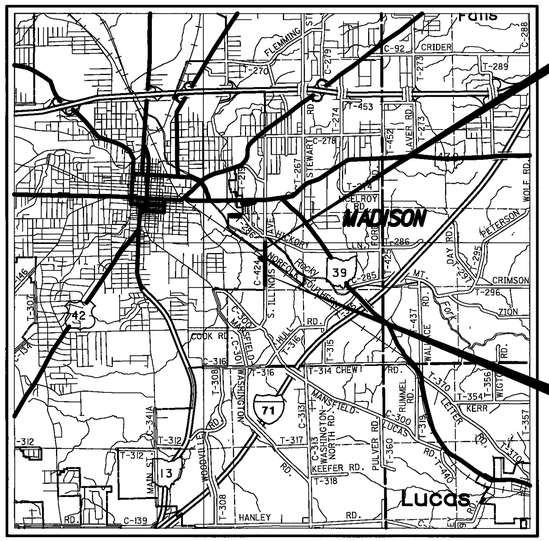


LOCATION MAP

LATITUDE: N40° 44′ 53″ LONGITUDE: W82° 29′ 04″

SCALE IN MILES

0 1 2 3 4

N

PORTION TO BE IMPROVED

INTERSTATE & DIVIDED HIGHWAY

UNDIVIDED STATE & FEDERAL ROUTES

OTHER ROADS

DESIGN DESIGNATION	SOUTH ILLINOIS	OAK ST.
CURRENT ADT (2006)	10,350	2,660
DESIGN YEAR ADT (2026)	12,940	3,330
DESIGN HOURLY VOLUME (2026)	1290	330
DIRECTIONAL DISTRIBUTION	55%	55%
TRUCKS (24 HOUR B&C)	3%	3%
DESIGN SPEED	40 MPH	35 MPH
LEGAL SPEED	40 MPH	35 MPH
DESIGN FUNCTIONAL CLASSIFICATION - URBAN ARTERIAL		LOCAL ROAD

DESIGN EXCEPTIONS

NONE

PLAN PREPARED BY:

RICHLAND ENGINEERING LIMITED
29 NORTH PARK STREET
MANSFIELD OHIO 44902
PHONE: (419) 524-0074 FAX: (419) 524-1812

UNDERGROUND UTILITIES
TWO WORKING DAYS
BEFORE YOU DIG
CALL 1-800-362-2764 (TOLL FREE)
OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS
MUST BE CALLED DIRECTLY

ENGINEERS SEAL:

STATE OF OHIO · DEAN A. PALMER · E-37475 · REGISTERED · PROFESSIONAL ENGINEER

SIGNED: Dean Palmer
DATE: 12-20-05

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
RIC-C.R. 424-0.62
CITY OF MANSFIELD
MADISON TOWNSHIP
RICHLAND COUNTY

PROJECT DESCRIPTION

THE PROPOSED PROJECT CONSISTS OF CONSTRUCTING AN OVERPASS GRADE SEPARATION OF SOUTH ILLINOIS AVENUE WITH THE NORFOLK SOUTHERN RAILWAY AND HAS A PROJECT LENGTH OF 2000 FEET. OAK STREET WILL BE CONSTRUCTED ON A MODIFIED ALIGNMENT AND RAISED TO THE NEW SOUTH ILLINOIS AVENUE GRADE OVER THE WORK LENGTH OF 939 FEET.

2005 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY EXCEPT AS NOTED ON SHEET II, AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

INDEX OF SHEETS:

PROJECT EARTH DISTURBED AREA	= 12.6 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA	= 5.2 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA	= 17.8 ACRES

STANDARD CONSTRUCTION DRAWINGS

BP-3.1	7-16-04	CB-1.1	7-15-05	MT-97.10	4-19-02			AS-1-81	7-19-02	800	1-20-06
BP-4.1	7-16-04	CB-1.3	7-15-05	MT-101.60	10-18-02			BR-2-98	7-19-02	802	4-15-05
BP-5.1	7-28-00	CB-2.1	7-15-05	MT-101.70	10-18-02			PSID-1-99	7-18-03	832	4-17-04
		CB-2.2	7-15-05	MT-105.10	10-18-02			SICD-1-96	7-19-02	833	2-12-03
F-1.1	7-16-04	CB-2.3	7-15-05	MT-105.11	10-18-02			VPF-1-90	7-19-02	836	4-15-05
		HW-2.1	7-15-05								
GR-1.1	7-16-04	HW-2.2	7-15-05	HL-10.13	1-17-03						
GR-2.1	1-16-04			HL-20.11	4-19-02						
GR-2.3	4-18-03	MH-1.1	7-19-02	HL-20.14	1-21-05						
GR-3.1	4-18-03	MH-1.2	7-15-05	HL-30.11	1-21-05	TC-41.20	1-19-01	SPECIAL PROVISIONS			
GR-4.1	4-18-03	DM-1.1	10-20-05	HL-30.31	1-21-05	TC-42.20	7-16-04				
GR-4.2	4-15-05	DM-1.3	7-20-01	HL-30.32	4-19-02	TC-52.10	4-20-01	REINFORCED EARTH WALL		12-20-05	
		DM-1.4	1-21-05	HL-40.10	4-19-02	TC-52.20	4-20-01	RETAINED EARTH WALL		12-20-05	
RM-1.1	4-18-03	DM-3.1	7-19-02	HL-50.11	7-20-01	TC-73.10	1-19-01	ARES RETAINING WALL		12-20-05	
RM-2.1	4-18-03	DM-4.3	7-19-02	HL-60.11	1-16-04	TC-82.10	4-19-02	MSE PLUS RETAINING WALL		12-20-05	
RM-4.2	4-18-03	DM-4.4	7-19-02	HL-60.12	1-21-05	TC-83.10	5-01-00	WATERWAY PERMITS NWP #14		11-10-04	

APPROVED _____
DATE 12/27/2005 MANSFIELD, CITY ENGINEER

APPROVED Thomas E. Buck
DATE 12/21/05 RICHLAND COUNTY, ENGINEER

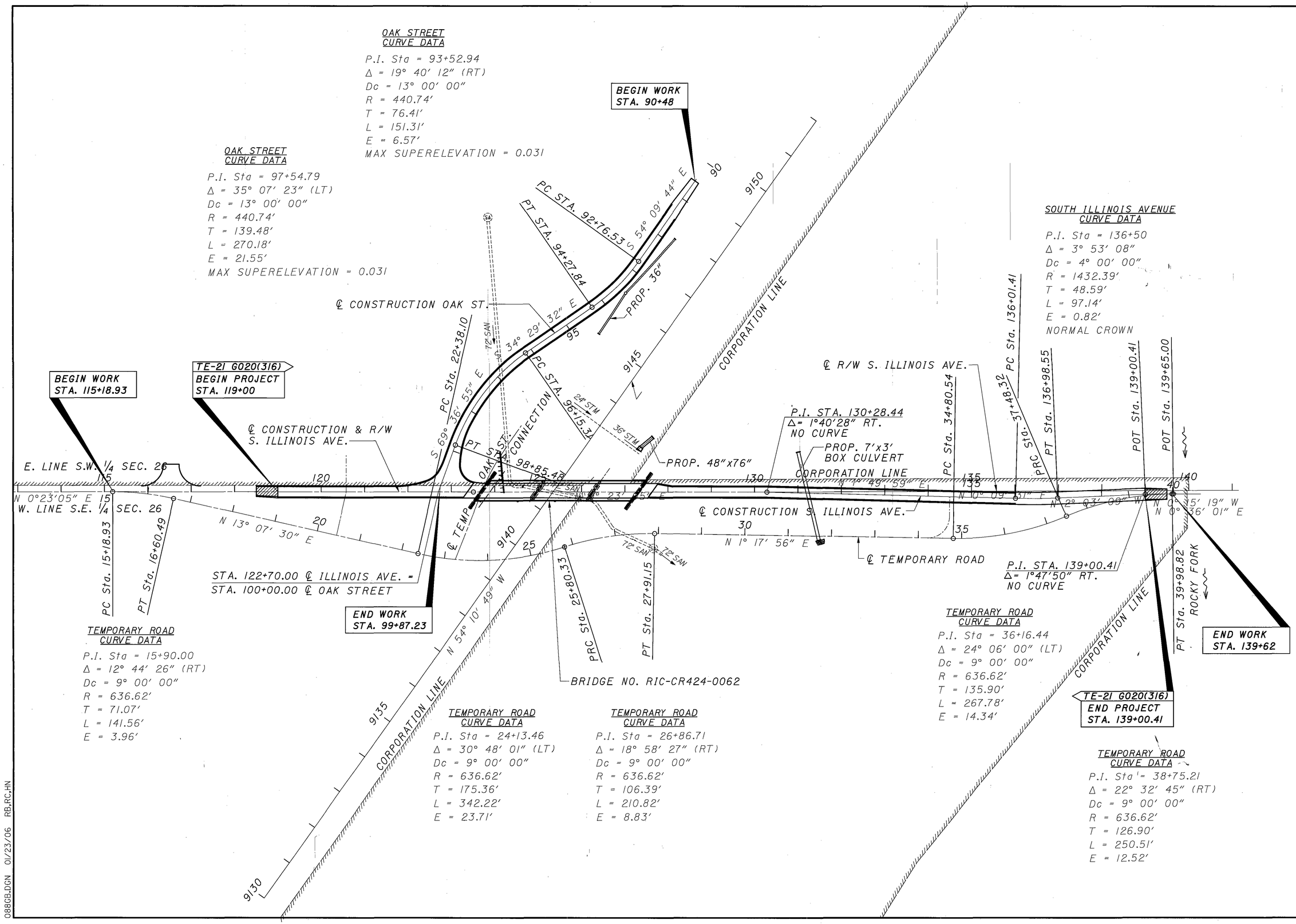
APPROVED Thomas M. O'Leary
DATE 1-31-06 DISTRICT DEPUTY DIRECTOR

APPROVED Gordon Proctor Jr.
DATE 3-2-06 DIRECTOR, DEPARTMENT OF TRANSPORTATION

FEDERAL PROJECT NO. G020(316)
PID NO. 23504
CONSTRUCTION PROJECT NO.
RAILROAD INVOLVEMENT NORFOLK SOUTHERN RAILWAY
RIC-C.R. 424-0.62
1 / 153

RIC - CR 424-0.62
060216 PID - 23504
Dist 3 5/3/2006

102088/088GT.DGN 12/20/05 CAR,HN,CEO,RC



N

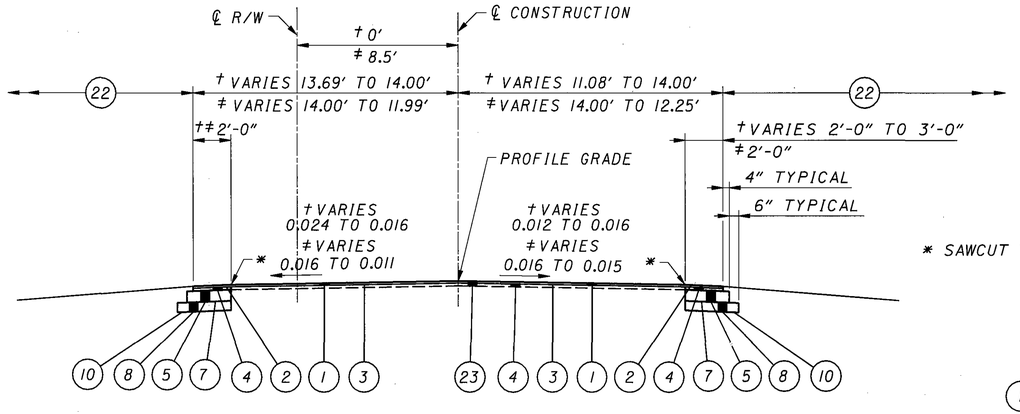
0 50 100 200
HORIZONTAL SCALE IN FEET

SCHEMATIC PLAN

RIC-C.R. 424-0.62

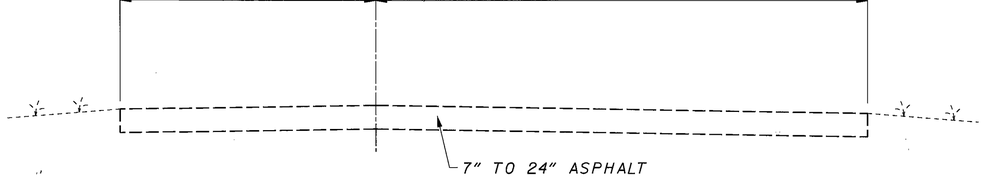
2
153

08BGB.DGN 01/23/06 RB,RC,HN

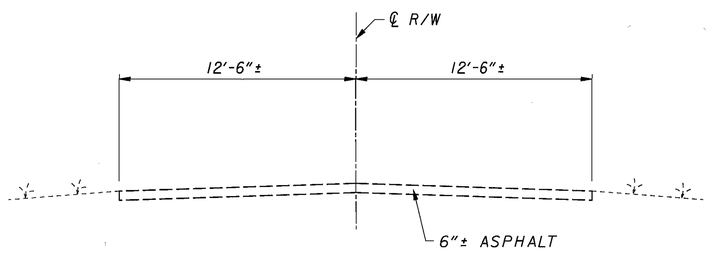


SOUTH ILLINOIS AVENUE

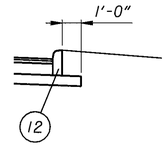
† STA. 118+50.00 TO STA. 119+00.00 = 100.00 FT.
≠ STA. 139+00.41 TO STA. 139+50.00 = 49.59 FT.



EXISTING SECTION SOUTH ILLINOIS AVENUE



EXISTING SECTION OAK STREET



STA. 118+90 TO 119+00 LT. & RT.
STA. 139+00.41 TO 139+10.41 RT. ONLY

* SAWCUT TO SOUND PAVEMENT

ITEM LEGEND

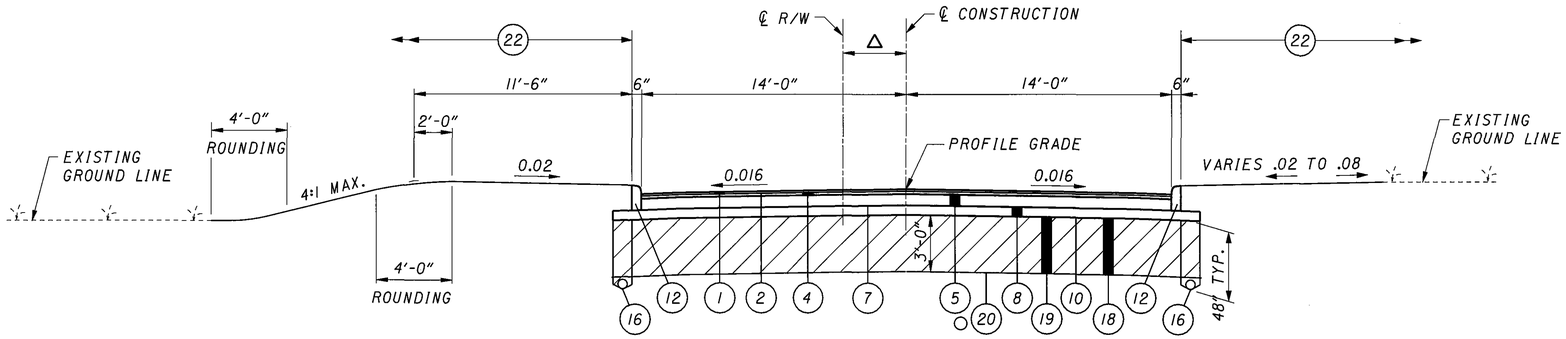
(1)	ITEM 448	1¼" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22, AS PER PLAN
(2)	ITEM 407	TACK COAT FOR INTERMEDIATE COURSE (SEE GENERAL NOTES)
(3)	ITEM 407	TACK COAT (SEE GENERAL NOTES)
(4)	ITEM 448	1¾" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22, AS PER PLAN
(5)	ITEM 301	7" ASPHALT CONCRETE BASE, PG64-22, AS PER PLAN
(6)	ITEM 301	4 " ASPHALT CONCRETE BASE, PG 64-22, AS PER PLAN
(7)	ITEM 408	PRIME COAT APPLIED AT THE RATE OF 0.4 GAL/S.Y.
(8)	ITEM 304	6" AGGREGATE BASE
(9)	NOT USED	
(10)	ITEM 204	SUBGRADE COMPACTION
(11)	ITEM 609	COMBINATION CURB & GUTTER, TYPE 2
(12)	ITEM 609	CURB, TYPE 6
(13)	ITEM 609	CURB, TYPE 2A (INCLUDED FOR PAYMENT - ITEM 526)
(14)	ITEM 526	REINFORCED CONCRETE APPROACH SLAB (T=17")
(15)	ITEM 608	4" CONCRETE WALK
(16)	ITEM 605	6" PIPE UNDERDRAIN WITH FABRIC WRAP, 707.31 OR 707.41
(17)	ITEM 605	AGGREGATE DRAIN
(18)	ITEM 204	EXCAVATION OF SUBGRADE
(19)	ITEM 204	GRANULAR MATERIAL, TYPE B
(20)	ITEM 204	GEOTEXTILE FABRIC, 712.09, TYPE D
(21)	ITEM 606	GUARDRAIL, TYPE 5 (WHERE SHOWN ON PLANS)
(22)	ITEM 659	SEEDING AND MULCHING (SEE GENERAL NOTE)
(23)	ITEM 202	WEARING COURSE REMOVED (VAR. THICKNESS)

CALCULATED EEL
CHECKED PDG

SOUTH ILLINOIS AVENUE & OAK STREET
TYPICAL SECTIONS

RIC-C.R. 424-0.62

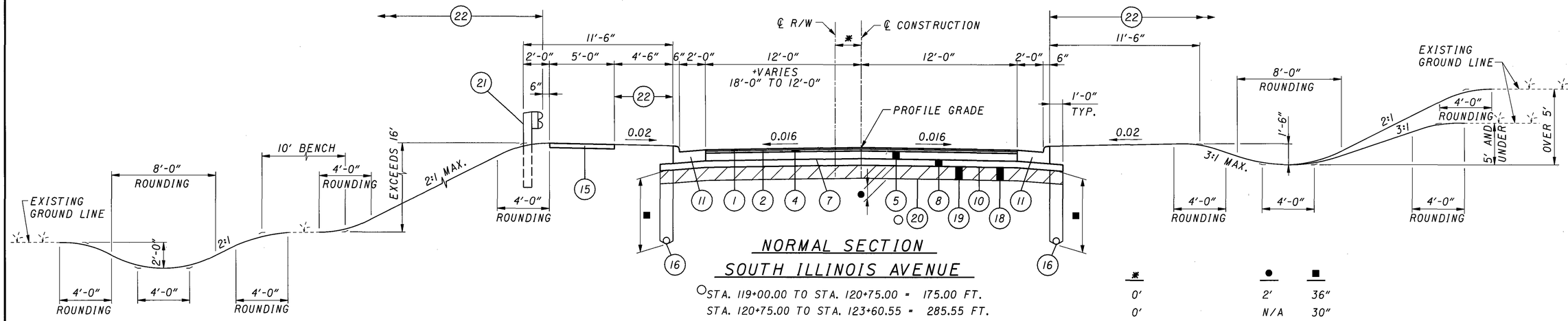
088GYA.DGN 12/15/05 RB,CAR,KH,HN,RC



NORMAL SECTION
SOUTH ILLINOIS AVENUE

STA.		△
STA. 136+01.41 TO STA. 136+50.00	= 48.59 FT.	16.75' TO 17.35'
STA. 136+50.00 TO STA. 139+00.41	= 250.41 FT.	17.35' TO 8.49'

○ GEOTEXTILE TO BE PLACED BETWEEN THE INSIDE LIMITS OF THE UNDERDRAIN TRENCHES.



NORMAL SECTION
SOUTH ILLINOIS AVENUE

STA.		*	●	■
○ STA. 119+00.00 TO STA. 120+75.00	= 175.00 FT.	0'	2'	36"
STA. 120+75.00 TO STA. 123+60.55	= 285.55 FT.	0'	N/A	30"
+ STA. 127+62.45 TO STA. 128+12.66	= 50.21 FT.	0'	N/A	30"
STA. 128+12.66 TO STA. 130+28.44	= 215.78 FT.	0'	N/A	30"
STA. 130+28.44 TO STA. 134+.50.00	= 421.56FT.	VARIES FROM 0' TO 12.32'	N/A	30"
○ STA. 134+50.00 TO STA. 136+01.41	= 151.41 FT.	VARIES FROM 12.32' TO 16.75'	3'	48"

ITEM LEGEND

(1) ITEM 448 1¼" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22, AS PER PLAN

(2) ITEM 407 TACK COAT FOR INTERMEDIATE COURSE (SEE GENERAL NOTES)

(3) ITEM 407 TACK COAT (SEE GENERAL NOTES)

(4) ITEM 448 1¾" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22, AS PER PLAN

(5) ITEM 301 7" ASPHALT CONCRETE BASE, PG64-22, AS PER PLAN

(6) ITEM 301 4 " ASPHALT CONCRETE BASE, PG 64-22, AS PER PLAN

(7) ITEM 408 PRIME COAT APPLIED AT THE RATE OF 0.4 GAL/S.Y.

(8) ITEM 304 6" AGGREGATE BASE

(9) NOT USED

(10) ITEM 204 SUBGRADE COMPACTION

(11) ITEM 609 COMBINATION CURB & GUTTER, TYPE 2

(12) ITEM 609 CURB, TYPE 6

(13) ITEM 609 CURB, TYPE 2A (INCLUDED FOR PAYMENT - ITEM 526)

(14) ITEM 526 REINFORCED CONCRETE APPROACH SLAB (T=17")

(15) ITEM 608 4" CONCRETE WALK

(16) ITEM 605 6" PIPE UNDERDRAIN WITH FABRIC WRAP, 707.31 OR 707.41

(17) ITEM 605 AGGREGATE DRAIN

(18) ITEM 204 EXCAVATION OF SUBGRADE

(19) ITEM 204 GRANULAR MATERIAL, TYPE B

(20) ITEM 204 GEOTEXTILE FABRIC, 712.09, TYPE D

(21) ITEM 606 GUARDRAIL, TYPE 5 (WHERE SHOWN ON PLANS)

(22) ITEM 659 SEEDING AND MULCHING (SEE GENERAL NOTE)

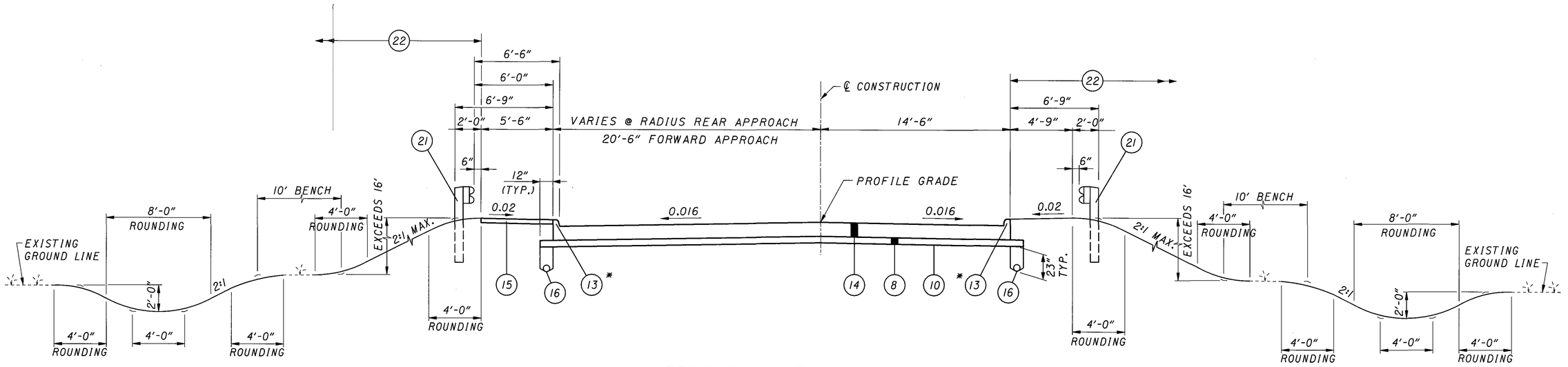
(23) ITEM 202 WEARING COURSE REMOVED (VAR. THICKNESS)

CALCULATED EEL
CHECKED PDG

SOUTH ILLINOIS AVENUE TYPICAL SECTIONS

RIC-C.R. 424-0.62

088GYA.DGN 12/15/05 RB,CAR,KH,HN,RC



APPROACH SLAB TYPICAL SECTION

STA. 123+60.55 TO STA. 123+90.55 = 30.00 FT.
STA. 127+32.45 TO STA. 127+62.45 = 30.00 FT.

* TRANSITION CURB FROM 8" TO 6"
OVER THE APPROACH SLAB LENGTH.

ITEM LEGEND

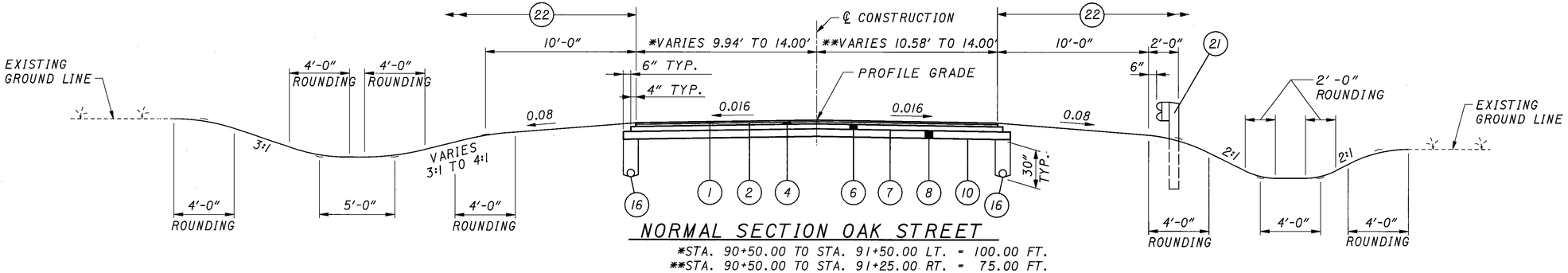
(1)	ITEM 448	1¼" ASPHALT CONCRETE SURFACE COURSE, TYPE I, PG64-22, AS PER PLAN
(2)	ITEM 407	TACK COAT FOR INTERMEDIATE COURSE (SEE GENERAL NOTES)
(3)	ITEM 407	TACK COAT (SEE GENERAL NOTES)
(4)	ITEM 448	1¾" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22, AS PER PLAN
(5)	ITEM 301	7" ASPHALT CONCRETE BASE, PG64-22, AS PER PLAN
(6)	ITEM 301	4 " ASPHALT CONCRETE BASE, PG 64-22, AS PER PLAN
(7)	ITEM 408	PRIME COAT APPLIED AT THE RATE OF 0.4 GAL/S.Y.
(8)	ITEM 304	6" AGGREGATE BASE
(9)	NOT USED	
(10)	ITEM 204	SUBGRADE COMPACTION
(11)	ITEM 609	COMBINATION CURB & GUTTER, TYPE 2
(12)	ITEM 609	CURB, TYPE 6
(13)	ITEM 609	CURB, TYPE 2A (INCLUDED FOR PAYMENT - ITEM 526)
(14)	ITEM 526	REINFORCED CONCRETE APPROACH SLAB (T=17")
(15)	ITEM 608	4" CONCRETE WALK
(16)	ITEM 605	6" PIPE UNDERDRAIN WITH FABRIC WRAP, 707.31 OR 707.41
(17)	ITEM 605	AGGREGATE DRAIN
(18)	ITEM 204	EXCAVATION OF SUBGRADE
(19)	ITEM 204	GRANULAR MATERIAL, TYPE B
(20)	ITEM 204	GEOTEXTILE FABRIC, 712.09, TYPE D
(21)	ITEM 606	GUARDRAIL, TYPE 5 (WHERE SHOWN ON PLANS)
(22)	ITEM 659	SEEDING AND MULCHING
(23)	ITEM 202	WEARING COURSE REMOVED (VAR. THICKNESS)

CALCULATED EEL
CHECKED PDG

SOUTH ILLINOIS AVENUE TYPICAL SECTIONS

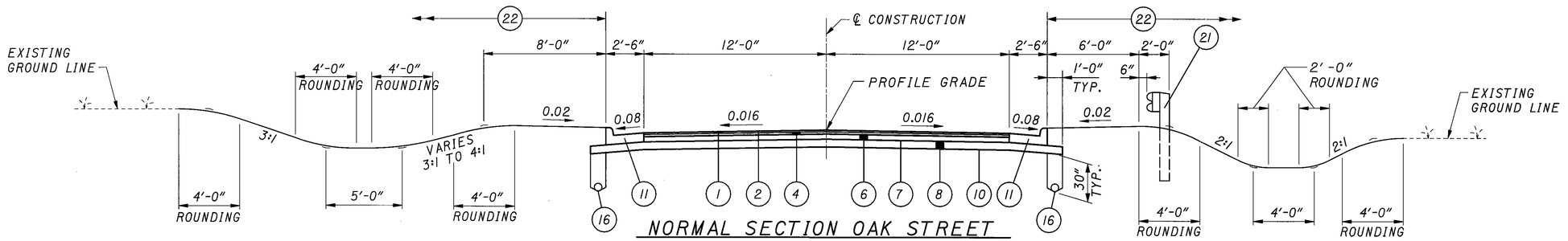
RIC-C.R. 424-0.62

088GYA.DGN 12/15/05 RB,CAR,KH,HN,RC



NORMAL SECTION OAK STREET

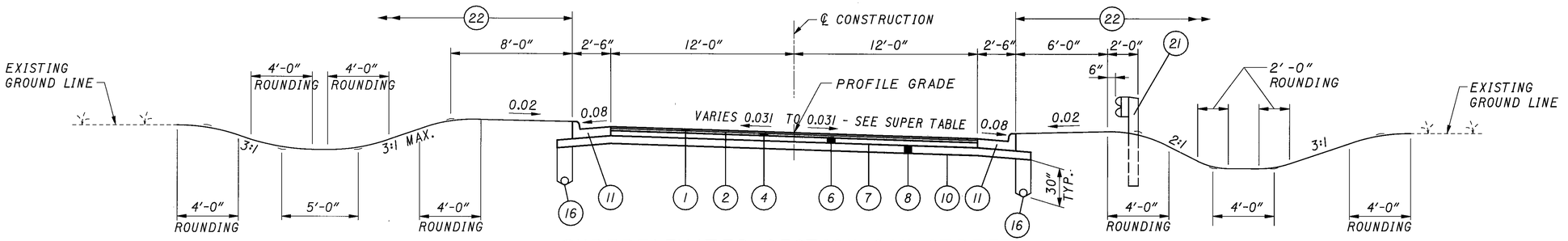
*STA. 90+50.00 TO STA. 91+50.00 LT. = 100.00 FT.
**STA. 90+50.00 TO STA. 91+25.00 RT. = 75.00 FT.



NORMAL SECTION OAK STREET

STA. 91+25.00 TO STA. 91+79.24 RT. = 54.24 FT.
STA. 91+50.00 TO STA. 91+79.24 LT. = 24.24 FT.

STA. 95+25.13 TO STA. 96+01.60 = 76.47 FT.
STA. 99+00.20 TO STA. 99+87.23 = 87.03 FT.



SUPERELEVATED SECTION OAK STREET

STA. 91+79.24 TO STA. 94+00.00 = 220.76 FT.
STA. 94+00.00 TO STA. 95+25.13 = 125.13 FT.
STA. 96+01.60 TO STA. 99+00.20 = 298.60 FT.

ITEM LEGEND

STA. 91+85 TO STA. 94+50

(1)	ITEM 448	1¼" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22, AS PER PLAN
(2)	ITEM 407	TACK COAT FOR INTERMEDIATE COURSE (SEE GENERAL NOTES)
(3)	ITEM 407	TACK COAT (SEE GENERAL NOTES)
(4)	ITEM 448	1¾" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22, AS PER PLAN
(5)	ITEM 301	7" ASPHALT CONCRETE BASE, PG64-22, AS PER PLAN
(6)	ITEM 301	4 " ASPHALT CONCRETE BASE, PG 64-22, AS PER PLAN
(7)	ITEM 408	PRIME COAT APPLIED AT THE RATE OF 0.4 GAL/S.Y.
(8)	ITEM 304	6" AGGREGATE BASE
(9)	NOT USED	
(10)	ITEM 204	SUBGRADE COMPACTION
(11)	ITEM 609	COMBINATION CURB & GUTTER, TYPE 2
(12)	ITEM 609	CURB, TYPE 6
(13)	ITEM 609	CURB, TYPE 2A (INCLUDED FOR PAYMENT - ITEM 526)
(14)	ITEM 526	REINFORCED CONCRETE APPROACH SLAB (T=17")
(15)	ITEM 608	4" CONCRETE WALK
(16)	ITEM 605	6" PIPE UNDERDRAIN WITH FABRIC WRAP, 707.31 OR 707.41
(17)	ITEM 605	AGGREGATE DRAIN
(18)	ITEM 204	EXCAVATION OF SUBGRADE
(19)	ITEM 204	GRANULAR MATERIAL, TYPE B
(20)	ITEM 204	GEOTEXTILE FABRIC, 712.09, TYPE D
(21)	ITEM 606	GUARDRAIL, TYPE 5 (WHERE SHOWN ON PLANS)
(22)	ITEM 659	SEEDING AND MULCHING
(23)	ITEM 202	WEARING COURSE REMOVED (VAR. THICKNESS)

CALCULATED EEL CHECKED PDG

OAK STREET TYPICAL SECTIONS

RIC-C.R. 424-0.62

088GYA.DGN 01/26/06 RB,RC,HN

OAK STREET SUPERELEVATION TABLE

CALCULATED EEL
CHECKED PDG

LEFT SIDE									CENTERLINE		RIGHT SIDE									REMARKS
FACE OF CURB ELEVATION	GUTTER CORR.	GUTTER SLOPE	GUTTER WIDTH	EDGE OF PAVEMENT ELEVATION	TRANSITION RATE	ELEVATION CORR.	CROSS SLOPE	PAVEMENT WIDTH	STATION	PROFILE GRADE	PAVEMENT WIDTH	CROSS SLOPE	ELEVATION CORR.	TRANSITION RATE	EDGE OF PAVEMENT ELEVATION	GUTTER WIDTH	GUTTER SLOPE	GUTTER CORR.	FACE OF CURB ELEVATION	
				1145.45		-0.16	-0.0160	9.94	90+50.00	1145.61	10.58	-0.0624	-0.66		1144.95					
				1145.54		-0.18	-0.0160	10.96	90+75.00	1145.72	11.72	-0.0508	-0.60		1145.12					
				1145.64		-0.19	-0.0160	11.97	91+00.00	1145.83	12.86	-0.0392	-0.50		1145.33					
				1145.66		-0.21	-0.0160	12.98	91+25.00	1145.87	14.00	-0.0392	-0.55		1145.32	2.00	-0.0833	-0.17	1145.15	
									91+25.00	1145.87	12.00	-0.0276	-0.33	179.67	1145.54	2.00	-0.0833	-0.17	1145.37	
1145.36	-0.17	-0.0833	2.00	1145.53		-0.22	-0.0160	14.00	91+50.00	1145.75										
1145.39	-0.17	-0.0833	2.00	1145.56		-0.19	-0.0160	12.00	91+50.00	1145.75	12.00	-0.0160	-0.19		1145.56	2.00	-0.0833	-0.17	1145.39	
1145.06	-0.17	-0.0833	2.00	1145.23	215.05	-0.19	-0.0160	12.00	91+79.24	1145.42	12.00	-0.0160	-0.19		1145.23	2.00	-0.0833	-0.17	1145.06	NC
1144.79	-0.17	-0.0833	2.00	1144.95		-0.10	-0.0080	12.00	92+00.00	1145.05	12.00	-0.0160	-0.19		1144.86	2.00	-0.0833	-0.17	1144.69	
1144.68	0.00	0.0000	2.00	1144.68		0.00	0.0000	12.00	92+20.53	1144.68	12.00	-0.0160	-0.19		1144.49	2.00	-0.0833	-0.17	1144.32	HALF FLAT
1144.63	0.00	0.0017	2.00	1144.63		0.02	0.0017	12.00	92+25.00	1144.61	12.00	-0.0160	-0.19		1144.42	2.00	-0.0833	-0.17	1144.25	
1144.45	0.02	0.0114	2.00	1144.43		0.14	0.0114	12.00	92+50.00	1144.29	12.00	-0.0160	-0.19		1144.10	2.00	-0.0833	-0.17	1143.93	
1144.41	0.03	0.0160	2.00	1144.38		0.19	0.0160	12.00	92+61.82	1144.19	12.00	-0.0160	-0.19	215.05	1144.00	2.00	-0.0833	-0.17	1143.83	
1144.40	0.04	0.0211	2.00	1144.35		0.25	0.0211	12.00	92+75.00	1144.10	12.00	-0.0211	-0.25		1143.85	2.00	-0.0833	-0.17	1143.68	
1144.40	0.04	0.0217	2.00	1144.36		0.26	0.0217	12.00	92+76.53	1144.10	12.00	-0.0217	-0.26		1143.84	2.00	-0.0833	-0.17	1143.67	PC
1144.47	0.06	0.0310	2.00	1144.41		0.37	0.0310	12.00	93+00.53	1144.04	12.00	-0.0310	-0.37		1143.67	2.00	-0.0833	-0.17	1143.50	FULL SUPER
1144.54	0.06	0.0310	2.00	1144.48		0.37	0.0310	12.00	93+25.00	1144.11	12.00	-0.0310	-0.37		1143.74	2.00	-0.0833	-0.17	1143.57	
1144.73	0.06	0.0310	2.00	1144.67		0.37	0.0310	12.00	93+50.00	1144.30	12.00	-0.0310	-0.37		1143.93	2.00	-0.0833	-0.17	1143.76	
1145.05	0.06	0.0310	2.00	1144.99		0.37	0.0310	12.00	93+75.00	1144.62	12.00	-0.0310	-0.37		1144.25	2.00	-0.0833	-0.17	1144.08	
1145.49	0.06	0.0310	2.00	1145.43		0.37	0.0310	12.00	94+00.00	1145.06	12.00	-0.0310	-0.37		1144.69	2.00	-0.0833	-0.17	1144.52	
1145.57	0.06	0.0310	2.00	1145.51	215.05	0.37	0.0310	12.00	94+03.84	1145.14	12.00	-0.0310	-0.37	215.05	1144.77	2.00	-0.0833	-0.17	1144.60	FULL SUPER
1145.95	0.05	0.0228	2.00	1145.90		0.27	0.0228	12.00	94+25.00	1145.63	12.00	-0.0228	-0.27		1145.36	2.00	-0.0833	-0.17	1145.19	
1146.01	0.04	0.0217	2.00	1145.97		0.26	0.0217	12.00	94+27.84	1145.71	12.00	-0.0217	-0.26		1145.45	2.00	-0.0833	-0.17	1145.28	PT
1146.33	0.03	0.0160	2.00	1146.30		0.19	0.0160	12.00	94+42.55	1146.11	12.00	-0.0160	-0.19		1145.92	2.00	-0.0833	-0.17	1145.75	
1146.51	0.03	0.0131	2.00	1146.49		0.16	0.0131	12.00	94+50.00	1146.33	12.00	-0.0160	-0.19		1146.14	2.00	-0.0833	-0.17	1145.97	
1147.21	0.01	0.0034	2.00	1147.20		0.04	0.0034	12.00	94+75.00	1147.16	12.00	-0.0160	-0.19		1146.97	2.00	-0.0833	-0.17	1146.80	
1147.48	0.00	0.0000	2.00	1147.48		0.00	0.0000	12.00	94+83.84	1147.48	12.00	-0.0160	-0.19		1147.29	2.00	-0.0833	-0.17	1147.12	HALF FLAT
1147.87	-0.17	-0.0833	2.00	1148.03		-0.08	-0.0063	12.00	95+00.00	1148.11	12.00	-0.0160	-0.19		1147.92	2.00	-0.0833	-0.17	1147.75	
1148.55	-0.17	-0.0833	2.00	1148.71		-0.16	-0.0132	12.00	95+18.02	1148.87	12.00	-0.0160	-0.19	215.05	1148.68	2.00	-0.0833	-0.17	1148.51	NORMAL CROWN LT
1148.83	-0.17	-0.0833	2.00	1149.00		-0.19	-0.0160	12.00	95+25.13	1149.19	12.00	-0.0132	-0.16		1149.03	2.00	-0.0833	-0.17	1148.87	NORMAL CROWN RT
1150.03	-0.17	-0.0833	2.00	1150.20		-0.19	-0.0160	12.00	95+50.00	1150.39	12.00	-0.0036	-0.04		1150.35	2.00	-0.0833	-0.17	1150.18	
1150.52	-0.17	-0.0833	2.00	1150.69		-0.19	-0.0160	12.00	95+59.31	1150.88	12.00	0.0000	0.00		1150.88	2.00	-0.0648	-0.13	1150.74	HALF FLAT
1151.37	-0.17	-0.0833	2.00	1151.54		-0.19	-0.0160	12.00	95+75.00	1151.73	12.00	0.0061	0.07		1151.80	2.00	-0.0338	-0.07	1151.73	
1152.83	-0.17	-0.0833	2.00	1153.00		-0.19	-0.0160	12.00	96+00.00	1153.19	12.00	0.0158	0.19		1153.38	2.00	0.0158	0.03	1153.41	
1152.86	-0.17	-0.0833	2.00	1153.03	215.05	-0.19	-0.0160	12.00	96+00.60	1153.22	12.00	0.0160	0.19		1153.41	2.00	0.0160	0.03	1153.44	
1153.71	-0.17	-0.0833	2.00	1153.88		-0.26	-0.0217	12.00	96+15.31	1154.14	12.00	0.0217	0.26		1154.40	2.00	0.0217	0.04	1154.44	PC
1154.30	-0.17	-0.0833	2.00	1154.46		-0.31	-0.0255	12.00	96+25.00	1154.77	12.00	0.0255	0.31		1155.08	2.00	0.0255	0.05	1155.13	
1155.20	-0.17	-0.0833	2.00	1155.37		-0.37	-0.0310	12.00	96+39.31	1155.74	12.00	0.0310	0.37		1156.11	2.00	0.0310	0.06	1156.17	FULL SUPER
1155.94	-0.17	-0.0833	2.00	1156.11		-0.37	-0.0310	12.00	96+50.00	1156.48	12.00	0.0310	0.37		1156.85	2.00	0.0310	0.06	1156.91	
1157.72	-0.17	-0.0833	2.00	1157.89		-0.37	-0.0310	12.00	96+75.00	1158.26	12.00	0.0310	0.37		1158.63	2.00	0.0310	0.06	1158.69	
1159.50	-0.17	-0.0833	2.00	1159.67		-0.37	-0.0310	12.00	97+00.00	1160.04	12.00	0.0310	0.37		1160.41	2.00	0.0310	0.06	1160.47	
1161.27	-0.17	-0.0833	2.00	1161.44		-0.37	-0.0310	12.00	97+25.00	1161.81	12.00	0.0310	0.37		1162.18	2.00	0.0310	0.06	1162.24	
1163.05	-0.17	-0.0833	2.00	1163.22		-0.37	-0.0310	12.00	97+50.00	1163.59	12.00	0.0310	0.37		1163.96	2.00	0.0310	0.06	1164.02	
1164.82	-0.17	-0.0833	2.00	1164.99		-0.37	-0.0310	12.00	97+75.00	1165.36	12.00	0.0310	0.37		1165.73	2.00	0.0310	0.06	1165.79	
1166.60	-0.17	-0.0833	2.00	1166.77		-0.37	-0.0310	12.00	98+00.00	1167.14	12.00	0.0310	0.37		1167.51	2.00	0.0310	0.06	1167.57	
1168.38	-0.17	-0.0833	2.00	1168.55		-0.37	-0.0310	12.00	98+25.00	1168.92	12.00	0.0310	0.37		1169.29	2.00	0.0310	0.06	1169.35	
1170.05	-0.17	-0.0833	2.00	1170.21		-0.39	-0.0310	12.50	98+50.00	1170.60	12.00	0.0310	0.37		1170.97	2.00	0.0310	0.06	1171.03	
1170.74	-0.17	-0.0833	2.00	1170.90	215.05	-0.41	-0.0310	13.10	98+61.49	1171.31	12.00	0.0310	0.37	215.05	1171.68	2.00	0.0310	0.06	1171.74	FULL SUPER
1171.56	-0.17	-0.0833	2.00	1171.73		-0.37	-0.0258	14.30	98+75.00	1172.10	12.00	0.0258	0.31		1172.41	2.00	0.0258	0.05	1172.46	
1172.18	-0.17	-0.0833	2.00	1172.35		-0.33	-0.0217	15.40	98+85.49	1172.68	12.00	0.0217	0.26		1172.94	2.00	0.0217	0.04	1172.98	PT
1172.97	-0.17	-0.0833	2.00	1173.13		-0.29	-0.0161	17.90	99+00.00	1173.42	12.00	0.0161	0.19		1173.61	2.00	0.0161	0.03	1173.65	
									99+00.20	1173.43	12.00	0.0160	0.19		1173.62	2.00	0.0160	0.03	1173.65	
									99+25.00	1174.56	12.00	0.0064	0.08		1174.64	2.00	0.0064	0.01	1174.65	
									99+41.49	1175.25	12.00	0.0000	0.00		1175.25	2.00	0.0000	0.00	1175.25	HALF FLAT
									99+50.00	1175.61	12.00	-0.0033	-0.04		1175.57	2.00	-0.0833	-0.17	1175.40	
									99+75.00	1176.66	12.00	-0.0130	-0.16		1176.50	2.00	-0.0833	-0.17	1176.34	
									99+82.78	1176.98	12.00	-0.0160	-0.19		1176.79	2.00	-0.0833	-0.17	1176.62	

RIC-C.R. 424-0.62

088GYB.DGN 09/29/04 KH;HN

OPTIONAL BID ITEMS:

THE ESTIMATED QUANTITIES INCLUDE SEVERAL PAY ITEMS LISTED AS OPTIONS FOR THE RETAINING WALLS.

THE CONTRACTOR SHALL BID ONLY **ONE** OF THE DESIGN OPTIONS FOR RETAINING WALLS. THE DESIGN OPTION SHALL BE EITHER:

A) REINFORCED EARTH WALL
THE REINFORCED EARTH COMPANY
1444 NORTH FARNSWORTH AVENUE, #505
AURORA, IL. 60505
PHONE: (630) 898-3334

B) RETAINED EARTH WALL
FOSTER GEOTECHNICAL, DIVISION
OF L.B. FOSTER COMPANY
1372 OLD BRIDGE ROAD, SUITE 101
WOODBRIDGE, VIRGINIA 22192
PHONE: (703) 499-9818

C) ARES RETAINING WALL
TENSAR EARTH TECHNOLOGIES, INC.
586 DEFENSE HIGHWAY
CROWNSVILLE, MARYLAND 21032
PHONE: (410) 573-9799

D) MSE PLUS RETAINING WALL
SSL, LLC
209 N. MAIN STREET, SUITE 200
MONTICELLO, IN 47960-2132
PHONE: (574) 583-2222
FAX: (574) 965-4132

ROUNDING

THE ROUNDING AT SLOPE BREAKPOINTS SHOWN ON THE TYPICAL SECTIONS APPLY TO ALL CROSS-SECTIONS EVEN THOUGH OTHERWISE SHOWN.

UTILITIES

LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS:

CITY OF MANSFIELD
ENGINEERING DEPT. -
WATER & SEWER
30 NORTH DIAMOND ST.
MANSFIELD, OH 44902
(419) 755-9702
ATTN: JOSEPH WYKA, P.E.

COLUMBIA GAS OF OHIO
1600 DUBLIN ROAD
COLUMBUS, OH 43215
(419) 521-6188
ATTN: JIM RENNY

SPRINT (FIBER OPTIC CABLE)
11815 HIGHWAY DR., SUITE 400
CINCINNATI, OH 45241
(877) 624-9493
ATTN: JOE THOMAS

OHIO EDISON
1717 ASHLAND ROAD
MANSFIELD, OH 44905-1806
(419) 521-6177
ATTN: MICHAEL STOUGHTON

SPRINT (LOCAL DISTRIBUTION)
175 ASHLAND ROAD
MANSFIELD, OH 44902
(419) 755-7016
ATTN: JAMES POKORSKI

COLUMBIA GAS OF OHIO, INC.
1120 W. FOURTH STREET
P.O. BOX 1328
MANSFIELD, OHIO 44901
(419) 528-1114
ATTN: BARTH J. SMITH

RICHLAND COUNTY
SANITARY ENGINEER -
12" SAN. FORCE MAIN
99 PARK AVENUE EAST
MANSFIELD, OHIO 44902
(419) 774-5517
ATTN: PHIL MARCUS

NORFOLK SOUTHERN RAILWAY
99 SPRING STREET SW
ATLANTA, GEORGIA 30303
(404) 529-1256
ATTN: CHRIS BENNETT

ELEVATION DATUM

ALL ELEVATIONS ARE BASED ON NAVD 88 BY GPS TRAVERSE THROUGH RICHLAND COUNTY GEODETIC MONUMENTS HANLEY, APRON, RC19 AND RC59.

WORK LIMITS

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. THE INSTALLATION AND OPERATION OF ALL TEMPORARY TRAFFIC CONTROL AND TEMPORARY TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS SHALL BE PROVIDED BY THE CONTRACTOR WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

CLEARING AND GRUBBING

ALL TREES AND STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE CONSTRUCTION LIMITS SHALL BE REMOVED UNDER THE LUMP SUM BID FOR ITEM 201, CLEARING AND GRUBBING. THE FOLLOWING IS AN APPROXIMATE ESTIMATE OF THE NUMBER OF TREES AND STUMPS TO BE REMOVED.

SIZES	NO. TREES	NO. STUMPS	TOTAL
18"	6	2	8
30"	2	0	2
48"	0	0	0
60"	0	0	0

MONUMENTS

MONUMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH DETAILS AS SHOWN ON THE STANDARD CONSTRUCTION DRAWINGS AND AT THE LOCATIONS SHOWN ON SHEET NO. 133 .

ITEM 203 EMBANKMENT, AS PER PLAN

PLACE AND COMPACT GRANULAR EMBANKMENT MATERIAL IN 6 INCH [150 mm] LIFTS FOR THE CONSTRUCTION OF THE APPROACH EMBANKMENT BETWEEN STATIONS 122+50 TO 123+66.55 AND 127+32.45 TO 128+50

ITEM 407 TACK COAT AND ITEM 407 TACK COAT FOR INTERMEDIATE COURSE

THE RATE OF APPLICATION OF THE 407 TACK COAT SHALL BE SUBJECT TO ADJUSTMENTS AS DIRECTED BY THE ENGINEER, FOR ESTIMATING PURPOSES ONLY. THE PLAN QUANTITIES INDICATE AN AVERAGE APPLICATION RATE OF:

407, TACK COAT 0.10 GAL. PER SQ. YD.

407, TACK COAT FOR INTERMEDIATE COURSE 0.05 GAL. PER SQ. YD.

CALCULATED TM CHECKED EEL

GENERAL NOTES

RIC-C.R. 424-0.62

SUBGRADE PREPARATION

EMBANKMENT UP TO 3 FEET HIGH

AS SHOWN ON THE TYPICAL SECTIONS AND THE CROSS SECTIONS, IT IS ANTICIPATED THAT UNSUITABLE MATERIAL WILL NEED TO BE REMOVED IN THE FOLLOWING AREAS AND REPLACED WITH GRANULAR MATERIAL TYPE B. AT THE DIRECTION OF THE ENGINEER, THE CONTRACTOR SHALL DESIGNATE AREAS FOR REMOVAL AND REPLACEMENT USING THE RESULTS OF THE PROOF ROLLING OPERATION. ALTHOUGH GRANULAR MATERIAL TYPE B IS SPECIFIED, THE CONTRACTOR MAY ALSO USE TYPE C FOR CUTS OF LESS THAN 3 FEET AND TYPE C OR D FOR CUTS OF 3' OR GREATER, HOWEVER, TYPE B SHALL BE USED IN THE AREA WITHIN THREE FEET OF THE PROPOSED UNDERDRAIN. AS SHOWN ON THE TYPICAL SECTIONS, 712.09 GEOTEXTILE FABRIC TYPE D SHALL BE USED AT THE BOTTOM OF EACH UNDERCUT AREA, HOWEVER GEOTEXTILE SHALL NOT BE USED WHERE UNDERDRAINS ARE TO BE PLACED.

LOCATION	UNDERCUT
SOUTH ILLINOIS AVENUE-QUANTITIES FOR PAYMENT INCLUDED ON THE GENERAL SUMMARY	
STATION 119+00 TO STATION 120+75	2 FT
STATION 134+50 TO STATION 139+00	3 FT
TEMPORARY OAK STREET-PAYMENT TO BE INCLUDED IN ITEM 615	
STATION 8+48 TO STATION 10+00	2 FT

EMBANKMENT - STATION 127+50 TO STATION 131+00

THE EMBANKMENT FOR THE ABOVE AREA SHALL BE ACCOMPLISHED IN THE FOLLOWING SEQUENCE:

1) RELOCATE THE STREAM TO ITS' FINAL LOCATION

2) OVER EXCAVATE THE AREA AS SHOWN ON THE CROSS SECTIONS

3) BACKFILL THE OVER EXCAVATED AREA WITH ITEM 703.16 C, GRANULAR MATERIAL TYPE D TO ELEVATION 1136 NO GEOTEXTILE IS REQUIRED BELOW THE GRANULAR MATERIAL. THE GRANULAR MATERIAL MAY BE PLACED BY END DUMPING UP TO THE ELEVATION SPECIFIED ABOVE.

4) LEVEL OFF THE WHOLE EMBANKMENT FOOTPRINT FROM STATION 127+50 TO STATION 131+00 AND PLACE A GEOTEXTILE CONFORMING TO ODOT ITEM 712.09 TYPE D.

5) PLACE A 24" THICK LAYER OF FREE DRAINING BASE CONFORMING TO ITEM 703.16 C, GRANULAR MATERIAL TYPE C AND PLACE A GEOTEXTILE CONFORMING TO ODOT ITEM 712.09 TYPE D.

6) CONSTRUCT THE REMAINING EMBANKMENT.

THE CONTRACTOR SHALL PLACE EMBANKMENTS ON SLOPES AND AT ELEVATIONS THAT TAKE INTO ACCOUNT THE ANTICIPATED SETTLEMENT AT THE VARIOUS EMBANKMENT LOCATIONS.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY TO COMPENSATE FOR ANTICIPATED SETTLEMENT AS NOTED ON THIS SHEET.

203, EMBANKMENT 4200 CU YDS

PAYMENT

PAYMENT FOR SUBGRADE PREPARATION SHALL BE MADE AT THE UNIT PRICE BID FOR THE FOLLOWING PAY ITEMS:

204,	EXCAVATION OF SUBGRADE	CU. YD.
204,	GRANULAR MATERIAL TYPE B,C,AND C OR D	CU. YD.
204,	GEOTEXTILE FABRIC, 712.09, TYPE D	SQ. YD.

EMBANKMENT SETTLEMENT

THE FOLLOWING ESTIMATES OF MAXIMUM EMBANKMENT SETTLEMENT AND TIME FOR THE MAJORITY OF THE PRIMARY CONSOLIDATION SETTLEMENT AFTER COMPLETION OF THE EMBANKMENT FILL ARE FURNISHED FOR THE CONTRACTOR'S INFORMATION AND USE IN SCHEDULING THE WORK.

SOUTH ILLINOIS AVENUE STATION	IMMEDIATE *PRIMARY SETTLEMENT INCHES	TIME FOR SETTLEMENT MONTH
122+00	7.1	2
123+50	26.2	4
123+90 (RA)	26.4	4
127+32 (FA)	22.2	4
128+50	25.7	4
130+00	26.3	4
131+50	7.9	2

IT IS ANTICIPATED THAT THE EMBANKMENT NORTH OF THE RAILROAD AND SOUTH OF STATION 122+50 WILL BE ALLOWED TO SETTLE OVER FOUR MONTHS OF THE FIRST CONSTRUCTION YEAR.

FINAL GRADING, CURB PLACEMENT, DRAINAGE PLACEMENT, PAVEMENT PLACEMENT, OR PILE DRIVING SHALL NOT BEGIN UNTIL SETTLEMENT PLATFORM INFORMATION SUGGESTS THE RATE OF SETTLEMENT HAS REACHED 90% OF THE ULTIMATE SETTLEMENT INDICATED BY A PLOT OF THE SETTLEMENT VALUES TAKEN AT THE SETTLEMENT PLATFORMS.

ITEM SPECIAL - SETTLEMENT PLATFORM (FOR EMBANKMENT)

DESCRIPTION: THIS ITEM CONSISTS OF FURNISHING, CONSTRUCTING, AND MAINTAINING SETTLEMENT PLATFORMS AND OBTAINING SETTLEMENT READINGS AS REQUIRED BY THE PLANS OR AS DIRECTED BY THE ENGINEER. AT THE OPTION AND EXPENSE OF THE CONTRACTOR, ADDITIONAL SETTLEMENT PLATFORMS MAY BE INSTALLED AT LOCATIONS APPROVED BY THE ENGINEER. SETTLEMENT READINGS SHALL BE TAKEN WEEKLY BEGINNING WITH THE FIRST WEEK FOLLOWING PLACEMENT OF EACH PLATFORM AND DURING ANY SPECIFIED WAITING PERIOD. READINGS SHALL BE TAKEN MONTHLY DURING ANY CONSOLIDATION OR OFF-SEASON TIMES. THE READINGS SHALL BE PLOTTED ON GRAPH PAPER PRESENTING DEFORMATION (ON THE NEGATIVE Y-AXIS) AND FILL HEIGHT (ON THE POSITIVE Y-AXIS) VERSUS TIME (ON THE X-AXIS). A COPY OF EACH CUMULATIVE PLOT SHALL BE SENT TO THE OFFICE OF GEOTECHNICAL ENGINEERING, ATTENTION: GEOTECHNICAL DESIGN COORDINATOR, AFTER EACH SETTLEMENT READING IS RECORDED.

MATERIAL: SOUND LUMBER SUCH AS 3/4-INCH EXTERIOR GRADE PLYWOOD SHALL BE USED FOR THE BASE. THE PIPE SHALL BE 2-1/2-INCH STANDARD BLACK PIPE WITH THREADED FITTING AS SHOWN ON THE PLANS. A STEEL PLATE 36" x 36" x 1/8" MAY BE SUBSTITUTED FOR THE LUMBER FOR THE PLATFORMS, AT THE CONTRACTOR'S OPTION.

CONSTRUCTION METHODS: THE PLATFORM SHALL CONFORM TO THE DETAILS SHOWN ON SHEET 10. THE PLATFORM SHALL BE SET ON A LEVEL SURFACE. THE PIPE SHALL BE FIRMLY SECURED TO THE PLATFORM AND SHALL BE MAINTAINED IN A PLUMB POSITION DURING THE PLACEMENT OF THE EMBANKMENT. THE PIPE SHALL BE MARKED AT INTERVALS TO FACILITATE MEASUREMENT OF THE DEPTH OF FILL. THE CONTRACTOR SHALL STOP WORK IN ANY LOCATION WHERE THE SETTLEMENT PLATFORM HAS BEEN DISTURBED OR DAMAGED. PLATFORMS OR PIPES DAMAGED OR DISPLACED DURING CONSTRUCTION SHALL BE RESTORED TO THEIR PROPER CONDITION AT THE CONTRACTOR'S EXPENSE.

SETTLEMENT PLATFORMS SHALL BE PLACED AT THE FOLLOWING LOCATIONS:

STATION	OFFSET
123+00	35' LT
123+50 (REAR ABUTMENT)	35' RT
127+32 (FORWARD ABUTMENT)	CENTERLINE
128+50	30' LT
128+50	30' RT
130+00	30' LT
130+00	30' RT
	TOTAL = 7 EACH

PRIOR TO PAVING, THE TOP OF THE SETTLEMENT PLATFORM PIPE SHALL BE CUT OFF TWO FEET BELOW THE FINISHED SURFACE OF THE SUBGRADE OR FINISHED GROUND SURFACE, WHICHEVER IS APPLICABLE.

METHOD OF MEASUREMENT: THE NUMBER OF SETTLEMENT PLATFORMS TO BE PAID FOR SHALL BE THE ACTUAL NUMBER OF SETTLEMENT PLATFORMS COMPLETED, MAINTAINED, AND ACCEPTED BY THE ENGINEER.

BASIS OF PAYMENT: PAYMENT SHALL BE MADE AT THE CONTRACT UNIT PRICE EACH FOR "ITEM SPECIAL - SETTLEMENT PLATFORM" WHICH IS COMPENSATION FOR CONSTRUCTING MAINTAINING, AND MONITORING THE SETTLEMENT PLATFORMS INCLUDING FURNISHING ALL LABOR, EQUIPMENT MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK. PAYMENT SHALL NOT BE MADE FOR SETTLEMENT PLATFORMS WHICH BECOME USELESS DUE TO DAMAGE CAUSED BY THE CONTRACTOR'S OPERATIONS.

CALCULATED TM CHECKED EEL

GENERAL NOTES

RIC-C.R. 424-0.62

ITEM SPECIAL - SETTLEMENT PLATFORM, AS PER PLAN (FOR SANITARY SEWER MONITORING)

DESCRIPTION: THIS ITEM CONSISTS OF FURNISHING, CONSTRUCTING, AND MAINTAINING SETTLEMENT PLATFORMS AND OBTAINING SETTLEMENT READINGS AS REQUIRED BY THE PLANS OR AS DIRECTED BY THE ENGINEER. AT THE OPTION AND EXPENSE OF THE CONTRACTOR, ADDITIONAL SETTLEMENT PLATFORMS MAY BE INSTALLED AT LOCATIONS APPROVED BY THE ENGINEER. SETTLEMENT READINGS SHALL BE TAKEN WEEKLY DURING ANY SPECIFIED WAITING PERIOD. THE READINGS SHALL BE PLOTTED ON GRAPH PAPER PRESENTING DEFORMATION (ON THE NEGATIVE Y-AXIS) AND FILL HEIGHT (ON THE POSITIVE Y-AXIS) VERSUS TIME (ON THE X-AXIS). A COPY OF EACH CUMULATIVE PLOT SHALL BE SENT TO THE OFFICE OF GEOTECHNICAL ENGINEERING, ATTENTION: GEOTECHNICAL DESIGN COORDINATOR, AFTER EACH SETTLEMENT READING IS RECORDED.

PRIOR TO BEGINNING ANY EARTHWORK ACTIVITIES, ELEVATIONS SHALL BE TAKEN ON EACH RISER AT THE ABOVE LOCATIONS TO BE USED AS BASE ELEVATIONS AGAINST WHICH SUCCESSIVE MEASUREMENTS WILL BE COMPARED. ELEVATIONS SHALL BE TAKEN DAILY AT EACH OF THE ABOVE LOCATIONS WHILE EMBANKMENT OPERATIONS ARE PROCEEDING AND TWICE A WEEK WHEN EMBANKMENT IS NOT IN PROGRESS. THE ELEVATIONS SHALL BE KEPT IN TABLE FORM, COMPARED WITH THE INITIAL ELEVATIONS, AND THERE SHALL BE A RUNNING TOTAL OF THE TOTAL SETTLEMENT AT EACH LOCATION. THE ABOVE TABULATION SHALL BE UPDATED AFTER EACH ROUND OF ELEVATIONS HAS BEEN COMPLETED AND A COPY HAND DELIVERED TO THE ENGINEER THE SAME DAY THE ELEVATIONS ARE TAKEN.

TOTAL SETTLEMENT IN EXCESS OF 0.04 FEET SHALL REQUIRE REMEDIATION TO BRING THE SEWER BACK UP TO ITS ORIGINAL ELEVATION OR REPAIRS TO THE DAMAGED CONDUIT. EARTHWORK ACTIVITIES SHALL CEASE UNTIL THE ORIGINAL SEWER ELEVATION HAS BEEN ATTAINED, OR REPAIRS HAVE BEEN MADE.

MATERIAL: SOUND LUMBER SUCH AS 3/4-INCH EXTERIOR GRADE PLYWOOD SHALL BE USED FOR THE BASE. THE PIPE SHALL BE 2-1/2-INCH STANDARD BLACK PIPE WITH THREADED FITTING AS SHOWN ON THE PLANS. A STEEL PLATE 36" x 36" x 1/8" MAY BE SUBSTITUTED FOR THE LUMBER FOR THE PLATFORMS, AT THE CONTRACTOR'S OPTION.

CONSTRUCTION METHODS: THE PLATFORM SHALL CONFORM TO THE DETAILS SHOWN ON THE PLANS THE PLATFORM SHALL BE SET ON A LEVEL SURFACE. THE PIPE SHALL BE FIRMLY SECURED TO THE PLATFORM AND SHALL BE MAINTAINED IN A PLUMB POSITION DURING THE PLACEMENT OF THE EMBANKMENT. THE PIPE SHALL BE MARKED AT INTERVALS TO FACILITATE MEASUREMENT OF THE DEPTH OF FILL. THE CONTRACTOR SHALL STOP WORK IN ANY LOCATION WHERE THE SETTLEMENT PLATFORM HAS BEEN DISTURBED OR DAMAGED. PLATFORMS OR PIPES DAMAGED OR DISPLACED DURING CONSTRUCTION SHALL BE RESTORED TO THEIR PROPER CONDITION AT THE CONTRACTOR'S EXPENSE.

SETTLEMENT PLATFORMS SHALL BE PLACED DIRECTLY ON TOP OF THE EXPOSED 72" SANITARY SEWER AT THE FOLLOWING LOCATIONS FOR THE PURPOSE OF MONITORING THE VERTICAL LOCATION OF SEWER.

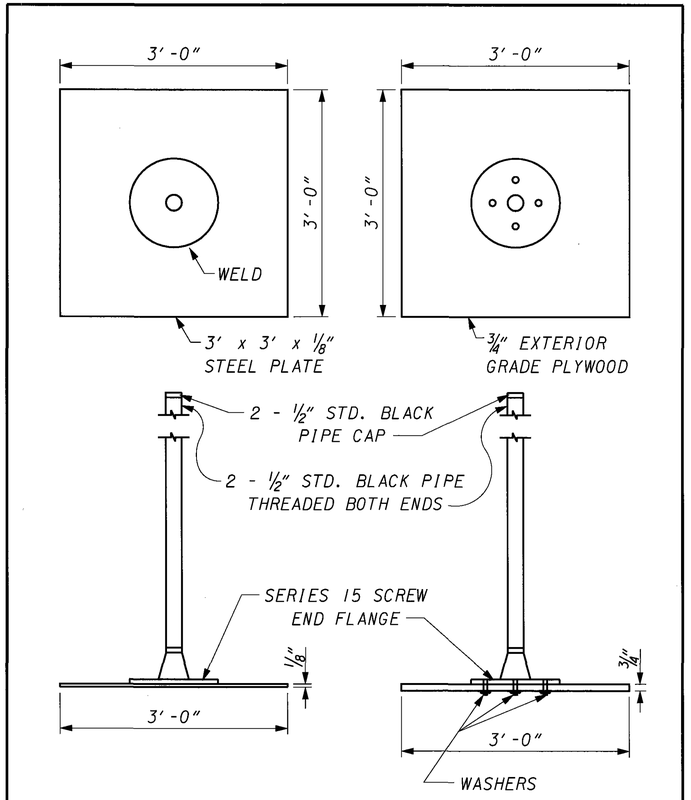
	STATION	OFFSET
SOUTH ILLINOIS AVENUE	124+34.5	57' LT
	124+37	39' LT
	124+43.5	15' LT
	124+82	10' LT
	125+07	5' LT
		13' RT
	126+30	20' RT
	126+41	36' RT
	126+51	52' RT
	126+62	70' RT
	126+74	86' RT
OAK STREET		
	96+56	45' RT
	96+67	30' RT
	96+78	15' RT
	96+89	CL
	97+03	15' LT
	97+19	31' LT
	97+35	46' LT

TOTAL = 18 EACH

PRIOR TO PAVING, THE TOP OF THE SETTLEMENT PLATFORM PIPE SHALL BE CUT OFF TWO FEET BELOW THE FINISHED SURFACE OF THE SUBGRADE OR FINISHED GROUND SURFACE, WHICHEVER IS APPLICABLE.

METHOD OF MEASUREMENT: THE NUMBER OF SETTLEMENT PLATFORMS TO BE PAID FOR SHALL BE THE ACTUAL NUMBER OF SETTLEMENT PLATFORMS COMPLETED, MAINTAINED, AND ACCEPTED BY THE ENGINEER.

BASIS OF PAYMENT: PAYMENT SHALL BE MADE AT THE CONTRACT UNIT PRICE EACH FOR "ITEM SPECIAL - SETTLEMENT PLATFORM, AS PER PLAN" WHICH IS COMPENSATION FOR CONSTRUCTING MAINTAINING, AND MONITORING THE SETTLEMENT PLATFORMS INCLUDING FURNISHING ALL LABOR, EQUIPMENT MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK. PAYMENT SHALL NOT BE MADE FOR SETTLEMENT PLATFORMS WHICH BECOME USELESS DUE TO DAMAGE CAUSED BY THE CONTRACTOR'S OPERATIONS.



NOTES:

1. SETTLEMENT PLATFORMS SHALL BE PLACED AT THE LOCATION INDICATED IN THE PLANS, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
2. CONTRACTOR HAS OPTION OF USING EITHER STEEL OR PLYWOOD PLATFORM BASE.
3. CONTRACTOR SHALL FURNISH MATERIALS AND LABOR TO EXTEND PIPE UP THROUGH ENTIRE FILL.
4. SETTLEMENT PLATFORMS SHALL BE ANCHORED BY STAKES DRIVEN AT EACH CORNER TO PREVENT OVERTURNING.

SETTLEMENT PLATFORM
NOT TO SCALE

CALCULATED TM
CHECKED EEL

GENERAL NOTES

RIC-C.R. 424-0.62

ITEM 203 - ROADWAY MISC.: LIGHT WEIGHT FILL

THIS ITEM OF WORK SHALL CONSIST OF FURNISHING AND PLACING LIGHT WEIGHT FILL CONFORMING TO ASTM D6817 TYPE EPS 22 AND ASTM C-578 TYPE II. THE LIGHT WEIGHT FILL SHALL BE DURAFILL EPS GEOFOAM BY PLYMOUTH FOAM INCORPORATED, FOAMFILL GEOFOAM BY POLYFOAM PACKERS CORPORATION, OR APPROVED EQUAL. THE MATERIAL SHALL HAVE A MINIMUM DENSITY OF 1.35 POUNDS PER CUBIC FEET, AND A COMPRESSIVE RESISTANCE OF 11 PSI AT 1% STRAIN DEFORMATION. CARE SHALL BE TAKEN TO PROTECT THE FOAM BLOCKS FROM EXPOSURE TO GASOLINE, SOLVENT NAPHTHA, FUEL OIL, MINERAL OIL, TURPENTINE, OR ANY OTHER SOLVENT. THE BLOCKS SHALL ALSO BE PROTECTED FROM EXPOSURE TO ANY HEAT SOURCE WHICH WOULD REACH 175 DEGREES (F).

SEE SHEETS 94 & 95 FOR SITE PREPARATION, AREA OF APPLICATION, POLYETHYLENE WRAP, AND EMBANKMENT TO BE PLACED ON TOP OF THE FOAM BLOCKS. JOINTS IN THE LIGHT WEIGHT FILL BLOCKS SHALL BE OFFSET FROM THE LAYER BELOW BY A MINIMUM OF 12". PRIOR TO ORDERING THE MATERIAL FOR THIS ITEM OF WORK, THE CONTRACTOR SHALL FURNISH THE ENGINEER WITH SHOP DRAWINGS SHOWING BLOCK THICKNESS, WIDTH, LENGTH AND LAYING PATTERN OR SCHEDULE. THE FOAM BLOCKS SHALL BE PLACED ON 4" OF GRANULAR BASE.

THE POLYETHLENE WRAP SHALL BE ON ALL SIDES OF THE LIGHT WEIGHT FILL. THE MATERIAL SHALL BE POLYETHLENE SHEETING (ASTM D4976) WITH A MINIMUM THICKNESS OF 8 MILS. JOINTS IN THE POLYETHLENE WRAP SHALL BE LAPPED A MINIMUM OF 18 INCHES.

PAYMENT FOR THIS ITEM OF WORK SHALL BE PAID FOR BY THE UNIT PRICE BID PER CUBIC YARD OF ITEM SPECIAL - ROADWAY MISC. : LIGHT WEIGHT FILL, WHICH PRICE AND PAYMENT INCLUDE ALL MATERIAL, SITE PREPARATION (EXCLUDING EXCAVATION), GRANULAR BASE, POLYETHYLENE WRAP, TOOLS, EQUIPMENT AND LABOR TO COMPLETE THIS ITEM OF WORK IN PLACE.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY:

ITEM 203 - ROADWAY MISC.: LIGHTWEIGHT FILL 1291 CU. YD.

ITEM 204 - PROOF ROLLING

AN ESTIMATED QUANTITY FOR THIS ITEM HAS BEEN PROVIDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER.

CALCULATED TM CHECKED EEL

GENERAL NOTES

RIC-C.R. 424-0.62

ITEM SPECIAL - MAILBOX SUPPORT

THIS WORK SHALL CONSIST OF FURNISHING AND ERECTING MAILBOX SUPPORTS AND ANY ASSOCIATED MOUNTING HARDWARE IN ACCORDANCE WITH PLAN DETAILS, AND ATTACHING AN OWNER-SUPPLIED MAILBOX AT LOCATIONS SPECIFIED IN THE PLAN, OR OTHERWISE ESTABLISHED BY THE ENGINEER.

WOOD POSTS SHALL BE NOMINAL 4" BY 4" SQUARE OR 4½" DIAMETER ROUND, AND CONFORM TO 710.14. STEEL POSTS SHALL BE NOMINAL PIPE SIZE 2" I.D., AND CONFORM TO AASHTO M 181.

HARDWARE (PLATES, SCREWS, BOLTS, ETC.) SHALL BE COMMERCIAL-GRADE GALVANIZED STEEL.

POSTS SHALL BE SET PER THE FIRST PARAGRAPH OF 606.03, AND SHALL IN NO INSTANCE BE ENCASED IN CONCRETE.

SUPPORT HARDWARE SHALL ACCOMMODATE EITHER A SINGLE OR A DOUBLE MAILBOX INSTALLATION, AND NO MORE THAN TWO BOXES MAY BE MOUNTED ON A SINGLE POST.

THE MAILBOX SHALL BE SECURELY AND NEATLY ATTACHED BY THE CONTRACTOR TO THE NEW SUPPORT. THE CONTRACTOR SHALL FURNISH ALL NECESSARY ATTACHMENT HARDWARE (NUTS, BOLTS, PLATES, SPACERS, AND WASHERS) AS NECESSARY TO ACCOMMODATE THE COMPLETE INSTALLATION.

IN THE ABSENCE OF A NEW BOX SUPPLIED BY THE OWNER, THE CONTRACTOR SHALL SALVAGE THE EXISTING BOX AND PLACE IT ON THE NEW SUPPORT. DUE CARE SHALL BE EXERCISED IN SUCH AN OPERATION, AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING OR REPLACING ANY BOX DAMAGED BY IMPROPER HANDLING ON HIS PART, AS JUDGED AND DIRECTED BY THE ENGINEER.

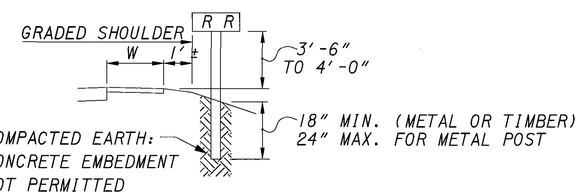
THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE LOCAL POST MASTER REGARDING THE TIMING OF THE MOVEMENT OF ANY MAILBOX TO A NEW LOCATION.

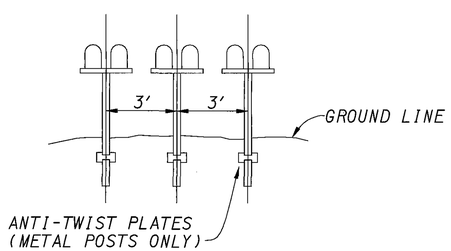
PAYMENT UNDER THIS ITEM SHALL BE LIMITED TO FINAL PERMANENT INSTALLATIONS. TEMPORARY INSTALLATIONS SHALL BE IN ACCORDANCE WITH 107.10. HOWEVER, THE SAME MATERIAL AND SIZE LIMITATIONS AS FOR PERMANENT INSTALLATIONS SHALL APPLY.

MAILBOX SUPPORTS, COMPLETE IN PLACE, WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER EACH, FOR ITEM SPECIAL MAILBOX SUPPORT, (SINGLE) (DOUBLE).

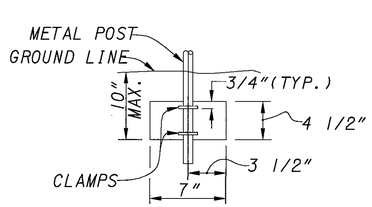
THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER FOR THE WORK NOTED ABOVE.

SPECIAL, MAILBOX SUPPORT SYSTEM, SINGLE	1	EACH
SPECIAL, MAILBOX SUPPORT SYSTEM, DOUBLE	1	EACH





GROUP MAILBOX INSTALLATION



ANTI-TWIST PLATE

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.

SEEDING AND MULCHING

THE FOLLOWING QUANTITIES ARE PROVIDED TO PROMOTE GROWTH AND CARE OF PERMANENT SEEDED AREAS:

659 SOIL ANALYSIS TEST	2	EACH
659 SEEDING AND MULCHING	26983	SQ. YD.
659 REPAIR SEEDING AND MULCHING	1403	SQ. YD
659 INTER-SEEDING	1403	SQ. YD.
659 COMMERCIAL FERTILIZER	4	TON
659 LIME	6	ACRES
659 WATER	152	M. GAL.
659 MOWING	64	M. SQ. FT.

SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL BETWEEN THE RIGHT-OF-WAY LINES, AND WITHIN THE CONSTRUCTION LIMITS FOR AREAS OUTSIDE THE RIGHT-OF-WAY LINES COVERED BY WORK AGREEMENT OR SLOPE EASEMENT. QUANTITY CALCULATIONS FOR SEEDING AND MULCHING ARE BASED ON THESE LIMITS.

CROSSINGS AND CONNECTIONS TO EXISTING PIPES AND UTILITIES

WHERE PLANS PROVIDE FOR A PROPOSED CONDUIT TO BE CONNECTED TO, OR CROSS OVER OR UNDER AN EXISTING SEWER OR UNDERGROUND UTILITY, THE CONTRACTOR SHALL LOCATE THE EXISTING PIPES OR UTILITIES BOTH AS TO LINE AND GRADE BEFORE STARTING TO LAY THE PROPOSED CONDUIT.

IF IT IS DETERMINED THAT THE ELEVATION OF THE EXISTING CONDUIT, OR EXISTING APPURTENANCE TO BE CONNECTED, DIFFERS FROM THE PLAN ELEVATION OR RESULTS IN A CHANGE IN THE PLAN CONDUIT SLOPE, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WILL BE AFFECTED BY THE VARIANCE IN THE EXISTING ELEVATIONS.

IF IT IS DETERMINED THAT THE PROPOSED CONDUIT WILL INTERSECT AN EXISTING SEWER OR UNDERGROUND UTILITY IF CONSTRUCTED AS SHOWN ON THE PLAN, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WOULD BE AFFECTED BY THE INTERFERENCE WITH AN EXISTING FACILITY.

PAYMENT FOR ALL THE OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 603 CONDUIT ITEM.

FARM DRAINS

ALL FARM DRAINS, WHICH ARE ENCOUNTERED DURING CONSTRUCTION, SHALL BE PROVIDED WITH UNOBSTRUCTED OUTLETS. EXISTING COLLECTORS WHICH ARE LOCATED BELOW THE ROADWAY DITCH ELEVATIONS, AND WHICH CROSS THE ROADWAY, SHALL BE REPLACED WITHIN THE (RIGHT OF WAY)(CONSTRUCTION) LIMITS BY ITEM 603 CONDUIT, TYPE B, ONE COMMERCIAL SIZE LARGER THAN THE EXISTING CONDUIT.

EXISTING COLLECTORS AND ISOLATED FARM DRAINS, WHICH ARE ENCOUNTERED ABOVE THE ELEVATION OF ROADWAY DITCHES, SHALL BE OUTLETTED INTO THE ROADWAY DITCH BY 603 TYPE F CONDUIT. THE OPTIMUM OUTLET ELEVATION SHALL BE ONE FOOT ABOVE THE FLOWLINE ELEVATION OF THE DITCH. LATERAL FIELD TILES WHICH CROSS THE ROADWAY SHALL BE INTERCEPTED BY 603, TYPE E CONDUIT, AND CARRIED IN A LONGITUDINAL DIRECTION TO AN ADEQUATE OUTLET OR ROADWAY CROSSING.

THE LOCATION, TYPE, SIZE AND GRADE OF REPLACEMENTS SHALL BE DETERMINED BY THE ENGINEER AND PAYMENT SHALL BE MADE ON FINAL MEASUREMENTS.

EROSION CONTROL PADS AND ANIMAL GUARDS SHALL BE PROVIDED AT THE OUTLET END OF ALL FARM DRAINS AS PER STANDARD CONSTRUCTION DRAWING DM-1.1, EXCEPT WHEN THEY OUTLET INTO A DRAINAGE STRUCTURE. PAYMENT FOR THE EROSION CONTROL PADS AND ANIMAL GUARDS AND ANY NECESSARY BENDS OR BRANCHES SHALL BE INCLUDED FOR PAYMENT IN THE PERTINENT CONDUIT ITEMS.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

603	6 " CONDUIT, TYPE B	200 FT.
603	6 " CONDUIT, TYPE E	200 FT.
603	6 " CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	200 FT.
601	ROCK CHANNEL PROTECTION TYPE C WITH FILTER	5 CU. YD.

ITEM 603 - SLOTTED DRAIN: 8", TYPE 2

THIS ITEM SHALL CONSIST OF 8 INCH DIAMETER SLOTTED DRAIN BITUMINOUS COATED STEEL CONDUIT 707.05 (14 GAUGE) WITH 6 INCH BY 3/16 INCH GALVANIZED SOLID BAR GRATE AS APPROVED BY THE ENGINEER. ALL COST FOR LABOR AND MATERIALS, INCLUDING TYPE 2 BEDDING, AND BACKFILLING AS DETAILED ON STANDARD CONSTRUCTION DRAWING DM-1.3 SHALL BE INCLUDED IN THE PRICE BID PER FOOT FOR ITEM 603 - SLOTTED DRAIN: 8 INCH, TYPE 2 .

CALCULATED TM CHECKED EEL

GENERAL NOTES

RIC-C.R. 424-0.62

CALCULATED TM CHECKED EEL

GENERAL NOTES

UNTREATED SEPTIC CONNECTIONS

THIS PLAN MAKES NO PROVISION FOR CONNECTING, NOR SHALL THE ENGINEER OR CONTRACTOR CONNECT, ANY UNTREATED SEPTIC DRAINAGE INTO THE HIGHWAY DRAINAGE SYSTEM. ANY PIPE CARRYING UNTREATED SEPTIC FLOW SHALL BE PLUGGED WITH CLASS C CONCRETE AT THE RIGHT OF WAY LINE. PAYMENT FOR PLUGGING SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 202 AND 203 ITEM.

TREATED SEPTIC CONNECTIONS

TREATED SEPTIC FLOW MAY BE DISCHARGED INTO THE HIGHWAY DRAINAGE SYSTEM PROVIDED THE OWNER HAS ACQUIRED AN OFFICIAL PERMIT FROM RICHLAND COUNTY OR CITY OF MANSFIELD.

IN EACH CASE WHERE A PERMIT HAS BEEN ISSUED FOR MAKING A TREATED SEPTIC CONNECTION INTO A HIGHWAY DRAINAGE CONDUIT, AN INSPECTION WELL SHALL BE PROVIDED IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWING DM-3.1.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER IN MAKING THE ABOVE CONNECTIONS:

603	6" CONDUIT, TYPE C	200 FT.
604	INSPECTION WELL	3 EACH

REVIEW OF DRAINAGE FACILITIES

BEFORE ANY WORK IS STARTED ON THE PROJECT AND AGAIN BEFORE FINAL ACCEPTANCE BY THE STATE, REPRESENTATIVES OF THE STATE AND THE CONTRACTOR, ALONG WITH LOCAL REPRESENTATIVES, SHALL MAKE AN INSPECTION OF ALL EXISTING SEWERS WHICH ARE TO REMAIN IN SERVICE AND WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING CONDUITS AND THEIR APPURTENANCE SHALL BE DETERMINED FROM FIELD OBSERVATIONS. RECORDS OF THE INSPECTION SHALL BE KEPT IN WRITING BY THE STATE.

ITEM 603 - CONDUIT, MISC.: 72" SANITARY SEWER INSPECTION

THE EXISTING 72" SANITARY SEWER SHALL BE VIDEO INSPECTED FOR THE LENGTH OF THE CONDUIT FROM STATION 10+00 TO STATION 17+00 (SEE SHEETS 94 AND 95). THE CONDITION OF THE EXISTING CONDUIT AND ITS APPURTENANCE SHALL BE DETERMINED AND DOCUMENTED WITH COLOR VIDEO ON A VCR TAPE WITH AN AUDIO DESCRIPTION OF CONDITIONS. CRACKS AND DETERIORATION SHALL BE NOTED AND LOCATED.

THE VIDEO INSPECTION SHALL BE PERFORMED DURING LOW FLOW CONDITIONS WHEN THE DEPTH OF FLOW IS LESS THAN 1.5 FEET. THE INSPECTION SHALL BE PERFORMED BETWEEN MIDNIGHT AND 6:00 AM. NO CLEANING OF THE SEWER IS REQUIRED.

THE SEWER SHALL BE INSPECTED PRIOR TO THE START OF WORK AND AGAIN BEFORE FINAL ACCEPTANCE BY THE STATE. THE SEWER SHALL ALSO BE INSPECTED AS DIRECTED BY THE ENGINEER WHEN SETTLEMENT EXCEEDING 0.04 FEET IS SUSPECTED.

PAYMENT SHALL BE AT THE UNIT PRICE BID FOR EACH INSPECTION FOR ITEM 603 - CONDUIT, MISC.: 72" SANITARY SEWER INSPECTION.

PIPE MATERIAL

ALL DRAINAGE CONDUITS 24" AND OVER IN SIZE SHALL BE 706.02

ALL NEW CONDUITS, INLETS, CATCH BASINS, AND MANHOLES CONSTRUCTED AS A PART OF THE PROJECT SHALL BE FREE OF ALL FOREIGN MATTER AND IN A CLEAN CONDITION BEFORE THE PROJECT WILL BE ACCEPTED BY THE STATE.

ALL EXISTING SEWERS INSPECTED INITIALLY BY THE ABOVE MENTIONED PARTIES SHALL BE MAINTAINED AND LEFT IN A CONDITION REASONABLY COMPARABLE TO THAT DETERMINED BY THE ORIGINAL INSPECTION. ANY CHANGE IN THE CONDITION RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE CORRECTED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 603 CONDUIT ITEMS.

MANHOLES, CATCH BASINS AND INLETS REMOVED OR ABANDONED

ALL CASTINGS SHALL BE CAREFULLY REMOVED AND STORED WITHIN THE RIGHT OF WAY FOR SALVAGE BY CITY OF MANSFIELD FORCES.

PAYMENT FOR ALL OF THE ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 202 ITEM.

SANITARY WORK

THE FOLLOWING CONDUIT TYPES MAY BE USED: 707.42, 707.43, 707.44, 707.45, 707.46, 707.47, 707.51, 707.52 SDR35, 706.01, 707.02 OR 706.08 WITH JOINTS AS PER 706.11 OR 706.12.

THE PAY ITEM MEASURED PER FT. SHALL BE:

603 BY SIZE CONDUIT, TYPE B OR C, FOR SANITARY

STORM WATER POLLUTION PREVENTION PLAN (SWPPP) AND TEMPORARY EROSION CONTROL (TEC)

THE CONTRACTOR SHALL PREPARE A SWPPP AND CALCULATE TEC QUANTITIES ACCORDING TO SUPPLEMENTAL SPECIFICATIONS 832 AND 833. PAYMENT MADE UNDER THE FOLLOWING PAY ITEMS:

ITEM 832 EROSION CONTROL	10000	EACH
ITEM 832 STORM WATER POLLUTION PREVENTION PLAN	1	EACH

POST CONSTRUCTION STORM WATER TREATMENT

THIS PLAN UTILIZES STRUCTURAL BEST MANAGEMENT PRACTICES (BMP'S) FOR POST CONSTRUCTION STORM WATER TREATMENT. THE FOLLOWING BMP'S HAVE BEEN DESIGNED INTO THE PLANS.

VEGETATED SWALES

VEGETATED SWALES HAVE BEEN IDENTIFIED IN THE TABLE BELOW FOR USE IN THIS PLAN. TAKE CARE TO GRADE THESE AREAS AS THE PLAN INDICATES. STABILIZE THE SWALE WITH ITEM 670 - VEGETATED SWALE EROSION PROTECTION MAT, TYPE B UPON FINAL GRADING. PAYMENT SHALL BE INCLUDED IN THE PERMANENT DITCH EROSION PROTECTION ITEMS.

STATION	FROM	OFFSET	STATION	TO	OFFSET
S. ILLINOIS AVE.					
132+10		59' RT	133+10		48' RT
132+85		51' RT	133+85		44' RT
138+50		58' RT	138+76		66' RT
OAK ST.					
95+00		58' LT	95+97		82' LT
96+70		90' LT	98+00		87' LT
98+06		52' RT	98+94		61' RT

FENCE MISC.: TEMPORARY FENCE, TYPE CL, 5'

THIS ITEM OF WORK SHALL CONSIST OF CONSTRUCTING A TEMPORARY FENCE AT THE LOCATION SHOWN ON SHEETS 25,26,27 AND 97. THE 6-FOOT CHAIN LINK FENCE FABRIC SALVAGED FROM THE REMOVAL OF THE EXISTING FENCE FROM THE SANITARY SEWER TREATMENT PLANT AREA MAY BE USED IN THE TEMPORARY FENCE.

PRIOR TO REMOVAL OF THE EXISTING FENCE, THE ENGINEER SHALL DETERMINE THE ACCEPTABILITY OF THE FENCE FABRIC FOR USE IN THE TEMPORARY FENCE LOCATION. SHOULD THE AMOUNT OF ACCEPTABLE FENCE MATERIAL NOT BE SUFFICIENT TO PLACE THE TEMPORARY FENCE, THE CONTRACTOR SHALL FURNISH NEW 5' CHAIN LINK FABRIC OR SALVAGED 5' CHAIN LINK FABRIC FROM OFF OF THE PROJECT SUBJECT TO THE APPROVAL OF THE ENGINEER.

ALL DETAILS CONTAINED IN STANDARD CONSTRUCTION DRAWINGS F-1.1 AND F-3.1 SHALL APPLY TO THE TEMPORARY FENCE CONSTRUCTION.

STANDARD 3-WIRE BRACKETS SHALL BE REUSED FROM THE EXISTING FENCE, FURNISHED FROM THE CONTRACTOR'S STOCK OR FURNISHED NEW WHICH WILL SUPPORT 3 STRANDS OF BARBED WIRE. THE BRACKETS SHALL BE SPECIFICALLY MANUFACTURED FOR PLACEMENT ON TOP OF THE SIZE FENCE POSTS USED AND INSTALLED SLOPE UPWARD AWAY FROM THE INTERIOR OF THE FACILITY AT AN ANGLE OF 45°. THE TOP OF THE BRACKET SHALL EXTEND TO A POINT 12" LATERALLY AWAY FROM THE FENCE. THE BARBED WIRE SHALL BE AS SPECIFIED IN CMS 710.01.

FOLLOWING CONSTRUCTION OF THE PROJECT, THE TEMPORARY FENCE SHALL BE REMOVED. THE CONSTRUCTION SEQUENCE FOR THE NEW FENCE AND REMOVAL OF THE TEMPORARY FENCE SHALL BE AS FOLLOWS:

1) CONSTRUCT THE NEW FENCE AT THE SPECIFIED LOCATION ACCEPT FOR THE TIE-IN LOCATIONS.

2) REMOVE THE TEMPORARY FENCE AT THE TIE-IN LOCATIONS AND COMPLETE THE NEW FENCE CONSTRUCTION.

3) REMOVE AND DISPOSE OF ALL COMPONENTS OF THE TEMPORARY FENCE.

PAYMENT PER FOOT OF FENCE MISC.: TEMPORARY FENCE, TYPE CL, 5' SHALL INCLUDE FENCE MATERIAL, POSTS, BRACES, LABOR, TOOLS, EQUIPMENT AND INCIDENTALS NECESSARY TO CONSTRUCT AND REMOVE THE TEMPORARY FENCE.

FENCE MISC.: TEMPORARY FENCE, TYPE CL, 6'

THIS ITEM OF WORK SHALL BE THE SAME AS FOR FENCE MISC.: TEMPORARY FENCE, TYPE CL, 5' EXCEPT THAT THE WORK ITEM SHALL APPLY TO THE SANITARY SEWER WET WELL AND LIFT STATION LOCATION RIGHT OF STATION 137+75 AND REQUIRE 6' FABRIC IN LIEU OF 5' FABRIC.

FENCE, TYPE CL, AS PER PLAN
FENCE, TYPE CL, MISC.: 6', AS PER PLAN

THIS ITEM OF WORK, IN ADDITION TO ITEM 607, SHALL INCLUDE THE FURNISHING AND PLACING OF STANDARD POST TOP BARBED WIRE BRACKETS AND 3 STANDS OF BARBED WIRE. THE BRACKETS SHALL BE NEW AND SLOPE UPWARD AT 45° FOR A LATERAL DISTANCE OF 12". BARBED WIRE SHALL BE NEW AND BE AS SPECIFIED IN CMS 710.01. THE BARBED WIRE STRANDS SHALL BE FASTENED TO THE CORRESPONDING STRAND AT EACH END OF THE PROPOSED FENCE.

ITEM 448 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22, AS PER PLAN
ITEM 448 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22, AS PER PLAN
ITEM 301 ASPHALT CONCRETE BASE, PG64-22, AS PER PLAN

THE REQUIREMENTS CONTAINED IN ODOT'S 2002 CONSTRUCTION AND MATERIAL SPECIFICATIONS FOR ASPHALT CONCRETE PAVEMENTS FOR MATERIALS, PRODUCT CONTROL AND PLACEMENT SHALL BE MODIFIED ACCORDING TO THE FOLLOWING:

1. ASPHALTIC CONCRETE JOINTS

A. LONGITUDINAL AND TRANSVERSE JOINTS IN THE ASPHALTIC CONCRETE WEARING COURSE SHALL BE OFFSET A MINIMUM OF EIGHT (8) INCHES FROM THE CORRESPONDING LONGITUDINAL AND TRANSVERSE JOINTS OF THE ASPHALTIC CONCRETE LEVELING COURSE.

B. TRANSVERSE JOINTS IN BOTH THE LEVELING AND WEARING COURSES SHALL BE CAREFULLY CONSTRUCTED AND THOROUGHLY COMPACTED TO PROVIDE A SMOOTH RIDING SURFACE OVER THESE JOINTS. TRANSVERSE JOINTS SHALL BE MADE BY FIRST TRIMMING THE EXISTING FACE OF THE COMPACTED MATERIAL TO A VERTICAL FACE AND PAINTING THE JOINT FACE WITH A THIN COATING OF HOT ASPHALT CEMENT BEFORE THE FRESH MATERIAL IS PLACED AGAINST IT. FRESH MATERIAL SHALL OVERLAP THE EXISTING JOINT 1 TO 2 INCHES AND SHALL BE LEFT SUFFICIENTLY HIGH TO ALLOW FOR COMPACTION. BEFORE ROLLING THE JOINT, THE COURSE AGGREGATES SHALL BE CAREFULLY MOVED WITH A BROOM OR LUTE ONTO THE SURFACE OF THE UNROLLED AREA. AT THE END OF THE PAVING DAY, ALL PAVING LANES SHALL BE COMPLETED TO APPROXIMATELY THE SAME LOCATION. WHEN PAVING THE ECHELON, THE LANES SHALL BE AS NEARLY EVEN AS PRACTICAL.

C. LONGITUDINAL JOINTS SHALL BE ROLLED DIRECTLY BEHIND THE PAVING OPERATION. THE FIRST LANE PLACED SHALL BE TRUE TO LANE AND GRADE AND SHALL HAVE A VERTICAL FACE. THE FINISHING MACHINE SHALL BE SO POSITIONED SO THAT IN SPREADING, THE MATERIAL OVERLAPS THE EDGE OF THE PREVIOUSLY PLACED LANE BY 1 TO 2 INCHES AND SHALL BE LEFT SUFFICIENTLY HIGH TO ALLOW FOR COMPACTING.

BEFORE ROLLING, THE MATERIAL OVERLAPPING THE JOINT SHALL BE CAREFULLY MOVED WITH A BROOM OR LUTE ONTO THE SURFACE OF THE UNROLLED LANE. WHEN THE ABUTTING LANE IS NOT PLACED IN THE SAME DAY, OR THE JOINT IS DISTORTED DURING THE DAYS WORK BY TRAFFIC OR BY OTHER MEANS, THE EDGE OF THE LANE SHALL BE CAREFULLY TRIMMED TO LINE AND PAINTED WITH A VERY THIN COATING OF HOT ASPHALT CEMENT BEFORE THE ADJACENT ABUTTING LANE IS PLACED.

2. ASPHALT CONCRETE SURFACE COURSE PLACEMENT

ASPHALT SURFACE COURSE MATERIAL SHALL BE PLACED NO EARLIER THAN EIGHT (8) HOURS AFTER THE PLACEMENT OF THE UNDERLYING INTERMEDIATE AND BASE COURSES, WITHOUT PRIOR APPROVAL OF THE ENGINEER.

3. ASPHALT MIX TEMPERATURES

A. MIX TEMPERATURES SHALL NOT VARY BY MORE THAN 20 DEGREES FAHRENHEIT FROM ONE TRUCK TO ANOTHER.

B. TEMPERATURES EXCEEDING 325 DEGREES FAHRENHEIT, BUT BELOW 350 DEGREES FAHRENHEIT, WILL NOT BE REJECTED BUT NOTIFICATION WILL BE GIVEN TO THE PLANT TO BRING THE TEMPERATURES WITHIN TOLERANCE. MATERIAL EXCEEDING PRODUCTION TEMPERATURE OF 350 DEGREES FAHRENHEIT WILL BE REJECTED.

4. PLANT PRODUCTION & LOADING

A. THE COMPUTER PRINTOUT ON THE PLANT SHALL BE OPERATIONAL AT ALL TIMES. SHOULD A PRINTER PROBLEM OR TECHNICAL DIFFICULTIES ARISE, THE PROBLEM SHALL BE CORRECTED IMMEDIATELY. THE PLANT OPERATOR WILL INFORM THE LABORATORY OF ANY COMPUTER MALFUNCTIONS AND WHAT CORRECTIVE ACTION HAS TO BE TAKEN. SHOULD THE PROBLEM NOT BE CORRECTED IN A TIMELY MANNER, PRODUCTION SHALL CEASE UNTIL THE PRINTER IS OPERATIONAL. PRINTOUTS ARE TO BE GIVEN TO THE CITY'S QUALITY ASSURANCE REPRESENTATIVE AT THE END OF EACH PRODUCTION DAY.

B. MIX QUANTITIES IN THE SILO SHALL BE KEPT TO A LEVEL TO MINIMIZE SEGREGATION. SILO CONFIGURATION, BATCHER CAPACITY AND TIMING WILL DETERMINE THIS QUANTITY.

C. TRUCK BEDS SHALL BE CLEAN AND SPRAYED WITH A UNIFORM COATING OF AN APPROVED RELEASE AGENT. EXCESSIVE RELEASE AGENT AND PUDDLING SHALL NOT BE ACCEPTABLE. THE RELEASE AGENT SHALL BE OPERATIONAL AT ALL TIMES, WITH ANY WATER DILUTIONS WITH THE MANUFACTURER'S RECOMMENDATIONS. THE USE OF A FINE MIST OF DIESEL ON THE APRON AND TAILGATE IS ALLOWED, BUT THE USE OF DIESEL FUEL IN TRUCK BEDS IS PROHIBITED.

D. TRUCKS SHALL BE LOADED IN THREE (3) DROPS TO MINIMIZE SEGREGATION. THE REAR, FRONT AND MIDDLE SHALL BE LOADED AS PER ASPHALT INSTITUTE GUIDELINES.

5. RECLAIMED MATERIALS

A. THE LOCATION OF PROPOSED RECLAIMED MATERIAL SHALL BE PLAINLY IDENTIFIED. APPROVAL OF SAID MATERIAL INSPECTED BY THE ENGINEER AND/OR HIS QUALITY ASSURANCE REPRESENTATIVE IS REQUIRED PRIOR TO PRODUCTION.

B. THE RECLAIMED MATERIAL SHALL BE CRUSHED AND SCREENED PRIOR TO INCORPORATION INTO THE MIX. ANY OVERSIZED MATERIAL MAY BE CAUSE FOR REJECTION.

CALCULATED TM CHECKED EEL

GENERAL NOTES

RIC-C.R. 424-0.62

102088/DGN/088GN.DGN 1/25/05 HN,SJK,RC

6. ASPHALT JOB MIX FORMULA REQUIREMENTS

A. 448 TYPE 1 SURFACE COURSE

IN DEVELOPING THE JOB MIX FORMULA(S) THE FOLLOWING SPECIAL TECHNICAL PROVISIONS ARE MADE. EXCEPT AS MODIFIED HEREIN, THE MIXES SHALL MEET ALL THE OTHER REQUIREMENTS OF 441.02-1.

1. THE USE OF RECLAIMED MATERIALS IN THIS ITEM ARE PROHIBITED.

2. THE MIX SHALL BE A BLEND OF LIMESTONE COARSE AGGREGATE AND NATURAL SAND.

3. THE ASPHALT CEMENT CONTENT SHALL BE A MINIMUM OF 6.8% BY TOTAL MIX WEIGHT.

4. A MAXIMUM OF 10% MANUFACTURED SAND MAY BE USED.

5. THE PERCENTAGE PASSING THE NO. 4 SIEVE SHALL BE 60-65.

6. THE PERCENTAGE PASSING THE NO. 8 SHALL BE 30-48.

B. 448 TYPE 2 INTERMEDIATE COURSE

1. A MAXIMUM OF 20% RECLAIMED MATERIALS MAY BE USED.

2. THE MIX SHALL BE A BLEND OF CRUSHED GRAVEL OR LIMESTONE COARSE AGGREGATE AND NATURAL SAND.

3. THE ASPHALT CEMENT CONTENT SHALL BE A MINIMUM OF 5.5% BY TOTAL MIX WEIGHT.

4. THE PERCENTAGE PASSING THE NO. 4 SIEVE SHALL BE 48-58.

C. 301 ASPHALT CONCRETE BASE

1. A MAXIMUM OF 30% RECLAIMED MATERIALS MAY BE USED.

D. APPROVAL AND ACCEPTANCE

1. ALL JOB MIX FORMULAS SHALL BE A F/A RATION (FINE TO ASPHALT RATIO) OF 1.0 OR LESS BY WASH TEST.

2. THE USE OF MANUFACTURED SAND WITH RECLAIMED MATERIALS IS NOT ALLOWED. A MAXIMUM OF 10% WILL BE ALLOWED IN VIRGIN MIXES.

3. JMF APPROVALS FOR VOIDS SHALL BE 3.0% TO 3.5%.

4. FIELD ACCEPTANCE ON VOIDS SHALL BE 2.0% TO 4.0%.

5. ALL OTHER TESTING ACCEPTED IN ACCORDANCE WITH 448 SPECIFICATIONS.

102088/DGN/088GN.DGN 1/4/05 HN,SJK,RC

CALCULATED TM CHECKED EEL

GENERAL NOTES

RIC-C.R. 424-0.62

CALCULATED TM
CHECKED EEL

GENERAL NOTES

ENVIRONMENTAL COMMITMENTS

1) *ANY UNAVOIDABLE CUTTING OF TREES WITH SUITABLE ROOSTING AND BROOD-REARING HABITAT FOR THE INDIANA BAT (LIVING OR STANDING DEAD TREES OR SNAGS WITH EXFOLIATING, PEELING OR LOOSE BARK, SPLIT TRUNKS AND/OR BRANCHES, OR CAVITIES) WILL BE PERFORMED ONLY BEFORE APRIL 15 OR AFTER SEPTEMBER 15 WHEN THE SPECIES WOULD NOT BE USING SUCH HABITAT.*

2) *BEST MANAGEMENT PRACTICES WILL BE EMPLOYED FOR EROSION CONTROL MEASURES AND SHALL BE ACCORDING TO THE OHIO DEPARTMENT OF TRANSPORTATION'S CONSTRUCTION AND MATERIAL SPECIFICATIONS, LOCATION AND DESIGN MANUAL AND STANDARD CONSTRUCTION DRAWINGS.*

3) *WETLANDS MITIGATION WILL BE CONDUCTED ACCORDING TO OEPA AND USACOE REGULATIONS. WETLAND LOSSES WITH THE PROJECT WILL BE MITIGATED BY USING THE BIG ISLAND MITIGATION BANK.*

4) *PRIOR TO CONSTRUCTION ACTIVITIES, THE PUBLIC WILL BE NOTIFIED IN THE LOCAL NEWSPAPER OF THE PROJECT AND DETOUR.*

5) *OAK STREET WILL BE CLOSED FOR A MAXIMUM OF ONE MONTH AND WHEN SCHOOL IS NOT IN SESSION.*

6) *THE PROPOSED RIGHT OF WAY LIMITS FOR THE FERNWOOD FARM AS REFLECTED IN THE OES LETTER TO THE OSHPO DATED MAY 28, 2004 SHALL BE ADHERED TO .*

7) *ALL NECESSARY PERMITS WILL BE OBTAINED PRIOR TO CONSTRUCTION.*

RIC-C.R. 424-0.62

102088/DGN/088GN.DGN 9/17/04 HN,SJK,RC,HN

ITEM 614 - MAINTAINING TRAFFIC

A MINIMUM OF ONE LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED ON SOUTH ILLINOIS AVENUE AT ALL TIMES BY USE OF THE EXISTING PAVEMENT, THE COMPLETED PAVEMENT, 615 PAVEMENT FOR MAINTAINING TRAFFIC, 615 ROADS FOR MAINTAINING TRAFFIC AND TEMPORARY SURFACES USING 410 AND 614.

A MINIMUM OF ONE LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED ON OAK STREET AT ALL TIMES BY USE OF THE EXISTING PAVEMENT, THE COMPLETED PAVEMENT, 615 PAVEMENT FOR MAINTAINING TRAFFIC, 615 ROADS FOR MAINTAINING TRAFFIC AND TEMPORARY SURFACES USING 410 AND 614 EXCEPT FOR A PERIOD NOT TO EXCEED 30 CONSECUTIVE CALENDAR DAYS, WHEN THROUGH TRAFFIC MAY BE DETOURED AS SHOWN ON SHEET 20 . THE 30 CONSECUTIVE CALENDAR DAYS SHALL BE IN THE LATE SPRING AND SUMMER MONTHS WHEN SCHOOL IS NOT IN SESSION. LIQUIDATED DAMAGES SHALL BE ASSESSED IN ACCORDANCE WITH 108.07 IN THE AMOUNT OF $1250 FOR EACH CALENDAR DAY THE ROADWAY REMAINS CLOSED TO TRAFFIC BEYOND THE SPECIFIED LIMIT.

INTERIM COMPLETION DATES

CONSTRUCTION OF PHASE I THROUGH PHASE II, NO. 5 SHALL BE COMPLETED BY NOVEMBER 18, 2006.

CONSTRUCTION OF ALL ITEMS OF CONSTRUCTION THROUGH PHASE III, NO. 5 SHALL BE COMPLETED BY NOVEMBER 17, 2007.

LIQUIDATED DAMAGES SHALL BE ASSESSED IN ACCORDANCE WITH 108.07 IN THE AMOUNT OF $1,250 FOR EACH CALENDAR DAY THAT THE CONSTRUCTION ITEMS REMAIN UNCOMPLETED FOR ALL OF THE CONSTRUCTION ITEMS UP TO THE PHASE AND NUMBER LISTED FOR EACH OF THE ABOVE INTERIM COMPLETION DATES.

FOR THE DRIVE AT STATION 135+05 LEFT, CLOSURE SHALL BE LIMITED TO A MAXIMUM OF 10 CALENDAR DAYS.

PHASE I

1) CONSTRUCT UTILITIES NORTH & SOUTH OF THE TRACKS
   - CONSTRUCT THE CULVERT AT STATION 131+00 FROM 70' ± RIGHT OF THE PERMANENT ALIGNMENT TO THE OUTLET.
   - CONSTRUCT THE CATCH BASINS AT STATION 136+00 AND THE TRUNK LINE TO THE ROCKY FORK RIVER.
   - CONSTRUCT WATER MAIN AND SANITARY WORK ALONG SOUTH ILLINOIS AVENUE FROM STATION 123+64 TO STA. 125+00 AND FROM 126+15 TO STA. 132+50 INCLUDING THE TEMP. CONNECTION ALONG THE TEMP. OAK ST. CONNECTION.
2) CONSTRUCT THE TEMPORARY ROAD, TEMPORARY RAILROADCROSSING AND SIGNALS, AND PLACE DRUMS TO PREVENT USE OF THE TEMPORARY PAVEMENT UNTIL STEP 5) BELOW. ± ACCESS SHALL BE MAINTAINED AT ALL TIMES TO THE DRIVES AT STATION 118+50 RIGHT, STATION 129+40 RIGHT, STATION 137+82 RIGHT AND THE RAILROAD DRIVES LEFT AND RIGHT OF THE TEMPORARY ROAD BOTH NORTH AND SOUTH OF THE TRACKS.
3) CONSTRUCT THE OAK STREET TEMPORARY CONNECTION TO THE TEMPORARY ROAD.
4) CONSTRUCT TEMPORARY DRIVEWAYS LEFT OF TEMPORARY ROAD STATION 16+75, 32+15 AND RIGHT OF OAK STREET STATION 93+50 TO 95+50.
5) PLACE TRAFFIC ON THE SOUTH ILLINOIS AVENUE TEMPORARY ALIGNMENT AND PLACE OAK STREET ON THE TEMPORARY CONNECTION TO TEMPORARY SOUTH ILLINOIS AVENUE ALIGNMENT. ± MAINTAIN ACCESS TO STONE CONTAINER ON THE EXISTING SOUTH ILLINOIS AVENUE PAVEMENT.

PHASE II

1) MAINTAIN ACCESS TO THE DRIVES LEFT OF STATION 133+50 TO 135+05
   - CONSTRUCT THE PROPOSED EMBANKMENT FROM STATION 132+75 TO STATION 136+05.
   - CONSTRUCT THE DRAINAGE AT STATION 133+10, 133+85 AND 135+98.66.
   - CONSTRUCT THE CURB & GUTTER AND COMPLETE THE PAVEMENT FROM STATION 133+00 TO 136+01.41.
   - CONSTRUCT THE PROPOSED DRIVES LEFT OF STATION 133+50, LEFT OF STATION 13+50 AND STATION 135+05.
   - CONSTRUCT 25' ASPHALT TAPER FROM PROPOSED PROFILE AT STATION 136+01.41 TO THE EXISTING PROFILE AT 136+26.41.
   - PLACE DRIVE ACCESS ON THE COMPLETED DRIVE PAVEMENT AND MAINTAIN ACCESS ON THE COMPLETED AND EXISTING SOUTH ILLINOIS AVENUE TO THE NORTH.
2) CONSTRUCT THE REMAINDER OF THE FORWARD APPROACH EMBANKMENT FROM STATION 126+50 UP TO STATION 132+75. (SEE THE EMBANKMENT SETTLEMENT NOTE ON SHEET 9 FOR ESTIMATED TIMES FOR SETTLEMENT).
3) CONSTRUCT THE SOUTH ILLINOIS AVENUE EMBANKMENT FROM STATION 119+00 UP TO STATION 122+90± PLACING CONCRETE BARRIER AT 122+88±. (SEE THE EMBANKMENT SETTLEMENT NOTE ON SHEET 9 FOR ESTIMATED TIMES FOR SETTLEMENT).
4) CONSTRUCT OAK STREET EMBANKMENT FROM STATION 94+90 TO 99+88, INCLUDING THE LIGHT WEIGHT FILL.
5) CONSTRUCT THE REMAINING PORTION OF THE CULVERT AT STATION 131+00.
6) AFTER 90% OF THE PROJECTED SETTLEMENT HAS OCCURED, CONSTRUCT PIER 2 AND THE FORWARD ABUTMENT.
7) AFTER 90% OF THE PROJECTED SETTLEMENT HAS OCCURED, CONSTRUCT THE NEW WATER MAIN ALONG OAK STREET.
8) CONSTRUCT DRAINAGE AND PROPOSED PAVEMENT WITHIN THE LIMITS SPECIFIED IN 3) ABOVE AND ON OAK STREET BEGINNING WITH STATION 95+02.75 INCLUDING SIDEWALK AND GUARDRAIL.
9) CONSTRUCT NEW GRASAN DRIVE AT STATION 120+57.5.
10) CONSTRUCT THE DRIVE CONNECTION RIGHT OF STATION 134+50 AND THE TEMPORARY PAVEMENT AT THE SAME LOCATION. PLACE DRUMS TO PREVENT USE OF THE TEMPORARY CONNECTION.
11) CLOSE OAK STREET FOR 30 CONSECUTIVE CALENDAR DAYS TO COMPLETE EARTHWORK, DRAINAGE AND PAVEMENT ON OAK STREET FROM THE BEGINNING OF WORK UP TO STATION 95+02.75. SEE OAK STREET CLOSURE LIMITATIONS IN THE NOTES.
12) PLACE PERMANENT AND TEMPORARY PAVEMENT MARKINGS.
13) PLACE OAK STREET TRAFFIC ON PROPOSED OAK STREET, PROPOSED SOUTH ILLINOIS AVENUE FROM STATION 120+50± TO STATION 122+50±, AND THE TEMPORARY CONNECTION TO THE TEMPORARY ROAD OPPOSITE STATION 122+50.

PHASE III

1) CONSTRUCT THE REMAINDER OF THE REAR APPROACH EMBANKMENT FROM STATION 122+90 TO 124+25 INCLUDING THE MSE RETAINING WALL. (SEE THE EMBANKMENT SETTLEMENT NOTE ON SHEET 9 FOR ESTIMATED TIMES FOR SETTLEMENT).
2) CONSTRUCT THE REAR ABUTMENT, PIER 1, SUPERSTRUCTURE, ROADWAY DRAINAGE, APPROACH SLABS, AND PAVEMENT ON THE PERMANENT SOUTH ILLINOIS AVENUE ALIGNMENT.
3) CONSTRUCT SIDEWALK AND PLACE GUARDRAIL.
4) PLACE THE SIGNING AND PAVEMENT MARKINGS.
5) PLACE TRAFFIC ON THE PROPOSED SOUTH ILLINOIS AVENUE ALIGNMENT.
6) REMOVE ALL TEMPORARY PAVEMENT EXCEPT FOR THE AREAS DESIGNATED TO REMAIN. SEE SHEET 18 FOR SCHEMATIC.
7) REGRADE TEMPORARY PAVEMENT AREAS TO PRECONSTRUCTION CONTOURS, INCLUDING FILLING DITCHES AND REPLACE ALL TOPSOIL WHERE CALLED FOR IN THE PLANS AND AS SHOWN ON THE DETAIL ON SHEET 18.

NOTICE OF CLOSURE SIGNS, AS DETAILED IN THESE PLANS, SHALL BE ERECTED BY THE CONTRACTOR AT LEAST ONE WEEK IN ADVANCE OF THE SCHEDULED ROAD CLOSURE. THE SIGNS SHALL BE ERECTED ON THE RIGHT HAND SIDE OF THE ROAD FACING TRAFFIC. THEY SHALL BE PLACED SO AS NOT TO INTERFERE WITH THE VISIBILITY OF ANY OTHER TRAFFIC CONTROL SIGNS. ON ROADWAYS, THEY SHOULD BE ERECTED AT THE POINT OF CLOSURE.

THE CONTRACTOR SHALL NOTIFY THE MANSFIELD CITY ENGINEER IN WRITING A MINIMUM OF 48 HOURS IN ADVANCE OF A DISRUPTION OF WATER, NATURAL GAS OR ELECTRIC SUPPLIES TO THE MANSFIELD CITY WASTE WATER TREATMENT PLANT.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER FOR THE MAINTENANCE OF TRAFFIC.

410, TRAFFIC COMPACTED SURFACE, TYPE A OR B	25	CU. YD.
410, TRAFFIC COMPACTED SURFACE, TYPE C	25	CU. YD.
614, ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	20	CU. YD.
616, WATER	4	M. GAL.

THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN STANDARD 48" X 30" "ROAD CLOSED" SIGNS, SIGN SUPPORTS, BARRICADES, GATES, AND LIGHTS, AS DETAILED IN STANDARD CONSTRUCTION DRAWING MT-101.60 AT THE FOLLOWING LOCATIONS DURING PERIODS IN WHICH THE AFFECTED ROADS ARE CLOSED TO TRAFFIC.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH 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 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

DUST CONTROL

THE CONTRACTOR SHALL FURNISH AND APPLY WATER AND CALCIUM CHLORIDE FOR DUST CONTROL AS DIRECTED BY THE ENGINEER. THE FOLLOWING CONTINGENCY QUANTITIES HAVE BEEN INCLUDED FOR DUST CONTROL PURPOSES:

616, WATER	4	M. GAL.

TEMPORARY WORK ZONE MARKINGS AND SIGNS

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER FOR TEMPORARY WORK ZONE PAVEMENT MARKINGS AND SIGNS PER THE REQUIREMENTS 614.04 AND 614.10.

614 - WORK ZONE CENTERLINE, CLASS I	0.54	MI.
614 - WORK ZONE EDGE LINE, CLASS I	1.09	MI.
614 - WORK ZONE STOP LINE, CLASS I	17	FT
614 - WORK ZONE MARKING SIGN	12	EACH

CALCULATED TM CHECKED EEL

MAINTENANCE OF TRAFFIC GENERAL NOTES

RIC-C.R. 424-0.62

ITEM 614 - REPLACEMENT SIGN

FLAT SHEET SIGNS 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 TO THE CONTRACTOR SHALL BE REPLACED IN KIND WHEN ORDERED BY THE ENGINEER. REPLACEMENT SIGNS SHALL BE NEW. OTHER MATERIALS MAY BE IN USED BUT GOOD CONDITION SUBJECT TO APPROVAL BY THE ENGINEER.

PAYMENT FOR THE NEW SIGNS SHALL BE MADE AT THE CONTRACT PRICE PER SQUARE FEET FOR ITEM SPECIAL, REPLACEMENT SIGN, AND SHALL INCLUDE THE COST OF REMOVING AND DISPOSING OF DAMAGED SIGNS, HARDWARE AND SUPPORTS, AND PROVIDING THE NECESSARY REPLACEMENT HARDWARE, SUPPORTS, ETC.

AN ESTIMATED QUANTITY OF 10 SQUARE FEET HAS BEEN PROVIDED IN THE GENERAL SUMMARY.

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 10 EACH HAS BEEN PROVIDED IN THE GENERAL SUMMARY.

ITEM 615 - ROADS FOR MAINTAINING TRAFFIC AS PER PLAN

IN ADDITION TO THE ITEMS LISTED FOR LUMP SUM PAYMENT UNDER ITEM 615 ROADS FOR MAINTAINING TRAFFIC, THIS ITEM SHALL INCLUDE THE FOLLOWING:

1) TEMPORARY RETAINING WALL RIGHT OF STATION 129+50. SEE THE TEMPORARY RETAINING WALL DESCRIPTION ON SHEET 22.

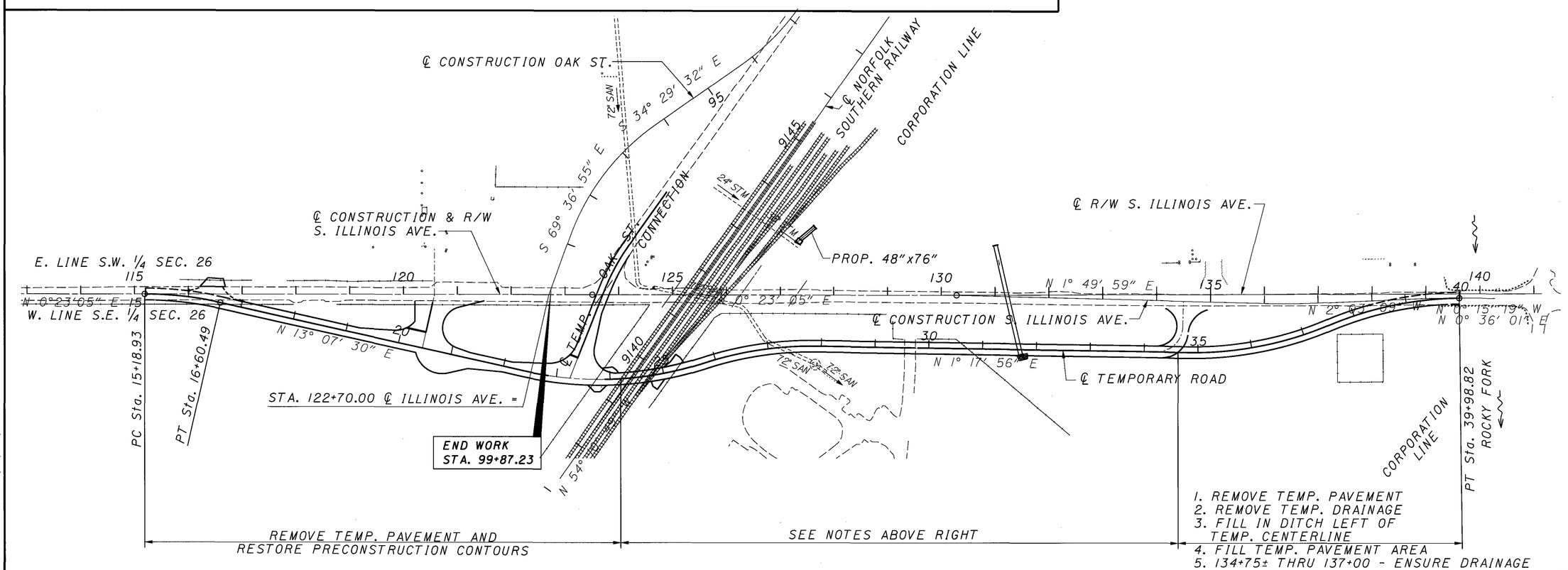
2) THE UNDERCUTTING ON THE TEMPORARY OAK STREET, THE 712.09 TYPE D GEOFABRIC AND THE TEMPORARY BACKFILL WITH 702.16C TYPE B GRANULAR MATERIAL.

RESTORATION FROM THE RAILROAD TRACKS UP TO STA. 34+80

1) REMOVE TEMPORARY PAVEMENT FROM THE TRACKS UP TO THE EAST EDGE OF MAINTENANCE DRIVE NO. 2, SEE SHEET 84 FOR DRIVE GEOMETRY.

2) REGRADE STATION 125+50 TO STATION 127+00 PER THE CROSS SECTIONS

3) REMOVE THE WEST SIDE OF THE TEMPORARY PAVEMENT FROM STATION 127+00± TO STATION 129+42± REFER TO SHEET 84 FOR MAINTENANCE DRIVE NO. 2 WESTSIDE PAVEMENT EDGE AND THE CROSS SECTIONS.



TEMPORARY PAVEMENT REMOVAL AND REGRADING SCHEMATIC

N

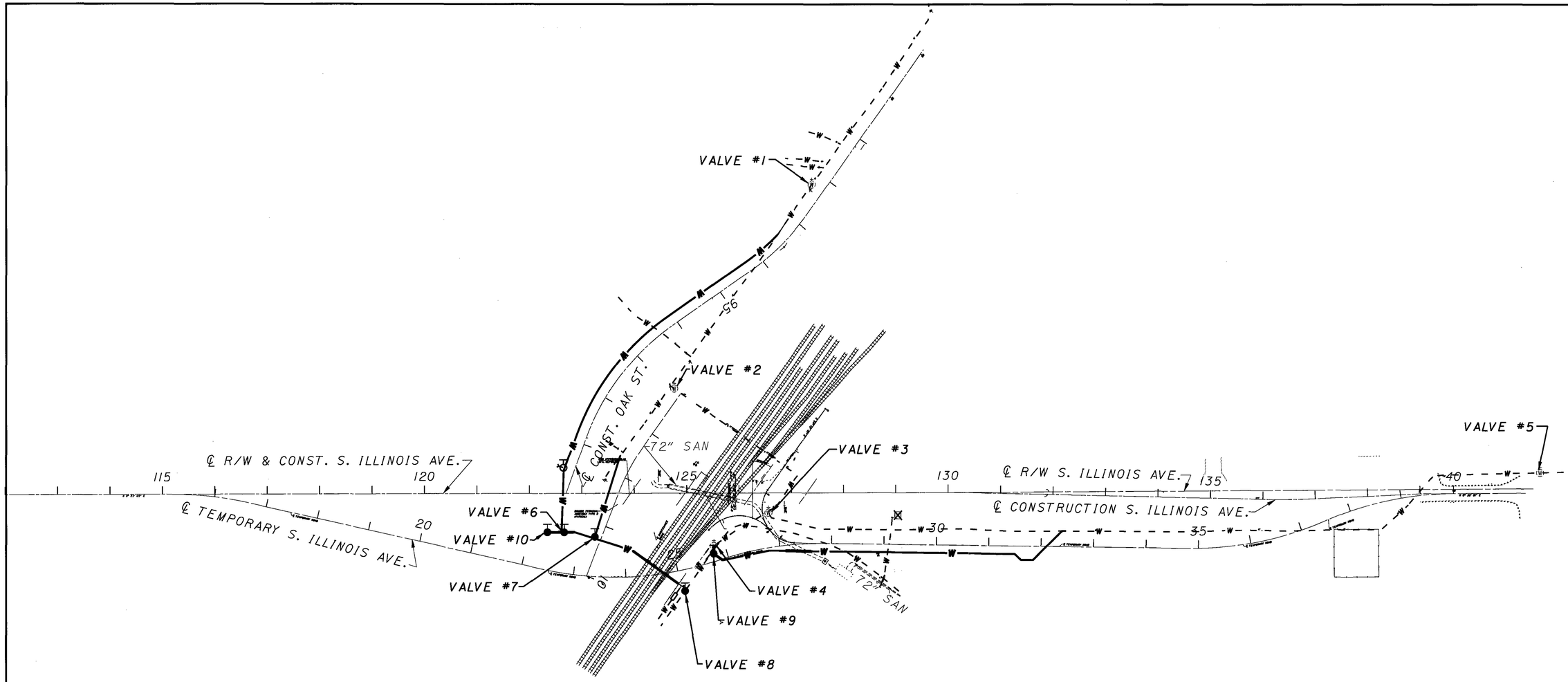
0 50 100 200 HORIZONTAL SCALE IN FEET

CALCULATED | CHECKED

MAINTENANCE OF TRAFFIC GENERAL NOTES

RIC-C.R. 424-0.62

088GNLDGN 2/14/05 KJK,HN,CEO,RC



HORIZONTAL SCALE IN FEET
0 50 100 200

WATERMAIN RELOCATION SCHEMATIC

WATERMAIN CONSTRUCTION SEQUENCE

GENERAL NOTES

1) THE CONTRACTOR SHALL NOT OPERATE ANY WATER VALVES. THE CONTRACTOR SHALL NOTIFY THE CITY, IN WRITING, 24 HOURS IN ADVANCE OF ANY REQUIRED WATERMAIN SHUTDOWN. NOTIFICATION FOR MONDAY SHUTDOWNS SHALL BE MADE ON FRIDAY.

2) SHUTDOWN OF THE 12" WATERMAIN ON OAK STREET, WHICH FEEDS THE WASTE WATER TREATMENT PLANT, CANNOT BE FOR MORE THAN FOUR HOURS AT A TIME. A MINIMUM OF 24 HOURS SHALL TRANSPIRE BETWEEN SUCCESSIVE SHUTDOWNS OF THE TREATMENT PLANT LINE.

THE PLANT USES WATER TO CHLORINATE, COOL BEARINGS AND OTHER FUNCTIONS IN THE PROCESS OF TREATING THE WASTE WATER, THEREFORE SHUTDOWN OF THE LINE WILL NECESSITATE SUSPENSION OF PLANT OPERATIONS. THE CITY PLANS ON STORING ALL SANITARY FLOWS WHILE THE WATERMAIN CONNECTIONS ARE BEING PERFORMED. SINCE STORM EVENTS RESULT IN INCREASED FLOWS TO THE SANITARY PLANT, THE 12" WATER TO THE PLANT CAN ONLY BE SHUT DOWN DURING DRY WEATHER, NOT IMMEDIATELY BEFORE OR FOLLOWING A STORM EVENT. CONNECTIONS MADE DURING HIGHER FLOWS WOULD RESULT IN RELEASE OF UNTREATED SANITARY FLOWS TO THE ROCKY FORK OF THE MOHICAN RIVER. THEREFORE, THE CITY SHALL BE THE FINAL AUTHORITY ON WHEN THE 12" WATER ON OAK STREET OR ANY PART OF THE LINE TO THE TREATMENT PLANT CAN BE SHUT DOWN.

3) THE FOLLOWING NOTES REFER TO THE PHASES AND STEPS CONTAINED IN THE OVERALL CONSTRUCTION SEQUENCE FOR THE PROJECT ON SHEET 11

CONSTRUCTION SEQUENCE

PHASE I, STEP 1)

1) CONSTRUCT PROPOSED WATER MAIN FROM STATION 125+48 TO STATION 132+50.
   - A) CONSTRUCT THE ENBANKMENT FOR THE TEMPORARY ROAD FROM STA. 25+00 TO 27+00
   - B) CONSTRUCT THE WATERMAIN EXCEPT FOR THE TIE-IN CONNECTIONS
   - C) CLOSE VALVES 3, 4 AND 5.
   - D) MAKE CONNECTIONS BETWEEN THE HOURS OF 6PM AND MIDNIGHT.
   - E) TEST AND CHLORINATE.
   - F) MAKE 2" TAP FOR THE WASTE WATER TREAMENT PLANT AT APPROXIMATELY STATION 128+10.
   - G) OPEN VALVES 4 AND 5.

2) CONSTRUCT THE NEW BACKFLOW PREVENTER AND CHAMBER.
   - A) CONSTRUCT THE NEW VALVES AND FITTINGS IN THE NEW CHAMBER PRIOR TO INSTALLATION
   - B) CLOSE VALVES 2, 3 & 4.
   - C) INSTALL THE NEW BACKFLOW PREVENTER & CHAMBER WITHIN THE MAXIMUM 4 HOUR SHUTDOWN, BETWEEN THE HOURS OF 11PM AND 5AM
     NOTE: THE 12" CUTTING-IN-SLEEVE SPECIFIED ON THE BACKFLOW PREVENTER CHAMBER DETAILS TO TIE IN WITH THE EXISTING 12" WATER MAIN FOR THIS STEP WILL BE REMOVED IN PHASE 1, STEP 1, NO. 4D.
   - D) TEST AND CHLORINATE.
   - E) OPEN VALVES 2, 3, & 4.

3) CONSTRUCT PROPOSED 16" WATER MAIN FROM STATION 122+64 TO STATION 124+85.
   - CLOSE VALVE 5 AND 10.

4) CONSTRUCT THE TEMPORARY CONNECTION TO OAK STREET
   - A) CONSTRUCT THE TEMPORARY 12" FROM STATION 98+75± TO THE 16" CONSTRUCTED ABOVE AT SOUTH ILLINOIS AVENUE STATION 123+23.
   - B) CLOSE VALVES 1, 2, & 4.
   - C) MAKE CONNECTION TO THE 12" ON OAK STREET DURING A MAXIMUM 4 HOUR CLOSURE BETWEEN THE HOURS OF 11PM AND 5AM.
   - D) MAKE THE CONNECTIONS TO THE 12" TO THE BACKFLOW PREVENTER AND THE 16", BLOCKING THE 12" WEST OF THE TEE TO THE NEW BACKFLOW PREVENTER. CONNECTIONS SHALL BE MADE DURING THE SAME 4 HOUR PERIOD OF TIME AS THE TEMPORARY CONNECTION TO OAK STREET.
   - E) OPEN VALVES 1, 4, 7, AND 9.
   - F) LEAVE VALVE 2 CLOSED, TAKING THE EXISTING WATERMAIN CROSSING THE TRACKS OUT OF COMMISSION.

PHASE II

6) IN ADDITION TO THE EMBANKMENT UPSTATION OF OAK STREET STATION 94+90, CONSTRUCT THE RIGHT SIDE EMBANKMENT FROM STATION 93+50 TO STATION 94+90.

7) CONSTRUCT THE NEW WATER MAIN ALONG OAK STREET, ACROSS SOUTH ILLINOIS AVENUE AND DOWN THE EMBANKMENT TO TIE IN WITH THE 16" WATER MAIN CONSTRUCTED UNDER PHASE I STEP 1).

   - A) CONSTRUCT THE WATERMAIN ALONG OAK STREET, ACROSS SOUTH ILLINOIS AVENUE AND DOWN THE EMBANKMENT CONNECTING TO THE 16".
   - B) CLOSE VALVES 1, 6 AND 7.
   - C) MAKE THE OAK STREET CONNECTION, SHUTTING THE 12" WATERMAIN DOWN FOR A MAXIMUM OF 4 HOURS BETWEEN THE HOURS OF 11 PM AND 5 AM.
   - D) TEST AND CHLORINATE.
   - E) OPEN VALVES 1 AND 6.
   - F) LEAVE VALVE 7 CLOSED, TAKING THE EXISTING 12" WATERMAIN ALONG EXISTING OAK STREET OUT OF COMMISSION.

WATERMAIN

RIC-C.R. 424-0.62

MAINTENANCE OF TRAFFIC DETOUR PLAN - OAK STREET

MANSFIELD
MULBERRY ST.
PARK AVE. EAST
LUTHER PL.
E. 2ND
MARSHALL AVE.
E. 1ST.
FRANKLIN
BENTLEY
BUSHNELL
5TH. AVE.
N. ILLINOIS AVE.
MANSFIELD WOOSTER RD.
CR. 424
GLENN
HEDGES
FOSTER ST.
OAK ST.
NORFOLK SOUTHERN RAILWAY
HICKORY LN.
S. ILLINOIS AVE.
S. MAIN
HOME
CLEVELAND
S. DIAMOND ST.
300'
500'
LEAH DR.
JANICE DR.
DAVIDSON ST.
DIANE DR.
OAK STREET WORK AREA
MANSFIELD CEMETERY
39
13
42
430

Ⓐ
OAK ST.
D3
DETOUR
M4-9R-30

Ⓑ
OAK ST.
D3
DETOUR
M4-9L-30

Ⓒ
TO S. ILLINOIS AVE.
D3
OAK ST.
D3
DETOUR
M4-9R-30

Ⓓ
OAK ST.
D3
DETOUR
M4-9-30

Ⓔ
ROAD CLOSED 500 FT.
W20-3

Ⓕ
ROAD CLOSED 1500 FT.
W20-3

Ⓖ
ROAD CLOSED
RII-2
ON TYPE III BARRICADES
DETOUR
M4-9R-30

Ⓗ
ROAD CLOSED TO THRU TRAFFIC
RII-4

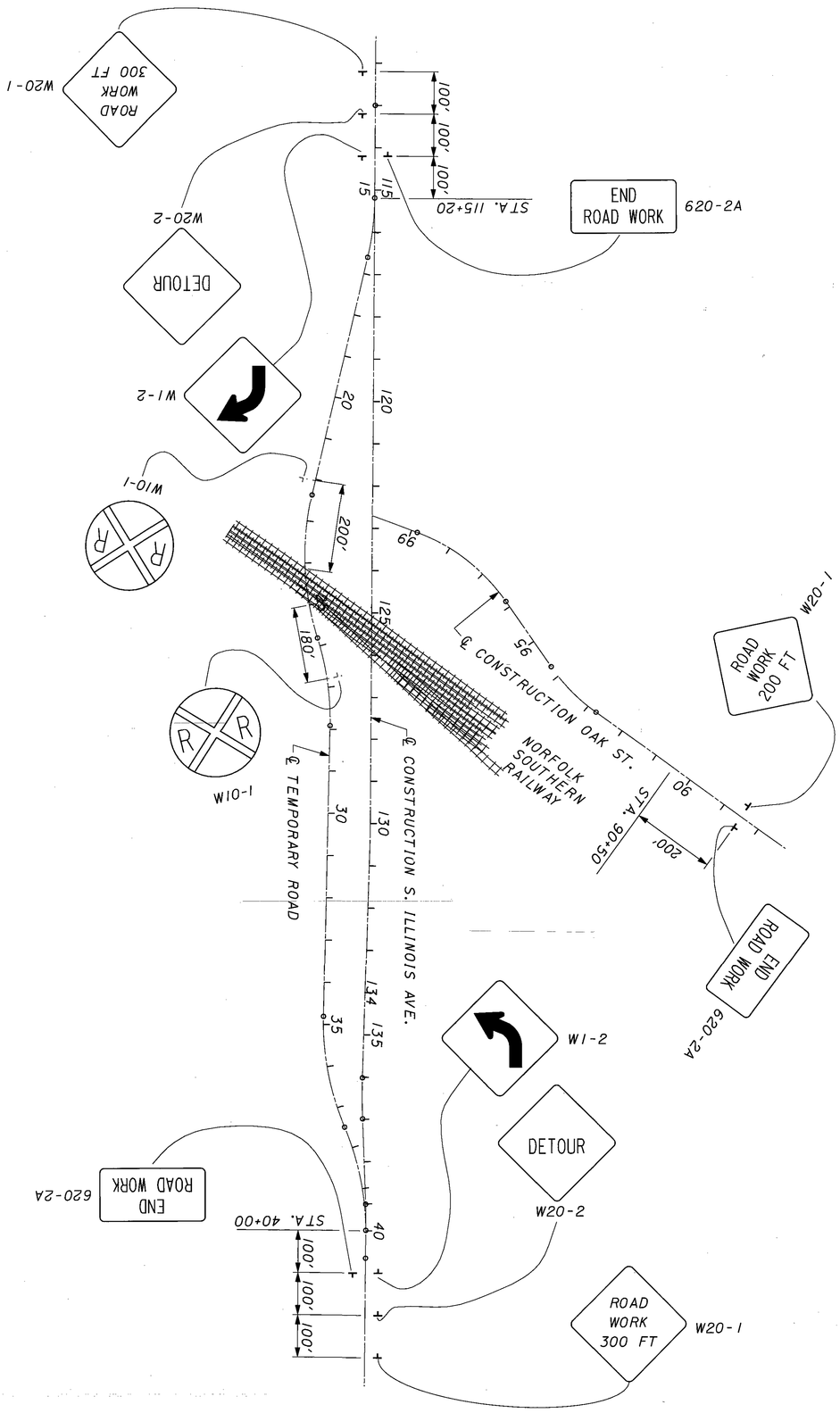
OAK STREET LOCAL DETOUR

NOTE: THE FURNISHING, ERECTING, MAINTAINING AND REMOVAL OF THE DETOUR SIGN AND SUPPORTS SPECIFIED IN THIS SHEET SHALL BE PAID UNDER ITEM 614 DETOUR SIGNING.

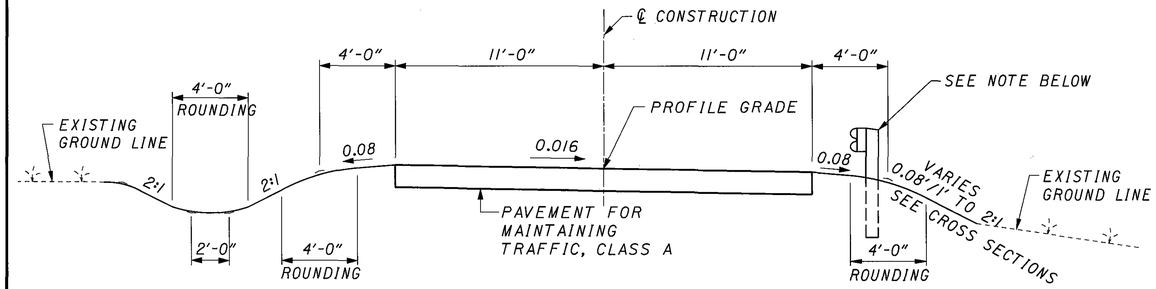
RIC-C.R. 424-0.62

102088/DGN/088CD.DGN 1/4/05 RC.HN

088MDA.DGN 1/4/05 KH,HN,RC

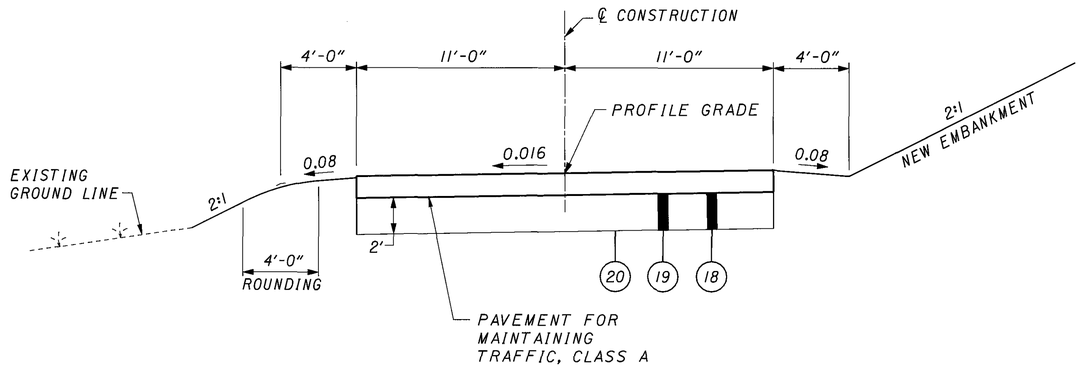


NOTE: THE FURNISHING, PLACEMENT, MAINTENANCE AND REMOVAL OF ALL SIGNS AND SUPPORTS SPECIFIED ABOVE SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 614 MAINTAINING TRAFFIC.



TEMPORARY ROAD TYPICAL SECTION

STA. 15+20.43 TO STA. 29+50
STA. 29+50.00 TO STA. 39+75±

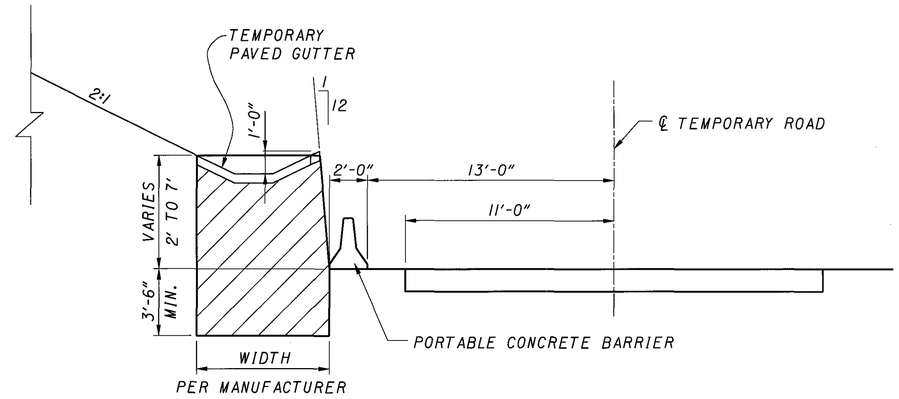


TEMPORARY OAK STREET CONNECTION TYPICAL SECTION

STA. 8+48± TO STA. 9+88.5

ITEM LEGEND

(18)	ITEM 204	EXCAVATION OF SUBGRADE
(19)	ITEM 204	GRANULAR MATERIAL, TYPE B
(20)	ITEM 204	GEOTEXTILE FABRIC, 712.09, TYPE D



TEMPORARY RETAINING WALL DETAIL

STA. 126+95± TO STA. 129+00± RIGHT

TEMPORARY RETAINING WALL

THIS WORK SHALL CONSIST OF THE DESIGN, FABRICATION, AND CONSTRUCTION OF A TEMPORARY RETAINING WALL FOR TEMPORARY CUT OFF OF THE FINAL EMBANKMENT TO AVOID THE TEMPORARY ROAD FOR MAINTAINING SOUTH ILLINOIS AVENUE TRAFFIC.
THE WALL IS NOT REQUIRED TO BE FACED WITH PRECAST CONCRETE PANELS. EXPOSED GEOFABRIC OR GEOGRID MATERIAL MAY RETAIN THE EARTH FACE OF THE WALL.

THE CONTRACTOR SHALL SELECT THE TYPE OF WALL CONSTRUCTION.

DETAILED DRAWINGS AND DESIGN CALCULATIONS SHALL BE PREPARED BY AN OHIO REGISTERED PROFESSIONAL ENGINEER. TWO COPIES OF THE DESIGN CALCULATIONS AND THREE COPIES OF THE DETAIL DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL 60 DAYS PRIOR TO COMMENCEMENT OF WALL CONSTRUCTION.

PAYMENT FOR THE WORK REQUIRED TO CONSTRUCT THE TEMPORARY RETAINING WALL SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 615 ROADS FOR MAINTAINING TRAFFIC, AS PER PLAN

TEMPORARY ROAD GUARDRAIL

FROM TEMPORARY ROAD CENTERLINE STATION 25+00 TO STATION 27+87.5, RIGHT SIDE, TEMPORARY TYPE 5 GUARDRAIL AND 2 TYPE A ANCHOR ASSEMBLIES SHALL BE PLACED AND REMOVED UNDER ITEM 615. PLACEMENT SHALL BE AS SHOWN ON SHEET 26 AND THE TYPICAL SECTION SHOWN ABOVE. GUARDRAIL SECTIONS FURNISHED SHALL BE AS ALLOWED IN CMS 615.04.

FROM TEMPORARY ROAD CENTERLINE STATION 30+22.50, TO STATION 33+97.50 RIGHT SIDE, PERMANENT GUARDRAIL SHALL BE AS SHOWN ON SHEETS 27 AND 28 AND THE TYPICAL SECTION SHOWN ABOVE. QUANTITIES FOR THIS SECTION OF GUARDRAIL ARE ITEMIZED ON SHEETS 27 AND 28. ALL MATERIALS AND PLACEMENT REQUIREMENTS SHALL CONFORM TO CMS ITEM 606.

CALCULATED EEL
CHECKED PDG

MAINTENANCE OF TRAFFIC TYPICAL SECTIONS

RIC-C.R. 424-0.62

088GYA.DGN 12/28/05 RB,CAR,KH,RC,HN,BH,ML.B

MAINTENANCE OF TRAFFIC LEGEND

(A) WORK ZONE CENTERLINE, SOLID, DOUBLE, 642 PAINT

(B) WORK ZONE EDGE LINE, WHITE 642 PAINT

(C) WORK ZONE STOP LINE, 642 PAINT

BEGIN WORK STA. 115+18.93

POT Sta. 13+00.00

℄ R/W & CONST. S. ILLINOIS AVE.

N 0° 23' 05" E

PC Sta. 15+18.93

PT Sta. 16+60.49

MATCH LINE STA. 17+00

+53.50 ℄ ASPHALT DR. W=36'; L=50'

R-11-2 MOUNTED ON TYPE III BARRICADES

ROAD CLOSED

℄ TEMPORARY ROAD

T ESMT

U ESMT

EX. R/W

C/L

50' R.

△=R.R. SPIKE ○=⅝" REBAR W/REF CAP	●=⅝" REBAR ○=⅝" REBAR W/REF CAP
STA. 114+00	STA. 15+90
REFERENCE POINT	REFERENCE POINT

℄ R/W S. ILLINOIS AVE. 37.82' 16.55' 32.42'

℄ TEMP. ROAD 35.65' 13.90' 37.16'

NOTE: FOR TEMPORARY PAVEMENT MARKING QUANTITIES, SEE SHEET 17 .

TEMPORARY ROAD CURVE DATA

P.I. STA. = 15+90.00
Δ = 12° 44' 26" (RT.)
Dc = 9° 00' 00"
R = 636.62'
T = 71.07'
L = 141.56'
E = 3.96'

GRAPHIC GRADE EXISTING PAVEMENT

STA. 15+18.93

+37

-0.81%

P.V.C. Sta. 16+85.79

28' V.C.
P.V.I. STA. 17+00.00
P.V.I. ELEV. = 1,166.00
K = 69.4

1,159.44 1,161.70 1,163.34 1,164.97 1,165.81 1,166.51 1,166.40 1,166.20 1,166.01

1,155.24 1,155.07 1,154.82 1,154.76 1,154.77 1,155.25 1,155.88 1,156.94 1,158.15 1,159.85 1,161.70 1,163.34 1,164.97 1,165.81 1,166.21 1,166.96 1,165.14

1180 1175 1170 1165 1160 1155 1150 1145 1140

13 14 15 16 17

REF NO.	STATION FROM	STATION TO	SIDE		
202	FENCE REMOVED			FT	126
1-R	15+80	17+00		LT	
TOTALS CARRIED TO SUBSUMMARY					126

HORIZONTAL SCALE IN FEET 0 10 20 40

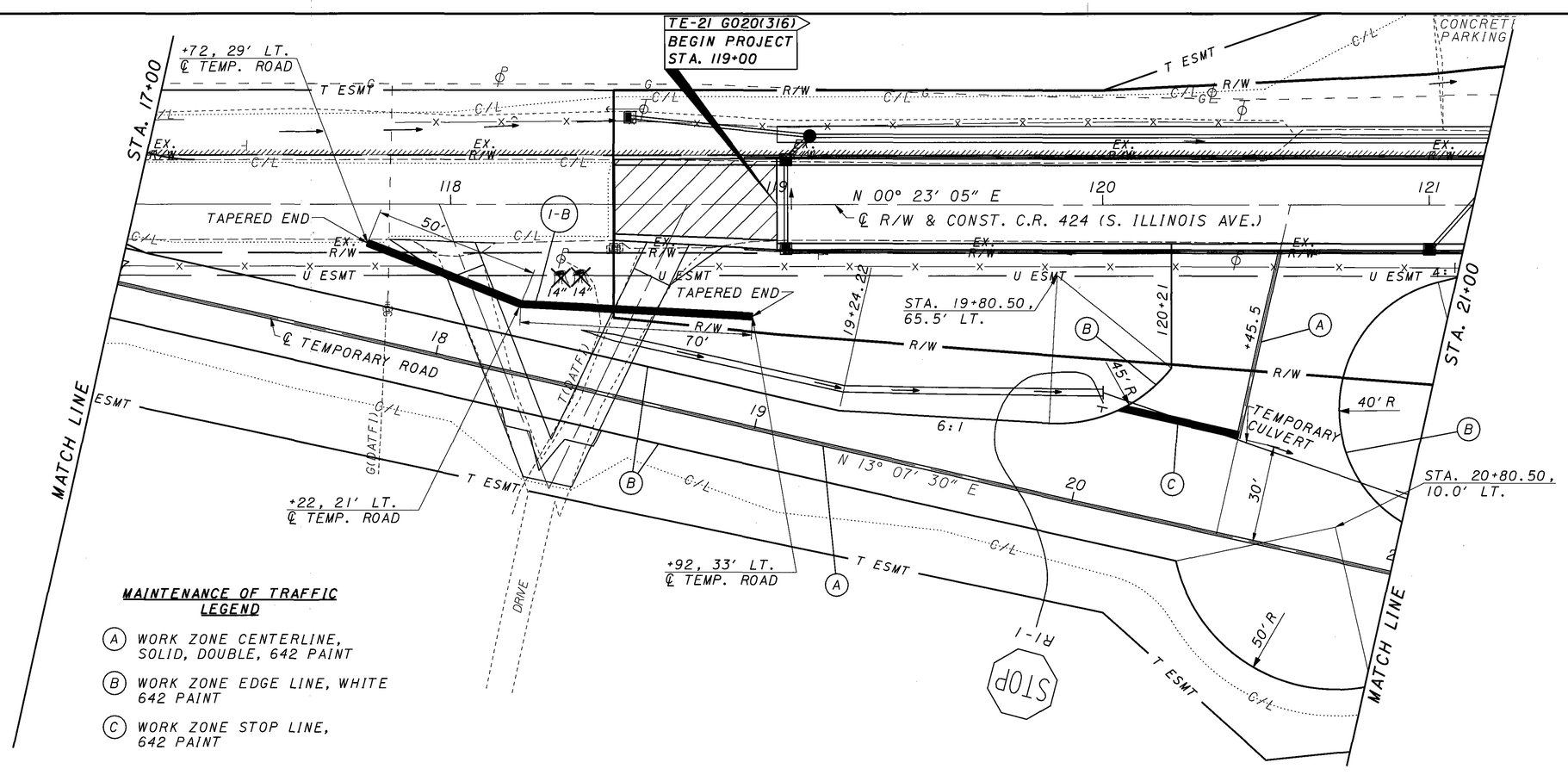
CALCULATED BPB CHECKED TM

TEMPORARY ROAD PLAN AND PROFILE STA. 13+00 TO STA. 17+00

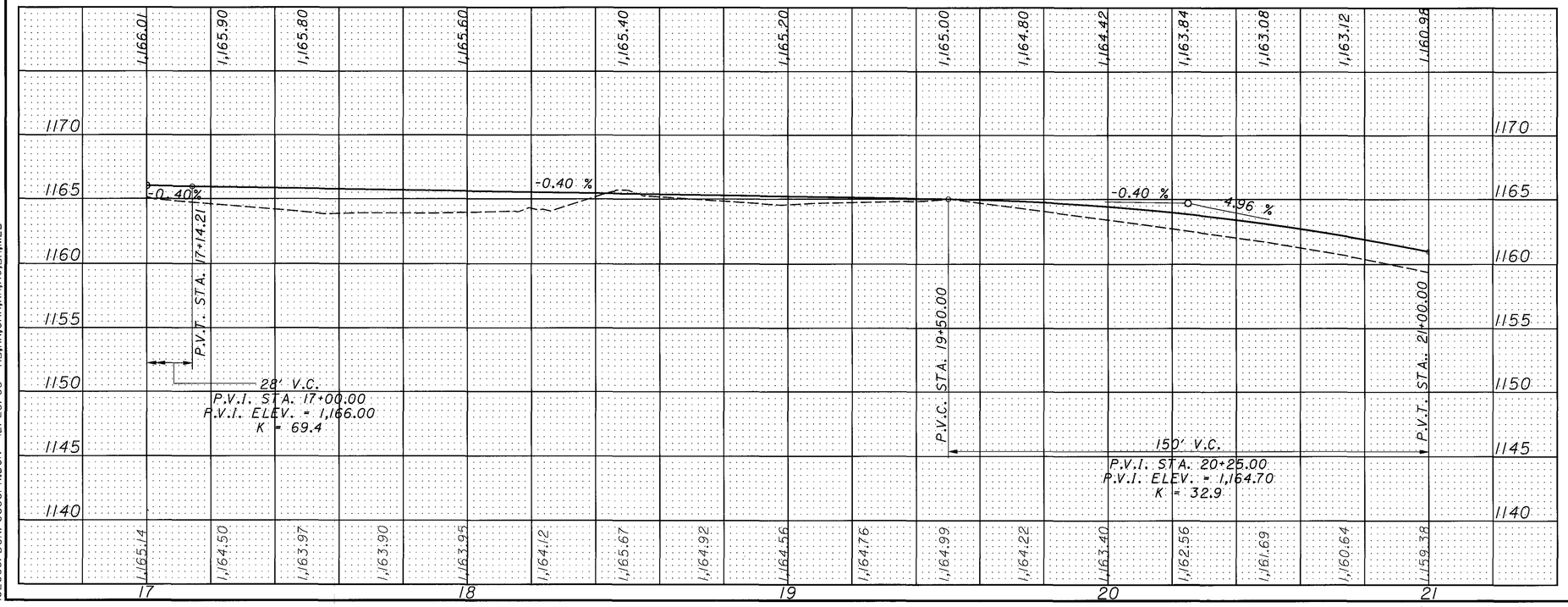
RIC-C.R. 424-0.62

23 153

I02088/DGN/088GPJ.DGN 11/17/05 RB,CAR,KH,HN,RC



REFERENCE	SEE SHEET NO.
S. ILLINOIS PLAN AND PROFILE	46



REF NO.	STATION FROM	STATION TO	SIDE								
614	OBJECT MARKER TWO WAY		EACH	3							3
	BARRIER REFLECTOR TYPE B2		EACH	4							4
622	PORTABLE CONCRETE BARRIER, 32"		FT	120							120
TOTALS CARRIED TO SUBSUMMARY				3							
I-B	17+72	18+92	LT								

CALCULATED BPB
CHECKED TM

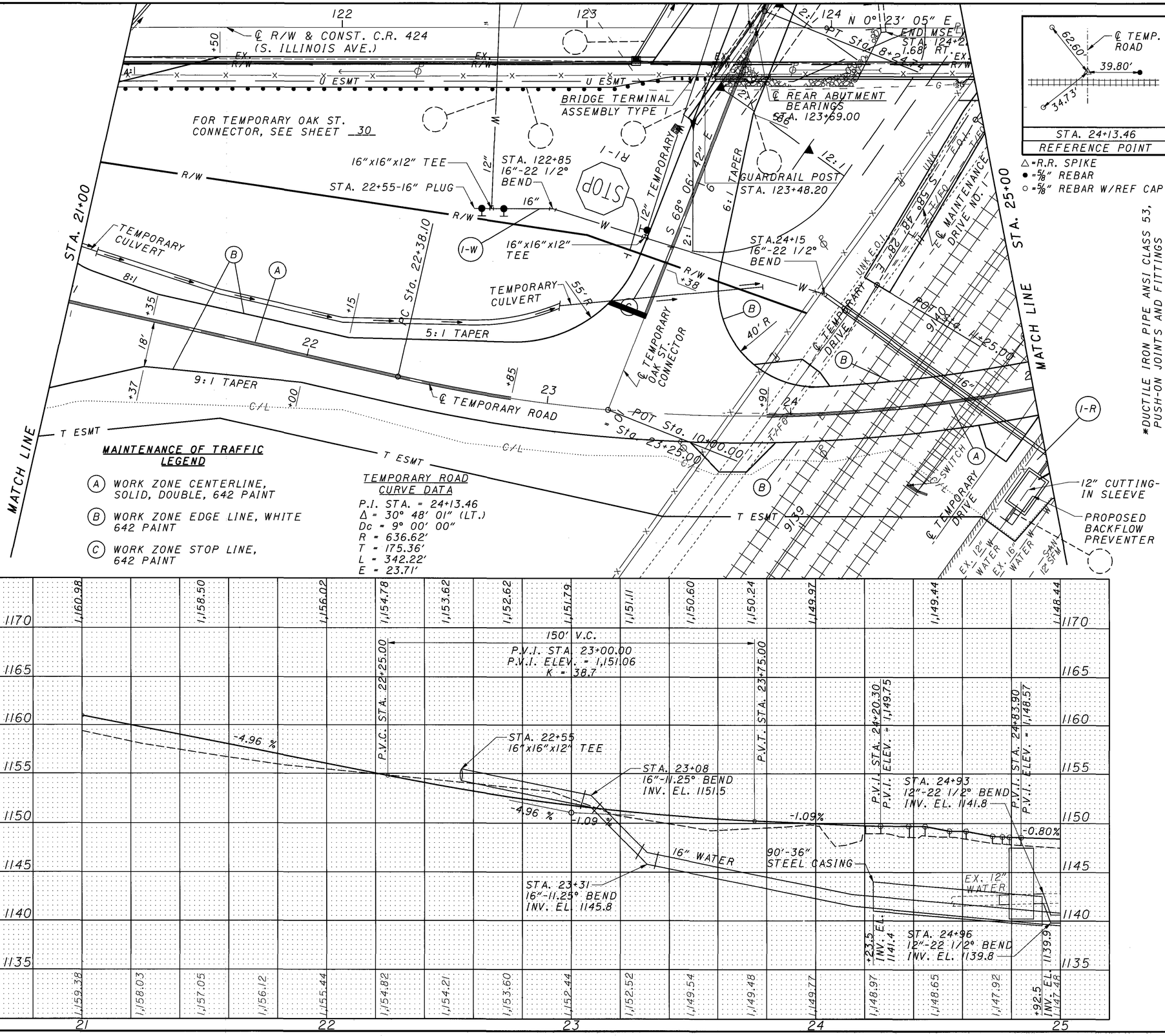
HORIZONTAL SCALE IN FEET
0 10 20 40

TEMPORARY ROAD PLAN AND PROFILE STA. 17+00 TO STA. 21+00

RIC-C.R. 424-0.62

REFERENCE	SEE SHEET NO.
S. ILLINOIS PLAN AND PROFILE	47
DRIVEWAY DETAILS	81
BACKFLOW PREVENTER VALVE DETAIL	97, 98
STRUCTURE PLANS	110-131

◯— ESTIMATED QUANTITIES LOCATED ON SHEET NO. 30, 47, 71 & 97.



MAINTENANCE OF TRAFFIC LEGEND

- Ⓐ WORK ZONE CENTERLINE, SOLID, DOUBLE, 642 PAINT
- Ⓑ WORK ZONE EDGE LINE, WHITE 642 PAINT
- Ⓒ WORK ZONE STOP LINE, 642 PAINT

TEMPORARY ROAD CURVE DATA

P.I. STA. = 24+13.46
Δ = 30° 48′ 01″ (LT.)
Dc = 9° 00′ 00″
R = 636.62′
T = 175.36′
L = 342.22′
E = 23.71′

REF NO.	STATION FROM	STATION TO	SIDE	638 16″ WATER MAIN* (FT)	638 36″ STEEL PIPE ENCASEMENT BORED OR JACKED (FT)	638 16″ BUTTERFLY VALVE AND VALVE BOX (EACH)
I-W	22+55	25+00	LT&RT	260	90	2
TOTALS CARRIED TO SUBSUMMARY				260	90	2

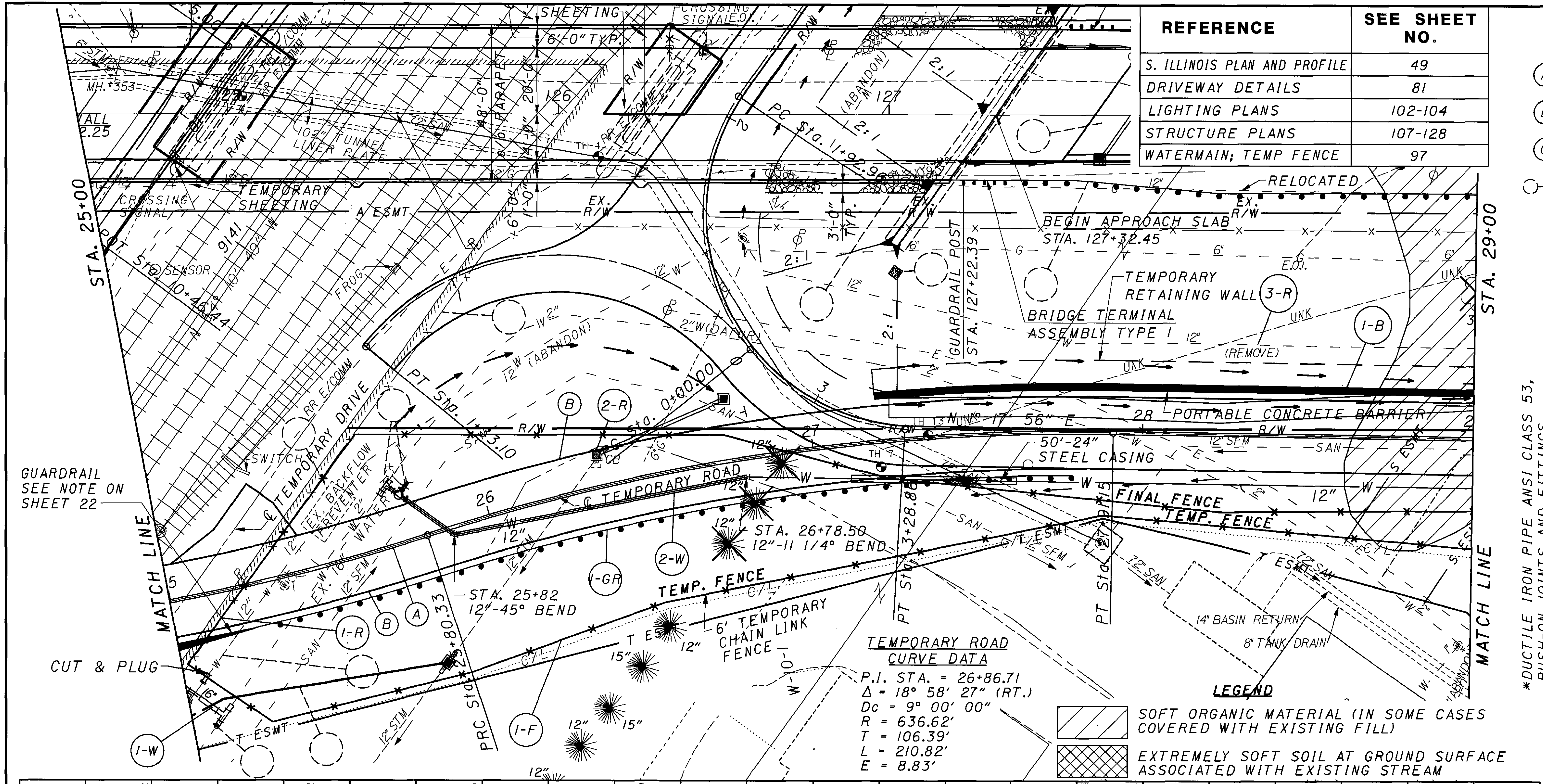
HORIZONTAL SCALE IN FEET 0 10 20 40

CALCULATED BPB
CHECKED TM

TEMPORARY ROAD PLAN AND PROFILE
STA. 21+00 TO STA. 25+00

RIC-C.R. 424-0.62

102088/DGN/088GPL.DGN 1/4/05 RB,CAR,KH,HN,RC



REFERENCE	SEE SHEET NO.
S. ILLINOIS PLAN AND PROFILE	49
DRIVEWAY DETAILS	81
LIGHTING PLANS	102-104
STRUCTURE PLANS	107-128
WATERMAIN; TEMP FENCE	97

TEMPORARY ROAD CURVE DATA

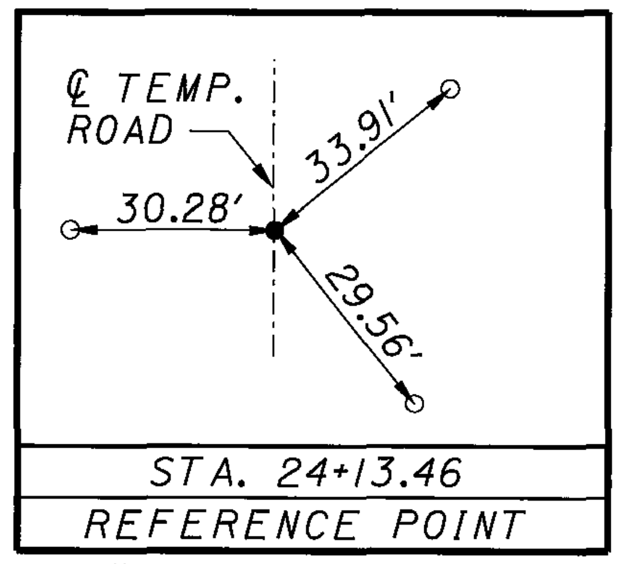
P.I. STA. = 26+86.71
Δ = 18° 58′ 27″ (RT.)
Dc = 9° 00′ 00″
R = 636.62′
T = 106.39′
L = 210.82′
E = 8.83′

LEGEND

▨	SOFT ORGANIC MATERIAL (IN SOME CASES COVERED WITH EXISTING FILL)
▩	EXTREMELY SOFT SOIL AT GROUND SURFACE ASSOCIATED WITH EXISTING STREAM

MAINTENANCE OF TRAFFIC LEGEND

- Ⓐ WORK ZONE CENTERLINE, SOLID, DOUBLE, 642 PAINT
- Ⓑ WORK ZONE EDGE LINE, 642 PAINT
- Ⓒ WORK ZONE STOP LINE, 642 PAINT
- ◌— ESTIMATED QUANTITIES LOCATED ON SHEET NOS 49 & 97

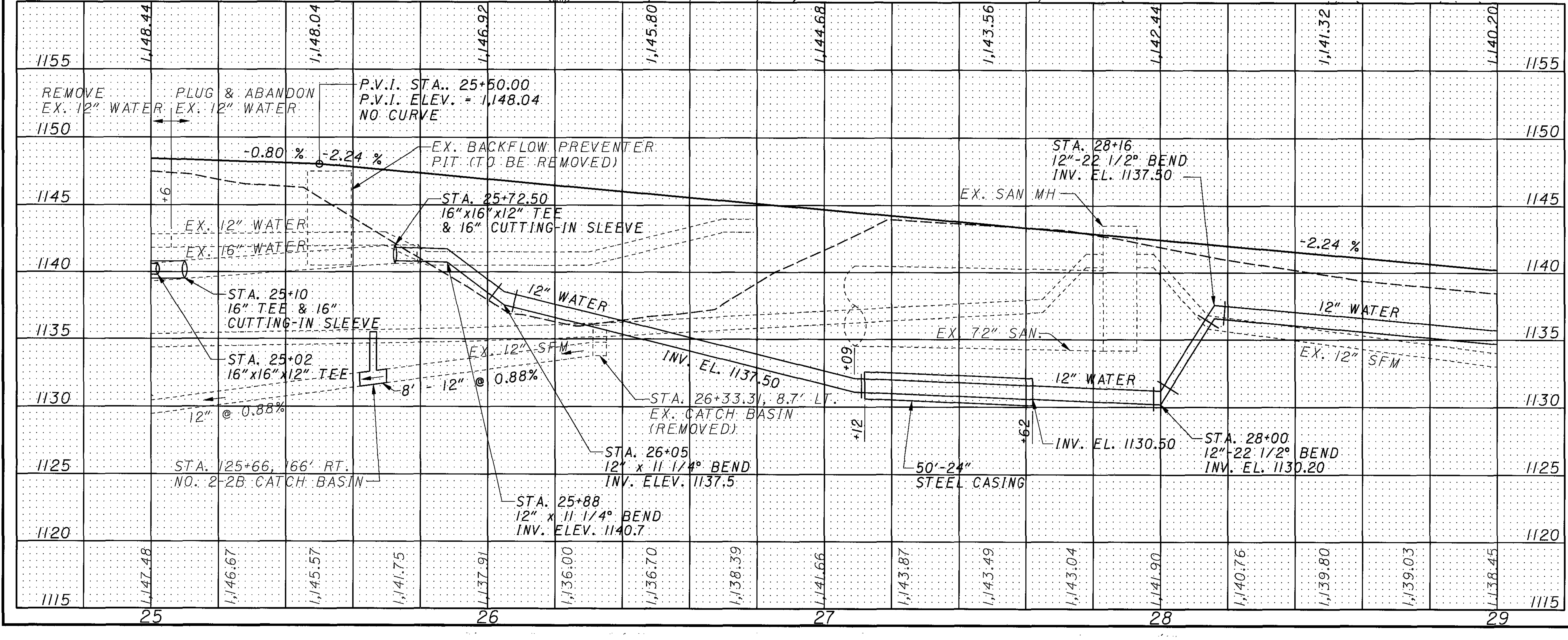


STA. 24+13.46
REFERENCE POINT

● = 5/8″ REBAR
○ = 5/8″ REBAR W/REF CAP

HORIZONTAL SCALE IN FEET 0 10 20 40

CALCULATED BPB
CHECKED TM



*DUCTILE IRON PIPE ANSI CLASS 53, PUSH-ON JOINTS AND FITTINGS

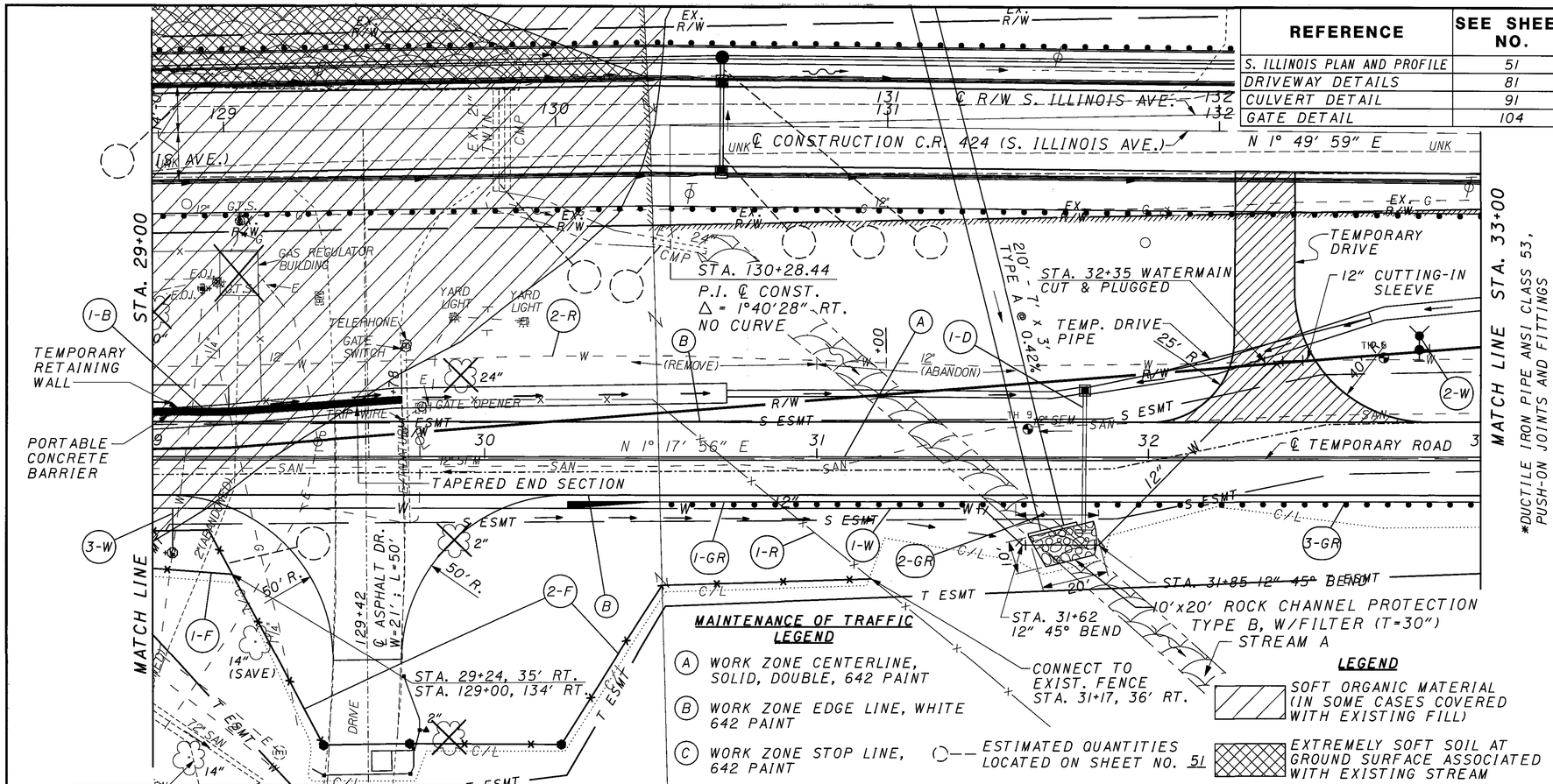
			1-R		2-R	3-R	1-GR		1-F		1-W		2-W	1-B	TOTALS CARRIED TO SUBSUMMARY
638	12" GATE VALVE AND VALVE BOX	EACH											1		1
	16" CUTTING -IN SLEEVE	EACH											1		1
	24" STEEL PIPE ENCASEMENT BORED OR JACKED	FT											50		50
	16" WATER MAIN*	FT									13				13
	12" WATER MAIN*	FT											334		334
622	PORTABLE CONCRETE BARRIER, 32"	FT												182	182
614	OBJECT MARKER, TWO WAY	EACH												3	3
	BARRIER REFLECTOR TYPE B2	EACH												4	4
	BARRIER REFLECTOR TYPE A2	EACH					5								5
607	FENCE MISC.: TEMPORARY FENCE, TYPE CL, 5'	FT							397						397
202	PIPE REMOVED, 24" & UNDER	EACH				232									232
	FENCE REMOVED	FT	456												456
	CATCH BASIN REMOVED	EACH			1										1
SIDE			LT&RT		LT	LT	RT		RT		RT		LT&RT	LT	
STATION		TO	29+00			29+00	27+87.5		29+00		25+10		29+00	29+00	
		FROM	25+01.5		26+35	26+90	25+00		25+01.50		25+00		25+72	27+20	
REF NO.			1-R		2-R	3-R	1-GR		1-F		1-W		2-W	1-B	

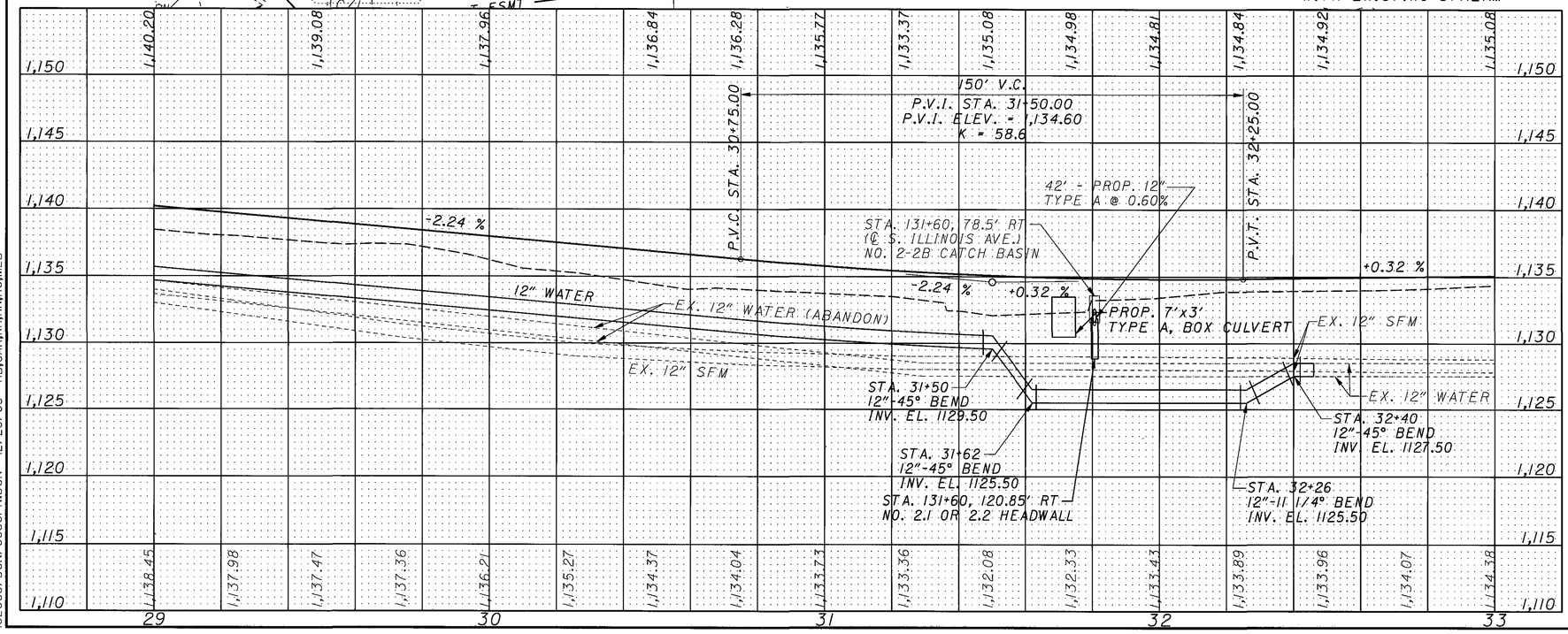
TEMPORARY ROAD PLAN AND PROFILE
STA. 25+00 TO STA. 29+00

RIC-C.R. 424-0.62

102088/DGN/088GPM.DGN 12/28/05 RB,CAR,KH,HN,RC,BH,MLB

REFERENCE	SEE SHEET NO.
S. ILLINOIS PLAN AND PROFILE	51
DRIVEWAY DETAILS	81
CULVERT DETAIL	91
GATE DETAIL	104





REF NO.	STATION FROM	STATION TO	SIDE	626 BARRIER REFLECTOR, TYPE A2 EACH	638 WATER WORK, MISC. SERVICE STOP AND BOX FT.	1½" COPPER SERVICE BRANCH FT.	6" WATER MAIN** FT.	6" GATE VALVE AND VALVE BOX EACH	6" FIRE HYDRANT EACH	12" CUTTING-IN-SLEEVE EACH	12" WATER MAIN* FT.	622 PORTABLE CONCRETE BARRIER, 32" FT.	614 OBJECT MARKER, TWO WAY EACH	BARRIER REFLECTOR, TYPE B2 EACH	607 FENCE, TYPE CL, AS PER PLAN FT	FENCE MISC.: TEMPORARY FENCE, TYPE CL, 5' FT	ANCHOR ASSEMBLY TYPE A EACH	606 GUARDRAIL, TYPE 5, 25' LONG-SPAN FT	GUARDRAIL TYPE 5 FT	604 CATCH BASIN NO. 2-2B EACH	603 12" CONDUIT, TYPE A FT	602 CONCRETE MASONRY CU. YD.	202 PIPE REMOVED, 24" & UNDER FT	FENCE REMOVED FT
				4	1	16	7	1	1	2	368	78	2	2	222	24	1	25	227.5	1	42	0.20	200	205
1-D	131+60		LT&RT																				
1-F	29+00	29+24	RT													24							
2-F	29+00	31+16	RT												222								
1-R	29+00	31+15	LT&RT														1						
2-R	29+00	31+00	LT																				
1-GR	30+22.50	31+60	RT																112.5				
2-GR	31+60	31+85	RT															25					
3-GR	31+85	33+00	RT																115				
1-W	29+00	32+40	LT&RT																				
2-W	32+82		LT																				
3-W	29+05		RT																				
1-B	29+00	29+78	LT																				
TOTALS CARRIED TO SUBSUMMARY				4	1	16	7	1	1	2	368	78	2	2	222	24	1	25	227.5	1	42	0.20	200	205

HORIZONTAL SCALE IN FEET
0 10 20 40

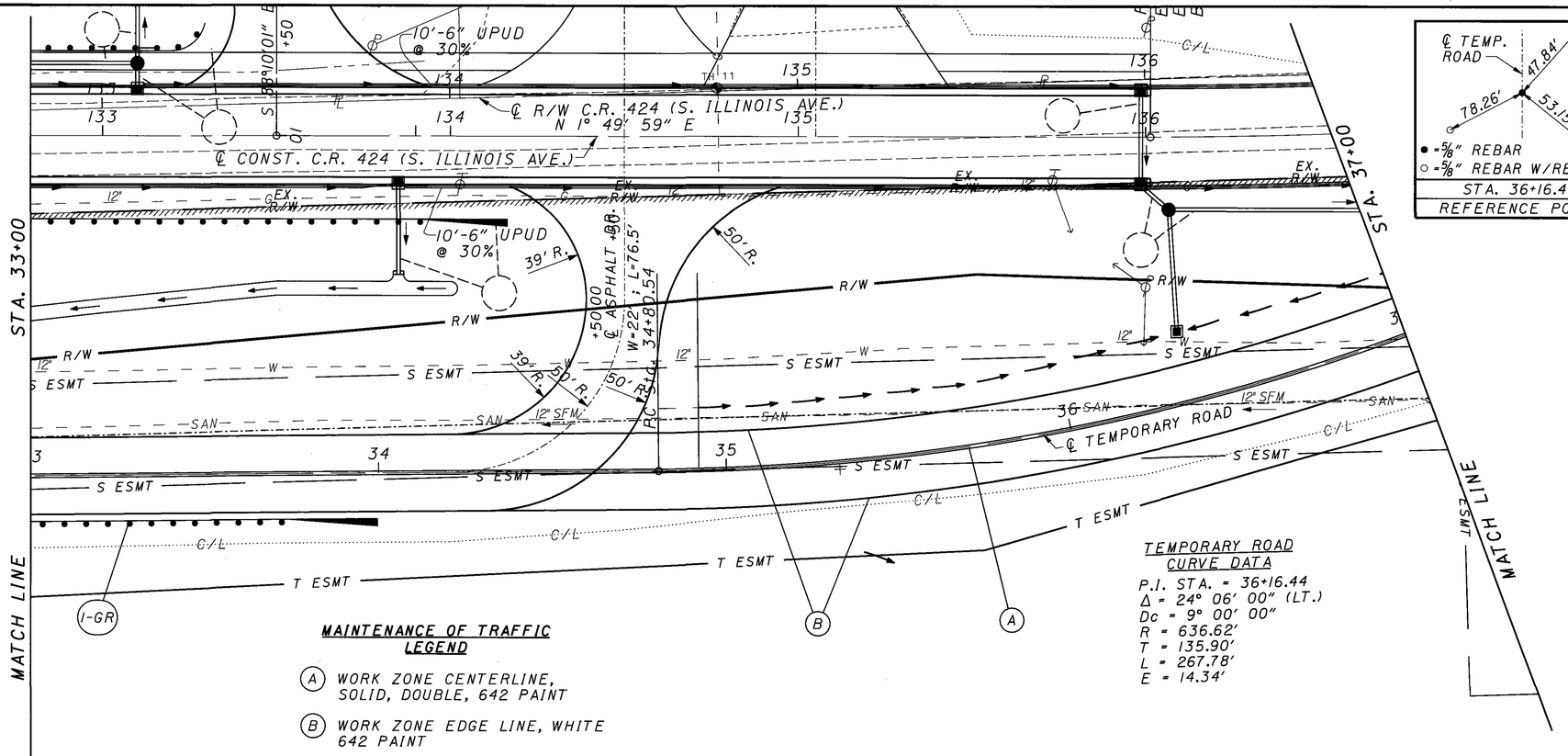
CALCULATED BPB
CHECKED TM

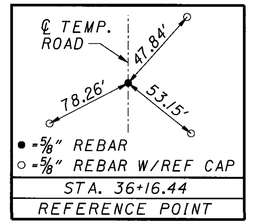
TEMPORARY ROAD PLAN AND PROFILE STA. 29+00 TO STA. 33+00

RIC-C.R. 424-0.62

27
153

I02088/DGN/088GPN.DGN 12/28/05 RB,CAR,KH,HN,RC,ML,B





REFERENCE	SEE SHEET NO.
S. ILLINOIS PLAN AND PROFILE	52
DRIVEWAY DETAILS	81

○——ESTIMATED QUANTITIES LOCATED ON SHEET NO. 52

MAINTENANCE OF TRAFFIC LEGEND

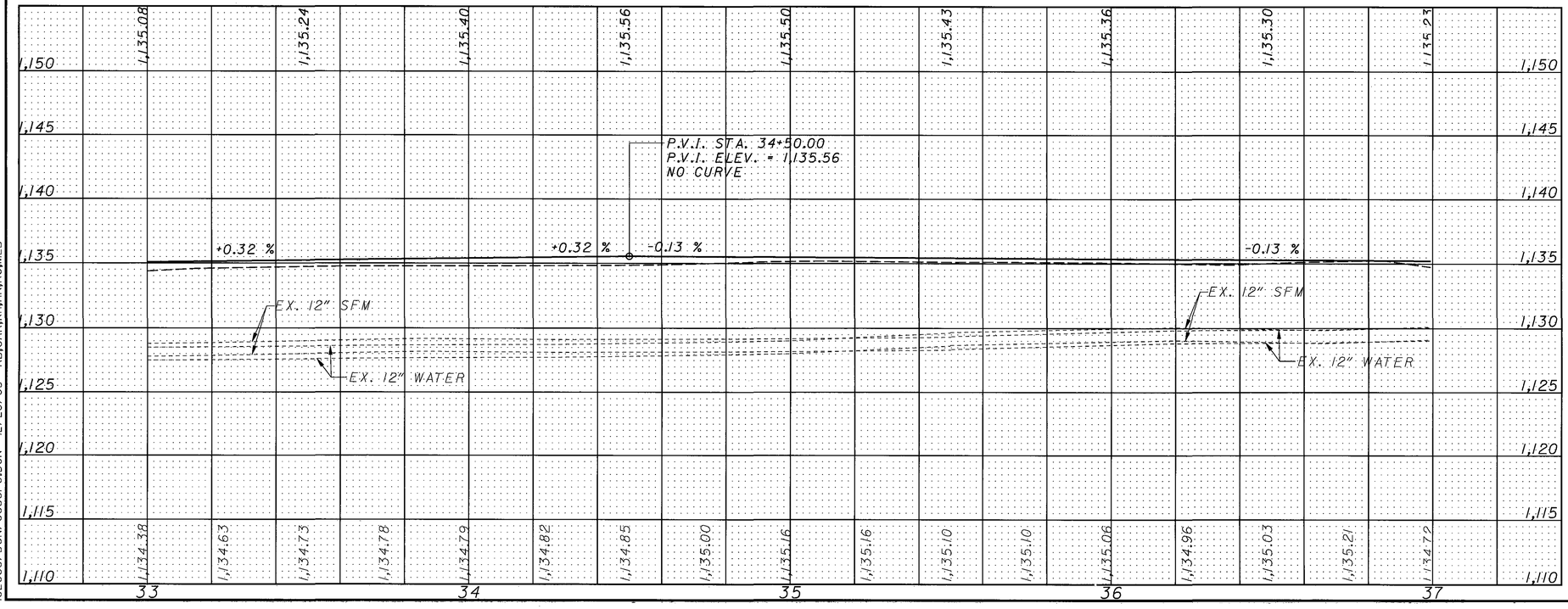
(A) WORK ZONE CENTERLINE, SOLID, DOUBLE, 642 PAINT

(B) WORK ZONE EDGE LINE, WHITE 642 PAINT

(C) WORK ZONE STOP LINE, 642 PAINT

TEMPORARY ROAD CURVE DATA

P.I. STA. = 36+16.44
Δ = 24° 06' 00" (LT.)
Dc = 9° 00' 00"
R = 636.62'
T = 135.90'
L = 267.78'
E = 14.34'



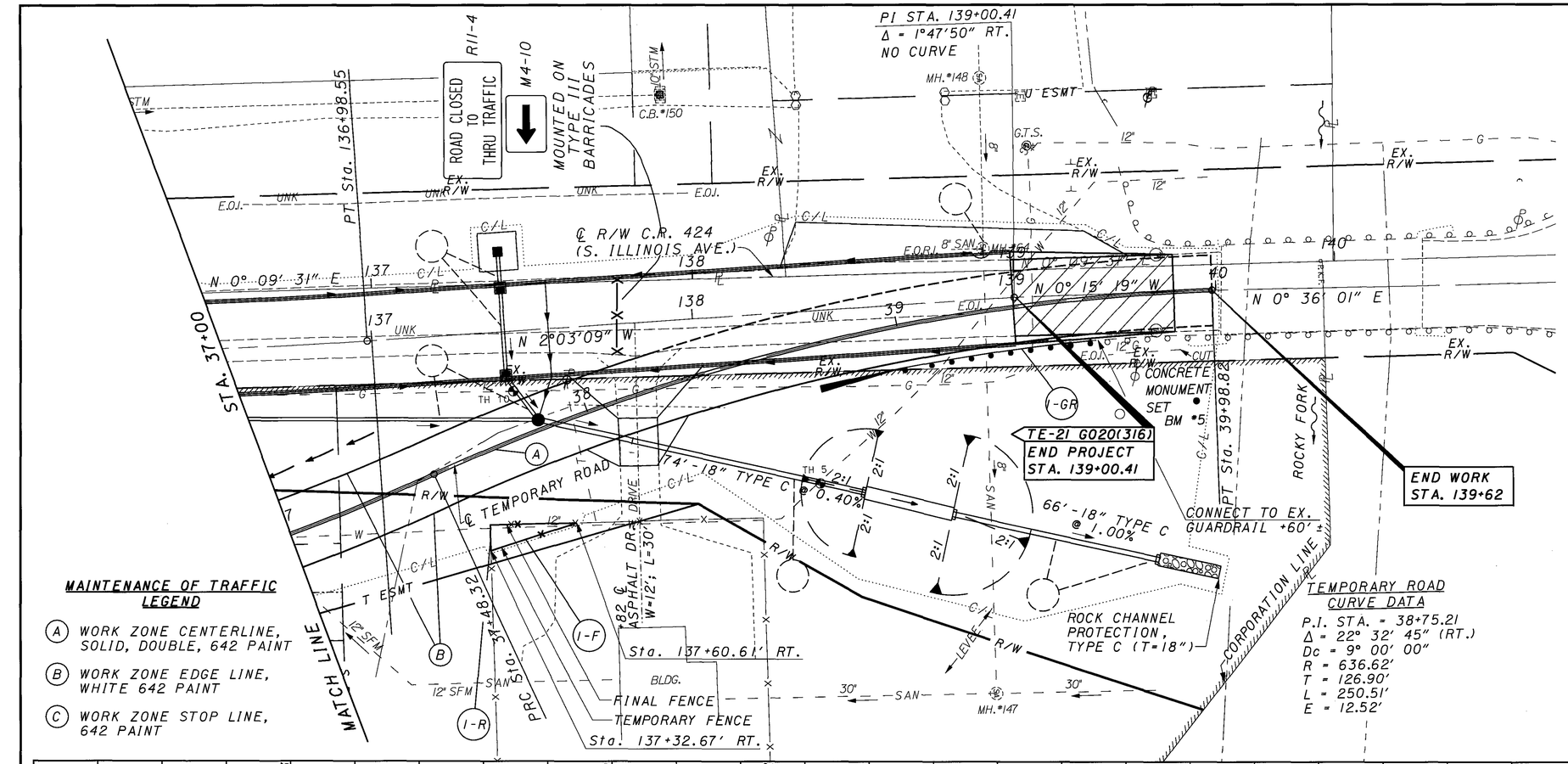
REF NO.	STATION FROM	STATION TO	SIDE							
606	BARRIER REFLECTOR TYPE A2			EACH	1					
606	ANCHOR ASSEMBLY TYPE A			EACH	1					
606	GUARDRAIL TYPE 5			FT	72.5					
I-GR	33+00	33+97.50	RT							
TOTALS CARRIED TO SUBSUMMARY					72.5	1	1			

TEMPORARY ROAD PLAN AND PROFILE STA. 33+00 TO STA 37+00

RIC-C.R. 424-0.62

CALCULATED BPB CHECKED TM

HORIZONTAL SCALE IN FEET 0 10 20 40



MAINTENANCE OF TRAFFIC LEGEND

- (A) WORK ZONE CENTERLINE, SOLID, DOUBLE, 642 PAINT
- (B) WORK ZONE EDGE LINE, WHITE 642 PAINT
- (C) WORK ZONE STOP LINE, 642 PAINT

TEMPORARY ROAD CURVE DATA

P.I. STA. = 38+75.21
Δ = 22° 32' 45" (RT.)
Dc = 9° 00' 00"
R = 636.62'
T = 126.90'
L = 250.51'
E = 12.52'

REFERENCE	SEE SHEET NO.
S. ILLINOIS PLAN AND PROFILE	53
CULVERT DETAIL	93

(-)--ESTIMATED QUANTITIES LOCATED ON SHEET NO. 53 OR 93

REF NO.	STATION FROM	STATION TO	SIDE						
626	BARRIER REFLECTOR TYPE A2		EACH	3					3
607	FENCE, TYPE CL, MISC.: HEIGHT 6', AS PER PLAN		FT			35			35
	FENCE MISC.: TEMPORARY FENCE, TYPE CL, 6'		FT				30		30
606	ANCHOR ASSEMBLY TYPE A		EACH	1					1
	GUARDRAIL TYPE 5		FT	62.5					62.5
202	FENCE REMOVED		FT			35			35
	GUARDRAIL REMOVED		FT	25					25
I-GR	38+72.50	39+60.00	RT						
I-R	137+32.00	137+60.00							
I-F	137+32.00	137+60.00							
TOTALS CARRIED TO SUBSUMMARY									

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED BPB
CHECKED TM

TEMPORARY ROAD PLAN AND PROFILE STA. 37+00 TO STA 39+83.45

RIC-C.R. 424-0.62

REFERENCE	SEE SHEET NO.
OAK ST. PLAN AND PROFILE	71
INTERSECTION DETAIL	77
DRIVEWAY DETAILS	81

○——ESTIMATED QUANTITIES LOCATED ON SHEET NO. 47

*DUCTILE IRON PIPE ANSI CLASS 53, PUSH-ON JOINTS AND FITTINGS

REF NO.	STATION FROM	STATION TO	SIDE			
638	12" GATE VALVE AND VALVE BOX			EACH	1	1
	12" CUTTING-IN-SLEEVE			EACH	1	1
	*12" WATER MAIN			FT.	166	166
		1-W	7+65	9+30	RT	
TOTALS CARRIED TO SUBSUMMARY						

MAINTENANCE OF TRAFFIC LEGEND

(A) WORK ZONE CENTERLINE, SOLID, DOUBLE, 642 PAINT

(B) WORK ZONE EDGE LINE, +15 WHITE 642 PAINT

(C) WORK ZONE STOP LINE, 642 PAINT

HORIZONTAL SCALE IN FEET: 0, 10, 20, 40

CALCULATED BPB CHECKED TM

TEMPORARY OAK STREET PLAN AND PROFILE STA. 6+00 TO STA. 10+00

RIC-C.R. 424-0.62

30/153

102088/DGN/088GPO.DGN 12/29/04 KH,HN,RC,HN

SEEDING	
END WIDTH	SQ. YDS.

120 100 80 60 40 20 0 20 40 60 80 100 120

℄ CONSTRUCTION

1170 1160 1150 1140

2:1 2:1 2:1

PHASE II, 3) EMBANKMENT LIMIT

2' UNDERCUTTING

1152.60
8+50
1152.38

PHASE II, 3) EMBANKMENT LIMIT

8+00
1151.49

R/W

7+50
1146.62

EXCAVATION OF SUBGRADE (A)
EMBANKMENT USING GRANULAR MATERIAL, TYPE B (B)
EMBANKMENT USING GRANULAR MATERIAL, TYPE C (C)

R/W

7+00
1146.17

SHEET TOTAL

END AREA		VOLUME	
CUT	FILL	CUT	FILL
AHD. 110^{A}	110^{B}		
BK. 0	0		

SHEET TOTAL

CALCULATED EEL
CHECKED JL

TEMPORARY OAK STREET CROSS SECTIONS STA. 7+00 TO STA. 8+50

RIC-C.R. 424-0.62

102088/DGN/OAKXS.DGN 12/29/04 KH,CEO,HN,RC

SEEDING	
END WIDTH	SQ. YDS.

120 100 80 60 40 20 0 20 40 60 80 100 120

℄ CONSTRUCTION

TOTALS

EXCAVATION OF SUBGRADE (A)
EMBANKMENT USING GRANULAR MATERIAL, TYPE B (B)
EMBANKMENT USING GRANULAR MATERIAL, TYPE C (C)

NOTE:
ALL AREAS AND QUANTITIES FOR EXCAVATION OF SUBGRADE AND EMBANKMENT ON THIS SHEET AND ON SHEET NO. 3L USING GRANULAR MATERIAL ARE FOR INFORMATION ONLY AND SHALL BE INCLUDED UNDER ITEM 615,

1160
1150
1140

5' UNDERCUTTING

1151.11
10+00
1150.53

AHD. EARTHWORK CARRIED ON S. ILLINOIS CROSS SECTIONS

2:1
2:1
2' UNDERCUTTING

1151.26
9+50
1151.15

2:1
2:1
2' UNDERCUTTING

1152.18
9+00
1153.18

SHEET TOTAL

END AREA		VOLUME			
CUT	FILL	CUT	FILL	CALCULATED	CHECKED
		553 A	553 B	EEL	JL
		BK. 215 A	215 B		
		325 A	325 B		
		136 A	136 B		
		228 A	228 B		
		STA. 8+50 AHD. 110 A	110 B		
		SHEET TOTAL 553 A	553 B		

TEMPORARY OAK STREET CROSS SECTIONS
STA. 9+00 TO STA. 10+00

RIC-C.R. 424-0.62

32
153

102088/DGN/OAKXS.DGN 02/14/05 KH,HN,RC,HN

SHEET NUMBER																	ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
8-16	17-18		38-39	40	41-43	67	76	81	87	89-90	91	93	97	99	102	133						
																					ROADWAY	
LUMP																	201	11000	LUMP		CLEARING AND GRUBBING	
			276					292									202	23000	568	SQ YD	PAVEMENT REMOVED	
					279												202	23500	279	SQ YD	WEARING COURSE REMOVED	
			958														202	35100	958	FT	PIPE REMOVED, 24" AND UNDER	
			40														202	35200	40	FT	PIPE REMOVED, OVER 24"	
			25														202	38000	25	FT	GUARDRAIL REMOVED	
			4														202	58100	4	EACH	CATCH BASIN REMOVED	
			1660														202	75000	1660	FT	FENCE REMOVED	
															2		202	75402	2	EACH	LIGHT POLE REMOVED FOR STORAGE	
															2		202	75500	2	EACH	LIGHT POLE FOUNDATION REMOVED	
			3														202	75610	3	EACH	VALVE BOX REMOVED	
			LUMP														202	98000	LUMP		REMOVAL MISC.: CONCRETE RETAINING WALL	
			1														202	98100	1	EACH	REMOVAL MISC.: BACKFLOW VALVES AND CHAMBER REMOVED	
			7														202	98100	7	EACH	REMOVAL MISC.: RAILROAD TIE	
			28														202	98200	28	FT	REMOVAL MISC.: 8" SLOTTED DRAIN	
						2144	3355	385	177								203	10000	6061	CU YD	EXCAVATION	
4200						47966	13467	512									203	20000	66145	CU YD	EMBANKMENT	
						22777											203	20001	22777	CU YD	EMBANKMENT, AS PER PLAN	8
7																	SPECIAL	20365000	7	EACH	SETTLEMENT PLATFORM	9
18																	SPECIAL	20365000	18	EACH	SETTLEMENT PLATFORM AS PER PLAN	10
1291																	SPECIAL	20398000	1291	CU YD	ROADWAY, MISC.: LIGHTWEIGHT FILL	11
					9426			3937									204	10000	13363	SQ YD	SUBGRADE COMPACTION	
						12839											204	13000	12839	CU YD	EXCAVATION OF SUBGRADE	
						1961											204	30010	1961	CU YD	GRANULAR MATERIAL, TYPE B	
						4129											204	30020	4129	CU YD	GRANULAR MATERIAL, TYPE C	
						9176											204	30030	9176	CU YD	GRANULAR MATERIAL, TYPE D	
					5												204	45000	5	HOUR	PROOF ROLLING	
					13995												204	50000	13995	SQ YD	GEOTEXTILE FABRIC, 712.09, TYPE D	
																10	604	38500	10	EACH	MONUMENT ASSEMBLY	
			2437.5														606	13000	2437.5	FT	GUARDRAIL, TYPE 5	
			25														606	17300	25	FT	GUARDRAIL, TYPE 5, 25' LONG-SPAN	
			8														606	25000	8	EACH	ANCHOR ASSEMBLY, TYPE A	
			1														606	26500	1	EACH	ANCHOR ASSEMBLY, TYPE T	
			4														606	35000	4	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE I	
			680														607	20001	680	FT	FENCE, TYPE CL, AS PER PLAN	13
			35														607	20101	35	FT	FENCE, TYPE CL, MISC.: HEIGHT 6', AS PER PLAN	13
			421														607	98000	421	FT	FENCE, MISC.: TEMPORARY FENCE, TYPE CL, 5'	13
			30														607	98000	30	FT	FENCE, MISC.: TEMPORARY FENCE, TYPE CL, 6'	13
															1		607	98100	1	EACH	FENCE, MISC.: REMOVE AND REERECT GATE, TYPE CL	104
					5507												608	10000	5507	SQ FT	4" CONCRETE WALK	
			2														608	49001	2	EACH	CURB RAMP, AS PER PLAN	78-80
1																	SPECIAL	69050100	1	EACH	MAILBOX SUPPORT SYSTEM, SINGLE	12
1																	SPECIAL	69050200	1	EACH	MAILBOX SUPPORT SYSTEM, DOUBLE	12

CALCULATED TM
CHECKED EEL

GENERAL SUMMARY

RIC-CR424-0.62

I02088/088GGA.DGN 01/26/06 RC,BH,HN

SHEET NUMBER																	ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
8-16	17-18	32	38-39	40	41-43	67	76	81	87	89-90	91	93	97	99	102	133						
																					EROSION CONTROL	
			1326														601	20000	1326	SQ YD	CRUSHED AGGREGATE SLOPE PROTECTION	
										30	20						601	32100	50	CU YD	ROCK CHANNEL PROTECTION, TYPE B WITH FILTER	
5			27									6					601	32200	38	CU YD	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER	
			350														601	39000	350	FT	PAVED GUTTER, TYPE 4	
2																	659	00100	2	EACH	SOIL ANALYSIS TEST	
						17821	8103	775	284								659	10000	26983	SQ YD	SEEDING AND MULCHING	
1403																	659	14000	1403	SQ YD	REPAIR SEEDING AND MULCHING	
1403																	659	15000	1403	SQ YD	INTER-SEEDING	
4																	659	20000	4	TON	COMMERCIAL FERTILIZER	
6																	659	31000	6	ACRE	LIME	
152																	659	35000	152	MGAL	WATER	
64																	659	40000	64	MSQ F	MOWING	
			1067														670	00700	1067	SQ YD	DITCH EROSION PROTECTION	
			389														670	10020	389	SQ YD	VEGETATED SWALE EROSION PROTECTION MAT, TYPE B	
1																	832	10000	1	EACH	STORM WATER POLLUTION PREVENTION PLAN	
10000																	832	30000	10000	EACH	EROSION CONTROL	
			295														836	20000	295	SQ YD	SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 1, WITHOUT SOIL FILLING	
																					DRAINAGE	
										37							517	73501	37	FT	RAILING, PIPE, AS PER PLAN	89
			4.2							1.4		0.7					602	20000	6.3	CU YD	CONCRETE MASONRY	
											6.0						602	20001	6.0	CU YD	CONCRETE MASONRY, AS PER PLAN	91
			85														603	00400	85	FT	4" CONDUIT, TYPE E	
200				194													603	00510	394	FT	6" CONDUIT, TYPE F FOR UDERDRAIN OUTLETS	
200				30													603	00900	230	FT	6" CONDUIT, TYPE B	
200																	603	01100	200	FT	6" CONDUIT, TYPE C	
200			60														603	01400	260	FT	6" CONDUIT, TYPE E	
			42														603	04200	42	FT	12" CONDUIT, TYPE A	
			641														603	04400	641	FT	12" CONDUIT, TYPE B	
			1051														603	04600	1051	FT	12" CONDUIT, TYPE C	
			130														603	04900	130	FT	12" CONDUIT, TYPE D	
			93														603	05200	93	FT	12" CONDUIT, TYPE F, 707.05, TYPE C	
			50														603	06100	50	FT	15" CONDUIT, TYPE C	
												66					603	07200	66	FT	18" CONDUIT, TYPE A	
			115														603	07400	115	FT	18" CONDUIT, TYPE B	
			144														603	07600	144	FT	18" CONDUIT, TYPE C	
			283														603	16400	283	FT	36" CONDUIT, TYPE B, 706.02	
										38							603	53200	38	FT	48" X 76" CONDUIT, TYPE A, 706.04, HE-1	
			28														603	97010	28	FT	8" SLOTTED DRAIN, TYPE 2	
3																	603	98100	3	EACH	CONDUIT, MIC.: 72" SANITARY SEWER INSPECTION	92
											210						603	98300	210	FT	CONDUIT, MISC.: 7' X 3' CONDUIT, TYPE A, 706.05	
			4														604	00400	4	EACH	CATCH BASIN, NO. 3	
			16														604	00800	16	EACH	CATCH BASIN, NO. 3A	
			2														604	02000	2	EACH	CATCH BASIN, NO. 6	
			6														604	04500	6	EACH	CATCH BASIN, NO. 2-2B	

CALCULATED TM
CHECKED EEL

GENERAL SUMMARY

RIC-CR424-0.62

I02088/088GGA.DGN 01/26/06 RC,MLB,HN

SHEET NUMBER																	ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
8-16	17-18	32	38-39	40	41-43	67	76	81	87	89-90	91	93	97	99	102	133						
																					DRAINAGE (CONTINUED)	
			8														604	31500	8	EACH	MANHOLE, NO. 3	
			1														604	35500	1	EACH	MANHOLE RECONSTRUCTED TO GRADE	
3																	604	37000	3	EACH	INSPECTION WELL	
										1							604	37501	1	EACH	JUNCTION CHAMBER, AS PER PLAN	90
												1					604	98000	1	EACH	DRAINAGE STRUCTURE, MISC.: DUCK BILL CHECK VALVE	93
				3284													605	11110	3284	FT	6" SHALLOW PIPE UNDERDRAINS WITH FABRIC WRAP, 707.31 OR 707.41	
				1298													605	12210	1298	FT	6" DEEP PIPE UNDERDRAINS WITH FABRIC WRAP, 707.31 OR 707.41	
				246													605	13410	246	FT	6" UNCLASSIFIED PIPE UNDERDRAINS WITH FABRIC WRAP, 707.31 OR 707.41	
																					PAVEMENT	
					1168												301	46001	1168	CU YD	ASPHALT CONCRETE BASE, PG64-22, AS PER PLAN	14
					1408			799									304	20000	2207	CU YD	AGGREGATE BASE	
					25												407	10000	25	GAL	TACK COAT	
					361												407	14000	361	GAL	TACK COAT FOR INTERMEDIATE COURSE	
					2892			963									408	10000	3855	GAL	PRIME COAT	
								82									448	46025	82	CU YD	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22 (DRIVEWAYS), AS PER PLAN	14
					351												448	46051	351	CU YD	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22, AS PER PLAN	14
					259												448	47021	259	CU YD	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22, AS PER PLAN	14
								86									448	48021	86	CU YD	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22 (DRIVEWAYS) , AS PER PLAN	14
			16					399									452	12000	415	SQ YD	8" NON-REINFORCED CONCRETE PAVEMENT	
					4076												609	12000	4076	FT	COMBINATION CURB AND GUTTER, TYPE 2	
					648												609	26000	648	FT	CURB, TYPE 6	
																					WATER WORK	
			46														638	00904	46	FT	6" WATER MAIN DUCTILE IRON ANCHORING PIPE AND FITTINGS	
			1640														638	02404	1640	FT	12" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 53, PUSH-ON JOINTS AND FITTINGS	
			273														638	03004	273	FT	16" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 53, PUSH-ON JOINTS AND FITTINGS	
			7														638	03104	7	FT	16" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 53, MECHANICAL JOINTS AND FITTINGS	
			121														638	05000	121	FT	1-1/2" COPPER SERVICE BRANCH	
			50														638	07310	50	FT	24" STEEL PIPE ENCASEMENT, BORED OR JACKED	
			90														638	07316	90	FT	36" STEEL PIPE ENCASEMENT, BORED OR JACKED	
			3														638	07800	3	EACH	6" GATE VALVE AND VALVE BOX	
			2														638	08100	2	EACH	12" GATE VALVE AND VALVE BOX	
			3														638	08200	3	EACH	16" BUTTERFLY VALVE AND VALVE BOX	
			5														638	08710	5	EACH	12" CUTTING-IN SLEEVE	
			2														638	08712	2	EACH	16" CUTTING-IN SLEEVE	
			4														638	10200	4	EACH	6" FIRE HYDRANT	
			3														638	10480	3	EACH	FIRE HYDRANT REMOVED	
			2														638	10600	2	EACH	FIRE HYDRANT AND GATE VALVE REMOVED AND RESET	
			2														638	10800	2	EACH	VALVE BOX ADJUSTED TO GRADE	
			1														638	98000	1	EACH	WATER WORK, MISC.: BACKFLOW PREVENTER VALVE AND VALVE CHAMBER	
			3														638	98000	3	EACH	WATER WORK, MISC.: SERVICE STOP AND BOX	

CALCULATED TM
CHECKED EEL

GENERAL SUMMARY

RIC-CR424-0.62

102088/088CGA.DGN 01/24/06 RC,MLB,HN

SHEET NUMBER																	ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
8-16	17-18	32	38-39	40	41-43	67	76	81	87	89-90	91	93	97	99	102	133						
																					LIGHTING	
															4		603	00400	4	FT	4" CONDUIT, TYPE E	
															8		625	00500	8	EACH	CONNECTOR KIT, TYPE II	
															3		625	01500	3	EACH	CABLE SPLICING KIT	
															20		625	10614	20	EACH	LIGHT POLE ANCHOR BOLTS ON STRUCTURE	
															2		625	14001	2	EACH	LIGHT POLE FOUNDATION, 24" X 6' DEEP, AS PER PLAN	103
															60		625	23400	60	FT	NO. 10 AWG POLE AND BRACKET CABLE	
															668		625	25400	668	FT	CONDUIT, 2", 725.04	
															26		625	25500	26	FT	CONDUIT, 3", 725.04	
															2		625	27520	2	EACH	REMOVAL OF LUMINAIRE AND REERECTION	
															302		625	29000	302	FT	TRENCH	
															26		625	29600	26	FT	TRENCH IN PAVED AREA, TYPE B	
															5		625	29921	5	EACH	STRUCTURE JUNCTION BOX, AS PER PLAN	106
															7		625	30706	7	EACH	PULL BOX, 725.08, 24"	
															6		625	32000	6	EACH	GROUND ROD	
															1		625	33000	1	EACH	STRUCTURE GROUNDING SYSTEM	
															2		625	35001	2	EACH	REERECT EXISTING LIGHT POLE, AS PER PLAN	103
															1		632	26500	1	EACH	DETECTOR LOOP	
															1		632	64020	1	EACH	PEDESTAL FOUNDATION	
															120		632	66104	120	FT	POWER CABLE, 3 CONDUCTOR, NO. 10 AWG	
															1		632	70001	1	EACH	POWER SERVICE, AS PER PLAN	103
															1		632	89300	1	EACH	WOOD POLE	
																					TRAFFIC CONTROL	
		30															626	00100	30	EACH	BARRIER REFLECTOR, TYPE A	
		8															626	00300	8	EACH	BARRIER REFLECTOR, TYPE A2	
															47		630	03100	47	FT	GROUND MOUNTED SUPPORT, NO. 3 POST	
															11		630	08510	11	FT	STREET NAME SIGN SUPPORT, NO. 2 POST	
															25		630	80100	25	SQ FT	SIGN, FLAT SHEET	
															2		630	80500	2	EACH	SIGN, DOUBLE FACED, STREET NAME	
															8		630	85000	8	EACH	REMOVAL OF GROUND MOUNTED SIGN AND STORAGE	
															7		630	86002	7	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	
															1		630	87510	1	EACH	REMOVAL OF POLE MOUNTED SIGN AND STORAGE	
															2		630	89902	2	EACH	REMOVAL OF MISCELLANEOUS TRAFFIC CONTROL ITEM: AUTOMATIC GATE ASSEMBLY FOR STORAGE	
															0.28		642	00090	0.28	MILE	EDGE LINE	
															0.58		642	00290	0.58	MILE	CENTER LINE	
															35		644	00500	35	FT	STOP LINE	
															269		644	00600	269	FT	CROSSWALK LINE	

CALCULATED TM
CHECKED EEL

GENERAL SUMMARY

RIC-CR424-0.62

SHEET NUMBER																	ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
8-16	17-18	20	38-39	40	41-43	67	76	81	87	89-90	91	93	97	99	102	133						
																					RETAINING WALLS (SEE SHEET NO. 109)	
																					BUILDING DEMOLITION	
			LUMP														202	56000	LUMP		BUILDING DEMOLISHED, PARCEL 14, ONE STORY BRICK COMMERCIAL	
			LUMP														202	56000	LUMP		BUILDING DEMOLISHED PARCEL 13 ONE STORY BRICK UTILITY	
																					STRUCTURE, (OVER 20')	
																					BRIDGE NO. RIC-CR424-0062 OVER NORFOLK SOUTHERN RAILWAY (SEE SHEET NO. 112)	
																					TRAFFIC MAINTENANCE	
	25																410	12000	25	CU YD	TRAFFIC COMPACTED SURFACE, TYPE A OR B	
	25																410	13000	25	CU YD	TRAFFIC COMPACTED SURFACE, TYPE C	
		LUMP															614	12420	LUMP		DETOUR SIGNING	
	12																614	12460	12	EACH	WORK ZONE MARKING SIGN	
	10																614	12510	10	SQ FT	REPLACEMENT SIGN	
	10																614	12600	10	EACH	REPLACEMENT DRUM	
	20																614	13000	20	CU YD	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	
			5														614	13202	5	EACH	BARRIER REFLECTOR, TYPE A2	
			10														614	13302	10	EACH	BARRIER REFLECTOR, TYPE B2	
			8														614	13360	8	EACH	OBJECT MARKER, TWO WAY	
	0.5																614	21000	0.5	MILE	WORK ZONE CENTER LINE, CLASS I	
	1.1																614	22000	1.1	MILE	WORK ZONE EDGE LINE, CLASS I	
	17																614	26000	17	FT	WORK ZONE STOP LINE, CLASS I	
	LUMP																615	10001	LUMP		ROADS FOR MAINTAINING TRAFFIC, AS PER PLAN	18
					7145												615	20000	7145	SQ YD	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A	
	8																616	10000	8	MGAL	WATER	
			380														622	40020	380	FT	PORTABLE CONCRETE BARRIER, 32"	
																	614	11000	LUMP		MAINTAINING TRAFFIC	
																	619	16010	24	MNTH	FIELD OFFICE, TYPE B	
																	623	10000	LUMP		CONSTRUCTION LAYOUT STAKES	
																	624	10000	LUMP		MOBILIZATION	

CALCULATED TM
CHECKED EEL

GENERAL SUMMARY

RIC-CR424-0.62

I02088/088GGA.DGN 01/24/06 RC,ML,B,HN

SUBSUMMARY

CALCULATED TM CHECKED JL

SHEET NO.	202														452	601			602	603											604				
	PAVEMENT REMOVED	PIPE REMOVED, 24" AND UNDER	PIPE REMOVED, OVER 24"	GUARDRAIL REMOVED		BUILDING DEMOLISHED, PARCEL 14, ONE STORY BRICK COMM.	BUILDING DEMOLISHED, PARCEL 13, ONE STORY BRICK UTILITY	CATCH BASIN REMOVED	VALVE BOX REMOVED	FENCE REMOVED	REMOVAL MISC.: BACKFLOW VALVES AND CHAMBER REMOVED	REMOVAL MISC.: 8" SLOTTED DRAIN	REMOVAL MISC.: CONCRETE RETAINING WALL	REMOVAL MISC.: RAILROAD TIE	8" NON-REINFORCED CONCRETE PAVEMENT	CRUSHED AGGREGATE SLOPE PROTECTION	PAVED GUTTER, TYPE 4	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER	CONCRETE MASONRY	4" CONDUIT, TYPE E	6" CONDUIT, TYPE E	12" CONDUIT, TYPE A	12" CONDUIT, TYPE B	12" CONDUIT, TYPE C	12" CONDUIT, TYPE D	12" CONDUIT, TYPE F, 707.05, TYPE C	15" CONDUIT, TYPE C	18" CONDUIT, TYPE B	18" CONDUIT, TYPE C	36" CONDUIT, TYPE B, 706.02	8" SLOTTED DRAIN, TYPE 2	CATCH BASIN, NO. 3	CATCH BASIN, NO. 3A	CATCH BASIN, NO. 6	CATCH BASIN, NO. 2-2B	MANHOLE, NO. 3
	SQ YD	FT	FT	FT				EACH	EACH	FT	EACH	FT	LUMP	EACH	SQ YD	SQ YD	FT	CU YD	CU YD	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	EACH	EACH	EACH	EACH	EACH
23										126																								
24																																		
25																																		
26		232						1		456																								
27		200								205									0.20			42											1	
28																																		
29				25						35																								
30																																		
46										420													229	55							2		1	1
47	276									360						684		4	0.46				83	196		93	50				5		1	1
49																642	200	2					83	113							2		1	
51		79					LUMP										150						28	406							2			1
52												28	LUMP					2	0.84				28	174	78					28	4			2
53		48													16				0.31				106							30	74	2		1		1
68		41																	0.69		26										117				
70		307	40					3						7				13	1.43		34		84	29	52					85	70	166		2		1	1	2
71						LUMP				58								6	0.20					70									1				
97		51							3		1									85				8										1	
TOTAL	276	958	40	25				4	3	1660	1	28		7	16	1326	350	27	4.13	85	60	42	641	1051	130	93	50	115	144	283	28	4	16	2	6	8
TOTAL CARRIED TO GENERAL SUMMARY	276	958	40	25		LUMP	LUMP	4	3	1660	1	28	LUMP	7	16	1326	350	27	4.2	85	60	42	641	1051	130	93	50	115	144	283	28	4	16	2	6	8

RIC-C.R. 424-0.62

SHEET NO.	604	606					607				608	614			622	626		638																		670		836
	MANHOLE RECONSTRUCTED TO GRADE	GUARDRAIL, TYPE 5	GUARDRAIL, TYPE 5 25' LONG-SPAN	ANCHOR ASSEMBLY, TYPE A	ANCHOR ASSEMBLY, TYPE T	BRIDGE TERMINAL ASSEMBLY, TYPE 1	FENCE, TYPE CL, AS PER PLAN	FENCE, TYPE CL, MISC.: HEIGHT 6', AS PER PLAN	FENCE, MISC.: TEMPORARY FENCE, TYPE CL 5'	6'	CURB RAMP, DESIGN B, AS PER PLAN	BARRIER REFLECTOR, TYPE A2	BARRIER REFLECTOR, TYPE B2	OBJECT MARKER, TWO WAY	PORTABLE CONCRETE BARRIER, 32"	BARRIER REFLECTOR, TYPE A	A2	6" WATER MAIN DUCTILE IRON ANCHORING PIPE AND FITTINGS	12" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 53, PUSH-ON JOINTS AND FITTINGS	16" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 53, PUSH-ON JOINTS AND FITTINGS	16" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 53, MECHANICAL JOINTS AND FITTINGS	1½" COPPER SERVICE BRANCH	24" STEEL PIPE ENCASEMENT, BORED OR JACKED	36" STEEL PIPE ENCASEMENT, BORED OR JACKED	6" GATE VALVE AND VALVE BOX	12" GATE VALVE AND VALVE BOX	16" BUTTERFLY VALVE AND VALVE BOX	12" CUTTING-IN SLEEVE	16" CUTTING-IN SLEEVE	6" FIRE HYDRANT	FIRE HYDRANT REMOVED	FIRE HYDRANT AND GATE VALVE REMOVED AND RESET	VALVE BOX ADJUSTED TO GRADE	WATER WORK, MISC.: BACKFLOW PREVENTER VALVE AND VALVE CHAMBER	WATER WORK, MISC.: SERVICE STOP AND BOX	DITCH EROSION PROTECTION	VEGETATED SWALE EROSION PROTECTION MAT, TYPE B	SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 1 WITHOUT SOIL FILLING
	EACH	FT	FT	EACH	EACH	EACH	FT	FT	FT		EACH	EACH	EACH	EACH	FT	EACH	EACH	FT	FT	FT	FT	FT	FT	FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	FT	EACH	EACH	SQ YD	SQ YD	SQ YD
23																																						
24													4	3	120																							
25																				260				90			2											
26									397			5	4	3	182				334	13			50			1			1									
27		227.5	25	1			222		24				2	2	78		4	7	368			16			1			2		1					1			
28		72.5		1													1																					
29		62.5		1				35		30							3																					
30																			166							1		1										
46		48.2		2												2																						
47		776.8		2		2					2					13																						
49		335.2				2	458									4																				260		
51		800														8																				445	75	
52		114.8		1	1											3																					71	
53	1																																				27	
68																		12												1	1		2					242
70																		7	385			48						1				1			1	241	88	53
71																		14	387			57						1				1			1	121	128	
97																		6			7				2		1		1	2	2			1				
TOTAL	1	2437.5	25	8	1	4	680	35	421	30	2	5	10	8	380	30	8	46	1640	273	7	121	50	90	3	2	3	5	2	4	3	2	2	1	3	1067	389	295
TOTAL CARRIED TO GENERAL SUMMARY	1	2437.5	25	8	1	4	680	35	421	30	2	5	10	8	380	30	8	46	1640	273	7	121	50	90	3	2	3	5	2	4	3	2	2	1	3	1067	389	295

CALCULATED TM
CHECKED JL

SUBSUMMARY

RIC-C.R. 424-0.62

REF. NO.	STATION	SIDE	FLOW	HIGH POINT OR PIPE SPECIAL ELEVATION	OUTLET ELEVATION	PIPE SPECIALS				603		605		
						6" PLUG	6" TEE	6" CROSS	6"-22 1/2° BEND	6" CONDUIT, TYPE B	6" CONDUIT, TYPE F FOR UDERDRAIN OUTLETS	6" SHALLOW PIPE UNDERDRAINS WITH FABRIC WRAP	6" UNCLASSIFIED PIPE UNDERDRAINS WITH FABRIC WRAP	6" DEEP PIPE UNDERDRAINS WITH FABRIC WRAP
						EACH				FT.	FT.	FT.	FT.	FT.
	S. ILLINOIS AVENUE													
1-UD	119+02.75	LT	↙	1162.17	1162.17									
	121+22	LT	↑	1168.33		1					10	47		163
2-UD	NOT USED													
3-UD	121+25	LT	↙	1168.49	1168.49						10			
	122+55	LT	↑	1172.19										
	122+55	LT	↑	1172.19								142		
	99+50*	RT	↘	1171.56	1171.56						10			
4-UD	119+02.75	RT	↙	1162.17	1162.17						10			
	120+75	RT	↑	1165.93										163
	120+98	RT.	↑	1167.64		1							23	
5-UD	121+00	RT	↙	1167.70	1167.70						10			
	123+15	RT	↑	1174.83		1						236		
6-UD	123+20	RT	↙	1174.22	1174.22						10			
	123+55	RT	↑	1174.95		1						25		
7-UD	123+43	LT	↙	1173.84	1173.84						10			
	123+80	LT	↑	1175.33		1						26		
8-UD	127+49	LT	↑	1170.61		1								
	127+86.5	LT	↘	1168.93	1168.93						10	28		
9-UD	127+93	LT	↑	1168.86		1								
	130+50	LT	↘	1154.40	1154.40						10	247		
10-UD	130+52	LT	↑	1154.28		1								
	133+10	LT	↘	1139.45	1139.45						10	248		
11-UD	127+23	RT	↑	1171.66		1								
	127+64	RT	↘	1169.69	1169.69						10	31		
12-UD	127+67	RT	↑	1169.97		1								
	130+50	RT	↘	1154.40	1154.40						10	273		
13-UD	130+52	RT	↑	1154.28		1								
	133+85	RT	↘	1136.37	1136.37						10	323		
	TOTALS THIS TABLE					11					130	1626	23	326

*OAK ST.

REF. NO.	STATION	SIDE	FLOW	HIGH POINT OR PIPE SPECIAL ELEVATION	OUTLET ELEVATION	PIPE SPECIALS				603		605		
						6" PLUG	6" x 6" TEE	6" CROSS	6"-22 1/2° BEND	6" CONDUIT, TYPE B	6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	6" SHALLOW PIPE UNDERDRAINS WITH FABRIC WRAP	6" UNCLASSIFIED PIPE UNDERDRAINS WITH FABRIC WRAP	6" DEEP PIPE UNDERDRAINS WITH FABRIC WRAP
						EACH				FT.	FT.	FT.	FT.	FT.
14-UD	133+12	LT	↓	1139.36		1								
	133+90	LT	↓	1136.20								78		
	134+00	LT	↓	1132.86									10	
	137+41	LT	↓	1128.42										341
	137+55	LT	↳	1128.41			1			30			14	
15-UD	137+55	LT	↱	1128.41										
	139+00	LT	↑	1129.66		1								145
16-UD	133+87	RT	↓	1136.30		1								
	133+90	RT	↓	1136.20								3		
	134+00	RT	↓	1132.86									10	
	137+41	RT	↓	1128.42										341
	137+55	RT	↳	1128.41	1128.40			1	1		14		14	
17-UD	137+55	RT	↱	1128.44										
	139+00	RT	↑	1129.66		1								145
18-UD	NOT USED													
	OAK ST.													
19-UD	90+50	LT	↓	1142.16		1								
	91+25	LT	↓	1142.08									75	
	92+75	LT	↳	1140.82	1140.10		1					150		
20-UD	92+75	LT	↱	1140.82	1140.10							221		
	94+96	LT	↑	1144.13		1								
21-UD	95+00	LT	↙	1144.29	1144.29						10			
	97+98	LT	↑	1162.88		1						288		
22-UD	98+00	LT	↙	1163.02	1163.02						10			
	123+41**	LT	↑	1173.95		1						154		
23-UD	90+50	RT	↓	1141.91		1								
	91+50	RT	↓	1141.81									100	
	92+75	RT	↓	1140.10			1					125		
	93+00	RT	↘	1139.92	1139.92						10	15		
24-UD	93+00	RT	↙	1139.92	1139.92						10			
	93+88	RT	↑	1140.73		1						78		
25-UD	93+92	RT	↙	1140.80	1140.80						10			
	99+48	RT	↑	1171.78		1						546		
	SUB TOTALS					11	3	1	1	30	64	1658	223	972
	TOTALS FROM FIRST COLUMN					11	0	0	0	0	130	1626	23	326
	SHEET TOTAL					22	3	1	1	30	194	3284	246	1298
	TOTALS CARRIED TO GEN. SUMMARY									30	194	3284	246	1298

** S. ILLINOIS AVE.

CALCULATED TM CHECKED JL

UNDERDRAIN SUBSUMMARY

RIC-C.R. 4.24-0.62

LINE	CALCULATIONS	QUANTITY
	ITEM 202 - WEARING COURSE REMOVED	
1	STA. 118+50.00 TO STA. 119+00.00 S. ILLINOIS AVE. : 50.00 X 26.1 AVE. =	1305.00 SQ. FT.
2	STA. 139+00.41 TO STA. 139+50.00 S. ILLINOIS AVE. : 49.59 X 24.2 AVE. =	1200.08 SQ. FT.
3	SUM OF LINES 1 AND 2 =	2505.08 SQ. FT.
4	FROM LINE 3 : 2505.08 SQ. FT. / 9 =	278.35 SQ. YD.
	TOTAL CARRIED TO GENERAL SUMMARY	279 SQ. YD.
	ITEM 448 - 1¼" ASPHALT CONCRETE SURFACE COURSE, TYPE I, PG64-22, AS PER PLAN	
5	STA. 118+50.00 TO STA. 119+00.00 S. ILLINOIS AVE. : 50.00 X (24.77 + 28) / 2 =	1319.25 SQ. FT.
6	STA. 119+00.00 TO STA. 123+36.55 S. ILLINOIS AVE. : 436.55 X 24 =	10477.20 SQ. FT.
7	STA. 127+62.45 TO STA. 136+01.41 S. ILLINOIS AVE. : 838.96 X 24 =	20135.04 SQ. FT.
8	STA. 136+01.41 TO STA. 139+00.41 S. ILLINOIS AVE. : 299.00 X 28 =	8372.00 SQ. FT.
9	STA. 139+00.41 TO STA. 139+50.00 S. ILLINOIS AVE. : 49.59 X (28 + 24.24) / 2 =	1295.30 SQ. FT.
10	STA. 90+50.00 TO STA. 91+50.00 OAK ST. LT. : 100.00 X (9.94 + 14) / 2 =	1197.00 SQ. FT.
11	STA. 90+50.00 TO STA. 91+25.00 OAK ST. RT. : 75.00 X (10.58 + 14) / 2 =	921.75 SQ. FT.
12	STA. 91+25.00 TO STA. 91+50.00 OAK ST. RT. : 25.00 X 12 =	300.00 SQ. FT.
13	STA. 91+50.00 TO STA. 99+87.23 OAK ST. LT. & RT. : 837.23 X 24 =	20093.52 SQ. FT.
14	ADDITIONAL AREA - S. ILLINOIS AVE. RADIUS RETURNS : COMPUTER AREA =	2928.00 SQ. FT.
15	SUM OF LINES 5 TO 14 =	67039.06 SQ. FT.
16	FROM LINE 15 : 67039.06 SQ. FT. X 1.25" / 12 / 27 =	258.64 CU. YD.
	TOTAL CARRIED TO GENERAL SUMMARY	259 CU. YD.
	ITEM 407 - TACK COAT FOR INTERMEDIATE COURSE (SEE GENERAL NOTES)	
17	STA. 118+50.00 TO STA. 119+00.00 S. ILLINOIS AVE. : 50.00 X (4 + 5) / 2 =	225.00 SQ. FT.
18	STA. 119+00.00 TO STA. 123+36.55 S. ILLINOIS AVE. : 436.55 X 24 =	10477.20 SQ. FT.
19	STA. 127+62.45 TO STA. 136+01.41 S. ILLINOIS AVE. : 838.96 X 24 =	20135.04 SQ. FT.
20	STA. 136+01.41 TO STA. 139+00.41 S. ILLINOIS AVE. : 299.00 X 28 =	8372.00 SQ. FT.
21	STA. 139+00.41 TO STA. 139+50.00 S. ILLINOIS AVE. : 49.59 X 4 =	198.36 SQ. FT.
22	STA. 90+50.00 TO STA. 91+50.00 OAK ST. LT. : 100.00 X (9.94 + 14) / 2 =	1197.00 SQ. FT.
23	STA. 90+50.00 TO STA. 91+25.00 OAK ST. RT. : 75.00 X (10.58 + 14) / 2 =	921.75 SQ. FT.
24	STA. 91+25.00 TO STA. 91+50.00 OAK ST. RT. : 25.00 X 12 =	300.00 SQ. FT.
25	STA. 91+50.00 TO STA. 99+87.23 OAK ST. LT. & RT. : 837.23 X 24 =	20093.52 SQ. FT.
26	ADDITIONAL AREA - S. ILLINOIS AVE. RADIUS RETURNS : COMPUTER AREA =	2928.00 SQ. FT.
27	SUM OF LINES 17 TO 26 =	64847.87 SQ. FT.
28	FROM LINE 27 : 64847.87 SQ. FT. / 9 X 0.05 =	360.26 GAL
	TOTAL CARRIED TO GENERAL SUMMARY	361 GAL
	ITEM 407 - TACK COAT (SEE GENERAL NOTES)	
29	STA. 118+50.00 TO STA. 119+00.00 S. ILLINOIS AVE. : 50.00 X (20.77 + 23) / 2 =	1094.25 SQ. FT.
30	STA. 139+00.41 TO STA. 139+50.00 S. ILLINOIS AVE. : 49.59 X (24 + 20.24) / 2 =	1096.94 SQ. FT.
31	SUM OF LINES 29 TO 30 =	2191.19 SQ. FT.
32	FROM LINE 31 : 2191.19 SQ. FT. / 9 0.10 =	24.35 GAL
	TOTAL CARRIED TO GENERAL SUMMARY	25 GAL
	ITEM 448 - 1¾" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22, AS PER PLAN	
33	STA. 118+50.00 TO STA. 119+00.00 S. ILLINOIS AVE. : 50.00 X (4 + 5) / 2 =	225.00 SQ. FT.
34	STA. 119+00.00 TO STA. 123+36.55 S. ILLINOIS AVE. : 436.55 X 24 =	10477.20 SQ. FT.
35	STA. 127+62.45 TO STA. 136+01.41 S. ILLINOIS AVE. : 838.96 X 24 =	20135.04 SQ. FT.
36	STA. 136+01.41 TO STA. 139+00.41 S. ILLINOIS AVE. : 299.00 X 28 =	8372.00 SQ. FT.
37	STA. 139+00.41 TO STA. 139+50.00 S. ILLINOIS AVE. : 49.59 X 4 =	198.36 SQ. FT.
38	STA. 90+50.00 TO STA. 91+50.00 OAK ST. LT. : 100.00 X (9.94 + 14) / 2 =	1197.00 SQ. FT.
39	STA. 90+50.00 TO STA. 91+25.00 OAK ST. RT. : 75.00 X (10.58 + 14) / 2 =	921.75 SQ. FT.
40	STA. 91+25.00 TO STA. 91+50.00 OAK ST. RT. : 25.00 X 12 =	300.00 SQ. FT.
41	STA. 91+50.00 TO STA. 99+87.23 OAK ST. LT. & RT. : 837.23 X 24 =	20093.52 SQ. FT.
42	ADDITIONAL AREA - S. ILLINOIS AVE. RADIUS RETURNS : COMPUTER AREA =	2928.00 SQ. FT.
43	SUM OF LINES 33 TO 42 =	64847.87 SQ. FT.
44	FROM LINE 43 : 64847.87 SQ. FT X 1.75" / 12 27 =	350.26 CU. YD.
	TOTAL CARRIED TO GENERAL SUMMARY	351 CU. YD.

LINE	CALCULATIONS	QUANTITY
	ITEM 301 - 7" ASPHALT CONCRETE BASE, PG64-22, AS PER PLAN	
45	STA. 118+50.00 TO STA. 119+00.00 S. ILLINOIS AVE. : 50.00 X (4.67 + 5.67) / 2 =	258.50 SQ. FT.
46	STA. 119+00.00 TO STA. 123+36.55 S. ILLINOIS AVE. : 436.55 X 24 =	10477.20 SQ. FT.
47	STA. 127+62.45 TO STA. 136+01.41 S. ILLINOIS AVE. : 838.96 X 24 =	20135.04 SQ. FT.
48	STA. 136+01.41 TO STA. 139+00.41 S. ILLINOIS AVE. : 299.00 X 28 =	8372.00 SQ. FT.
49	STA. 139+00.41 TO STA. 139+50.00 S. ILLINOIS AVE. : 49.59 X 4.67 =	231.59 SQ. FT.
50	SUM OF LINES 45 TO 49 =	39474.33 SQ. FT.
51	FROM LINE 50 : 39474.33 SQ. FT. X 7" / 12 / 27 =	852.85 CU. YD.
	TOTAL CARRIED TO GENERAL SUMMARY	853 CU. YD.
	ITEM 301 - 4" ASPHALT CONCRETE BASE, PG64-22, AS PER PLAN	
52	STA. 90+50.00 TO STA. 91+40.00 OAK ST. LT. : 90.00 X (10.27 + 13.92) / 2 =	1088.55 SQ. FT.
53	STA. 91+40.00 TO STA. 91+50.00 OAK ST. LT. : 10.00 X (13.59 + 14) / 2 =	137.95 SQ. FT.
54	STA. 90+50.00 TO STA. 91+15.00 OAK ST. RT. : 65.00 X (10.91 + 13.87) / 2 =	805.35 SQ. FT.
55	STA. 91+15.00 TO STA. 91+25.00 OAK ST. RT. : 10.00 X (13.54 + 14) / 2 =	137.70 SQ. FT.
56	STA. 91+25.00 TO STA. 91+50.00 OAK ST. RT. : 25.00 X 12 =	300.00 SQ. FT.
57	STA. 91+50.00 TO STA. 99+87.23 OAK ST. LT. & RT. : 837.23 X 24 =	20093.52 SQ. FT.
58	ADDITIONAL AREA - S. ILLINOIS AVE. RADIUS RETURNS : COMPUTER AREA =	2928.00 SQ. FT.
59	SUM OF LINES 52 TO 58 =	25491.07 SQ. FT.
60	FROM LINE 59 : 25491.07 SQ. FT. X 4" / 12 / 27 =	314.71 CU. YD.
	TOTAL CARRIED TO GENERAL SUMMARY	315 CU. YD.
	ITEM 304 - 6" AGGREGATE BASE	
61	STA. 118+50.00 TO STA. 119+00.00 S. ILLINOIS AVE. : 50.00 X (5.67 + 6.67) / 2 =	308.50 SQ. FT.
62	STA. 119+00.00 TO STA. 123+36.55 S. ILLINOIS AVE. : 436.55 X 31 =	13533.05 SQ. FT.
63	STA. 127+62.45 TO STA. 136+01.41 S. ILLINOIS AVE. : 838.96 X 31 =	26007.76 SQ. FT.
64	STA. 136+01.41 TO STA. 139+00.41 S. ILLINOIS AVE. : 299.00 X 31 =	9269.00 SQ. FT.
65	STA. 139+00.41 TO STA. 139+50.00 S. ILLINOIS AVE. : 49.59 X 5.67 =	281.18 SQ. FT.
66	STA. 90+50.00 TO STA. 91+40.00 OAK ST. LT. : 90.00 X (10.77 + 14.42) / 2 =	1133.55 SQ. FT.
67	STA. 91+40.00 TO STA. 91+50.00 OAK ST. LT. : 10.00 X (13.59 + 14) / 2 =	137.95 SQ. FT.
68	STA. 90+50.00 TO STA. 91+15.00 OAK ST. RT. : 65.00 X (11.41 + 14.37) / 2 =	837.85 SQ. FT.
69	STA. 91+15.00 TO STA. 91+25.00 OAK ST. RT. : 10.00 X (13.54 + 14) / 2 =	137.70 SQ. FT.
70	STA. 91+25.00 TO STA. 91+50.00 OAK ST. RT. : 25.00 X 12 =	300.00 SQ. FT.
71	STA. 91+50.00 TO STA. 99+87.23 OAK ST. LT. & RT. : 837.23 X 24 =	20093.52 SQ. FT.
72	ADDITIONAL AREA - S. ILLINOIS AVE. RADIUS RETURNS : COMPUTER AREA =	3952.00 SQ. FT.
73	SUM OF LINES 61 TO 72 =	75992.06 SQ. FT.
74	FROM LINE 73 : 75992.06 SQ. FT. X 6" / 12 / 27 =	1407.27 CU. YD.
	TOTAL CARRIED TO GENERAL SUMMARY	1408 CU. YD.
	ITEM 408 - PRIME COAT APPLIED AT THE RATE OF 0.4 GAL/S.Y.	
75	STA. 118+50.00 TO STA. 119+00.00 S. ILLINOIS AVE. : 50.00 X (5.67 + 6.67) / 2 =	308.50 SQ. FT.
76	STA. 119+00.00 TO STA. 123+36.55 S. ILLINOIS AVE. : 436.55 X 24 =	10477.20 SQ. FT.
77	STA. 127+62.45 TO STA. 136+01.41 S. ILLINOIS AVE. : 838.96 X 24 =	20135.04 SQ. FT.
78	STA. 136+01.41 TO STA. 139+00.41 S. ILLINOIS AVE. : 299.00 X 28 =	8372.00 SQ. FT.
79	STA. 139+00.41 TO STA. 139+50.00 S. ILLINOIS AVE. : 49.59 X 5.67 =	281.18 SQ. FT.
80	STA. 90+50.00 TO STA. 91+40.00 OAK ST. LT. : 90.00 X (10.27 + 13.92) / 2 =	1088.55 SQ. FT.
81	STA. 91+40.00 TO STA. 91+50.00 OAK ST. LT. : 10.00 X (13.59 + 14) / 2 =	137.95 SQ. FT.
82	STA. 90+50.00 TO STA. 91+15.00 OAK ST. RT. : 65.00 X (10.91 + 13.87) / 2 =	805.35 SQ. FT.
83	STA. 91+15.00 TO STA. 91+25.00 OAK ST. RT. : 10.00 X (13.54 + 14) / 2 =	137.70 SQ. FT.
84	STA. 91+25.00 TO STA. 91+50.00 OAK ST. RT. : 25.00 X 12 =	300.00 SQ. FT.
85	STA. 91+50.00 TO STA. 99+87.23 OAK ST. LT. & RT. : 837.23 X 24 =	20093.52 SQ. FT.
86	ADDITIONAL AREA - S. ILLINOIS AVE. RADIUS RETURNS : COMPUTER AREA =	2928.00 SQ. FT.
87	SUM OF LINES 75 TO 86 =	65064.99 SQ. FT.
88	FROM LINE 87 : 65064.99 SQ. FT. / 9 X 0.4 =	2891.78 GAL
	TOTAL CARRIED TO GENERAL SUMMARY	2892 GAL

CALCULATED KMW CHECKED TM

CALCULATIONS

RIC-CR424-0.62

LINE	CALCULATIONS	QUANTITY
	ITEM 204 - SUBGRADE COMPACTION	
89	STA. 118+50.00 TO STA. 119+00.00 S. ILLINOIS AVE. : 50.00 X (7 + 8) / 2 =	375.00 SQ. FT.
90	STA. 119+00.00 TO STA. 123+36.55 S. ILLINOIS AVE. : 436.55 X 32 =	13969.60 SQ. FT.
91	STA. 127+62.45 TO STA. 136+01.41 S. ILLINOIS AVE. : 838.96 X 32 =	26846.72 SQ. FT.
92	STA. 136+01.41 TO STA. 139+00.41 S. ILLINOIS AVE. : 299.00 X 32 =	9568.00 SQ. FT.
93	STA. 139+00.41 TO STA. 139+50.00 S. ILLINOIS AVE. : 49.59 X 7 =	347.13 SQ. FT.
94	STA. 90+50.00 TO STA. 91+40.00 OAK ST. LT. : 90.00 X (11.44 + 15.59) / 2 =	1216.35 SQ. FT.
95	STA. 91+40.00 TO STA. 91+50.00 OAK ST. LT. : 10.00 X (15.59 + 16) / 2 =	157.95 SQ. FT.
96	STA. 90+50.00 TO STA. 91+15.00 OAK ST. RT. : 65.00 X (12.08 + 15.54) / 2 =	897.65 SQ. FT.
97	STA. 91+15.00 TO STA. 91+25.00 OAK ST. RT. : 10.00 X (15.54 + 16) / 2 =	157.70 SQ. FT.
98	STA. 91+25.00 TO STA. 91+50.00 OAK ST. RT. : 25.00 X 16 =	400.00 SQ. FT.
99	STA. 91+50.00 TO STA. 99+87.23 OAK ST. LT. & RT. : 837.23 X 32 =	26791.36 SQ. FT.
100	ADDITIONAL AREA - S. ILLINOIS AVE. RADIUS RETURNS : COMPUTER AREA =	4098.00 SQ. FT.
101	SUM OF LINES 89 TO 100 =	84825.46 SQ. FT.
102	FROM LINE 101 : 84825.46 SQ. FT. / 9 =	9425.06 SQ. YD.
	TOTAL CARRIED TO GENERAL SUMMARY	**9426 SQ. YD.**
	ITEM 204 - PROOF ROLLING	
103	FROM LINE 102 : 9425.06 SQ. YD. / 2000 =	4.27 HOUR
	TOTAL CARRIED TO GENERAL SUMMARY	**5 HOUR**
	ITEM 609 - CURB, TYPE 6	
103A	STA. 118+90 TO STA. 119+00 S. ILLINOIS AVE. LT. & RT. =	20.00 FT.
104	STA. 136+01.41 TO STA. 139+00.41 S. ILLINOIS AVE. LT. & RT. : 299.00X 2 =	598.00 FT.
104A	STA. 139+00.41 TO STA. 139+10.41 S. ILLINOIS AVE. RT. =	10.00 FT.
105	STA. 91+40.00 TO STA. 91+50.00 OAK ST. LT. =	10.00 FT.
106	STA. 91+15.00 TO STA. 91+25.00 OAK ST. RT. =	10.00 FT.
107	SUM OF LINES 103A TO 106 =	648.00 FT.
	TOTAL CARRIED TO GENERAL SUMMARY	**648 FT.**
	ITEM 609 - COMBINATION CURB AND GUTTER, TYPE 2	
108	STA. 119+00.00 TO STA. 119+89.50 S. ILLINOIS AVE. LT.	
109	STA. 119+89.50 TO STA. 120+20.64 48 X 40°26'28" x 0.01744 =	89.50 FT.
110	STA. 120+94.36 TO STA. 121+25.50 : 48 X 40°26'28" x 0.01744 =	33.85 FT.
111	STA. 121+25.50 TO STA. 121+68.39 S. ILLINOIS AVE. LT. =	33.85 FT.
112	ADDITIONAL LENGTH - OAK ST. RADIUS RETURN RT. COMPUTER LENGTH =	42.89 FT.
113	ADDITIONAL LENGTH - OAK ST. RADIUS RETURN LT. COMPUTER LENGTH =	143.01 FT.
114	STA. 119+00.00 TO STA. 123+28.02 S. ILLINOIS AVE. RT. : (37.25 SQ. + 6 SQ.) SQRT =	148.87 FT.
115	STA. 127+75.41 TO STA. 128+12.66 S. ILLINOIS AVE. LT. =	428.02 FT.
116	STA. 128+12.66 TO STA. 136+01.41 S. ILLINOIS AVE. LT. =	37.73 FT.
117	STA. 127+52.51 TO STA. 136+01.41 S. ILLINOIS AVE. RT. =	788.75 FT.
118	STA. 91+50.00 TO STA. 98+30.05 OAK ST. LT. =	848.90 FT.
119	STA. 91+25.00 TO STA. 99+25.37 OAK ST. RT. =	708.34 FT.
120	SUM OF LINES 108 TO 119 =	800.37 FT.
	=	4075.80 FT.
	TOTAL CARRIED TO GENERAL SUMMARY	**4076 FT.**
	ITEM 608 - 4" CONCRETE WALK	
121	NOT USED	
122	STA. 119+00.00 TO STA. 121+68.18 S. ILLINOIS AVE. : 268.18 X 5 =	1340.90 SQ. FT.
123	STA. 121+68.18 TO STA. 122+30.90 S. ILLINOIS AVE. : COMPUTER AREA =	479.34 SQ. FT.
124	STA. 123+38.60 TO STA. 123+83.00 S. ILLINOIS AVE. : 44.40 X 5.5 =	244.20 SQ. FT.
125	STA. 127+48.50 TO STA. 127+76.68 S. ILLINOIS AVE. : 28.18 X (5.5 + 5) / 2 =	147.95 SQ. FT.
126	STA. 127+76.68 TO STA. 136+01.41 S. ILLINOIS AVE. : 824.73 X 5 =	4123.65 SQ. FT.
126A	DEDUCT FOR DRIVES =	830.00 SQ. FT.
127	SUM OF LINES 121 TO 126 =	5506.04 SQ. FT.
	TOTAL CARRIED TO GENERAL SUMMARY	**5507 SQ. FT.**

LINE	CALCULATIONS	QUANTITY
	ITEM 204 - GEOTEXTILE FABRIC, 712.09, TYPE D	
128	STA. 08+48.00 TO STA. 09+00.00 TEMP. OAK STREET: 52.00 X(22 + 28)=	1300.00 SQ. FT.
129	STA. 09+00.00 TO STA. 09+50.00 TEMP. OAK STREET: 50.00 X(28 + 43.5)=	1787.50 SQ. FT.
130	STA. 09+50.00 TO STA. 09+88.50 TEMP. OAK STREET: 38.50 X(43.5 + 100)=	2762.38 SQ. FT.
	131-156 NOT USED	
157	STA. 119+00.00 TO STA. 119+50.00 S. ILLINOIS AVENUE: 50.00 X(29 + 29)=	1450.00 SQ. FT.
158	STA. 119+50.00 TO STA. 120+00.00 S. ILLINOIS AVENUE: 50.00 X(29 + 29)=	1450.00 SQ. FT.
159	STA. 120+00.00 TO STA. 120+50.00 S. ILLINOIS AVENUE: 50.00 X(29 + 55)=	2100.00 SQ. FT.
160	STA. 120+50.00 TO STA. 120+75.00 S. ILLINOIS AVENUE: 25.00 X(55 + 0)=	687.50 SQ. FT.
161	STA. 127+50.00 TO STA. 128+00.00 S. ILLINOIS AVENUE: 50.00 X(255 + 258)=	12825.00 SQ. FT.
162	STA. 128+00.00 TO STA. 128+50.00 S. ILLINOIS AVENUE: 50.00 X(258 + 265)=	13075.00 SQ. FT.
163	STA. 128+50.00 TO STA. 129+00.00 S. ILLINOIS AVENUE: 50.00 X(265 + 339)=	15100.00 SQ. FT.
164	STA. 129+00.00 TO STA. 129+50.00 S. ILLINOIS AVENUE: 50.00 X(339 + 291)=	15750.00 SQ. FT.
165	STA. 129+50.00 TO STA. 130+00.00 S. ILLINOIS AVENUE: 50.00 X(291 + 296)=	14675.00 SQ. FT.
166	STA. 130+00.00 TO STA. 130+50.00 S. ILLINOIS AVENUE: 50.00 X(296 + 276)=	14300.00 SQ. FT.
167	STA. 130+50.00 TO STA. 131+00.00 S. ILLINOIS AVENUE: 50.00 X(276 + 240)=	12900.00 SQ. FT.
168	NOT USED	
169	STA. 133+50.00 TO STA. 134+00.00 S. ILLINOIS AVENUE: 50.00 X(0 + 29)=	725.00 SQ. FT.
170	STA. 134+00.00 TO STA. 134+50.00 S. ILLINOIS AVENUE: 50.00 X(29 + 29)=	1450.00 SQ. FT.
171	STA. 134+50.00 TO STA. 135+00.00 S. ILLINOIS AVENUE: 50.00 X(29 + 29)=	1450.00 SQ. FT.
172	STA. 135+00.00 TO STA. 135+50.00 S. ILLINOIS AVENUE: 50.00 X(29 + 29)=	1450.00 SQ. FT.
173	STA. 135+50.00 TO STA. 136+01.41 S. ILLINOIS AVENUE: 51.41 X(29 + 29)=	1490.89 SQ. FT.
174	STA. 136+01.41 TO STA. 136+50.00 S. ILLINOIS AVENUE: 48.59 X(29 + 31)=	1457.70 SQ. FT.
175	STA. 136+50.00 TO STA. 137+00.00 S. ILLINOIS AVENUE: 50.00 X(31 + 31)=	1550.00 SQ. FT.
176	STA. 137+00.00 TO STA. 137+50.00 S. ILLINOIS AVENUE: 50.00 X(31 + 31)=	1550.00 SQ. FT.
177	STA. 137+50.00 TO STA. 138+00.00 S. ILLINOIS AVENUE: 50.00 X(31 + 31)=	1550.00 SQ. FT.
178	STA. 138+00.00 TO STA. 138+50.00 S. ILLINOIS AVENUE: 50.00 X(31 + 31)=	1550.00 SQ. FT.
179	STA. 138+50.00 TO STA. 139+00.41 S. ILLINOIS AVENUE: 50.41 X(31 + 31)=	1562.71 SQ. FT.
180	SUM OF LINES 128 TO 179 =	125948.68 SQ. FT.
181	FROM LINE 180 : 125948.68 SQ. FT. / 9 =	13994.30 SQ. YD.
	TOTAL CARRIED TO GENERAL SUMMARY	**13995 SQ. YD.**

CALCULATED KMW CHECKED TM

CALCULATIONS

RIC-CR424-0.62

LINE	CALCULATIONS	QUANTITY
	659 SEEDING AND MULCHING	
182	TOTAL SEEDING AND MULCHING CARRIED FROM THE GENERAL SUMMARY	26983 SQ. YD.
183	TOTAL FOR DITCH EROSION PROTECTION	1067 SQ. YD.
184	SUM OF LINES 182 & 183 TOTAL (659) =	28050 SQ. YD.
185	NOT USED	
	659 SOIL ANALYSIS TEST	
186	LINE 184 (28050 SQ. YD. x 1 TEST / 48400 SQ. YD.) (MINIMUM OF 2 TESTS) TOTAL (659) =	0.58 EACH
	TOTAL CARRIED TO GENERAL NOTES	**2 EACH**
	659 COMMERCIAL FERTILIZER	
187	LINE 184 (28050 SQ. YD. x 1 TON / 7410 SQ. YD.) TOTAL (659) =	3.79 TON
	TOTAL CARRIED TO GENERAL NOTES	**4 TON**
	659 LIME	
188	LINE 184 (28050 SQ. YD. / 4840 SQ. YD. / 1 ACRE) TOTAL (659) =	5.80 ACRE
	TOTAL CARRIED TO GENERAL NOTES	**6 ACRE**
	659 INTERSEEDING	
189	LINE 184 (28050 SQ. YD. x 0.05) TOTAL (659) =	1402.50 SQ. YD.
	TOTAL CARRIED TO GENERAL NOTES	**1403 SQ. YD.**
	659 WATER	
190	LINE 184 (28050 SQ. YD. x 0.0027 M. GAL. / SQ. YD. x 2 APPLICATIONS) TOTAL (659) =	151.47 M. GAL.
	TOTAL CARRIED TO GENERAL NOTES	**152 M. GAL.**
	659 REPAIR SEEDING AND MULCHING	
191	LINE 184 (28050 SQ. YD. x 0.05) TOTAL (659) =	1402.50 SQ. YD.
	TOTAL CARRIED TO GENERAL NOTES	**1403 SQ. YD.**
	659 MOWING	
192	LINE 184 (28050 SQ. YD. x 0.25) x 9 ÷ 1000 TOTAL (659) =	63.12 M. SQ. FT.
	TOTAL CARRIED TO GENERAL NOTES	**64 M. SQ. FT.**

LINE	CALCULATIONS	QUANTITY
	ITEM 615 - PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A	
193	STA. 15+42.00 TO STA. 17+00.00 : COMPUTER AREA =	1517.65 SQ. FT.
194	STA. 17+00.00 TO STA. 19+24.22 : 224.22 x 22 =	4932.84 SQ. FT.
195	STA. 19+24.22 TO STA. 19+87.90 : 63.68 x (22 + 32.6) / 2 =	1738.46 SQ. FT.
196	STA. 19+87.90 TO STA. 21+35.00 : 147.10 x 22 =	3236.20 SQ. FT.
197	ADDITIONAL AREA - INDUSTRIAL DRIVE CONNECTOR : : **80** x 22 =	4160.00 SQ. FT.
198	ADDITIONAL AREA - INDUSTRIAL DRIVE CONNECTOR RADIUS RETURNS COMPUTER AREA =	1976.00 SQ. FT.
199	ADDITIONAL AREA - EAST SIDE : COMPUTER AREA =	2082.00 SQ. FT.
200	STA. 21+35.00 TO STA. 22+00.00 : 65.00 x (30 + 22) / 2 =	1690.00 SQ. FT.
201	STA. 22+00.00 TO STA. 22+15.00 : 15.00 x 22 =	330.00 SQ. FT.
202	STA. 22+15.00 TO STA. 22+81.64 : 66.64 x (22 + 33.5 / 2 =	1849.26 SQ. FT.
203	STA. 22+81.64 TO STA. 38+00.00 : 1518.36 x 22 =	33403.92 SQ. FT.
204	STA. 38+00.00 TO STA. 39+61.00 : COMPUTER AREA =	1777.55 SQ. FT.
205	ADDITIONAL AREA - OAK STREET CONNECTOR RADIUS RETURNS : COMPUTER AREA =	1527.00 SQ. FT.
206	STA. 08+47.00 TO STA. 08+66.00 : 19.00 x 22 =	418.00 SQ. FT.
207	STA. 08+66.00 TO STA. 09+29.39 : 63.39 x (22 + 32.6) / 2 =	1730.55 SQ. FT.
208	STA. 09+29.39 TO STA. 09+88.50 : 59.11 x 32.6 =	1926.99 SQ. FT.
209	SUM OF LINES 193 TO 206 =	64296.42 SQ. FT.
210	FROM LINE 209 : 64296.42 SQ. FT. /9 =	7144.05 SQ. YD.
	TOTAL CARRIED TO GENERAL SUMMARY	**7145 SQ. YD.**

CALCULATED KMW CHECKED TM

CALCULATIONS

RIC-CR424-0.62

088GAC.DGN 01/24/06 HN,

POT Sta. 13+00.00
BEGIN WORK
STA. 115+18.93
TE-21 G020(316)
BEGIN PROJECT
STA. 119+00
BUILDING
GRAVEL PARKING
CONC. PARKING
℄ CONSTRUCTION & R/W
S. ILLINOIS AVE.
℄ OAK ST.
E. LINE S.W. ¼ SEC. 26
W. LINE S.E. ¼ SEC. 26
N 0° 23' 05" E
PC Sta. 15+18.93
PT Sta. 16+60.49
STA. 122+70.00 ℄ ILLINOIS AVE. =
STA. 100+00.00 ℄ OAK STREET
AC Sta. 122+38
STA. 127+00
MATCH LINE
A = 0.26 AC
C = 0.65
A = 0.10 AC
C = 0.9
A = 0.10 AC
C = 0.9
A = 0.12 AC
C = 0.72
A = 0.13 AC
C = 0.72
A = 0.08 AC
C = 0.9
A = 0.08 AC
C = 0.9
A = 0.17 AC
C = 0.90
A = 0.13 AC
C = 0.90
BRIDGE NO. RI-CR424-0062
℄ NORFOLK SOUTHERN RAILWAY
N 54° 49' 00" W
2" SCH 80 PVC
2" HP GAS
12" CMP
SWITCH
SWITCH

LEGEND

SOFT ORGANIC MATERIAL (IN SOME CASES COVERED WITH EXISTING FILL)

EXTREMELY SOFT SOIL AT GROUND SURFACE ASSOCIATED WITH EXISTING STREAM

WETLAND

STA. 127+00
MATCH LINE
P.I. STA. 130+28.44
△ = 1°40' 28" RT.
NO CURVE
A = 0.17 AC
C = 0.90
A = 0.16 AC
C = 0.90
A = 0.17 AC
C = 0.90
COMMERCIAL
A = 0.32 AC
C = 0.70
BUILDING
PC Sta. 136+01.41
PT Sta. 136+98.55
PT Sta. 139+00.41
A = 0.05 AC
C = 0.90
A = 0.19 AC
C = 0.76
POT Sta. 139+65.00
ROCKY FORK
POT Sta. 40+64.53
POT STA. 141+14.73
℄ R/W S. ILLINOIS AVE.
N 0° 09' 31" E
N 2° 03' 09" W
N 0° 36' 01" E
N 1° 49' 59" E
N 1° 17' 56" E
PROP. CULVERT
A = 0.20 AC
C = 0.72
A = 0.21 AC
C = 0.50
℄ CONSTRUCTION
S. ILLINOIS AVE.
PC Sta. 134+80.54
A = 0.13 AC
C = 0.72
℄ TEMPORARY ROAD
20'x20' ROCK CHANNEL PROTECTION TYPE B, W/FILTER (T-30")
BUILDING
PT Sta. 27+91.15
A = 0.18 AC
C = 0.72
A = 0.05 AC
C = 0.90
A = 0.21 AC
C = 0.61
P.I. STA. 139+00.41
△ = 1°47' 50" RT.
NO CURVE
A = 0.26 AC
C = 0.61
END WORK
STA. 139+62
TE-21 G020(316)
END PROJECT
STA. 139+00.41
TRUCK DOCK
BLDG.
10"-6" UPUD @ 30%

088DE-LDGN 1/5/05 KH,HN,RC

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED EEL
CHECKED TM

PROJECT SITE PLAN - 1

RIC-C.R. 424-0.62

GENERAL NOTES

THE PROJECT CONSISTS OF CONSTRUCTING AN OVERPASS GRADE SEPARATION OF SOUTH ILLINOIS AVENUE WITH THE NORFOLK SOUTHERN RAILWAY. THE PROPOSED WORK INCLUDES INTERSECTION RECONSTRUCTION, CONSTRUCTION OF A NEW STORM SEWER, AND ALL RELATED DRAINAGE AND ROADWAY WORK INCLUDING TRAFFIC CONTROL AND MAINTENANCE OF TRAFFIC. THE PROJECT LENGTH IS APPROXIMATELY 2000 FEET.

THE EXISTING SITE CAN BE DESCRIBED AS RURAL AND COMMERCIAL.

DRAINAGE AREA VALUES AND RUNOFF COEFFICIENTS SHOWN ON THE PLANS REPRESENT POSTCONSTRUCTION SITE CONDITIONS. DUE TO THE NATURE OF THIS PROJECT, THE PRECONSTRUCTION VALUES FOR EACH AREA ARE APPROXIMATELY THE SAME. EXISTING DRAINAGE FEATURES HAVE BEEN REPLACED IN-KIND. PROPOSED DRAINAGE ITEMS HAVE BEEN PLACED TO COLLECT THE EXISTING DRAINAGE INFRASTRUCTURE.

CATCH BASIN, INLET OR MANHOLE INLET PROTECTION, DITCH CHECKS AND BALE FILTER DIKES, ETC. SHALL BE CONSTRUCTED AS PER STANDARD CONSTRUCTION DRAWINGS DM-4.3 AND DM-4.4.

USGS QUADRANT NOS 40082-F4-TF-024 & 40082-G4-TF-024
*LATITUDE 40°44′53″ N
*LONGITUDE 82°29′04″ W

*LONGITUDE AND LATITUDE TO APPROXIMATE CENTER OF PROJECT.
IMMEDIATE RECEIVING WATERS - ROCKY FORK OF THE MOHICAN RIVER
SUBSEQUENT RECEIVING WATERS - MOHICAN RIVER
SOIL DATA - SEE SOIL PROFILES.

PROJECT DATA		
TOTAL AREA (RIGHT-OF-WAY):	14.82	ACRES
PROJECT EARTH DISTURBED AREA:	12.6	ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA:	5.2	ACRES
NOTICE OF INTENT EARTH DISTURBED AREA:	17.8	ACRES
IMPERVIOUS (PAVED) AREA FOR PRE-CONSTRUCTION SITE:	1.61	ACRES
IMPERVIOUS (PAVED) AREA FOR POST CONSTRUCTION SITE:	2.39	ACRES
RUNOFF COEFFICIENT FOR PRE-CONSTRUCTION SITE:	SEE NOTES THIS SHEET	
RUNOFF COEFFICIENT FOR POST CONSTRUCTION SITE:		

SEE ALSO SOIL SURVEY OF RICHLAND COUNTY, SHEET NO. 43.

HORIZONTAL SCALE IN FEET: 0, 25, 50, 100

CALCULATED EEL CHECKED TM

PROJECT SITE PLAN - 2

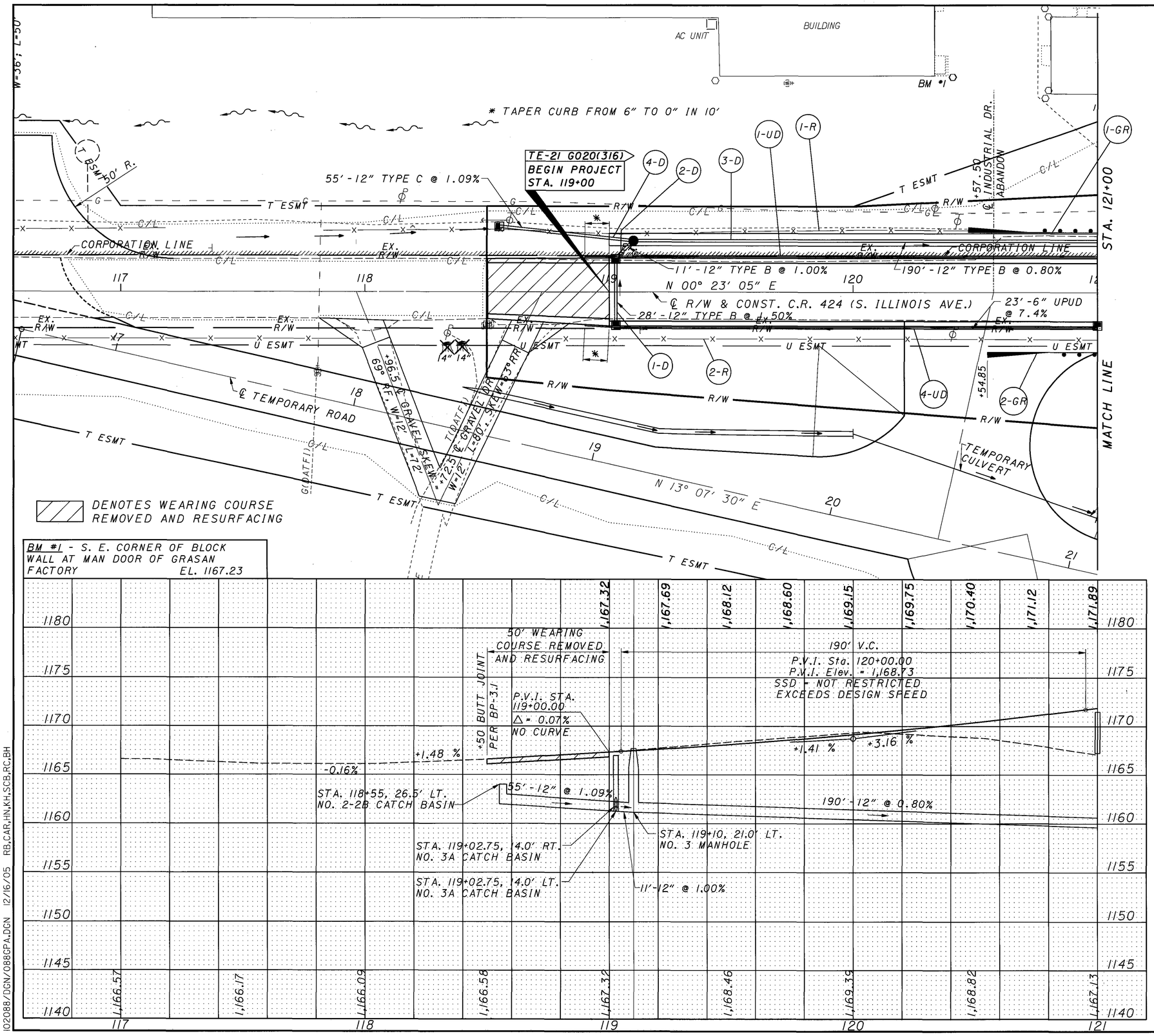
RIC-C.R. 424-0.62

45/153

088DE-2.DGN 01/24/06 KH,BH,HN

REFERENCE	SEE SHEET NO.
TEMPORARY ROAD	24
UNDERDRAIN SUBSUMMARY	40

○--ESTIMATED QUANTITIES LOCATED ON SHEET NO. 23



REF NO.	STATION FROM	STATION TO	SIDE														
626	BARRIER REFRECTOR TYPE A			EACH								1	1				2
606	ANCHOR ASSEMBLY, TYPE A			EACH								1	1				2
	GUARDRAIL, TYPE 5			FT								28.0	20.2				48.2
604	MAHHOLE NO. 3			EACH									1				1
	CATCH BASIN NO. 3A			EACH								1	1				2
	CATCH BASIN, NO. 2-2B			EACH										1			1
603	12" CONDUIT TYPE C			FT										55			55
603	12" CONDUIT, TYPE B			FT								28	11	190			229
202	FENCE REMOVED			FT											200	220	420
	TOTALS CARRIED TO SUBSUMMARY																420
1-D	119+02.75	119+10.00		LT&RT													
2-D	119+02.75	121+00.00		LT													
3-D	119+10.00	121+00.00		LT													
4-D	118+55.00	119+10.00		LT													
1-GR	120+47.00	121+00.00		LT													
2-GR	120+54.85	121+00.00		RT													
1-R	118+50.00	120+50.00		LT													
2-R	118+80.00	121+00.00		RT													

CALCULATED BPB CHECKED TM

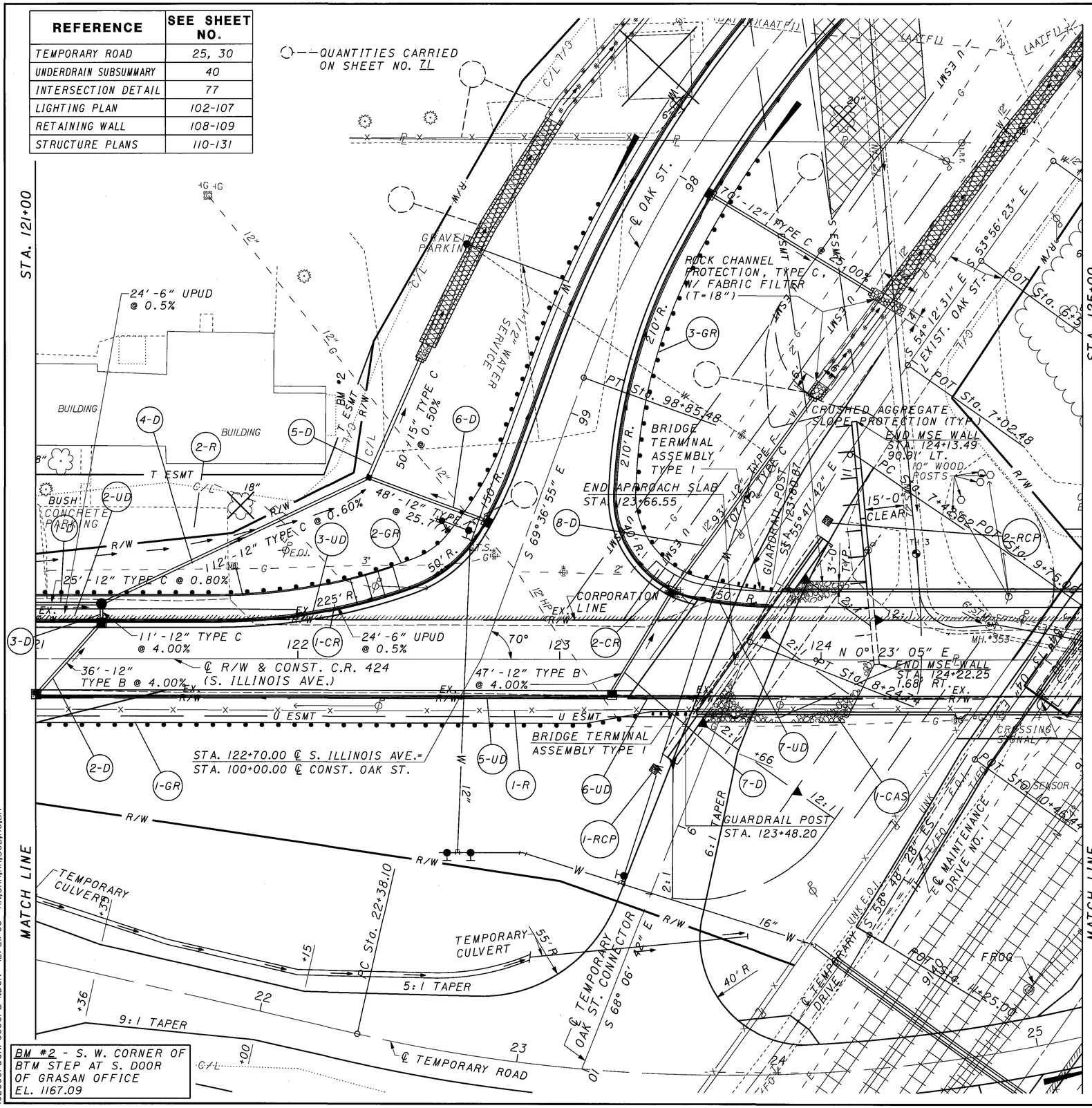
HORIZONTAL SCALE IN FEET 0 10 20 40

PLAN AND PROFILE - S. ILLINOIS AVENUE
STA. 117+00 TO STA. 121+00

RIC-C.R. 424-0.62

102088/DGN/088GPA.DGN 12/16/05 RB,CAR,HN,KH,SCB,RC,BH

REFERENCE	SEE SHEET NO.
TEMPORARY ROAD	25, 30
UNDERDRAIN SUBSUMMARY	40
INTERSECTION DETAIL	77
LIGHTING PLAN	102-107
RETAINING WALL	108-109
STRUCTURE PLANS	110-131



BM #2 - S. W. CORNER OF BTM STEP AT S. DOOR OF GRASAN OFFICE EL. 1167.09

626	BARRIER REFLECTOR TYPE A	EACH									6	2	5								13
608	CURB RAMP DESIGN B, AS PER PLAN	EACH															1	1			2
606	ANCHOR ASSEMBLY, TYPE A	EACH										1	1								2
	BRIDGE TERMINAL ASSEMBLY, TYPE I	EACH									1		1								2
	GUARDRAIL, TYPE 5	FT									254.8	309.5	212.5								776.8
604	MANHOLE NO. 3	EACH				1															1
	CATCH BASIN NO. 2-2B	EACH					1														1
	CATCH BASIN NO. 3A	EACH		1	1			1	1	1											5
603	15" CONDUIT, TYPE C	FT					50														50
	12" CONDUIT, TYPE F 707.05, TYPE C	FT								93											93
	12" CONDUIT, TYPE C	FT	25		11	112		48													196
	12" CONDUIT, TYPE B	FT		36					47												83
602	CONCRETE MASONRY	CU. YD.					0.25			0.21											0.46
601	RCP, TYPE C WITH FABRIC FILTER	CU. YD.					2												1	1	4
	CRUSHED AGGREGATE SLOPE PROTECTION	SQ. YD.												684							684
202	FENCE REMOVED	FT													360						360
	PAVEMENT REMOVED	SQ. YD.														276					276
SIDE			LT	LT&RT	LT	LT	RT	RT	LT&RT	LT	RT	LT	LT	LT&RT	RT	LT	LT	LT	RT	RT	TOTALS CARRIED TO SUBSUMMARY
STATION	TO		121+25.00	121+25.00		99+50.00	99+00.00		123+43.00	123+98.00	123+54.45	98+03.40	97+54.55		124+60.00	121+74.00					
	FROM		121+00.00	121+00.00	121+25.00	121+25.00	99+50.00	99+50.00	123+20.00	123+43.00	121+00.00	121+00.00	123+87.00	123+44.50	121+00.00	121+03.00	122+31.00	123+34.00	123+30.00	124+00.00	
REF NO.			1-D	2-D	3-D	4-D	5-D	6-D	7-D	8-D	1-GR	2-GR	3-GR	1-CAS	1-R	2-R	1-CR	2-CR	1-RCP	2-RCP	

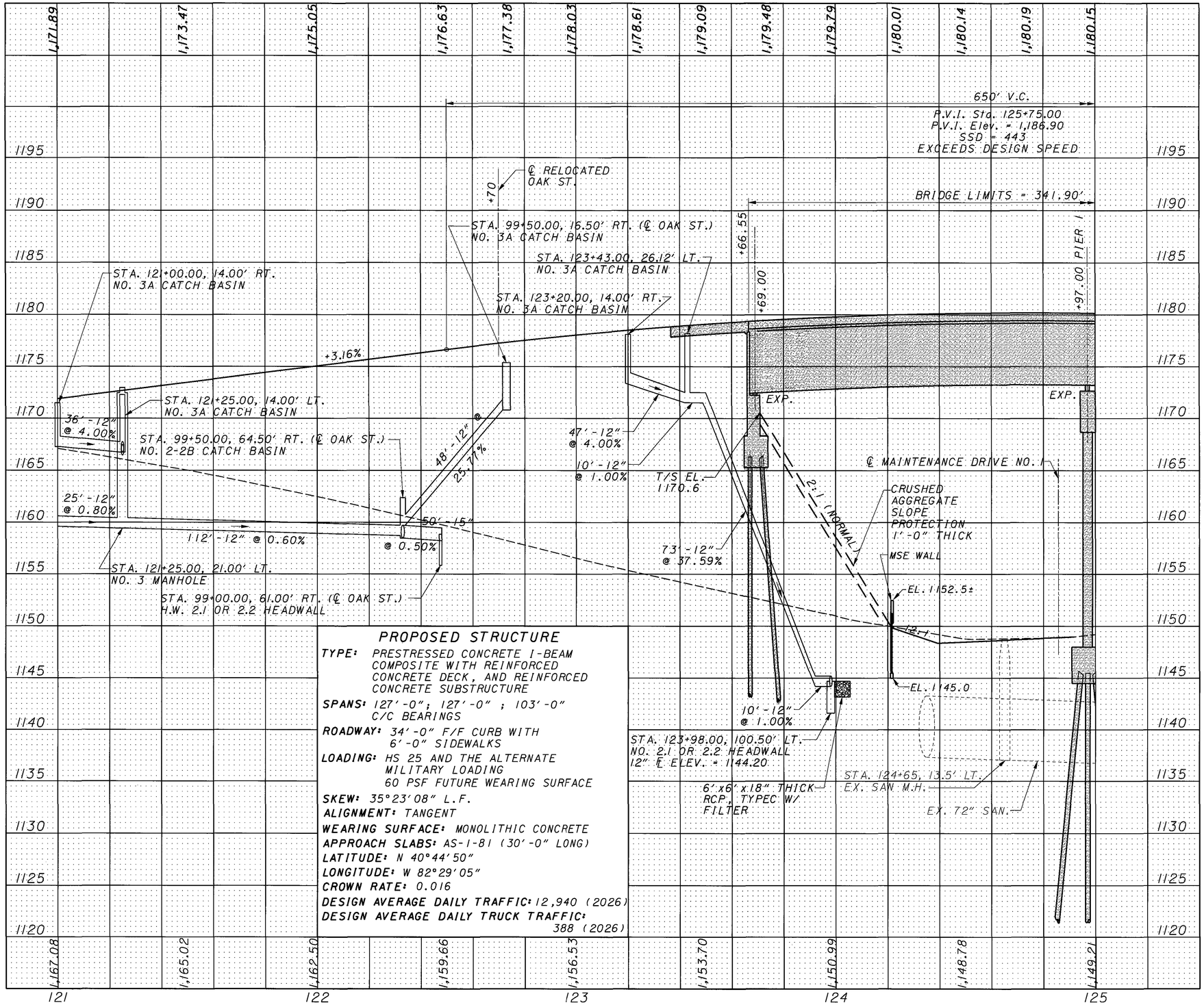
CALCULATED BPB
CHECKED TM

0 10 20 40
HORIZONTAL SCALE IN FEET

N

PLAN - S. ILLINOIS AVENUE
STA. 121+00 TO STA. 125+00

RIC-C.R. 424-0.62



PROPOSED STRUCTURE

TYPE: PRESTRESSED CONCRETE I-BEAM COMPOSITE WITH REINFORCED CONCRETE DECK, AND REINFORCED CONCRETE SUBSTRUCTURE

SPANS: 127'-0"; 127'-0" ; 103'-0" C/C BEARINGS

ROADWAY: 34'-0" F/F CURB WITH 6'-0" SIDEWALKS

LOADING: HS 25 AND THE ALTERNATE MILITARY LOADING
60 PSF FUTURE WEARING SURFACE

SKEW: 35°23'08" L.F.

ALIGNMENT: TANGENT

WEARING SURFACE: MONOLITHIC CONCRETE

APPROACH SLABS: AS-1-81 (30'-0" LONG)

LATITUDE: N 40°44'50"

LONGITUDE: W 82°29'05"

CROWN RATE: 0.016

DESIGN AVERAGE DAILY TRAFFIC: 12,940 (2026)

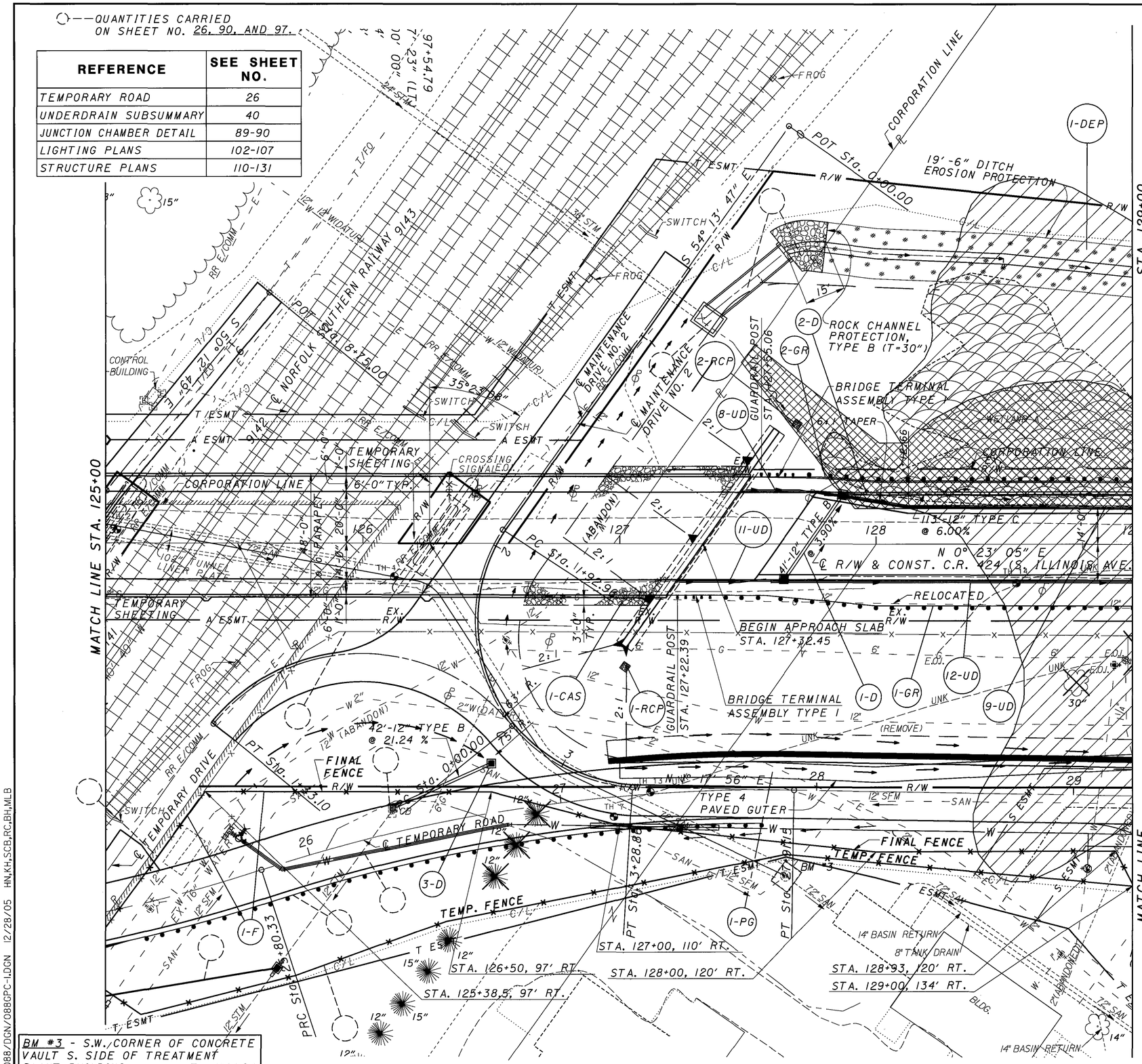
DESIGN AVERAGE DAILY TRUCK TRAFFIC: 388 (2026)

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED BPB
CHECKED TM

PROFILE - S. ILLINOIS AVENUE
STA. 121+00 TO STA. 125+00

RIC-C.R. 424-0.62



LEGEND

- SOFT ORGANIC MATERIAL (IN SOME CASES COVERED WITH EXISTING FILL)
- EXTREMELY SOFT SOIL AT GROUND SURFACE ASSOCIATED WITH EXISTING STREAM
- WETLAND

BENDS	12" x 30°	EACH				1									
670	DITCH EROSION PROTECTION	SQ. YD.								260					260
626	BARRIER REFLECTOR TYPE A	EACH					2	2							4
607	FENCE TYPE CL, AS PER PLAN	FT							458						458
606	BRIDGE TERMINAL ASSEMBLY, TYPE I	EACH					1	1							2
	GUARDRAIL, TYPE 5	FT					184	151.2							335.2
604	CATCH BASIN NO 2-2B	EACH				1									1
	CATCH BASIN NO. 3A	EACH	1												2
603	12" CONDUIT, TYPE C	FT		113											113
	12" CONDUIT, TYPE B	FT	41			42									83
601	PAVED GUTTER, TYPE 4	FT								200					200
	RCP, TYPE C WITH FILTER	CU. YD.										1			2
	CRUSHED AGGREGATE SLOPE PROTECTION	SQ. YD.							642						642

REF NO.	STATION FROM	STATION TO	SIDE
1-D	127+64.00	127+86.50	LT&RT
2-D	127+80.00	129+00.00	LT
3-D	126+02.00	126+50.00	RT
1-GR	127+16.16	129+00.00	RT
2-GR	127+48.81	129+00.00	LT
1-PG	127+00.00	129+00.00	RT
1-F	125+00.00	129+00.00	RT
1-DEP	127+78.00	129+00.00	LT
1-CAS	126+63.00	127+28.00	LT&RT
1-RCP	127+04.00		RT
2-RCP	127+67.00		LT
TOTALS CARRIED TO SUBSUMMARY			

HORIZONTAL SCALE IN FEET (0, 10, 20, 40)

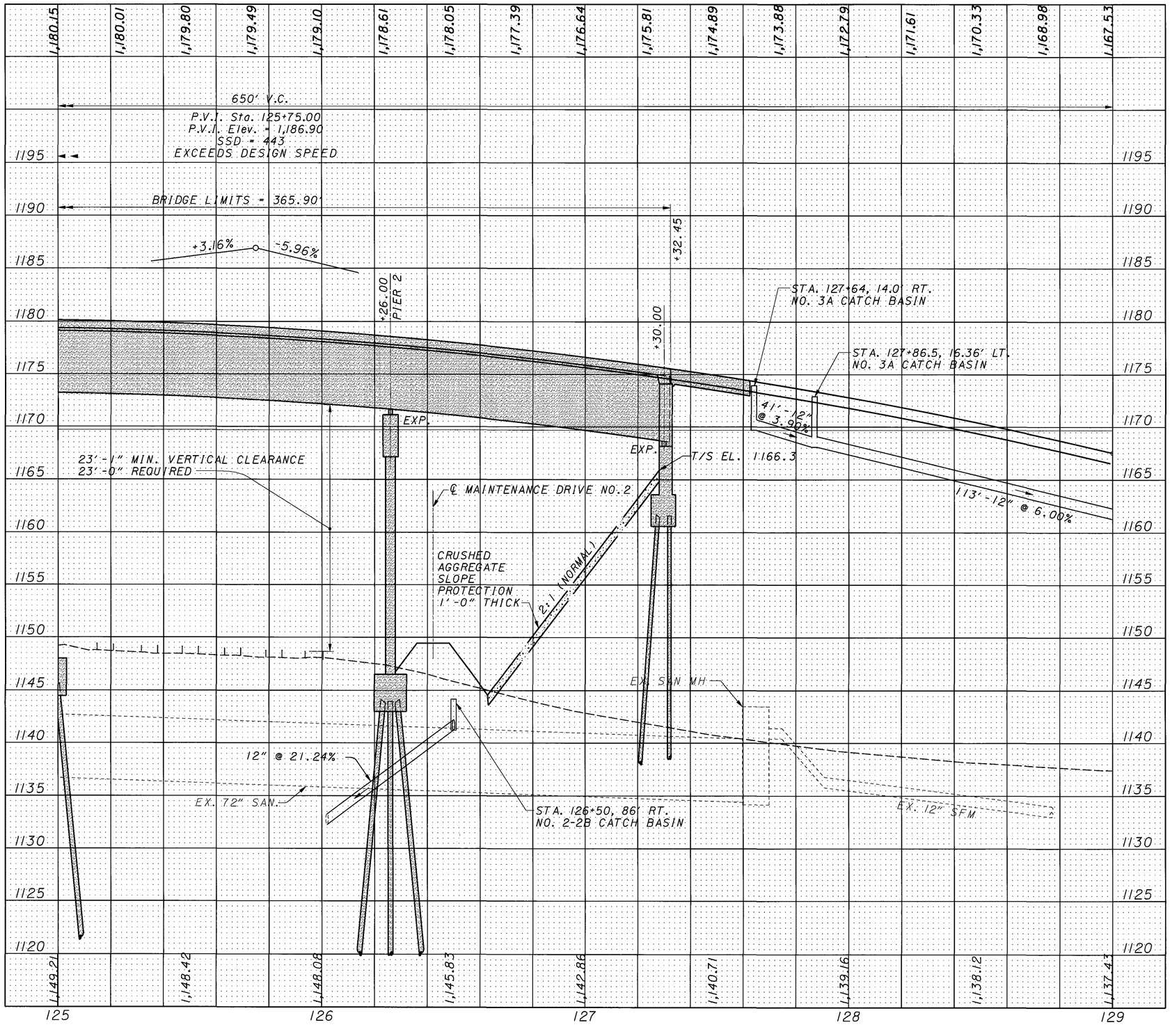
CALCULATED BPB CHECKED TM

PLAN - S. ILLINOIS AVENUE STA. 125+00 TO STA. 129+00

RIC-C.R. 424-0.62

49 / 153

I02088/DGN/088GPC-1.DGN 12/28/05 HN,KH,SCB,RC,BH,MLB



HORIZONTAL SCALE IN FEET
0 10 20 40

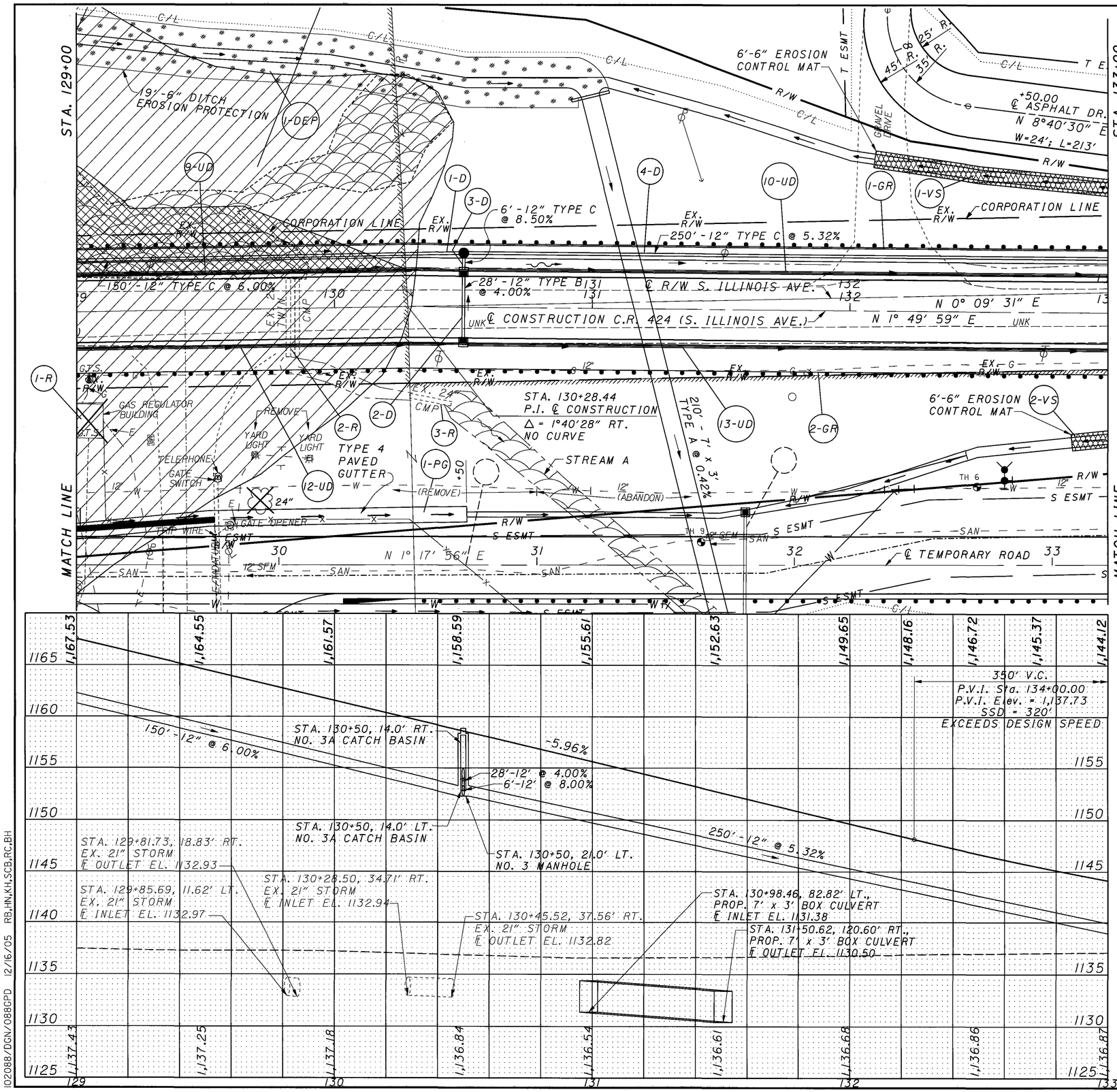
CALCULATED BPB
CHECKED TM

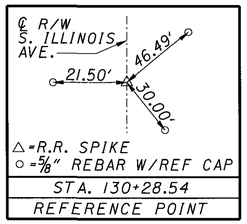
PROFILE - S. ILLINOIS AVENUE
STA. 125+00 TO STA. 129+00

RIC-C.R. 424-0.62

50
153

I02088/DGN/088GPC-2.DGN 2/14/05 HN,KH,SCB,RC,KJK





REFERENCE	SHEET NO.
TEMPORARY ROAD	27
UNDERDRAIN SUBSUMMARY	40
STORM SEWER	64
CULVERT DETAIL	91

LEGEND

SOFT ORGANIC MATERIAL (IN SOME CASES COVERED WITH EXISTING FILL)

EXTREMELY SOFT SOIL AT GROUND SURFACE ASSOCIATED WITH EXISTING STREAM

WETLAND

℄—℄ QUANTITIES CARRIED ON SHEET NO. 27.

REF NO.	STATION FROM	STATION TO	SIDE	670 VEGETATED SWALE EROSION PROTECTION MAT, TYPE B SQ. YD.	670 DITCH EROSION PROTECTION SQ. YD.	626 BARRIER REFLECTOR TYPE A EACH	606 GUARDRAIL, TYPE 5 FT	604 MANHOLE NO. 3 EACH	604 CATCH BASIN NO. 3A FT	603 12" CONDUIT, TYPE C FT	603 12" CONDUIT, TYPE B FT	601 PAVED GUTTER, TYPE 4 FT	202 BUILDING DEMOLISHED PARCEL 13, ONE STORY BRICK UTILITY	202 PIPE REMOVED 24" AND UNDER FT
1-D	129+00.00	130+50.00	LT						1		28			
2-D	130+50.00		LT&RT						1					
3-D	130+50.00		LT						1		6			
4-D	130+50.00	133+00.00	LT								250			
1-R	129+05.00		RT										LUMP	
2-R	129+81.73	129+85.69	LT&RT							62				
3-R	130+28.50	130+45.52	RT							17				
1-VS	132+10.00	133+00.00	LT									150		
2-VS	132+87.00	133+00.00	RT											
1-PG	129+00.00	130+50.00	RT											
1-DEP	129+00.00	131+00.00	LT											
1-GR	129+00.00	133+00.00	LT											
2-GR	129+00.00	133+00.00	RT											
TOTALS CARRIED TO SUBSUMMARY				75	445	8	800	1	2	406	28	150	LUMP	79
					65									
					10									
					445									
						4	400							
						4	400							

N

0 10 20 40 HORIZONTAL SCALE IN FEET

CALCULATED BPB CHECKED TM

PLAN AND PROFILE - S. ILLINOIS AVENUE STA. 129+00 TO STA. 133+00

RIC-C.R. 424-0.62

51/153

I02088/DGN/088GPD 12/16/05 RB,HN,KH,SCB,RC,BH

REFERENCE	SHEET NO.
TEMPORARY ROAD	28
UNDERDRAIN SUBSUMMARY	40

CURVE DATA
P.I. STA. 136+50.00
Δ = 3°53'08"
Dc = 4°00'00"
R = 1432.39'
T = 48.59'
L = 97.14'
E = 0.82'

* REMOVE WALL TO 48' LT.
** REMOVE WALL TO 50' LT.

℄ CONST. S. ILLINOIS AVE.	℄ CONST. S. ILLINOIS AVE.
△=R.R. SPIKE ○=⅝" REBAR W/REF CAP	△=R.R. SPIKE ○=⅝" REBAR W/REF CAP
STA. 136+01.41	STA. 136+98.55
REFERENCE POINT	REFERENCE POINT

HORIZONTAL SCALE IN FEET (0, 10, 20, 40)

CALCULATED BPB CHECKED TM

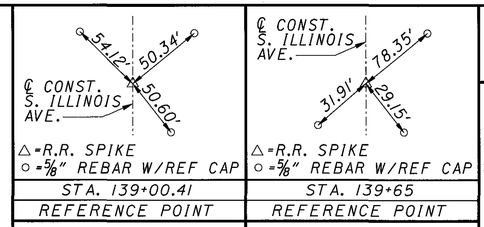
PLAN AND PROFILE - S. ILLINOIS AVENUE STA. 133+00 TO STA 137+00

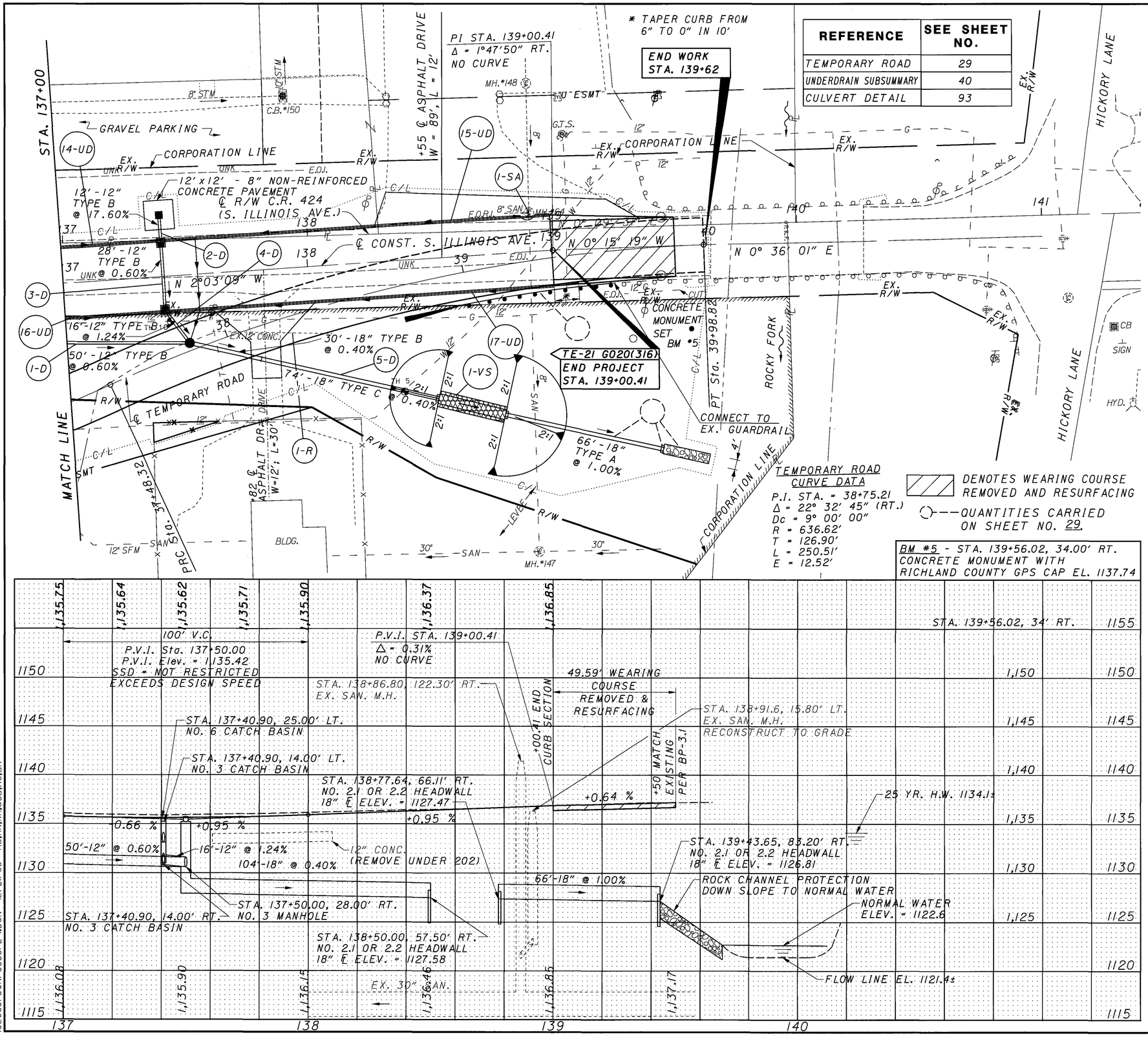
RIC-C.R. 424-0.62

52 / 153

REF NO.	STATION FROM	STATION TO	SIDE	670 VEGTATED SWALE EROSION PROTECTION MAT, TYPE B SQ. YD.	626 BARRIER REFLECTOR, TYPE A EACH	606 ANCHOR ASSEMBLY TYPE T EACH	606 ANCHOR ASSEMBLY TYPE A EACH	606 GUARDRAIL, TYPE 5 FT	604 MANHOLE NO. 3 EACH	604 CATCH BASIN NO. 3A EACH	603 12" CONDUIT TYPE D FT	603 12" CONDUIT, TYPE C FT	603 12" CONDUIT, TYPE B FT	603 8" SLOTTED DRAIN, TYPE 2 FT	602 CONCRETE MASONRY CU. YD.	601 RCP, TYPE C, W/ FILTER CU. YD.	202 REMOVAL MISC: CONCRETE RETAINING WALL LUMP	REMOVAL MISC: 8" SLOTTED DRAIN FT
1-D	133+00.00	133+10.00	LT									10						
2-D	133+10.00		LT									6						
3-D	133+10.00		LT									25			0.21			
4-D	133+85.00		RT									26			0.21			
5-D	135+98.66		LT&RT										28					
6-D	135+98.66	136+05.00	RT										10					
7-D	136+05.00	137+00.00	RT										97					
8-D	134+91.00	135+19.00	LT											28				28
9-D	133+13.00	133+90.00	LT								78				0.42			
1-RCP	133+10.00		LT													2		
1-GR	133+00.00	133+30.00	LT															
2-GR	133+00.00	134+16.00	RT															
1-R	134+80.50	135+32.50	LT														LUMP	
1-VS	133+00.00	133+09.00	LT															
2-VS	133+00.00	133+89.00	RT															
TOTALS CARRIED TO SUBSUMMARY				2	3	1	1	114.8	2	4	78	174	28	28	0.84	2	LUMP	28
				670	626	606	606	606	604	604	603	603	603	603	602	601	202	202
				SQ. YD.	EACH	EACH	EACH	FT	EACH	EACH	FT	FT	FT	FT	CU. YD.	CU. YD.	LUMP	FT
				71	3	1	1	91	2	4	78	174	28	28	0.84	2	LUMP	28
								23.8										
					1	1												
					2													
				7														
				64														

REFERENCE	SEE SHEET NO.
TEMPORARY ROAD	29
UNDERDRAIN SUBSUMMARY	40
CULVERT DETAIL	93





REF NO.	STATION FROM	STATION TO	SIDE	670 VEGETATED SWALE EROSION PROTECTION MAT, TYPE B SQ. YD.	604 MANHOLE RECONSTRUCTED TO GRADE EACH	604 CATCH BASIN NO. 3 EACH	604 CATCH BASIN NO. 6 EACH	604 MANHOLE NO. 3 EACH	603 18" CONDUIT, TYPE C FT	603 18" CONDUIT, TYPE B FT	603 12" CONDUIT, TYPE B FT	602 CONCRETE MASONRY CU. YD.	452 8" NON-REINFORCED CONCRETE PAVEMENT SQ. YD.	202 PIPE REMOVED, 24" AND UNDER FT
1-D	137+00.00	137+50.00	RT			1					50			
2-D	137+40.90		LT				1				12		16	
3-D	137+40.90		LT&RT								28			
4-D	137+40.90	137+50.00	RT								16			
5-D	137+50.00	138+50.00	RT	27	1	1		1		30		0.31		
1-SA	138+91.60		LT				1		74		106			48
1-R	137+61.00	138+09.00	RT				1		74					
1-VS	138+50.00	138+78.00					1		30			0.31		
TOTALS CARRIED TO SUBSUMMARY				27	1	2	1	1	74	30	106	0.31	16	48

CALCULATED BPB
CHECKED TM

HORIZONTAL SCALE IN FEET
0 10 20 40

PROFILE - S. ILLINOIS AVENUE
STA. 137+00 TO STA. 139+00

PLAN AND PROFILE
STA. 137+00 TO STA. 139+00

RIC-C.R. 424-0.62

53
153

102088/DGN/088GPE-1.DGN 12/21/05 RB,HN,KH,SCB,RC,BH

SEEDING	
END WIDTH	SQ. YDS.
0	
0	
0	

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED JL

CHECKED BPB

120 100 80 60 40 20 ℄ 20 40 60 80 100 120

℄ TEMPORARY ROAD

EX. R/W

T ESMT

1170 1160 1150

5.0%

· EXIST GAS

+53.5 ℄ ASPHALT DRIVE
W = 36' L = 50'

2:1 2:1

1164.5

116+50
1166.66

FOR EARHWORK QUNTITIES, SEE SHEET NO. 81.

FOR EARHWORK QUNTITIES, SEE THIS SHEET

TEMPORARY ROAD EARTHWORK
FOR INFORMATION ONLY

STATION	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
116+50	62	0		
			111	0
116+00	57	0		
			63	0
115+50	10	0		
			6	0
115+18.93 AH	0	0		

1163.5

116+00
1165.07

AHD.
BK.

115+50
1161.72

115+18.93 BEGIN WORK

115+00
1158.15

SHEET TOTAL

SHEET TOTAL

120 100 80 60 40 20 ℄ 20 40 60 80 100 120

102088/088GX.DGN 12/16/05 RB,HN,KN,RC,CAR,BH

S. ILLINOIS AVENUE CROSS SECTIONS
STA. 115+00 TO STA. 116+50

RIC-C.R. 424-0.62

SEEDING END WIDTH	SEEDING SQ. YDS.
35	181
30	175
33	92
0	0
0	0
0	0
	448 SHEET TOTAL

120 100 80 60 40 20 ℄ 20 40 60 80 100 120

℄ CONSTRUCTION

EX. R/W — R/W — T ESMT

3:1 — 2:1 — 12:1

12" STM

2' UNDERCUT

℄ TEMPORARY ROAD

1162.7

1169.15
120+00
1169.39

1168.12
119+50
1168.46

11'-12" @ 1.00%

28'-12" @ 1.50%

STA. 119+10, 21.0' LT.
NO. 3 MANHOLE
TOP OF COVER EL. 1167.64
6" ℄ EL. 1163.05
12" ℄ (SE & N) EL. 1161.4

1164.0

STA. 119+02.75, 14.0' RT.
NO. 3A CATCH BASIN
TOP OF GRATE EL. 1166.96
6" ℄ EL. 1162.17
12" ℄ (W) EL. 1161.67

1167.32
119+00 BEGIN PROJECT
1167.32

2.8% FINAL DRIVE GRADE

1164.5

STA. 118+55, 26.5' LT.
NO. 2-2B CATCH BASIN
TOP OF GRATE EL. 1164.00
12" ℄ (N) EL. 1162.00

118+50
1166.58
+72.5 ℄ GRAVEL DRIVE
W=12' L=80'

2.1% FINAL DRIVE GRADE

1164.4

118+00
1166.09
+96.5 ℄ GRAVEL DRIVE
W=12' L=72'

1164.6

117+50
1166.17

117+00
1166.57

TEMPORARY ROAD EARTHWORK
FOR INFORMATION ONLY

STATION	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
120+00	42	10	83	13
119+50	47	3	63	7
119+00	20	4	49	5
118+50	32	1	30	22
118+00	0	22	0	52
117+50	0	34	6	36
117+00	6	4	63	4
116+50	62	0		

EXCAVATION OF SUBGRADE (A)
EMBANKMENT USING GRANULAR MATERIAL, TYPE B (B)

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
47	35		
62 A	62 B		
		76	50
		115 A	115 B
35	19		
62 A	62 B		
		70	46
		115 A	115 B
AH. 62 A	AH. 62 B		
AH. 41	31		
BK. 0	0		
		146 A	96 B
		230	230
	SHEET TOTAL		

CALCULATED JL
CHECKED BPB

S. ILLINOIS AVENUE CROSS SECTIONS STA. 117+00 TO STA. 120+00

RIC-C.R. 424-0.62

55
153

102088/088GX.DGN 12/16/05 RB,HN,KN,RC,CAR,BH

SEEDING END WIDTH	SEEDING SQ. YDS.
94	525
95	483
79	475
	-582 DEDUCT FOR DRIVE LT.
92	353
35	1254

STA. 120+00

SHEET TOTAL

TEMPORARY ROAD EARTHWORK
FOR INFORMATION ONLY

STATION	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
122+00	21	4		
			24	23
121+50	4	20		
			9	74
121+00	5	59		
			31	123
120+50	28	73		
			65	77
120+00	42	10		

EXCAVATION OF SUBGRADE (A)
EMBANKMENT USING GRANULAR MATERIAL, TYPE B (B)

℄ CONSTRUCTION

1175.05
122+00
1162.51

1163.0
12" STM

1173.47
121+50
1165.06

1165.0
EX. CONC. - REMOVE

STA. 121+25, 21.0' LT.
NO. 3 MANHOLE
TOP OF COVER EL. 1172.96
12" E (E) EL. 1165.52
12" E (S & NE) EL. 1159.42

EX. CONC. - REMOVE
1165.5

36'-12" @ 4.00%

7'-12" @ 4.00%

1171.89
121+00
1167.13

STA. 121+25, 14.0' LT.
NO. 3A CATCH BASIN
TOP OF GRATE EL. 1172.28
6" E (N.) EL. 1168.49
12" E (SE & W) EL. 1165.80

STA. 121+00, 14.0' RT.
NO. 3A CATCH BASIN
TOP OF GRATE EL. 1171.49
6" E EL. 1167.70
12" E (W) EL. 1167.24

1170.40
120+50
1168.82

12" STM

2' UNDERCUT
(END @ STA. 120+75)

3:1 TEMPORARY CONNECTION

℄ ASPHALT DR. - ABANDON

℄ TEMPORARY ROAD
1154.2

℄ TEMPORARY ROAD
1156.6

℄ TEMPORARY ROAD
1159.0

BLDG. BK.
BLDG. AH.
BLDG.
T ESMT
R/W
EX. R/W
M/L
2:1
4:1
12:1
3:1

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
13	976		
		12	1539
0	686		
		0	956
0	346		
		6	191
14	66		
STA. 120+75 AH.			
14	57		
62 A	62 B	13	53
		58 A	58 B
14	57		
62 A	62 B	56	85
		115 A	115 B
47	35		
STA. 120+00			
		87	2824
SHEET TOTAL		173 A	173 B

CALCULATED JL
CHECKED BPB

S. ILLINOIS AVENUE CROSS SECTIONS STA. 120+50 TO STA. 122+00

RIC-C.R. 424-0.62

56
153

102088/088GX.DGN 12/16/04 RB,HN,KN,RC,CAR,BH

SEEDING END WIDTH	SEEDING SQ. YDS.
79	389
61	
308	
50	
101	542
94	
	1239

120 100 80 60 40 20 ℄ 20 40 60 80 100 120

℄ CONSTRUCTION

M/L OAK ST.
STA. 99+50

BK. RT.

EX. R/W

EX. R/W

2:1

R/W

M/L

1179.09
123+50
1153.70

EARTHWORK CARRIED ON SKEWED SECTIONS

M/L TEMP. OAK ST.
STA. 9+50.00

16" W

℄ TEMPORARY ROAD

T ESMT

2:1

120 140 160 180

M/L
99+50

RT.

EX. R/W

EX. R/W

M/L
W/SKEW SECTION
STA. 123+36.55

2:1

R/W

AHD. TO SECTION STA. 123+36.55

AHD. TO SECTION STA. 123+66.55

16" W

M/L

1178.03
123+00
1156.54

M/L

℄ TEMPORARY ROAD

2:1

2:1

2:1

2:1

1149.0

T ESMT

120 140 160 180

M/L OAK ST.
STA. 99+00

AHD. RT.

BK.

4:1

2:1

1162.5

EX. R/W

EX. R/W

RELOCATED 12" WATER

EL. 1169.5

2:1

R/W

M/L

1176.63
122+50
1159.67

12"-22 1/2° BEND

M/L

EL. 1155.5

12" W

16"x16"x12" TEE

12"-22 1/2° BEND

℄ TEMPORARY ROAD

2:1

2:1

2:1

1151.9

T ESMT

120 140 160

EMBANKMENT, AS PER PLAN (E)

STA. 122+00

SHEET TOTAL

TEMPORARY ROAD EARTHWORK
FOR INFORMATION ONLY

STATION	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
123+50	7	1	131	13
123+00	134	12	181	25
122+50	61	14	76	17
122+00	21	4		

	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
AHD. TO SECTION 123+66.55	0	206 E		
AHD. TO SECTION 123+36.55	0	1542 E		
BK.	0	1748 E		
			1	3058 E
AH	1	1555 E		
BK	1	1555		
			13	2344 E
STA. 122+00	13	976		
SHEET TOTAL			14	5402 E

CALCULATED JL
CHECKED BPB

S. ILLINOIS AVENUE CROSS SECTIONS
STA. 122+50 TO STA. 123+50

RIC-C.R. 424-0.62

57
153

102088/088GX.DGN 12/08/04 RB,HN,KN,RC,CAR

TEMPORARY ROAD EARTHWORK				
FOR INFORMATION ONLY				
STATION	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
124+00	9	14	15	14
123+50	7	1		

CALCULATED JL
CHECKED BPB

S. ILLINOIS AVENUE CROSS SECTIONS
STA. 123+70.55 TO STA. 124+00

RIC-C.R. 424-0.62

102088/088GX.DGN 2/14/05 RB,HN,KN,RC,CAR

SEEDING	
END WIDTH	SQ. YDS.

TEMPORARY ROAD EARTHWORK FOR INFORMATION ONLY				
STATION	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
126+00	0	125	0	232
125+50	0	126	1	131
125+00	1	15	17	16
124+50	17	2	25	15
124+00	9	14		

℄ CONSTRUCTION
EX. R/W
℄ MAINTENANCE DRIVE EXTENSION
M/L
STA. 126+02.00, 103.00' RT.
EX. C.B.
PROP. 12" ℄ (N.) EL. 1132.28
EX. 12" ℄ (S.E.) EL. 1132.28
REMOVE C.B. & CONNECT PROP. TO EXIST. WITH 30° BEND AND CONCRETE COLLAR
STA. 125+66.00, 166.00' RT.
NO. 2-2B CATCH BASIN
TOP OF GRATE EL. 1135.50
12" ℄ EL. 1131.61
48:1
12:1
T ESMT
A ESMT
EX. 72" SAN. IN 108" TUNNEL LINER
126+00
1148.08
℄ TEMPORARY ROAD
TEMPORARY EARTHWORK
2:1
5:1
1145.0
12" W
12" @ 0.88%
EX. 12" SFM
FINAL EARTHWORK
8'-12" TYPE C @ 0.88%
℄ MAINTENANCE DRIVE EXTENSION
R/W
1145.5
EX. 2" W
EX. 16" W
125+50
1148.42
120
140
160
EX. 72" SAN. IN 108" TUNNEL LINER
125+00
1149.21
EX. 12" W
EX. 16" W
EX. R/W
124+50
1148.78
STA. 124+65, 13.5' LT.
EX. SAN. M.H.
TOP OF COVER ELEV. = 1147.83
6" ℄ (SW) EL. 1141.82
72" ℄ (SW & NE) EL. 1134.71
PROP. 16" WATER IN 36" CASING
STA. 124+38

	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	0	419		
			34	463
	37	81		
	0	0		
			2	6
	10	28		
SHEET TOTAL			36	469

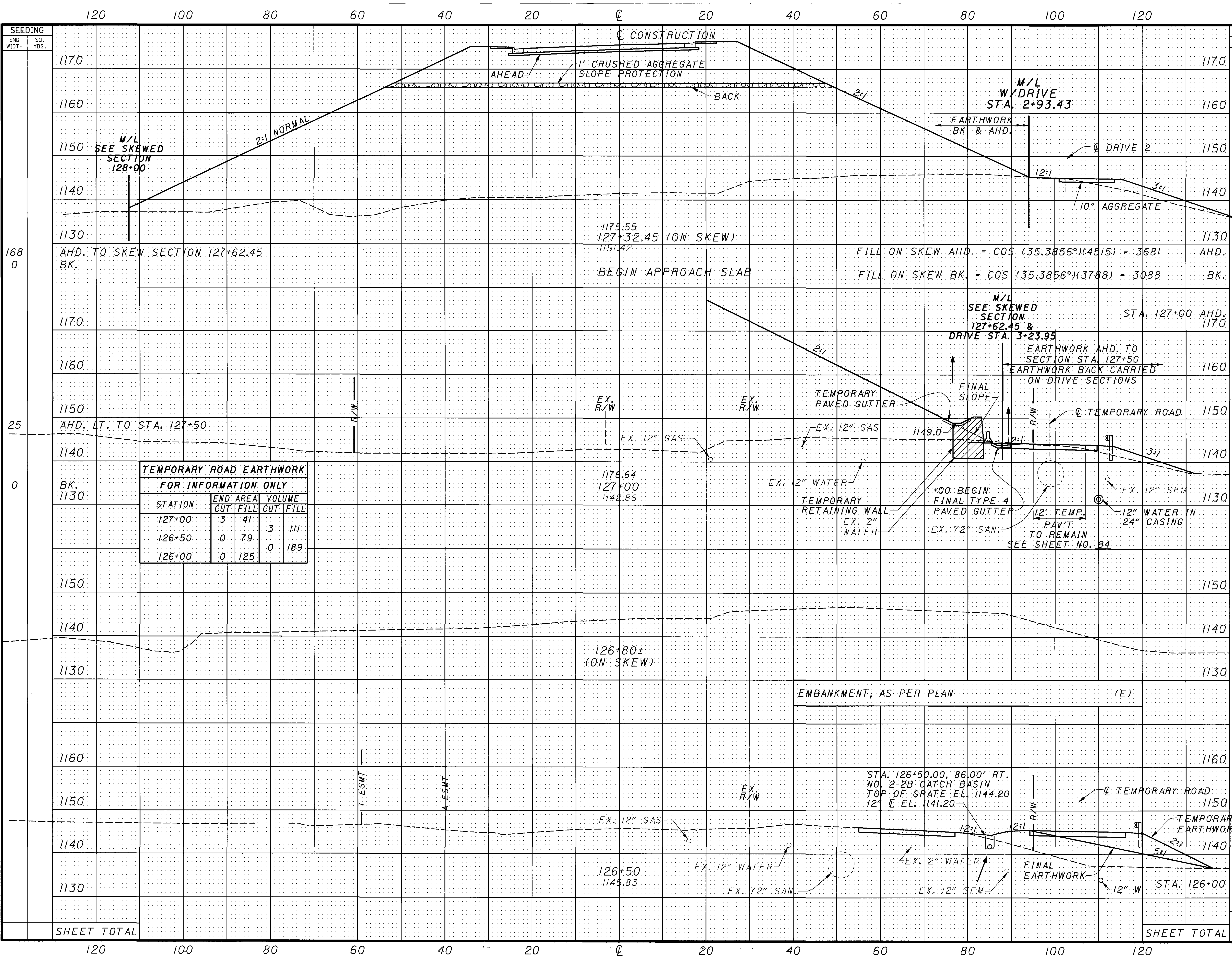
CALCULATED JL
CHECKED BPB

S. ILLINOIS AVENUE CROSS SECTIONS STA. 124+50 TO STA. 126+00

RIC-C.R. 424-0.62

59
153

102088/088GX.DGN 1/5/05 RB,HN,KN,RC,CAR



TEMPORARY ROAD EARTHWORK				
FOR INFORMATION ONLY				
STATION	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
127+00	3	41		
			3	111
126+50	0	79		
			0	189
126+00	0	125		

	SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
127+32.45 AHD.	168		0	3681 E		
BK.	0		0	3088 E		
STA. 127+00 AHD.			7	28 E		
	25				0	2999 E
BK.	0					
126+80±			0	0		
					0	107
			0	193		
					0	567
STA. 126+00			0	419		
SHEET TOTAL					0	674
					0	2999 E

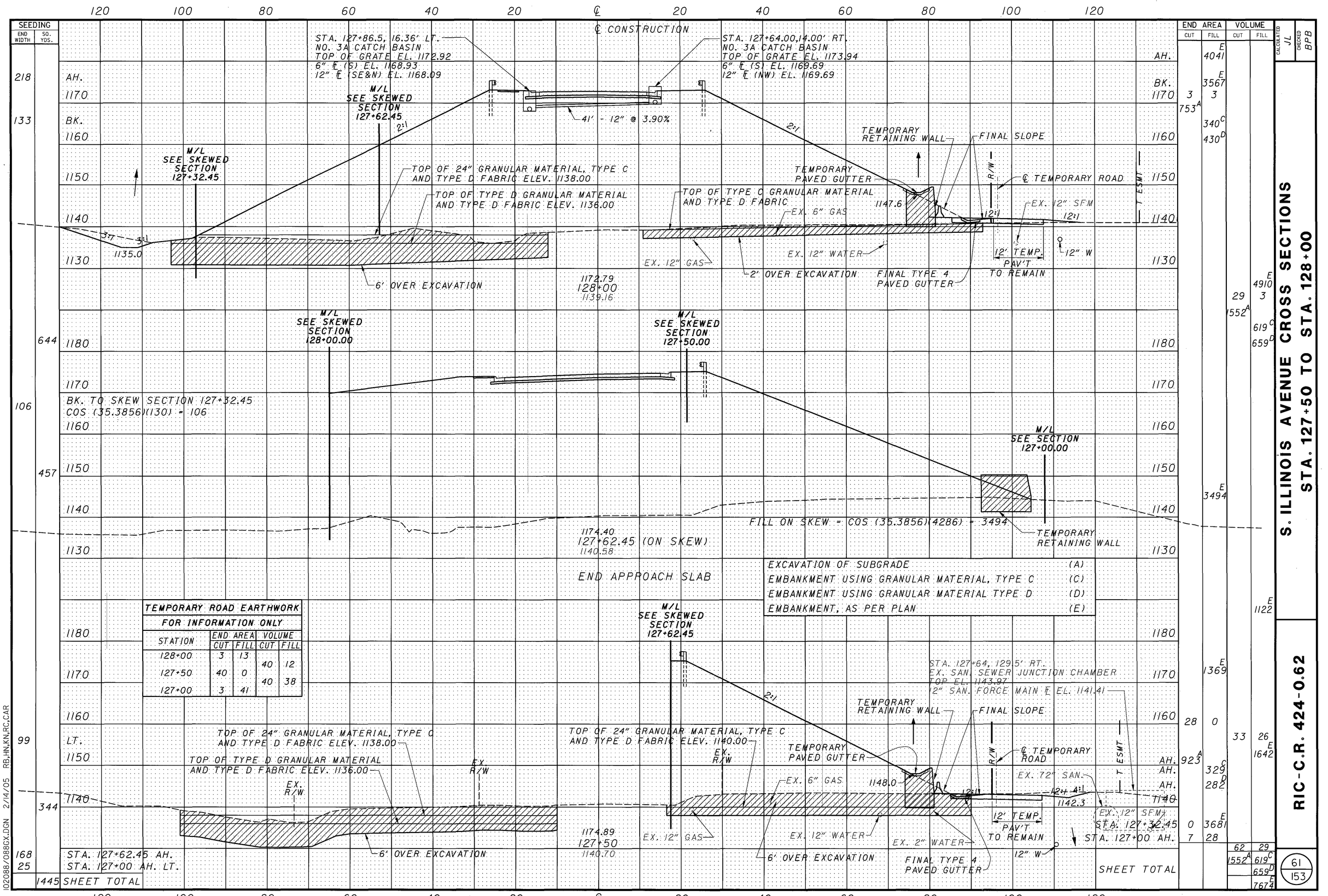
CALCULATED JL
CHECKED BPB

S. ILLINOIS AVENUE CROSS SECTIONS
STA. 126+50 TO STA. 127+32.45

RIC-C.R. 424-0.62

60
153

102088\088CX.DGN 2/14/05 RB,HN,KN,RC,CAR


120 100 80 60 40 20 ℄ 20 40 60 80 100 120
SEEDING
END WIDTH
SQ. YDS.
STA. 127+86.5, 16.36' LT.
NO. 3A CATCH BASIN
TOP OF GRATE EL. 1172.92
6" ℄ (S) EL. 1168.93
12" ℄ (SE&N) EL. 1168.09
℄ CONSTRUCTION
STA. 127+64.00, 14.00' RT.
NO. 3A CATCH BASIN
TOP OF GRATE EL. 1173.94
6" ℄ (S) EL. 1169.69
12" ℄ (NW) EL. 1169.69
M/L SEE SKEWED SECTION 127+62.45
M/L SEE SKEWED SECTION 127+32.45
41' - 12" @ 3.90%
2:1
TEMPORARY RETAINING WALL
FINAL SLOPE
TOP OF 24" GRANULAR MATERIAL, TYPE C AND TYPE D FABRIC ELEV. 1138.00
TOP OF TYPE D GRANULAR MATERIAL AND TYPE D FABRIC ELEV. 1136.00
TOP OF TYPE C GRANULAR MATERIAL AND TYPE D FABRIC
TEMPORARY PAVED GUTTER
R/W
℄ TEMPORARY ROAD
T ESMT
EX. 12" SFM
EX. 6" GAS
1147.6
12:1
3:1
1135.0
EX. 12" GAS
EX. 12" WATER
12' TEMP. PAV'T TO REMAIN
12" W
6' OVER EXCAVATION
2' OVER EXCAVATION
FINAL TYPE 4 PAVED GUTTER
1172.79
128+00
1139.16
M/L SEE SKEWED SECTION 128+00.00
M/L SEE SKEWED SECTION 127+50.00
M/L SEE SECTION 127+00.00
BK. TO SKEW SECTION 127+32.45
COS (35.3856)(130) - 106
FILL ON SKEW = COS (35.3856)(4286) = 3494
TEMPORARY RETAINING WALL
1174.40
127+62.45 (ON SKEW)
1140.58
END APPROACH SLAB
M/L SEE SKEWED SECTION 127+62.45
STA. 127+64, 129.5' RT.
EX. SAN. SEWER JUNCTION CHAMBER
TOP EL. 1143.97
12" SAN. FORCE MAIN ℄ EL. 1141.41
TOP OF 24" GRANULAR MATERIAL, TYPE C AND TYPE D FABRIC ELEV. 1138.00
TOP OF TYPE D GRANULAR MATERIAL AND TYPE D FABRIC ELEV. 1136.00
TOP OF 24" GRANULAR MATERIAL, TYPE C AND TYPE D FABRIC ELEV. 1140.00
EX. R/W
EX. 72" SAN.
1148.0
1142.3
4:1
EX. 2" WATER
1174.89
127+50
1140.70
STA. 127+32.45
STA. 127+00 AH.
STA. 127+62.45 AH.
STA. 127+00 AH. LT.
SHEET TOTAL
LT.
AH.
BK.
218
133
644
106
457
344
168
25
99
1445
1180
1170
1160
1150
1140
1130
1135
EXCAVATION OF SUBGRADE (A)
EMBANKMENT USING GRANULAR MATERIAL, TYPE C (C)
EMBANKMENT USING GRANULAR MATERIAL TYPE D (D)
EMBANKMENT, AS PER PLAN (E)
TEMPORARY ROAD EARTHWORK
FOR INFORMATION ONLY
STATION | END AREA CUT | END AREA FILL | VOLUME CUT | VOLUME FILL
128+00 | 3 | 13 | 40 | 12
127+50 | 40 | 0 | 40 | 38
127+00 | 3 | 41
END AREA CUT
END AREA FILL
VOLUME CUT
VOLUME FILL
3
753A
E 4041
E 3567
3
340C
430D
29
552A
E 4910
3
619C
659D
E 3494
E 1122
E 1369
28
0
33
26
E 1642
923A
329C
282D
0
E 3681
7
28
62
29
552A
619C
659D
E 7674
CALCULATED JL
CHECKED BPB
S. ILLINOIS AVENUE CROSS SECTIONS
STA. 127+50 TO STA. 128+00
RIC-C.R. 424-0.62
61
153
102088/088GX.DGN 2/4/05 RB,HN,KN,RC,CAR

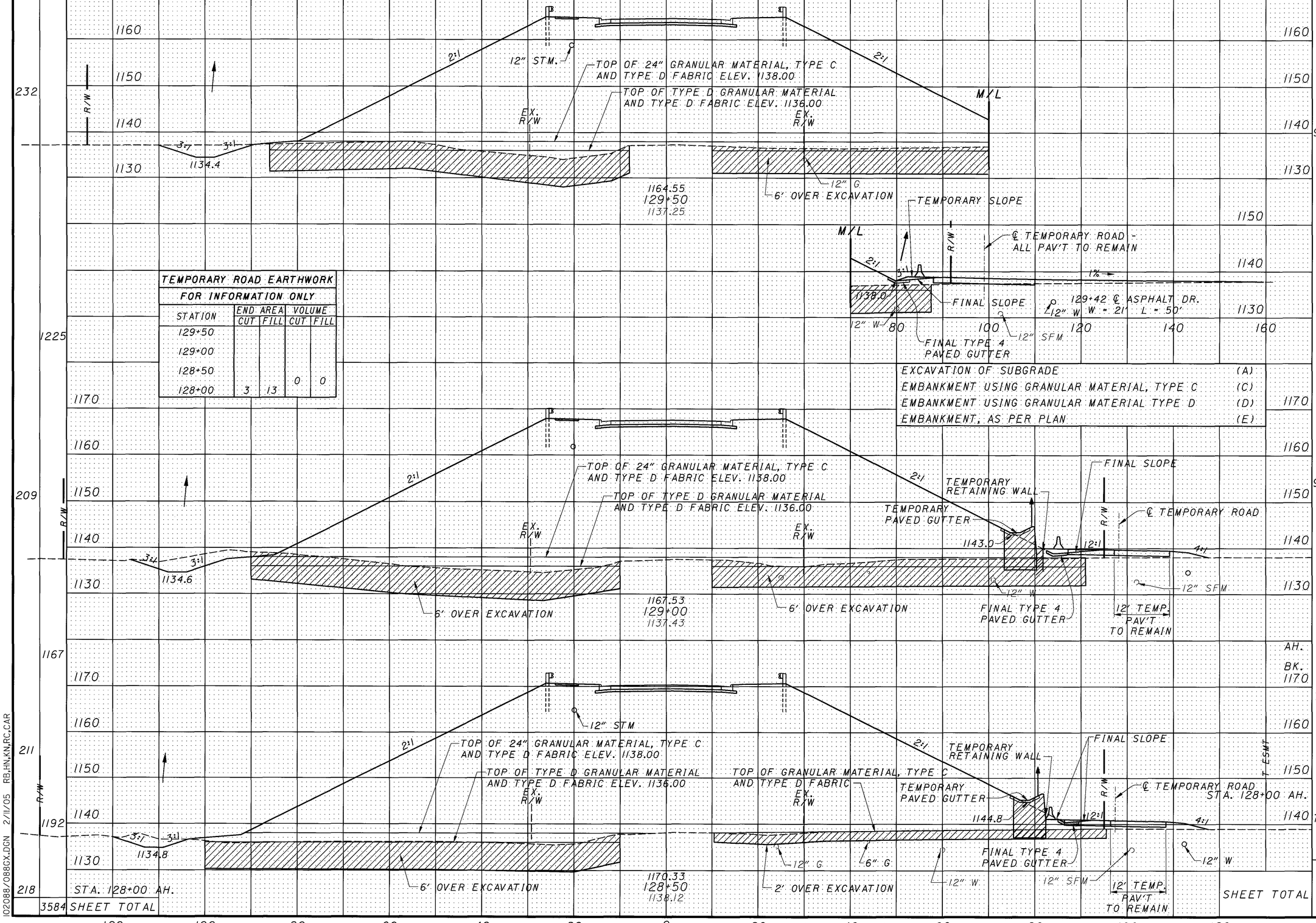
SEEDING	
END WIDTH	SQ. YDS.
232	1225
209	1167
211	1192
218	3584

120 100 80 60 40 20 ℄ 20 40 60 80 100 120

℄ CONSTRUCTION

TEMPORARY ROAD EARTHWORK
FOR INFORMATION ONLY

STATION	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
129+50				
129+00				
128+50			0	0
128+00	3	13		



STA. 128+00 AH.

SHEET TOTAL

EXCAVATION OF SUBGRADE	(A)			
EMBANKMENT USING GRANULAR MATERIAL, TYPE C	(C)			
EMBANKMENT USING GRANULAR MATERIAL TYPE D	(D)			
EMBANKMENT, AS PER PLAN	(E)			

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
34	2838		
933A	331C		
	729D		
		83	5689
		1728A	617C
			1423D
56	3305		
933A	335C		
	807D		
		73	6534
		1522A	656C
			1232D
AH.	23	3752	
BK.		3719E	
	23	33	
	710A	374C	
		524D	
			7186E
		24	34
		1355A	661C
			883D
	3	4041E	
	3	3	
	753A	340C	
		430D	
		180	12257
		4605A	1934C
			3538D
			7186E

CALCULATED JL
CHECKED BPB

S. ILLINOIS AVENUE CROSS SECTIONS
STA. 128+50 TO STA. 129+50

RIC-C.R. 424-0.62

62
153

02088/088GX.DGN 2/11/05 RB,HN,KN,RC,CAR

SEEDING END WIDTH	SEEDING SQ. YDS.
	956
	997
	3109

120 100 80 60 40 20 ℄ 20 40 60 80 100 120

℄ CONSTRUCTION

169

1160 1150 1140 1130

R/W

2:1

EX. R/W

TOP OF 24" GRANULAR MATERIAL, TYPE C AND TYPE D FABRIC ELEV. 1138.00

TOP OF TYPE D GRANULAR MATERIAL AND TYPE D FABRIC ELEV. 1136.00

3:1 3:1

1133.8

210'-3'x7' BOX CULVERT @ 0.42%

1155.61
131+00
1136.57

12" G

6' OVER EXCAVATION (BK.)

48:1

1135.0

12" W

12" SFW

4' BERM 4:1

℄ TEMPORARY ROAD - ALL PAV'T TO REMAIN

T. ESMT.

STA. 130+50.00, 21.00' LT.
NO. 3 MANHOLE
TOP OF COVER EL. 1158.86
12" ℄ (N, S & E) EL. 1152.31

STA. 130+50.00, 14.00' RT.
NO. 3A CATCH BASIN
TOP OF GRATE EL. 1158.19
6" ℄ EL. 1154.28
12" ℄ (W) EL. 1153.94

6'-12" @ 8.00%

28'-12" @ 4.00%

STA. 130+50.00, 14.00' LT.
NO. 3A CATCH BASIN
TOP OF GRATE EL. 1158.19
6" ℄ EL. 1154.28
12" ℄ (W & E) EL. 1152.82

END TYPE 4 PAVED GUTTER

℄ TEMPORARY ROAD

175

TOP OF 24" GRANULAR MATERIAL, TYPE C AND TYPE D FABRIC ELEV. 1138.00

3:1 3:1

1134.0

6' OVER EXCAVATION

1158.59
130+50
1136.85

6' OVER EXCAVATION

12:1

1136.0

12" W

4' BERM

TOP OF TYPE D GRANULAR MATERIAL AND TYPE D FABRIC ELEV. 1136.00

184

12" STM.

TOP OF 24" GRANULAR MATERIAL, TYPE C AND TYPE D FABRIC ELEV. 1138.00

TOP OF TYPE D GRANULAR MATERIAL AND TYPE D FABRIC ELEV. 1136.00

TYPE 4 PAVED GUTTER

℄ TEMPORARY ROAD - ALL PAV'T TO REMAIN

3:1 3:1

1134.2

6' OVER EXCAVATION

EX. TWIN 21" (REMOVE)

1161.57
130+00
1137.18

6' OVER EXCAVATION

12:1

1137.0

12" W

12" SFM

4:1

12" W

232 STA. 129+50

3109 SHEET TOTAL

EXCAVATION OF SUBGRADE	(A)	
EMBANKMENT USING GRANULAR MATERIAL, TYPE C	(C)	
EMBANKMENT USING GRANULAR MATERIAL TYPE D	(D)	

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
AHD. 23	1969		
BK. 23	1519		
751[A]			
BK.	247[C]		
	886[D]		
		38	3230
		1479[A]	
			481[C]
			1702[D]
18	1969		
846[A]			
	273[C]		
	952[D]		
		39	4020
		1583[A]	
			520[C]
			1742[D]
24	2373		
864[A]			
	289[C]		
	929[D]		
		54	4755
		1544[A]	
			536[C]
			1257[D]
STA. 129+50 34	2762		
AHD. 803[A]			
	290[C]		
	429[D]		
		131	12005
		4606[A]	1537[C]
			4701[D]

SHEET TOTAL

CALCULATED JL CHECKED BPB

S. ILLINOIS AVENUE CROSS SECTIONS STA. 130+00 TO STA. 131+00

RIC-C.R. 424-0.62

63 153

I02088/086GX.DGN 2/11/05 RB,HN,KN,RC,CAR

120 100 80 60 40 20 ℄ 20 40 60 80 100 120

SEEDING	
END WIDTH	SQ. YDS.
141	814
152	825
145	867
167	933
169	3439 SHEET TOTAL

120 100 80 60 40 20 ℄ 20 40 60 80 100 120

℄ CONSTRUCTION

STA. 133+10, 21.0' LT.
NO. 3 MANHOLE
TOP OF COVER EL. 1143.91
12" ℄ (S, W & E) EL. 1138.48

℄ DRIVE — T ESMT — R/W — EX. R/W — 2:1 — 3:1 — 2.25:1 3:1 — 1134.6 — 25'-12" @ 14.04% — 6'-12" @ 8.50% — 12" G — 3:1 — 3:1 — 1134.7 — 48:1 — 12:1 — ℄ TEMPORARY ROAD ALL PAV'T TO REMAIN

7.5'x3' ROCK CHANNEL PROTECTION, TYPE C, W/ FABRIC FILTER (T=18")

STA. 133+13, 48.00' LT.
NO. 2.1 OR 2.2 HEADWALL
12" ℄ (E.) EL. 1134.75

STA. 133+10, 45.0' LT.
NO. 2.1 OR 2.2 HEADWALL
12" ℄ EL. 1134.97

STA. 133+10, 14.0' LT.
NO. 3A CATCH BASIN
TOP OF GRATE EL. 1143.84
6" ℄ EL. 1139.33
12" ℄ (W) EL. 1138.99

1144.12
133+00
1137.08

12" W — 12" SFM

℄ DRIVE — T ESMT — R/W — 12:1 — 8:1 — 3:1 — 1134.4 — 2:1 — EX. R/W — 2:1 — 3:1 — 1134.5 — R/W — ℄ TEMPORARY ROAD ALL PAV'T TO REMAIN — T ESMT

1146.72
132+50
1136.96

12" SFM

EXCAVATION OF SUBGRADE (A)
EMBANKMENT USING GRANULAR MATERIAL, TYPE B (B)
EMBANKMENT USING GRANULAR MATERIAL, TYPE C OR D (C)

PROP. DRIVE — R/W — T ESMT — EX. DRIVE — 2:1 — EX. R/W — 12" STM. — 3:1 — 1134.2 — 2:1 — EX. R/W — 3:1 — 3:1 — 1134.3 — R/W — ℄ TEMPORARY ROAD ALL PAV'T TO REMAIN — T ESMT — 12:1

1149.65
132+00
1136.79

12" W

R/W — 2:1 — EX. R/W — 12" STM. — 3:1 — 3:1 — 1134.0 — 2:1 — EX. R/W — 48:1 — 3:1 — 3:1 48:1 — 1134.1 — R/W — ℄ TEMPORARY ROAD ALL PAV'T TO REMAIN — T ESMT — 4:1

STA. 131+60, 1208.5' RT.
NO. 2.1 OR 2.2 HEADWALL
12" ℄ (E.) EL. 1131.35

1152.63
131+50
1136.63

12" G — STA. 131+60, 78.5' RT. NO. 2-2B CATCH BASIN TOP OF GRATE EL. 1133.60 12" ℄ (W) EL. 1131.60 — 12" W — 12" SFM — 42' - PROP. 12" TYPE A @ 0.60% — 12" W

STA. 131+00 AHD.

	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	21	650	31	1388
	12	849	30	1843
	20	1141	38	2532
	21	1594	41	3299
SHEET TOTAL	23	1969	140	9062

CALCULATED JL — CHECKED BPB

S. ILLINOIS AVENUE CROSS SECTIONS
STA. 131+50 TO STA. 133+00

RIC-C.R. 424-0.62

64
153

102088/0886GX.DGN 2/11/05 RB,HN,KN,RC,CAR

SEEDING END WIDTH	SEEDING SQ. YDS.
28	317
86	-291
	603
131	644
	-456
101	586
110	697
141	2100

120 100 80 60 40 20 ℄ 20 40 60 80 100 120

℄ CONSTRUCTION

EXCAVATION OF SUBGRADE (A)

EMBANKMENT USING GRANULAR MATERIAL, TYPE B (B)

℄ TEMPORARY ROAD - ALL PAV'T TO BE REMOVED

T. ESMT — EX. R/W — R/W

1140 / 1130

3:1 — 48:1 — 4:1 — 4:1 — 12:1

1134.4

12" G — 12" W — 12" SFM

3' UNDERCUT

1136.79
135+50
1136.80

TRUCK DOCK FLOOR EL.

2.0% — 7.1% — 3:1 — 48:1 — 4:1 — 4:1

1134.5

+05 ℄ CONCRETE DR.
W = 29' L = 65

3' UNDERCUT

1137.50
135+00
1137.00

28'-0" SLOTTED DRAIN, TYPE 2 @ 0.5%
8" ℄ (N) EL. 1133.01
CONNECT TO EX. 8" STORM AHEAD WITH CONC. COLLAR (DM-1.1)

℄ TEMPORARY ROAD - ALL PAV'T TO REMOVED

℄ TEMPORARY ROAD - ALL PAV'T TO REMAIN

DEDUCT FOR DRIVE LT.

TEMPORARY ROAD EARTHWORK
FOR INFORMATION ONLY

STATION	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
135+50	28	0		
			51	0
135+00	27	0		
			45	0
134+50	22	0		

0 0 0 0

4.3% — 3:1 — 3:1 — 7.0% — 20' ROUNDING — 10' ROUNDING

℄ ASPHALT DR.
W = 16' L = 58'

3' UNDERCUT

1138.58
134+50
1137.17

℄ ASPHALT DR.
W = 22' L = 76.5'

DRIVE PVI STA. 134+50, 75' RT.
DRIVE PVI ELEV. = 1135.85

DEDUCT FOR DRIVE LT. & RT.

℄ TEMPORARY RD. ALL PAV'T TO REMAIN

3:1 — 3:1 — 3:1 — 48:1

26'-12" @ 2.00%

1135.0

STA. 133+90, 40.00' LT.
NO. 2.1 OR 2.2 HEADWALL
12" ℄ (S.) EL. 1135.92

1140.05
134+00
1137.19

STA. 133+85, 14.0' RT.
NO. 3A CATCH BASIN
TOP OF GRATE EL. 1140.16
6" ℄ EL. 1136.25
12" ℄ (E) EL. 1135.91

STA. 133+85, 40.0' RT.
NO. 2.1 OR 2.2 HEADWALL
12" ℄ EL. 1135.39

℄ TEMPORARY ROAD ALL PAV'T TO REMAIN

3:1 — 2:1 — 3:1 — 3:1 — 48:1 — 12:1

1134.9

12" G — 12" W — 12" SFM

℄ ASPHALT DR. (SEE SHEET NO. 86)
W = 24' L = 213'

1141.89
133+50
1137.17

STA. 133+00

SHEET TOTAL

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
43	29		
143 A	102 B		
		65	119
		251 A	191 B
27	100		
128 A	104 B		
		43	162
		210 A	193 B
19	75		
99 A	104 B		
		28	247
11	192		
AHD.			
11	241		
BK.			
		21	602
12	409		
		31	981
21	650		
		188	2111
		461 A	384 B

CALCULATED JL
CHECKED BPB

S. ILLINOIS AVENUE CROSS SECTIONS STA. 133+50 TO STA. 135+50

RIC-C.R. 424-0.62

65/153

10208B/088GX.DGN 2/14/05 RB,HN,KN,RC,CAR

SEEDING END WIDTH	SEEDING SQ. YDS.
19	211
	-53
57	297
50	292
55	244
33	169
28	1160

DEDUCT FOR DRIVE RT.

SHEET TOTAL

ST.A. 135+50

TEMPORARY ROAD EARTHWORK
FOR INFORMATION ONLY

STATION	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
138+00	52	0		
			107	0
137+50	64	0		
			64	19
137+00	5	21		
			30	19
136+50	27	0		
			45	0
136+00	22	0		
			46	0
135+50	28	0		

℄ CONSTRUCTION

EXCAVATION OF SUBGRADE (A)
EMBANKMENT USING GRANULAR MATERIAL, TYPE B (B)

℄ TEMPORARY ROAD - ALL PAV'T TO BE REMOVED
48:1 7.5% FINAL DRIVE GRADE
24:1
2:1
1134.4
12" CONC. (REMOVE UNDER 202)
12" G
3' UNDERCUT
1135.90
138+00
1136.15
+82 ℄ ASPHALT DR. W = 12' L = 30'
PROP. 18"
12" W
30" SAN
R/W
T ESMT
STA. 137+94.58, 70.49' LT.
EX. CATCH BASIN
TOP OF GRATE EL. 1135.67
8" ℄ (S) EL. 1132.73
10" ℄ (W.) EL. 1132.73
℄ TEMPORARY ROAD
3' UNDERCUT
48:1
48:1 FINAL
2:1
1134.1
STA. 137+40.9, 25.0' LT.
NO. 6 CATCH BASIN
TOP OF GRATE EL. 1135.60
12" ℄ (E) EL. 1133.10
12'-12" @ 17.60%
28'-12" @ 0.60%
16'-12" @ 1.24%
1135.62
137+50
1135.90
STA. 137+40.9, 14.0' LT.
NO. 3 CATCH BASIN
TOP OF GRATE EL. 1135.22
12" ℄ (E & N) EL. 1130.99
STA. 137+40.9, 14.0' RT.
NO. 3 CATCH BASIN
TOP OF GRATE EL. 1135.22
12" ℄ (W & NE) EL. 1130.80
STA. 137+50, 28.0' RT.
NO. 3 MANHOLE
TOP OF COVER (TEMP. GRADE) EL. 1135.20
TOP OF COVER (FINAL GRADE) EL. 1136.17
12" ℄ (SW & S) EL. 1130.60
18" ℄ (N) EL. 1128.00
6" ℄ EL. 1129.00
℄ TEMPORARY ROAD - ALL PAV'T TO BE REMOVED
24:1
48:1
4:1
12:1
1135.8
1134.5
3' UNDERCUT
1135.75
137+00
1136.08
12" SFM
℄ TEMPORARY ROAD - ALL PAV'T TO BE REMOVED
48:1
1136.2
1134.4
12" STM.
3' UNDERCUT
1136.08
136+50
1136.41
STA. 136+05, 21.0' RT.
NO. 3 MANHOLE
TOP OF COVER EL. 1136.75
12" ℄ (SW & N) EL. 1131.49
℄ TEMPORARY ROAD - ALL PAV'T TO BE REMOVED
EX. R/W
3' UNDERCUT
3:1
1134.3
28'-12" @ 0.80%
10'-12" @ 0.60%
12" G
12" W
12" SFM
STA. 135+98.66, 14.0' LT.
NO. 3A CATCH BASIN
TOP OF GRATE EL. 1136.02
12" ℄ (E) EL. 1131.77
1136.41
136+00
1136.64
STA. 135+98.66, 14.0' RT.
NO. 3A CATCH BASIN
TOP OF GRATE EL. 1136.02
12" ℄ (E) EL. 1131.55

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
37	9		
133A	96B		
		76	31
		248A	178B
45	25		
135A	96B		
		91	31
		259A	178B
53	9		
145A	96B		
		95	25
		267A	178B
50	18		
143A	96B		
		87	34
		268A	183B
44	19		
146A	102B		
		81	44
		268A	189B
43	29		
143A	102B		
		430	165
		1310A	906B

CALCULATED JL
CHECKED BPB

S. ILLINOIS AVENUE CROSS SECTIONS
STA. 136+00 TO STA. 138+00

RIC-C.R. 424-0.62

66
153

102088/088GX.DGN 2/15/05 RB,HN,KN,RC,CAR

120 100 80 60 40 20 ℄ 20 40 60 80 100 120

℄ CONSTRUCTION

SEEDING END WIDTH	SEEDING SQ. YDS.	
	18526	SUB TOTAL
	-705	DEDUCT FOR DITCH EROSION
	17821	PROTECTION (SEE SHEETS 49 & 51)
		TOTAL CARRIED TO GENERAL SUMMARY

TOTAL CARRIED TO GENERAL SUMMARY

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		1844	38689
		A	B
		15768	6195
			C
			12878
			D
			3118
			E
			30966

CALCULATED JL CHECKED BPB

EXCAVATION OF SUBGRADE	(A)
EMBANKMENT USING GRANULAR MATERIAL, TYPE B	(B)
EMBANKMENT USING GRANULAR MATERIAL, TYPE C	(C)
EMBANKMENT USING GRANULAR MATERIAL TYPE D	(D)
EMBANKMENT, AS PER PLAN	(E)

139+62 END WORK

0 AHD.
7 BK.

1140
1130

℄ TEMPORARY ROAD

24:1

139+50
1137.17

STA. 139+43.65, 83.20' RT.
NO. 2.1 OR 2.2 HEADWALL
18" ℄ EL. 1126.81
W/ DUCKBILL CHECK VALVE

TEMPORARY ROAD EARTHWORK
FOR INFORMATION ONLY

STATION	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
138+50	5	0	53	0
138+00	52	0		

69

℄ TEMPORARY ROAD

3' UNDERCUT

24:1 12:1

12" G

3:1 SLOPES
4' BOTT.
2:1 2:1

R/W

STA. 138+77.64, 66.11' RT.
HW. 2.1 OR 2.2 HEADWALL
18" ℄ EL. 1127.47

STA. 138+91.64, 15.8' LT.
EX. SAN. M.H.
TOP OF COVER ELEV. = 1136.3
8" ℄ (E) EL. 1122.68
RECONSTRUCT TO EL. 1137.08

12" W

8" SAN

18 281

-107 DEDUCT FOR DRIVE LT.

1136.85
139+00.41 END PROJECT
1136.85

STA. 138+86.80, 122.30' RT.
EX. SAN. M.H.
TOP OF COVER EL. 1141.4
8" ℄ (W) EL. 1121.25
8" ℄ (W) EL. ~~1117.75~~
30" ℄ (N & S) EL. 1115.33

℄ TEMPORARY ROAD

1.0% 0:1

3:1 SLOPES
4' BOTT.
2:1 2:1

12" G

R/W

3' UNDERCUT

1136.37
138+50
1136.46

12" W

STA. 138+50, 57.5' RT.
HW. 2.1 OR 2.2 HEADWALL
18" ℄ EL. 1127.58

83 283

19 STA. 138+00

526 SHEET TOTAL

STA. 138+00
30" SAN

SHEET TOTAL

AHD.	0	0		
BK.	38	2		
	0A	0B		
			226	15
			120A	89B
AHD.	206	14		
	130A	96B		
BK.	157	157		
	130A	96B		
			225	21
			244A	178B
	37	9		
	133A	96B		
			451	36
			364A	267B

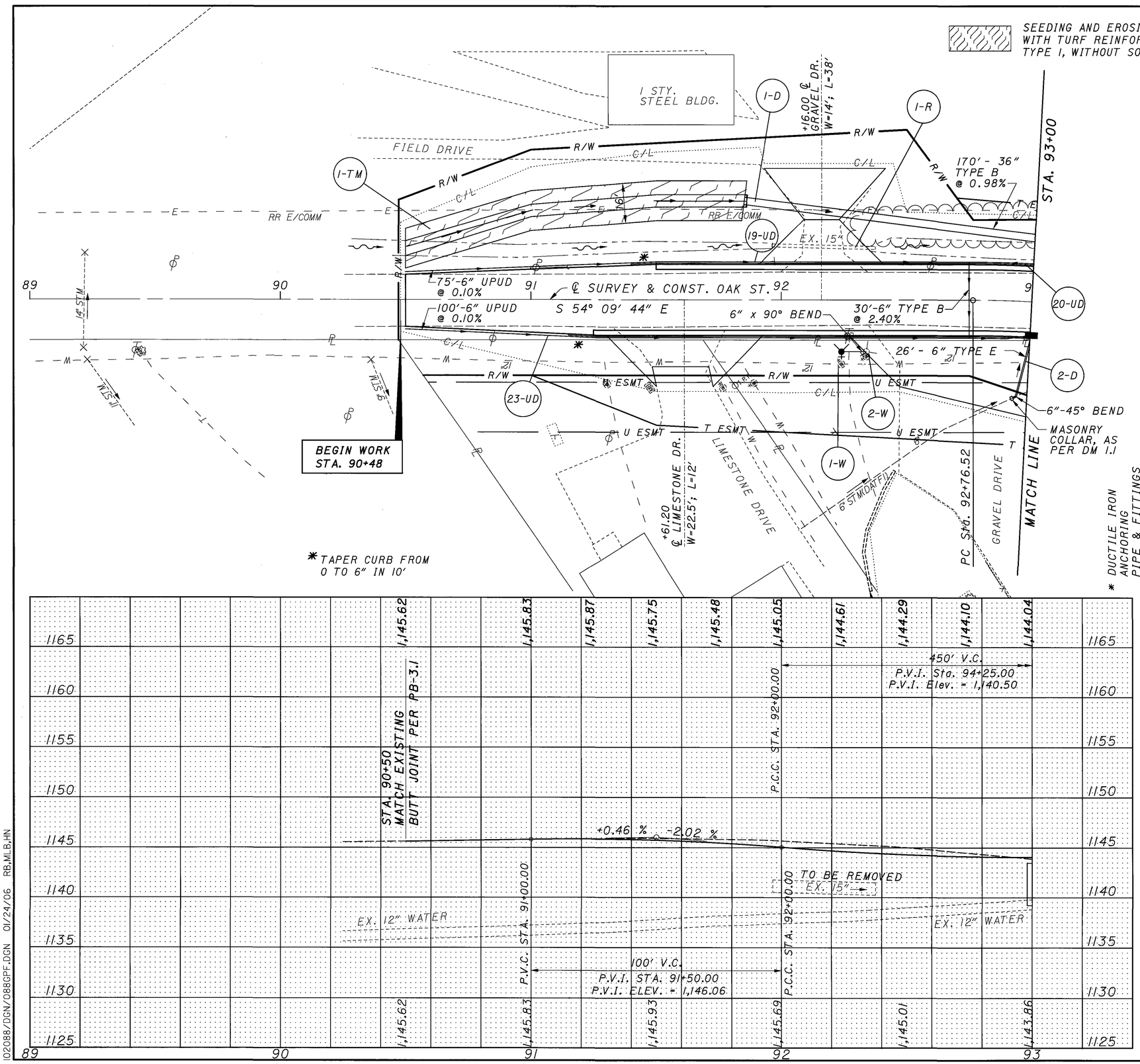
S. ILLINOIS AVENUE CROSS SECTIONS
STA. 138+50 TO STA. 139+50

RIC-C.R. 424-0.62

67
153

02088/088GX.DGN 2/14/05 RB,HN,KN,RC,CAR,HN

120 100 80 60 40 20 ℄ 20 40 60 80 100 120



REFERENCE	SEE SHEET NO.
STORM SEWER PROFILE LT.	70
UNDERDRAIN SUBSUMMARY	40

REF NO.	STATION FROM	STATION TO	SIDE		638	638	638	836	603	603	602	202
					FIRE HYDRANT REMOVED	VALVE BOX ADJUSTED TO GRADE	6" WATER MAIN *	6" FIRE HYDRANT	SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE I, WITHOUT SOIL FILLING	36" CONDUIT, TYPE B, 706.02	6" CONDUIT, TYPE E	CONCRETE MASONRY	PIPE REMOVED 24" AND UNDER
					EACH	EACH	FT.	EACH	SQ. YD.	FT.	FT.	CU.FT.	FT.
I-D	91+86.00	93+00.00	LT							117		0.69	
2-D	92+93.00	93+00.00	RT								26		
I-R	91+96.00	92+37.00	LT								41		
I-TM	90+50.00	91+86.00	LT						242				
I-W	92+24.00		RT			1	12	1					
2-W	92+24.00	92+34.00	RT			1	12	1					
TOTALS CARRIED TO SUBSUMMARY					1	2	24	1	242	117	26	0.69	41

* DUCTILE IRON ANCHORING PIPE & FITTINGS

PLAN AND PROFILE - OAK ST.
STA. 89+00 TO STA. 93+00

CALCULATED BPB CHECKED TM

RIC-C.R. 424-0.62

68
153

I02088/DGN/0888PF.DGN 01/24/06 RB,MLB,HN

CURVE DATA

P.I. Sta = 93+52.94
Δ = 19° 40' 12" (RT)
Dc = 13° 00' 00"
R = 440.74'
T = 76.41'
L = 151.31'
E = 6.57'

℄ OAK ST. 37.60' 49.17' 41.56'	℄ OAK ST. 26.99' 55.25' 36.70'
● = ⅝" REBAR ○ = ⅝" REBAR W/REF CAP	● = ⅝" REBAR ○ = ⅝" REBAR W/REF CAP
STA. 94+27.84 REFERENCE POINT	STA. 96+15.31 REFERENCE POINT

LIGHT WEIGHT FILL

SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE I, WITHOUT SOIL FILLING

TEMPORARY DRIVE

VEGETATED SWALE EROSION PROTECTION MAT, TYPE B

REFERENCE	SEE SHEET NO.
DRAINAGE DETAILS	87
QUANTITIES	70
UNDERDRAIN SUBSUMMARY	40
STORM SEWER PROFILE LT.	70

BM #6 - STA. 93+45.30, 93.60' RT.
N. W. CORNER OF BOTTOM
CONCRETE STEP AT N.W. CORNER OF
LIPPERT BLD E. SIDE LOADING DOCK
ELEV. 1145.07

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED BPB
CHECKED TM

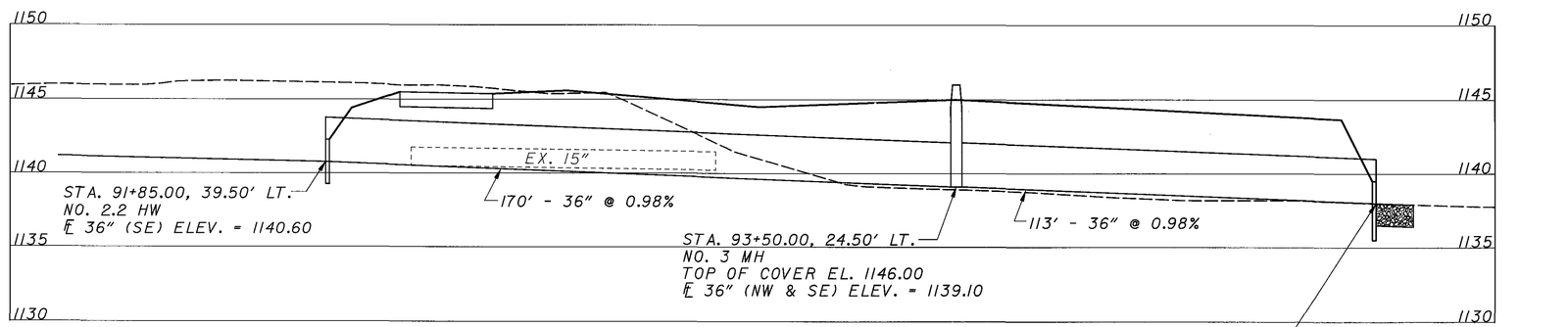
PLAN AND PROFILE - OAK ST.
STA. 93+00 TO STA. 97+00

RIC-C.R. 424-0.62

69
153

I02088/DGN/088GPG.DGN 01/26/06 RB,MLB,HN

REF NO.	STATION		SIDE	202				601	602	603							604				638						670	670	836
				PIPE REMOVED 24" & UNDER	PIPE REMOVED OVER 24"	CATCH BASIN REMOVED	REMOVAL MISC.; RR TIE	RCP, TYPE C, W/FILTER	CONCRETE MASONRY	6" CONDUIT, TYPE E	12" CONDUIT, TYPE B	12" CONDUIT, TYPE C	12" CONDUIT, TYPE D	18" CONDUIT, TYPE B	18" CONDUIT, TYPE C	36" CONDUIT, TYPE B, 706.02	CATCH BASIN NO. 2-2B	CATCH BASIN NO. 3	CATCH BASIN NO. 6	MANHOLE NO. 3	6" WATER MAIN DUCTILE IRON ANCHORING PIPE AND FITTINGS	12" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 53, PUSH-ON JOINTS AND FITTINGS	12" CUTTING-IN-SLEEVE	FIRE HYDRANT AND GATE VALVE REMOVED AND RESET	1½" COPPER SERVICE BRANCH	WATCH WORK MISC.; SERVICE STOP AND BOX	DITCH EROSION PROTECTION	VEGETATED SWALE EROSION PROTECTION MAT, TYPE B	SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT. TYPE I, WITHOUT SOIL FILLING
	FROM	TO		FT	FT	EACH	EACH	CU. YD.	CU. YD.	FT	FT	FT	FT	FT	FT	EACH	EACH	EACH	EACH	EACH	FT	FT	EACH	EACH	FT	FT	SQ. YD.	SQ. YD.	SQ. YD.
1-D	93+00.50		RT								84								1										
2-D	93+86.00	93+92.00	RT							34		22						1											
3-D	93+86.00	95+00.00	LT&RT											85	40		1												
4-D	95+00.00		LT					2	0.31						30					1									
5-D	95+23.00	95+75.00	RT					2					52																
6-D	95+00.00	95+00.00	LT									7						1											
7-D	96+15.00	96+86.00	LT			1			0.43																				
8-D	93+00.00	93+50.00	LT													53													
9-D	93+50.00	94+50.00	LT					4	0.69							113				1									
1-DEP	93+86.00	95+18.00	RT																								99		
2-DEP	95+97.00	96+10.00	LT																								15		
3-DEP	96+18.00	96+70.00	LT					5																			22		
4-DEP	95+75.00	97+00.00	RT																								105		
1-R	93+70.00		RT			1																							
2-R	93+60.00	93+68.00	RT				7																						
3-R	93+70.00	96+35.50	LT&RT	260	40																								
4-R	95+41.50	95+57.50	RT	47		1																							
1-TM	94+00.00	94+58.00	LT																										53
1-W	93+12.00	97+00.00	RT																		7	385	1	1	48	1			
1-VS	95+00.00	95+97.00	LT																									72	
2-VS	96+70.00	97+00.00	RT																									16	
TOTALS CARRIED TO SUBSUMMARY				307	40	3	7	13	1.43	34	84	29	52	85	70	166	1	2	1	2	7	385	1	1	48	1	241	88	53



STORM SEWER

N

0 10 20 40 HORIZONTAL SCALE IN FEET

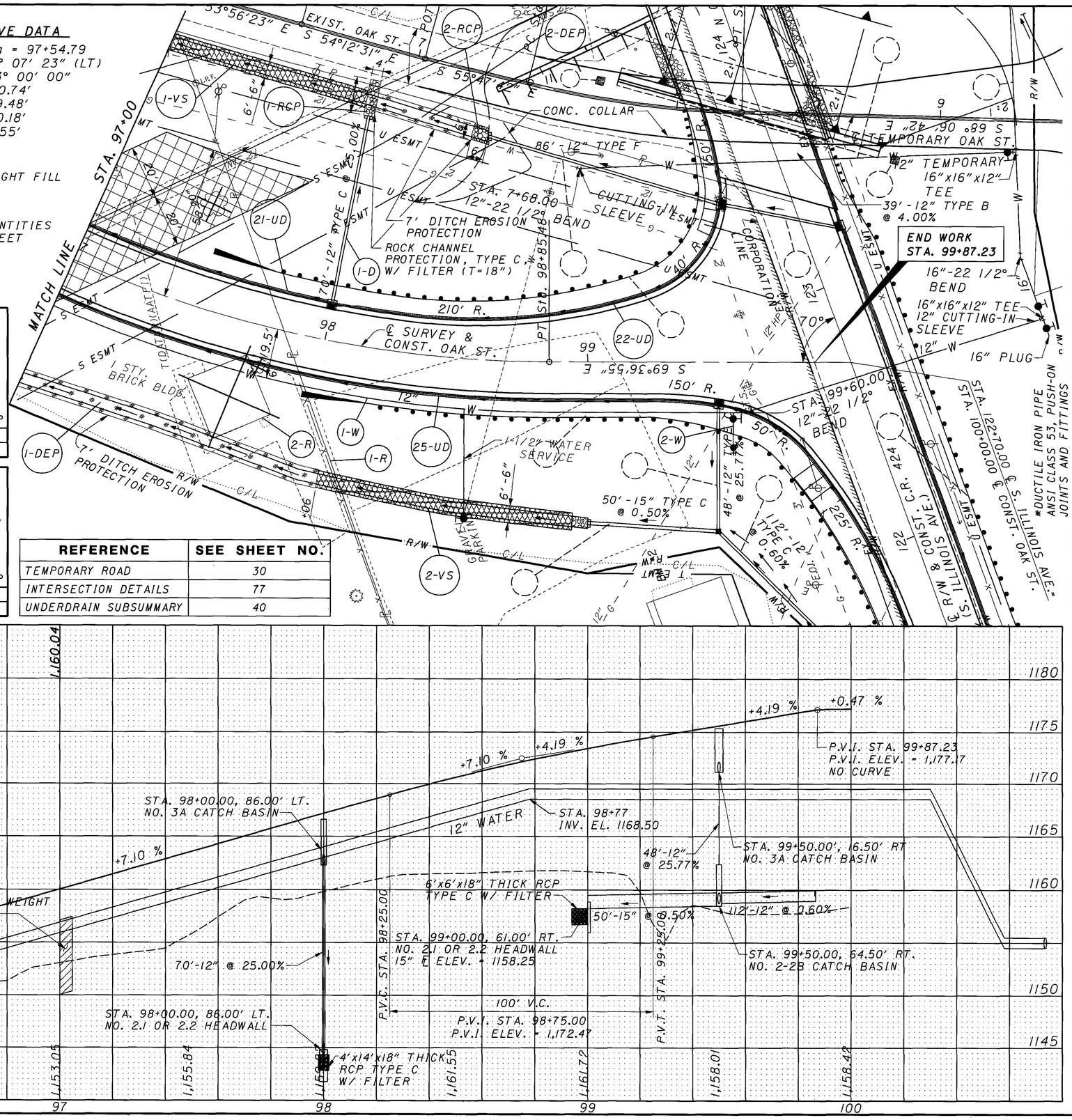
CALCULATED BPB CHECKED TM

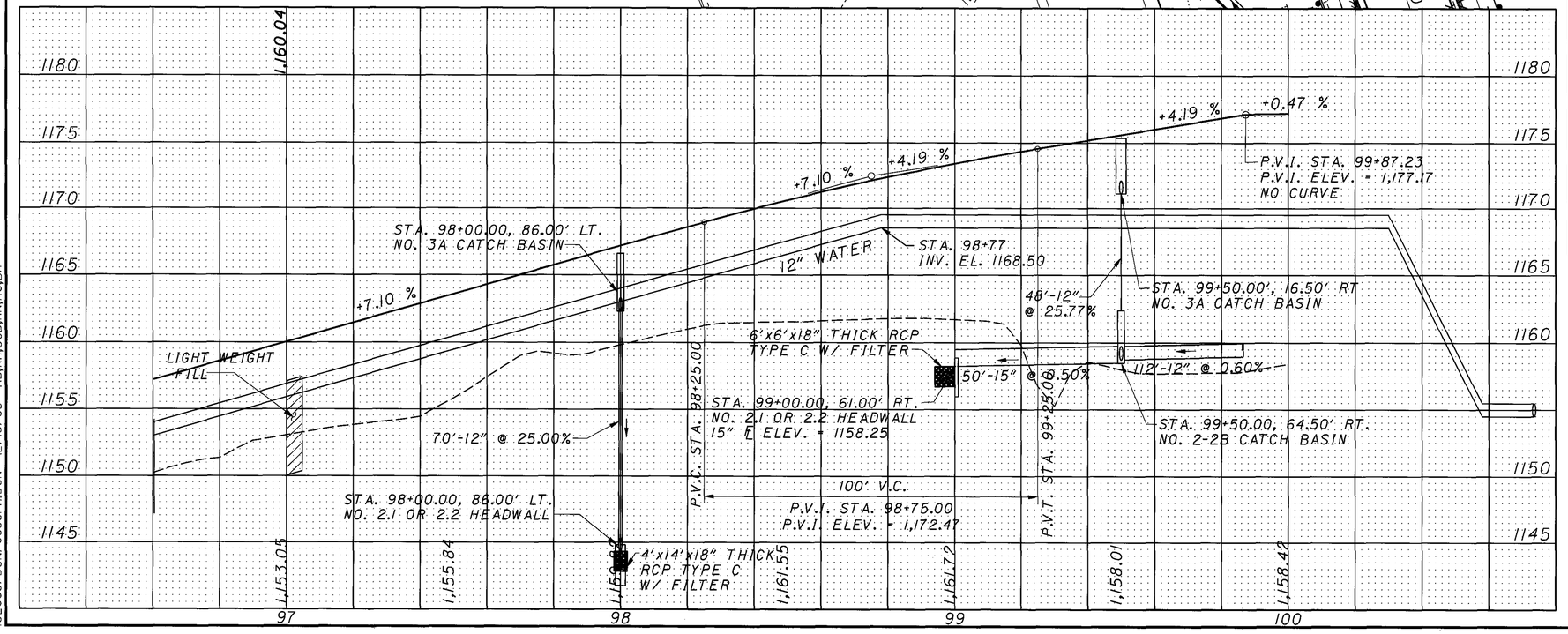
PLAN AND PROFILE QUANTITIES - OAK ST.
STA. 93+00 TO STA. 97+00 AND STORM SEWER PROFILE

RIC-C.R. 424-0.62

70
153

102088/DGN/088GPG.DGN 01/26/06 HN





CURVE DATA

P.I. Sta = 97+54.79
Δ = 35° 07' 23" (LT)
Dc = 13° 00' 00"
R = 440.74'
T = 139.48'
L = 270.18'
E = 21.55'

REFERENCE	SEE SHEET NO.
TEMPORARY ROAD	30
INTERSECTION DETAILS	77
UNDERDRAIN SUBSUMMARY	40

REF NO.	STATION FROM	STATION TO	SIDE	202	601	602	603	604	638	638	638	638	638	638	638	670	670		
				FENCE REMOVED	BUILDING DEMOLISHED ONE STORY, BRICK COMM.	RCP, TYPE C W/ FILTER	CONCRETE MASONRY	12" CONDUIT, TYPE C	CATCH BASIN NO. 3A	WATER WORK MISC.: SERVICE STOP AND BOX	6" WATER MAIN DUCTILE IRON ANCHORING PIPE AND FITTINGS	12" CUTTING -IN SLEEVE	12" WATER LINE*	FIRE HYDRANT AND GATE VALVE REMOVED AND RESET	1½" COPPER SERVICE BRANCH	DITCH EROSION PROTECTION	VEGETATED SWALE EROSION PROTECTION MAT, TYPE B		
				FT	LUMP	CU. YD.	CU. YD.	FT	EACH	EACH	FT	EACH	FT	EACH	FT	SQ. YD.	SQ. YD.		
1-D	98+00.00		LT				0.20	70	1										
1-DEP	97+00.00	98+06.00	RT													91			
2-DEP	98+02.00	98+48.00	LT													30			
1-RCP	97+98.00	98+02.00	LT			4													
2-RCP	98+48.00	98+54.00	LT			2													
1-VS	97+00.00	97+98.00	LT														56		
2-VS	98+06.00	98+94.00	RT														72		
1-R	97+94	98+23	RT	58															
2-R	97+57	97+89	RT		LUMP														
1-W	97+00	122+61	RT							1		1	387		57				
2-W	99+56		RT								14			1					
TOTALS CARRIED TO SUBSUMMARY				58	LUMP	6	0.20	70	1	1	14	1	387	1	57	121	128		

*DUCTILE IRON PIPE ANSI CLASS 53, PUSH-ON JOINTS AND FITTINGS

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED BPB
CHECKED TM

PLAN AND PROFILE - OAK ST.
STA. 97+00 TO STA. 100+00

RIC-C.R. 424-0.62

102088/DGN/088GPH.DGN 12/16/05 RB,KH,SCB,HN,RC,BH

SEEDING END WIDTH	SEEDING SQ. YDS.		END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	-135	DEDUCT FOR DRIVE LT.				
		1150				
		1140				
		1130				
56		STA. 92+00	46	28		
		1150			57	15
	106	1140				
71		STA. 91+85	159	23		
		1130				
	283				188	45
		1150				
	-77	DEDUCT FOR DRIVE RT.	130	46		
		1140				
74						
		1130				
	356		101	35	214	75
		1150				
		1140				
54						
		1130				
	150				117	32
		1150				
0			AHD. 25	0		
		1140	BK. 0	0		
		1130				
	683	SHEET TOTAL			576	167

120 100 80 60 40 20 0 20 40 60 80 100 120

℄ CONSTRUCTION

R/W

4% → 0.02 →

36" STM

EX. 15"

1144.75
92+16.00
1145.50

DRIVE LT.
W=14'; L=38'

STA. 92+00

R/W

3:1 3:1

STA. 91+85.00, 39.5' LT.
NO 2.2 HEADWALL
℄ 36" (SE) EL. 1140.77

1140.6

EX. 15"

1145.05
92+00.00
1145.69

R/W

0.02 → 100:1

T ESMT

BUILDING

EX. 12" WATER

STA. 92+00

STA. 91+85

BUILDING

R/W

3:1 3:1

1141.2

R/W

T ESMT

BUILDING

4.0% →

1145.75
91+50.00
1145.93

+61.2 ℄ LIMESTONE DR.
W=22.5'; L=12'

R/W

3:1 3:1

1141.4

R/W

12:1

1145.83
91+00.00
1145.83

R/W

EX. 12" WATER

1145.61
90+50.00
1145.62

90+48.00 BEGIN WORK

120 100 80 60 40 20 0 20 40 60 80 100 120

CALCULATED EEL
CHECKED JL

OAK STREET CROSS SECTIONS
STA. 90+50 TO STA. 92+16

RIC-C.R. 424-0.62

72
153

02088/DGN/OAKXS.DGN 01/24/06 RB,ML,B,HN

SEEDING END WIDTH	SEEDING SQ. YDS.
79	359
50	
51	
39	281
56	-361
	251
	264
	794

DEDUCT FOR DRIVE RT.

SHEET TOTAL

℄ CONSTRUCTION

STA. 93+92.00, 14.00' RT.
NO. 3 CATCH BASIN
TOP OF GRATE EL. 1144.81
6" E EL. 1141.27
12" E (W) EL. 1140.77

T ESMT · R/W · 48:1 · 6:1 · 1144.1 · 36" STM · EX. 15" - REMOVE · 1145.06 · 94+00.00 · 1141.99 · 12" W · 4:1 · EX. 2" GAS · 4:1 · 1142.1 · EX. 12" WATER · 22'-12" @ 9.36%

STA. 93+86.00, 35.00' RT.
NO. 2-2B CATCH BASIN
TOP OF GRATE EL. 1142.00
6" E (NW.) EL. 1138.71
12" E (N&E) EL. 1138.71
18" E (SE) EL. 1138.21

R/W · T ESMT · BUILDING · 6:1 · 6:1 · 1144.3 · 2% · 4.0% · EX. 6" CPP · EX. 12" CPP · 12" STM · EX. 6" PVC

STA. 93+50.00, 24.5' LT.
NO. 3 MANHOLE
TOP OF COVER EL. 1146.00
E 36" (NW. & SE) EL. 1139.10

1144.30 · 93+50.00 · 1142.40

STA. 93+70.00, 6.30' RT.
EX. CATCH BASIN
REMOVE

DRIVE RT.

R/W · T ESMT · BUILDING · PROP. 6" TYPE E (CONNECT TO EX. 6" WITH MASONRY COLLAR) · 6:1 · 6:1 · 1144.5 · 36" STM · 0% · 12" W

STA. 93+00.50, 14.00' RT.
NO. 6 CATCH BASIN
TOP OF GRATE EL. 1143.46
6" E EL. 1139.92
6" E (W) EL. 1139.55
12" E (S) EL. 1139.21

1144.04 · 93+00.00 · 1143.86

+05 ℄ GRAVEL DR.
W=110'; L=32'

R/W · T ESMT · 6:1 · 6:1 · 1144.7 · 3.0% · 36" STM · EX. 12" WATER · 1144.29 · 92+00.00 · 1145.01 · DRIVE RT.

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
11	270		
		11	375
0	135		
		17	198
18	78		
		59	122
46	54		
		86	76
STA. 92+00	46	28	
SHEET TOTAL		173	771

CALCULATED EEL
CHECKED JL

OAK STREET CROSS SECTIONS
STA. 92+50 TO STA. 94+00

RIC-C.R. 424-0.62

73
153

102088/DGN/OAKXS.DGN 1/27/06 RB,ML,B,HN

SEEDING END WIDTH	SEEDING SQ. YDS.
91	
131	
	658
106	
-201	DEDUCT FOR DRIVE LT.
	558
95	
	529
95	
	458
96	STA. 94+00
	2002 SHEET TOTAL

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
7	344		
108	344		
		196	643
104	350		
		169	547
79	241		
36	265		
		62	451
31	222		
		39	456
11	270		
		466	2097

CALCULATED EEL CHECKED JL

OAK STREET CROSS SECTIONS STA. 94+50 TO STA. 96+00

RIC-C.R. 424-0.62

74 / 153

℄ CONSTRUCTION

EXISTING PAVEMENT TO BE REMOVED UNDER 203

FOR EARTHWORK 65' LT., SEE DRAINAGE DETAIL SHEET NO. 87.

EX. 2" GAS

EX. 12" WATER

EX. 30" - REMOVE

EX. 6" CPP

STA. 96+15.24, 78.04' LT.
EX. CATCH BASIN - REMOVE
NO. 2.1 OR 2.2 HEADWALL
24" E EL. 1137.07

1153.19
96+00.00
1147.73

12" W

EX. 24"

℄ LIMESTONE DR.
W=24'; L=61.5'

10' ROUNDING

T ESMT

-8.0%

2.2%

PROP. 12"

EX. 15" - REMOVE

STA. 95+53, 18.9' LT.
EX. OVERFLOW
REMOVE

1150.39
95+50.00
1143.01

STA. 95+00, 21.0' LT.
NO. 3 MANHOLE
TOP OF COVER EL. 1148.60
12" E (SW) EL. 1143.02
18" E (NW & NE) EL. 1137.86

BK & AHD

EX. 15" - REMOVE

STA. 95+00, 14.0' LT.
NO. 3 CATCH BASIN
TOP OF GRATE EL. 1147.83
6" E EL. 1143.92
12" E (N) EL. 1143.58

ROCK CHANNEL PROTECTION, TYPE C, W/ FILTER (T=18")

STA. 95+00, 51.0' LT.
NO. 2.1 OR 2.2 HEADWALL
18" E EL. 1137.77

30'-18" @ 0.28%
7'-12" @ 8.00%

1148.11
95+00.00
1143.78

18" STM

STA. 94+50, 59.50' LT.
NO 2.2 HEADWALL
E 36" (NW) EL. 1138.00

1146.33
94+50.00
1143.07

SEEDING END WIDTH	SEEDING SQ. YDS.
141	750
129	722
131	703
122	503
90	
91	2678

	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	104	697		
			268	1208
	185	608		
			579	944
	440	412		
			616	934
AH	225	597		
BK	12	512		
			18	793
STA. 96+00 AH	7	344		
SHEET TOTAL			1481	3879

CALCULATED EEL
CHECKED JL

OAK STREET CROSS SECTIONS STA. 96+50 TO STA. 98+00

RIC-C.R. 424-0.62

75
153

102088/DGN/OAKXS.DGN 2/14/05 RB,CAR,CEO,RC

℄ CONSTRUCTION

EXISTING PAVEMENT TO BE REMOVED UNDER 203

REMOVE EXIST. PAVEMENT

24:1

4:1

2:1

3:1

70' 12" @ 25.00%

STA. 98+00.00, 86.00' LT.
NO. 2.1 OR 2.2 HEADWALL
12" ℄ EL. 1144.31

EX. 12" WATER

EX. 2" GAS

STA. 98+00.00, 14.00' LT.
NO. 3A CATCH BASIN
TOP OF GRATE EL. 1166.56
6" ℄ EL. 1162.65
12" ℄ EL. 1162.31

1167.14
98+00.00
1159.82

12" W

1158.1

R/W

1143.8

1143.5

ROCK CHANNEL PROTECTION, TYPE C, W/ FABRIC FILTER (T=18")

LIGHT WT. FILL AREA

1163.59
97+50.00
1155.84

4" GRANULAR BASE

EXISTING 72" SANITARY SEWER

1157.3

LIGHT WEIGHT FILL

1153.1

1160.04
97+00.00
1153.05

1142.7

FOR EARTHWORK SEE DRAINAGE DETAILS SHEET NO. 87.

1141.9

1156.48
96+50.00
1149.31

1149.1

ST.A. 96+35.5, 44.6' RT.
EX. CATCH BASIN
REMOVE

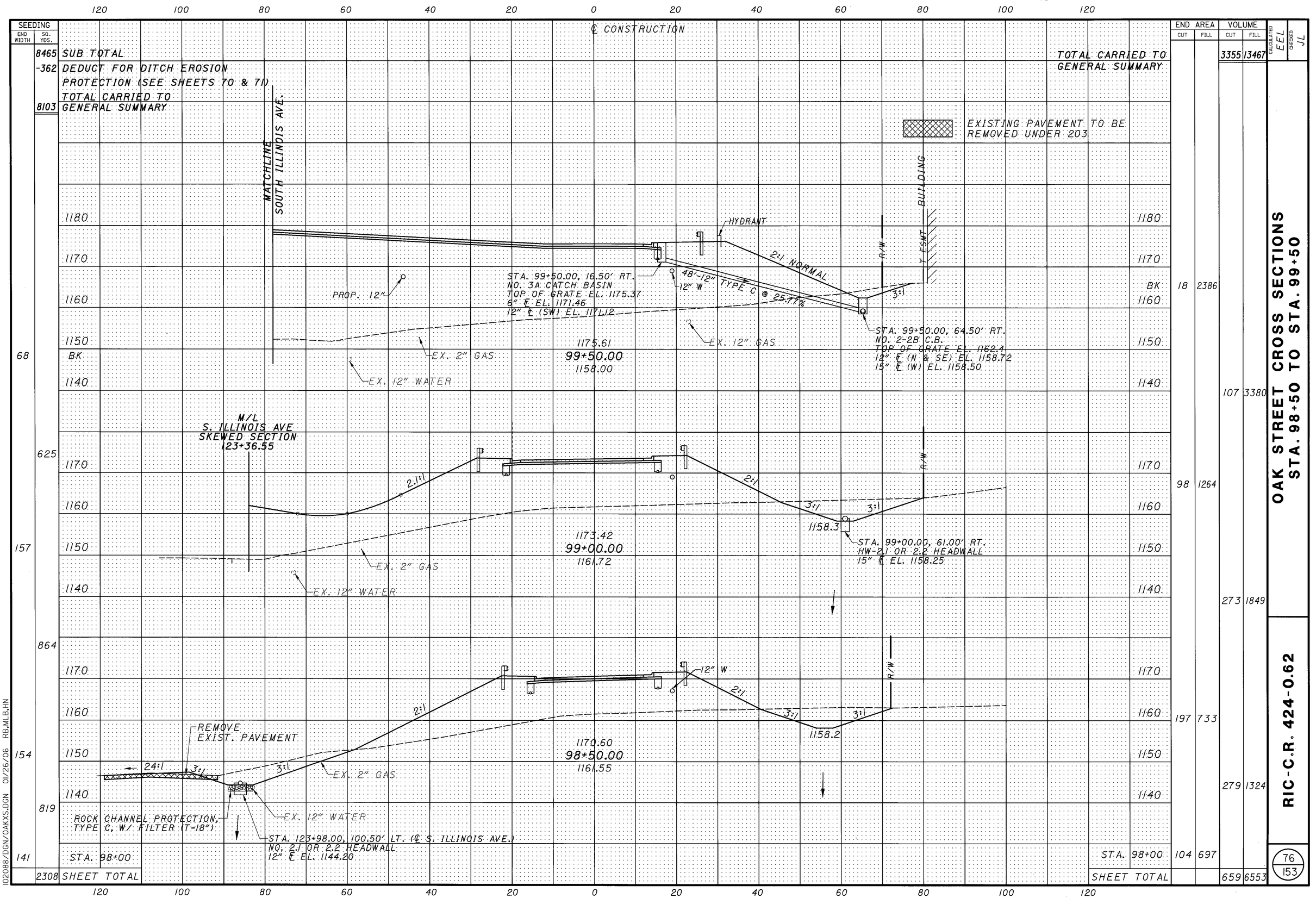
STA. 96+00 AH

SHEET TOTAL

SEEDING END WIDTH	SEEDING SQ. YDS.	
	8465	SUB TOTAL
	-362	DEDUCT FOR DITCH EROSION PROTECTION (SEE SHEETS 70 & 71)
	8103	TOTAL CARRIED TO GENERAL SUMMARY
68	BK	
157	625	
154	864	
141	819	
	2308	SHEET TOTAL

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL	
		3355	13467	TOTAL CARRIED TO GENERAL SUMMARY
18	2386			BK
98	1264	107	3380	
197	733	273	1849	
104	697	279	1324	STA. 98+00
		659	6553	SHEET TOTAL

CALCULATED EEL
CHECKED JL



OAK STREET CROSS SECTIONS STA. 98+50 TO STA. 99+50

RIC-C.R. 424-0.62

76
153

I02088/DGN/OAKXS.DGN 01/26/06 RB,MLB,HN

STA. 121+68.39, 239' LT.
R=225'

19°27'44"

STA. 99+25.37, 164' RT.
R=150'

11°28'41"

STA. 99+45.27, 66' RT. R=50 ℄ OAK ST.
STA. 122+26.70, 74' LT. R=50 ℄ S. ILLINOIS

99+50
TG=1162.40

39°03'31"

STA. 121+68.39

225' R

STA. 122+43.36, 26.86' LT.

HIGH PT
TC 1176.52
EP 1176.19

3:1
2:1
3:1
2:1
3:1
2:1
2:1
2:1

150' R

15.03'
15.03'

+50
TG = 1175.37
STA. 99+55.22
17.00' LT.

50' R

10' TYP.

8.51'
8.51'
8.51'
8.52'
8.52'

19.10'
19.11'
19.10'
19.11'

TC 1174.19
EP 1173.86
TC 1174.79
EP 1174.46
TC 1175.35
EP 1175.02
TC 1175.88
EP 1175.55
TC 1176.38
EP 1176.05
TC 1176.49
EP 1176.16
TC 1176.50
EP 1176.17
TC 1176.37
EP 1176.04
TC 1176.00
EP 1175.67
TC 1175.72
EP 1175.22
TC 1175.15
EP 1174.64
TC 1174.15
EP 1173.61
TC 1172.96
EP 1172.41
TC 1171.53
EP 1170.97
TC 1169.85
EP 1169.29

1175.61
1176.66

℄ OAK ST.

1168.92
12'
TC 1169.23
EP 1168.90

1170.60
1170.23
TC 1170.79
EP 1170.46

1172.10
1171.79
TC 1172.24
EP 1171.91

1173.42
1173.23
12'
1174.56
TC 1173.53
EP 1173.20

23.06'
23.07'
23.06'
23.07'

R=210'

99

PT STA. 98+85.48

STA. 98+30.05

STA. 123+81.38, 170.05' LT.
R=150'

10°56'29"

STA. 98+58.28, 224.87' LT.
R=210'

25°10'16"

STA. 99+10.74, 63.95' RT. R=40 ℄ OAK ST.
STA. 123+60.63, 62' LT. R=40 ℄ S. ILLINOIS

TC 1175.12
EP 1174.79

STA. 99+23.06, 25.95'

81°09'40"

14.16'
14.16'
40' R
14.16'
14.16'
14.16'

TC 1176.33
EP 1176.00
TC 1177.65
EP 1177.32
TC 1178.56
EP 1178.23

STA. 123+53.08, 22.73'

150' R

STA. 123+81.58

+43
TG = 1178.19

TC 1179.27
BC 1178.77
TC 1179.62
BC 1179.04
TC 1179.75
EP 1179.28

14.32'
14.32'

18'

1173.47
12'
1174.26
1175.05
122
1175.84
1176.63
1177.38
70°
123
1178.03
1178.61
1179.09
1179.48
124

℄ CONSTRUCTION & R/W S. ILLINOIS AVE.

+20
TG = 1178.10
STA. 122+70.00 S. ILLINOIS AVE.
STA. 100+00.00 OAK ST.

N 0°23'05" E

HORIZONTAL SCALE IN FEET
0 5 10 20

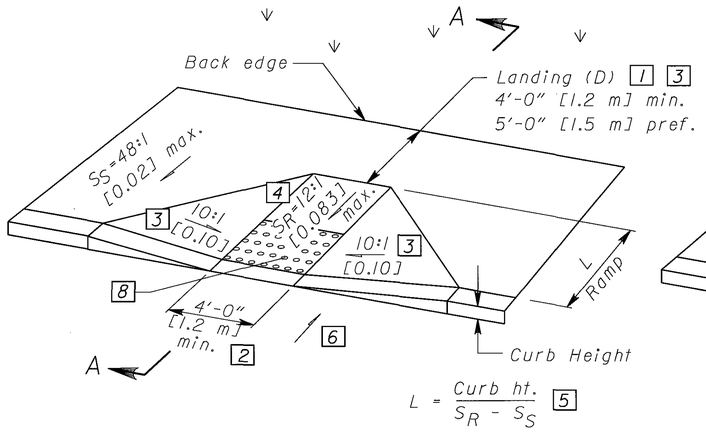
CALCULATED EEL
CHECKED TM

S. ILLINOIS AVENUE - OAK STREET INTERSECTION DETAIL

RIC-C.R. 424-0.62

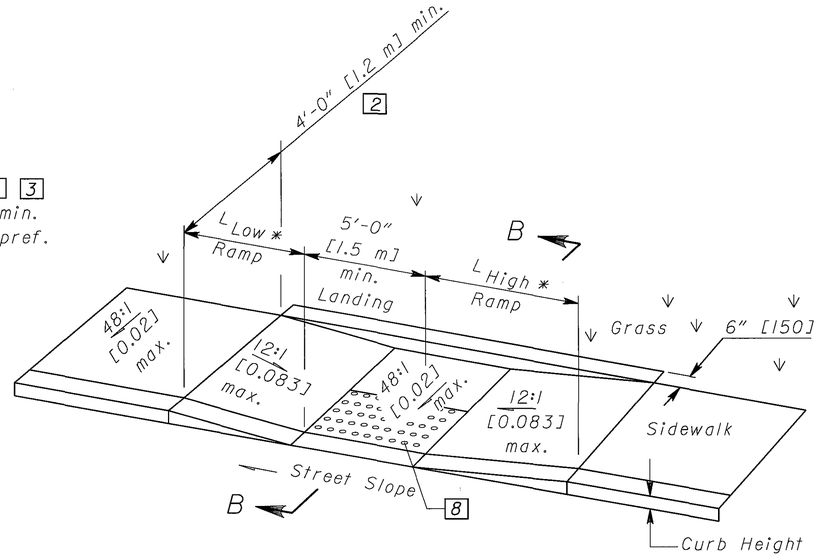
77
153

102088/08GINT.DGN 2/15/05 EEL,KH,HN,RC



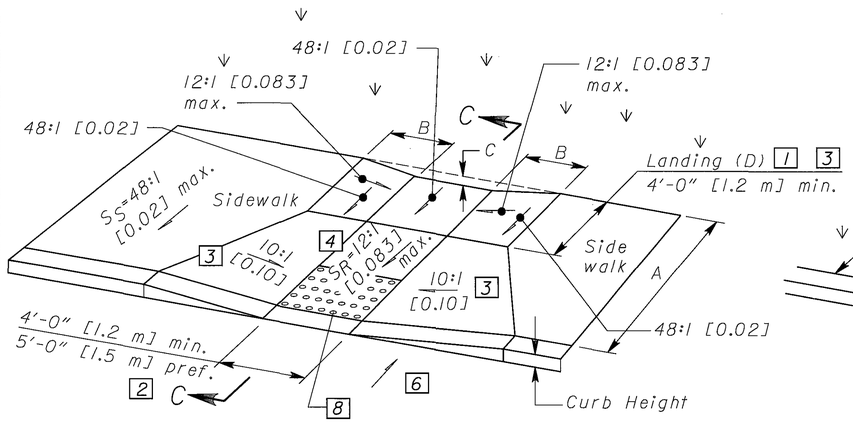
See Sht. 3/3 for SECTION A-A

PERPENDICULAR CURB RAMP DETAIL



See Sht. 3/3 for SECTION B-B

PARALLEL CURB RAMP DETAIL (DOUBLE)

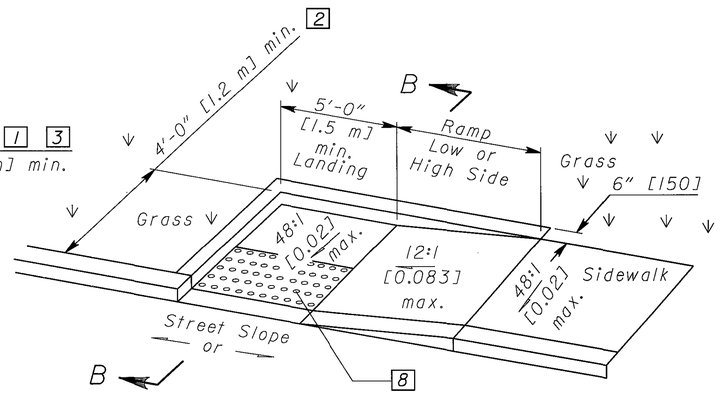


See Sht. 3/3 for SECTION C-C

COMBINED CURB RAMP DETAIL

$B = C / 0.083$

$C = [\text{Curb ht.} + A(S_S)] - [(A-D)S_R + D(0.02)]$



See Sht. 3/3 for SECTION B-B

PARALLEL CURB RAMP DETAIL (SINGLE)

Street Slope	Ramp Length @ 1"/ft [0.083]	
	$L_{LOW\ SIDE}$ *	$L_{HIGH\ SIDE}$ *
0.01	5'-5" [1.6 m]	6'-10" [2.1 m]
0.02	4'-10" [1.5 m]	7'-11" [2.4 m]
0.03	4'-5" [1.3 m]	9'-5" [2.9 m]
0.04	4'-1" [1.2 m]	11'-8" [3.6 m]
0.05	3'-9" [1.1 m]	15'-2" [4.6 m]
* Measured along the back of a 6" [150] high curb.		

$$L_{HIGH} = \frac{\text{Curb ht.}}{0.083 - \text{Street Slope}} \quad 7$$

$$L_{LOW} = \frac{\text{Curb ht.}}{0.083 + \text{Street Slope}} \quad 7$$

LEGEND

1 May be reduced to 3'-0" [915] in existing sidewalks if the landing is unconstrained along the back edge.

2 May be reduced to 3'-4" [1.02 m] in existing sidewalks to better fit the walk configuration or where site conditions are restricted by narrow walks, pole foundations, drainage inlets, etc. The width may be tapered.

3 Where landing width (D) has been reduced to 3'-0" [915] the flared sides shall have a maximum slope of 12:1 [0.083].

Flared sides are not required where the edges of a curb ramp are protected by landscaping or other barriers to travel by wheel chair users or pedestrians across the edge of the curb ramp. However, if the flared sides are used in these areas, they may be of any slope.

4 The slope of the ramp toward the curb is preferred to be 12:1 [0.083] or flatter related to the horizontal, but the maximum slope shall be 12:1 [0.083] relative to the existing or proposed walk slope.

In existing sidewalks, where the maximum ramp slope (S_R) is not feasible, it may be reduced as follows:

A) 10:1 [0.10] for a max. rise of 6" [150],
B) 8:1 [0.125] for a max. rise of 3" [75],
C) 6:1 [0.167] over a max. run of 2'-0" [610] for historic areas where a flatter slope is not feasible.

5 The minimum length of a perpendicular ramp is 6' [2.0 m] from the back of a 6" [150] curb and may be increased where feasible to obtain a flatter ramp slope or to better blend with the walk configuration.

6 Gutter counter slopes at the foot of perpendicular curb ramps should not exceed 20:1 [0.05] over a distance of 2'-0" [610] from the curb.

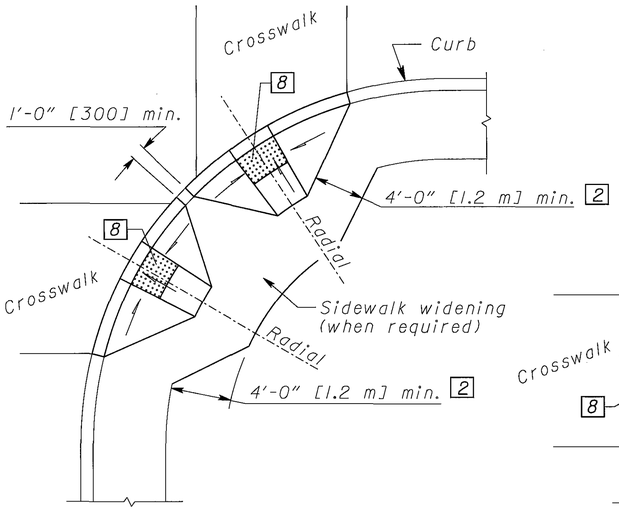
7 Dimensions derived by equation are nominal. Construct ramps to meet required slopes and existing conditions.

8 Detectable Warnings (truncated domes) are to be installed in the location shown. Dimensions of the domes are 24" [610] from the back of the curb by the width of the ramp. See NOTES on sheet 3.

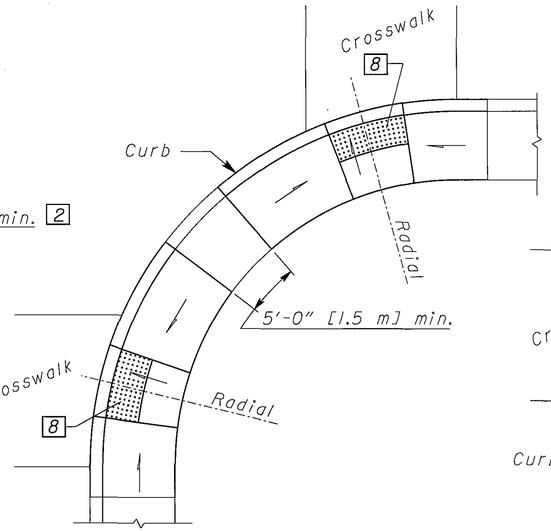
CURB RAMPS WITH TRUNCATED DOMES

RIC-C.R. 424-0.62

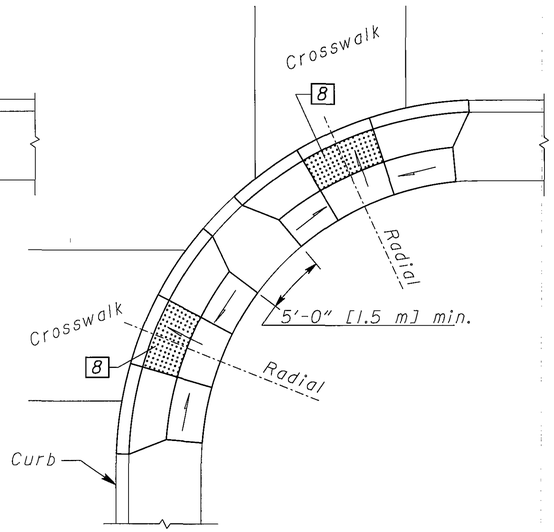
088CRTD.DGN 12/29/04 TM,HN,RC 1



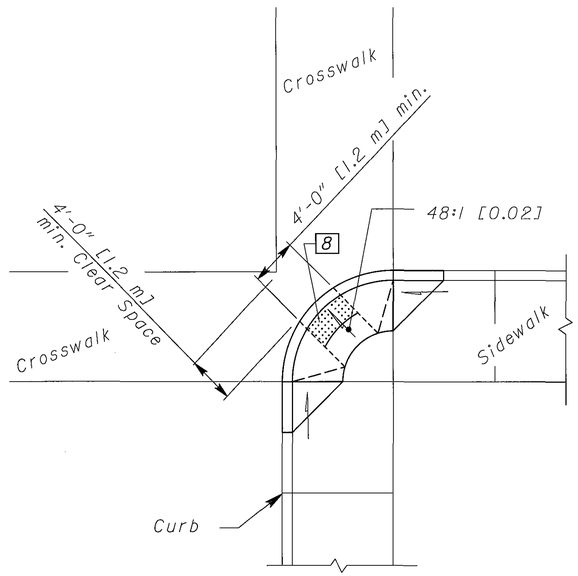
DESIGN A
PERPENDICULAR RAMP



DESIGN B
PARALLEL RAMP



DESIGN C
COMBINATION RAMP



DESIGN D
DIAGONAL RAMP

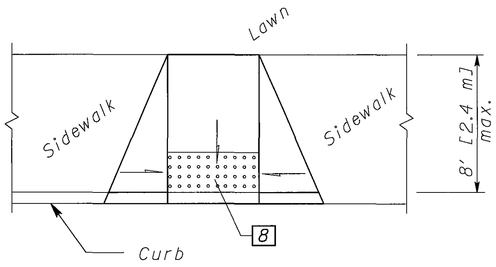
Use in existing walks only and when site constraints prohibit other designs. The diagonal ramp may be perpendcular, parallel or combination.

Avoid using where curb radii are less than 20'-0" [6.0 m].

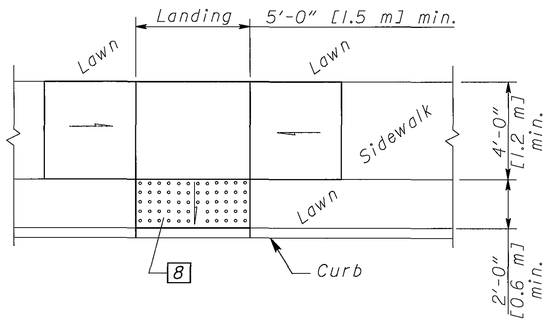
CORNER CURB RAMP DESIGNS

(See Curb Ramp Details on Sht. 1/3 for additional requirements.)

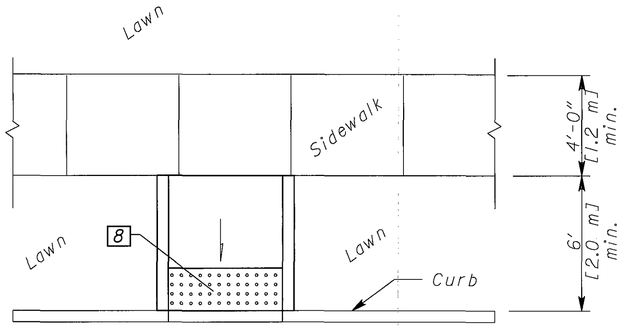
For LEGEND, See sheet 1.



DESIGN E
PERPENDICULAR RAMP



DESIGN F
PARALLEL RAMP



DESIGN G
PERPENDICULAR RAMPS
w/o FLARES

MID BLOCK CURB RAMP DESIGNS

(See Curb Ramp Details on Sht. 1/3 for additional requirements.)

CURB RAMPS WITH TRUNCATED DOMES

RIC-C.R. 424-0.62

08BCRTD.DGN 12/29/04 TM,HN,RC 2

NOTES

SURFACE TEXTURE: Texture of concrete surfaces shall be obtained by coarse brooming transverse to the ramp slopes and shall be rougher than adjacent walk.

TRUNCATED DOMES: Install detectable warnings (truncated domes) for a distance of 24" [610] from the back of the curb for the entire width of the ramp opening as shown on details on Sheet 1.

Pavers will meet ASTM C 902 Class SX, Type 1, or C 936, or C 1272 Type R.

Acceptable manufacturers and products are:

1) Whitacre-Greer Fireproofing Company, 1400 S. Mahoning Ave, Alliance, OH, 44601, (800) WG PAVER ADA Paver, 4"x8"x2-1/4", Clear Red (Rustic) #30.

2) Hanover Architectural Products, 240 Bender Rd., Hanover, PA. 17331, (717) 637-0500 Detectable Warning Paver, 12"x12"x2", or 24"x24"x2", Red or Quarry Red.

3) Endicott Clay Products, PO Box 17, Fairbury, NE, 68352, (402) 729-5804 Handicap Detectable Warning Paver, 4"x8"x2-1/4", Red Blend.

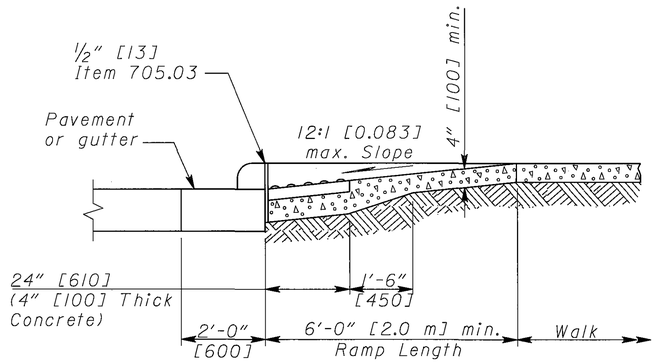
Pavers will laid on top of a 4" [100] unreinforced concrete base. Setting bed and joints to be mortared in accordance with manufacturer's instruction, or with a maximum 1/2" [13] thick bed of latex modified cement mortar. Mortar joints to a width not greater than 5/32" [4] and not less than 1/16" [1.5]. Pavers shall not be directly touching each other unless they have spacing bars.

Mortared joints are to be flush with top surface and struck so as to give a smooth surface. Pavers shall be laid such that joints are level with adjoining joints so as to provide a smooth transition from brick to brick and brick to concrete surface.

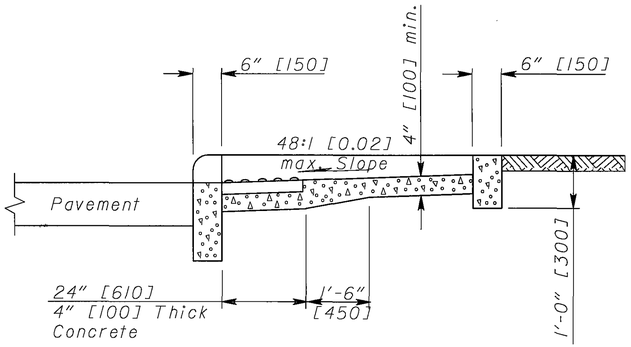
The surface of any two adjacent units should not differ by more than 1/8" [3] in height. Bricks shall be placed in a running bond pattern. Face of all brick shall be clean of cement and protected so as to avoid chipping during constructionn.

EXPANSION JOINTS: shall be provided in the curb ramp as extensions of walk joints and consistent with Item 608.03 requirements for a new concrete walk. A 1/2" [13] Item 705.03 expansion joint filler shall be provided around the edge of ramps built in existing concrete walk. Lines shown on this drawing indicate the ramp edge and slope changes and are not necessarily joint lines.

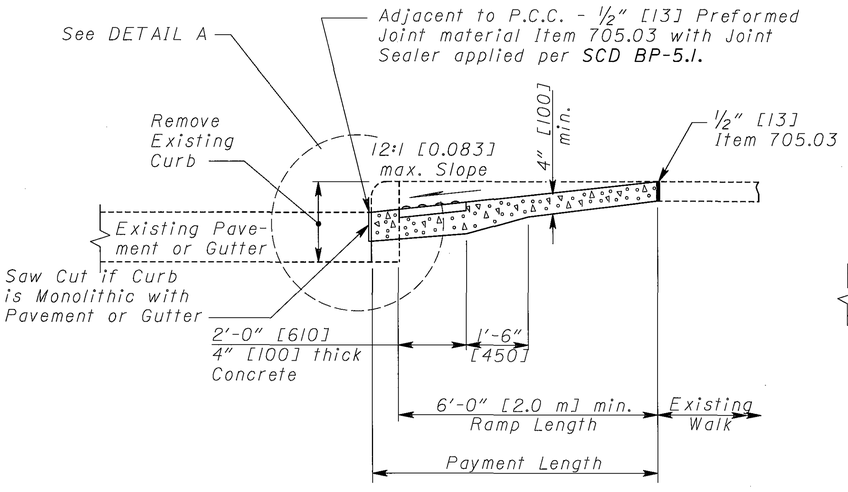
PAYMENT: Walk and curb, Items 608 and 609, shall be measured through the curb ramp area paid for under their respective Items. **Item 608 - Curb Ramp, As Per Plan, Each** constructed in new curb and walk shall include the cost of any additional materials and installation (including truncated domes), grading, forming and finishing. **Item 608 - Curb Ramp. As Per Plan, Square Foot [Meter],** constructed in existing curb and walk shall include the cost of furnishing and installing all materials (including truncated domes), grading, forming, and finishing of the curb and walk of the curb ramp. Removal of existing curb and walk shall be paid for under Item 202.



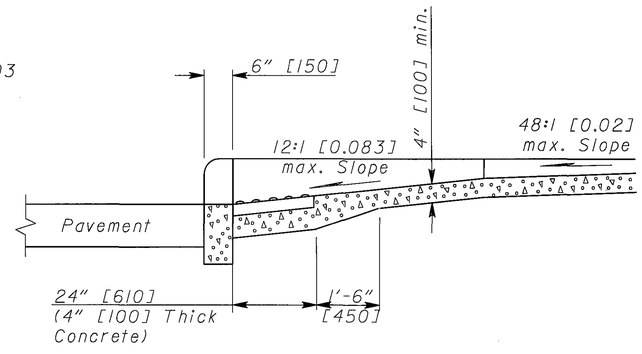
SECTION A-A
NORMAL DETAIL
See Sheet 1 of 3.
(Gutter shown)



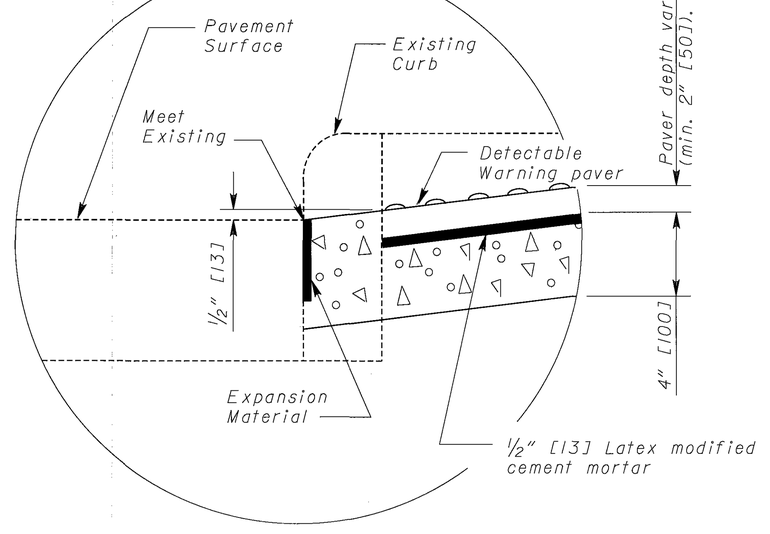
SECTION B-B
See Sheet 1 of 3.



SECTION A-A
EXISTING WALK DETAIL
See Sheet 1 of 3.



SECTION C-C
See Sheet 1 of 3.



DETAIL A

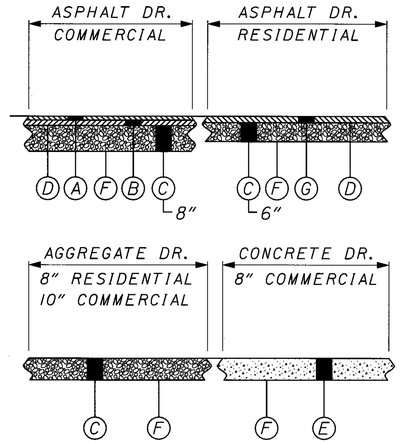
088CRTD.DGN 12/29/04 TM,HN,RC 3

CURB RAMPS WITH TRUNCATED DOMES

RIC-C.R. 424-0.62

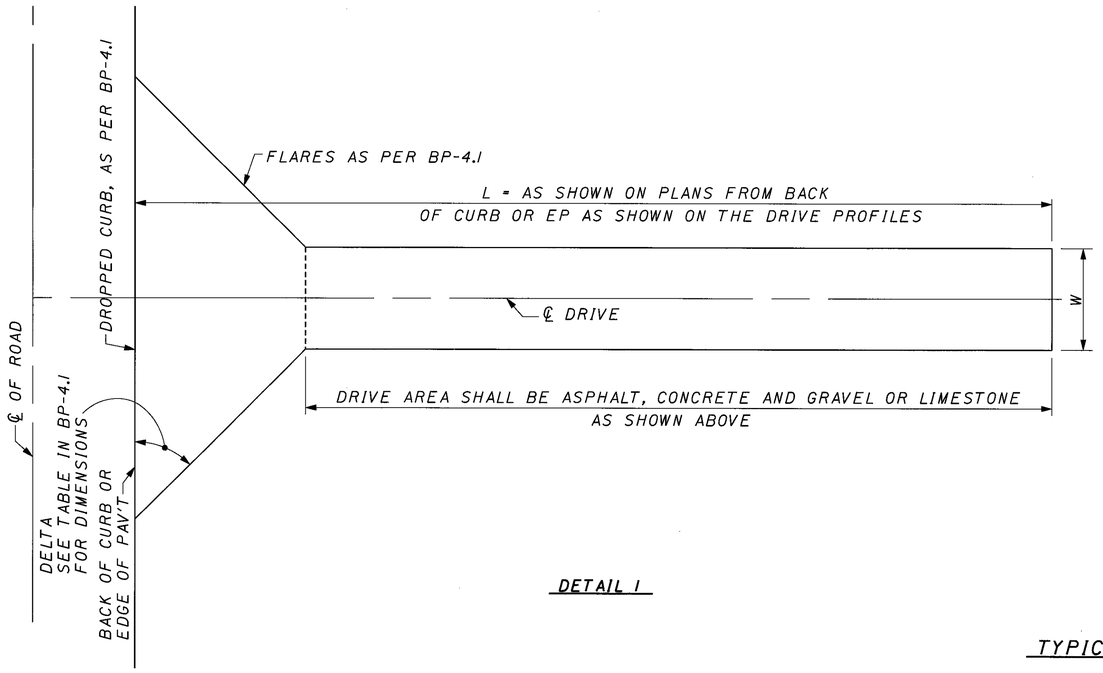
STATION	SIDE	PROPOSED LENGTH	PROPOSED WIDTH	TREELAWN	SIDEWALK WIDTH	DETAIL	EXISTING TYPE	202	203		204	304			408	448		452	608	659
								PAVEMENT REMOVED	EXCAVATION	EMBANKMENT	SUBGRADE COMPACTION	AGGREGATE BASE			PRIME COAT	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22 (DRIVEWAYS)	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22 (DRIVEWAYS)	8" NON-REINFORCED CONCRETE PAVEMENT	4" CONCRETE WALK DEDUCTION	SEEDING & MULCHING
												6"	8"	10"						
		FT.	FT.	FT.	FT.			SQ. YD.	CU. YD.	CU. YD.	SQ. YD.	CU. YD.	CU. YD.	CU. YD.	GAL.	CU. YD.	CU. YD.	SQ. YD.	SQ. FT.	SQ. YD.
117+96.5	R	72	12			1	GRAVEL			7.11	103	3.65	18.07				1.22			
118+72.8	R	80	12			1	GRAVEL		14.75		115	3.65	20.74				1.22			
116+53.50	L	50	36						97.49		319.07		70.91		127.62	15.51	13.29			
MAINT. DR. 1		250	12				LIMESTONE				333.33			59.0						
MAINT. DR. 2		380.81	12				LIMESTONE		113	227	576.75			160.21						775
129+42.00	R	50	21			1	ASPH		16.50	19.20	235.78		52.40		94.44	11.46	8.19			
133+50.00	L	213	24	4.5	5	2	GRAVEL				572.47		126.22		228.93		17.91	51.67	240	
134+50.00	L	58	16	4.5	5	2	LIMESTONE		20.74	50.67	192.11		33.60		60.50		4.56	56.00	275	
134+50.00	R	76.5	22			1	ASPH			92.67	263.44		58.54		105.11	12.81	9.15			
135+05.00	L	65	28	4.5	5	2	CONC.	291.11	9.12		291.11							291.11	315	
137+82.00	R	30	12			1	ASPH				65.89		14.64		26.35	3.20	2.29			
138+55.00	L	12	89			1	ASPH		36.26		105.44		23.43		42.18	5.13	3.66			
91+61.20	R	12	22.5			1	LIMESTONE		16.70		75.56		16.79		30.75	3.67	2.62			
92+16.00	L	38	14			1	GRAVEL				134.44		14.05	19.78	25.30	3.07	2.20			
93+05.00	R	32	110			1	GRAVEL		59.75	65.00	358		79.56		143.24	17.40	12.43			
95+50.00	R	61.5	24			1	LIMESTONE			50.11	195.33		43.41		78.10	9.50	6.78			
TOTALS								291.11	384.31	511.76	3936.72	7.30	572.36	219.21	962.52	81.75	85.52	398.78	830	775.00
TOTALS CARRIED TO GENERAL SUMMARY								292	385	512	3937		799		963	82	86	399	830 *	775

*THIS QUANTITY CARRIED TO SHEET 42.

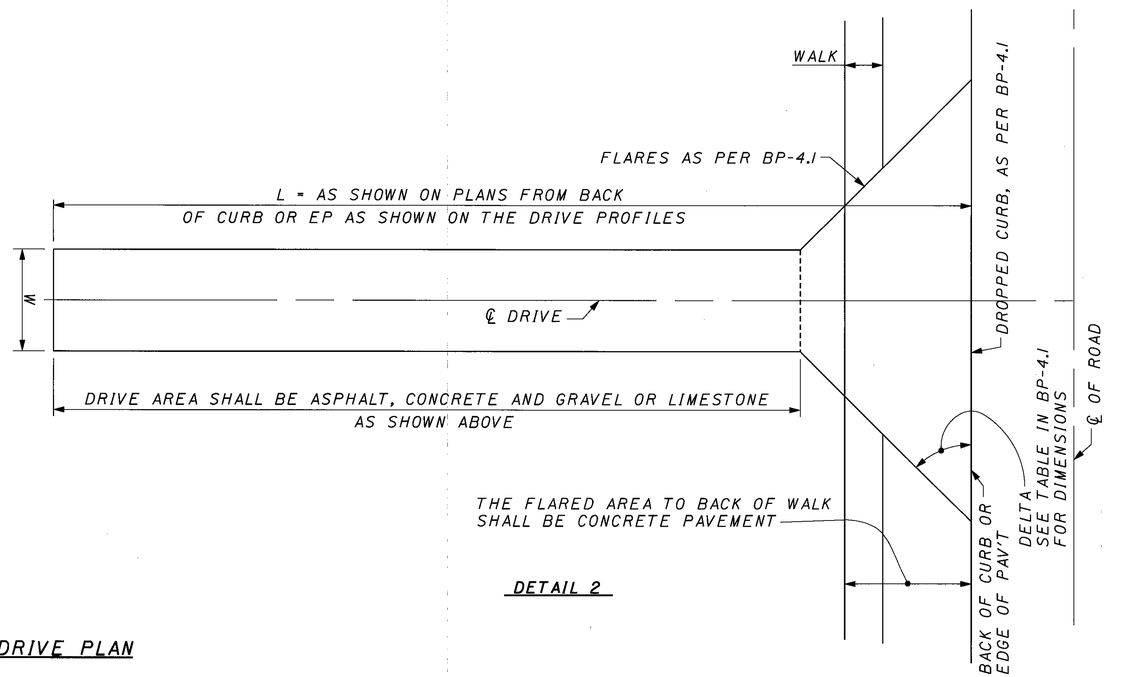


LEGEND

- (A) 448 - 1 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22 (DRIVEWAYS)
- (B) 448 - 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22 (DRIVEWAYS)
- (C) 304 - AGGREGATE BASE
- (D) 408 - PRIME COAT @ 0.40 GAL./SY
- (E) 452 - 8" NON-REINFORCED CONCRETE PAVEMENT
- (F) 204 - SUBGRADE COMPACTION
- (G) 448 - 2" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22 (DRIVEWAYS)



DETAIL 1



DETAIL 2

TYPICAL DRIVE PLAN

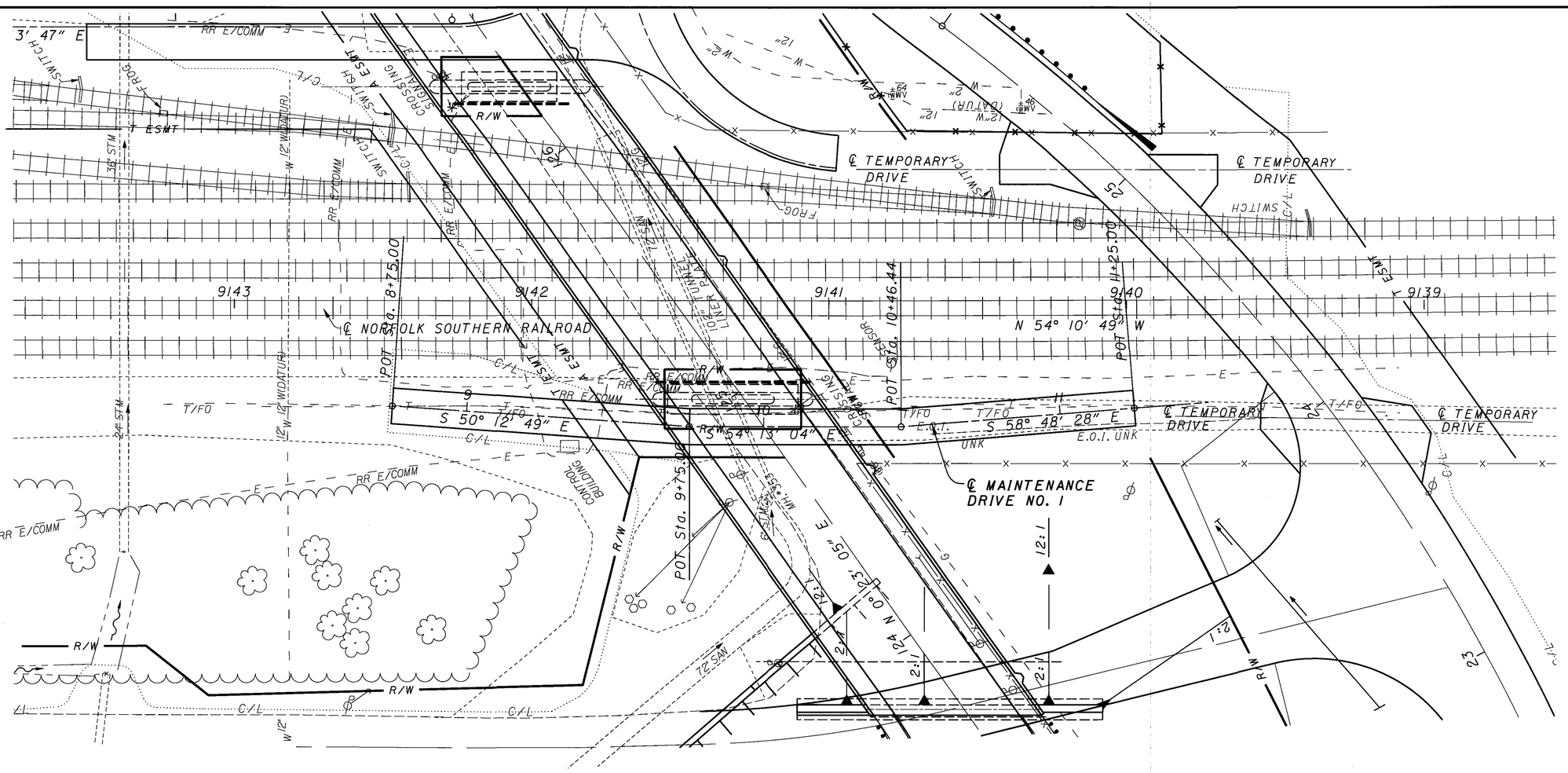
CALCULATED TM CHECKED EEL

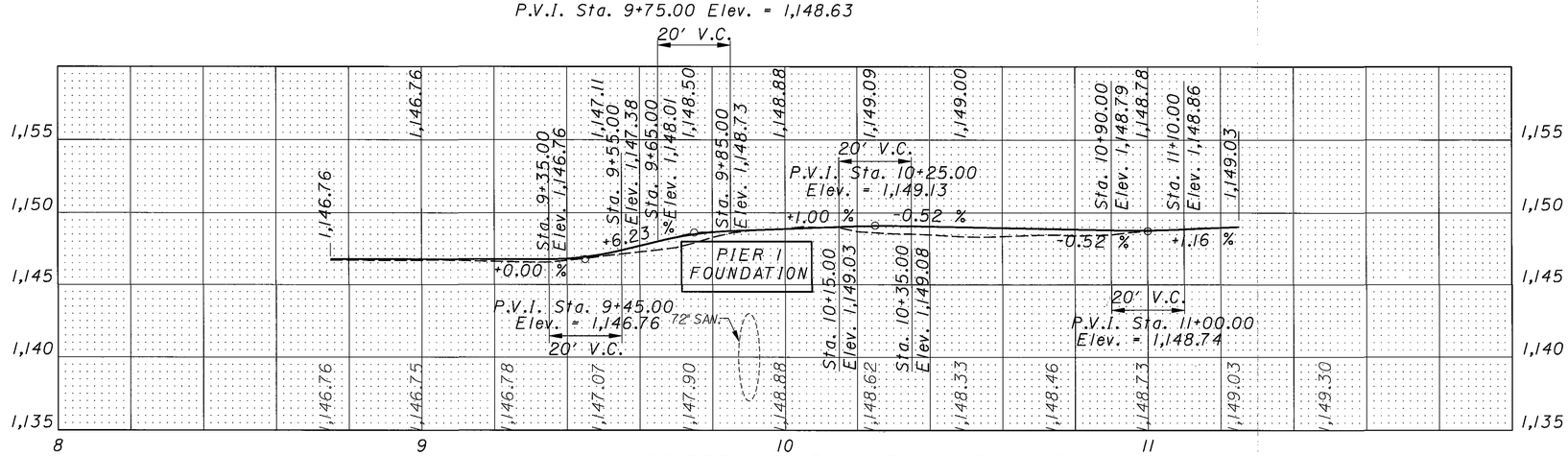
DRIVE DETAILS & SUBSUMMARY

DRIVE

RIC-CR424-0.62

102088/088GAD.DGN 12/28/05 HN,RC,CEO,BH,MLB





PROFILE ALONG CENTERLINE OF MAINTENANCE DRIVE NO. 1

HORIZONTAL SCALE IN FEET

CALCULATED EEL
CHECKED TM

MAINTENANCE DRIVE NO. 1
PLAN & PROFILE

RIC-C.R. 424-0.62

82
153

102088/DGN/088DRL.DGN 12/28/05 EEL,HN,RC,MLB

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
		0	11		
				0	7
		0	3		
				0	6
		0	3		
				0	3
		0	0		
SHEET TOTAL				0	16

1150 / 1140 — 1148.50 9+75.00 1147.90

1150 / 1140 — 3:1 — 1147.11 9+50.00 1147.07

1150 / 1140 — 1146.76 9+00.00 1146.75

BEGIN PROPOSED DRIVE STA. 8+75.00 — AH 0 3 — BK 0 0

1150 / 1140 — 8+50.00 1146.59

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
				0	59
		0	0		
		0	1		
				0	1
		0	1		
				0	19
		0	18		
				0	18
		0	0		
				0	5
STA. 9+75.00		0	11		
SHEET TOTAL				0	43

VOLUME OF ITEM 304 CARRIED TO DRIVE TABLE SHEET NO. 81

END PROPOSED DRIVE STA. 11+25.00 — AH — BK

1150 / 1140 — 1148.78 11+00.00 1148.78

1150 / 1140 — 1149.00 10+50.00 1148.33

1150 / 1140 — 1148.88 10+00.00 1148.88

60 40 20 ℄ 20 40 60

40 20 ℄ 20 40 60

088DRIVESHT.DGN 12/27/05 SAM,RC,TM

CALCULATED JDL

CHECKED TM

MAINTENANCE DRIVE NO. 1
CROSS SECTIONS

RIC-C.R. 424-0.62

MAINTENANCE DRIVE CURVE DATA

P.I. Sta = 3+05.08
D = 119° 47' 39" (LT)
Dc = 88° 08' 50"
R = 65.00'
T = 112.12'
L = 135.90'
E = 64.60'

MAINTENANCE DRIVE EXTENSION CURVE DATA

P.I. Sta = 0+92.09
D = 101° 40' 48" (LT)
Dc = 76° 23' 40"
R = 75.00'
T = 92.09'
L = 133.10'
E = 43.77'

WETLAND

STA. 1+90.53, 64.95' LT.
℄ MAINTENANCE DRIVE NO.2

STA. 2+74.75
℄ MAINTENANCE DRIVE = NO. 2
STA. 0+00.00
℄ MAINTENANCE DRIVE EXTENSION

STA. 0+66.55, 75.0' LT.
℄ MAINTENANCE DRIVE EXTENSION

℄ MAINTENANCE DRIVE NO. 2

S 54° 13' 47" E

STA. 2+14.44, 64.62' RT.
℄ MAINTENANCE DRIVE NO. 2

℄ TEMPORARY DRIVE

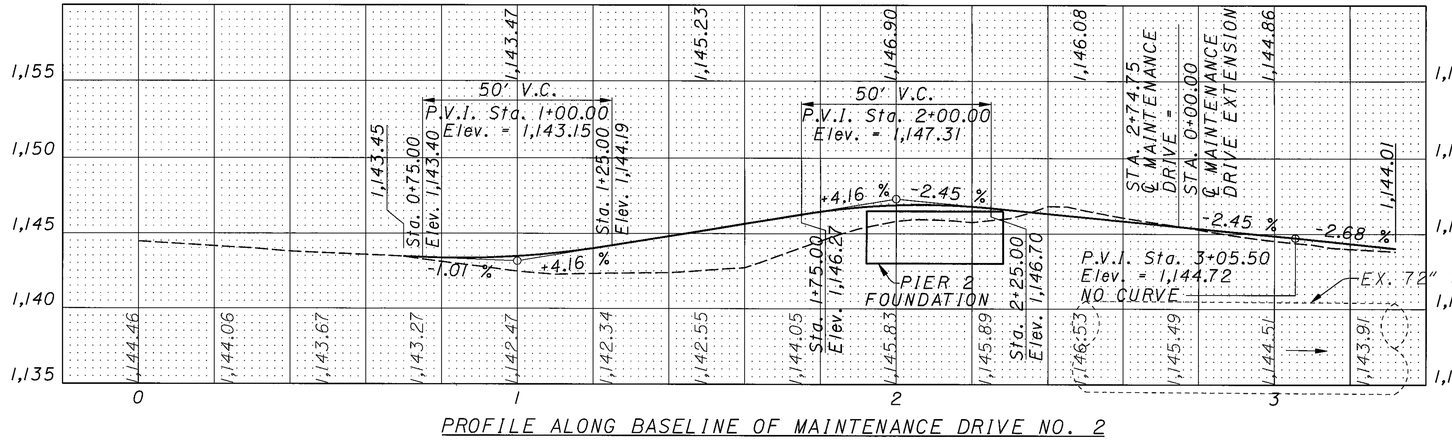
℄ TEMPORARY DRIVE

PC Sta. 1+90.53
PT Sta. 2+25.43
PC Sta. 3+28.86
PT Sta. 27+91.15
PRC Sta. 25+80.33
PT Sta. 1+33.10

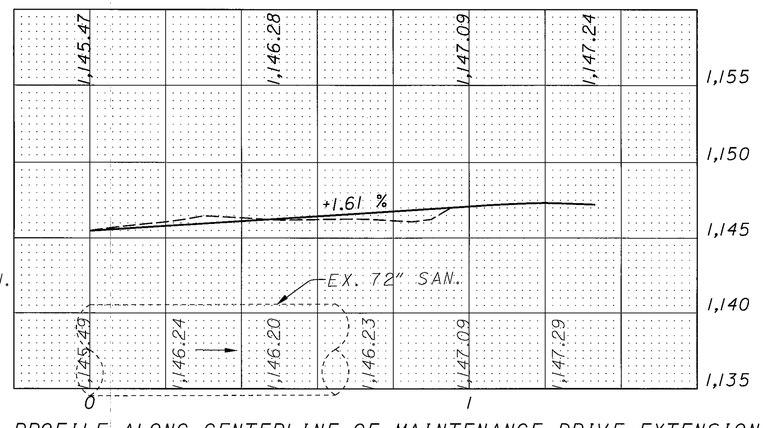
64' R.
45' R.
75' R.

TEMP. FENCE

RR E/COMM
SWITCH
FROG
CROSSING
12" WATER
36" STM
DATUM



PROFILE ALONG BASELINE OF MAINTENANCE DRIVE NO. 2



PROFILE ALONG CENTERLINE OF MAINTENANCE DRIVE EXTENSION

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED EEL
CHECKED TM

MAINTENANCE DRIVE NO. 2 PLAN & PROFILE

RIC-CR424-0.62

84
153

102088/DGN/088DR2.DGN 2/14/05 EEL,HN,RC,CEO

SEEDING END WIDTH	SEEDING SQ. YDS.	STATION	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		1150 / 1140				
31		M/L; 2:1; 3:1; 1142.0; 1145.23 1+50.00 1142.53	0	60		
	142				4	63
		1150 / 1140				
20		M/L; 2:1; 3:1; 1143.47 1+00.00 1142.40; STA 0+80.00 JUNCTION CHAMBER, AS PER PLAN	4	7		
	56				5	8
		0+68 AHD.	4	7		
		0+68 BACK	0	0		
		1150 / 1140				
0		48" x 76" CONDUIT; 0+50.00 1143.60	0	0		
		1150 / 1140				
		0+00.00 1144.36				
	198	SHEET TOTAL			9	71

SEEDING END WIDTH	SEEDING SQ. YDS.	STATION	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	775	STA. 3+23.95 AHD. = STA. 127+00 AHD. ℄ CONST. S. ILLINOIS				
		EARTHWORK AND SEEDING CARRIED TO DRIVE TABLE SHEET NO. 81				
		3+23.95 BK.	7	28		
25		3+23.95 BK.				
		M/L SEE SOUTH ILLINOIS CROSS SECTIONS				
	84	1150 / 1140				
		1144.86 3+00.00 1144.51	3	51		
38						
	156					
		1150 / 1140				
18		M/L; 2:1; 4:1; 1144.2; 1146.08 2+50.00 1146.51	45	1		
	150					
		1150 / 1140				
36		M/L; 2:1; 4:1; 1143.8; 1146.90 2+00.00 1145.79	6	8		
	187					
31		STA. 1+50.00	0	60		
	577	SHEET TOTAL			104	156

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		113	227
		5	35
		45	49
		48	9
		6	63

CALCULATED JDL
CHECKED TM

MAINTENANCE DRIVE NO. 2
DRIVE CROSS SECTIONS

RIC-C.R. 424-0.62

85
153

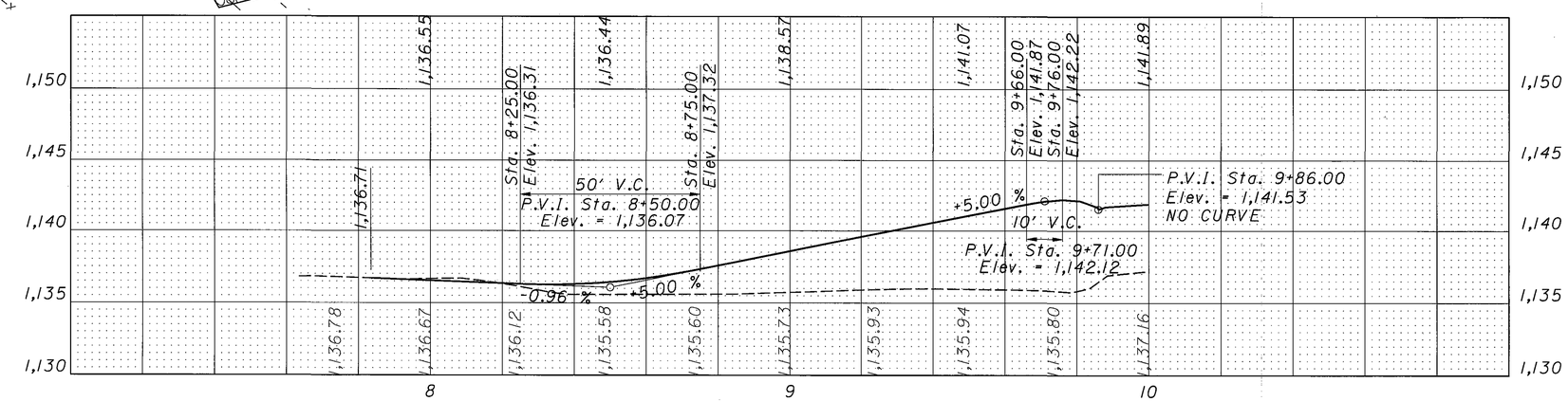
088DRIVESHT.DGN 12/29/04 SAM,RC

40 20 ℄ 20 40 60 — STA. 1+50.00 — 40 20 ℄ 20 40 60

℄ DRIVE CURVE DATA
P.I. Sta = 8+17.25
Δ = 88° 38′ 03″ (LT)
Dc = 163° 54′ 44″
R = 34.96′
T = 34.13′
L = 54.07′
E = 13.90′

℄ DRIVE CURVE DATA
P.I. Sta = 9+42.73
Δ = 83° 09′ 26″ (RT)
Dc = 190° 59′ 09″
R = 30.00′
T = 26.62′
L = 43.54′
E = 13.90′

S 83°53′04″ E
P.C. Sta. 7+83.11
STA. 132+47.7, 116.0′ LT.
STA. 132+48.6, 114.0′ LT.
STA. 132+49.5, 111.9′ LT.
PT Sta. 8+37.79
GRAVEL DRIVE
+50.00 ℄ ASPHALT DR. N 8°40′30″ E W=24′; L=213′
STA. 133+20.0, 40′ LT.
STA. 133+17.0, 37.5′ LT.
STA. 133+12.8, 37.0′ LT.
STA. 133+12.8, 34.0′ LT.
PT Sta. 9+59.65
PC Sta. 9+16.11
43′ R.
30′ R.
25′ R.
S 88°10′01″ E
+50.00 ℄ ASPHALT DR. W=16′; L=58′
STA. 134+08.8, 61.6′ LT.
STA. 133+92.0, 61.6′ LT.
+05.00 ℄ CONCRETE DR. W=28′; L=65′
8″ STM
EX. R/W
℄ R/W S. ILLINOIS AVE.
℄ R/W C.R. 424 (S. ILLINOIS AVE.)
N 0° 09′ 31″ E
N 1° 49′ 59″ E
CONSTRUCTION C.R. 424 (S. ILLINOIS AVE.)
℄ CONST. C.R. 424 (S. ILLINOIS AVE.)
10′-6″ UPUD @ 30%
50′ R.
35′ R.
39′ R.
STA. 133+99.0, 46.9′ RT.
STA. 134+04.0, 47.0′ RT.
STA. 134+09.6, 57.9′ RT.
STA. 135+09.8, 62.5′ RT.
+80.54 RC Sta. 134+80.54
210′ - 7′ x 3′ TYPE A @ 0.42%
S ESMT
℄ TEMPORARY ROAD
TEMPORARY ROAD TO BE REMOVED
31
32
33
34
35



PROFILE ALONG CENTERLINE OF DRIVE STA. 133+50 LT.

N
HORIZONTAL SCALE IN FEET
0 10 20 40
CALCULATED EEL
CHECKED TM

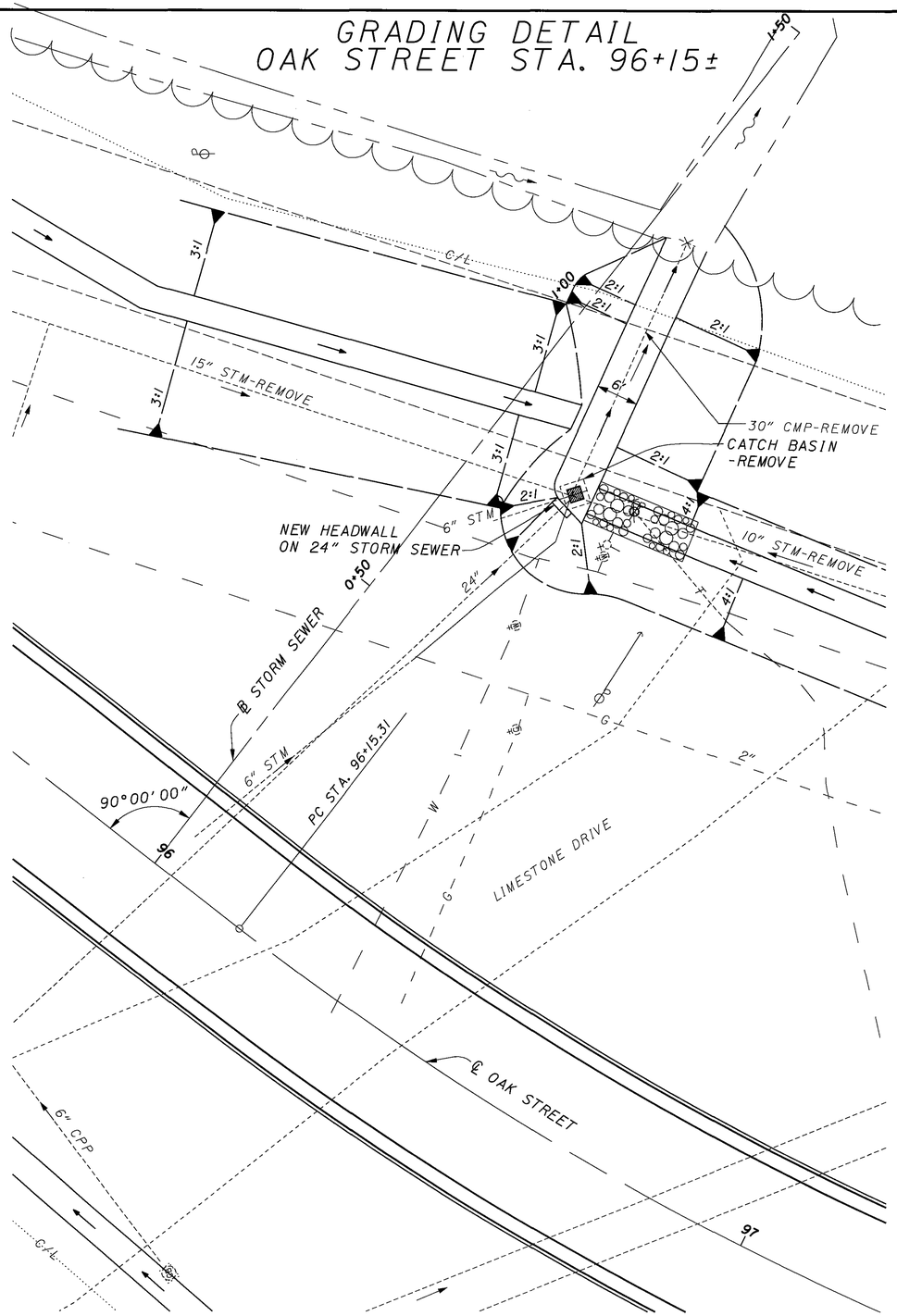
S. ILLINOIS AVENUE
DRIVEWAY DETAILS

RIC-CR424-0.62

86
153

I02088/DGN/088DR3.DGN 2/14/05 EEL,RC

GRADING DETAIL
OAK STREET STA. 96+15±



SEEDING END WIDTH	SEEDING SQ. YDS.		END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	284	TOTALS CARRIED TO GENERAL SUMMARY			177	0
0		AHD.	0	0		
43		BK.	0	0		
	33	STA. 1+22.00			4	0
43		1140	30	0		
		1130				
		1137.14				
		1+15				
		1137.14				
	98				57	0
		1150				
		1140	124	0		
45		1130				
		1140.68				
		0+95				
		1143.10				
	102				93	0
		1150				
		1140				
47		AHD.	137	0		
46		BK.	125	0		
		1130				
		1139.85				
		0+75				
		1142.30				
	51				23	0
		1150				
		1140				
45		AHD.	0			
0		BK.	0			
		1130				
		1140.74				
		0+65				
		1142.74				
		SHEET TOTAL				
		SHEET TOTAL				

SEE OAK STREET CROSS SECTIONS

EX. 1136.65 — 2:1 NORMAL

EX. 30" (REMOVE) — 2:1 NORMAL — 1136.87 — 2:1 NORMAL

1137.07

NO. 2.1 OR 2.2 HEADWALL ON 24" STORM SEWER

EX. 24" (TO REMAIN)

40 20 ℄ 20 40

HORIZONTAL SCALE IN FEET

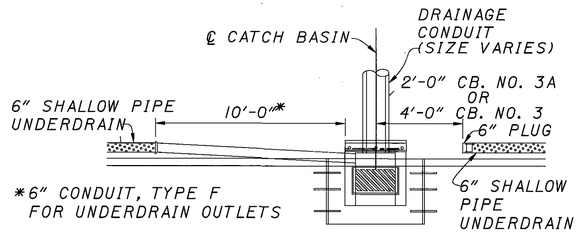
CALCULATED EEL CHECKED JL

DRAINAGE DETAILS

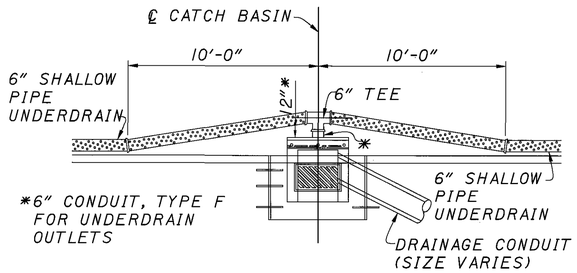
RIC-C.R. 424-0.62

87 / 153

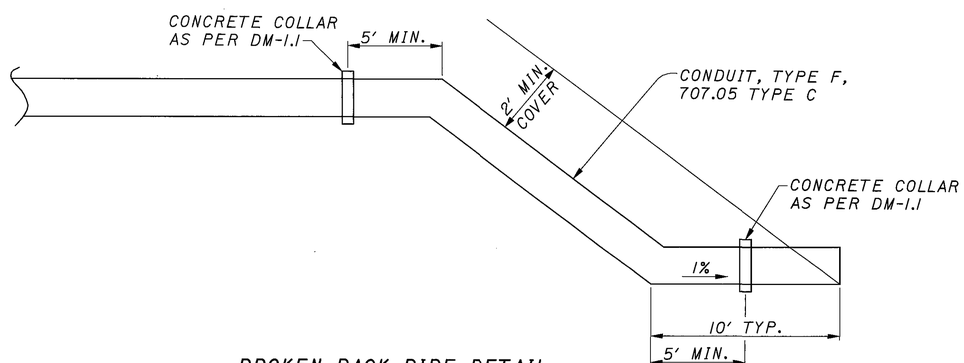
102088/DGN/088DD-1.DGN 12/29/04 KH,HN,RC



OUTLETTING UNDERDRAIN INTO CATCH BASIN NO.3/3A
(WITH STORM PIPE OUTLETTING INTO SIDE/SIDES OF STRUCTURE)



OUTLETTING UNDERDRAIN INTO CATCH BASIN NO.3/3A
(WITH STORM PIPE OUTLETTING INTO SIDE/SIDES OF STRUCTURE)



BROKEN BACK PIPE DETAIL

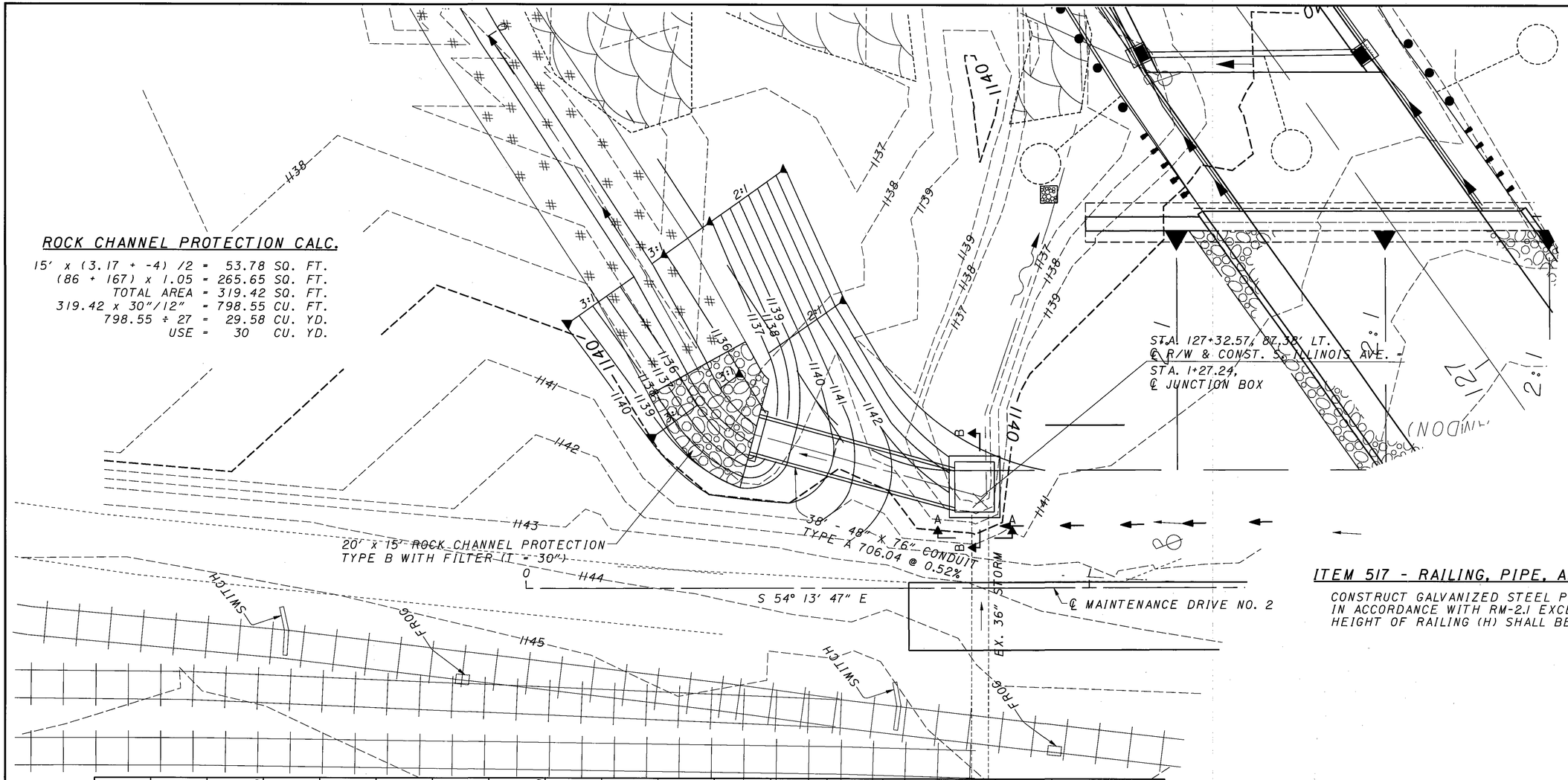
CALCULATED EEL
CHECKED JL

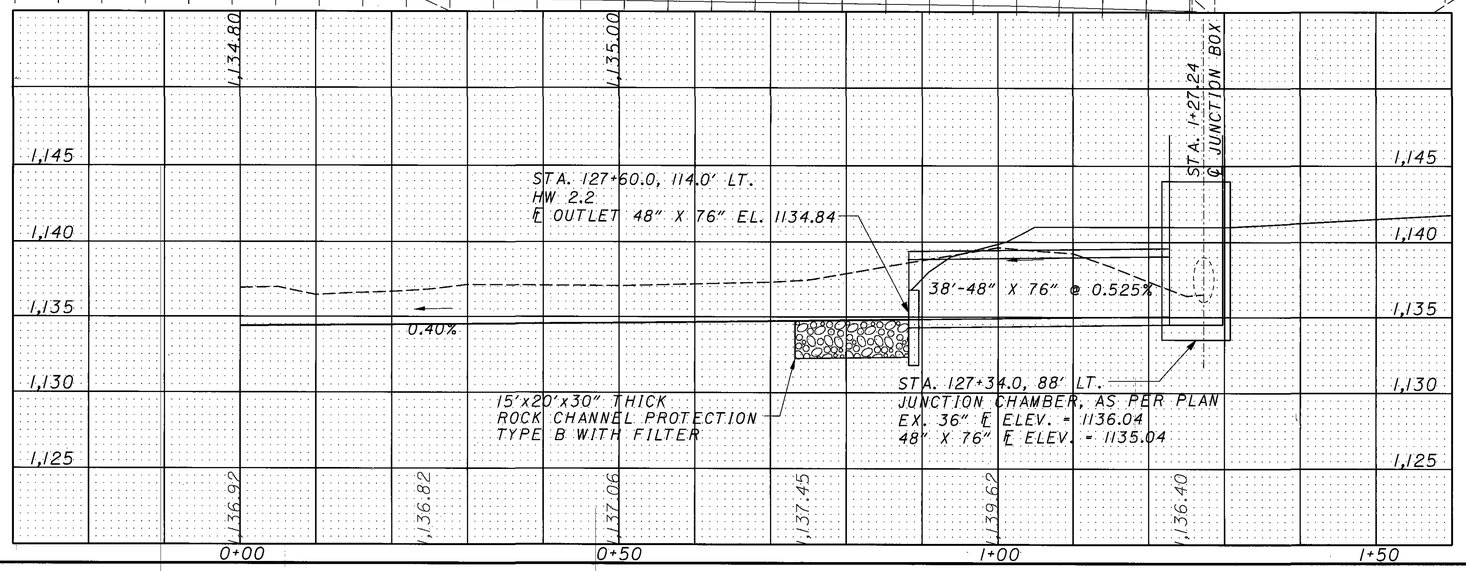
DRAINAGE DETAILS

RIC-C.R. 424-0.62

ROCK CHANNEL PROTECTION CALC.

15' x (3.17 + -4) /2 = 53.78 SQ. FT.
(86 + 167) x 1.05 = 265.65 SQ. FT.
TOTAL AREA = 319.42 SQ. FT.
319.42 x 30"/12" = 798.55 CU. FT.
798.55 ÷ 27 = 29.58 CU. YD.
USE = 30 CU. YD.





ITEM 517 - RAILING, PIPE, AS PER PLAN

CONSTRUCT GALVANIZED STEEL PIPE RAILING IN ACCORDANCE WITH RM-2.1 EXCEPT THAT HEIGHT OF RAILING (H) SHALL BE 42" MIN.

ESTIMATED QUANTITIES

ITEM	QUANTITY	UNIT	DESCRIPTION
517	37	FT.	RAILING, PIPE, AS PER PLAN
601	30	CU. YD.	ROCK CHANNEL PROTECTION, TYPE B WITH FILTER
602	1.34	CU. YD.	CONCRETE MASONRY
603	38	FT.	48" x 76" CONDUIT, TYPE A, 706.04, HE-1
604	1	EACH	JUNCTION CHAMBER, AS PER PLAN

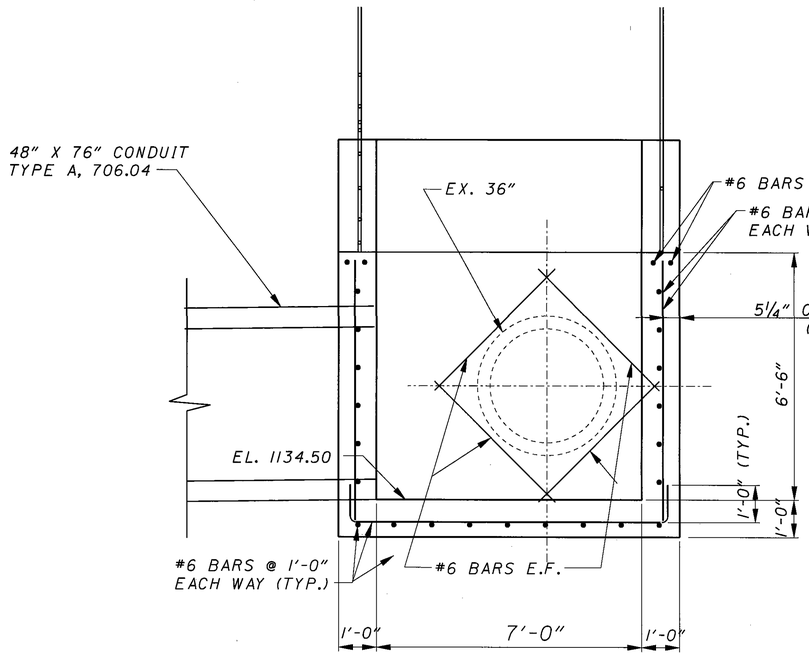
JUNCTION CHAMBER DETAIL SEE SHEET 90 .

HORIZONTAL SCALE IN FEET
0 5 10 20
CALCULATED BLN
CHECKED TM

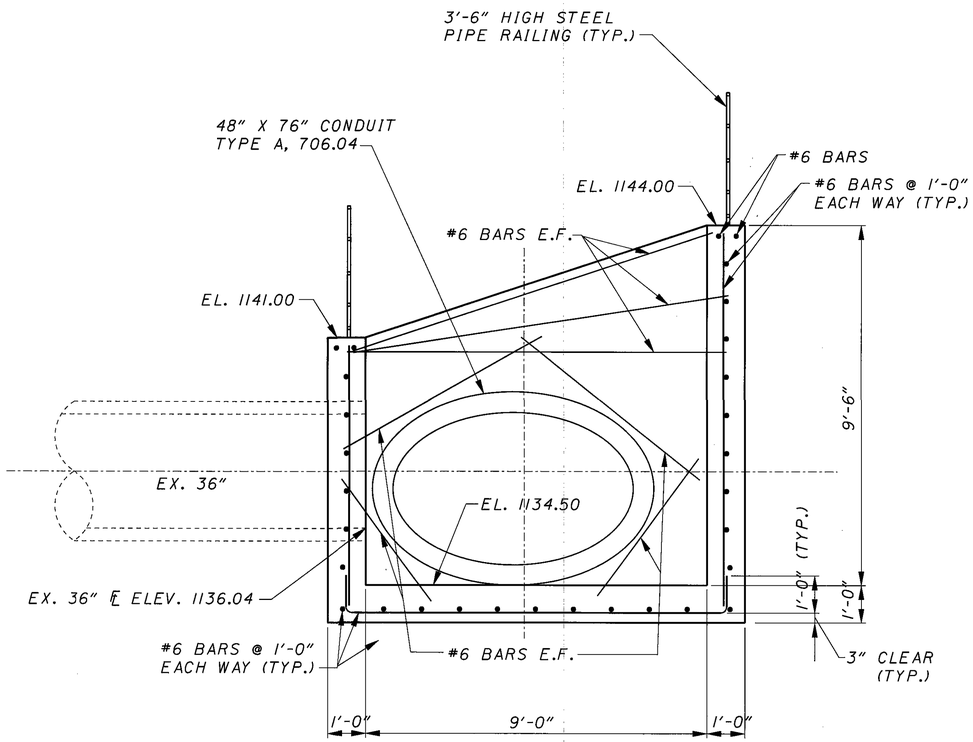
JUNCTION CHAMBER DETAIL

RIC-C.R.424-0.62

DRAINBOX1.DGN 12/29/04 SAM,HN,TWH,HN,RC



VIEW A-A



VIEW B-B

NOTATION

E.F. - EACH FACE

JUNCTION CHAMBER DETAIL

NOTES

ITEM 604 - JUNCTION CHAMBER, AS PER PLAN

REFER TO CB-1.3 FOR ADDITIONAL SPECIFICATIONS AND NOTES EXCEPT THAT PRECAST WALLS SHALL HAVE MINIMUM THICKNESS OF 8".

REINFORCED STEEL INCLUDED FOR PAYMENT.

REINFORCING LAP LENGTHS:
#6 BARS @ 2'-5".

HORIZONTAL SCALE IN FEET
0 2 4

CALCULATED TM
CHECKED EEL

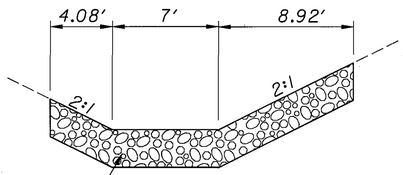
JUNCTION CHAMBER DETAIL

RIC-C.R.424-0.62

DRAINBOX2.DGN 12/29/04 SAM,CEO,TWH,RC

ESTIMATED QUANTITIES			
ITEM	QUANTITY	UNIT	DESCRIPTION
601	20	CU. YD.	ROCK CHANNEL PROTECTION, TYPE B, WITH FILTER
602	6.0	CU. YD.	CONCRETE MASONRY, AS PER PLAN*
603	210	FT.	CONDUIT, MISC.: 7' x 3' CONDUIT TYPE A, 706.05

SHEET NO.	REFERENCE
27	TEMPORARY ROAD PLAN AND PROFILE
51	S. ILLINOIS AVE PLAN AND PROFILE



ROCK CHANNEL PROTECTION, TYPE C, WITH FILTER, 18" THICK

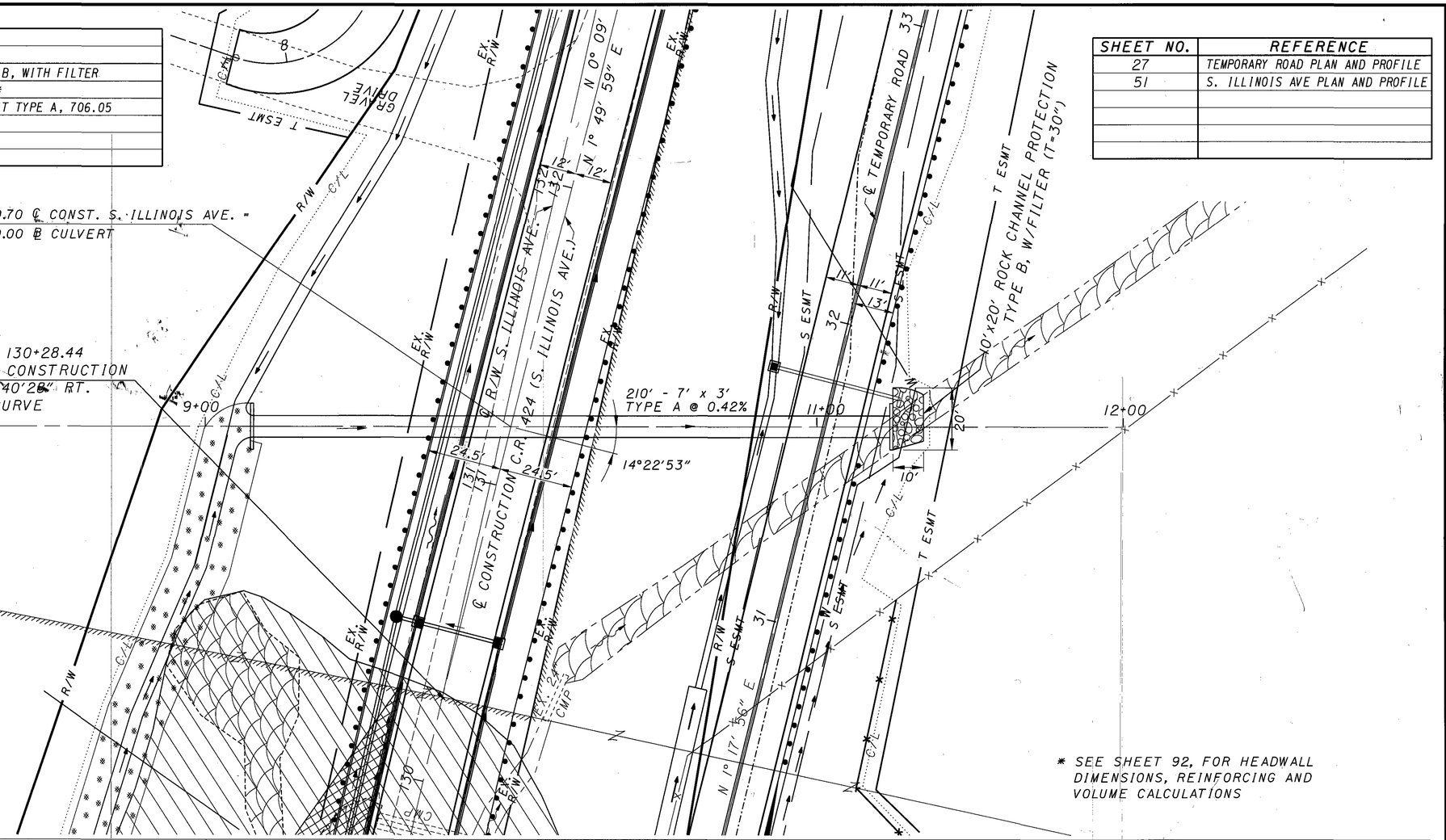
ROCK CHANNEL PROTECTION CALCULATION

7' x 10' = 70.00 SQ. FT.
4.08' x 10' x 1.12 = 45.70 SQ. FT.
8.92' x 10' x 1.12 = 99.90 SQ. FT.
= 215.60 SQ. FT.

215.60 x 2.5'/27 = 19.96 CU. YD.
USE 20 CU. YD.

STA. 131+19.70 ℄ CONST. S. ILLINOIS AVE. = STA. 10+00.00 ℄ CULVERT

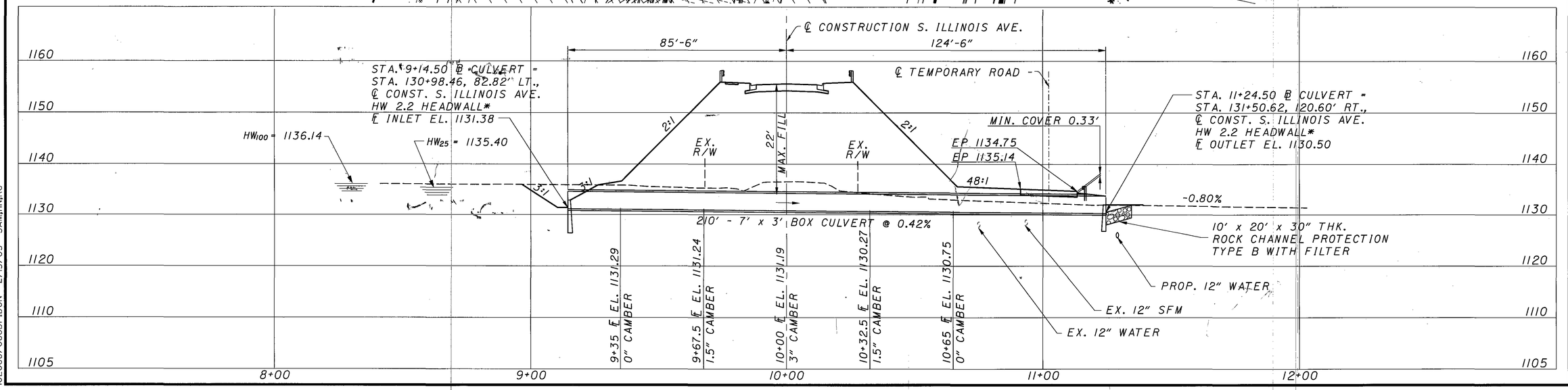
STA. 130+28.44 PI ℄ CONSTRUCTION
Δ = 1°40'26" RT.
NO CURVE



* SEE SHEET 92, FOR HEADWALL DIMENSIONS, REINFORCING AND VOLUME CALCULATIONS

EXISTING HYDRAULIC DATA	
DRAINAGE AREA = 83 ACRES	
Q_{25} = 97 cfs	EX.V_{50} = N/A fps
Q_{100} = 117 cfs	PROP.V_{25} = 6.60 fps
HW_{25} = 1135.40	EX.V_{100} = N/A fps
HW_{100} = 1136.14	PROP.V_{100} = 7.96 fps

HS25 AND ALTERNATE MILITARY LOADING



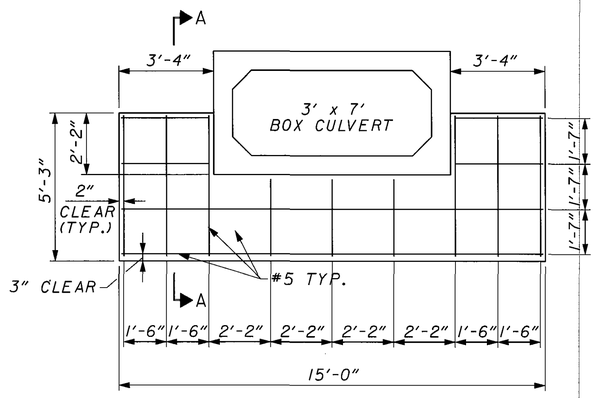
CULVERT DETAIL
STA. 131+19.70

RIC-C.R. 424-0.62

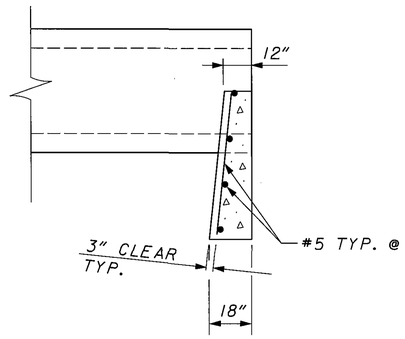
CALCULATED TM
CHECKED EEL

HORIZONTAL SCALE IN FEET
0 10 20 40

102088/088DP.DGN 2/15/05 SAM,HN,RC



HEADWALL DETAIL



SECTION A-A

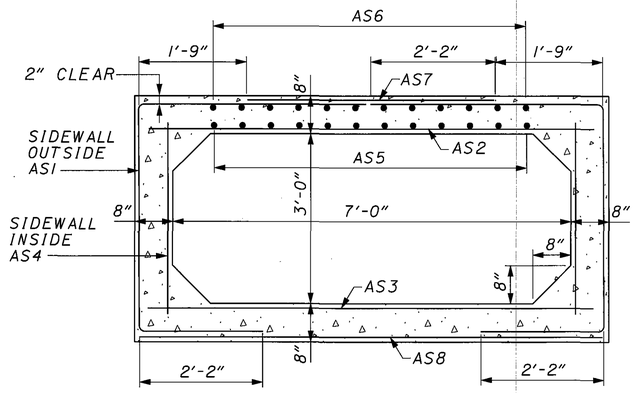
HW 2.2 HEADWALL FOR 7' x 3' CONCRETE BOX

VOLUME CALCULATIONS: 15' x 3.08' x (14.48+18.00)/12/2 = 62.52 CU. FT.
2 x (2.17' x 3.33' x (12.00+14.48)/12/2) = 15.95 CU. FT.
TOTAL 78.47 CU. FT.
= 2.91 CU. CY.
2 HEADWALLS = 5.82 CU. YD.
USE 6.00 CU. YD.

ITEM 602 CONCRETE MASONRY, AS PER PLAN

SHALL CONSIST OF CONSTRUCTING AN HW-2.2 HEADWALL TO THE ABOVE DIMENSIONS, INCLUDING FURNISHING AND PLACING ALL SPECIFIED REINFORCEMENT. ALL REINFORCING BARS SHALL BE EPOXY COATED.

PAYMENT SHALL BE MADE UNDER THE CONTRACT PRICE BID FOR ITEM 602 CONCRETE MASONRY, AS PER PLAN, WHICH PRICE AND PAYMENT SHALL CONSTITUTE FULL COMPENSATION FOR CONSTRUCTING THE ABOVE HEADWALL, FURNISHING AND PLACING ALL REINFORCING AND ALL OTHER ITEMS INCLUDED FOR PAYMENT UNDER ITEM 602.



1" CLEAR COVER OVER REINFORCMENT
EXCEPT AS NOTED

CONDUIT, MISC.: 7' X 3' CONDUIT TYPE A, 706.05

AS1	.413 IN^2 /FT.
AS2	.517 IN^2 /FT.
AS3	.431 IN^2 /FT.
AS4	.194 IN^2 /FT.
AS5	.205 IN^2 /FT.
AS6	.192 IN^2 /FT.
AS7	.205 IN^2 /FT.
AS8	.192 IN^2 /FT.

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED TM
CHECKED EEL

CULVERT DETAIL
STA. 131+19.70

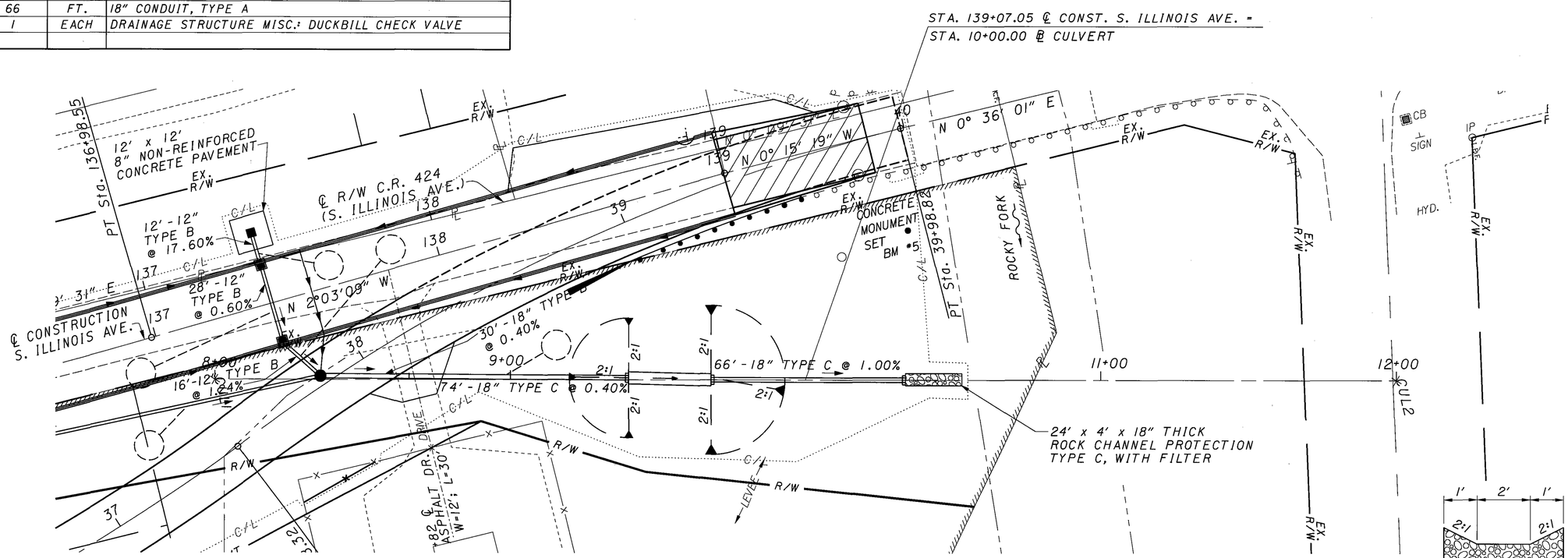
RIC-C.R. 424-0.62

92
153

I02068/088DP2.DGN 2/15/05 SAM,TWH,RC

ESTIMATED QUANTITIES			
ITEM	QUANTITY	UNIT	DESCRIPTION
601	6	CU. YD.	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER
602	0.66	CU. YD.	CONCRETE MASONRY
603	66	FT.	18" CONDUIT, TYPE A
604	1	EACH	DRAINAGE STRUCTURE MISC.: DUCKBILL CHECK VALVE

REFERENCE	SHEET NO.
TEMPORARY ROAD	29
S. ILLINOIS AVE.	53



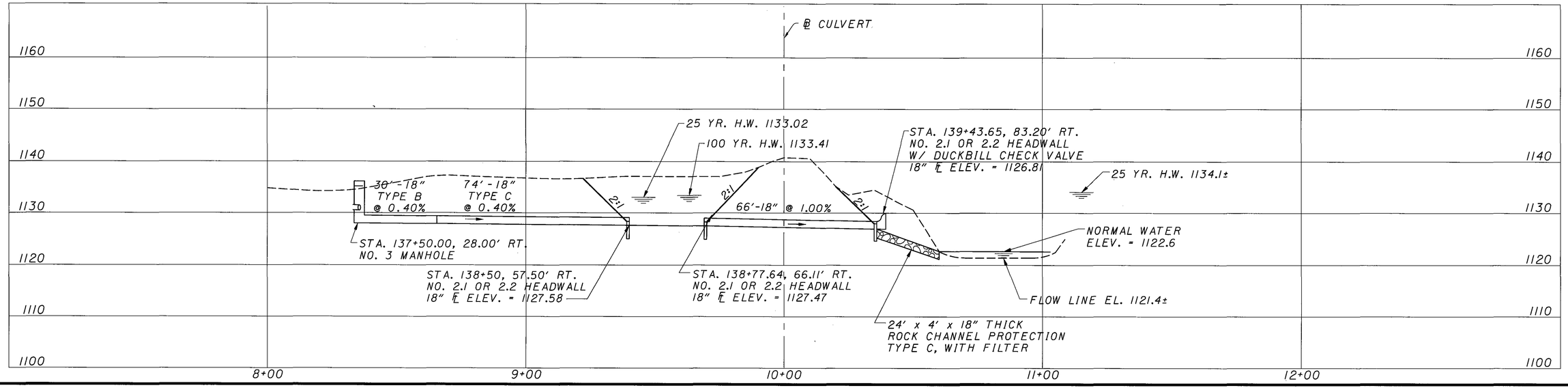
EXISTING HYDRAULIC DATA	
DRAINAGE AREA = 1.4 ACRES	
Q_{25} = 5.6 cfs	EX.V_{50} = N/A fps
Q_{100} = 7.0 cfs	PROP.V_{25} = 3.4 fps
HW_{25} = 1133.02	EX.V_{100} = N/A fps
HW_{100} = 1133.41	PROP.V_{100} = 4.0 fps

ITEM 604 - DRAINAGE STRUCTURE MISC.: DUCKBILL CHECK VALVE

RED VALVE NO. TF-1 OR TF-2, ELASTO VALVE SERIES CPO, OR APPROVED EQUAL ARE ACCEPTABLE. 8" OF CONDUIT SHALL EXTEND BEYOND THE FACE OF HEADWALL IN ORDER TO ATTACH THE CHECK VALVE IN ACCORDANCE WITH THE MANUFACTURERS INSTRUCTIONS. ALL COST FOR LABOR AND MATERIALS SHALL BE INCLUDED IN THE PRICE BID EACH FOR ITEM 604 - DRAINAGE STRUCTURE MISC.: DUCKBILL CHECK VALVE.

ROCK CHANNEL PROTECTION CALCULATION

24 x 2	= 48.0	SQ. FT.
2 x 1 x 1.12 x 24	= 53.8	SQ. FT.
	101.8	SQ. FT.
101.8 x 1.5 / 27	= 5.65	CU. YD.
	USE 6	CU. YD.



I02088/088DPB.DGN 1/17/05 CAR.CEO.RC

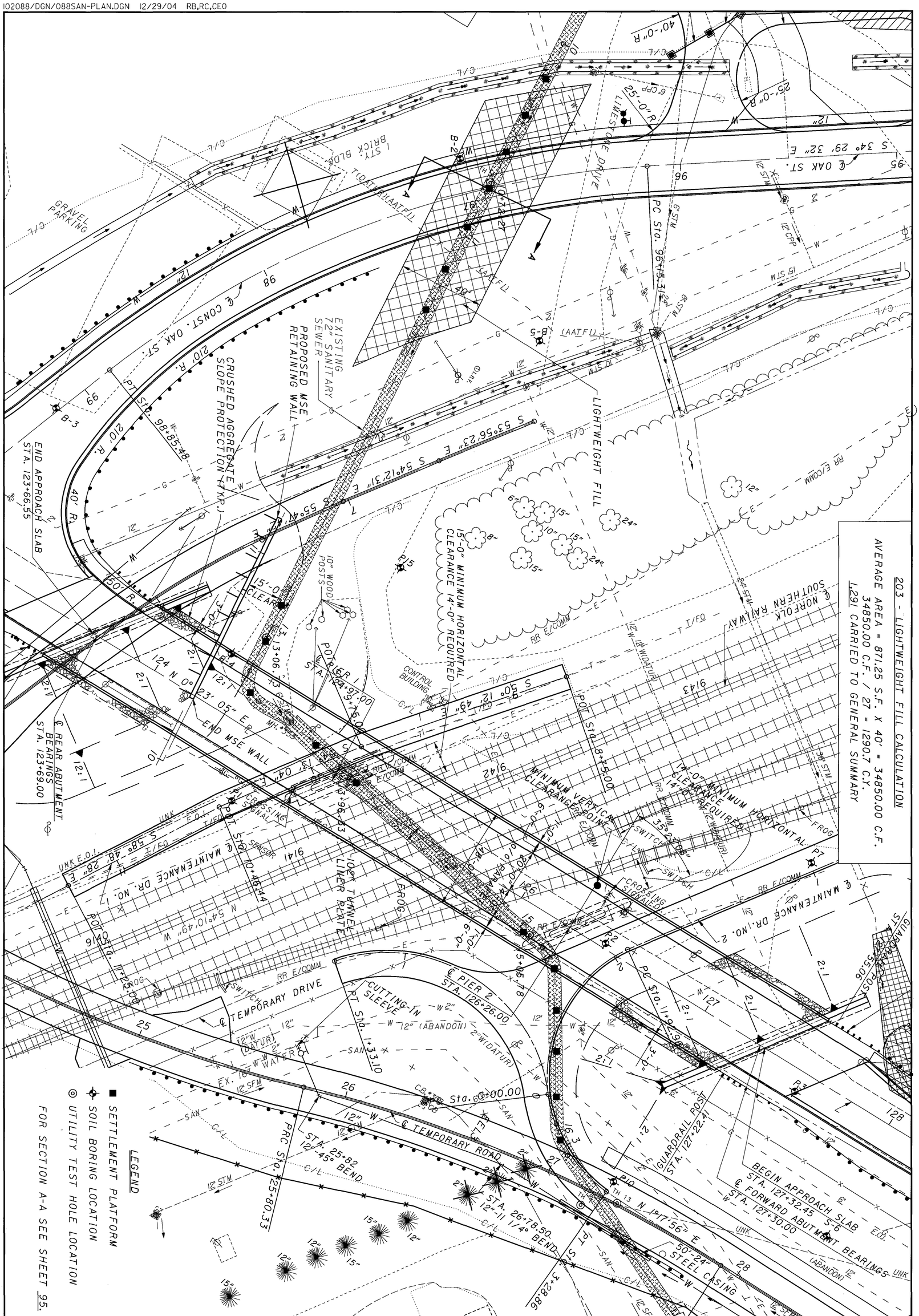
HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED TM
CHECKED EEL

CULVERT DETAIL STA. 139+07.05

RIC-C.R. 424-0.62

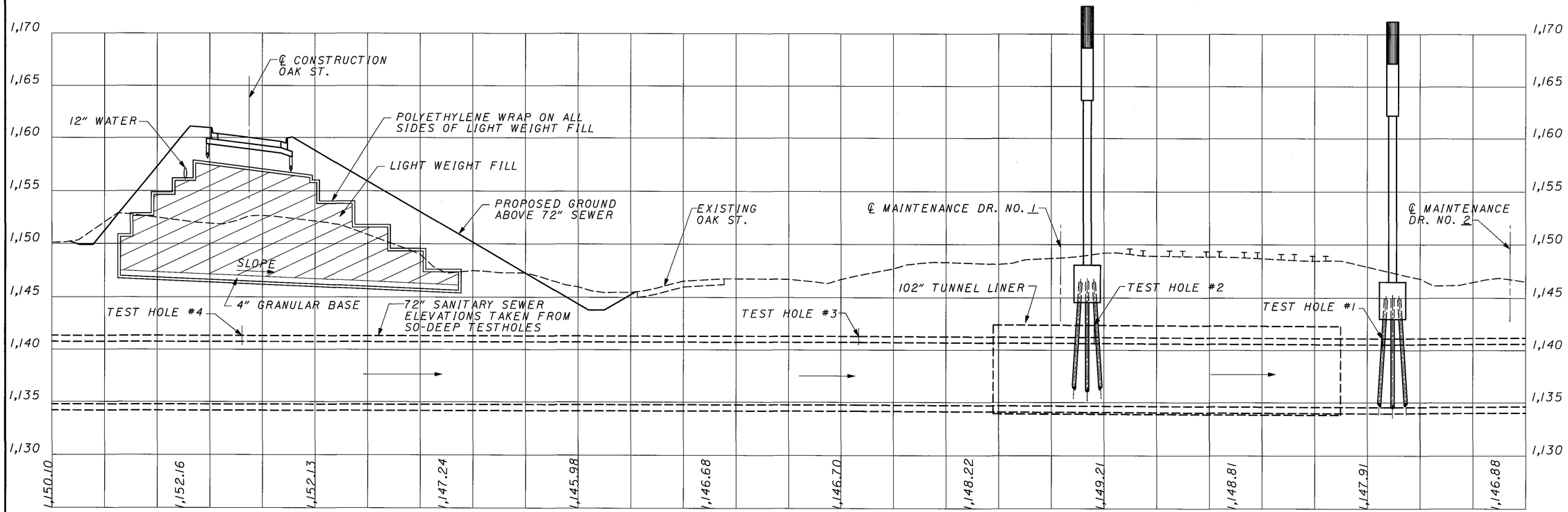
93
153

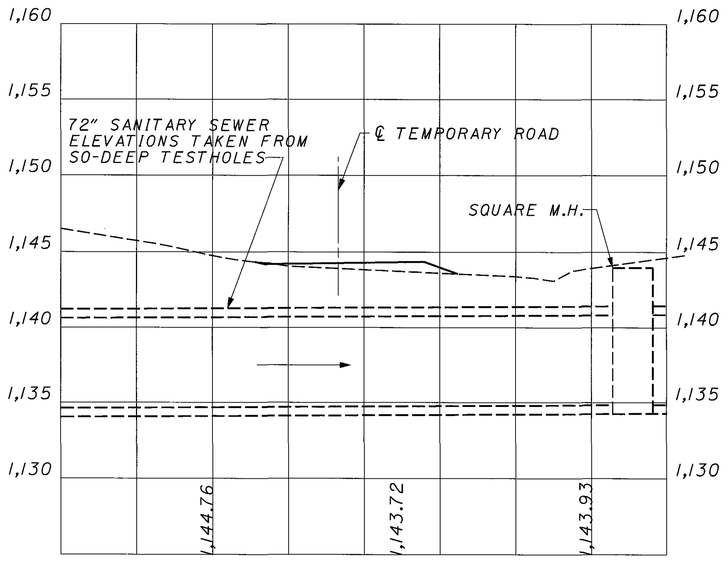


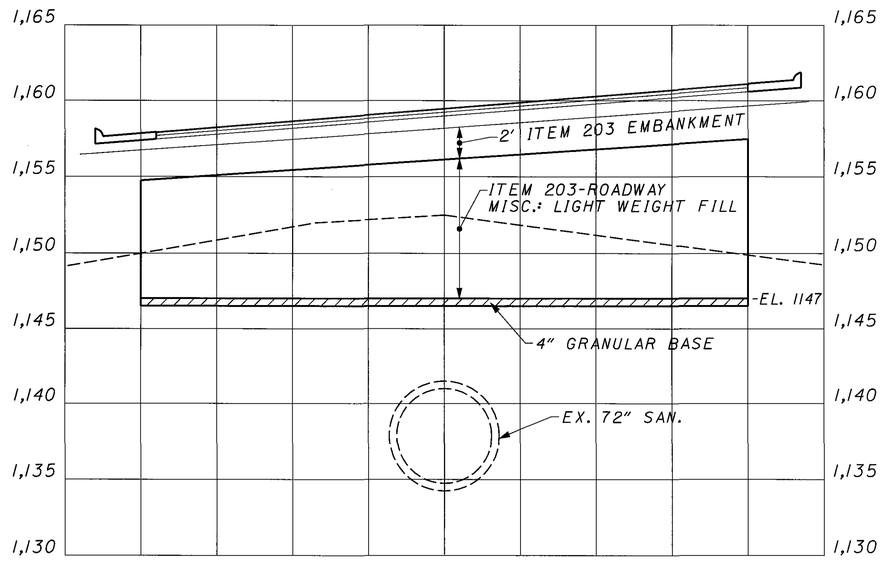
94/153

RIC-C.R. 424-0.62

72" SANITARY SEWER PLAN







SECTION A-A

HORIZONTAL SCALE IN FEET
0 10 20 40

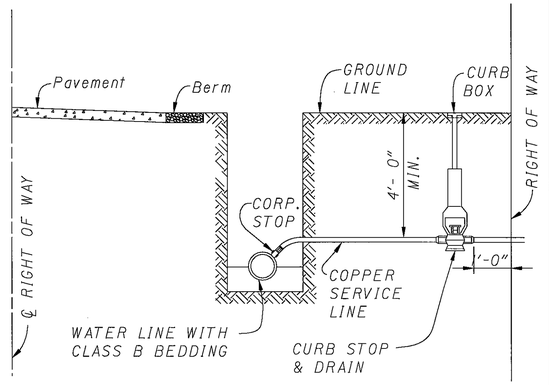
CALCULATED EEL
CHECKED BPB

72" SANITARY SEWER PROFILE

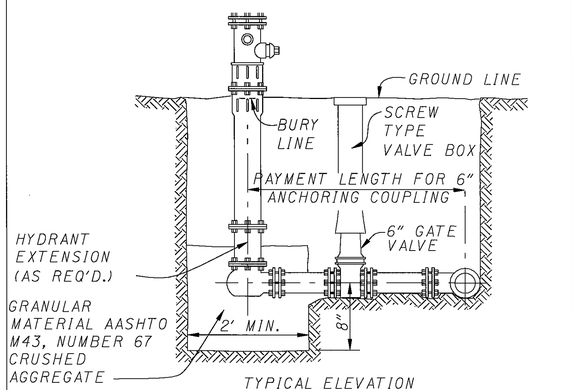
RIC-C.R. 424-0.62

95
153

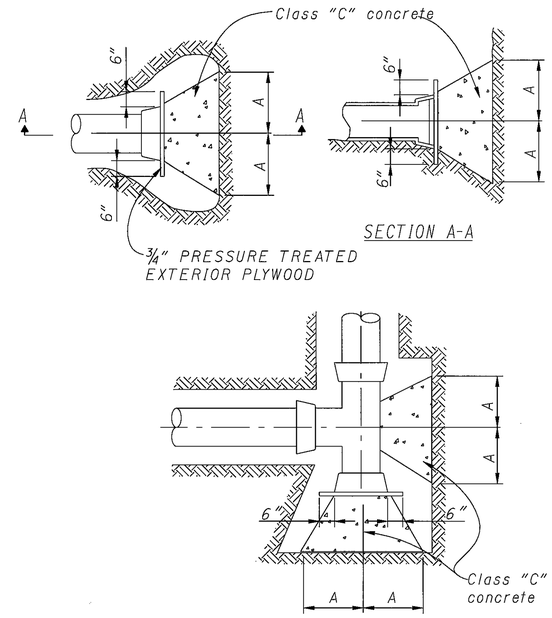
I02088/DGN/088SAN-PROFILE.DGN 1/17/05 RB,CEO,RC



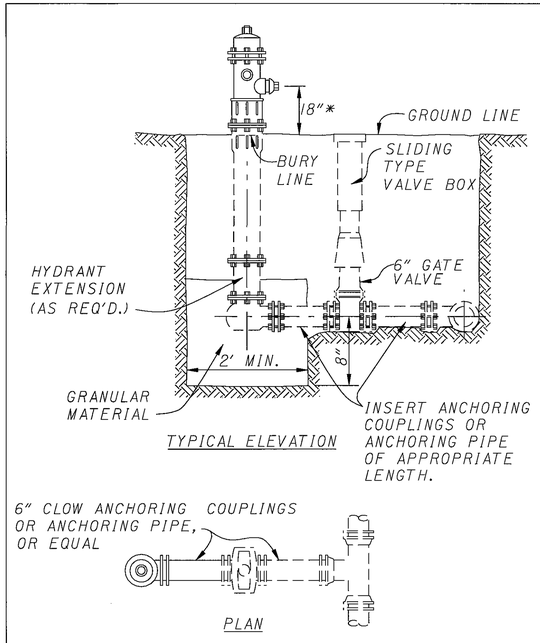
TYPICAL SERVICE LINE INSTALLATION



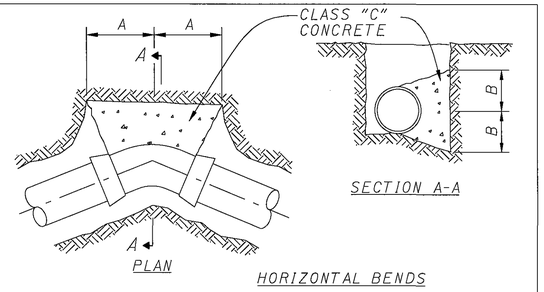
HYDRANT SETTING DETAILS

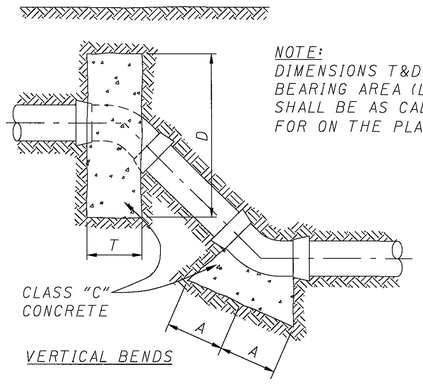


TYPICAL THRUST BLOCK DETAILS



HYDRANT AND GATE VALVE RELOCATION





TYPICAL THRUST BLOCK DETAILS

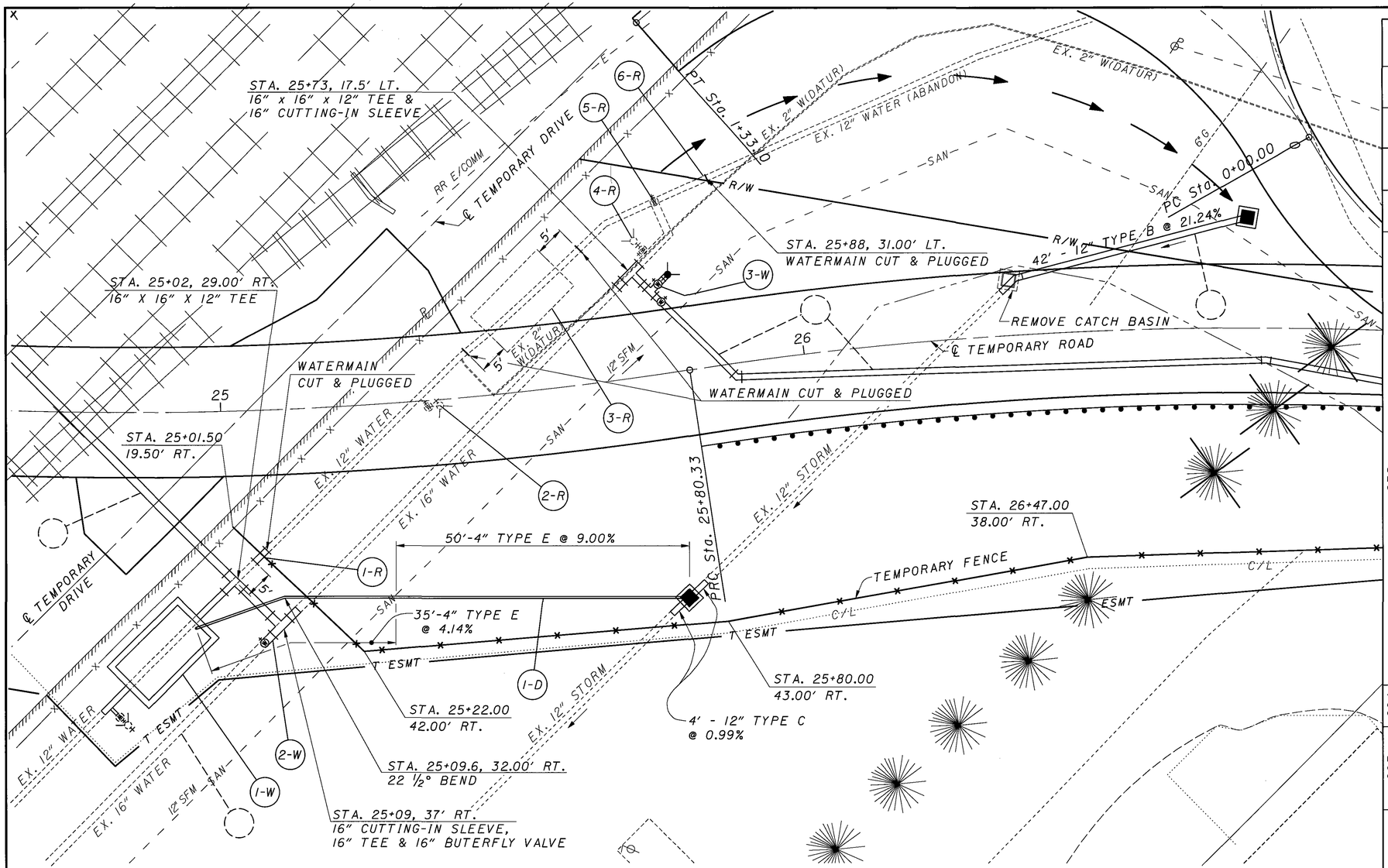
NOTE:
BASED ON 150 P.S.I. STATIC PRESSURE PLUS A.W.W.A. WATER HAMMER. ALL BEARING SURFACES TO BE CARRIED TO UNDISTURBED GROUND.

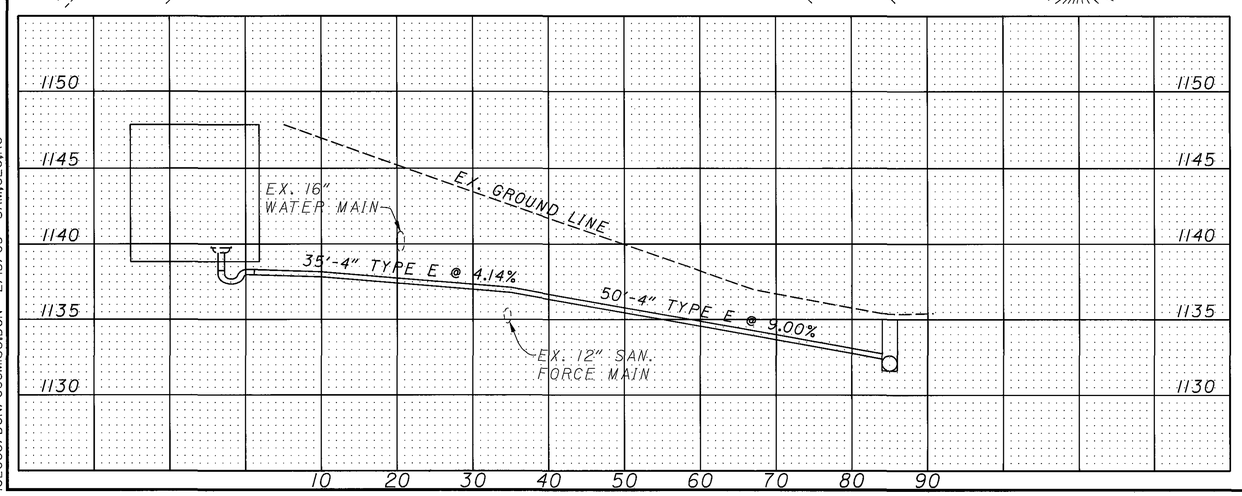
TYPE	SIZE	45° BENDS		45	22-1/2° BENDS		22-1/2	TEES	
		A	B	V (CU YD)	A	B	V (CU YD)	A	B
2000P.S.F. SOIL	12"	18"	23"	0.64	12"	18"	0.33	21"	
	16"	20"	27"	0.84	14"	21"	0.46	24"	

WATER DETAILS

RIC-C.R. 424-0.62

088WWD.DGN 1/17/05 RC





REMOVAL MISC.: BACKFLOW VALVES & CHAMBER REMOVED SHALL INCLUDE THE DISMANTLING OF THE EXISTING BACKFLOW PREVENTER VALVES AND FITTINGS AND STORAGE ON SITE FOR CITY PICKUP. FOLLOWING REMOVAL OF THE CHAMBER THE CONTRACTOR SHALL PLUG THE 12" WATERMAIN ON BOTH SIDES AT THE EXISTING CHAMBER AND BACK FILL THE CHAMBER PIT WITH ACCEPTABLE BACKFILL COMPACTED ACCORDING TO ITEM 203.07.

				638	638	638	638	638	638	638	638	604	603	603	202	202	202
REF NO.	**STATION FROM**	**STATION TO**	**SIDE**	6" FIRE HYDRANT	6" GATE VALVE & VALVE BOX	6" WATERMAIN D.I. ANCHORING PIPE & FITTINGS	16" WATERMAIN D.I.P. CLASS 53, MECH. JT. & FITTINGS	16" BUTTERFLY VALVE & VALVE BOX	16" CUTTING-IN SLEEVE	WATERWORK MISC.: BACKFLOW PREVENTER VALVE & VALVE CHAMBER	FIRE HYDRANT REMOVED	CATCH BASIN, NO. 2-2B	12" CONDUIT, TYPE C	4" CONDUIT, TYPE E	VALVE BOX REMOVED	REMOVAL MISC.: BACKFLOW VALVES & CHAMBER REMOVED	PIPE REMOVED, 24" AND UNDER
				EACH	EACH	FT	FT	EACH	EACH	EACH	EACH	EACH	FT	FT	EACH	LUMP	EACH
1-R	25+05	25+07	RT.														2
2-R	25+36		RT.								1				1		
3-R	25+47	25+62	LT.													1	
4-R	25+77		LT.								1				1		
5-R	25+80		LT.												1		
6-R	25+83	25+85	LT.														2
1-D	124+85	125+19	RT.									1	8	85			8
1-W	124+71	124+90	RT.							1							32
2-W	124+96	125+01		1	1	3	7	1	1								7
3-W	125+51	125+53		1	1	3											
TOTALS CARRIED TO SUBSUMMARY				2	2	6	7	1	1	1	2	1	8	85	3	1	51

WASTEWATER TREATMENT PLANT WATERMAIN, DRAINAGE & TEMPORARY FENCE DETAILS

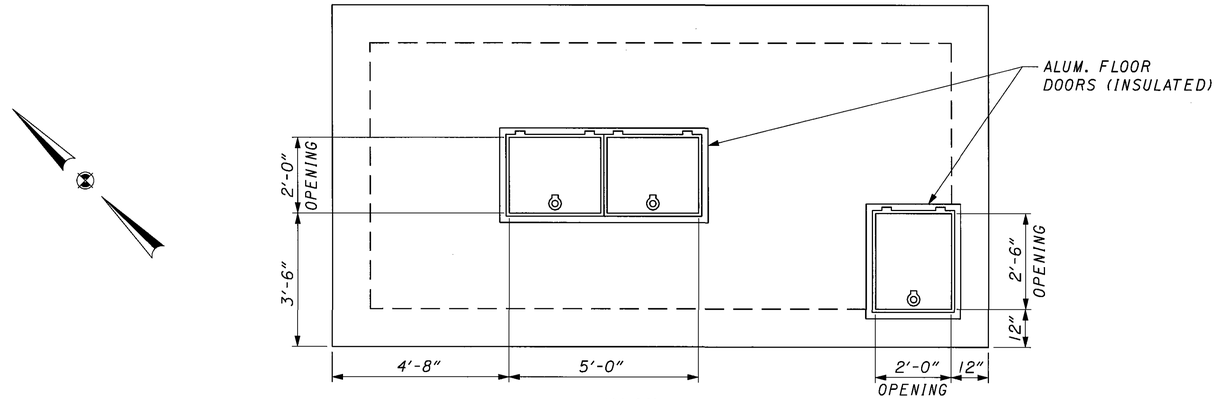
RIC-C.R. 424-0.62

HORIZONTAL SCALE IN FEET
0 5 10 20

CALCULATED EEL
CHECKED TM

102088/DGN/088MISC.DGN 2/15/05 SAM,CEO,RC

SCALE: ½" = 1'-0"



PLAN

NOTES:

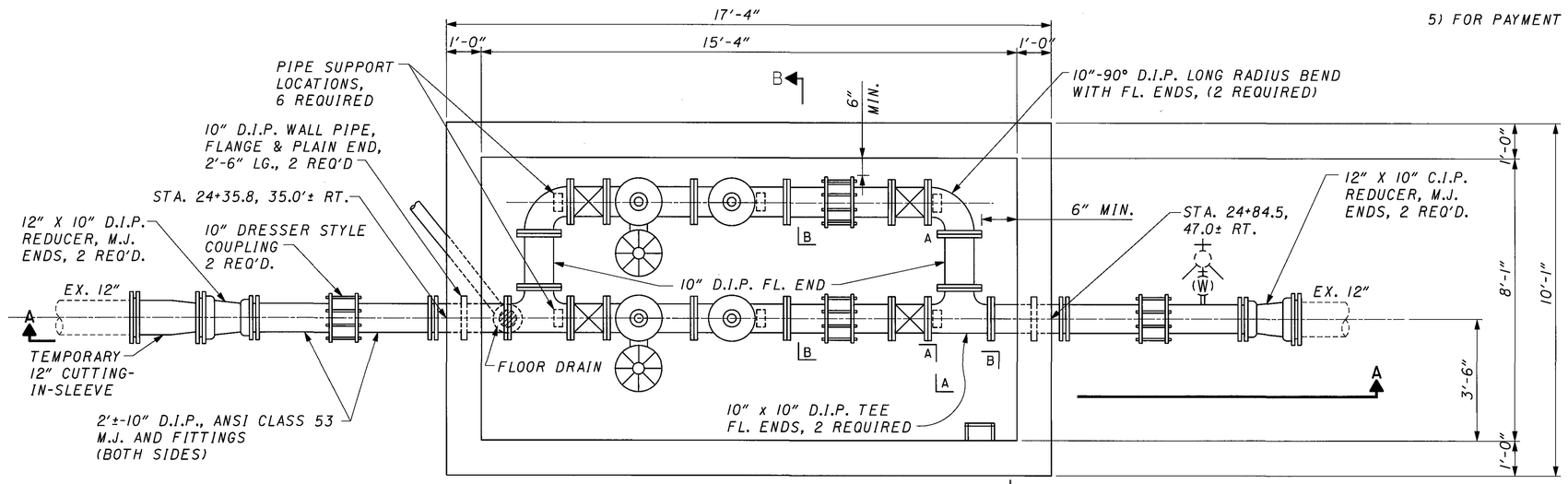
1) PROVIDE A MINIMUM OF 6" CLEARANCE FROM THE OUTSIDE OF ALL VALVES AND FITTINGS TO THE INSIDE WALL OF THE CHAMBER

2) BACKFLOW PREVENTER CHAMBER SHALL BE FURNISHED IN ONE OR PIECES SO THAT THE CHAMBER COMPLETE WITHIN VALVES & FITTINGS INSTALLED CAN BE LOWERED INTO PLACE AT THE PROPOSED LOCATION WITHIN A 4 HOUR MAXIMUM PERIOD OF TIME. IF CONSTRUCTED IN TWO PIECES, THE UNIT SHALL BE WATERPROOF WHEN ASSEMBLED

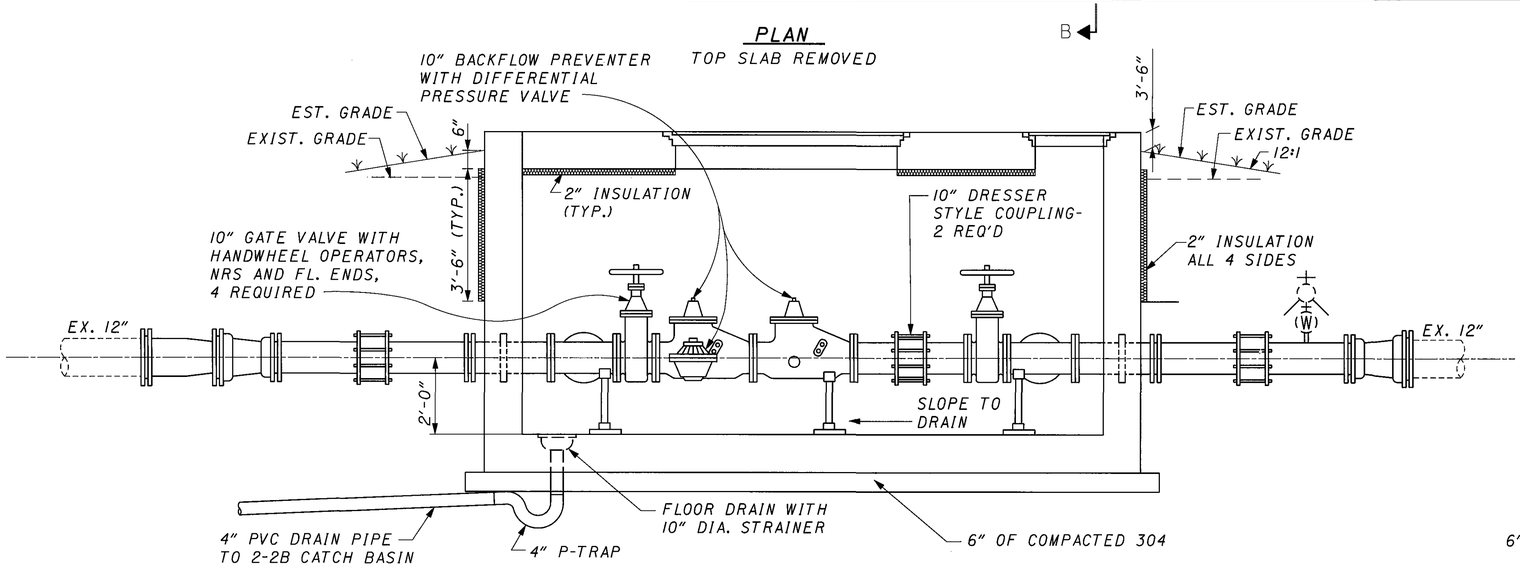
3) PAYMENT FOR THE 12" CUTTING IN SLEEVE SHALL BE SEPERATE FROM THE CHAMBER.

4) PAYMENT FOR THE LUMP SUM BID FOR ITEM 638 WATER WORK, MISC.: BACKFLOW PREVENTER VALVE AND CHAMBER SHALL INCLUDE THE CHAMBER ACCESS CASTINGS, AGGREGATE BASE, ALL VALVES, FITTINGS, COUPLINGS, PIPE SUPPORTS, INSULATION, P-TRAP, REDUCERS, 10"DIP, LABOR, TOOLS AND EQUIPMENT NECESSARY TO COMPLETE THIS ITEM OF WORK IN PLACE

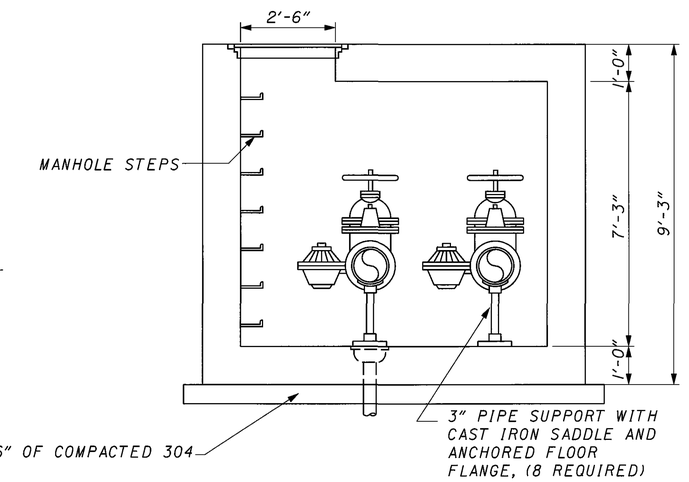
5) FOR PAYMENT QUANTITIES SEE SHEET 97



PLAN
TOP SLAB REMOVED



SEC A-A



SEC B-B

CALCULATED EEL
CHECKED TM

BACKFLOW PREVENTER VALVE & CHAMBER

RIC-C.R. 424-0.62

088WD1.DGN 1/17/05 HN,KJK,RC

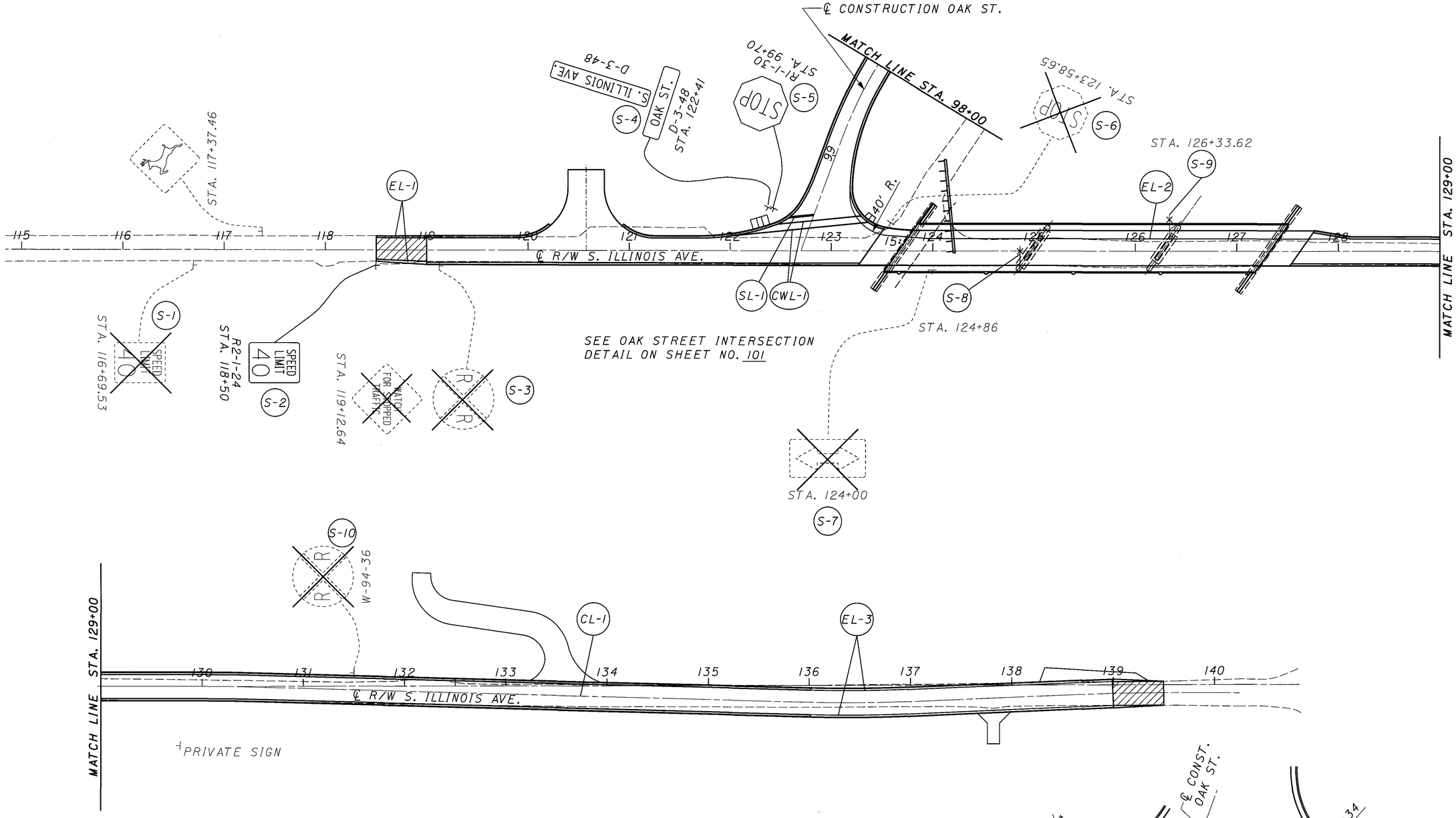
SHEET NO.	REFERENCE NO.	LOCATION	STATION	SIDE	CODE	SIZE (INCHES)	630							
							STREET NAME SIGN SUPPORT, NO. 2 POST	GROUND MOUNTED SUPPORT, NO. 3 POST	SIGN, FLAT SHEET	SIGN, DOUBLE FACED, STREET NAME	REMOVAL OF GROUND MOUNTED SIGN AND STORAGE	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	REMOVAL OF POLE MOUNTED SIGN AND STORAGE	REMOVAL OF MISCELLANEOUS TRAFFIC CONTROL ITEM: AUTOMATIC GATE ASSEMBLY FOR STORAGE
							FT.	FT.	SQ. FT.	EACH	EACH	EACH	EACH	EACH
100	S-1	S. ILLINOIS AVE.	116+69.53	RT.							1	1		
100	S-2	S. ILLINOIS AVE.	118+50	RT.	R2-1	24 x 30		12	5					
100	S-3	S. ILLINOIS AVE.	119+12.64	RT.							2	1		
100	S-4	S. ILLINOIS AVE.	122+41	LT.	D3	VAR x 8	10.5			1				
					D3	VAR x 8				1				
100	S-5	OAK ST.	99+70	RT.	R1-1	30 x 30		12	6.3					
100	S-6	S. ILLINOIS AVE.	123+58.65	LT.							1	1		
100	S-7	S. ILLINOIS AVE.	124+00	RT.							1	2		
100	S-8	S. ILLINOIS AVE.	124+86.13	RT.										1
100	S-9	S. ILLINOIS AVE.	126+33.62	LT.										1
100	S-10	S. ILLINOIS AVE.	132+50	LT.							1	1		
101	S-11	OAK ST.	91+50	LT.	W1-2L	30 x 30		12.2	6.3		1			
			91+97.34	LT.	W13-1	18 x 18			2.3		1	1		
101	S-12	OAK ST.	95+43.79	LT.									1	
			95+50	LT.	R2-1	24 x 30		11	5					
TOTALS CARRIED TO GENERAL SUMMARY							10.5	47.2	24.9	2	8	7	1	2

SHEET NO.	REFERENCE NO.	LOCATION	STATION		SIDE	642		644	
			FROM	TO		EDGE LINE, WHITE	CENTER LINE, DOUBLE SOLID	STOP LINE	CROSSWALK LINE
						FT.	FT.	FT.	FT.
100	CL-1	S. ILLINOIS AVE.	118+50	139+50	℄		2,100		
101	CL-2	OAK ST.	90+50	99+70.46	℄		921		
100	EL-1	S. ILLINOIS AVE.	118+50	119+00	LT&RT	100			
100	EL-2	S. ILLINOIS AVE.	123+18.87	127+95	LT.	503			
100	EL-3	S. ILLINOIS AVE.	136+01.41	139+50	LT&RT	698			
101	EL-4	OAK ST.	90+50	91+50	LT.	100			
101	EL-5	OAK ST.	90+50	91+25	RT.	75			
100	SL-1	OAK ST.	99+72.46		RT.			35	
100	CWL-1	OAK ST.	99+76.72	99+83.10	LT&RT				269
			SUBTOTAL			1,476	3,021	35	269
			CONVERTED TO MILES			0.28	0.58		
TOTALS CARRIED TO GENERAL SUMMARY						0.28	0.58	35	269

CALCULATED TM
CHECKED PDG

SIGNING AND PAVEMENT MARKING SUBSUMMARY

RIC-C.R. 424-0.62



OAK STREET INTERSECTION DETAIL

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED TM
CHECKED EEL

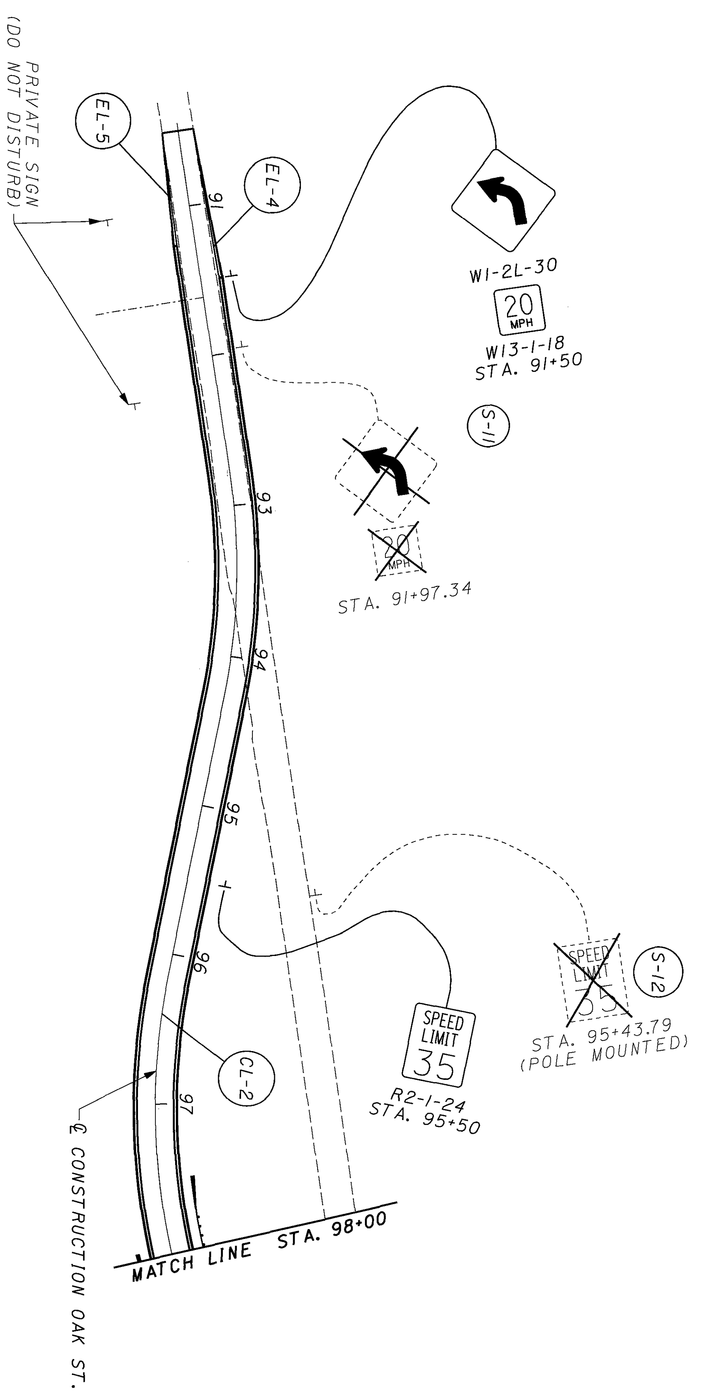
SIGNING AND PAVEMENT MARKING PLAN

RIC-CR424-0.62

100
153

088TPA.DGN 2/15/05 CEO,SJK,RC

088TPB.DGN 2/15/05 SJK,CEO,RC



101 / 153	RIC-CR424-0.62	SIGNING AND PAVEMENT MARKING PLAN	CALCULATED TM / CHECKED EEL	0 50 / 25 100 HORIZONTAL SCALE IN FEET

REFERENCE NO.	SHEET NO.	STATION TO STATION	SIDE	LENGTH	202		603	607	625														632									
					LIGHT POLE REMOVED FOR STORAGE	LIGHT POLE FOUNDATION REMOVED	4" CONDUIT, TYPE E	FENCE, MISC.: REMOVE AND REERECT GATE, TYPE CL	CONNECTOR KIT, TYPE II	CABLE SPLICING KIT	LIGHT POLE ANCHOR BOLTS ON STRUCTURE	LIGHT POLE FOUNDATION, 24" x 6' DEEP, AS PER PLAN	NO. 10 AWG POLE AND BRACKET CABLE	CONDUIT, 2", 725.04	CONDUIT, 3", 725.04	REMOVAL OF LUMINAIRE AND REERECTION	TRENCH	TRENCH IN PAVED AREA, TYPE B	STRUCTURE JUNCTION BOX, AS PER PLAN	PULL BOX, 725.08, 24"	GROUND ROD	STRUCTURE GROUNDING SYSTEM	REERECT EXISTING LIGHT POLE, AS PER PLAN	DETECTOR LOOP	PEDESTAL FOUNDATION	POWER CABLE, 3 CONDUCTOR, NO. 10 AWG	POWER SERVICE, AS PER PLAN	WOOD POLE							
				FT	EACH	EACH	FT	EACH	EACH	EACH	EACH	EACH	FT	FT	FT	EACH	FT	FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH	FT	EACH	EACH					
R-1	104	29+49.78	LT.		1	1																										
R-2	104	29+80.51	LT.		1	1																										
G-1	104	29+50.00 TO 29+78.00	RT.					1	2					6			6				2					21						
A-1	104	29+47.50 TO 29+78.00	RT.						2			1	30	4		1	4				1		1			37						
A-2	104	29+78.00 TO 29+82.00	RT.						2			1	30	7		1	7				1		1			24						
PS-1	104	29+82.00	RT.																		1						1	1				
C-1	104	29+75.00 TO 29+78.00	RT.						2					17			17				1				1	38						
PB-1	104	29+51.00	RT.												26			26		1												
PB-2	104	29+77.00	RT.											2			2			1												
PB-3	104	29+80.00	RT.							3				2			2			1												
L-1	104	29+54.00 TO 29+78.00	RT.																					1								
A-1	105	121+85.00 TO 121+95.00	LT.	10										10			10															
A-2	105	121+95.00 TO 122+05.00	LT.	10										10			10															
PB-1	105	121+95.00	LT.				10													1												
A-3	105	121+95.00 TO 121+95.00	LT./RT.	56										56			56															
A-4	105	121+85.00 TO 121+95.00	RT.	10										10			10															
PB-2	105	121+95.00	RT.				10												1													
A-5	105	121+95.00 TO 123+43.00	RT.	148										148			148															
PB-3	105	123+43.00	RT.				10												1													
A-6	105	123+43.00 TO 123+64.00	RT.	21										21			10															
ZA-1	105	123+64.00	RT.								4								1													
A-7	105	123+64.00 TO 124+50.00	RT.	86										86																		
ZA-2	105	124+50.00	RT.								4								1													
A-8	105	124+50.00 TO 125+39.00	RT.	86										86																		
ZA-3	105	125+36.00	RT.								4								1													
A-9	105	125+36.00 TO 126+22.00	RT.	86										86																		
ZA-4	105	126+22.00	RT.								4								1													
A-10	105	126+22.00 TO 127+08.00	RT.	86										86																		
ZA-5	105	127+08.00	RT.								4								1													
A-11	105	127+08.00 TO 127+29.00	RT.	21										21			10															
PB-4	105	127+29.00	RT.				10													1												
A-12	105	127+29.00 TO 127+39.00	RT.	10										10			10															
SG-1	105	126+26.00																					1									
TOTALS CARRIED TO GENERAL SUMMARY					2	2	40	1	8	3	20	2	60	668	26	2	302	26	5	7	6	1	2	1	1	120	1	1					

LIGHTING & ELECTRICAL SUBSUMMARY

CALCULATED DLR
CHECKED EEL

RIC-C.R. 424-0.62

088GM-1.DGN 1/4/05 HN,RC

ITEM 625, LIGHT POLE FOUNDATION, 24" x 6' DEEP, AS PER PLAN

THIS ITEM OF WORK SHALL BE IN ACCORDANCE WITH REQUIREMENTS SET FORTH IN ITEM 625. CONTRACTOR SHALL ALSO ENSURE THAT ANCHOR BOLTS ARE SET TO BE COMPATIBLE WITH THE EXISTING LIGHT POLES AS APPROVED BY THE ENGINNER. ALL COST FOR LABOR AND MATERIALS SHALL BE INCLUDED IN THE PRICE BID FOR EACH FOR ITEM 625, LIGHT POLE FOUNDATION, 24" x 6' DEEP, AS PER PLAN.

ITEM 202, LUMINAIRE REMOVED FOR REUSE

THIS ITEM OF WORK SHALL CONSIST OF REMOVING AN EXISTING LUMINAIRE AND PROPERLY STORING IT ON THE PROJECT SITE FOR RE-ERECTION.

PAYMENT WILL BE MADE AT THE UNIT PRICE BID UNDER CMS ITEM 202, "LUMINAIRE REMOVED FOR REUSE" FOR EACH LUMINAIRE REMOVED AND STORED WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

ITEM 202, LIGHT POLE REMOVED FOR STORAGE

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

PAYMENT WILL BE MADE AT THE UNIT PRICE BID UNDER CMS ITEM 202, "LIGHT POLE REMOVED FOR STORAGE," FOR EACH POLE REMOVED AND STORED WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

ITEM 202, LIGHT POLE FOUNDATION REMOVED

THIS ITEM OF WORK SHALL CONSIST OF REMOVING AN EXISTING LIGHT POLE FOUNDATION TO A MINIMUM OF 1 FOOT BELOW FINISHED GRADE, OR REMOVING THE FOUNDATION COMPLETELY, BACKFILLING THE RESULTANT DEPRESSION WITH COMPACTED SOIL AND RESTORING THE DISTURBED AREA.

PAYMENT SHALL BE MADE AT THE UNIT PRICE BID UNDER CMS ITEM 202, "LIGHT POLE FOUNDATION REMOVED" FOR EACH FOUNDATION REMOVED WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

ITEM 625, LUMINAIRE, INSTALLATION ONLY, AS PER PLAN

THIS ITEM OF WORK SHALL CONSIST OF INSTALLING A LUMINAIRE EITHER REMOVED FROM A PREVIOUS LOCATION ON THE PROJECT SITE OR SUPPLIED TO THE PROJECT SITE BY OTHERS.

PAYMENT SHALL BE MADE AT THE UNIT PRICE BID UNDER CMS ITEM 625, "LUMINAIRE, INSTALLATION ONLY, AS PER PLAN" FOR EACH LUMINAIRE INSTALLED WHICH SHALL INCLUDE ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO PERFORM THIS ITEM OF IN A SATISFACTORY AND WORKMANLIKE MANNER.

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

THIS ITEM OF WORK SHALL CONSIST OF RE-ERECTING AN EXISTING LIGHT POLE REMOVED FROM A PREVIOUS LOCATION ON THE PROJECT SITE. THE LIGHT POLE WILL BE INSTALLED ON A NEW FOUNDATION AS INDICATED IN THE PLAN.

WHERE THE POLE WILL BE INSTALLED ON A NEW FOUNDATION, THE CONTRACTOR SHALL VERIFY THE POLE BOLT CIRCLE LAYOUT AND FURNISH AND SET NEW ANCHOR BOLTS ACCORDINGLY.

IN ADDITION, THE EXISTING LIGHT POLE IDENTIFICATION DECAL SHALL BE REMOVED, AND A NEW DECAL FOR THE NEW IDENTIFICATION NUMBER FURNISHED AND INSTALLED.

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 ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

625, POWER SERVICE, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF THE SPECIFICATIONS, THE FOLLOWING IS ADDED.

THE POWER SUPPLYING AGENCY FOR THIS PROJECT IS:

POWER COMPANY:	OHIO EDISON
ADDRESS:	1717 ASHLAND ROAD MANSFIELD, OH 44905-1806
PHONE:	(419) 521-6177
CONTACT NAME:	MICHAEL STOUGHTON

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY CHARGES MADE BY THE POWER COMPANY FOR WORK BY THE COMPANY IN CONJUNCTION WITH THE ESTABLISHMENT OF THE REQUIRED SERVICE.

ELECTRICAL ENERGY FROM EXISTING POWER SERVICES SHALL CONTINUE TO BE CHARGED TO THE MAINTAINING AGENCY. THE CONTRACTOR SHALL PAY ELECTRICAL ENERGY CHARGES FOR NEW POWER SERVICES ESTABLISHED BY THIS PROJECT. AFTER ACCEPTANCE OF THE LIGHTING, THE POWER SERVICE ELECTRICAL ENERGY ACCOUNT SHALL BE TRANSFERRED TO THE MAINTAINING AGENCY NOTED IN THE PLANS.

THIS SHALL INCLUDE NEW POWER SERVICE ESTABLISHED BY THIS PROJECT AS WELL AS REASSIGNMENT OF EXISTING SERVICE DUE TO WORK PERFORMED BY THIS PROJECT.

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

CALCULATED TM
CHECKED EEL

LIGHTING AND ELECTRICAL GENERAL NOTES

RIC-C.R. 424-0.62

088GM-2.DGN 01/04/05 RC,HN

℄ R/W & CONSTR. S. ILLINOIS AVE.

130

EX. 21" TWIN CMP

℄ CONSTRUCTION S. ILLINOIS AVE.

UNK

EX. R/W

GAS REGULATOR BUILDING

6" G

UNK

30"

W

12" W

YARD LIGHT

YARD LIGHT

E

24"

GATE OPENER

S ESMT

R/W

R-1

R-2

29

30

31

N 1° 17' 56" E

12" SFM

SAN

℄ TEMPORARY ROAD

12"

2"

STA. 129+42.00
℄ ASPHALT DRIVE
W = 21'; L = 50'

DRIVE

T ESMT

C/L

72" SAN

8" TANK DRAIN

2" (ABANDONED)

14" (SAVE)

BLDG.

STA. 29+51.00, 86.00' RT.
EPA W/GROUND AS PER HL-50.11

STA. 29+47.50, 93.00' RT.
RELOCATED LIGHT POLE

STA. 29+38.06, 88.17' RT.
EX. ELECTRIC MH
(DO NOT DISTURB)

STA. 29+51.00, 95.00' RT.
(NO SPLICES)

STA. 29+75.00, 66.00' RT.
RELOCATED CONTROLLER

STA. 29+80.00, 82.00' RT.

STA. 29+82.00, 82.00' RT.
POWER SERVICE

STA. 29+77.00, 86.00' RT. END POST
ASSEMBLY WITH RELOCATED GATE
OPENER AND GROUND AS PER HL-50.11

STA. 29+78.00, 93.00' RT.
RELOCATED LIGHT POLE

STA. 29+77.00, 95.00' RT. (NO SPLICES)

C-1 PB-3 G-1 PS-1 A-2 L-1 A-1 PB-1 PB-2

FENCE MISC.: REMOVE AND REERECT EXISTING GATE, TYPE CL

THIS ITEM SHALL CONSIST OF THE REMOVAL AND REERECTION OF THE GATE, OPENER AND CONTROLLER AND SHALL CONFORM TO 607 EXCEPT AS NOTED.

PRIOR TO REMOVING EXISTING GATE, PROPOSED FENCE FROM STATION 29+51 TO STATION 30+23 SHALL BE COMPLETE INCLUDING TWO END POSTS, CONDUIT, PULL BOXES AND PEDESTAL FOUNDATION FOR CONTROLLER.

THE FENCE OR ANY PART THEREOF DAMAGED BY THE NEGLIGENCE OF THE CONTRACTOR AS DETERMINED BY THE ENGINEER SHALL BE REPLACED AT THE EXPENSE OF THE CONTRACTOR.

PAYMENT SHALL BE MADE AT THE LUMP SUM PRICE BID FOR ITEM 607 FENCE MISC.: REMOVE AND REERECT EXISTING GATE, TYPE CL, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL GATE INCLUDING CONNECTIONS TO POWER AND CONTROLS

N

HORIZONTAL SCALE IN FEET
0 5 10 20

CALCULATED EEL
CHECKED TM

WASTE WATER TREATMENT PLANT
GATE DETAILS AND NOTES

RIC-C.R. 424-0.62

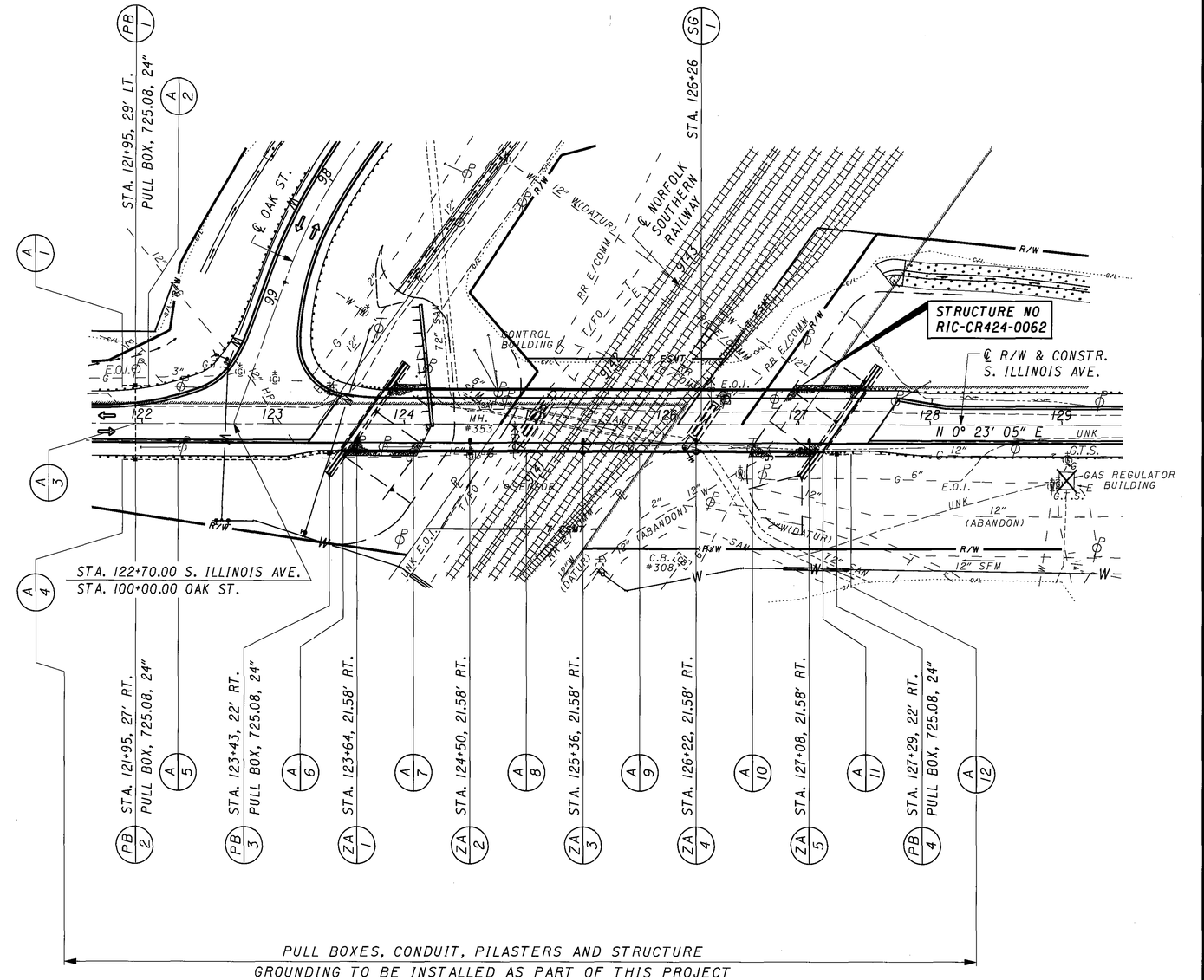
104
153

088GM-3.DGN 01/04/05 RC,HN

LIGHTING NOTES:

UNDERDRAINS FOR PULL BOXES

REFERENCE IS MADE TO THE STANDARD DRAWINGS FOR DETAILS OF DRAINING PULL BOXES. UNDERDRAINS FOR PULL BOXES SHALL BE USED AS DIRECTED BY THE ENGINEER AND SHALL BE PROVIDED WHERE THE LENGTH REQUIRED FOR SATISFACTORY OUTLET DOES NOT EXCEED APPROXIMATELY 20 FEET. AN ANIMAL GUARD SHALL BE INCLUDED AT THE OUTLET END OF THE DRAIN. AN ESTIMATED QUANTITY OF CMS ITEM 603, 4" CONDUIT, TYPE E IS INCLUDED AT EACH PULL BOX FOR THIS PURPOSE.



LEGEND

- ■ - (PB / 1) - PULL BOX, IDENTIFICATION NUMBER WITH OFFSET
- ! - (ZA / 1) - FUTURE POLE, IDENTIFICATION NUMBER
- (A / 1) - CIRCUIT NUMBER
- —·—·— - CONDUIT, 2", 725.04
- ------- - CONDUIT, 2", 725.04, IN TRENCH

N

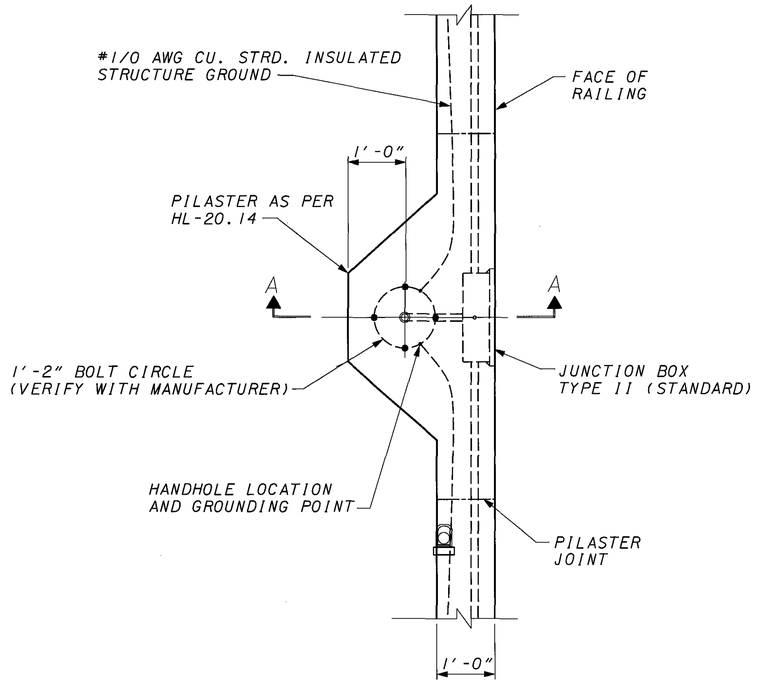
SCALE IN FEET 0 25 50 100

CALCULATED DLR CHECKED

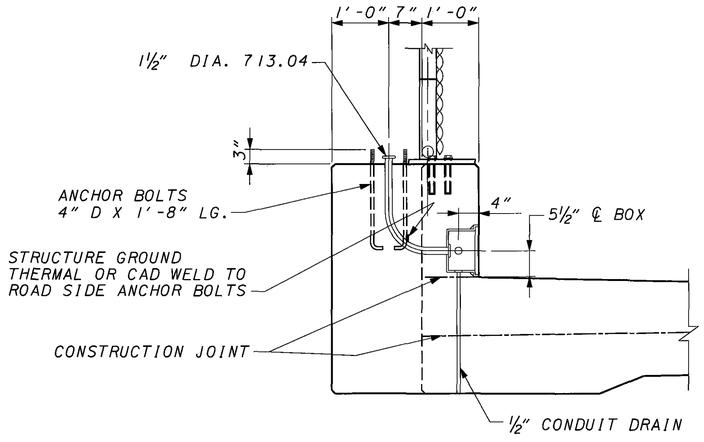
LIGHTING SCHEMATIC PLAN NOTES AND SUB-SUMMARY

RIC-CR424-0.62

08BLP.DGN 12/29/04 HN,SCB,KJK,RC

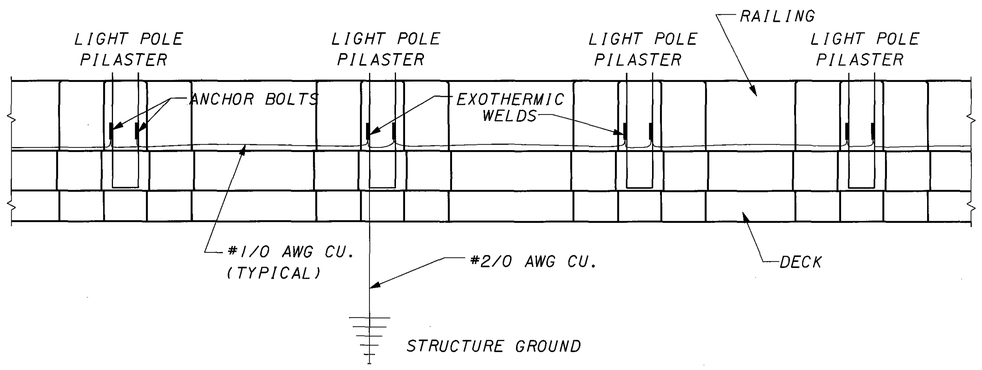


PLAN

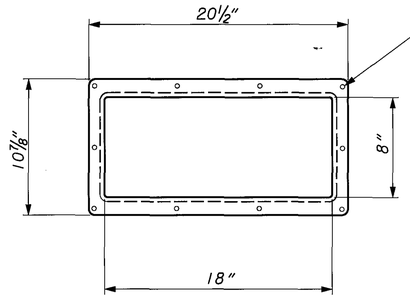


SECTION A-A

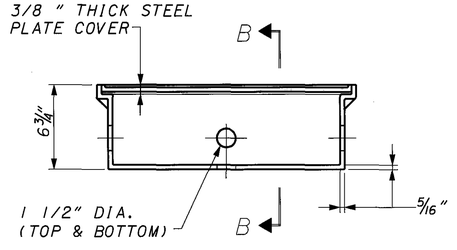
LIGHT POLE PILASTER FOR BRIDGE
WITH SIDEWALK RAILING



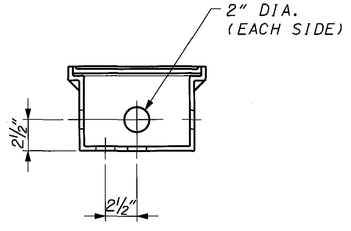
TYPICAL-PARAPET TO PARAPET



TOP VIEW



SIDE VIEW



SECTION B-B

TYPE II JUNCTION BOX

NOTE:

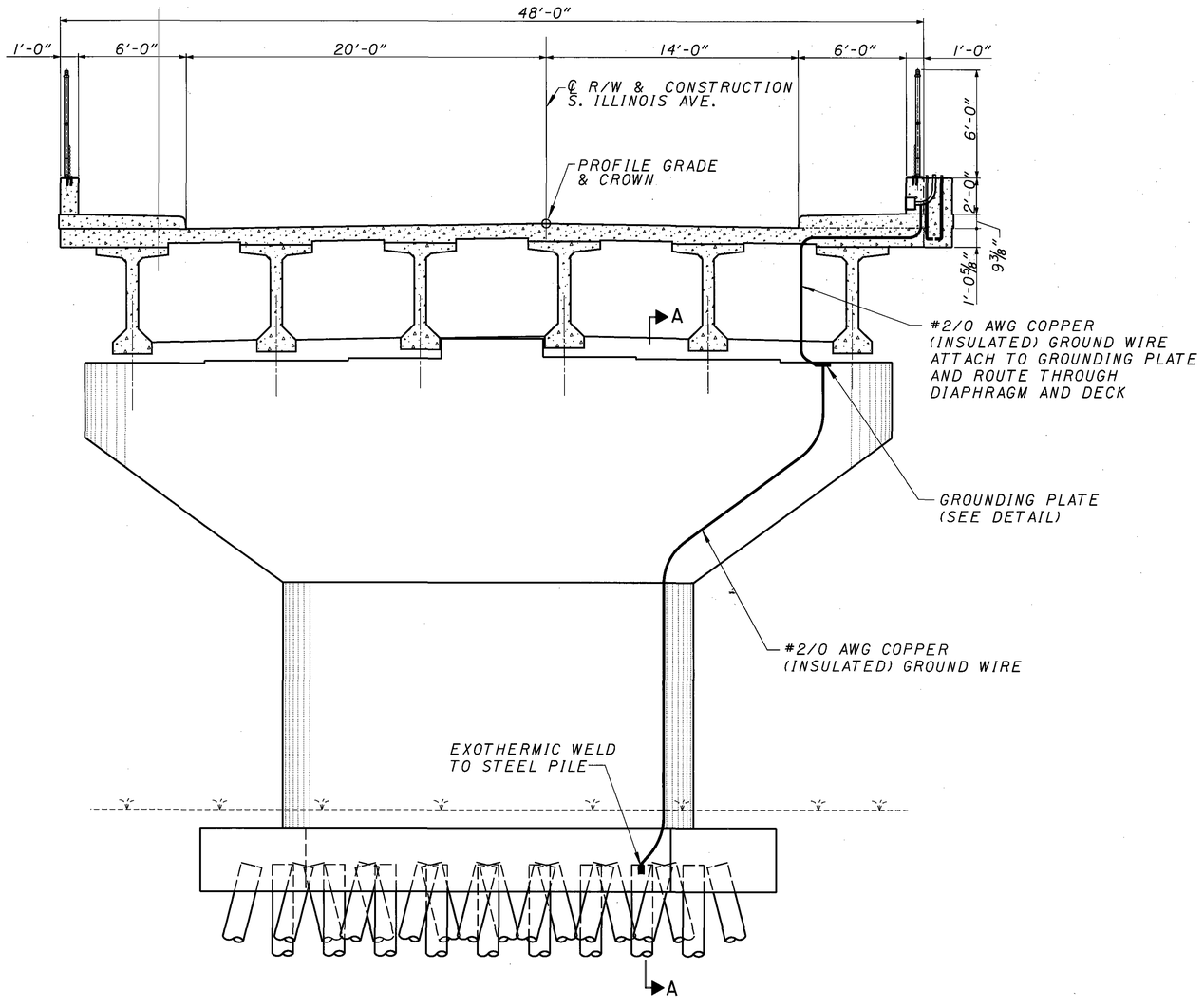
ALL JUNCTION BOXES ARE TYPE II PER HL-20.14, 725.10 AND AS DETAILED HEREIN.
CAP ALL UNUSED OPENINGS.

CALCULATED DLR CHECKED

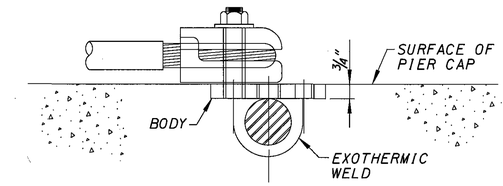
LIGHTING DETAILS

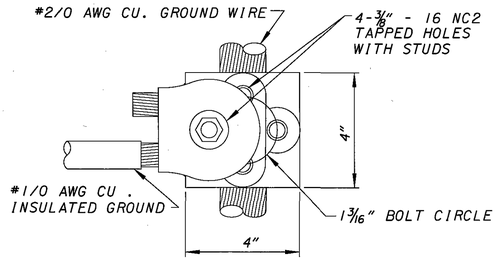
RIC-CR424-0.62

088LDA.DGN 09/20/04 HN, SCB

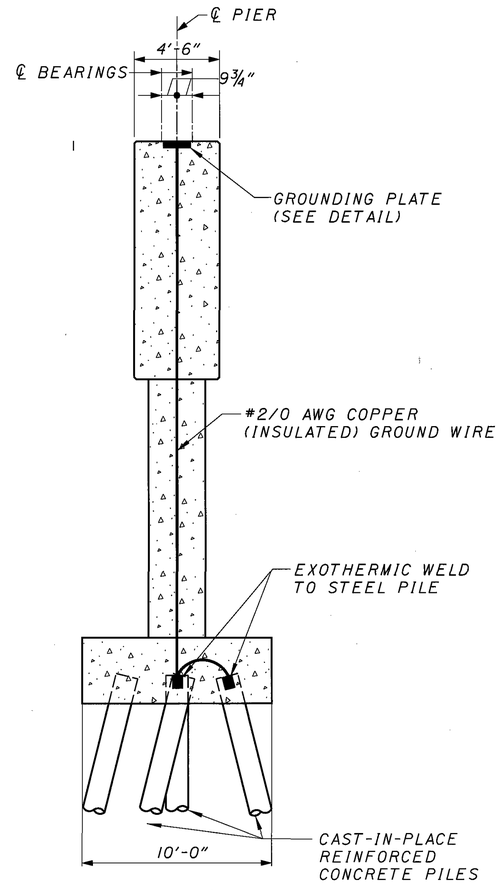


BRIDGE TRANSVERSE SECTION
AT PIER 2





GROUND CONNECTORS AND PLATE



SECTION A-A

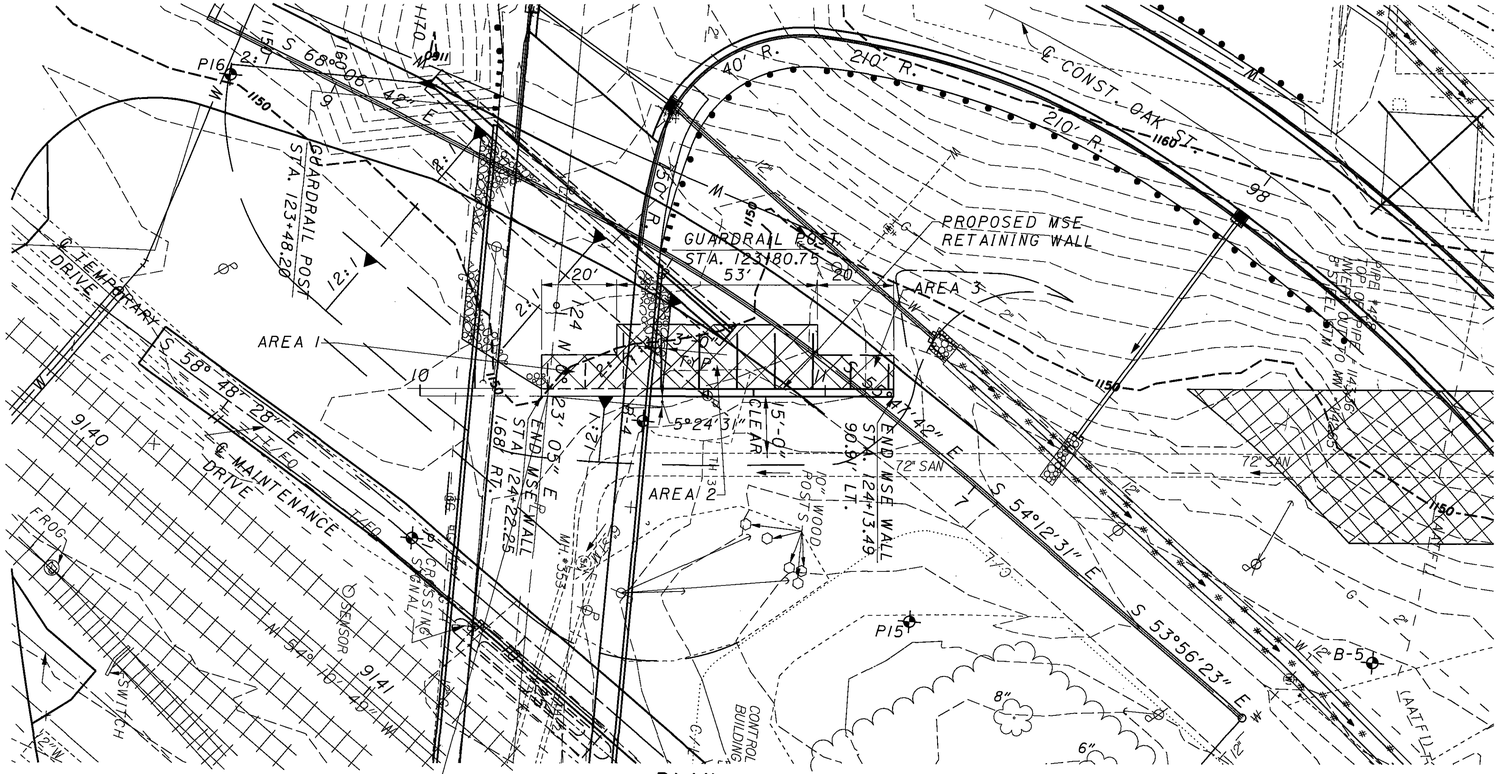
CALCULATED DLR CHECKED

STRUCTURE GROUNDING DETAILS

RIC-CR424-0.62

107
153

088LDB.DGN 09/13/04 SCB



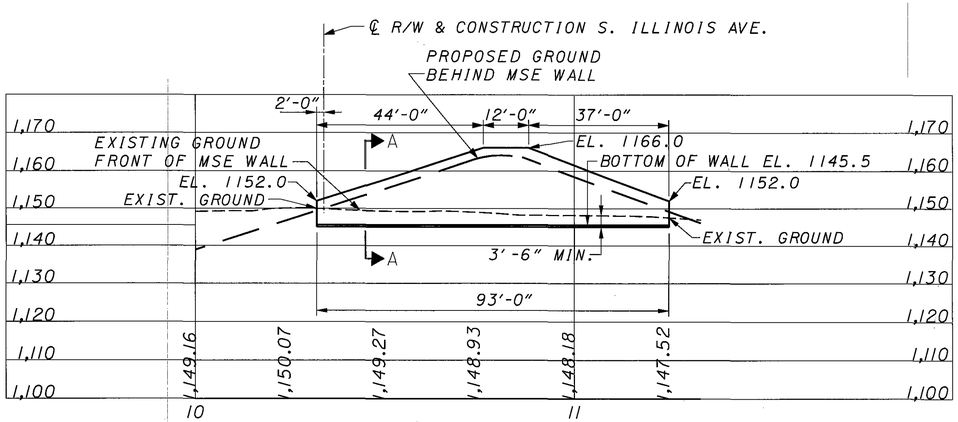
PLAN

STA. 124+22.10 ℄ R/W OF CONSTRUCTION S. ILLINOIS AVE.
STA. 10+33.69 ℄ RETAINING WALL

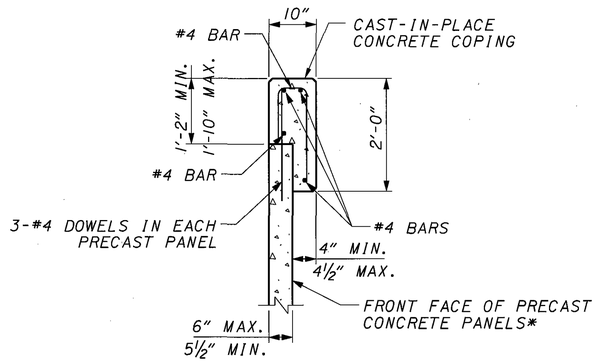
LEGEND

INDICATES LIMITS OF RETAINING WALL EMBANKMENT. (LENGTH OF RETAINING WALL EMBANKMENT IS FOR ESTIMATING PURPOSES ONLY. THE LENGTH WILL VARY PER MANUFACTURER DESIGN).

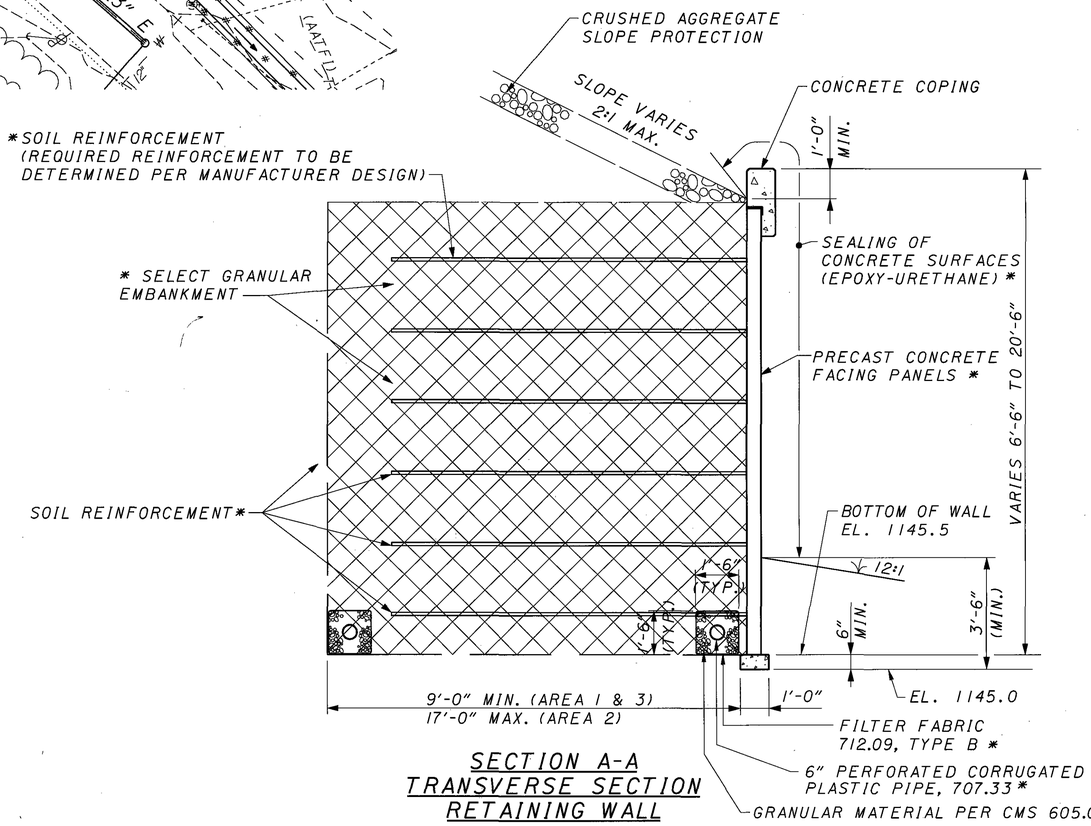
*INCLUDED WITH ITEM SPECIAL - REINFORCED EARTH WALL, DESIGN A; RETAINED EARTH WALL, DESIGN B; OR MSE PLUS RETAINING WALL, DESIGN C, ARES RETAINING WALL, DESIGN D, FOR PAYMENT



ELEVATION



COPING DETAIL



SECTION A-A
TRANSVERSE SECTION
RETAINING WALL

RICHLAND ENGINEERING LIMITED
29 NORTH PARK STREET
MANSFIELD, OHIO 44902

DESIGNED BLN | DRAWN RB | CHECKED KAK | REVIEWED DAP | DATE 12/20/05 | REVISED

SITE PLAN
RETAINING WALL SITE
RIC-CR424-0.62

088MSEI.DGN 12/15/05 RB,CEO,SJK,TWH,RC,MLB

RETAINING WALL DESIGN REQUIREMENTS

THE DESIGN OF THE WALL SHALL BE IN STRICT CONFORMANCE WITH THE AASHTO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES", 17TH EDITION, THE 2003 "ODOT BRIDGE DESIGN MANUAL", AND THE REQUIREMENTS LISTED BELOW:

1. THE DESIGN SHALL MEET ALL PLAN REQUIREMENTS.
2. THE HEIGHT OF THE WALL FOR DESIGN PURPOSES SHALL BE MEASURED FROM THE TOP OF THE LEVELING PAD TO THE TOP OF THE CONCRETE COPING.
3. THE WALL SYSTEM SHALL ACCOMMODATE UP TO 1 PERCENT DIFFERENTIAL SETTLEMENT IN THE LONGITUDINAL DIRECTION.
4. THE ALLOWABLE BEARING CAPACITY IS 1 TSF FOR THE RETAINING WALLS. THE SAFETY FACTOR HAS BEEN APPLIED TO THESE VALUES. UNDERCUTTING WILL BE ALLOWED TO INCREASE THE BEARING CAPACITY.

ESTIMATED QUANTITIES (RETAINING WALLS)

CALCULATED BLN DATED 9/04
CHECKED ALP DATED 11/04

ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	RETAINING WALL
SPECIAL	61013600	LUMP		REINFORCED EARTH WALL, DESIGN A (SEE SPECIAL PROVISIONS)*	LUMP
SPECIAL	61013800	LUMP		RETAINED EARTH WALL, DESIGN B (SEE SPECIAL PROVISIONS)*	LUMP
SPECIAL	61014000	LUMP		ARES RETAINING WALL, DESIGN D (SEE SPECIAL PROVISIONS)*	LUMP
SPECIAL	61014200	LUMP		MSE PLUS RETAINING WALL, DESIGN C (SEE SPECIAL PROVISIONS)*	LUMP
SPECIAL	61016200	98	FT.	CONCRETE COPING (SEE SPECIAL PROVISION)	98

RETAINING WALL ESTIMATED QUANTITIES FOR INFORMATIONAL PURPOSES ONLY:

FACE AREA OF WALL (TOP OF LEVELING PAD TO TOP CONCRETE COPING) 1340 SQ. FT.

VOLUME OF RETAINING WALL (TOP OF LEVELING PAD TO 1'-0" BELOW TOP OF CONCRETE COPING AND RETAINING WALL EMBANKMENT WIDTH) 679 CU. YD.

* THIS PROJECT CONTAINS FOUR MSE WALL OPTIONS. THE CONTRACTOR SHALL BID ON ONLY ONE OPTION AND BUILD THE OPTION CORRESPONDING WITH THE BID. THE CONTRACTOR SHALL BID ZERO FOR THE OTHER THREE OPTIONS.

RICHLAND ENGINEERING LIMITED
29 NORTH PARK STREET
MANSFIELD, OHIO 44902

DESIGNED BLN
DRAWN RB
CHECKED KAK
REVIEWED DAP
DATE 12/20/05
REVISED

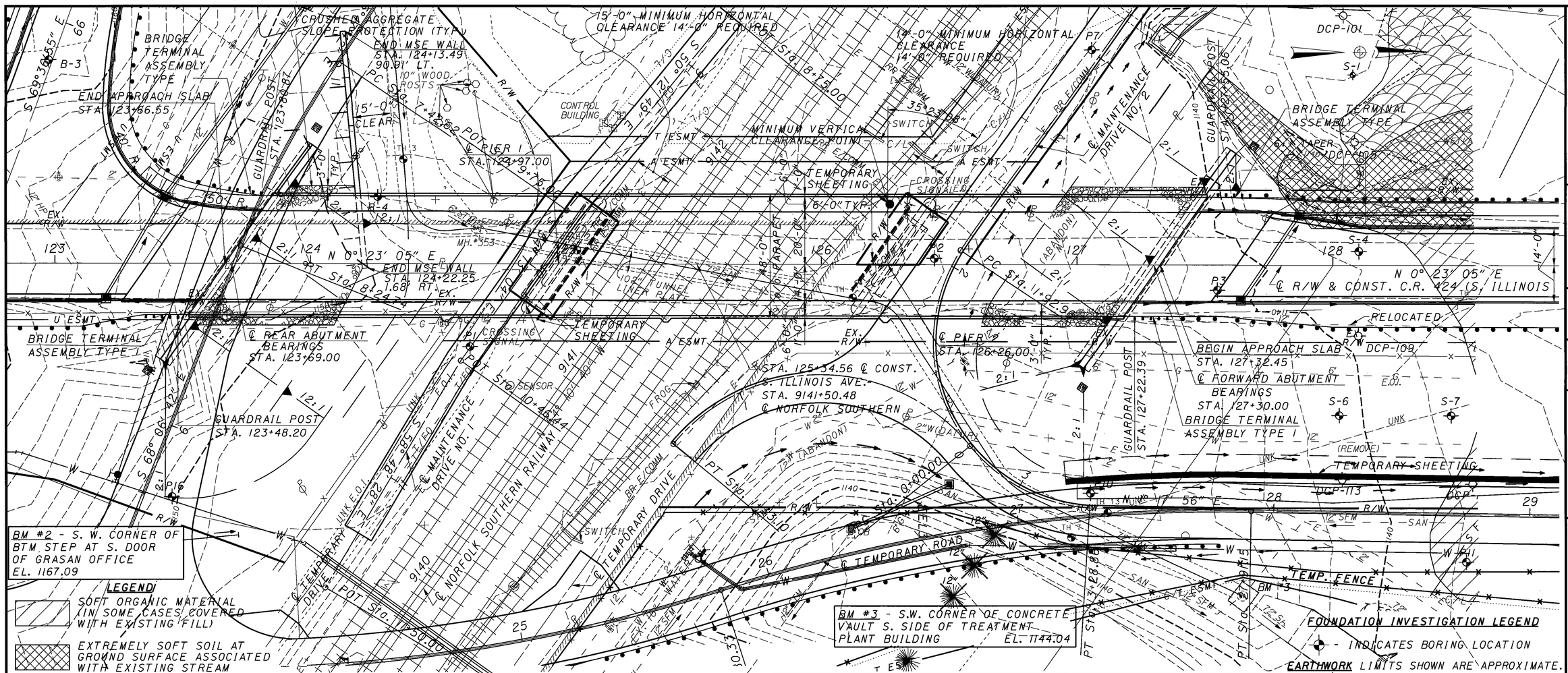
RETAINING WALL - GENERAL NOTES & ESTIMATED QUANTITIES

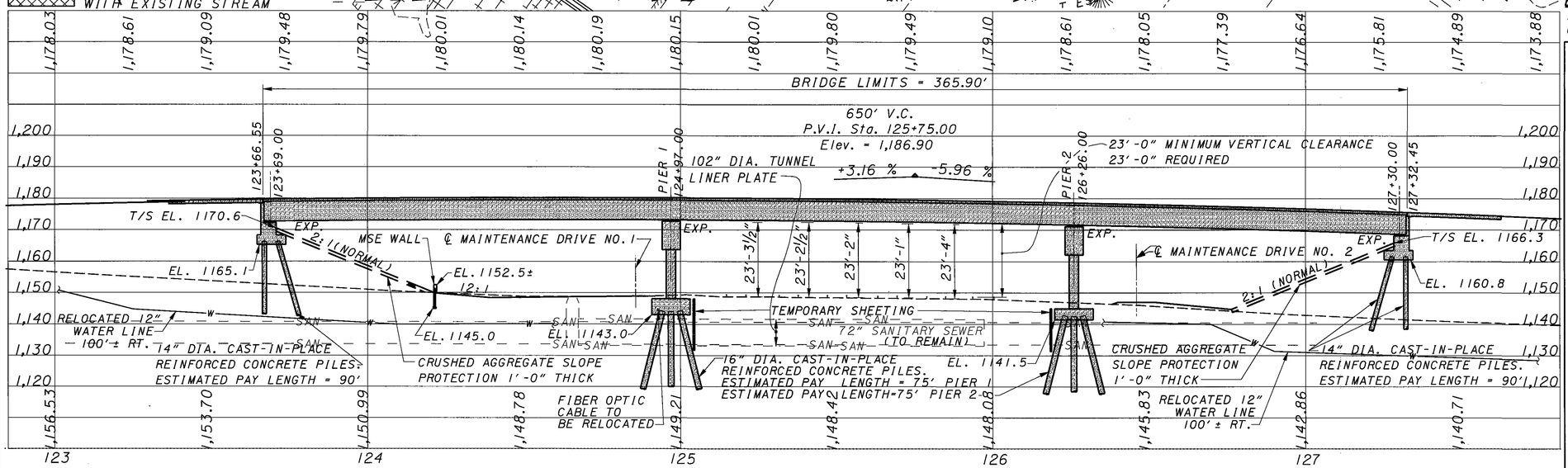
RIC-CR424-0.62

2/2

109/153

088MSE2.DGN 12/28/05 JLS,SCB,SJK,TWH,RC,MLB





PROPOSED STRUCTURE

TYPE: PRESTRESSED CONCRETE I-BEAM COMPOSITE WITH REINFORCED CONCRETE DECK, AND REINFORCED CONCRETE SUBSTRUCTURE
SPANS: 127'-0"; 127'-0" ; 103'-0" C/C BEARINGS
ROADWAY: 34'-0" F/F CURB WITH 6'-0" SIDEWALKS
LOADING: HS 25 AND THE ALTERNATE MILITARY LOADING
60 PSF FUTURE WEARING SURFACE
SKEW: 35°23'08" L.F.
ALIGNMENT: TANGENT
WEARING SURFACE: MONOLITHIC CONCRETE
APPROACH SLABS: AS-1-81 (30'-0" LONG)
LATITUDE: N 40°44'53"
LONGITUDE: W 82°29'04"
CROWN RATE: 0.016
CURRENT AVERAGE DAILY TRAFFIC: 10,350 (2006)
DESIGN AVERAGE DAILY TRAFFIC: 12,940 (2026)
DESIGN AVERAGE DAILY TRUCK TRAFFIC: 388 (2026)

RICHLAND ENGINEERING LIMITED
29 NORTH PARK STREET
MANSFIELD, OHIO 44902

DESIGNED	DRAWN	REVIEWED	DATE
BLN	RB	DAP	12/20/05
CHECKED	REVISED	STRUCTURE FILE NUMBER	
KAK		7034601	

RICHLAND COUNTY
STA. 123+66.55
STA. 127+32.45

SITE PLAN

BRIDGE NO. RIC-CR424-0062
OVER NORFOLK SOUTHERN RAILWAY

RIC-CR424-0.62

1/22

110/153

088SP.DGN 12/28/05 RB,HN,JLS,TWH,RC

REFERENCE SHALL BE MADE TO THE FOLLOWING STANDARD DRAWINGS:

AS-1-81	(REVISED 7-19-02)
BR-2-98	(REVISED 7-19-02)
PSID-1-99	(REVISED 7-18-03)
SICD-1-96	(REVISED 7-19-02)
VPF-1-90	(REVISED 7-19-02)

DESIGN SPECIFICATIONS:

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

DESIGN DATA:

DESIGN LOADING - HS25 AND THE ALTERNATE MILITARY LOADING
- 60 PSF FUTURE WEARING SURFACE (FWS)

CONCRETE CLASS C - COMPRESSIVE STRENGTH 4000 PSI (SUBSTRUCTURE)
REINFORCING STEEL - ASTM A615 OR A996
- GRADE 60 WITH MINIMUM YIELD STRESS OF 60 KSI.
- ALL REINFORCING STEEL SHALL BE EPOXY COATED PER MATERIAL SPECIFICATION 709.00
- SPLICES INDICATED FOR GRADE 60 STEEL

CONCRETE CLASS HP - COMPRESSIVE STRENGTH 4500 PSI (SUPERSTRUCTURE)
CONCRETE I-BEAM DESIGN STRESSES:
PRESTRESSED CONCRETE - f'c = 7000 PSI (28-DAY)
f'ci = 5000 PSI (RELEASE)
END DIAPHRAGM CONCRETE - 4500 PSI CLASS HP
REINFORCING STEEL - ASTM A615 OR A996 GRADE 60 WITH A MINIMUM YIELD STRENGTH OF 60 KSI AND SHALL BE EPOXY COATED
PRESTRESSING STRAND - ASTM A416 GRADE 270, ½" DIA. SEVEN-WIRE, UNCOATED, LOW-RELAXATION STRANDS. NOMINAL STRAND AREA = 0.167 IN.²
STRUCTURAL STEEL INTERMEDIATE DIAPHRAGMS (GALVANIZED) - ASTM A36, YIELD STRENGTH = 36 KSI.

PARAPET PROTECTION METHOD:

EPOXY COATED REINFORCING STEEL, 2.5 INCHES CONCRETE COVER.

MONOLITHIC WEARING SURFACE:

IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1 INCH THICK.

UTILITY LINES:

ALL EXPENSE INVOLVED IN RELOCATING (INSTALLING) THE AFFECTED UTILITY LINES SHALL BE BORNE BY THE UTILITIES. THE CONTRACTOR AND THE UTILITIES ARE TO COOPERATE BY ARRANGING THEIR WORK IN SUCH A MANNER THAT INCONVENIENCE TO EACH WILL BE HELD TO A MINIMUM.

ITEM 503 - UNCLASSIFIED EXCAVATION, AS PER PLAN

UNCLASSIFIED EXCAVATION SHALL BE IN ACCORDANCE WITH 503 EXCEPT THAT THE BACKFILL MATERIAL BEHIND THE ABUTMENTS SHALL BE 203 MATERIAL PLACED AND COMPACTED IN ACCORDANCE WITH 304.04.

ITEM 511 - CLASS C CONCRETE, AS PER PLAN

THE COARSE AGGREGATE SHALL BE NO. 57 LIMESTONE.

ITEM 511 - CONCRETE, MISC.: IPANEX ADMIXTURE

THE CONTRACTOR SHALL USE A WATERPROOFING ADMIXTURE IN ALL OF THE CONCRETE ABOVE FOOTING. THE WATERPROOFING ADMIXTURE SHALL BE IPANEX BY IPANEX SYSTEM, INC. P.O. BOX 26869, 2745 N. AMBER ST. PHILADELPHIA, PENNSYLVANIA 19134, (214) 425-5607. THE ADMIXTURE SHALL BE INCLUDED IN THE CONCRETE MIX AS PER MANUFACTURE RECOMMENDATIONS AND DOSAGE.

THE CONTRACTOR SHOULD NOTE THE USE OF THIS ADMIXTURE DOES NOT WAIVE ANY OF THE OTHER REQUIREMENTS OF CMS 511 AS TO STRENGTH, ENTRAINED AIR CONTENT, WORKABILITY, ETC. OF THEIR CONCRETE MIXES. THE MATERIALS SHALL MEET ALL OF THE REQUIREMENTS OF 511 AND 499.

THE IPANEX ADMIXTURE SHALL BE PAID FOR PER ITEM 511 CONCRETE, MISC.: IPANEX ADMIXTURE PER CUBIC YARD AND SHALL BE 100% COUNTY COST.

ITEM 511 - CLASS HP CONCRETE, AS PER PLAN

THE CONCRETE SHALL BE PROPORTIONED ACCORDING TO 499.03, CLASS HP3 OR HP4, WITH THE FOLLOWING ADDITIONAL REQUIREMENTS:

MIX PROPORTIONING:
THE COARSE AGGREGATE SHALL BE PREDOMINANTLY NO. 57 LIMESTONE.
NO GAP GRADING (8 TO 18 RULE).
COARSENESS FACTOR BETWEEN 75 AND 55. [(% CUM. RET. (⅜") / CUM. RET. (#8) X 100]
WORKABILITY FACTOR BETWEEN 32% AND 38%. [% CUM. PASS. (#8)]
CEMENT- MAXIMUM 470 POUNDS PER CUBIC YARD.
POZZOLONS- UP TO 25%. (IN ADDITION TO THE 470 POUNDS OF CEMENT)
WATER- 0.44 MAXIMUM WATER TO CEMENT RATIO.
0.42 MINIMUM WATER TO CEMENT RATIO.
MORTAR VOLUME (CEMENT + POZZOLON + WATER) - 27% MAXIMUM OF TOTAL VOLUME.
AIR ENTRAINMENT - 5.5% TO 8.5%.

CEMENT: TYPE II PORTLAND CEMENT, BLAINE: 280 TO 320 SQUARE METER PER KILOGRAM.
STRENGTH: 4,500 PSI, DESIGN ACCORDING TO ACI 301.
PLACEMENT:
LOW SLUMP WITHOUT SUPERPLASTICIZERS. 7" SLUMP MAXIMUM WITH SUPERPLASTICIZERS.
CONCRETE TEMPERATURE - 50 TO 75 DEGREES (F), WITHIN 35 DEGREES OF AIR AND FORMS TEMPERATURE.
EARLY FINISH - MAXIMUM 15 MINUTE, ONE PASS.
CURING - 511.17 A. METHOD A, WATER CURING.
MANUAL TINE GROOVING ACCEPTABLE IF IMMEDIATE.

ITEM 515 - PRESTRESSED CONCRETE BRIDGE I-BEAM MEMBERS, MISC.: GALVANIZED STEEL INTERMEDIATE DIAPHRAGM

STEEL SHALL BE GALVANIZED AFTER FABRICATION PER 711.02. THE CONTRACTOR SHALL BE VERY CAREFUL IN HANDLING THE GALVANIZED STEEL TO MINIMIZE SCRATCHES AND ABRASIONS OF THE FINISH. WIRE ROPE SLINGS AND METAL HOOKS SHALL BE PADDED WITH WOOD OR REINFORCED FABRIC WEBBING SHALL BE USED FOR MATERIAL HANDLING. SCRATCHES AND ABRASIONS OF THE GALVANIZED FINISH SHALL BE TOUCHED UP IN THE FIELD BY "COLD APPLIED GALVANIZING" AS DIRECTED BY THE ENGINEER. CONNECTION BOLTS FOR GALVANIZED STEEL MEMBERS SHALL BE MECHANICALLY GALVANIZED.

ITEM 516 - SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL, AS PER PLAN:

INSTALL A 3 FOOT WIDE STRIP, 3/32" THICK, GENERAL PURPOSE, HEAVY DUTY NEOPRENE SHEET WITH NYLON FABRIC REINFORCEMENT AT LOCATIONS SHOWN IN THE PLANS. SECURE THE 3 FOOT WIDE NEOPRENE SHEETING TO THE CONCRETE WITH 1¼"x#10 GAGE (LENGTHxSHANK DIAMETER) GALVANIZED BUTTON HEAD SPIKES THROUGH A 1 INCH OUTSIDE DIAMETER, #10 GAGE GALVANIZED WASHER. MAXIMUM FASTENER SPACING IS 9 INCHES. OTHER SIMILAR GALVANIZED DEVICES WHICH WILL NOT DAMAGE EITHER THE NEOPRENE OR THE CONCRETE MAY BE USED SUBJECT TO THE APPROVAL OF THE ENGINEER.

CENTER THE NEOPRENE STRIPS ON ALL JOINTS. FOR HORIZONTAL JOINTS, SECURE THE HORIZONTAL NEOPRENE STRIP BY USING A SINGLE LINE OF FASTENERS, STARTING AT 6 INCHES, +/-, FROM THE TOP OF THE NEOPRENE STRIP. FOR THE VERTICAL JOINTS SECURE THE VERTICAL NEOPRENE STRIP BY USING A SINGLE VERTICAL LINE OF FASTENERS, STARTING AT 6 INCHES, +/-, FROM THE VERTICAL EDGE OF THE NEOPRENE STRIP NEAREST TO THE CENTERLINE OF ROADWAY.

FOR VERTICAL JOINTS, INSTALL 2 ADDITIONAL FASTENERS AT 6 INCHES, CENTER TO CENTER, ACROSS THE TOP OF THE NEOPRENE STRIP ON THE SAME SIDE OF THE VERTICAL JOINT AS THE SINGLE VERTICAL ROW OF FASTENERS IS LOCATED.

THE VERTICAL NEOPRENE STRIPS SHOULD COMPLETELY OVERLAP THE HORIZONTAL STRIPS. LAPS IN THE LENGTH OF THE HORIZONTAL STRIPS THAT ARE NOT VULCANIZED OR ADHESIVELY BONDED SHALL BE AT LEAST 1 FOOT IN LENGTH OR 6 INCHES IN LENGTH IF THE LAP IS VULCANIZED OR ADHESIVE BONDED. NO LAPS ARE ACCEPTABLE IN VERTICALLY INSTALLED NEOPRENE STRIPS.

THE NEOPRENE SHEETING SHALL BE 3/32" THICK GENERAL PURPOSE, HEAVY DUTY NEOPRENE SHEET WITH NYLON FABRIC REINFORCEMENT. THE SHEETING SHALL BE "FAIRPRENE NUMBER NN-0003", BY E.I. DUPONT DE NEMOURS AND COMPANY, INC., "WINGPRENE" BY THE GOODYEAR TIRE AND RUBBER COMPANY, OR AN APPROVED ALTERNATE. THE NEOPRENE SHEETING SHALL CONFORM TO THE FOLLOWING:

DESCRIPTION OF TEST	ASTM METHOD	REQUIREMENT
THICKNESS, INCH	D751	0.094" +/- .01
BREAKING STRENGTH, GRAB WXF, LBS, MINIMUM	D751	700 x 700
ADHESIVE 1" STRIP, 2" MINIMUM, LBS MINUMUM	D751	9
BURST STRENGTH (MULLEN) PSI, MINIMUM	D751	1400
HEAT AGING 70 HOURS T 212° F, 180° BEND WITHOUT CRACKING	D2136	NO CRACKING OF COATING
LOW TEMPERATURE BRITTLENESS 1 HOUR AT -40° F. BEND AROUND ¼" MANDREL	D2136	NO CRACKING OF COATING

METHOD OF MEASUREMENT: THE DEPARTMENT WILL MEASURE THE TOTAL LENGTH OF JOINT TO BE SEALED BY THE NUMBER OF FEET.

BASIS OF PAYMENT: THE DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES AT THE CONTRACT PRICE FOR ITEM 516, SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL, AS PER PLAN.

ITEM 518 - POROUS BACKFILL WITH FILTER FABRIC, AS PER PLAN:

POROUS BACKFILL SHALL BE #57 GRAVEL ONLY.

ITEM 526 - REINFORCED CONCRETE APPROACH SLAB (T=17"), AS PER PLAN

THE SHAPE OF THE CURBING ON APPROACH SLABS SHALL BE TRANSITIONED FROM THE STANDARD SECTION ON THE APPROACHES TO THE SECTION USED ON THE BRIDGE, WITHIN THE LIMITS OF THE APPROACH SLAB. THE CONCRETE SHALL BE CLASS HP4 WITH THE SAME ADDITIONAL MIX REQUIREMENTS AS THE DECK CONCRETE

ITEM SPECIAL - PILE COATING

ALL ABUTMENT PILES SHALL BE COATED WITH A 40 TO 80 MIL BITUMINOUS COATING (1 MM TO 2 MM) THICK PER AASHOTO M243. THE COATING SHALL EXTEND 30 FOOT BELOW THE BOTTOM OF FOOTING TO REDUCE DOWN DRAG.

DECK PLACEMENT SEQUENCE

THE CONCRETE SHALL BE PLACED IN ONE CONTINUOUS OPERATION. THE CONCRETE DIAPHRAMS AT THE ABUTMENTS AND PIERS MUST BE PLACED WITH THE DECK CONCRETE. DIAPHRAM CONCRETE MAY NEED TO BE RETARDED TO PREVENT SET BEFORE ADJACENT DECKS ARE PLACED. THE CONTRACTOR SHALL SUBMIT HIS PLACEMENT PROCEDURE FOR APPROVAL.

ITEM 512 - SEALING OF CONCRETE SURFACES, AS PER PLAN

EPOXY URETHANE SHALL BE THE LIGHT NEUTRAL COLOR MEETING FEDERAL COLOR STANDARD NO. 17778. ALL ABUTMENT SURFACES AND PIER WALL SURFACES (EXCEPT TOP OF PIER) SHALL BE COMPLETELY SEALED DOWN TO GROUNDLINE WITH EPOXY-URETHANE. BEAM AND SUPERSTRUCTURE SHALL BE SEALED AS PER PLAN DETAILS.

NORFOLK SOUTHERN RAILROAD SPECIAL REQUIREMENTS

REFER TO THE SPECIAL CLAUSES IN THE PROPOSAL FOR REQUIREMENTS REGARDING WORK ON OR ABOVE RAILWAY PROPERTY.

THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER AND THE RAILWAY DETAILED EXCAVATION PLANS, TEMPORARY SHORING PLANS AND CALCULATIONS ALL PREPARED AND SIGNED BY A REGISTERED PROFESSIONAL ENGINEER SHOWING SIZES OF ALL TEMPORARY SHORING STRUCTURAL MEMBERS, DETAILS OF CONNECTIONS, AND EMBEDMENT DEPTH. THE PLANS SHALL INCLUDE A PLAN VIEW SHOWING ALL THE PROPOSED EXCAVATIONS AND THE DISTANCES FROM THE CENTERLINE OF THE TRACK. THE PLANS MUST BE COMPLETE AND ACCURATELY DESCRIBE THE WORK. THE PLANS AND CALCULATIONS MUST BE APPROVED BY THE RAILWAY AND THE ENGINEER BEFORE EXCAVATION BEGINS.

A TEMPORARY MINIMUM VERTICAL CLEARANCE OF 22'-0" ABOVE THE TOP OF RAIL ELEVATION (OR THE EXISTING CLEARANCE IF LESS THAN 22'-0") AND A TEMPORARY MINIMUM HORIZONTAL CLEARANCE OF 10'-0" AS MEASURED FROM THE TRACK CENTERLINE SHALL BE MAINTAINED TO ANY TEMPORARY FORM WORK, FALSE WORK, STOCKPILED MATERIALS, OR OTHER OBSTRUCTION WHICH WILL BE LEFT IN PLACE DURING TRAIN MOVEMENTS THROUGH THE JOB SITE.

UPON COMPLETION OF THE WORK ON RAILROAD PROPERTY, THE CONTRACTOR SHALL REQUEST THE ENGINEER TO ARRANGE A FINAL INSPECTION OF THE PROJECT WITH THE RAILWAY'S DIVISION ENGINEER OR HIS AUTHORIZED REPRESENTATIVE.

TO PROTECT THE RAILROAD TRACKS DURING THE PIER FOOTING CONSTRUCTION, TEMPORARY SHEET PILING WITH A MINIMUM SECTION MODULUS OF 10 IN³/FT SHALL BE DRIVEN TO A MINIMUM DEPTH OF 15 FOOT BELOW THE BOTTOM OF FOOTING. THE SHEET PILING SHALL BE CUT TO FIT AROUND THE 102 INCH TUNNEL LINER PLATE (72 INCH SEWER). THIS LOCATION SHALL BE REINFORCED WITH A W18x55 TOP AND BOTTOM HORIZONTAL WHALER OR SIMILAR SECTION WITH TWO CONTINUOUS 5/16 INCH FILLET WELDS TO FLANGE. ALTERNATE SHORING OPTIONS MAY BE PROPOSED BY THE CONTRACTOR AT THE SEWER. THIS TRACK PROTECTION WORK SHALL BE INCLUDED WITH ITEM 503- COFFERDAMS, CRIBS AND SHEETING, AS PER PLAN FOR PAYMENT.

SURVEY DISC ON STRUCTURE

THE CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST ONE (1) WEEK IN ADVANCE OF POURING THE CONCRETE FOR COMPLETION OF THE ABUTMENT. THE ENGINEER WILL PROVIDE THE CONTRACTOR ONE (1) SURVEY DISC FOR EACH STRUCTURE (OBTAINED FROM THE DISTRICT SURVEYOR) WHICH THE CONTRACTOR SHALL PLACE IN THE SURFACE OF THE HEADWALL/ABUTMENT. AND ON A FLAT, HORIZONTAL SURFACE BEYOND THE EDGE OF THE DECK AND GUARDRAIL OR PARAPET. THE BENCHMARK SHALL BE ACCESSIBLE TO A SURVEYOR'S ROD WITHOUT ANY OBSTRUCTIONS. COST OF THIS WORK IS CONSIDERED INCIDENTAL TO THE CONTRACTORS BID ITEM.

GENERAL NOTES CONTINUED SEE SHEET 3 / 22 .

RICHLAND ENGINEERING LIMITED
29 NORTH PARK STREET
MANSFIELD, OHIO 44902

DESIGNED	DRAWN	REVIEWED	DATE
BLN	SJK	DAP	12/20/05
CHECKED	REVISED	STRUCTURE FILE NUMBER	
KAK		7034601	

GENERAL NOTES
BRIDGE NO. RIC-CR424-0062
OVER NORFOLK SOUTHERN RAILWAY

RIC-CR424-0.62

088SGN.DGN 12/28/05 TWH,RC,MLB

ESTIMATED QUANTITIES

CALCULATED BLN DATED 9/04
CHECKED ALP DATED 10/04

ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	SUPER	ABUTS.	PIERS	GEN'L	SEE SHEET
503	11101	LUMP		COFFERDAMS, CRIBS AND SHEETING, AS PER PLAN				LUMP	2 / 22
503	21101	654	CU.YD.	UNCLASSIFIED EXCAVATION, AS PER PLAN		448	206		2 / 22
505	11100	LUMP		PILE DRIVING EQUIPMENT MOBILIZATION				LUMP	
507	00600	5040	FOOT	14" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN		5040			
507	00650	5320	FOOT	14" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED **		5320			
507	00700	3900	FOOT	16" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN			3900		
507	00750	4160	FOOT	16" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED **			4160		
SPEC	50771500	1680	FOOT	PILE COATING (BITUMINOUS COATING, 40 TO 80 MILS, (1MM TO 2MM) THICK)		1680			2 / 22
507	92200	90	FOOT	PREBORED HOLES			90		
509	10000	220,037	POUND	EPOXY COATED REINFORCING STEEL **	137,185	23,342	59,510		
511	42001	268	CU.YD.	CLASS C CONCRETE, PIER ABOVE FOOTINGS, AS PER PLAN			268		2 / 22
511	43501	272	CU.YD.	CLASS C CONCRETE, ABUTMENT INCLUDING FOOTING, AS PER PLAN		272			2 / 22
511	46501	123	CU.YD.	CLASS C CONCRETE, FOOTING, AS PER PLAN			123		2 / 22
511	50001	877	CU.YD.	CLASS HP CONCRETE, BRIDGE DECK, AS PER PLAN	877				2 / 22
511	50101	75	CU.YD.	CLASS HP CONCRETE, BRIDGE DECK (PARAPET), AS PER PLAN	75				2 / 22
511	71100	1334	CU.YD.	CONCRETE, MISC.: IPANEX ADMIXTURE *	952	114	268		2 / 22
512	10050	590	SQ.YD.	SEALING OF CONCRETE SURFACES (NON-EPOXY)	590				2 / 22
512	10101	2457	SQ.YD.	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN	1932	85	440		2 / 22
515	15050	18	EACH	DRAPED STRAND PRESTRESSED CONCRETE BRIDGE I-BEAM MEMBERS, LEVEL 3, TYPE 4 MODIFIED (72")	18				
515	16000	45	EACH	PRESTRESSED CONCRETE BRIDGE I-BEAM MEMBERS, MISC.: GALVANIZED STEEL INTERMEDIATE DIAPHRAGM	45				2 / 22
516	13900	111	SQ.FT.	2" PREFORMED EXPANSION JOINT FILLER		111			
516	14021	164	FOOT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL, AS PER PLAN		164			2 / 22
516	44000	24	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (1.984" X 13.25" X 22.00" PAD AND 2" X 14¼" X 2'-1½" BEV. PLATE)			24		
516	44200	12	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (3.243" X 13.25" X 22.00" PAD AND 2" X 10" X 2'-1½" AND 2" X 14¼" X 23" PLATES AND W18 X 60 SECTION)		12			
518	21231	LUMP		POROUS BACKFILL WITH FILTER FABRIC, AS PER PLAN		LUMP			2 / 22
518	40000	203	FOOT	6" PERFORATED CORRUGATED PLASTIC PIPE		203			
518	40010	23	FOOT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS		23			
523	20000	2	EACH	DYNAMIC LOAD TESTING		1	1		
523	20500	8	EACH	RESTRIKING		4	4		
526	30001	237	SQ.YD.	REINFORCED CONCRETE APPROACH SLAB (T=17"), AS PER PLAN				237	2 / 22
SPEC	60739900	702	FOOT	VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC	702				10 / 22

* THIS ITEM SHALL BE PAID FOR AS 100% COUNTY COST

** SEE PROPOSAL NOTE

GENERAL NOTES CONTINUED:

PILE DRIVING CONSTRAINTS

PRIOR TO DRIVING PILES, CONSTRUCT THE SPILL THROUGH SLOPES AND THE BRIDGE APPROACH EMBANKMENT BEHIND THE ABUTMENTS UP TO THE LEVEL OF THE SUBGRADE ELEVATION FOR A MINIMUM DISTANCE OF 200 FEET BEHIND EACH ABUTMENT. DO NOT BEGIN THE EXCAVATION FOR THE ABUTMENT FOOTINGS AND THE INSTALLATION OF THE ABUTMENT PILES UNTIL AFTER THE ABOVE REQUIRED EMBANKMENT HAS BEEN CONSTRUCTED. SEE EMBANKMENT SETTLEMENT NOTE (SHEET 9 OF 153) FOR FURTHER REQUIREMENTS.

BATTERED PILES

THE BLOW COUNT FOR BATTERED PILES SHALL BE THE BLOW COUNT DETERMINED FOR VERTICAL PILES OF THE SAME ULTIMATE BEARING VALUE DIVIDED BY AN EFFICIENCY FACTOR (D). COMPUTE THE EFFICIENCY FACTOR (D) AS FOLLOWS.

$$D = \frac{1-UG}{\sqrt{(1+G^2)}}$$

U = COEFFICIENT OF FRICTION, WHICH IS ESTIMATED AT 0.05 FOR DOUBLE-ACTING AIR OPERATED OR DIESEL HAMMERS; 0.1 FOR SINGLE-ACTING AIR OPERATED OR DIESEL HAMMERS; AND 0.2 FOR DROP HAMMERS.

G = RATE OF BATTER (1/3, 1/4, ETC.)

PILE DESIGN LOADS (ULTIMATE BEARING VALUE):

THE ULTIMATE BEARING VALUE IS 106 TONS PER PILE FOR THE 14 INCH CAST-IN-PLACE REINFORCED CONCRETE ABUTMENT PILES, INCLUDING DOWN DRAG. THE ULTIMATE BEARING VALUE IS 172 TONS PER PILE FOR THE 16 INCH CAST-IN-PLACE REINFORCED CONCRETE PIER PILES. THE ADDITION OF 30 TONS OF ULTIMATE BEARING VALUE PER ABUTMENT PILE IS DUE TO THE POSSIBILITY OF DOWN DRAG FORCES INDUCED BY EMBANKMENT SETTLEMENT.

ABUTMENT PILES:
56 PILES 95 FEET LONG, ORDER LENGTH
1 DYNAMIC LOAD TESTING ITEMS
4 RESTRIKE ITEMS

PIER PILES:
52 PILES 80 FEET LONG, ORDER LENGTH
1 DYNAMIC LOAD TESTING ITEMS
4 RESTRIKE ITEMS

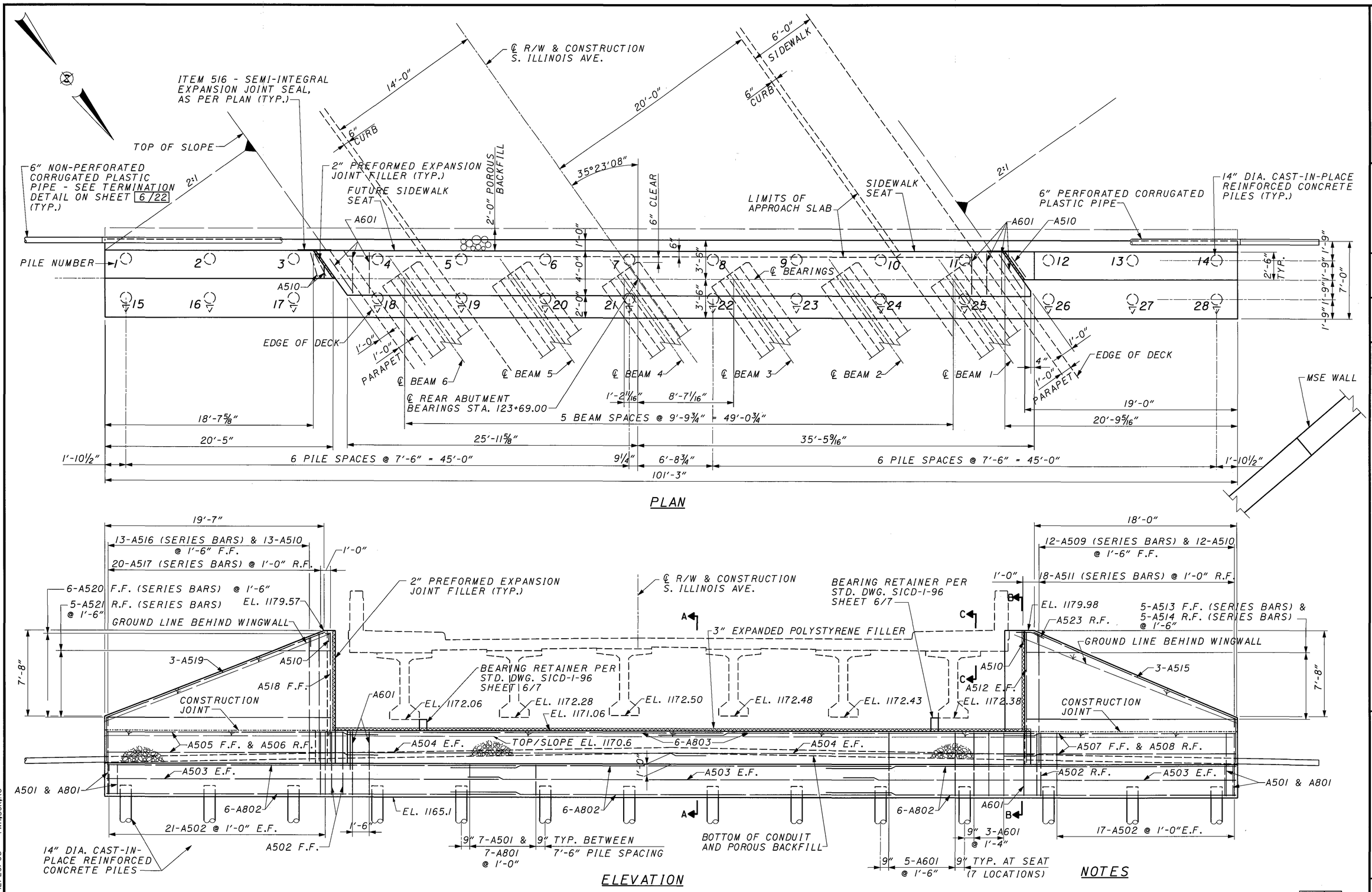
RICHLAND ENGINEERING LIMITED
29 NORTH PARK STREET
MANSFIELD, OHIO 44902

REVIEWED DAP 12/20/05
DATE
STRUCTURE FILE NUMBER 7034601
DRAWN SJK
REVISED
DESIGNED BLN
CHECKED KAK

GENERAL NOTES & ESTIMATED QUANTITIES
BRIDGE NO. RIC-CR424-0062
OVER NORFOLK SOUTHERN RAILWAY

RIC-CR424-0.62

088EQ.DGN 12/28/05 TWH,RC,MLB



LEGEND

INDICATES PILE BATTER OF 1:4

NOTES

SECTION A-A, B-B & C-C: SEE SHEET 6/22 .

ADDITIONAL NOTES: SEE SHEET 6/22 .

RICHLAND ENGINEERING LIMITED
29 NORTH PARK STREET
MANSFIELD, OHIO 44902

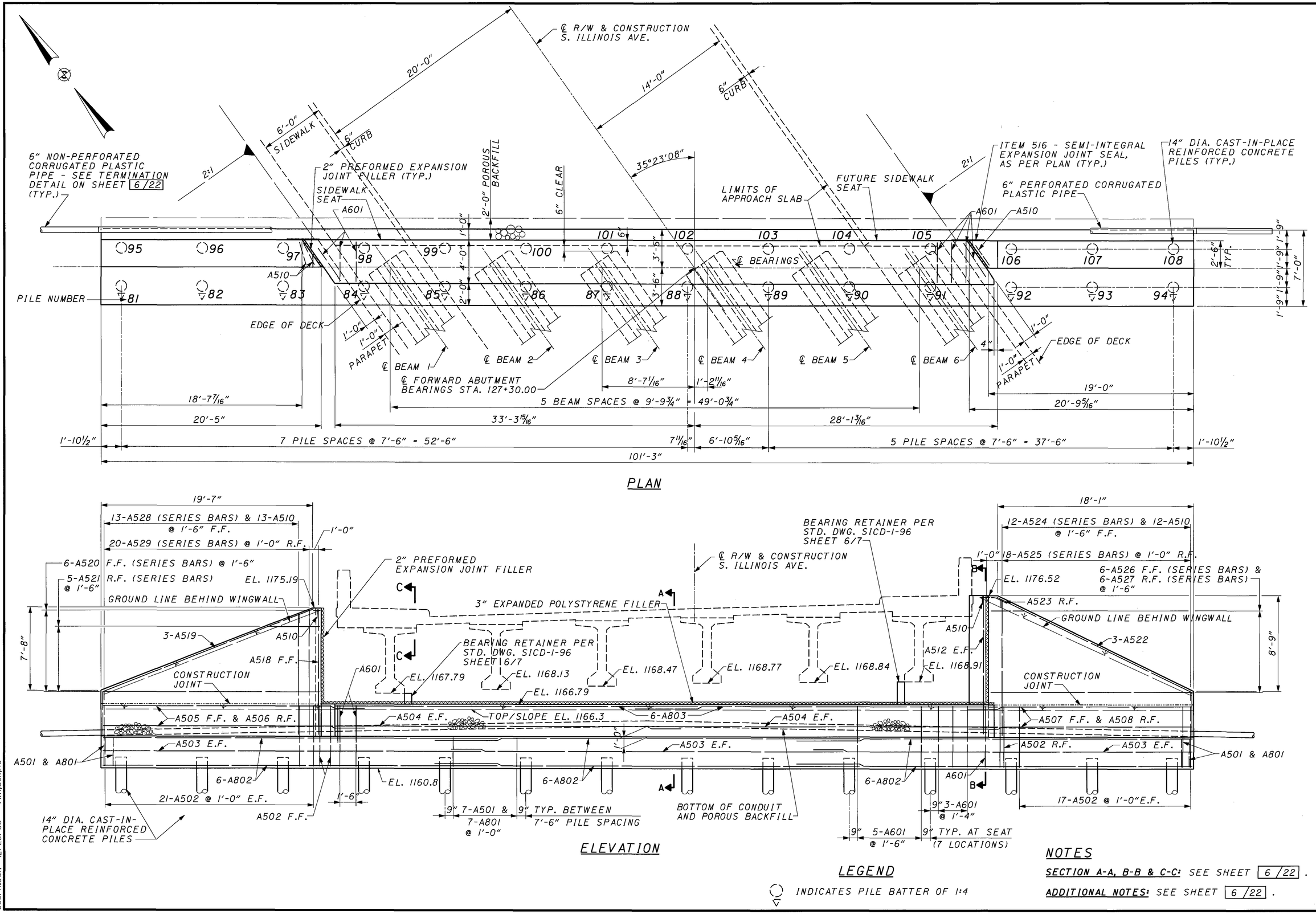
DESIGNED	DRAWN	REVIEWED	DATE
BLN	TWH	DAP	12/20/05
CHECKED	REVISED	STRUCTURE FILE NUMBER	
KAK		7034601	

REAR ABUTMENT DETAILS

BRIDGE NO. RIC-CR424-0062
OVER NORFOLK SOUTHERN RAILWAY

RIC-CR424-0.62

088RA.DGN 12/28/05 TWH,SJK,RC



RICHLAND ENGINEERING LIMITED
29 NORTH PARK STREET
MANSFIELD, OHIO 44902

DESIGNED	DRAWN	REVIEWED	DATE
BLN	TWH	DAP	12/20/05
CHECKED	REVISED	STRUCTURE FILE NUMBER	
KAK		7034601	

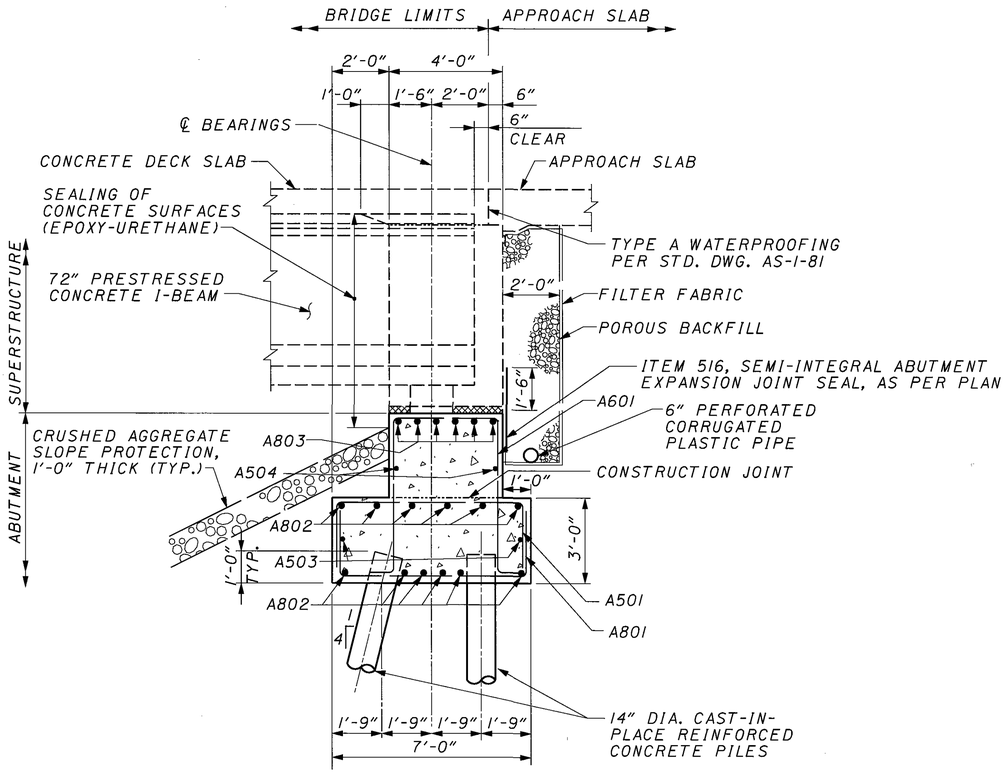
FORWARD ABUTMENT DETAILS
BRIDGE NO. RIC-CR424-0062
OVER NORFOLK SOUTHERN RAILWAY

RIC-CR424-0.62

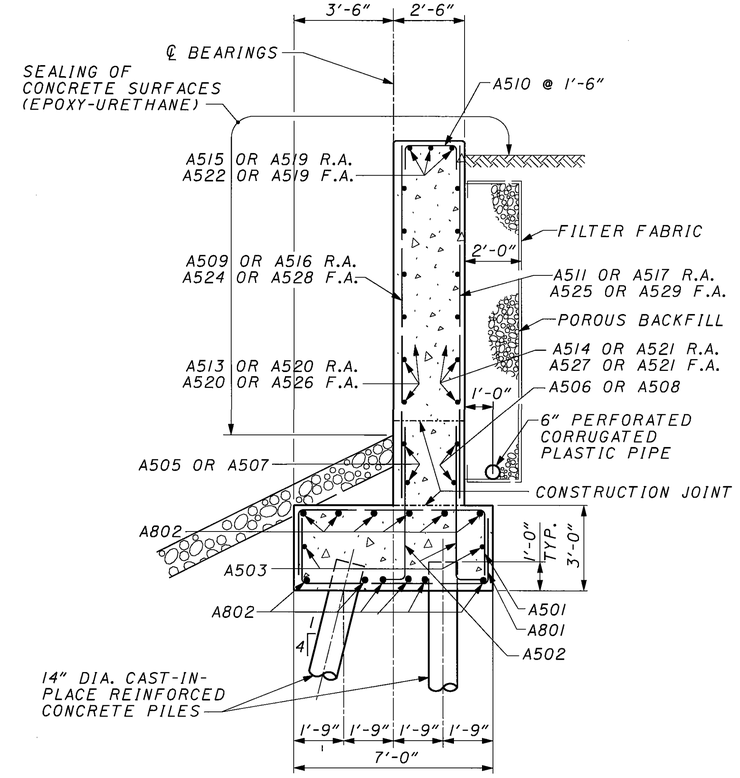
5/22

114/153

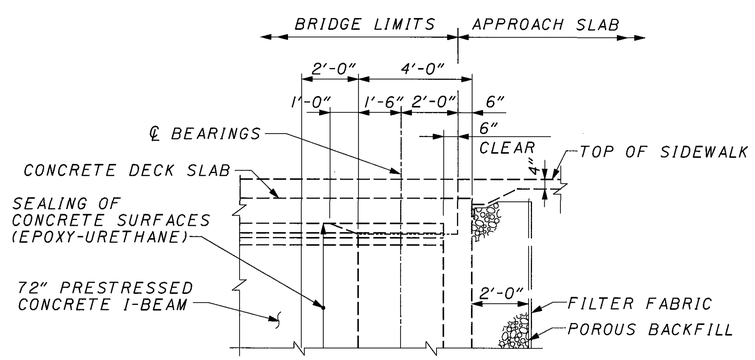
088FA.DGN 12/28/05 TWH,SJK,RC



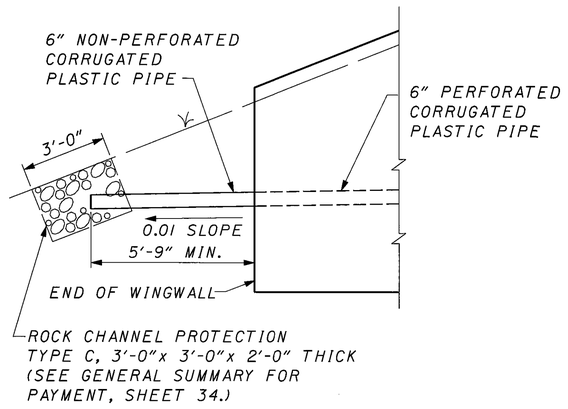
SECTION A-A



SECTION B-B



SECTION C-C



TERMINATION OF 6" NON-PERFORATED CONDUIT

NOTES

REINFORCING STEEL SPLICE LENGTHS SHALL BE 2'-0" FOR VERTICAL #5 BARS, 2'-9" FOR HORIZONTAL #5 BARS, 5'-10" FOR #8 BARS.

POROUS BACKFILL WITH FILTER FABRIC, 2'-0" THICK, SHALL EXTEND UP TO THE PLANE OF THE SUBGRADE, TO ONE FOOT BELOW THE EMBANKMENT SURFACE, AND LATERALLY TO THE ENDS OF THE WINGWALLS. GEOTEXTILE FABRIC SHALL CONFORM WITH 712.09, TYPE A. THE BOTTOM OF THE POROUS BACKFILL SHALL BE SLOPED LATERALLY TO DRAIN. GEOTEXTILE FABRIC IS INCLUDED WITH POROUS BACKFILL FOR PAYMENT.

SECTION A-A, B-B, & C-C: FOR LOCATION SEE SHEETS 4/22 & 5/22.

NOTATION: R.A. - REAR ABUTMENT
F.A. - FORWARD ABUTMENT
E.F. - EACH FACE
R.F. - REAR FACE
F.F. - FRONT FACE
TYP. - TYPICAL

RICHLAND ENGINEERING LIMITED
29 NORTH PARK STREET
MANSFIELD, OHIO 44902

DESIGNED BLN | DRAWN TWH | REVIEWED DAP | DATE 12/20/05 | CHECKED KAK | REVISED | STRUCTURE FILE NUMBER 7034601

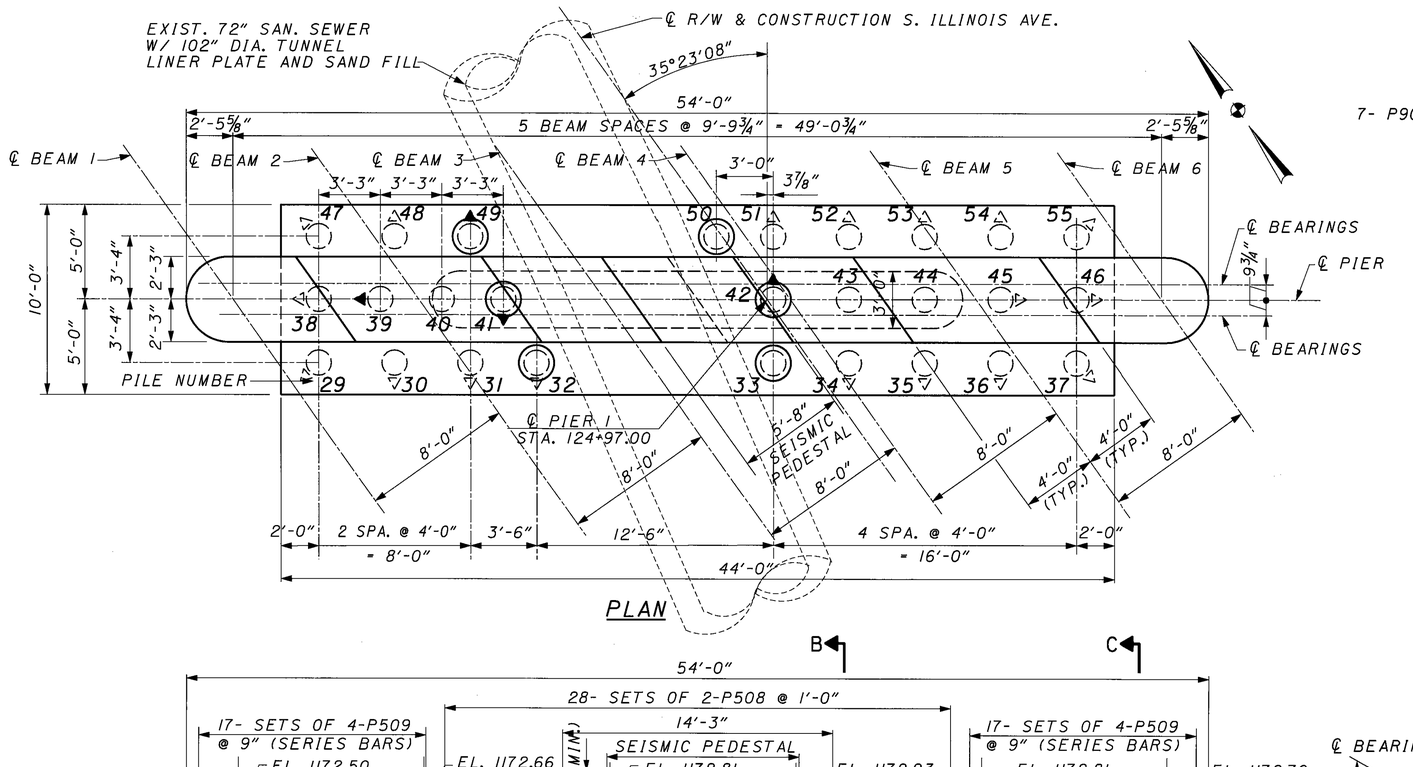
ABUTMENT DETAILS
BRIDGE NO. RIC-CR424-0062
OVER NORFOLK SOUTHERN RAILWAY

RIC-CR424-0.62

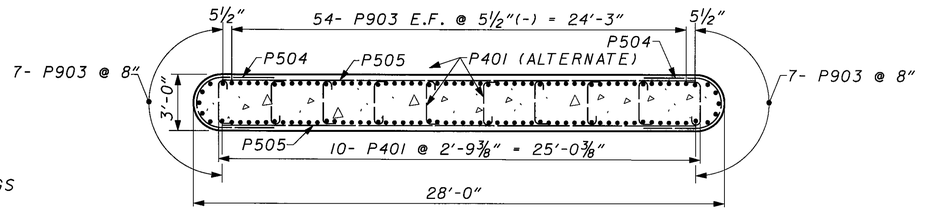
6 / 22

115 / 153

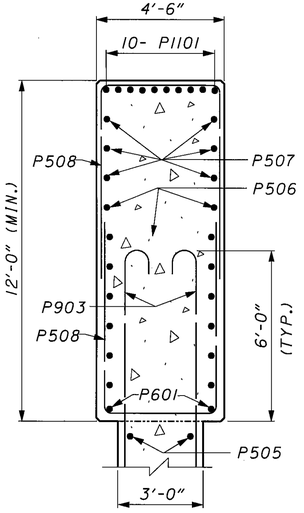
088RAD.DGN 12/28/05 SJK,TWH,RC



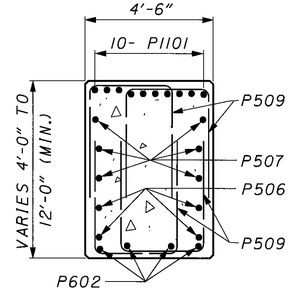
PLAN



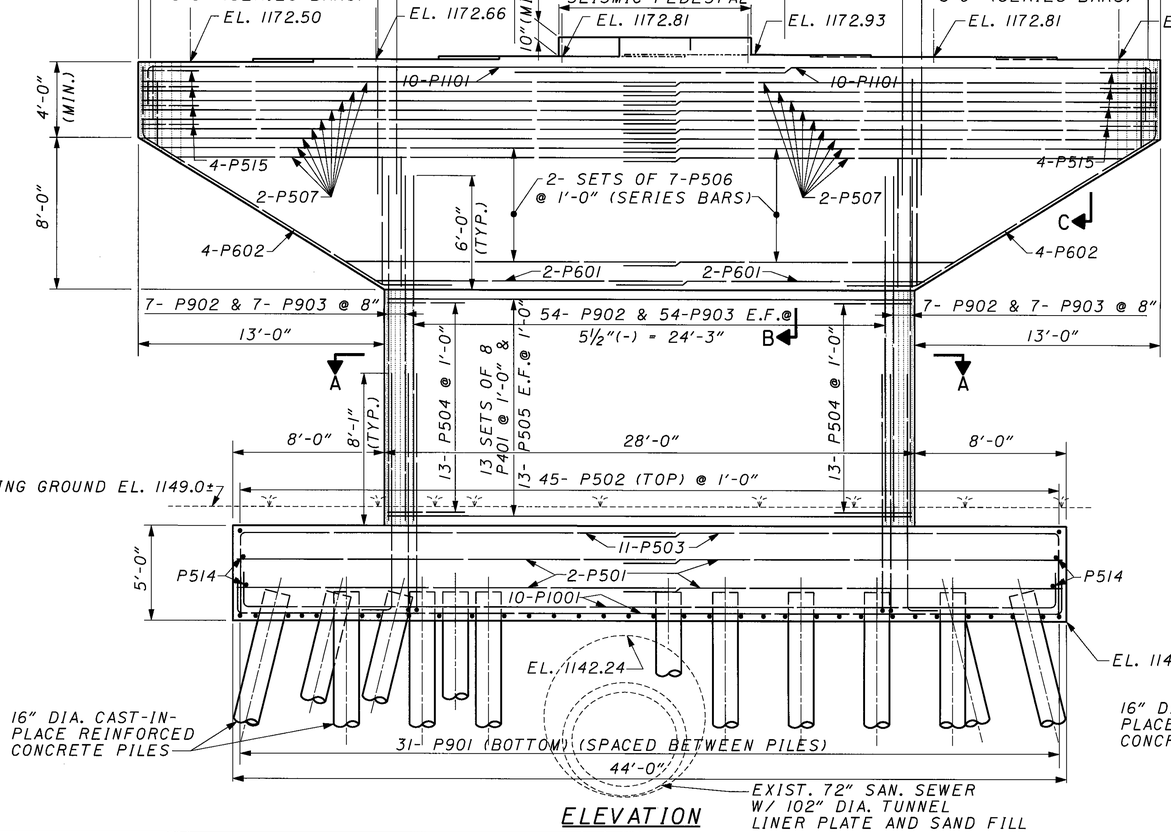
SECTION A-A



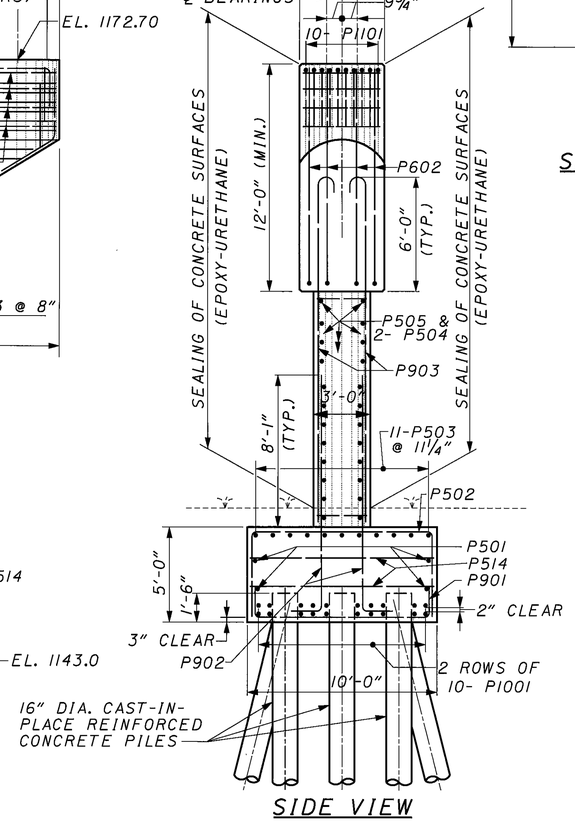
SECTION B-B



SECTION C-C



ELEVATION



SIDE VIEW

LEGEND

- INDICATES PILE BATTER OF 1:6
- INDICATES PILE BATTER OF 1:6 @ 45°
- INDICATES PILE BATTER OF 1:8
- INDICATES PREBORED HOLES (10 FEET OR BELOW SEWER)

NOTES

REINFORCING STEEL SPLICE LENGTHS SHALL BE 2'-0" FOR #5 VERTICAL BARS, 2'-9" FOR #5 HORIZONTAL BARS, 3'-1" FOR #6 VERTICAL BARS, 3'-6" FOR #6 HORIZONTAL BARS.

SEISMIC PEDESTAL DETAIL: SEE SHEET 9 / 22 .

NOTATION: F.F. - FRONT FACE
R.F. - REAR FACE
E.F. - EACH FACE

RICHLAND ENGINEERING LIMITED
29 NORTH PARK STREET
MANSFIELD, OHIO 44902

DESIGNED BLN | DRAWN TWH | CHECKED KAK | REVIEWED DAP | DATE 12/20/05 | REVISED | STRUCTURE FILE NUMBER 7034601

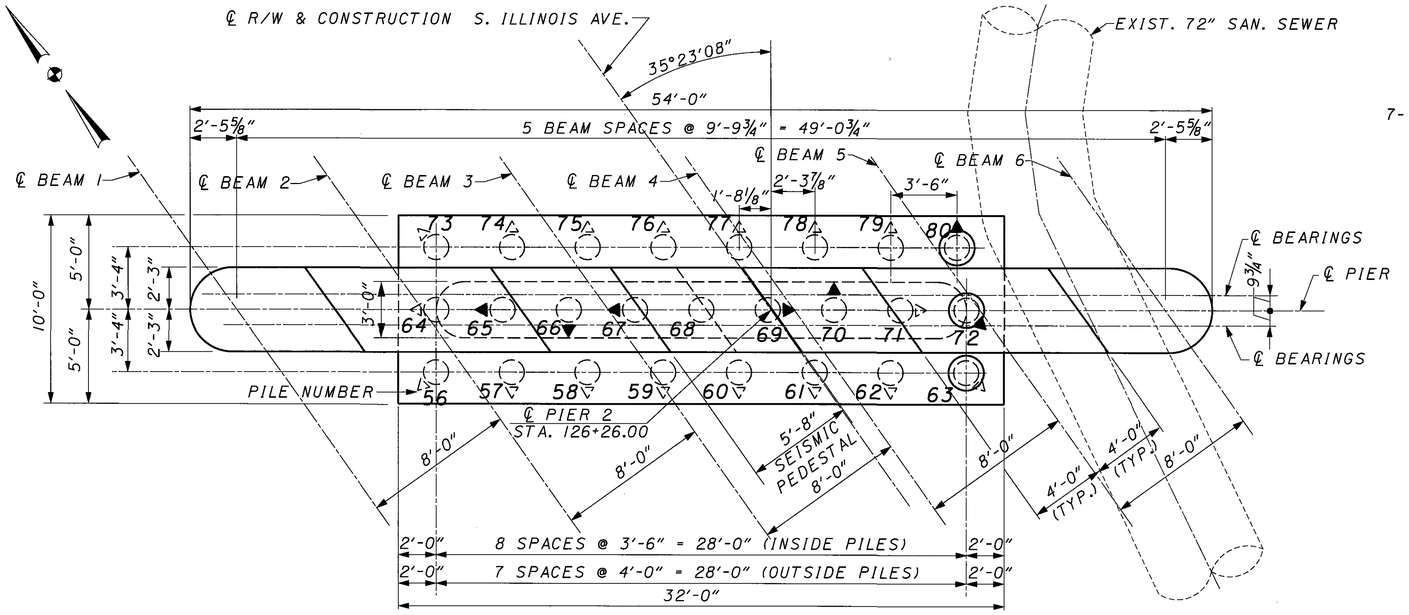
PIER 1 DETAILS
BRIDGE NO. RIC-CR424-0062
OVER NORFOLK SOUTHERN RAILWAY

RIC-CR424-0.62

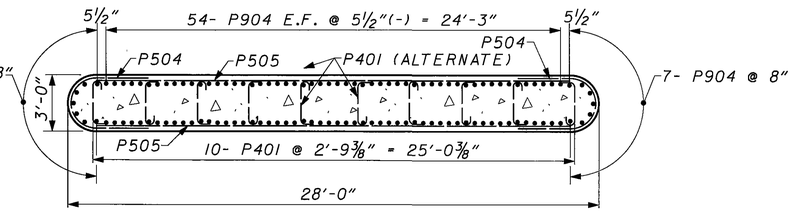
7/22

116/153

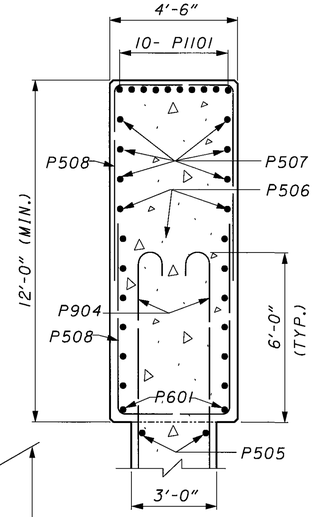
088P1.DGN 12/28/05 SJK,TWH,RC



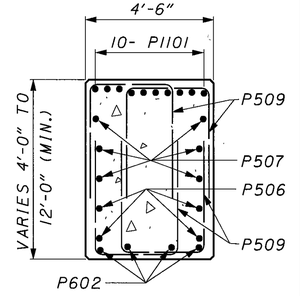
PLAN



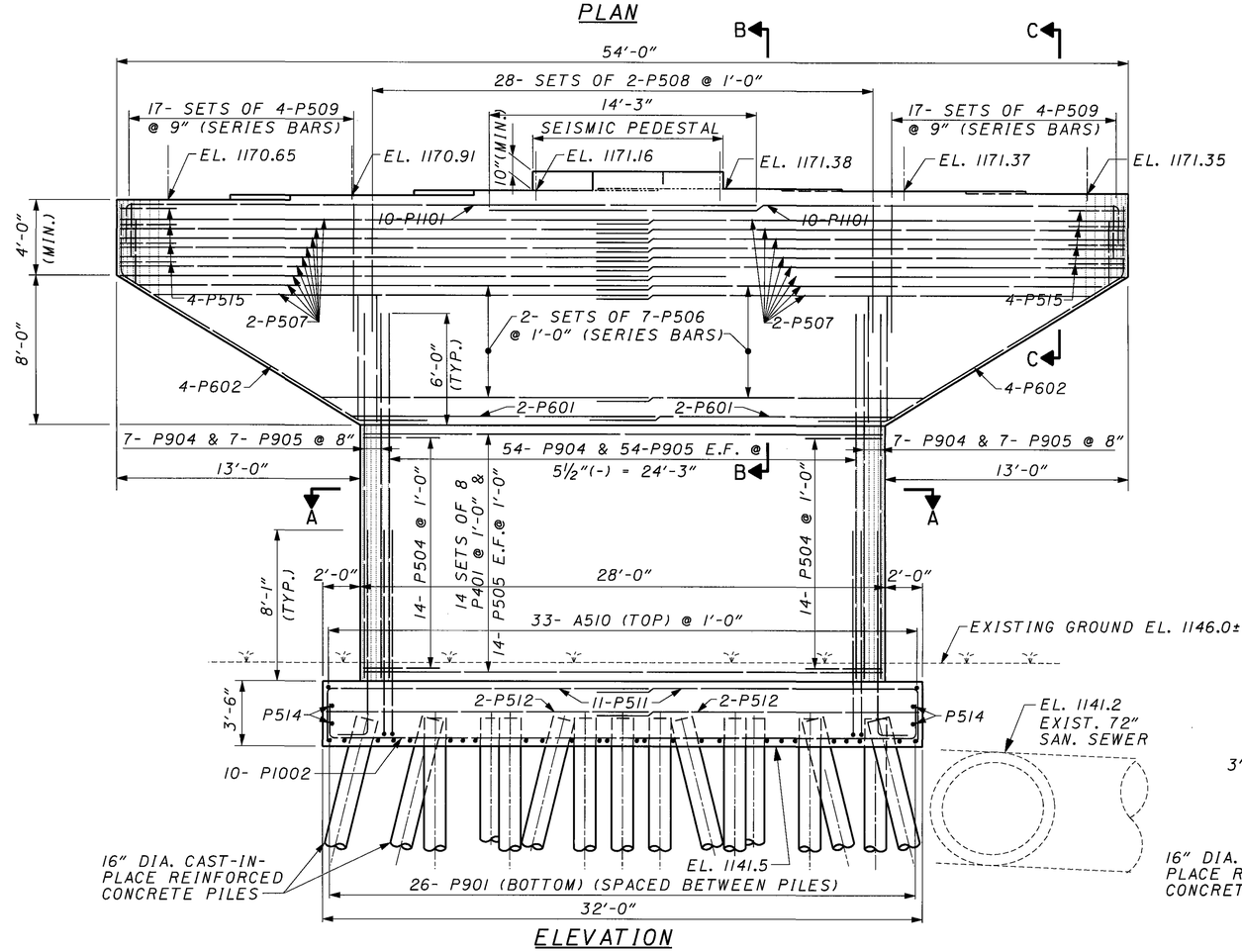
SECTION A-A



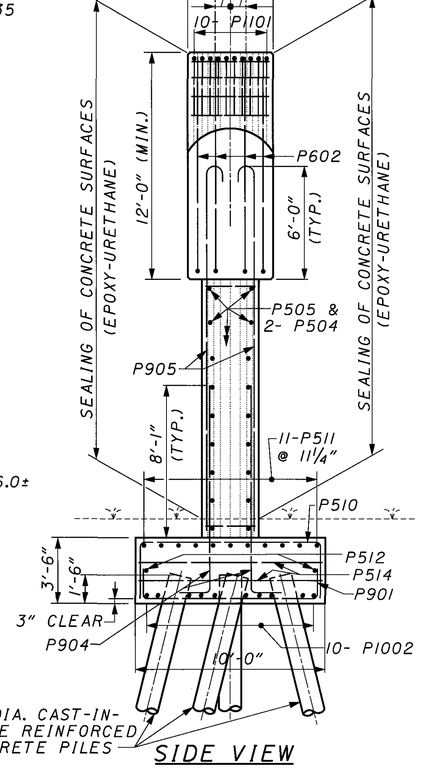
SECTION B-B



SECTION C-C



ELEVATION



SIDE VIEW

LEGEND

- INDICATES PILE BATTER OF 1:6
- INDICATES PILE BATTER OF 1:6 @ 45°
- INDICATES PILE BATTER OF 1:8
- INDICATES PREBORED HOLES (10 FEET OR BELOW SEWER)

NOTES

ADDITIONAL NOTES: SEE SHEET 7/22.

RICHLAND ENGINEERING LIMITED
29 NORTH PARK STREET
MANSFIELD, OHIO 44902

DESIGNED BLN | DRAWN RRB | CHECKED KAK | REVISED

REVIEWED DAP 12/20/05 | STRUCTURE FILE NUMBER 7034601

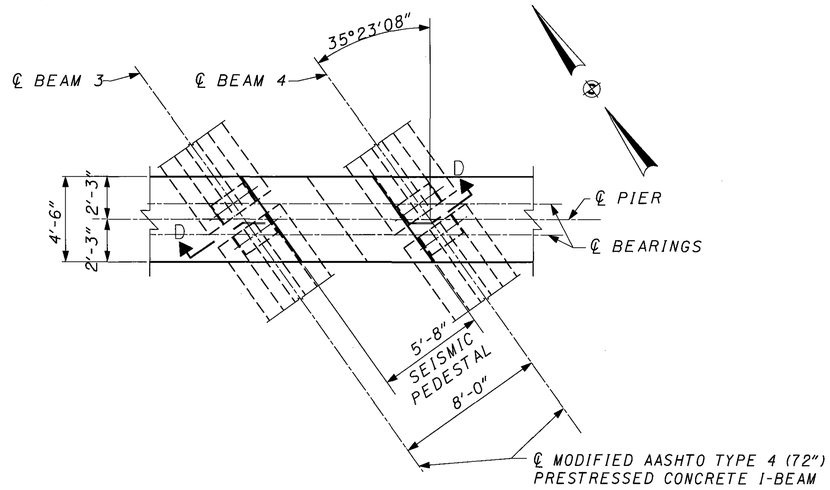
PIER 2 DETAILS
BRIDGE NO. RIC-CR424-0062
OVER NORFOLK SOUTHERN RAILWAY

RIC-CR424-0.62

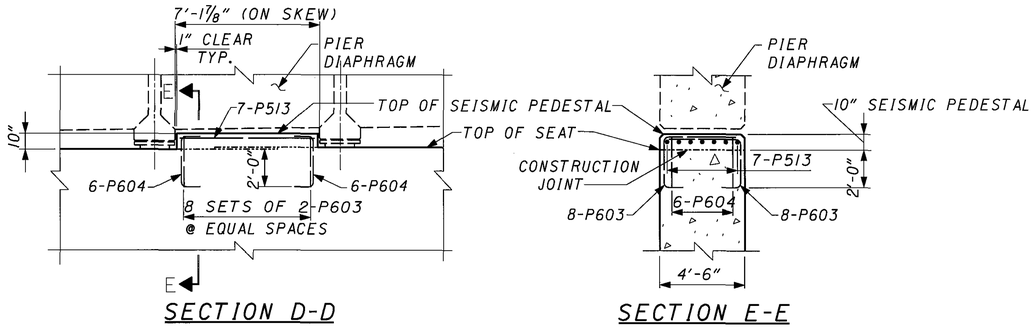
8/22

117/153

088P12.DGN 12/28/05 TWH,RC



PLAN



SECTION D-D

SECTION E-E

SEISMIC PEDESTAL DETAIL

NOTE:

SEISMIC PEDESTAL: FOR LOCATIONS SEE SHEET 7/22 & 8/22 .

088PD.DGN 12/28/05 TWH,RC

RICHLAND ENGINEERING LIMITED
29 NORTH PARK STREET
MANSFIELD, OHIO 44902

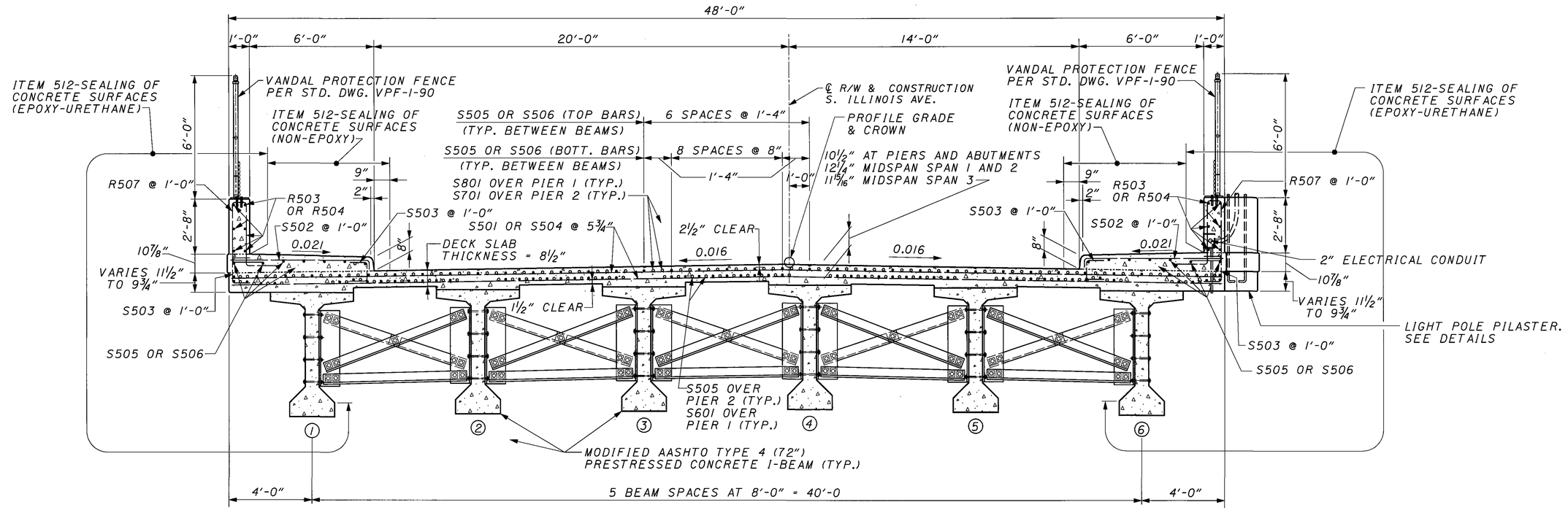
DESIGNED	DRAWN	REVIEWED	DATE
BLN	TWH	DAP	12/20/05
CHECKED	REVISED	STRUCTURE FILE NUMBER	
KAK		7034601	

PIER DETAILS
BRIDGE NO. RIC-CR424-0062
OVER NORFOLK SOUTHERN RAILWAY

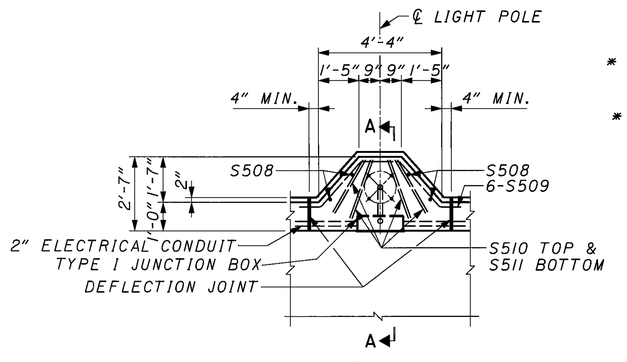
RIC-CR424-0.62

9/22

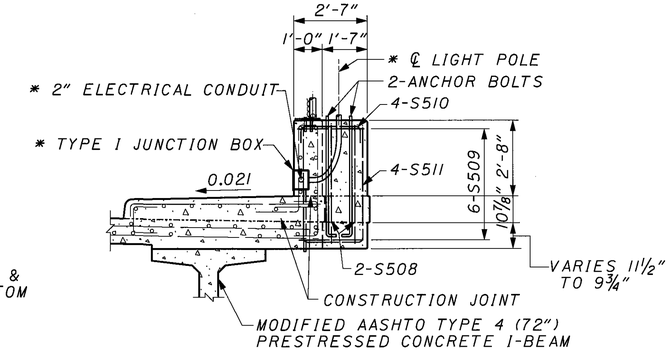
118
153



TRANSVERSE SECTION

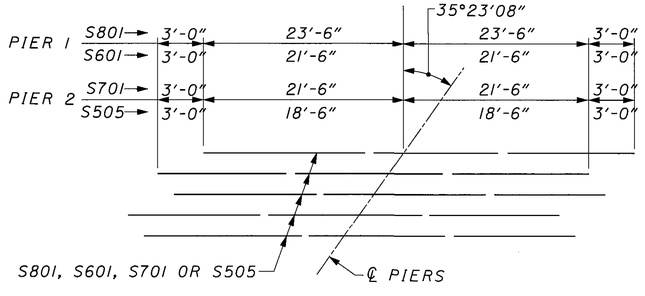


PLAN



SECTION A-A

* SEE GENERAL SUMMARY, SHEET 102



S801 OR S701 (TOP BARS) S601 OR S505 (BOTTOM BARS) STAGGER BARS OVER PIERS

LIGHT POLE PILASTER DETAILS

NOTES

REINFORCING STEEL SPLICE LENGTHS SHALL BE 2'-0" FOR #4 BARS, 2'-6" FOR #5 BARS AND 3'-0" FOR #6 BARS.

PRESTRESSED CONCRETE I-BEAM DETAILS:
SEE STANDARD DRAWING PSID-1-99

RAILING DETAILS:
SEE STANDARD DRAWING BR-2-98

PILASTER DETAILS:
SEE STANDARD DRAWING HL-20.14M, FOR LOCATION OF PILASTERS SEE SHEET 15/22.

RICHLAND ENGINEERING LIMITED
29 NORTH PARK STREET
MANSFIELD, OHIO 44902

DESIGNED BLN | DRAWN TWH | CHECKED KAK | REVIEWED DAP | DATE 12/20/05 | STRUCTURE FILE NUMBER 7034601 | REVISED

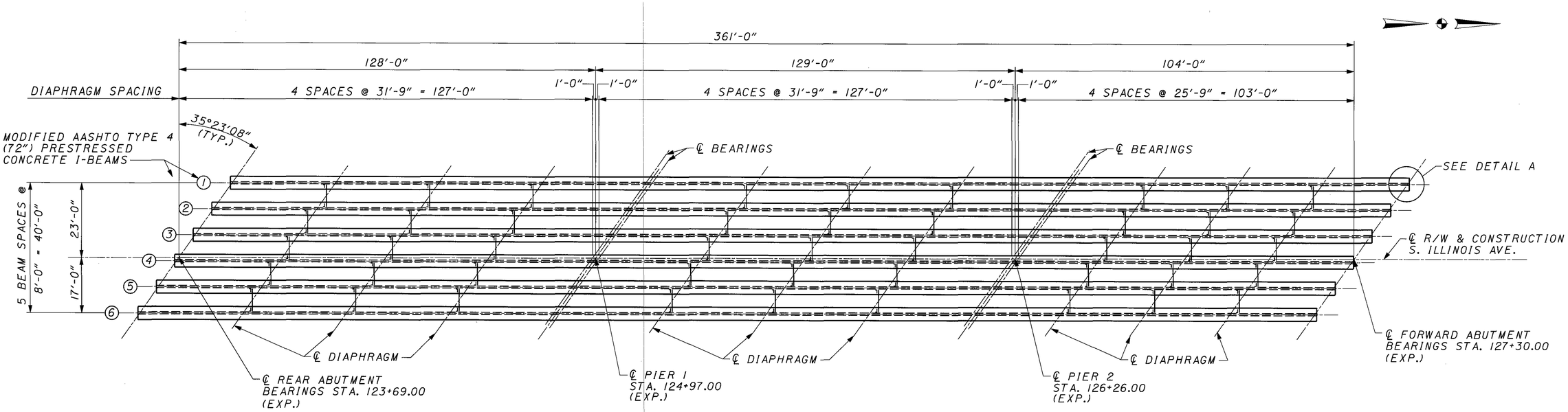
TRANSVERSE SECTION
BRIDGE NO. RIC-CR424-0062
OVER NORFOLK SOUTHERN RAILWAY

RIC-CR424-0.62

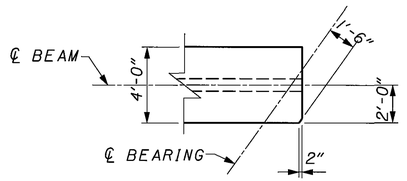
10/22

119/153

088TS.DGN 12/28/05 KH,TWH,RC,MLB



FRAMING PLAN



DETAIL A

TYPICAL AT ABUTMENT END
OF ALL BEAMS (TOP FLANGE ONLY)

NOTES

TRANSVERSE SECTION: SEE SHEET 10/22 .

I-BEAM DETAILS: SEE SHEET 12/22 & 13/22.

RICHLAND ENGINEERING LIMITED
29 NORTH PARK STREET
MANSFIELD, OHIO 44902

DESIGNED BLN | DRAWN TWH | CHECKED KAK | REVISED

REVIEWED DAP 12/20/05 | DATE

STRUCTURE FILE NUMBER 7034601

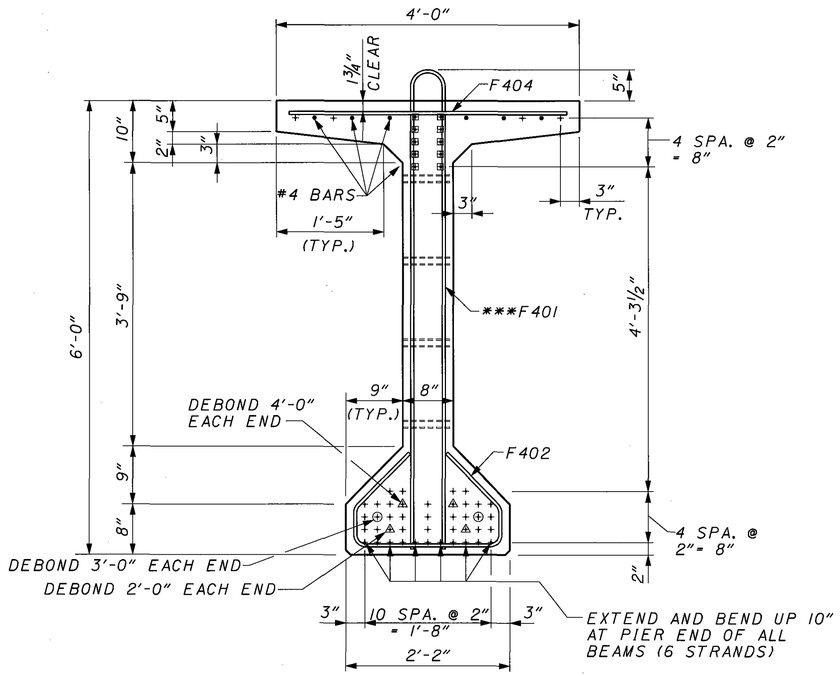
FRAMING PLAN
BRIDGE NO. RIC-CR424-0062
OVER NORFOLK SOUTHERN RAILWAY

RIC-CR424-0.62

11/22

(120/153)

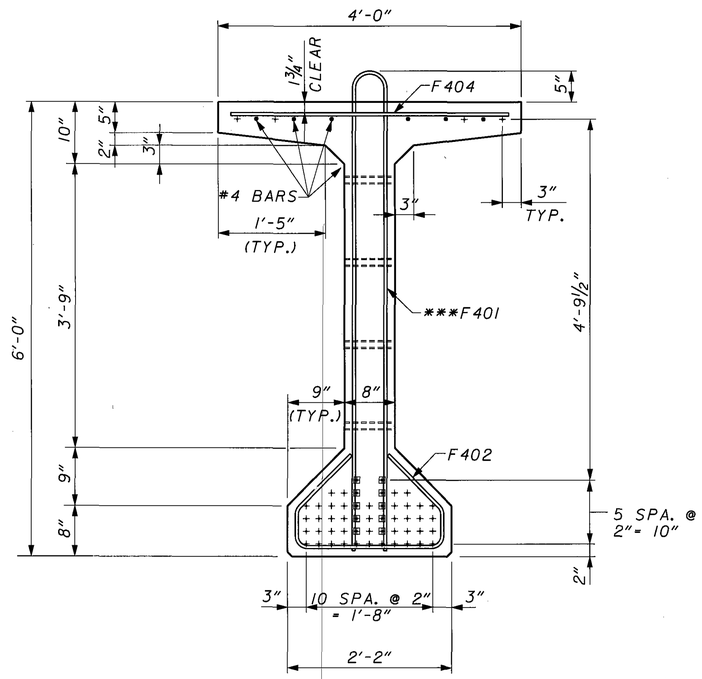
088SD1.DGN 12/28/05 SJK, TWH, RC



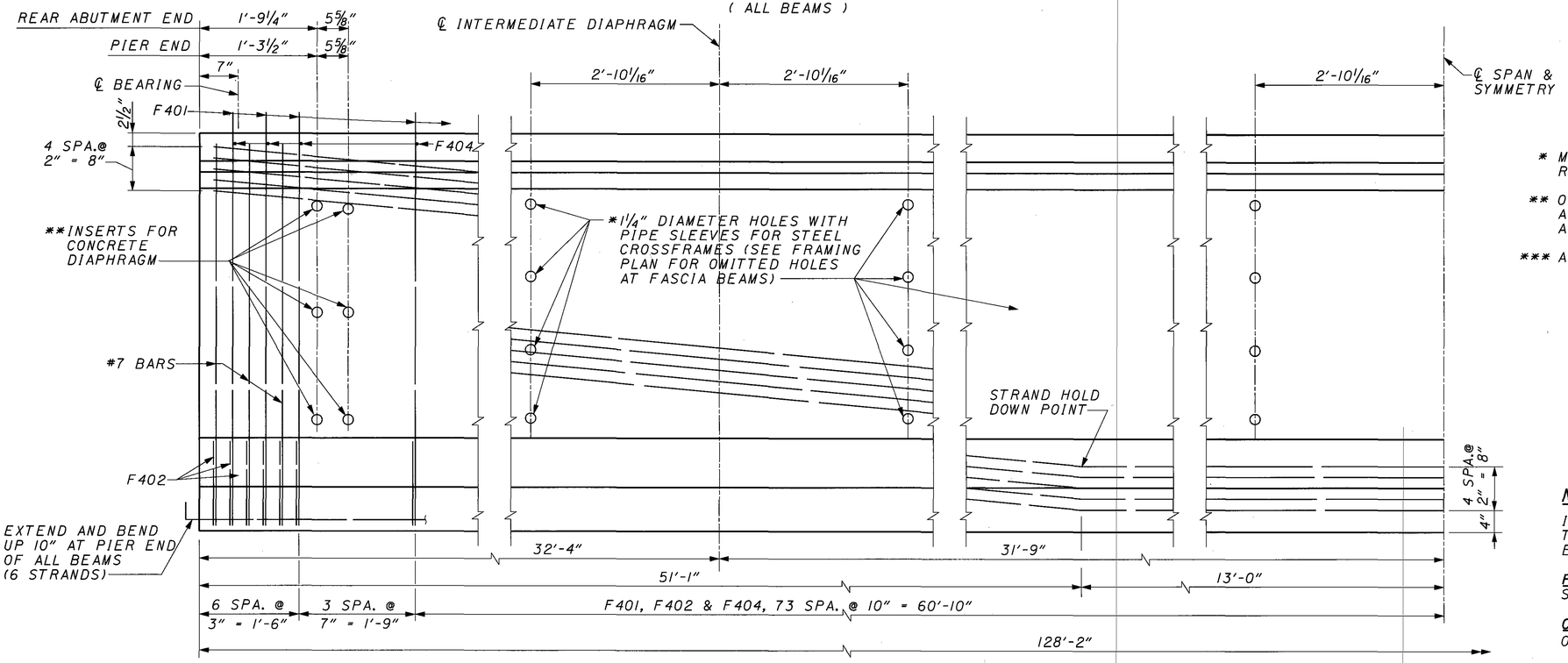
END SECTION

MODIFIED AASHTO TYPE 4 (72") BEAM

(56 TOTAL STRANDS, 10 DRAPED, ½" DIA. A = 0.167in²)
SPANS 1 & 2
(ALL BEAMS)



MIDDLE SECTION



BEAM ELEVATION

* MAY BE MOVED SLIGHTLY IN ORDER TO AVOID REINFORCING STEEL AND PRESTRESSING STRANDS.

** OMIT THREADED INSERTS ON EXTERIOR BEAMS AT PIERS. SEE PSID-1-99 FOR LOCATION ON SKEWED ABUTMENT AND PIER DIAPHRAGM.

*** ALL PROJECTING BARS SHALL BE EPOXY COATED.

LEGEND:

- ✦ STRANDS
- ⊞ DRAPED STRANDS

NOTES:

INITIAL FORCE PER STRAND = 33,818 LB.
TOTAL HOLD DOWN CAPACITY REQUIRED = 32,700 LB.
ESTIMATED BEAM WEIGHT = 139,800 LB.

PRESTRESSED CONCRETE I-BEAM DETAILS: SEE STANDARD CONSTRUCTION DRAWING PSID-1-99.

CHAMFER AND SOLE PLATE DETAILS AT THE ENDS OF THE BEAMS, SEE SHEETS 18/22 & 19/22.

RICHLAND ENGINEERING LIMITED
29 NORTH PARK STREET
MANSFIELD, OHIO 44902

DESIGNED BLN | DRAWN TWH | CHECKED KAK | REVISED | REVIEWED DAP 12/20/05 | STRUCTURE FILE NUMBER 7034601

72" CONCRETE I-BEAM DETAILS SPANS 1 & 2

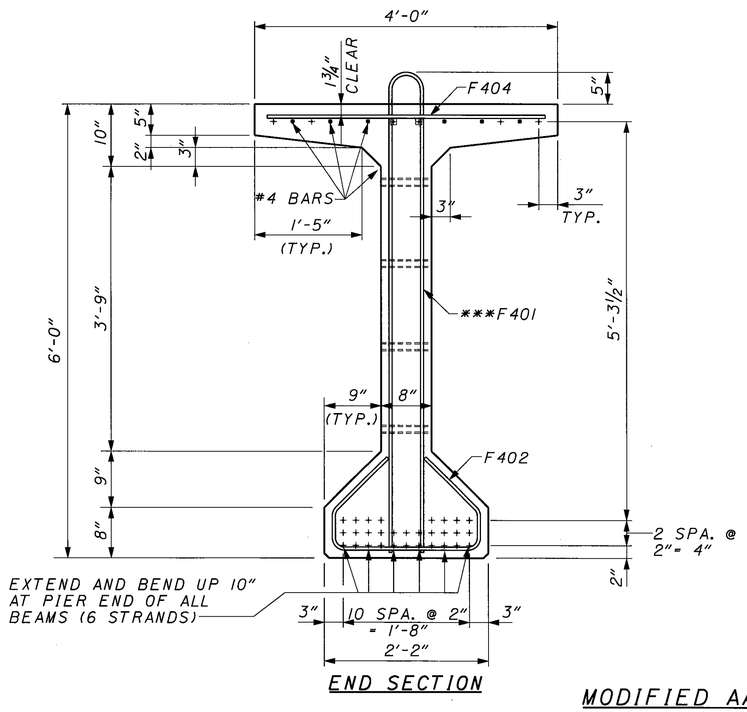
BRIDGE NO. RIC-CR424-0062
OVER NORFOLK SOUTHERN RAILWAY

RIC-CR424-0.62

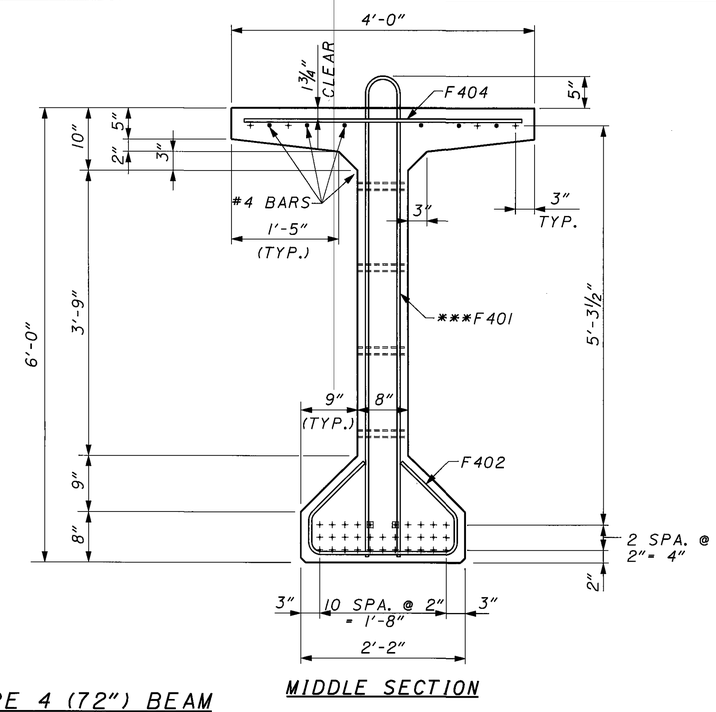
12/22

121
153

088SD2.DGN 12/28/05 JLS,TWH,RC



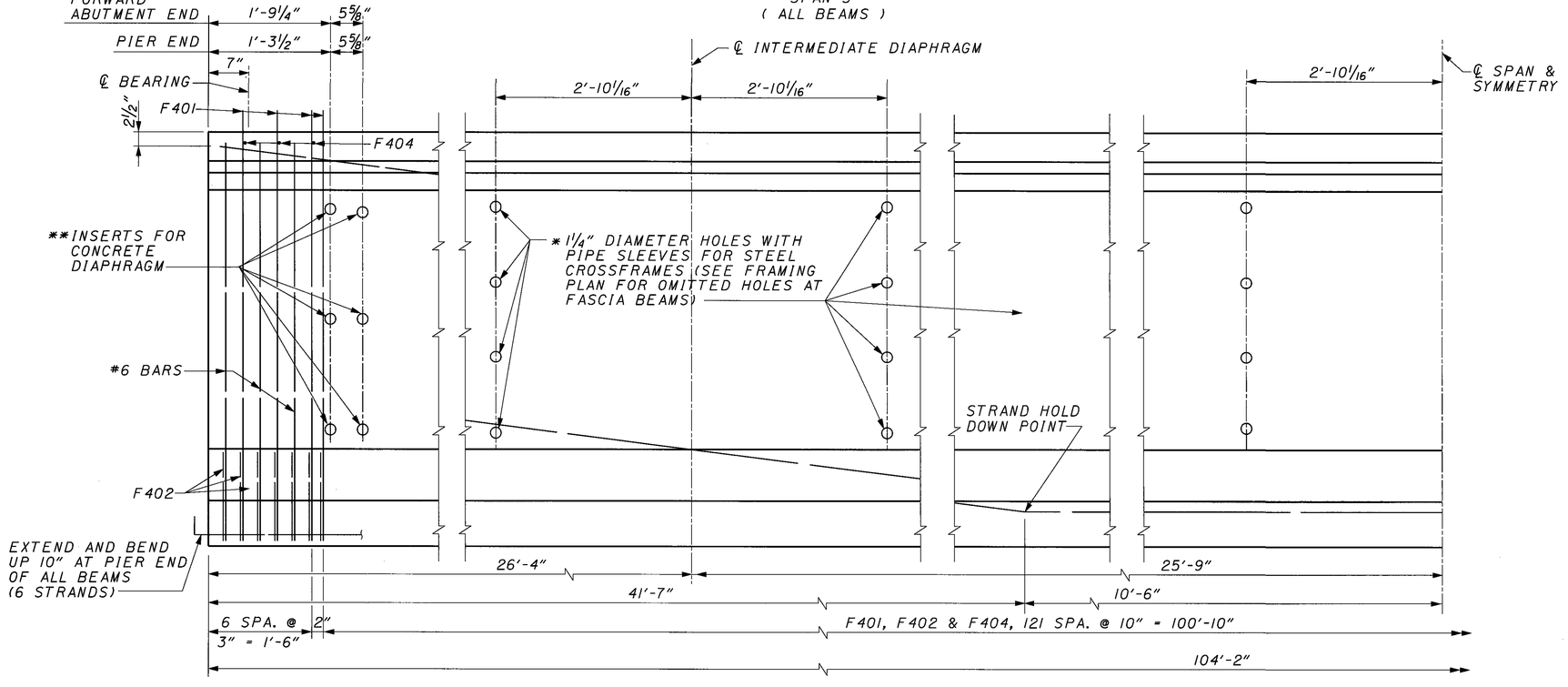
END SECTION



MIDDLE SECTION

MODIFIED AASHTO TYPE 4 (72") BEAM

(36 TOTAL STRANDS, 2 DRAPED,
½" DIA. A = 0.167in²)
SPAN 3
(ALL BEAMS)



BEAM ELEVATION

* MAY BE MOVED SLIGHTLY IN ORDER TO AVOID REINFORCING STEEL AND PRESTRESSING STRANDS.

** OMIT THREADED INSERTS ON EXTERIOR BEAMS AT PIERS. SEE PSID-I-99 FOR LOCATION ON SKEWED ABUTMENT AND PIER DIAPHRAGM.

*** ALL PROJECTING BARS SHALL BE EPOXY COATED.

LEGEND:

+ STRANDS
⊞ DRAPED STRANDS

NOTES:

INITIAL FORCE PER STRAND = 33,818 LB.
TOTAL HOLD DOWN CAPACITY REQUIRED = 8,300 LB.
ESTIMATED BEAM WEIGHT = 113,400 LB.

PRESTRESSED CONCRETE I-BEAM DETAILS: SEE STANDARD CONSTRUCTION DRAWING PSID-I-99.

CHAMFER AND SOLE PLATE DETAILS AT THE ENDS OF THE BEAMS, SEE SHEETS 18/22 & 19/22.

RICHLAND ENGINEERING LIMITED
29 NORTH PARK STREET
MANSFIELD, OHIO 44902

DESIGNED BLN | DRAWN TWH | REVIEWED DAP | DATE 12/20/05
CHECKED KAK | REVISED | STRUCTURE FILE NUMBER 7034601

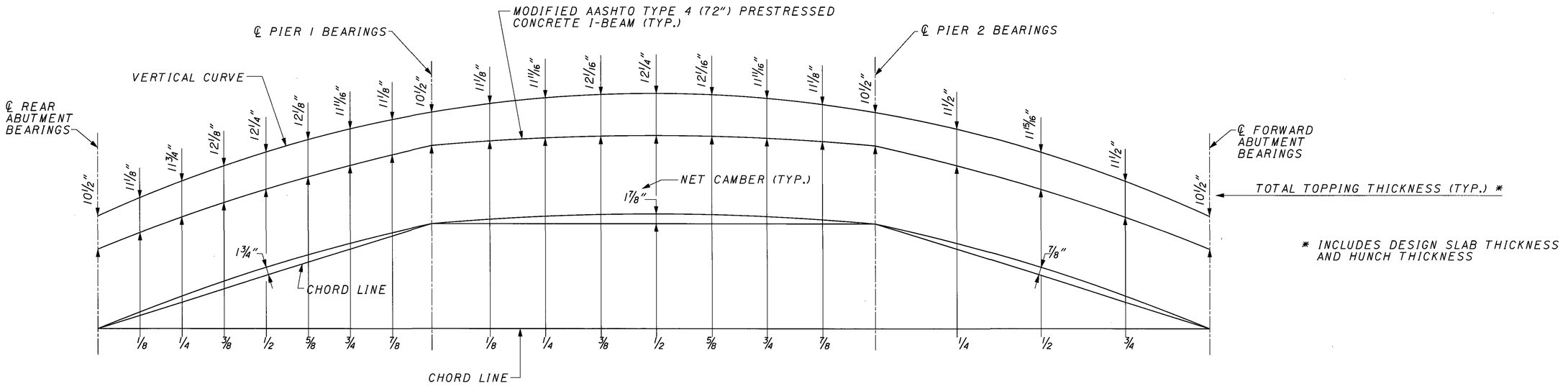
72" CONCRETE I-BEAM DETAILS SPAN 3
BRIDGE NO. RIC-CR424-0062
OVER NORFOLK SOUTHERN RAILWAY

RIC-CR424-0.62

13/22

122/153

088SD2.DGN 12/28/05 JLS,TWH,RC



CAMBER DIAGRAM

NOTES

SPAN 1

CALCULATED CAMBER OF BEAMS AT THE TIME OF DECK PLACEMENT IS 3½". ESTIMATED DEFLECTION OF BEAMS DUE TO WEIGHT OF DECK SLAB, SIDEWALK AND RAILING IS 1¾". THE NET CAMBER IS 1¾". AN ADDITIONAL ADJUSTMENT OF 3½" IS NEEDED FOR THE CREST VERTICAL CURVE. THE VERTICAL CURVE ADJUSTMENT MINUS THE NET CAMBER REQUIRES THE HAUNCH THICKNESS OF 2" AT THE PIERS AND ABUTMENTS BE INCREASED TO 3¾" AT THE CENTER OF SPAN TO PLACE THE DECK PARALLEL TO THE PROFILE GRADE.

SPAN 2

CALCULATED CAMBER OF BEAMS AT THE TIME OF DECK PLACEMENT IS 3½". ESTIMATED DEFLECTION OF BEAMS DUE TO WEIGHT OF DECK SLAB, SIDEWALK AND RAILING IS 1⅞". THE NET CAMBER IS 1⅞". AN ADDITIONAL ADJUSTMENT OF 3½" IS NEEDED FOR THE CREST VERTICAL CURVE. THE VERTICAL CURVE ADJUSTMENT MINUS THE NET CAMBER REQUIRES THE HAUNCH THICKNESS OF 2" AT THE PIERS AND ABUTMENTS BE INCREASED TO 3¾" AT THE CENTER OF SPAN TO PLACE THE DECK PARALLEL TO THE PROFILE GRADE.

SPAN 3

CALCULATED CAMBER OF BEAMS AT THE TIME OF DECK PLACEMENT IS 1⅝". ESTIMATED DEFLECTION OF BEAMS DUE TO WEIGHT OF DECK SLAB, SIDEWALK AND RAILING IS ¾". THE NET CAMBER IS ⅞". AN ADDITIONAL ADJUSTMENT OF 2¼" IS NEEDED FOR THE CREST VERTICAL CURVE. THE VERTICAL CURVE ADJUSTMENT MINUS THE NET CAMBER REQUIRES THE HAUNCH THICKNESS OF 2" AT THE PIERS AND ABUTMENTS BE INCREASED TO 3 7/16" AT THE CENTER OF SPAN TO PLACE THE DECK PARALLEL TO THE PROFILE GRADE.

CALCULATED BEAM CAMBER	SPAN 1 & 2	SPAN 3
CALCULATED NET CAMBER AT THE TIME OF RELEASE IS:	2 INCHES	15/16 INCHES
CALCULATED NET CAMBER AT THE TIME OF ERECTION IS:	3½ INCHES	1⅝ INCHES
CALCULATED NET LONG-TERM CAMBER IS:	5 INCHES	2 5/16 INCHES

DECK SLAB THICKNESS FOR CONCRETE QUANTITY: THE TOPPING THICKNESSES SHOWN FROM THE TOP OF THE DECK SLAB TO THE TOP OF THE TOP FLANGE ALONG THE CENTERLINE OF THE I-BEAM ARE THEORETICAL DIMENSIONS. THE HAUNCH DEPTH IS THE TOPPING THICKNESS MINUS THE DESIGN SLAB THICKNESS. THE DEPARTMENT WILL PAY FOR SUPERSTRUCTURE CONCRETE BASED ON THE DESIGN SLAB THICKNESS AND THE AVERAGE OF THE THEORETICAL HAUNCH DEPTHS AT MID-SPAN AND AT EACH BEAM BEARING EVEN THOUGH DEVIATION FROM THE DIMENSIONS SHOWN MAY BE NECESSARY TO PLACE THE DECK SURFACE AT THE FINISHED GRADE. ONCE ALL BEAMS ARE SET IN THEIR FINAL POSITION, THE ACTUAL CAMBER FOR EACH MEMBER WILL BE THE TOP OF BEAM ELEVATION AT MID-SPAN MINUS THE AVERAGE TOP OF BEAM ELEVATION AT EACH BEARING. THE ACTUAL TOPPING THICKNESS AT MID-SPAN WILL BE THE THEORETICAL DIMENSION PLUS OR MINUS THE DIFFERENCE BETWEEN THE ACTUAL AND ANTICIPATED CAMBER.

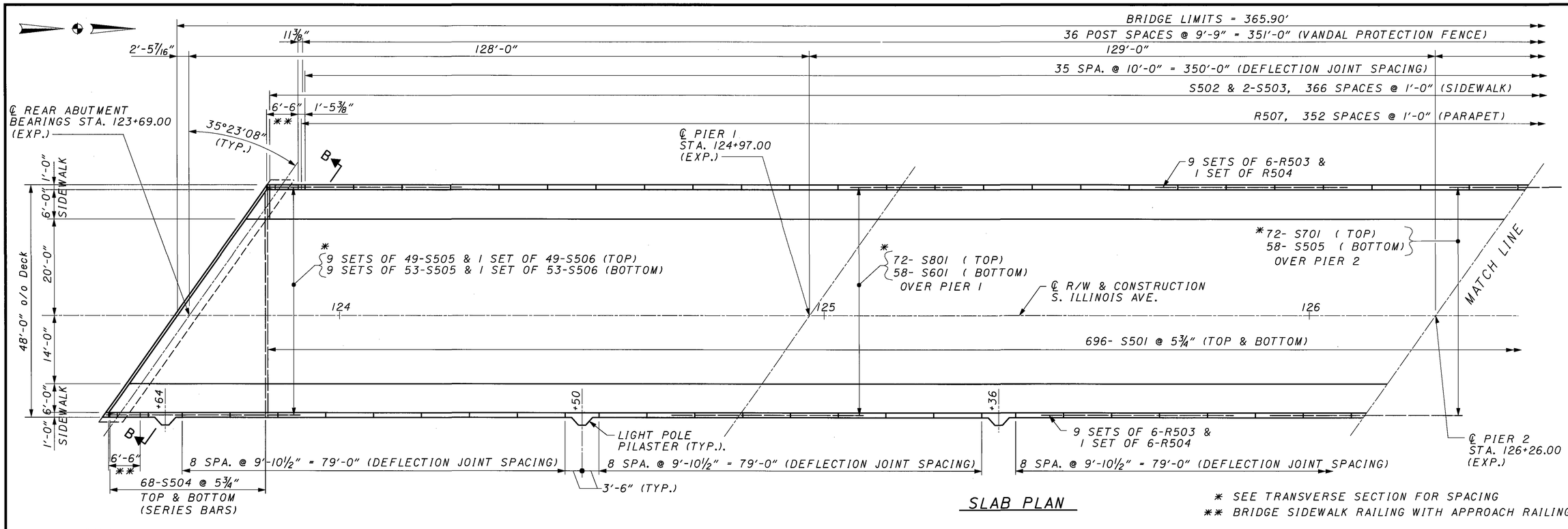
RICHLAND ENGINEERING LIMITED
29 NORTH PARK STREET
MANSFIELD, OHIO 44902

DESIGNED BLN | DRAWN TWH | CHECKED KAK | REVISED | REVIEWED DAP 12/20/05 | DATE | STRUCTURE FILE NUMBER 7034601

CAMBER DIAGRAM
BRIDGE NO. RIC-CR424-0062
OVER NORFOLK SOUTHERN RAILWAY

RIC-CR424-0.62

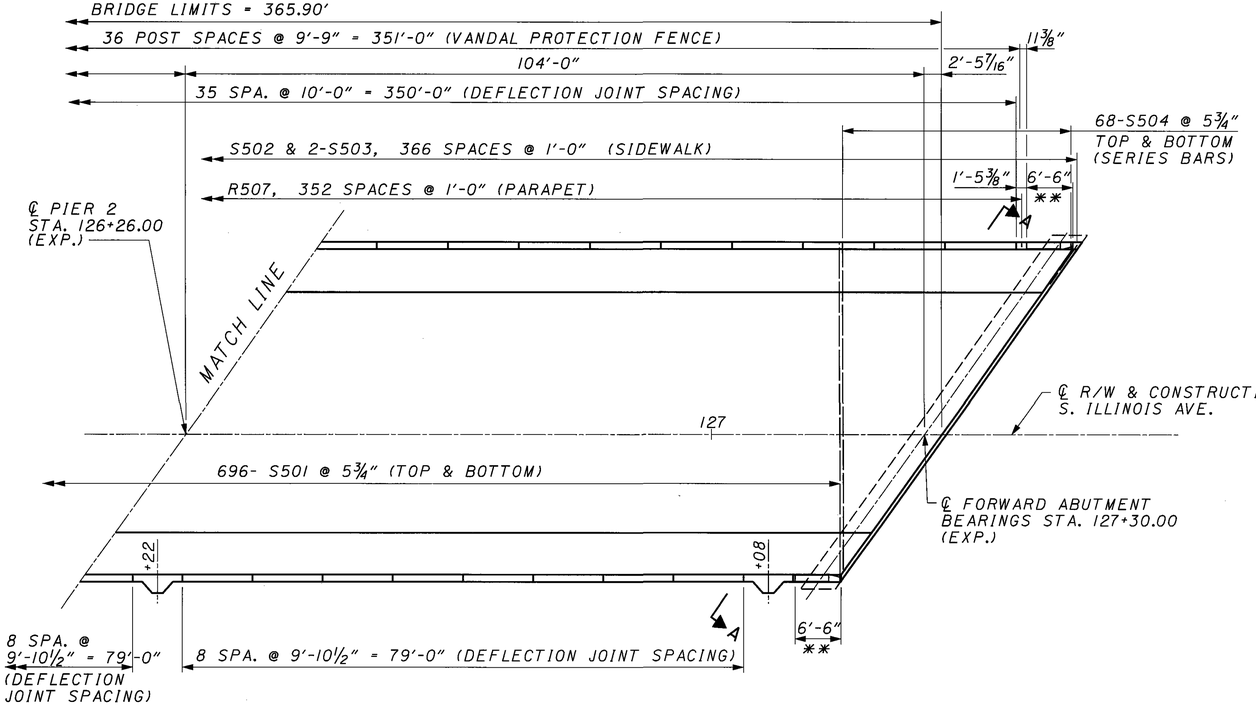
088SDF.DGN 12/28/05 JLS,TWH,RC

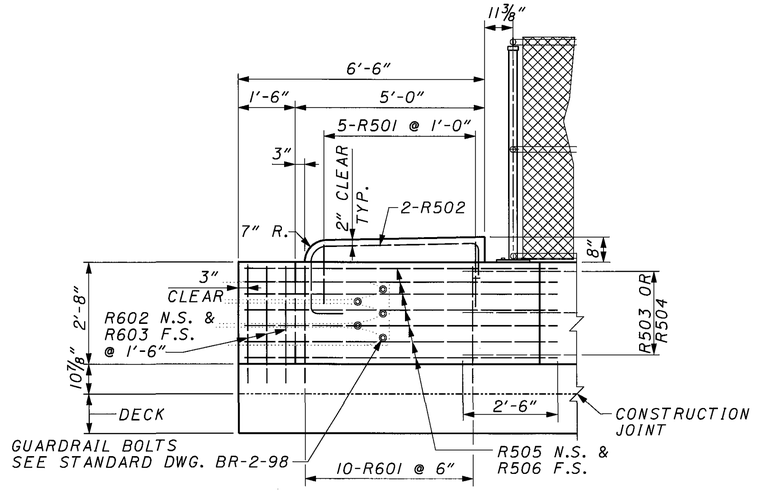


SLAB PLAN

* SEE TRANSVERSE SECTION FOR SPACING

** BRIDGE SIDEWALK RAILING WITH APPROACH RAILING





BRIDGE SIDEWALK RAILING WITH APPROACH RAILING

NOTES

TRANSVERSE SECTION: SEE SHEET 10/22.

SECTION A-A & B-B: SEE SHEET 17/22.

LIGHT POLE PILASTER DETAIL: SEE SHEET 10/22.

ADDITIONAL NOTES: SEE SHEET 16/22.

DECK PLACEMENT SEQUENCE: SEE SHEET 2/22.

RICHLAND ENGINEERING LIMITED
29 NORTH PARK STREET
MANSFIELD, OHIO 44902

DESIGNED BLN | DRAWN TWH | CHECKED KAK | REVIEWED DAP | DATE 12/20/05 | REVISED | STRUCTURE FILE NUMBER 7034601

SLAB PLAN
BRIDGE NO. RIC-CR424-0062
OVER NORFOLK SOUTHERN RAILWAY

RIC-CR424-0.62

15/22

124/153

088SDB.DGN 12/28/05 KH,SJK,TWH,RC

SCREED ELEVATION TABLE - SPAN 1

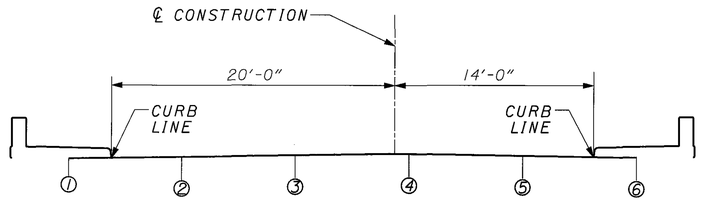
SPAN POINT	℄ R.A. BEARINGS	1/8	1/4	3/8	1/2	5/8	3/4	7/8	℄ PIER 1
	STATION & ELEVATION	STATION & ELEVATION	STATION & ELEVATION	STATION & ELEVATION	STATION & ELEVATION	STATION & ELEVATION	STATION & ELEVATION	STATION & ELEVATION	STATION & ELEVATION
BEAM 1, 23.00' LT.	123+85.34 1179.25	124+01.34 1179.49	124+17.34 1179.69	124+33.34 1179.83	124+49.34 1179.92	124+65.34 1179.95	124+81.34 1179.92	124+97.34 1179.84	125+13.34 1179.72
CURB, 20.00' LT.	123+83.21 1179.31	123+99.21 1179.52	124+15.21 1179.72	124+31.21 1179.87	124+47.21 1179.96	124+63.21 1179.99	124+79.21 1179.97	124+95.21 1179.89	125+11.21 1179.78
BEAM 2, 15.00' LT.	123+79.65 1179.31	123+95.65 1179.56	124+11.65 1179.77	124+27.65 1179.93	124+43.65 1180.03	124+59.65 1180.07	124+75.65 1180.05	124+91.65 1179.98	125+07.65 1179.88
BEAM 3, 7.00' LT.	123+73.97 1179.36	123+89.97 1179.62	124+05.97 1179.84	124+21.97 1180.01	124+37.97 1180.13	124+53.97 1180.18	124+69.97 1180.18	124+85.97 1180.12	125+01.97 1180.03
℄ CONSTRUCTION	123+69.00 1179.40	123+85.00 1179.67	124+01.00 1179.91	124+17.00 1180.09	124+33.00 1180.21	124+49.00 1180.28	124+65.00 1180.28	124+81.00 1180.24	124+97.00 1180.16
BEAM 4, 1.00' RT.	123+68.29 1179.37	123+84.29 1179.65	124+00.29 1179.88	124+16.29 1180.07	124+32.29 1180.19	124+48.29 1180.26	124+64.29 1180.27	124+80.29 1180.23	124+96.29 1180.14
BEAM 5, 9.00' RT.	123+62.61 1179.16	123+78.61 1179.45	123+94.61 1179.69	124+10.61 1179.89	124+26.61 1180.03	124+42.61 1180.11	124+58.61 1180.13	124+74.61 1180.10	124+90.61 1180.03
CURB, 14.00' RT.	123+59.06 1179.02	123+75.06 1179.32	123+91.06 1179.57	124+07.06 1179.77	124+23.06 1179.92	124+39.06 1180.01	124+55.06 1180.04	124+71.06 1180.02	124+87.06 1179.95
BEAM 6, 17.00' RT.	123+56.93 1178.94	123+72.93 1179.24	123+88.93 1179.50	124+04.93 1179.71	124+20.93 1179.86	124+36.93 1179.95	124+52.93 1179.98	124+68.93 1179.97	124+84.93 1179.91

SCREED ELEVATION TABLE - SPAN 2

SPAN POINT	1/8	1/4	3/8	1/2	5/8	3/4	7/8	℄ PIER 2
	STATION & ELEVATION	STATION & ELEVATION	STATION & ELEVATION	STATION & ELEVATION	STATION & ELEVATION	STATION & ELEVATION	STATION & ELEVATION	STATION & ELEVATION
BEAM 1, 23.00' LT.	125+29.46 1179.67	125+45.59 1179.57	125+61.71 1179.42	125+77.84 1179.22	125+93.96 1178.96	126+10.09 1178.64	126+26.21 1178.27	126+42.34 1177.86
CURB, 20.00' LT.	125+27.33 1179.73	125+43.46 1179.64	125+59.58 1179.50	125+75.71 1179.30	125+91.83 1179.04	126+07.96 1178.73	126+24.08 1178.37	126+40.21 1177.96
BEAM 2, 15.00' LT.	125+23.78 1179.83	125+39.90 1179.75	125+56.03 1179.62	125+72.15 1179.43	125+88.28 1179.18	126+04.40 1178.88	126+20.53 1178.52	126+36.65 1178.12
BEAM 3, 7.00' LT.	125+18.10 1180.00	125+34.22 1179.93	125+50.35 1179.81	125+66.47 1179.63	125+82.60 1179.40	125+98.72 1179.10	126+14.85 1178.76	126+30.97 1178.38
℄ CONSTRUCTION	125+13.13 1180.14	125+29.25 1180.08	125+45.38 1179.97	125+61.50 1179.81	125+77.63 1179.58	125+93.75 1179.30	126+09.88 1178.97	126+26.00 1178.59
BEAM 4, 1.00' RT.	125+12.42 1180.13	125+28.54 1180.07	125+44.67 1179.96	125+60.79 1179.80	125+76.92 1179.58	125+93.04 1179.30	126+09.17 1178.97	126+25.29 1178.59
BEAM 5, 9.00' RT.	125+06.73 1180.03	125+22.86 1179.98	125+38.98 1179.89	125+55.11 1179.74	125+71.23 1179.53	125+87.36 1179.26	126+03.48 1178.94	126+19.61 1178.58
CURB, 14.00' RT.	125+03.18 1179.96	125+19.31 1179.92	125+35.43 1179.84	125+51.56 1179.70	125+67.68 1179.49	125+83.81 1179.23	125+99.93 1178.93	126+16.06 1178.57
BEAM 6, 17.00' RT.	125+01.05 1179.92	125+17.18 1179.89	125+33.30 1179.81	125+49.43 1179.67	125+65.55 1179.47	125+81.68 1179.22	125+97.80 1178.91	126+13.93 1178.57

SCREED ELEVATION TABLE - SPAN 3

SPAN POINT	1/4	1/2	3/4	F.A. BRGS.
	STATION & ELEVATION	STATION & ELEVATION	STATION & ELEVATION	STATION & ELEVATION
BEAM 1, 23.00' LT.	126+68.34 1177.25	126+94.34 1176.52	127+20.34 1175.65	127+46.34 1174.66
CURB, 20.00' LT.	126+66.21 1177.35	126+92.21 1176.63	127+18.21 1175.77	127+44.21 1174.79
BEAM 2, 15.00' LT.	126+62.65 1177.53	126+88.65 1176.82	127+14.65 1175.97	127+40.65 1175.01
BEAM 3, 7.00' LT.	126+56.97 1177.80	126+82.97 1177.11	127+08.97 1176.29	127+34.97 1175.34
℄ CONSTRUCTION	126+52.00 1178.04	126+78.00 1177.37	127+04.00 1176.56	127+30.00 1175.64
BEAM 4, 1.00' RT.	126+51.29 1178.04	126+77.29 1177.37	127+03.29 1176.57	127+29.29 1175.64
BEAM 5, 9.00' RT.	126+45.61 1178.05	126+71.61 1177.40	126+97.61 1176.62	127+23.61 1175.72
CURB, 14.00' RT.	126+42.06 1178.06	126+68.06 1177.42	126+94.06 1176.65	127+20.06 1175.76
BEAM 6, 17.00' RT.	126+39.93 1178.06	126+65.93 1177.43	126+91.93 1176.67	127+17.93 1175.78



NOTES

SCREED ELEVATIONS SHOWN ARE FOR THE DECK SLAB SURFACE PRIOR TO CONCRETE PLACEMENT. ALLOWANCE HAS BEEN MADE FOR ANTICIPATED CALCULATED DEAD LOAD DEFLECTIONS.

SPAN POINTS GIVEN FROM ℄ ABUTMENT BEARINGS TO ℄ PIER IN SPANS 1 AND 3 AND ℄ PIER TO ℄ PIER IN SPAN 2.

NOTATION: R.A.- REAR ABUTMENT
F.A. - FORWARD ABUTMENT
BRGS. - BEARINGS

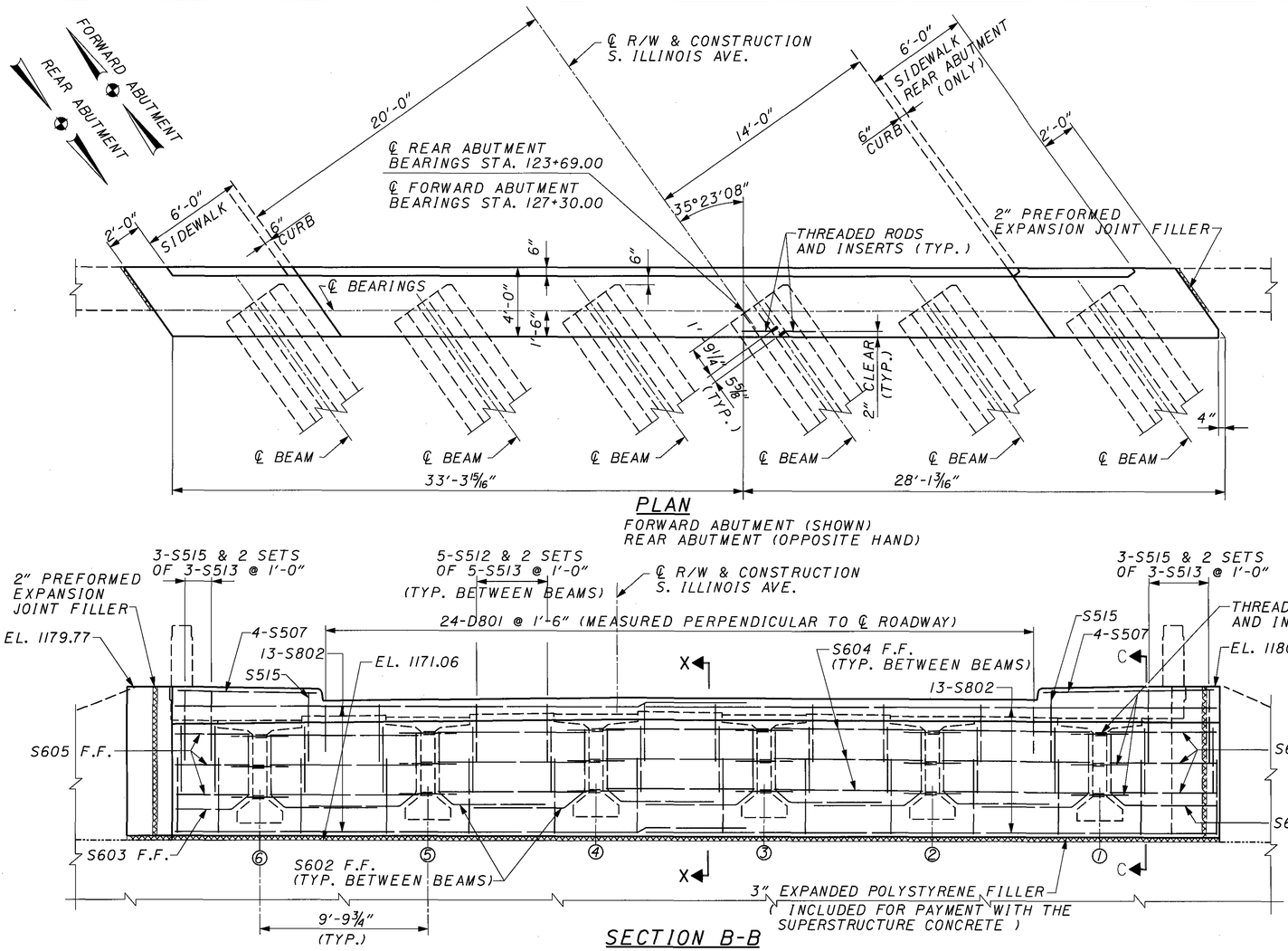
RICHLAND ENGINEERING LIMITED
29 NORTH PARK STREET
MANSFIELD, OHIO 44902

DESIGNED BLN | DRAWN TWH | REVIEWED DAP | DATE 12/20/05
CHECKED KAK | REVISED | STRUCTURE FILE NUMBER 7034601

SCREED ELEVATIONS
BRIDGE NO. RIC-CR424-0062
OVER NORFOLK SOUTHERN RAILWAY

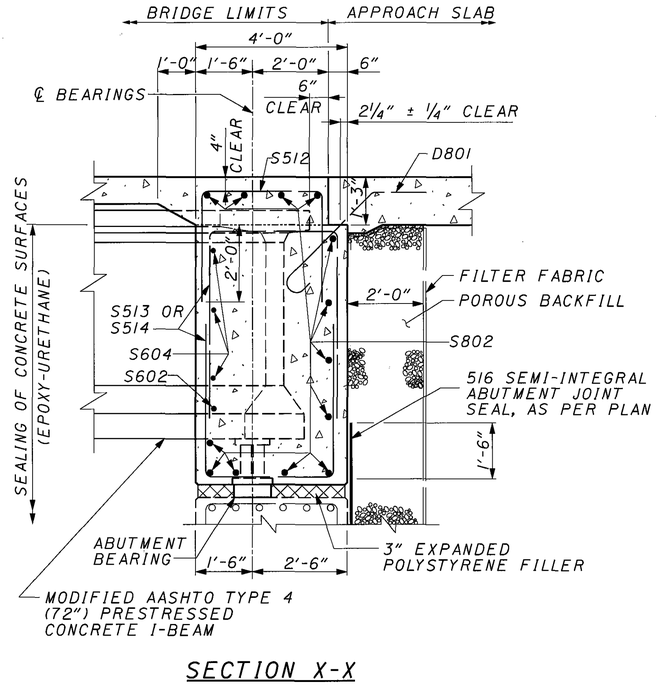
RIC-CR424-0.62

088SDE.DGN 12/28/05 JLS,TWH,RC



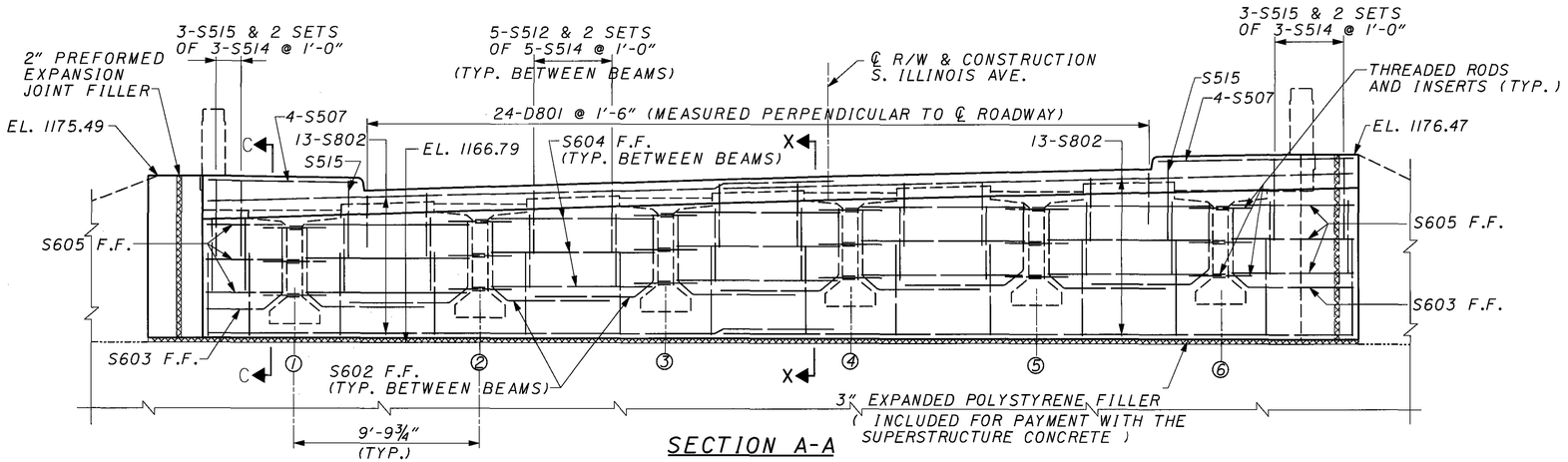
PLAN

FORWARD ABUTMENT (SHOWN)
REAR ABUTMENT (OPPOSITE HAND)



SECTION X-X

SECTION B-B
REAR ABUTMENT



SECTION A-A
FORWARD ABUTMENT

NOTES

SECTIONS C-C: SEE SHEET 6/22.

SECTIONS A-A & B-B: FOR LOCATION SEE SHEET 15/22.

DIAPHRAGM CONCRETE IS INCLUDED WITH ITEM 511 CLASS HP CONCRETE, BRIDGE DECK, AS PER PLAN

ABUTMENT DIAPHRAGM, PRESTRESSED I-BEAM SUPERSTRUCTURE: PLACE THE CONCRETE ENCASING THE PRESTRESSED I-BEAM STRUCTURAL MEMBER AS PART OF THE DECK POUR.

ADDITIONAL NOTES: SEE SHEET 6/22.

RICHLAND ENGINEERING LIMITED
29 NORTH PARK STREET
MANSFIELD, OHIO 44902

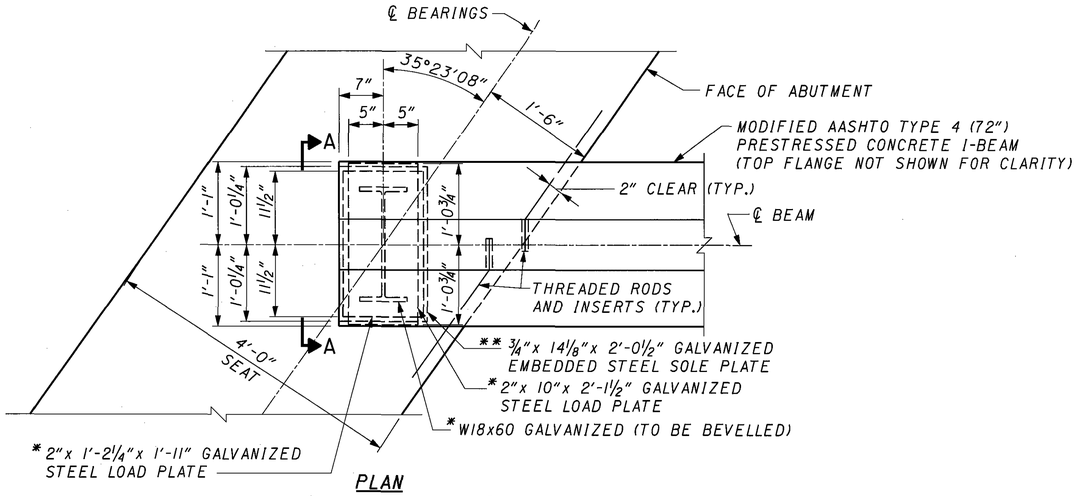
DESIGNED BLN
DRAWN TWH
CHECKED KAK
REVIEWED DAP
DATE 12/20/05
REVISED
STRUCTURE FILE NUMBER 7034601

SUPERSTRUCTURE DETAILS

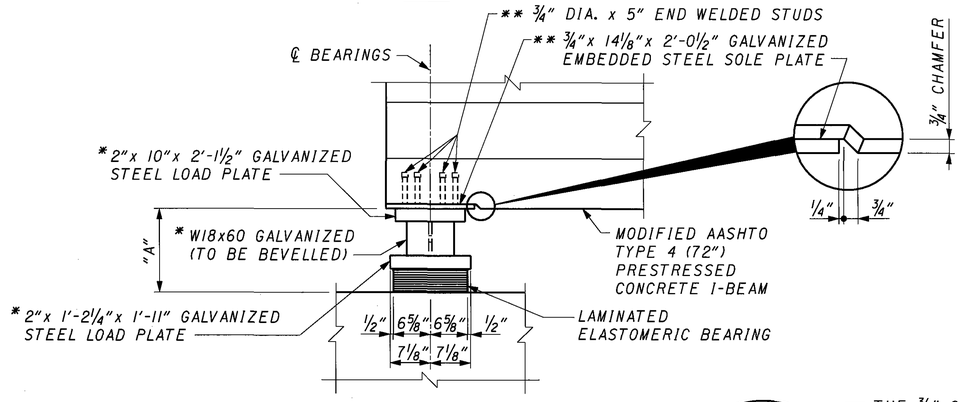
BRIDGE NO. RIC-CR424-0062
OVER NORFOLK SOUTHERN RAILWAY

RIC-CR424-0.62

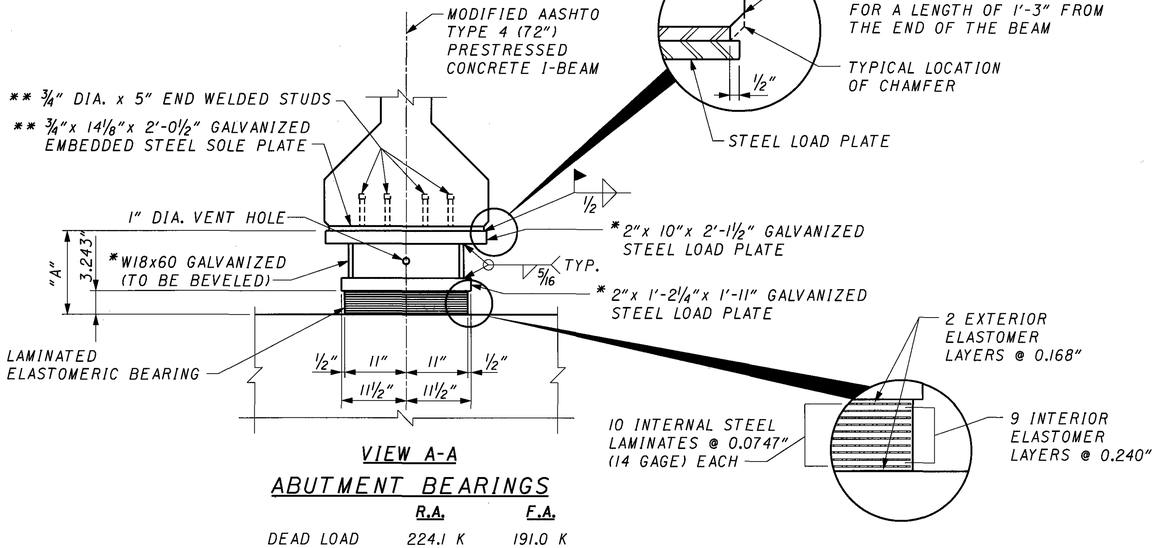
088SDC.DGN 12/28/05 SJK,TWH,RC



PLAN



SIDE ELEVATION

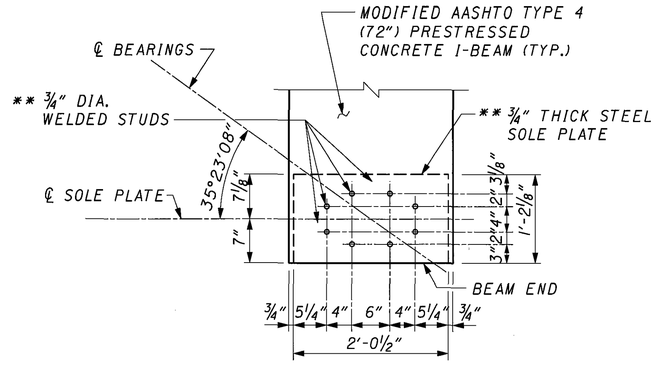


VIEW A-A

ABUTMENT BEARINGS

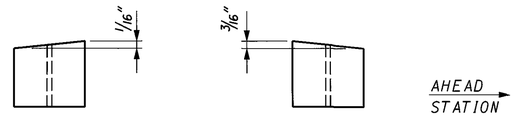
	R.A.	F.A.
DEAD LOAD	224.1 K	191.0 K
LIVE LOAD	66.4 K	63.4 K
TOTAL	290.5 K	254.4 K

* INCLUDED WITH BEARING FOR PAYMENT.
** INCLUDED WITH BEAM FOR PAYMENT.



WELDED STUDS LOCATION

NOTE: WELDED STUDS MAY BE MOVED SLIGHTLY IN ORDER TO AVOID REINFORCING STEEL AND PRESTRESSING STRANDS.



BEVELED W18x60 R.A.

BEVELED W18x60 F.A.

BEAM LINE	"A"	
	R.A.	F.A.
1	1.32'	1.00'
2	1.37'	1.34'
3	1.42'	1.68'
4	1.44'	1.98'
5	1.22'	2.05'
6	1.00'	2.12'

NOTES

WELDING SHALL BE CONTROLLED SO THAT THE PLATE TEMPERATURE AT THE ELASTOMER BONDED SURFACE DOES NOT EXCEED 300°F AS DETERMINED BY USE OF PYROMETRIC STICKS OR OTHER TEMPERATURE MONITORING DEVICES.

ELASTOMERIC BEARINGS: THE ELASTOMER SHALL HAVE A HARDNESS OF 50 DUROMETER. THE BEARINGS WERE DESIGNED UNDER DIVISION I, SECTION 14.6.6 (METHOD A) OF THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES. THE STEEL LOAD PLATE SHALL BE BONDED BY VULCANIZATION TO THE ELASTOMER DURING THE MOLDING PROCESS.

STRUCTURAL STEEL AND LOAD PLATES: SHALL BE MINIMUM ASTM A36, 36 KSI YIELD STRENGTH.

NOTATION: R.A. - REAR ABUTMENT
F.A. - FORWARD ABUTMENT
DIA. - DIAMETER
TYP. - TYPICAL

RICHLAND ENGINEERING LIMITED
29 NORTH PARK STREET
MANSFIELD, OHIO 44902

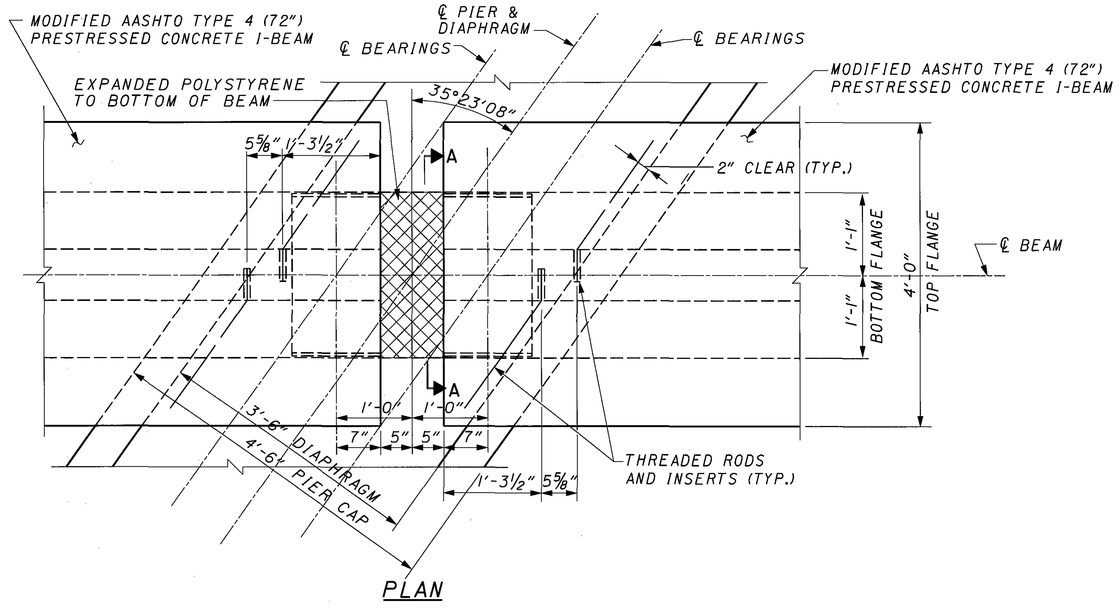
DESIGNED BLN | DRAWN TWH | CHECKED KAK | REVIEWED DAP | DATE 12/20/05 | REVISED | STRUCTURE FILE NUMBER 7034601

EXPANSION DETAILS AT ABUTMENTS

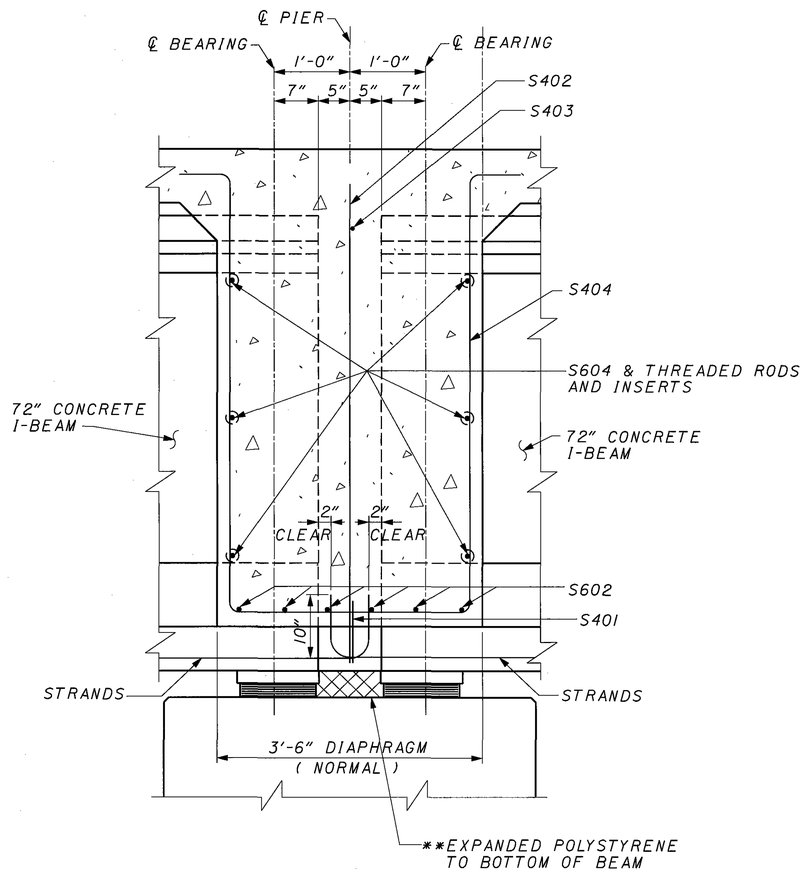
BRIDGE NO. RIC-CR424-0062
OVER NORFOLK SOUTHERN RAILWAY

RIC-CR424-0.62

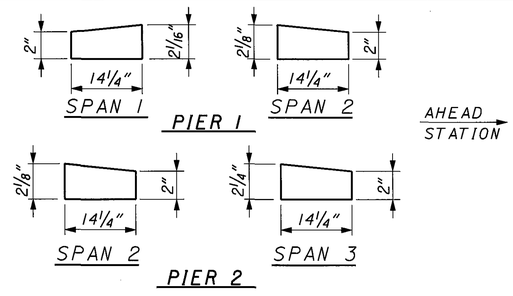
088SDC.DGN 12/28/05 JLS,TWH,RC



PLAN

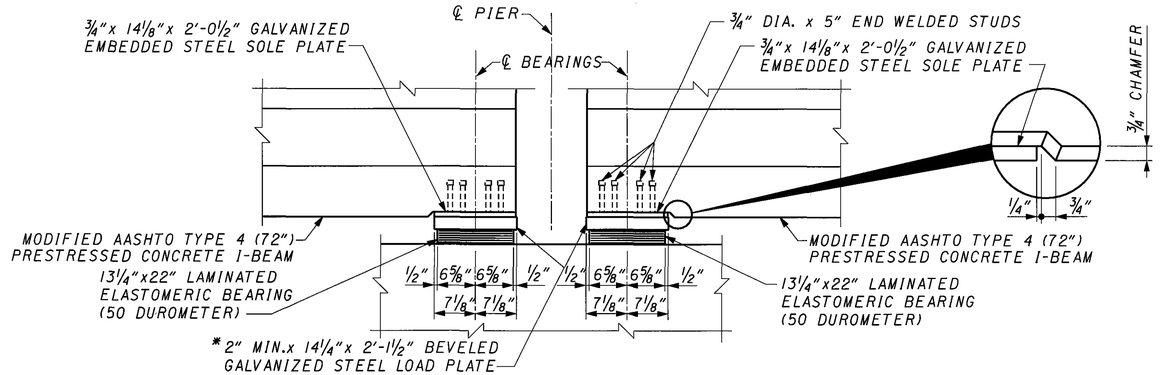


ELEVATION THRU DIAPHRAGM
AT PIER
** INCLUDED WITH DECK CONCRETE FOR PAYMENT.

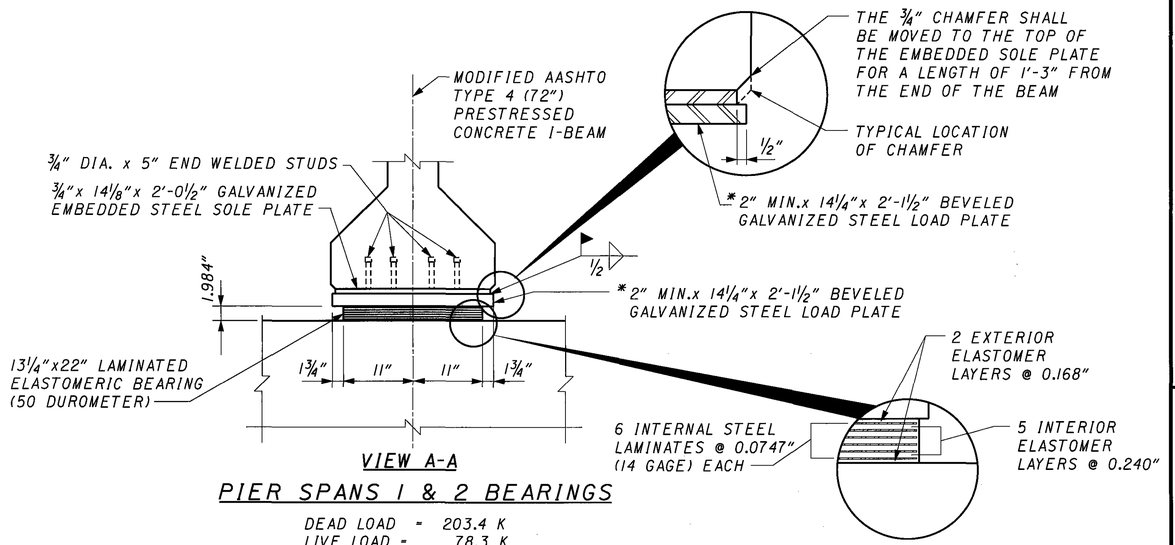


* 2" MIN.x 14¼"x 2'-1½" BEVELED GALVANIZED STEEL LOAD PLATE

LOAD PLATE



SIDE ELEVATION



VIEW A-A

PIER SPANS 1 & 2 BEARINGS

DEAD LOAD =	203.4 K
LIVE LOAD =	78.3 K
TOTAL =	281.7 K

PIER SPAN 3 BEARINGS

DEAD LOAD =	170.5 K
LIVE LOAD =	70.7 K
TOTAL =	241.2 K

* INCLUDED WITH BEARING FOR PAYMENT.

NOTES

EMBEDDED PLATE DETAILS: SEE SHEET 18/22.

PIER DIAPHRAGMS SHALL BE PLACED WITH THE DECK CONCRETE AND ONLY AFTER THE BEAMS ARE AT LEAST 45 DAYS OLD.

ADDITIONAL NOTES: SEE SHEET 18/22.

RICHLAND ENGINEERING LIMITED
29 NORTH PARK STREET
MANSFIELD, OHIO 44902

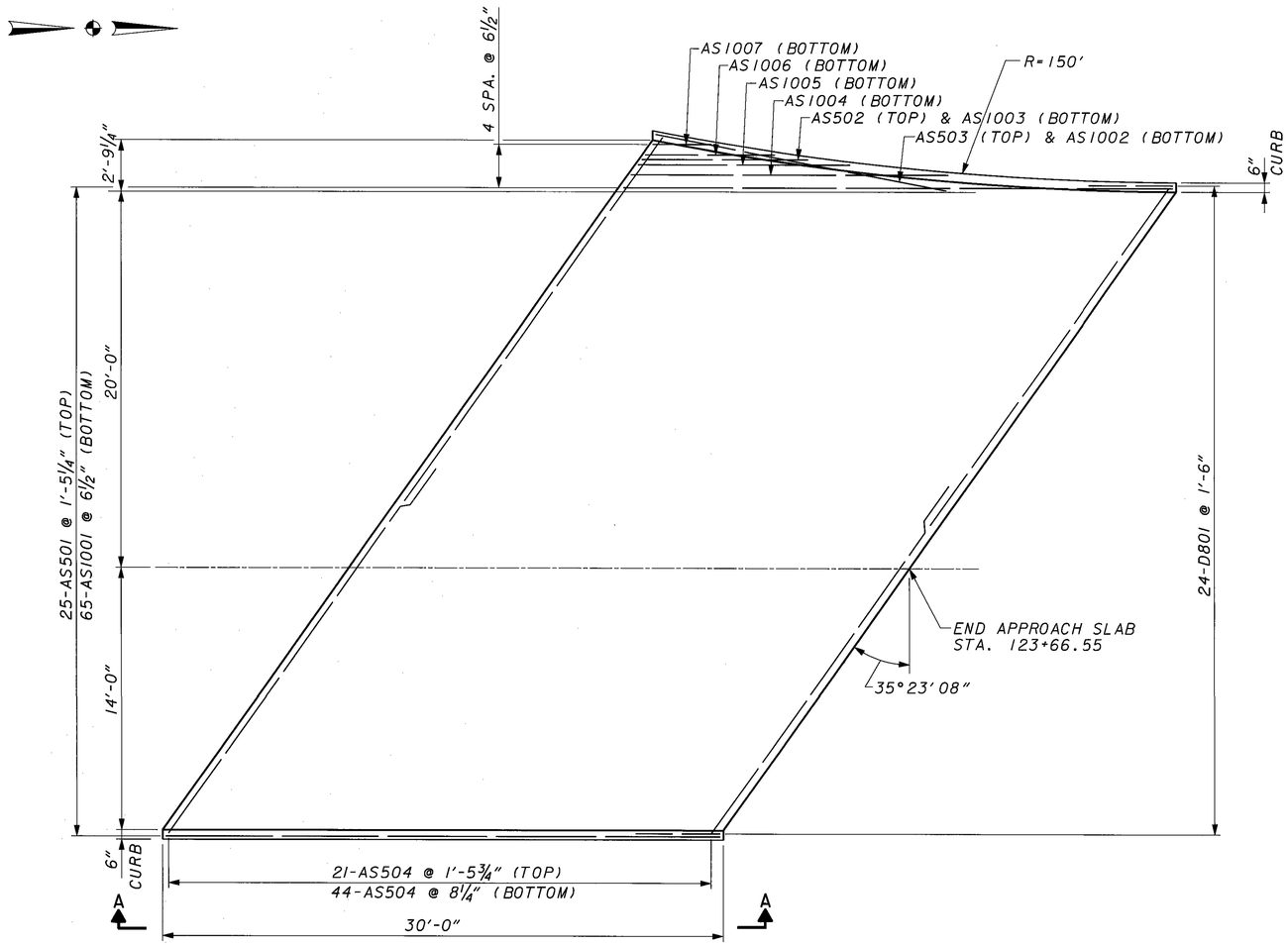
DESIGNED	DRAWN	REVIEWED	DATE
BLN	TWH	DAP	2/10/05
CHECKED	REVISED	STRUCTURE FILE NUMBER	
KAK		7034601	

BEARING DETAILS AT PIERS

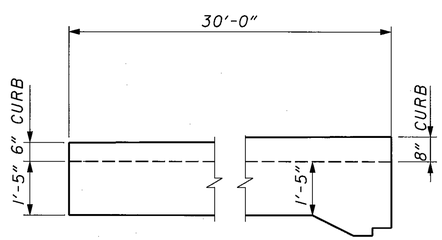
BRIDGE NO. RIC-CR424-0062
OVER NORFOLK SOUTHERN RAILWAY

RIC-CR424-0.62

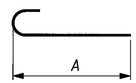
088SDD.DGN 2/10/05 JLS,TWH,RC



PLAN



VIEW A-A



TYPE 1

** REINFORCING STEEL WEIGHT SHOWN FOR INFORMATION ONLY. REINFORCING STEEL INCLUDED WITH ITEM 526 - REINFORCED CONCRETE APPROACH SLAB FOR PAYMENTS.

REAR APPROACH SLAB

MARK	R.A.	TOTAL	LENGTH	TYPE	A	B	INC.	WEIGHT
AS501	25	25	29'-6"	STR.				769
AS502	1	1	8'-10"	STR.				9
AS503	1	1	15'-9"	STR.				16
AS504	130	130	24'-2"	STR.				3277
AS1001	65	65	30'-11"	1	29'-6"			8647
AS1002	1	1	15'-9"	STR.				68
AS1003	1	1	8'-10"	STR.				38
AS1004	1	1	16'-10"	STR.				72
AS1005	1	1	11'-3"	STR.				48
AS1006	1	1	6'-10"	STR.				29
AS1007	1	1	3'-1"	STR.				13
					TOTAL WEIGHT		**	12,973

NOTES

REINFORCING STEEL SPLICE LENGTHS SHALL BE 2'-4" FOR #5 BARS.

ADDITIONAL DETAILS: SEE STD. DRAWING AS-1-81.

RICHLAND ENGINEERING LIMITED
29 NORTH PARK STREET
MANSFIELD, OHIO 44902

DESIGNED	DRAWN	REVIEWED	DATE
BLN	SJK	DAP	12/20/05
CHECKED	REVISED	STRUCTURE FILE NUMBER	
KAK		7034601	

REAR APPROACH SLAB DETAILS
BRIDGE NO. RIC-CR424-0062
OVER NORFOLK SOUTHERN RAILWAY

RIC-CR424-0.62

088ASD.DGN 12/28/05 SJK,TWH,RC

ABUTMENTS

CALCULATED TWH DATE 5/04
CHECKED BLN DATE 10/04

MARK	R.A.	F.A.	TOTAL	LENGTH	TYPE	A	B	C	INC.	WEIGHT (LBS.)
A501	95	95	190	11'-1"	1	2'-4"	6'-8"	2'-4"		2196
A502	82	82	164	6'-4"	1	5'-7"	10"	0		1083
A503	6	6	12	31'-10"	STR.					398
A504	4	4	8	32'-1"	STR.					268
A505	2	2	4	24'-4"	STR.					102
A506	2	2	4	22'-7"	STR.					94
A507	2	2	4	22'-0"	STR.					92
A508	2	2	4	24'-0"	STR.					100
A509	1 SER.OF 12		1 SER.OF 12	4'-0" TO 11'-4"	STR.				8"	96
A510	28	28	56	3'-7"	1	0'-10"	2'-2"	0'-10"		209
A511	1 SER.OF 18		1 SER.OF 18	4'-0" TO 11'-5"	STR.				5 1/4"	145
A512	2	2	4	11'-6"	STR.					48
A513	1 SER.OF 5		1 SER.OF 5	3'-10" TO 17'-8"	STR.				3'-5 1/2"	56
A514	1 SER.OF 5		1 SER.OF 5	5'-0" TO 19'-2"	STR.				3'-6 1/2"	63
A515	3		3	19'-9"	STR.					62
A516	1 SER.OF 13		1 SER.OF 13	4'-0" TO 11'-6"	STR.				7 1/2"	105
A517	1 SER.OF 20		1 SER.OF 20	4'-0" TO 11'-6"	STR.				4 3/4"	162
A518	2	2	4	11'-7"	STR.					48
A519	3	3	6	21'-0"	STR.					131
A520	1 SER.OF 6	1 SER.OF 6	2 SER.OF 6	0'-6" TO 19'-8"	STR.				3'-10"	126
A521	1 SER.OF 5	1 SER.OF 5	2 SER.OF 5	2'-0" TO 18'-4"	STR.				4'-1"	106
A522		3	3	20'-2"	STR.					63
A523	1	1	2	2'-11"	15	1'-6"	1'-6"	0		6
A524		1 SER.OF 12	1 SER.OF 12	4'-0" TO 12'-6"	STR.				9 1/4"	103
A525		1 SER.OF 18	1 SER.OF 18	4'-0" TO 12'-6"	STR.				6"	155
A526		1 SER.OF 6	1 SER.OF 6	3'-0" TO 18'-3"	STR.				3'-0 5/8"	66
A527		1 SER.OF 6	1 SER.OF 6	3'-10" TO 19'-3"	STR.				3'-1"	72
A528		1 SER.OF 13	1 SER.OF 13	4'-0" TO 11'-4"	STR.				7 5/16"	104
A529		1 SER.OF 20	1 SER.OF 20	4'-0" TO 11'-4"	STR.				4 5/8"	160
A601	42	42	84	16'-0"	4	5'-6"	3'-8"	1'-0"		2019
A801	95	95	190	10'-11"	1	2'-4"	6'-8"	2'-4"		5538
A802	36	36	72	37'-6"	STR.					7209
A803	12	12	24	33'-8"	STR.					2157
									TOTAL	23,342

PIERS

CALCULATED TWH DATE 8/04
CHECKED BLN DATE 10/04

MARK	PIER 1	PIER 2	TOTAL	LENGTH	TYPE	A	B	C	INC.	WEIGHT (LBS.)
P401	104	112	216	3'-9"	6	2'-8"	8"			541
P501	8		8	23'-3"	STR.					194
P502	45		45	18'-7"	1	4'-7"	9'-8"	4'-7"		872
P503	22		22	27'-9"	1	4'-7"	23'-3"	0		637
P504	26	28	54	9'-8"	7	2'-9"	2'-8"			544
P505	26	28	54	22'-0"	STR.					1239
P506	4 SER. OF 7	4 SER. OF 7	8 SER. OF 7	17'-6" TO 27'-3"	STR.				1'-7 1/2"	1307
P507	32	32	64	28'-3"	STR.					1886
P508	56	56	112	18'-3"	1	7'-2"	4'-2"	7'-2"		2132
P509	8 SER.OF 17	8 SER.OF 17	16 SER.OF 17	9'-3" TO 16'-11"	1	3'-4" TO 7'-2"	2'-10"	3'-4" TO 7'-2"	2 7/8"	3712
P510		33	33	15'-7"	1	3'-1"	9'-8"	3'-1"		536
P511		22	22	20'-3"	1	3'-1"	17'-3"	0		465
P512		4	4	17'-3"	STR.					72
P513	7	7	14	6'-8"	STR.					97
P514	4	4	8	9'-8"	STR.					81
P515	8	8	16	12'-1"	7	2'-9"	4'-2"			202
P601	4	4	8	16'-3"	STR.					195
P602	8	8	16	21'-9"	8	3'-6"	14'-10"	3'-6"		523
P603	16	16	32	7'-6"	1	1'-0"	2'-8"	4'-2"		360
P604	12	12	24	4'-4"	1	1'-0"	2'-8"	1'-0"		156
P901	31	26	57	12'-3"	1	1'-7"	9'-8"	1'-7"		2374
P902	122		122	14'-2"	1	1'-7"	12'-10"	0		5876
P903	122		122	19'-8"	6	18'-6"	0			8158
P904		122	122	12'-8"	1	1'-7"	11'-4"	0		5254
P905		122	122	20'-11"	6	19'-8"	0			8676
P1001	20		20	46'-6"	1	1'-10"	43'-6"	1'-10"		4002
P1002		10	10	34'-6"	1	1'-10"	31'-6"	1'-10"		1485
P1101	20	20	40	37'-4"	1	2'-0"	34'-0"	2'-0"		7934
									TOTAL	59,510

NOTES: SEE SHEET 22/22 .

BENDING DIAGRAM: SEE SHEET 22/22 .

RICHLAND ENGINEERING LIMITED
29 NORTH PARK STREET
MANSFIELD, OHIO 44902

DESIGNED BLN | DRAWN TWH | REVIEWED DAP | DATE 12/20/05
CHECKED KAK | REVISED | STRUCTURE FILE NUMBER 7034601

REINFORCING STEEL LIST 1
BRIDGE NO. RIC-CR424-0062
OVER NORFOLK SOUTHERN RAILWAY

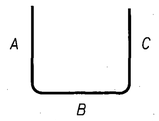
RIC-CR424-0.62

088RL.DGN 12/28/05 TWH,RC

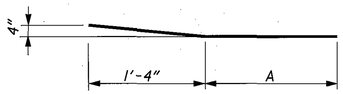
SUPERSTRUCTURE

CALCULATED TWH DATE 5/04
CHECKED BLN DATE 10/04

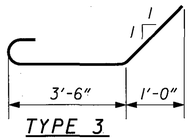
MARK	TOTAL	LENGTH	TYPE	A	B	C	INC.	WEIGHT (LBS.)
S401	12	4'-9"	13					38
S402	12	13'-5"	7	6'-4"	5½"			108
S403	12	3'-8"	STR.					29
S404	50	15'-10"	4	5'-8"	3'-2"	0'-8"		529
S501	696	47'-7"	STR.					34,542
S502	734	6'-11"	1	0'-5"	6'-6"	0		5295
S503	1468	2'-6"	1	0'-10"	1'-1"	0'-10"		3828
S504	4 SER.OF 68	1'-0" TO 46'-0"	STR.				8⅛"	6667
S505	976	40'-0"	STR.					40,719
S506	102	28'-0"	STR.					2979
S507	16	9'-0"	STR.					150
S508	20	3'-8"	STR.					76
S509	30	6'-2"	9	1'-4"	1'-5"	0'-6"		193
S510	20	3'-7"	1	0'-10"	2'-2"	0'-10"		75
S511	20	9'-3"	1	3'-8"	2'-2"	3'-8"		193
S512	50	8'-11"	1	3'-0"	3'-2"	3'-0"		465
S513	62	11'-5"	1	4'-0"	3'-8"	4'-0"		738
S514	62	12'-5"	1	4'-6"	3'-8"	4'-6"		803
S515	16	10'-7"	1	3'-10"	3'-2"	3'-10"		177
S601	58	46'-0"	STR.					4007
S602	80	9'-1"	14	5'-2"				1091
S603	4	7'-4"	14	3'-5"				44
S604	90	8'-8"	STR.					1172
S605	12	4'-4"	STR.					78
S701	72	46'-0"	STR.					6770
S801	72	50'-0"	STR.					9612
S802	52	33'-5"	STR.					4640
D801	48	5'-10"	3					748
R501	20	3'-7"	7	1'-5"	6½"			75
R502	8	7'-6"	10					63
R503	108	40'-0"	STR.					4506
R504	12	17'-0"	STR.					213
R505	28	8'-3"	2	6'-10"				241
R506	28	8'-3"	STR.					241
R507	706	7'-3"	12	4'-2"	0'-8"	2'-8"		5339
R601	40	9'-7"	11	1'-10"				576
R602	12	4'-8"	1	3'-0"	1'-10"	0		84
R603	12	4'-6"	1	2'-10"	1'-10"	0		81
							TOTAL	137,185



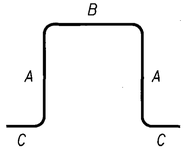
TYPE 1



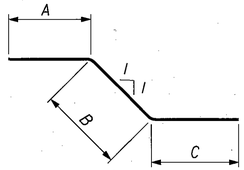
TYPE 2



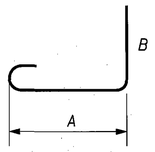
TYPE 3



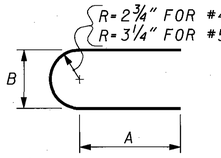
TYPE 4



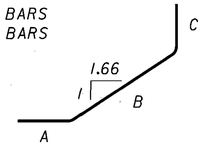
TYPE 5



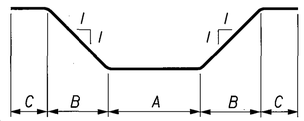
TYPE 6



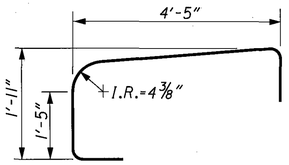
TYPE 7



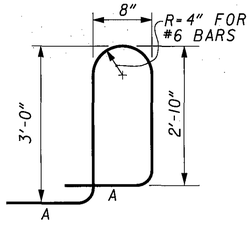
TYPE 8



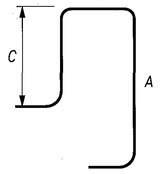
TYPE 9



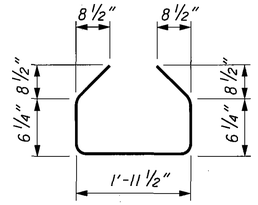
TYPE 10



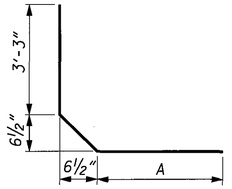
TYPE 11



TYPE 12

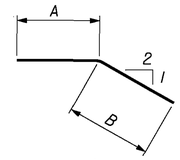


TYPE 13



TYPE 14

BENDING DIAGRAM



TYPE 15

NOTES:

BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST LETTER IDENTIFIES BAR LOCATION, THE NEXT DIGIT INDICATES THE BAR SIZE DESIGNATION, THE REMAINING DIGITS STATE THE SEQUENCE NUMBER.

EXAMPLE: A511
A = LOCATION OF THE BAR IN STRUCTURE (ABUTMENT)
5 = BAR SIZE DESIGNATION
11 = SEQUENCE NUMBER

BAR DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE INDICATED. R INDICATES INSIDE RADIUS, UNLESS OTHERWISE NOTED.

ALL REINFORCING STEEL TO BE EPOXY COATED.

RAILING BARS: SEE STANDARD DWG. BR-2-98.

RICHLAND ENGINEERING LIMITED
29 NORTH PARK STREET
MANSFIELD, OHIO 44902

DESIGNED BLN | DRAWN TWH | REVIEWED DAP 12/20/05 | DATE | STRUCTURE FILE NUMBER 7034601
CHECKED KAK | REVISED

REINFORCING STEEL LIST 2

BRIDGE NO. RIC-CR424-0062
OVER NORFOLK SOUTHERN RAILWAY

RIC-CR424-0.62

22/22

131/153

088RL.DGN 12/28/05 TWH,RC

THE PROPOSED RIGHT OF WAY & MONUMENTS SHALL BE REFERENCED FROM THE CENTERLINE OF RIGHT OF WAY OF RIC-C.R. 424 (S. ILLINOIS AVE.) AND FROM THE CENTERLINE OF SURVEY AND CONSTRUCTION OF OAK ST.

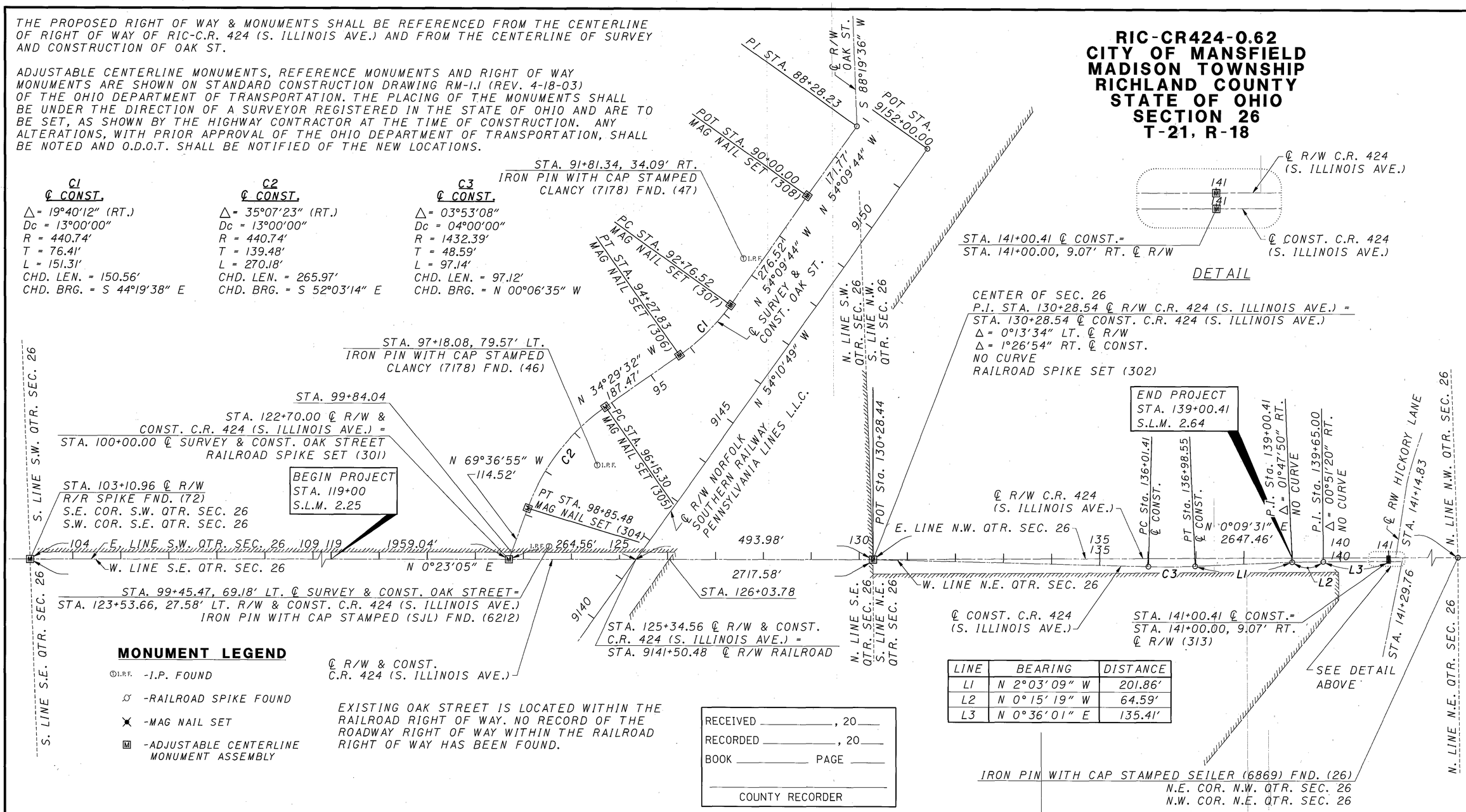
ADJUSTABLE CENTERLINE MONUMENTS, REFERENCE MONUMENTS AND RIGHT OF WAY MONUMENTS ARE SHOWN ON STANDARD CONSTRUCTION DRAWING RM-1.1 (REV. 4-18-03) OF THE OHIO DEPARTMENT OF TRANSPORTATION. THE PLACING OF THE MONUMENTS SHALL BE UNDER THE DIRECTION OF A SURVEYOR REGISTERED IN THE STATE OF OHIO AND ARE TO BE SET, AS SHOWN BY THE HIGHWAY CONTRACTOR AT THE TIME OF CONSTRUCTION. ANY ALTERATIONS, WITH PRIOR APPROVAL OF THE OHIO DEPARTMENT OF TRANSPORTATION, SHALL BE NOTED AND O.D.O.T. SHALL BE NOTIFIED OF THE NEW LOCATIONS.

C1
℄ CONST.
△ = 19°40'12" (RT.)
Dc = 13°00'00"
R = 440.74'
T = 76.41'
L = 151.31'
CHD. LEN. = 150.56'
CHD. BRG. = S 44°19'38" E

C2
℄ CONST.
△ = 35°07'23" (RT.)
Dc = 13°00'00"
R = 440.74'
T = 139.48'
L = 270.18'
CHD. LEN. = 265.97'
CHD. BRG. = S 52°03'14" E

C3
℄ CONST.
△ = 03°53'08"
Dc = 04°00'00"
R = 1432.39'
T = 48.59'
L = 97.14'
CHD. LEN. = 97.12'
CHD. BRG. = N 00°06'35" W

RIC-CR424-0.62
CITY OF MANSFIELD
MADISON TOWNSHIP
RICHLAND COUNTY
STATE OF OHIO
SECTION 26
T-21, R-18



LINE	BEARING	DISTANCE
L1	N 2°03'09" W	201.86'
L2	N 0°15'19" W	64.59'
L3	N 0°36'01" E	135.41'

MONUMENT LEGEND

- ①I.R.F. -I.P. FOUND
- ⌀ -RAILROAD SPIKE FOUND
- ✖ -MAG NAIL SET
- Ⓜ -ADJUSTABLE CENTERLINE MONUMENT ASSEMBLY

EXISTING OAK STREET IS LOCATED WITHIN THE RAILROAD RIGHT OF WAY. NO RECORD OF THE ROADWAY RIGHT OF WAY WITHIN THE RAILROAD RIGHT OF WAY HAS BEEN FOUND.

RECEIVED _____, 20___
RECORDED _____, 20___
BOOK _____ PAGE _____
_____
COUNTY RECORDER

BASIS OF BEARINGS

BEARINGS ARE RELATIVE TO GRID NORTH OF THE OHIO STATE PLANE COORDINATE SYSTEM, NORTH ZONE NAD 83(86) DATUM, AND ARE BASED ON A GLOBAL POSITIONING TRAVERSE ORIGINATING ON NGS MONUMENTS APRON AND HANLEY, RICHLAND COUNTY GEODETIC MONUMENTS 19 AND 59.

ALL DISTANCES ARE PROJECT GROUND. THE PROJECT ADJUSTMENT FACTOR (P.A.F.) FROM STATE PLANE GRID TO PROJECT GROUND IS 1.000118983 X 3.28083333 = 3.28122369320

EXISTING RIGHT OF WAY

EXISTING RIGHT OF WAY CENTERLINE, WIDTHS AND LOCATIONS WERE DETERMINED USING SURVEY PLATS C-176, F-1-65, F-1-177, F-2-200 ON FILE FROM THE RICHLAND COUNTY ENGINEER AND RECORDER.

PROPERTY LINES

PROPERTY LINES WERE ESTABLISHED USING THE FOLLOWING DOCUMENTATION ON FILE FROM THE RICHLAND COUNTY ENGINEER AND RECORDER:

SURVEYS: C-176, F-1-65, F-1-177, F-2-200

DEEDS:

D.V. 367, PG. 122	O.R.V. 359, PG. 449
D.V. 676, PG. 82	O.R.V. 444, PG. 296
O.R.V. 35, PG. 385	O.R.V. 478, PG. 857
O.R.V. 120, PG. 905	O.R.V. 580, PG. 471
O.R.V. 266, PG. 444	O.R.V. 855, PG. 446

RAILROAD VALUATION MAP V.1. OHIO/125

I HEREBY CERTIFY THAT THIS PLAT IS A TRUE DELINEATION OF A SURVEY MADE FOR THE OHIO DEPARTMENT OF TRANSPORTATION IN 2002-2003 BY RICHLAND ENGINEERING LIMITED.

THE ESTABLISHMENT OF THE PROPERTY LINES AND EXISTING RIGHT OF WAY LINES SHOWN ON THIS PLAN AS OF THIS DATE WERE PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION.

BY Robert J. McAuley
ROBERT J. McAULEY
SURVEYOR NO. 7209 DATE 29 Dec 2005

REV. 12/28/05
POINT NO. 22 CHANGED TO POINT NO. 26

STATE OF OHIO ROBERT J. McAULEY 7209 REGISTERED PROFESSIONAL SURVEYOR

SCALE IN FEET 0 50 100 200

PID NO. 23504

R/W DESIGNER BB
R/W REVIEWER RJM

CENTERLINE PLAT

RIC-C.R. 424-0.62

1/2
1/22
132/153

088RC.DGN 12/29/05 CEO,RC

RIC-CR424-0.62

RIC-CR424-0.62
CITY OF MANSFIELD
MADISON TOWNSHIP
RICHLAND COUNTY
STATE OF OHIO

THE PROPOSED RIGHT OF WAY & MONUMENTS SHALL BE REFERENCED FROM THE CENTERLINE OF RIGHT OF WAY OF RIC-C.R. 424 (S. ILLINOIS AVE.) AND FROM THE CENTERLINE OF SURVEY AND CONSTRUCTION OF OAK ST.

ADJUSTABLE CENTERLINE MONUMENTS, REFERENCE MONUMENTS AND RIGHT OF WAY MONUMENTS ARE SHOWN ON STANDARD CONSTRUCTION DRAWING RM-1.1 (REV. 4-18-03) OF THE OHIO DEPARTMENT OF TRANSPORTATION. THE PLACING OF THE MONUMENTS SHALL BE UNDER THE DIRECTION OF A SURVEYOR REGISTERED IN THE STATE OF OHIO AND ARE TO BE SET, AS SHOWN BY THE HIGHWAY CONTRACTOR AT THE TIME OF CONSTRUCTION. ANY ALTERATIONS, WITH PRIOR APPROVAL OF THE OHIO DEPARTMENT OF TRANSPORTATION, SHALL BE NOTED AND O.D.O.T. SHALL BE NOTIFIED OF THE NEW LOCATIONS.

ALL DISTANCES ARE PROJECT GROUND. THE PROJECT ADJUSTMENT FACTOR (P.A.F.) FROM STATE PLANE GRID TO PROJECT GROUND IS 1.000118983 X 3.28083333 = 3.28122369320

EXISTING MONUMENTATION (POINT FOUND WITHIN PROJECT AREA)

POINT NUMBER	STATION	OFFSET	PROJECT COORDINATES (ft.)		STATE PLANE COORDINATES (m)		DESCRIPTION
			NORTHING	EASTING	NORTHING	EASTING	
26	NE COR NW 1/4		396783.4273	1973068.3179	120925.4426	601320.8798	IPIN WITH CAP STAMPED "SEILER 6869"
23	139+95.78	0.14' LT	395103.2073	1973063.5245	120413.3714	601319.4189	PK FND
29	134+03.49	30.15' LT	394511.0070	1973031.8787	120232.8899	601309.7744	IPIN WITH CAP STAMPED "RICHLAND ENG 7209"
46	97+18.08	79.57' LT	393562.6995	1972859.7218	119943.8796	601257.3071	IPIN WITH CAP STAMPED "CLANCY 7178"
47	91+81.34	34.09' RT	393871.2107	1972430.3201	120037.9028	601126.4408	IPIN WITH CAP STAMPED "CLANCY 7178"
72	103+10.96	℄	391418.4566	1973042.7481	119290.3908	601313.0870	RSPK FND
6212	123+53.56	27.58' LT	393461.2972	1973028.8825	119912.9758	601308.8613	IPIN WITH CAP STAMPED "SJL 7052"

EXISTING MONUMENTATION (EXISTING CENTERLINE POINTS)

POINT NUMBER	STATION	OFFSET	PROJECT COORDINATES (ft.)		STATE PLANE COORDINATES (m)		DESCRIPTION	ADJUSTABLE CENTERLINE MONUMENTS TO BE SET
			NORTHING	EASTING	NORTHING	EASTING		
72	103+10.96	℄	391418.4566	1973042.7481	119290.3908	601313.0870	RSPK FND	1
300	POT 114+00.00	℄	392507.4721	1973050.0589	119622.2839	601315.3151	RSPK SET	
301	POT 122+70.00	℄	393377.4524	1973055.8993	119887.4229	601317.0950	RSPK SET	1
302	PI 130+28.54	℄	394135.9791	1973060.9914	120118.5948	601318.6470	RSPK SET	1
303	POT 141+00.00	℄	395207.4313	1973063.9558	120445.1352	601319.5504	RSPK SET	1

EXISTING MONUMENTATION (PROPOSED CENTERLINE OF OAK STREET)

POINT NUMBER	STATION	OFFSET	PROJECT COORDINATES (ft.)		STATE PLANE COORDINATES (m)		DESCRIPTION	ADJUSTABLE CENTERLINE MONUMENTS TO BE SET
			NORTHING	EASTING	NORTHING	EASTING		
301	POT 100+00.00	℄	393377.4524	1973055.8993	119887.4229	601317.0950	RSPK SET	
304	PT 98+85.48	℄	393417.3405	1972948.5554	119899.5793	601284.3804	PIN SET	1
305	PC 96+15.30	℄	393580.8895	1972738.8165	119949.4233	601220.4595	PIN SET	1
306	PT 94+27.83	℄	393735.4003	1972632.6551	119996.5126	601188.1053	PIN SET	1
307	PC 92+76.52	℄	393843.1086	1972527.4471	120029.3383	601156.0417	RSPK SET	1
308	POT 90+00.00	℄	394005.0169	1972303.2682	120078.6821	601087.7199	RSPK SET	1

EXISTING MONUMENTATION (CENTERLINE OF CONSTRUCTION)

POINT NUMBER	STATION	OFFSET	PROJECT COORDINATES (ft.)		STATE PLANE COORDINATES (m)		DESCRIPTION	ADJUSTABLE CENTERLINE MONUMENTS TO BE SET
			NORTHING	EASTING	NORTHING	EASTING		
302	PI 130+28.54	℄	394135.9791	1973060.9914	120118.5948	601318.6470	RSPK SET	
309	PC 136+01.41	℄	394708.5585	1973079.3155	120293.0965	601324.2315	RSPK SET	
310	PT 136+98.55	℄	394805.6775	1973079.1295	120322.6949	601324.1748	RSPK SET	
311	PI 139+00.41	℄	395007.4105	1973071.8997	120384.1760	601321.9714	RSPK SET	
312	PI 139+65.00	℄	395071.9998	1973071.6120	120403.8605	601321.8837	RSPK SET	
313	POT 141+00.41	℄	395207.4062	1973073.0306	120445.1275	601322.3161	RSPK SET	1

EXISTING MONUMENTATION (TEMPORARY ROAD CENTERLINE POINTS)

POINT NUMBER	STATION	OFFSET	PROJECT COORDINATES (ft.)		STATE PLANE COORDINATES (m)		DESCRIPTION	ADJUSTABLE CENTERLINE MONUMENTS TO BE SET
			NORTHING	EASTING	NORTHING	EASTING		
314	PI 15+90.00	℄	392697.5711	1973051.3351	119680.2193	601315.7040	MAG NAIL SET	
315	PI 24+13.46	℄	393500.0929	1973238.4578	119924.7993	601372.7324	RSPK SET	
316	PI 25+86.72	℄	393768.5267	1973152.9141	120006.6084	601346.6617	PIN SET	
317	PI 36+16.44	℄	394699.9636	1973174.0351	120290.4771	601353.0986	PIN SET	
318	PI 38+75.21	℄	394942.2165	1973072.1902	120364.3072	601322.0599	MAG NAIL SET	
							TOTAL	10

REV. 12/28/05
POINT NO. 22 CHANGED TO POINT NO. 26

PID NO. 23504
STATE JOB NO. 435270
R/W DESIGNER BB
R/W REVIEWER RJM

CENTERLINE MONUMENTATION

RIC-C.R. 424-0.62

2/2
2/22
133/153

088RSA.DGN 12/29/05 CEO.RC

RIC-CR424-0.62
CITY OF MANSFIELD
MADISON TOWNSHIP
RICHLAND COUNTY
STATE OF OHIO
SECTION 26
T-21, R-18

CONVENTIONAL SIGNS

County Line
Township Line
Section Line or Lot Line
Corporation Line or
Fence Line (existing) (proposed)
Center Line
Trees, Stumps (to be removed)
Utility Poles: Telephone, Power, Light
Limited Access (only) LA
Right of Way (only) R/W
Limited Access & Right of Way LA-R/W
Exist. Right of Way EX. R/W
Temp. Right of Way T ESMT
Slope Easement SL ESMT
Utility Easement U ESMT
Sanitary Easement S ESMT
Property Line (in existing fence)
Railroad or
Guardrail (existing) (proposed)
Construction Limits C/L

(9)

VANROBGO, LTD.
D.V. 676, PG. 82
6.000 AC.
O.R.V. 1338, PG. 706
1.590 AC.

(12)

440 S. ILLINOIS
LIMITED PARTNERSHIP
A.K.A. 440 S. ILLINOIS P.L.L.
AN OHIO GENERAL PARTNERSHIP
028-90-035-12-000
O.R.V. 855, PG. 446
O.R.V. 384, PG. 721
11.050 AC.
440 S. ILLINOIS AVE.

(14)

LIPPERT INVESTMENT INC.
860 OAK ST.
028-90-075-08-001
O.R.V. 266, PG. 444
1.090 AC.
LIPPERT INVESTMENT CO.
028-90-077-11-000
O.R.V. 35, PG. 385
2.000 AC.

(15)

LAWRENCE L. LIPPERT
028-90-075-08-000
D.V. 885, PG. 57
1.460 AC.
860 OAK ST.

(16)

WALTER GRAPHICS
INCORPORATED
AN OHIO CORPORATION
028-90-086-01-000
O.R.V. 359, PG. 449
1.480 AC.
850 OAK ST.

(18)

STEVEN R. BROWN AND
CAROL J. BROWN
S. ILLINOIS AVE.
O.R.V. 580, PG. 471
025-09-009-11-000
1.930 AC

028-90-018-04-000
2.000 AC

O.R.V. 478. PG. 857
S. ILLINOIS AVE.
025-09-009-01-000
0.970 AC.

025-09-009-02-000
3.830 AC.

UTILITY OWNERS

CITY OF MANSFIELD ENGINEERING
DEPT. WATER & SEWER
135 PARK AVE. EAST
MANSFIELD, OH 44902
PHONE:(419) 755-9702

SPRINT (FIBER OPTIC CABLE)
11815 HIGHWAY DR., SUITE 400
CINCINNATI, OH 45241
PHONE:(877) 624-9493

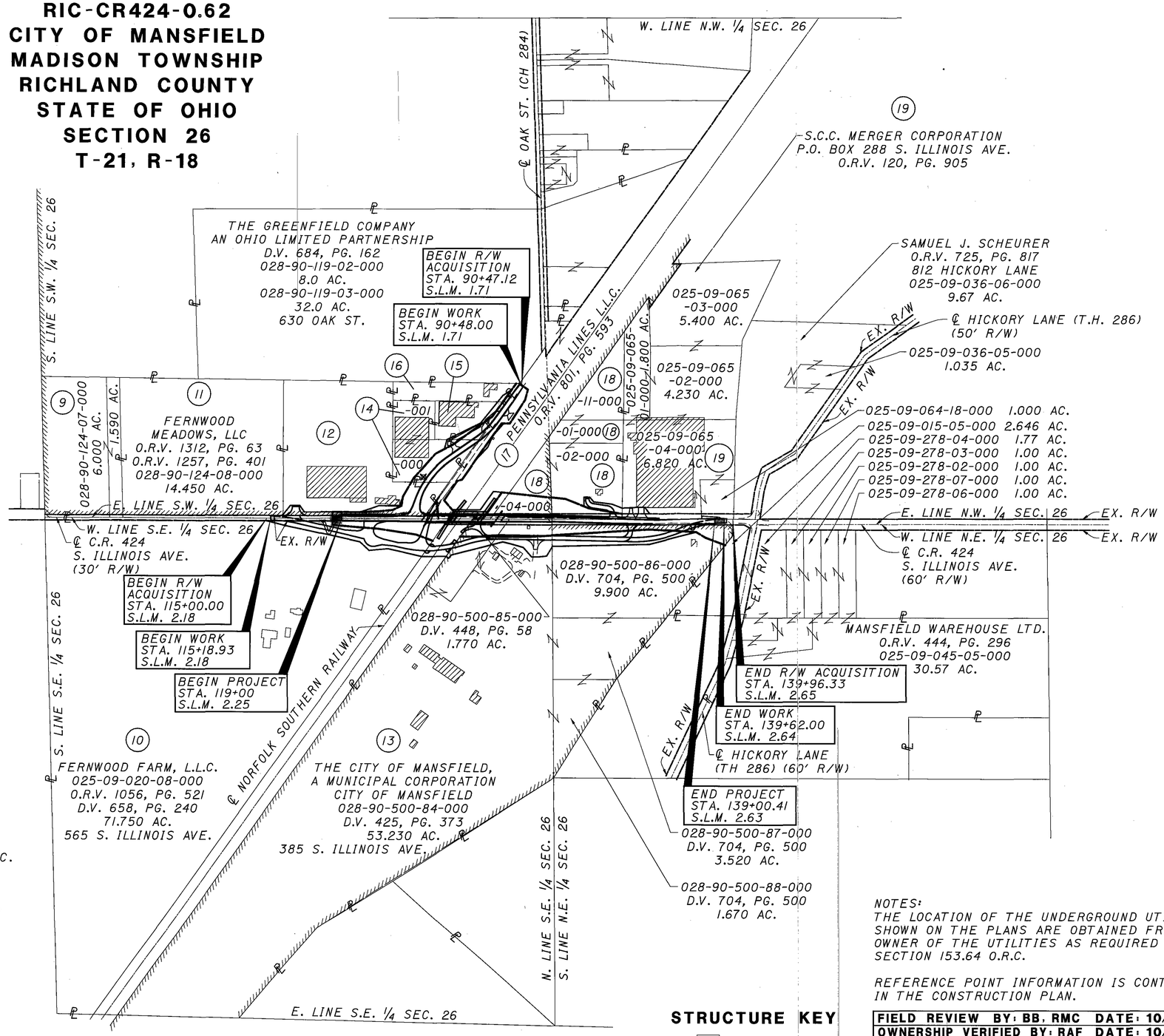
OHIO EDISON
1717 ASHLAND ROAD
MANSFIELD, OH 44905-1806
PHONE:(419) 521-6178

SPRINT (LOCAL DISTRIBUTION)
175 ASHLAND ROAD, BOX 3555
MANSFIELD, OH 44907
PHONE:(419) 755-7135

COLUMBIA GAS OF OHIO, INC.
1120 W. FOURTH STREET
MANSFIELD, OHIO 44901
PHONE:(419) 528-1137
DAMAGE PREVENTION CENTER
1600 DUBLIN ROAD
COLUMBUS, OH 43215
PHONE:(866) 632-6243

RICHLAND COUNTY
SANITARY ENGINEER
99 PARK AVENUE EAST
MANSFIELD, OHIO 44902
PHONE:(419) 774-5517

THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS OF THE UTILITY AS REQUIRED BY SECTION 153.64 O.R.C..



STRUCTURE KEY

RESIDENTIAL
COMMERCIAL

NOTES:
THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE OBTAINED FROM THE OWNER OF THE UTILITIES AS REQUIRED BY SECTION 153.64 O.R.C.

REFERENCE POINT INFORMATION IS CONTAINED IN THE CONSTRUCTION PLAN.

REV.	DATE	DESCRIPTION
		FIELD REVIEW BY: BB, RMC DATE: 10/8/04
		OWNERSHIP VERIFIED BY: RAF DATE: 10/10/04
CEO	11-16-05	REVISED 12TV & 12TV-1
CEO	1-24-06	REVISED 17WDV & ADDED 17TV-1

DATE OF COMPLETION: 10/19/04

N

0 150 300 600 HORIZONTAL SCALE IN FEET

PID NO. 23504

R/W DESIGNER BB
R/W REVIEWER RJM

PROPERTY MAP

RIC-C.R. 424-0.62

3/22

134/153

088RM.DGN 1/25/06 CEO,RC

TOTAL NUMBER OF : 9 OWNERSHIPS; 25 PARCELS; 0 TOTAL TAKES; 3 OWNERSHIPS WITH STRUCTURES INVOLVED; 6 OWNERSHIPS WITH "P" ITEMS

ALL AREAS IN ACRES **DENOTES RIGHT OF WAY ENCROACHMENT
NET RESIDUE = RECORD AREA - TOTAL PRO - NET TAKE

GRANTEE: ALL RIGHT OF WAY ACQUIRED IN THE NAME OF THE COUNTY OF RICHLAND UNLESS OTHERWISE SHOWN

PARCEL NO.	OWNER	SHEET NO.	OWNERS RECORD BOOK	OWNERS RECORD PAGE	AUDITOR'S PARCEL	RECORD AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUCTURE	NET RESIDUE LEFT	NET RESIDUE RIGHT	TYPE FUND FEDERAL/LOCAL 80%/20%	REMARKS AND PERSONALTY	AS ACQUIRED BOOK	AS ACQUIRED PAGE
1-8	NOT USED																
9	VANROBGO, LTD.		D.V.676	82	028-90-124-07-000	6.000	0.120	—	—	—		5.880	—				
			O.R.V. 1338	706	028-90-124-08-001	1.590	0.024	—	—	—		1.566	—				
					TOTAL	7.590	0.144	—	—	—		7.446	—		NO ADDITIONAL R/W REQUIRED		
10WDV	FERNWOOD FARM, L.L.C.		O.R.V. 1056	521	025-09-020-08-000	71.750	0.742	0.902	0.213	0.689	P	—	70.319		REMOVE 1082 L.F. OF BARBED WIRE		
			D.V. 658	240											FENCE (DILAPIDATED)		
10TV																	
						—	—	1.420	—	1.420		—	—		CONSTRUCTION OF TEMPORARY ROAD		
11	FERNWOOD MEADOWS, L.L.C.		O.R.V. 1312	63	028-90-124-08-000	14.450	0.296	—	—	—		14.154	—		NO ADDITIONAL R/W REQUIRED		
			O.R.V. 1257	401													
															REMOVE 205 L.F. OF WIRE FENCE		
12WDV	440 S. ILLINOIS LIMITED PARTNERSHIP		O.R.V. 855	446	028-90-035-12-000	11.050	0.260	1.123	0.169	0.954	P	9.836	—				
	A.K.A. 440 S. ILLINOIS P.L.L. AN		O.R.V. 384	721													
	OHIO GENERAL PARTNERSHIP																
12TV							—	0.097	—	0.097		—	—		GRADING		
12TV-1							—	0.180	—	0.180		—	—		CONSTRUCTION OF DRIVE		
											P				REMOVE 40 L.F. OF WIRE FENCE		
13WDV	CITY OF MANSFIELD		D.V. 448	58	028-90-500-85-000	1.770	0.135	0.428	0.135	0.293	P	—	1.342		TELEPHONE, YARD LIGHTS,		
13WDV-1	THE CITY OF MANSFIELD, A MUNICIPAL CORPORATION		D.V. 425	373	028-90-500-84-000	53.230	0.165	0.560	0.165	0.395	YES	—	52.670		GATE SWITCH, GATE OPENER,		
13WDV-2	CITY OF MANSFIELD		D.V. 704	500	028-90-500-86-000	9.900	0.666	1.698	0.666	1.032	P	—	8.202		GAS REGULATOR BUILDING, REMOVE		
			D.V. 704	500	028-90-500-87-000	3.520	—	—	—	—		—	3.520		563 L.F. OF CHAINLINK FENCE		
			D.V. 704	500	028-90-500-88-000	1.670	—	—	—	—		—	1.670				
					TOTAL	70.090	0.966	2.686	0.966	1.720		—	67.404				
13TV					028-90-500-84-000	—	—	0.475	—	0.475		—	—		CONSTRUCTION OF TEMPORARY ROAD		
					028-90-500-85-000	—	—	0.339	—	0.339		—	—				
					028-90-500-86-000	—	—	1.048	—	1.048		—	—				
					TOTAL			1.862		1.862							
14WDV	LIPPERT INVESTMENT INC.,		O.R.V. 266	444	028-90-075-08-001	1.090	—	—	—	—	YES	1.090	—		ONE STORY BRICK BUILDING		
	A.K.A. LIPPERT INVESTMENT COMPANY		O.R.V.35	385	028-90-077-11-000	2.000	—	0.907	—	0.907	P	1.093	—		REMOVE 60 L.F. OF FENCE		
					TOTAL	3.090	—	0.907		0.907		2.183	—				
14TV						—	—	0.044	—	0.044		—	—		CONSTRUCTION OF DRIVE AND GRADING		
15WDV	LAWRENCE L. LIPPERT		D.V. 885	57	028-90-075-08-000	1.460	—	0.205	—	0.205	P	1.255	—		RAILROAD TIES		
15TV						—	—	0.160	—	0.160		—	—		CONSTRUCTION OF DRIVE AND GRADING		
16WDV	WALTER GRAPHICS INCORPORATED, AN OHIO		O.R.V. 359	449	028-90-086-01-000	1.480	—	0.040	—	0.040		1.440					
	CORPORATION																
16TV						—	—	0.029	—	0.029		—	—		CONSTRUCTION OF DRIVE AND GRADING		
17WDV	PENNSYLVANIA LINES L.L.C. A.K.A.		O.R.V. 801	593	CITY OF MANSFIELD	5.712(C)	—	1.188	—	1.188			—		AREA S.W. QTR. SEC. 26		
17WDV-1	NORFOLK SOUTHERN RAILROAD		D.V. 757	589	028-90-900-03-001		—	0.135	—	0.135			—		10" WOOD POSTS, CONTROL BUILDING		
17SHV					MADISON TOWNSHIP		—	0.021	—	0.021			—		PROPERTY LEASED TO SPRINT PCS		
17SHV-1					025-09-900-05-001		—	0.012	—	0.012			—		O.R.V. 1366, PG. 202		
					TOTAL	5.712	—	1.356	—	1.356		4.356	—				
17AV						—	—	0.259	—	0.259		—	—				
17TV						—	—	0.921	—	0.921		—	—				
17TV-1						—	—	0.036	—	0.036		—	—				
18WDV	STEVEN R. BROWN AND CAROL J. BROWN		O.R.V. 580	471	028-90-018-04-000	2.000	0.220	0.841	0.220	0.621		1.159	—		CONSTRUCTION OF TEMPORARY ROAD		
			O.R.V. 580	471	025-09-009-11-000	1.930	—	—	—	—		1.930	—		AND STRUCTURE, LIEN O.R.V. 972, PG. 38		
			D.V. 478	857	025-09-009-01-000	0.970	—	—	—	—		0.970	—				
18WDV-1			D.V. 478	857	025-09-009-02-000	3.830	0.258	0.620	0.258	0.362		3.210	—				
					TOTAL	8.730	0.478	1.461	0.478	0.983		7.269	—				
18TV					025-09-009-02-000	—	—	0.201		0.201		—	—		CONSTRUCTION OF DRIVE		
19	S.C.C. MERGER CORPORATION		O.R.V. 120	905	025-09-065-04-000	6.820	0.293	—	—	—	P	6.527	—		POSTS		
					025-09-064-18-000	1.000	0.118	—	—	—		0.882	—				
					025-09-065-01-000	1.800	—	—	—	—		1.800	—				
					025-09-065-02-000	4.230	—	—	—	—		4.230	—				
					025-09-065-03-000	5.400	—	—	—	—		5.400	—				
					TOTAL	19.250	0.411	—	—	—		18.839	—				
19TV					025-09-065-04-000	—	—	0.105	—	0.105		—	—		CONSTRUCTION OF DRIVE		
															REMOVAL OF RETAINING WALL		

(C) = CALCULATED

NOTE:
UNDER NO CIRCUMSTANCES ARE TEMPORARY EASEMENTS TO BE USED FOR STORAGE OF MATERIAL OR EQUIPMENT BY THE CONTRACTOR UNLESS NOTED OTHERWISE.

NOTE:
ALL TEMPORARY PARCELS TO BE OF 24 MONTHS DURATION.

FIELD REVIEW BY: BB, RMC		DATE: 10/8/04
OWNERSHIP VERIFIED BY: RAF		DATE: 10/10/04
CEO	12-6-04	REVISED 13TV & 17WDV
CEO	2-16-05	REVISED GRANTEE NAME
CEO	11-16-05	REVISED 12TV & 12TV-1
CEO	1-24-06	REVISED 17WDV & ADDED 17TV-1
REV. BY	DATE	DESCRIPTION
DATE OF COMPLETION: 10/19/04		

FEDERAL PROJECT NO.

PID NO. 23504

STATE JOB NO. 435270

R/W DESIGNER BB
R/W REVIEWER RJM

SUMMARY OF ADDITIONAL RIGHT OF WAY

RIC-C.R. 424-0.62

4 / 22

135 / 153

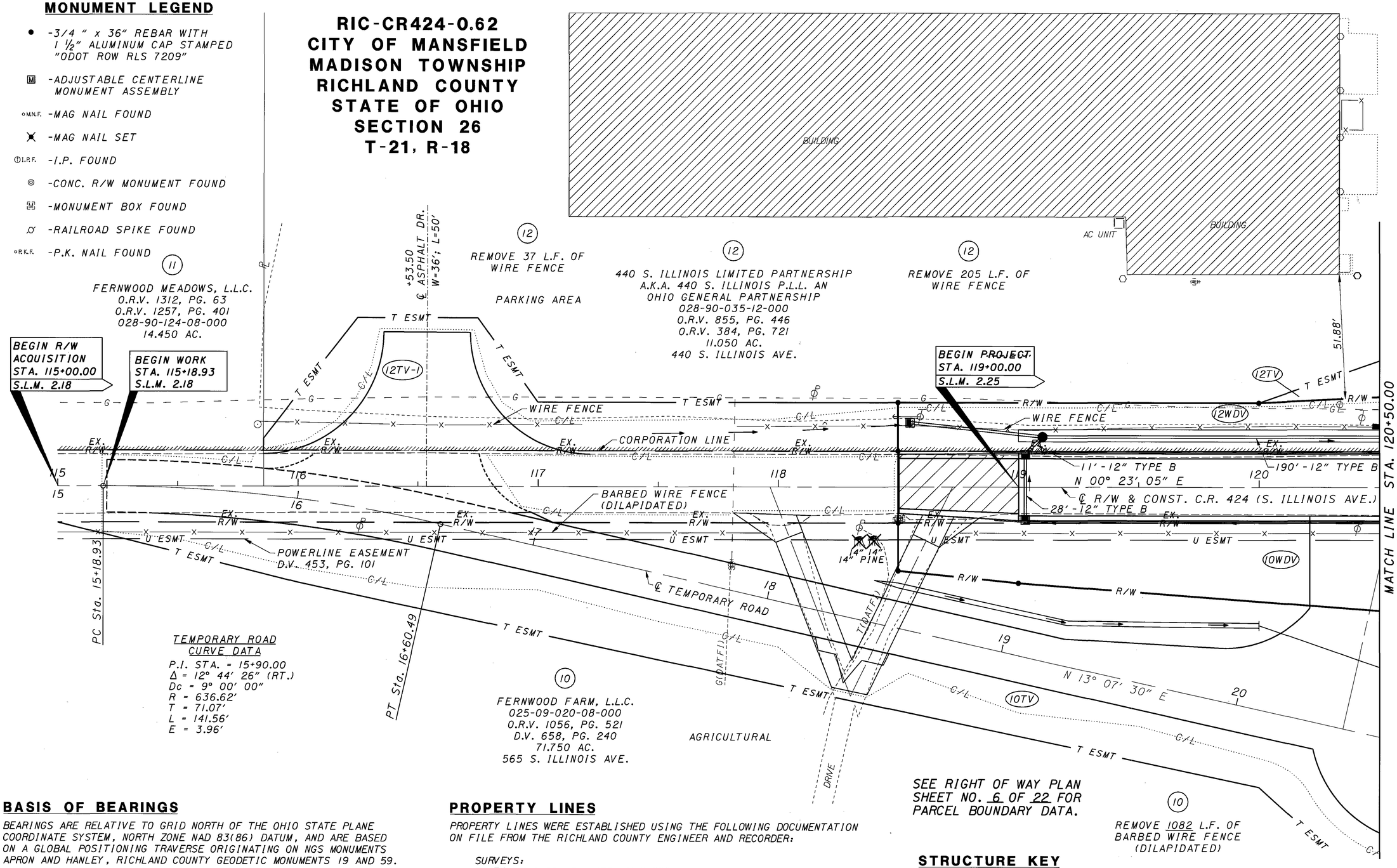
088RS.DGN 1/25/06 CEO,RC

RIC-CR424-0.62

RIC-CR424-0.62
CITY OF MANSFIELD
MADISON TOWNSHIP
RICHLAND COUNTY
STATE OF OHIO
SECTION 26
T-21, R-18

MONUMENT LEGEND

- -3/4 " x 36" REBAR WITH 1 ½" ALUMINUM CAP STAMPED "ODOT ROW RLS 7209"
- [M] -ADJUSTABLE CENTERLINE MONUMENT ASSEMBLY
- o M.N.F. -MAG NAIL FOUND
- X -MAG NAIL SET
- ⊙ I.P.F. -I.P. FOUND
- ◎ -CONC. R/W MONUMENT FOUND
- [M] -MONUMENT BOX FOUND
- ⌀ -RAILROAD SPIKE FOUND
- o R.K.F. -P.K. NAIL FOUND



TEMPORARY ROAD CURVE DATA

P.I. STA. = 15+90.00
Δ = 12° 44' 26" (RT.)
Dc = 9° 00' 00"
R = 636.62'
T = 71.07'
L = 141.56'
E = 3.96'

(10)
FERNWOOD FARM, L.L.C.
025-09-020-08-000
O.R.V. 1056, PG. 521
D.V. 658, PG. 240
71.750 AC.
565 S. ILLINOIS AVE.

AGRICULTURAL

SEE RIGHT OF WAY PLAN SHEET NO. 6 OF 22 FOR PARCEL BOUNDARY DATA.

(10)
REMOVE 1082 L.F. OF BARBED WIRE FENCE (DILAPIDATED)

BASIS OF BEARINGS

BEARINGS ARE RELATIVE TO GRID NORTH OF THE OHIO STATE PLANE COORDINATE SYSTEM, NORTH ZONE NAD 83(86) DATUM, AND ARE BASED ON A GLOBAL POSITIONING TRAVERSE ORIGINATING ON NGS MONUMENTS APRON AND HANLEY, RICHLAND COUNTY GEODETIC MONUMENTS 19 AND 59.

ALL DISTANCES ARE PROJECT GROUND. THE PROJECT ADJUSTMENT FACTOR (P.A.F.) FROM STATE PLANE GRID TO PROJECT GROUND IS 1.000118983 X 3.28083333 = 3.28122369320

EXISTING RIGHT OF WAY

EXISTING RIGHT OF WAY CENTERLINE, WIDTHS AND LOCATIONS WERE DETERMINED USING SURVEY PLATS C-176, F-1-65, F-1-177, F-2-200 ON FILE FROM THE RICHLAND COUNTY ENGINEER AND RECORDER.

PROPERTY LINES

PROPERTY LINES WERE ESTABLISHED USING THE FOLLOWING DOCUMENTATION ON FILE FROM THE RICHLAND COUNTY ENGINEER AND RECORDER:

SURVEYS:
C-176, F-1-65, F-1-177, F-2-200

DEEDS:

D.V.	367, PG. 122	O.R.V.	359, PG. 449
D.V.	676, PG. 82	O.R.V.	444, PG. 296
O.R.V.	35, PG. 385	O.R.V.	478, PG. 857
O.R.V.	120, PG. 905	O.R.V.	580, PG. 471
O.R.V.	266, PG. 444	O.R.V.	855, PG. 446

RAILROAD VALUATION MAP V. I. OHIO/125

STRUCTURE KEY

- RESIDENTIAL
- COMMERCIAL

FIELD REVIEW BY: BB, RMC DATE: 10/8/04		
OWNERSHIP VERIFIED BY: RAF DATE: 10/10/04		
REV	12-6-04	REVISED BASIS OF BEARINGS NOTE
CEO	11-16-05	REVISED 12TV & 12TV-1
REV.	DATE	DESCRIPTION
DATE OF COMPLETION: 10/19/04		

N

SCALE IN FEET 0 10 20 40

PID NO. 23504

R/W DESIGNER BB
R/W REVIEWER RJM

RIGHT OF WAY PLAN
STA. 115+00.00 TO 120+50.00

RIC-C.R. 424-0.62

5/22

136/153

088RPA.DGN 11/17/05 CEO

RIC-CR424-0.62

RIC-CR424-0.62
CITY OF MANSFIELD
MADISON TOWNSHIP
RICHLAND COUNTY
STATE OF OHIO
SECTION 26
T-21, R-18

LINE	BEARING	DISTANCE
L1	N 89°29'43" W	5.00'
L2	N 51°32'16" W	63.51'
L3	N 00°23'05" E	50.00'
L4	N 54°50'49" E	43.01'
L5	S 89°36'55" E	20.00'
L6	N 89°36'55" W	35.00'
L7	N 89°36'55" W	35.00'
L8	S 89°36'55" E	20.00'

(11)
FERNWOOD MEADOWS, L.L.C.
O.R.V. 1312, PG. 63
O.R.V. 1257, PG. 401
028-90-124-08-000
14.450 AC.

(12)
440 S. ILLINOIS LIMITED PARTNERSHIP
A.K.A. 440 S. ILLINOIS P.L.L. AN
OHIO GENERAL PARTNERSHIP
028-90-035-12-000
O.R.V. 855, PG. 446
O.R.V. 384, PG. 721
11.050 AC.
440 S. ILLINOIS AVE.

BEGIN R/W ACQUISITION
STA. 115+00.00
S.L.M. 2.18

BEGIN WORK
STA. 115+18.93

BEGIN PROJECT
STA. 119+00.00
S.L.M. 2.25

S. LINE S.W. QTR. SEC. 26

STA. 115+00.00, 15.00' RT.

STA. 115+85.79, ℄ R/W & CONST.

STA. 115+85.82, 15.00' LT.

STA. 115+85.83, 20.00' LT.

STA. 116+00.00, 40.00' RT.

STA. 116+25.00, 70.00' LT.

STA. 116+75.00, 70.00' LT.

+53.50 ℄ ASPHALT DR. W=36'; L=50'

STA. 117+00.00, 35.00' LT.

STA. 118+50.00, 35.00' LT.

STA. 118+50.00 ℄ R/W & CONST.

STA. 118+50.00, 15.00' LT.

STA. 118+50.00, 15.00' RT.

STA. 119+00.00, 40.00' RT.

STA. 120+00.00, 35.00' LT.

STA. 120+50.00, 125.00' RT.

PC Sta. 15+18.93

PT Sta. 16+60.49

L2 T ESMT

L3 T ESMT

L4 T ESMT

L5

L6

L7

L8

S 14°25'33" W T ESMT 103.08'

S 00°23'05" W 264.18'

N 00°23'05" E 150.00' T ESMT

N 00°23'05" E 1539.04'

N 00°23'05" E 350.00'

N 00° 23' 05" E 623.19'

N 00°23'05" E 150.00'

N 06°05'43" E R/W 50.25'

N 04°40'26" E R/W 200.56'

N 18°54'19" W 105.95' T ESMT

S 12°22'54" W T ESMT 408.93'

N 13° 07' 30" E T ESMT

S 42°22'19" W T ESMT 67.27'

N 00° 23' 05" E 484.50'

E. LINE S.W. QTR. SEC. 26
W. LINE S.E. QTR SEC. 26

CORPORATION LINE

℄ TEMPORARY ROAD

℄ R/W & CONST. C.R. 424 (S. ILLINOIS AVE.)

POWERLINE EASEMENT
D.V. 453, PG. 101

MATCH LINE STA. 120+50.00
SEE SHEET NO. 8 OF 22

12TV-1
12TV
12WDV
10WDV
10TV

STA. 103+10.96 ℄ R/W
R/R SPIKE FND.
S.E. COR. S.W. QTR. SEC. 26
S.W. COR. S.E. QTR. SEC. 26

TEMPORARY ROAD CURVE DATA
P.I. STA. = 15+90.00
Δ = 12° 44' 26" (RT.)
Dc = 9° 00' 00"
R = 636.62'
T = 71.07'
L = 141.56'
E = 3.96'

MONUMENT LEGEND

- ● -3/4 " x 36" REBAR WITH 1 ½" ALUMINUM CAP STAMPED "ODOT ROW RLS 7209"
- Ⓜ -ADJUSTABLE CENTERLINE MONUMENT ASSEMBLY
- ○M.N.F. -MAG NAIL FOUND
- ✕ -MAG NAIL SET
- ⊙I.P.F. -I.P. FOUND
- ◎ -CONC. R/W MONUMENT FOUND
- Ⓜ -MONUMENT BOX FOUND
- ∅ -RAILROAD SPIKE FOUND
- ○P.K.F. -P.K. NAIL FOUND

(10)
REMOVE 1082 L.F. OF BARBED WIRE FENCE (DILAPIDATED)

(10)
FERNWOOD FARM, L.L.C.
025-09-020-08-000
O.R.V. 1056, PG. 521
D.V. 658, PG. 240
71.750 AC.
565 S. ILLINOIS AVE.

SEE RIGHT OF WAY PLAN SHEET NO. 5 OF 22 FOR TOPOGRAPHIC AND PROPOSED PROJECT DATA.

BASIS OF BEARINGS
SEE SHEET 5 OF 22 FOR BASIS OF BEARING

EXISTING RIGHT OF WAY
SEE SHEET 5 OF 22 FOR EXISTING RIGHT OF WAY

PROPERTY LINES
SEE SHEET 5 OF 22 FOR PROPERTY LINES

FIELD REVIEW BY: BB, RMC DATE: 10/8/04		
OWNERSHIP VERIFIED BY: RAF DATE: 10/10/04		
CEO	11-16-05	REVISED 12TV & 12TV-1
REV.	DATE	DESCRIPTION
DATE OF COMPLETION: 10/19/04		

SCALE IN FEET: 0, 10, 20, 40

PID NO. 23504

R/W DESIGNER BB
R/W REVIEWER RJM

RIGHT OF WAY PLAN
STA. 115+00.00 TO 120+50.00

RIC-C.R. 424-0.62

6/22

137/153

088RPAa.DGN 11/17/05 CEO,RC

RIC-CR424-0.62 CITY OF MANSFIELD
MADISON TOWNSHIP RICHLAND COUNTY
STATE OF OHIO SECTION 26
T-21, R-18

440 S. ILLINOIS LIMITED PARTNERSHIP
A.K.A. 440 S. ILLINOIS P.L.L. AN
(12) OHIO GENERAL PARTNERSHIP
028-90-035-12-000
O.R.V. 855, PG. 446
11.050 AC.
440 S. ILLINOIS AVE.

(17) PENNSYLVANIA LINES L.L.C.
O.R.V. 801, PG. 593

BUILDING
BUILDING
18" POPLAR
T ESMT
BUSH (SAVE)
CONCRETE PARKING (REMOVE)
18" RED MAPLE
C/L
R/W
(12TV)
7.67'
11.17'
(12WDV)
50' R.
15" TYPE C
12"
42' - 12" TYPE C
150' R.
S 69°36'55" E 66
℄ SURVEY & CONSTRUCTION OAK STREET
PT Sta. 98+85.48
86' - 12" TYPE C
50' R.
40' R.
U ESMT
25' - 12" TYPE C
116' - 12" TYPE C
P.E.O.I.
225' R.
215' - 12" EX.
EX. R/W
12" HP EX.
11' - 12" TYPE C
CORPORATION LINE
121
122
123
36' - 12" TYPE B
℄ R/W & CONST. C.R. 424 (S. ILLINOIS AVE.)
39' - 12" TYPE B
BARBED WIRE FENCE (DILAPIDATED)
POWERLINE EASEMENT D.V. 453, PG. 101
STA. 122+70.00 ℄ R/W & CONST. C.R. 424 (S. ILLINOIS AVE.)
STA. 100+00.00 ℄ SURVEY & CONST. OAK ST.
(10)
FERNWOOD FARM, L.L.C.
025-09-020-08-000
O.R.V. 1056, PG. 521
D.V. 658, PG. 240
71.750 AC.
565 S. ILLINOIS AVE.
12" TEMPORARY
S 68° 06' 42" E
2:1
(10WDV)
SEE RIGHT OF WAY PLAN SHEET NO. 8 OF 22 FOR PARCEL BOUNDARY DATA.
(10TV)
16" W
℄ TEMPORARY ROAD
21
22
23
24
01
RC Sta. 22+38.10
℄ TEMPORARY OAK ST.
C/L
T ESMT
(10) REMOVE 1082 L.F. OF BARBED WIRE FENCE (DILAPIDATED)
(13) REMOVE 583 L.F. OF CHAINLINK FENCE
(17WDV)
POT Sta. 7+02.48
S 55°47' E
10" WOOD POSTS
PC Sta. 7+42.62
POT Sta. 9+75.09
CONTROL BUILDING
S 50°12'49" E 1760' ±
℄ NORFOLK SOUTHERN RAILWAY
RR E/COMM.
(17TV)
T ESMT
A ESMT
9142
(17AV)
MH. 353
124 N 0°23' 05" E
PT Sta. 8+24.24
(17SHV)
372°30'04" E
10' TUNNEL LINER PLATE
CROSSING SIGNAL
A ESMT
9141
SENSOR
10'-46" 45A W
FROG
(13WDV)
12W (ABT)
(17WDV)
PT Sta.
R/W
(13TV)
3.10
MAINTENANCE ROAD
UNK. E.O.I.
S 58°48'28" E
9140
F=5.00
SWITCH
CORPORATION LINE
EX. W. TO BE REMOVED
12 STM
SAN
+80.33
PRC Sta.
(13) CITY OF MANSFIELD
028-90-500-85-000
D.V. 448, PG. 58
1.770 AC.
385 S. ILLINOIS AVE.
CHAINLINK FENCE
T ESMT
8' TEMPORARY CHAINLINK FENCE
9139
BACKFLOW PREVENTER
MATCH LINE STA. 126+00.00 SEE SHEET NO. 9 OF 22
SEE SHEET NO. 5 OF 22 MATCH LINE STA. 120+50.00

BASIS OF BEARINGS
SEE SHEET 5 OF 22 FOR BASIS OF BEARING

EXISTING RIGHT OF WAY
SEE SHEET 5 OF 22 FOR EXISTING RIGHT OF WAY

PROPERTY LINES
SEE SHEET 5 OF 22 FOR PROPERTY LINES

MONUMENT LEGEND
- ● -3/4 " x 36" REBAR WITH 1 ½" ALUMINUM CAP STAMPED "ODOT ROW RLS 7209"
- Ⓜ -ADJUSTABLE CENTERLINE MONUMENT ASSEMBLY
- ◦M.N.F. -MAG NAIL FOUND
- ✕ -MAG NAIL SET
- Ⓘ I.R.F. -I.P. FOUND
- ◎ -CONC. R/W MONUMENT FOUND
- Ⓜ -MONUMENT BOX FOUND
- ⌀ -RAILROAD SPIKE FOUND
- ◦P.K.F. -P.K. NAIL FOUND

STRUCTURE KEY
- RESIDENTIAL
- COMMERCIAL

FIELD REVIEW BY: BB, RMC DATE: 10/8/04		
OWNERSHIP VERIFIED BY: RAF DATE: 10/10/04		
REV	12-6-04	REMOVED LEADER
CEO	11-16-05	REVISED 12TV
CEO	12-28-05	REVISED MAINTENANCE DRIVE
REV.	DATE	DESCRIPTION
DATE OF COMPLETION: 10/19/04		

N

SCALE IN FEET 0 10 20 40

PID NO. 23504

R/W DESIGNER BB
R/W REVIEWER RJM

RIGHT OF WAY PLAN
STA. 120+50.00 TO 126+00.00

RIC-C.R. 424-0.62

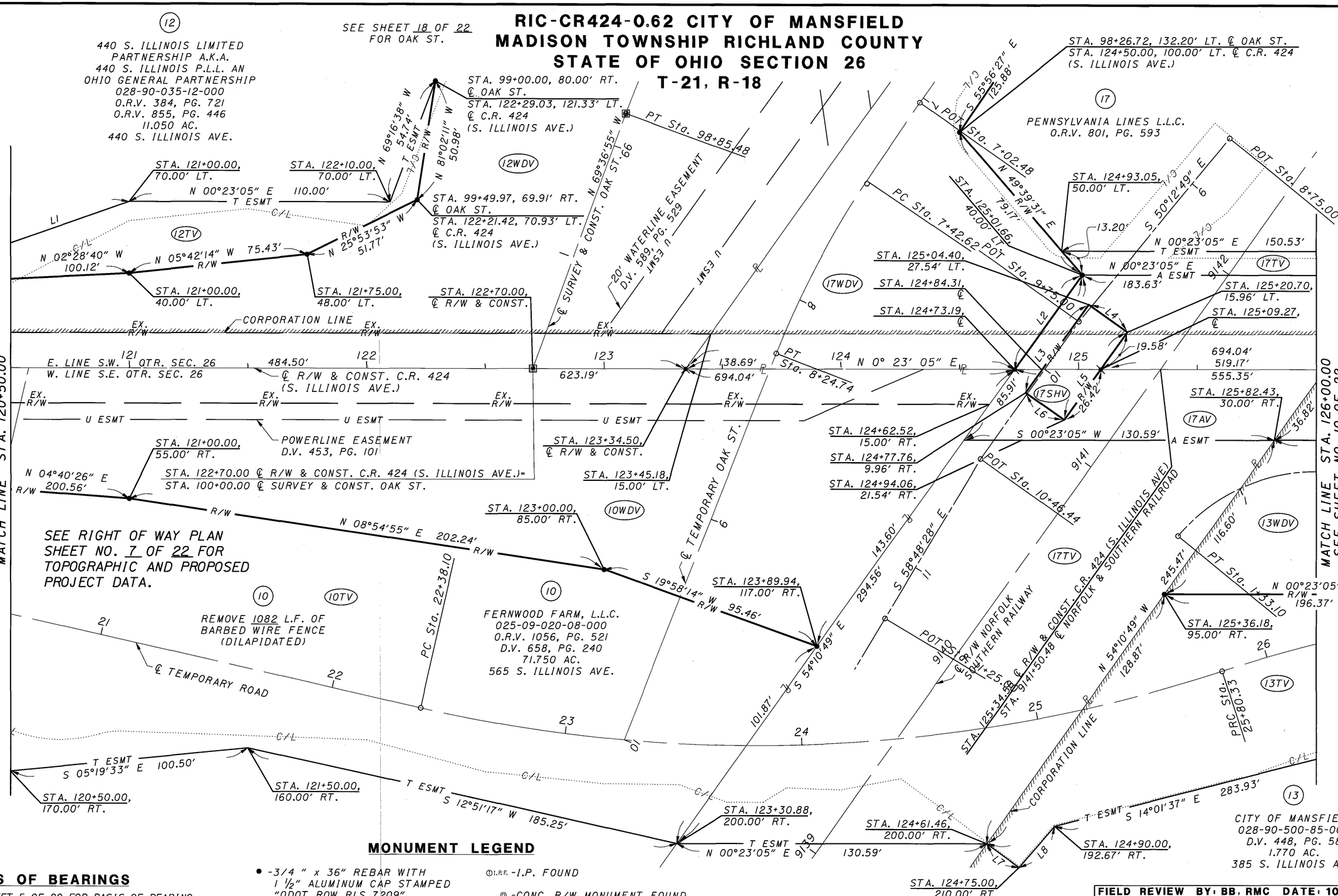
7/22

138/153

088RPB.DGN 12/29/05 CEO,RC

RIC-CR424-0.62

RIC-CR424-0.62 CITY OF MANSFIELD
MADISON TOWNSHIP RICHLAND COUNTY
STATE OF OHIO SECTION 26
T-21, R-18



MONUMENT LEGEND

- ● -3/4 " x 36" REBAR WITH 1 ½" ALUMINUM CAP STAMPED "ODOT ROW RLS 7209"
- Ⓜ -ADJUSTABLE CENTERLINE MONUMENT ASSEMBLY
- ○M.N.F. -MAG NAIL FOUND
- ✕ -MAG NAIL SET
- Ⓘ I.R.F. -I.P. FOUND
- ◎ -CONC. R/W MONUMENT FOUND
- Ⓜ -MONUMENT BOX FOUND
- ∅ -RAILROAD SPIKE FOUND
- ○P.K.F. -P.K. NAIL FOUND

BASIS OF BEARINGS

SEE SHEET 5 OF 22 FOR BASIS OF BEARING

EXISTING RIGHT OF WAY

SEE SHEET 5 OF 22 FOR EXISTING RIGHT OF WAY

PROPERTY LINES

SEE SHEET 5 OF 22 FOR PROPERTY LINES

LINE	BEARING	DISTANCE	LINE	BEARING	DISTANCE
L1	N 18°54'19" W	105.95'	L6	S 35°46'13" W	20.00'
L2	S 54°10'49" E	49.10'	L7	S 36°50'24" W	16.83'
L3	N 54°13'47" W	46.00'	L8	S 48°44'33" E	22.92'
L4	N 35°46'13" E	20.00'			
L5	S 54°13'47" E	46.00'			

FIELD REVIEW BY: BB, RMC DATE: 10/8/04		
OWNERSHIP VERIFIED BY: RAF DATE: 10/10/04		
CEO	11-16-05	REVISED 12TV
CEO	12-28-05	REVISED MAINTENANCE DRIVE
REV.	DATE	DESCRIPTION
DATE OF COMPLETION: 10/19/04		

SCALE IN FEET (0, 10, 20, 40)

PID NO. 23504

R/W DESIGNER BB

R/W REVIEWER RJM

RIGHT OF WAY PLAN
STA. 120+50.00 TO 126+00.00

RIC-C.R. 424-0.62

8/22

139/153

088RPBg.DGN 12/29/05 CEO,CAR,RC

MONUMENT LEGEND

- ● -3/4 " x 36" REBAR WITH 1 1/2" ALUMINUM CAP STAMPED "ODOT ROW RLS 7209"
- Ⓜ -ADJUSTABLE CENTERLINE MONUMENT ASSEMBLY
- ○M.N.F. -MAG NAIL FOUND
- ✕ -MAG NAIL SET
- ⊙I.P.F. -I.P. FOUND
- ◎ -CONC. R/W MONUMENT FOUND
- Ⓜ -MONUMENT BOX FOUND
- ⌀ -RAILROAD SPIKE FOUND
- ○P.K.F. -P.K. NAIL FOUND

RIC-CR424-0.62
CITY OF MANSFIELD
MADISON TOWNSHIP
RICHLAND COUNTY
STATE OF OHIO
SECTION 26
T-21, R-18

STRUCTURE KEY

- RESIDENTIAL
- COMMERCIAL

BASIS OF BEARINGS

SEE SHEET 5 OF 22 FOR BASIS OF BEARING

EXISTING RIGHT OF WAY

SEE SHEET 5 OF 22 FOR EXISTING RIGHT OF WAY

PROPERTY LINES

SEE SHEET 5 OF 22 FOR PROPERTY LINES

SEE RIGHT OF WAY PLAN SHEET NO. 10 OF 22 FOR PARCEL BOUNDARY DATA.

(18) 025-09-009-02-000 3.830 AC.

(18) STEVEN R. BROWN AND CAROL J. BROWN O.R.V. 580, PG. 471 S. ILLINOIS AVE. 028-90-018-04-000 2.000 AC.

(17) PENNSYLVANIA LINES L.L.C. O.R.V. 801, PG. 593

(13) CITY OF MANSFIELD, INC. 028-90-500-85-000 D.V. 448, PG. 58 1.770 AC. 385 S. ILLINOIS AVE.

(13) THE CITY OF MANSFIELD, A MUNICIPAL CORPORATION 028-90-500-84-000 D.V. 425, PG. 373 53.230 AC. 385 S. ILLINOIS AVE.

(13) CITY OF MANSFIELD 028-90-500-86-000 D.V. 704, PG. 500 9.900 AC. 385 S. ILLINOIS AVE.

N 0° 23' 05" E
℄ R/W & CONST. C.R. 424 (S. ILLINOIS AVE.)

℄ TEMPORARY ROAD

BEGIN APPROACH SLAB STA. 127+32.45

BRIDGE TERMINAL ASSEMBLY TYPE 2 (TYPICAL)

GUARDRAIL POST STA. 127+55.06

GUARDRAIL POST STA. 127+22.41

POT Sta. 0+00.00

PC Sta. 11+92.9

PT Sta. 12+28.8

PT Sta. 12+56.23

CROSSING SIGNALED

SWITCH

CHAINLINK FENCE

GAS REGULATOR BUILDING

BRICK SIGN

YARD LIGHT

TELEPHONE

GATE SWITCH

GATE OPENER

TRIP WIRE

CORPORATION LINE

30' SANITARY EASEMENT O.R.V. 222, PG. 833

8' TEMPORARY CHAINLINK FENCE

8' TEMPORARY GATE

REMOVE 583 L.F. OF CHAINLINK FENCE

WETLAND A

14" BASIN RETURN

8" TANK DRAIN

SQUARE M.H.

BLDG.

DRIVE

6:1 TAPER

120'-12" TYPE C

150'-12" TYPE C

250'-12" TYPE C-131

6'-12" TYPE C

28'-12" TYPE B

40'-12" TYPE B

38' - 6' x 3' C/L

210' - 7' x 3' TYPE A @ 0.42%

MATCH LINE STA. 131+50.00 SEE SHEET NO. II OF 22

SEE SHEET NO. 7 OF 22 MATCH LINE STA. 126+00.00

FIELD REVIEW BY: BB, RMC DATE: 10/8/04
OWNERSHIP VERIFIED BY: RAF DATE: 10/10/04

REV.	DATE	DESCRIPTION

DATE OF COMPLETION: 10/19/04

RIGHT OF WAY PLAN
STA. 126+00.00 TO 131+50.00

RIC-C.R. 424-0.62

PID NO. 23504

R/W DESIGNER BB
R/W REVIEWER RJM

SCALE IN FEET 0 10 20 40

9/22

140/153

088RPC.DGN 10/19/04 CEO,CAR,RC

RIC-CR424-0.62

MONUMENT LEGEND

- ● -3/4 " x 36" REBAR WITH 1 1/2" ALUMINUM CAP STAMPED "ODOT ROW RLS 7209"
- Ⓜ -ADJUSTABLE CENTERLINE MONUMENT ASSEMBLY
- ○M.N.F. -MAG NAIL FOUND
- ✕ -MAG NAIL SET
- ⊙I.P.F. -I.P. FOUND
- ◎ -CONC. R/W MONUMENT FOUND
- Ⓜ -MONUMENT BOX FOUND
- ⌀ -RAILROAD SPIKE FOUND
- ○P.K.F. -P.K. NAIL FOUND

SEE RIGHT OF WAY PLAN SHEET NO. 9 OF 22 FOR TOPOGRAPHIC AND PROPOSED PROJECT DATA.

RIC-CR424-0.62
CITY OF MANSFIELD
MADISON TOWNSHIP
RICHLAND COUNTY
STATE OF OHIO
SECTION 26
T-21, R-18

BASIS OF BEARINGS
SEE SHEET 5 OF 22 FOR BASIS OF BEARING

EXISTING RIGHT OF WAY
SEE SHEET 5 OF 22 FOR EXISTING RIGHT OF WAY

PROPERTY LINES
SEE SHEET 5 OF 22 FOR PROPERTY LINES

SCALE IN FEET 0 10 20 40

LINE	BEARING	DISTANCE
L1	N 54°13'47" W	33.78'
L2	N 35°46'13" E	20.00'
L3	S 54°13'47" E	19.58'
L4	S 00°23'05" W	24.53'
L5	N 06°13'21" E	45.75'
L6	S 00°23'05" W	35.00'
L7	S 05°57'20" E	45.28'

(18) STEVEN R. BROWN AND CAROL J. BROWN O.R.V. 580, PG. 471 D.V. 478. PG. 857 S. ILLINOIS AVE. 028-90-018-04-000 2.000 AC.

(18) 025-09-009-02-000 3.830 AC.

(17) PENNSYLVANIA LINES L.L.C. O.R.V. 801, PG. 593

(13) CITY OF MANSFIELD 028-90-500-85-000 D.V. 448, PG. 58 1.770 AC. 385 S. ILLINOIS AVE.

(13) THE CITY OF MANSFIELD, A MUNICIPAL CORPORATION 028-90-500-84-000 D.V. 425, PG. 373 53.230 AC. 385 S. ILLINOIS AVE.

(13) CITY OF MANSFIELD 028-90-500-86-000 D.V. 704, PG. 500 9.900 AC. 385 S. ILLINOIS AVE.

POT Sta. 0+00.00
STA. 127+98.20, 141.09' LT.
STA. 127+60.00, 145.00' LT.
STA. 127+14.49, 149.65' LT.
T ESMT L5
R/W 38.39'
R/W N 06°13'21" E 227.28'
S 54°13'47" E 122.31'
T ESMT N 54°10'49" W
17TV
17WDV-1
173.17'
N 54°10'49" W 177.96'
℄ MAINTENANCE RD.
C/L
R/W
STA. 126+43.58, 50.00' LT.
N 00°23'05" E 150.53'
N 00°23'05" E 183.63'
A ESMT
STA. 126+33.40, 27.54' LT.
STA. 126+13.83, ℄ R/W & CONST.
STA. 126+49.70, 15.96' LT.
17SHV-1
L1 L2 L3 L4 53.04'
STA. 127+19.14, 30.00' LT.
EX. R/W
STA. 128+00.15, ℄ R/W & CONST.
555.35'
330.75'
129 228.39'
330.75'
390.17'
424.76'
N 0° 23' 05" E
℄ R/W & CONST. C.R. 424 (S. ILLINOIS AVE.)
40.97'
196.37'
PC Sta. 1+92.96
127
E. LINE S.W. QTR. SEC. 26
W. LINE S.E. QTR. SEC. 26
128
STA. 126+97.79, ℄ R/W & CONST.
STA. 126+56.82, ℄ R/W & CONST.
STA. 126+38.37, ℄ R/W & CONST.
STA. 126+03.78, ℄ R/W & CONST.
STA. 127+98.81, 30.00' RT.
13WDV
S 54°10'49" E 116.60'
STA. 127+32.55, 95.00' RT.
PC Sta. 0+00.00
196.37'
℄ TEMPORARY ROAD
N 1° 17' 56" E
27
28
N 00°23'05" E 167.45'
R/W
3+28.86
PT Sta. 2+91.15
STA. 127+65.00, 122.00' RT.
STA. 129+00.00, 95.00' RT.
SANITARY LIFT STATION EASEMENT O.R.V. 222, PG. 833
S ESMT
29
30 129.54'
13WDV-1
13TV
STA. 128+00.00, 130.00' RT.
T ESMT S 14°01'37" E 283.93'
35.90' S 13°15'35" W
T ESMT S 15°18'58" W 77.62'
STA. 128+75.00, 150.00' RT.
T ESMT S 48°23'51" W 67.27'
STA. 129+20.00, 200.00' RT.
STA. 130+00.00 195.00' RT.
STA. 129+55.00, 200.00' RT.
T ESMT L6
T ESMT L7
T ESMT S 58°10'32" E 58.61'
N. LINE S.E. QTR. SEC. 26
S. LINE N.E. QTR. SEC. 26
N. LINE S.W. QTR. SEC. 26
S. LINE N.W. QTR. SEC. 26
CORPORATION LINE
S 88°19'36" W 118.05'
STA. 130+24.30, 117.98' LT.
STA. 131+00.00, 110.00' LT.
N 06°13'21" E 75.66'
N 21°57'36" E 134.63'
18WDV-1
18WDV
CENTER OF SEC. 26
P.I. STA. 130+28.54 ℄ R/W
C.R. 424 (S. ILLINOIS AVE.) -
STA. 130+28.54 ℄ CONST.
C.R. 424 (S. ILLINOIS AVE.)
Δ = 0°13'34" LT. ℄ R/W
Δ = 1°26'54" RT. ℄ CONST.
NO CURVE
RAILROAD SPIKE SET
STA. 130+27.46, 30.00' LT.
℄ R/W C.R. 424 (S. ILLINOIS AVE.)
131
131 N 0° 09' 31" E
374.44'
967.79'
N 1° 49' 59" E
℄ CONST. C.R. 424 (S. ILLINOIS AVE.)
130
CORPORATION LINE
STA. 130+28.68, 30.00' RT.
N 89°54'01" E 86.64'
STA. 130+28.93, 86.64' RT.
13WDV-2
N 03°18'59" W 651.57'
522.03'
S ESMT
N 1° 17' 56" E 31
STA. 130+30.00, 145.00' RT.
S 01°03'12" E 520.12'
SEE SHEET NO. 8 OF 22 MATCH LINE STA. 126+00.00
MATCH LINE STA. 131+50.00 SEE SHEET NO. 12 OF 22

FIELD REVIEW BY: BB, RMC DATE: 10/8/04
OWNERSHIP VERIFIED BY: RAF DATE: 10/10/04

REV.	DATE	DESCRIPTION

DATE OF COMPLETION: 10/19/04

RIGHT OF WAY PLAN
STA. 126+00.00 TO 131+50.00

RIC-C.R. 424-0.62

PID NO. 23504

R/W DESIGNER BB
R/W REVIEWER RJM

10/22

146/153

088RPCa.DGN 10/19/04 CEO,CAR,RC

RIC-CR424-0.62
CITY OF MANSFIELD
MADISON TOWNSHIP
RICHLAND COUNTY
STATE OF OHIO
SECTION 26
T-21, R-18

P.I. Sta = 8+17.25
Δ = 88° 38′ 03″ (LT)
Dc = 163° 54′ 44″
R = 34.96′
T = 34.13′
L = 54.07′
E = 13.90′

STRUCTURE KEY

RESIDENTIAL

COMMERCIAL

MONUMENT LEGEND

- -3/4 " x 36" REBAR WITH 1 ½" ALUMINUM CAP STAMPED "ODOT ROW RLS 7209"
- Ⓜ -ADJUSTABLE CENTERLINE MONUMENT ASSEMBLY
- ○M.N.F. -MAG NAIL FOUND
- ✕ -MAG NAIL SET
- Ⓘ I.P.F. -I.P. FOUND
- ◎ -CONC. R/W MONUMENT FOUND
- Ⓜ -MONUMENT BOX FOUND
- ⌀ -RAILROAD SPIKE FOUND
- ○P.K.F. -P.K. NAIL FOUND

(18)
STEVEN R. BROWN AND
CAROL J. BROWN
O.R.V. 478, PG. 857
S. ILLINOIS AVE.
025-09-009-02-000
3.830 AC.

(19)
S.C.C. MERGER CORPORATION
P.O. BOX 288 S. ILLINOIS AVE.
O.R.V. 120, PG. 905
025-09-065-04-000
6.820 AC.

CHAINLINK FENCE (DO NOT DISTURB)
P.I. Sta = 9+42.73
Δ = 83° 09′ 26″ (RT)
Dc = 190° 59′ 09″
R = 30.00′
T = 26.62′
L = 43.54′
E = 10.10′

STEEL POSTS (TYP.) (DO NOT DISTURB)

SEE SHEET NO. 9 OF 22 MATCH LINE STA. 131+50.00

SEE SHEET NO. 13 OF 22 MATCH LINE STA. 137+00.00

S 83°53′04″ E
PC Sta. 7+83.11
PT Sta. 8+37.19
T ESMT
C/L
R/W
GRAVEL DRIVE
+50.00 ℄ ASPHALT DR. 9
N 8°40′30″ E
W=24′; L=213′
PC Sta. 9+46.71
PT Sta. 9+59.65
S 88°00′01″ E
18WDV-1
18TV
19TV
25′-12″ TYPE C
250′-12″ TYPE C
10′-12″ TYPE C
6′-12″ TYPE C
10′-6″ UPUD @ 30%
26′-12″ TYPE B
42′-12″ TYPE A
10′x20′ ROCK CHANNEL PROTECTION TYPE B, W/FILTER (T=30″)
EX. R/W
℄ R/W C.R. 424 (S. ILLINOIS AVE.)
N 1° 49′ 59″ E
℄ CONST. C.R. 424 (S. ILLINOIS AVE.)
N 0° 09′ 31″ E
TEMPORARY DRIVE
CORPORATION LINE
℄ SANITARY LIFT STATION EASEMENT O.R.V. 222, PG. 833
℄ TEMPORARY ROAD
S ESMT
SAN
12″ SFM
+50.00 ℄ ASPHALT DR. W=22′; L=76.5′
PC Sta. 34+80.54
30′
E.O.I.
GAS METER
+50.00 ℄ ASPHALT DR. W=16′; L=58′
+85.00 CONCRETE DR. W=28′; L=65′
TRUCK DOCK
BUILDING
8″ STM
EXISTING RETAINING WALL
35.60′
PC Sta. 136+01.41
END CURB & GUTTER
END SIDEWALK
BEGIN TYPE 6 CURB
GRAVEL PARKING
UNK
PT Sta. 136+98.55
28′-12″ TYPE B
97′-12″ TYPE C
ELECTRIC LINE EASEMENT O.R.V. 292, PG. 941
SANITARY LIFT STATION EASEMENT O.R.V. 222, PG. 833

(13)
REMOVE 583 L.F. OF CHAINLINK FENCE

SEE RIGHT OF WAY PLAN SHEET NO. 12 OF 22 FOR PARCEL BOUNDARY DATA.

(13)
CITY OF MANSFIELD
028-90-500-86-000
D.V. 704, PG. 500
9.900 AC.
385 S. ILLINOIS AVE.

TEMPORARY ROAD CURVE DATA
P.I. STA. = 36+16.44
Δ = 24° 06′ 00″ (LT.)
Dc = 9° 00′ 00″
R = 636.62′
T = 135.90′
L = 267.78′
E = 14.34′

BASIS OF BEARINGS
SEE SHEET 5 OF 22 FOR BASIS OF BEARING

EXISTING RIGHT OF WAY
SEE SHEET 5 OF 22 FOR EXISTING RIGHT OF WAY

PROPERTY LINES
SEE SHEET 5 OF 22 FOR PROPERTY LINES

FIELD REVIEW BY: BB, RMC	DATE: 10/8/04
OWNERSHIP VERIFIED BY: RAF	DATE: 10/10/04

REV.	DATE	DESCRIPTION

DATE OF COMPLETION: 10/19/04

N

SCALE IN FEET 0 10 20 40

PID NO. 23504

R/W DESIGNER BB
R/W REVIEWER RJM

RIGHT OF WAY PLAN
STA. 131+50.00 TO 137+00.00

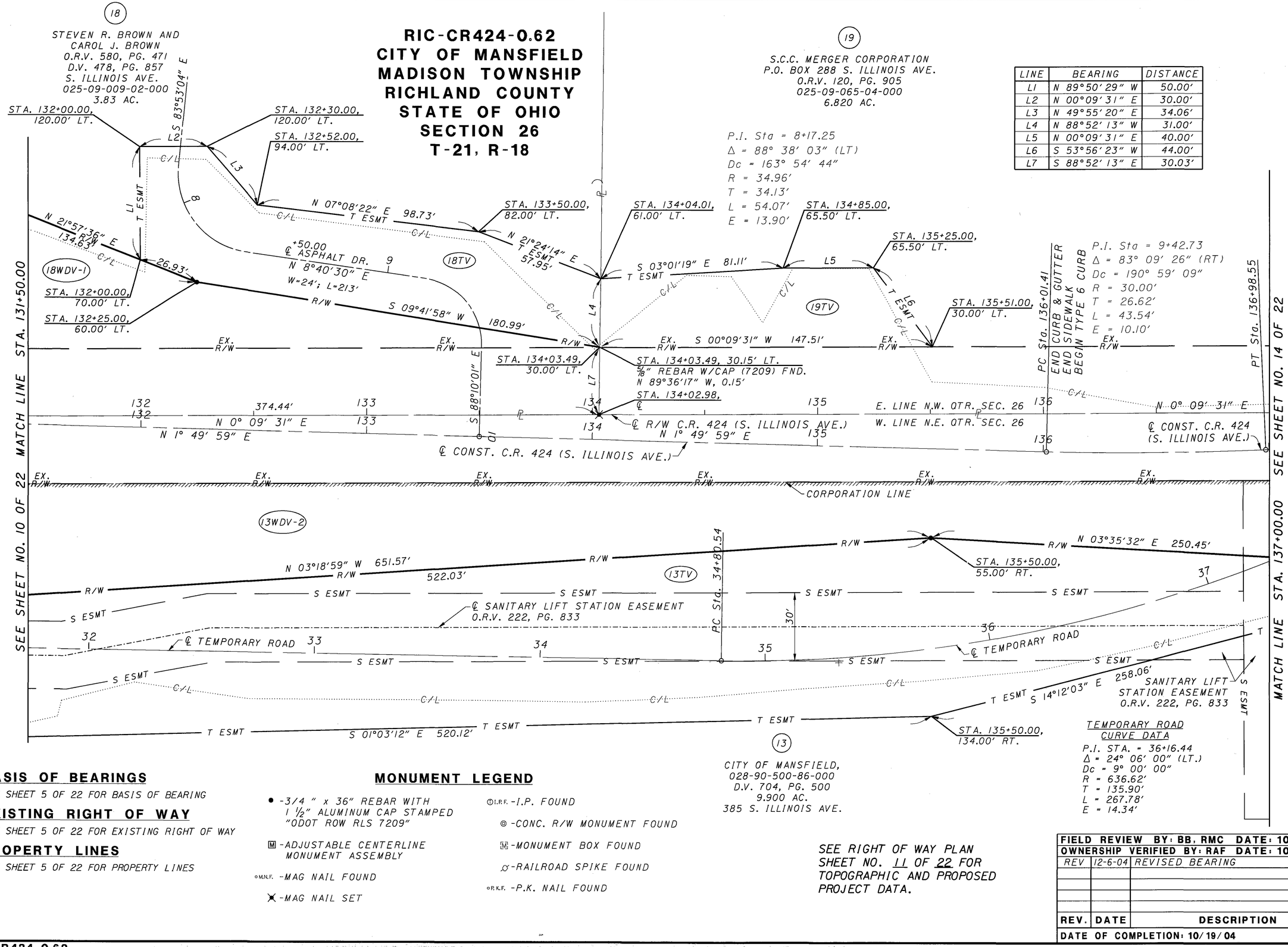
RIC-C.R. 424-0.62

11/22

142/153

088RPD.DGN 10/19/04 CEO.RC

RIC-CR424-0.62
CITY OF MANSFIELD
MADISON TOWNSHIP
RICHLAND COUNTY
STATE OF OHIO
SECTION 26
T-21, R-18



BASIS OF BEARINGS

SEE SHEET 5 OF 22 FOR BASIS OF BEARING

EXISTING RIGHT OF WAY

SEE SHEET 5 OF 22 FOR EXISTING RIGHT OF WAY

PROPERTY LINES

SEE SHEET 5 OF 22 FOR PROPERTY LINES

MONUMENT LEGEND

- ● -3/4 " x 36" REBAR WITH 1 ½" ALUMINUM CAP STAMPED "ODOT ROW RLS 7209"
- Ⓜ -ADJUSTABLE CENTERLINE MONUMENT ASSEMBLY
- ○M.N.F. -MAG NAIL FOUND
- ✕ -MAG NAIL SET
- Ⓘ I.P.F. -I.P. FOUND
- ◎ -CONC. R/W MONUMENT FOUND
- Ⓜ -MONUMENT BOX FOUND
- ⌀ -RAILROAD SPIKE FOUND
- ○P.K.F. -P.K. NAIL FOUND

SEE RIGHT OF WAY PLAN SHEET NO. 11 OF 22 FOR TOPOGRAPHIC AND PROPOSED PROJECT DATA.

TEMPORARY ROAD CURVE DATA

P.I. STA. = 36+16.44
Δ = 24° 06' 00" (LT.)
Dc = 9° 00' 00"
R = 636.62'
T = 135.90'
L = 267.78'
E = 14.34'

REV.	DATE	DESCRIPTION
REV	12-6-04	REVISED BEARING

FIELD REVIEW BY: BB, RMC DATE: 10/8/04
OWNERSHIP VERIFIED BY: RAF DATE: 10/10/04
DATE OF COMPLETION: 10/19/04

N

SCALE IN FEET 0 10 20 40

PID NO. 23504

R/W DESIGNER BB
R/W REVIEWER RJM

RIGHT OF WAY PLAN
STA. 131+50.00 TO 137+00.00

RIC-C.R. 424-0.62

12/22

143

088RPDa.DGN 12/6/04 CEO,RC

MONUMENT LEGEND

- ● -3/4 " x 36" REBAR WITH 1 1/2" ALUMINUM CAP STAMPED "ODOT ROW RLS 7209"
- Ⓜ -ADJUSTABLE CENTERLINE MONUMENT ASSEMBLY
- ○M.N.F. -MAG NAIL FOUND
- ✕ -MAG NAIL SET
- ①I.P.F. -I.P. FOUND
- ◎ -CONC. R/W MONUMENT FOUND
- Ⓜ -MONUMENT BOX FOUND
- ⊄ -RAILROAD SPIKE FOUND
- ○P.K.F. -P.K. NAIL FOUND

SEE RIGHT OF WAY PLAN SHEET NO. 14 OF 22 FOR PARCEL BOUNDARY DATA.

RIC-CR424-0.62
CITY OF MANSFIELD
MADISON TOWNSHIP
RICHLAND COUNTY
STATE OF OHIO
SECTION 26
T-21, R-18

SEE SHEET NO. II OF 22 MATCH LINE STA. 137+00.00

(19) S.C.C. MERGER CORPORATION
P.O. BOX 288 S. ILLINOIS AVE.
025-09-065-04-000
6.820 AC.

(19) S.C.C. MERGER CORPORATION
P.O. BOX 288 S. ILLINOIS AVE.
025-09-064-18-000
1.000 AC.

SAMUEL J. SCHEURER
O.R.V. 725, PG. 817
812 HICKORY LANE
025-09-036-06-000
9.67 AC.

24' DRIVE EASEMENT D.V. 590, PG. 27

PI STA. 139+00.41
Δ = 1°47'50" RT.
NO CURVE

STEEL POSTS (TYP.)

END WORK
STA. 139+62.00
S.L.M. 2.64

END R/W ACQUISITION
STA. 139+96.33
S.L.M. 2.65

8" STM — C.B. #150 — 10" STM — MH. #148 — 24" ESMT

GAS EASEMENT D.V. 903, PG. 606

EX. UNK R/W — UNK — E.O.J. — EX. R/W — EX. R/W — EX. R/W — EX. R/W

12' x 12' - 8" NON-REINFORCED CONCRETE PAVEMENT

℄ R/W C.R. 424 (S. ILLINOIS AVE.)

12'-12" TYPE B — 28'-12" TYPE B — 14'-6" TYPE F — 14'-6" UPUD — 16'-12" TYPE B — 50'-12" TYPE B

N 2°03'09" W

138 — 139 — 140 — 141

E.O.R.I. 8" SAN. MH. #64 W — 24" — 39 — E.O.J. — 12" — CUT — 12" CONC. — 30'-18" TYPE B @ 0.40% — 74'-18" TYPE C — 59'-18" TYPE C

N 0° 15' 19" W — N 0° 36' 01" E

STP
END PROJECT
STA. 139+00.41
S.L.M. 2.63

13WDV-2

℄ TEMPORARY ROAD — 12" — M.H. — ESMT — R/W — C/L

(13TV)

ASPHALT DRIVE W=12'; L=30' — 36.54 — 34+48.32 — PRC Sta. 33+12.84 — BLDG. — 12" SFM — SAN — 30" — MH. #147 — LEVEE

PT Sta. 39+98.82 — ROCKY FORK — SAN — 8"

(13) REMOVE 583 L.F. OF CHAINLINK FENCE

TEMPORARY ROAD CURVE DATA
P.I. STA. = 38+75.21
Δ = 22° 32' 45" (RT.)
Dc = 9° 00' 00"
R = 636.62'
T = 126.90'
L = 250.51'
E = 12.52'

℄ HICKORY LANE — EX. R/W

CB — DRIVE — IP — HYD. — MANSFIELD WAREHOUSE LTD. 025-09-278-04-000 1.77 AC.

(13) CITY OF MANSFIELD
028-90-500-86-000
D.V. 704, PG. 500
9.900 AC.
385 S. ILLINOIS AVE.

CHAINLINK FENCE

S ESMT — SANITARY LIFT STATION EASEMENT O.R.V. 222, PG. 833

MANSFIELD WAREHOUSE LTD.
025-09-015-05-000
2.646 AC.

CORPORATION LINE

BASIS OF BEARINGS
SEE SHEET 5 OF 22 FOR BASIS OF BEARING

EXISTING RIGHT OF WAY
SEE SHEET 5 OF 22 FOR EXISTING RIGHT OF WAY

PROPERTY LINES
SEE SHEET 5 OF 22 FOR PROPERTY LINES

STRUCTURE KEY
- RESIDENTIAL
- COMMERCIAL

FIELD REVIEW BY: BB, RMC		DATE: 10/8/04
OWNERSHIP VERIFIED BY: RAF		DATE: 10/10/04
REV.	DATE	DESCRIPTION
DATE OF COMPLETION: 10/19/04		

SCALE IN FEET: 0, 10, 20, 40

PID NO. 23504

R/W DESIGNER BB — R/W REVIEWER RJM

RIGHT OF WAY PLAN
STA. 137+00.00 TO 141+00.00

RIC-C.R. 424-0.62

13/22

144/153

088RPE.DGN 10/19/04 CEO,RC

MONUMENT LEGEND

- ● -3/4 " x 36" REBAR WITH 1 ½" ALUMINUM CAP STAMPED "ODOT ROW RLS 7209"
- Ⓜ -ADJUSTABLE CENTERLINE MONUMENT ASSEMBLY
- ○M.N.F. -MAG NAIL FOUND
- ✕ -MAG NAIL SET
- Ⓘ I.R.F. -I.P. FOUND
- ◎ -CONC. R/W MONUMENT FOUND
- Ⓜ -MONUMENT BOX FOUND
- ⌀ -RAILROAD SPIKE FOUND
- ○P.K.F. -P.K. NAIL FOUND

RIC-CR424-0.62
CITY OF MANSFIELD
MADISON TOWNSHIP
RICHLAND COUNTY
STATE OF OHIO
SECTION 26
T-21, R-18

(19)
S.C.C. MERGER CORPORATION
P.O. BOX 288 S. ILLINOIS AVE.
025-09-065-04-000
6.820 AC.

(19)
S.C.C. MERGER CORPORATION
P.O. BOX 288 S. ILLINOIS AVE.
025-09-064-18-000
1.000 AC.

SAMUEL J. SCHEURER
O.R.V. 725, PG. 817
812 HICKORY LANE
025-09-036-06-000
9.67 AC.

SEE SHEET NO. 12 OF 22
MATCH LINE STA. 137+00.00

STA. 138+27.82, 30.00' LT.

GAS EASEMENT
D.V. 903, PG. 606

U ESMT

END WORK
STA. 139+62.00
S.L.M. 2.64

STA. 140+00.42, 30.00' LT.

END R/W ACQUISITION
STA. 139+96.33
S.L.M. 2.65

℄ HICKORY LANE

EX. R/W

℄ R/W C.R. 424 (S. ILLINOIS AVE.)

STA. 138+29.15, ℄ R/W C.R. 424 (S. ILLINOIS AVE.)

P.I. Sta. 139+00.41
Δ = 0°47'50" RT.
NO CURVE

P.I. Sta. 139+65.00
Δ = 00°05'20" RT.
NO CURVE

STA. 139+99.69, ℄ R/W C.R. 424 (S. ILLINOIS AVE.)

N 0° 09' 31" E
967.79'

N 0° 15' 19" W

N 0° 36' 01" E

STA. 139+96.33, ℄ R/W C.R. 424 (S. ILLINOIS AVE.)

E. LINE N.W. QTR. SEC. 26

W. LINE N.E. QTR. SEC. 26

℄ R/W S. ILLINOIS AVE.

N 2°03'09" W

CORPORATION LINE

℄ CONST. C.R. 424 (S. ILLINOIS AVE.)

STP
END PROJECT
STA. 139+00.41
S.L.M. 2.63

PT Sta. 39+98.82

S 89°51'46" E
88.01'

STA. 139+96.34, 30.00' RT.

STA. 140+55.37, 30.00' RT.

STA. 140+89.27, 48.22' RT.

STA. 139+96.37, 88.01' RT.

STA. 141+00.41 ℄ CONST. C.R. 424 (S. ILLINOIS AVE.)- STA. 141+00.00, 9.07' RT. ℄ R/W

℄ TEMPORARY ROAD

13TV

N 03°35'32" E
250.45'

S 14°12'03" E
258.06'

ESMT

STA. 138+00.00, 70.00' RT.

13WDV-2

S 31°07'21" W
58.31'

STA. 138+50.00, 100.00' RT.

STA. 139+58.69, 74.58' RT.

S 19°46'54" W
40.00'

S 20°09'34" W
112.00'

STA. 139+17.66, 124.63' RT.

40.00'

S 50°34'26" E
64.97'

PRC Sta. 37+48.32

(13)
CITY OF MANSFIELD
028-90-500-86-000
D.V. 704, PG. 500
9.900 AC.
385 S. ILLINOIS AVE.

TEMPORARY ROAD CURVE DATA
P.I. STA. = 38+75.21
Δ = 22° 32' 45" (RT.)
Dc = 9° 00' 00"
R = 636.62'
T = 126.90'
L = 250.51'
E = 12.52'

STA. 139+55.25, 138.31' RT.

S ESMT

CORPORATION LINE

MANSFIELD WAREHOUSE LTD.
O.R.V. 444, PG. 296
025-09-015-05-000
2.646 AC.

MANSFIELD WAREHOUSE LTD.
025-09-278-04-000
1.77 AC.

SEE RIGHT OF WAY PLAN SHEET NO. 13 OF 22 FOR TOPOGRAPHIC AND PROPOSED PROJECT DATA.

BASIS OF BEARINGS
SEE SHEET 5 OF 22 FOR BASIS OF BEARING

EXISTING RIGHT OF WAY
SEE SHEET 5 OF 22 FOR EXISTING RIGHT OF WAY

PROPERTY LINES
SEE SHEET 5 OF 22 FOR PROPERTY LINES

FIELD REVIEW BY: BB, RMC DATE: 10/8/04		
OWNERSHIP VERIFIED BY: RAF DATE: 10/10/04		
REV	12-6-04	℄ CALLOUT
REV.	DATE	DESCRIPTION
DATE OF COMPLETION: 10/19/04		

SCALE IN FEET 0 10 20 40

PID NO. 23504

R/W DESIGNER BB
R/W REVIEWER RJM

RIGHT OF WAY PLAN
STA. 137+00.00 TO 141+00.00

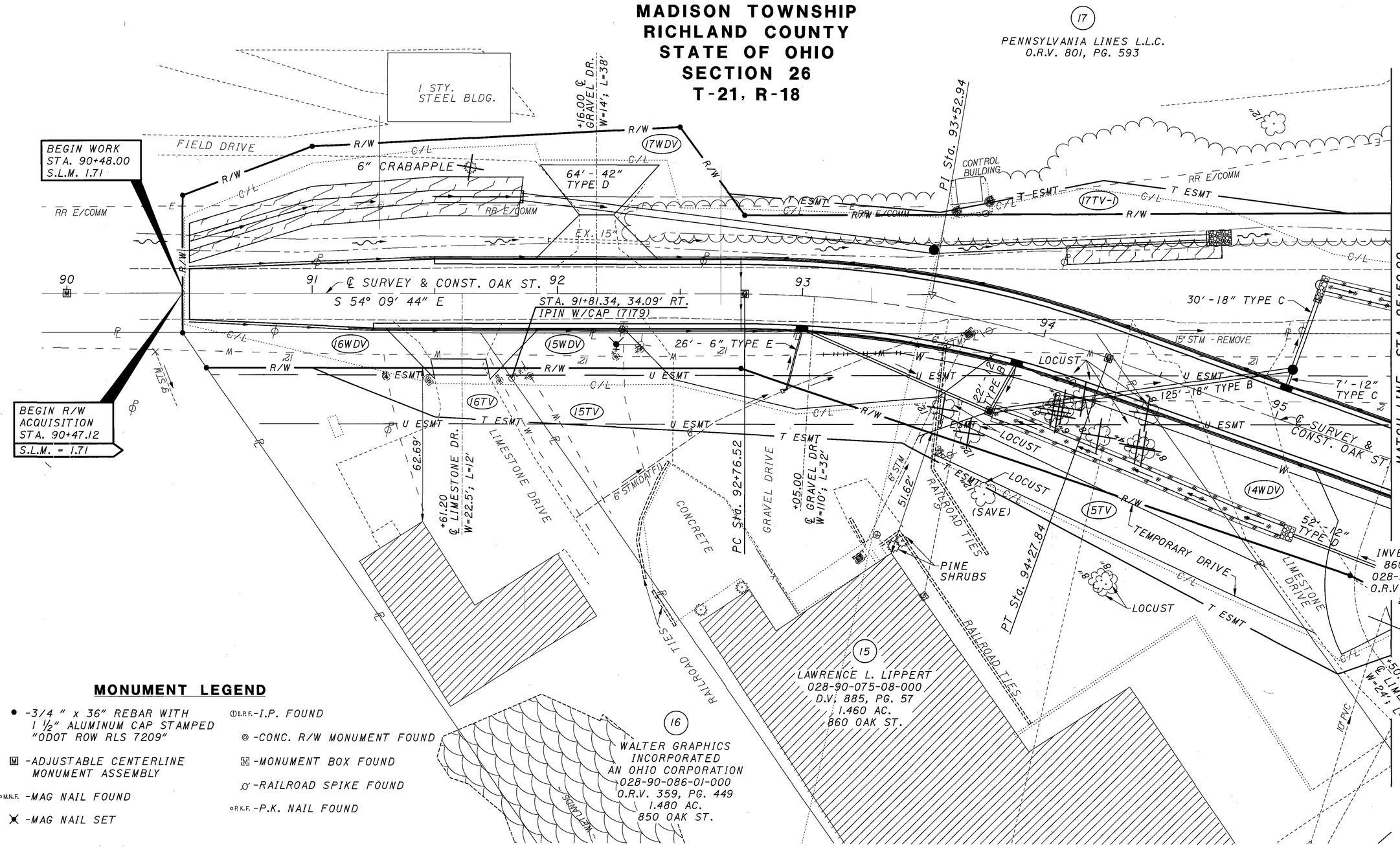
RIC-C.R. 424-0.62

14/22

145/153

088RPEa.DGN 12/6/04 CEO.RC

RIC-CR424-0.62
CITY OF MANSFIELD
MADISON TOWNSHIP
RICHLAND COUNTY
STATE OF OHIO
SECTION 26
T-21, R-18



MONUMENT LEGEND

- ● -3/4 " x 36" REBAR WITH 1 ½" ALUMINUM CAP STAMPED "ODOT ROW RLS 7209"
- Ⓜ -ADJUSTABLE CENTERLINE MONUMENT ASSEMBLY
- ○M.N.F. -MAG NAIL FOUND
- ✕ -MAG NAIL SET
- ⓘI.R.F. -I.P. FOUND
- ◎ -CONC. R/W MONUMENT FOUND
- Ⓜ -MONUMENT BOX FOUND
- ⌀ -RAILROAD SPIKE FOUND
- ○P.K.F. -P.K. NAIL FOUND

BASIS OF BEARINGS

SEE SHEET 5 OF 22 FOR BASIS OF BEARING

EXISTING RIGHT OF WAY

SEE SHEET 5 OF 22 FOR EXISTING RIGHT OF WAY

PROPERTY LINES

SEE SHEET 5 OF 22 FOR PROPERTY LINES

SEE RIGHT OF WAY PLAN SHEET NO. 16 OF 22 FOR PARCEL BOUNDARY DATA.

STRUCTURE KEY

- RESIDENTIAL
- COMMERCIAL

FIELD REVIEW BY: BB, RMC DATE: 10/8/04		
OWNERSHIP VERIFIED BY: RAF DATE: 10/10/04		
CEO	12-6-04	REVISED TREE LABELS
CEO	1-24-06	REVISED 17WDV & ADDED 17TV-1
REV.	DATE	DESCRIPTION
DATE OF COMPLETION: 10/19/04		

SCALE IN FEET 0 10 20 40

P1D NO. 23504

R/W DESIGNER BB
R/W REVIEWER RJM

RIGHT OF WAY PLAN
STA. 90+00.00 TO 95+50.00
OAK ST. RIGHT
STA. 90+00.00
RIC-C.R. 424-0.62

15/22

146/153

088RPG.DGN 1/25/06 CEO,RC

RIC-CR424-0.62
CITY OF MANSFIELD
MADISON TOWNSHIP
RICHLAND COUNTY
STATE OF OHIO
SECTION 26
T-21, R-18

MONUMENT LEGEND

- ● -3/4 " x 36" REBAR WITH 1 ½" ALUMINUM CAP STAMPED "ODOT ROW RLS 7209"
- Ⓜ -ADJUSTABLE CENTERLINE MONUMENT ASSEMBLY
- ○M.N.F. -MAG NAIL FOUND
- ✕ -MAG NAIL SET
- ⓘI.P.F.-I.P. FOUND
- ◎ -CONC. R/W MONUMENT FOUND
- Ⓜ -MONUMENT BOX FOUND
- ∅ -RAILROAD SPIKE FOUND
- ○P.K.F. -P.K. NAIL FOUND

(17) PENNSYLVANIA LINES L.L.C. O.R.V. 801, PG. 593

STA. 92+50.00, 68.00' LT.

+16.00 ℄ GRAVEL DR. W=14'; L=38'

STA. 91+00.00, 60.00' LT.

S 57°12'54" E 150.21'

R/W

S 00°33'12" E 44.72'

STA. 93+50.00, 40.00' LT.

PI Sta. 93+52.94

STA. 94+05.00, 68.00' LT.

STA. 95+00.00, 88.29' LT.

STA. 90+47.06, 40.00' LT.

56.59' S 74°51'33" E

BEGIN R/W ACQUISITION STA. 90+47.12 S.L.M. = 1.71

C/L

17WDV

STA. 92+70.00, 40.86' LT.

S 49°10'37" E 86.62'

T ESMT

11.01'

S 65°24'14" E 67.73'

T ESMT

246.02'

17TV-1

S 46°30'46" E 100.72'

T ESMT

S 54°25'34" E 368.35'

STA. 92+76.53, 32.00' LT.

55.83' N 35°50'16" E

BEGIN WORK STA. 90+48.00 S.L.M. 1.71

STA. 91+78.50, 30.00' RT.

℄ SURVEY & CONST. OAK ST.

90 N 54°09'44" W

91

92

229.47'

93

STA. 94+19.80, 7.78' LT.

STA. 91+68.62, 15.79' RT.

℄ CONST. OAK STREET

N 54°10'49" W

121.56'

16WDV

17.30'

15WDV

96.50'

251.15'

94

771.54'

S 54°10'49" E 893.10'

278.27'

STA. 92+75.00, 30.00' RT.

STA. 90+47.06, 15.83' RT.

121.57'

N 54°09'44" W

N 00°59'10" E 17.26'

R/W

U ESMT -78.50'

U ESMT

STA. 90+56.93, 30.00' RT.

16TV

N 32°21'39" W 53.85'

44.12'

T ESMT

15TV

27.27'

N 51°03'14" W 190.82'

146.69'

T ESMT

S 35°28'23" E 215.01'

15WDV

N 00°32'15" E 101.92'

14WDV

95

N 34°29'32" W 187.47'

STA. 95+03.12, 50.80' RT.

STA. 95+50.00, 50.00' RT.

14A

LIPPERT INVESTMENT CO. 860 OAK ST. 028-90-077-11-000 O.R.V. 35, PG. 385 2.000 AC.

STA. 91+00.00, 30.00' RT.

STA. 91+50.00, 50.00' RT.

+61.20 ℄ LIMESTONE DR. W=22.5'; L=12'

STA. 91+94.06, 52.39' RT.

S 01°02'27" W

PC Sta. 92+76.52

+05.00 ℄ GRAVEL DR. W=110'; L=32'

STA. 93+50.00, 55.00' RT.

20' WATERLINE EASEMENT D.V. 589, PG. 529

PT Sta. 94+27.84

N 26°11'59" W 201.07'

T ESMT

15TV

R 68.29'

46.89' N 35°28'23" W

14TV

50.41' S 27°12'23" E

52.99' N 73°51'29" W

+50.00 ℄ LIMESTONE DR. W=24'; L=61.5'

STA. 95+59.04, 90.00' RT.

MATCH LINE STA. 95+50.00 SEE SHEET NO. 18 OF 22

S 00°59'10" W

(16) WALTER GRAPHICS INCORPORATED AN OHIO CORPORATION 028-90-086-01-000 O.R.V. 359, PG. 449 1.480 AC. 850 OAK ST.

℄ CONSTR. OAK ST. CURVE DATA

P.I. Sta = 93+52.94
Δ = 19° 40' 12" (RT)
Dc = 13° 00' 00"
R = 440.74'
T = 76.41'
L = 151.31'
E = 6.57'

(15) LAWRENCE L. LIPPERT 028-90-075-08-000 D.V. 885, PG. 57 1.460 AC. 860 OAK ST.

SEE RIGHT OF WAY PLAN SHEET NO. 15 OF 22 FOR TOPOGRAPHIC AND PROPOSED PROJECT DATA.

BASIS OF BEARINGS

SEE SHEET 5 OF 22 FOR BASIS OF BEARING

EXISTING RIGHT OF WAY

SEE SHEET 5 OF 22 FOR EXISTING RIGHT OF WAY

PROPERTY LINES

SEE SHEET 5 OF 22 FOR PROPERTY LINES

FIELD REVIEW BY: BB, RMC DATE: 10/8/04		
OWNERSHIP VERIFIED BY: RAF DATE: 10/10/04		
CEO	1-24-06	REVISED 17WDV & ADDED 17TV-1
REV.	DATE	DESCRIPTION
DATE OF COMPLETION: 10/19/04		

SCALE IN FEET 0 10 20 40

PID NO. 23504

R/W DESIGNER BB R/W REVIEWER RJM

OAK ST. RIGHT OF WAY PLAN STA. 90+00.00 TO 95+50.00

RIC-C.R. 424-0.62

16/22

147/153

088RPGa.DGN 1/26/06 CEO,RC

RIC-CR424-0.62

RIC-CR424-0.62 CITY OF MANSFIELD
MADISON TOWNSHIP RICHLAND COUNTY
STATE OF OHIO SECTION 26
T-21, R-18

SEE RIGHT OF WAY PLAN SHEET NO. 18 OF 22 FOR PARCEL BOUNDARY DATA.

SEE SHEET NO. 15 OF 22 MATCH LINE STA. 95+50.00

(17) PENNSYLVANIA LINES L.L.C. O.R.V. 801, PG. 593

STA. 97+18.08, 79.57' LT. IRON PIN FOUND

(10) FERNWOOD FARM, L.L.C. 025-09-020-08-000 O.R.V. 1056, PG. 521 D.V. 658, PG. 240 71.750 AC. 565 S. ILLINOIS AVE.

(15) LAWRENCE L. LIPPERT 028-90-075-08-000 D.V. 885, PG. 57 1.460 AC. 860 OAK ST.

(14) LIPPERT INVESTMENT COMPANY 860 OAK ST. 028-90-077-11-000 O.R.V. 35, PG. 385 2.000 AC.

(12) 440 S. ILLINOIS LIMITED PARTNERSHIP A.K.A. 440 S. ILLINOIS P.L.L. AN OHIO GENERAL PARTNERSHIP 028-90-035-12-000 O.R.V. 855, PG. 446 11.050 AC. 440 S. ILLINOIS AVE. D.V. 384, PG. 721

14 REMOVE 60 L.F. OF CHAINLINK FENCE

BASIS OF BEARINGS
SEE SHEET 5 OF 22 FOR BASIS OF BEARING

EXISTING RIGHT OF WAY
SEE SHEET 5 OF 22 FOR EXISTING RIGHT OF WAY

PROPERTY LINES
SEE SHEET 5 OF 22 FOR PROPERTY LINES

STRUCTURE KEY
- RESIDENTIAL
- COMMERCIAL

MONUMENT LEGEND
- ● -3/4 " x 36" REBAR WITH 1 ½" ALUMINUM CAP STAMPED "ODOT ROW RLS 7209"
- Ⓜ -ADJUSTABLE CENTERLINE MONUMENT ASSEMBLY
- ○M.N.F. -MAG NAIL FOUND
- ✕ -MAG NAIL SET
- Ⓘ I.P.F. -I.P. FOUND
- ◎ -CONC. R/W MONUMENT FOUND
- Ⓜ -MONUMENT BOX FOUND
- ⌀ -RAILROAD SPIKE FOUND
- ○P.K.F. -P.K. NAIL FOUND

REV.	DATE	DESCRIPTION
CEO	1-24-06	REVISED 17WDV

FIELD REVIEW BY: BB, RMC DATE: 10/8/04
OWNERSHIP VERIFIED BY: RAF DATE: 10/10/04
DATE OF COMPLETION: 10/19/04

SCALE IN FEET

P.I.D. NO. 23504

R/W DESIGNER BB
R/W REVIEWER RJM

OAK ST. RIGHT OF WAY PLAN STA. 95+50.00 TO 100+00.00

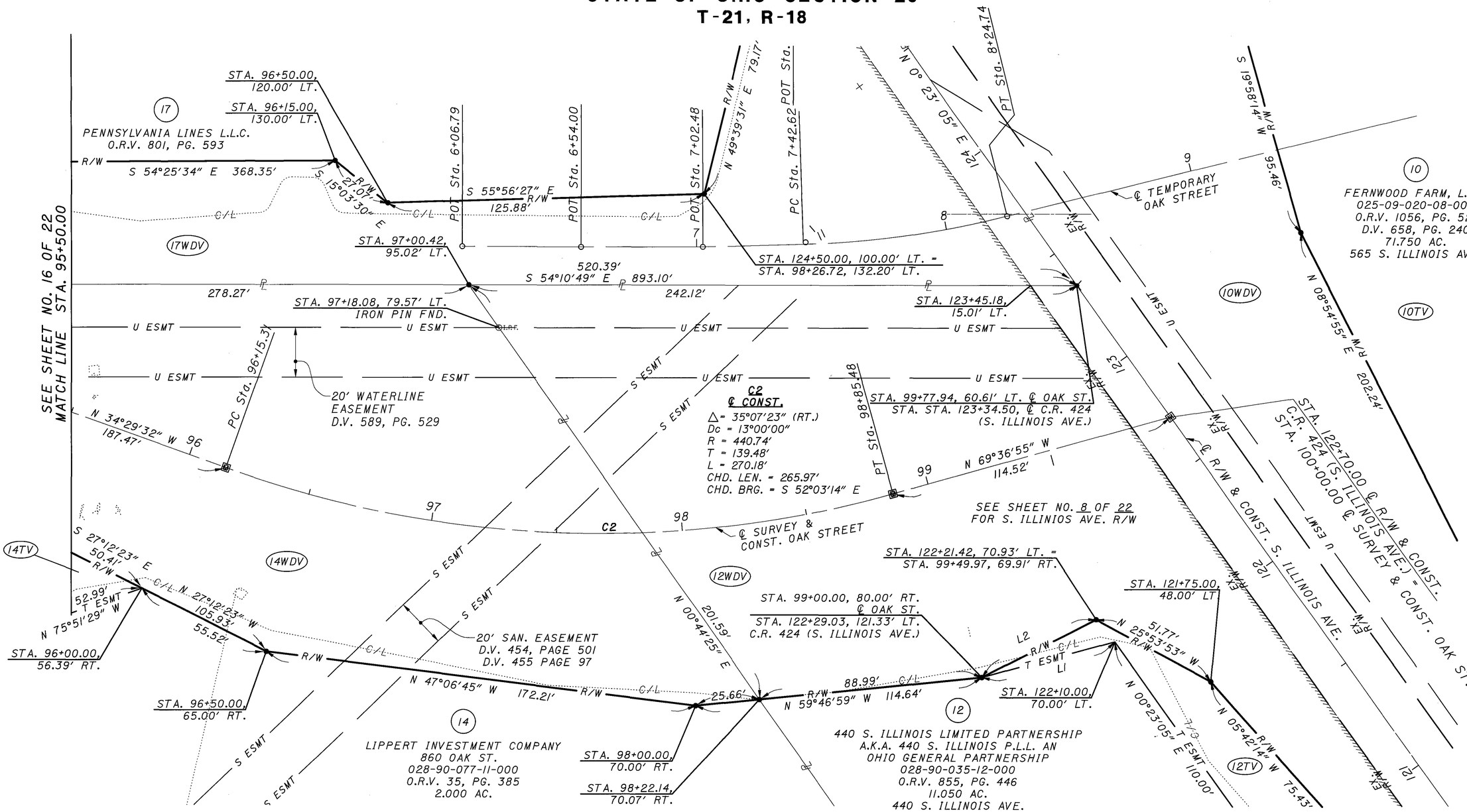
RIC-C.R. 424-0.62

17/22

148/153

088RPF.DGN 1/25/06 CEO,CAR,RC

RIC-CR424-0.62 CITY OF MANSFIELD
MADISON TOWNSHIP RICHLAND COUNTY
STATE OF OHIO SECTION 26
T-21, R-18



MONUMENT LEGEND

- ● -3/4 " x 36" REBAR WITH 1 ½" ALUMINUM CAP STAMPED "ODOT ROW RLS 7209"
- Ⓜ -ADJUSTABLE CENTERLINE MONUMENT ASSEMBLY
- ◦M.N.F. -MAG NAIL FOUND
- ✕ -MAG NAIL SET
- ⓘI.R.F. -I.P. FOUND
- ◎ -CONC. R/W MONUMENT FOUND
- Ⓜ -MONUMENT BOX FOUND
- ⌀ -RAILROAD SPIKE FOUND
- ◦P.K.F. -P.K. NAIL FOUND

LINE	BEARING	DISTANCE
L1	N 69°16'38" W	54.74'
L2	S 81°02'11" E	50.98'

SEE RIGHT OF WAY PLAN SHEET NO. 17 OF 22 FOR TOPOGRAPHIC AND PROPOSED PROJECT DATA.

BASIS OF BEARINGS
SEE SHEET 5 OF 22 FOR BASIS OF BEARING

EXISTING RIGHT OF WAY
SEE SHEET 5 OF 22 FOR EXISTING RIGHT OF WAY

PROPERTY LINES
SEE SHEET 5 OF 22 FOR PROPERTY LINES

FIELD REVIEW BY: BB, RMC		DATE: 10/8/04
OWNERSHIP VERIFIED BY: RAF		DATE: 10/10/04
CEO	1-24-06	REVISED 17WDV
REV.	DATE	DESCRIPTION
DATE OF COMPLETION: 10/19/04		

SCALE IN FEET (0, 10, 20, 40)

PID NO. 23504

D/M DESIGNER BB
R/W REVIEWER RJM

OAK ST. RIGHT OF WAY PLAN
STA. 95+50.00 TO 100+00.00

RIC-C.R. 424-0.62

18/22

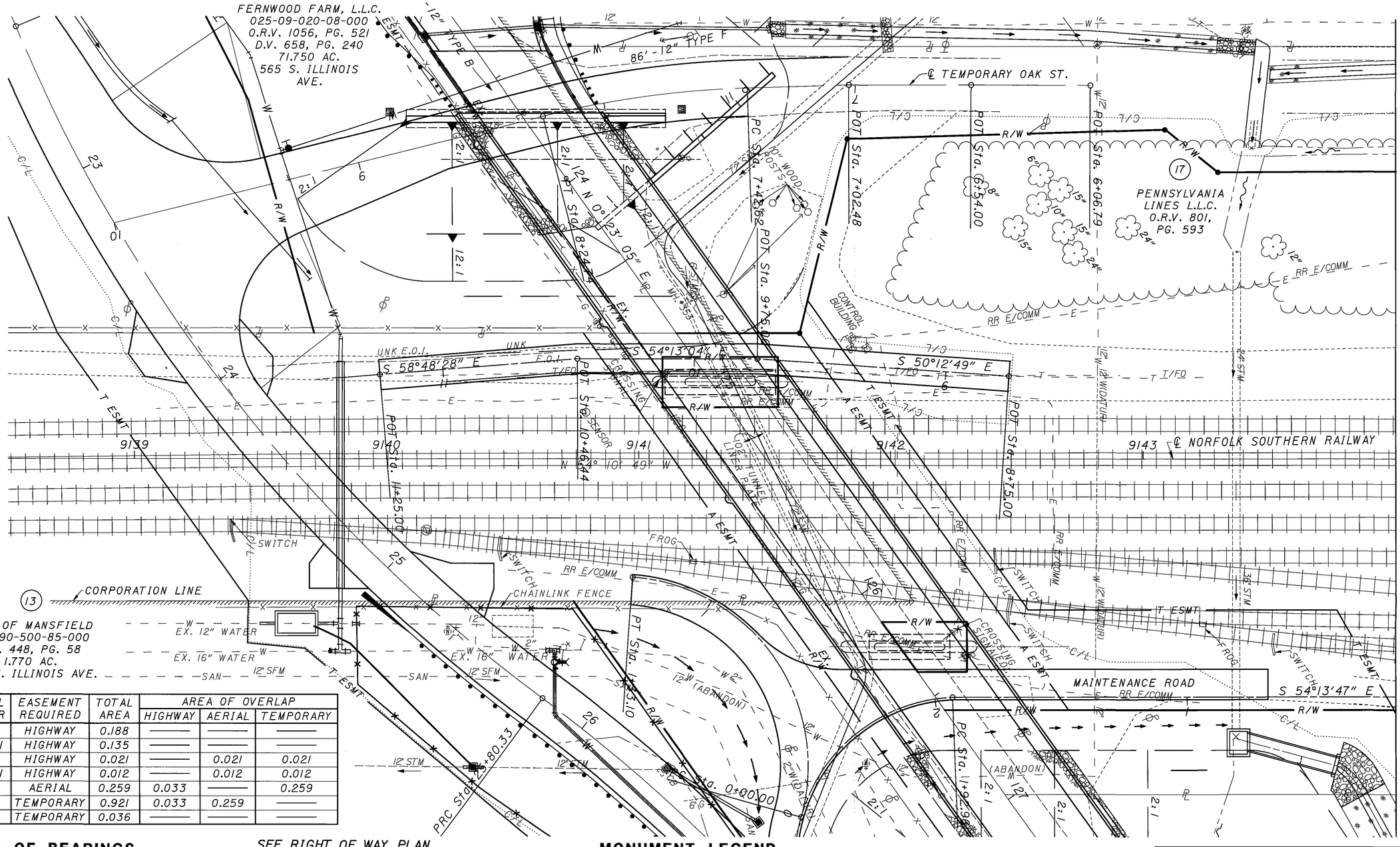
149/153

088RPFa.DGN 1/25/06 CEO,CAR,RC

RIC-CR424-0.62

RIC-CR424-0.62
CITY OF MANSFIELD
MADISON TOWNSHIP, RICHLAND COUNTY
STATE OF OHIO SECTION 26, T-21, R-18

RAILROAD STATIONING RELATIVE TO VALUATION MAP V.I. OHIO/125



PARCEL NUMBER	EASEMENT REQUIRED	TOTAL AREA	AREA OF OVERLAP		
			HIGHWAY	AERIAL	TEMPORARY
17WDV	HIGHWAY	0.188	———	———	———
17WDV-1	HIGHWAY	0.135	———	———	———
17SHV	HIGHWAY	0.021	———	0.021	0.021
17SHV-1	HIGHWAY	0.012	———	0.012	0.012
17AV	AERIAL	0.259	0.033	———	0.259
17TV	TEMPORARY	0.921	0.033	0.259	———
17TV-1	TEMPORARY	0.036	———	———	———

BASIS OF BEARINGS
SEE SHEET 5 OF 22 FOR BASIS OF BEARING

EXISTING RIGHT OF WAY
SEE SHEET 5 OF 22 FOR EXISTING RIGHT OF WAY

PROPERTY LINES
SEE SHEET 5 OF 22 FOR PROPERTY LINES

SEE RIGHT OF WAY PLAN SHEET NO. 20 OF 22 FOR PARCEL BOUNDARY DATA.

(13) REMOVE 583 L.F. OF CHAINLINK FENCE

MONUMENT LEGEND
- ● -3/4" x 36" REBAR WITH 1 1/2" ALUMINUM CAP STAMPED "ODOT ROW RLS 7209"
- Ⓜ -ADJUSTABLE CENTERLINE MONUMENT ASSEMBLY
- ◦M.N.F. -MAG NAIL FOUND
- ✕ -MAG NAIL SET
- ①I.R.F. -I.P. FOUND
- ◎ -CONC. R/W MONUMENT FOUND
- Ⓜ -MONUMENT BOX FOUND
- ⌀ -RAILROAD SPIKE FOUND
- ◦P.K.F. -P.K. NAIL FOUND

STRUCTURE KEY
- ☐ RESIDENTIAL
- ▨ COMMERCIAL

FIELD REVIEW BY: BB, RMC DATE: 10/8/04		
OWNERSHIP VERIFIED BY: RAF DATE: 10/10/04		
CEO	1-24-06	REVISED 17WDV
REV.	DATE	DESCRIPTION
DATE OF COMPLETION: 10/19/04		

SCALE IN FEET 0 10 20 40

PID NO. 23504

R/W DESIGNER BB
R/W REVIEWER RJM

RAILROAD PLAT

RIC-C.R. 424-0.62

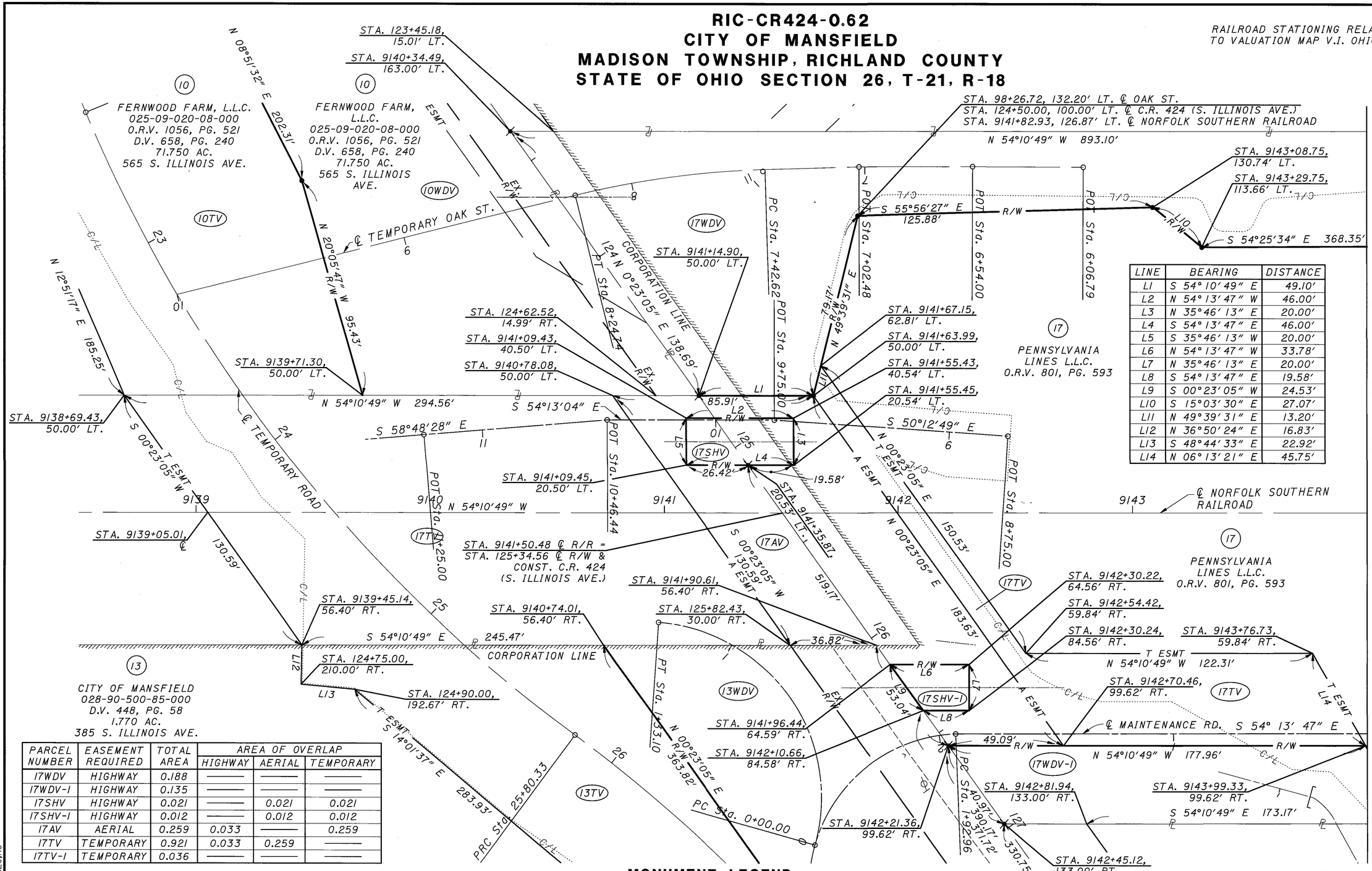
19/22

150/153

088RRA.DGN 1/25/06 CEO,RC

RIC-CR424-0.62
CITY OF MANSFIELD
MADISON TOWNSHIP, RICHLAND COUNTY
STATE OF OHIO SECTION 26, T-21, R-18

RAILROAD STATIONING RELATIVE TO VALUATION MAP V.I. OHIO/125



LINE	BEARING	DISTANCE
L1	S 54° 10' 49" E	49.10'
L2	N 54° 13' 47" W	46.00'
L3	N 35° 46' 13" E	20.00'
L4	S 54° 13' 47" E	46.00'
L5	S 35° 46' 13" W	20.00'
L6	N 54° 13' 47" W	33.78'
L7	N 35° 46' 13" E	20.00'
L8	S 54° 13' 47" E	19.58'
L9	S 00° 23' 05" W	24.53'
L10	S 15° 03' 30" E	27.07'
L11	N 49° 39' 31" E	13.20'
L12	N 36° 50' 24" E	16.83'
L13	S 48° 44' 33" E	22.92'
L14	N 06° 13' 21" E	45.75'

PARCEL NUMBER	EASEMENT REQUIRED	TOTAL AREA	AREA OF OVERLAP		
			HIGHWAY	AERIAL	TEMPORARY
17WDV	HIGHWAY	0.188	———	———	———
17WDV-1	HIGHWAY	0.135	———	———	———
17SHV	HIGHWAY	0.021	———	0.021	0.021
17SHV-1	HIGHWAY	0.012	———	0.012	0.012
17AV	AERIAL	0.259	0.033	———	0.259
17TV	TEMPORARY	0.921	0.033	0.259	———
17TV-1	TEMPORARY	0.036	———	———	———

BASIS OF BEARINGS
SEE SHEET 5 OF 22 FOR BASIS OF BEARING

EXISTING RIGHT OF WAY
SEE SHEET 5 OF 22 FOR EXISTING RIGHT OF WAY

PROPERTY LINES
SEE SHEET 5 OF 22 FOR PROPERTY LINES

SEE RIGHT OF WAY PLAN SHEET NO. 19 OF 22 FOR TOPOGRAPHIC AND PROPOSED PROJECT DATA.

MONUMENT LEGEND
- ● -3/4 " x 36" REBAR WITH 1 ½" ALUMINUM CAP STAMPED "ODOT ROW RLS 7209"
- Ⓜ -ADJUSTABLE CENTERLINE MONUMENT ASSEMBLY
- ○M.N.F. -MAG NAIL FOUND
- ✕ -MAG NAIL SET
- ①I.P.F. -I.P. FOUND
- ◎ -CONC. R/W MONUMENT FOUND
- Ⓜ -MONUMENT BOX FOUND
- ⌀ -RAILROAD SPIKE FOUND
- ○P.K.F. -P.K. NAIL FOUND

STRUCTURE KEY
- □ RESIDENTIAL
- ▨ COMMERCIAL

FIELD REVIEW BY: BB, RMC DATE: 10/8/04		
OWNERSHIP VERIFIED BY: RAF DATE: 10/10/04		
CEO	1-24-06	REVISED 17WDV
REV.	DATE	DESCRIPTION
DATE OF COMPLETION: 10/19/04		

SCALE IN FEET 0 10 20 40

P.I.D. NO. 23504

R/W DESIGNER BB
R/W REVIEWER RJM

RAILROAD PLAT

RIC-C.R. 424-0.62

20/22

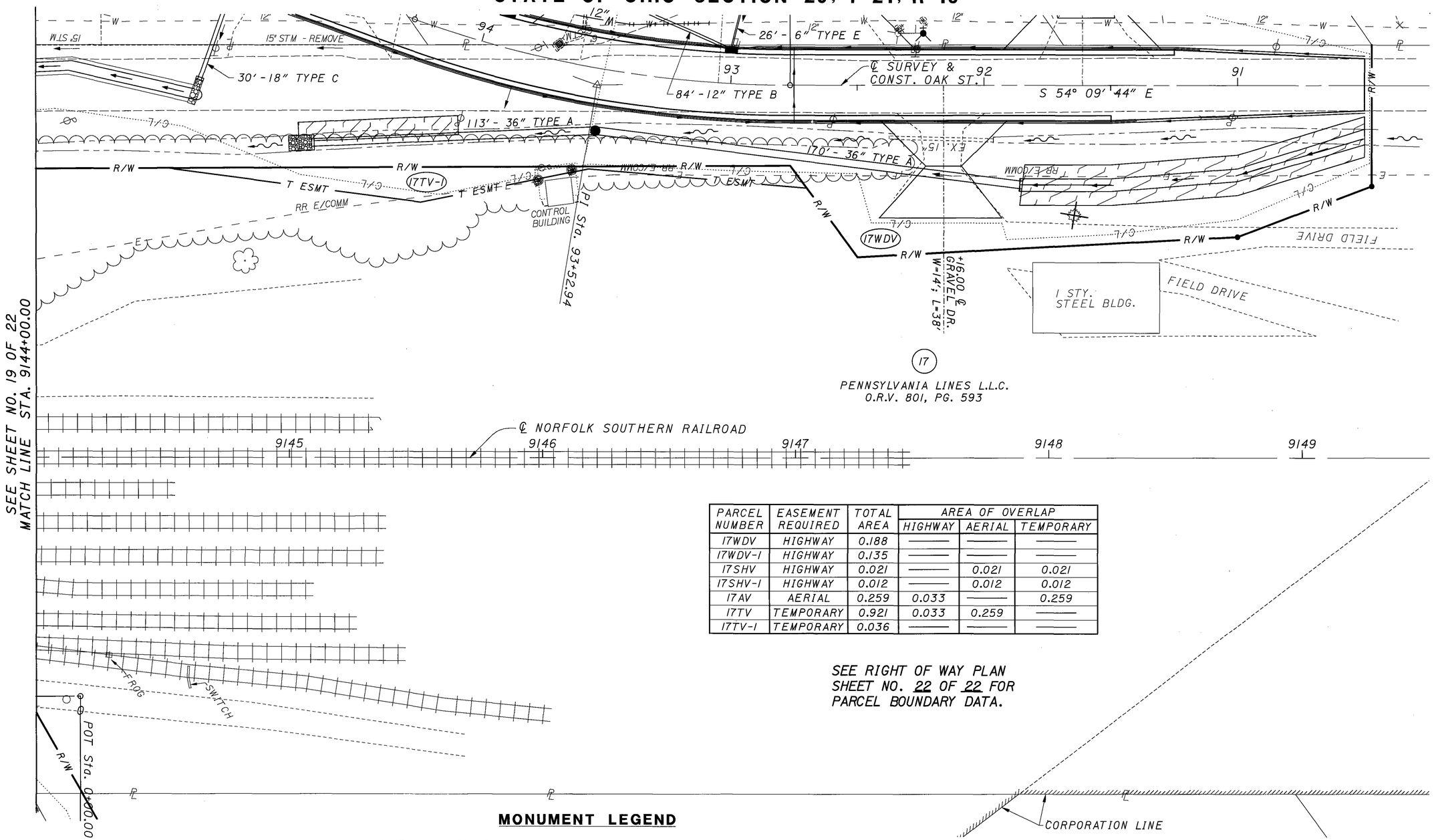
151/153

08RRRAI.DGN 1/25/06 CEO,RC

RIC-CR424-0.62

RIC-CR424-0.62
CITY OF MANSFIELD
MADISON TOWNSHIP, RICHLAND COUNTY
STATE OF OHIO SECTION 26, T-21, R-18

RAILROAD STATIONING RELATIVE TO VALUATION MAP V.I. OHIO/125



PARCEL NUMBER	EASEMENT REQUIRED	TOTAL AREA	AREA OF OVERLAP		
			HIGHWAY	AERIAL	TEMPORARY
17WDV	HIGHWAY	0.188	———	———	———
17WDV-1	HIGHWAY	0.135	———	———	———
17SHV	HIGHWAY	0.021	———	0.021	0.021
17SHV-1	HIGHWAY	0.012	———	0.012	0.012
17AV	AERIAL	0.259	0.033	———	0.259
17TV	TEMPORARY	0.921	0.033	0.259	———
17TV-1	TEMPORARY	0.036	———	———	———

SEE RIGHT OF WAY PLAN SHEET NO. 22 OF 22 FOR PARCEL BOUNDARY DATA.

BASIS OF BEARINGS
SEE SHEET 5 OF 22 FOR BASIS OF BEARING

EXISTING RIGHT OF WAY
SEE SHEET 5 OF 22 FOR EXISTING RIGHT OF WAY

PROPERTY LINES
SEE SHEET 5 OF 22 FOR PROPERTY LINES

MONUMENT LEGEND
- ● -3/4 " x 36" REBAR WITH 1 ½" ALUMINUM CAP STAMPED "ODOT ROW RLS 7209"
- Ⓜ -ADJUSTABLE CENTERLINE MONUMENT ASSEMBLY
- ○M.N.F. -MAG NAIL FOUND
- ✕ -MAG NAIL SET
- ①I.P.F. -I.P. FOUND
- ◎ -CONC. R/W MONUMENT FOUND
- Ⓜ -MONUMENT BOX FOUND
- ∅ -RAILROAD SPIKE FOUND
- ○P.K.F. -P.K. NAIL FOUND

STRUCTURE KEY
- □ RESIDENTIAL
- ▨ COMMERCIAL

REV.	DATE	DESCRIPTION
		FIELD REVIEW BY: BB, RMC DATE: 10/8/04
		OWNERSHIP VERIFIED BY: RAF DATE: 10/10/04
CEO	1-24-06	REVISED 17WDV & ADDED 17TV-1
		DATE OF COMPLETION: 10/19/04

SCALE IN FEET: 0, 10, 20, 40

PID NO. 23504

R/W DESIGNER BB
R/W REVIEWER RJM

RAILROAD PLAT

RIC-C.R. 424-0.62

21/22

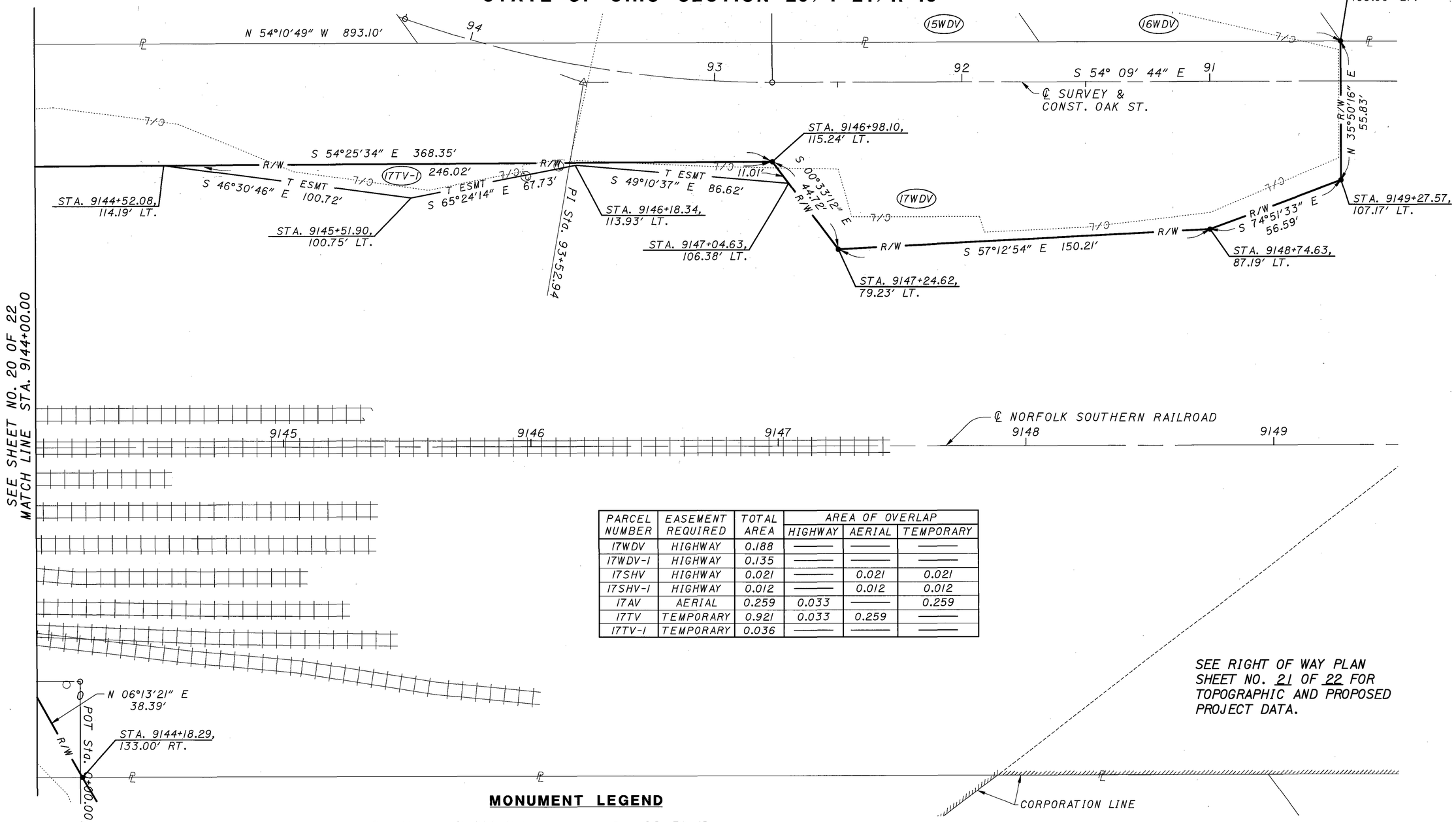
152/153

08RRBL.DGN 1/25/06 CEO.RC

RIC-CR424-0.62

RIC-CR424-0.62
CITY OF MANSFIELD
MADISON TOWNSHIP, RICHLAND COUNTY
STATE OF OHIO SECTION 26, T-21, R-18

RAILROAD STATIONING RELATIVE TO VALUATION MAP V.I. OHIO/125



PARCEL NUMBER	EASEMENT REQUIRED	TOTAL AREA	AREA OF OVERLAP		
			HIGHWAY	AERIAL	TEMPORARY
17WDV	HIGHWAY	0.188	———	———	———
17WDV-1	HIGHWAY	0.135	———	———	———
17SHV	HIGHWAY	0.021	———	0.021	0.021
17SHV-1	HIGHWAY	0.012	———	0.012	0.012
17AV	AERIAL	0.259	0.033	———	0.259
17TV	TEMPORARY	0.921	0.033	0.259	———
17TV-1	TEMPORARY	0.036	———	———	———

SEE RIGHT OF WAY PLAN SHEET NO. 21 OF 22 FOR TOPOGRAPHIC AND PROPOSED PROJECT DATA.

BASIS OF BEARINGS
SEE SHEET 5 OF 22 FOR BASIS OF BEARING

EXISTING RIGHT OF WAY
SEE SHEET 5 OF 22 FOR EXISTING RIGHT OF WAY

PROPERTY LINES
SEE SHEET 5 OF 22 FOR PROPERTY LINES

MONUMENT LEGEND
- ● -3/4 " x 36" REBAR WITH 1 ½" ALUMINUM CAP STAMPED "ODOT ROW RLS 7209"
- Ⓜ -ADJUSTABLE CENTERLINE MONUMENT ASSEMBLY
- ○M.N.F. -MAG NAIL FOUND
- ✕ -MAG NAIL SET
- Ⓘ I.P.F. -I.P. FOUND
- ◎ -CONC. R/W MONUMENT FOUND
- Ⓜ -MONUMENT BOX FOUND
- ∅ -RAILROAD SPIKE FOUND
- ○P.K.F. -P.K. NAIL FOUND

STRUCTURE KEY
- ☐ RESIDENTIAL
- ▨ COMMERCIAL

FIELD REVIEW BY: BB, RMC DATE: 10/8/04		
OWNERSHIP VERIFIED BY: RAF DATE: 10/10/04		
CEO	1-24-06	REVISED 17WDV & ADDED 17TV-1
REV.	DATE	DESCRIPTION
DATE OF COMPLETION: 10/19/04		

SCALE IN FEET 0 10 20 40

PID NO. 23504

R/W DESIGNER BB R/W REVIEWER RJM

RAILROAD PLAT

RIC-C.R. 424-0.62

22/22

153/153

088RRBL.DGN 1/25/06 CEO,RC

RIC-CR424-0.62

GENERAL INFORMATION

INTRODUCTION

THE PROJECT CONSISTS OF REPLACING THE EXISTING AT-GRADE RAILROAD CROSSING ON SOUTH ILLINOIS AVENUE WITH A NEW BRIDGE CARRYING THE ROADWAY OVER THE NORFOLK SOUTHERN TRACKS. TO THIS END, IT IS PROPOSED TO RAISE/RECONSTRUCT APPROXIMATELY 0.5 MILES OF S. ILLINOIS AVENUE, CONSTRUCT A NEW 3-SPAN BRIDGE, AND RELOCATE OAK STREET.

GEOLOGY AND OBSERVATIONS OF THE PROJECT

THE PROJECT SITE IS LOCATED NEAR THE EDGE OF A PRE-GLACIAL VALLEY. DURING PAST GLACIATION EVENTS, THE VALLEY WAS FILLED WITH A COMBINATION OF OUTWASH DEPOSITS AND GLACIAL TILL. GLACIAL OUTWASH DEPOSITS TYPICALLY CONSIST OF STRATIFIED LAYERS OF SAND, GRAVEL AND LARGER SIZE PARTICLES, WHILE GLACIAL TILL TYPICALLY CONSISTS OF AN UNSTRATIFIED MIXTURE OF CLAY, SILT, SAND AND LARGER SIZE PARTICLES. GEOLOGIC REFERENCES AND ADJACENT WELL LOGS (ON FILE WITH THE ODNR) INDICATE THAT BEDROCK, CONSISTING OF SANDSTONE, SILTSTONE AND SHALE BELONGING TO THE LOGAN AND CUYAHOGA FORMATION OF MISSISSIPPIAN AGE, IS LOCATED BETWEEN EL. 950 AND EL. 1050, OR ROUGHLY 100 TO 200 FEET BELOW THE EXISTING GROUND SURFACE.

EXPLORATION

THE BORINGS WERE PERFORMED WITH AN ALL TERRAIN VEHICLE (ATV) MOUNTED DRILL RIG USING A 3-1/4-INCH I.D. HOLLOW-STEM AUGER TO ADVANCE THE BORINGS BETWEEN SAMPLES. AT REGULAR INTERVALS WITHIN THE SOIL, THE CENTER PLUG WAS WITHDRAWN FROM THE AUGER AND DISTURBED, BUT REPRESENTATIVE, SOIL SAMPLES WERE OBTAINED BY LOWERING A 2-INCH O.D. SPLIT-BARREL SAMPLER TO THE BOTTOM OF THE BORING AND THEN DRIVING THE SAMPLER INTO THE SOIL WITH BLOWS FROM A 140-POUND HAMMER FREELY FALLING 30 INCHES (STANDARD PENETRATION TEST). IF NO MATERIAL WAS RETAINED IN THE SAMPLER, A 2.5-INCH O.D. SPLIT- BARREL SAMPLER WAS USED TO DRIVE OVER AND 6 INCHES DEEPER THAN THE ADVANCEMENT OF THE 2-INCH O.D. SAMPLER IN AN EFFORT TO RETRIEVE THE SOIL SAMPLE. A TOTAL OF TEN "UNDISTURBED" SAMPLES WERE OBTAINED BY HYDRAULICALLY PUSHING 3-INCH O.D. THIN WALL SHELBY TUBES AT A CONSTANT RATE OF PENETRATION. SHELBY TUBE SAMPLES WERE PRESERVED IN THE TUBES BY FIRST CLEANING THE ENDS OF CUTTINGS AND THEN SEALING THEM WITH WAX. IMMEDIATELY AFTER DRILLING WAS COMPLETED AND GROUNDWATER MEASUREMENTS OBTAINED, THE BORINGS WERE BACKFILLED IN ACCORDANCE WITH ODOT REQUIREMENTS.

INVESTIGATIONAL FINDINGS

S. ILLINOIS AVENUE

TWENTY NINE BORINGS (DESIGNATED P-1 THROUGH P-20, S-1 THROUGH S-8 AND B-4) WERE PERFORMED ALONG THE S. ILLINOIS AVE AND ADJACENT WETLAND AREA. TWELVE OF THE TWENTY NINE BORINGS WERE ADVANCED THROUGH THE EXISTING S. ILLINOIS AVE. PAVEMENT AND ENCOUNTERED BETWEEN 6 AND 24 INCHES OF ASPHALTIC CONCRETE OVERLAYING BETWEEN 0 AND 12 INCHES OF GRANULAR BASE. BORING P-1 WAS ADVANCED THROUGH A DRIVE ADJACENT TO THE RAILROAD TRACK AND ENCOUNTERED 12 INCHES OF ASPHALTIC CONCRETE. MANY OF THESE BORINGS ENCOUNTERED 2 TO 3 FEET OF FILL BENEATH THE PAVEMENT WHICH CONSISTED OF VERY-STIFF TO HARD BROWN GRAY SILTY CLAY (A-6a), LOOSE TO MEDIUM-DENSE BROWN AND GRAY FINE TO COARSE SAND (A-1-b, A-2-6, A-3a, A-4a), OR VERY-LOOSE TO LOOSE BROWN FINE TO COARSE SAND AND CLAYEY SILT (A-4a, A-4b). IN A FEW BORINGS, THE PRESENCE OF SLAG WAS NOTED WITHIN THE FILL.

BORINGS P-7 THROUGH P-12, P-15, B-4, S-3, AND S-5 THROUGH S-8, WHICH WERE DRILLED OUTSIDE OF THE EXISTING PAVEMENT EACH ENCOUNTERED BETWEEN 3 AND 8 FEET OF FILL SOILS CONSISTING OF VERY-STIFF TO HARD BROWN AND GRAY SILTY CLAY (A-6a) MIXED WITH CLAYEY SILT (A-4a) AND LOOSE TO MEDIUM-DENSE FINE TO COARSE SAND (A-1-b, A-3a, A-4a). IN CONTRAST, BORINGS P-14 AND P-16 DID NOT ENCOUNTER ANY FILL. SEVEN OF THE NINE BORINGS NOT ADVANCED THROUGH PAVEMENT ENCOUNTERED 2 TO 3 INCHES OF TOPSOIL.

IN THE VICINITY OF THE DELINEATED WETLAND AREA BETWEEN STATION 127+50 AND 130+00, BORINGS P-8, P-11, P-13, S-2, S-3, S-5 AND TO A LESSER EXTENT P-14 AND S-8, ENCOUNTERED BETWEEN 1.5 AND 4.0 FEET OF VERY-SOFT TO SOFT ORGANIC OR PARTIALLY ORGANIC SILTY CLAY OR CLAYEY SILT BENEATH EXISTING FILL OR TOPSOIL. BORING P-11 ALSO ENCOUNTERED A 3.5-FOOT THICK LAYER OF VERY-SOFT SLIGHTLY ORGANIC DARK GRAY SILTY CLAY (A-6a) AT A DEPTH OF 13.5 BELOW THE EXISTING GROUND SURFACE. THE MEASURED LOI VALUES RANGED FROM JUST OVER 1% TO AS MUCH AS 18% FOR THIS LAYER..

BENEATH THE UPPER FILL MATERIAL, EXISTING TOPSOIL, OR WEAK ORGANIC SOILS, THE BORINGS ENCOUNTERED A HIGHLY HETEROGENEOUS STRATIGRAPHY CONSISTING OF ALTERNATING LAYERS OF MEDIUM-STIFF TO HARD SILTY CLAY (A-6a, A-6b, A-7-5, A-7-6) AND CLAYEY SILT (A-4a) INTERBEDDED WITH LAYERS OF LOOSE TO MEDIUM-DENSE FINE TO COARSE SAND (A-1-b, A-2-6, A-3, A-3a) AND SILT (A-4b). THE MAJORITY OF THE COHESIVE SOILS WERE OBSERVED TO CONTAIN NUMEROUS SEEMS SILT AND FINE SAND. A FEW, RELATIVELY ISOLATED ZONES OF VERY-SOFT TO MEDIUM-STIFF SILTY CLAY OR CLAYEY SILT WERE ENCOUNTERED AT DEPTH WITHIN A PORTION OF THE BORINGS. IN GENERAL, THESE ZONES CONTAINED SOME TO "AND" FINE TO COARSE SAND.

DURING DRILLING, GROUNDWATER WAS ENCOUNTERED AT DEPTHS BETWEEN 0.0 AND 18.0 FEET (ELEVATION BETWEEN EL. 1123.0 AND EL. 1135.6) BENEATH THE GROUND SURFACE IN ALL OF THE S. ILLINOIS AVE. BORINGS. AT THE COMPLETION OF DRILLING, GROUNDWATER WAS GENERALLY MEASURED AT SIMILAR DEPTHS. EXTENDED GROUNDWATER MEASUREMENTS WERE PERFORMED AT BORING S-3. DURING THE SUMMER OF 2004, GROUNDWATER WAS MEASURED AT DEPTHS BETWEEN 4.2 AND 6.0 FEET (EL. 1133.5 TO EL. 1135.1) BENEATH THE GROUND SURFACE AT THIS LOCATION.

OAK STREET

BORINGS B-1 THROUGH B-3 AND B-5 WERE LOCATED IN THE VICINITY OF THE PROPOSED OAK STREET REALIGNMENT, AND ENCOUNTERED BETWEEN 3.0 AND 5.5 FEET OF FILL SOIL BENEATH SIX INCHES OF TOPSOIL FILL. THE FILL CONSISTED OF VERY-STIFF TO HARD BROWN SILTY CLAY (A-6a) IN BORING B-2 AND B-3, AND MEDIUM-DENSE BROWN FINE TO COARSE SAND (A-1-b, A-2-6) IN BORINGS B-1 AND B-5. BORING B-1 WAS TERMINATED WITHIN THE FILL. BENEATH THE FILL, BORINGS B-3 AND B-5 ENCOUNTERED SLIGHTLY ORGANIC STIFF TO VERY-STIFF CLAYEY SILT (A-4b) OR SILTY CLAY (A-6a). BELOW THIS LEVEL, THE BORINGS ENCOUNTERED A HETEROGENEOUS STRATIGRAPHY GENERALLY CONSISTING OF ALTERNATING LAYERS OF VERY-LOOSE TO MEDIUM-DENSE FINE TO COARSE SAND CONSISTING VARYING AMOUNTS OF SILT AND CLAY (A-2-4, A-2-6, A-3a, A-4a) INTERBEDDED WITH LAYERS OF MEDIUM-STIFF TO VERY-STIFF SILTY CLAY (A-6a) AND CLAYEY SILT (AO4a), MUCH OF WHICH CONTAINED THIN SEAMS OF SILT.

DURING DRILLING, SEEPAGE WAS ENCOUNTERED AT DEPTHS BETWEEN 8.5 AND 13.5 FEET BELOW THE GROUND SURFACE IN BORINGS B-2, B-3 AND B-5. AT THE COMPLETION OF DRILLING, WATER WAS MEASURED INSIDE THE HOLLOW-STEM AUGER AT A DEPTH OF 16.5 FEET IN BORING B-2, AND AT A DEPTH OF 17.0 FEET IN BORING B-5. BORING B-1 DID NOT ENCOUNTER ANY GROUNDWATER OR SEEPAGE.

LEGEND

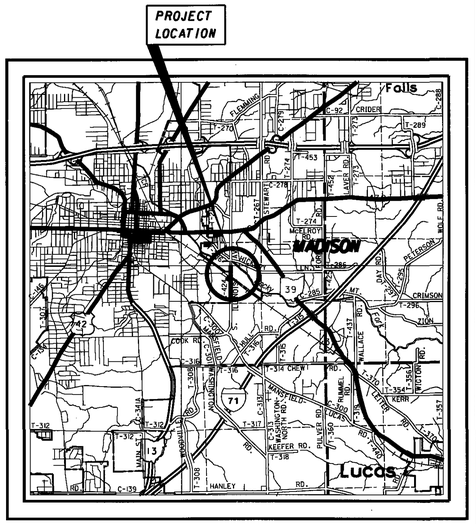
DESCRIPTION	ODOT CLASS	% AGG.	% C. SAND	% F. SAND	% SILT	% CLAY	LIQUID LIMIT	PLASTICITY INDEX	WATER CONTENT	SAMPLES TESTED
GRAVEL	A-1-a ( )	63	19.5	10.5	3.5	3.5				2
GRAVEL WITH SAND	A-1-b (0)	43.4	24.1	15.9	8.6	8			13	10
FINE SAND	A-3 (0)	1	46	44	5	4				1
COARSE AND FINE SAND	A-3a (0)	11	14	50	15	10				4
GRAVEL WITH SAND AND SILT	A-2-4 (0)	43	11	16	21	9	20	5	8	1
GRAVEL WITH SAND, SILT AND CLAY	A-2-6 ( )	37.5	17	15.5	19	11				2
GRAVEL WITH SILT AND CLAY	A-2-7	11	47	10	15	17	42	20	19	1
SANDY SILT	A-4a (8)	8.9	9.3	21.8	38.8	21.2	24.8	7.7	16.5	26
SILT	A-4b (8)	0.3	1.2	9.1	63.5	25.9	27.1	8	18.2	10
SILT AND CLAY	A-6a (10)	4.75	3.3	13.8	44.5	33.6	19	8.1	13.2	12
SILTY CLAY	A-6b (12)	0.5	0.5	7.5	49.5	42	38.25	17.5	23.5	2
CLAY	A-7-6 (15)	0.8	3.8	13.2	44.4	37.8	56.6	25.4	50.2	5
RANDOM FILL	VISUAL CLASSIFICATION			**SILT AND CLAY COMBINED						
WEATHERED SHALE	VISUAL CLASSIFICATION									
MUDSTONE	VISUAL CLASSIFICATION									
SHALE	VISUAL CLASSIFICATION									
SANDSTONE	VISUAL CLASSIFICATION									
LIMESTONE	VISUAL CLASSIFICATION									
VARIOUS OTHER MATERIAL	VISUAL CLASSIFICATION									

- SOD AND/OR TOP SOIL - X - APPROXIMATE DEPTH
- BERM MATERIAL
- AUGER BORING - PLAN VIEW
- DRIVE SAMPLE AND/OR CORE BORING - PLAN VIEW
- ROADWAY OR AUGER BORING PLOTTED TO VERTICAL SCALE ONLY
- DRIVE SAMPLE AND/OR CORE BORING PLOTTED TO VERTICAL SCALE ONLY
- WATER CONTENT NEARLY EQUAL TO OR GREATER THAN LIQUID LIMIT
- INDICATES A NON-PLASTIC MATERIAL WITH A HIGH WATER CONTENT
- W FREE WATER
- STATIC WATER LEVEL
- NUMBER OF BLOWS FOR STANDARD PENETRATION TEST (X/YY/Z or X/YY/Z)
  - X = NUMBER OF BLOWS FOR FIRST 0.5 FT.
  - Y = NUMBER OF BLOWS FOR SECOND 0.5 FT.
  - Z = NUMBER OF BLOWS FOR THIRD 0.5 FT.

NOTE: FIGURES BESIDE BORINGS INDICATE WATER CONTENT IN PERCENT. e.g. 15

NOTE

ALL AVAILABLE SOIL INFORMATION WHICH CAN BE CONVENIENTLY SHOWN ON THE SOIL PROFILE SHEETS HAS BEEN SO REPORTED. ADDITIONAL SUBSURFACE INVESTIGATIONS, SOIL TESTS, AND BORINGS HAVE BEEN MADE TO STUDY SOME SPECIAL ASPECT OF THE PROJECT. COPIES OF THIS DATA, MAY BE INSPECTED IN THE DISTRICT DEPUTY DIRECTOR'S OFFICE, THE OFFICE OF GEOTECHNICAL ENGINEERING AT 1600 WEST BROAD STREET, THE OFFICE OF ROADWAY ENGINEERING OR THE OFFICE OF STRUCTURAL ENGINEERING AT 1980 WEST BROAD STREET.



LOCATION MAP

LOCATION MAP

BBC&M ENGINEERING INC.

SOIL PROFILE

RIC-CR424-0.62

1 / 13

1 / 25

I02088IFHNOTES.DGN 8/13/04 CAR,RC,KH

BORING LOCATION	BORING NUMBER	SAMPLE DEPTH	% AGG.	% C.S.	% F.S.	% SLIT	% SILT/CLAY	% CLAY	L.L.	P.I.	% N.M.C.	ODOT CLASS	D/50	D/60
STA. 93+55.6, 27.4' RT., ℄ PROP. OAK ST.	B-1	1.4	37	27	18	12	0	6	NP	NP	13	A-1-b(0)	0.9488	9.4069
	B-1	3.25	42	19	14	18	0	7	38	12	15	A-2-6(0)	1.0563	25.0037
	B-1	4.75	33	15	17	20	0	15	32	11	18	A-2-6(0)	0.3552	18.6268
STA. 96+98.7, 16.5' RT., ℄ PROP. OAK ST.	B-2	4.75	11	17	23	32	0	17	26	7	15	A-4a(3)	0.083	2.3965
	B-2	14.25	6	10	22	39	0	23	21	7	15	A-4a(5)	0.0329	1.0963
STA. 99+15.7, 1.5' RT., ℄ PROP. OAK ST.	B-3	4.75	1	7	19	52	0	21	36	10	26	A-4b(8)	0.0239	0.3325
	B-3	14.25	0	0	3	71	0	26	24	6		A-4b(8)	0.0133	0.0573
	B-3	19.25							24	9	16			
	B-3	20.75	2	3	9	46	0	40	22	7		A-4a(8)	0.0087	0.1664
	B-3	21.17									17			
	B-3	29.25									17			
STA. 124+26.3, 25.6' LT., ℄ PROP. S. ILLINOIS AVE.	B-4	6.75	1	2	34	49	0	14	NP	NP	18	A-4a(0)	0.0387	0.2508
	B-4	13.75	5	10	48	31	0	6	NP	NP	20	A-4a(0)	0.1254	0.922
	B-4	19.25							30	13	20			
	B-4	20.25	0	0	3	57	0	40	29	10		A-4b(8)	0.0085	0.0557
	B-4	34.25							25	8	16			
	B-4	44.25							27	11	17			
	B-4	54.25	9	17	23	35	0	16	20	5	10	A-4a(3)	0.0697	1.8258
	B-4	64.25	0	4	75		21						0.1889	0.3872
	B-4	84.25	26	17	41		16						0.355	6.7665
STA. 96+81.0, 73.8' LT., ℄ PROP. OAK ST.	B-5	4.75	1	1	14	47	0	37	40	19	26	A-6b(12)	0.0112	0.1392
	B-5	14.25	26	13	19		42						0.172	10.6153
STA. 124+62.4, 32.3' RT., ℄ PROP. S. ILLINOIS AVE.	P-1	6.25									25			
	P-1	6.75	1	3	16	43	0	37	47	27	27	A-7-6(16)	0.0121	0.1767
	P-1	11.75	17	15	26	29	0	13	19	5	13	A-4a(1)	0.124	5.5886
	P-1	24.25	1	1	32	49	0	17					0.0327	0.1824
	P-1	34.25	0	1	20	55	0	24	22	5	17	A-4b(8)	0.019	0.152
	P-1	43.75									14			
	P-1	44.5	2	6	12	46	0	34	27	10	15	A-4a(8)	0.0125	0.327
	P-1	44.75									15			
	P-1	54.25							28	12	14			
	P-1	64.25	4	8	12	46	0	30	27	10	15	A-4a(8)	0.0163	0.626
	P-1	74.5									20			
	P-1	84.25	43	11	16	21	0	9	20	5	8	A-2-4(0)	0.7338	21.5067
	P-1	99.25									11			
STA. 126+44.2, 2.4' LT., ℄ PROP. S. ILLINOIS AVE.	P-2	4.25	4	17	31	30	0	18	22	8	12	A-4a(3)	0.0849	1.1578
	P-2	14.25	61	23	13		3						2.8062	11.8431
	P-2	24.25	4	6	16	46	0	28	24	10	14	A-4a(8)	0.0191	0.4212
	P-2	34.35									8			
	P-2	44.25							22	8	11			
	P-2	59.25							20	7	11			
	P-2	64.25									12			
	P-2	69.25							22	6	15			
	P-2	79.25	0	0	1	84	0	15					0.0166	0.0569
STA. 127+54.9, 9.7' RT., ℄ PROP. S. ILLINOIS AVE.	P-3	6.75	27	28	31		14						0.5433	7.7204
	P-3	17.05							18	5	11			
	P-3	24.25	39	30	27		4						1.1334	10.4485
	P-3	39.25	65	16	8		11						3.3609	11.9786
	P-3	49.25									10			
	P-3	59.25									9			
	P-3	64.25	14	12	24	33	0	17	20	6	11	A-4a(3)	0.075	4.1393
	P-3	69.25									13			
	P-3	79.25									13			
STA. 131+32.1, 4.0' LT., ℄ PROP. S. ILLINOIS AVE.	P-4	19.25	0	0	1	52	0	47	34	13	25	A-6a(9)	0.0058	0.0468
	P-4	34.25	18	31	20		31						0.3968	5.1847
STA. 132+97.4, 6.6' LT., ℄ PROP. S. ILLINOIS AVE.	P-5	2.6	0	0	18	54	0	28	35	14	18	A-6a(10)	0.0157	0.1299
STA. 137+26.9, 2.4' LT., ℄ PROP. S. ILLINOIS AVE.	P-6	2.4	15	18	29	26	0	12	29	6	16	A-4a(1)	0.154	3.862
	P-6	3.9	3	4	26	45	0	22	31	12	20	A-6a(7)	0.0288	0.2989
	P-6	5	0	3	62	25	0	10					0.1137	0.348
STA. 127+05.6, 84.1' LT., ℄ PROP. S. ILLINOIS AVE.	P-7	4.75									23			
	P-7	9.25	0	1	3	46	0	50	35	14	39	A-6a(10)	0.0049	0.0507
	P-7	23.9							21	7	12			
	P-7	29.25									17			
STA. 124+55.0, 108.9' LT., ℄ PROP. S. ILLINOIS AVE.	P-8	5	1	5	9	44	0	41	89	37	100	A-7-5(20)	0.0088	0.1784
	P-8	9.25									26			
	P-8	14.25	0	0	1	52	0	47	35	16	25	A-6b(10)	0.0059	0.0471
	P-8	24.25	53	17	8		22						2.4582	22.1089
	P-8	28.85									10			
STA. 124+84.2, 115.3' LT., ℄ PROP. S. ILLINOIS AVE.	P-9	4.75							40	19	16			
	P-9	9.25	0	0	1	56	0	43	33	14	25	A-6a(10)	0.0069	0.048
	P-9	14.25	52	18	13		17						2.2159	17.0356
	P-9	23.85									13			
STA. 127+05.2, 89.4' RT., ℄ PROP. S. ILLINOIS AVE.	P-10	9	1	1	1	56	0	41	30	12	24	A-6a(9)	0.0075	0.0532
	P-10	9.75	43	8	11		38						0.5158	22.4798
	P-10	14.25	38	11	16	16	0	19	19	5	10	A-2-4(0)	0.3762	21.5678
	P-10	28.65							31	14	19			
	P-10	34.25									15			
STA. 128+52.1, 115.9' RT., ℄ PROP. S. ILLINOIS AVE.	P-11	8.75									25			
	P-11	9.5	0	0	1	51	0	48	48	26	31	A-7-6(16)	0.0055	0.0467
	P-11	12.25	0	1	5	62	0	32	33	10	29	A-4b(8)	0.011	0.063
	P-11	19.25	59	13	6		22						3.561	20.1836
	P-11	24.25	0	0	5	59	0	36	29	11	23	A-6a(8)	0.0097	0.0603
	P-11	29.1									24			
STA. 129+82.9, 85.5' RT., ℄ PROP. S. ILLINOIS AVE.	P-12	4.75	0	0	18	61	0	21	27	9	9	A-4b(8)	0.0198	0.1251

BORING LOCATION	BORING NUMBER	SAMPLE DEPTH	% AGG.	% C.S.	% F.S.	% SLIT	% SILT/CLAY	% CLAY	L.L.	P.I.	% N.M.C.	ODOT CLASS	D/50	D/60
STA. 129+82.9, 85.5' RT., ℄ PROP. S. ILLINOIS AVE.	P-12	9.25	38	22	24		16						0.8593	10.1019
	P-12	19.25							38	16	27			
STA. 128+65.1, 4.4' LT., ℄ PROP. S. ILLINOIS AVE.	P-13	4.25	1	10	31		58		45	13	49	A-7-5(6)		0.4962
	P-13	6.75									26			
	P-13	11.75	0	0	3	53	0	44	30	10	26	A-4b(8)	0.0068	0.0531
	P-13	12.75	0	0	6	51	0	43	29	9	30	A-4b(8)	0.007	0.0605
	P-13	13.25									27			
	P-13	14.25									28			
	P-13	29.25	1	2	24	48	0	25	18	3	20	A-4a(8)	0.0214	0.1982
	P-13	34.25									11			
	P-13	44.25							17	5	10			
STA. 129+81.3, 41.2' LT., ℄ PROP. S. ILLINOIS AVE.	P-14	2.75	1	1	9	55	0	34	54	24	44	A-7-5(16)	0.0114	0.0853
	P-14	3.15									22			
	P-14	4.75							44	24	32			
	P-14	14.25	0	0	5	67	0	28	24	7	23	A-4b(8)	0.013	0.0608
	P-14	24.35									12			
STA. 124+71.9, 100.6' LT., ℄ PROP. S. ILLINOIS AVE.	P-15	3.25	1	6	34	38	0	21	26	8	16	A-4a(5)	0.0398	0.354
	P-15	5.1	0	0	34		66							0.1591
	P-15	19	0	0	8	80	0	12	NP	NP	25	A-4b(0)	0.0199	0.071
	P-15	24.5	7	7	19	45	0	22	21	7	13	A-4a(6)	0.0276	1.0696
	P-15	29.25									17			
STA. 123+45.8, 91.3' RT., ℄ PROP. S. ILLINOIS AVE.	P-16	1.75	30	20	10	26	0	14	28	8	13	A-4a(1)	0.425	11.1933
	P-16	5.25	11	47	10	15	0	17	42	20	19	A-2-7(2)	0.5531	2.2916
	P-16	14.25	35	39	12		14						1.123	7.7386
	P-16	29.25	1	46	44		9						0.3957	1.4772
STA. 122+24.4, 9.1' LT., ℄ PROP. S. ILLINOIS AVE.	P-17	2	10	12	20	43	0	15	28	8	19	A-4a(5)	0.0457	2
	P-17	4.25	39	29	10		22						1.1003	11.82
	P-17	9.25	55	18	10		17						2.5021	14.8438
STA. 118+86.7, 9.9' LT., ℄ PROP. S. ILLINOIS AVE.	P-18	2.5	2	6	18	48	0	26	29	11	20	A-6a(8)	0.0207	0.3022
	P-18	3.75	1	7	18	41	0	33	32	12	19	A-6a(9)	0.0151	0.288
	P-18	5.25	1	3	15	46	0	35	29	10	15	A-4a(8)	0.0119	0.1756
STA. 114+94.5, 9.8' LT., ℄ PROP. S. ILLINOIS AVE.	P-19	4.3	1	7	25	42	0	25	28	10	18	A-4a(6)	0.0257	0.3288
	P-19	5.05									17			
	P-19	9.25	4	10	21	43	0	22	24	7	16	A-4a(6)	0.0289	0.7897
STA. 110+98.9, 6.5' RT., ℄ PROP. S. ILLINOIS AVE.	P-20	2.25	38	11	13	26	0	12					0.3843	22.0075
	P-20	4	7	13	30	25	0	25	37	21	21	A-6b(7)	0.074	1.4091
	P-20	5	20	11	27	35	0	7	NP	NP	15	A-4a(0)	0.1191	8.7161
STA. 128+07.6, 74.5' LT., ℄ PROP. S. ILLINOIS AVE.	S-1	1.75									25			
	S-1	4.25	1	1	2	43	0	53	38	15	22	A-6a(10)	0.0045	0.0508
	S-1	6.75									28			
	S-1	9.25	0	1	1	44	0	54	34	14	27	A-6a(10)	0.0043	0.0455
	S-1	14.25							36	16	27			
STA. 129+27.9, 60.4' LT., ℄ PROP. S. ILLINOIS AVE.	S-3	6.75	1	1	2	54	0	42	63	32	63	A-7-5(20)	0.0072	0.0553
	S-3	7.25	0	1	2	59	0	38	57	24	73	A-7-5(17)	0.0086	0.0543
	S-3	7.75									84			
	S-3	9.25	53	10	16	14	0	7	22	3	13	A-1-b(0)	2.7687	31.7119
	S-3	14.25	55	17	13		15						2.6848	17.61
STA. 128+10.1, 5.2' LT., ℄ PROP. S. ILLINOIS AVE.	S-4	1.75									12			
	S-4	4.5	0	1	5	53	0	41	35	18		A-6b(11)	0.008	0.0612
	S-4	6.75									23			
	S-4	9.25	0	1	2	55	0	42	30	11	24	A-6a(8)	0.0074	0.0532
	S-4	14.25	37	20	28		15						0.7308	9.1001
STA. 129+40.2, 2.6' LT., ℄ PROP. S. ILLINOIS AVE.	S-5	1.75									10			
	S-5	4									64			
	S-5	4.25	11	4	7	47	0	31	42	20	28	A-7-6(12)	0.0153	3.6447
	S-5	4.75	0	1	10	51	0	38	62	27	54	A-7-5(19)	0.0235	0.0939
	S-5	6.75							46	28	34			
	S-5	9.25									24			
	S-5	11.75	0	1	2	45	0	52	33	14	25	A-6a(10)	0.0046	0.049
	S-5	14.25									25			
	S-5	16.75									24			
	S-5	19.25	0	1	2	53	0	44	62	27	24	A-7-5(19)	0.007	0.0527
STA. 128+02.5, 58.7' RT., ℄ PROP. S. ILLINOIS AVE.	S-6	1.75									15			
	S-6	4.25	7	7	26	38	0	22	30	11	20	A-6a(6)	0.0359	1.0054
	S-6	6.75									20			
	S-6	9.25	0	1	5	60	0	34	27	9	21	A-4b(8)	0.0105	0.0627
	S-6	11.75									22			
	S-6	14.25							30	12	23			
	S-6	19.25									10			
STA. 128+46.1, 58.7' RT., ℄ PROP. S. ILLINOIS AVE.	S-7	1.75									18			
	S-7	4.25	30	14	28	15	0	13	23	8	12	A-2-4(0)	0.3301	14.2464
	S-7	6.75	1	1	11	47	0	40	41	23	24	A-7-6(13)	0.0088	0.1109
	S-7	11.75	44	22	21		13				19		1.2752	14.3458
	S-7	16.75							28	9	25			
	S-7	19.25									23			
STA. 129+27.7, 61.9' RT., ℄ PROP. S. ILLINOIS AVE.	S-8	1.75									13			
	S-8	4.25	2	2	19	48	0	29	47	20	36	A-7-6(13)	0.0168	0.1875
	S-8	6.75									19			
	S-8	7.25	3	2	7	44	0	44	41	23	32	A-7-6(13)	0.0072	0.1249
	S-8	9.25	2	2	7	52	0	37	35	16	28	A-6b(10)	0.0099	0.0935
	S-8	11.75									21			
	S-8	16.75									24			
	S-8	19.25	0	1	1	51	0	47	30	11	24	A-6a(8)	0.0059	0.0491
	S-8	24.25									25			

SUMMARY OF SOIL TEST DATA

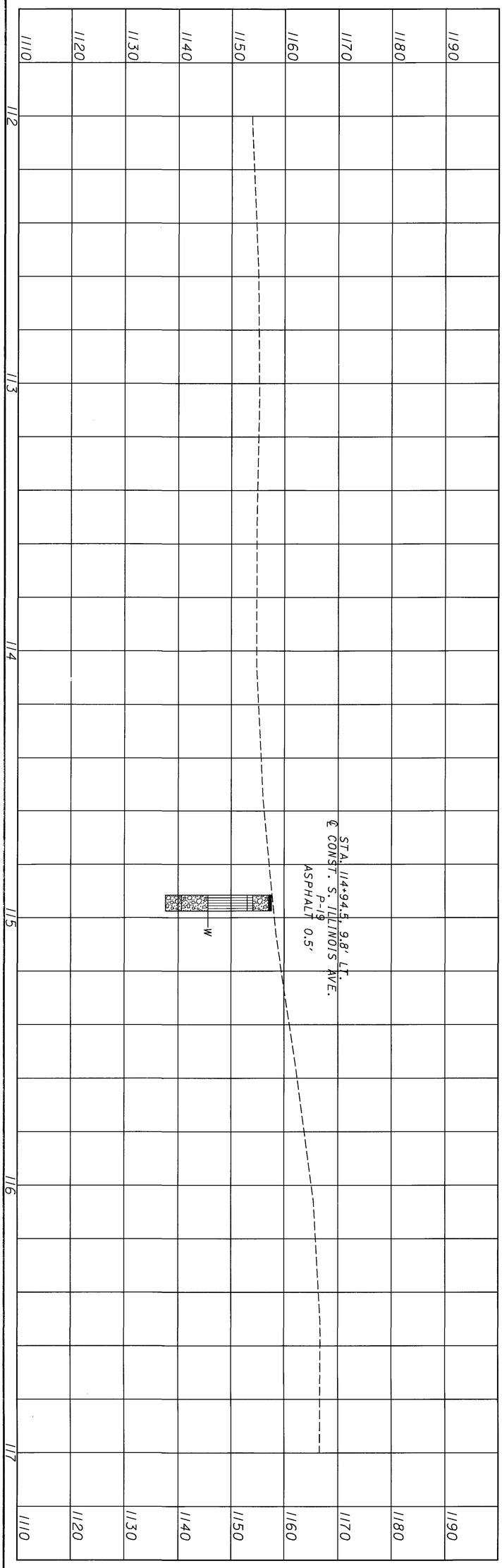
RIC-CR424-0.62

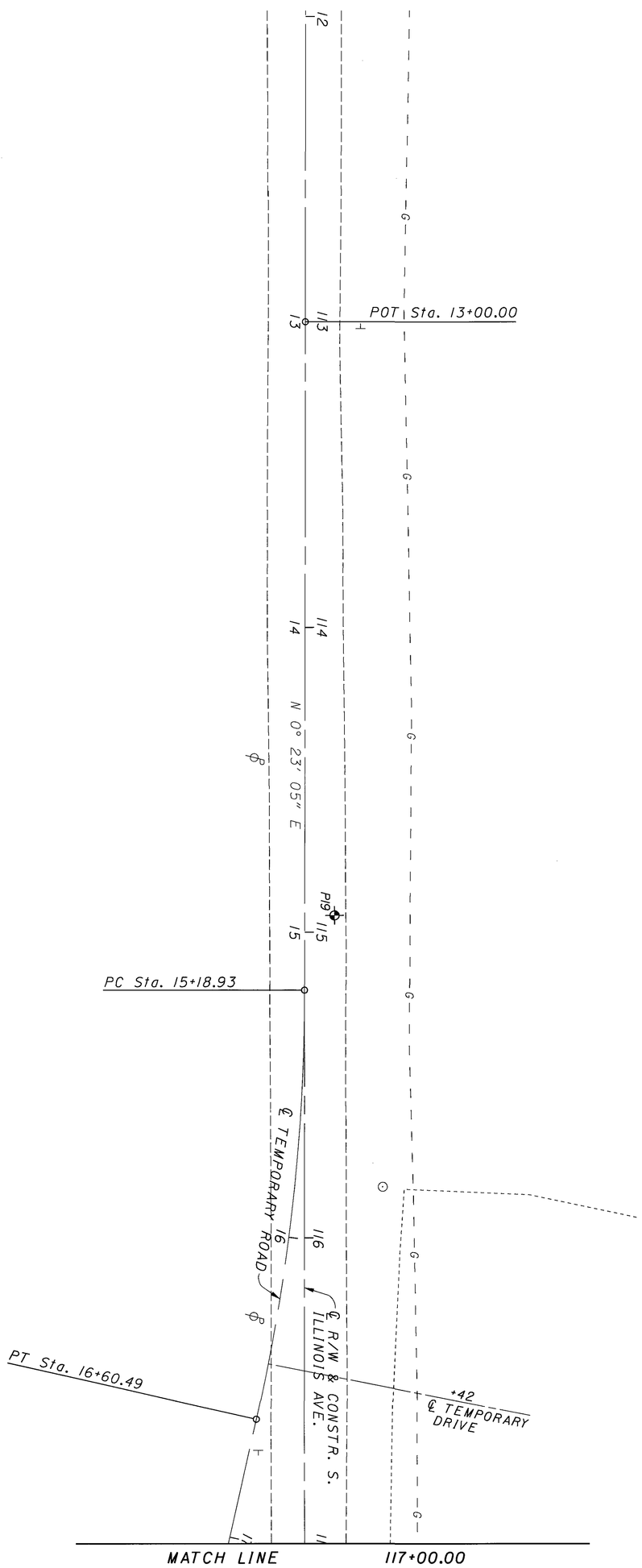
2/13

2/25

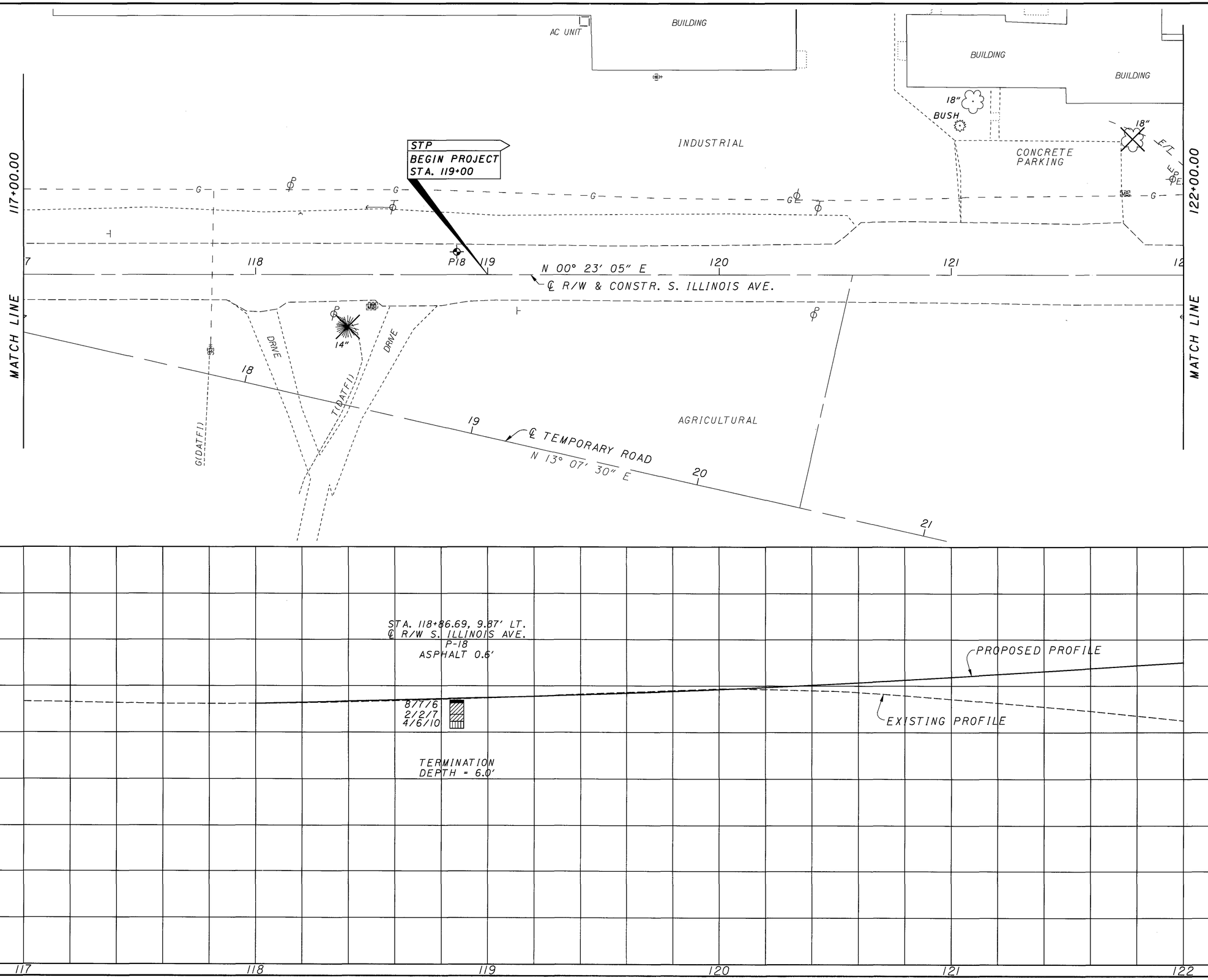
102088SOIL.DGN 8/19/04 CAR,KH

102088IFA.DGN 8/18/04 CAR,RC





3/25	3/13	RIC-CR424-0.62	SOIL PROFILE PLAN AND PROFILE STA. 112+00 TO STA. 117+00	CALCULATED CHECKED	0 20 10 40 HORIZONTAL SCALE IN FEET



HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED
CHECKED

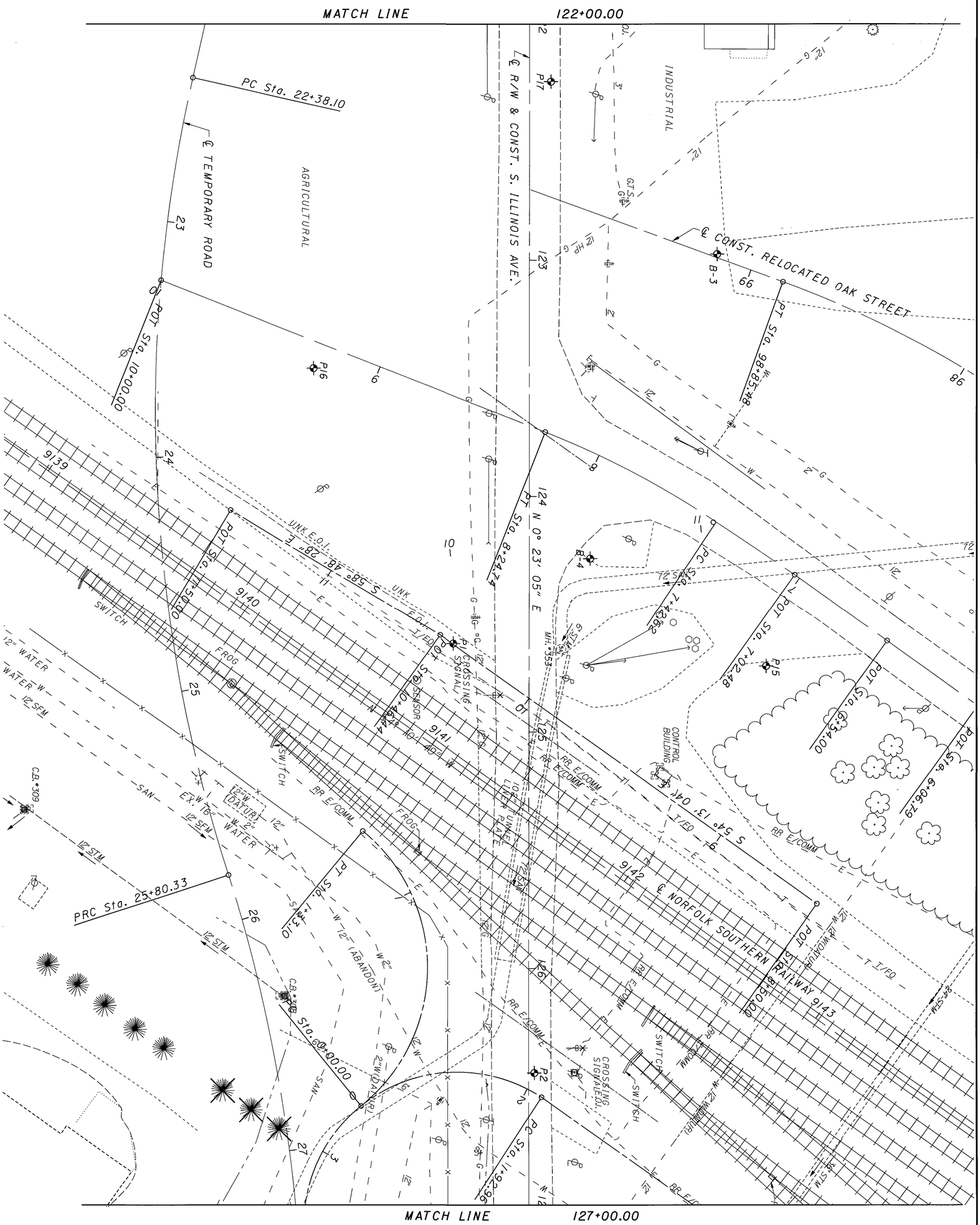
SOIL PROFILE PLAN AND PROFILE
STA. 117+00 TO STA. 122+00

RIC-CR424-0.62

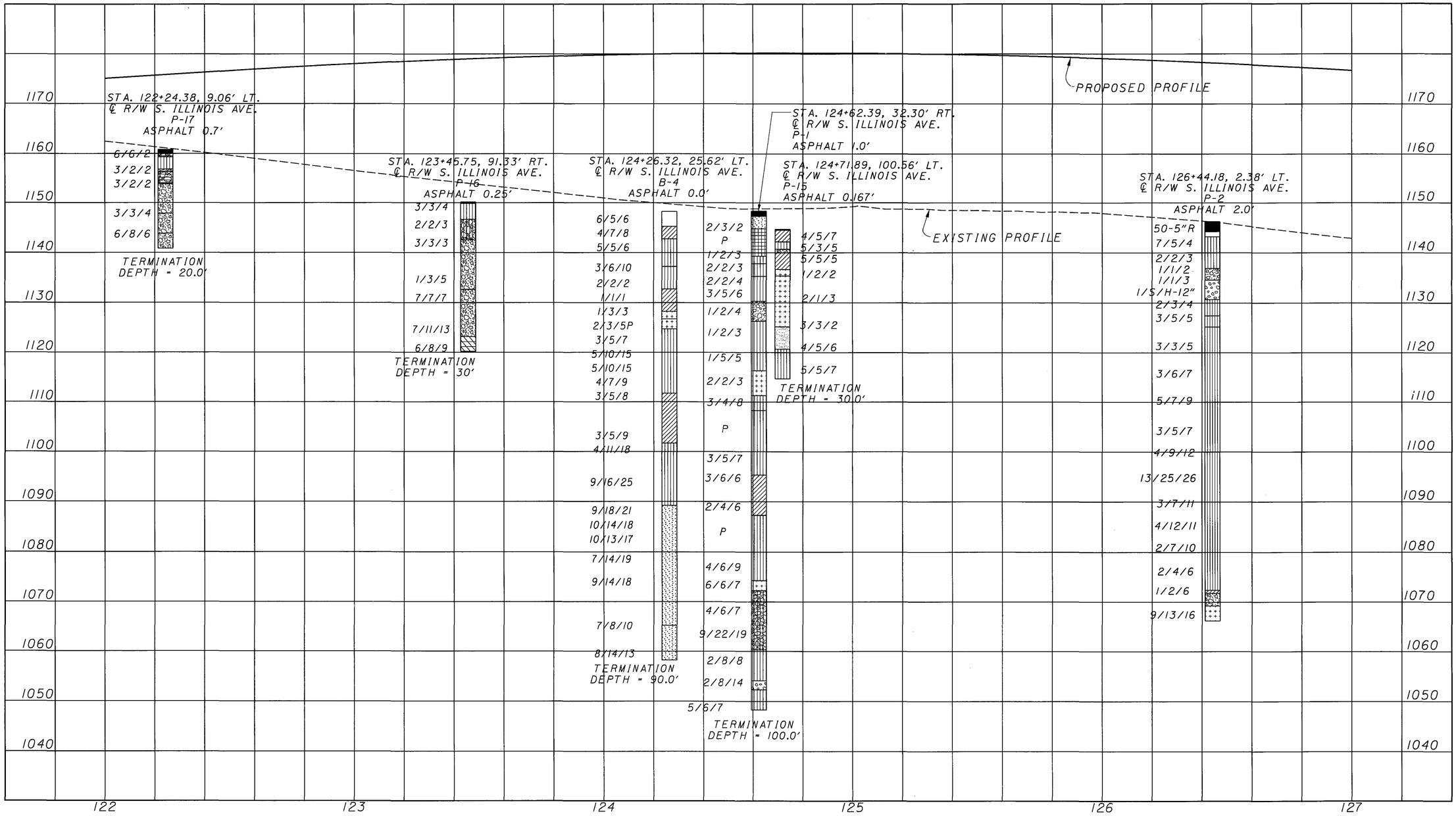
4 / 13

4 / 25

102088FB.DGN 8/18/03 CAR,RC



5/25	5/13	RIC-CR424-0.62	SOIL PROFILE PLAN STA. 122+00 TO STA. 127+00	CALCULATED CHECKED	0 20 10 40 HORIZONTAL SCALE IN FEET



HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED
CHECKED

SOIL PROFILE
STA. 122+00 TO STA. 127+00

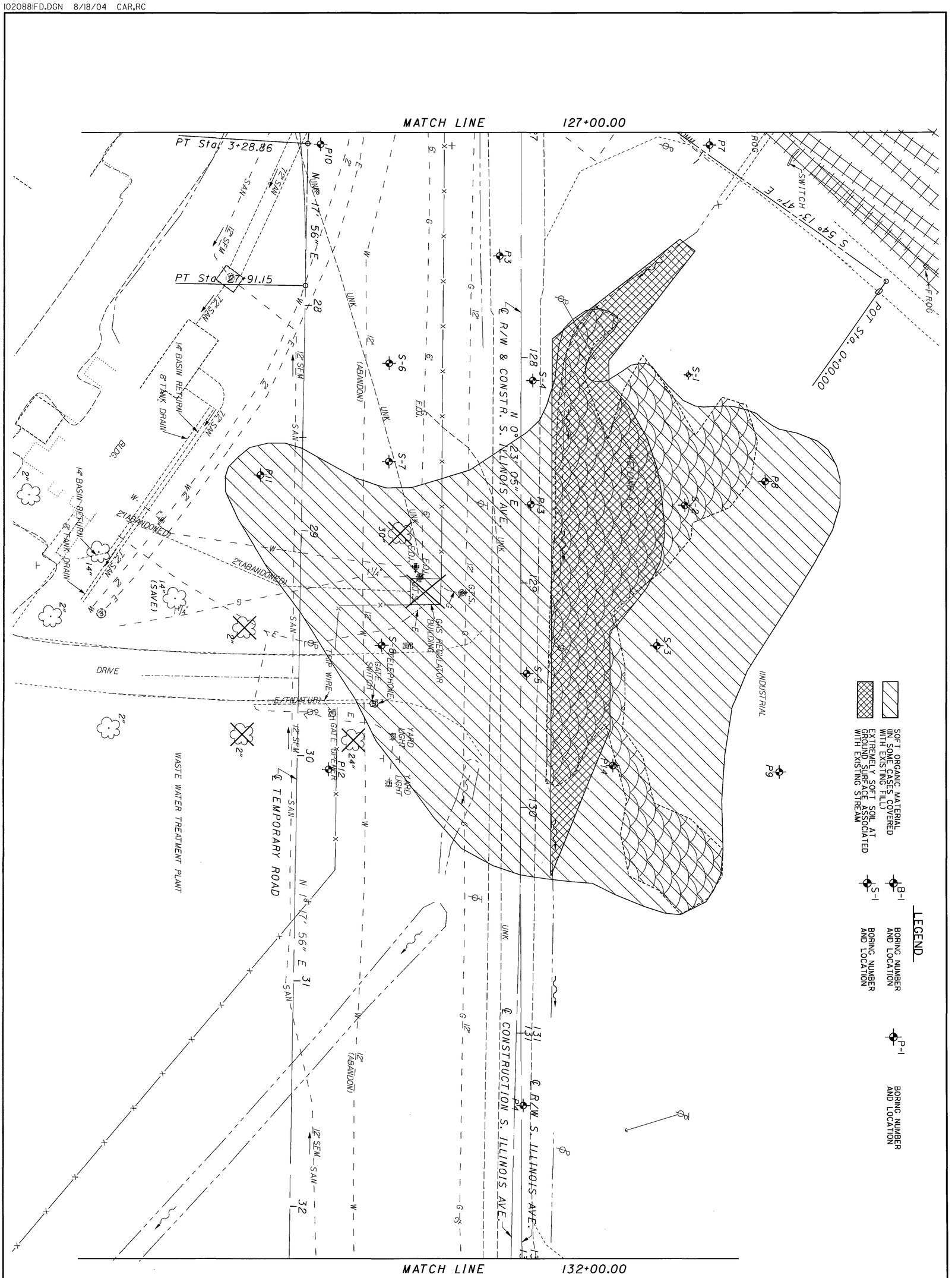
RIC-CR424-0.62

6/13

6/25

I02088IFE.DGN 8/18/03 CAR,RC

102088IFD.DGN 8/18/04 CAR,RC



LEGEND

SOFT ORGANIC MATERIAL (IN SOME CASES COVERED WITH EXISTING FILL)

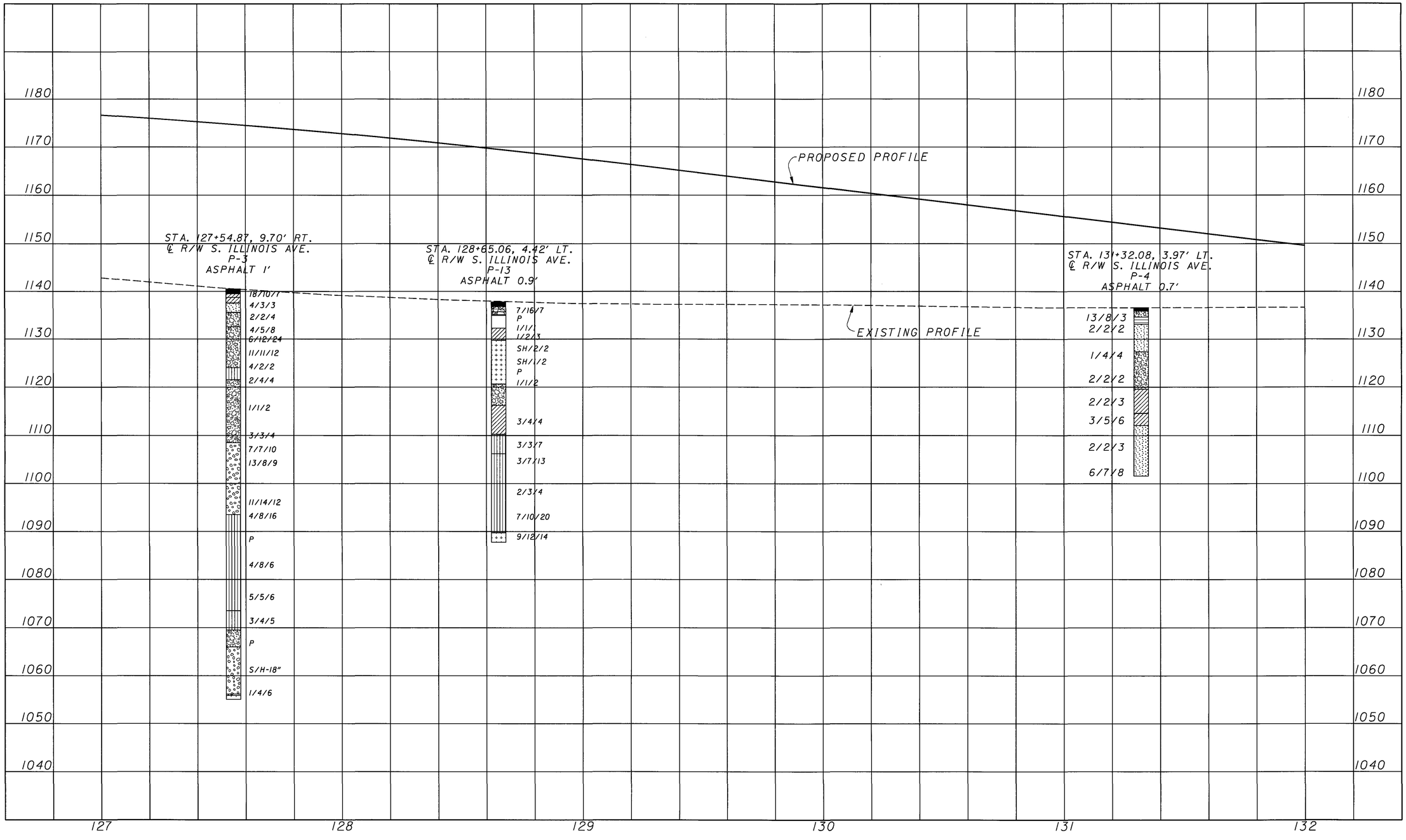
EXTREMELY SOFT SOIL AT GROUND SURFACE ASSOCIATED WITH EXISTING STREAM

S-1 BORING NUMBER AND LOCATION

B-1 BORING NUMBER AND LOCATION

P-1 BORING NUMBER AND LOCATION

7 / 25	7 / 13	RIC-CR424-0.62	SOIL PROFILE PLAN STA. 127+00 TO STA. 132+00	CALCULATED CHECKED	0 20 10 40 HORIZONTAL SCALE IN FEET



SOIL PROFILE
STA. 127+00 TO STA. 132+00

RIC-CR424-0.62

8 / 13

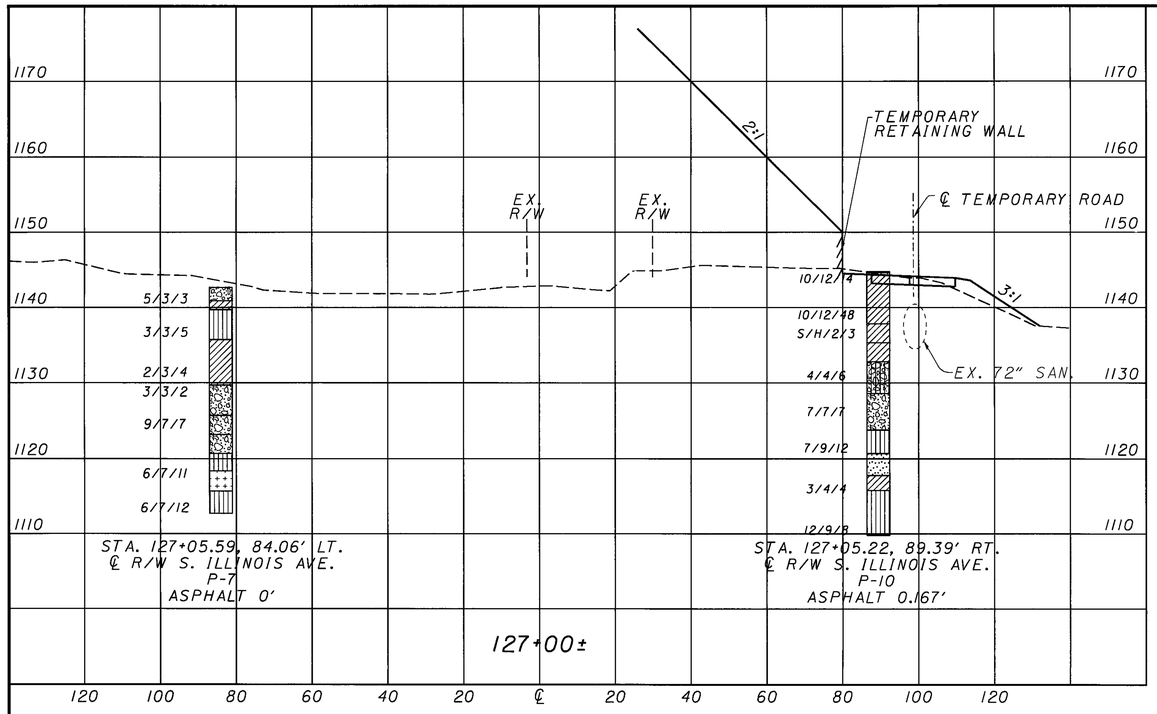
8
25

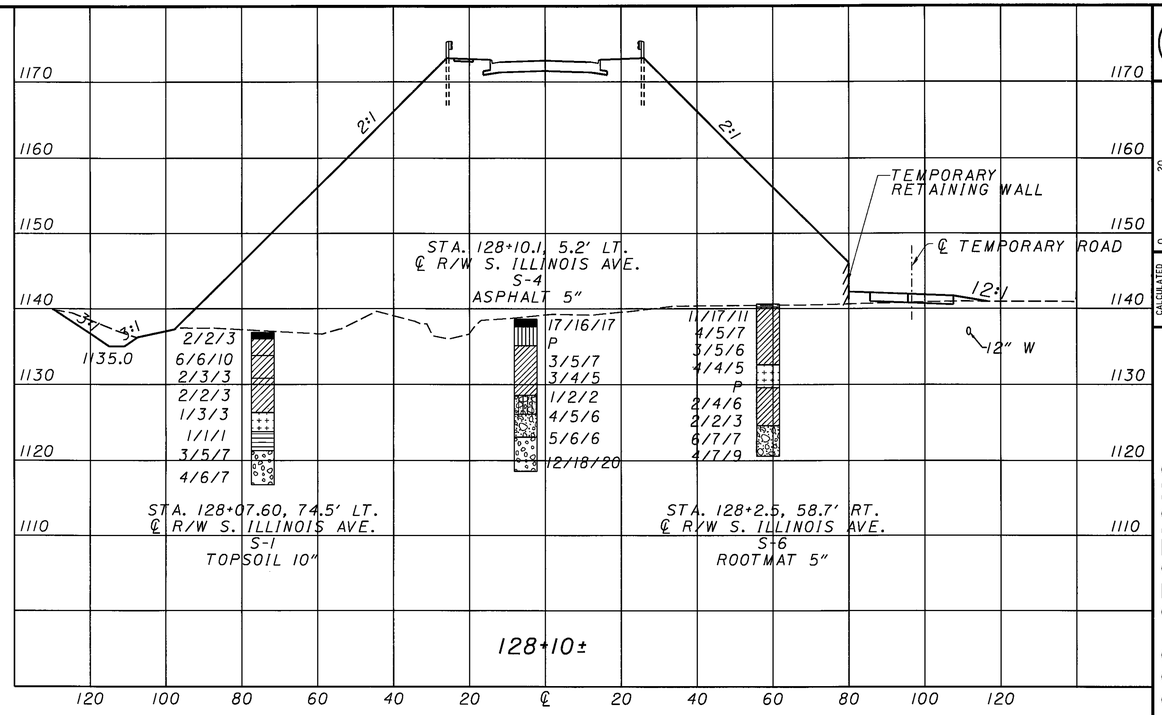
CALCULATED | CHECKED

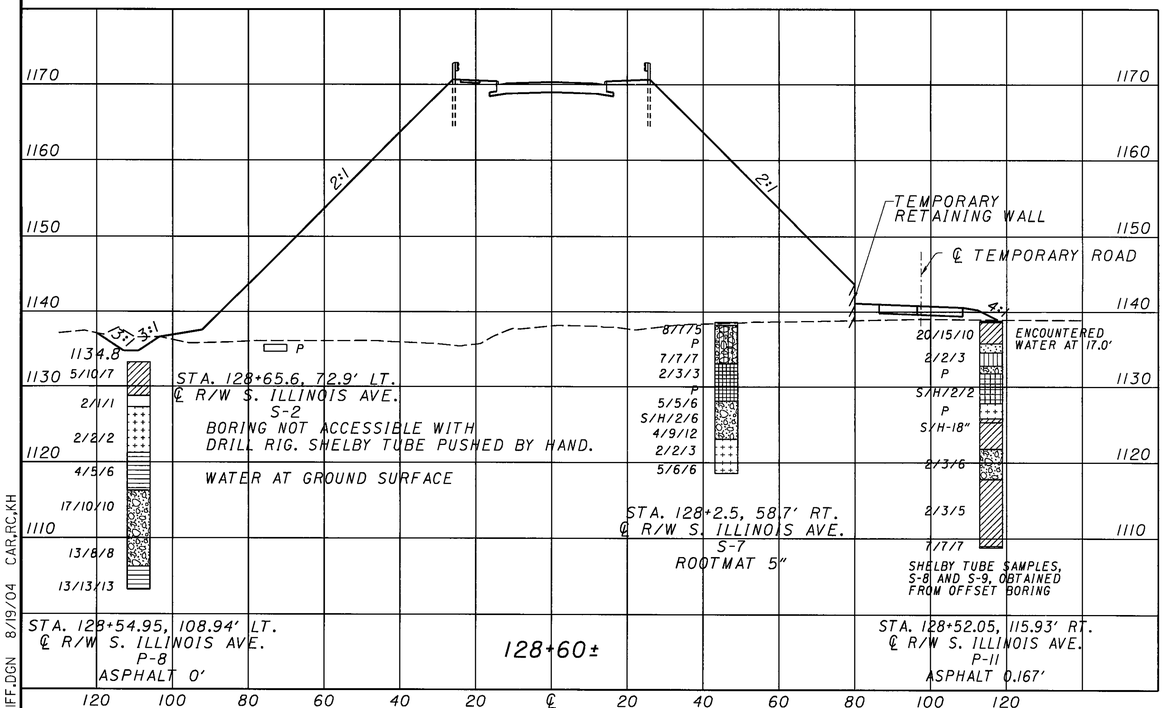
0 10 20 40
HORIZONTAL
SCALE IN FEET

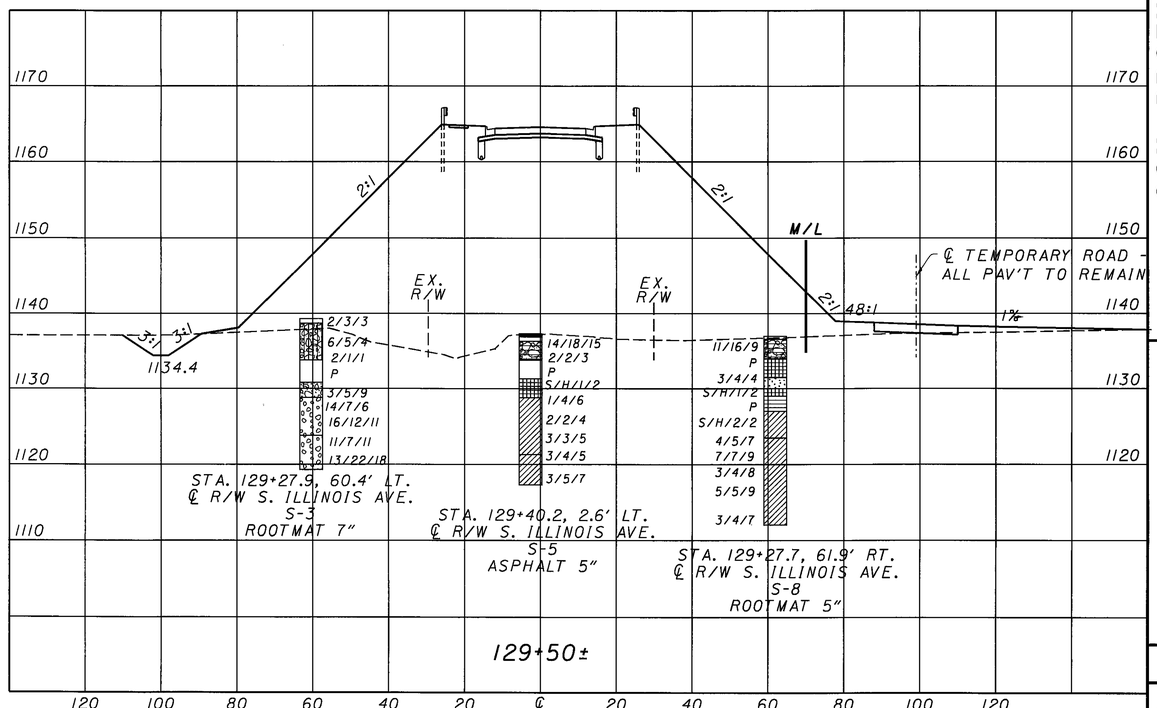
N

102088IFF.DGN 8/19/03 CAR,RC,KH









N

0 10 20 40 HORIZONTAL SCALE IN FEET

CALCULATED | CHECKED

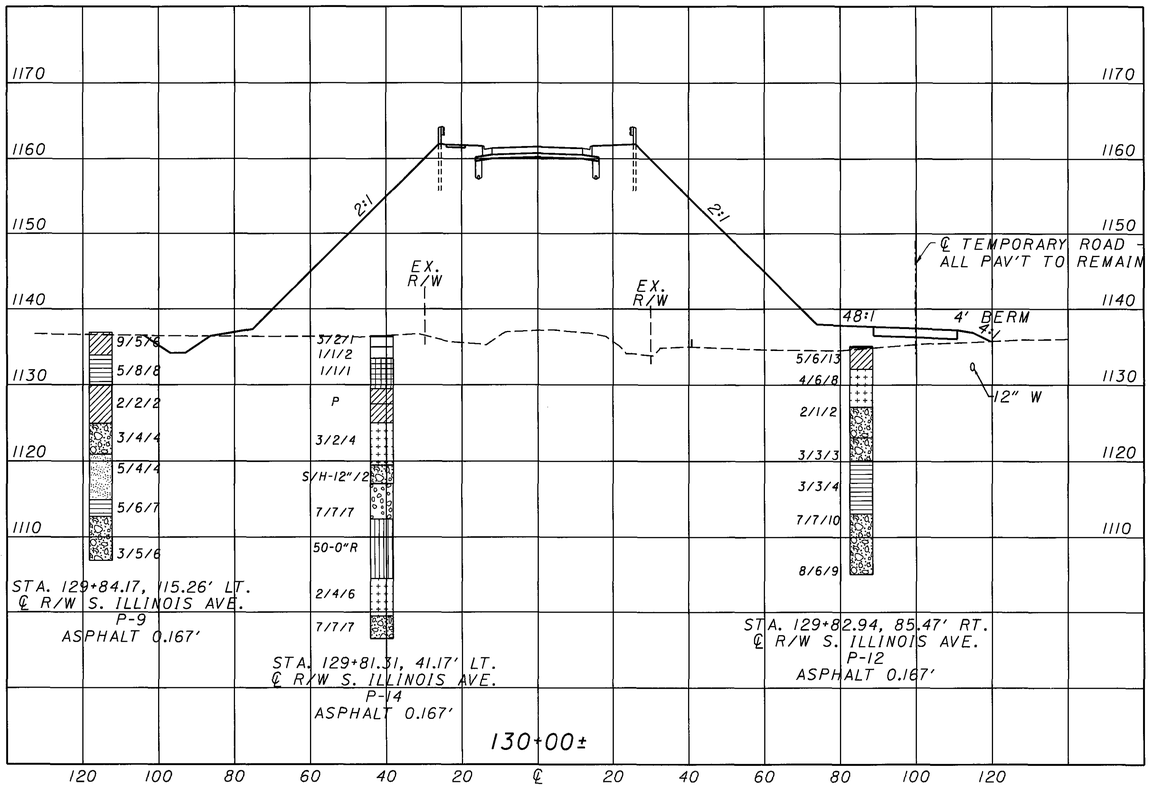
SOIL PROFILE - CROSS SECTIONS STA. 127+00 TO STA. 129+50

RIC-CR424-0.62

9 / 13

9 / 25

102088IFF.DGN 8/19/04 CAR,RC,KH



HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED | CHECKED

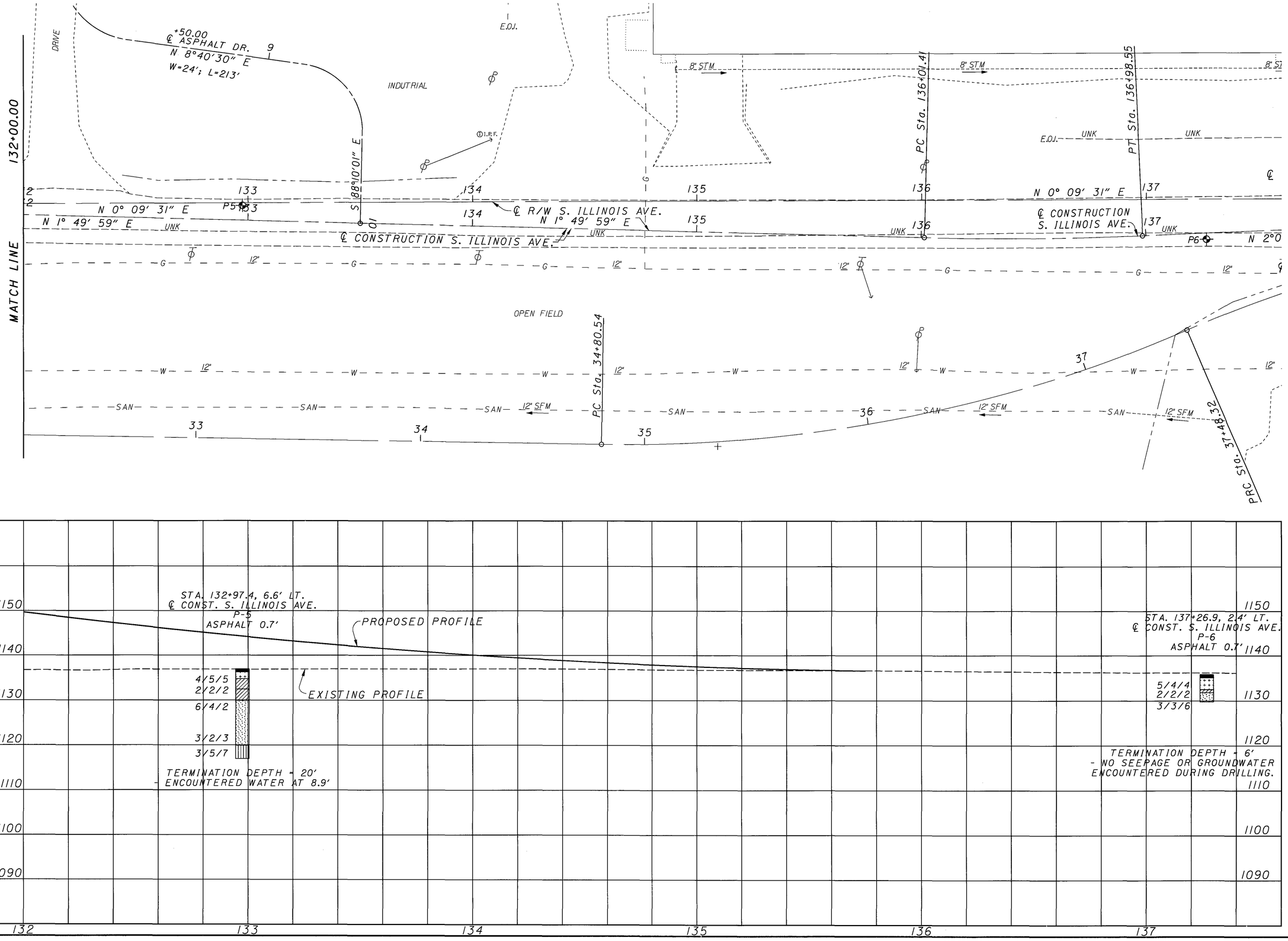
SOIL PROFILE - CROSS SECTION STA. 130+00

RIC-CR424-0.62

10 / 13

10 / 25

102088IFF.DGN 8/19/04 CAR,RC,KH



HORIZONTAL SCALE IN FEET
0 10 20 40
CALCULATED
CHECKED

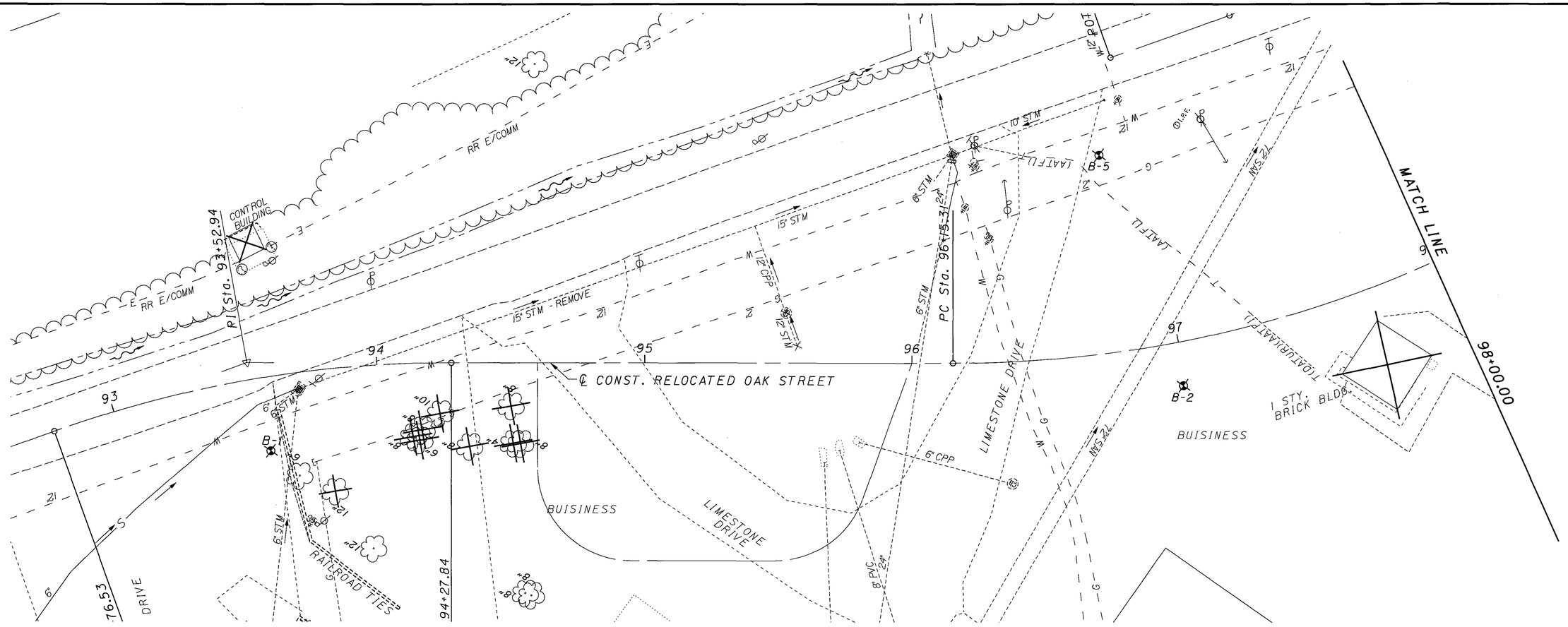
SOIL PROFILE PLAN AND PROFILE
STA. 132+00 TO STA. 137+00

RIC-CR424-0.62

11 / 13

11 / 25

I02088IFDA.DGN 8/19/04 CAR,RC



HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED
CHECKED

SOIL PROFILE PLAN AND PROFILE - OAK STREET
STA. 93+00 TO STA. 98+00

RIC-CR424-0.62

12 / 13

12 / 25

102088IFH.DGN 8/19/04 CAR,RC

MATCH LINE

98+00.00

PT Sta. 98+85.48

℄ CONST. RELOCATED OAK STREET

B-3

99

INDUSTRIAL

GRAVEL PARKING

STA. 122+70.00 S. ILLINOIS AVE.
STA. 100+00.00 OAK ST.

PC Sta. 22+38.10

℄ TEMPORARY ROAD

℄ R/W & CONST. S. ILLINOIS AVE.

POT S

PROPOSED PROFILE

STA. 99+15.73, 1.47' RT.
℄ CONST. OAK STREET
B-3
ASPHALT 0.0'

6/5/6
2/2/4
7/7/7
1/1/1
2/5/6P
5/8A/8B
2/5/7
4/5/9

EXISTING PROFILE

TERMINATION DEPTH = 30.0'

1190 1180 1170 1160 1150 1140 1130 1120 1110

98 99 100

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED
CHECKED

SOIL PROFILE PLAN AND PROFILE - OAK STREET
STA. 98+00 TO STA. 100+00

RIC-CR424-0.62

13/13

13/25

102088IFL.DGN 8/19/04 CAR,RC,KH

GENERAL INFORMATION

INTRODUCTION

THE PROJECT CONSISTS OF REPLACING THE EXISTING AT-GRADE RAILROAD CROSSING ON SOUTH ILLINOIS AVENUE WITH A NEW BRIDGE CARRYING THE ROADWAY OVER THE NORFOLK SOUTHERN TRACKS. TO THIS END, IT IS PROPOSED TO RAISE/RECONSTRUCT APPROXIMATELY 0.5 MILES OF S. ILLINOIS AVENUE, CONSTRUCT A NEW 3 SPAN BRIDGE.

GEOLOGY AND OBSERVATIONS OF THE PROJECT

THE PROJECT SITE IS LOCATED NEAR THE EDGE OF A PRE-GLACIAL VALLEY. DURING PAST GLACIATION EVENTS, THE VALLEY WAS FILLED WITH A COMBINATION OF OUTWASH DEPOSITS AND GLACIAL TILL. GLACIAL OUTWASH DEPOSITS TYPICALLY CONSIST OF STRATIFIED LAYERS OF SAND, GRAVEL AND LARGER SIZE PARTICLES, WHILE GLACIAL TILL TYPICALLY CONSISTS OF AN UNSTRATIFIED MIXTURE OF CLAY, SILT, SAND AND LARGER SIZE PARTICLES. GEOLOGIC REFERENCES AND ADJACENT WELL LOGS (ON FILE WITH THE ODNR) INDICATE THAT BEDROCK, CONSISTING OF SANDSTONE, SILTSTONE AND SHALE BELONGING TO THE LOGAN AND CUYAHOGA FORMATION OF MISSISSIPPIAN AGE, IS LOCATED BETWEEN EL. 950 AND EL. 1050, OR ROUGHLY 100 TO 200 FEET BELOW THE EXISTING GROUND SURFACE.

EXPLORATION

THE BORINGS WERE PERFORMED WITH AN ALL TERRAIN VEHICLE (ATV) MOUNTED DRILL RIG USING A 3-1/4-INCH I.D. HOLLOW-STEM AUGER TO ADVANCE THE BORINGS BETWEEN SAMPLES. AT REGULAR INTERVALS WITHIN THE SOIL, THE CENTER PLUG WAS WITHDRAWN FROM THE AUGER AND DISTURBED, BUT REPRESENTATIVE, SOIL SAMPLES WERE OBTAINED BY LOWERING A 2-INCH O.D. SPLIT-BARREL SAMPLER TO THE BOTTOM OF THE BORING AND THEN DRIVING THE SAMPLER INTO THE SOIL WITH BLOWS FROM A 140-POUND HAMMER FREELY FALLING 30 INCHES (STANDARD PENETRATION TEST). IF NO MATERIAL WAS RETAINED IN THE SAMPLER, A 2.5-INCH O.D. SPLIT- BARREL SAMPLER WAS USED TO DRIVE OVER AND 6 INCHES DEEPER THAN THE ADVANCEMENT OF THE 2-INCH O.D. SAMPLER IN AN EFFORT TO RETRIEVE THE SOIL SAMPLE. A TOTAL OF TEN "UNDISTURBED" SAMPLES WERE OBTAINED BY HYDRAULICALLY PUSHING 3-INCH O.D. THIN WALL SHELBY TUBES AT A CONSTANT RATE OF PENETRATION. SHELBY TUBE SAMPLES WERE PRESERVED IN THE TUBES BY FIRST CLEANING THE ENDS OF CUTTINGS AND THEN SEALING THEM WITH WAX. IMMEDIATELY AFTER DRILLING WAS COMPLETED AND GROUNDWATER MEASUREMENTS OBTAINED, THE BORINGS WERE BACKFILLED IN ACCORDANCE WITH ODOT REQUIREMENTS.

INVESTIGATIONAL FINDINGS

S. ILLINOIS AVENUE

TWENTY NINE BORINGS (DESIGNATED P-1 THROUGH P-20, S-1 THROUGH S-8 AND B-4) WERE PERFORMED ALONG THE S. ILLINOIS AVE AND ADJACENT WETLAND AREA. TWELVE OF THE TWENTY NINE BORINGS WERE ADVANCED THROUGH THE EXISTING S. ILLINOIS AVE. PAVEMENT AND ENCOUNTERED BETWEEN 6 AND 24 INCHES OF ASPHALTIC CONCRETE OVERLAYING BETWEEN 0 AND 12 INCHES OF GRANULAR BASE. BORING P-1 WAS ADVANCED THROUGH A DRIVE ADJACENT TO THE RAILROAD TRACK AND ENCOUNTERED 12 INCHES OF ASPHALTIC CONCRETE. MANY OF THESE BORINGS ENCOUNTERED 2 TO 3 FEET OF FILL BENEATH THE PAVEMENT WHICH CONSISTED OF VERY-STIFF TO HARD BROWN GRAY SILTY CLAY (A-6a), LOOSE TO MEDIUM-DENSE BROWN AND GRAY FINE TO COARSE SAND (A-1-b, A-2-6, A-3a, A-4a), OR VERY-LOOSE TO LOOSE BROWN FINE TO COARSE SAND AND CLAYEY SILT (A-4a, A-4b). IN A FEW BORINGS, THE PRESENCE OF SLAG WAS NOTED WITHIN THE FILL.

BORINGS P-7 THROUGH P-12, P-15, B-4, S-3, AND S-5 THROUGH S-8, WHICH WERE DRILLED OUTSIDE OF THE EXISTING PAVEMENT EACH ENCOUNTERED BETWEEN 3 AND 8 FEET OF FILL SOILS CONSISTING OF VERY-STIFF TO HARD BROWN AND GRAY SILTY CLAY (A-6a) MIXED WITH CLAYEY SILT (A-4a) AND LOOSE TO MEDIUM-DENSE FINE TO COARSE SAND (A-1-b, A-3a, A-4a). IN CONTRAST, BORINGS P-14 AND P-16 DID NOT ENCOUNTER ANY FILL. SEVEN OF THE NINE BORINGS NOT ADVANCED THROUGH PAVEMENT ENCOUNTERED 2 TO 3 INCHES OF TOPSOIL.

IN THE VICINITY OF THE DELINEATED WETLAND AREA BETWEEN STATION 127+50 AND 130+00, BORINGS P-8, P-11, P-13, S-2, S-3, S-5 AND TO A LESSER EXTENT P-14 AND S-8, ENCOUNTERED BETWEEN 1.5 AND 4.0 FEET OF VERY-SOFT TO SOFT ORGANIC OR PARTIALLY ORGANIC SILTY CLAY OR CLAYEY SILT BENEATH EXISTING FILL OR TOPSOIL. BORING P-11 ALSO ENCOUNTERED A 3.5-FOOT THICK LAYER OF VERY-SOFT SLIGHTLY ORGANIC DARK GRAY SILTY CLAY (A-6a) AT A DEPTH OF 13.5 BELOW THE EXISTING GROUND SURFACE. THE MEASURED LOI VALUES RANGED FROM JUST OVER 1% TO AS MUCH AS 18% FOR THIS LAYER.

BENEATH THE UPPER FILL MATERIAL, EXISTING TOPSOIL, OR WEAK ORGANIC SOILS, THE BORINGS ENCOUNTERED A HIGHLY HETEROGENEOUS STRATIGRAPHY CONSISTING OF ALTERNATING LAYERS OF MEDIUM-STIFF TO HARD SILTY CLAY (A-6a, A-6b, A-7-5, A-7-6) AND CLAYEY SILT (A-4a) INTERBEDDED WITH LAYERS OF LOOSE TO MEDIUM-DENSE FINE TO COARSE SAND (A-1-b, A-2-6, A-3, A-3a) AND SILT (A-4b). THE MAJORITY OF THE COHESIVE SOILS WERE OBSERVED TO CONTAIN NUMEROUS SEEMS SILT AND FINE SAND. A FEW, RELATIVELY ISOLATED ZONES OF VERY-SOFT TO MEDIUM-STIFF SILTY CLAY OR CLAYEY SILT WERE ENCOUNTERED AT DEPTH WITHIN A PORTION OF THE BORINGS. IN GENERAL, THESE ZONES CONTAINED SOME TO "AND" FINE TO COARSE SAND.

DURING DRILLING, GROUNDWATER WAS ENCOUNTERED AT DEPTHS BETWEEN 0.0 AND 18.0 FEET (ELEVATION BETWEEN EL. 1123.0 AND EL. 1135.6) BENEATH THE GROUND SURFACE IN ALL OF THE S. ILLINOIS AVE. BORINGS. AT THE COMPLETION OF DRILLING, GROUNDWATER WAS GENERALLY MEASURED AT SIMILAR DEPTHS. EXTENDED GROUNDWATER MEASUREMENTS WERE PERFORMED AT BORING S-3. DURING THE SUMMER OF 2004, GROUNDWATER WAS MEASURED AT DEPTHS BETWEEN 4.2 AND 6.0 FEET (EL. 1133.5 TO EL. 1135.1) BENEATH THE GROUND SURFACE AT THIS LOCATION.

OAK STREET

BORINGS B-1 THROUGH B-3 AND B-5 WERE LOCATED IN THE VICINITY OF THE PROPOSED OAK STREET REALIGNMENT, AND ENCOUNTERED BETWEEN 3.0 AND 5.5 FEET OF FILL SOIL BENEATH SIX INCHES OF TOPSOIL FILL. THE FILL CONSISTED OF VERY-STIFF TO HARD BROWN SILTY CLAY (A-6a) IN BORING B-2 AND B-3, AND MEDIUM-DENSE BROWN FINE TO COARSE SAND (A-1-b, A-2-6) IN BORINGS B-1 AND B-5. BORING B-1 WAS TERMINATED WITHIN THE FILL. BENEATH THE FILL, BORINGS B-3 AND B-5 ENCOUNTERED SLIGHTLY ORGANIC STIFF TO VERY-STIFF CLAYEY SILT (A-4b) OR SILTY CLAY (A-6a). BELOW THIS LEVEL, THE BORINGS ENCOUNTERED A HETEROGENEOUS STRATIGRAPHY GENERALLY CONSISTING OF ALTERNATING LAYERS OF VERY-LOOSE TO MEDIUM-DENSE FINE TO COARSE SAND CONSISTING VARYING AMOUNTS OF SILT AND CLAY (A-2-4, A-2-6, A-3a, A-4a) INTERBEDDED WITH LAYERS OF MEDIUM-STIFF TO VERY-STIFF SILTY CLAY (A-6a) AND CLAYEY SILT (A04a), MUCH OF WHICH CONTAINED THIN SEAMS OF SILT.

DURING DRILLING, SEEPAGE WAS ENCOUNTERED AT DEPTHS BETWEEN 8.5 AND 13.5 FEET BELOW THE GROUND SURFACE IN BORINGS B-2, B-3 AND B-5. AT THE COMPLETION OF DRILLING, WATER WAS MEASURED INSIDE THE HOLLOW-STEM AUGER AT A DEPTH OF 16.5 FEET IN BORING B-2, AND AT A DEPTH OF 17.0 FEET IN BORING B-5. BORING B-1 DID NOT ENCOUNTER ANY GROUNDWATER OR SEEPAGE.

LEGEND

DESCRIPTION	ODOT CLASS
GRAVEL	A-1-a ( )
GRAVEL WITH SAND	A-1-b (0)
FINE SAND	A-3 (0)
COARSE AND FINE SAND	A-3a (0)
GRAVEL WITH SAND AND SILT	A-2-4 (0)
GRAVEL WITH SAND, SILT AND CLAY	A-2-6 ( )
SANDY SILT	A-4a (8)
SILT	A-4b (8)
SILT AND CLAY	A-6a (10)
SILTY CLAY	A-6b (12)
ELASTIC CLAY	A-7-5 ( )
CLAY	A-7-6 (15)
RANDOM FILL	VISUAL CLASSIFICATION
WEATHERED SHALE	VISUAL CLASSIFICATION
MUDSTONE	VISUAL CLASSIFICATION
SHALE	VISUAL CLASSIFICATION
SANDSTONE	VISUAL CLASSIFICATION
LIMESTONE	VISUAL CLASSIFICATION
VARIOUS OTHER MATERIAL	VISUAL CLASSIFICATION

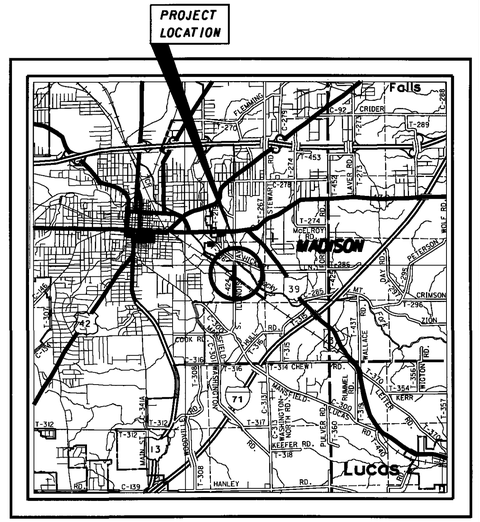
**SILT AND CLAY COMBINED

- SOD AND/OR TOP SOIL - X - APPROXIMATE DEPTH
- BERM MATERIAL
- AUGER BORING - PLAN VIEW
- DRIVE SAMPLE AND/OR CORE BORING - PLAN VIEW
- ROADWAY OR AUGER BORING PLOTTED TO VERTICAL SCALE ONLY
- DRIVE SAMPLE AND/OR CORE BORING PLOTTED TO VERTICAL SCALE ONLY
- WATER CONTENT NEARLY EQUAL TO OR GREATER THAN LIQUID LIMIT
- INDICATES A NON-PLASTIC MATERIAL WITH A HIGH WATER CONTENT
- W FREE WATER
- STATIC WATER LEVEL
- NUMBER OF BLOWS FOR STANDARD PENETRATION TEST (X or X/Y/Z)
  - X = NUMBER OF BLOWS FOR FIRST 0.5 FT.
  - Y = NUMBER OF BLOWS FOR SECOND 0.5 FT.
  - Z = NUMBER OF BLOWS FOR THIRD 0.5 FT.

NOTE: FIGURES BESIDE BORINGS INDICATE WATER CONTENT IN PERCENT. e.g. 15

NOTE

ALL AVAILABLE SOIL INFORMATION WHICH CAN BE CONVENIENTLY SHOWN ON THE SOIL PROFILE SHEETS HAS BEEN SO REPORTED. ADDITIONAL SUBSURFACE INVESTIGATIONS, SOIL TESTS, AND BORINGS HAVE BEEN MADE TO STUDY SOME SPECIAL ASPECT OF THE PROJECT. COPIES OF THIS DATA, MAY BE INSPECTED IN THE DISTRICT DEPUTY DIRECTOR'S OFFICE, THE OFFICE OF GEOTECHNICAL ENGINEERING AT 1600 WEST BROAD STREET, THE OFFICE OF ROADWAY ENGINEERING OR THE OFFICE OF STRUCTURAL ENGINEERING AT 1980 WEST BROAD STREET.



LOCATION MAP

BBC&M ENGINEERING INC.

DRAWN CAR | REVIEWED DAP | DATE 8/12/04 | REVISED | STRUCTURE FILE NUMBER 7034601

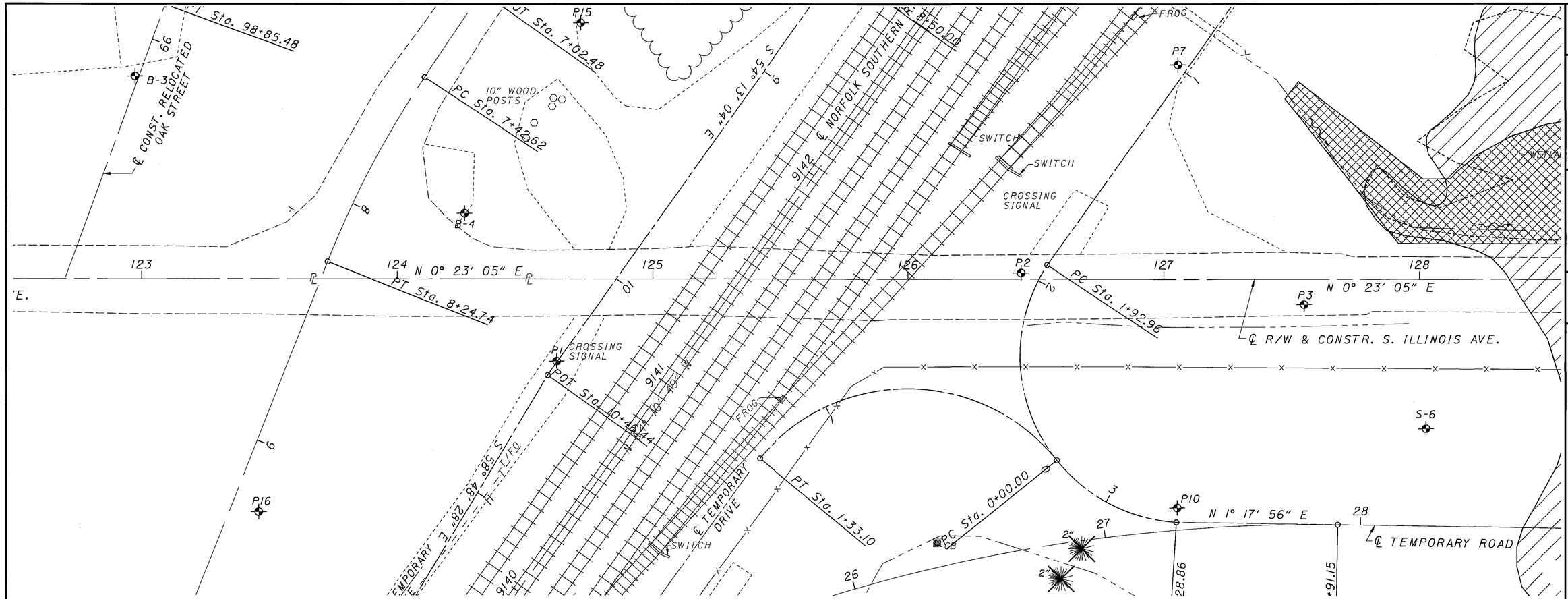
STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. RIC-CR424-0062
OVER NORFOLK SOUTHERN RAILWAY

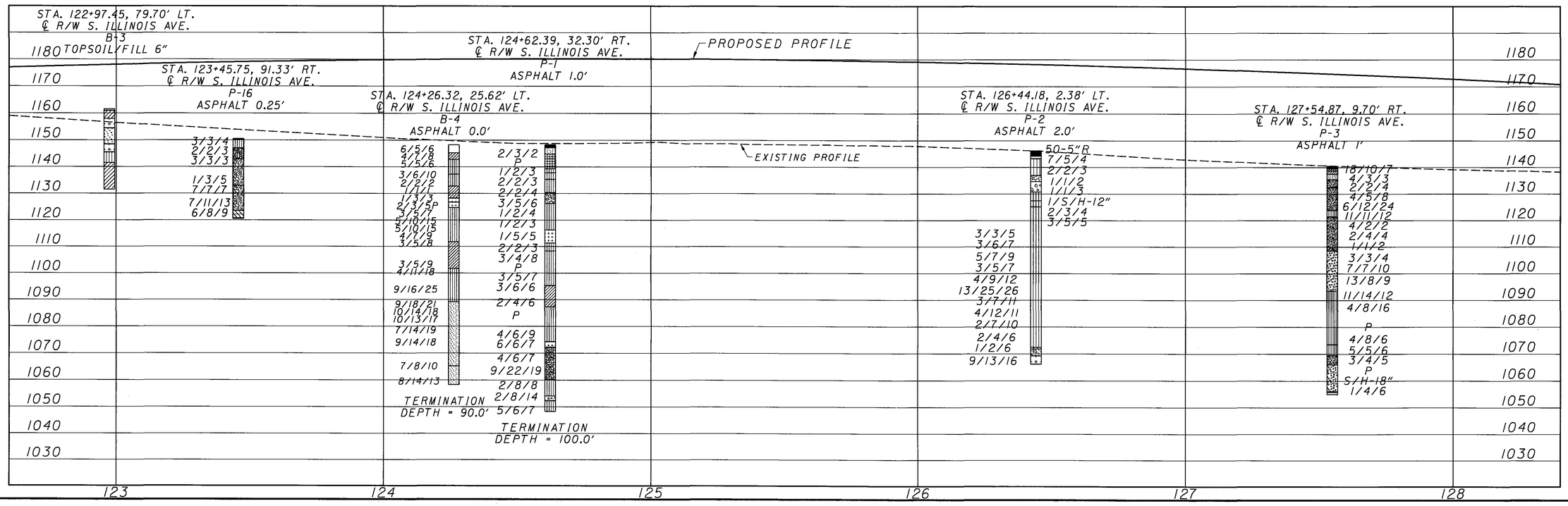
RIC-CR424-0.62

1 / 12

14 / 25

I02088IFANOTES.DGN 8/19/04 CAR,RC,KH





STRUCTURE FOUNDATION INVESTIGATION

BRIDGE NO. RIC-CR424-0062
OVER NORFOLK SOUTHERN RAILWAY

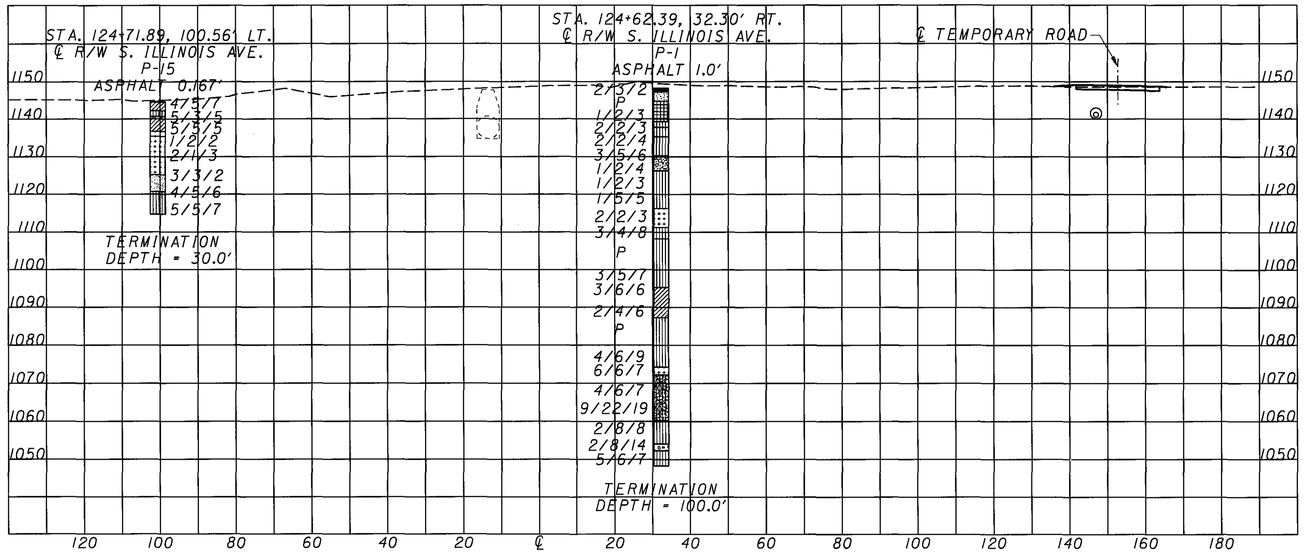
DRAWN CAR
REVIEWED DAP
DATE 8/12/04
STRUCTURE FILE NUMBER 7034601
REVISED

RIC-CR424-0.62

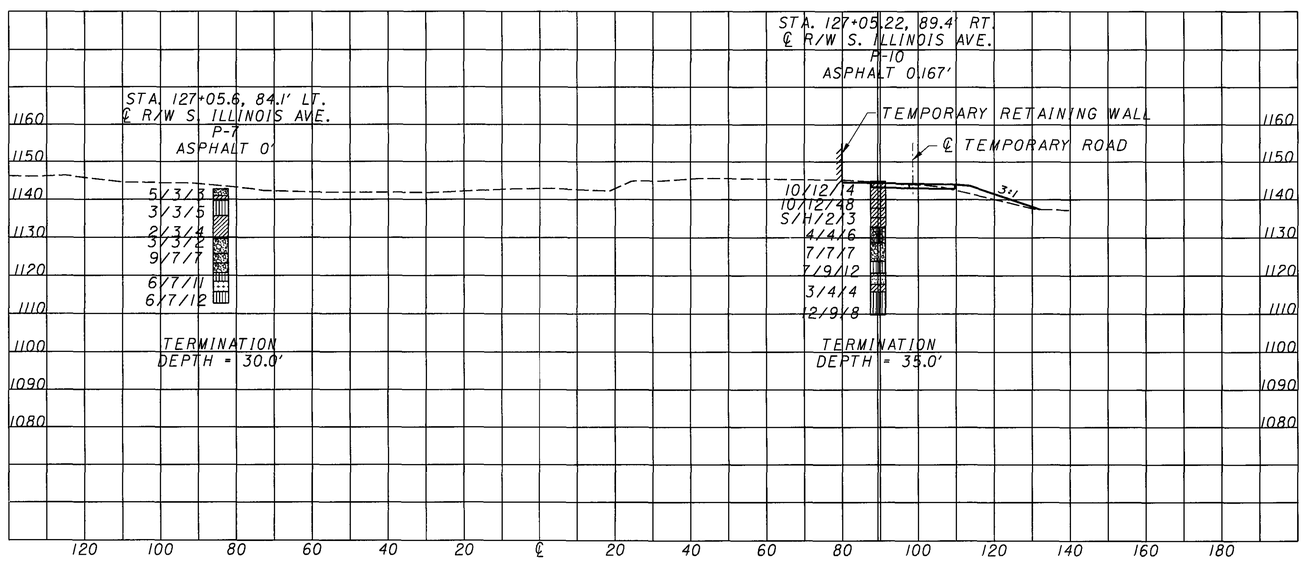
2 / 12

15 / 25

102088IFG.DGN 8/19/04 CAR,RC,KH



CROSS SECTION STA. 124+50



CROSS SECTION STA. 127+00

102088IFG.DGN 8/19/04 CAR,RC,KH

N

0 10 20 40 HORIZONTAL SCALE IN FEET

DRAWN	REVIEWED	DATE
CAR	DAP	8/12/04
REVISED		STRUCTURE FILE NUMBER 7034601

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. RIC-CR424-0062
OVER NORFOLK SOUTHERN RAILWAY

RIC-CR424-0.62

3 / 12

16 / 25

LOG OF BORING NO. P-1
S. ILLINOIS AVE. RAILROAD GRADE SEPARATION PROJECT
MANSFIELD, OHIO

TYPE: 4-1/2" O.D. Continuous-flight Auger; 3-1/4" I.D. Hollow-stem Auger; 2" O.D. Split-barrel Sampler; Shelby Tube Sampler
LOCATION: See Plan of Borings
COMPLETION DEPTH: 100.0' ELEVATION: 1148.3 DATE: 9/5/02

ELEVATION	DEPTH, FEET	SAMPLE NO.	SAMPLES	SAMPLING EFFORT	HAND PENE-TROMETER tsf	MOISTURE CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	AGG.	C.S.	F.S.	SILT	CLAY	DESCRIPTION
1147.3	0													1.0 ASPHALT - 12 INCHES
														FILL: Loose (est.) dark-gray fine to coarse sand, trace fine gravel, some silt.
1144.8		1		2/3/2	1.0-1.9									3.5 Est. A-3a
	5													Stiff brown mottled with dark-gray silty clay, some fine to coarse sand, trace fine gravel, becoming little fine to coarse sand.
		2	P		1.1-1.7	27	47	20	1	3	16	43	37	
1140														8.3 A-7-6 (16)
1139.3		3A		1/2/3	0.1-0.3									9.0 Very-soft to soft gray silty clay, trace fine to medium sand, contains silt seams.
		3B			1.1-1.9									10.5 Est. A-7-6
1137.8	10													Stiff brown mottled with gray clayey silt, some fine to coarse sand, trace fine gravel.
		4		2/2/3		13	19	14	17	15	26	29	13	Est. A-4a
1135.3														13.0 Loose brown fine to coarse sand, little fine gravel, "and" clayey silt.
		5		2/2/4	0.1-0.9									A-4a (1)
	15													Very-soft to medium-stiff brown clayey silt, some fine to coarse sand, little fine gravel, contains fine coarse sand seams.
		6		3/5/6	0.1-0.8									
1130.3														18.0 Est.A-4a
		7		1/2/4										Loose brown and gray fine to coarse sand, little fine to coarse gravel, little silt.
	20													
1126.3														22.0 Est. A-1-b
		8		1/2/3					1	1	32	49	17	Loose brown silt, some fine to medium sand, little clay, laminated.
	25													
		9		1/5/5										
	30													
1116.3														32.0 Est. A-4a
		10		2/2/3	0.7-1.5	17	22	17	0	1	20	55	24	Medium-stiff to stiff brown clayey silt interbedded with fine to coarse sand.
	35													A-4b (8)

WATER LEVEL: 26.5 | 12.4 | 11.0
WATER NOTE: Inside HSA | Caved at 77.2
DATE: 9/06/02 | 9/06/02 | 9/10/02

JOB: 011-06604-002

-CONTINUED-

PLATE 4

LOG OF BORING NO. P-1
S. ILLINOIS AVE. RAILROAD GRADE SEPARATION PROJECT
MANSFIELD, OHIO

TYPE: 4-1/2" O.D. Continuous-flight Auger; 3-1/4" I.D. Hollow-stem Auger; 2" O.D. Split-barrel Sampler; Shelby Tube Sampler
LOCATION: See Plan of Borings
COMPLETION DEPTH: 100.0' ELEVATION: 1148.3 DATE: 9/5/02

ELEVATION	DEPTH, FEET	SAMPLE NO.	SAMPLES	SAMPLING EFFORT	HAND PENE-TROMETER tsf	MOISTURE CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	AGG.	C.S.	F.S.	SILT	CLAY	DESCRIPTION - CONTINUED
	35													Medium-stiff to stiff brown clayey silt interbedded with fine to coarse sand.
1111.3														37.0 A-4b (8)
														Very-stiff dark-gray clayey silt, little fine to coarse sand, little fine to coarse gravel.
1108.3		11		3/4/8	3.2-3.3									40.0 A-4a (8)
	40													Very-stiff gray clayey silt, some fine to coarse sand, little fine to coarse gravel, contains many silt seams.
		12	P		2.25-2.6	14	27	17	2	6	12	46	34	
	45													
		13		3/5/7	2.1-3.6									
	50													
1095.3														53.0 A-4a (8)
		14		3/6/6	1.0-1.7	14	28	16						Stiff to very-stiff gray silty clay, little fine to coarse sand, trace fine gravel, contains many fine sand and silt seams.
	55													
	60	15		2/4/6	1.2-2.2									
1087.3														61.0 Est. A-6a
		16	P		3.5	15	27	17	4	8	12	46	30	Very-stiff to hard gray clayey silt, some fine to coarse sand, little fine to coarse gravel, contains fine to medium sand seams.
	65													
		17		4/6/9	3.0-4.0									A-4a (8)
	70													

WATER LEVEL: 26.5 | 12.4 | 11.0
WATER NOTE: Inside HSA | Caved at 77.2
DATE: 9/06/02 | 9/06/02 | 9/10/02

JOB: 011-06604-002

-CONTINUED-

PLATE 5

BBC&M ENGINEERING INC.
DRAWN CAR | REVIEWED DAP | DATE 8/12/04 | STRUCTURE FILE NUMBER 7034601 | REVISED

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. RIC-CR424-0062
OVER NORFOLK SOUTHERN RAILWAY

RIC-CR424-0.62

LOG OF BORING NO. P-1
S. ILLINOIS AVE. RAILROAD GRADE SEPARATION PROJECT
MANSFIELD, OHIO

TYPE: 4-1/2" O.D. Continuous-flight Auger; 3-1/4" I.D. Hollow-stem Auger; 2" O.D. Split-barrel Sampler; Shelby Tube Sampler
LOCATION: See Plan of Borings
COMPLETION DEPTH: 100.0' ELEVATION: 1148.3 DATE: 9/5/02

ELEVATION	DEPTH, FEET	SAMPLE NO.	SAMPLES	SAMPLING EFFORT	HAND PENE-TROMETER tsf	MOISTURE CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	AGG.	C.S.	F.S.	SILT	CLAY	DESCRIPTION - CONTINUED
	70													Very-stiff to hard gray clayey silt, some fine to coarse sand, little fine to coarse gravel, contains fine to medium sand seams.
1074.3		18A		6 /6/ 7	3.5-4.5									74.0 A-4a (8)
		18B				20								Medium-dense dark-gray silt, trace clay, some fine sand, interbedded with fine sand seams.
	75													
1072.3														76.0 Est. A-4b
														Medium-dense gray fine to coarse gravel, some fine to coarse sand, some clayey silt.
		19		4 /6/ 7										
	80													
		20		9 /22/ 19		8	20	15	43	11	16	21	9	
	85													
1060.3														88.0 A-2-4 (0)
		21		2 /8/ 8	4.1-4.5+									Hard gray clayey silt, some to "and" fine to coarse sand, little fine to coarse gravel.
	90													
1054.1		22A		6 /8/ 14	4.5+									94.2 Est. A-4a
		22B												Medium-dense gray fine to coarse gravel, "and" fine to coarse sand, little silt.
	95													
1052.3														96.0 Est. A-1-a
														Hard gray clayey silt, some fine to coarse sand, trace fine to coarse gravel, contains layers of fine and and silt.
		23		5 /6/ 7	4.5+	11								
1048.3	100													100.0 Est. A-4a
	105													

- Used 4-1/2" O.D. Continuous-flight Auger 0.0' to 18.5'.
- Used 3-1/4" I.D. Hollow-stem Auger 18.5' to 98.5'.
- Encountered water at 18.0'.

WATER LEVEL:	▽ 26.5	▽ 12.4	▽ 11.0	▽	▽	▽
WATER NOTE:	Inside HSA	Caved at 77.2				
DATE:	9/06/02	9/06/02	9/10/02			

ODOTLJ 16604002.GPJ BBCM.GDT 1/31/03
JOB: 011-06604-002
PLATE 6

LOG OF BORING NO. P-2
S. ILLINOIS AVE. RAILROAD GRADE SEPARATION PROJECT
MANSFIELD, OHIO

TYPE: 4-1/2" O.D. Continuous-flight Auger; 3-1/4" I.D. Hollow-stem Auger; 2" O.D. Split-barrel Sampler
LOCATION: See Plan of Borings
COMPLETION DEPTH: 80.0' ELEVATION: 1146.2 DATE: 9/4/02

ELEVATION	DEPTH, FEET	SAMPLE NO.	SAMPLES	SAMPLING EFFORT	HAND PENE-TROMETER tsf	MOISTURE CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	AGG.	C.S.	F.S.	SILT	CLAY	DESCRIPTION
	0													ASPHALT - 24 INCHES
1144.2		1		50-5"R										2.0
1143.2														3.0 GRANULAR BASE - 12 INCHES
		2		7 /5/ 4		12	22	14	4	17	31	30	18	Very-loose to loose brown fine to coarse sand, trace fine gravel, some to "and" clayey silt.
	5													
		3		2 /2/ 3										
1136.9		4A		1 /1/ 2										9.3 A-4a (3)
		4B												Very-loose brown fine to coarse sand, trace fine gravel, little silt.
	10													
1134.6		5A		1 /1/ 3										11.6 Est. A-1-b
		5B												Very-loose brown fine to coarse sand, some fine to coarse gravel, trace silt.
		6		1/ S/H-12"					61	23	13	3		
1130.7	15													15.5 A-1-a (0)
		7		2 /3/ 4	2.0-2.7									Very-stiff brown clayey silt, some fine to coarse sand, trace fine to coarse gravel.
1127.4		8A		3 /5/ 5	3.5-3.9									18.8 Est. A-4a
		8B												Loose gray fine sand, "and" silt.
1125.2	20													21.0 Est. A-4a
														Very-stiff to hard gray clayey silt, some fine to coarse sand, little fine to coarse gravel, few silt seams, few cobbles.
		9		3 /3/ 5	2.0-2.5	14	24	14	4	6	16	46	28	
	25													
		10		3 /6/ 7	3.5-4.5									
	30													
		11A		5 /7/ 9	2.2-3.5	8								- 33.5' to 33.7', fine to coarse sand "and" silt seam.
	35	11B												A-4a (8)

WATER LEVEL:	▽ 33.6	▽ 11.7	▽ 11.3	▽	▽	▽
WATER NOTE:	Inside HSA	Caved at 66.0'	Caved at 12.5'			
DATE:	9/04/02	9/04/02	9/06/02			

ODOTLJ 16604002.GPJ BBCM.GDT 1/31/03
JOB: 011-06604-002
-CONTINUED-
PLATE 7

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. RIC-CR424-0062
OVER NORFOLK SOUTHERN RAILWAY

DRAWN CAR | REVIEWED DAP | DATE 8/12/04 | REVISED | STRUCTURE FILE NUMBER 7034601

RIC-CR424-0.62

5/12

18/25

I02088IPB.DGN 8/19/04 CAR,HN,KH

LOG OF BORING NO. P-2
S. ILLINOIS AVE. RAILROAD GRADE SEPARATION PROJECT
MANSFIELD, OHIO

TYPE: 4-1/2" O.D. Continuous-flight Auger; 3-1/4" I.D. Hollow-stem Auger; 2" O.D. Split-barrel Sampler
LOCATION: See Plan of Borings
COMPLETION DEPTH: 80.0' ELEVATION: 1146.2 DATE: 9/4/02

ELEVATION	DEPTH, FEET	SAMPLE NO.	SAMPLES	SAMPLING EFFORT	HAND PENE-TROMETER tsf	MOISTURE CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	AGG.	C.S.	F.S.	SILT	CLAY	DESCRIPTION - CONTINUED
	35													Very-stiff to hard gray clayey silt, some fine to coarse sand, little fine to coarse gravel, few silt seams, few cobbles.
	40	12		3/5/7	2.5-3.9									
	45	13		4/9/12	4.1-4.5+	11	22	14						
	50	14		13/25/26	4.5+									
	55	15		3/7/11	2.5-4.0									
	60	16		4/12/11	3.0-4.0	11	20	13						
	65	17		2/7/10	2.75-4.0	12								
	70	18		2/4/6	2.5-3.0	15	22	16						A-4a (8)

WATER LEVEL: 33.6 | 11.7 | 11.3
WATER NOTE: Inside HSA | Caved at 66.0' | Caved at 12.5'
DATE: 9/04/02 | 9/04/02 | 9/06/02

ODOTLJ 16604002.GPJ BBCM.GDT 1/31/03

JOB: 011-06604-002

-CONTINUED-

PLATE 8

LOG OF BORING NO. P-2
S. ILLINOIS AVE. RAILROAD GRADE SEPARATION PROJECT
MANSFIELD, OHIO

TYPE: 4-1/2" O.D. Continuous-flight Auger; 3-1/4" I.D. Hollow-stem Auger; 2" O.D. Split-barrel Sampler
LOCATION: See Plan of Borings
COMPLETION DEPTH: 80.0' ELEVATION: 1146.2 DATE: 9/4/02

ELEVATION	DEPTH, FEET	SAMPLE NO.	SAMPLES	SAMPLING EFFORT	HAND PENE-TROMETER tsf	MOISTURE CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	AGG.	C.S.	F.S.	SILT	CLAY	DESCRIPTION - CONTINUED
	70													Very-stiff to hard gray clayey silt, some fine to coarse sand, little fine to coarse gravel, few silt seams, few cobbles.
1072.4		19A		1/2/6	2.75									73.8 A-4a (8)
1071.8	75	19B			0.5-0.9									74.4 Medium-stiff gray clayey silt interbedded with silty clay, little fine to medium sand. Est. A-6a
		19C												
1069.2														77.0 Medium-dense gray fine to coarse sand, "and" fine to coarse gravel, little silt. Est. A-1-b
		20		9/13/16					0	0	1	84	15	Medium-dense gray silt, trace fine to coarse sand, little clay.
1066.2	80													80.0 A-4b (8)
	85													
	90													
	95													
	100													
	105													

- Encountered 6" of blow-in just before attempting Sample 19.
- Encountered water at 8.0'.
- Used 4-1/2" O.D. Continuous-flight Auger 0.0' to 18.5'.
- Used 3-1/4" I.D. Hollow-stem Auger 18.5' to 78.5'.

WATER LEVEL: 33.6 | 11.7 | 11.3
WATER NOTE: Inside HSA | Caved at 66.0' | Caved at 12.5'
DATE: 9/04/02 | 9/04/02 | 9/06/02

ODOTLJ 16604002.GPJ BBCM.GDT 1/31/03

JOB: 011-06604-002

PLATE 9

BBC&M ENGINEERING, INC.
DRAWN CAR | REVISED | REVIEWED DAP 8/12/04 | DATE | STRUCTURE FILE NUMBER 7034601

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. RIC-CR424-0062
OVER NORFOLK SOUTHERN RAILWAY

RIC-CR424-0.62

6/12
19/25

I02088IPC.DGN 8/19/04 CAR,HN,KH

BBCM

LOG OF BORING NO. P-3
S. ILLINOIS AVE. RAILROAD GRADE SEPARATION PROJECT
MANSFIELD, OHIO

TYPE: 4-1/2" O.D. Continuous-flight Auger; 3-1/4" I.D. Hollow-stem Auger; 2" O.D. Split-barrel Sampler; Shelby Tube Sampler
LOCATION: See Plan of Borings
COMPLETION DEPTH: 85.0' ELEVATION: 1140.5 DATE: 9/9/02

ELEVATION	DEPTH, FEET	SAMPLE NO.	SAMPLES	SAMPLING EFFORT	HAND PENE-TROMETER tsf	MOISTURE CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	AGG.	C.S.	F.S.	SILT/CLAY	DESCRIPTION
	0												ASPHALT - 12 INCHES
1139.5													1.0
1138.7		1A		18/10/7									FILL: Very-stiff (est.) dark-gray silty clay, some fine to coarse sand, trace fine gravel.
		1B											1.8
1137.5													Est. A-6a
													3.0
													Medium-dense brown fine to medium sand interbedded with silty clay.
1135.5	5	2		4/3/3									Est. A-6a
													5.0
													Loose brown fine to medium sand, little silt, laminated.
		3		2/2/4					27	28	31	14	Est. A-3a
1132.5													Loose brown fine to coarse sand, "and" fine to coarse gravel, trace clayey silt.
													8.0
		4		4/5/8									A-1-b (0)
	10												Medium-dense to dense brown fine to coarse sand, some to "and" fine to coarse gravel, little silt.
		5		6/12/24									
		6		11/11/12									
	15												
1123.9		7A		4/2/2	0.5	11	18	13					16.6 Est. A-1-b
		7B											Medium-stiff dark-gray clayey silt, "and" fine to coarse sand, trace fine to coarse gravel.
1121.5		8A		2/4/4	0.3-0.5								19.0 Est. A-4a
		8B											Loose gray fine to coarse sand, some fine to coarse gravel, trace silt.
	20												
		9		1/1/2					39	30	27	4	
	25												
		10		3/3/4									
	30												
1108.5													32.0 A-1-b (0)
		11		7/7/10									Medium-dense gray fine to coarse sand, "and" fine to coarse gravel, little silt.
	35												A-1-a (0)

WATER LEVEL: ▽ 9.5 ▼ 5.9
WATER NOTE: Caved at 76.5' *
DATE: 9/09/02 9/10/02

JOB: 011-06604-002 -CONTINUED- PLATE 10

ODOTLJ 16604002.GPJ BBCM.GDT 1/31/03

BBCM

LOG OF BORING NO. P-3
S. ILLINOIS AVE. RAILROAD GRADE SEPARATION PROJECT
MANSFIELD, OHIO

TYPE: 4-1/2" O.D. Continuous-flight Auger; 3-1/4" I.D. Hollow-stem Auger; 2" O.D. Split-barrel Sampler; Shelby Tube Sampler
LOCATION: See Plan of Borings
COMPLETION DEPTH: 85.0' ELEVATION: 1140.5 DATE: 9/9/02

ELEVATION	DEPTH, FEET	SAMPLE NO.	SAMPLES	SAMPLING EFFORT	HAND PENE-TROMETER tsf	MOISTURE CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	AGG.	C.S.	F.S.	SILT/CLAY	DESCRIPTION - CONTINUED
	35												Medium-dense gray fine to coarse sand, "and" fine to coarse gravel, little silt.
		12		13/8/9					65	16	8	11	
	40												
		13		11/14/12									
	45												
1093.5													47.0 A-1-a (0)
		14		4/8/16	2.5-4.5	10							Very-stiff to hard gray clayey silt, some fine to coarse sand, trace fine to coarse gravel.
	50												
		P											- Drilling mud added to augers after Sample 13.
		15			3.1-4.2								
	55												
		16		4/8/9	2.1-3.5	9							
	60												
		17		5/5/6	2.1-3.5	11	20	14	14	12	24	33	17 - Becoming "and" fine to coarse sand.
	65												
1073.5													67.0 A-4a (3)
		18		3/4/5	0.3-0.7	13							Soft to medium-stiff gray clayey silt, some fine to coarse sand, trace fine gravel.
	70												Est. A-4a

WATER LEVEL: ▽ 9.5 ▼ 5.9
WATER NOTE: Caved at 76.5' *
DATE: 9/09/02 9/10/02

JOB: 011-06604-002 -CONTINUED- PLATE 11

ODOTLJ 16604002.GPJ BBCM.GDT 1/31/03

BBC&M ENGINEERING INC.

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. RIC-CR424-0062
OVER NORFOLK SOUTHERN RAILWAY

DRAWN CAR | REVIEWED DAP 8/12/04 | DATE | STRUCTURE FILE NUMBER 7034601 | REVISED

RIC-CR424-0.62

7/12

20/25

I02088IPD.DGN 8/19/04 CAR,HN,KH

LOG OF BORING NO. P-3
S. ILLINOIS AVE. RAILROAD GRADE SEPARATION PROJECT
MANSFIELD, OHIO

TYPE: 4-1/2" O.D. Continuous-flight Auger; 3-1/4" I.D. Hollow-stem Auger; 2" O.D. Split-barrel Sampler; Shelby Tube Sampler
LOCATION: See Plan of Borings
COMPLETION DEPTH: 85.0' ELEVATION: 1140.5 DATE: 9/9/02

ELEVATION	DEPTH, FEET	SAMPLE NO.	SAMPLES	SAMPLING EFFORT	HAND PENE-TROMETER tsf	MOISTURE CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	AGG.	C.S.	F.S.	SILT	CLAY	DESCRIPTION - CONTINUED
1069.5	70													71.0 Est. A-4a Loose (est.) gray silt, some fine sand, trace clay.
1066	75	19	P		0.3-0.7									74.5 Est. A-4b Soft to medium-stiff gray clayey silt, some to "and" fine to coarse sand, trace fine to coarse gravel.
	80	20	S/H-18"		0.0-0.1	13								
1056.1	85	21A	1	4/6	0.5-0.9									84.4 Est. A-4a
1055.8		21B												84.7 Loose gray fine to coarse gravel, some fine to coarse sand, "and" clayey silt.
1055		21C												85.5 Est. A-4a Medium-dense gray silt, trace fine sand. Est. A-4b
	90													
	95													
	100													
	105													

- Encountered water at 5.0'.
- Used 4-1/2" O.D. Continuous-flight Auger 0.0' to 18.5'.
- Used 3-1/4" I.D. Hollow-stem Auger 18.5' to 83.5'.

* Bottom of HSA at 40.0'.

WATER LEVEL:	9.5	5.9				
WATER NOTE:	Caved at 76.5' *					
DATE:	9/09/02	9/10/02				

ODOTLJ 16604002.GPJ BBCM.GDT 1/31/03

JOB: 011-06604-002 PLATE 12

LOG OF BORING NO. P-7
S. ILLINOIS AVE. RAILROAD GRADE SEPARATION PROJECT
MANSFIELD, OHIO

TYPE: 4-1/2" O.D. Continuous-flight Auger; 2" O.D. Split-barrel Sampler
LOCATION: See Plan of Borings
COMPLETION DEPTH: 30.0' ELEVATION: 1142.7 DATE: 9/11/02

ELEVATION	DEPTH, FEET	SAMPLE NO.	SAMPLES	SAMPLING EFFORT	HAND PENE-TROMETER tsf	MOISTURE CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	AGG.	C.S.	F.S.	SILT	CLAY	DESCRIPTION
	0													
1140.9		1A	5	3/3	2.5-3.0									FILL: Loose dark-brown fine to coarse sand, some fine to coarse gravel, little silt, contains slag.
1139.7		1B												1.8 Est. A-1-b Very-stiff brown mottled with gray silty clay, some fine to medium sand, contains many silt seams.
	5	2	3	3/5	2.0-3.0	23								3.0 Est. A-6a Very-stiff brown mottled with gray clayey silt interbedded with silty clay, little fine to coarse sand, trace fine gravel.
1135.7														7.0 Est. A-4a
	10	3	2	3/4	0.5-1.5	39	35	21	0	1	3	46	50	Medium-stiff to stiff brown mottled with gray silty clay, laminated, many thin seams of silt and fine sand.
1129.7														13.0 A-6a (10)
	15	4	3	3/2										Loose brown fine to coarse sand, trace fine to coarse gravel, trace silt.
1125.7														17.0 Est. A-1-b Medium-dense brown fine to coarse sand, "and" fine to coarse gravel, little silt.
1123.2	20	5A	9	7/7										19.5 Est. A-1-b Medium-dense gray fine to coarse sand, trace fine gravel, trace silt.
1120.7		5B												22.0 Est. A-1-b Very-stiff gray clayey silt, some fine to coarse sand, trace fine to coarse gravel, contains thin seams of fine to coarse sand.
1118.4	25	6A	6	7/11	2.0-3.0	12	21	14						24.3 A-4a Medium-dense gray silt, "and" fine sand.
1115.7		6B												27.0 Est. A-4b Very-stiff gray clayey silt, some fine to coarse sand, trace fine to coarse gravel.
1112.7	30	7	6	7/12	2.1-2.3	17								30.0 Est. A-4a
	35													- Encountered water at 13.0'.

WATER LEVEL:	7.7	7.7				
WATER NOTE:	Caved at 12.6'	Caved at 11.0'				
DATE:	9/11/02	9/11/02				

ODOTLJ 16604002.GPJ BBCM.GDT 1/31/03

JOB: 011-06604-002 PLATE 17

BBC&M ENGINEERING INC.
DRAWN CAR | REVIEWED DAP | DATE 8/12/04
REVISED | STRUCTURE FILE NUMBER 7034601
STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. RIC-CR424-0062
OVER NORFOLK SOUTHERN RAILWAY
RIC-CR424-0.62
8 / 12
21 / 25

I02088IPE.DGN 8/19/04 CAR,HN,KH

BBCM

LOG OF BORING NO. P-10
S. ILLINOIS AVE. RAILROAD GRADE SEPARATION PROJECT
MANSFIELD, OHIO

Page 1 of 1

TYPE: 4-1/2" O.D. Continuous-flight Auger; 2" O.D. Split-barrel Sampler
LOCATION: See Plan of Borings
COMPLETION DEPTH: 35.0' ELEVATION: 1144.8 DATE: 9/10/02

ELEVATION	DEPTH, FEET	SAMPLE NO.	SAMPLES	SAMPLING EFFORT	HAND PENE-TROMETER tsf	MOISTURE CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	AGG.	C.	S.	F.	S.	SILT	CLAY	DESCRIPTION
1144.6	0															0.2 TOPSOIL/FILL - 2 INCHES
		1		10/12/14	4.5+											FILL: Very-stiff to hard brown silty clay, some fine to coarse sand, some fine to coarse gravel, contains cobbles and boulders, concrete fragments.
	5	2		10/12/48	2.1-4.5+											
1137.8																7.0 Est. A-6a
																Medium-stiff gray silty clay, trace fine to coarse and, many thin seams of silt and fine sand, partly organic.
1135.3		3A		S/H	0.5-0.75	24	30	18	1	1	1	56	41			LOI = 4.5% 9.5 A-6a (9)
	10	3B		/2/3					43	8	11	38				Loose gray fine to coarse gravel, some fine to coarse sand, "and" silty clay.
1132.8																12.0 Est. A-6a
		4		4/4/6		10	19	14	38	11	16	16	19			Loose gray fine to coarse sand, some fine to coarse gravel, some clayey silt.
1128.6	15															16.2 A-2-4 (0)
		5		7/7/7												Medium-dense fine to coarse sand, "and" fine to coarse gravel, trace silt.
1123.8	20															21.0 Est. A-1-b
		6A		7/9/12	2.7-3.5											Very-stiff gray clayey silt, little fine to coarse sand, little fine to coarse gravel.
1120.7		6B														24.1 Est. A-4a
	25															Medium-dense gray fine sand, little silt.
1117.8																27.0 Est. A-3a
		7A		3/4/4	1.5-2.0	19	31	17								Stiff to very-stiff gray silty clay, trace fine to coarse sand, many silt seams.
1115.8		7B			1.0											29.0 Est. A-6a
	30															Stiff to very-stiff gray clayey silt, some fine to coarse sand, trace fine gravel, contains seam of fine to coarse sand, some fine gravel, some clayey silt at 33.9'.
1109.8	35	8		12/9/8	1.5-2.5	15										35.0 Est. A-4a
	40															

- Encountered concrete at 5.0', offset boring 9' W.
- Encountered water at 16.2'.

WATER LEVEL:	16.2	15.6				
WATER NOTE:	Caved at 18.5'	Caved at 16.2'				
DATE:	9/10/02	9/12/02				

JOB: 011-06604-002

PLATE 20

BBCM

LOG OF BORING NO. P-15
S. ILLINOIS AVE. RAILROAD GRADE SEPARATION PROJECT
MANSFIELD, OHIO

Page 1 of 1

TYPE: 4-1/2" O.D. Continuous-flight Auger; 2" O.D. Split-barrel Sampler
LOCATION: See Plan of Borings
COMPLETION DEPTH: 30.0' ELEVATION: 1144.7 DATE: 9/11/02

ELEVATION	DEPTH, FEET	SAMPLE NO.	SAMPLES	SAMPLING EFFORT	HAND PENE-TROMETER tsf	MOISTURE CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	AGG.	C.	S.	F.	S.	SILT	CLAY	DESCRIPTION
1144.5	0															0.2 TOPSOIL - 2 INCHES
		1		4/5/7	4.5+											FILL: Hard brown silty clay intermixed with clayey silt, little fine to coarse sand, little fine to coarse gravel, contains asphalt pieces.
1142.2																2.5 Est. A-6a
		2		5/3/5	1.0-2.5	16	26	18	1	6	34	38	21			Stiff to very-stiff brown mottled with gray clayey silt,
1140.7																4.0 "and" fine to coarse sand, trace fine gravel.
1140	5	3A		5/5/5												4.7 A-4a (5)
		3B			2.0				0	0	34	66				Loose brown fine to coarse sand, trace fine gravel, trace silt.
1136.7																Est. A-1-b
																8.0 Very-stiff brown silty clay, some fine sand, trace medium sand, slightly organic.
1135.4		4A		1/2/2												9.3 LOI = 1.3%
	10	4B														Est. A-6a
																Loose gray silt, trace clay, contains fine sand seams.
																Est. A-4b
		5		2/1/3												Very-loose gray silt, laminated, many thin seams of clayey silt and fine to medium sand.
	15															
1125.2		6A		3/3/2		25	NP	NP	0	0	8	80	12			19.5 Est. A-4b (8)
	20	6B														Loose gray fine sand, trace medium to coarse sand, trace fine gravel, trace silt.
1120.7		7A		4/5/6	1.2-1.7	13	21	14	7	7	19	45	22			24.0 Est. A-3
	25	7B														Stiff to very-stiff gray clayey silt, some fine to coarse sand, trace fine gravel.
		8		5/5/7	2.1-2.5	17										
1114.7	30															30.0 A-4a (6)
	35															

- Encountered water at 9.3'.

WATER LEVEL:	11.2	8.1				
WATER NOTE:	Caved at 17.5'	Caved at 8.3'				
DATE:	9/11/02	9/11/02				

JOB: 011-06604-002

PLATE 27

BBC&M ENGINEERING INC.

DRAWN CAR | REVIEWED DAP | DATE 8/12/04 | STRUCTURE FILE NUMBER 7034601 | REVISED

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. RIC-CR424-0062
OVER NORFOLK SOUTHERN RAILWAY

RIC-CR424-0.62

9/12

22/25

ODOTLJ 16604002.GPJ BBCM.GDT 1/31/03

I02088IPF.DGN 8/19/04 CAR,HN,KH

LOG OF BORING NO. P-16
S. ILLINOIS AVE. RAILROAD GRADE SEPARATION PROJECT
MANSFIELD, OHIO

Page 1 of 1

TYPE: 3-1/4" I.D. Hollow-stem Auger; 2" O.D. Split-barrel Sampler

LOCATION: See Plan of Borings

COMPLETION DEPTH: 30.0' ELEVATION: 1150.2 DATE: 11/6/02

ELEVATION	DEPTH, FEET	SAMPLE NO.	SAMPLES	SAMPLING EFFORT	HAND PENE-TROMETER tsf	MOISTURE CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	AGG.	C.S.	F.S.	SILT	CLAY	DESCRIPTION
1149.95	0													0.3 TOPSOIL - 3 INCHES
		1		3/3/4		13	28	20	30	20	10	26	14	Loose brown fine to coarse sand, little fine to coarse gravel, "and" clayey silt.
1146.7														3.5 A-4a (1)
	5	2		2/2/3	2.5-2.7	19	42	22	11	47	10	15	17	Loose dark-brown fine to coarse sand, trace fine to coarse gravel, some silty clay.
1142.6														7.6 A-2-7 (2)
		3		3/3/3										Loose brown fine to coarse sand, little fine gravel, little silt.
	10													
		4		1/3/5					35	39	12	14		
	15													
1132.7														17.5 A-1-b (0)
		5		7/7/7										Medium-dense brown fine to coarse sand, "and" fine to coarse gravel, little silt.
	20													
		6		7/11/13										
	25													
1123.2														27.0 Est. A-1-b
		7		6/8/9					1	46	44	9		Medium-dense gray-brown fine to medium sand, trace coarse sand, trace fine gravel, trace silt.
1120.2	30													30.0 A-3 (0)
	35													

- Encountered water at 11.7'.
- Encountered many cobbles from 23.8' to 28.5'.

WATER LEVEL: ▽ 11.7
WATER NOTE: Inside HSA
DATE: 11/06/02

ODOTLJ 16604002.GPJ BBCM.GDT 1/31/03

JOB: 011-06604-002

PLATE 28

LOG OF BORING NO. B-3
S. ILLINOIS AVE. RAILROAD GRADE SEPARATION PROJECT
MANSFIELD, OHIO

Page 1 of 1

TYPE: 3-1/4" I.D. Hollow-stem Auger; 2" O.D. Split-barrel Sampler; Shelby Tube

LOCATION: Sta. 99+15.7, 1.5' Rt. of Proposed Oak St. Centerline

COMPLETION DEPTH: 30.0' ELEVATION: 1161.5 DATE: 5/1/03

ELEVATION	DEPTH, FEET	SAMPLE NO.	SAMPLES	SAMPLING EFFORT	HAND PENE-TROMETER tsf	MOISTURE CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	AGG.	C.S.	F.S.	SILT	CLAY	DESCRIPTION
1161.0	0													0.5 TOPSOIL/FILL - 6 INCHES
		1		6/5/6	4.0									FILL: Hard brown silty clay, some fine to coarse sand, little fine gravel.
1158.0														3.5 Est. A-6a
	5	2		2/2/4	1.0-2.0	26	36	26	1	7	19	52	21	Stiff to very-stiff brown and dark-brown clayey silt, some fine to coarse sand, trace fine gravel, partly organic.
1154.5														7.0 A-4b (8)
		3		7/7/7										Medium-dense brown and gray fine sand, little silt, trace clay.
1148.5	10													13.0 Est. A-3a
		4		1/1/1			24	18	0	0	3	71	26	Very-loose brown and gray silt, interbedded with clayey silt, trace fine sand.
1145.5	15													16.0 A-4b (8)
		5		2/5/6	1.5-2.0	16	24	15						Stiff to very-stiff gray clayey silt, little fine to coarse sand, trace fine gravel, contains silt seams.
1141.5	20	8A		P	1.25-2.25	13	22	15	2	3	9	46	40	
		8B		6		17								20.0 A-4a
		6		2/5/7	1.0-2.0									Stiff to very-stiff gray silty clay, little to some fine to coarse sand, trace fine to coarse gravel, contains many silt lenses.
	25													
1131.5		7		4/5/9	1.0-2.0	17								30.0 A-6a (9)
	30													
	35													
	40													

- Shelby pushed at 20.0' in offset boring.
- Encountered seepage from 13.0' to 16.0'.

WATER LEVEL: ▽ "Dry"
WATER NOTE: Inside HSA
DATE: 5/01/03

ODOTLJ 16604002.GPJ BBCM.GDT 5/30/03

JOB: 011-06604-002

PLATE 4

BBC&M ENGINEERING INC.

DRAWN CAR | REVIEWED DAP | DATE 8/12/04 | REVISED | STRUCTURE FILE NUMBER 7034601

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. RIC-CR424-0062
OVER NORFOLK SOUTHERN RAILWAY

RIC-CR424-0.62

10/12

23/25

I020088IPG.DGN 8/19/04 CAR,HN,KH

BBCM

LOG OF BORING NO. B-4
S. ILLINOIS AVE. RAILROAD GRADE SEPARATION PROJECT
MANSFIELD, OHIO

TYPE: 3-1/4" I.D. Hollow-stem Auger; 3-1/8" Tricone; 2" O.D. Split-barrel Sampler; Shelby Tube

LOCATION: Sta. 124+26.3, 25.6' Lt. of Prop. S. Illinois Ave. Centerline

COMPLETION DEPTH: 90.0' ELEVATION: 1148.2 DATE: 4/30/03

ELEVATION	DEPTH, FEET	SAMPLE NO.	SAMPLES	SAMPLING EFFORT	HAND PENE-TROMETER tsf	MOISTURE CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	AGG.	C.S.	F.S.	SILT	CLAY	DESCRIPTION
	0													FILL: Stiff (est.) brown and dark-brown organic silty clay, trace fine to medium sand, contains many roots.
1145.2		1		6/5/6										3.0 Visual
		2		4/7/8	2.0									FILL: Very-stiff brown silty clay, some fine to coarse sand, little fine gravel.
1142.7	5													5.5 Est. A-6a
		3		5/5/6		18	NP	NP	1	2	34	49	14	Loose brown silt, "and" fine to coarse sand, trace fine gravel, interbedded with very thin seams of silty clay.
		4		3/6/10										
1137.2	10													11.0 A-4a (6)
		5		2/2/2										Very-loose brown fine to medium sand, trace coarse sand, trace fine gravel, some silt, trace clay.
		6		1/1/1		20	NP	NP	5	10	48	31	6	
1132.7	15													15.5 A-4a (0)
		7		1/3/3	1.0-2.0									Stiff to very-stiff gray-brown silty clay, interbedded with silt, little fine sand.
		8		2/3/5 P	1.0-2.0	20 22	30 29	17 19	0	0	3	57	40	
1128.2	20													20.0 A-6a
1126.7		9												Loose (est.) gray-brown silt interbedded with silty clay, trace fine to coarse sand. A-4b (8)
1124.7														21.5 Loose (est.) gray-brown silt, some fine sand, trace clay.
	25													23.5 Est. A-4b
		10		3/5/7	1.5-2.75									Stiff to very-stiff gray clayey silt, little to some fine to coarse sand, trace to little fine to coarse gravel.
		11		5/10/15	2.0-3.25									
	30													
		12		4/7/9	1.5-3.5	16	25	17						
1111.7	35													36.5 A-4a
		13		3/5/8	2.0									Very-stiff gray silty clay, little fine to coarse sand, trace fine to coarse gravel.
	40													A-6a

WATER LEVEL: ▽ 8.0 ▼ ▽ ▼ ▽ ▼ ▽ ▼
WATER NOTE: Inside HSA ** ▽ ▼ ▽ ▼ ▽ ▼ ▽ ▼
DATE: 4/30/03 ▽ ▼ ▽ ▼ ▽ ▼ ▽ ▼

JOB: 011-06604-002

-CONTINUED-

PLATE 5

ODOTLJ 16604002.GPJ BBCM.GDT 5/30/03

BBCM

LOG OF BORING NO. B-4
S. ILLINOIS AVE. RAILROAD GRADE SEPARATION PROJECT
MANSFIELD, OHIO

TYPE: 3-1/4" I.D. Hollow-stem Auger; 3-1/8" Tricone; 2" O.D. Split-barrel Sampler; Shelby Tube

LOCATION: Sta. 124+26.3, 25.6' Lt. of Prop. S. Illinois Ave. Centerline

COMPLETION DEPTH: 90.0' ELEVATION: 1148.2 DATE: 4/30/03

ELEVATION	DEPTH, FEET	SAMPLE NO.	SAMPLES	SAMPLING EFFORT	HAND PENE-TROMETER tsf	MOISTURE CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	AGG.	C.S.	F.S.	SILT	CLAY	DESCRIPTION - CONTINUED
	40													Very-stiff gray silty clay, little fine to coarse sand, trace fine to coarse gravel.
		14		3/5/9	2.0-3.0	17	27	16						
1101.7	45													46.5 A-6a
		15		4/11/18	3.0-4.0									Very-stiff to hard gray clayey silt, some to "and" fine to coarse sand, trace fine gravel.
	50													
		16		9/16/25	4.0+	10	20	15	9	17	23	35	16	
	55													
1089.2		17A 17B		9/18/21	4.5+									59.0 A-4a (3)
	60													Medium-dense to dense gray fine sand, trace medium to coarse sand, some silt.
		18		10/14/18						0	4	75	21	
	65													
		19		10/13/17										
	70													
		20		7/14/19										
	75													
		21		9/14/18										Est. A-3a
	80													

WATER LEVEL: ▽ 8.0 ▼ ▽ ▼ ▽ ▼ ▽ ▼
WATER NOTE: Inside HSA ** ▽ ▼ ▽ ▼ ▽ ▼ ▽ ▼
DATE: 4/30/03 ▽ ▼ ▽ ▼ ▽ ▼ ▽ ▼

JOB: 011-06604-002

-CONTINUED-

PLATE 6

ODOTLJ 16604002.GPJ BBCM.GDT 5/30/03

BBC&M ENGINEERING INC.

DRAWN CAR | REVIEWED DAP | DATE 8/12/04

REVISED | STRUCTURE FILE NUMBER 7034601

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. RIC-CR424-0062
OVER NORFOLK SOUTHERN RAILWAY

RIC-CR424-0.62

I02088IPH.DGN 8/19/04 CAR,JHN,KH

BBCM

LOG OF BORING NO. B-4
S. ILLINOIS AVE. RAILROAD GRADE SEPARATION PROJECT
MANSFIELD, OHIO

TYPE: 3-1/4" I.D. Hollow-stem Auger; 3-1/8" Tricone; 2" O.D. Split-barrel Sampler; Shelby Tube

LOCATION: Sta. 124+26.3, 25.6' Lt. of Prop. S. Illinois Ave. Centerline

COMPLETION DEPTH: 90.0' ELEVATION: 1148.2 DATE: 4/30/03

ELEVATION	DEPTH, FEET	SAMPLE NO.	SAMPLES	SAMPLING EFFORT	HAND PENE-TROMETER tsf	MOISTURE CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	AGG.	C.S.	F.S.	SILT/CLAY	DESCRIPTION - CONTINUED
	80												Medium-dense to dense gray fine sand, trace medium to coarse sand, some silt.
1065.2													83.0 Est. A-3a
	85	22	■	7/8/10					26	17	41	16	Medium-dense gray fine to coarse sand, little fine gravel, little silt.
1058.2	90	23	■	8/14/13									90.0 A-3a (0)
	95												- Encountered cobble at 9.2'. - Encountered water at 11.0'. - Water added to augers prior to switch to mud rotary drilling. - Used 3-1/4" I.D. HSA from 0.0' to 30.0'. - Used 3-1/8" roller cone bit with drilling mud from 30.0' to 88.5'.
	100												
	105												
	110												
	115												
	120												** Prior to mud rotary drilling.

WATER LEVEL: ▽ 8.0
WATER NOTE: Inside HSA **
DATE: 4/30/03

JOB: 011-06604-002

PLATE 7

ODOTLJ 16604002.GPJ BBCM.GDT 5/30/03

I02088IP1.DGN 8/19/04 CAR,HN,KH

BBC&M ENGINEERING INC.

DRAWN CAR | REVIEWED DAP | DATE 8/12/04 | REVISED | STRUCTURE FILE NUMBER 7034601

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. RIC-CR424-0062
OVER NORFOLK SOUTHERN RAILWAY

RIC-CR424-0.62

12 / 12

25 / 25