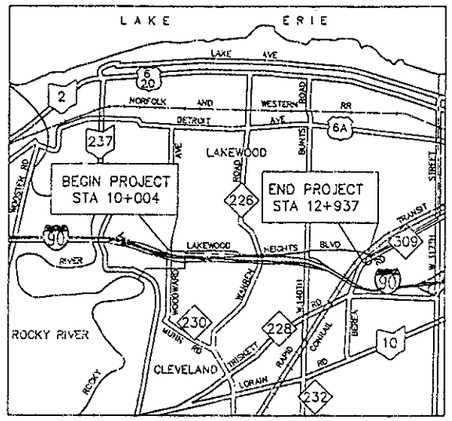
COUNTY OF CUYAHOGA

CUY - LAKEWOOD HEIGHTS BLVD.
COUNTY ROAD No. 297 SLM 0150

RECONSTRUCTION OF EXISTING SEPARATED GRADE CROSSING WITH CONSOLIDATED RAIL CORPORATION AND GREATER CLEVELAND REGIONAL TRANSIT AUTHORITY RAILROADS

CITY OF CLEVELAND
CITY OF LAKEWOOD

metric units



LOCATION MAP

LATITUDE: N41°28'12" LONGITUDE: W81°47'45"

SCALE IN KILOMETERS
0 1 2 3 4 5
1:40000

N

90	6	10	297	
INTERSTATE ROUTE	U.S. ROUTE	STATE ROUTE	COUNTY ROAD	OTHER ROADS

DESIGN DESIGNATION

CURRENT A.D.T. (2000)	= 9600
DESIGN YEAR A.D.T. (2020)	= 10540
DESIGN HOURLY VOLUME (2020)	= 1100
DIRECTIONAL DISTRIBUTION	= 60%
TRUCKS (24 HOUR B&C)	= 4%
LEGAL SPEED	= 35 MPH
DESIGN SPEED	= 60 km/h
FUNCTIONAL CLASSIFICATION	= URBAN COLLECTOR

DESIGN EXCEPTIONS

DESIGN FEATURE	APPROVAL DATE	SHEET
HORIZONTAL STOPPING SIGHT DISTANCE		
VERTICAL STOPPING SIGHT DISTANCE		
HORIZONTAL ALIGNMENT		
VERTICAL ALIGNMENT		

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PROJECT DESCRIPTION

REHABILITATION, RESURFACING OF ROADWAY AND RECONSTRUCTION OF BRIDGE NOS 209 & 210 ON 2.9 Km OF C.R. 297 (LAKEWOOD HEIGHTS BOULEVARD) IN THE CITIES OF CLEVELAND AND LAKEWOOD, CUYAHOGA COUNTY, INCLUDING REPAIR OR REPLACEMENT OF ANY DETERIORATED PAVEMENT, CURB, DRIVE APRONS, SIDEWALKS AND CATCH BASINS; AND INCLUDING NEW PAVEMENT MARKINGS AND TRAFFIC CONTROL SIGNING

BOARD OF COMMISSIONERS
CUYAHOGA COUNTY

APPROVED _____
DATE _____ *COUNTY COMMISSIONER*

APPROVED _____
DATE _____ *COUNTY COMMISSIONER*

APPROVED _____
DATE _____ *COUNTY COMMISSIONER*

JOURNAL _____ *PAGE* _____

1997 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 FOR SHORT TERM DETOUR SHOWN ON SHEETS _____ , AND PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES

APPROVED _____
DATE _____ *CUYAHOGA COUNTY ENGINEER*

UNDERGROUND UTILITIES
TWO WORKING DAYS BEFORE YOU DIG
Call 800-362-2764 (Toll Free)
OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS MUST BE CALLED DIRECTLY

URS Greiner
Engineering & Architectural Services
554 WHITE POND DRIVE
AKRON, OHIO 44320-1100

PAUL D. HAWKINS REG. ENGINEER NO 44324 REGISTERED PROFESSIONAL ENGINEER

DESIGNED BY: CHECKED BY:
DRAWN BY: DATE: CHECKED BY: 6/01/98 MAL
CAD FILE NAME: TITLE: 11CC0200

STANDARD CONSTRUCTION DRAWINGS

BP-1.1M	10-28-94	GR-4.1M	11-30-94	MT-35.10M	1-30-95	TC-42.20M	3-31-94	BP-2.4C		806	9/9/97
BP-2.1M	4-8-97	GR-4.2M	10-21-97	MT-35.11M	1-30-95	TC-52.10M	7-29-94	BP-2.5C		815	5/30/96
BP-2.2M	4-8-97	GR-5.1M	4-21-95	MT-95.30M	4-25-94	TC-52.20M	7-29-94	BP-2.5C		845	7/17/95
BP-2.5M	4-8-97	GR-6.1M	1-03-96	MT-95.31M	4-25-94	TC-71.10M	9-01-93	BP-4.1C		846	9/9/97
BP-3.1M	10-28-94			MT-95.32M	4-25-94	TC-82.10M	11-24-93	CB-3C	5-5-97	883	9/9/97
BP-5.1M	10-28-94	HL-10.11M	5-01-95	MT-105.10M	1-30-95	MT-95.40M	4-25-94	CB-3C2	5-22-95	910	4/21/97
BP-7.1M	10-28-94	HL-10.12M	5-01-95	MT-105.20M	1-30-95			MB-1C	5-5-97	911	7/10/97
CB-2.3M	7-12-95	HL-10.13M	5-01-95	MT-110.20M	3-01-96	AS-1-81M	3-20-95	MD-1C	5-5-97	953	6/14/95
		HL-20.14M	5-01-95	RW-3.1M	10-21-97	EXJ-4-87M	2-18-97	MD-3C	5-5-97	954	9/9/97
GR-1.1M	10-21-97	HL-30.31M	5-01-95	RM-4.2M	10-21-97	VBF-1-90M	3-20-95	MD-6C	5-5-97		
GR-1.2M	1-03-96	HL-50.21M	5-01-95	TC-41.10M	3-31-94	PCB-91M	3-20-95	MD-8C	5-22-95		
GR-1.3M	11-30-94	HL-60.11M	5-01-95	TC-41.20M	7-01-94	RB-1-55M	10-25-94	MH-10C	5-22-95		
GR-2.1M	10-21-97			TC-41.40M	3-31-94						
GR-3.1M	10-21-97	MH-1.1M	10-21-97	TC-41.41M	3-31-94						
GR-3.2M	10-21-97	MH-1.2M	9-06-95	TC-41.50M	7-01-94						

FEDERAL PROJECT NO. STP/BHF 93C( )
PID NO. 11422
CONSTRUCTION PROJECT NO.
RAILROAD INVOLVEMENT
CONSOLIDATED RAIL CORPORATION AND GREATER CLEVELAND REGIONAL TRANSIT AUTHORITY
CUY - LAKEWOOD HEIGHTS BLVD.

BEGIN PROJECT
BEGIN WORK
STA. 10+004.000

STP/BHF 93C( )

℄ CURVE DATA
P.I STA. 10+215.676
Δ = 17°37'35" LT.
R = 160.694m
T = 24.915m
L = 49.436m
E = 1.920m

N74°01'14"E

STA. 10+250.737 LHB =
STA 1+000.000 CARABEL AVE

STA. 10+588.951 LHB =
STA. 1+000.000 ARTHUR AVE.

STA. 10+944.655 LHB =
STA 1+000.000 ALGER ROAD

℄ CURVE DATA
P.I STA. 10+965.151
Δ = 39°34'12" LT.
T = 56.976m
L = 20.496m
E = 39.349m
E = 3.574m

℄ PAVEMENT CURVE DATA
P.I. STA. 10+983.423
Δ = 19°22'08" LT
R = 132.503m
T = 22.612m
L = 44.792m
E = 1.916m

STA. 11+212.770 LHB =
STA. 1+000.000 WARREN ROAD

STA. 11+395.132 LHB =
STA. 1+000.000 LINCOLN AVE.

WOODWARD AVE. N01°06'38"E
OLIVE AVE. N01°06'34"E
SEC. 18 / SEC. 19
P.C. STA. 10+190.761
P.T. STA. 10+240.197
CARABEL AVE. N01°06'34"E
P.C. STA. 10+250.755
P.T. STA. 10+298.029
ARTHUR AVE. N01°06'34"E
P.C. STA. 10+817.987
P.T. STA. 10+984.004
ALGER ROAD N01°16'47"E
WARREN ROAD
LINCOLN AVE. N01°23'50"E
MATCH LINE STA. 11+400

LAKEWOOD HEIGHTS BOULEVARD

S88°21'11"E
S89°12'48"E
S89°25'27"E
N88°14'25"E
CITY OF LAKEWOOD
CITY OF CLEVELAND
I-90 RAMP

STA. 10+166.732 LHB =
STA. 1+000.000 OLIVE AVE.

STA. 10+000.000 LHB =
STA 1+000.000 WOODWARD AVE.

℄ CURVE DATA
P.I STA. 10+274.562
Δ = 16°46'00" RT
R = 161.544m
T = 23.807m
L = 47.273m
E = 1.745m

℄ CURVE DATA
P.I. STA. 10+882.249
Δ = 23°48'39" RT.
R = 304.800m
T = 64.262m
L = 126.668m
E = 6.701m

P.R.C. STA. 10+944.655
℄ DEFLECTION = 15°32'52"
PVMT DEFLECTION = NONE

℄ PAVEMENT CURVE DATA
P.I. STA. 10+934.425
Δ = 19°25'40" RT
R = 304.800m
T = 52.176m
L = 103.351m
E = 4.434m

P.I. STA. 11+208.683
Δ = 2°-20'-08"

EXISTING SUPERELEVATION TRANSITION DATA

LOCATION	FROM	TO	RATE
STA. 12+382.5 TO STA. 12+435.8	NORMAL	LEVEL	400:1
STA. 12+435.8 TO STA. 12+498.5	LEVEL	0.042	175:1
STA. 12+679.5 TO STA. 12+709.9	0.042	0.060	198.41:1
STA. 12+820.9 TO STA. 12+923.3	0.060	LEVEL	200:1

PHASE 1
PHASE 2
PH. 3

STA. 12+039.208 LHB =
STA. 1+000.000 WYANDOTTE AVE

STA. 12+290.685 LHB =
STA. 1+000.000 CHESTERLAND AVE.

STA. 12+382.023 LHB =
STA. 1+000.000 WATERBURY ROAD

STA. 11+953.440 LHB =
STA. 1+000.000 WASCANA AVE.

STA. 12+120.070 LHB =
STA. 1+000.000 ELBUR AVE.

STA. 11+852.124 LHB =
STA. 1+004.170 BUNTS ROAD

STA. 12+202.330 LHB =
STA. 1+000.000 LEWIS ROAD

℄ PAVEMENT CURVE DATA
P.I. STA. 11+780.984 LHB
Δ = 10°34'50"
R = 229.000m
T = 21.204m
L = 42.288m
E = 0.980m

℄ CURVE DATA
P.I. STA. 12+584.172
Δ = 30°00'00" RT.
R = 436.592m
T = 116.985m
L = 228.599m
E = 15.401m
SE = 0.042 (NDC = NORMAL CROWN)

STA. 11+749.117 LHB =
STA. 1+000.000 RICHLAND AVE. (N)

P.I. STA. 11+449.083
Δ = 0°-00'-25"

ADELINE ST. N01°20'20"E
HILDA ST. N01°20'20"E
BROWN ROAD N01°04'20"E
RICHLAND AVE. N00°51'27"E
BUNTS ROAD SEC. 19 / SEC. 20
P.I. STA. 11+915.776
Δ = 16°-13'-31"
(NDC = 2° 30')
PAVEMENT CURVE RADIUS = 108m
WASCANA AVE. N00°59'15"E
WYANDOTTE AVE.
ELBUR AVE. N00°59'15"E
LEWIS ROAD S00°59'25"W
CHESTERLAND AVE. N00°59'25"E
WATERBURY ROAD N00°59'15"E
SERVICE ROAD
STRUCTURE No. 209 1830473
STRUCTURE No. 210 1830481
GREATER CLEVELAND RTA AND CONRAIL RAILROAD
P.C. STA. 12+467.187
P.C. STA. 12+595.788
P.T. STA. 12+933.559
BEREA ROAD
MATCH LINE STA. 11+400

S80°21'45"E
S61°49'15"W
N46°01'31"W
N73°24'44"E
N84°59'17"E
N88°14'50"E
N88°14'25"E

STA. 11+577.620 LHB =
STA. 1+000.000 HILDA ST.

STA. 11+492.167 LHB =
STA. 1+000.000 ADELINE ST.

P.I. STA. 11+649.902 LHB =
STA. 1+000.000 BROWN ROAD
Δ = 3°-15'-33"

STA. 11+747.398 LHB =
STA. 1+000.000 RICHLAND AVE (S)

P.I. STA. 11+780.984
Δ = 10°-34'-50"
PAVEMENT CURVE RADIUS = 229m

W 140TH ST. N01°33'17"E
W 139TH ST. N01°30'45"E
W 138TH ST. N00°59'15"E
W 137TH ST. N01°30'45"E
W 136TH ST. N01°30'45"E
JOSLYN ROAD N01°30'45"E
ALLEY N01°30'45"E

℄ PAVEMENT CURVE DATA
P.I. STA. 11+915.776 LHB
Δ = 15°56'15"
R = 108.000m
T = 15.118m
L = 30.041m
E = 1.053m

STA. 11+953.418 LHB =
STA. 1+000.000 W 139TH ST.

STA. 11+852.124 LHB =
STA. 1+000.000 W 140TH ST

STA. 12+202.289 LHB =
STA 1+000.000 W 136TH ST.

STA. 12+119.997 LHB =
STA. 1+000.000 W 137TH ST.

STA. 12+039.186 LHB =
STA. 1+000.000 W 138TH ST

STA. 12+290.720 LHB =
STA. 1+000.000 JOSLYN ROAD

STA. 12+944.151 LHB =
STA. 1+000.000 BEREA ROAD

℄ PAVEMENT CURVE DATA
P.I. STA. 11+649.902 LHB
Δ = 3°15'33"
R = 291.000m
T = 8.279m
L = 16.553m
E = 0.118m

NOTE:
WHERE PAVEMENT CURVE DATA IS SHOWN, EXISTING PAVEMENT IS ECCENTRIC WITH THE RECORD ℄ SURVEY LAKEWOOD HEIGHTS BOULEVARD. INFORMATION PROVIDED GIVES APPROXIMATE ALIGNMENT BASED ON EXISTING CURBS.

STP/BHF 93C( )
END PROJECT
END WORK
STA 12+937.000

℄ CURVE DATA
P.I. = N/A
Δ = 194°19'54" RT.
R = 70.104m (NDC = 125m MIN.)
L = 237.774m
T = N/A
E = N/A
SE = 0.060 (NDC = 0.038m)

LEGEND
LHB LAKEWOOD HEIGHTS BOULEVARD

N

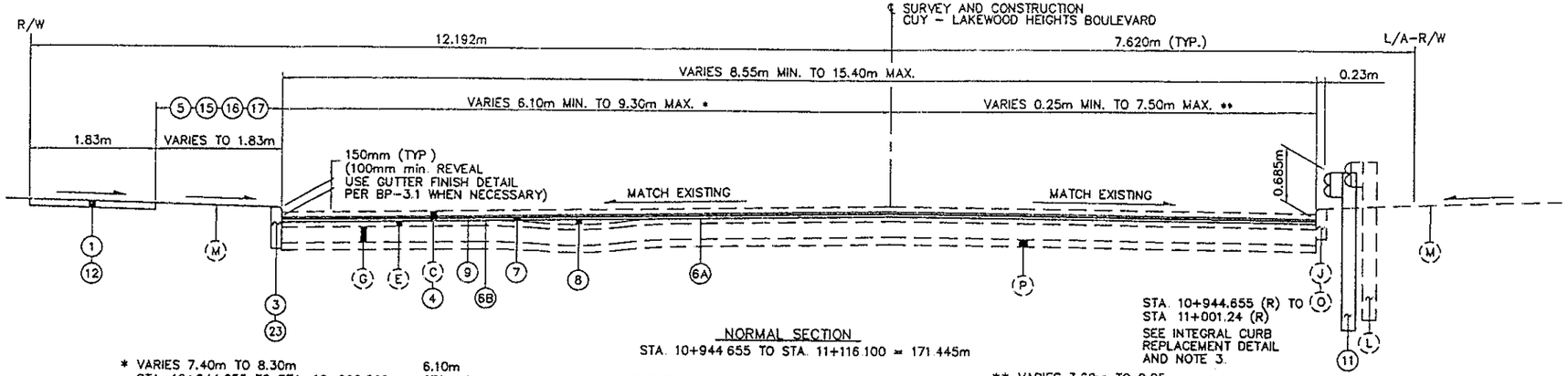
HORIZONTAL SCALE IN METERS
0 20 40 80

CALCULATED PAR
CHECKED KS

SCHEMATIC PLAN

CUY - LAKEWOOD HEIGHTS BOULEVARD

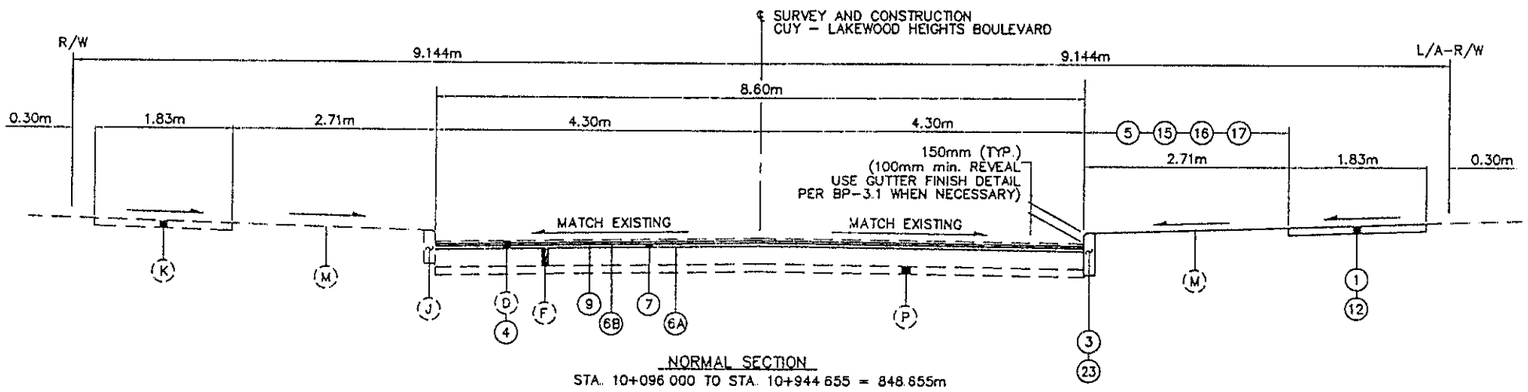
DESIGNED BY:	CHECKED BY:	
DATE:	DATE:	
DRAWN BY:	REVISED BY:	MAL
DATE:	DATE:	10/6/98
CAD FILE NAME:		HSCH0100



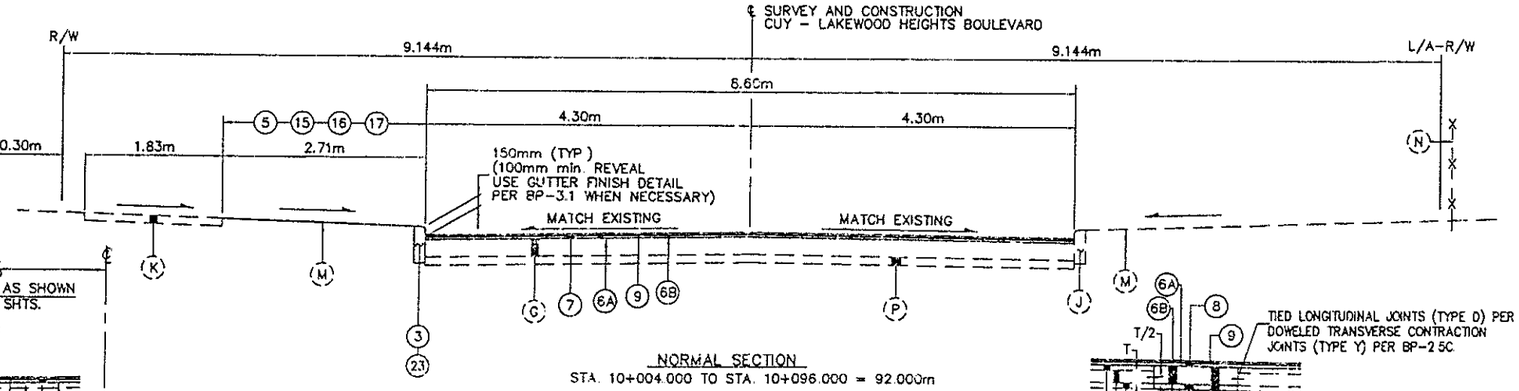
NORMAL SECTION
STA. 10+944.655 TO STA. 11+116.100 = 171.445m

* VARIES 7.40m TO 8.30m
STA. 10+944.655 TO STA. 10+966.200
VARIES 8.30m TO 7.60m
STA. 10+966.200 TO STA. 10+976.200
VARIES 7.60m TO 6.80m
STA. 10+976.200 TO STA. 10+984.004
VARIES 6.80m TO 6.10m
STA. 10+984.004 TO STA. 10+993.600
6.10m
STA. 10+993.600 TO STA. 11+018.200
VARIES 6.10m TO 9.30m
STA. 11+018.200 TO STA. 11+023.500
9.30m
STA. 11+023.500 TO STA. 11+105.600
VARIES 9.30m TO 6.10m
STA. 11+105.600 TO STA. 11+116.100

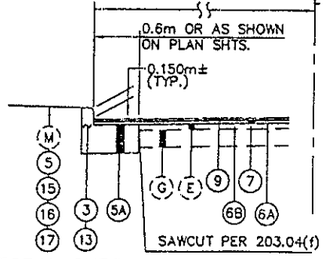
** VARIES 3.60m TO 0.25m
STA. 10+944.655 TO STA. 10+966.200
VARIES 0.25m TO 1.00m
STA. 10+966.200 TO STA. 10+976.200
VARIES 7.50m TO 6.10m
STA. 10+976.200 TO STA. 10+984.004
6.10m
STA. 10+984.004 TO STA. 11+116.100



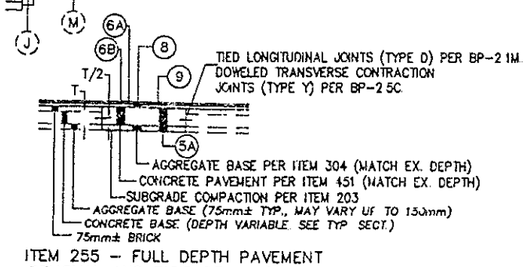
NORMAL SECTION
STA. 10+096.000 TO STA. 10+944.655 = 848.655m



NORMAL SECTION
STA. 10+004.000 TO STA. 10+096.000 = 92.000m



INTEGRAL CURB REPLACEMENT DETAIL
SEE STD. DWG. NO. 10.500 FOR ADDITIONAL DETAILS



ITEM 255 - FULL DEPTH PAVEMENT
REMOVAL AND RIGID REPLACEMENT,

LEGEND

(1)	ITEM 202	WALK REMOVED
(2)	ITEM 202	PAVEMENT REMOVED, AS PER PLAN
(2A)	ITEM 202	APPROACH SLAB REMOVED, AS PER PLAN
(3)	ITEM 202	CURB REMOVED
(4)	ITEM 202	WEARING COURSE REMOVED
(5)	ITEM 203	LINEAR GRADING, AS PER PLAN
(5A)	ITEM 255	FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS MS, AS PER PLAN (SEE DETAIL THIS SHEET)
(6)	ITEM 304	150mm AGGREGATE BASE, AS PER PLAN
(6A)	ITEM 407	TACK COAT
(6B)	ITEM 407	TACK COAT FOR INTERMEDIATE COURSE
(7)	ITEM 448	45mm ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG 64-22, AS PER PLAN
(8)	ITEM 448	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG 64-22, AS PER PLAN, (VARIABLE DEPTH) 32mm TO 100mm±
(9)	ITEM 448	32mm ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 64-22, AS PER PLAN
(10)	ITEM 451	250mm REINFORCED CONCRETE PAVEMENT, AS PER PLAN
(10A)	ITEM 605	150mm SHALLOW PIPE UNDERDRAIN WITH FABRIC WRAP, AS PER PLAN
(11)	ITEM 606	GUARDRAIL, TYPE 5
(12)	ITEM 608	114mm CONCRETE WALK, AS PER PLAN
(13)	ITEM 609	CURB, TYPE 2-B, AS PER PLAN
(14)	ITEM 612	CONCRETE MEDIAN, AS PER PLAN
(15)	ITEM 659	COMMERCIAL FERTILIZER
(16)	ITEM 659	AGRICULTURAL LIMING
(17)	ITEM 659	SEEDING AND MULCHING, AS PER PLAN
(18)	ITEM 611	REINFORCED CONCRETE APPROACH SLAB (T = 380mm), AS PER PLAN
(19)	ITEM 304	75mm AGGREGATE BASE
(20)		LONGITUDINAL JOINT, AS PER ODOT STD CONST DWG. BP-2.1M
(21)	ITEM 203	SUBGRADE COMPACTION
(22)	ITEM 609	CURB, TYPE 2-A
(23)	ITEM 609	CURB, TYPE 6, AS PER PLAN
(A)		60mm± ASPHALT CONCRETE
(B)		60mm - 100mm± ASPHALT CONCRETE
(C)		120mm± ASPHALT CONCRETE
(D)		85mm - 125mm± ASPHALT CONCRETE
(E)		76mm± BRICK
(F)		180mm± REINFORCED CONCRETE PAVEMENT
(G)		230mm± REINFORCED CONCRETE PAVEMENT
(H)		220mm - 250mm± REINFORCED CONCRETE PAVEMENT
(I)		240mm± REINFORCED CONCRETE PAVEMENT
(J)		NON-INTEGRAL CURB
(K)		CONCRETE WALK
(L)		GUARDRAIL (TO BE REMOVED)
(M)		SOD
(N)		FENCE
(O)		INTEGRAL CURB
(P)		75mm± SUBBASE
(Q)		152mm± VITRIFIED CLAY PIPE UNDERDRAIN
(R)		330mm± REINFORCED CONCRETE APPROACH SLAB WITH 64mm± BITUMINOUS WEARING COURSE
(LT)		LONGITUDINAL JOINT

NOTES:

1. FOR LOCATIONS OF CURB, SIDEWALK, AND GUARDRAIL REPLACEMENTS AND PAVEMENT REPAIR, SEE PLAN SHEETS 72 TO 85.
2. FOR PAVEMENT CORE INFORMATION, SEE SHEET 92A.
3. INTEGRAL CONCRETE CURB REMOVAL AND REPLACEMENT SHALL BE IN ACCORDANCE WITH MD-1C (DETAIL B) AND AS DETAILED ON THIS SHEET.

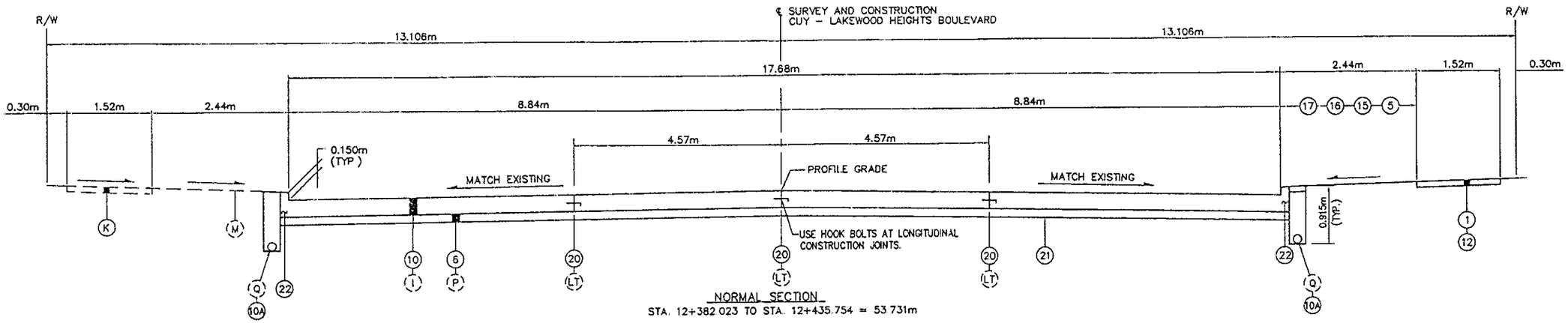
CALCULATED JAN
CHECKED PDH

TYPICAL SECTIONS - C.R.297

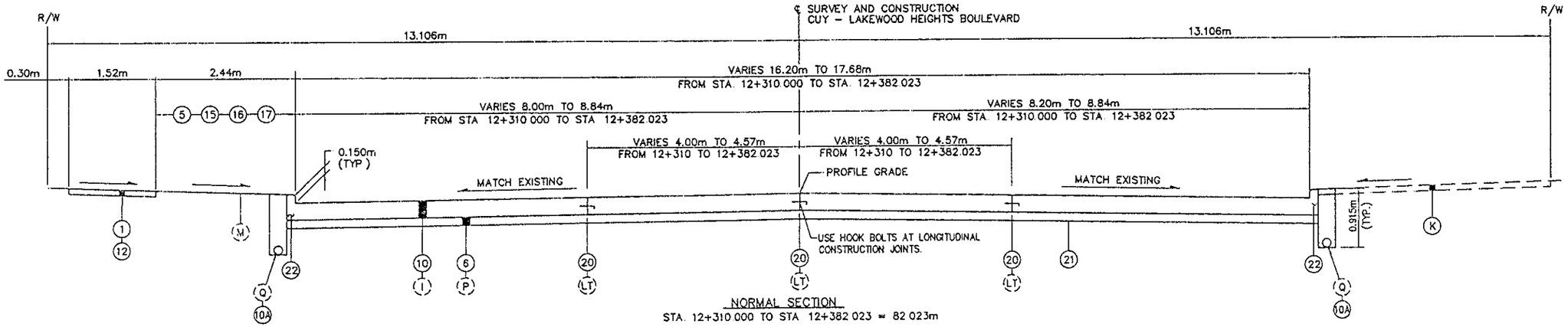
LAKEWOOD HEIGHTS BOULEVARD

3
163

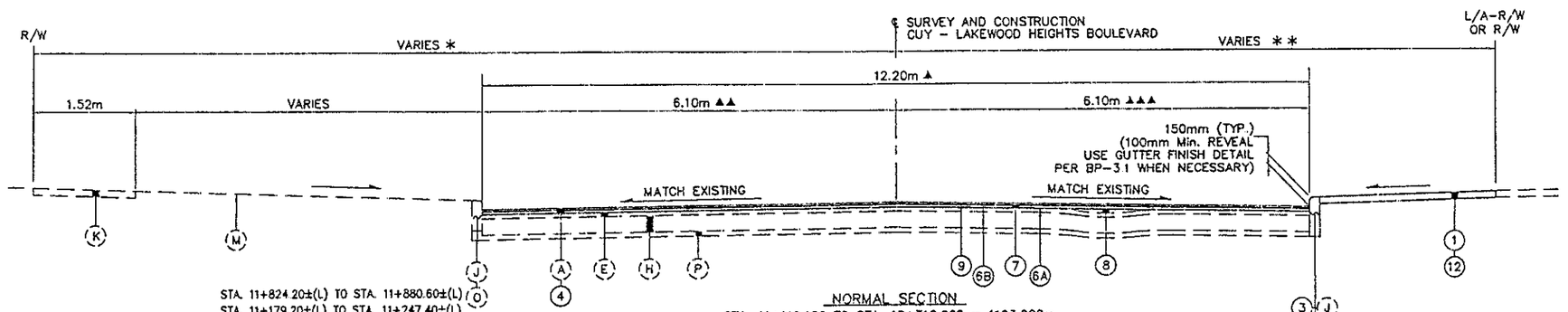
DESIGNED BY:
CHECKED BY:
DATE:
DRAWN BY:
REVISED BY: MAL
DATE: 10/6/98
CAD FILE NAME: HOX0000



NORMAL SECTION
STA. 12+382.023 TO STA. 12+435.754 = 53.731m



NORMAL SECTION
STA. 12+310.000 TO STA. 12+382.023 = 82.023m



NORMAL SECTION
STA. 11+116.100 TO STA. 12+310.000 = 1193.900m

STA. 11+824.20±(L) TO STA. 11+880.60±(L)
STA. 11+179.20±(L) TO STA. 11+247.40±(L)
STA 12+290.72±(L) TO STA. 12+310.00±(L)
SEE INTEGRAL CURB REPLACEMENT
DETAIL AND NOTE 5.

* 12.192m
STA. 11+116.100 TO STA 11+212.770
13.106m
STA. 11+212.770 TO STA. 11+649.902
9.144m
STA. 11+649.902 TO STA. 11+799.200
VARIES 9.144m TO 12.192m
STA. 11+799.20 TO STA. 11+800.000
VARIES 12.192m TO 9.144m
STA 11+800.000 TO STA. 11+843.000
9.144m
STA. 11+843.000 TO STA. 11+852.124
13.106m
STA. 11+852.124 TO STA. 12+290.685

** 7.620m
STA. 11+116.100 TO STA. 11+329.500
VARIES 7.620m TO 9.144m
STA. 11+329.500 TO STA 11+381.100
3.048m
STA. 11+381.100 TO STA. 11+649.902
VARIES 3.048m TO 9.144m
STA. 11+649.902 TO STA. 11+656.800
9.144m
STA. 11+656.800 TO STA. 11+696.096
13.106m
STA. 11+696.096 TO STA. 11+800.115
VARIES 13.106m TO 9.144m
STA. 11+800.115 TO STA 11+801.337
9.144m
STA. 11+801.337 TO STA. 11+825.524
11.090m
STA. 11+825.524 TO STA. 11+852.124
13.106m
STA. 11+852.124 TO STA. 12+290.685

STA. 11+179.20±(R) TO STA. 11+247.40±(R)
STA. 11+311.35±(R) TO STA. 11+662.06±(R)
STA 11+824.20±(R) TO STA 11+880.60±(R)
STA. 12+290.72±(R) TO STA. 12+310.00±(R)
SEE INTEGRAL CURB REPLACEMENT
DETAIL SHEET 3 AND NOTE 5.

▲ 12.20m STA. 11+118.000 TO STA. 11+308.000
VARIES FROM 12.20m @ STA. 11+308.000 TO 14.80m @ STA. 11+381.000
8.60m STA. 11+381.000 TO STA. 11+650.700
VARIES FROM 8.60m @ STA. 11+650.700 TO 12.20m @ STA. 11+655.000
12.20m STA. 11+655.000 TO STA. 12+290.685
16.20m STA 12+290.685 TO STA. 12+310

▲▲ 6.10m STA. 11+118.000 TO STA. 11+760.000
VARIES FROM 6.10m @ STA. 11+760.000 TO 6.60m @ STA. 11+780.984
VARIES FROM 6.60m @ STA. 11+780.984 TO 4.40m @ STA. 11+852.124
6.10m STA. 11+852.124 TO STA. 11+900.000
VARIES FROM 6.10m @ STA. 11+900.000 TO 5.10m @ STA. 11+915.776
VARIES FROM 5.10m @ STA. 11+915.776 TO 6.10m @ STA. 11+933.600
6.10m STA. 11+933.600 TO STA. 12+290.685
8.00m STA 12+290.685 TO STA. 12+310

▲▲▲ 6.10m STA. 11+118.000 TO STA. 11+308.000
VARIES FROM 6.10m @ STA. 11+308.000 TO 8.70m @ STA. 11+381.100
2.50m STA. 11+381.100 TO STA. 11+650.700
VARIES FROM 2.50m @ STA 11+650.700 TO 6.10m @ STA. 11+655.000
6.10m STA. 11+655.000 TO STA. 11+760.000
VARIES FROM 6.10m @ STA. 11+760.000 TO 5.60m @ STA. 11+780.984
VARIES FROM 5.60m @ STA. 11+780.984 TO 7.80m @ STA. 11+852.124
6.10m FROM STA. 11+852.124 TO STA. 11+900.000
VARIES FROM 6.10m @ STA. 11+900.000 TO 7.10m @ STA. 11+915.776
VARIES FROM 7.10m @ STA. 11+915.776 TO 6.10m @ STA. 11+933.600
6.10m STA. 11+933.600 TO STA. 12+290.685
8.20m STA. 12+290.685 TO STA 12+310

NOTES:

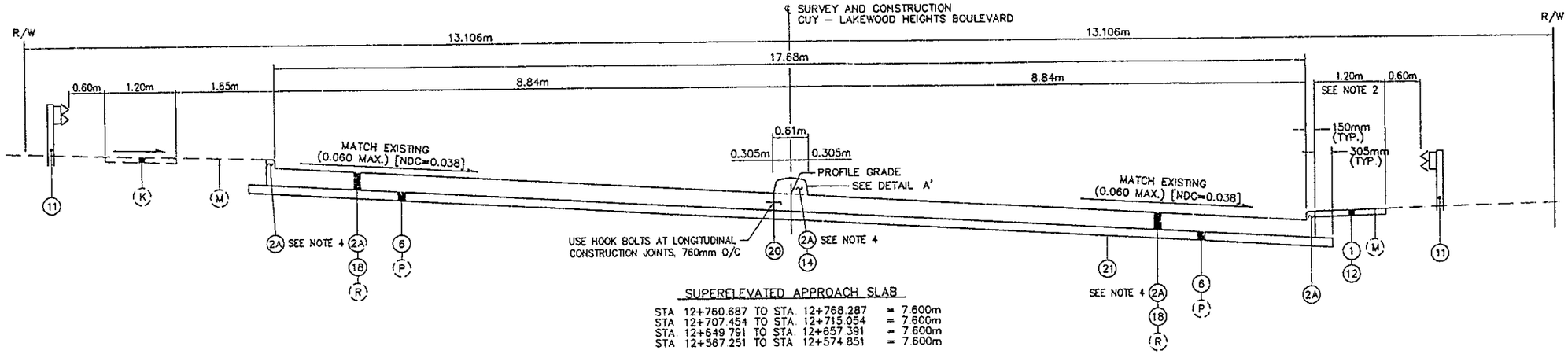
1. FOR LEGEND SEE SHEET 3.
2. FOR LOCATIONS OF CURB, SIDEWALK, AND GUARDRAIL REPLACEMENT, AND PAVEMENT REPAIR, SEE PLAN SHEETS 72 TO 85.
3. FOR PAVEMENT CORE INFORMATION, SEE SHEET 92A.
4. FOR (5A) ITEM 235 DETAIL. SEE SHEET 3.
5. INTERGRAL CONCRETE CURB REMOVAL/REPLACEMENT SHALL BE IN ACCORDANCE WITH MD-1C (DETAIL B).

SIGNED BY:	CHECKED BY:
DESIGN BY:	DRAFT:
CALC. BY:	REVISED BY: MAL
INT. BY:	DATE: 10/20/98
ID FILE NAME:	MGX0100

CALCULATED JAN
CHECKED PDH

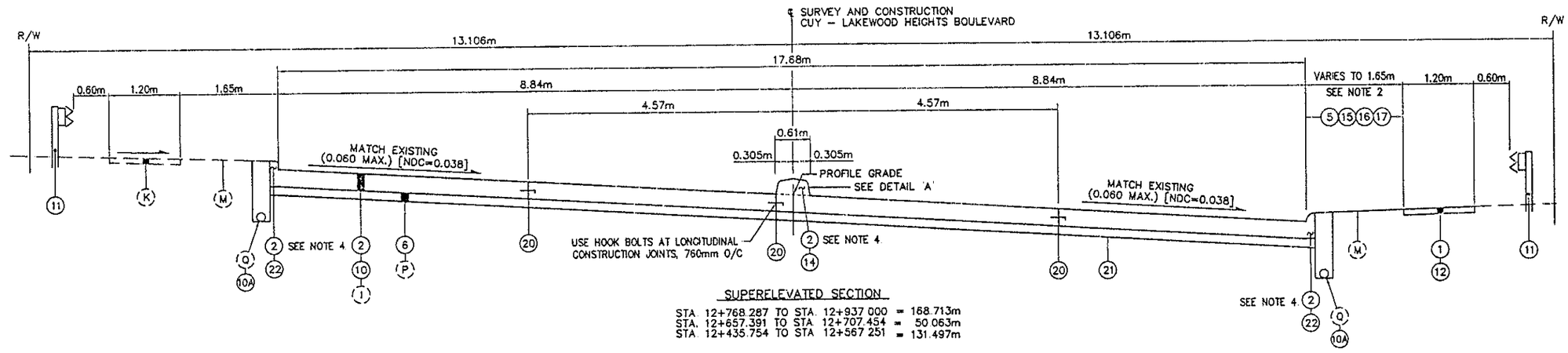
TYPICAL SECTIONS - C.R.297

CUY - LAKEWOOD HEIGHTS BOULEVARD



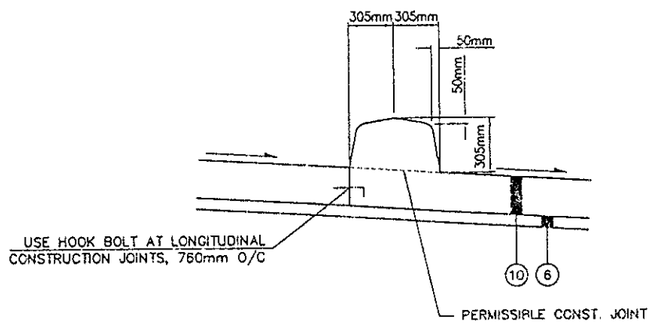
SUPERELEVATED APPROACH SLAB

STA 12+760.687 TO STA. 12+768.287 = 7.600m
STA 12+707.454 TO STA. 12+715.054 = 7.600m
STA. 12+649.791 TO STA. 12+657.391 = 7.600m
STA 12+567.251 TO STA 12+574.851 = 7.600m



SUPERELEVATED SECTION

STA. 12+768.287 TO STA. 12+937.000 = 168.713m
STA. 12+657.391 TO STA. 12+707.454 = 50.063m
STA. 12+435.754 TO STA 12+567.251 = 131.497m



ITEM 612 CONCRETE MEDIAN, AS PER PLAN
DETAIL 'A'
SEE STD. DWG. RM-3.1M FOR ADDITIONAL DETAILS
CONSTRUCT IN ACCORDANCE WITH 609.04(b)

NOTES:

1. FOR LEGEND SEE SHEET 3
2. FOR LOCATIONS OF CURB, SIDEWALK, AND GUARDRAIL REPLACEMENT, AND PAVEMENT REPAIR, SEE PLAN SHEETS 72 TO 85
3. FOR PAVEMENT CORE INFORMATION, SEE SHEET 92A
4. CURB REMOVAL AND CONCRETE MEDIAN REMOVAL ARE INCLUDED IN THE CONTRACT UNIT PRICE BID FOR ITEM 202 – PAVEMENT REMOVED, AS PER PLAN AND ITEM 202 – APPROACH SLAB REMOVED, AS PER PLAN.
5. FOR SUPERELEVATION TABLE, SEE SHEET NO. 89

DESIGNED BY:	
DATE:	
DRAWN BY:	MAL
DATE:	10/20/98
CAD FILE NAME:	HGX0400
CHECKED BY:	
DATE:	
REVISED BY:	
DATE:	

CALCULATED JAN
CHECKED PDH

TYPICAL SECTIONS - C.R.297

CUY - LAKEWOOD HEIGHTS BOULEVARD

GENERAL

UTILITIES

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

AMERICAN TELEPHONE & TELEGRAPH
3833 WEYMOUTH ROAD
MEDINA, OHIO 44256
ATTN: PAT HARRIS
PHONE: (303) 723-9135

COX CABLE
12221 PLAZA DRIVE
PARMA, OHIO 44130
ATTN: TIM YANDA
PHONE: (216) 676-8300

AMERITECH
13630 LORAIN AVENUE - 4TH FLOOR
CLEVELAND, OHIO 44111
ATTN: SHELLY ARMSTRONG
PHONE: (216) 476-6142
FAX: (216) 476-6013

EAST OHIO GAS COMPANY
1201 EAST 55TH STREET
CLEVELAND, OHIO 44103
ATTN: PAUL ARENDASH
PHONE: (216) 736-6675
FAX: (216) 736-6780

CLEVELAND ELECTRIC ILLUMINATING CO.
CENTRAL DIVISION
3601 RIDGE ROAD
CLEVELAND, OHIO 44102
ATTN: FRANK DIBBS
PHONE: (216) 634-7303
(216) 634-7266

NORTHEAST OHIO REGIONAL SEWER DISTRICT (NEORSD)
3826 EUCLID AVENUE
CLEVELAND, OHIO 44115-2504
ATTN: RICHARD SMITALSKI
PHONE: (216) 881-6600
FAX: (216) 881-2738

CENTERIOR ELECTRIC
6200 OAK TREE BOULEVARD
INDEPENDENCE, OHIO 44131
ATTN: BILL EASTERLING
PHONE: (216) 581-4000 EXT. 25

CITY OF CLEVELAND
DIVISION OF WATER
1201 LAKESIDE AVENUE
CLEVELAND, OHIO 44114
ATTN: MARK SUNYAK
PHONE: (216) 664-2444

CITY OF LAKEWOOD
SERVICE DEPARTMENT
12650 DETROIT AVE.
LAKEWOOD, OHIO 44107
ATTN: JOE O'DONNELL
PHONE:

GREATER CLEVELAND REGIONAL TRANSIT AUTHORITY (GCRTA)
615 SUPERIOR AVENUE, NORTHWEST
CLEVELAND, OHIO 44113
ATTN: BESTMAN ELEE
PHONE: (216) 566-5210

WORLD COM (WILTEL)
120 RAVINE STREET
AKRON, OHIO 44303
ATTN: AL GUEST
PHONE:

CALL OHIO UTILITIES PROTECTION SERVICE
TWO (2) WORKING DAYS BEFORE YOU DIG
TOLL FREE NO. 1-800-362-2764
(NON-MEMBERS MUST BE CALLED DIRECTLY)

CONTINGENCY QUANTITIES

THE CONTRACTOR SHALL NOT ORDER MATERIALS OR PERFORM WORK FOR ITEMS DESIGNATED BY PLAN NOTE TO BE USED "AS DIRECTED BY THE ENGINEER" UNLESS AUTHORIZED BY THE ENGINEER. THE ACTUAL WORK LOCATIONS AND QUANTITIES USED FOR SUCH ITEMS SHALL BE INCORPORATED INTO THE FINAL CHANGE ORDER GOVERNING COMPLETION OF THIS PROJECT. NO ADJUSTED UNIT PRICES WILL BE MADE FOR ANY DECREASE OR ELIMINATION OF CONTINGENCY QUANTITIES/ITEMS AND ANY SUCH PROVISIONS OF 104.02 SHALL NOT APPLY.

CONSTRUCTION NOISE

ACTIVITIES AND LAND USE ADJACENT TO THIS PROJECT MAY BE AFFECTED BY CONSTRUCTION NOISE. IN ORDER TO MINIMIZE ANY ADVERSE CONSTRUCTION NOISE IMPACTS, ANY POWER-OPERATED CONSTRUCTION-TYPE DEVICE SHALL NOT BE OPERATED BETWEEN THE HOURS OF 9:00 P.M. AND 7:00 A.M. (UNLESS SPECIFICALLY REQUIRED IN THE PLANS). IN ADDITION, ANY SUCH DEVICE SHALL NOT BE OPERATED AT ANY TIME IN SUCH A MANNER THAT THE NOISE CREATED SUBSTANTIALLY EXCEEDS THE NOISE CUSTOMARILY AND NECESSARILY ATTENDANT TO THE REASONABLE AND EFFICIENT PERFORMANCE OF SUCH EQUIPMENT.

ELEVATION DATUM

ELEVATIONS SHOWN ARE BASED ON CLEVELAND REGIONAL GEODETIC SURVEY (C.R.G.S.) DATA. MONUMENTS ARE DESCRIBED ON THE PLANS.

WORK LIMITS

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. THE INSTALLATION, AND OPERATION (INCLUDING ERECTION, MAINTENANCE AND REMOVAL) OF ALL TEMPORARY TRAFFIC CONTROL AND TEMPORARY TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS, EXCEPT WHERE OTHERWISE NOTED, SHALL BE PROVIDED BY THE CONTRACTOR WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

PAVEMENT CORE INFORMATION

EXISTING PAVEMENT CORE INFORMATION IS SHOWN ON SHEET 92A. THE CORE LOCATIONS ARE MARKED ON THE PLAN AND PROFILE SHEETS. THIS DATA IS SHOWN FOR INFORMATION PURPOSES ONLY. THE CORES ALONG WITH EXISTING PLANS WERE USED TO DETERMINE THE EXISTING PAVEMENT BUILD UP, HOWEVER THERE IS NO GUARANTEE THAT THEY REPRESENT THE BUILDUP FOR ALL LOCATIONS. THE CONTRACTOR SHALL OBTAIN ANY ADDITIONAL INFORMATION HE DEEMS NECESSARY FOR BIDDING THE PROPOSED WORK.

ITEM 806 - FIELD OFFICE, TYPE B, AS PER PLAN

THE FIELD OFFICE SHALL, IN ADDITION TO THE ITEMS LISTED IN SUPPLEMENTAL SPECIFICATION 806, BE FURNISHED WITH TWO (2) CELLULAR PHONES OR A COMMERCIAL GRADE BASE RADIO AND TWO (2) COMMERCIAL GRADE HAND HELD RADIO UNITS CAPABLE OF TRANSMITTING AND RECEIVING VOICE COMMUNICATION BETWEEN THE OFFICE AND/OR ANY AREA ON THE PROJECT SITE.

THE FOLLOWING QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR THIS ITEM:

ITEM 806 - FIELD OFFICE, TYPE B, AS PER PLAN 24 MONTHS

PROGRESS SCHEDULE (CRITICAL PATH METHOD)

THE PRE-CONSTRUCTION MEETING WILL BE HELD NO LATER THAN THIRTY (30) CALENDAR DAYS AFTER THE CONTRACT IS SIGNED. THE CONTRACTOR SHALL SUBMIT THEIR PROPOSED CPM SCHEDULE AT THE PRE-CONSTRUCTION MEETING FOR REVIEW BY THE CONSTRUCTION ENGINEER. WRITTEN COMMENTS REGARDING THE CPM SCHEDULE WILL BE FORWARDED TO THE CONTRACTOR BY THE CONSTRUCTION ENGINEER WITHIN FOURTEEN (14) CALENDAR DAYS AFTER THE PRE-CONSTRUCTION MEETING.

A FINAL CPM SCHEDULE SHALL BE SUBMITTED TO THE CONSTRUCTION ENGINEER WITHIN THIRTY (30) CALENDAR DAYS FROM THE DATE OF THE PRE-CONSTRUCTION MEETING BUT AT LEAST SEVEN (7) CALENDAR DAYS PRIOR TO THE DATE DESIGNATED AS THE STARTING DATE IN THE CPM SCHEDULE. THE SCHEDULE WILL BE SIGNED AND DATED BY THE PRIME CONTRACTOR AND NAMED SUBCONTRACTORS.

ADJUSTMENTS IN CONTRACT TIME

TIME EXTENSIONS WILL ONLY BE CONSIDERED WHEN CONTROLLING ITEMS OF WORK ON THE APPROVED CPM SCHEDULE ARE AFFECTED DUE TO NO FAULT OF THE CONTRACTOR.

WHEN ADDITIONAL WORK IS REQUIRED, TIME EXTENSIONS WILL ONLY BE GRANTED FOR CONTROLLING ITEMS ON THE CPM SCHEDULE

PROJECT PROGRESS MEETINGS

PROGRESS MEETINGS WILL BE HELD EVERY TWO (2) WEEKS AT THE PROJECT OFFICE OR OTHER LOCATION DESIGNATED BY THE PROJECT ENGINEER, AND WILL BE ATTENDED BY ODOT AND CONTRACTOR DECISION-MAKING PERSONNEL.

THE PURPOSE OF THESE MEETINGS IS TO DISCUSS CRITICAL OPERATIONS AND POTENTIAL PROBLEMS. ALSO, THE CONTRACTOR WILL CONFIRM THE NUMBER AND DURATION OF WORKSHIFTS, NUMBER OF WORK CREWS, AND SPECIFIC PORTIONS OF THE WORK TO BE PERFORMED DURING THE FOLLOWING WEEKS

THESE MEETINGS CAN ONLY BE WAIVED BY THE PROJECT ENGINEER

ROADWAY

MONUMENT BOXES AND ASSEMBLIES

WHERE THE PLAN CALLS FOR EXISTING MONUMENT BOXES TO BE REPLACED, THE CONTRACTOR SHALL REMOVE THE EXISTING MONUMENT BOX AND REPLACE IT WITH A CUYAHOGA COUNTY MONUMENT BOX AS DETAILED ON CONSTRUCTION DRAWING MB-1C, SET TO GRADE. PAYMENT FOR THE ABOVE WORK SHALL BE MADE UNDER ITEM 604 - CUYAHOGA COUNTY MONUMENT BOX. CARE AND/OR PROTECTIVE MEASURES SHALL BE EMPLOYED BY THE CONTRACTOR TO AVOID DAMAGE OR DISPLACEMENT OF THE EXISTING MONUMENT DURING THE MONUMENT BOX REMOVAL AND REPLACEMENT OPERATIONS AND ALL OTHER OPERATIONS IN THE PROXIMITY. THOSE EXISTING MONUMENTS DISPLACED OR DAMAGED DUE TO THE CONTRACTOR'S NEGLIGENCE SHALL BE REPLACED WITH A CUYAHOGA COUNTY ROADWAY MONUMENT ASSEMBLY UNDER THE SUPERVISION OF A LICENSED SURVEYOR; ALL AT THE CONTRACTOR'S EXPENSE. WHERE NO EXISTING MONUMENTS ARE FOUND WITHIN SAID MONUMENT BOXES OR WHERE MONUMENTS ARE DISPLACED OR DAMAGED AT NO FAULT OF THE CONTRACTOR, THEY SHALL BE PLACED OR REPLACED IN ACCORDANCE WITH "ITEM 604 - CUYAHOGA COUNTY ROADWAY MONUMENT ASSEMBLY"; ALL AT THE DIRECTION OF THE ENGINEER. AN ESTIMATED QUANTITY FOR THIS ITEM HAS BEEN PROVIDED IN THE GENERAL SUMMARY FOR THIS CONTINGENCY

ITEM 604 - CUYAHOGA COUNTY ROADWAY MONUMENT ASSEMBLY 10 EACH

WHERE THE PLAN CALLS FOR A CUYAHOGA COUNTY ROADWAY MONUMENT ASSEMBLY THE CONTRACTOR SHALL INSTALL, EXCEPT THE "MONUMENT" ITSELF, THE ENTIRE MONUMENT ASSEMBLY, INCLUDING THE BOX AS DETAILED ON CONSTRUCTION DRAWING MB-1C. INSTALLATION SHALL BE SUCH THAT WHEN THE "MONUMENT" IS SUBSEQUENTLY PLACED BY THE CUYAHOGA COUNTY ENGINEER, IT CAN BE CENTERED IN THE BOX. PAYMENT FOR THE ABOVE WORK SHALL BE MADE UNDER ITEM 604 - CUYAHOGA COUNTY ROADWAY MONUMENT ASSEMBLY

THE CONTRACTOR SHALL CONTACT THE CUYAHOGA COUNTY ENGINEER'S SURVEY OFFICE AT (216) 348-3846 NO LESS THAN TWO (2) WEEKS PRIOR TO THE DISTURBANCE OF ANY EXISTING MONUMENTS.

RIGHT-OF-WAY LINES

THE RIGHT-OF-WAY LINES AND RIGHT-OF-WAY/LIMITED ACCESS LINES SHOWN IN THESE PLANS ARE TAKEN FROM RECORD INFORMATION AND SHOWN AT RECORD OFFSETS FROM CENTERLINES ESTABLISHED BY FIELD SURVEY OF EXISTING CENTERLINE MONUMENTS

ITEM 623 - CONSTRUCTION LAYOUT STAKES, AS PER PLAN

WHEN THE ABOVE ITEM IS CALLED FOR ON THE PLANS OR IN THE PROPOSAL, ALL APPLICABLE PROVISIONS OF ITEM 623 AS SET FORTH IN THE CONSTRUCTION AND MATERIAL SPECIFICATIONS SHALL APPLY, EXCEPT AS MODIFIED OR APPENDED HEREIN.

THE COUNTY WILL LOCATE AND REFERENCE THE CENTERLINE OF RIGHT-OF-WAY FOR THE PROJECT AND WILL ESTABLISH BENCH MARKS ALONG THE LINE OF THE IMPROVEMENT OUTSIDE THE CONSTRUCTION LIMITS.

THE CONTRACTOR WILL LOCATE AND REFERENCE THE CENTERLINE OF CONSTRUCTION FOR THE PROJECT, IF DIFFERENT FROM THE CENTERLINE OF RIGHT-OF-WAY, AND PROVIDE FIELD FORCES AND SET ALL ADDITIONAL STAKES FOR THE PROJECT, AS SPECIFIED IN 623.02. THE CONTRACTOR SHALL ALSO LOCATE AND REFERENCE THE CENTERLINE OF RIGHT-OF-WAY AND THE CENTERLINE OF CONSTRUCTION FOR ALL INTERSECTING STREETS AND ROADS NECESSARY TO SECURE A CORRECT LAYOUT OF THE WORK

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ANY SURVEY INFORMATION APPEARING IN THE PLANS, EXCEPT FOR THE PROJECT CENTERLINE OF RIGHT-OF-WAY, WHICH HE MAY USE TO LAYOUT THE WORK

IN ADDITION TO THE ABOVE AND TO HIS RESPONSIBILITIES UNDER SECTION 107.12, THE CONTRACTOR SHALL REFERENCE AND NOTE THE TYPE, SIZE, AND CONDITION OF ALL KNOWN EXISTING PRIVATE PROPERTY LINE MONUMENTS (WHICH MAY BE AFFECTED BY THE WORK AND ARE WITHIN THE CONSTRUCTION LIMITS) TO POINTS AND/OR TO PERMANENT STRUCTURES OUTSIDE THE CONSTRUCTION LIMITS TO FACILITATE RE-ESTABLISHMENT OF THEIR POSITION AND REPLACEMENT OF THE POINT. NO LESS THAN THREE (3) SUCH REFERENCES PER MONUMENT ARE TO BE FURNISHED. A REASONABLE SEARCH WILL BE MADE FOR PRIVATE PROPERTY LINE MONUMENTS. IF NO PRIVATE PROPERTY MONUMENTS CAN BE FOUND THEN RE-ESTABLISHMENT IS NOT NECESSARY.

ANY EXISTING PRIVATE PROPERTY LINE MONUMENTS OR ROADWAY MONUMENTS THAT ARE FOUND AND SUBSEQUENTLY DISTURBED SHALL BE RESET (BY THE CONTRACTOR) WHERE ORIGINALLY FOUND AND A DESCRIPTION OF THE TYPE AND SIZE OF THE NEW MONUMENT SET SHALL BE NOTED. CUYAHOGA COUNTY ROADWAY MONUMENT ASSEMBLIES SHALL BE USED EXCLUSIVELY FOR SAID ROADWAY MONUMENTS. THE REFERENCES FOR SAID MONUMENTS SHALL BE DOCUMENTED IN A FIELD BOOK PROVIDED BY THE CUYAHOGA COUNTY ENGINEER'S SURVEY DEPARTMENT

THE DOCUMENTATION AND REFERENCING SHALL BE MADE UNDER THE SUPERVISION OF A LICENSED SURVEYOR AND IS CONSIDERED A LEGAL DOCUMENT FOR THE PROJECT. THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR THE ABOVE DOCUMENTATION AND FIELD BOOK. DOCUMENTATION SHALL ALSO INCLUDE THE NAMES OF ALL PERSONS IN THE FIELD PARTY, DATE WORK WAS PERFORMED, AND WEATHER CONDITIONS. ALL WORK PERFORMED SHALL BE REFERENCED IN THE INDEX ALONG WITH PAGE NUMBERS INCLUDED. THE FIELD BOOK SHALL BE GIVEN TO THE PROJECT ENGINEER UPON COMPLETION OF THE WORK AND SUBSEQUENTLY RETURNED TO THE CUYAHOGA COUNTY ENGINEER'S SURVEY DEPARTMENT.

PAYMENT FOR THE ABOVE WORK SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE BID FOR ITEM 623 - CONSTRUCTION LAYOUT STAKES, AS PER PLAN.

THE FOLLOWING INFORMATION IS PROVIDED FOR REFERENCING THE CENTERLINE OF RIGHT-OF-WAY IN THE PAVEMENT REPLACEMENT PORTION OF THE PROJECT:

STATION	DESCRIPTION	CRGS NORTHING	CRGS EASTING
	IP MON.	24058.9819	18675.7820
12+290.754	℄ CHESTERLAND	24045.8073	18675.5542
	IP MON	24032.7225	18675.2434
	IP MON.	24059.5134	18767.1165
12+467.187	P.C.	24046.9240	18852.0528
	IP MON	23951.3714	19685.6424
	DRILL HOLE	23889.3214	19079.7208
12+695.786	P.C.C.	23989.8815	19036.0476
	DRILL HOLE	23991.8933	19087.9064
	IP MON.	23887.5945	18966.6631
12+933.559	P.T.	23885.7603	18979.7538
	IP MON.	23878.2737	18987.5356

ITEM 203 - PROOF ROLLING

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

ITEM 203 - PROOF ROLLING 3 HOURS

DESIGNED BY:	CHECKED BY: JAN
DATE:	DATE: 8/08/97
DRAWN BY: MAL	REVISED BY: MAL
DATE: 7/24/97	DATE: 10/20/98
CAD FILE NAME:	HGCN0100

HGCN0100.DWG 10-26-98 10:05:21 am EST

CALCULATED PDH CHECKED JAN

GENERAL NOTES

LAKEWOOD HEIGHTS BOULEVARD

ROADWAY CONTINUED

ITEM 203 – LINEAR GRADING, AS PER PLAN

THIS ITEM SHALL CONSIST OF GRADING THE AREA BETWEEN THE BACK OF THE PROPOSED CURB AND FACE OF PROPOSED/EXISTING SIDEWALK, AND FOR AREAS ABUTTING PROPOSED DRIVE APRON EDGES; AS SHOWN ON THE TYPICAL SECTION SHEETS 3-5, OR AS DIRECTED BY THE ENGINEER.

MEASUREMENT SHALL BE IN ACCORDANCE WITH 203.15(c)

PAYMENT FOR ALL LABOR, EQUIPMENT, AND INCIDENTAL COSTS NECESSARY TO COMPLETE THIS WORK, INCLUDING REMOVAL AND DISPOSAL OF MATERIALS DEEMED UNFIT FOR REUSE BY THE ENGINEER AND ADDITIONAL/REPLACEMENT EMBANKMENT MATERIAL WITH A MINIMUM OF TWO INCHES (2") OF TOPSOIL IN ACCORDANCE WITH 653.01 THRU 653.05, SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE BID PER METER FOR

ITEM 203 – LINEAR GRADING, AS PER PLAN

IN ADDITION TO THE PLAN QUANTITIES TABULATED ON SHEETS 58 AND 59, THE FOLLOWING CONTIGENCY QUANTITIES ARE PROVIDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER TO POSITIVELY REGRADE ANY EXISTING TREE LAWNS THAT MAY POND RAIN WATER OR THAT OTHERWISE REQUIRE REGRADING AS DETERMINED BY THE ENGINEER.

ITEM 203 – LINEAR GRADING, AS PER PLAN	4000	METERS
ITEM 659 – COMMERCIAL FERTILIZER	1100	KILOGRAMS
ITEM 659 – AGRICULTURAL LIMING	6160	KILOGRAMS
ITEM 659 – SEEDING AND MULCHING, AS PER PLAN	11000	SQ METERS

EXISTING WALK REMOVAL/REPLACEMENT

APPROXIMATE LOCATIONS FOR THE REQUIRED REMOVAL/REPLACEMENT OF WALK ARE AS SHOWN ON THE PLANS. WALK REMOVAL/REPLACEMENT LIMITS SHALL TYPICALLY EXTEND TO THE NEAREST EXISTING WALK JOINT/DIVISION LINE UNLESS OTHERWISE DIRECTED BY THE ENGINEER. THE EXACT LOCATIONS AND LIMITS OF EXISTING WALK REMOVAL/REPLACEMENT SHALL BE ESTABLISHED AND DESIGNATED BY THE ENGINEER. AEROSOL SPRAY PAINT FOR OUTLINING SHALL BE PROVIDED BY THE CONTRACTOR

EXISTING WALK SHALL BE REMOVED AND DISPOSED OF PER 202.05 AND IN A MANNER THAT WILL NOT DISTURB, DAMAGE, OR UNDERMINE ADJACENT WALK, CURB, DRIVES OR DRIVE APRONS INTENDED TO REMAIN IN PLACE. ANY ADJACENT FACILITIES DAMAGED AS A RESULT OF THE CONTRACTOR'S NEGLIGENCE, AS DETERMINED BY THE ENGINEER, AND WHICH ARE NOT OTHERWISE DESIGNATED FOR REPLACEMENT, SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE; ALL AT THE DIRECTION OF THE ENGINEER.

REPLACED WALK SHALL BE CONSTRUCTED IN ACCORDANCE WITH "ITEM 608 – 114mm CONCRETE WALK, AS PER PLAN" (SEE PLAN NOTE).

WHERE REQUIRED TO FACILITATE CURB RAMP CONSTRUCTION, EXISTING WALK AND CURB SHALL BE REMOVED PER 202.05 AND REPLACED IN ACCORDANCE WITH THE ITEM 608 – CURB RAMP(S) SPECIFIED; ALL PER BP-7.1M AND AT THE DIRECTION OF THE ENGINEER. CURB RAMPS SHOWN IN THE PLANS ARE SUBJECT TO ADJUSTMENT TO MINIMIZE CONFLICTS WITH EXISTING CATCH BASINS, MANHOLES, UTILITY POLES, HYDRANTS OR OTHER SUCH APPURTENANCES

ESTIMATED PLAN QUANTITIES FOR THE ABOVE WORK ARE TABULATED ON SHEETS 63-64 AND CARRIED TO THE GENERAL SUMMARY.

PAYMENT OF THE ACTUALLY COMPLETED AND ACCEPTED QUANTITIES OF THE ABOVE WORK SHALL BE MADE AT THE CONTRACT UNIT PRICE BID FOR:

ITEM 202 – WALK REMOVED	(SQ METERS)
ITEM 608 – 114mm CONCRETE WALK, AS PER PLAN	(SQ. METERS)
ITEM 608 – CURB RAMP, TYPE 1	(EACH)
ITEM 608 – CURB RAMP, TYPE 2	(EACH)
ITEM 608 – CURB RAMP, CITY OF CLEVELAND, TYPE 1	(EACH)
ITEM 608 – CURB RAMP, CITY OF CLEVELAND, TYPE 2	(EACH)

THE LIMITS OF ADDITIONAL CONTINGENCY WALK REMOVAL/REPLACEMENT REQUIRED TO FACILITATE ADJACENT CURB, UNDERDRAIN, CURB RAMP, OR DRIVE APRON WORK NOT OTHERWISE SHOWN ON THE PLANS SHALL BE DESIGNATED BY THE ENGINEER. AREAS OF WALK REMOVED/REPLACED TO FACILITATE CURB AND/OR UNDERDRAIN WORK SHALL NOT GENERALLY EXCEED 0.6 METERS BEYOND THE BACK OF CURB. THIS WORK SHALL INCLUDE THE COST OF ANY SAW CUTS AND PRE-MOLDED JOINT FILLER REQUIRED BY THE ENGINEER TO COMPLETE THIS WORK

THE FOLLOWING CONTINGENCY QUANTITIES ARE CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER AND ARE IN ADDITION TO THE PLAN QUANTITIES TABULATED ON SHEETS 63-64

ITEM 202 – WALK REMOVED	800	SQ METERS
ITEM 608 – 114mm CONCRETE WALK AS PER PLAN	800	SQ. METERS

ITEM 608 – 114 mm CONCRETE WALK, AS PER PLAN

ALL CONCRETE WALK SHALL BE A MINIMUM OF 114 mm THICK AND HAVE A 50 mm COMPACTED SCREENINGS BED WHICH MEETS THE REQUIREMENTS OF 703.10 EXCEPT THAT THE MINIMUM TOTAL PERCENT PASSING THE 150 MICROMETER SIEVE SHALL BE FIVE (5) PERCENT. THE COST FOR FURNISHING AND PLACING THE 50 mm COMPACTED SCREENINGS BED SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE BID FOR ITEM 608 – 114 mm CONCRETE WALK, AS PER PLAN

IN ADDITION TO THE LOCATIONS SPECIFIED UNDER 608.03(c), TRANSVERSE EXPANSION JOINT FILLER (705.03) SHALL BE CONSTRUCTED AT INTERVALS OF NOT MORE THAN 30 m UNLESS OTHERWISE DIRECTED BY THE ENGINEER. THE FILLER SHALL BE PLACED AT THE TRANSVERSE DIVISION JOINTS FOR THE FULL DEPTH/WIDTH OF THE CONCRETE WALK AND SHALL BE TRULY NORMAL TO GRADE

THE FINAL SURFACE SHALL BE TEXTURED BY USE OF AN ACCEPTED BROOM SO AS TO PRODUCE A UNIFORM, GRITTY, TRANSVERSE TEXTURE

THE COST OF THE MATERIAL AND LABOR ASSOCIATED WITH THE ABOVE WORK IS INCLUDED IN THE CONTRACT UNIT PRICE BID FOR ITEM 608 – 114 mm CONCRETE WALK AS PER PLAN

EXISTING DRIVE APRON REMOVAL/REPLACEMENT

THE PROPOSED LOCATIONS AND LIMITS OF DRIVE APRON REPLACEMENTS ARE AS SHOWN ON THE PLANS WITH THE ASSOCIATED PLAN QUANTITIES TABULATED ON SHEETS 68-71 AND CARRIED TO THE GENERAL SUMMARY.

THE CONTRACTOR SHALL REMOVE AND DISPOSE OF THE EXISTING DRIVE APRONS PER 202.05 AND BY METHODS THAT WILL NOT DISTURB, DAMAGE OR UNDERMINE THE ADJACENT PAVEMENT, CURB, SIDEWALK OR EXISTING DRIVES INTENDED TO REMAIN IN PLACE. ANY ADJACENT FACILITIES DAMAGED AS A RESULT OF THE CONTRACTOR'S NEGLIGENCE, AS DETERMINED BY THE ENGINEER, AND WHICH ARE NOT OTHERWISE DESIGNATED FOR REPLACEMENT, SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE; ALL AT THE DIRECTION OF THE ENGINEER.

EXCEPT AS OTHERWISE DIRECTED BY THE ENGINEER, THE CONFIGURATIONS OF REPLACED DRIVE APRONS SHALL CONFORM TO THE TYPICAL DRIVE APRON DETAILS AND THE CORRELATING DRIVE TABLE DIMENSIONS ON SHEETS 68-71. THE DRIVE APRON COMPOSITIONS SHALL MINIMALLY CONFORM TO THE DETAILS SHOWN ON CONSTRUCTION DRAWING BP-4.1C

ITEM 606 – BRIDGE TERMINAL ASSEMBLY, TYPE 1, AS PER PLAN
ITEM 606 – BRIDGE TERMINAL ASSEMBLY, TYPE 2, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF ITEM 606, SPACER BLOCKS IN ACCORDANCE WITH CONSTRUCTION DRAWING MD-8C SHALL BE FURNISHED AND INSTALLED.

ITEM 611 – REINFORCED CONCRETE APPROACH SLAB (T=380mm), AS PER PLAN

THE SHAPE OF THE MEDIAN CURBS AND INTEGRAL CURBS ON THE 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 CURBS, STEEL CURB PLATES, AND ANCHORS SHALL BE INCLUDED WITH ITEM 611 – REINFORCED CONCRETE APPROACH SLAB (T=380mm), AS PER PLAN FOR PAYMENT.

ITEM 202 – PAVEMENT REMOVED, AS PER PLAN &
ITEM 202 – APPROACH SLAB REMOVED, AS PER PLAN

ITEM 202 – PAVEMENT REMOVED, AS PER PLAN AND ITEM 202 – APPROACH SLAB REMOVED SHALL BE IN ACCORDANCE WITH ITEM 202 AND INCLUDE THE REMOVAL OF THE ASSOCIATED CONCRETE CURB AND MEDIAN. NO ADDITIONAL COMPENSATION WILL BE MADE

EROSION CONTROL

ITEM 659 – SEEDING AND MULCHING, AS PER PLAN

WHEN THE ABOVE ITEM IS CALLED FOR ON THE PLANS OR IN THE PROPOSAL, ALL APPLICABLE PROVISIONS OF ITEM 659 AS SET FORTH IN THE CONSTRUCTION AND MATERIAL SPECIFICATIONS SHALL APPLY UNLESS MODIFIED HEREIN.

659.06 MULCHING METHODS:

UPON THE APPROVAL OF THE ENGINEER, OTHER MATERIALS PROCESSED OR MANUFACTURED FOR MULCHING PURPOSES MAY BE USED

659.09 SEEDING AND MULCHING:

THE MIXTURE OF SEEDS TO BE USED SHALL BE AS FOLLOWS, OR AS DETERMINED BY THE ENGINEER IN THE FIELD FOR THE AREA CONCERNED.

RESIDENTIAL & URBAN AREAS:

40% KENTUCKY BLUE GRASS
30% MANHATTAN OR PENFINE RYEGRASS
30% CREEPING RED FESCUE

AT LOCATIONS SUCH AS INTERSECTING STREETS, PRIVATE LAWNS, OR PARKS, WHERE THE PROJECT SEEDING ADJOINS SEEDING OF A HIGHER TYPE OR QUALITY, THE CONTRACTOR SHALL, TO THE SATISFACTION OF THE ENGINEER, ADJUST THE PROJECT SEEDING TO DUPLICATE OR MATCH THE HIGHER TYPE SEEDING AT NO ADDITIONAL COST TO THE COUNTY.

ASPHALT EMULSION SHALL NOT BE USED TO PREVENT DISPLACEMENT OF MULCHING MATERIALS.

THE OPERATION OF THE ACTUAL SEED SOWING WILL NOT BE PERMITTED AT SUCH TIMES AS THE ENGINEER DEEMS IMPROPER FOR SEEDING.

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 ITEM 659 – SEEDING AND MULCHING, AS PER PLAN ARE BASED ON THESE LIMITS.

PAYMENT FOR THIS WORK SHALL BE MADE AT THE CONTRACT UNIT PRICE BID FOR THE ACTUALLY COMPLETED AND ACCEPTED QUANTITIES OF:

ITEM 659 – SEEDING AND MULCHING, AS PER PLAN	(SQ. METERS)
ITEM 659 – AGRICULTURAL LIMING	(KILOGRAMS)
ITEM 659 – COMMERCIAL FERTILIZER	(KILOGRAMS)

QUANTITIES FOR THE ABOVE ARE AS ESTIMATED IN THE SUBSUMMARY SHEETS AND CARRIED TO THE GENERAL SUMMARY

WATERING PERMANENT SEEDED AREAS

THE FOLLOWING ESTIMATED QUANTITIES ARE TO BE USED AS DIRECTED BY THE ENGINEER TO PROMOTE GROWTH AND TO CARE FOR PERMANENT SEEDED AREAS PER 659.09:

ITEM 659 – WATER	110	CU. METERS

CALCULATED PDH CHECKED JAN

GENERAL NOTES

LAKEWOOD HEIGHTS BOULEVARD

7
162

DESIGNED BY:		CHECKED BY:	JAN
DATE:		DATE:	8/08/97
DRAWN BY:	MAL	REVISED BY:	MAL
DATE:	7/24/97	DATE:	10/22/98
CAD FILE NAME:		HGGN0101	HGGN0101.DWG 5-18-98 1:50:22 pm EST

DRAINAGE

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 APPURTENANCES SHALL BE DETERMINED FROM FIELD OBSERVATIONS. RECORDS OF THE INSPECTION SHALL BE KEPT IN WRITING BY THE STATE

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 CONTRACTOR PRICE FOR THE PERTINENT 603 CONDUIT ITEMS

RESIDENTIAL AND COMMERCIAL DRAINAGE CONNECTIONS

EXISTING ROOF DRAINS, FOOTER DRAINS OR YARD DRAINS DISTURBED BY THE WORK SHALL BE PROVIDED WITH UNOBSTRUCTED OUTLETS BY CONNECTING A CONDUIT INTO A STORM SEWER OR DRAINAGE STRUCTURE. THE LOCATION, TYPE, SIZE AND GRADE OF THE NEW CONDUIT REQUIRED TO REPLACE OR EXTEND THE EXISTING DRAIN WILL BE DETERMINED BY THE ENGINEER.

THE FOLLOWING CONDUIT TYPES MAY BE USED: 706.01 (CLASS 3), 706.02, 706.08 (EXTRA STRENGTH), 707.33, 707.42, 707.43, 707.44, 707.45, 707.47, 707.51 OR 707.52.

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

ITEM 603 – 150mm CONDUIT, TYPE B, FOR DRAINAGE CONNECTION	100	METERS
ITEM 603 – 150mm CONDUIT, TYPE C, FOR DRAINAGE CONNECTION	50	METERS

EXISTING TEST TEES

STORM AND SANITARY SEWER CONNECTION TEST TEES ENCOUNTERED WITHIN THE CONSTRUCTION LIMITS SHALL BE ADJUSTED TO GRADE, RECONSTRUCTED TO GRADE, ABANDONED WITH NEW TEST TEES INSTALLED AT ALTERNATE LOCATIONS, OR SIMPLY REPLACED, AS REQUIRED AND DIRECTED BY THE ENGINEER; ALL IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF ITEM 604 AND THE DETAILS ON CONSTRUCTION DRAWING MD–6C. WHEN IT BECOMES NECESSARY TO PLACE OR REPLACE TEST TEES WITHIN PAVED AREAS SUCH AS DRIVEWAYS, SIDEWALKS, ETC. (RELOCATE OUTSIDE PAVED AREAS WHERE POSSIBLE), THEY SHALL BE SET TO FINISHED PAVED SURFACE GRADE AS DETAILED ON CONSTRUCTION DRAWING MD–6C, AND/OR AS OTHERWISE SPECIFIED BY THE ENGINEER

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

ITEM 202 – ABANDON, MISC: TEST TEE	5	EACH
ITEM 604 – DRAINAGE STRUCTURE, MISC: TEST TEE ADJUSTED TO GRADE	5	EACH
ITEM 604 – DRAINAGE STRUCTURE, MISC: TEST TEE RECONSTRUCTED TO GRADE	5	EACH
ITEM 604 – DRAINAGE STRUCTURE, MISC: TEST TEE	5	EACH

NONE OF THE ABOVE MATERIALS SHALL BE ORDERED BY THE CONTRACTOR UNTIL AUTHORIZED BY THE ENGINEER

ITEM SPECIAL – MISCELLANEOUS METAL

STRUCTURES, FOR WHICH ADJUST TO GRADE OR RECONSTRUCTION WORK IS SPECIFIED, MAY HAVE EXISTING CASTINGS WHICH ARE UNSUITABLE FOR REUSE, AS DETERMINED BY THE ENGINEER. TO PROVIDE FOR THIS CONTINGENCY, AN ESTIMATED QUANTITY OF ITEM SPECIAL – MISCELLANEOUS METAL HAS BEEN INCLUDED IN THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE THE CASTINGS OF THE REQUIRED TYPE, SIZE AND STRENGTH (HEAVY DUTY) FOR THE PARTICULAR STRUCTURE IN QUESTION. ALL CASTING MATERIALS SHALL CONFORM TO ITEM 604 SPECIFICATIONS AND HAVE THE PRIOR APPROVAL OF THE ENGINEER.

WHERE IT IS NECESSARY TO REPLACE UNSUITABLE STORM SEWER MANHOLE CASTINGS (FRAMES AND COVERS), THEY SHALL BE REPLACED USING CUYAHOGA COUNTY NO. 9 FRAMES AND NO. 28 COVERS AS DETAILED ON CONSTRUCTION DRAWING MH–10C.

WHERE THE ENGINEER DETERMINES CATCH BASIN GRATES ENCOUNTERED WITHIN THE WORK ARE NON–BICYCLE/PEDESTRIAN SAFE, THEY SHALL BE REMOVED AND REPLACED WITH THE APPROPRIATE BICYCLE / PEDESTRIAN SAFE GRATES AS AVAILABLE AND RECOMMENDED BY THE VARIOUS CASTING MANUFACTURERS AND APPROVED BY THE ENGINEER. REFER TO STANDARD CONSTRUCTION DWG. CB–3C FOR THE APPROPRIATE FRAME AND GRATE TO BE USED ON CUYAHOGA COUNTY NO. 3–C CATCH BASINS AND SEE SHEET 94A FOR APPROPRIATE FRAME AND GRATE TO BE USED ON CITY OF CLEVELAND NO. 1 CATCH BASINS.

WHERE ENCOUNTERED, EXISTING CAST IRON TRAPS SHALL BE REUSED. IF, IN THE OPINION OF THE ENGINEER, THE EXISTING TRAP IS UNSUITABLE FOR REUSE, THE CONTRACTOR SHALL REPLACE IT. SEE CUYAHOGA COUNTY STANDARD DWG. CB–3C FOR APPROPRIATE CAST IRON TRAP TO BE USED ON CUYAHOGA COUNTY NO. 3–C CATCH BASINS.

THE CONTRACTOR IS CAUTIONED TO USE EXTREME CARE IN THE REMOVAL, STORAGE AND RESETTING OF ALL EXISTING CASTINGS CASTINGS DAMAGED BY THE NEGLIGENCE OF THE CONTRACTOR, AS DETERMINED BY THE ENGINEER, SHALL BE REPLACED WITH THE PROPER NEW CASTINGS AT THE CONTRACTOR'S EXPENSE

THE CONTRACTOR SHALL NOT ORDER ANY OF THE ABOVE CASTINGS UNTIL DIRECTED BY THE ENGINEER, AND IN THE EVENT NO REPLACEMENT CASTINGS ARE REQUIRED, THE ITEM SHALL BE NONPERFORMED.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER:

ITEM SPECIAL – MISCELLANEOUS METAL	4000	KILOGRAMS

STRUCTURES ADJUSTED TO GRADE OR RECONSTRUCTED TO GRADE

ALL ADJUSTMENT OR RECONSTRUCTION WORK, EXCEPT FOR THOSE STRUCTURES OWNED BY PRIVATE COMPANIES, SHALL BE PERFORMED BY THE CONTRACTOR. WHERE APPLICABLE, THE TIME BETWEEN RESETTING THE CASTINGS AND RESURFACING SHALL BE KEPT TO AN ABSOLUTE MINIMUM.

CASTINGS SHALL BE ADJUSTED TO GRADE IN ACCORDANCE WITH 604.03(a) OR 638.19, AS APPLICABLE. NO ADJUSTING RINGS OR CASTINGS ARE PERMITTED.

ADJUST TO GRADE OR RECONSTRUCT TO GRADE WORK SHALL, WHERE REQUIRED, INCLUDE THE REMOVAL AND REPLACEMENT, IN KIND, OF ANY EXISTING CONCRETE BLOCKOUT PAVEMENT. CUYAHOGA COUNTY NO. 3–C CATCH BASIN BLOCKOUT PAVEMENT SHALL BE REPLACED IN ACCORDANCE WITH CUYAHOGA COUNTY STANDARD DWG CB–3C. DAMAGED PAVEMENT DOWELS OR OTHER SUCH LOAD TRANSFER DEVICES SHALL BE REPLACED AS DIRECTED BY THE ENGINEER

ALL EXISTING CASTINGS FOR STRUCTURES TO BE ADJUSTED OR RECONSTRUCTED TO GRADE SHALL BE FIELD CHECKED AT THE TIME OF CONSTRUCTION AND MARKED SUITABLE FOR SALVAGE AND REUSE OR REPLACED AS DIRECTED BY THE ENGINEER. UNLESS OTHERWISE INDICATED ON THE PLAN, REPLACEMENT CASTINGS ARE PAID UNDER ITEM SPECIAL – MISCELLANEOUS METAL

THE FOLLOWING CONTINGENCY QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY IN ADDITION TO THE QUANTITIES SHOWN ON SHEET NOS. 65A–67A TO PERFORM THIS WORK

ITEM 604 – CATCH BASIN ADJUSTED TO GRADE, AS PER PLAN	5	EACH
ITEM 604 – CATCH BASIN RECONSTRUCTED TO GRADE, AS PER PLAN	5	EACH
ITEM 604 – MANHOLE ADJUSTED TO GRADE, AS PER PLAN	5	EACH
ITEM 604 – MANHOLE RECONSTRUCTED TO GRADE	5	EACH
ITEM 638 – VALVE BOX ADJUSTED TO GRADE	10	EACH
ITEM 638 – SERVICE BOX ADJUSTED TO GRADE	20	EACH

WHERE CERTAIN STRUCTURES ARE DETERMINED BY THE ENGINEER TO REQUIRE TOTAL REPLACEMENT IN LIEU OF ADJUSTMENT OR RECONSTRUCTION, THEY SHALL BE COMPLETELY REMOVED AND REPLACED IN KIND WITH A NEW STRUCTURE OF THE TYPE SPECIFIED BY THE ENGINEER AND IN ACCORDANCE WITH ITEM 604. NEW MANHOLE CASTINGS SHALL CONFORM TO CONSTRUCTION DRAWING MH–10C. THE FOLLOWING FOLLOWING ESTIMATED QUANTITIES ARE PROVIDED FOR THIS CONTINGENCY:

ITEM 604 – MANHOLE, NO 1, AS PER PLAN	5	EACH
ITEM 604 – CATCH BASIN, CUYAHOGA COUNTY NO. 3–C	10	EACH
ITEM 604 – CATCH BASIN, CITY OF CLEVELAND NO. 1	10	EACH

NONE OF THE ABOVE MATERIALS SHALL BE ORDERED BY THE CONTRACTOR UNTIL AUTHORIZED BY THE ENGINEER.

THE COST OF REPLACING EXISTING CONDUIT CONNECTIONS, IF REQUIRED, SHALL BE PAID FOR BY SIZE AND TYPE SPECIFIED AND/OR DESIGNATED BY THE ENGINEER. AN ESTIMATED QUANTITY OF THE FOLLOWING IS PROVIDED IN THE GENERAL SUMMARY FOR THIS WORK:

ITEM 603 – 300mm CONDUIT, TYPE B, 706.02	20	METER
ITEM 603 – 300mm CONDUIT, TYPE C, 706.01 (CLASS 3), 706.02 OR 706.08 (ES)	20	METER
ITEM 603 – 150 mm CONDUIT, TYPE F	20	METER

NONE OF THE ABOVE MATERIALS SHALL BE ORDERED BY THE CONTRACTOR UNTIL AUTHORIZED BY THE ENGINEER

ITEM 605 – 150mm SHALLOW PIPE UNDERDRAIN WITH FABRIC WRAP, AS PER PLAN

THE FOLLOWING PIPE MATERIAL TYPES MAY BE USED FOR 150mm PERFORATED UNDERDRAIN PIPE: 706.06; 706.08; 707.31; 707.41; AND 707.33. 707.42 OR 707.45 PERFORATED PER 707.31.

EXISTING UNDERDRAINS

AT THE INTERSECTIONS OF LAKEWOOD HEIGHTS BOULEVARD WITH WARREN ROAD, BUNTS ROAD AND W. 140TH ST., IT IS INTENDED NOT TO DISTURB THE EXISTING VSP UNDERDRAIN DURING THE INTEGRAL CONCRETE CURB AND PAVEMENT REMOVAL AND REPLACEMENT OPERATIONS, AS PER THE DETAILS SHOWN IN METHOD "B" ON CUYAHOGA COUNTY STANDARD CONSTRUCTION DRAWING MD–1C. EXISTING UNDERDRAINS WHICH THE ENGINEER DETERMINES ARE ADVERSELY AFFECTED (THROUGH NO FAULT OF THE CONTRACTOR) BY THE CONSTRUCTION OF THIS IMPROVEMENT OR ARE FOUND TO BE OTHERWISE UNSUITABLE, SHALL BE REMOVED AND REPLACED IN KIND, AT THE SAME TRENCH WIDTH AND DEPTH, UNLESS OTHERWISE SPECIFIED BY THE ENGINEER.

THE FOLLOWING CONTIGENCY QUANTITY IS CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER:

ITEM 605 – 150mm SHALLOW PIPE UNDERDRAIN, 706.08	170	METERS

THE ABOVE ITEM SHALL NOT BE ORDERED BY THE CONTRACTOR UNTIL AUTHORIZED BY THE ENGINEER.

NEW CATCH BASIN CONSTRUCTION

NEW CATCH BASINS SHALL BE CONSTRUCTED AT VERTICAL SAG POINTS WHICH HAVE NO EXISTING CATCH BASINS. THE LOCATION OF THE CATCH BASINS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD. THE SLOPE AND PIPE RUN WILL BE DETERMINED BY THE ENGINEER IN THE FIELD. IN ADDITION, IT IS THE RESPONSIBILITY OF THE ENGINEER TO BE SURE THAT SAG POINTS IN AREAS OF TOTAL REPLACEMENT ARE STILL ABLE TO DRAIN TO EXISTING CATCH BASINS IN THE FIELD. THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR USE IN DRAINING VERTICAL SAG POINTS AS DIRECTED BY THE ENGINEER.

ITEM 603 – 300mm CONDUIT, TYPE B, 706.02	100	METERS
ITEM 604 – CATCH BASIN, CUYAHOGA COUNTY TWIN 3C	4	EACH

THE ABOVE ITEMS ARE INTENDED FOR USE AT STA. 10+130± AS WELL AS OTHER LOCATIONS DIRECTED BY THE ENGINEER

PAVEMENT

PROFILE AND ALIGNMENT

THE PROPOSED PAVEMENT RESURFACING SHALL FOLLOW THE ALIGNMENT AND PROFILE OF THE EXISTING PAVEMENT. THE PROPOSED ASPHALT CONCRETE OVERLAY SHALL HAVE A UNIFORM THICKNESS AS SHOWN ON THE TYPICAL SECTIONS.

CONTRACTION AND/OR EXPANSION JOINTS

ALTHOUGH SPECIFIC LOCATIONS OF CERTAIN CONTRACTION AND EXPANSION JOINTS HAVE BEEN DETAILED ON THIS PLAN, NO WAIVER OF THE SPECIFICATIONS IS INTENDED. PROVISION OF EXPANSION JOINTS AT ALL MAJOR STRUCTURES AND THE MAXIMUM SPACING BETWEEN CONTRACTION JOINTS SHALL, IN ALL CASES, BE IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWING BP–2.2M AND THE SPECIFICATIONS.

CONTRACTION JOINTS IN CONCRETE PAVEMENT OR BASE REPLACEMENT

WHERE NEW CONCRETE IS PLACED ADJACENT TO EXISTING CONCRETE, CONTRACTION JOINTS SHALL BE PROVIDED IN THE NEW CONCRETE SO AS TO FORM CONTINUOUS JOINTS WITH THOSE IN THE EXISTING CONCRETE

THE MAXIMUM DISTANCE BETWEEN THE JOINTS IN THE NEW CONCRETE SHALL BE IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWING BP–2.2M. IF NECESSARY, ADDITIONAL JOINTS SHALL BE PROVIDED IN THE NEW CONCRETE AT APPROXIMATELY EQUAL INTERVALS BETWEEN EXISTING JOINTS THAT EXCEED THE MAXIMUM SPACING.

ITEM 407 – TACK COAT &
ITEM 407 – TACK COAT FOR INTERMEDIATE COURSE

THE RATE OF APPLICATION OF THE 407 TACK COAT SHALL BE SUBJECT TO ADJUSTMENT AS DIRECTED BY THE ENGINEER. PLAN QUANTITIES INDICATE AN AVERAGE APPLICATION RATE OF 0.34 LITERS PER SQUARE METER OF TACK FOR ESTIMATING PURPOSES ONLY

ITEMS 301 AND 448, PG 64–22, AS PER PLAN

THE COARSE AGGREGATE FOR ANY ASPHALT CONCRETE COURSE SHALL BE CRUSHED CARBONATE STONE OR CRUSHED AIR–COOLED SLAG.

FOR ALL INTERMEDIATE, LEVELING, OR BITUMINOUS AGGREGATE BASE COURSES, UP TO A MAXIMUM OF 35 PERCENT RECLAIMED MATERIAL MAY BE USED; HOWEVER, PG 58–28 BINDER SHALL BE USED FOR MIXES CONTAINING MORE THAN 20 PERCENT RECLAIMED MATERIAL.

CALCULATED PDH JAN
CHECKED

GENERAL NOTES

LAKEWOOD HEIGHTS BOULEVARD

DESIGNED BY:		CHECKED BY:	JAN
DATE:		DATE:	R/08/97
DRAWN BY:	MAL	REVISED BY:	MAL
DATE:	7/24/97	DATE:	10/20/98
CAD FILE NAME:	HCGN0102		

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PAVEMENT (CONTINUED)

ITEM 304 – AGGREGATE BASE, AS PER PLAN

MATERIAL FURNISHED FOR THIS ITEM SHALL BE LIMITED TO CRUSHED CARBONATE STONE, CRUSHED AIR-COOLED BLAST FURNACE SLAG OR OPEN HEARTH SLAG FROM APPROVED SOURCES ON FILE AT THE LABORATORY

ALL MATERIALS SHALL MEET THE GRADATION REQUIREMENTS OF 304.02 EXCEPT THE 75 MICROMETER SIEVE, HEREBY MODIFIED TO 0–10 TOTAL PERCENT PASSING

AGGREGATE BASE MATERIAL MAY BE SPREAD UPON THE SUBGRADE ONLY AFTER THE PRESCRIBED SUBGRADE AND SUBBASE DRAINAGE HAS BEEN PLACED, EXCEPT THAT FOR PORTLAND CEMENT CONCRETE PAVEMENTS, UNDERDRAINS NEED NOT BE PLACED PRIOR TO PLACING AGGREGATE BASE MATERIAL, PROVIDING ADEQUATE SURFACE DRAINAGE FOR THE SUBGRADE IS MAINTAINED DURING CONSTRUCTION

VERIFICATION OF POSITIVE DRAINAGE FROM SIDEWALK TO CURB

THE CONTRACTOR SHALL VERIFY THAT ALL PROPOSED SIDEWALK AND TREE LAWN SURFACES AND EXISTING TREE LAWN SURFACES ADJACENT TO PROPOSED CURB HAVE CROSS SLOPES THAT PROVIDE POSITIVE DRAINAGE TO THE TOP OF CURB. IN AREAS WHERE POSITIVE DRAINAGE CANNOT BE ACHIEVED WITH TYPICAL CURB REVEAL, THE CONTRACTOR SHALL ADJUST THE PROPOSED CURB GRADE TO PROVIDE AT LEAST 100mm OF CURB REVEAL. TRANSITIONS TO LESS THAN 150mm CURB REVEAL SHALL BE SMOOTH, UNIFORM, AND CONTINUOUS AND SHALL HAVE THE ENGINEER'S APPROVAL PRIOR TO CONSTRUCTION. COSTS FOR VERIFYING POSITIVE DRAINAGE FROM SIDEWALK TO CURB TOGETHER WITH ANY CURB GRADE ADJUSTMENTS SHALL BE CONSIDERED INCIDENTAL TO ITEM 609

JOINT AND CRACK SEALING CONCRETE PAVEMENT (BASE) PRIOR TO OVERLAY

THE FOLLOWING METHOD OF CLEANING AND SEALING SHALL BE REQUIRED, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

JOINTS AND CRACKS SHALL BE THOROUGHLY CLEANED OF ALL FOREIGN MATERIAL BY APPROVED EQUIPMENT/METHODS SUCH AS SAND BLASTING, WATER UNDER PRESSURE, COMPRESSED AIR, ETC.; AND THE CONTACT SURFACES SHALL BE CLEAN AND DRY WHEN THE SEAL IS APPLIED.

WHERE LONGITUDINAL, TRANSVERSE OR OTHER RANDOM CRACKS OCCUR, AND WHERE SUCH CRACKS, IN THE OPINION OF THE ENGINEER, ARE NOT STRUCTURALLY DAMAGING TO THE RIGID PAVEMENT (STRUCTURALLY DETERIORATED CRACKS AND JOINTS SHALL BE REPAIRED PER THE PARTIAL AND/OR FULL DEPTH PAVEMENT REPAIR OPERATIONS OUTLINED ELSEWHERE IN THE PLANS.). THE CONTRACTOR SHALL CLEAN AND SEAL THE CRACK OPENINGS AS FOLLOWS:

A. WHERE THE CRACK EXTENDS DEEP INTO THE RIGID PAVEMENT AND THE SURFACE OPENING IS GREATER THAN 20mm, IT SHALL BE CLEANED THEN SEALED AS FOLLOWS: THE LOWER PORTION OF THE CRACK SHALL BE FILLED WITH HOT-APPLIED 705.04 JOINT SEALER. THE UPPER PORTION OF THE CRACK SHALL BE FILLED FLUSH TO THE SURFACE WITH SAND ASPHALT. THE SAND SHALL CONFORM TO 703.02, EXCEPT THAT 100% MUST PASS THE NUMBER 4 SIEVE. THE BITUMEN CONTENT SHALL BE AS DIRECTED BY THE LABORATORY WITHIN THE FOLLOWING LIMITS:

BITUMEN (PERCENT OF TOTAL MIX) 5.0 TO 10.0

B. CRACKS WITH SURFACE OPENINGS LESS THAN 20mm SHALL BE CLEANED AND FILLED WITH A 705.04 JOINT SEALER FLUSH TO THE SURFACE WITHOUT EXCESS.

UNLESS OTHERWISE DESIGNATED FOR PARTIAL OR FULL-DEPTH REPAIR, EXISTING LONGITUDINAL AND TRANSVERSE PAVEMENT JOINTS SHALL BE CLEANED AND RESEALED WITH 705.04 BITUMINOUS JOINT SEALER. FOR JOINT OPENINGS WIDER THAN 20mm, AN APPROVED BOND-BREAKING BACKER ROD MATERIAL SHALL BE INSTALLED SUCH THAT ONLY THE UPPER 25mm OF THE JOINT WILL SUBSEQUENTLY BE SEALED WITH 705.04. EXISTING JOINT SEALER SHALL BE REMOVED BY METHODS APPROVED BY THE ENGINEER. TRANSVERSE JOINTS SHALL BE FILLED TO APPROXIMATELY 3mm TO 6mm BELOW THE PAVEMENT SURFACE. LONGITUDINAL JOINTS SHALL BE FILLED FLUSH TO THE SURFACE WITHOUT EXCESS. WHERE, IN THE OPINION OF THE ENGINEER, EXISTING TRANSVERSE JOINTS ARE SOUNDLY SEALED FOR THE ENTIRE PAVEMENT WIDTH, SAID JOINTS SHALL BE LEFT UNDISTURBED EXCEPT THAT THEY SHALL BE SWEPT CLEAN AND/OR BLOWN CLEAN WITH COMPRESSED AIR PRIOR TO THE OVERLAY OPERATIONS

THE METHOD OF MEASUREMENT SHALL BE THE ACTUAL NUMBER OF METERS MEASURED ALONG THE CONCRETE PAVEMENT CRACK OR JOINT

THE FOLLOWING ESTIMATED QUANTITIES ARE PROVIDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER FOR:

ITEM SPECIAL – CONCRETE PAVEMENT JOINT CLEANED AND FILLED	1000	METERS
ITEM SPECIAL – CONCRETE PAVEMENT CRACK CLEANED AND FILLED	1000	METERS

REPAIR OF DAMAGED OR LOOSE BRICK PAVEMENT

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER IN REMOVING AND REPLACING UNSTABLE AREAS OF EXISTING BRICK PAVEMENT:

ITEM 202 – BRICK BASE REMOVED	500	SQ. METER
ITEM 301 – BITUMINOUS AGGREGATE BASE	100	CU. METER

ITEM 255 – FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS MS, AS PER PLAN

WHEN THIS ITEM IS CALLED FOR ON THE PLANS OR IN THE PROPOSAL, ALL APPLICABLE PROVISIONS OF ITEM 255 AS SET FORTH IN THE CONSTRUCTION AND MATERIAL SPECIFICATIONS, SHALL APPLY EXCEPT AS MODIFIED HEREIN AND AS OTHERWISE DETAILED OR SPECIFIED ON CONSTRUCTION DRAWING BP-2.5C, AND THE DETAIL ON TYPICAL SECTION SHEET '3'.

SUITABLE SUBBASE DISTURBED IN AREAS WHERE CONCRETE PAVEMENT IS REMOVED SHALL BE SHAPED AND RECOMPACTED TO THE SATISFACTION OF THE ENGINEER AT NO ADDITIONAL COST TO THE COUNTY. UNSUITABLE SUBBASE, AS DETERMINED BY THE ENGINEER, SHALL BE REMOVED AND REPLACED TO A 75mm MINIMUM DEPTH WITH ITEM 304 – AGGREGATE BASE ON A COMPACTED SUBGRADE, AGAIN AT NO ADDITIONAL COST TO THE COUNTY

WHERE UNSUITABLE SUBGRADE MATERIAL IS ENCOUNTERED, IT SHALL BE REMOVED TO THE DEPTH DETERMINED BY THE ENGINEER, AND REPLACED IN 100mm (LOOSE DEPTH) MECHANICALLY COMPACTED LAYERS. SUITABLE EMBANKMENT MATERIAL REQUIRED TO REPLACE THE UNDERCUT SUBGRADE SHALL, TO THE EXTENT POSSIBLE, EXHIBIT THE SAME PHYSICAL PROPERTIES AS THE ADJACENT SOUND SUBGRADE MATERIALS. ALL EARTHWORK MATERIALS AND OPERATIONS SHALL BE IN ACCORDANCE WITH ITEM 203 AND/OR AS DIRECTED BY THE ENGINEER

REMOVE AND REPLACEMENT OF UNSUITABLE SUBBASE OR SUBGRADE SHALL BE CONSIDERED INCIDENTAL TO ITEM 255 AND NO SEPARATE PAYMENT WILL BE MADE

ALL EXPOSED OR RECONSTRUCTED SUBGRADE SOILS SHALL BE COMPACTED TO A 150mm MINIMUM DEPTH PER THE REQUIREMENTS OF 203.13(a) AND NO SEPARATE PAYMENT SHALL BE MADE

INTEGRAL CONCRETE CURB REMOVED IN CONJUNCTION WITH THE PAVEMENT REMOVAL OPERATION SHALL NOT BE PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED INCIDENTAL TO THE ITEM 255 – PAVEMENT REMOVAL. INTEGRAL CONCRETE CURB SO REMOVED SHALL BE REPLACED (IN KIND) IN ACCORDANCE WITH THE "INTEGRAL CONCRETE CURB REPLACEMENT DETAIL, METHOD B", AS SHOWN ON CONSTRUCTION DRAWING MD-1C AND PAID FOR UNDER ITEM 609 – CURB, TYPE 2-B, AS PER PLAN.

MATERIALS FOR ANY BITUMINOUS OVERLAYS SHALL BE PAID FOR SEPARATELY AND BE AS SPECIFIED ELSEWHERE IN THE PLANS

THE REPLACEMENT OF UNSUITABLE SUBGRADE AND/OR SUBBASE MATERIAL SHALL BE IN ACCORDANCE WITH ITEM 203 AND ITEM 304 RESPECTIVELY. PAYMENT SHALL BE INCLUDED UNDER THE SQUARE METER UNIT PRICE FOR ITEM 255

QUANTITIES FOR THE ABOVE WORK ARE TABULATED ON SHEET NOS. 58, 59, & 61 AND CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER. PAYMENT FOR ACTUALLY COMPLETED AND ACCEPTED QUANTITIES SHALL BE MADE AT THE CONTRACT UNIT PRICE BID FOR:

ITEM 255 – FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS MS, AS PER PLAN	(SQ. METER)
ITEM 255 – FULL DEPTH PAVEMENT SAWING	(METER)
ITEM 609 – CURB TYPE 2-B	(METER)

IN ADDITION, THE FOLLOWING CONTINGENCY QUANTITIES ARE CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER:

ITEM 255 – FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS MS, AS PER PLAN	200	SQ. METER
ITEM 255 – FULL DEPTH PAVEMENT SAWING	100	METER
ITEM 609 – CURB, TYPE 2-B, AS PER PLAN	50	METER

ITEM 255 – FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS FS, AS PER PLAN

IN ADDITION TO ALL THE REQUIREMENTS OF "ITEM 255 – FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS MS, AS PER PLAN" ABOVE; THE CONTRACTOR SHALL FIELD TEST THE MIX DESIGN AND WORK PROCEDURES ON A FULL DEPTH REPAIR WITH THE PHASE 1 WORK AREA (APPROXIMATELY 100 SQ. METERS IN SIZE) AND WHICH WILL NOT IMPACT MAINTENANCE OF TRAFFIC OPERATIONS. THE CONTRACTOR SHALL DEMONSTRATE THAT THE MIX DESIGN IS CAPABLE OF MEETING 2.8 MPa (400 PSI) MODULUS OF RUPTURE STRENGTH WITHIN 4 HOURS OF PLACEMENT AND THAT THE CONTRACTORS WORK OPERATION CAN BE ACCOMPLISHED WITHIN 24 HOURS INCLUSIVE OF THE WORK REQUIRED TO SET AND REMOVE THE SINGLE LANE ZONES FOR MAINTAINING ONE NORTHBOUND AND ONE SOUTHBOUND LANE OF TRAFFIC ON WARREN ROAD. FAILURE TO DEMONSTRATE THE ABILITY TO MEET STRENGTH AND TIME REQUIREMENTS STATED ABOVE REQUIRES REPEATING THE FIELD TEST UNTIL THESE REQUIREMENTS ARE MET.

PAYMENT FOR THE FIELD TEST(S) SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 255 – FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS FS, AS PER PLAN. THIS ITEM ALSO INCLUDES PLACING A 75mm TEMPORARY SURFACE COURSE OF ITEM 410 – TRAFFIC COMPACTED AGGREGATE OVER THE RIGID BASE TO MEET THE FINISHED PAVEMENT GRADE (AFTER CONCRETE STRENGTH REQUIREMENTS HAVE BEEN MET) AND PLACEMENT OF ALL TRAFFIC CONTROL ITEMS REQUIRED FOR MAINTAINING TRAFFIC ON WARREN ROAD. MILLINGS SHALL MEET THE REQUIREMENTS OF ITEM 410.

PAYMENT FOR ITEM 255 FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS FS, AS PER PLAN SHALL BE MADE ON THE BASIS OF COMPLETING THE WORK, INCLUDING PLACEMENT OF A TEMPORARY SURFACE OF MILLED ASPHALT CONCRETE, AND SINGLE LANE TRAFFIC CONTROL WORK AS FOLLOWS:

TIME REQUIRED TO COMPLETE THE WORK	PAYMENT
LESS THAN 20 HOURS	110%
20 HOURS UP TO 24 HOURS	100%
24 HOURS UP TO 26 HOURS	70%
26 HOURS UP TO 30 HOURS	50%
30 HOURS AND MORE	20%

PAYMENT FOR FIELD TEST(S) SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 255 – FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS FS, AS PER PLAN

ITEM 451 – REINFORCED CONCRETE PAVEMENT, AS PER PLAN

WHEN THE ABOVE ITEM IS CALLED FOR ON THE PLANS OR IN THE PROPOSAL, ALL APPLICABLE PROVISIONS OF ITEM 451, AS SET FORTH IN THE CONSTRUCTION AND MATERIAL SPECIFICATIONS, SHALL APPLY EXCEPT AS MODIFIED HEREIN.

451.02 – MATERIAL.

CURING MATERIAL SHALL BE 705.07 (TYPE 2). REINFORCING MESH FABRIC SHALL BE 152mm x 305mm MW55 x MW26, CONFORMING TO 709.10 AND BP-1.1M

451.08 JOINTS.

(b) IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INSURE THE DOWEL BASKET ASSEMBLIES ARE STABLE AND HELD FIRMLY IN PLACE IN ACCORDANCE WITH BP-2.2M

(d) CONTRACTION JOINT. UNLESS OTHERWISE SHOWN ON THE PLANS, CONTRACTION JOINTS SHALL BE TYPICALLY SPACED AT 6m CENTERS. MINOR ADJUSTMENTS IN JOINT SPACINGS MAY BE REQUIRED TO MEET DRAINAGE STRUCTURE BLOCKOUTS, OTHER SIMILAR PAVEMENT BLOCKOUTS, INTERSECTION JOINT SPACINGS, ETC. HOWEVER IN NO CASE SHALL THE SPACINGS EXCEED 6.5m OR TYPICALLY BE LESS THAN 4.5m. CONTRACTION JOINT WIDTHS SHALL BE 8mm + 1.5mm AND THE MINIMUM DEPTHS SHALL BE THE SLAB THICKNESS DIVIDED BY FOUR (T/4).

PREFORMED ELASTIC JOINT SEALER MEETING THE REQUIREMENTS OF 705.11 SHALL BE USED. THE SEALER MATERIAL WIDTH SHALL BE 14mm UNLESS OTHERWISE RECOMMENDED BY THE SEALANT MANUFACTURER AND APPROVED BY THE DIRECTOR DRAWINGS AND SPECIFICATIONS OF THE MATERIAL PROPOSED FOR USE SHALL BE SUBMITTED TO THE DIRECTOR FOR REVIEW AND APPROVAL.

451.09 – FINISHING.

UNLESS OTHERWISE SPECIFIED, THE FINAL SURFACE TEXTURE OF THE PAVEMENT SHALL BE BROOM FINISHED, USING A BROOM OF APPROVED TYPE, NOT LESS THAN 450mm IN WIDTH OF BASS OR BASSINE FIBER, NOT MORE THAN 125mm IN LENGTH THE STROKES SHALL BE EDGE TO EDGE OF THE SLAB, ONE STROKE PER WIDTH OF BROOM, WITH ADJACENT STROKES SLIGHTLY OVERLAPPED AND CORRUGATIONS APPROXIMATELY 3mm IN DEPTH.

BROOMS SHALL BE WASHED THOROUGHLY AT FREQUENT INTERVALS DURING EACH DAY. ANY COARSE OR LONG BRISTLES WHICH CAUSE IRREGULARITIES SHALL BE TRIMMED OR REMOVED.

451.101 – PROTECTION AGAINST RAIN.

IN ORDER THAT THE CONCRETE MAY BE PROPERLY PROTECTED AGAINST THE EFFECTS OF RAIN BEFORE THE CONCRETE IS SUFFICIENTLY HARDENED, THE CONTRACTOR WILL BE REQUIRED TO HAVE AVAILABLE AT ALL TIMES MATERIALS FOR THE PROTECTION OF THE UNHARDENED CONCRETE SURFACE. SUCH PROTECTIVE MATERIALS SHALL CONSIST OF STANDARD COVERING MATERIAL SUCH AS BURLAP OR COTTON MATS, CURING PAPER OR PLASTIC SHEETING FOR THE PROTECTION OF THE PAVEMENT SURFACE. WHEN RAIN APPEARS IMMINENT, ALL PAVING OPERATIONS SHALL STOP, AND ALL AVAILABLE PERSONNEL SHALL BEGIN COVERING THE SURFACE OF UNHARDENED CONCRETE WITH THE PROTECTIVE COVERING

ITEM 251 – PARTIAL DEPTH PAVEMENT REPAIR, AS PER PLAN

WHEN REMOVAL OF THE WEARING COURSE OR BRICK REVEALS A NEED FOR PARTIAL DEPTH REPAIR IN THE CONCRETE BASE AND WHEN THIS ITEM IS CALLED FOR S DIRECTED BY THE ENGINEER, APPLICABLEPROVISIONS OF ITEM 251, AS SET FORTH IN THE CONSTRUCTION AND MATERIALS SPECIFICATIONS, SHALL APPLY EXCEPT AS MODIFIED HEREIN

251.01 AREA TO BE REPAIRED

APPROVED REMOVAL METHODS SHALL SATISFACTORILY ESTABLISH A NEAT VERTICAL FACE ALONG THE ENTIRE PERIMETER OF THE REPAIR AREA IN ORDER TO SUBSEQUENTLY PERMIT THE PROPER PLACEMENT AND COMPACTION OF THE ASPHALT CONCRETE PATCHING MATERIAL. ANY METHOD USED TO ESTABLISH THE VERTICAL FACE (INCLUDING SAW CUTTING) SHALL BE INCLUDED IN THE COST OF THIS 251 ITEM.

UNLESS OTHERWISE SPECIFIED BY THE ENGINEER, REMOVAL DEPTHS SHALL VARY FROM A 37mm MINIMUM TO A 75mm MAXIMUM.

PARTIALLY EMBEDDED STEEL MESH EXPOSED SHALL BE WIRE-BRUSHED OR OTHERWISE CLEANED TO REMOVE ALL LOOSED RUST. LOOSENED OR TOTALLY EXPOSED WIRE MESH REINFORCING SHALL BE CUT AND REMOVED AS REQUIRED WITHOUT DISPLACEMENT OR DISRUPTION TO THE REINFORCEMENT AND/OR PAVEMENT TO REMAIN.

751.05 BASIS OF PAYMENT

THE FOLLOWING CONTINGENCY QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER:

ITEM 251– PARTIAL DEPTH PAVEMENT REPAIR, AS PER PLAN 1000 SQ METER

DESIGNED BY: JAN | CHECKED BY: | DATE: 8/08/97
DRAWN BY: MAL | REVISED BY: MAL | DATE: 7/24/97 | DATE: 8/18/97
CAD FILE NAME: HGGN0103 | HGGN0103.DWG 10-23-98 2:15:48 pm EST

CALCULATED PDH | CHECKED JAN

GENERAL NOTES

LAKEWOOD HEIGHTS BOULEVARD

CALCULATED JJS
CHECKED PDH

MAINTENANCE OF TRAFFIC GENERAL NOTES

ITEM 614 – MAINTAINING TRAFFIC, AS PER PLAN

IN THE EXISTING ONE-WAY SECTION OF LAKEWOOD HEIGHTS BLVD. BETWEEN WOODWARD AVENUE AND BROWN ROAD A MINIMUM OF ONE LANE OF TRAFFIC WESTBOUND SHALL BE MAINTAINED AT ALL TIMES BY USE OF THE EXISTING PAVEMENT AND THE COMPLETED PAVEMENT. AS SHOWN ON SHEETS 18-24A, 32-38A PART WIDTH CONSTRUCTION SHALL BE USED TO FACILITATE MAINTAINING TRAFFIC WORK SHALL BE DONE IN PHASES AS OUTLINED BELOW

BETWEEN BROWN ROAD AND CHESTERLAND AVE., THE MAKING OF THIS IMPROVEMENT REQUIRES THAT THE ROAD BE CLOSED TO EASTBOUND TRAFFIC. DETOURS SHALL BE AS SHOWN ON SHEET NO. 12-13 LOCAL ACCESS FOR ABUTTING PROPERTIES AND ADJACENT STREETS SHALL BE MAINTAINED AT ALL TIMES THROUGH THE USE OF PARTIAL WIDTH CONSTRUCTION AND BY MAINTAINING ONE MINIMUM 3.6 METER WIDE LANE FOR WESTBOUND TRAFFIC FOR MINIMUM SIGNING REQUIREMENTS SEE SHEET NO 25-27, 39-41

BETWEEN CHESTERLAND AVE. AND BEREA ROAD, A MINIMUM OF ONE LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES BY USE OF THE EXISTING PAVEMENT, THE COMPLETED PAVEMENT, AND/OR TEMPORARY PAVEMENT AS SHOWN ON SHEET NO. 27A-31, 41A-45 PART WIDTH CONSTRUCTION SHALL BE USED TO FACILITATE MAINTAINING TWO-WAY TRAFFIC WORK SHALL BE DONE IN PHASES AS OUTLINED BELOW

THE CONTRACTOR SHALL MAINTAIN SAFE AND SATISFACTORY ACCESS TO ABUTTING PROPERTY. THE CONTRACTOR SHALL MAINTAIN ADEQUATE PEDESTRIAN WALKS AT ALL INTERSECTIONS, INCLUDING TEMPORARY BITUMINOUS WALKS WHERE DIRECTED BY THE ENGINEER

THE CONTRACTOR SHALL DIVERT TRAFFIC FROM NORMAL CHANNELS BY PLASTIC DRUMS, (FLASHING ARROW PANELS COMPLYING WITH MT-35.10M AND MT-35.11M). TRAFFIC SIGNS AND PAVEMENT MARKINGS AS SHOWN IN THE PLANS

ALL CONSTRUCTION TRAFFIC CONTROL DEVICES USED FOR THIS PROJECT SHALL CONFORM TO THE OHIO MANUAL ON TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, AND SHALL BE FURNISHED, ERECTED MAINTAINED, AND REMOVED BY THE CONTRACTOR EXCEPT AS NOTED BELOW

THE CONTRACTOR SHALL FURNISH AND MAINTAIN ALL NECESSARY SAFEGUARDS, SUCH AS BARRICADES, LIGHTING, FLAGGERS, AND SUCH OTHER TRAFFIC CONTROL DEVICES AS PROVIDED IN ITEM 614, MAINTAINING TRAFFIC, SO AS TO AVOID DAMAGE AND/OR INJURY TO VEHICLES AND PERSONS USING THE ROADWAY DURING CONSTRUCTION

EXISTING TRAFFIC CONTROL DEVICES (SIGNS AND/OR TRAFFIC SIGNALS), LOCATED WITHIN THE WORK AREA, WHICH ARE REQUIRED FOR INTERIM OR PERMANENT TRAFFIC CONTROL, SHALL BE RELOCATED TO POINTS APPROVED BY THE ENGINEER. APPROPRIATE TRAFFIC CONTROL DEVICES SHALL BE MAINTAINED, IN COMPLIANCE WITH THE MANUAL, AT ALL TIMES WHILE TRAFFIC IS MAINTAINED. THE COST OF RELOCATION, IF REQUIRED, SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614 – MAINTAINING TRAFFIC

THE LENGTH AND DURATION OF LANE CLOSURES AND OR TRAFFIC RESTRICTIONS SHALL BE AT THE APPROVAL OF THE ENGINEER. IT IS THE INTENT TO MINIMIZE THE IMPACT TO THE TRAVELING PUBLIC. LANE CLOSURES OR RESTRICTIONS OVER SEGMENTS OF THE PROJECT IN WHICH NO WORK IS ANTICIPATED WITHIN A REASONABLE TIME FRAME, AS DETERMINED BY THE ENGINEER, SHALL NOT BE PERMITTED. THE LEVEL OF UTILIZATION OF MAINTENANCE OF TRAFFIC DEVICES SHALL BE COMMENSURATE WITH THE WORK IN PROGRESS

THE CONTRACTOR SHALL PROVIDE RTA CERTIFIED FLAGMEN FOR NOTES REGARDING RTA AND CONRAIL MAINTANCE OF TRAFFIC SEE SHEET NO 4-5 OF 31 OF THE STRUCTURAL GENERAL NOTES

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, AS PER PLAN UNLESS SEPARATELY ITEMIZED IN THE PLAN

NOTIFICATION

THE CONTRACTOR SHALL NOTIFY IN WRITING THE FOLLOWING AGENCIES AT LEAST ONE WEEK PRIOR TO THE START OF CONSTRUCTION, AND AT LEAST 72 HOURS BEFORE IMPLEMENTING ANY SUBSTANTIAL CHANGE IN TRAFFIC PATTERN OR CLOSING ANY STREET TO TRAFFIC:

THE CUYAHOGA COUNTY ENGINEER – PUBLIC INFORMATION OFFICE
THE OHIO DEPARTMENT OF TRANSPORTATION – DISTRICT 12 – PUBLIC INFORMATION OFFICE
THE GREATER CLEVELAND REGIONAL TRANSIT AUTHORITY
THE CUYAHOGA COUNTY BOARD OF MENTAL RETARDATION
THE UNITED STATES POSTAL SERVICE
THE CLEVELAND BOARD OF EDUCATION
THE LAKEWOOD BOARD OF EDUCATION
THE LAKEWOOD POLICE, FIRE AND SERVICE DEPARTMENTS
THE CITY OF CLEVELAND COMMISSIONER OF TRAFFIC ENGINEERING
COMMISSIONER OF ENGINEERING AND CONSTRUCTION
COMMISSIONER OF EMERGENCY MEDICAL SERVICES.
POLICE TRAFFIC COMMISSIONER AND FIRE CHIEF.

THE CONTRACTOR SHALL NOTIFY O.U.P.S. AT LEAST TWO WORKING DAYS PRIOR THE INSTALLATION OF TEMPORARY TRAFFIC SIGNING INCLUDING DETOUR SIGNING TO PREVENT CONFLICTS WITH EXISTING UTILITIES

CONSTRUCTION SEQUENCE

THE RECONSTRUCTION OF LAKEWOOD HEIGHTS BLVD. WITHIN THE LIMITS OF THIS PROJECT SHALL BE ACCOMPLISHED IN THREE (3) CONSTRUCTION SECTIONS AS OUTLINED BELOW

SECTION I – FROM WOODWARD AVENUE TO BROWN ROAD
SECTION II – FROM BROWN ROAD TO CHESTERLAND AVENUE
SECTION III – FROM CHESTERLAND AVENUE TO BEREA ROAD

THE CONTRACTOR SHALL COMPLETE ALL WORK EXCEPT FINAL PAVEMENT MARKING AND SIGNING IN THE TRANSITION ZONE BETWEEN SECTIONS IN A GIVEN CONSTRUCTION SECTION BEFORE BEGINNING ANY WORK IN A SUBSEQUENT SECTION SUBJECT TO THE APPROVAL OF THE ENGINEER. NORMAL VEHICULAR TRAFFIC SHALL BE MAINTAINED AT ALL TIMES BEYOND THE WORK LIMITS OF THE SECTION CURRENTLY UNDER CONSTRUCTION

THE CONTRACTOR MAY, AT HIS OPTION BEGIN WORK IN ANY SECTION AND MAY WORK IN SECTIONS I AND III CONCURRENTLY

CONSTRUCTION PHASING

WITHIN EACH CONSTRUCTION SECTION, WORK SHALL BE PERFORMED IN 2 PHASES. THE CONTRACTOR SHALL COMPLETE ALL WORK, EXCEPT FINAL PAVEMENT MARKING AND SIGNING IN A GIVEN CONSTRUCTION PHASE BEFORE BEGINNING ANY WORK IN A SUBSEQUENT PHASE SUBJECT TO THE APPROVAL OF THE ENGINEER

IN SECTION I, PHASE A SHALL CONSIST OF ALL WORK IN THE RIGHT WESTBOUND LANE WITH ONE-WAY WESTBOUND TRAFFIC MAINTAINED ON THE EXISTING PAVEMENT IN THE LEFT WESTBOUND LANE. PHASE B SHALL CONSIST OF ALL WORK IN THE LEFT WESTBOUND LANE, WITH ONE-WAY WESTBOUND TRAFFIC MAINTAINED ON THE COMPLETED PAVEMENT IN THE RIGHT WESTBOUND LANE

IN SECTION II PHASE A SHALL CONSIST OF ALL WORK IN THE EASTBOUND LANE AND LEFT WESTBOUND LANE WITH ONE-WAY WESTBOUND TRAFFIC MAINTAINED ON THE EXISTING PAVEMENT IN THE WESTBOUND CURB LANE. PHASE B SHALL CONSIST OF ALL WORK IN THE WESTBOUND CURB LANE WITH TWO-WAY TRAFFIC MAINTAINED ON THE COMPLETED PAVEMENT

IN SECTION III, PHASE A SHALL CONSIST OF ALL WORK IN THE EASTBOUND LANES WITH TWO-WAY TRAFFIC MAINTAINED ON THE EXISTING PAVEMENT IN THE WESTBOUND LANES PHASE B SHALL CONSIST OF ALL WORK IN THE WESTBOUND LANES, WITH TWO-WAY TRAFFIC MAINTAINED ON THE COMPLETED PAVEMENT IN THE EASTBOUND LANES

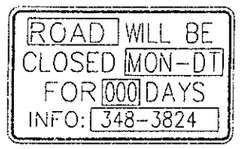
ALL WORK IN A GIVEN PHASE, INCLUDING SUCH ITEMS AS BASE REPAIR, ASPHALT CONCRETE COURSES, ADJUSTMENT OF CASTINGS, LANDSCAPING, SIDEWALKS, DRIVEWAY REPAIRS, GUARDRAIL AND TRAFFIC SIGNS AND SIGNALS SHALL BE COMPLETED PRIOR TO BEGINNING THE NEXT PHASE, WITH THE EXCEPTION OF THE ITEM 448 SURFACE COURSE, FINAL PAVEMENT MARKINGS, AND ANY SIGNS OR SIGNALS WHICH CONFLICT WITH THE MAINTENANCE OF TRAFFIC PLANS

AT THE END OF THE LAST PHASE IN CONSTRUCTION SECTIONS I AND II, THE 407 TACK COAT FOR INTERMEDIATE COURSE AND THE 448 SURFACE COURSE SHALL BE INSTALLED ACROSS THE ENTIRE PAVEMENT WIDTH AND FINAL PAVEMENT MARKINGS AND THE BALANCE OF THE SIGNS AND SIGNALS SHALL BE INSTALLED. DURING THIS PHASE TRAFFIC SHALL BE MAINTAINED IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWING MT-95.30M, MT-95.31M, OR MT-95.32M, AS APPROPRIATE

AT THE END OF THE LAST PHASE IN CONSTRUCTION SECTION III THE FINAL PAVEMENT MARKINGS AND THE BALANCE OF THE SIGNS AND SIGNALS SHALL BE INSTALLED, DURING THIS PHASE, TRAFFIC SHALL BE MAINTAINED IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWING MT-95.30M, MT-95.31M, OR MT-95.32M, AS APPROPRIATE

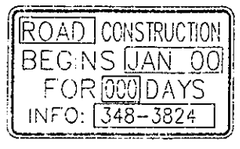
NOTICE OF CLOSURE SIGNS

NOTICE OF CLOSURE SIGNS (OC-60), 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 AT STATIONS 11+680, RT., 11+910, RT., 12+080, RT., AND 12+225, RT., FACING TRAFFIC. THEY SHALL BE PLACED SO AS NOT TO INTERFERE WITH THE VISIBILITY OF ANY OTHER TRAFFIC CONTROL SIGNS



OC-60
60" x 36"

NOTICE OF CONSTRUCTION SIGNS (OC-61) AS DETAILED IN THESE PLANS SHALL BE ERECTED BY THE CONTRACTOR AT LEAST ONE WEEK IN ADVANCE OF THE SCHEDULED BEGINNING OF CONSTRUCTION. THE SIGNS SHALL BE ERECTED ON THE RIGHT HAND SIDE OF THE ROAD AT STATIONS 10+140, LT., 10+910 LT. 11+150 LT. 11+630, LT. 11+680, LT. & RT. 11+910 LT. & RT., 12+080, LT. & RT., 12+225, LT. & RT. AND 12+370, LT. & RT., FACING TRAFFIC. THEY SHALL BE PLACED SO AS NOT TO INTERFERE WITH THE VISIBILITY OF ANY OTHER TRAFFIC CONTROL SIGNS



OC-61
1500mm x 900mm

THE CONTRACTOR SHALL INSERT THE SCHEDULED DATE OF THE BEGINNING OF CONSTRUCTION, DURATION (NUMBER OF DAYS FROM THE START DATE TO THE PROJECT COMPLETION DATE) AND INFORMATION PHONE NUMBER ON THE SIGN IN THE PROPER POSITIONS

GUARDRAIL REPLACEMENT

NO HAZARD SHALL BE LEFT UNPROTECTED EXCEPT FOR THE ACTUAL TIME NECESSARY TO REMOVE THE EXISTING GUARDRAIL, PREPARE THE SITE, AND INSTALL NEW GUARDRAIL IN A CONTINUOUS OPERATION. THE REMOVAL OF GUARDRAIL SHALL AT ALL TIMES BE AS DIRECTED BY THE ENGINEER. NO GUARDRAIL SHALL BE REMOVED UNTIL THE REPLACEMENT MATERIAL IS ON THE SITE READY FOR INSTALLATION. FAILURE TO COMPLY WITH THIS REQUIREMENT SHALL BE DEEMED SUFFICIENT CAUSE TO ORDER WORK SUSPENDED UNTIL SUCH TIME AS THE ENGINEER IS ASSURED OF COMPLIANCE

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	200	CU. METER
616 CALCIUM CHLORIDE	5	METRIC TON

ITEM 622 – PORTABLE CONCRETE BARRIER

IT IS ANTICIPATED THAT THE SAME BARRIER WILL BE USED IN VARIOUS PHASES OF CONSTRUCTION. MOVEMENT OF THE CONCRETE BARRIER BETWEEN PHASES SHALL BE ACCOMPLISHED IN ONE WORKING DAY. FLAGGERS SHALL BE UTILIZED FOR PROTECTION OF VEHICULAR TRAFFIC UNTIL MOVEMENT OF THE BARRIER IS COMPLETE

ALL COSTS INVOLVED IN MOVING AND REINSTALLING THE CONCRETE BARRIER WILL BE INCLUDED IN THE CONTRACT PRICE FOR ITEM 622 – PORTABLE CONCRETE BARRIER

ITEM SPECIAL – 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 OF 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 THE APPROVAL OF THE ENGINEER

WHEN ADDITIONAL SIGNS ARE FOUND BY THE ENGINEER TO BE NECESSARY FOR THE SAFE MAINTENANCE OF TRAFFIC, ABOVE AND BEYOND THE SIGNING SHOWN IN THE PLANS AND/OR ON THE STANDARD CONSTRUCTION DRAWINGS, THE CONTRACTOR SHALL FURNISH, ERECT, MAINTAIN, AND REMOVE THE ADDITIONAL SIGNS UNDER THIS ITEM AS DIRECTED BY THE ENGINEER

PAYMENT FOR THE NEW SIGNS SHALL BE MADE AT THE CONTRACT PRICE PER SQUARE METER 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 100 SQUARE METERS HAS BEEN PROVIDED IN THE GENERAL SUMMARY.

COVERING OF SIGNS

WHERE THE PLANS CALL FOR ANY EXISTING OR PROPOSED PERMANENT SIGN TO BE COVERED, THE CONTRACTOR SHALL DO SO IN SUCH A MANNER AS TO AVOID DAMAGING THE PERMANENT SIGN WHEN THE COVER IS REMOVED. THE COVER SHALL BE TOTALLY OPAQUE. THE USE OF ADHESIVE TAPE APPLIED DIRECTLY TO ANY EXISTING OR NEW SIGN FACE IS STRICTLY PROHIBITED

ITEM 614 – BARRIER REFLECTORS

THE FOLLOWING ITEM, FOR USE IN REPLACING REFLECTORS DAMAGED THROUGH NO FAULT OF THE CONTRACTOR AND AS DIRECTED BY THE ENGINEER, HAS BEEN CARRIED TO THE GENERAL SUMMARY. REFLECTORS AND THEIR MOUNTING SHALL CONFORM TO ITEM 626 EXCEPT SPACING SHALL BE AS SHOWN ON STANDARD CONSTRUCTION DRAWING MT-95.40M. PROJECT ESTIMATED QUANTITIES FOR THIS ITEM ARE SHOWN ON SHEET NO 31

ITEM 614–BARRIER REFLECTOR, TYPE B 20 EACH

CONSTRUCTION TRAFFIC

ALL CONSTRUCTION TRAFFIC SHALL USE ACCEPTABLE TRUCK ROUTES TO ACCESS THE CONSTRUCTION AREA. USE OF LOCAL RESIDENTIAL STREETS IS STRICTLY PROHIBITED UNLESS ALLOWED IN WRITING BY THE LOCAL ENFORCEMENT AUTHORITY

CUY - LAKEWOOD HEIGHTS BOULEVARD

J:\D900547\ROADWAY\MOINOTES.DWG

TIME OF COMPLETION

THE WORK BETWEEN BROWN ROAD AND CHESTERLAND AVENUE IN SECTION II PHASE A OF THIS CONTRACT SHALL BE COMPLETED WITHIN 30 CALENDAR DAYS. THIS DATE SHALL BE CONSIDERED AN INTERIM COMPLETION DATE. FOR EACH CALENDAR DAY THAT ANY WORK BETWEEN BROWN ROAD AND CHESTERLAND AVENUE IN SECTION II PHASE A SHALL REMAIN UNCOMPLETED, THE SUM SPECIFIED IN 108.07 SHALL BE DEDUCTED FROM ANY MONEY DUE THE CONTRACTOR AS LIQUIDATED DAMAGES

THE WORK IN SECTION I WHICH REQUIRES REDUCING WARREN ROAD TO 1 LANE NORTHBOUND AND 1 LANE SOUTHBOUND SHALL BE PERFORMED IN TWO (2) SEPARATE ONE (1) CALENDAR DAY PERIODS PER PHASE. SEE ITEM 255 FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS FS, AS PER PLAN FOR MORE INFORMATION.

THE WORK IN SECTION I FOR PERFORMING THE FULL DEPTH REPAIR IN ALGER ROAD WHICH REQUIRES DETOURING TRAFFIC SHALL BE COMPLETED WITHIN 7 CALENDAR DAYS OF ACTIVATING THE DETOUR. THE 7th DAY OF THE DETOUR SHALL BE CONSIDERED AN INTERIM COMPLETION DATE. FOR EACH CALENDAR DAY THAT ANY WORK REMAINS UNCOMPLETED, THE SUM SPECIFIED IN 108.07 SHALL BE DEDUCTED FROM ANY MONEY DUE THE CONTRACTOR AS LIQUIDATED DAMAGES. THIS WORK SHALL BE PERFORMED AFTER THE WARREN ROAD INTERSECTION LANE RESTRICTIONS HAVE TERMINATED

MAINTENANCE OF TRAFFIC STANDARD CONSTRUCTION DRAWINGS

REFERENCES TO ITEM 740.05 (OR 947.03), TYPE C AND ITEM 740.05, TYPE B ON THE STANDARD CONSTRUCTION DRAWINGS OR ELSEWHERE IN THESE PLANS SHALL BE CONSIDERED TO READ AS REFERENCES TO ITEM 740.06, TYPE I AND ITEM 740.06, TYPE II, RESPECTIVELY

REFERENCES TO ITEMS 621 AND 647 ON THE STANDARD CONSTRUCTION DRAWINGS OR ELSEWHERE IN THESE PLANS SHALL BE CONSIDERED TO READ AS REFERENCES TO ITEMS 642 AND 645 (OR 614) RESPECTIVELY.

TEMPORARY LOOP DETECTORS

TEMPORARY LOOP DETECTORS SHALL NOT BE CUT INTO PERMANENT PAVEMENT UNLESS THE LOCATION AND SIZE ARE THE SAME AS THE PERMANENT LOOP DETECTOR LOCATION AND SIZE. AS SHOWN IN THE SIGNAL PLANS, THE CONTRACTOR SHALL USE NON-DESTRUCTIVE METHODS FOR VEHICLE DETECTION IN PERMANENT PAVEMENT AREAS, EVEN THOUGH OTHERWISE SHOWN IN THE PLANS.

DETOUR SIGNING

ADVANCE TRAFFIC SIGNING, INCLUDING DETOUR SIGNING, SHOWN ON THE PLANS BEYOND THE WORK LIMITS OF THE PROJECT, SHALL BE FURNISHED, ERECTED MAINTAINED, AND REMOVED BY THE CONTRACTOR.

CONSTRUCTION WORK ZONE APPROACH SIGNING, BARRICADES AND SIGNS ON BARRICADES SHOWN ON THE PLANS BEYOND THE WORK LIMITS SHALL BE FURNISHED ERECTED MAINTAINED, AND REMOVED BY THE CONTRACTOR

SIGN LOCATIONS

ALL SUPPORT LOCATIONS SHALL HAVE THE ENGINEERS APPROVAL PRIOR TO INSTALLATION. SIGN LOCATIONS OF MAINTENANCE FOR TRAFFIC SIGNS ON THE PLANS ARE APPROXIMATE. THE CONTRACTOR, PRIOR TO ERECTION OF ALL SIGN SUPPORTS SHALL STAKE THE PROPOSED LOCATION. THE LOCATIONS SHALL BE ADJUSTED TO CORRECT SLOPE AND SUBSURFACE DIFFICULTIES, SIGN SIGHT DISTANCE OBSTRUCTIONS IMPROVE SAFETY AND ELIMINATE OVERHEAD OBSTACLES

TEMPORARY RAMPING OF VERTICAL SURFACES

IN ORDER TO PROVIDE FOR LOCAL ACCESS, LONGITUDINAL VERTICAL FACES ABUTTING INTERSECTING STREETS SHALL BE TEMPORARILY RAMPED USING ITEM 614 BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC. VERTICAL FACES ABUTTING RESIDENTIAL DRIVES SHALL BE TEMPORARILY RAMPED USING ITEM 410 TRAFFIC COMPACTED SURFACE, TYPE A OR B, AS PER PLAN. TRANSVERSE VERTICAL FACES SHALL BE TEMPORARILY RAMPED A MINIMUM OF THREE METERS (3 m) IN LENGTH AND TRAFFIC SHALL BE WARNED WITH OW-62 "BUMP" SIGNS IN ADVANCE OF THE RAMPED AREAS.

ALL CASTINGS ENCOUNTERED SHALL BE SET TO GRADE AND PAID FOR UNDER VARIOUS ITEMS DESCRIBED ELSEWHERE IN THE GENERAL NOTES OR SPECIFICATIONS. THE CASTING ELEVATION DIFFERENTIAL SHALL NOT BE GREATER THAN TWENTY-FIVE MILLIMETERS (25 mm) WHEN EXPOSED TO TRAFFIC

ALL TEMPORARY RAMPING SHALL BE INSTALLED, AT THE DIRECTION OF THE ENGINEER.

ITEM 410 - TRAFFIC COMPACTED SURFACE, TYPE A OR B, AS PER PLAN

THIS ITEM SHALL BE CONSTRUCTED IN ACCORDANCE WITH ITEM 410 - TRAFFIC COMPACTED SURFACE USING EITHER RECLAIMED ASPHALT CONCRETE PAVEMENT (RACP) OR RECLAIMED BITUMINOUS AGGREGATE BASE (RBAB)

COOPERATION BETWEEN CONTRACTORS

THE CONTRACTOR SHOULD BE AWARE THAT ANOTHER CONTRACTOR MAY BE WORKING WITHIN THE PROJECT LIMITS OR WORK LIMITS OF THIS PROJECT, OR ON AN ADJACENT SECTION. THE PROVISIONS OF 107.05 WILL APPLY TO THIS CONTRACT

INSTALLATION OF PAVEMENT MARKINGS

THE CONTRACTOR MAY REDUCE THE NUMBER OF THROUGH TRAFFIC LANES BY 50% AS DIRECTED BY THE ENGINEER, IN ORDER TO REMOVE PAVEMENT MARKINGS, OR TO INSTALL TEMPORARY OR PERMANENT PAVEMENT MARKINGS. HE SHALL LIMIT THE AFOREMENTIONED CLOSURE TO BETWEEN THE HOURS OF 9 A.M. AND 3 P.M., UNLESS OTHERWISE APPROVED BY THE ENGINEER.

INSTALLATION OF PAVEMENT MARKINGS (CONT.)

ALL TEMPORARY PAVEMENT MARKINGS AND SIGNS REQUIRED FOR A PARTICULAR LANE CLOSURE OR TRAFFIC PATTERN SHALL BE INSTALLED ON A SINGLE WORK DAY AND THE CORRESPONDING TRAFFIC PATTERN, AS DETAILED ON THE PLANS, SHALL BE IMPLEMENTED IMMEDIATELY.

ITEM SPECIAL - LAW ENFORCEMENT OFFICER, AND ITEM SPECIAL - LAW ENFORCEMENT OFFICER WITH PATROL CAR

IN ADDITION TO THE REQUIREMENTS OF 614 AND THE LATEST EDITION OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD), A UNIFORMED LAW ENFORCEMENT OFFICER, OR A UNIFORMED LAW ENFORCEMENT OFFICER AND OFFICIAL PATROL CAR WITH WORKING TOP MOUNTED EMERGENCY FLASHING LIGHTS, SHALL BE PROVIDED FOR CONTROLLING TRAFFIC FOR THE FOLLOWING TASKS:

1) FOR LANE CLOSURES: DURING INITIAL SET-UP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT, OR WHERE NEW LANE CLOSURES ARE INITIATED.
2) DURING THE ENTIRE ADVANCE PREPARATION AND CLOSURE SEQUENCE, WHERE COMPLETE BLOCKAGE OF TRAFFIC IS REQUIRED
3) DURING A TRAFFIC SIGNAL INSTALLATION

THE LEO'S ARE CONSIDERED TO BE EMPLOYED BY THE CONTRACTOR AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR ACTIONS. ALTHOUGH THEY ARE EMPLOYED BY THE CONTRACTOR, THE PROJECT ENGINEER SHALL HAVE CONTROL OVER THEIR PLACEMENT. ANY PATROL CAR UTILIZED SHALL BE A PUBLIC SAFETY VEHICLE AS REQUIRED BY THE OHIO REVISED CODE.

THE HOURS PAID SHALL INCLUDE MINIMUM SHOW-UP TIME REQUIRED BY THE LAW ENFORCEMENT AGENCY INVOLVED. THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR THESE SERVICES WITH:

CLEVELAND POLICE DEPARTMENT
1300 ONTARIO
CLEVELAND, OHIO 44113
(216) 621-1234

LAKEWOOD POLICE DEPARTMENT
12650 DETROIT AVE
LAKEWOOD, OHIO 44107
(216) 521-6773

LAW ENFORCEMENT OFFICERS REQUIRED BY THE TRAFFIC MAINTENANCE TASKS ABOVE SHALL BE PAID FOR ON A UNIT PRICE (HOURLY) BASIS UNDER ITEM SPECIAL - LAW ENFORCEMENT OFFICER AND/OR ITEM SPECIAL - LAW ENFORCEMENT OFFICER WITH PATROL CAR. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM SPECIAL - LAW ENFORCEMENT OFFICER	40 HOURS
ITEM SPECIAL - LAW ENFORCEMENT OFFICER WITH PATROL CAR	100 HOURS

LAW ENFORCEMENT OFFICERS (LEO'S) SHOULD NOT BE USED WHERE THE OMUTCD INTENDS THAT FLAGGERS BE USED. HOWEVER, IF THE CONTRACTOR WISHES TO UTILIZE LEO'S FOR FLAGGING AND TRAFFIC CONTROL OTHER THAN FOR THAT REQUIRED IN THESE PLANS, HE MAY DO SO AT HIS OWN EXPENSE. PAYMENT FOR UTILIZING LEO'S IN THIS MANNER WILL BE INCLUDED UNDER ITEM 614 - MAINTAINING TRAFFIC

SIDE STREET CLOSURE LIMITATION

TWO-WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES ON THE FOLLOWING STREETS:

CARABEL AVE., ARTHUR AVE., ALGER RD, WARREN RD., BROWN RD., W. 140th ST.-BUNTS RD., JOSLYN RD.-CHESTERLAND AVE. (EXCEPT FOR THE NORTHBOUND ALGER ROAD DETOUR)

OTHER INTERSECTING STREETS MAY BE CLOSED FOR A PERIOD NOT TO EXCEED 2 CONSECUTIVE CALENDAR DAYS. WHEN THROUGH TRAFFIC MAY BE DETOURED

LIQUIDATED DAMAGES SHALL BE ASSESSED IN ACCORDANCE WITH SECTION 108.07 FOR EACH CALENDAR DAY THAT ANY INTERSECTING STREET REMAINS CLOSED TO TRAFFIC BEYOND THE SPECIFIED LIMIT.

ALL CLOSED STREETS SHALL BE BARRICADED AT THE WORK LIMITS WITH GATES AND BARRICADES PER MT-101.60M AND SIGNED WITH A 'ROAD CLOSED' (R-75) SIGN MOUNTED ON THE BARRICADES. IN ADDITION, A 'ROAD CLOSED AHEAD' (OW-120) SIGN SHALL BE INSTALLED AT THE FIRST INTERSECTION BEYOND THE WORK, AND/OR WHERE SHOWN ON THE PLANS. THE CONTRACTOR SHALL FURNISH, ERECT, MAINTAIN AND REMOVE ALL SIGNS AND BARRICADES REQUIRED FOR THIS PURPOSE.

TEMPORARY MAINTENANCE OF EXISTING TRAFFIC SIGNALS

INCIDENTAL TO THE REQUIREMENTS FOR MAINTAINING TRAFFIC IN ACCORDANCE WITH 614.03, EXISTING TRAFFIC SIGNALS AT THE FOLLOWING INTERSECTION(S) SHALL BE TEMPORARILY MAINTAINED UNTIL THE NEW TRAFFIC SIGNAL INSTALLATION IS IN CPERATION, OR UNTIL THE PROJECT IS COMPLETE AND THE EXISTING OPERATION CAN BE RESTORED:

CITY OF LAKEWOOD	CITY OF CLEVELAND
WOODWARD AVE	W.140th - BUNTS RD
CARABEL AVE.	W.136th - LEWIS RD.
ALGER RD.	RTA ENTRANCE
WARREN RD.	WATERBURY RD.
	BEREA RD.

THE EXISTING SIGNAL HEADS (OR ADDITIONAL TRAFFIC SIGNAL HEADS SUPPLIED BY THE CONTRACTOR) SHALL BE POSITIONED SO AS TO PROVIDE A MINIMUM OF TWO TRAFFIC SIGNAL HEADS OVER THE PORTION OF THE ROADWAY USED BY EACH DIRECTION OF TRAFFIC, AS SHOWN ON THE PLANS. AND THE OPERATION SHALL BE MODIFIED AS SHOWN IN THE PLANS. THE NUMBER, LOCATION, VISIBILITY, AND HEIGHT OF ALL TRAFFIC SIGNALS SHALL BE IN ACCORDANCE WITH THE PROVISIONS OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS (OMUTCD)

ANY COSTS FOR THE TEMPORARY MAINTENANCE OF EXISTING TRAFFIC SIGNALS SHALL BE INCLUDED IN THE LUMP SUM COST BID FOR ITEM 614 - MAINTAINING TRAFFIC.

ESTIMATED QUANTITIES FOR MAINTAINING TRAFFIC

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

614	BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC	300 CU. METER
410	TRAFFIC COMPACTED SURFACE TYPE A OR B, AS PER PLAN	200 CU. METER
608	TEMPORARY BITUMINOUS WALK	200 SQ. METER

SECTION III DECK REMOVAL

THE CONTRACTOR SHALL PERFORM THE SECTION III DECK REMOVAL BY ONE OF THE FOLLOWING PROCEDURES:

METHOD A:
- CONSTRUCT TEMPORARY SUPPORTS FOR THE NORTHERLY PORTION OF THE DECKS.
- COMPLETE PHASE A MAINTENANCE OF TRAFFIC USING DRUMS IN LIEU OF TEMPORARY CONCRETE BARRIER
- PERFORM MEDIAN DEMOLITION ACROSS BRIDGE DECKS DOWN TO THE EXISTING PAVEMENT SURFACE
- MAKE THE LONGITUDINAL SAW CUTS AT 150mm± FROM THE FACE OF THE MEDIAN ACROSS THE DECKS (SEE MAINTENANCE OF TRAFFIC TYPICAL SECTIONS FOR DETAILS)
- REPLACE DRUMS WITH THE PHASE A MAINTENANCE OF TRAFFIC PORTABLE CONCRETE BARRIER
- PERFORM PHASE A DECK REMOVAL

METHOD B:
- CONSTRUCT TEMPORARY SUPPORTS FOR THE NORTHERLY PORTION OF THE DECKS
- CLOSE THE WESTBOUND PASSING LANE FROM BEREA ROAD TO THE WEST SIDE OF THE RAILROAD BRIDGE
- MAKE THE LOGINTUDINAL SAW CUTS AT 150mm± FROM THE NORTH FACE OF THE MEDIAN ACROSS THE DECKS (SEE MAINTENANCE OF TRAFFIC TYPICAL SECTIONS FOR DETAILS)
- COMPLETE PHASE A MAINTENANCE OF TRAFFIC (SET PORTABLE CONCRETE BARRIER PRIOR TO OPENING WEST BOUND PASSING LANE)
- PERFORM PHASE A DECK REMOVAL

WARREN ROAD INTERSECTION

THE FULL DEPTH PAVEMENT REMOVAL AND REPLACEMENT SCHEDULED FOR THIS INTERSECTION SHALL BE PERFORMED BY MAINTAINING TRAFFIC 1 LANE NORTHBOUND AND 1 LANE SOUTHBOUND ON WARREN ROAD AND 2 LANES WESTBOUND ON LAKEWOOD HEIGHTS BOULEVARD AT ALL TIMES. LANE CLOSURES ON WARREN ROAD SHALL BE IN ACCORDANCE WITH STANDARD DRAWING MT 95.31M. PAYMENT FOR MAINTAINING TRAFFIC ON WARREN ROAD AND LAKEWOOD HEIGHTS BOULEVARD SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 614 MAINTAINING TRAFFIC

THE CONTRACTOR SHALL PERFORM HIS OPERATIONS IN THE FOLLOWING MANNER:

PHASE A

- SET SINGLE LANE ZONES IN NORTHBOUND AND SOUTHBOUND WARREN ROAD TO MAKE PAVEMENT REMOVAL SAWCUTS. (THIS WORK MAY BE PERFORMED IN ADVANCE OF THE FULL DEPTH REMOVAL PROVIDED IT IS DONE BETWEEN THE HOURS OF 10:00 PM AND 6:00 AM INCLUDING SETTING AND REMOVING SINGLE LANE ZONES.)
- UNDER WARREN ROAD SINGLE LANE ZONES, REMOVE THE CENTER TWO LANES AND REPLACE. SEE ITEM 255 FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS FS, AS PER PLAN IN THE ROADWAY GENERAL NOTES (PAVEMENT) FOR DETAILS. THIS WORK SHALL BE PERFORMED ON THE RIGHT SIDE OF THE CENTERLINE TO THE CENTERLINE OF LAKEWOOD HEIGHTS BOULEVARD.
- UNDER WARREN ROAD SINGLE LANE ZONES, REMOVE THE REMAINING INTERSECTION PAVEMENT ON THE RIGHT SIDE OF LAKEWOOD HEIGHTS BOULEVARD TO THE CENTERLINE OF LAKEWOOD HEIGHTS BOULEVARD. SEE ITEM 255 FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS FS, AS PER PLAN.

PHASE B

- PERFORM IN THE SAME MANNER AS PHASE A FOR PAVEMENT LEFT OF THE LAKEWOOD HEIGHTS BOULEVARD CENTERLINE

THE WORK SHALL BE PERFORMED IN TWO STAGES FOR THE TWO PHASES TO LIMIT DAYTIME SINGLE LANE ZONES ON WARREN ROAD TO FOUR PERIODS OVER THE LENGTH OF THE PROJECT. THE ZONES SHALL BE ERECTED AND REMOVED WITHIN A 24 HOUR PERIOD IN ACCORDANCE WITH ITEM 255 FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS FS, AS PER PLAN.

SEE SHEET 31A FOR GENERAL APPLICATION OF MT-95.31 IN THE WARREN ROAD INTERSECTION AREA. SEE NOTIFICATION ON SHEET 10 FOR NOTIFICATION REQUIREMENTS

JS | PDH

MAINTENANCE OF TRAFFIC GENERAL NOTES

CUY - LAKEWOOD HEIGHTS BOULEVARD

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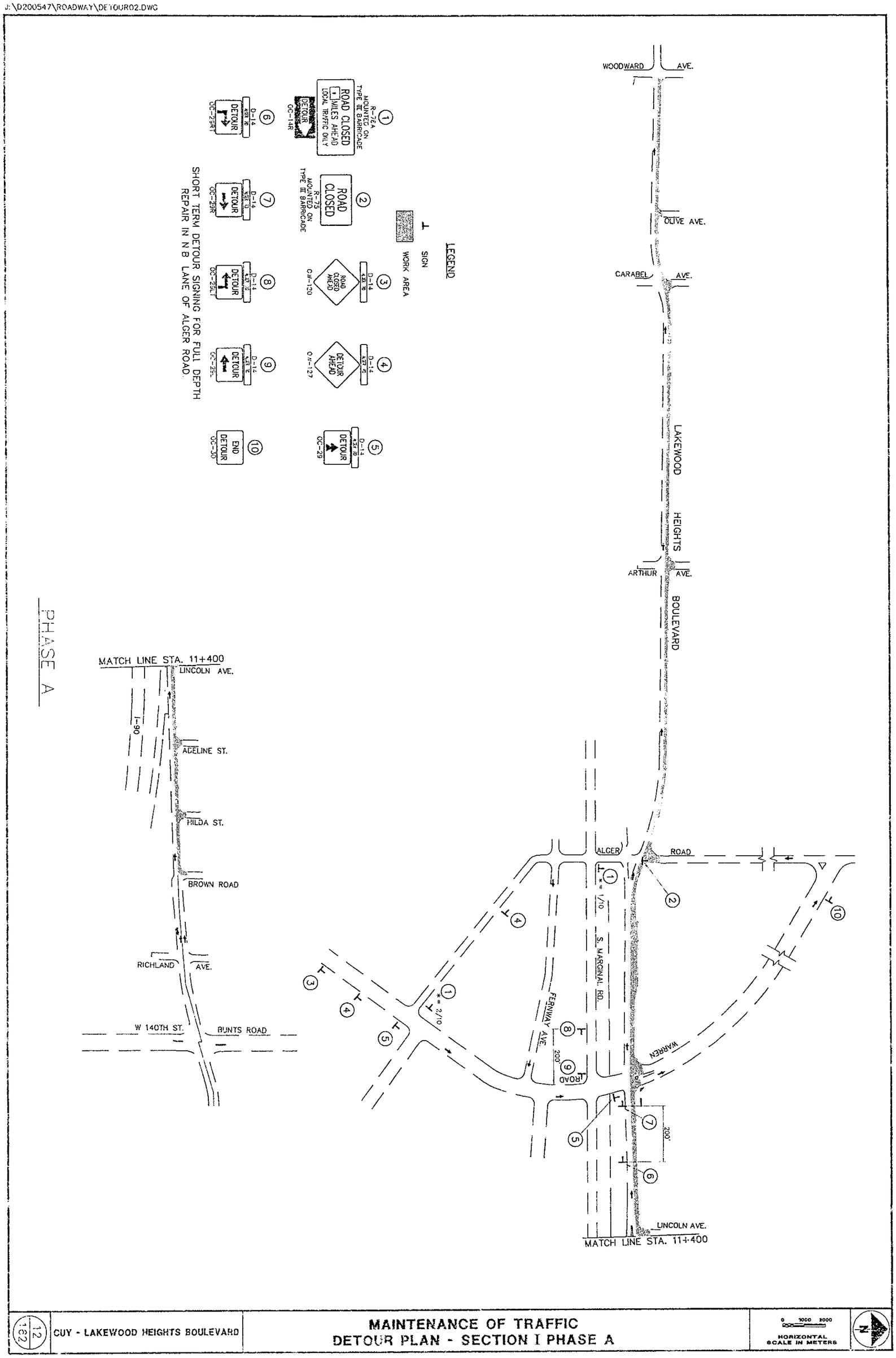

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CUY - LAKEWOOD HEIGHTS BOULEVARD

MAINTENANCE OF TRAFFIC
DETOUR PLAN - SECTION I PHASE A

0 1000 2000
HORIZONTAL SCALE IN METERS

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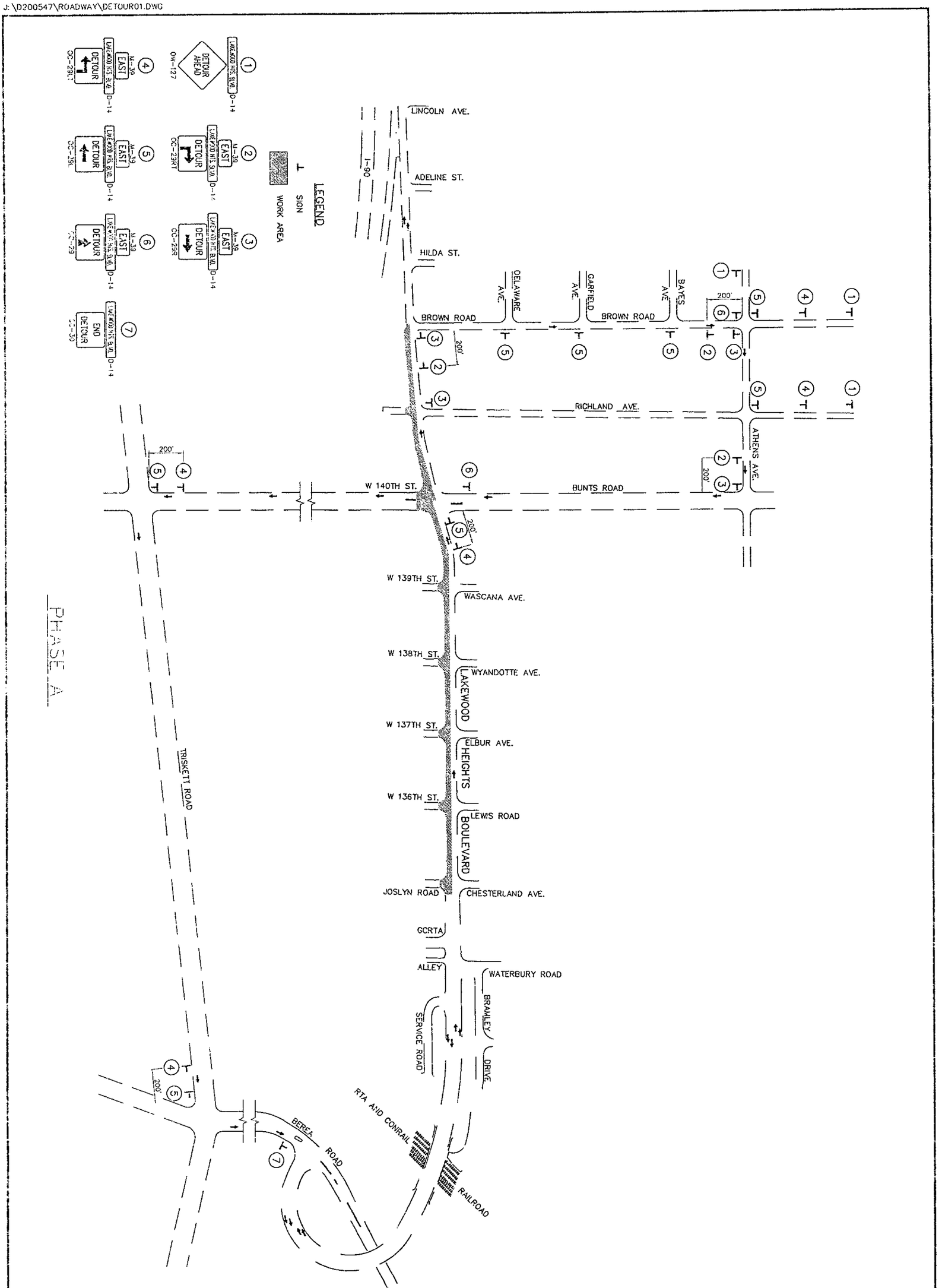
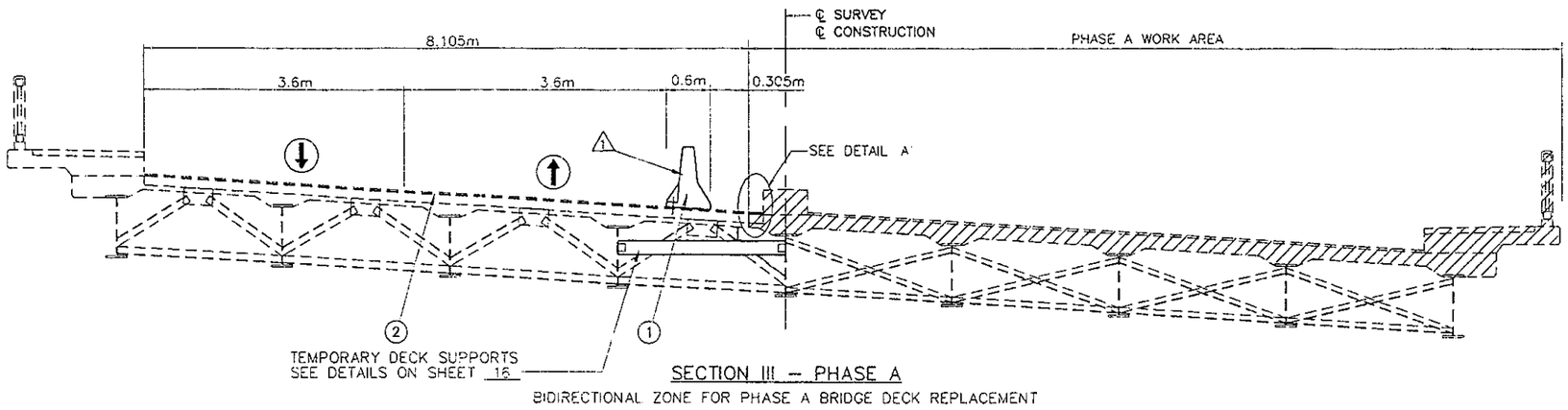
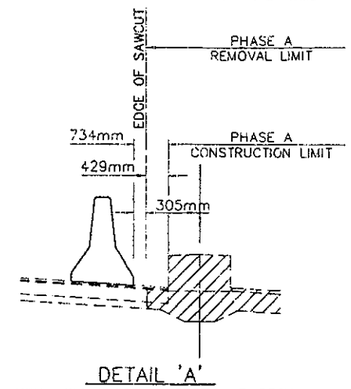


13 / 162	CUY - LAKEWOOD HEIGHTS BOULEVARD	MAINTENANCE OF TRAFFIC DETOUR PLAN - SECTION II PHASE A	0 1000 2000 HORIZONTAL SCALE IN METERS



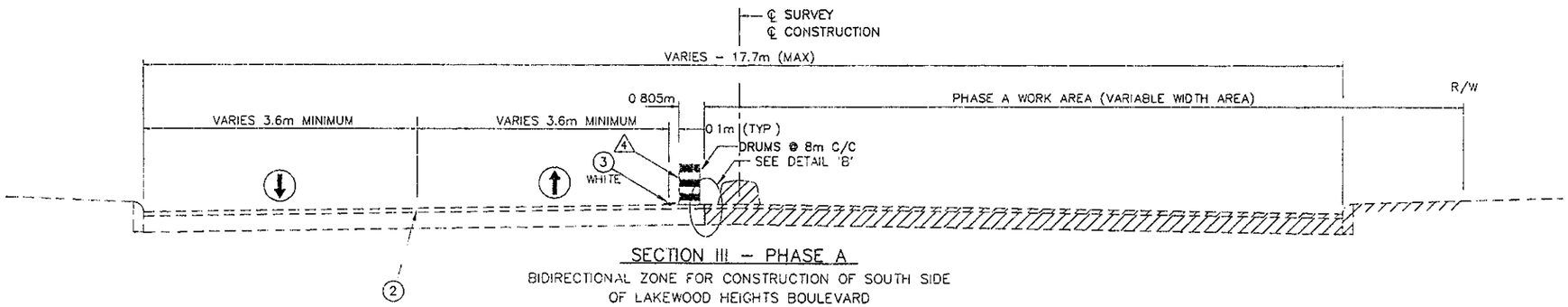
SECTION III – PHASE A

BIDIRECTIONAL ZONE FOR PHASE A BRIDGE DECK REPLACEMENT



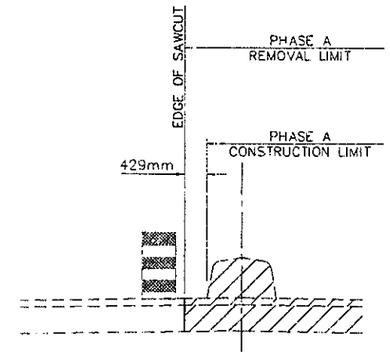
DETAIL 'A'

NOTE: SEE SHEET 11, SECTION 3, DECK REMOVAL

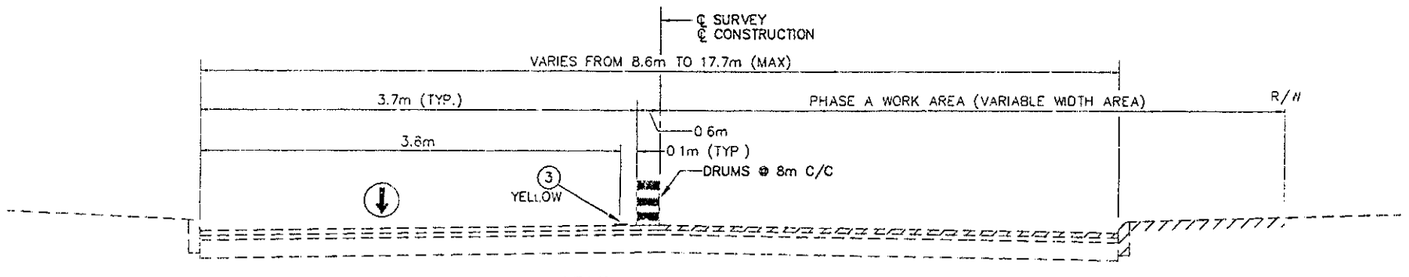


SECTION III – PHASE A

BIDIRECTIONAL ZONE FOR CONSTRUCTION OF SOUTH SIDE
OF LAKEWOOD HEIGHTS BOULEVARD
FROM CHESTERLAND AVENUE TO BEREA ROAD

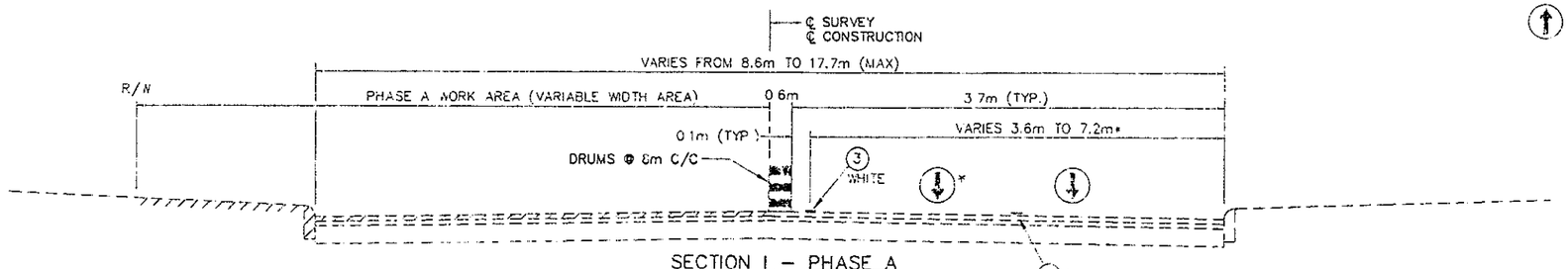


DETAIL 'B'



SECTION II – PHASE A

SINGLE LANE ZONE FOR CONSTRUCTION OF SOUTH SIDE
OF LAKEWOOD HEIGHTS BOULEVARD
FROM BROWN ROAD TO CHESTERLAND AVENUE



SECTION I – PHASE A

ONE WAY ZONE FOR CONSTRUCTION OF NORTH SIDE
OF LAKEWOOD HEIGHTS BOULEVARD
FROM WOODWARD AVENUE TO BROWN ROAD

* 2 LANE SECTION BETWEEN ALGER RD. AND LINCOLN AVE

LEGEND

(1) ITEM 622 – PORTABLE CONCRETE BARRIER 813mm BRIDGE MOUNTED

(2) ITEM 614 – TEMPORARY CENTER LINE, CLASS I DOUBLE SOLID 642 PAINT

(3) ITEM 614 – TEMPORARY EDGE LINE CLASS I 642 PAINT

(4) ITEM 614 – TEMPORARY LANE LINE, CLASS I, 642 PAINT

PROPOSED WORK AREA

– DIRECTION OF TRAFFIC

NOTES

1. PORTABLE CONCRETE BARRIERS SHALL BE ANCHORED TO DECK WITH TWO (2) ANCHORS REQUIRED ON TRAFFIC SIDE OF EACH BARRIER SEGMENT. SEE STD CONSTRUCTION DWG. PCB-91.1

2. PORTABLE CONCRETE BARRIER 813mm SHALL BE USED BETWEEN STA 12+445 AND 12+930 AS NOTED ON THIS SHEET. SEE SHEETS 18-31 FOR PLAN LOCATION

MAINTENANCE OF TRAFFIC TYPICAL SECTIONS

CUY - LAKEWOOD HEIGHTS BOULEVARD

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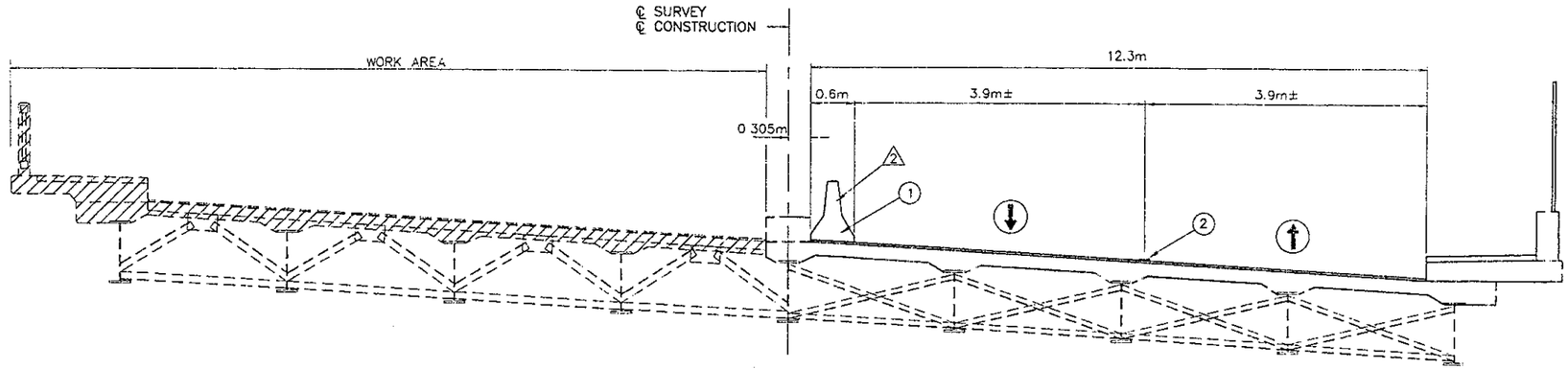
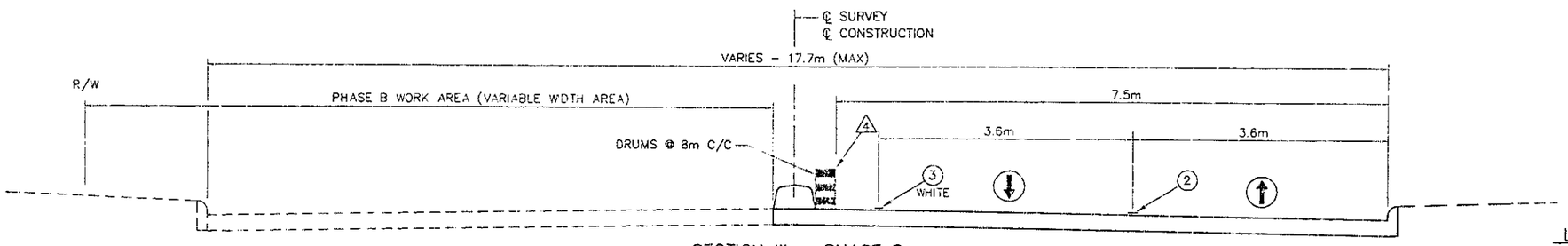


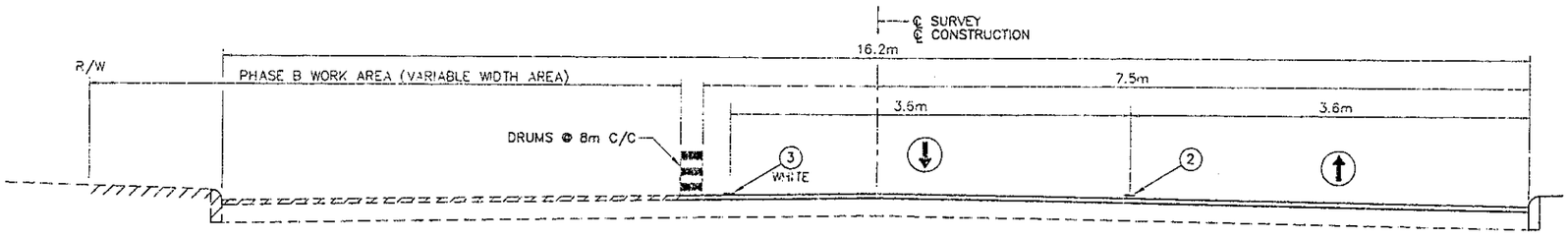
SECTION III – PHASE B

BIDIRECTIONAL ZONE FOR PHASE B BRIDGE DECK REPLACEMENT 3



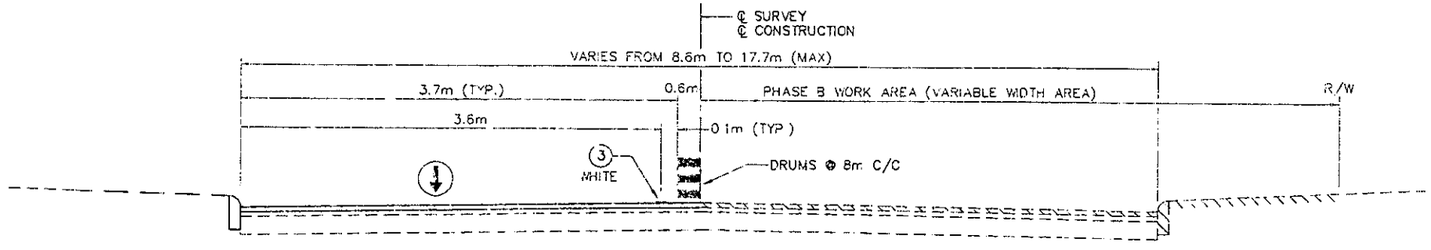
SECTION III – PHASE B

BIDIRECTIONAL ZONE FOR CONSTRUCTION OF NORTH SIDE
OF LAKEWOOD HEIGHTS BOULEVARD
FROM CHESTERLAND AVENUE TO BEREA ROAD



SECTION II – PHASE B

BIDIRECTIONAL ZONE FOR CONSTRUCTION OF NORTH SIDE
OF LAKEWOOD HEIGHTS BOULEVARD
FROM BROWN ROAD TO CHESTERLAND AVENUE



SECTION I – PHASE B

ONE WAY ZONE FOR CONSTRUCTION OF SOUTH SIDE
OF LAKEWOOD HEIGHTS BOULEVARD
FROM WOODWARD AVENUE TO BROWN ROAD

LEGEND

(1) ITEM 622 – PORTABLE CONCRETE BARRIER, 813mm

(2) ITEM 614 – TEMPORARY CENTER LINE, CLASS I DOUBLE SOLID, 740 06 TYPE 1

(3) ITEM 614 – TEMPORARY EDGE LINE CLASS I 740 06 TYPE 1

PROPOSED WORK AREA

– DIRECTION OF TRAFFIC

NOTES

2 PORTABLE CONCRETE BARRIER SHALL BE PLACED AGAINST THE MEDIAN CURB AS SHOWN. NO ANCHORS REQUIRED

3 THE TEMPORARY DECK SUPPORTS SHALL REMAIN IN PLACE UNTIL PHASE A CONSTRUCTION IS COMPLETE AND TRAFFIC HAS BEEN SHIFTED ONTO THE NEWLY BUILT PORTION OF THE DECK. SEE SHEET 16 FOR DETAILS

4 PORTABLE CONCRETE BARRIER, 813mm SHALL BE USED BETWEEN STA. 12+445 AND STA. 12+930 AS NOTED ON THIS SHEET. SEE SHEETS 32-45 FOR PHASE B DETAILS

MAINTENANCE OF TRAFFIC TYPICAL SECTIONS

CUY - LAKEWOOD HEIGHTS BOULEVARD

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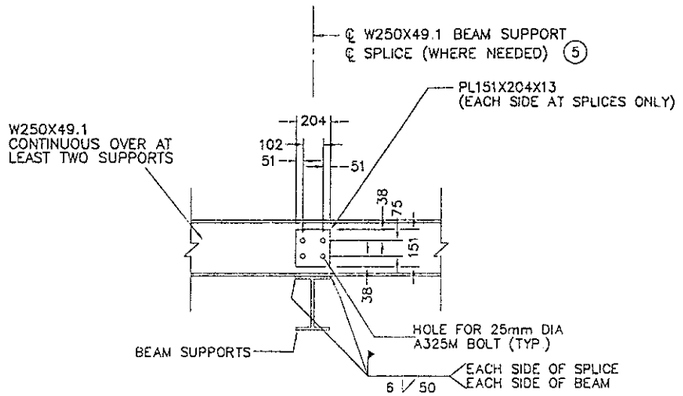
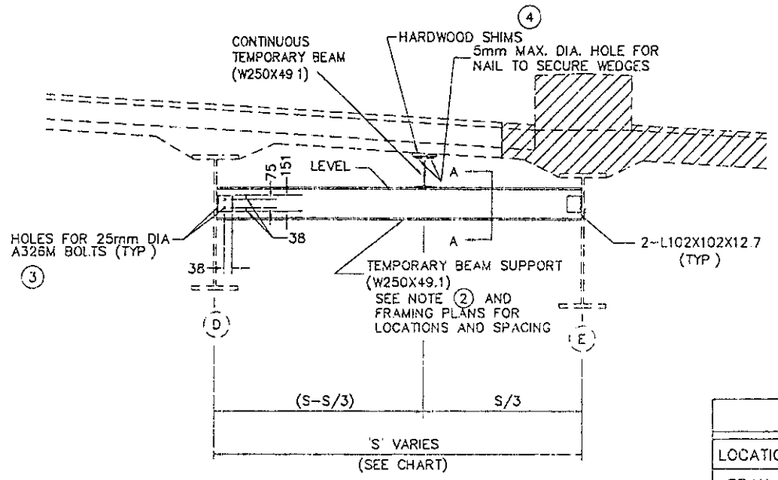


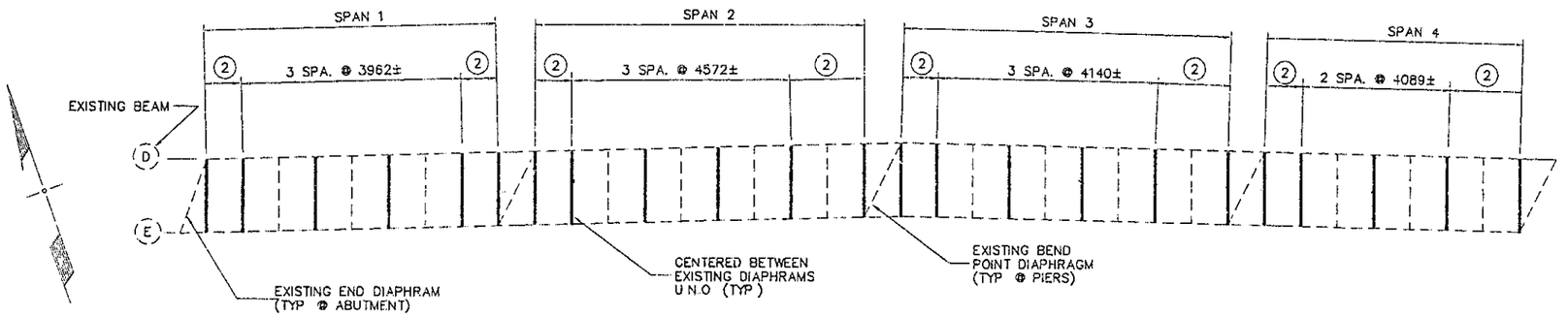
SECTION A–A



TEMPORARY DECK SUPPORT DETAIL

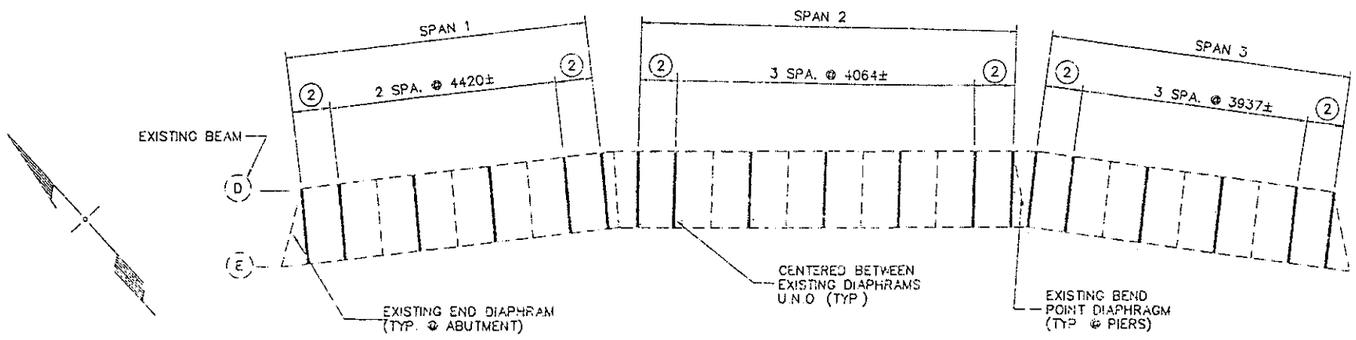
EXISTING BEAM SPACING (S)*		
LOCATION	BRIDGE 209	BRIDGE 210
SPAN 1	2304±	2264±
SPAN 2	2342±	2309±
SPAN 3	2400±	2215±
SPAN 4	2448±	–

* MEASURED PERPENDICULAR TO BEAMS



BRIDGE 209

PARTIAL FRAMING PLAN
(SHOWING LOCATIONS OF TEMPORARY BEAM SUPPORTS)



BRIDGE 210

PARTIAL FRAMING PLAN
(SHOWING LOCATIONS OF TEMPORARY BEAM SUPPORTS)

LEGEND

PROPOSED WORK AREA

TEMPORARY SUPPORT NOTES

(1) THE TEMPORARY DECK SUPPORTS SHALL BE INSTALLED BEFORE ANY SAWCUTTING OF THE DECK IS PERMITTED. THE COST OF INSTALLING, MAINTAINING, AND REMOVING ALL PORTIONS OF THE TEMPORARY DECK SUPPORT SHALL BE INCLUDED WITH ITEM 614 – MAINTAINING TRAFFIC

(2) TEMPORARY BEAM SUPPORTS AT ENDS OF SPANS SHALL BE LOCATED AS CLOSE AS PRACTICAL TO THE EXISTING END DIAPHRAMS. ALL OTHER SUPPORTS SHALL BE LOCATED MIDWAY BETWEEN THE EXISTING INTERMEDIATE DIAPHRAMS. AS DIRECTED BY THE ENGINEER, INSTALL TIMBER BLOCKING AND/OR A SCREW JACK AT THE ABUTMENT BEAM SEATS TO PROVIDE A TIGHT FITTING SUPPORT FOR THE W250x49.1

(3) HOLES FOR TEMPORARY SUPPORTS MUST BE DRILLED IN EXISTING BEAMS.

(4) SHIMS SHALL BE PLACED TIGHT AT EACH TEMPORARY BEAM SUPPORT AND AS DIRECTED BY THE ENGINEER

(5) THE TEMPORARY BEAM SHALL BE SPLICED ONLY AS NECESSARY FOR CONSTRUCTION. SPLICES, WHERE REQUIRED, SHALL BE LOCATED AT THE BEAM SUPPORTS AS SHOWN

MAINTENANCE OF TRAFFIC TYPICAL SECTIONS
DETAILS

CITY - LAKEWOOD HEIGHTS BOULEVARD

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QUANTITY SUBSUMMARY

PHASE	LOCATION: STATION TO STATION LAKE= 100% PROJECT CITY OF LAKEWOOD CLEV= 100% PROJECT CITY OF CLEVELAND	ITEM NUMBERS 614 — TEMPORARY LANE LINE, CLASS I, 642 PAINT (KM)		TEMPORARY CENTER LINE, CLASS I, 642 PAINT (KM)		TEMPORARY EDGE LINE, WHITE, CLASS I, 642 PAINT (KM)		TEMPORARY EDGE LINE, YELLOW, CLASS I, 642 PAINT (KM)		TEMPORARY CHANNELIZING LINE, CLASS I, 642 PAINT (METER)		TEMPORARY STOP LINE, CLASS I, 642 PAINT (METER)		TEMPORARY CROSSWALK LINE, CLASS I, 642 PAINT (METER)		TEMPORARY CENTER LINE, CLASS I, 740.06, TYPE I (KM)		TEMPORARY EDGE LINE, WHITE, CLASS I, 740.06, TYPE I (KM)		TEMPORARY EDGE LINE, YELLOW, CLASS I, 740.06, TYPE I (KM)		TEMPORARY CHANNELIZING LINE, CLASS I, 740.06, TYPE I (METER)		TEMPORARY DOTTED LINE, CLASS I, 740.06, TYPE I (METER)		TEMPORARY STOP LINE, CLASS I, 740.06, TYPE I (METER)		TEMPORARY CROSSWALK LINE, CLASS I, 740.06, TYPE I (METER)		TEMPORARY LANE ARROW, CLASS I, 740.06, TYPE I (EACH)		TEMPORARY WORD ON PAVEMENT, 1800mm, CLASS I, 740.06, TYPE I (EACH)		622 — PORTABLE CONCRETE BARRIER, 813mm (METER)		PORTABLE CONCRETE BARRIER, 813mm, BRIDGE MOUNTED (METER)	
		LAKE	CLEV	LAKE	CLEV	LAKE	CLEV	LAKE	CLEV	LAKE	CLEV	LAKE	CLEV	LAKE	CLEV	LAKE	CLEV	LAKE	CLEV	LAKE	CLEV	LAKE	CLEV	LAKE	CLEV	LAKE	CLEV	LAKE	CLEV	LAKE	CLEV	LAKE	CLEV	LAKE	CLEV
A	STA.10+010.2 TO STA.11+649.2					1.639																													
A	STA.11+649.2 TO STA.12+276							0.203	0.424																										
A	STA.12+133.2 TO STA.12+276.3															0.143		0.062																	
A	STA.12+300 TO STA.12+402						0.102																												
A	STA.12+300 TO STA.12+930.8			0.439	0.192																														
A	STA.12+434.4 TO STA.0+967.9 BEREA RD.																																	114.0	262.6	143.8	38.0
A	STA.10+957 TO STA.10+990.5									52.2																									
A	STA.10+990.5 TO STA.11+336		0.346																																
A	STA.11+336 TO STA.11+381.4						0.045			45.4																										
A	STA.11+661 TO STA.11+738.4															0.077						38.0								2		1					
A	STA.12+304.8 TO STA.12+353																					48.2								2		1					
A	STA.0+966 TO STA.1+000.8 BEREA ROAD																	0.037																			
A	STA.1+018.2 TO STA.1+173.5 BEREA ROAD																	0.158																			
A	STA.10+004 TO STA.12+930.8											17.3	17.5	65.3	34.2												17.2	23.9									
A/B	WARREN ROAD																	0.266	0.069	0.271	0.069																
B	STA.10+010.2 TO STA.11+649.2																			1.639																	
B	STA.11+661 TO STA.11+737															0.038	0.038																				
B	STA.11+658.5 TO STA.12+277.9																0.619	0.150	0.469																		
B	STA.12+214.7 TO STA.12+930															0.284	0.432																				
B	STA.12+275.3 TO STA.12+302.9																										27.6										
B	STA.0+999.4 TO STA.1+026.5 BEREA ROAD																	0.187																			
B	STA.10+004 TO STA.12+930																										52.4	55.6	60.9								
	SUB-TOTAL	–	0.346	0.439	0.192	1.639	0.147	0.203	0.424	–	97.6	17.3	17.5	65.3	34.2	0.322	1.309	0.416	0.982	1.910	0.069	86.2	–	–	27.6	118.7	99.4	60.9	–	4	–	2	–	114.0	262.6	143.8	38.0
	TOTAL	0.346		0.631		2.413				97.6		34.8		99.5		1.631		3.377				86.2		27.6		218.1		60.9		4		2		376.6		181.8	

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JJS | PDH

MAINTENANCE OF TRAFFIC SUB-SUMMARY

CUY - LAKEWOOD HEIGHTS BOULEVARD

LEGEND

WORK AREA

DRUM

TRAFFIC MOVEMENT

ROAD CONSTRUCTION AHEAD ① OW-128

END CONSTRUCTION ② OC-8

ONE WAY R-43L | DO NOT ENTER R-41B | ONE WAY R-43L ③

ONE WAY R-43R | DO NOT ENTER R-41B ④

WRONG WAY ⑤ R-41A

ONE WAY ⑥ R-43R

CONTRACTOR SHALL ERECT PROPOSED "NO PARKING" SIGNS AS SHOWN ON TRAFFIC CONTROL PLANS.

NOTE:
SIGNS SHOWN IN PAVED AREAS SHALL BE PLACED ON PORTABLE SUPPORTS WITH STABILIZED BASES.

STA.10+010.2, LT.
STA.10+030, LT.
STA.10+175, LT
STA.10+185, LT.

BEGIN WORK
BEGIN PROJECT
STA. 10+004
STP- 8HF 93C( )

STATIONING ON INTERSECTING STREETS RUNS FROM SOUTH TO NORTH WITH 1+000 AT LAKEWOOD HEIGHTS BLVD

① STA.1+060. LT.
② STA.1+018, RT.
③ STA.10+010.2, LT.
④ STA.10+030, LT. & RT.
⑤
⑥ STA.10+058, RT.
① STA.0+940, RT.

WOODWARD AVE

DRUMS @ 1.5m C/C

10+000

10+040

℄ LAKEWOOD HEIGHTS BLVD.

3.6m
4.30m

TEMPORARY STOP LINE CLASS I 642 PAINT
TEMPORARY CROSSWALK LINE, CLASS I, 642 PAINT
TEMPORARY EDGE LINE, WHITE, CLASS I, 642 PAINT

DRUMS @ 8m C/C

MATCH LINE STA. 10+080

IF PERMANENT ASPHALT COURSES ARE NOT PLACED IMMEDIATELY FOLLOWING MILLING, THEN PLACE ITEM 614 BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC.

① STA.1+060, LT
TEMPORARY STOP LINE, CLASS I, 740 06 TYPE 11

② STA 1+015. RT

④ STA.10+175, LT. & RT.

OLIVE AVE

SEC 18
SEC 19

10+100
10+140
10+149

DRUMS @ 15m C/C
DRUMS @ 8m C/C

℄ LAKEWOOD HEIGHTS BLVD.

TEMPORARY EDGE LINE WHITE CLASS I 642 PAINT

CITY OF LAKEWOOD
CITY OF CLEVELAND

⑥ STA.10+093, RT
⑥ STA.10+168, RT
⑤ STA.10+381, LT. & RT.

MATCH LINE STA. 10+200
SEE SHEET NO. 19

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MAINTENANCE OF TRAFFIC - C.R. 297 SECTION I - PHASE A
STA. 10+000 TO STA. 10+200

CUY - LAKEWOOD HEIGHTS BOULEVARD

HORIZONTAL SCALE IN METERS

CALCULATED | CHECKED

LEGEND

WORK AREA

DRUM

TRAFFIC MOVEMENT

ROAD CONSTRUCTION AHEAD ①
OW-128

BUMP ②
W-62

END CONSTRUCTION ③
OC-8

ONE WAY R-43R | DO NOT ENTER R-41B | ONE WAY R-43L ④

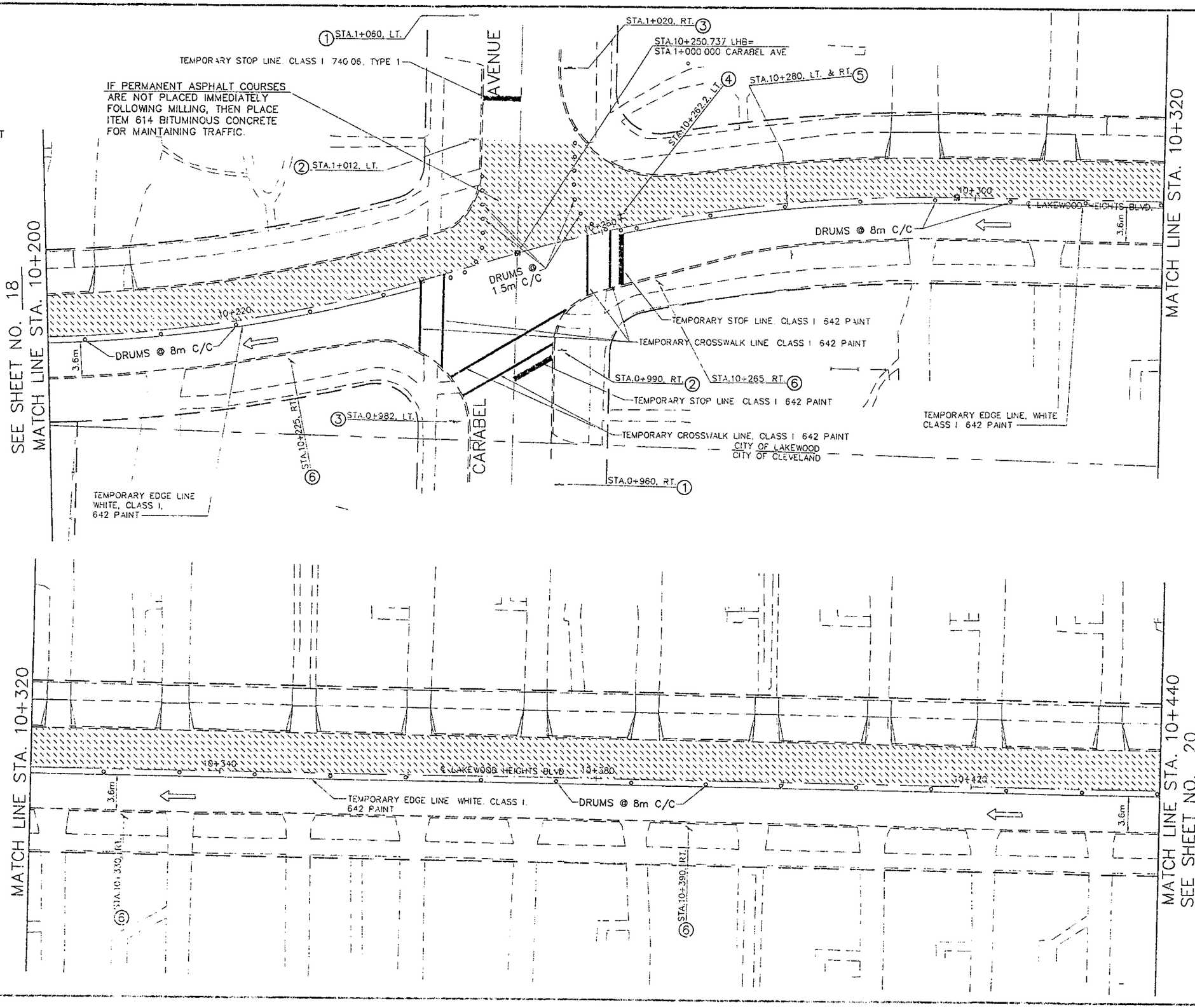
WRONG WAY ⑤
R-41A

NO PARKING ANY TIME ⑥
R-55

NOTE:
SIGNS SHOWN IN PAVED AREAS SHALL BE PLACED ON PORTABLE SUPPORTS WITH STABILIZED BASES.

STA 10+262 2, LT.
STA.10+280, LT.

STATIONING ON INTERSECTING STREETS RUNS FROM SOUTH TO NORTH WITH 1+000 AT LAKEWOOD HEIGHTS BLVD.



MAINTENANCE OF TRAFFIC - C.R. 297 SECTION I - PHASE A
STA. 10+200 TO STA. 10+440

CUY - LAKEWOOD HEIGHTS BOULEVARD

19
162

HORIZONTAL SCALE IN METERS

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LEGEND

WORK AREA

DRUM

TRAFFIC MOVEMENT

ROAD CONSTRUCTION AHEAD ①
OW-128

END CONSTRUCTION ②
OC-8

ONE WAY R-43R | DO NOT ENTER R-41B | ONE WAY R-43L ③

WRONG WAY ④
R-41A

NO PARKING ANY TIME ⑤
R-55

NOTE:
SIGNS SHOWN IN PAVED AREAS SHALL BE PLACED ON PORTABLE SUPPORTS WITH STABILIZED BASES

STA.10+600, LT.
STA.10+615, LT

STATIONING ON INTERSECTING STREETS RUNS FROM SOUTH TO NORTH WITH 1+000 AT LAKEWOOD HEIGHTS BLVD

SEE SHEET NO. 19
MATCH LINE STA. 10+440

MATCH LINE STA. 10+560

10+460 E LAKEWOOD HEIGHTS BLVD.

10+500

10+540

3.6m

4.30m

TEMPORARY EDGE LINE WHITE CLASS I. 642 PAINT

DRUMS @ 8m C/C

STA.10+452, RT. ⑤

STA.10+508, RT. ⑤

IF PERMANENT ASPHALT COURSES ARE NOT PLACED IMMEDIATELY FOLLOWING MILLING, THEN PLACE ITEM 614 BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC

① STA.1+060, LT.

TEMPORARY STOP LINE CLASS I, 740 06 TYPE 1

AVENUE

STA.1+015, RT. ②

STA 10+588.951 LHB
STA 1+000.000 ARTHUR AVE

③ STA.10+600, LT.

④ STA.10+615, LT. & RT.

MATCH LINE STA. 10+560

10+580

10+620 E LAKEWOOD HEIGHTS BLVD.

10+660

DRUMS @ 1.5m C/C

TEMPORARY EDGE LINE WHITE CLASS I. 642 PAINT

DRUMS @ 8m C/C

ARTHUR

STA.10+570, RT. ⑤

STA.10+605, RT. ⑤

STA.10+665, RT. ⑤

TEMPORARY STOP LINE CLASS I, 740 06 TYPE 1

STA.0+980, RT. ①

MATCH LINE STA. 10+680
SEE SHEET NO. 21

N

HORIZONTAL SCALE IN METERS

CALCULATED

CHECKED

MAINTENANCE OF TRAFFIC - C.R. 297 SECTION I - PHASE A
STA. 10+440 TO STA. 10+680

CUY - LAKEWOOD HEIGHTS BOULEVARD

20
162

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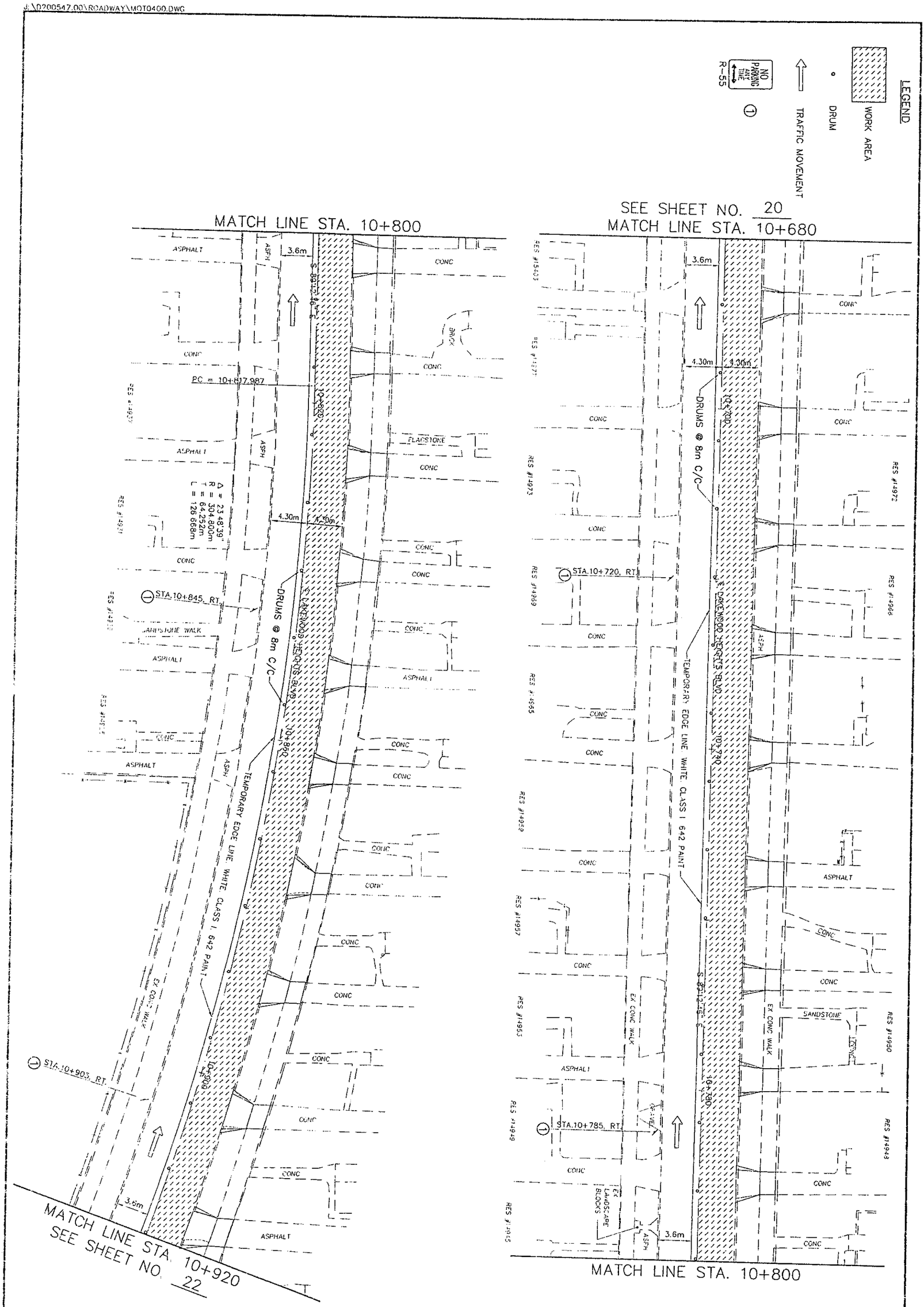

CUY - LAKEWOOD HEIGHTS BOULEVARD

MAINTENANCE OF TRAFFIC - C.R. 297 SECTION I - PHASE A
STA. 10+680 TO STA. 10+920

CALCULATED
CHECKED

0 4
2 8
HORIZONTAL SCALE IN METERS

N

LEGEND

WORK AREA

DRUM

TRAFFIC MOVEMENT

ROAD CONSTRUCTION AHEAD ①
OW-128

END CONSTRUCTION ②
OC-8

DO NOT ENTER ONE WAY R-43R R-41B R-43L ③

WRONG WAY ④
R-41A

BUMP ⑤
W-62

ONE WAY ⑥
R-43R

CONTRACTOR SHALL ERECT PROPOSED "NO PARKING" SIGNS AS SHOWN ON TRAFFIC CONTROL PLANS

NOTE:
SIGNS SHOWN IN PAVED AREAS SHALL BE PLACED ON PORTABLE SUPPORTS WITH STABILIZED BASES

STA.10+954.4, LT
STA.11+015.4, LT.

STATIONING ON INTERSECTING STREETS RUNS FROM SOUTH TO NORTH WITH 1+000 AT LAKEWOOD HEIGHTS BLVD.

① STA.1+060, LT.
⑤ STA.1+022.5, LT.
TEMPORARY STOP LINE CLASS I 740 06 TYPE I
STA.1+025, RT. ②
SEE SHEET NO. 21 MATCH LINE STA. 10+920
ALGER ROAD
STA.10+944.655 LHS= STA 1+000 000 ALGER RD
IF PERMANENT ASPHALT COURSES ARE NOT PLACED IMMEDIATELY FOLLOWING MILLING, THEN PLACE ITEM 614 BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC.
STA.10+954.4, LT ③
DRUMS @ 1.5m C/C
TEMPORARY STOP LINE, CLASS I, 642 PAINT
STA.11+015.4, LT. & RT. ④
EX POSTS
EX CONC WALK
DRUMS @ 8m C/C
CITY OF LAKEWOOD
CITY OF CLEVELAND
EX SIGN BASE
10+980
11+020
℄ LAKEWOOD HEIGHTS BLVD
EX MARKER
EX POSTS
0+975.5, LT.
② STA.0+975.5, LT.
② STA.0+970 LT.
STA.0+973.7, RT. ⑤
STA.0+940, RT. ①
TEMPORARY CHANNELIZING LINE CLASS I 642 PAINT ⑤
TEMPORARY EDGE LINE WHITE CLASS I, 642 PAINT
TEMPORARY LANE LINE CLASS I, 642 PAINT
EX CONC RET WALL ⑥
MATCH LINE STA. 11+040
MATCH LINE STA. 11+160
SEE SHEET NO. 23
EX CONC BIKE RACK
CONC
EXIST BRICK BUILDING
EX CONC WALK
℄ LAKEWOOD HEIGHTS BLVD.
DRUMS @ 8m C/C
TEMPORARY EDGE LINE WHITE CLASS I 642 PAINT
TEMPORARY LANE LINE CLASS I, 642 PAINT
EX CONCRETE RETAINING WALL

MAINTENANCE OF TRAFFIC - C.R. 297 SECTION I - PHASE A
STA. 10+920 TO STA. 11+160
CUY - LAKEWOOD HEIGHTS BOULEVARD

HORIZONTAL SCALE IN METERS

22
162

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LEGEND

WORK AREA

DRUM

TRAFFIC MOVEMENT

ROAD CONSTRUCTION AHEAD ①
OW-128

END CONSTRUCTION ②
OC-8

ONE WAY R-43R | DO NOT ENTER R-41B | ONE WAY R-43L ③

WRONG WAY ④
R-41A

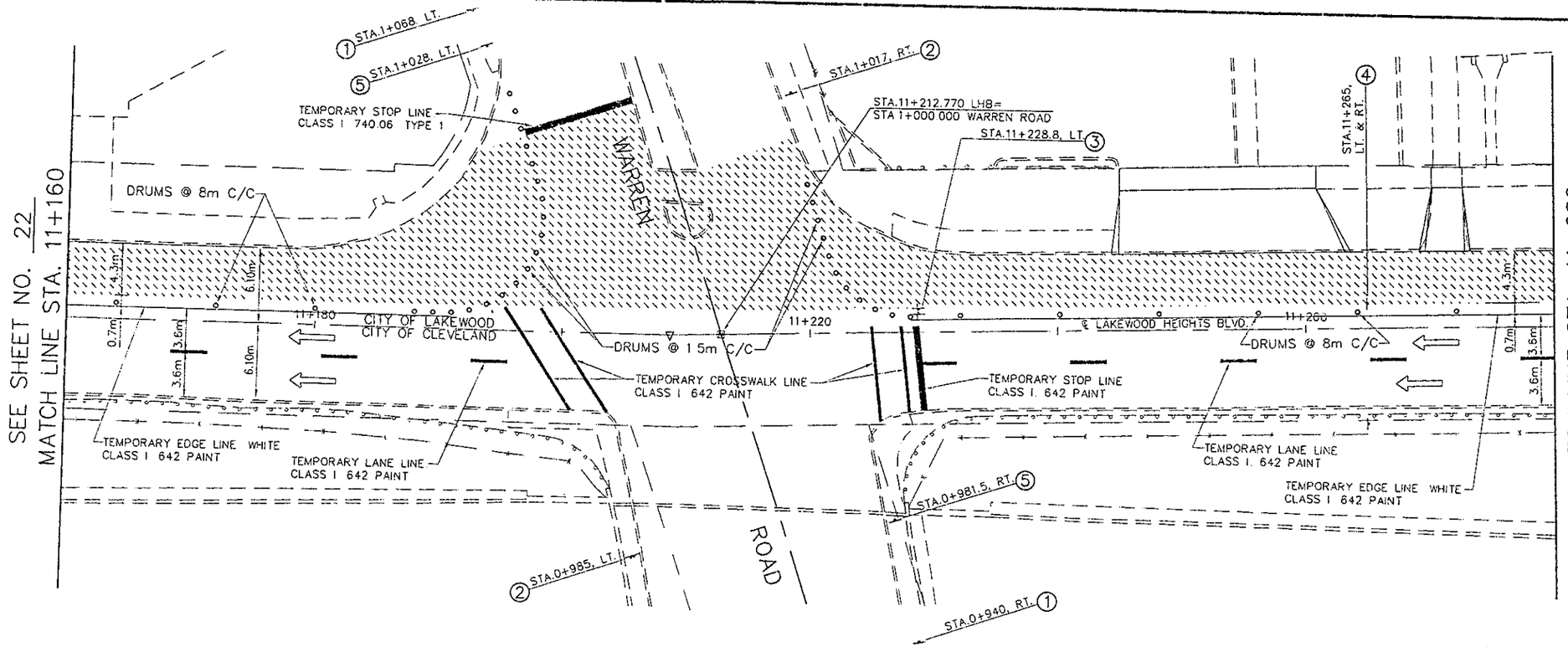
BUMP ⑤
W-62

CONTRACTOR SHALL ERECT PROPOSED "NO PARKING" SIGNS AS SHOWN ON TRAFFIC CONTROL PLANS.

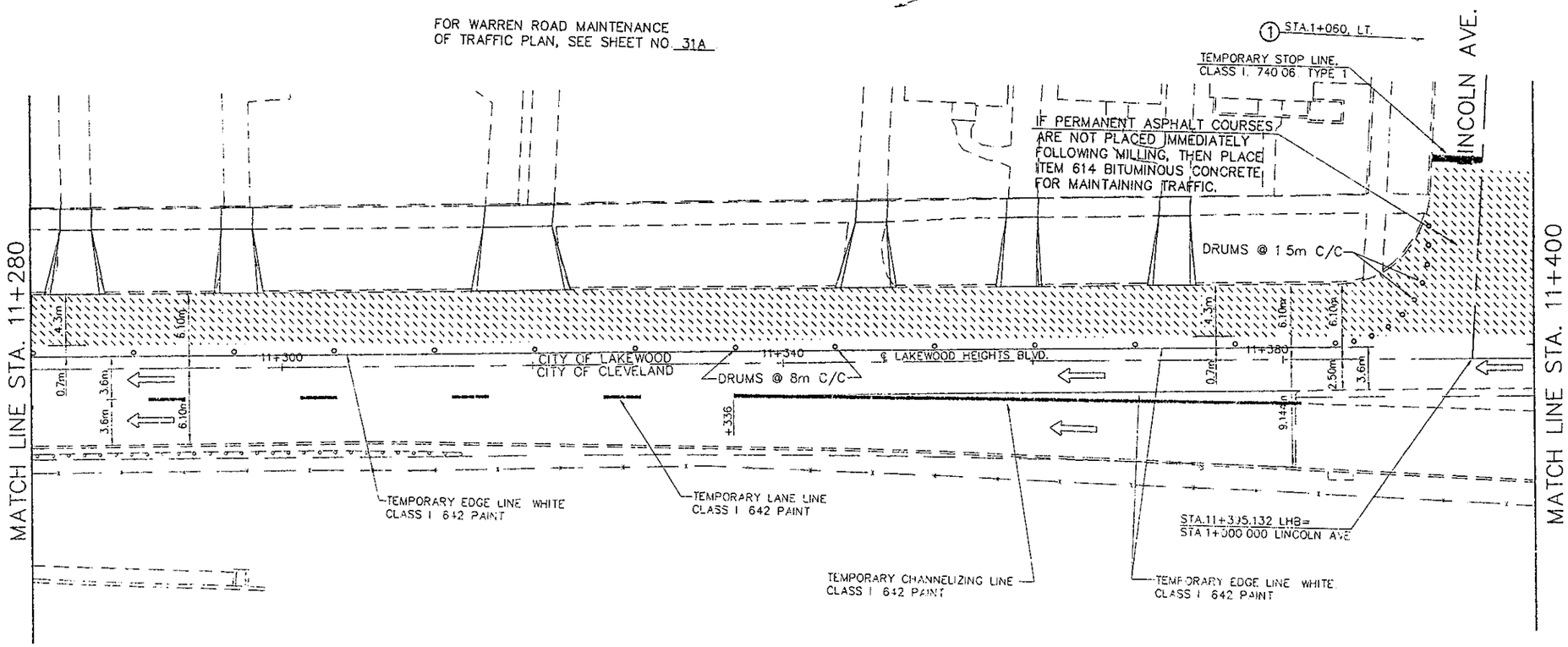
NOTE:
SIGNS SHOWN IN PAVED AREAS SHALL BE PLACED ON PORTABLE SUPPORTS WITH STABILIZED BASES.

STA 11+228.8, LT.
STA.11+265, LT.

STATIONING ON INTERSECTING STREETS RUNS FROM SOUTH TO NORTH WITH 1+000 AT LAKEWOOD HEIGHTS BLVD.



FOR WARREN ROAD MAINTENANCE OF TRAFFIC PLAN, SEE SHEET NO. 31A



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HORIZONTAL SCALE IN METERS

CUY - LAKEWOOD HEIGHTS BOULEVARD

MAINTENANCE OF TRAFFIC - C.R. 297 SECTION I - PHASE A
STA. 11+160 TO STA. 11+400

LEGEND

WORK AREA

DRUM

TRAFFIC MOVEMENT

ROAD CONSTRUCTION AHEAD ①
OW-128

END CONSTRUCTION ②
OC-8

ONE WAY R-43R | DO NOT ENTER R-41B | ONE WAY R-43L ③

WRONG WAY ④
R-41A

BUMP ⑤
W-62

CONTRACTOR SHALL ERECT PROPOSED "NO PARKING" SIGNS AS SHOWN ON TRAFFIC CONTROL PLANS

NOTE:
SIGNS SHOWN IN PAVED AREAS SHALL BE PLACED ON PORTABLE SUPPORTS WITH STABILIZED BASES

STA 11+405, LT.
STA.11+500, LT.
STA.11+510, LT.
STA 11+585, LT
STA 11+605, LT.

STATIONING ON INTERSECTING STREETS RUNS FROM SOUTH TO NORTH WITH 1+000 AT LAKEWOOD HEIGHTS BLVD.

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IF PERMANENT ASPHALT COURSES ARE NOT PLACED IMMEDIATELY FOLLOWING MILLING, THEN PLACE ITEM 614 BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC.

SEE SHEET NO. 23
MATCH LINE STA. 11+400

STA.1+020, RT. ② LINCOLN AVE.

STA.11+405, LT. ③

STA.1+060, LT. ①

TEMPORARY STOP LINE, CLASS I, 740.06 TYPE 1

ADELINE ST.

STA.1+020, RT. ②

STA.11+500, LT. ③

MATCH LINE STA. 11+520

4.3m | 6.10m | 4.3m
3.6m | 0.7m | 2.50m | 3.6m | 0.7m

11+420 ℄ LAKEWOOD HEIGHTS BLVD. 11+460 DRUMS @ 8m C/C

CITY OF LAKEWOOD
CITY OF CLEVELAND
DRUMS @ 1.5m C/C

11+500

CONC MEDIAN

STA.11+414, LT. & RT. ④

STA.11+492.167 LHB=
STA 1+000.000 ADELINE ST.

STA.11+510, LT. & RT. ④

TEMPORARY EDGE LINE, WHITE, CLASS I, 642 PAINT

STA.11+435, RT. ⑤

STA.11+492, RT. ①

IF PERMANENT ASPHALT COURSES ARE NOT PLACED IMMEDIATELY FOLLOWING MILLING, THEN PLACE ITEM 614 BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC.

① STA.1+060, LT.

TEMPORARY STOP LINE, CLASS I, 740.06 TYPE 1

ST. HILDA

STA.1+020, RT. ②

STA.11+585, LT. ③

MATCH LINE STA. 11+520

4.3m | 6.10m | 4.3m
3.6m | 0.7m | 2.50m | 3.6m | 0.7m

11+540 CITY OF LAKEWOOD
CITY OF CLEVELAND
℄ LAKEWOOD HEIGHTS BLVD. 11+580 DRUMS @ 1.5m C/C

11+620 DRUMS @ 8m C/C

STA.11+577.620 LHB=
STA 1+000.000 HILDA ST.

STA.11+605, LT. & RT. ④

TEMPORARY EDGE LINE, WHITE, CLASS I, 642 PAINT

MATCH LINE STA. 11+640
SEE SHEET NO. 25

HORIZONTAL SCALE IN METERS

MAINTENANCE OF TRAFFIC - C.R. 297 SECTION I - PHASE A
STA. 11+400 TO STA. 11+640

CUY - LAKEWOOD HEIGHTS BOULEVARD

LEGEND

WORK AREA

DRUM

TRAFFIC MOVEMENT

ROAD CONSTRUCTION AHEAD ① OW-128

END CONSTRUCTION ② OC-8

ONLY | ONLY ③ R-31Z

STATIONING ON INTERSECTING STREETS RUNS FROM SOUTH TO NORTH WITH 1+000 AT LAKEWOOD HEIGHTS BLVD

① STA.1+060, LT.
TEMPORARY STOP LINE, CLASS I, 740.06, TYPE 1

IF PERMANENT ASPHALT COURSES ARE NOT PLACED IMMEDIATELY FOLLOWING MILLING, THEN PLACE ITEM 614 BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC.

② STA.1+020, RT.

STA.11+649.902 LHB=
STA.1+000.000 BROWN RD.

③ STA.11+661, LT.

③ STA.11+691.4, LT.

① STA.11+737, LT.

STA.11+749.117 LHB=
STA.1+000.000 RICHLAND AVE. (N)

BROWN RD

SEE SHEET NO. 24
MATCH LINE STA. 11+640

11+660

11+676.2

11+699

11+700

11+740

11+738.4

℄ LAKEWOOD HEIGHTS BLVD.

6.10m

3.6m

DRUMS @ 1.5m C/C

② STA.11+720, RT

STA.11+747.398 LHB=
STA.1+000.000 RICHLAND AVE. (S)

RICHLAND AVENUE

MATCH LINE STA. 11+760

TEMPORARY LANE ARROW, CLASS I, 740.06, TYPE 1

TEMPORARY WORD ON PAVEMENT, 1800mm. CLASS I 740.06, TYPE 1

TEMPORARY CHANNELIZING LINE, CLASS I. 740.06, TYPE 1

TEMPORARY EDGE LINE, WHITE, CLASS I, 642 PAINT

TEMPORARY LANE ARROW, CLASS I, 740.06, TYPE 1

TEMPORARY CENTER LINE, DOUBLE SOLID. CLASS I. 740.06, TYPE 1

STA.11+852.124 LHB=
STA.1+004.170
BUNTS RD

BUNTS ROAD

SEC 19
SEC 20

CITY OF LAKEWOOD
CITY OF CLEVELAND

11+860
℄ LAKEWOOD HEIGHTS BLVD

11+820
℄ LAKEWOOD HEIGHTS BLVD

11+780

MATCH LINE STA. 11+760

W 140TH ST.

STA.11+852.124 LHB=
STA.1+000.000
W. 140th ST

N

HORIZONTAL SCALE IN METERS
0 2 4

MAINTENANCE OF TRAFFIC - C.R. 297 SECTION I - PHASE A
STA. 11+640 TO STA. 11+880

CITY - LAKEWOOD HEIGHTS BOULEVARD

24A
162

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LEGEND

WORK AREA

DRUM

TRAFFIC MOVEMENT

① ROAD CONSTRUCTION AHEAD — OW-128

② END CONSTRUCTION — OC-8

③ ONE WAY R-43R | DO NOT ENTER R-41B | ONE WAY R-43L

④ ONE WAY R-43R | DO NOT ENTER R-41B

⑤ WRONG WAY R-41A

⑥ ONE WAY R-43R

⑦ R-121

⑧ R-120

⑨ BUMP W-62

CONTRACTOR SHALL ERECT PROPOSED "NO PARKING" SIGNS AS SHOWN ON TRAFFIC CONTROL PLANS

NOTE:
SIGNS SHOWN IN PAVED AREAS SHALL BE PLACED ON PORTABLE SUPPORTS WITH STABILIZED BASES
STA.11+662, LT
STA.11+690, LT.
STA 11+760, LT
STA.11+775, LT.
STA.11+880, LT.

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SEE SHEET NO. 24
MATCH LINE STA. 11+640

① STA.1+060, LT.
⑦ STA.1+018, LT.
② STA.1+020, RT.

TEMPORARY STOP LINE, CLASS I, 740.06, TYPE 1

TEMPORARY EDGE LINE, YELLOW, CLASS I, 642 PAINT ⑪

IF PERMANENT ASPHALT COURSES ARE NOT PLACED IMMEDIATELY FOLLOWING MILLING, THEN PLACE ITEM 614 BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC

STA.11+649.902 LHB=
STA.1+000 000 BROWN RD.

BROWN RD

STA.11+640, LT. ②

④ STA.11+662, LT.

⑤ STA.11+690, LT.

DRUMS @ 8m C/C

3.6m
6.10m
0.6m

11+660

E. LAKEWOOD HEIGHTS BLVD.

11+700

STA.11+652.3, RT. ⑥

W-30
EXISTING STA 11+648, RT
W-32 OVERLAY

END SECTION I
BEGIN SECTION II

STATIONING ON INTERSECTING STREETS RUNS FROM SOUTH TO NORTH WITH 1+000 AT LAKEWOOD HEIGHTS BLVD.

① STA.1+060, LT.
⑦ STA.1+018, LT.
STA.11+749.117 LHB=
STA 1+000 000 RICHLAND AVE. (N)

DRUMS @ 1.5m C/C

11+740

③ STA.11+760, LT.

STA.1+020, RT. ②

RICHLAND AVENUE

MATCH LINE STA. 11+760

STA.11+747.398 LHB=
STA.1+000 000 RICHLAND AVE (S)

STA.0+985, RT. ⑧

② STA.0+980, LT.

① STA 1+060, LT.
⑨⑦ STA.1+018, LT.

TEMPORARY STOP LINE, CLASS I, 740.06, TYPE 1

STA.0+940, RT. ①
STA.1+026, RT. ②

BUNTS ROAD

STA.11+852.124 LHB=
STA.1+004.170
BUNTS RD

SEC 19
SEC 20

③ STA.11+880, LT.

DRUMS @ 1.5m C/C
CITY OF LAKEWOOD
CITY OF CLEVELAND
E. LAKEWOOD HEIGHTS BLVD.
11+860

MATCH LINE STA. 11+880
SEE SHEET NO. 26

⑤ STA.11+775, LT.

DRUMS @ 8m C/C
DRUMS @ 1.5m C/C

3.6m
9.6m
11+820

E. LAKEWOOD HEIGHTS BLVD.

MATCH LINE STA. 11+760

11+780

W. 140TH ST.

STA.11+852.124 LHB=
STA.1+000.000
W. 140th ST.

⑧⑨ 0+982

TEMPORARY STOP LINE, CLASS I, 740.06, TYPE 1

IF PERMANENT ASPHALT COURSES ARE NOT PLACED IMMEDIATELY FOLLOWING MILLING, THEN PLACE ITEM 614 BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC.

② 0+929

① 0+929

HORIZONTAL SCALE IN METERS

MAINTENANCE OF TRAFFIC - C.R. 297 SECTION II - PHASE A
STA. 11+640 TO STA. 11+880

CUY - LAKEWOOD HEIGHTS BOULEVARD

LEGEND

WORK AREA

DRUM

TRAFFIC MOVEMENT

ROAD CONSTRUCTION AHEAD ①
OW-128

END CONSTRUCTION ②
OC-8

ONE WAY R-43R | DO NOT ENTER R-41B | ONE WAY R-43L ③

WRONG WAY ④
R-41A

⑤
R-121

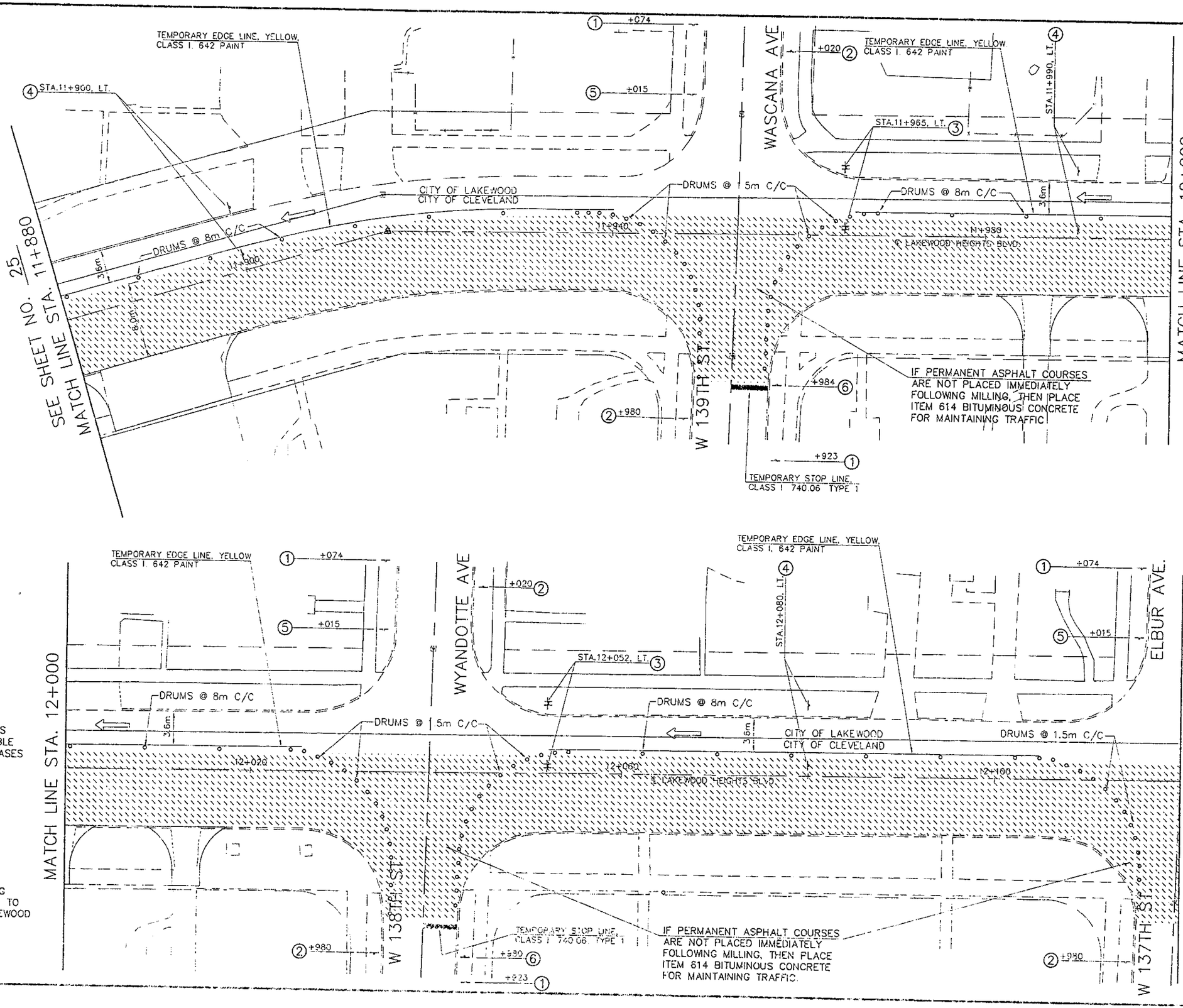
⑥
R-120

CONTRACTOR SHALL ERECT PROPOSED "NO PARKING" SIGNS AS SHOWN ON TRAFFIC CONTROL PLANS.

NOTE:
SIGNS SHOWN IN PAVED AREAS SHALL BE PLACED ON PORTABLE SUPPORTS WITH STABILIZED BASES

STA 11+965, LT.
STA 11+990, LT.
STA 12+052, LT.
STA 12+080, LT.

STATIONING ON INTERSECTING STREETS RUNS FROM SOUTH TO NORTH WITH 1+000 AT LAKEWOOD HEIGHTS BLVD



MAINTENANCE OF TRAFFIC - C.R. 297 SECTION II-PHASE A
STA. 11+880 TO STA. 12+120

CUY - LAKEWOOD HEIGHTS BOULEVARD

HORIZONTAL SCALE IN METERS

26/162

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LEGEND

WORK AREA

DRUM

TRAFFIC MOVEMENT

ROAD CONSTRUCTION AHEAD ① OW-128

END CONSTRUCTION ② OC-8

DO NOT ENTER R-41B ONE WAY R-43R ONE WAY R-43L ③

WRONG WAY ④ R-41A

⑤ R-121

⑥ R-120

R-43R ONE WAY ONE WAY R-43L ⑦

CONTRACTOR SHALL ERECT PROPOSED "NO PARKING" SIGNS AS SHOWN ON TRAFFIC CONTROL PLANS

NOTE:
SIGNS SHOWN IN PAVED AREAS SHALL BE PLACED ON PORTABLE SUPPORTS WITH STABILIZED BASES.

STA 12+134, LT
STA 12+150, LT
STA 12+215, LT
STA 12+235, LT
STA 12+276, LT
STA 12+302, RT

STATIONING ON INTERSECTING STREETS RUNS FROM SOUTH TO NORTH WITH 1+000 AT LAKEWOOD HEIGHTS BLVD.

SEE SHEET NO. 26
MATCH LINE STA. 12+120

ELBUR AVE.

W 137TH ST.

STA. 1+020 RT. ②
STA. 1+076 LT. ①
STA. 1+150, LT. ④
STA. 1+015 LT. ⑤
STA.12+134, LT. ③
TEMPORARY EDGE LINE YELLOW, CLASS I, 642 PAINT
DRUMS @ 1.5m C/C
DRUMS @ 8m C/C
CITY OF LAKEWOOD
CITY OF CLEVELAND
3.6m
12+140
12+180
℄ LAKEWOOD HEIGHTS BLVD
IF PERMANENT ASPHALT COURSES ARE NOT PLACED IMMEDIATELY FOLLOWING MILLING, THEN PLACE ITEM 614 BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC
STA. 0+975 RT. ⑥
STA. 0+922 RT. ①
TEMPORARY STOP LINE, CLASS I 740.06 TYPE 1
STA. 0+924 LT. ②
END SECTION II PHASE A

LEWIS RD.

STA. 1+020 RT. ②
STA.12+235. LT. ④
STA.12+215, LT. ③
DRUMS @ 8m C/C
DRUMS @ 1.5m C/C
3.6m
6.10M
12+220
STA. 0+985 RT. ⑥
STA. 0+924 RT. ①
TEMPORARY STOP LINE, CLASS I 740.06 TYPE 1

MATCH LINE STA. 12+240

CHESTERLAND AVE.

STA. 1+076 LT. ①
STA. 1+020 RT. ②
TEMPORARY EDGE LINE YELLOW, CLASS I 642 PAINT
STA. 12+276 LT. ⑦
STA. 1+015, LT. ⑤
24"x30" BLANK OVERLAY
SPEED LIMIT 35 R-10
STA. 12+299.1 LT.
ONLY R-31Z STA. 12+305 LT.
TEMPORARY CHANNELIZING LINE, WHITE CLASS I 740.06 TYPE 1
TEMPORARY LANE ARROW, CLASS I, 740.06, TYPE 1
STA. 12+365, LT. ①
ONLY R-31Z STA. 12+353 LT.
DRUMS @ 8m C/C
3.6m
6.10M
CITY OF LAKEWOOD
CITY OF CLEVELAND
12+260
TEMPORARY LANE ARROW, CLASS I, 740.06, TYPE 1
DRUMS @ 1.5m C/C
12+300
4.00M
4.19M
+326.5 ONLY
+348
12+340
℄ LAKEWOOD HEIGHTS BLVD
STA.12+302, LT. & RT. ③
TEMPORARY WORD ON PAVEMENT, 1800mm. CLASS I 740.06 TYPE 1
IF PERMANENT ASPHALT COURSES ARE NOT PLACED IMMEDIATELY FOLLOWING MILLING, THEN PLACE ITEM 614 BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC.
STA. 0+980 RT. ⑥
NOTE: THE MOT DRUMS AND SIGNS FROM STA 12+292 TO STA.12+310, RT. SHALL BE REMOVED, AT THE DIRECTION OF THE ENGINEER, AS SOON AS THIS AREA BECOMES SUITABLE FOR USE BY EASTBOUND TRAFFIC.
STA. 0+923 LT. ②
STA 0+923 RT. ①
TEMPORARY STOP LINE, CLASS I, 740.06, TYPE 1

JOSLYN RD.

RTA ENTRANCE

HORIZONTAL SCALE IN METERS

MAINTENANCE OF TRAFFIC - C.R. 297 SECTION II - PHASE A
STA. 12+120 TO STA. 12+360

CUY - LAKEWOOD HEIGHTS BOULEVARD

27
162

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LEGEND

WORK AREA

DRUM

TRAFFIC MOVEMENT

ROAD CONSTRUCTION AHEAD ①
OW--128

END CONSTRUCTION ②
OC-8

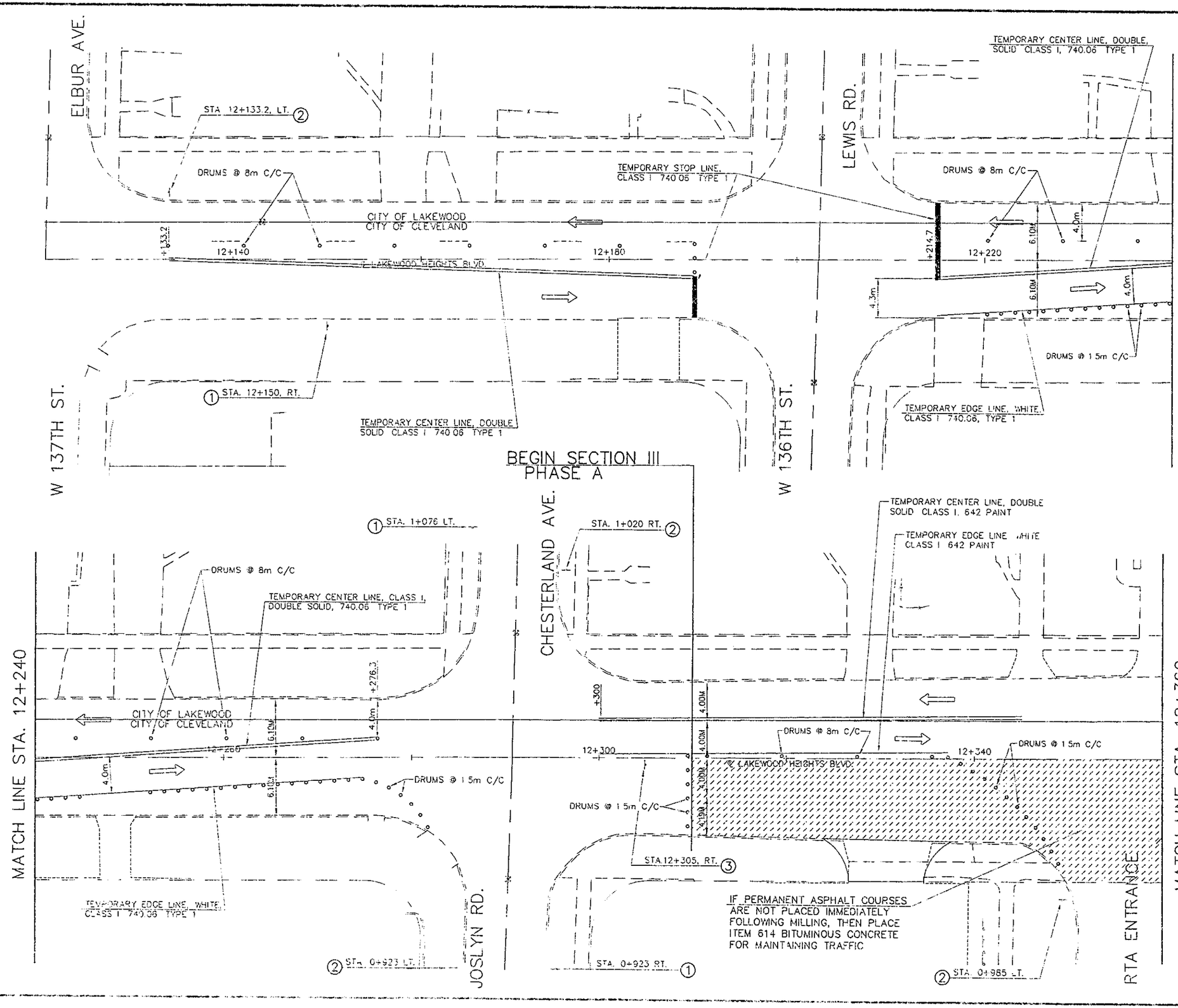
③
OW-71

CONTRACTOR SHALL ERECT PROPOSED "NO PARKING" SIGNS AS SHOWN ON TRAFFIC CONTROL PLANS.

NOTE:
SIGNS SHOWN IN PAVED AREAS SHALL BE PLACED ON PORTABLE SUPPORTS WITH STABILIZED BASES.

STA.12+305, RT

STATIONING ON INTERSECTING STREETS RUNS FROM SOUTH TO NORTH WITH 1+000 AT LAKEWOOD HEIGHTS BLVD



MAINTENANCE OF TRAFFIC - C.R. 297 SECTION III - PHASE A
STA. 12+120 TO STA. 12+360

CUY - LAKEWOOD HEIGHTS BOULEVARD

HORIZONTAL SCALE IN METERS

CALCULATED

CHECKED

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LEGEND

WORK AREA

DRUM

TRAFFIC MOVEMENT

ROAD CONSTRUCTION AHEAD ①
OW-128

END CONSTRUCTION ②
OC-8

DO NOT PASS ③
R-33

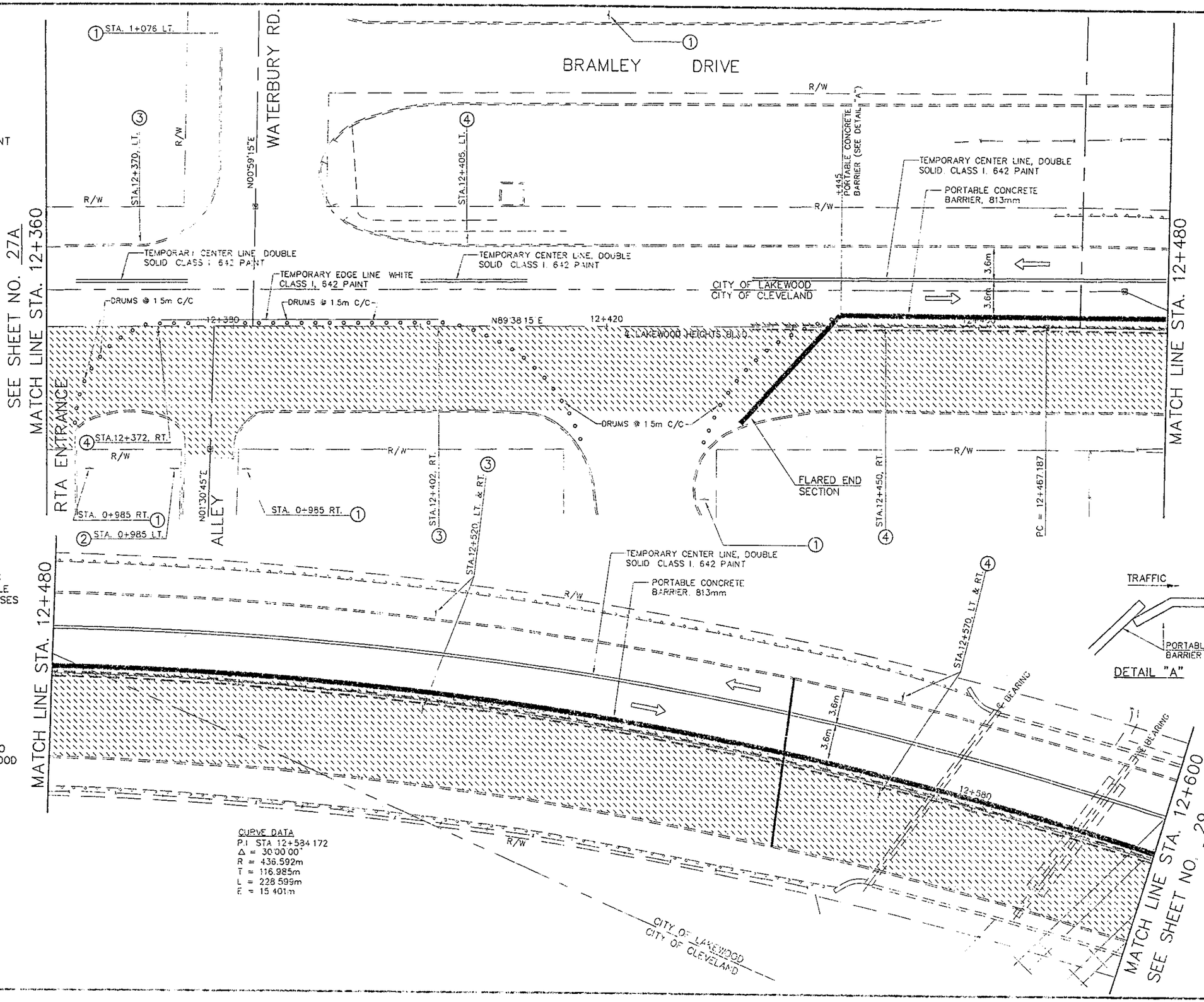
④
OW-71

CONTRACTOR SHALL ERECT PROPOSED "NO PARKING" SIGNS AS SHOWN ON TRAFFIC CONTROL PLANS

NOTE:
SIGNS SHOWN IN PAVED AREAS SHALL BE PLACED ON PORTABLE SUPPORTS WITH STABILIZED BASES

STA.12+372, RT
STA.12+402, RT.
STA.12+450, RT
STA.12+520, RT
STA.12+570, RT.

STATIONING ON INTERSECTING STREETS RUNS FROM SOUTH TO NORTH WITH 1+000 AT LAKEWOOD HEIGHTS BLVD



MAINTENANCE OF TRAFFIC - C.R. 297 SECTION III PHASE A
STA. 12+360 TO STA. 12+600

CUY - LAKEWOOD HEIGHTS BOULEVARD

28
163

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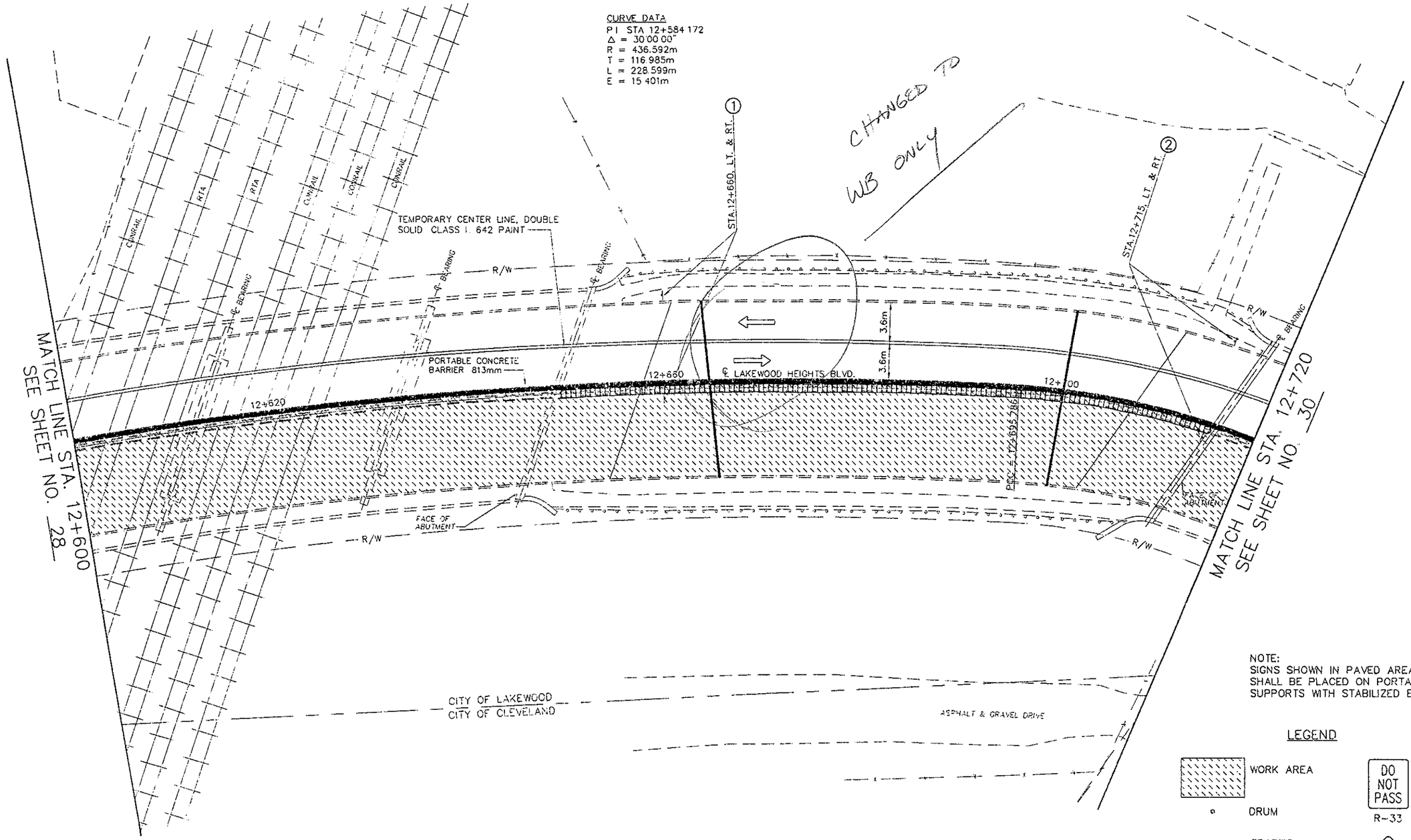

MAINTENANCE OF TRAFFIC - C.R. 297 SECTION III PHASE A
STA. 12+600 TO STA. 12+720

CUY - LAKEWOOD HEIGHTS BOULEVARD

HORIZONTAL SCALE IN METERS

29
162

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TEMPORARY CENTER LINE, DOUBLE SOLID CLASS I 642 PAINT

PORTABLE CONCRETE BARRIER 813mm

STA.12+780, LT. & RT. (1)

STA.12+835, LT. & RT. (2)

R/W

℄ BEARING

CONCRETE

ASPHALT

GATE

EX CONC WALK

CITY OF CLEVELAND

CITY OF LAKEWOOD

S61°49'15"W

12+780 ℄ LAKEWOOD HEIGHTS BLVD.

3.6m

3.6m

12+740

12+820

EX GUARDRAIL

FACE OF ABUTMENT

MATCH LINE STA. 12+720
SEE SHEET NO. 29

MATCH LINE STA. 12+840
SEE SHEET NO. 31

BEREA ROAD

N61°49'15"E

Δ = 19°19'54"
R = 70.104m
T = 557.609m
L = 237.7[illegible]m

NOTE:
SIGNS SHOWN IN PAVED AREAS SHALL BE PLACED ON PORTABLE SUPPORTS WITH STABILIZED BASES.

LEGEND

WORK AREA

DRUM

TRAFFIC MOVEMENT

DO NOT PASS
R-33 (1)

OW-71 (2)

CONTRACTOR SHALL ERECT PROPOSED "NO PARKING" SIGNS AS SHOWN ON TRAFFIC CONTROL PLANS.

HORIZONTAL SCALE IN METERS

MAINTENANCE OF TRAFFIC - C.R. 297 SECTION III PHASE A
STA. 12+720 TO STA. 12+840

CUY - LAKEWOOD HEIGHTS BOULEVARD

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LEGEND

WORK AREA

DRUM

TRAFFIC MOVEMENT

D-14 LAKEWOOD HTS BLVD

ROAD CONSTRUCTION AHEAD ① OW-128

END CONSTRUCTION ② OC-8

DO NOT PASS ③ R-33

④ OW-71

RIGHT LANE CLOSED AHEAD ⑤ OW-122

⑥ OW-60C

NOTE:
SIGNS SHOWN IN PAVED AREAS SHALL BE PLACED ON PORTABLE SUPPORTS WITH STABILIZED BASES.

PHASE	STATION TO STATION	ITEM 614 BARRIER REFLECTOR, TYPE B	
		LAKE	CLEVE
A	STA.12+434.4 TO STA.0+967.9 BEREA RD.	33	37
B	STA.12+425 TO STA.1+027.7 BEREA RD.	33	37
SUB-TOTAL		66	74
TOTAL		140	

CURVE DATA
PI STA N.A.
Δ = 194°19'54"
R = 70.104m
T = N.A.
L = 237.774m
E = N.A.

CURVE DATA
PI STA 0+109.996
Δ = 41°17'10"
R = 159.054m
T = 59.921m
L = 114.611m
E = 10.913m

TEMPORARY CENTER LINE, DOUBLE SOLID CLASS I 642 PAINT

PORTABLE CONCRETE BARRIER, 813mm

STA.12+860, LT. & RT.

STA.12+915 LT.

FOR DETAILS, SEE STANDARD CONSTRUCTION DRAWING MT-95.31M

TEMPORARY EDGE LINE, WHITE, CLASS I, 740.06, TYPE 1

STA. 1+040 RT.

TEMPORARY STOP LINE CLASS I 642 PAINT

SEE DETAIL "A" SHEET NO. 28

SEE SHEET NO. 30 MATCH LINE STA. 12+840

R/W

3.6m

12+900

1+020

1+000

N61°49'15"E

FLARED END SECTION

1.2m

0+980

DRUMS @ 1.5m C/C

BEREA ROAD

END WORK
END PROJECT
STA. 12+937
STP- BHF 93C( )

STA. 0+960 LT.

EX BRICK BLDG

EX BUSINESS SIGN

EX POSTS

PLANTER

PC 0+950.075

0+940

STA. 0+940 RT.

SEE DETAIL "A" SHEET NO. 28

MAINTENANCE OF TRAFFIC - C.R. 297 SECTION III PHASE A
STA. 12+840 TO STA. 12+960

CUY - LAKEWOOD HEIGHTS BOULEVARD

HORIZONTAL SCALE IN METERS

31
162

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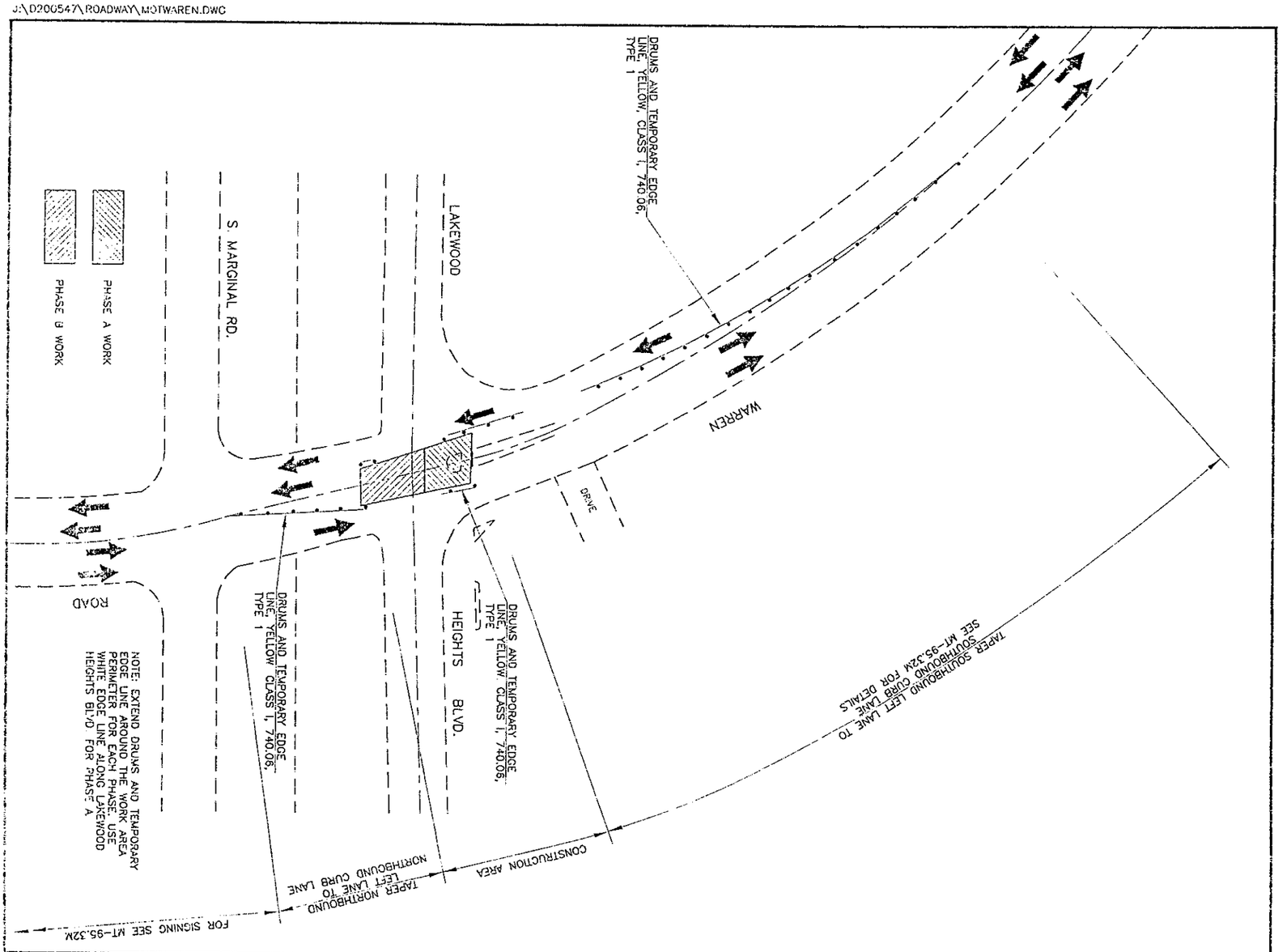
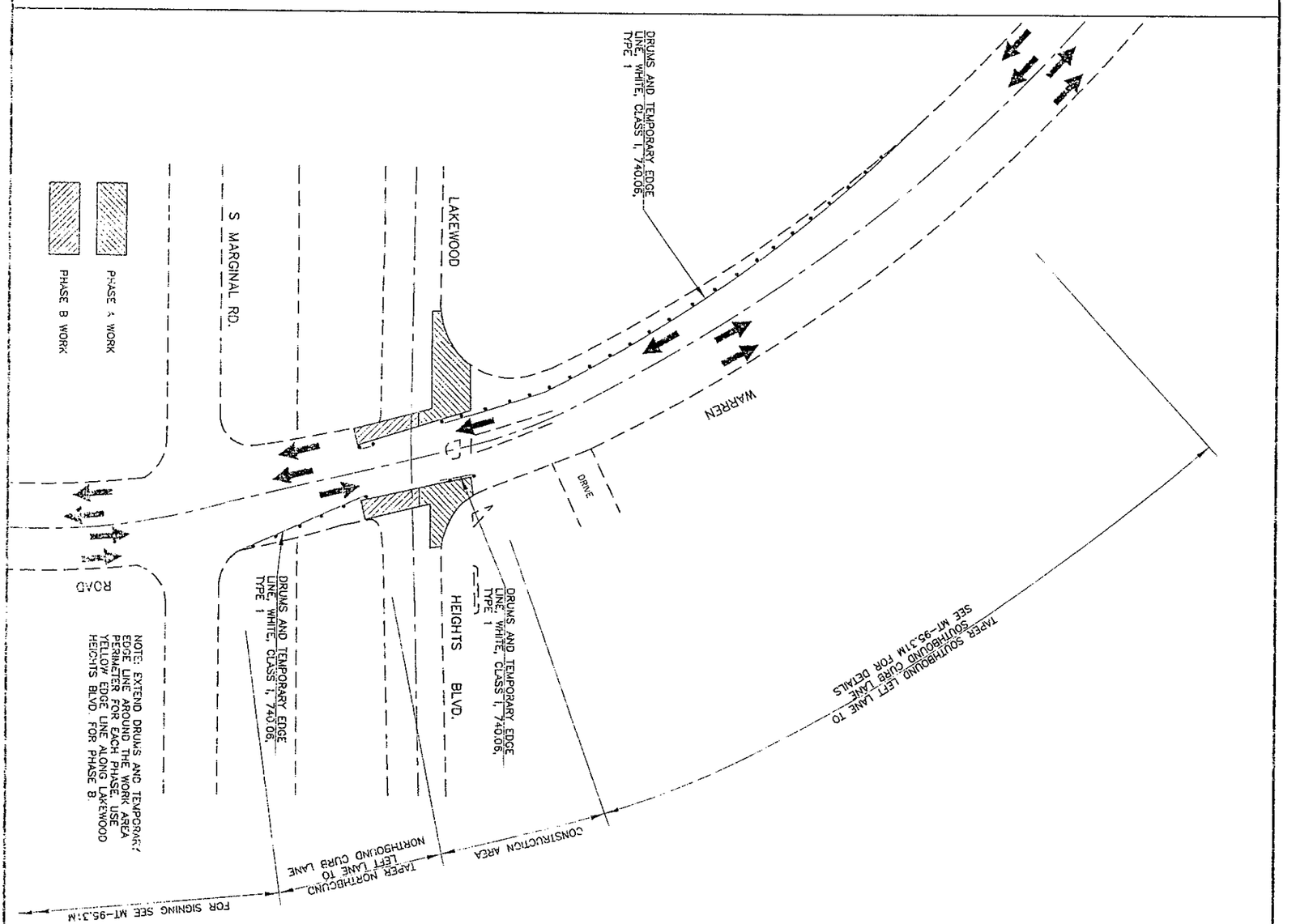




31A
162

CUY - LAKEWOOD HEIGHTS BOULEVARD

MAINTENANCE OF TRAFFIC
WARREN ROAD

0 250 500
HORIZONTAL SCALE IN METERS

N

LEGEND

WORK AREA

DRUM

TRAFFIC MOVEMENT

ROAD CONSTRUCTION AHEAD ①
OW-128

END CONSTRUCTION ②
OC-8

ONE WAY R-43R | DO NOT ENTER R-41B | ONE WAY R-43L ③

ONE WAY R-43R | DO NOT ENTER R-41B ④

WRONG WAY ⑤
R-41A

ONE WAY ⑥
R-43R

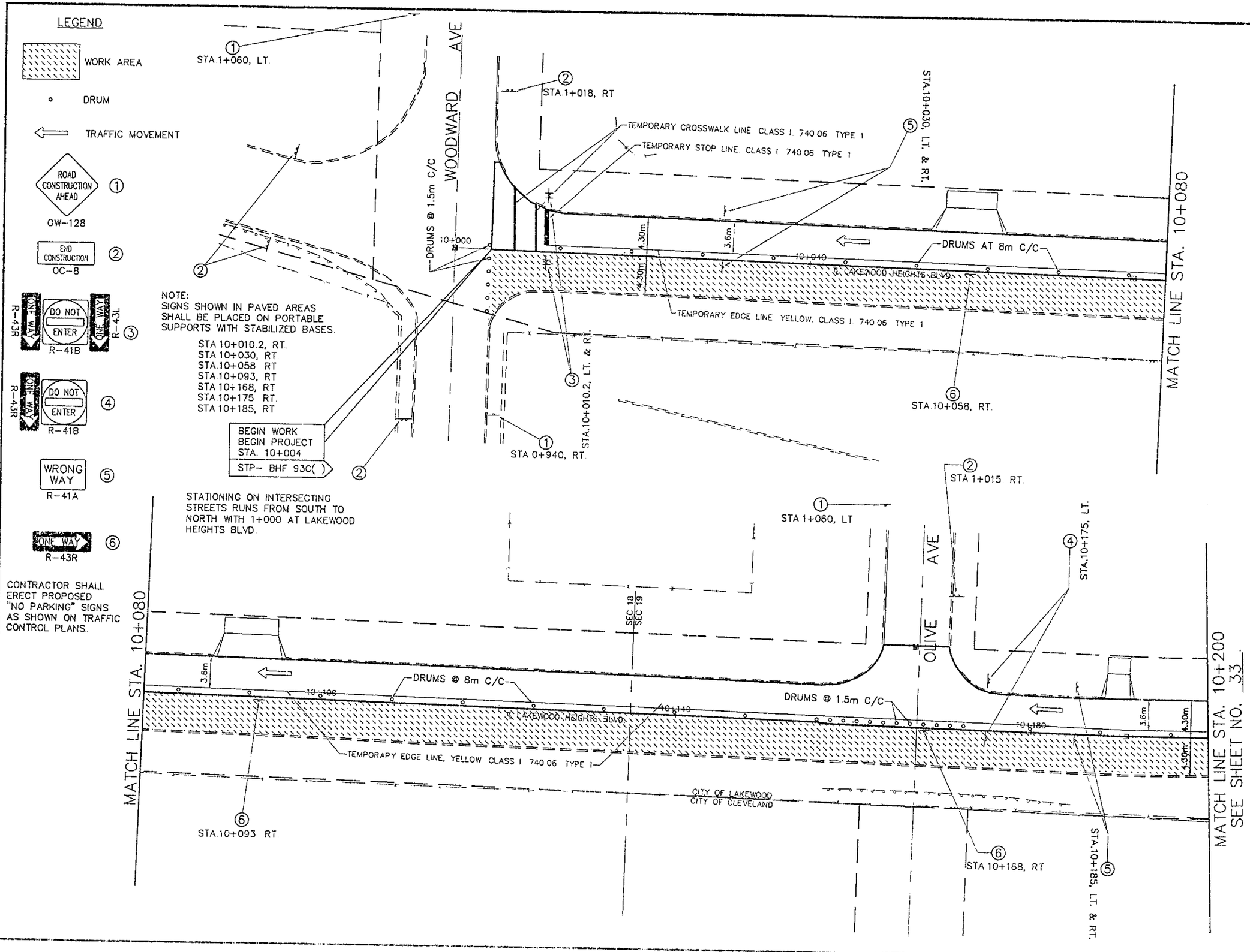
CONTRACTOR SHALL ERECT PROPOSED "NO PARKING" SIGNS AS SHOWN ON TRAFFIC CONTROL PLANS.

NOTE:
SIGNS SHOWN IN PAVED AREAS SHALL BE PLACED ON PORTABLE SUPPORTS WITH STABILIZED BASES.

STA 10+010.2, RT.
STA 10+030, RT.
STA 10+058 RT.
STA 10+093, RT
STA 10+168, RT
STA 10+175 RT.
STA 10+185, RT

BEGIN WORK
BEGIN PROJECT
STA. 10+004
STP- BHF 93C( )

STATIONING ON INTERSECTING STREETS RUNS FROM SOUTH TO NORTH WITH 1+000 AT LAKEWOOD HEIGHTS BLVD.



MAINTENANCE OF TRAFFIC - C.R. 297 SECTION I - PHASE B
STA. 10+000 TO STA. 10+200

CUY - LAKEWOOD HEIGHTS BOULEVARD

CALCULATED | CHECKED

HORIZONTAL SCALE IN METERS

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LEGEND

WORK AREA

DRUM

TRAFFIC MOVEMENT

ROAD CONSTRUCTION AHEAD ①
OW-128

BUMP ②
W-62

END CONSTRUCTION ③
OC-8

ONE WAY R-43R | DO NOT ENTER R-41B | ONE WAY R-43L ④

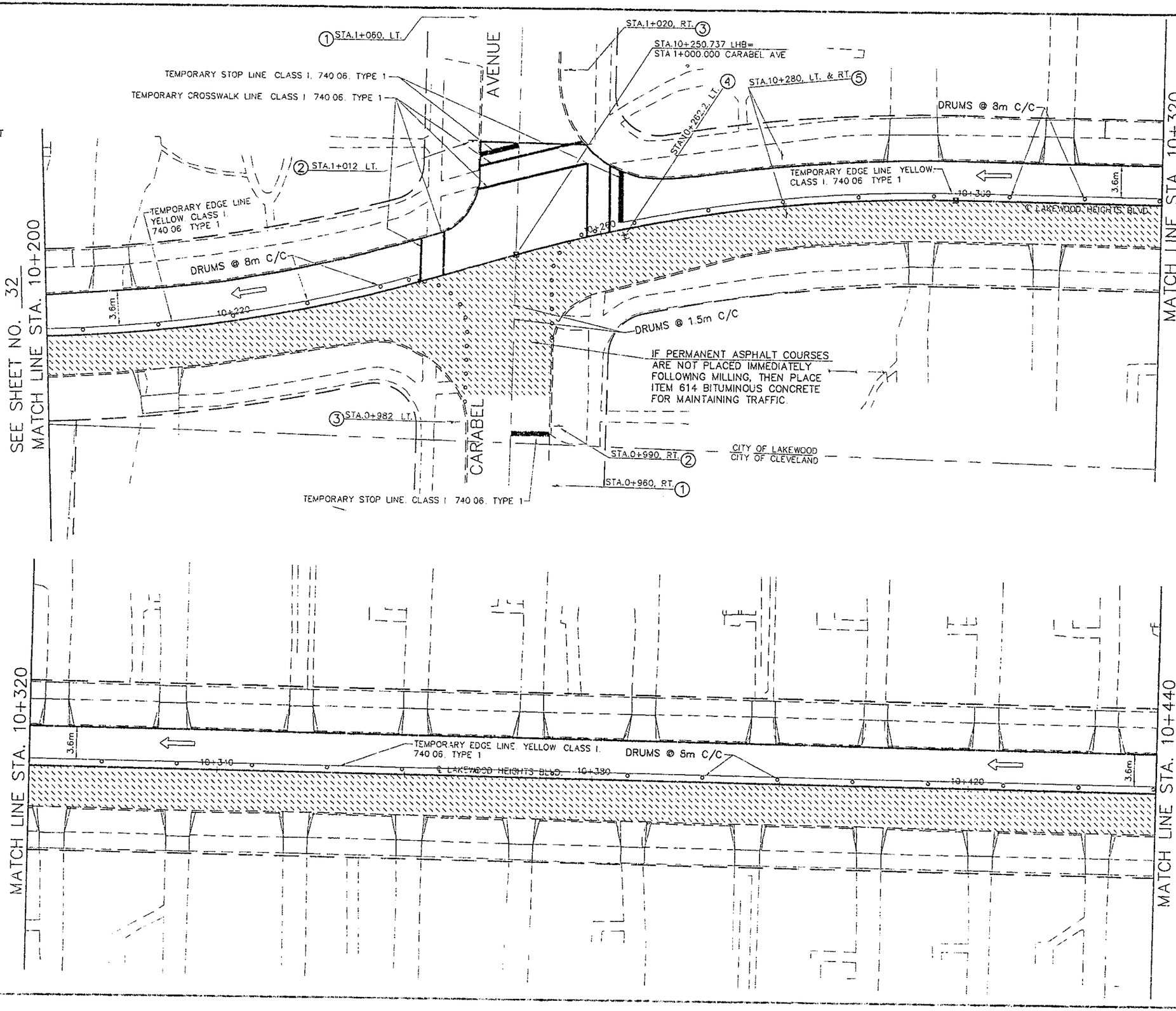
WRONG WAY ⑤
R-41A

CONTRACTOR SHALL ERECT PROPOSED "NO PARKING" SIGNS AS SHOWN ON TRAFFIC CONTROL PLANS

NOTE:
SIGNS SHOWN IN PAVED AREAS SHALL BE PLACED ON PORTABLE SUPPORTS WITH STABILIZED BASES

STA 10+262.2, RT
STA 10+280, RT.

STATIONING ON INTERSECTING STREETS RUNS FROM SOUTH TO NORTH WITH 1+000 AT LAKEWOOD HEIGHTS BLVD.



MAINTENANCE OF TRAFFIC - C.R. 297 SECTION I - PHASE B
STA. 10+200 TO STA. 10+440

CUY - LAKEWOOD HEIGHTS BOULEVARD

33
162

HORIZONTAL SCALE IN METERS

N

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LEGEND

WORK AREA

DRUM

TRAFFIC MOVEMENT

ROAD CONSTRUCTION AHEAD ①
OW-128

END CONSTRUCTION ②
OC-8

DO NOT ENTER ONE WAY R-43R R-41B R-43L ③

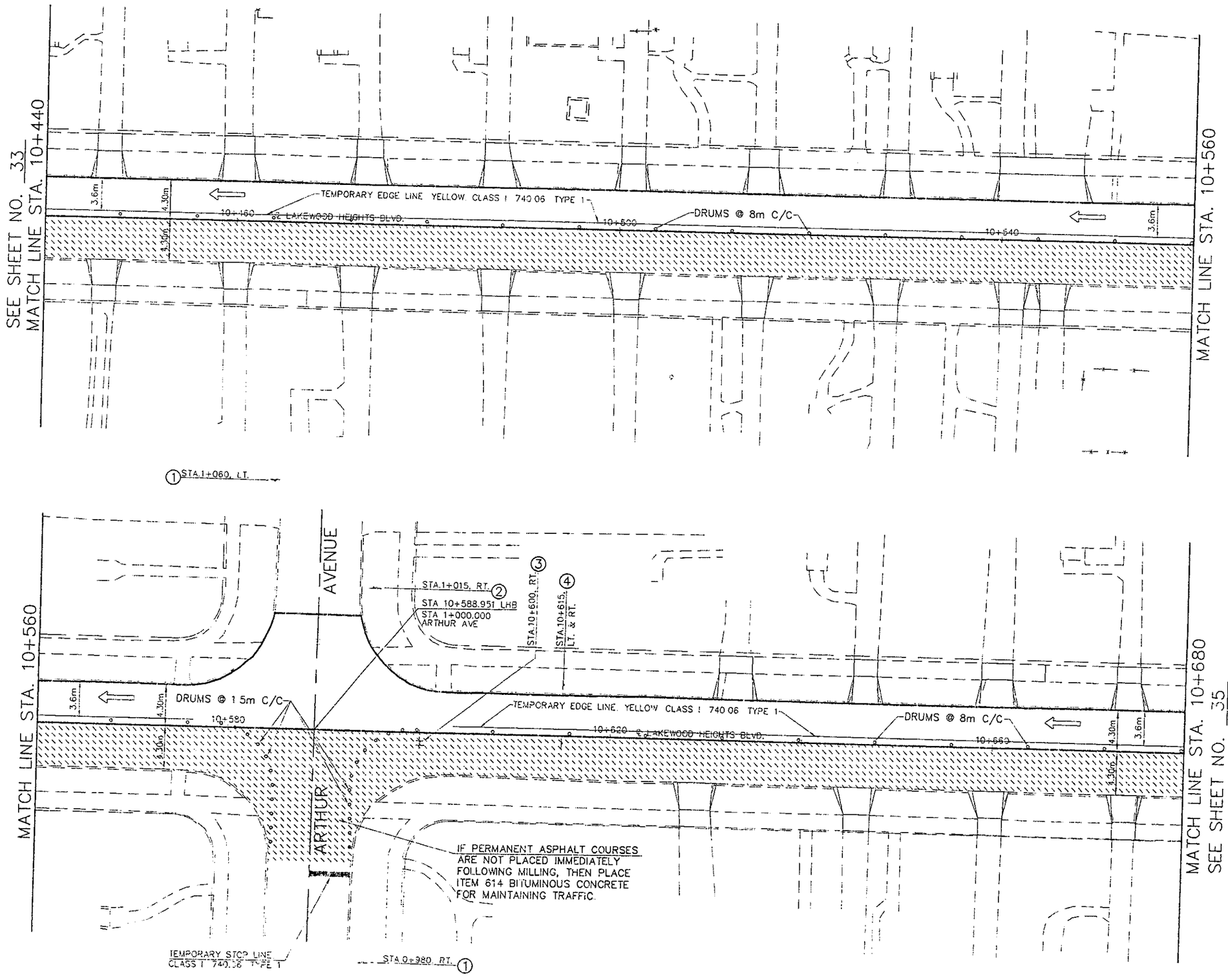
WRONG WAY ④
R-41A

CONTRACTOR SHALL ERECT PROPOSED "NO PARKING" SIGNS AS SHOWN ON TRAFFIC CONTROL PLANS

NOTE:
SIGNS SHOWN IN PAVED AREAS SHALL BE PLACED ON PORTABLE SUPPORTS WITH STABILIZED BASES

STA 10+600, RT
STA 10+615, RT

STATIONING ON INTERSECTING STREETS RUNS FROM SOUTH TO NORTH WITH 1+000 AT LAKEWOOD HEIGHTS BLVD



HORIZONTAL SCALE IN METERS

CALCULATED

CHECKED

MAINTENANCE OF TRAFFIC - C.R. 297 SECTION I - PHASE B
STA. 10+440 TO STA. 10+680

CUY - LAKEWOOD HEIGHTS BOULEVARD

34
162

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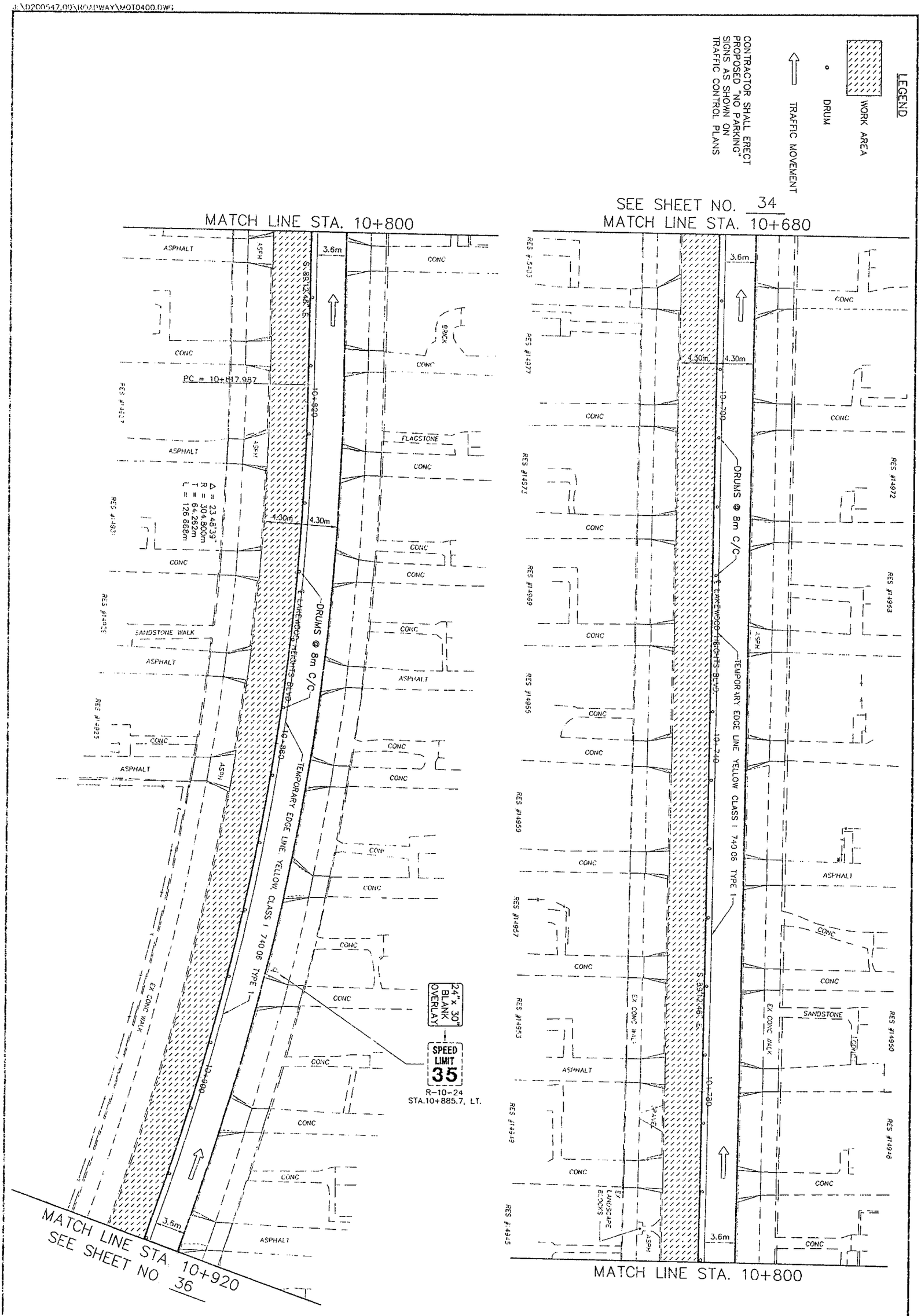

CUY - LAKEWOOD HEIGHTS BOULEVARD

MAINTENANCE OF TRAFFIC - C.R. 297 SECTION I - PHASE B
STA. 10+680 TO STA. 10+920

CALCULATED
CHECKED

HORIZONTAL SCALE IN METERS

LEGEND

WORK AREA

DRUM

TRAFFIC MOVEMENT

ROAD CONSTRUCTION AHEAD ①
OW-128

END CONSTRUCTION ②
OC-8

ONE WAY R-43R | DO NOT ENTER R-41B | ONE WAY R-43L ③

WRONG WAY ④
R-41A

BUMP ⑤
W-62

ONE WAY ⑥
R-43R

CONTRACTOR SHALL ERECT PROPOSED "NO PARKING" SIGNS AS SHOWN ON TRAFFIC CONTROL PLANS

NOTE:
SIGNS SHOWN IN PAVED AREAS SHALL BE PLACED ON PORTABLE SUPPORTS WITH STABILIZED BASES.

STA.10+954.4, LT.
STA.11+000, LT.
STA.11+015.4, LT.

STATIONING ON INTERSECTING STREETS RUNS FROM SOUTH TO NORTH WITH 1+000 AT LAKEWOOD HEIGHTS BLVD.

IF PERMANENT ASPHALT COURSES ARE NOT PLACED IMMEDIATELY FOLLOWING MILLING, THEN PLACE ITEM 614 BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC.

SEE SHEET NO. 35
MATCH LINE STA. 10+920

① STA.1+060, LT.
⑤ STA.1+022.5, LT.
STA.1+025, RT. ②
STA.10+944.655 LHB=
STA 1+000.000 ALGER RD.
TEMPORARY STOP LINE, CLASS I, 740.06, TYPE 1
STA.10+954.4, LT. ③
3.6m
10+940
DRUMS @ 1.5m C/C
℄ PVMT.
9.30m
4.20m
3.6m
CITY OF LAKEWOOD
CITY OF CLEVELAND
EX SIGN BASE
ALGER ROAD
10+960
② STA.0+975.5, LT.
0+975.5, LT
EX MARKER
② STA.0+970, LT
STA.0+973.7, RT. ⑤
STA.0+940, RT. ①
STA.10+966.6, RT.
STA.10+968.7, RT. ⑤

EXISTING PAVEMENT
WORK AREA
0.038
ITEM 614-BITUMINOUS CONCRETE
SECTION A-A

④
EX POSTS
DRUMS @ 8m C/C
ASPHALT
TEMPORARY EDGE LINE, YELLOW, CLASS I, 740.06, TYPE 1
STA.11+015.4, LT.
EX CONC WALK
CONC
EX POSTS
6.8m
3.6m
6.10m
A
11+020
℄ LAKEWOOD HEIGHTS BLVD.
EX GUARDRAIL
STA.11+000, LT.
EX. CONC. RET. WALL
⑦
MATCH LINE STA. 11+040

STA. 10+955 TO STA. 11+381 SHALL BE RESURFACED BETWEEN THE HOURS OF 7:00PM AND 6:00AM IN THIS AREA. ITEM 407-TACK COAT SHALL BE APPLIED AT THE BEGINNING OF THE SHIFT AND SHALL ONLY BE APPLIED TO THOSE AREAS WHICH WILL BE RESURFACED BY THE END OF THE SHIFT. TEMPORARY LANE LINES SHALL BE PLACED ON THE COMPLETED WORK BY 6:00AM EACH WORK DAY. DROP OFFS GREATER THAN 32mm AT SECTION A-A SHALL BE TRANSITIONED AT 0.038 CROSS SLOPE USING ITEM 614-BITUMINOUS CONCRETE. THE WORK AREA WITHIN THESE STATION LIMITS SHALL BE OPENED TO TRAFFIC AT 6:00AM

EXIST. BRICK BUILDING
EX CONC BIKE RACK
CONC
EX CONC WALK
DRUMS @ 8m C/C
TEMPORARY EDGE LINE, YELLOW, CLASS I, 740.06, TYPE 1
9.30m
6.8m
3.10m
11+060
℄ LAKEWOOD HEIGHTS BLVD.
11+100
6.10m
CITY OF LAKEWOOD
CITY OF CLEVELAND
11+140
3.6m
EX CONCRETE RETAINING WALL
MATCH LINE STA. 11+040
SEE SHEET NO. 37

MAINTENANCE OF TRAFFIC - C.R. 297 SECTION I - PHASE B
STA. 10+920 TO STA. 11+160
CUY - LAKEWOOD HEIGHTS BOULEVARD
HORIZONTAL SCALE IN METERS
36
162

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LEGEND

WORK AREA

DRUM

TRAFFIC MOVEMENT

ROAD CONSTRUCTION AHEAD ①
OW-128

END CONSTRUCTION ②
OC-8

ONE WAY R-43R | DO NOT ENTER R-41B | ONE WAY R-43L ③

WRONG WAY ④
R-41A

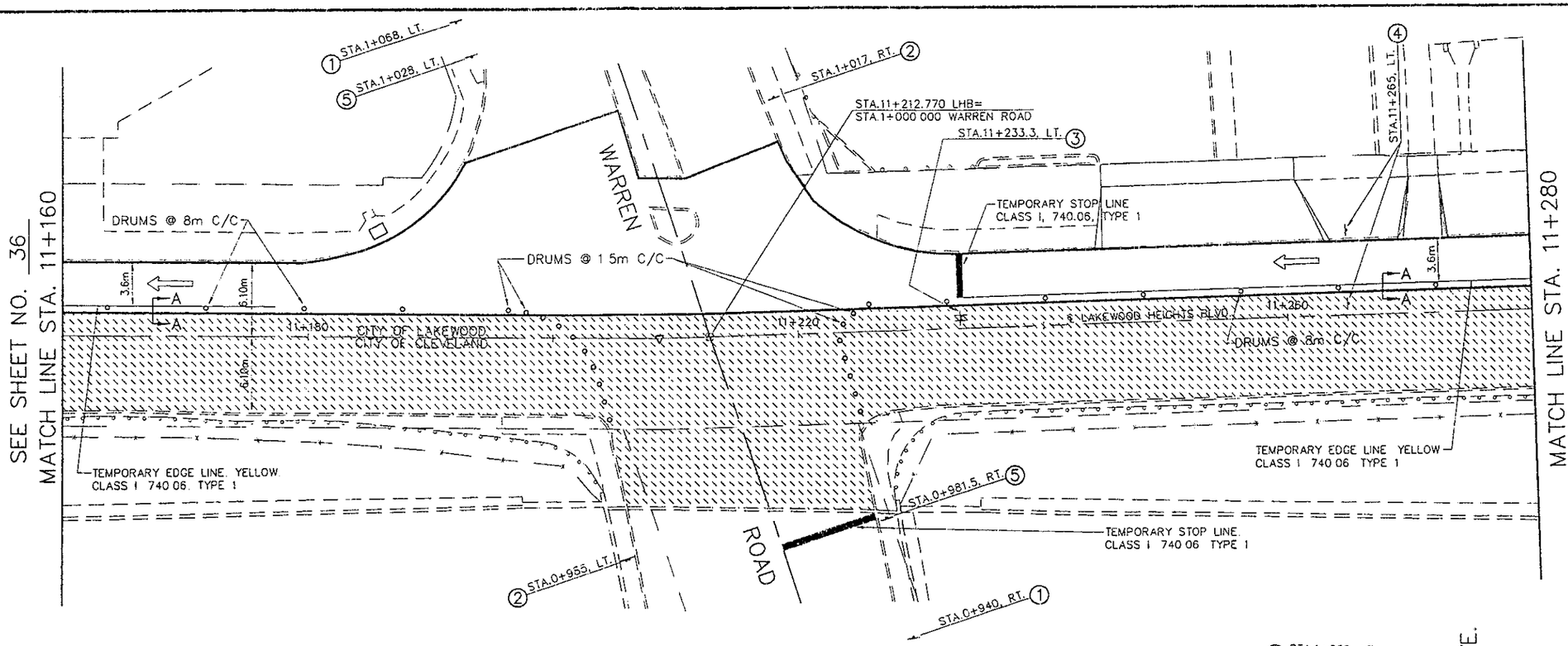
BUMP ⑤
W-62

CONTRACTOR SHALL ERECT PROPOSED "NO PARKING" SIGNS AS SHOWN ON TRAFFIC CONTROL PLANS

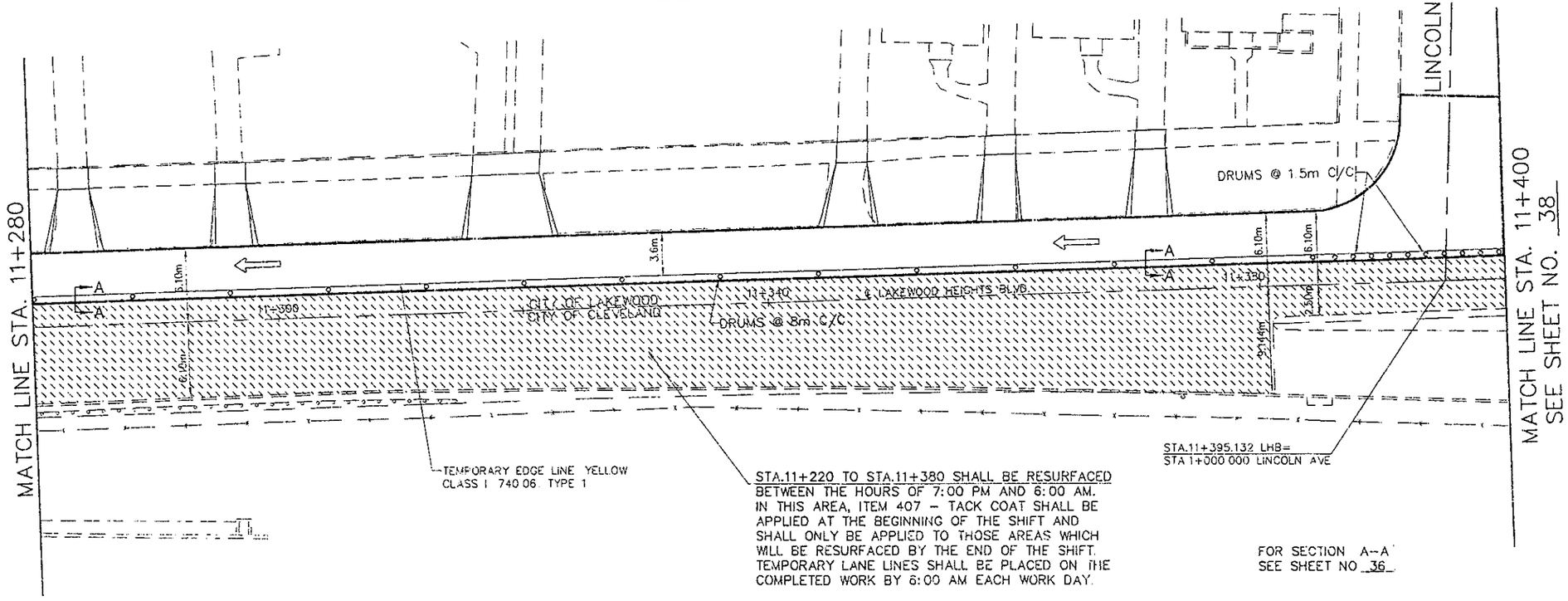
NOTE:
SIGNS SHOWN IN PAVED AREAS SHALL BE PLACED ON PORTABLE SUPPORTS WITH STABILIZED BASES.

STA.11+233.3, LT
STA.11+265, LT

STATIONING ON INTERSECTING STREETS RUNS FROM SOUTH TO NORTH WITH 1+000 AT LAKEWOOD HEIGHTS BLVD.



FOR WARREN ROAD MAINTENANCE
OF TRAFFIC PLAN, SEE SHEET NO. 31A



STA.11+220 TO STA.11+380 SHALL BE RESURFACED BETWEEN THE HOURS OF 7:00 PM AND 6:00 AM. IN THIS AREA, ITEM 407 – TACK COAT SHALL BE APPLIED AT THE BEGINNING OF THE SHIFT AND SHALL ONLY BE APPLIED TO THOSE AREAS WHICH WILL BE RESURFACED BY THE END OF THE SHIFT. TEMPORARY LANE LINES SHALL BE PLACED ON THE COMPLETED WORK BY 6:00 AM EACH WORK DAY.

FOR SECTION A–A
SEE SHEET NO. 36

CUY - LAKEWOOD HEIGHTS BOULEVARD

MAINTENANCE OF TRAFFIC - C.R. 297 SECTION I - PHASE B
STA. 11+160 TO STA. 11+400

HORIZONTAL SCALE IN METERS

37
162

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LEGEND

WORK AREA

DRUM

TRAFFIC MOVEMENT

ROAD CONSTRUCTION AHEAD ①
OW-128

END CONSTRUCTION ②
OC-8

DO NOT ENTER
ONE WAY R-43R
ONE WAY R-43L
③
R-41B

WRONG WAY ④
R-41A

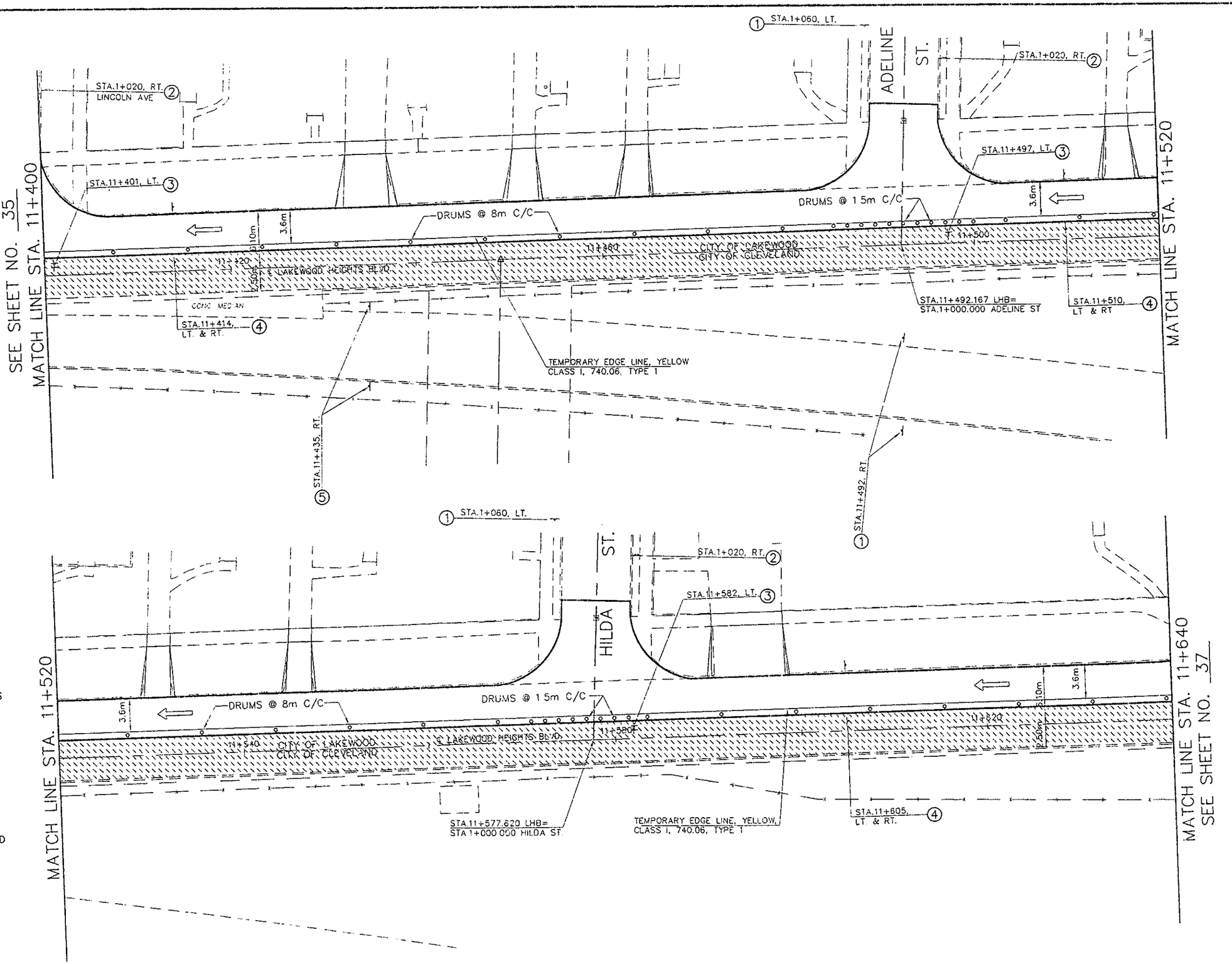
BUMP ⑤
W-62

CONTRACTOR SHALL ERECT PROPOSED "NO PARKING" SIGNS AS SHOWN ON TRAFFIC CONTROL PLANS

NOTE:
SIGNS SHOWN IN PAVED AREAS SHALL BE PLACED ON PORTABLE SUPPORTS WITH STABILIZED BASES

STA 11+401, LT.
STA 11+414, LT.
STA 11+497, LT
STA 11+510, LT.
STA 11+582, LT.
STA 11+605, LT.

STATIONING ON INTERSECTING STREETS RUNS FROM SOUTH TO NORTH WITH 1+000 AT LAKEWOOD HEIGHTS BLVD



MAINTENANCE OF TRAFFIC - C.R. 297 SECTION I - PHASE B
STA. 11+400 TO STA. 11+640

CUY - LAKEWOOD HEIGHTS BOULEVARD

HORIZONTAL SCALE IN METERS

38
162

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LEGEND

WORK AREA

DRUM

TRAFFIC MOVEMENT

ROAD CONSTRUCTION AHEAD ①
OW-128

END CONSTRUCTION ②
OC-8

W-60L

STATIONING ON INTERSECTING STREETS RUNS FROM SOUTH TO NORTH WITH 1+000 AT LAKEWOOD HEIGHTS BLVD.

① STA.1+060, LT.

② STA.1+020, RT.

③ STA.11+737, LT.

STA.11+549.902 LHB=
STA 1+000.000 BROWN RD.

STA.11+749.117 LHB=
STA 1+000.000 RICHLAND AVE (N)

SEE SHEET NO. 38
MATCH LINE STA. 11+640

BROWN RD

DRUMS @ 15m C/C

4.3m +661

6.10m

11+660

TEMPORARY EDGE LINE, YELLOW CLASS I 740.06 TYPE 1

℄ LAKEWOOD HEIGHTS BLVD.

11+700

8.1m +737

11+740

STA.11+720, RT. ②

STA.11+747.398 LHB=
STA 1+000.000 RICHLAND AVE. (S)

TEMPORARY CENTER LINE, CLASS I, DOUBLE SOLID, 740.06 TYPE 1

B AVENUE

RICHLAND

MATCH LINE STA. 11+760

BUNTS ROAD

STA.11+852.124 LHB=
STA.1+004.170
BUNTS RD

SEC 19
SEC 20

CITY OF LAKEWOOD
CITY OF CLEVELAND

11+860
℄ LAKEWOOD HEIGHTS BLVD

W 140TH ST.

STA.11+761, LT. ③

MATCH LINE STA. 11+760

11+820
℄ LAKEWOOD HEIGHTS BLVD

11+780

STA.11+852.124 LHB=
STA.1+000.000
W 140th ST.

HORIZONTAL SCALE IN METERS

MAINTENANCE OF TRAFFIC - C.R. 297 SECTION I - PHASE B
STA. 11+640 TO STA. 11+880

CUY - LAKEWOOD HEIGHTS BOULEVARD

38A
162

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LEGEND

WORK AREA

DRUM

TRAFFIC MOVEMENT

ROAD CONSTRUCTION AHEAD ① OW-128

END CONSTRUCTION ② OC-8

ONE WAY R-43R | DO NOT ENTER R-41B | ONE WAY R-43L ③

ONE WAY R-43R | DO NOT ENTER R-41B ④

WRONG WAY ⑤ R-41A

ONE WAY ⑥ R-43R

⑦ R-121

⑧ R-120

⑩ OW-71

BUMP ⑨ W-62

DO NOT PASS ⑪ R-33

CONTRACTOR SHALL ERECT PROPOSED "NO PARKING" SIGNS AS SHOWN ON TRAFFIC CONTROL PLANS

NOTE:
SIGNS SHOWN IN PAVED AREAS SHALL BE PLACED ON PORTABLE SUPPORTS WITH STABILIZED BASES.

STA 11+680, LT.
STA 11+732, LT
STA 11+830, LT.

IF PERMANENT ASPHALT COURSES ARE NOT PLACED IMMEDIATELY FOLLOWING MILLING, THEN PLACE ITEM 614 BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC

SEE SHEET NO. 38
MATCH LINE STA. 11+640

END SECTION I
BEGIN SECTION II

BROWN RD

STA.1+020, RT. ②
STA.11+649.902 LHB=
STA 1+000.000 BROWN RD.
STA.11+680, LT. ⑪
STA.11+640, LT. ②

STA.1+060, LT. ①
TEMPORARY STOP LINE, CLASS I, 740.06 TYPE 1
STA.11+749.117 LHB=
STA 1+000.000 RICHLAND AVE (N)
STA.1+020, RT. ②
⑩ STA.11+732, LT.

RICHLAND AVENUE

MATCH LINE STA. 11+760

TEMPORARY STOP LINE CLASS I. 740.06. TYPE 1

11+740
11+700
DRUMS @ 8m C/C
11+660
3.6m
6.1m
3.6m
℄ LAKEWOOD HEIGHTS BLVD.

TEMPORARY STOP LINE, CLASS I 740.06 TYPE 1

DRUMS @ 1.5m C/C

⑪ STA.11+732, RT.

STA.11+747.398 LHB=
STA 1+000.000 RICHLAND AVE (S)

STA.11+756, RT. ⑩

TEMPORARY STOP LINE, CLASS I. 740.06 TYPE 1

② STA.0+980, LT.

TEMPORARY CENTER LINE, CLASS I DOUBLE SOLID 740.06 TYPE 1

⑩ STA.11+670, RT.

TEMPORARY EDGE LINE, WHITE CLASS I. 740.06 TYPE 1

① STA.1+060, LT.

STA.0+940, RT. ①
STA 1+026, RT. ②

TEMPORARY STOP LINE, CLASS I. 740.06. TYPE 1

⑨ STA.1+018, LT.

STA.11+852.124 LHB=
STA.1+004.170
BUNTS RD

BUNTS ROAD

SEC. 19
SEC. 20

IF PERMANENT ASPHALT COURSES ARE NOT PLACED IMMEDIATELY FOLLOWING MILLING, THEN PLACE ITEM 614 BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC.

TEMPORARY EDGE LINE, WHITE CLASS I 740.06 TYPE 1
TEMPORARY CENTER LINE, CLASS I DOUBLE SOLID 740.06 TYPE 1

⑩ STA.11+830, LT.

CITY OF LAKEWOOD
CITY OF CLEVELAND

3.6m
3.6m

11+860
℄ LAKEWOOD HEIGHTS BLVD

TEMPORARY STOP LINE, CLASS I 740.06. TYPE 1

MATCH LINE STA. 11+880
SEE SHEET NO. 40

W 140TH ST.

11+820
℄ LAKEWOOD HEIGHTS BLVD.
DRUMS @ 1.5m C/C

TEMPORARY STOP LINE, CLASS I 740.06 TYPE 1

DRUMS @ 8m C/C

MATCH LINE STA. 11+760

11+780

3.6m
3.6m

TEMPORARY CENTER LINE, DOUBLE, SOLID CLASS I, 740.06, TYPE 1

⑨ +982

TEMPORARY EDGE LINE, WHITE, CLASS I. 740.06 TYPE 1

TEMPORARY STOP LINE, CLASS I. 740.06. TYPE 1

STA.11+852.124 LHB=
STA.1+000.000
W 140th ST

STATIONING ON INTERSECTING STREETS RUNS FROM SOUTH TO NORTH WITH 1+000 AT LAKEWOOD HEIGHTS BLVD.

② 0+929

① 0+929

HORIZONTAL SCALE IN METERS

CALCULATED | CHECKED

MAINTENANCE OF TRAFFIC - C.R. 297 SECTION II - PHASE B
STA. 11+640 TO STA. 11+980

CUY - LAKEWOOD HEIGHTS BOULEVARD

39
162

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LEGEND

WORK AREA

DRUM

TRAFFIC MOVEMENT

ROAD CONSTRUCTION AHEAD ① OW-128

END CONSTRUCTION ② OC-8

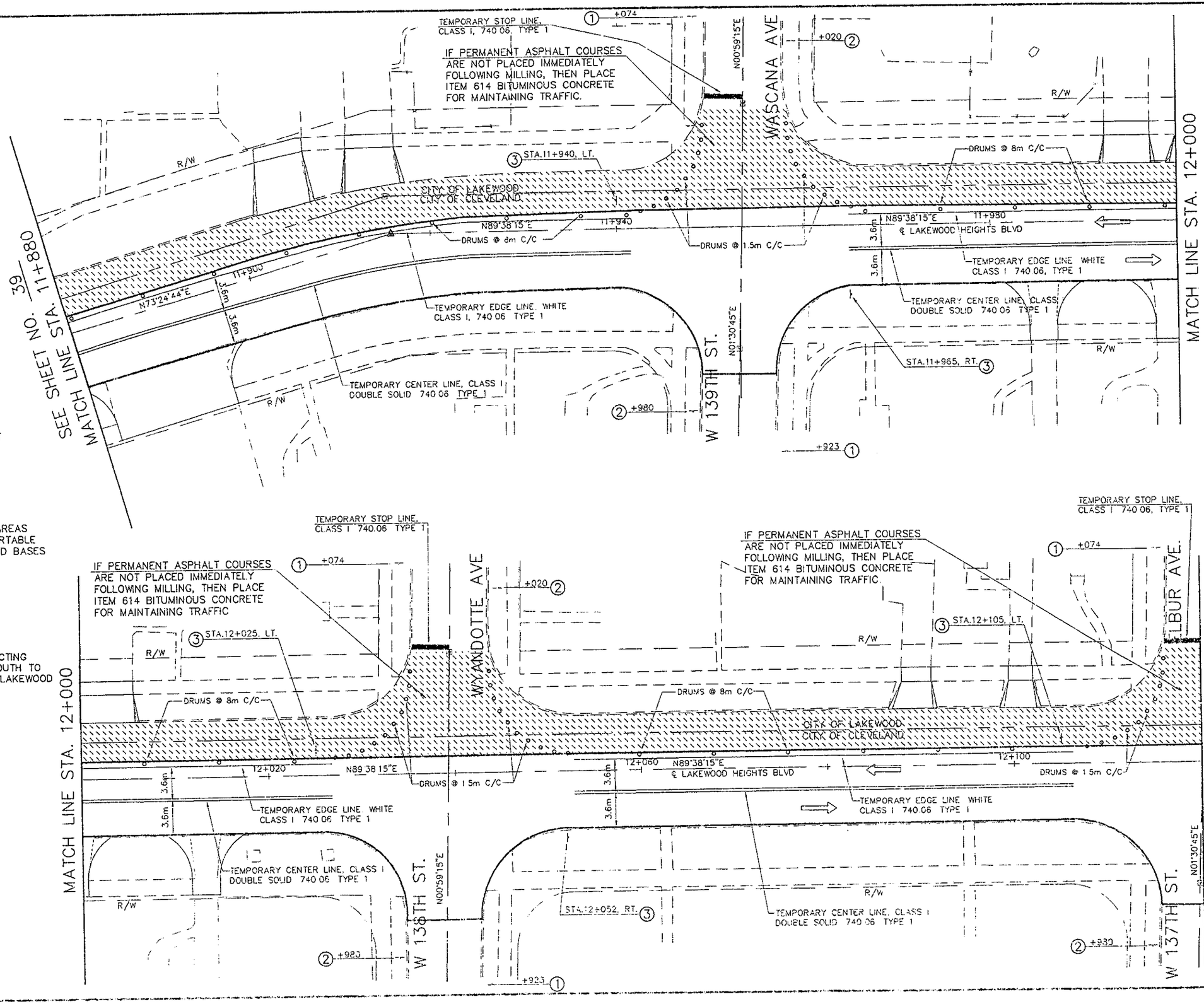
③ OW-71

CONTRACTOR SHALL ERECT PROPOSED "NO PARKING" SIGNS AS SHOWN ON TRAFFIC CONTROL PLANS

NOTE:
SIGNS SHOWN IN PAVED AREAS SHALL BE PLACED ON PORTABLE SUPPORTS WITH STABILIZED BASES

STA 11+940, LT.
STA 12+025, LT.
STA 12+105, LT

STATIONING ON INTERSECTING STREETS RUNS FROM SOUTH TO NORTH WITH 1+000 AT LAKEWOOD HEIGHTS BLVD



HORIZONTAL SCALE IN METERS

MAINTENANCE OF TRAFFIC - C.R. 297 SECTION II-PHASE B
STA. 11+880 TO STA. 12+120

CUY - LAKEWOOD HEIGHTS BOULEVARD

40
162

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LEGEND

WORK AREA

DRUM

TRAFFIC MOVEMENT

ROAD CONSTRUCTION AHEAD ① OW-128

END CONSTRUCTION ② OC-8

③ OW-71

CONTRACTOR SHALL ERECT PROPOSED "NO PARKING" SIGNS AS SHOWN ON TRAFFIC CONTROL PLANS.

NOTE:
SIGNS SHOWN IN PAVED AREAS SHALL BE PLACED ON PORTABLE SUPPORTS WITH STABILIZED BASES

STA.12+188, LT.
STA.12+275, LT

STATIONING ON INTERSECTING STREETS RUNS FROM SOUTH TO NORTH WITH 1+000 AT LAKEWOOD HEIGHTS BLVD.

NOTE:
CONTRACTOR SHALL USE FLAGGERS WHILE WORKING IN THE CHESTERLAND AVE. INTERSECTION TO EXTEND THE EASTBOUND SINGLE LANE AND PERMIT WESTBOUND TRAFFIC TO PROCEED AROUND HIS WORK OPERATION IN A SAFE MANNER

SEE SHEET NO. 40
MATCH LINE STA. 12+120

ELBUR AVE.

W 137TH ST.

STA. 1+020 RT. ②

STA. 0+922 RT. ①

IF PERMANENT ASPHALT COURSES ARE NOT PLACED IMMEDIATELY FOLLOWING MILLING, THEN PLACE ITEM 614 BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC.

① STA. 1+076 LT.

STA. 1+020 RT. ②

LEWIS RD.

TEMPORARY STOP LINE, CLASS I 740.06 TYPE 1

③ STA. 12+188, LT.

CITY OF LAKEWOOD
CITY OF CLEVELAND

DRUMS @ 1.5m C/C

12+140

DRUMS @ 8m C/C

℄ LAKEWOOD HEIGHTS BLVD

12+180

3.6m

TEMPORARY EDGE LINE WHITE CLASS I 740.06, TYPE 1

TEMPORARY CENTER LINE, CLASS I DOUBLE SOLID 740.06 TYPE 1

STA. 12+145, RT. ③

TEMPORARY STOP LINE, CLASS I, 740.06 TYPE 1

② STA. 0+924 LT.

W 136TH ST.

DRUMS @ 1.5m C/C

12+220

6.10M

3.6m

DRUMS @ 8m C/C

TEMPORARY EDGE LINE, WHITE CLASS I 740.06 TYPE 1

STA. 12+225, RT. ③

TEMPORARY CENTER LINE, CLASS I DOUBLE SOLID. 740.06 TYPE 1

STA. 0+924 RT. ①

MATCH LINE STA. 12+240

MATCH LINE STA. 12+240

IF PERMANENT ASPHALT COURSES ARE NOT PLACED IMMEDIATELY FOLLOWING MILLING, THEN PLACE ITEM 614 BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC

③ STA. 12+275, LT.

CITY OF LAKEWOOD
CITY OF CLEVELAND

12+260

DRUMS @ 8m C/C

DRUMS @ 1.5m C/C

6.10M

3.6m

TEMPORARY EDGE LINE WHITE CLASS I 740.06 TYPE 1

TEMPORARY CENTER LINE CLASS I DOUBLE SOLID 740.06 TYPE 1

② STA. 0+923 LT.

JOSLYN RD.

CHESTERLAND AVE.

TEMPORARY STOP LINE, CLASS I, 740.06, TYPE 1

① STA. 1+076 LT.

STA. 1+020 RT. ②

24"x30" BLANK OVERLAY

SPEED LIMIT 35 R-10 STA. 12+299.1 LT.

ONLY ONLY R-31Z STA. 12+336 LT.

TEMPORARY CHANNELIZING LINE, WHITE CLASS I. 740.06 TYPE 1

TEMPORARY LANE ARROW, CLASS I, 740.06. TYPE 1

STA. 12+365 LT. ①

ONLY ONLY R-31Z STA. 12+353 LT.

+326.5 ONLY

+348

4.00M

4.00M

4.00M

4.00M

4.19M

12+300

TEMPORARY LANE ARROW, CLASS I, 740.06, TYPE 1

℄ LAKEWOOD HEIGHTS BLVD.

12+340

TEMPORARY WORD ON PAVEMENT, 1800mm CLASS I 740.06 TYPE 1

END SECTION II PHASE B

STA. 0+923 RT. ①

RTA ENTRANCE

N

HORIZONTAL SCALE IN METERS

CALCULATED

CHECKED

CUY - C.R. 297 SECTION II PHASE B

MAINTENANCE OF TRAFFIC - LAKEWOOD HEIGHTS BOULEVARD

STA. 12+120 TO STA. 12+360

41
162

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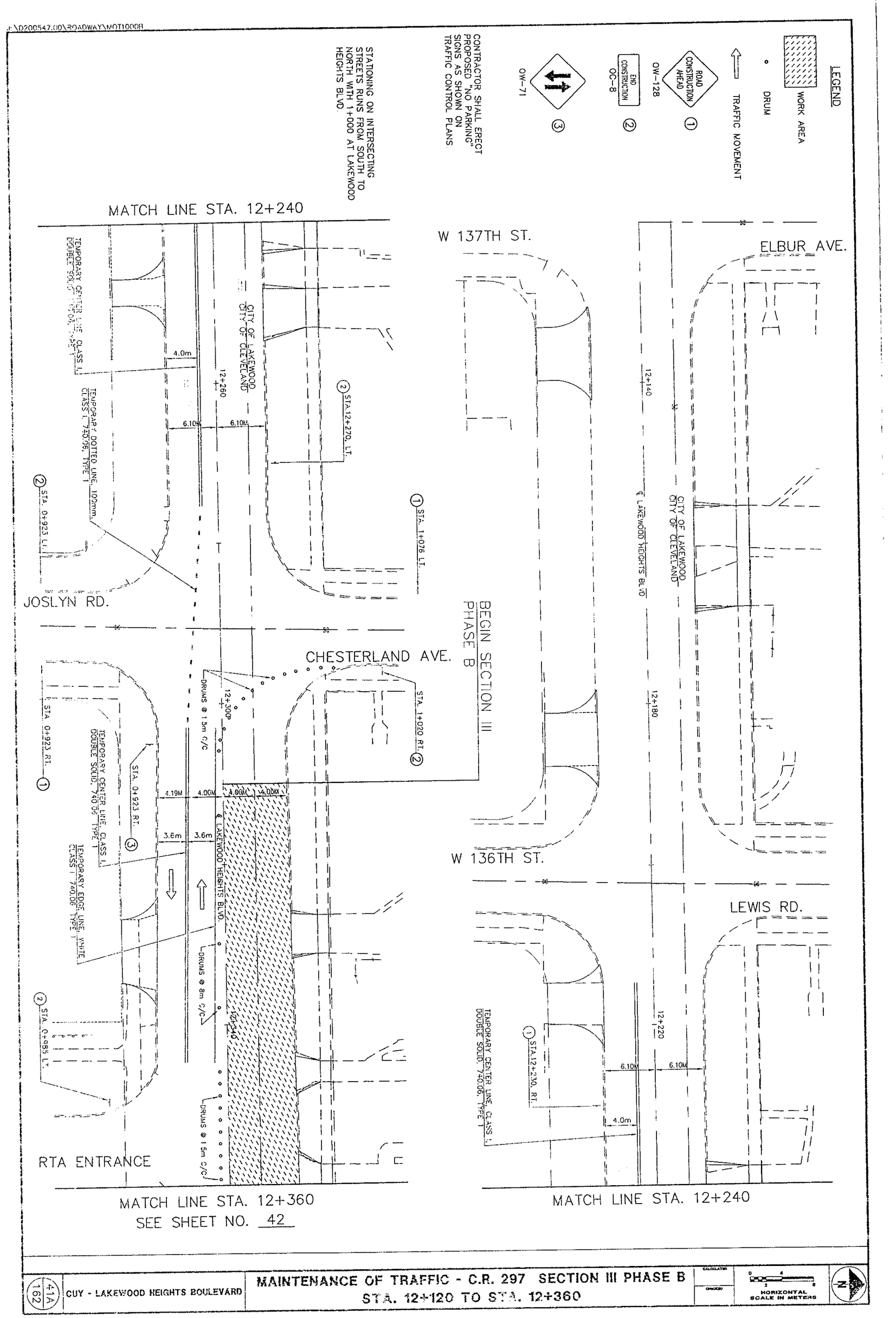

41A / 162 | CUY - LAKEWOOD HEIGHTS BOULEVARD

MAINTENANCE OF TRAFFIC - C.R. 297 SECTION III PHASE B
STA. 12+120 TO STA. 12+360

CALCULATED | CHECKED | HORIZONTAL SCALE IN METERS 0 2 4 8 | N

LEGEND

WORK AREA

DRUM

TRAFFIC MOVEMENT

ROAD CONSTRUCTION AHEAD ①
OW-128

END CONSTRUCTION ②
OC-8

DO NOT PASS ③
R-33

④
OW-71

CONTRACTOR SHALL ERECT PROPOSED "NO PARKING" SIGNS AS SHOWN ON TRAFFIC CONTROL PLANS.

NOTE:
SIGNS SHOWN IN PAVED AREAS SHALL BE PLACED ON PORTABLE SUPPORTS WITH STABILIZED BASES.
STA.12+370, LT
STA.12+520, LT.
STA.12+560, LT

STATIONING ON INTERSECTING STREETS RUNS FROM SOUTH TO NORTH WITH 1+000 AT LAKEWOOD HEIGHTS BLVD

SEE SHEET NO. 41A
MATCH LINE STA. 12+360

① STA. 1+076 LT.
TEMPORARY STOP LINE, CLASS I 740.06 TYPE 1
④ STA.12+370, LT.
R/W
WATERBURY RD.
N00°00'15"E
STA 12+382.623 14HR
STA 14000.000
WATERBURY RD

IF PERMANENT ASPHALT COURSES ARE NOT PLACED IMMEDIATELY FOLLOWING MILLING, THEN PLACE ITEM 614 BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC.

BRAMLEY DRIVE

FLARED END SECTION

BEGIN CONCRETE MEDIAN TRANSITION 910mm HGT. STA. 12+435.754

END CONCRETE MEDIAN TRANSITION 305mm HGT. STA. 12+441.240

CITY OF LAKEWOOD
CITY OF CLEVELAND

N89°38'15"E
12+380
12+420
℄ LAKEWOOD HEIGHTS BLVD

DRUMS @ 1.5m C/C

PORTABLE CONCRETE BARRIER 813mm

TEMPORARY CENTER LINE, CLASS I DOUBLE SOLID 740.06 TYPE 1

3.6m
3.6m

MATCH LINE STA. 12+480

RTA ENTRANCE

N01°30'45"E
ALLEY

② STA. 0+985 LT.
STA. 0+985 RT. ①
④ STA.12+400, RT.
STA.12+520, LT. & RT.
④

+435 PORTABLE CONCRETE BARRIER SEE DETAIL "A" SHEET NO. 28

STA.12+460, LT. & RT.
③

PC = 12+467.187

STA.12+560, LT. & RT.
③

MATCH LINE STA. 12+480

12+480
LAKEWOOD HEIGHTS BLVD
12+540
12+580

3.9m
3.9m

CURVE DATA
PI STA 12+584.172
Δ = 30°00'00"
R = 436.592m
T = 116.985m
L = 228.599m
E = 15.401m

PORTABLE CONCRETE BARRIER 813mm

TEMPORARY CENTER LINE, CLASS I, DOUBLE SOLID, 740.06 TYPE 1

CITY OF LAKEWOOD
CITY OF CLEVELAND

FACE OF EQUIPMENT

STA. 12+592.400M±, 9.25M± RT.
6.568M± MIN. VERT. CLEARANCE

SEE SHEET NO. 43
MATCH LINE STA. 12+600

N
HORIZONTAL SCALE IN METERS
0 2 4
CALCULATED
CHECKED

MAINTENANCE OF TRAFFIC - C.R. 297 SECTION III PHASE B
STA. 12+360 TO STA. 12+600

CUY - LAKEWOOD HEIGHTS BOULEVARD

42
162

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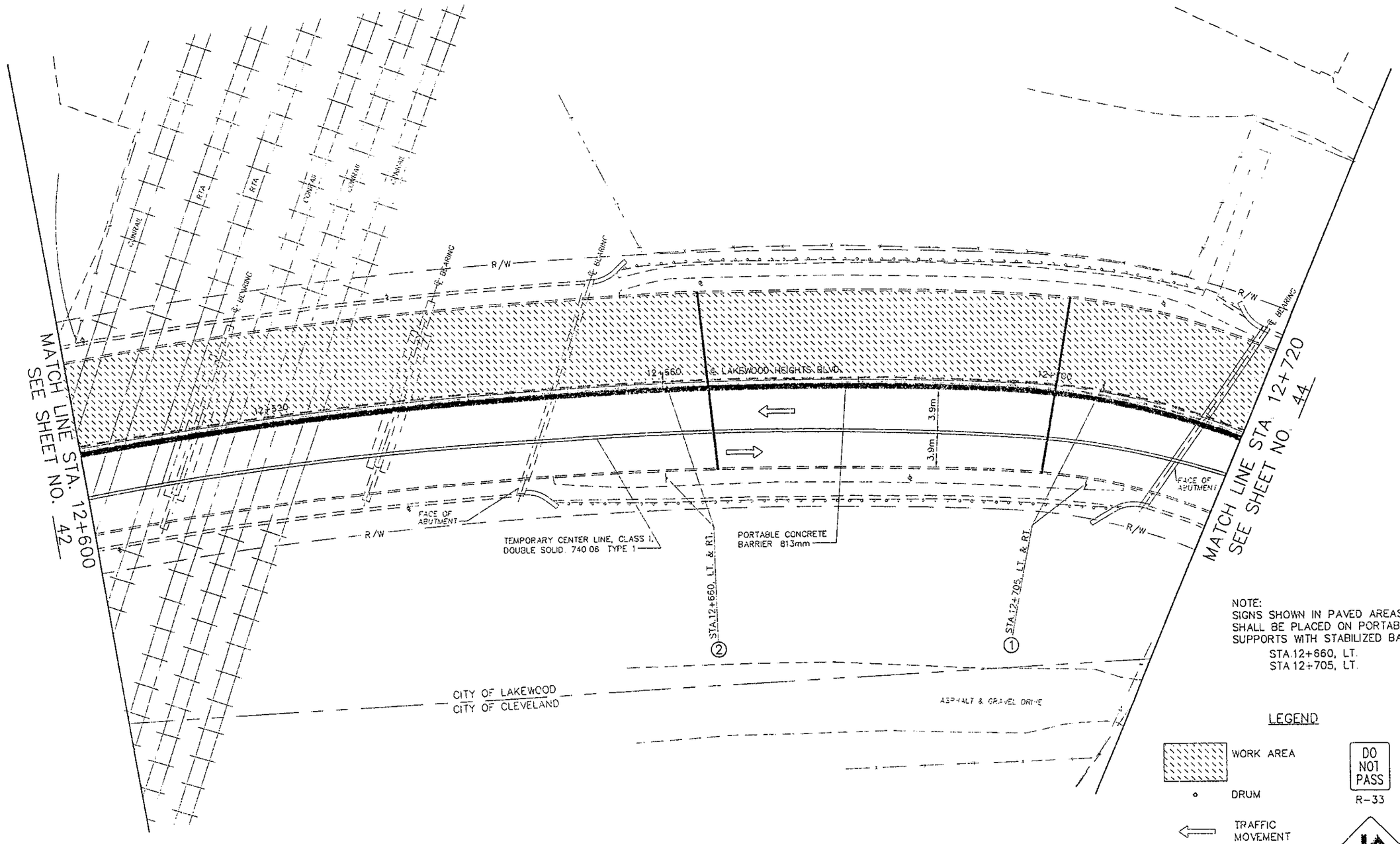

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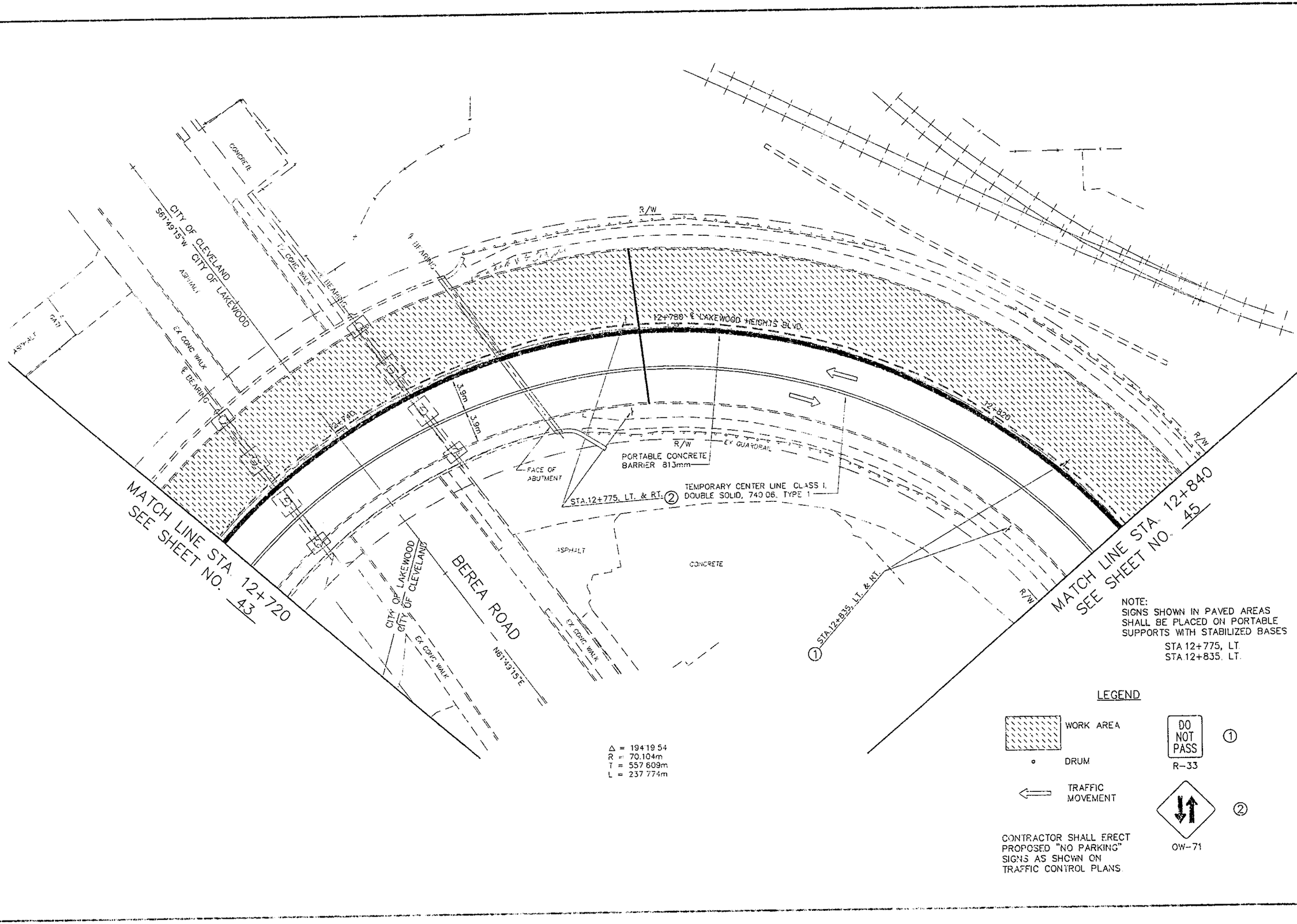
MAINTENANCE OF TRAFFIC - C.R. 297 SECTION III PHASE B
STA. 12+720 TO STA. 12+840

CUY - LAKEWOOD HEIGHTS BOULEVARD

HORIZONTAL SCALE IN METERS

CALCULATED

DRAWN



NOTE:
SIGNS SHOWN IN PAVED AREAS SHALL BE PLACED ON PORTABLE SUPPORTS WITH STABILIZED BASES

STA 12+775, LT.
STA 12+835, LT.

LEGEND

WORK AREA

DRUM

TRAFFIC MOVEMENT

DO NOT PASS ①
R-33

②
OW-71

CONTRACTOR SHALL ERECT PROPOSED "NO PARKING" SIGNS AS SHOWN ON TRAFFIC CONTROL PLANS

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LEGEND

WORK AREA

DRUM

TRAFFIC MOVEMENT

ROAD CONSTRUCTION AHEAD ① OW-128

END CONSTRUCTION ② OC-8

③ OW-71

RIGHT LANE CLOSED AHEAD ④ OW-122

⑤ OW-60C

NOTE:
SIGNS SHOWN IN PAVED AREAS SHALL BE PLACED ON PORTABLE SUPPORTS WITH STABILIZED BASES

STA.12+860, LT.
STA.12+915, LT.

SEE SHEET NO. 44 MATCH LINE STA. 12+840

CURVE DATA
PI STA N.A.
Δ = 194°19'54"
R = 70.104m
T = N.A.
L = 237.774m
E = N.A

STA.12+915, LT. ③

FOR DETAILS, SEE STANDARD CONSTRUCTION DRAWING MT-95.31M

FLARED END SECTION

TEMPORARY EDGE LINE, WHITE, CLASS I, 740.06 TYPE 1

1+040

3.6m

② STA. 1+040 RT.

DRUMS @ 1.5m C/C

1+020

PORTABLE CONCRETE BARRIER, 813mm

PT = 12+933.55

N46°51'51"W

1+000

TEMPORARY STOP LINE, CLASS I, 740.06, TYPE 1

SEE DETAIL "A" SHEET NO 28

BEREA ROAD

0+980

R/W

3.6m

3.6m

PORTABLE CONCRETE BARRIER, 813mm

TEMPORARY CENTER LINE, CLASS I, DOUBLE SOLID 740.06 TYPE 1

STA.12+860, LT. & RT. ③

ASPHALT

② STA. 0+960 LT

EX. BUSHES

EX. POSTS

PLANTER

PC 0+950.075

0+960

PLANTER

0+940

N61°39'15"E

R/W STA. 0+940 RT. ①

END WORK
END PROJECT
STA. 12+937
STP-- BHF 93C( )

CURVE DATA
PI STA 0+109.996
Δ = 41°17'10"
R = 159.054m
T = 59.921m
L = 114.611m
E = 10.913m

FOR BARRIER REFLECTOR QUANTITIES SEE SHEET NO 31

MAINTENANCE OF TRAFFIC - C.R. 297 SECTION III PHASE B
STA. 12+840 TO STA. 12+960

CUY - LAKEWOOD HEIGHTS BOULEVARD

HORIZONTAL SCALE IN METERS

45/162

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PROJECT FUNDS LOCATED IN THE CITY OF LAKEWOOD

000/000 PROJECT FUNDS LOCATED IN THE CITY OF CLEVELAND

000*/000* * INDICATES 100% LOCAL FUNDING

GENERAL SUMMARY

6	7	8	9	58	59	60		62	63	64	65	66	67	67A	71		93
								404 135									
															508 74	1708* 284*	205 591
								3191 3556									
						16099 9796											
			500														
	800								615 33	355 950							
				1563	1082 778												
											310 517						
											1			2			
											8 2						
		5												1			
															114 28	319* 59*	
3																	205 591
								3924 6042									
	4000			1635	1082 895												
											9 2						
10											19 6						
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											3 1						
											3 1						
	800								587 33	358 952							
										7							
										2							
											12						
											2						
	11000			1635	1082 895												
	1100			164	108 90												
	6160			912	608 501												
	110																
		100															
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		120												11			
		20															
		10										12 33	12 11	6			
		10										3	3				
		4															

CONTINGENCY	PARTICIPATION 100% LOCAL LAKEWOOD	100% LOCAL CLEVELAND	PROJECT FUNDS LAKEWOOD	PROJECT FUNDS CLEVELAND	ITEM	ITEM EXTENSION	GRAND TOTAL	UNIT	DESCRIPTION	AS PER PLAN SHEET REF.
									ROADWAY	
			404	135	202	22901	539	SQUARE METER	APPROACH SLAB REMOVED, AS PER PLAN	7
	1708	284	713	665	202	23000	3370	SQUARE METER	PAVEMENT REMOVED	
			3191	5556	202	23001	8747	SQUARE METER	PAVEMENT REMOVED, AS PER PLAN	7
			16099	9798	202	23500	25895	SQUARE METER	WEARING COURSE REMOVED	
500					202	2400	500	SQUARE METER	BRICK BASE REMOVED	
800			970	983	202	30000	2753	SQUARE METER	WALK REMOVED	
			2645	778	202	32000	3423	METER	CURB REMOVED	
			310	517	202	38000	827	METER	GUARDRAIL REMOVED	
				2	202	58100	2	EACH	CATCH BASIN REMOVED	
			1		202	98000	LUMP		REMOVAL MISC.: LANDSCAPE	
			8	2	202	98100	10	EACH	REMOVAL MISC: POST	
5					202	98600	5	EACH	ABANDON MISC: TEST TEE	
			1		202	98600	1	EACH	ABANDON MISC.: ABANDON CATCH BASIN AND CONNECT THRU	
	310	59	114	28	203	12000	511	CUBIC METER	EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION	
3					203	45000	3	HOUR	PROOF ROLLING	
			4129	6633	203	50000	10762	SQUARE METER	SUBGRADE COMPACTION	
4000			2717	895	203	60101	7612	METER	LINEAR GRADING, AS PER PLAN	7
10			9	2	604	38504	21	EACH	CUYAHOGA COUNTY ROADWAY MONUMENT ASSEMBLY	
			19	6	604	38600	25	EACH	CUYAHOGA COUNTY ROADWAY MONUMENT BOX	
			300.66	499.44	606	13000	800.10	METER	GUARDRAIL, TYPE 5	
			2	3	606	25000	5	EACH	ANCHOR ASSEMBLY, TYPE A	
			1	4	606	26500	5	EACH	ANCHOR ASSEMBLY, TYPE T	
			3	1	606	35000	4	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 1, AS PER PLAN	7
			3	1	606	35101	4	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 2, AS PER PLAN	7
800			945	985	608	11001	2730	SQUARE METER	114mm CONCRETE WALK, AS PER PLAN	7
			7		608	50000	7	EACH	CURB RAMP, TYPE 1	
			2		608	51000	2	EACH	CURB RAMP, TYPE 2	
				12	608	51200	12	EACH	CURB RAMP, CITY OF CLEVELAND, TYPE 1	
				2	608	51300	2	EACH	CURB RAMP, CITY OF CLEVELAND, TYPE 2	
									EROSION CONTROL	
11000			2717	895	659	10001	14612	SQUARE METER	SEEDING AND MULCHING, AS PER PLAN	8
1100			272	90	659	20000	1462	KILOGRAM	COMMERCIAL FERTILIZER	
6160			1518	501	659	30000	8179	KILOGRAM	AGRICULTURAL LIMING	
110					659	35000	110	CUBIC METER	WATER	
									DRAINAGE	
100					603	00900	100	METER	150mm CONDUIT, TYPE B, (FOR DRAINAGE CONNECTION)	
50					603	01100	50	METER	150mm CONDUIT, TYPE C, (FOR DRAINAGE CONNECTION)	
20					603	01500	20	METER	150mm CONDUIT, TYPE F	
120			11		603	04400	131	METER	300mm CONDUIT, TYPE B, 706.02	
20					603	04600	20	METER	300mm CONDUIT, TYPE C, 706.01 (CLASS 3), 706.02 OR 706.08 (ES)	
10				24	604	00300	34	EACH	CATCH BASIN CITY OF CLEVELAND NO. 1	
10			50		604	01000	60	EACH	CATCH BASIN, CUYAHOGA COUNTY, NO. 3C	
4			5		604	01010	10	EACH	CATCH BASIN, CUYAHOGA COUNTY TWN 3C	

CALCULATED JAN CHECKED PDH

GENERAL SUMMARY

CUY-LAKEWOOD HEIGHTS BLVD.

55/162

DESIGNED BY: JAN CHECKED BY:
DATE: 7/3/97 DATE:
DRAWN BY: JAN REVISED BY: MAL
DATE: 7/3/97 DATE: 10/15/98
CAD FILE NAME: GSUM1

PROJECT FUNDS LOCATED IN THE CITY OF LAKEWOOD (000/000)

PROJECT FUNDS LOCATED IN THE CITY OF CLEVELAND (000/000)

(000*/000*) * INDICATES 100% LOCAL FUNDING

GENERAL SUMMARY

8	9	58	59	60	61	62	65A	66	67	67A	71	93	CONTINGENCY	PARTICIPATION 100% LOCAL LAKEWOOD	PARTICIPATION 100% LOCAL CLEVELAND	PROJECT FUNDS LAKEWOOD	PROJECT FUNDS CLEVELAND	ITEM	ITEM EXTENSION	GRAND TOTAL	UNIT	DESCRIPTION	AS PER PLAN SHEET REF.
																						DRAINAGE (CONTINUED)	
								1		1						1	1	604	02000	2	EACH	CATCH BASIN NO. 6	
									1							1		604	04500	1	EACH	CATCH BASIN NO. 2-2B	
	5												5					604	09001	5	EACH	CATCH BASIN ADJUSTED TO GRADE, AS PER PLAN	8
	5												5					604	09501	5	EACH	CATCH BASIN RECONSTRUCTED TO GRADE, AS PER PLAN	8
	5												5					604	30101	5	EACH	MANHOLE, NO. 1, AS PER PLAN	8
									1	1						2		604	31500	2	EACH	MANHOLE, NO. 3	
	5							32/7	5/15	1			5			38	22	604	34501	65	EACH	MANHOLE ADJUSTED TO GRADE, AS PER PLAN	8
	5												5					604	35500	5	EACH	MANHOLE RECONSTRUCTED TO GRADE	
	5												5					604	98000	5	EACH	DRAINAGE STRUCTURE, MISC: TEST TEE ADJUSTED TO GRADE	
	5												5					604	98001	5	EACH	DRAINAGE STRUCTURE, MISC: TEST TEE RECONSTRUCTED TO GRADE	
	5												5					604	98002	5	EACH	DRAINAGE STRUCTURE, MISC: TEST TEE	
	170												170					605	11111	170	METER	150mm SHALLOW PIPE UNDERDRAIN, 706.08	
	10						46/3 22/2						10			46	22	638	10800	78	EACH	VALVE BOX ADJUSTED TO GRADE	
	20												20			3	2	638	10900	25	EACH	SERVICE BOX ADJUSTED TO GRADE	
	4000												4000					SPECIAL	60450000	4000	KILOGRAM	MISCELLANEOUS METAL	
																						PAVEMENT	
		1000											1000					251	00100	1000	SQUARE METER	FULL DEPTH PAVEMENT REPAIRS, AS PER PLAN	9
					431	442										431	442	255	10101	873	SQUARE METER	FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS FS, AS PER PLAN	9
		200	26	4/67		1252	508						200			1282	575	255	10150	2057	SQUARE METER	FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS MS, AS PER PLAN	9
		100	46	7/126		391	283					9/240	100			453	649	255	20000	1202	METER	FULL DEPTH PAVEMENT SAWING	
		100											100					301	46000	100	CUBIC METER	BITUMINOUS AGGREGATE BASE, PG64-22	
						554	870				88/18	272*/50* 31/89		272	50	673	977	304	20001	1972	CUBIC METER	AGGREGATE BASE, AS PER PLAN	9
				5872	3312											5872	3312	407	10000	9184	LITER	TACK COAT	
				5872	3312											5872	3312	407	14000	9184	LITER	TACK COAT FOR INTERMEDIATE COURSE	
				778	438											778	438	448	46051	1216	CUBIC METER	ASPHALT CONCRETE, INTERMEDIATE COURSE, TYPE 2, PG64-22, AS PER PLAN	9
				553	312											553	312	448	47011	865	CUBIC METER	ASPHALT CONCRETE, SURFACE COURSE, TYPE 1, PG64-22, AS PER PLAN	9
											57/39	211*/99*		211	99	57	39	451	13001	406	SQUARE METER	210mm REINFORCED CONCRETE PAVEMENT, AS PER PLAN	9
						3177	5421									3177	5421	451	14501	8598	SQUARE METER	250mm REINFORCED CONCRETE PAVEMENT, AS PER PLAN	9
												205/591				205	591	451	15001	796	SQUARE METER	260mm REINFORCED CONCRETE PAVEMENT, AS PER PLAN	9
											527/83	1604*/236*		1604	236	527	83	452	10000	2450	SQUARE METER	160mm PLAIN CONCRETE PAVEMENT	
						403	504									403	504	609	14000	907	METER	CURB, TYPE 2-A	
												71/120				71	120	609	14001	191	METER	CURB, TYPE 2-A, AS PER PLAN	93
													50			77	124	609	16001	251	METER	CURB, TYPE 2-B, AS PER PLAN	9
		50	71/1518	6/124 1030/652												2548	652	609	16001	3200	METER	CURB, TYPE 6, AS PER PLAN	3,4
												22				22		609	30001	22	METER	CURB, TYPE 8, AS PER PLAN	93
						410	137									410	137	611	25001	547	SQUARE METER	REINFORCED CONCRETE APPROACH SLAB (T=380mm), AS PER PLAN	7
						185	208									165	208	612	42000	373	SQUARE METER	CONCRETE MEDIAN, AS PER PLAN	5
		1000											1000					SPECIAL	45012000	1000	METERS	CONCRETE PAVEMENT JOINT CLEANED AND FILLED	
		1000											1000					SPECIAL	45035700	1000	METERS	CONCRETE PAVEMENT CRACK CLEANED AND FILLED	
						54	18									54	18	SPECIAL	45131000	72	METER	PRESSURE RELIEF JOINT, TYPE B	

DESIGNED BY: JAN	CHECKED BY:
DATE: 7/3/97	DATE:
DRAWN BY: JAN	REVISED BY: MAL
DATE: 7/3/97	DATE: 10/15/98
CAD FILE NAME:	GSAM(2)

CALCULATED JAN CHECKED PDH

GENERAL SUMMARY

CUY-LAKEWOOD HEIGHTS BLVD.

PROJECT FUNDS LOCATED IN THE CITY OF LAKEWOOD (000/000)

PROJECT FUNDS LOCATED IN THE CITY OF CLEVELAND

(000*/000*) * INDICATES 100% LOCAL FUNDING

GENERAL SUMMARY

6	10	11	17	31	65	CONTINGENCY	PARTICIPATION 100% LOCAL LAKEWOOD	PARTICIPATION 100% LOCAL CLEVELAND	PARTICIPATION PROJECT FUNDS LAKEWOOD	PARTICIPATION PROJECT FUNDS CLEVELAND	ITEM	ITEM EXTENSION	GRAND TOTAL	UNIT	DESCRIPTION	AS PER PLAN SHEET REF.
															FOR LIGHTING QUANTITIES SEE SHEET 126.	
															FOR TRAFFIC CONTROL QUANTITIES SEE SHEET 98.	
					12					12	626	00100	12	EACH	BARRIER REFLECTOR, TYPE A	
															FOR STRUCTURE QUANTITIES SEE SHEET 137.	
															MAINTANENCE OF TRAFFIC	
		200				200					410	12001	200	CUBIC METER	TRAFFIC COMPACTED SURFACE, TYPE A OR B, AS PER PLAN	10
		200				200					608	21200	200	SQUARE METER	TEMPORARY BITUMINOUS WALK	
		100				100					614	11100	100	HOURS	LAW ENFORCEMENT OFFICER WITH PATROL CAR	
		40				40					614	11200	40	HOURS	LAW ENFORCEMENT OFFICER	
		300				300					614	13000	300	CUBIC METER	BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC	
	20			66 74		20			66	74	614	13300	160	EACH	BARRIER REFLECTOR, TYPE B	
			0.346							0.346	614	20100	0.35	KILOMETER	TEMPORARY LANE LINE, CLASS I, 642 PAINT	
			0.439 0.192						0.439	0.192	614	21100	0.63	KILOMETER	TEMPORARY CENTER LINE, CLASS I, 642 PAINT	
			0.322 1.309						0.322	1.309	614	21200	1.63	KILOMETER	TEMPORARY CENTER LINE, CLASS I, 740.06, TYPE I	
			1.842 0.571						1.842	0.571	614	22100	2.41	KILOMETER	TEMPORARY EDGE LINE, CLASS I, 642 PAINT	
			2.326 1.051						2.326	1.051	614	22200	3.38	KILOMETER	TEMPORARY EDGE LINE, CLASS I, 740.06, TYPE I	
			97.6							97.6	614	23200	98	METER	TEMPORARY CHANNELIZING LINE, CLASS I, 642 PAINT	
			86.2						86.2		614	23300	86	METER	TEMPORARY CHANNELIZING LINE, CLASS I, 740.06, TYPE I	
			27.6							27.6	614	24400	28	METER	TEMPORARY DOTTED LINE, CLASS I, 740.06, TYPE I	
			17.3 17.5						17.3	17.5	614	26200	35	METER	TEMPORARY STOP LINE, CLASS I, 642 PAINT	
			118.7 99.4						118.7	99.4	614	26400	218	METER	TEMPORARY STOP LINE, CLASS I, 740.06, TYPE I	
			65.3 34.2						65.3	34.2	614	27200	100	METER	TEMPORARY CROSSWALK LINE, CLASS I, 642 PAINT	
			60.9						60.9		614	27400	61	METER	TEMPORARY CROSSWALK LINE, CLASS I, 740.06, TYPE I	
			4						4		614	30400	4	EACH	TEMPORARY LANE ARROW, CLASS I, 740.06, TYPE I	
			2						2		614	31400	2	EACH	TEMPORARY WORD ON PAVEMENT, 1800 MM, CLASS I, 740.06, TYPE I	
	200					200					616	10000	200	CUBIC METER	WATER	
	5					5					616	20000	5	METRIC TON	CALCIUM CHLORIDE	
			114 263						114	263	622	40020	377	METER	PORTABLE CONCRETE BARRIER, 813 mm	
			144 38						144	38	622	40040	182	METER	PORTABLE CONCRETE BARRIER, 813mm, BRIDGE MOUNTED	
	100					100					SPECIAL	61412500	100	EACH	REPLACEMENT SIGN	10
	16					16					SPECIAL	61418000	16	EACH	MAINTAINING TRAFFIC MISC: MAINTAINING EXISTING TRAFFIC SIGNALS	10
															MISCELLANEOUS	
											614	11001	LUMP		MAINTAINING TRAFFIC, AS PER PLAN	10,135,136
											806	16011	24	MONTH	FIELD OFFICE, TYPE B, AS PER PLAN	6
24											623	10001	LUMP		CONSTRUCTION LAYOUT STAKES, AS PER PLAN	6
											624	10000	LUMP		MOBILIZATION	

DESIGNED BY: JAN | CHECKED BY:
DATE: 7/3/97 | DATE:
DRAWN BY: JAN | REVISED SY:
DATE: 7/3/97 | DATE:
CAD FILE NAME: 7035700\LGSUM1

CALCULATED JAN | CHECKED PDH

GENERAL SUMMARY

CUY-LAKEWOOD HEIGHTS BLVD.

LOCATION				202		203		255						609		609		659													
SHEET No.	STATION TO STATION	SIDE	LENGTH	CURB REMOVED		LINEAR GRADING, AS PER PLAN		FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS MS, AS PER PLAN		FULL DEPTH PAVEMENT SAWING				CURB, TYPE 6 AS PER PLAN		CURB, TYPE 2B AS PER PLAN		SEEDING AND MULCHING, AS PER PLAN		COMMERCIAL FERTILIZER		AGRICULTURAL LIMING									
				METER		METER		SQ. METER		METER				METER		METER		SQ. METER		KILOGRAM		KILOGRAM									
				FEDERAL		FEDERAL		FEDERAL		FEDERAL				FEDERAL		FEDERAL		FEDERAL		FEDERAL		FEDERAL									
			METER	LAKE.	CLEVE.	LAKE.	CLEVE.	LAKE.	CLEVE.	LAKE.	CLEVE.			LAKE.	CLEVE.	LAKE.	CLEVE.	LAKE.	CLEVE.	LAKE.	CLEVE.	LAKE.	CLEVE.								
72	STA. 10+053.33 TO STA. 10+061.93	LT.	8.60	8.6		8.6								8.6				8.6		0.9		2.2									
	STA. 10+074.43 TO STA. 10+090.00	LT.	15.57	15.6		15.6								15.6				15.6		1.6		8.7									
	STA. 10+090.00 TO STA. 10+106.22	LT.	16.22	16.2		16.2								16.2				16.2		1.6		9.1									
	STA. 10+106.22 TO STA. 10+139.12	LT.	32.94	32.9		32.9								32.9				32.9		3.3		18.4									
	STA. 10+139.16 TO STA. 10+150.14	LT.	11.58	11.6		11.6								11.6				11.6		1.2		6.5									
	STA. 10+150.14 TO OLIVE AVE. NW	LT.	12.13	12.1		12.1								12.1				12.1		1.2		6.8									
	OLIVE AVE. NE TO STA. 10+176.62	LT.	5.39	5.4		5.4								5.4				5.4		0.5		3.0									
72	STA. 10+176.62 TO STA. 10+200.40	LT.	23.78	23.8		23.8								23.8				23.8		2.4		13.3									
73	STA. 10+200.40 TO CARABEL AVE. NW	LT.	51.52	51.5		51.5								51.5				51.5		5.2		28.9									
	CARABEL AVE. NE TO STA. 10+268.80	LT.	7.48	7.5		7.5								7.5				7.5		0.7		4.2									
	STA. 10+268.80 TO STA. 10+272.50	LT.	3.70	3.7		3.7								3.7				3.7		0.4		2.1									
73	STA. 10+272.50 TO STA. 10+463.27	LT.	190.77	190.8		190.8								190.8				190.8		19.1		106.8									
74	STA. 10+463.27 TO STA. 10+466.93	LT.	3.66	3.7		3.7								3.7				3.7		0.4		2.0									
	STA. 10+466.93 TO STA. 10+482.51	LT.	15.58	15.6		15.6								15.6				15.6		1.6		8.7									
	STA. 10+482.51 TO STA. 10+485.55	LT.	3.04	3.0		3.0								3.0				3.0		0.3		1.7									
	STA. 10+485.55 TO STA. 10+495.06	LT.	9.51	9.5		9.5								9.5				9.5		1.0		5.3									
	STA. 10+495.06 TO STA. 10+518.03	LT.	22.97	23.0		23.0								23.0				23.0		2.3		12.9									
	STA. 10+518.03 TO STA. 10+528.90	LT.	10.87	10.9		10.9								10.9				10.9		1.1		6.1									
	STA. 10+528.90 TO STA. 10+577.09	LT.	48.19	48.2		48.2								48.2				48.2		4.8		27.0									
	STA. 10+577.09 TO ARTHUR AVE. NW	LT.	5.28	5.3		5.3								5.3				5.3		0.5		3.0									
	ARTHUR AVE. NE TO STA. 10+606.90	LT.	11.23	11.2		11.2								11.2				11.2		1.1		6.3									
	STA. 10+606.90 TO STA. 10+611.78	LT.	4.88	4.9		4.9								4.9				4.9		0.5		2.7									
	STA. 10+611.78 TO STA. 10+648.59	LT.	36.81	36.8		36.8								36.8				36.8		3.7		20.6									
	STA. 10+648.59 TO STA. 10+655.91	LT.	7.32	7.3		7.3								7.3				7.3		0.7		4.1									
	STA. 10+655.91 TO STA. 10+667.21	LT.	11.30	11.3		11.3								11.3				11.3		1.1		6.3									
	STA. 10+667.21 TO STA. 10+677.56	LT.	10.35	10.4		10.4								10.4				10.4		1.0		5.8									
74	STA. 10+677.56 TO STA. 10+883.84	LT.	206.28	206.3		206.3								206.3				206.3		20.6		115.5									
75	STA. 10+883.84 TO STA. 10+889.39	LT.	5.55	5.6		5.6								5.6				5.6		0.6		3.1									
76	STA. 10+889.39 TO ALGER ROAD NW	LT.	52.65	52.7		52.7								52.7				52.7		5.3		29.5									
	ALGER ROAD NE TO STA. 10+951.55	LT.	7.90	7.9		7.9								7.9				7.9		0.8		4.4									
	STA. 10+951.55 TO STA. 10+967.35	LT.	15.80	15.8		15.8								15.8				15.8		1.6		8.8									
	STA. 10+967.35 TO STA. 10+970.24	LT.	2.89	2.9		2.9								2.9				2.9		0.3		1.6									
76	STA. 10+970.24 TO STA. 11+023.50	LT.	52.58	69.0*		69.0*								69.0*				69.0*		6.9*		38.3*		*INCLUDES DRIVE CURB							
77	WARREN ROAD NW	LT.	13.02			13.0										13.0		13.0		1.3		7.3									
77	WARREN ROAD NE	LT.	14.13			14.1										14.1		14.1		1.4		7.9									
77	STA. 11+242.22 TO 11+247.40	LT.	5.18			5.2		3.1		6.4						5.2		5.2		0.5		2.9									
77	STA. 11+247.40 TO LINCOLN AVE. NW	LT.	146.70	146.7		146.7								146.7				146.7		14.7		82.0									
78	LINCOLN AVE. NE TO ADELINE ST. NW	LT.	93.70	93.7		93.7								93.7				93.7		9.4		52.5									
78	ADELINE ST. NE TO HILDA ST. NW	LT.	86.12	86.1		86.1								86.1				86.1		8.6		48.2									
78	HILDA ST. NE TO BROWN RD. NW	LT.	68.76	68.8		68.8								68.8				68.8		6.9		38.5									
79	BROWN RD. NE TO RICHLAND AVE. NW	LT.	85.48	85.5		85.5								85.5				85.5		8.5		47.9									
	RICHLAND AVE. NE TO STA. 11+819.49	LT.	62.34	62.3		62.3								62.3				62.3		6.2		34.9									
	STA. 11+819.49 TO STA. 11+822.97	LT.	3.48	3.5		3.5								3.5				3.5		0.3		1.9									
	STA. 11+822.97 TO 11+824.20	LT.	1.23	1.2		1.2								1.2				1.2		0.1		0.7									
	STA. 11+824.20 TO BUNTS ROAD NW	LT.	28.03			28.0		16.8		29.2						28.0		28.0		2.8		15.6									
	BUNTS ROAD TO STA. 11+880.60	LT.	11.11			11.1		6.0		10.6						10.6**		11.1		1.1		6.2									
79	STA. 11+880.60 TO STA. 11+934.16	LT.	53.56	53.6		53.6								8.8**				53.6		5.4		29.9		** FOR QUANTITIES ASSOCIATED WITH BUS PADS SEE SHEET 93.							
80	STA. 11+934.16 TO STA. 11+941.75	LT.	7.59	7.6		7.6								7.6				7.6		0.8		4.3									
80	STA. 11+941.75 TO WASCANA AVE. NW	LT.	6.28	6.3		6.3								6.3				6.3		0.6		3.5									
80	WASCANA NE TO STA. 11+966.37	LT.	6.77	6.8		6.8								6.8				6.8		0.7		3.8									
	TOTAL			1563.1		1634.5		25.9		46.2				1518.3		70.9		1634.5		163.6		911.7									

DESIGNED BY: JAN
DATE: 8/06/97
DRAWN BY: MAL
DATE: 8/06/97
CAD FILE NAME: H5S010X(1)
CHECKED BY: MAL
DATE: 10/1/98
REVISED BY:

CALCULATED JAN
CHECKED LAS

ROADWAY SUBSUMMARY

CITY - LAKEWOOD ELEVATED GUIDEWAY

LOCATION				202		203		255						609		609		659															
SHEET No.	STATION TO STATION	SIDE	LENGTH	CURB REMOVED		LINEAR GRADING, AS PER PLAN		FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS MS, AS PER PLAN		FULL DEPTH PAVEMENT SAWING				CURB, TYPE 6 AS PER PLAN		CURB, TYPE 2B AS PER PLAN		SEEDING AND MULCHING, AS PER PLAN		COMMERCIAL FERTILIZER		AGRICULTURAL LIMING									
				METER		METER		SQ. METER		METER				METER		METER		SQ. METER		KILOGRAM		KILOGRAM									
				FEDERAL		FEDERAL		FEDERAL		FEDERAL				FEDERAL		FEDERAL		FEDERAL		FEDERAL		FEDERAL									
			METER	LAKE.	CLEVE.	LAKE.	CLEVE.	LAKE.	CLEVE.	LAKE.	CLEVE.			LAKE.	CLEVE.	LAKE.	CLEVE.	LAKE.	CLEVE.	LAKE.	CLEVE.	LAKE.	CLEVE.									
80	STA. 11+966.37 TO STA. 11+972.47	LT.	6.10	6.1		6.1								6.1				6.1		0.6		3.4									
	STA. 11+972.47 TO STA. 11+989.48	LT.	17.01	17.0		17.0								17.0				17.0		1.7		9.5									
	STA. 11+989.48 TO STA. 11+992.02	LT.	2.54	2.5		2.5								2.5				2.5		0.3		1.4									
	STA. 11+992.02 TO WYANDOTTE AVE. NW	LT.	46.65	46.7		46.7								46.7				46.7		4.7		26.1									
	WYANDOTTE AVE. NE TO STA. 12+096.31	LT.	55.92	55.9		55.9								55.9				55.9		5.6		31.3									
	STA. 12+096.31 TO STA. 12+098.44	LT.	2.13	2.1		2.1								2.1				2.1		0.2		1.2									
80	STA. 12+098.44 TO ELBUR AVE	LT.	16.39	16.4		16.4								16.4				16.4		1.6		9.2									
81	ELBUR AVE. TO STA. 12+133.29	LT.	11.64	11.6		11.6								11.6				11.6		1.1		6.5									
	STA. 12+133.29 TO STA. 12+135.73	LT.	2.44	2.4		2.4								1.4••				2.4		0.2		1.4									
	STA. 12+135.73 TO STA. 12+186.34	LT.	50.53	50.5		50.5								5.5••				50.5		5.1		28.3									
	STA. 12+186.34 TO STA. 12+189.89	LT.	3.55	3.6		3.6								3.6				3.6		0.4		2.0									
	STA. 12+189.89 TO LEWIS ROAD	LT.	5.56	5.6		5.6								5.6				5.6		0.6		3.1									
	LEWIS ROAD TO STA. 12+274.64	LT.	64.76	64.8		64.8								64.8				64.8		6.5		36.3									
	STA. 12+274.64 TO STA. 12+277.05	LT.	2.41	2.4		2.4								2.4				2.4		0.2		1.3									
	STA. 12+277.05 TO CHESTERLAND AVE. NW	LT.	6.01	6.0		6.0								6.0				6.0		0.6		3.4									
81	STA. 12+304.00 TO STA. 12+310	LT.	6.00	6.0		6.0		3.6		7.2						6.0		6.0		0.6		3.4									
72	STA. 10+019.00 TO STA. 10+022.00	RT.	3.00	3.0		3.0								3.0				3.0		0.3		1.7									
72	STA. 10+106.22 TO STA. 10+139.16	RT.	32.94	32.9		32.9								32.9				32.9		3.3		18.4									
73	STA. 10+201.09 TO CARABEL AVENUE SW	RT.	45.33	45.3		45.3								45.3				45.3		4.5		25.4									
73	CARABEL AVENUE SE TO STA. 10+528.90	RT.	283.12	283.1		283.1								283.1				283.1		28.3		158.5									
74	STA. 10+528.90 TO STA. 10+577.09	RT.	48.19	48.2		48.2								48.2				48.2		4.8		27.0									
74	STA. 10+577.09 TO ARTHUR AVE. SW	RT.	12.92	12.9		12.9								12.9				12.9		1.3		7.2									
74	ARTHUR AVE. SE TO ALGER ROAD SW	RT.	356.95	357.0		357.0								357.0				357.0		35.7		199.9									
76	ALGER ROAD SE RETURN	RT.	12.00					12.0		6.0		12.0					12.0		12.0		1.2		6.7									
76	STA. 10+998 TO STA. 11+001.24	RT.	3.24					3.2		1.9		4.4					3.2		3.2		0.3		1.8									
76	STA. 11+001.24 TO STA. 11+179.20	RT.	177.96		178.0			178.0							178.0				178.0		17.8		99.4									
76	STA. 11+179.20 TO WARREN ROAD SW	RT.	26.07					26.1		13.1		26.1					26.1		26.1		2.6		14.6									
78	STA. 11+470.87 TO STA. 11+477.79	RT.	6.92		6.9			6.9							6.9				6.9		0.7		3.9									
79	STA. 11+639.13 TO STA. 11+662.06	RT.	22.93					22.9		11.5		22.9					22.9		22.9		2.3		12.8									
	STA. 11+662.06 TO RICHLAND AVE. SW	RT.	85.42		85.4			85.4							85.4				85.4		8.5		47.7									
	RICHLAND AVE. SE TO STA. 11+795.41	RT.	51.30		51.3			51.3							51.3				51.3		5.1		28.7									
	STA. 11+795.41 TO STA. 11+806.47	RT.	11.06		11.1			11.1							11.1				11.1		1.1		6.2									
	STA. 11+806.47 TO STA. 11+812.66	RT.	5.64		5.6			5.6							5.6				5.6		0.6		3.2									
	STA. 11+812.66 TO STA. 11+824.20	RT.	11.54		11.5			11.5							11.5				11.5		1.2		6.4									
	STA. 11+824.20 TO W. 140TH ST. SW	RT.	19.71					19.7		11.8		20.9					19.7		19.7		2.0		11.0									
79	W. 140TH ST. SE TO STA. 11+880.60	RT.	32.82					32.8		12.4		21.2					20.6••		32.8		3.3		18.3									
79	STA. 11+880.60 TO STA. 11+937.17	RT.	56.57		56.6			56.6							41.3••				56.6		5.7		31.6									
80	STA. 11+937.17 TO STA. 11+941.74	RT.	4.57		4.6			4.6							4.6				4.6		0.5		2.6									
	STA. 11+941.74 TO W. 139TH ST. SW	RT.	12.81		12.8			12.8							12.8				12.8		1.3		7.2									
	W. 139TH ST. SE TO W. 138TH ST. SW	RT.	88.92		88.9			88.9							88.9				88.9		8.9		49.8									
80	W. 138TH ST. SE TO W. 137TH ST. SW	RT.	83.73		83.7			83.7							37.7••				83.7		8.4		46.9									
81	W. 137TH ST. SE TO STA. 12+186.18	RT.	59.27		59.3			59.3							14.1••				59.3		5.9		33.2									
	STA. 12+186.18 TO STA. 12+190.25	RT.	4.07		4.1			4.1							3.3••				4.1		0.4		2.3									
	STA. 12+190.25 TO W. 136TH ST.	RT.	10.68		10.7			10.7							10.7				10.7		1.1		6.0									
	W. 136TH ST. TO STA. 12+274.78	RT.	72.15		72.2			72.2							72.2				72.2		7.2		40.4									
	STA. 12+274.78 TO STA. 12+277.52	RT.	2.74		2.7			2.7							2.7				2.7		0.3		1.5									
	STA. 12+277.52 TO JOSLYN ROAD SW	RT.	13.44		13.4			13.4							13.4				13.4		1.3		7.5									
	JOSLYN ROAD SE TO STA. 12+301.75	RT.	11.09		11.1			11.1		6.7		12.3					11.1		11.1		1.1		6.2									
	STA. 12+301.75 TO STA. 12+304.80	RT.	3.05		3.1			3.1									3.1		3.1		0.3		1.7									
81	STA. 12+304.80 TO STA. 12+310.00	RT.	5.20		5.2			5.2		3.1		6.4					5.2		5.2		0.5		2.9									
	TOTAL			1082.0	778.2	1052.0	894.9	3.6	66.5	7.2	126.2			1030.0	651.5	6.0	123.9	1082.0	894.9	108.2	89.6	305.9	500.5									

•• FOR QUANTITIES ASSOCIATED WITH BUS PADS SEE SHEET 93.

DESIGNED BY: JAN CHECKED BY:
DATE: 8/06/97 DATE:
DRAWN BY: MAL REVISED BY: MAL
DATE: 8/20/97 DATE: 10/1/98
CAD FILE NAME: HGSS0100(2)

CALCULATED JAN CHECKED LAS

ROADWAY SUBSUMMARY

CUY - LAKEWOOD HEIGHTS BOULEVARD

* AVERAGE WIDTH

ROADWAY SUBSUMMARY

SHEET No.	STATION TO STATION	SIDE	LENGTH	WIDTH (METER, FEDERAL)		AREA (SQ. METER, FEDERAL)		202 WEARING COURSE REMOVED (SQ. METER, FEDERAL)		407 TACK COAT (LITER, FEDERAL)		407 TACK COAT FOR INTERMEDIATE COURSE (LITER, FEDERAL)		448 45mm ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG 64-22, AS PER PLAN (CU. METER, FEDERAL)		448 32mm ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 64-22, AS PER PLAN (CU. METER, FEDERAL)	
				LAKE.	CLEVE.	LAKE.	CLEVE.	LAKE.	CLEVE.	LAKE.	CLEVE.	LAKE.	CLEVE.	LAKE.	CLEVE.	LAKE.	CLEVE.
72	STA. 10+004.0 TO STA. 10+014.0					108.0		108		36.72		36.72		4.86		3.46	
72	STA. 10+014.0 TO STA. 10+096.0		82	8.6		705.2		NO		239.77		239.77		31.73		22.57	
72-75	STA. 10+096.0 TO STA. 10+920.0		824	8.6		7086.4		7086		2409.38		2409.38		318.89		226.76	
76	STA. 10+920.0 TO STA 11+018.2					1042.0	404.0	1042	404	354.28	137.36	354.28	137.36	46.89	18.18	33.34	12.93
	INCLUDING ALGER ROAD RETURNS																
76	STA. 11+018.2 TO STA. 11+023.5		5.3	7.7*	6.1*	40.8	32.3	41	32	13.88	10.99	13.88	10.99	1.84	1.45	1.31	1.03
76	STA. 11+023.5 TO STA. 11+105.6		82.1	9.3	6.1	763.5	500.8	764	501	259.60	170.28	259.60	170.28	34.36	22.54	24.43	16.03
76	STA. 11+105.6 TO STA. 11+116.1		10.5	7.7*	6.1*	80.9	64.1	81	64	27.49	21.78	27.49	21.78	3.64	2.88	2.59	2.05
76-77	STA. 11+116.1 TO STA. 11+308.0		191.9	6.1	6.1	1170.6	1170.6	1171	1171	398.00	398.00	398.00	398.00	52.68	52.68	37.46	37.46
77	STA. 11+308.0 TO STA. 11+381.1		73.1	6.1*	7.62*	445.9	557.0	446	557	151.61	189.39	151.61	189.39	20.07	25.07	14.27	17.82
78	STA. 11+381.1 TO STA. 11+650.7		269.6	6.1	2.5	1644.6	674.0	1645	674	559.15	229.16	559.15	229.16	74.01	30.33	52.63	21.57
79	STA. 11+650.7 TO STA. 11+655.0		4.3	6.1*	4.3*	26.2	18.5	26	18	8.92	6.29	8.92	6.29	1.18	0.83	0.84	0.59
79	STA. 11+655.0 TO STA. 11+780.98		125.98	6.1	6.1	768.5	768.5	768	768	261.28	261.28	261.28	261.28	34.58	34.58	24.59	24.59
79-80	STA. 11+780.98 TO STA. 11+915.78		134.8	3.6*	6.9*	479.9	932.8	480	990	163.17	317.15	163.17	317.15	21.60	41.98	15.36	29.85
80-81	STA. 11+915.78 TO STA. 12+290.7		374.92	1.8*	8.9*	690.8	3350.3	691	3350	234.87	1139.10	234.87	1139.10	31.09	150.76	22.11	107.21
81	STA. 12+290.72 TO STA. 12+310.0		19.28	4	12.2	77.1	235.2	77	235	26.22	79.97	26.22	79.97	3.47	10.58	2.47	7.53
72	OLIVE AVE. CURB RETURN					73.0		73		24.82		24.82		3.29		2.34	
73	CARABEL AVE. CURB RETURN (N.)					101.0		101		34.34		34.34		4.55		3.23	
73	CARABEL AVE. CURB RETURN (S.)					165.0		165		56.10		56.10		7.43		5.28	
74	ARTHUR AVE. CURB RETURN (N.)					105.0		105		35.70		35.70		4.73		3.36	
74	ARTHUR AVE. CURB RETURN (S.)					118.0		118		40.12		40.12		5.31		3.78	
77	WARREN ROAD CURB RETURN (N.)					306.0		NO		104.0		104.0		13.8		9.8	
77	WARREN ROAD CURB RETURN (S.)					160.0		NO		54.4		54.4		7.2		5.1	
77	LINCOLN AVE. CURB RETURN					97.0		97.0		33.0		33.0		4.4		3.1	
78	ADELINE ST. CURB RETURN					90.0		90.0		30.6		30.6		4.1		2.9	
78	HILDA ST. CURB RETURN					89.0		89.0		30.3		30.3		4.0		2.8	
79	BROWN ROAD CURB RETURN					64.0		64.0		21.8		21.8		2.9		2.0	
	RICHLAND AVENUE CURB RETURN (N.)					66.0		66.0		22.4		22.4		3.0		2.1	
	RICHLAND AVENUE CURB RETURN (S.)						83.0		83.0		28.2		28.2		3.7		2.7
	BUNTS ROAD CURB RETURN					226.0		226.0		76.8		76.8		10.2		7.2	
79	W. 140TH STREET CURB RETURN						389.0		389.0		132.3		132.3		17.5		12.4
80	WASCANA AVE. CURB RETURN					86.0		86.0		29.2		29.2		3.9		2.8	
	W. 139TH STREET CURB RETURN						113.0		113.0		38.4		38.4		5.1		3.6
	WYANDOTTE AVE. CURB RETURN					93.0		93.0		31.6		31.6		4.2		3.0	
	W. 138TH STREET CURB RETURN						114.0		114.0		38.8		38.8		5.1		3.6
	ELBUR AVE. CURB RETURN					86.0		86.0		29.2		29.2		3.9		2.8	
80	W. 137TH STREET CURB RETURN						117.0		117.0		39.8		39.8		5.3		3.7
81	LEWIS ROAD CURB RETURN					105.0		105.0		35.7		35.7		4.7		3.4	
	W. 136TH STREET CURB RETURN						107.0		107.0		36.4		36.4		4.8		3.4
	CHESTERLAND AVE. CURB RETURN					109.0		109.0		37.1		37.1		4.9		3.5	
81	JOSLYN ROAD CURB RETURN						109.0		109.0		37.1		37.1		4.9		3.5
								TOTAL		16099	9796			5872	3312	5872	3312

														778	438	553	312

DESIGNED BY: JAN | CHECKED BY:
DATE: 8/05/97 | DATE:
DRAWN BY: MAL | REVISED BY: MAL
DATE: 8/05/97 | DATE: 6/11/98
CAD FILE NAME: H05S0101

CALCULATED JAN | CHECKED LAS

ROADWAY SUBSUMMARY

CITY - LAKEWOOD HEIGHTS BOULEVARD

ROADWAY SUBSUMMARY

SHEET No.	LOCATION: STATION TO STATION	SIDE	LENGTH	WIDTH METER FEDERAL LAKE.	WIDTH METER FEDERAL CLEVE.	AREA SQ. METER FEDERAL LAKE.	AREA SQ. METER FEDERAL CLEVE.	255 FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS MS, AS PER PLAN SQ. METER FEDERAL LAKE.	255 FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS MS, AS PER PLAN SQ. METER FEDERAL CLEVE.	255 FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS FS, AS PER PLAN SQ. METER FEDERAL LAKE.	255 FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS FS, AS PER PLAN SQ. METER FEDERAL CLEVE.	255 FULL DEPTH PAVEMENT SAWING METER FEDERAL LAKE.	255 FULL DEPTH PAVEMENT SAWING METER FEDERAL CLEVE.
72	STA. 10+074.43 TO STA.10+090.00	LT.	15.6			90.0		90.0				26.8	
72	STA. 10+106.22 TO STA. 10+139.16		32.9			284.0		284.0				17.2	
72	STA. 10+139.16 TO STA. 10+150.74	LT.	11.6			50.0		50.0				15.9	
72	STA. 10+176.62 TO STA. 10+200.40	LT.	23.8			98.0		98.0				32.4	
73	STA. 10+236.10 TO STA.10+241.10	LT.	5.0			11.0		11.0				14.5	
73	STA. 10+268.80 TO STA. 10+272.50	LT.	3.7			12.0		12.0				10.1	
74	STA. 10+463.27 TO STA. 10+466.93	LT.	3.7			10.0		10.0				8.9	
	STA. 10+482.51 TO STA. 10+485.55	LT.	3.0			17.0		17.0				14.0	
	STA. 10+495.06 TO STA. 10+518.03	LT.	23.0			47.0		47.0				30.9	
	STA. 10+528.90 TO STA. 10+577.09	LT.	48.2			415.0		415.0				17.2	
	STA. 10+606.90 TO STA. 10+611.78	LT.	4.9			15.0		15.0				10.9	
	STA. 10+648.59 TO STA. 10+655.91	LT.	7.3			21.0		21.0				12.8	
74	STA. 10+667.21 TO STA. 10+677.56	LT.	10.4			58.0		58.0				21.4	
75	STA. 10+883.84 TO STA. 10+889.39	LT.	5.6			27.0		27.0				14.8	
76	N.E. CORNER AT ALGER & LAKEWOOD HGTS. BLVD.					40.0		40.0				17.6	
76	STA. 10+967.35 TO STA. 10+970.24	LT.	2.9			4.0		4.0				5.0	
77	INTERSECTION OF WARREN RD. & LAKEWOOD HGTS. BLVD					430.5	442.1			430.5	442.1	50.8	36.5
78	STA. 11+474.44 TO STA. 11+478.18	RT.	3.8				4.5		4.5				6.2
79	STA. 11+639.13 TO STA. 10+659.05	RT.	19.9				105.0		105.0			23.4	8.5
79	STA. 11+659.05 TO STA. 11+795.41	RT.	136.4				322.0		322.0				141.0
79	STA. 11+806.47 TO STA. 11+812.66	RT.	6.2				15.0		15.0				11.2
79	STA. 11+819.49 TO STA. 11+822.97	LT.	3.5			7.0		7.0					7.5
80	STA. 11+934.16 TO STA. 11+941.75	LT.	7.6			13.0		13.0				10.6	
	STA. 11+937.17 TO STA. 11+941.74	RT.	4.6				7.0		7.0				7.6
	STA. 11+966.37 TO STA. 11+972.47	LT.	6.1			11.0		11.0				9.1	
	STA. 11+989.48 TO STA. 11+992.02	LT.	2.5			4.0		4.0				5.0	
	STA. 12+026.22 TO STA. 12+031.27	RT.	5.4				7.5		7.5				8.7
	STA. 12+045.12 TO STA. 12+052.10	RT.	7.0				8.8		8.8				10.3
	STA. 12+096.31 TO STA. 12+098.44	LT.	2.1			4.0		4.0				5.5	
80	STA. 12+108.12 TO STA. 12+113.00	RT.	4.9				6.4		6.4				8.1
81	STA. 12+125.43 TO STA. 12+130.61	RT.	5.2				7.1		7.1				8.7
	STA. 12+133.29 TO STA. 12+134.70	LT.	1.4			3.0		3.0				3.5	
	STA. 12+187 TO STA. 12+190.25	RT.	3.3				5.0		5.0				4.9
	STA. 12+186.34 TO STA. 12+189.89	LT.	3.6			6.0		6.0				6.6	
	STA. 12+208.51 TO STA. 12+214.27	RT.	5.8				7.6		7.6				9.1
	STA. 12+274.64 TO STA. 12+277.05	LT.	2.4			5.0		5.0				6.7	
	STA. 12+274.78 TO STA. 12+277.52	RT.	2.7				5.0		5.0				6.7
81	STA. 12+301.75 TO STA. 12+304.80	RT.	3.1				6.0		6.0				7.5
	TOTAL							1252	508	431	442	391	283

DESIGNED BY: JAN | CHECKED BY:
DATE: 8/06/97 | DATE:
DRAWN BY: MAL | REVIEED BY: MAL
DATE: 8/06/97 | DATE: 6/11/98
CAD FILE NAME: HGSS0102

CALCULATED JAN
CHECKED LAS

ROADWAY SUBSUMMARY

CUY - LAKEWOOD HEIGHTS BOULEVARD

ROADWAY SUBSUMMARY

SHEET No.	LOCATION STATION TO STATION	SIDE	LENGTH	WIDTH		AREA		202 PAVEMENT REMOVED, AS PER PLAN (INCLUDES INTERGRAL CURB AND MEDIAN)		202 APPROACH SLAB REMOVED, AS PER PLAN (INCLUDES INTERGRAL CURB AND MEDIAN)		203 SUBGRADE COMPACTION		304 150mm AGGREGATE BASE, AS PER PLAN		451 250mm REINFORCED CONCRETE PAVEMENT, AS PER PLAN		609 CURB, TYPE 2-A		611 REINFORCED CONCRETE APPROACH SLAB, AS PER PLAN (T = 380 mm)		612 CONCRETE MEDIAN, AS PER PLAN		SPECIAL PRESSURE RELIEF JOINT, TYPE B	
				METER		SQ. METER		SQ. METER		SQ. METER		SQ. METER		CU. METER		SQ. METER		METERS		SQ. METERS		METER		METER	
				FEDERAL		FEDERAL		FEDERAL		FEDERAL		FEDERAL		FEDERAL		FEDERAL		FEDERAL		FEDERAL		FEDERAL		FEDERAL	
				LAKE.	CLEVE.	LAKE.	CLEVE.	LAKE.	CLEVE.	LAKE.	CLEVE.	LAKE.	CLEVE.	LAKE.	CLEVE.	LAKE.	CLEVE.	LAKE.	CLEVE.	LAKE.	CLEVE.	LAKE.	CLEVE.	LAKE.	CLEVE.
72	STA. 12+310.00 TO STA. 12+382.02	LT./RT.	72.0	4.4	12.5	319.4	900.6	319.4	900.6			391.4	972.6	51.2	138.4	341.3	922.5	72.0	72.0						
73	STA. 12+382.02 TO STA. 12+475.40	LT./RT.	93.4	4.9	12.8	454.8	1196.2	454.8	1196.2			548.1	1289.6	72.5	183.7	483.1	1224.6	93.4	93.4				39.7		
73	STA. 12+475.40 TO STA. 12+509.61	LT./RT.	34.2	11.3	6.4	385.7	219.1	385.7	219.1			419.9	253.3	59.4	34.4	396.1	75.6	34.2	34.2			34.2			
73	STA. 12+509.61 TO STA. 12+567.25	LT./RT.	57.6	17.7		1019.1	0.0	1019.1				1076.7		155.5		1036.6		57.6				57.6			
74	STA. 12+657.39 TO STA. 12+707.45	LT./RT.	50.1	17.7		885.1		885.1				935.1		135.0		900.3		100.1				50.1			
75	STA. 12+768.29 TO STA. 12+912.95	LT./RT.	144.7		17.7		2557.6		2557.6				2702.2		390.2		2601.6		289.3				144.7		
76	STA. 12+912.95 TO STA 12+937.00	LT./RT.					582.0		582.0				582.0		87.3		582.0						16.5		
	BEREA ROAD CURB RETURN																								
72	RTA ENTRANCE CURB RETURN	LT./RT.					66.0		66.0				66.0		9.9		9.9								
73	ALLEY CURB RETURN	LT./RT.					34.0		34.0				34.0		5.1		5.1								
73	WATERBURY ROAD CURB RETURN	LT./RT.				127.0		127.0				127.0		19.1		19.1									
	APPROACH SLABS																								
73	STA. 12+567.25 TO STA. 12+574.85	LT./RT.	7.6	17.7		134.4				134.4		142.0		20.5				15.2		136.6		7.6			
74	STA. 12+649.79 TO STA. 12+657.39	LT./RT.	7.6	17.7		134.4				134.4		142.0		20.5				15.2		136.6		7.6			
74	STA. 12+707.45 TO STA. 12+715.05	LT./RT.	7.6	17.7		134.4				134.4		142.0		20.5				15.2		136.6		7.6			
75	STA. 12+760.69 TO STA. 12+768.29	LT./RT.	7.6		17.7		134.4				134.4		142.0		20.5				15.2		136.6		7.6		
73	STA. 12+559.162	LT./RT.																							18
74	STA. 12+664.572	LT./RT.																							18
74	STA. 12+700.177	LT./RT.																							18
75	STA. 12+776.555	LT./RT.																							18
	TOTAL							3191	5556	404	135	3924	6042	554	870	3177	5421	403	504	410	137	165	208	54	18

DESIGNED BY: JAN | CHECKED BY:
DATE: | DATE:
DRAWN BY: MAL | REVISED BY: MAL
DATE: 8/06/97 | DATE: 6/09/98
CAD FILE NAME: HGS0103

CALCULATED JAN | CHECKED LAS

ROADWAY SUBSUMMARY

CUY - LAKEWOOD HEIGHTS BOULEVARD

ROADWAY SUBSUMMARY

LOCATION				202				608			
SHEET No.	STATION TO STATION		SIDE	WALK REMOVED				114mm CONCRETE WALK, AS PER PLAN			
				SQ. METER				SQ. METER			
				FEDERAL				FEDERAL			
	FROM	TO		LAKE.	CLEVE.			LAKE.	CLEVE.		
72	10+048	10+055	LT.	12.86				12.86			
	10+107.5	10+110.5	LT.	5.93				5.93			
	10+132	10+135	LT.	5.87				5.87			
	10+142	10+143.8	LT.	2.95				2.95			
	10+183.5	10+188.7	LT.	8.28				8.28			
72	10+191.5	10+193.0	LT.	2.36				2.36			
73	10+203.5	10+205.8	LT.	3.49				3.49			
	10+213.11	10+219.01	RT.	7.88				7.88			
	10+224.5	10+232.3	RT.	10.55				10.55			
	10+260	10+292.8	RT.	58.01				58.01			
	10+276	10+278	LT.	3.02				3.02			
	10+286.3	10+291.1	LT.	8.40				8.40			
	10+296.1	10+301.9	LT.	10.76				10.76			
	10+310.5	10+313.9	LT.	5.87				5.87			
	10+324.17	10+326.9	RT.	4.49				4.49			
	10+324.3	10+333.7	LT.	16.18				16.18			
	10+336.63	10+340.3	LT.	6.08				6.08			
	10+350.32	10+353.3	LT.	5.14				5.14			
	10+362.53	10+371.9	LT.	16.86				16.86			
	10+369.92	10+371.12	RT.	1.88				1.88			
	10+374.12	10+383.1	RT.	15.38				15.38			
	10+374.9	10+380.8	LT.	10.84				10.84			
	10+386.03	10+386.53	RT.	0.56				0.56			
	10+390.06	10+391.56	LT.	2.69				2.69			
	10+398.26	10+408.18	RT.	16.04				16.04			
73	10+411.53	10+416.33	LT.	7.42				7.42			
74	10+451.05	10+454.0	LT.	5.38				5.38			
	10+455.2	10+458.47	RT.	5.39				5.39			
	10+461.4	10+466.2	LT.	8.62				8.62			
	10+461.47	10+467.47	RT.	9.73				9.73			
	10+478.4	10+481.4	LT.	5.75				5.75			
	10+484.24	10+485.74	RT.	2.51				2.51			
	10+488.74	10+490.24	RT.	2.17				2.17			
	10+492.18	10+493.68	LT.	2.81				2.81			
	10+496.38	10+496.38	RT.	5.03				5.03			
	10+502.76	10+504.26	LT.	2.57				2.57			
	10+521.02	10+522.5	LT.	2.81				2.81			
	10+523.72	10+526.52	RT.	4.58				4.58			
	10+542.4	10+544.2	RT.	1.80				1.80			
	10+546.87	10+554.37	RT.	11.99				11.99			
	10+566.2	10+568.3	LT.	3.37				3.37			
	10+647.97	10+658.43	RT.	18.03				18.03			
	10+655.6	10+658.8	LT.	5.60				5.60			
	10+661.8	10+665	LT.	5.95				5.95			
74	10+675.42	10+681.2	RT.	7.33				7.33			
SUBTOTAL				362				362			

LOCATION				202				608			
SHEET No.	STATION TO STATION		SIDE	WALK REMOVED				114mm CONCRETE WALK, AS PER PLAN			
				SQ. METER				SQ. METER			
				FEDERAL				FEDERAL			
	FROM	TO		LAKE.	CLEVE.			LAKE.	CLEVE.		
75	10+691.83	10+693.33	RT.	2.65				2.65			
	10+692.1	10+699.7	LT.	13.45				13.45			
	10+698.03	10+699.83	RT.	2.70				2.70			
	10+705.73	10+707.23	RT.	2.52				2.52			
	10+720.97	10+725.87	LT.	8.43				8.43			
	10+728.87	10+729.9	LT.	1.71				1.71			
	10+755.9	10+758.8	LT.	5.08				5.08			
	10+753.41	10+765.31	LT.	3.24				3.24			
	10+779.25	10+788.34	RT.	14.90				14.90			
	10+780.01	10+781.51	LT.	2.59				2.59			
	10+792.1	10+795.9	LT.	6.28				6.28			
	10+807.8	10+809.4	LT.	2.78				2.78			
	10+820.5	10+824.66	RT.	7.07				7.07			
	10+840.91	10+844.41	LT.	6.37				6.37			
	10+858.3	10+859.8	RT.	2.73				2.73			
	10+858.79	10+860.89	LT.	3.77				3.77			
	10+869.13	10+873.63	LT.	8.31				8.31			
	10+876.63	10+878.43	LT.	3.04				3.04			
	10+886.37	10+890.17	LT.	4.78				4.78			
	10+899.1	10+901.1	LT.	3.62				3.62			
	10+904.1	10+906.9	LT.	4.86				4.86			
75	10+918.0	10+922.3	LT.	7.14				7.14			
76	10+923.4	10+926.1	LT.	2.92				2.92			
	10+926.5	1+018.1 ALGER	LT.	12.66				17.19			
	10+936.4	10+940.1	RT.	9.69				9.69			
	10+968.5	10+970.4	LT.	2.86				2.86			
	10+975.8	10+983.61	LT.	13.03				13.03			
76	11+148.2	11+152.2	LT.	9.02				9.02			
77	11+386.5	11+388.4	LT.	7.48							
78	11+403.3	11+404.5	LT.	6.80							
	11+436.34	11+439.94	LT.	4.88				4.88			
	11+472.8	11+482.1	LT.	13.36				13.36			
	11+486.7	11+489	LT.	4.93							
	11+497	11+500.1	LT.	4.56							
	11+536.2	11+544.23	LT.	11.42				11.42			
	11+547.23	11+550.2	LT.	4.34				4.34			
	11+561.2	11+562.7	LT.	2.22				2.22			
	11+572	11+574.1	LT.	4.48							
78	11+581.8	11+582.3	LT.	3.43							
79	11+678.15	11+679.59	LT.	2.22				2.22			
	11+689.39	11+690.93	LT.	2.10				2.10			
	11+696.2	11+710.6	RT.		22.74				22.74		
	11+723.52	11+726.82	LT.	4.19				4.19			
	11+731.32	11+737.42	LT.	7.46				7.46			
79	11+751.2	11+759.2	RT.		10.33				10.33		
SUBTOTAL				253	33			225	33		
SUBTOTAL (FROM COLUMNS AT LEFT)				362				362			
TOTAL				615	33			587	33		

DESIGNED BY: JAN | CHECKED BY:
DATE: 8/26/97 | DATE:
DRAWN BY: MAL | REVISED BY: MAL
DATE: 8/26/97 | DATE: 10/1/98
CAD FILE NAME: H05S0105(1)

CALCULATED JAN
CHECKED LAS

ROADWAY SUBSUMMARY

CUY - LAKEWOOD HEIGHTS BOULEVARD

ROADWAY SUBSUMMARY

LOCATION				202				608											
SHEET No.	STATION TO STATION		SIDE	WALK REMOVED				114mm CONCRETE WALK, AS PER PLAN											
				SQ. METER				SQ. METER											
				FEDERAL				FEDERAL											
	FROM	TO		LAKE.	CLEVE.			LAKE.	CLEVE.										
79	11+789.1	11+803.2	RT.		20.04				20.04										
	11+798.6	11+809.9	LT.	15.65				15.65											
	11+813.2	11+818.0	LT.	7.54				7.54											
	11+837.1	11+845.9	LT.	16.79				16.79											
79	11+860.3	11+863.7	RT.		6.12				7.95										
80	11+880.2	11+881.7	RT.		2.77				2.77										
	11+901.5	11+909.1	RT.		13.53				13.53										
	11+906.51	11+911.21	LT.																
	11+925.1	11+926.3	RT.		2.53				2.53										
	11+931.1	11+933.1	RT.		3.42				3.42										
	11+945.6	11+948.5	RT.		6.78				6.78										
	11+957.5	11+960.2	RT.		7.65				7.65										
	11+969.5	11+971.2	RT.		2.46				2.46										
	11+975.61	11+984.11	RT.		14.40				14.40										
	12+019.2	12+033.9	LT.	24.23				30.17											
	12+044.8	12+047.2	LT.	10.47				16.99											
	12+051.5	12+053.3	LT.	2.17				2.17											
	12+079.1	12+080.7	LT.	2.46				2.46											
	12+095.79	12+099.29	LT.	5.07				5.07											
80	12+102.29	12+109.09	LT.	8.17				8.17											
81	12+124.2	12+130.9	RT.		40.78				40.78										
	12+125.3	12+127.9	LT.	11.28				14.97											
	12+139.9	12+181.4	RT.		270.67				270.67										
	12+178.4	12+181.5	LT.	4.24				4.24											
	12+187.8	12+197.3	RT.		48.61				48.61										
	12+225.5	12+240.0	RT.		92.02				92.02										
	12+254.7	12+286.5	RT.		197.22				197.22										
	12+300.7	12+320.5	RT.		46.04				46.04										
	12+320	12+326.8	LT.	8.66				8.66											
	12+335.2	12+344.5	RT.		16.98				16.98										
81	12+342.8	12+344.6	LT.	4.51				4.51											
82	12+362.9	12+374.9	RT.		35.45				35.45										
	12+380.5	12+382.4	RT.		2.87				2.87										
	12+389.0	12+392.9	RT.		9.07				9.07										
	12+414.2	12+417.1	RT.		4.23				4.23										
	12+433.8	12+438.5	RT		5.81				5.81										
	12+455.7	12+457.1	RT.		1.67				1.67										
	12+527.8	12+529.3	LT.	1.76				1.76											
	12+374.0	12+376.8	LT.	8.45				8.38											
	12+535.0	12+571.2	RT.	39.29				45.38											
82	12+577.0	12+579.6	LT.	4.3				4.28											
83	12+645.5	12+712.2	RT.	87.4				76.0											
83	12+653.1	12+718.1	LT.	93.8				82.4											
84	12+757.1	12+792.0	LT		50.23				50.40										
84	12+764.5	12+790.9	RT.		48.62				48.29										
	SUBTOTAL			355	950			356	952										

LOCATION				202	608														
SHEET No.	STATION TO STATION		SIDE	WALK REMOVED	114mm CONCRETE WALK, AS PER PLAN			CURB RAMP, TYPE 1		CURB RAMP, TYPE 2		CITY OF CLEVELAND CURB RAMP, TYPE 1		CITY OF CLEVELAND CURB RAMP, TYPE 2					
				SQ. METER	SQ. METER			EACH		EACH		EACH		EACH					
				FEDERAL	FEDERAL			FEDERAL		FEDERAL		FEDERAL		FEDERAL					
	FROM	TO		LAKE.	LAKE.	CLEVE.		LAKE.		LAKE.			CLEVE.		CLEVE.				
76	10+930.98		LT.					1											
76	10+938.25		RT.							1									
79	11+755.2		RT.										1						
79	11+841.5		LT.					1											
79	11+862		RT.										1						
80	11+947.05		RT.												1				
80	11+958.85		RT.												1				
80	12+031		LT.					1											
80	12+046		LT.					1											
81	12+126		LT.					1											
81	12+126		RT.										1						
81	12+197.5		RT.										1						
81	12+286.6		RT.										1						
81	12+340.5		LT./RT.		2.11					1			1						
82	12+364		RT.										1						
82	12+373		RT.										1						
82	12+376		LT.					1											
82	12+381		RT.										1						
82	12+390.9		RT.										1						
82	12+395.2		LT.					1											
82	12+416.3		RT.										1						
82	12+434.1		RT.										1						
	SUBTOTAL				2			7		2			12		2				
	SUBTOTAL (FROM COLUMNS AT LEFT)			355	950	356	952												
	TOTAL			355	950	358	952	7		2			12		2				

DESIGNED BY: JAN
DATE: 8/28/97
DRAWN BY: MAL
DATE: 9/06/97
CAD FILE NAME: HGSS0105(2)

CHECKED BY: MAL
DATE: REVISED BY: 10/1/98
DATE:

CALCULATED JAN
CHECKED LAS

ROADWAY SUBSUMMARY

CUY - LAKEWOOD HEIGHTS BOULEVARD

ROADWAY SUBSUMMARY

LOCATION					202		202		604		604	
SHEET No.	REF. No.	STATION	OFFSET	SIDE	REMOVAL MISC., LANDSCAPE		REMOVAL MISC., POSTS		CUYAHOGA COUNTY ROADWAY MONUMENT BOX		CUYAHOGA COUNTY ROADWAY MONUMENT ASSEMBLY	
					LUMP		EACH		EACH		EACH	
					FEDERAL		FEDERAL		FEDERAL		FEDERAL	
					LAKE.	CLEVE.	LAKE.	CLEVE.	LAKE.	CLEVE.	LAKE.	CLEVE.
72	M-1	10+076.28									1	
72	M-2	10+166.64	9.09	LT.					1			
72	M-3	10+190.77									1	
73	M-4	10+250.73							1			
73	M-5	10+298.04							1			
74	M-6	10+588.98	9.11	LT.					1			
75	M-7	10+818.00							1			
76	M-8	10+983.75							1			
77	M-9	11+212.77									1	
77	M-10	11+395.63	9.14	LT.					1			
78	M-11	11+449.08							1			
78	M-12	11+492.87	13.12	LT.					1			
78	M-13	11+578.33	13.2	LT.					1			
79	M-14	11+649.9									1	
79	M-15	11+750.05	9.15	LT.					1			
79	M-16	11+780.98							1			
79	M-17	11+796.57	0.02	LT.					1			
79	M-18	11+853.42							1			
80	M-19	11+915.776								1		
80	M-20	11+915.82							1			
80	M-21	11+952.97	13.12	RT.						1		
80	M-22	12+119.56	13.21	RT.						1		
81	M-23	12+143.07	3.94	LT.						1		
81	M-24	1+013.07 LEWIS							1			
82	M-25	12+475.5	4.00	LT.							1	
81	M-26	12+290.99	13.17	LT.					1			
82	M-27	12+377.39	13.03	RT.								1
82	M-28	12+382.33	13.12	LT.							1	
84	M-29	12+780.83										1
85	M-30	12+933.31	0.02	LT.								1
81	M-31	12+290.38	12.96	RT.						1		
76	M-32	10+944.66							1			
73	M-33	10+240.20									1	
78	M-34	10+928.85									1	
80	M-35	1+013.16 WYANDOTTE							1			
81	M-36	0+986.843 W. 136TH								1		
83	M-37	12+695.79									1	
82	M-38	12+467.19										1
75	R-1	10+991		LT.			4					
76	R-2	11+010		LT.			4					
80	R-3	11+960		RT.				2				
82	R-4	12+409.67		LT.	1							
TOTAL					1		8	2	19	6	9	4

LOCATION			202	606						626	
SHEET No.	STATION TO STATION	SIDE	GUARDRAIL REMOVED	GUARDRAIL TYPE 5		ANCHOR ASSEMBLY, TYPE A		ANCHOR ASSEMBLY, TYPE T		BRIDGE TERMINAL ASSEMBLY, TYPE 2, AS PER PLAN		BRIDGE TERMINAL ASSEMBLY, TYPE i, AS PER PLAN		BARRIER REFLECTOR, TYPE A	
			METER	METER		EACH		EACH		EACH		EACH		EACH	
			FEDERAL	FEDERAL		FEDERAL		FEDERAL		FEDERAL		FEDERAL		FEDERAL	
			LAKE.	LAKE.	CLEVE.	LAKE.	CLEVE.	LAKE.	CLEVE.	LAKE.	CLEVE.	LAKE.	CLEVE.	LAKE.	CLEVE.
72	STA. 10+156.9 TO STA. 10+183.3	RT.	26.7	11.43		2									
76	STA. 0+945 ALGER RD. RT. TO STA. 11+202 (WARREN RD.)*	RT.			255.3		247.65				2				9
77	STA. 11+228.1 (WARREN RD.) TO STA. 11+314.3**	RT.			91.4		80.01		1		1				3
82	STA. 12+467.6 TO STA. 12+578.92	LT.	114.3	110.49				1		1					
82	STA. 12+480.4 TO STA. 12+570.16	RT.	49.2	49.20	30.81		1					1			
83	STA. 12+645.8 TO STA. 12+711.2	RT.	57.5	60.96						1		1			
83	STA. 12+654.0 TO STA. 12+717.5	LT.	62.5	68.58						1		1			
84	STA. 12+765.6 TO STA. 12+824.9	RT.			46.9		45.72				1				
84	STA. 12+757.4 TO STA. 12+845.3	LT.			84.9		95.25		1				1		
	* CONNECT GUARDRAIL PRIOR TO BRIDGE TERMINAL ASSEMBLIES, EXISTING BRIDGE TERMINAL ASSEMBLIES TO REMAIN														
	** CONNECT GUARDRAIL PRIOR TO BRIDGE TERMINAL ASSEMBLIES AT WARREN ROAD, EXISTING BRIDGE TERMINAL ASSEMBLIES TO REMAIN														
TOTAL			310.2	516.9	300.66	499.44	2	3	1	4	3	1	3	1	12

DESIGNED BY: JAN
DATE: 8/06/97
DRAWN BY: MAL
DATE: 8/06/97
CAD FILE NAME: HSS0106
CHECKED BY:
DATE:
REVISED BY: MAL
DATE: 6/19/98

CALCULATED JAN
CHECKED LAS

ROADWAY SUBSUMMARY

CITY - LAKEWOOD HEIGHTS BOULEVARD

ROADWAY SUBSUMMARY

LOCATION					638		638									
SHEET No.	REF. No.	STATION	OFFSET	SIDE	VALVE BOX ADJUSTED TO GRADE		SERVICE BOX ADJUSTED TO GRADE									
					EACH		EACH									
					FEDERAL		FEDERAL									
					LAKE.	CLEVE.	LAKE.	CLEVE.								
72	W-1	10+030.8	2.3	LT.	1											
72	W-2	10+164	3.7	LT.	1											
72	W-3	10+163.8	8.8	LT.	1											
73	W-4	10+248.2	4.6	LT.	1											
73	W-5	10+244.2	9.7	RT.	1											
73	W-6	10+261.3	2.3	LT.	1											
73	W-7	10+265.2	2.8	LT.	1											
73	W-8	10+368.2	3.6	LT.	1											
74	W-9	10+483	3.3	LT.	1											
74	W-10	10+578.5	2.4	LT.	1											
74	W-11	10+591.7	9.0	LT.	1											
74	W-12	10+586.5	9.1	RT.	1											
74	W-13	10+591.7	9.5	RT.	1											
74	W-14	10+599.1	2.3	LT.	1											
75	W-15	10+762.1	3.1	LT.	1											
75	W-16	10+858.1	4.2	LT.	1											
76	W-17	10+936.3	2.6	LT.	1											
76	W-18	1+010.5 ALGER	2.5	RT.	1											
76	W-19	1+017.7 ALGER	3.6	RT.	1											
76	W-20	10+953.9	3.7	LT.	1											
76	W-21	10+960.9	5.0	LT.	1											
76	W-22	11+035.6	3.2	LT.	1											
76	W-23	11+135.3	3.4	LT.	1											
77	W-24	11+179.9	2.9	LT.	1											
77	W-25	11+199	3.5	LT.	1											
77	W-26	11+206.1	1.5	LT.	1			1								
77	W-27	11+207	3.3	RT.		1										
77	W-28	11+205	8.4	LT.	1											
77	W-29	11+218.2	2.0	RT.		1										
77	W-30	11+217.3	5.2	LT.	1											
77	W-31	11+393.1	9.3	LT.	1											
78	W-32	11+452.2	9.1	LT.	1											
78	W-33	1+013 ADELINE	2.4	LT.	1											
79	W-34	11+648.1	10.6	LT.	1											
79	W-35	11+660	6.3	LT.	1											
79	W-36	11+758	6.0	LT.	1											
79	W-37	11+844.5	5.3	LT.	1											
79	W-38	11+852.1	9.0	LT.	1											
79	W-39	11+860.5	13.2	LT.	1											
79	W-40	11+866.1	9.1	LT.	1											
79	W-41	11+840.6	6.6	RT.		1										
79	W-42	11+847.2	8.8	RT.		1										
79	W-43	11+861.7	9.8	RT.		1										
80	W-44	11+950.6	13.1	RT.		1										
		SUBTOTAL			39	8	1									

LOCATION					638		638									
SHEET No.	REF. No.	STATION	OFFSET	SIDE	VALVE BOX ADJUSTED TO GRADE		SERVICE BOX ADJUSTED TO GRADE									
					EACH		EACH									
					FEDERAL		FEDERAL									
					LAKE.	CLEVE.	LAKE.	CLEVE.								
80	W-45	12+025.8	10.0	LT.	1											
80	W-46	1+012.8 WYANDOTTE	2.7	LT.	1											
80	W-47	12+107.9	10.0	LT.	1											
81	W-48	12+156.0	10.5	RT.		1		1								
81	W-49	12+173.5	10.7	RT.		1										
81	W-50	12+180	9.0	RT.		1										
81	W-51	12+180.7	10.9	RT.		1										
81	W-52	1+012.93 LEWIS	2.4	LT.	1											
81	W-53	0+986.8 W.136	2.5	LT.		1										
81	W-54	12+215.8	10.9	RT.		1										
81	W-55	12+231.1	10.3	RT.		1										
81	W-56	12+233.6	10.7	RT.		1										
81	W-57	12+261	10.6	RT.		1										
81	W-58	12+268.5	9.0	RT.		1										
81	W-59	12+270.2	10.7	RT.		1										
81	W-60	0+987 JOSLYN	2.2	LT.		1										
81	W-61	1+013 CHESTERLAND	2.5	LT.	1											
81	W-62	12+314.8	10.7	RT.		1										
81	W-63	12+345.5	9.4	RT.		1										
81	W-64	12+355.4	11.1	RT.		1										
82	W-65	12+375.2	9.2	LT.	1											
82	W-66	12+379.9	13.1	LT.	1											
82	W-67	12+389	11.4	RT.				1								
77	W-68	11+230.3	5.9	LT.			1									
77	W-69	11+219.8	11.3	LT.			1									
77	W-70	11+772.2	7.1	RT.		1										
74	W-71	10+670	3.3	LT.	1											
		SUBTOTAL			8	16	2	2								
		SUBTOTAL (FROM COLUMNS AT LEFT)			38	6	1									
		TOTAL			46	22	3	2								

DESIGNED BY: JAN
DATE: 8/06/97
DRAWN BY: MAL
DATE: 8/08/97
CAD File NAME: 14SS005S

CHECKED BY:
DATE:
REVISED BY: MAL
DATE: 6/11/98

CALCULATED JAN
CHECKED LAS

ROADWAY SUBSUMMARY

CUY - LAKEWOOD HEIGHTS BOULEVARD

65A
162

DRAINAGE SUBSUMMARY

LOCATION					604							
SHEET No.	REF. No.	STATION	OFFSET	SIDE	CATCH BASIN, CUYAHOGA COUNTY No. 3C		CATCH BASIN, CUYAHOGA COUNTY TWN 3C		CATCH BASIN, CITY OF CLEVELAND No. 1		MANHOLE ADJUSTED TO GRADE, AS PER PLAN	
					EACH		EACH		EACH		EACH	
					FEDERAL		FEDERAL		FEDERAL		FEDERAL	
					LAKE.	CLEVE.	LAKE.	CLEVE.	LAKE.	CLEVE.	LAKE.	CLEVE.
72	D-1	10+038.88	2.8	RT.							1	
	D-2	10+051.93	4.29	LT.			1					
	D-3	10+052.55	4.23	RT.	1							
	D-4	10+086.19	4.25	LT.	1							
	D-5	10+090.81	0.02	RT.							1	
	D-6	10+102.19	4.24	RT.	1							
	D-7	10+166.73	0.02	LT.							1	
	D-8	10+176.28	4.26	LT.	1							
72	D-9	10+177.77	4.29	RT.	1							
73	D-10	10+206.44	0.05	LT.							1	
	D-11	10+239.82	2.63	LT.							1	
	D-12	10+239.85	9.23	RT.	1							
	D-13	10+247.93	4.33	RT.							1	
	D-14	10+249.58	0.96	LT.							1	
	D-15	10+255.96	4.6	RT.							1	
	D-16	10+256.45	5.93	RT.			1					
	D-17	10+262.94	1.45	RT.							1	
	D-18	10+264.25	4.21	RT.							1	
	D-19	10+268.04	4.49	LT.	1							
	D-20	10+264.43	5.47	RT.	1							
	D-21	10+406.25	0	LT.							1	
	D-22	10+406.94	4.26	LT.	1							
73	D-23	10+406.98	4.26	RT.	1							
74	D-24	10+497.43	0.05	RT.							1	
	D-25	10+498.21	4.3	LT.	1							
	D-26	10+498.34	4.31	RT.	1							
	D-27	10+579.15	5.14	LT.	1							
	D-28	10+584.58	14.2	RT.	1							
	D-29	10+588.79	0.07	RT.							1	
	D-30	10+593.17	14.13	RT.	1							
	D-31	10+603.86	4.26	LT.	1							
74	D-32	10+603.94	4.33	RT.	1							
75	D-33	10+680.22	0.35	RT.							1	
	D-34	10+683.72	4.23	LT.	1							
	D-35	10+683.94	4.32	RT.	1							
	D-36	10+771.48	0.56	RT.							1	
	D-37	10+774.99	4.27	RT.	1							
	D-38	10+774.80	4.27	LT.	1							
	D-39	10+855.89	0.05	RT.							1	
	D-40	10+857.46	4.36	RT.	1							
75	D-41	10+857.08	4.31	LT.	1							
76	D-42	10+936.94	0.27	LT.							1	
	D-43	10+949.93	4.37	LT.							1	
	D-44	10+951.91	7.92	LT.	1							
76	D-45	10+973.78	8.00	RT.							1	
SUBTOTAL					24		2				1	18

LOCATION					604							
SHEET No.	REF. No.	STATION	OFFSET	SIDE	CATCH BASIN, No. 6		CATCH BASIN, CUYAHOGA COUNTY No. 3C		CATCH BASIN, CUYAHOGA COUNTY TWIN 3C		CATCH BASIN, CITY OF CLEVELAND No. 1		MANHOLE ADJUSTED TO GRADE, AS PER PLAN	
					EACH		EACH		EACH		EACH		EACH	
					FEDERAL		FEDERAL		FEDERAL		FEDERAL		FEDERAL	
					LAKE.	CLEVE.	LAKE.	CLEVE.	LAKE.	CLEVE.	LAKE.	CLEVE.	LAKE.	CLEVE.
76	D-46	10+976.97	1.39	RT.										1
	D-47	10+978.97	7.43	LT.			1							
	D-48	11+024.33	9.31	LT.			1							
	D-49	11+066.95	0.13	LT.									1	
	D-50	11+068.44	9.35	LT.			1							
76	D-51	11+068.31	6.11	RT.								1		
77	D-52	11+166.51	0.05	LT.									1	
	D-53	11+167.94	6.07	LT.			1							
	D-54	11+167.53	6.17	RT.								1		
	D-55	11+199.98	6.08	RT.								1		
	D-56	11+205.31	16.75	LT.									1	
	D-57	11+239.82	6.12	LT.			1							
	D-58	11+245.79	6.19	RT.								1		
	D-59	11+251.59	1.48	LT.									1	
	D-60	11+297.72	4.42	RT.										1
	D-61	11+323.28	1.45	LT.									1	
	D-62	11+382.34	6.09	LT.			1							
77	D-63	11+395.06	1.53	LT.									1	
78	D-64	11+476.13	2.44	RT.								1		
	D-65	11+480.13	6.11	LT.			1							
	D-66	11+484.96	1.43	LT.									1	
	D-67	11+492.08	1.46	LT.									1	
78	D-68	11+505.20	6.09	LT.			1							
78	D-70	11+565.93	2.44	RT.								1		
	D-71	11+577.83	1.52	LT.									1	
	D-72	11+580.35	1.59	LT.									1	
	D-73	11+590.78	6.1	LT.	1									
78	D-74	11+636.19	1.65	LT.									1	
79	D-76	11+660.28	6.06	RT.								1		
	D-77	11+664.31	6.13	LT.			1							
	D-78	11+742.18	13.69	RT.								1		
	D-79	11+746.10	10.32	RT.										1
	D-80	11+748.94	5.21	RT.										1
	D-81	11+750.17	12.27	RT.								1		
	D-82	11+779.83	1.39	LT.									1	
	D-83	11+792.28	5.69	LT.						1				
	D-84	11+794.13	6.73	RT.										1
	D-85	11+831.24	1.50	LT.									1	
	D-86	11+856.37	13.84	LT.									1	
	D-87	11+847.08	21.99	RT.										1
	D-88	11+857.84	1.22	RT.										1
	D-89	11+859.56	14.41	RT.								1		
79	D-90	11+865.13	8.43	RT.								1		
SUBTOTAL					1		9		1		11	14	7	
SUBTOTAL (FROM COLUMNS AT LEFT)							24		2		1	18		
TOTAL					1		33		3		12	32	7	

DESIGNED BY:	JAN	CHECKED BY:
DATE:	8/06/97	DATE:
DRAWN BY:	MAL	REVISED BY: MAL
DATE:	8/06/97	DATE: 6/11/98
CAD FILE NAME:		H05S0104

CALCULATING LAS
CHECKED MAL

DRAINAGE SUBSUMMARY

CITY - LAKEWOOD HEIGHTS BOULEVARD

DRAINAGE SUBSUMMARY

LOCATION					604											
SHEET No.	REF. No.	STATION	OFFSET	SIDE	CATCH BASIN, No. 6		MANHOLE No. 3		CATCH BASIN, CUYAHOGA COUNTY No. 3C		CATCH BASIN, CUYAHOGA COUNTY TWN 3C		CATCH BASIN, CITY OF CLEVELAND No. 1		MANHOLE ADJUSTED TO GRADE, AS PER PLAN	
					EACH		EACH		EACH		EACH		EACH		EACH	
					FEDERAL		FEDERAL		FEDERAL		FEDERAL		FEDERAL		FEDERAL	
					LAKE.	CLEVE.	LAKE.	CLEVE.	LAKE.	CLEVE.	LAKE.	CLEVE.	LAKE.	CLEVE.	LAKE.	CLEVE.
79	D-91	11+875.62	8.33	LT.					1							
80	D-92	11+914.24	0.95	RT.												1
	D-93	11+929.04	4.16	RT.												1
	D-94	11+938.95	6.14	RT.										1		
	D-95	11+938.58	6.09	LT.					1							
80	D-96	11+953.84	1.51	RT.												1
80	D-99	11+967.26	6.14	RT.										1		
	D-100	11+967.91	6.16	LT.							1					
	D-101	12+024.52	6.11	LT.					1							
	D-102	12+024.74	6.11	RT.										1		
80	D-103	12+039.32	2.14	RT.												1
80	D-106	12+105.52	6.11	RT.										1		
80	D-107	12+105.56	6.11	LT.							1					
81	D-108	12+120.06	1.94	RT.												1
81	D-111	12+134.62	6.14	LT.					1							
	D-112	12+134.42	8.10	RT.		1										
	D-113	12+178.73	4.45	RT.												1
	D-114	12+188.01	6.11	LT.										1		
	D-115	12+188.47	6.11	RT.										1		
	D-116	12+203.12	1.59	RT.												1
	D-117	12+276.31	6.04	RT.										1		
81	D-118	12+275.88	6.17	LT.					1							
81	D-120	12+290.17	15.55	RT.											1	
81	D-122	12+299.84	1.5	RT.												1
81	D-123	12+318.63	7.3	RT.												1
81	D-124	12+346.94	8.84	RT.										1		
81	D-126	12+359.17	13.09	RT.												1
81	D-128	12+342.41	5.59	LT.											1	
82	D-129	12+367.78	8.91	LT.							1					
82	D-130	12+380.23	5.46	LT.											1	
82	D-131	12+381.87	1.46	RT.												1
82	D-134	12+385.49	8.77	RT.										1		
82	D-135	12+400.77	6.9	LT.			1									
SUBTOTAL						1		1		5		3		9		3		11

LOCATION					604											
SHEET No.	REF. No.	STATION	OFFSET	SIDE	CATCH BASIN No. 6		MANHOLE No. 3		CATCH BASIN, CUYAHOGA COUNTY No. 3C		CATCH BASIN, CUYAHOGA COUNTY TWN 3C		CATCH BASIN, CITY OF CLEVELAND No. 1		MANHOLE ADJUSTED TO GRADE, AS PER PLAN	
					EACH		EACH		EACH		EACH		EACH		EACH	
					FEDERAL		FEDERAL		FEDERAL		FEDERAL		FEDERAL		FEDERAL	
					LAKE.	CLEVE.	LAKE.	CLEVE.	LAKE.	CLEVE.	LAKE.	CLEVE.	LAKE.	CLEVE.	LAKE.	CLEVE.
82	D-136	12+406.47	6.11	RT.												1
	D-137	12+426.93	0.61	RT.												1
	D-138	12+429.28	5.55	LT.											1	
	D-139	12+437.03	9.66	RT.										1		
	D-140	12+449.37	0.42	LT.					1							
	D-141	12+472.18	1.81	RT.												1
	D-142	12+475.97	5.49	RT.												1
	D-143	12+476.21	5.05	LT.											1	
	D-144	12+480.65	0.43	LT.										1		
82	D-145	12+483.46	8.73	RT.										1		
83	D-146	12+704.79	0.32	LT.					1							
83	D-147	12+700.75	8.85	RT.					1							
85	D-148	12+854.58	0.32	LT.					1							
85	D-149	12+855.07	8.91	RT.					1							
85	D-150	12+899.77	8.88	RT.					1							
SUBTOTAL									6						3	2	4
SUBTOTAL (FROM COLUMNS AT LEFT)						1		1		5		3			9	3	11
TOTAL						1		1		11		3			12	5	15

DESIGNED BY: JAN CHECKED BY:
DATE: 8/06/97 DATE:
DRAWN BY: MAL REVISED BY: MAL
DATE: 8/06/97 DATE: 10/22/98
CAD FILE NAME: HGS30104

CALCULATED: LAS
CHECKED: MAL

DRAINAGE SUBSUMMARY

CUY - LAKEWOOD HEIGHTS BOULEVARD

DRAINAGE SUBSUMMARY

LOCATION					202		202		603		604							
SHEET No.	REF. No.	STATION	OFFSET	SIDE	CATCH BASIN REMOVED		ABANDON MISC.; ABANDON CATCH BASIN AND CONNECT THRU		300mm CONDUIT, TYPE B, 706.02		MANHOLE No. 3		CATCH BASIN, CUYAHOGA COUNTY No. 3C		CATCH BASIN No. 2-2B		MANHOLE ADJUSTED TO GRADE, AS PER PLAN	
					EACH		EACH		METER		EACH		EACH		EACH		EACH	
					FEDERAL		FEDERAL		FEDERAL		FEDERAL		FEDERAL		FEDERAL		FEDERAL	
					LAKE.	CLEVE.	LAKE.	CLEVE.	LAKE.	CLEVE.	LAKE.	CLEVE.	LAKE.	CLEVE.	LAKE.	CLEVE.	LAKE.	CLEVE.
85	D-151	12+900.45	0.33	LT.									1					
	D-152	12+909.14	8.83	RT.		1												
	D-153	12+909.24	0.32	LT.		1												
	D-154	12+924.38	11.4	RT.									1					
	D-155	12+932.57	17.3	RT.									1					
85	D-156	12+929.36	12.46	LT.									1					
81	D-157	12+342.42	5.59	LT.													1	
82	D-158	12+395.44	22.81	LT.							1							
82	D-159	12+396.64	19.18	LT.									1					
82	D-160	12+397.15	17.80	LT.			1											
82	D-161	12+399.13	12.90	LT.									1					
82	D-162	12+408.06	16.82	LT.					11						1			
SUBTOTAL						2	1		11		1		6		1		1	

DESIGNED BY: JAN CHECKED BY:
DATE: 8/05/97 DATE:
DRAWN BY: MAL REVISED BY: MAL
DATE: 8/05/97 DATE: 10/2/98
CAD FILE NAME: HOSSO104

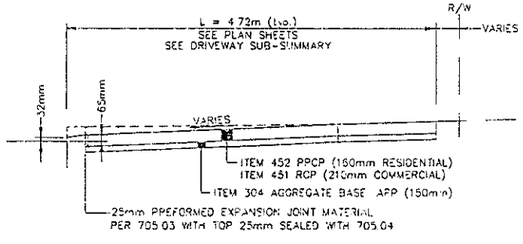
CALCULATED LAS CHECKED MAL

DRAINAGE SUBSUMMARY

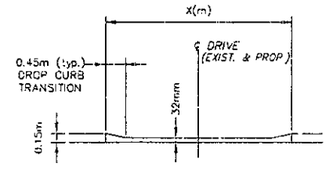
CUY - LAKEWOOD HEIGHTS BOULEVARD

67A
162

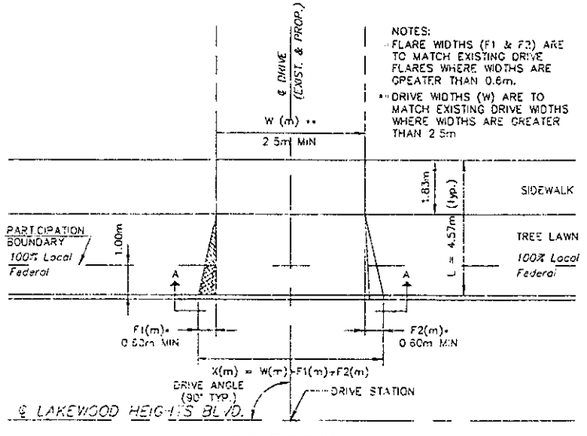
DRIVE LOCATION				PROPOSED DRIVE DATA										202				203				304				451				452			
SHEET	REF NO	DRIVE STATION	SIDE	DRIVE TYPE	DRIVE APRON MATERIAL	ANGLE	F1 FLARE WIDTH	W DRIVE WIDTH	F2 FLARE WIDTH	L LENGTH	R RADIUS	X CURB CUT WIDTH	DRIVE AREA	PAVEMENT REMOVED				EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION				AGGREGATE BASE (150mm) AS PER PLAN				210mm REINFORCED CONCRETE PAVEMENT, AS PER PLAN				160mm PLAIN CONCRETE PAVEMENT			
						Degree	Meters	Meters	Meters	Meters	Meters	Meters	Sq. Meters	Square Meters				Cubic Meters				Cubic Meters				Square Meters				Square Meters			
														FEDERAL		100% LOCAL		FEDERAL		100% LOCAL		FEDERAL		100% LOCAL		FEDERAL		100% LOCAL		FEDERAL		100% LOCAL	
														CLEV.	LAKE.	CLEV.	LAKE.	CLEV.	LAKE.	CLEV.	LAKE.	CLEV.	LAKE.	CLEV.	LAKE.	CLEV.	LAKE.	CLEV.	LAKE.	CLEV.	LAKE.	CLEV.	LAKE.
72	DR-1	10+057.78	LT.	COMM.	CONC.		1.63	5.65	1.33	4.57		8.60	29.86		7.84		20.02		1.29		3.91		1.21		3.27		8.06		21.80				
72	DR-2	10+091.79	RT.	COMM.	CONC.		1.15	6.00	1.10	4.57		8.25	30.50		7.65		21.14		1.24		3.95		1.18		3.40		7.84		22.66				
72	DR-3	10+189.63	LT.	RES.	CONC.		0.60	2.50	0.60	4.57		3.70	13.07		3.48		8.68		0.52		1.72		0.52		1.44							3.48		9.59
73	DR-4	10+207.39	LT.	RES.	CONC.		0.92	3.75	0.67	4.57		5.35	19.33		3.39		11.29		1.28		3.06		0.76		2.14							5.06		14.27
73	DR-5	10+211.31	RT.	RES.	CONC.		0.60	4.00	0.70	4.57		5.30	20.06		3.86		12.04		1.13		3.17		0.76		2.25							5.06		15.00
73	DR-6	10+293.53	LT.	RES.	CONC.		0.60	5.20	0.60	4.57		6.40	25.41		5.7		18.12		1.08		3.23		0.93		2.88							6.18		19.23
73	DR-7	10+294.47	RT.	RES.	CONC.		0.60	2.50	0.60	4.57		3.70	13.07		2.74		7.86		0.75		1.97		0.52		1.44							3.48		9.59
73	DR-8	10+307.87	RT.	RES.	CONC.		0.60	2.80	0.60	4.57		4.00	14.44		3.41		9.45		0.88		1.97		0.57		1.60							3.78		10.66
73	DR-9	10+308.94	LT.	RES.	CONC.		0.65	3.10	0.65	4.57		4.40	15.95		3.42		11.4		0.85		1.69		0.62		1.77							4.16		11.79
73	DR-10	10+322.59	RT.	RES.	CONC.		0.80	2.70	0.60	4.57		4.10	14.26		3.4		9.77		0.71		1.76		0.58		1.56							3.84		10.41
73	DR-11	10+322.84	LT.	RES.	CONC.		0.60	2.50	0.60	4.57		3.70	13.07		2.63		8.85		0.79		1.67		0.52		1.44							3.48		9.59
73	DR-12	10+335.13	LT.	RES.	CONC.		0.62	2.85	0.62	4.57		4.10	14.74		3.19		10.41		0.79		1.77		0.58		1.63							3.87		10.37
73	DR-13	10+336.14	RT.	RES.	CONC.		0.60	2.50	0.60	4.57		3.70	13.07		2.79		8.61		0.74		1.74		0.52		1.44							3.48		9.59
73	DR-14	10+348.54	RT.	RES.	CONC.		0.60	2.50	0.60	4.57		3.70	13.07		2.97		8.58		0.68		1.76		0.52		1.44							3.48		9.59
73	DR-15	10+348.82	LT.	RES.	CONC.		0.60	2.50	0.60	4.57		3.70	13.07		2.72		8.66		0.76		1.73		0.52		1.44							3.48		9.59
73	DR-16	10+360.67	RT.	RES.	CONC.		0.60	2.80	0.60	4.57		4.00	14.44		3.42		9.36		0.63		2.00		0.57		1.60							3.78		10.66
73	DR-17	10+361.03	LT.	RES.	CONC.		0.60	2.50	0.60	4.57		3.70	13.07		2.91		9.03		0.70		1.61		0.52		1.44							3.48		9.59
73	DR-18	10+372.62	RT.	RES.	CONC.		0.75	2.50	0.70	4.57		3.95	13.41		3.51		9.13		0.61		1.64		0.55		1.46							3.69		9.73
73	DR-19	10+373.40	LT.	RES.	CONC.		0.75	2.50	0.60	4.57		3.85	13.27		2.97		9.26		0.74		1.58		0.54		1.45							3.60		9.67
73	DR-20	10+384.53	RT.	RES.	CONC.		0.60	2.50	0.60	4.57		3.70	13.07		2.84		7.96		0.72		1.94		0.52		1.44							3.48		9.59
73	DR-21	10+385.26	LT.	RES.	CONC.		0.88	2.55	0.58	4.57		4.00	13.64		3.4		9.48		0.66		1.62		0.56		1.49							3.74		9.90
73	DR-22	10+396.75	RT.	RES.	CONC.		0.68	2.65	0.68	4.57		4.00	13.96		3.21		9.61		0.73		1.72		0.56		1.53							3.75		10.21
73	DR-23	10+398.08	LT.	RES.	CONC.		0.60	2.50	0.60	4.57		3.70	13.07		2.63		8.32		0.79		1.83		0.52		1.44							3.48		9.59
73	DR-24	10+409.68	RT.	RES.	CONC.		0.60	2.50	0.60	4.57		3.70	13.07		3.14		8.9		0.63		1.65		0.52		1.44							3.48		9.59
73	DR-25	10+410.03	LT.	RES.	CONC.		0.60	2.50	0.60	4.57		3.70	13.07		2.51		7.14		0.82		2.20		0.52		1.44							3.48		9.59
73	DR-26	10+421.51	RT.	RES.	CONC.		0.75	2.50	0.60	4.57		3.85	13.27		3.24		8.8		0.65		1.72		0.54		1.45							3.60		9.67
73	DR-27	10+421.84	LT.	RES.	CONC.		0.60	2.60	0.60	4.57		3.80	13.53		3.15		9.34		0.67		1.68		0.54		1.49							3.58		9.94
73	DR-28	10+433.98	RT.	RES.	CONC.		0.60	2.50	0.60	4.57		3.70	13.07		2.94		8.44		0.69		1.79		0.52		1.44							3.48		9.59
73	DR-29	10+434.56	LT.	RES.	CONC.		0.60	2.50	0.85	4.57		3.95	13.41		3.18		8.91		0.71		1.71		0.55		1.46							3.69		9.73
74	DR-30	10+446.24	RT.	RES.	CONC.		0.60	2.50	0.60	4.57		3.70	13.07		3.05		8.18		0.66		1.87		0.52		1.44							3.48		9.59
74	DR-31	10+446.55	LT.	RES.	CONC.		0.60	2.50	0.60	4.57		3.70	13.07		3.15		9.1		0.62		1.59		0.52		1.44							3.48		9.59
74	DR-32	10+459.90	LT.	RES.	CONC.		0.60	3.20	0.60	4.57		4.40	16.27		3.79		11.4		0.75		2.03		0.63		1.81							4.18		12.09
74	DR-33	10+459.97	RT.	RES.	CONC.		0.60	2.50	0.60	4.57		3.70	13.07		3.04		7.92		0.66		1.96		0.52		1.44							3.48		9.59
74	DR-34	10+472.56	RT.	RES.	CONC.		0.60	3.40	0.60	4.57		4.60	17.18		3.81		10.95		0.83		2.49		0.66		1.92							4.38		12.60
74	DR-35	10+473.60	LT.	RES.	CONC.		0.60	2.50	1.15	4.57		4.25	13.82		3.7		10.84		0.66		1.19		0.59		1.48							3.93		9.89
74	DR-36	10+486.98	LT.	RES.	CONC.		0.60	2.50	1.40	4.57		4.50	14.17		3.84		10.29		0.71		1.42		0.62		1.50							4.14		10.03
74	DR-37	10+487.24	RT.	RES.	CONC.		0.70	2.90	0.60	4.57		4.20	15.03		3.49		9.7		0.74		2.09		0.59		1.66							3.96		11.07
74	DR-38	10+500.88	RT.	RES.	CONC.		1.00	2.60	0.60	4.57		4.20	14.07		3.52		8.86		0.71		1.93		0.59		1.52							3.91		10.17
74	DR-39	10+501.26	LT.	RES.	CONC.		0.60	2.50	0.60	4.57		3.70	13.07		3.39		10.3		0.55		1.22		0.52		1.44							3.48		9.59
74	DR-40	10+514.23	RT.	RES.	CONC.		0.65	2.50	0.75	4.57		3.90	13.34		3.14		8.53		0.70		1.82		0.55		1.45							3.64		9.70
												SUBTOTAL (THIS SHEET)			140.16		404.61		30.69		79.59		24.17		66.80		15.90		44.46		145.23		400.88



CURB DROP DETAIL



SECTION A-A



DRIVE DETAIL
CITY OF LAKEWOOD

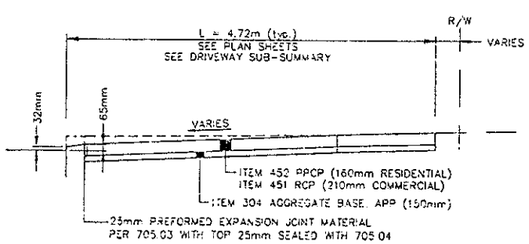
DESIGNED BY: JJS | CHECKED BY: JAN
DATE: 5/8/97 | DATE: 10/93
DRAWN BY: JJS | REVISED BY: MAL
DATE: 5/8/97 | DATE: 10/26/96
CAD FILE NAME: DRVSSUM1

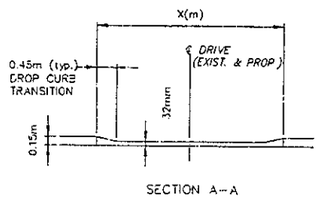
CALCULATED JJS CHECKED EDR

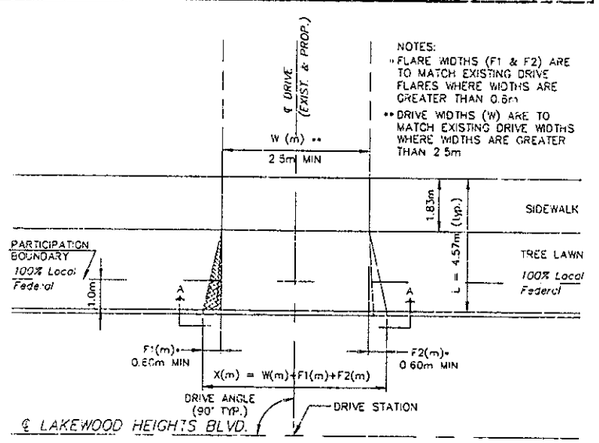
DRIVEWAY SUB-SUMMARY

CUY - LAKEWOOD HEIGHTS BOULEVARD

DRIVE LOCATION				PROPOSED DRIVE DATA										202				203				304				451				452			
SHEET	REF NO.	DRIVE STATION	SIDE	DRIVE TYPE	DRIVE APRON MATERIAL	ANGLE	F1 FLARE WIDTH	W DRIVE WIDTH	F2 FLARE WIDTH	L LENGTH	R RADIUS	X CURB CUT WIDTH	DRIVE AREA	PAVEMENT REMOVED				EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION				AGGREGATE BASE (150mm) AS PER PLAN				210mm REINFORCED CONCRETE PAVEMENT, AS PER PLAN				160mm PLAIN CONCRETE PAVEMENT			
						Degree	Meters	Meters	Meters	Meters	Meters	Meters	Sq. Meters	Square Meters				Cubic Meters				Cubic Meters				Square Meters				Square Meters			
														FEDERAL		100% LOCAL		FEDERAL		100% LOCAL		FEDERAL		100% LOCAL		FEDERAL		100% LOCAL		FEDERAL		100% LOCAL	
														CLEV.	LAKE.	CLEV.	LAKE.	CLEV.	LAKE.	CLEV.	LAKE.	CLEV.	LAKE.	CLEV.	LAKE.	CLEV.	LAKE.	CLEV.	LAKE.	CLEV.	LAKE.	CLEV.	LAKE.
74	DR-41	10+515.02	LT.	RES.	CONC.		0.60	3.20	0.60	4.57		4.40	16.27		3.68		11.29		0.78		2.06		0.63		1.81							4.18		12.09
74	DR-42	10+528.02	RT.	RES.	CONC.		0.95	2.50	0.60	4.57		4.05	13.55		3.23		8.46		0.73		1.88		0.57		1.47							3.77		9.78
74	DR-43	10+528.89	LT.	RES.	CONC.		0.60	2.50	0.60	4.57		3.70	13.07		2.94		8.32		0.69		1.83		0.52		1.44							3.48		9.59
74	DR-44	10+541.19	RT.	RES.	CONC.		0.60	2.50	0.60	4.57		3.70	13.07		3.28		8.72		0.58		1.71		0.52		1.44							3.48		9.59
74	DR-44A	10+545.45	RT.	RES.	CONC.		0.60	2.50	0.60	4.57		3.70	13.07		3.29		8.76		0.58		1.69		0.52		1.44							3.48		9.59
74	DR-45	10+543.98	LT.	RES.	CONC.		0.60	8.80	1.00	4.57		10.40	42.41		9.26		30.74		1.78		5.33		1.52		4.84							10.11		32.30
74	DR-46	10+629.14	RT.	RES.	CONC.		0.85	3.20	0.60	4.57		4.65	16.61		3.85		11.52		0.82		2.05		0.66		1.83							4.39		12.23
74	DR-47	10+632.96	LT.	RES.	CONC.		0.60	3.50	0.60	4.57		4.70	17.64		3.33		9.19		1.03		3.20		0.67		1.97							4.48		13.16
74	DR-48	10+645.97	RT.	RES.	CONC.		1.20	2.70	0.65	4.57		4.55	14.87		3.98		10.15		0.70		1.76		0.63		1.60							4.21		10.66
74	DR-49	10+646.55	LT.	RES.	CONC.		0.60	2.50	0.60	4.57		3.70	13.07		2.92		8.65		0.70		1.73		0.52		1.44							3.48		9.59
74	DR-50	10+659.93	RT.	RES.	CONC.		1.15	2.50	0.60	4.57		4.25	13.82		3.66		9.47		0.67		1.61		0.59		1.48							3.93		9.89
74	DR-51	10+660.30	LT.	RES.	CONC.		0.60	3.30	0.60	4.57		4.50	16.73		3.61		9.94		0.85		2.64		0.64		1.87							4.28		12.44
74	DR-52	10+673.92	RT.	RES.	CONC.		0.60	2.50	0.60	4.57		3.70	13.07		2.85		8.05		0.72		1.91		0.52		1.44							3.48		9.59
74	DR-53	10+674.12	LT.	RES.	CONC.		0.60	2.50	0.90	4.57		4.00	13.48		3.29		8.35		0.69		1.90		0.56		1.46							3.73		9.75
75	DR-54	10+687.30	LT.	RES.	CONC.		0.60	2.50	1.20	4.57		4.30	13.89		3.37		8.98		0.78		1.78		0.60		1.49							3.97		9.92
75	DR-55	10+687.53	RT.	RES.	CONC.		1.70	2.50	0.60	4.57		4.80	14.58		3.89		9.33		0.81		1.80		0.66		1.53							4.38		10.20
75	DR-56	10+701.20	LT.	RES.	CONC.		0.65	3.00	0.85	4.57		4.50	15.77		3.32		10.91		0.91		1.93		0.63		1.73							4.23		11.54
75	DR-57	10+701.33	RT.	RES.	CONC.		0.60	2.50	0.60	4.57		3.70	13.07		3.18		12.34		0.62		0.59		0.52		1.44							3.48		9.59
75	DR-58	10+714.32	RT.	RES.	CONC.		0.65	2.70	0.65	4.57		4.00	14.12		3.41		10.18		0.67		1.61		0.56		1.55							3.76		10.36
75	DR-59	10+714.55	LT.	RES.	CONC.		0.50	2.50	1.05	4.57		4.15	13.69		3.15		8.71		0.79		1.82		0.58		1.48							3.85		9.84
75	DR-60	10+726.93	RT.	RES.	CONC.		0.60	2.50	0.60	4.57		3.70	13.07		2.88		12.31		0.71		0.59		0.52		1.44							3.48		9.59
75	DR-61	10+727.37	LT.	RES.	CONC.		0.95	2.50	0.60	4.57		4.05	13.55		0.00		4.68		1.73		3.05		0.57		1.47							3.77		9.78
75	DR-62	10+740.16	LT.	RES.	CONC.		0.60	2.50	1.15	4.57		4.25	13.82		3.62		9.75		0.69		1.53		0.59		1.48							3.93		9.89
75	DR-63	10+740.76	RT.	RES.	CONC.		0.95	3.00	0.80	4.57		4.75	16.11		3.86		10.68		0.84		2.06		0.66		1.75							4.43		11.68
75	DR-64	10+753.50	RT.	RES.	CONC.		0.60	2.50	0.60	4.57		3.70	13.07		2.79		9.05		0.74		1.60		0.52		1.44							3.48		9.59
75	DR-65	10+754.40	LT.	RES.	CONC.		0.60	3.00	0.60	4.57		4.20	15.35		3.34		10.02		0.80		2.13		0.60		1.71							3.98		11.37
75	DR-66	10+765.67	RT.	RES.	CONC.		0.60	2.50	0.60	4.57		3.70	13.07		3.00		12.43		0.67		0.56		0.52		1.44							3.48		9.59
75	DR-67	10+766.81	LT.	RES.	CONC.		0.60	2.50	0.60	4.57		3.70	13.07		3.07		12.18		0.65		0.63		0.52		1.44							3.48		9.59
75	DR-68	10+777.75	RT.	RES.	CONC.		0.70	2.80	0.60	4.57		4.10	14.58		3.60		10.26		0.66		1.75		0.58		1.61							3.86		10.71
75	DR-69	10+778.51	LT.	RES.	CONC.		0.75	2.70	0.65	4.57		4.10	14.26		3.26		9.34		0.76		1.89		0.58		1.56							3.84		10.41
75	DR-70	10+789.84	RT.	RES.	CONC.		0.83	3.15	0.60	4.57		4.58	16.35		3.93		11.31		0.77		2.03		0.65		1.80							4.31		12.03
75	DR-71	10+790.60	LT.	RES.	CONC.		0.65	2.70	1.00	4.57		4.35	14.60		3.65		9.94		0.73		1.77		0.61		1.58							4.05		10.55
75	DR-72	10+802.42	RT.	RES.	CONC.		0.85	2.80	0.80	4.57		4.25	14.78		0.00		4.98		1.83		3.42		0.60		1.62							3.99		10.80
75	DR-73	10+803.01	LT.	RES.	CONC.		0.95	2.90	0.65	4.57		4.50	15.45		3.94		10.98		0.71		1.77		0.63		1.69							4.21		11.24
75	DR-74	10+814.45	RT.	RES.	CONC.		0.63	2.75	0.63	4.57		4.00	14.28		3.36		9.87		0.69		1.77		0.57		1.58							3.77		10.51
75	DR-75	10+815.06	LT.	RES.	CONC.		0.60	2.50	0.60	4.57		3.70	13.07		2.83		8.59		0.72		1.75		0.52		1.44							3.48		9.59
75	DR-76	10+826.16	RT.	RES.	CONC.		1.35	2.90	0.65	4.57		4.90	15.99		0.00		5.53		2.09		3.56		0.68		1.72							4.54		11.46
75	DR-77	10+826.78	LT.	RES.	CONC.		0.75	2.70	1.05	4.57		4.50	14.81		3.76		10.23		0.75		1.72		0.63		1.60							4.17		10.63
75	DR-78	10+839.27	LT.	RES.	CONC.	88	1.15	2.50	0.95	4.57		4.60	14.30		3.64		9.80		0.81		1.60		0.63		1.51							4.22		10.09
75	DR-79	10+839.05	RT.	RES.	CONC.	87	0.65	2.90	0.65	4.57		4.20	15.03		3.41		10.28		0.77		1.91		0.59		1.66							3.96		11.07
75	DR-80	10+851.78	LT.	RES.	CONC.	85	1.00	2.50	1.15	4.57		4.65	14.37		3.69		9.81		0.81		1.61		0.64		1.52							4.26		10.11
											SUBTOTAL (THIS SHEET)				135.12		414.08		34.86		79.53		25.03		67.79							166.84		451.95







DRIVE DETAIL
CITY OF LAKEWOOD

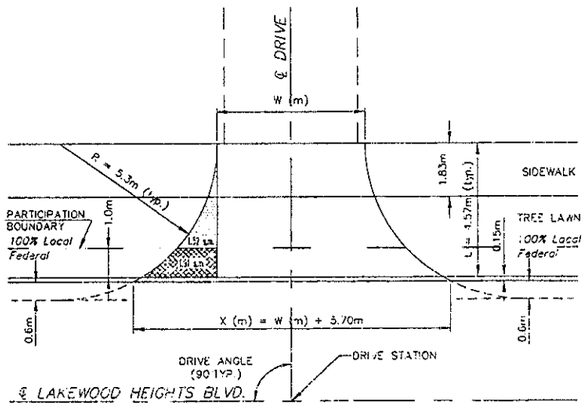
DESIGNED BY: JJS | CHECKED BY: JAN
DATE: 5/8/97 | DATE: 10/98
DRAWN BY: JJS | REVISED BY: MAL
DATE: 5/8/97 | DATE: 10/26/98
CAD FILE NAME: DRVSSUM2

CALCULATED JJS | CHECKED FDR

DRIVEWAY SUB-SUMMARY

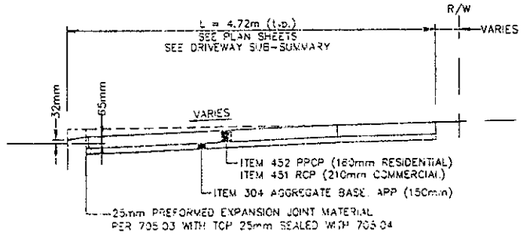
CITY - LAKEWOOD
HEIGHTS BOULEVARD

DRIVE LOCATION				PROPOSED DRIVE DATA										202				203				304				451				452			
SHEET	REF NO	DRIVE STATION	SIDE	DRIVE TYPE	DRIVE APRON MATERIAL	ANGLE	F1 FLARE WIDTH	W DRIVE WIDTH	F2 FLARE WIDTH	L LENGTH	R RADIUS	X CURB CUT WIDTH	DRIVE AREA	PAVEMENT REMOVED				EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION				AGGREGATE BASE (150mm) AS PER PLAN				210mm REINFORCED CONCRETE PAVEMENT, AS PER PLAN				160mm PLAIN CONCRETE PAVEMENT			
						Degree	Meters	Meters	Meters	Meters	Meters	Meters	Sq. Meters	Square Meters				Cubic Meters				Cubic Meters				Square Meters				Square Meters			
														FEDERAL		100% LOCAL		FEDERAL		100% LOCAL		FEDERAL		100% LOCAL		FEDERAL		100% LOCAL		FEDERAL		100% LOCAL	
														CLEV.	LAKE.	CLEV.	LAKE.	CLEV.	LAKE.	CLEV.	LAKE.	CLEV.	LAKE.	CLEV.	LAKE.	CLEV.	LAKE.	CLEV.	LAKE.	CLEV.	LAKE.	CLEV.	LAKE.
75	DR-81	10+851.19	RT.	RES.	CONC.	86	1.05	2.80	0.60	4.57		4.45	15.06		3.50		9.77		0.82		1.99		0.62		1.64						4.15		10.91
75	DR-82	10+863.67	LT.	RES.	CONC.	82	1.05	2.50	0.65	4.57		4.20	13.75		3.36		9.25		0.75		1.67		0.58		1.48						3.89		9.86
75	DR-83	10+863.15	RT.	RES.	CONC.	81	0.90	2.60	1.25	4.57		4.95	15.74		0.00		5.41		2.10		3.47		0.68		1.68						4.58		11.18
75	DR-84	10+876.99	LT.	RES.	CONC.	78	2.35	2.50	0.60	4.57		5.45	15.47		3.82		9.55		1.08		1.89		0.74		1.58						4.91		10.55
75	DR-85	10+889.94	LT.	RES.	CONC.	77	1.35	2.50	0.65	4.57		4.50	14.17		3.47		9.72		0.83		1.60		0.62		1.50						4.14		10.03
75	DR-86	10+905.15	LT.	RES.	CONC.	74	1.80	2.80	0.60	4.57		5.20	16.08		3.88		11.71		0.99		1.58		0.71		1.70						4.76		11.32
75	DR-87	10+919.14	LT.	RES.	CONC.	73	1.35	3.30	0.65	4.57		5.30	17.82		3.31		11.99		1.24		2.21		0.74		1.93						4.94		12.89
76	DR-88	10+985.11	LT.	RES.	CONC.		1.50	3.00	0.60	5.60		5.10	20.76		4.10		14.52		0.95		2.83		0.72		2.39						4.82		15.94
76	DR-89	10+999.96	LT.	COMM.	CONC.			10.10		6.25	SEE PLAN	23.55	92.85		23.07		72.28		2.98		10.17		3.30		10.62		22.03		70.82					
77	DR-90	11+253.00	LT.	COMM.	CONC.		0.70	15.80	2.80	6.71		19.30	114.56		18.94		95.62		2.84		14.34		2.84		14.34		18.94		95.62					
77	DR-91	11+271.45	LT.	RES.	CONC.		1.00	2.50	0.60	6.71		4.10	20.68		3.49		14.98		0.73		3.06		0.59		2.51						3.94		16.74
77	DR-92	11+283.65	LT.	RES.	CONC.		1.30	2.50	1.05	6.71		4.85	22.51		4.04		16.61		0.87		3.08		0.69		2.68						4.51		17.90
77	DR-93	11+296.46	LT.	RES.	CONC.		0.60	2.50	0.85	6.71		3.95	20.31		3.43		15.14		0.69		2.90		0.57		2.48						3.80		16.51
77	DR-94	11+318.03	LT.	RES.	CONC.	94	0.60	5.50	1.85	6.71		7.95	42.88		7.09		36.12		1.34		4.99		1.15		5.28						7.70		35.18
77	DR-95	11+346.41	LT.	RES.	CONC.	94	1.30	2.50	1.15	6.71		4.95	22.75		4.05		17.85		0.91		2.77		0.70		2.71						4.70		18.05
77	DR-96	11+358.56	LT.	RES.	CONC.	93	0.60	2.50	0.60	6.71		3.70	19.70		3.16		15.77		0.67		2.53		0.54		2.42						3.58		16.13
77	DR-97	11+370.67	LT.	RES.	CONC.	93	0.60	2.50	0.80	6.71		3.90	20.19		3.60		16.64		0.81		2.40		0.56		2.47						3.76		16.43
78	DR-98	11+434.24	LT.	RES.	CONC.	93	1.00	4.40	1.40	6.71		6.80	35.36		6.13		28.42		1.11		4.45		0.98		4.32						6.55		28.83
78	DR-99	11+451.30	LT.	RES.	CONC.	93	0.90	2.50	0.90	6.71		4.30	21.17		3.90		16.70		0.68		2.87		0.62		2.58						4.12		17.05
78	DR-100	11+463.51	LT.	RES.	CONC.	93	1.05	2.50	0.60	6.71		4.15	20.80		3.56		15.53		0.73		2.92		0.60		2.52						3.98		16.82
78	DR-101	11+515.12	LT.	RES.	CONC.	93	0.60	2.50	0.95	6.71		4.05	20.56		3.38		15.32		0.75		2.92		0.58		2.50						3.89		16.67
78	DR-102	11+530.48	LT.	RES.	CONC.	93	0.60	2.50	0.60	6.71		3.70	19.70		3.21		14.71		0.65		2.86		0.54		2.42						3.58		16.13
78	DR-103	11+545.73	LT.	RES.	CONC.	93	0.60	2.50	0.60	6.71		3.70	19.70		3.06		15.40		0.69		2.84		0.54		2.42						3.58		16.13
78	DR-104	11+594.56	LT.	RES.	CONC.		0.80	7.60	0.60	6.71		8.80	53.92		7.58		44.29		1.64		7.08		1.30		6.79						8.89		45.25
79	DR-105	11+671.23	LT.	RES.	CONC.	97	0.60	2.50	0.75	2.90		3.85	7.97		2.89		4.53		0.58		0.78		0.48		0.71						3.22		4.75
79	DR-106	11+682.83	LT.	RES.	CONC.	97	0.60	2.50	0.95	2.90		4.05	8.08		3.06		4.78		0.58		0.71		0.50		0.71						3.33		4.75
79	DR-107	11+694.45	LT.	RES.	CONC.	95	0.60	2.80	0.75	2.90		4.15	8.64		3.37		5.24		0.57		0.82		0.53		0.80						3.52		5.32
79	DR-108	11+715.54	LT.	RES.	CONC.	94	0.60	2.80	0.60	2.90		4.00	8.76		3.22		5.37		0.58		0.78		0.52		0.80						3.44		5.32
79	DR-109	11+727.61	LT.	RES.	CONC.	96	0.60	2.60	0.90	2.90		4.30	8.92		3.59		5.53		0.54		0.73		0.54		0.80						3.80		5.32
79	DR-110	11+771.67	RT.	RES.	CONC.	96		3.70		2.59	5.30	9.40	15.13	3.85		5.07		2.18		1.66		1.17		1.10				7.80		7.33			
79	DR-111	11+780.21	LT.	RES.	CONC.	97	0.60	2.80	0.60	2.59		4.00	7.71		3.09		4.47		0.52		0.68		0.48		0.67						3.21		4.50
79	DR-112	11+787.80	RT.	RES.	CONC.	105		3.05		2.74	5.30	8.75	13.73	3.33		4.86		1.52		1.93		0.88		1.18				5.88		7.85			
79	DR-113	11+794.45	LT.	RES.	CONC.	105	0.50	2.80	1.50	3.33		4.90	10.90		3.78		7.38		0.76		0.79		0.63		1.00						4.20		6.70
79	DR-114	11+808.02	RT.	COMM.	CONC.			10.00		1.63	5.30	15.70	21.06	9.40		6.53		2.33		2.12		1.75		1.41		11.69		9.37					
79	DR-115	11+808.73	LT.	RES.	CONC.	105	1.10	3.00	0.70	5.95		4.80	21.56		3.96		15.10		0.88		3.13		0.69		2.55						4.58		16.98
79	DR-116	11+821.97	LT.	RES.	CONC.	108	0.60	3.40	0.80	5.95		4.60	22.70		3.10		16.45		1.09		3.29		0.67		2.74						4.45		18.25
79	DR-116A	11+835.74	RT.	COMM.	CONC.	119		7.00		2.33	5.30	12.34	26.20		9.22		14.85	1.90		2.37		1.64				10.90		15.30					
												SUBTOTAL	(THIS SHEET)	16.58	166.41	16.46	616.98	7.91	32.75	8.08	100.76	5.44	26.57	5.99	93.73	22.59	40.97	24.67	166.44	13.68	136.16	15.18	458.40

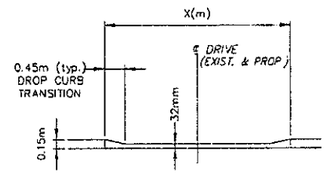


FEDERAL FUNDS: DRIVEWAY APRON AREA (s.m.) = W (m) x [illegible] = 2(1.91 s.m.)
100% LOCAL FUNDS: DRIVEWAY APRON AREA (s.m.) = W (m) x 2.57m = 2(1.52 s.m.)

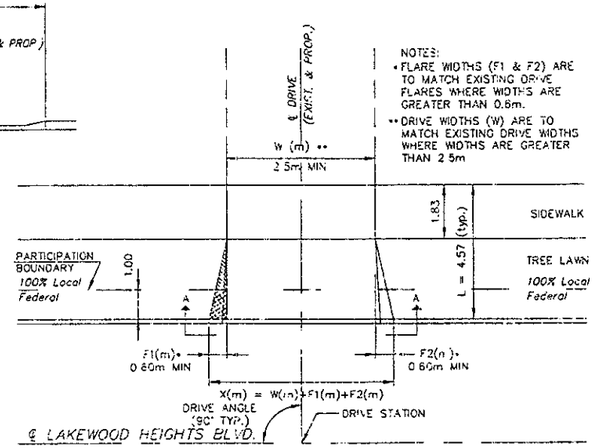
DRIVE DETAIL
CITY OF CLEVELAND



CURB DROP DETAIL
CITY OF LAKEWOOD
CITY OF CLEVELAND



SECTION A–A



NOTES:
* FLARE WIDTHS (F1 & F2) ARE TO MATCH EXISTING DRIVE FLARES WHERE WIDTHS ARE GREATER THAN 0.6m.
** DRIVE WIDTHS (W) ARE TO MATCH EXISTING DRIVE WIDTHS WHERE WIDTHS ARE GREATER THAN 2.5m

DRIVE DETAIL
CITY OF LAKEWOOD

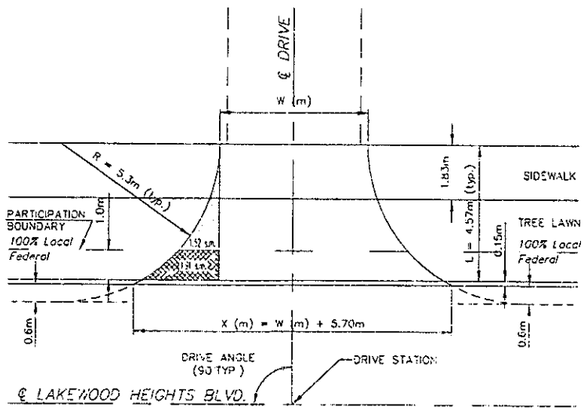
DESIGNED BY: JJS | CHECKED BY: JAN
DATE: 5/5/97 | DATE: 10/98
DRAWN BY: JJS | REVISED BY: MAL
DATE: 5/8/97 | DATE: 10/26/98
CAD FILE NAME: DRVSUM3

CALCULATED JJS CHECKED EDR

DRIVEWAY SUB-SUMMARY

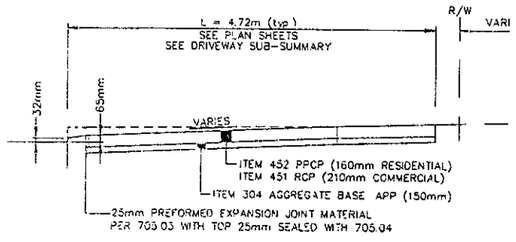
CUY - LAKEWOOD HEIGHTS BOULEVARD

DRIVE LOCATION				PROPOSED DRIVE DATA										202				203				304				451				452			
SHEET	REF NO	DRIVE STATION	SIDE	DRIVE TYPE	DRIVE APRON MATERIAL	ANGLE	F1 FLARE WIDTH	W DRIVE WIDTH	F2 FLARE WIDTH	L LENGTH	R RADIUS	X CURB CUT WIDTH	DRIVE AREA	PAVEMENT REMOVED				EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION				AGGREGATE BASE (150mm) AS PER PLAN				210mm REINFORCED CONCRETE PAVEMENT, AS PER PLAN				160mm PLAIN CONCRETE PAVEMENT			
						Degree	Meters	Meters	Meters	Meters	Meters	Meters	Sq. Meters	Square Meters				Cubic Meters				Cubic Meters				Square Meters				Square Meters			
														FEDERAL		100% LOCAL		FEDERAL		100% LOCAL		FEDERAL		100% LOCAL		FEDERAL		100% LOCAL		FEDERAL		100% LOCAL	
														CLEV.	LAKE.	CLEV.	LAKE	CLEV.	LAKE.	CLEV.	LAKE.	CLEV.	LAKE.	CLEV.	LAKE.	CLEV.	LAKE	CLEV.	LAKE.	CLEV.	LAKE.	CLEV.	LAKE.
80	DR-117	11+838.30	RT.	COMM.	CONC.			13.00		6.48	5.30	18.70	91.10	13.70		71.05		3.30		11.95		2.52		11.14		16.82		74.28					
80	DR-118	11+904.18	LT.	RES.	CONC.	102	0.60	5.20	0.90	5.90		6.70	39.68		6.19		31.56		1.10		5.46		0.98		4.97						6.55		33.13
80	DR-119	11+913.71	LT.	RES.	CONC.	105	0.60	5.20	1.10	5.52		6.90	31.84		6.32		24.78		1.11		3.90		1.00		3.78						6.67		25.17
80	DR-120	11+985.61	RT.	RES.	CONC.			3.00		6.44	5.30	8.70	26.18	3.17		15.12		1.94		3.96		1.02		2.90						6.82		19.36	
80	DR-121	11+994.74	LT.	RES.	CONC.		0.60	4.80	0.50	4.27		8.00	21.96		5.12		16.19		1.06		2.44		0.86		2.43						5.75		16.21
80	DR-122	12+002.79	LT.	RES.	CONC.		1.10	5.60	0.60	4.27		7.50	26.84		6.38		19.43		1.31		3.03		1.07		2.95						7.15		19.69	
80	DR-123	11+999.08	RT.	RES.	CONC.			3.00		6.44	5.30	8.70	26.18	3.84		16.62		1.77		3.59		1.02		2.90						6.82		19.36	
80	DR-124	12+013.15	RT.	RES.	CONC.			3.00		6.44	5.30	8.70	26.18	3.04		13.77		1.97		4.30		1.02		2.90						6.82		19.36	
80	DR-125	12+089.61	LT.	RES.	CONC.		1.40	3.20	0.50	4.26		5.20	16.06		4.75		12.91		0.73		1.18		0.72		1.69						4.79		11.27
80	DR-126	12+100.79	LT.	RES.	CONC.		1.00	2.60	0.90	4.26		4.50	13.38		4.06		10.79		0.63		0.92		0.62		1.39						4.11		9.28	
81	DR-127	12+136.15	RT.	RES.	CONC.			6.60		6.55	5.30	12.30	50.09	9.85		39.96		1.71		5.88		1.56		5.95						10.42		39.67	
81	DR-128	12+161.87	LT.	RES.	CONC.		0.50	12.60	0.60	6.71		13.80	87.47		8.40		60.08		3.69		15.32		2.05		11.07						13.68		73.80
81	DR-129	12+184.25	RT.	RES.	CONC.			6.60		6.55	5.30	12.30	50.09	6.38		35.92		2.57		6.89		1.56		5.95						10.42		39.67	
81	DR-130	12+217.18	RT.	RES.	CONC.			5.20		6.71	5.30	10.90	41.75	5.09		29.70		2.34		5.67		1.35		4.91						9.02		32.73	
81	DR-131	12+240.56	LT.	RES.	CONC.		0.60	5.70	0.60	6.71		6.90	41.18		3.93		29.76		1.90		6.60		1.02		5.16						6.78		34.40
81	DR-132	12+250.82	LT.	RES.	CONC.		0.60	4.80	1.60	6.71		7.00	37.56		6.03		29.70		1.25		4.96		1.02		4.62						6.77		30.80	
81	DR-133	12+248.55	RT.	RES.	CONC.			3.30		6.55	5.30	9.00	28.48	3.68		18.28		1.93		3.97		1.07		3.20						7.12		21.36	
81	DR-134	12+328.82	LT.	RES.	CONC.		0.60	4.80	0.60	4.42		6.00	22.77		5.13		17.08		1.06		2.53		0.87		2.55						5.77		17.00	
81	DR-135	12+330.53	RT.	RES.	CONC.			8.00		4.27	5.30	13.70	41.02	8.92		27.36		2.50		4.84		1.77		4.38						11.82		26.20	
81	DR-136	12+345.98	LT.	RES.	CONC.		1.20	2.60	1.50	4.42		5.30	14.99		4.39		9.49		0.84		1.75		0.72		1.53						4.78		10.21	
81	DR-137	12+359.07	LT.	RES.	CONC.		1.75	3.10	1.45	4.42		6.30	17.85		5.25		10.27		0.99		2.41		0.85		1.82						5.68		12.16	
												SUBTOTAL (THIS SHEET)		57.67	65.95	267.78	272.03	20.03	15.66	51.05	50.50	12.89	11.77	44.23	43.97	16.82		74.28		69.26	78.48	220.71	293.12
												TOTAL		74.25	507.64	284.24	1707.70	27.94	113.96	59.13	310.40	18.33	87.54	50.22	272.29	39.41	56.87	98.95	210.90	82.94	526.72	235.89	1604.35

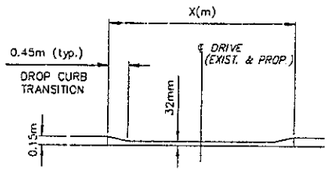


FEDERAL FUNDS: DRIVEWAY APRON AREA (s.m.) = W (m) x 1.22m + 2(.91 s.m.)
100% LOCAL FUNDS: DRIVEWAY APRON AREA (s.m.) = W (m) x 3.57m + 2(1.52 s.m.)

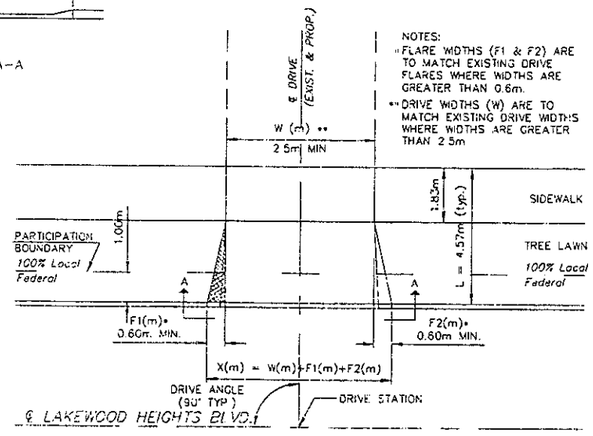
DRIVE DETAIL
CITY OF CLEVELAND



CURB DROP DETAIL
CITY OF LAKEWOOD
CITY OF CLEVELAND



SECTION A-A



DRIVE DETAIL
CITY OF LAKEWOOD

DESIGNED BY: JJS	CHECKED BY: JAN
DATE: 5/8/97	DATE: 10/98
DRAWN BY: JJS	REVISED BY: MAL
DATE: 5/8/97	DATE: 10/14/98
CAD FILE NAME:	DRVSSUM4

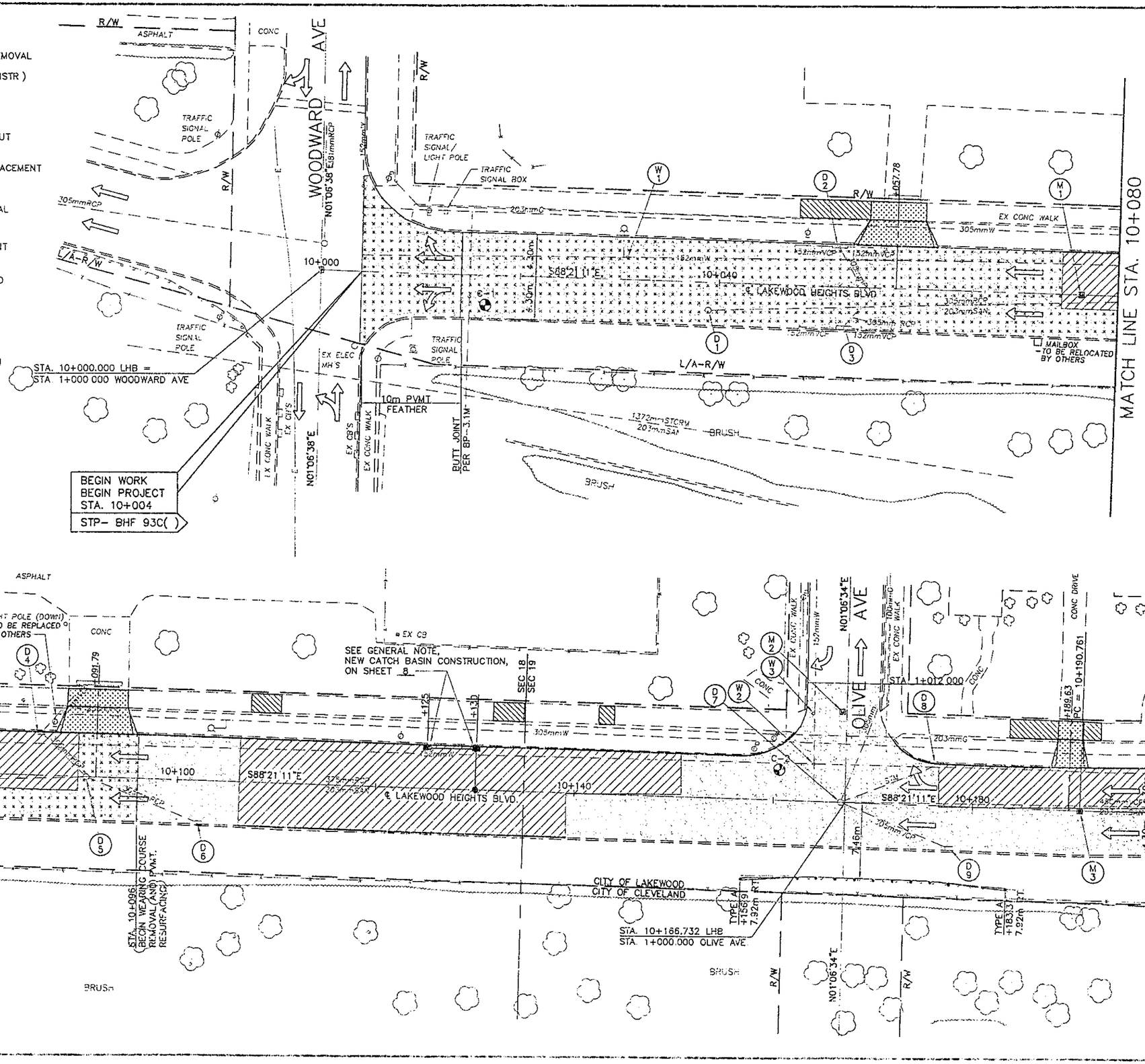
CALCULATED JJS

DRIVEWAY SUB-SUMMARY

CUY - LAKEWOOD HEIGHTS BOULEVARD

LEGEND

- FULL DEPTH PAVEMENT REMOVAL AND REPLACEMENT (FIELD VERIFY DURING CONSTR.)
- SIDEWALK REMOVAL AND REPLACEMENT
- SIDEWALK REMOVAL WITHOUT REPLACEMENT
- CURB REMOVAL AND REPLACEMENT
- INTEGRAL CURB REMOVAL AND REPLACEMENT
- CONCRETE MEDIAN REMOVAL AND REPLACEMENT
- DRIVE APRON REPLACEMENT
- WEARING COURSE REMOVED AND RESURFACING
- PAVEMENT RESURFACING
- PAVEMENT CORE LOCATION
- MONUMENT BOX
- TRAFFIC MOVEMENT



FOR ROADWAY QUANTITIES, SEE SHEETS 58-65A

FOR ROADWAY PROFILES, SEE SHEETS 96-88

FOR DRAINAGE QUANTITIES, SEE SHEETS 66-67A

FOR DRIVE DETAILS AND QUANTITIES, SEE SHEETS 68-71

HORIZONTAL SCALE IN METERS

PLAN - C.R. 297
STA. 10+000 TO STA. 10+200

CUY - LAKEWOOD HEIGHTS BOULEVARD

72
162

DESIGNED BY:	
DATE:	
DRAWN BY:	JAN
DATE:	8/08/97
REVISED BY:	MAL
DATE:	10/26/98
CAD FILE NAME:	HGSu0100/HGUT0100

LEGEND

- FULL DEPTH PAVEMENT REMOVAL AND REPLACEMENT (FIELD VERIFY DURING CONSTR.)
- SIDEWALK REMOVAL AND REPLACEMENT
- SIDEWALK REMOVAL WITHOUT REPLACEMENT
- CURB REMOVAL AND REPLACEMENT
- INTEGRAL CURB REMOVAL AND REPLACEMENT
- CONCRETE MEDIAN REMOVAL AND REPLACEMENT
- DRIVE APRON REPLACEMENT
- WEARING COURSE REMOVED AND RESURFACING
- PAVEMENT RESURFACING
- PAVEMENT CORE LOCATION
- MONUMENT BOX

FOR ROADWAY QUANTITIES, SEE SHEETS 58-65A.

FOR ROADWAY PROFILES, SEE SHEETS 86-88.

FOR DRAINAGE QUANTITIES, SEE SHEETS 66-67A.

FOR DRIVE DETAILS AND QUANTITIES, SEE SHEETS 68-71.

DESIGNED BY:	CHECKED BY:
DATE:	DATE:
DRAWN BY:	REVISED BY: MAL
DATE:	DATE: 10/26/98
CAD FILE NAME:	HGSU0200/HCUT0200

CURVE DATA
P.I. STA.10+215.676
Δ = 17°37'35"
R = 160.694m
T = 24.915m
L = 49.436m
E = 1.920m

SEE SHEET NO. 72
MATCH LINE STA. 10+200

CARABEL AVENUE

STA.10+250.737 LHB
STA.1+000.000 CARABEL AVE.

RES #2237 & #2239

EX. HYDRANT -TO BE RELOC. BY OTHERS

EX. LIGHT POLE -TO BE RELOC. BY OTHERS

EX. GAS TEST STA.

STA. 1+012.000

PT = 10+240.157

N01°06'34"E

N74°01'14"E

PC = 10+250.737

CURVE DATA
P.I. STA.10+274.562
Δ = 16°46'00"
R = 161.544m
T = 23.807m
L = 47.273m
E = 1.745m

STA. 0+985.000

CITY OF LAKEWOOD
CITY OF CLEVELAND

PT = 10+298.029

MATCH LINE STA. 10+320

10+300

℄ LAKEWOOD HEIGHTS BLVD.

MATCH LINE STA. 10+320

EXIST. LIGHT POLE -TO BE RELOCATED BY OTHERS

℄ LAKEWOOD HEIGHTS BLVD.

S89°12'46"E

MATCH LINE STA. 10+440
SEE SHEET NO. 74

RES #15618 RES #15614 RES #15606 RES #15602

RES #15615 RES #15611 RES #15607

HORIZONTAL SCALE IN METERS

CALCULATED

CHECKED

PLAN - C.R. 297
STA. 10+200 TO STA. 10+440

CUY - LAKEWOOD HEIGHTS BOULEVARD

LEGEND

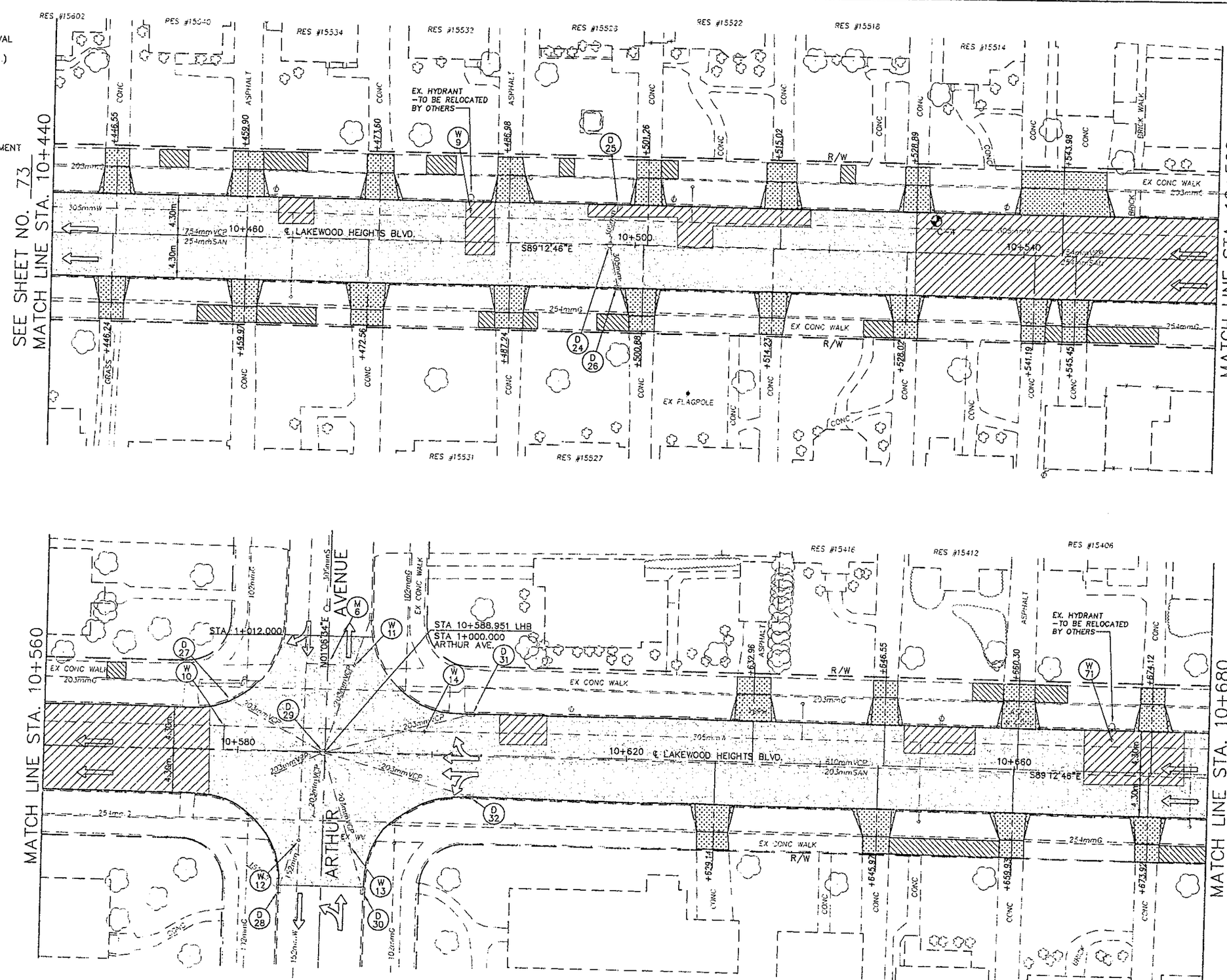
- FULL DEPTH PAVEMENT REMOVAL AND REPLACEMENT (FIELD VERIFY DURING CONSTR.)
- SIDEWALK REMOVAL AND REPLACEMENT
- SIDEWALK REMOVAL WITHOUT REPLACEMENT
- CURB REMOVAL AND REPLACEMENT
- INTEGRAL CURB REMOVAL AND REPLACEMENT
- CONCRETE MEDIAN REMOVAL AND REPLACEMENT
- DRIVE APRON REPLACEMENT
- WEARING COURSE REMOVED AND RESURFACING
- PAVEMENT RESURFACING
- PAVEMENT CORE LOCATION
- MONUMENT BOX
- TRAFFIC MOVEMENT

FOR ROADWAY QUANTITIES, SEE SHEETS 58-65A

FOR ROADWAY PROFILES, SEE SHEETS 86-88

FOR DRAINAGE QUANTITIES, SEE SHEETS 66-67A

FOR DRIVE DETAILS AND QUANTITIES, SEE SHEETS 68-71



DESIGNED BY:	CHECKED BY:
DATE:	DATE:
DRAWN BY:	REVISED BY: MAL
DATE:	DATE: 10/26/98
CAD FILE NAME:	HOSU0300/HCUT0300

HORIZONTAL SCALE IN METERS

CALCULATED

CHECKED

PLAN - C.R. 297
STA. 10+440 TO STA. 10+680

CUY - LAKEWOOD HEIGHTS BOULEVARD

DESIGNED BY:	CHECKED BY:
DATE:	DATE:
DRAWN BY:	REVISED BY: MAL
DATE:	DATE: 10/26/98
CAD FILE NAME:	HOSU0400, HCUT0400

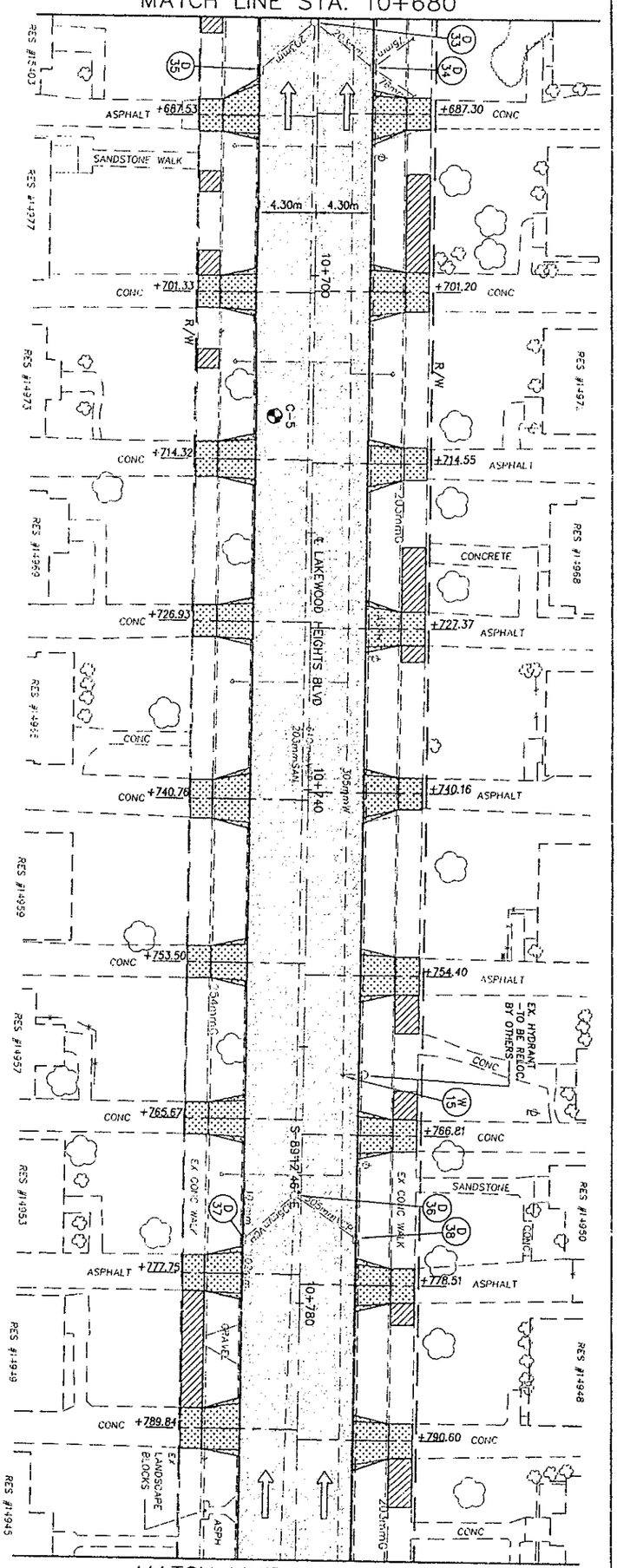
LEGEND

- FULL DEPTH PAVEMENT REMOVAL AND REPLACEMENT (FIELD VERIFY DURING CONSTR.)
- SIDEWALK REMOVAL AND REPLACEMENT
- SIDEWALK REMOVAL WITHOUT REPLACEMENT
- CURB REMOVAL AND REPLACEMENT
- INTEGRAL CURB REMOVAL AND REPLACEMENT
- CONCRETE MEDIAN REMOVAL AND REPLACEMENT
- DRIVE APRON REPLACEMENT
- WEARING COURSE REMOVED AND RESURFACING
- PAVEMENT RESURFACING
- PAVEMENT CORE LOCATION
- MONUMENT BOX
- TRAFFIC MOVEMENT

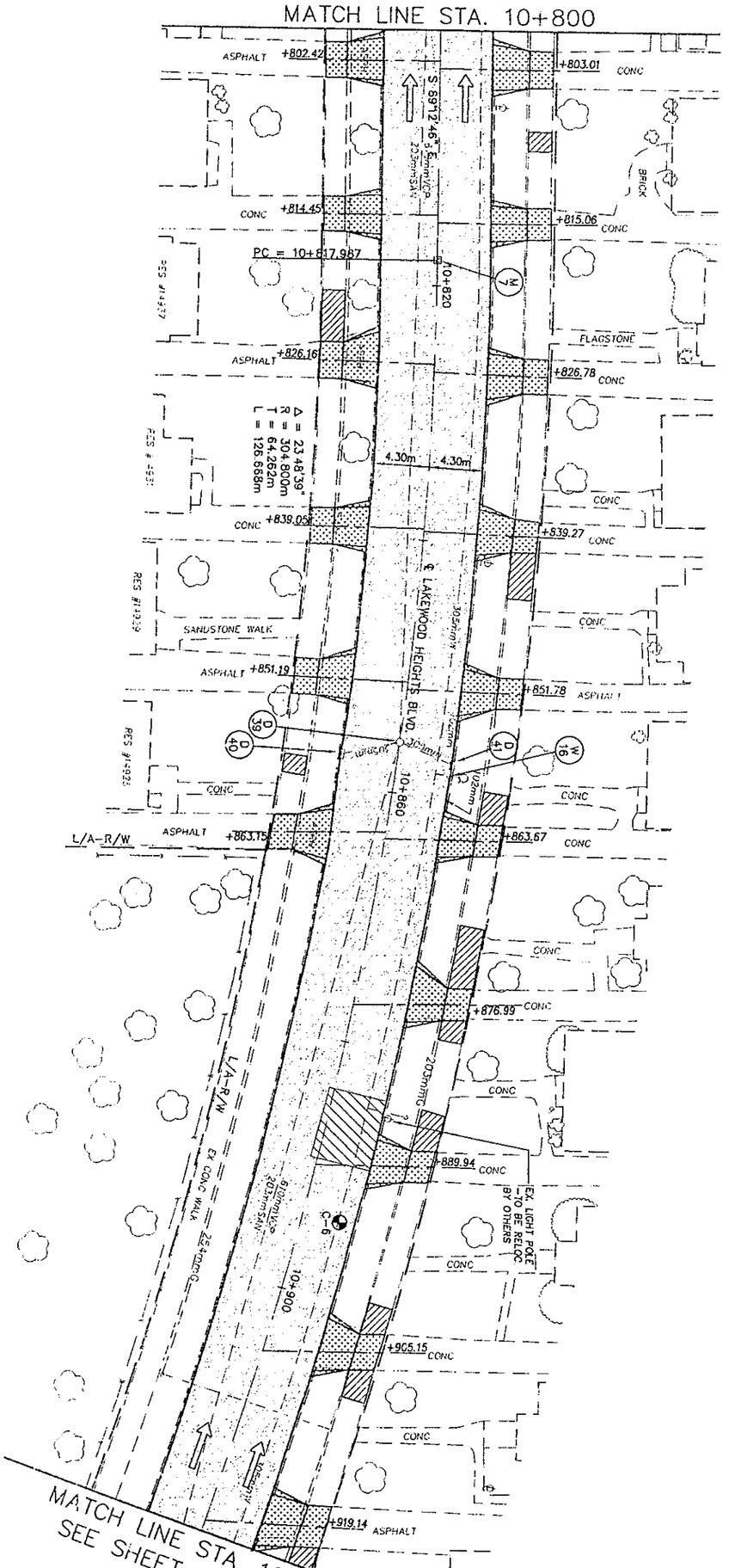
FOR ROADWAY QUANTITIES, SEE SHEETS 58-65A.
FOR ROADWAY PROFILES SEE SHEETS 86-88.
FOR DRAINAGE QUANTITIES SEE SHEETS 66-67A.
FOR DRIVE DETAILS AND QUANTITIES, SEE SHEETS 68-71.

SEE SHEET NO. 74

MATCH LINE STA. 10+680



MATCH LINE STA. 10+800



MATCH LINE STA. 10+920
SEE SHEET NO. 76

75 / 182	CUY - LAKEWOOD HEIGHTS BOULEVARD	PLAN - C.R. 297 STA. 10+680 TO STA. 10+920	CALCULATED / CHECKED	HORIZONTAL SCALE IN METERS	N

LEGEND

- FULL DEPTH PAVEMENT REMOVAL AND REPLACEMENT (FIELD VERIFY DURING CONSTR.)
- SIDEWALK REMOVAL AND REPLACEMENT
- SIDEWALK REMOVAL WITHOUT REPLACEMENT
- CURB REMOVAL AND REPLACEMENT
- INTEGRAL CURB REMOVAL AND REPLACEMENT
- CONCRETE MEDIAN REMOVAL AND REPLACEMENT
- DRIVE APRON REPLACEMENT
- WEARING COURSE REMOVED AND RESURFACING
- PAVEMENT RESURFACING
- PAVEMENT CORE LOCATION
- MONUMENT BOX
- TRAFFIC MOVEMENT

FOR ROADWAY QUANTITIES, SEE SHEETS 58-65A

FOR ROADWAY PROFILES, SEE SHEETS 86-88

FOR DRAINAGE QUANTITIES, SEE SHEETS 66-67A

FOR DRIVE DETAILS AND QUANTITIES, SEE SHEETS 68-71

CURVE DATA
P.I. STA 10+882.249
Δ = 23°48'39"
R = 304.800m
T = 64.262m
L = 126.668m
E = 6.701m

CURVE DATA
P.I. STA 10+965.151
Δ = 39°34'12"
R = 56.976m
T = 20.496m
L = 39.349m
E = 3.574m

℄ PVMT CURVE DATA
P.I. STA 10+982.058
Δ = 21°03'06"
R = 132.503m (NDC = 135M MIN.)
T = 24.620m
L = 48.685m
E = 2.268m

• GUARDRAIL OFFSET MEASURED FROM FACE OF CURB TO FACE OF GUARDRAIL

SEE SHEET NO 75
MATCH LINE STA. 10+920

EX. LIGHT POLE TO BE RELOC. BY OTHERS

CURB RAMP, TYPE 1

CURB RAMP, TYPE 2

ROAD

ALGER

N01°16'47"E

STA. 10+944.655 LHB
STA. 1+000.000 ALGER RD.

P.T. STA. 10+928.852 ℄ PVMT

P.C. STA. 10+957.438 ℄ PVMT

PRC = 10+944.655
DEFL = 153°39'52" RT

CITY OF LAKEWOOD
CITY OF CLEVELAND

℄ LAKEWOOD HEIGHTS BLVD.

PT STA. 11+006.123 ℄ PVMT.=
STA. 11+006.955 ℄ LHB

TRANSITION FULL HGT. CURB TO 0mm IN 3.0 METERS. (TYP BOTH SIDES)

TYPE 1 ANCHOR ASSEMBLY

BEGIN TYPE 5 GUARDRAIL REPLACEMENT
STA. 0+975.1, 7.9m RT. ALGER
MATCH EXISTING
BRIDGE TERM ASSEMBLY TO REMAIN

END EXIST. INTEGRAL CURB
BEGIN EXIST. NON-INTEGRAL CURB
STA. 11+001.32 RT.

MATCH LINE STA. 11+040

MATCH LINE STA. 11+160
SEE SHEET NO. 77

S89°25'27"E

EX CONCRETE RETAINING WALL

DESIGNED BY:		CHECKED BY:	JAN
DATE:		DATE:	8/08/07
DRAWN BY:		REVISED BY:	MAL
SCALE:		DATE:	10/26/20
CAD FILE NAME:		HCSU0503/HCUT0500	

HORIZONTAL SCALE IN METERS

CHECKED

DESIGNED

PLAN - C.R. 297
STA. 10+920 TO STA. 11+160

CUY - LAKEWOOD HEIGHTS BOULEVARD

LEGEND

- FULL DEPTH PAVEMENT REMOVAL AND REPLACEMENT (FIELD VERIFY DURING CONSTR.)
- SIDEWALK REMOVAL AND REPLACEMENT
- SIDEWALK REMOVAL WITHOUT REPLACEMENT
- CURB REMOVAL AND REPLACEMENT
- INTEGRAL CURB REMOVAL AND REPLACEMENT
- CONCRETE MEDIAN REMOVAL AND REPLACEMENT
- DRIVE APRON REPLACEMENT
- WEARING COURSE REMOVED AND RESURFACING
- PAVEMENT RESURFACING
- PAVEMENT CORE LOCATION
- MONUMENT BOX
- TRAFFIC MOVEMENT

FOR ROADWAY QUANTITIES SEE SHEETS 58-65A

FOR ROADWAY PROFILES, SEE SHEETS 86-88

FOR DRAINAGE QUANTITIES, SEE SHEETS 66-67A

FOR DRIVE DETAILS AND QUANTITIES, SEE SHEETS 68-71

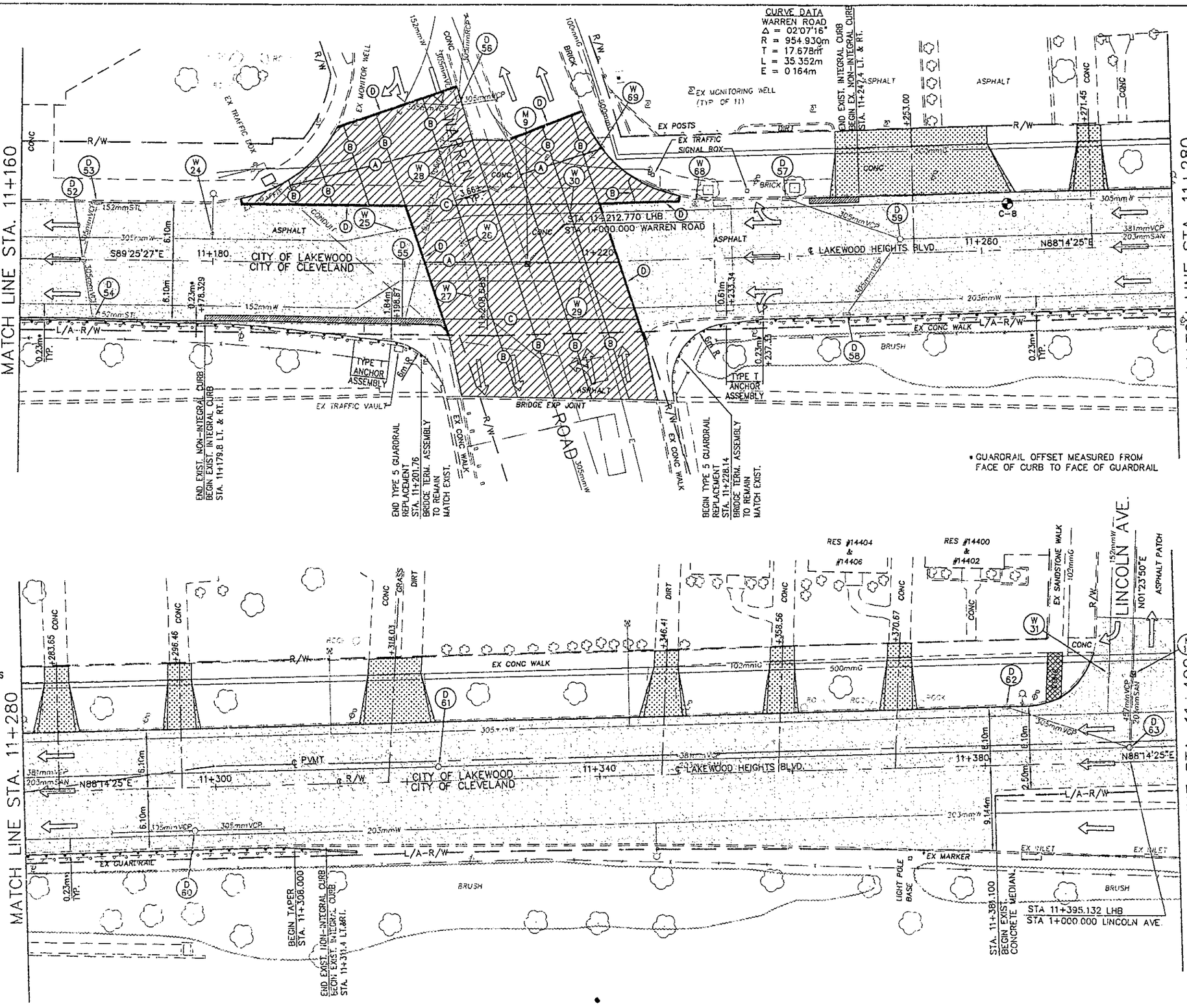
(A) CONTRACTION JOINT PER BP-2.2M

(B) LONGITUDINAL JOINT PER BP-2.1M

(C) 25mm DOWELED EXPANSION JOINT PER BP-2.2M

(D) THICKENDED EDGE JOINT PER BP-2.6C

NOTE:
PAVEMENT JOINTS SHOWN ABOVE ARE FOR GENERAL INFORMATION, NO VARIANCE FROM THE SPECIFICATIONS IS INTENDED.



DESIGNED BY:	CHECKED BY: JAN
DATE:	DATE: 8/08/97
DRAWN BY:	REVISED BY: MAL
DATE:	DATE: 10/26/99
CAD FILE NAME:	HCSU0600/HCUT0600

HORIZONTAL SCALE IN METERS

CALCULATED

CHECKED

PLAN STA. 11+160 TO STA. 11+400

CUY - LAKEWOOD HEIGHTS BOULEVARD

LEGEND

- FULL DEPTH PAVEMENT REMOVAL AND REPLACEMENT (FIELD VERIFY DURING CONSTR.)
- SIDEWALK REMOVAL AND REPLACEMENT
- SIDEWALK REMOVAL WITHOUT REPLACEMENT
- CURB REMOVAL AND REPLACEMENT
- INTEGRAL CURB REMOVAL AND REPLACEMENT
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- DRIVE APRON REPLACEMENT
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- PAVEMENT CORE LOCATION
- MONUMENT BOX
- TRAFFIC MOVEMENT

FOR ROADWAY QUANTITIES SEE SHEETS 58-65A

FOR ROADWAY PROFILES, SEE SHEETS 66-88

FOR DRAINAGE QUANTITIES, SEE SHEETS 66-67A

FOR DRIVE DETAILS AND QUANTITIES, SEE SHEETS 68-71

DESIGNED BY:	CHECKED BY:
DATE:	DATE:
DRAWN BY:	REVISED BY: MAL
DATE:	DATE: 10/26/98
CAD FILE NAME:	HCSU0700/HCUT0700

HORIZONTAL SCALE IN METERS

CALCULATED

CHKD/RD

PLAN - C.R. 297
STA. 11+400 TO STA. 11+640

CUY - LAKEWOOD HEIGHTS BOULEVARD

78
162

SEE SHEET NO. 78
MATCH LINE STA. 11+640

MATCH LINE STA. 11+760

MATCH LINE STA. 11+880
SEE SHEET NO. 80

FOR ROADWAY QUANTITIES, SEE SHEETS 58-65A

FOR ROADWAY PROFILES, SEE SHEETS 86-88

FOR DRAINAGE QUANTITIES, SEE SHEETS 66-67A

FOR DRIVE DETAILS AND QUANTITIES, SEE SHEETS 68-71

FOR BUS PAD DETAILS AND QUANTITIES, SEE SHEET 93

LEGEND

- FULL DEPTH PAVEMENT REMOVAL AND REPLACEMENT (FIELD VERIFY DURING CONSTR.)
- SIDEWALK REMOVAL AND REPLACEMENT
- SIDEWALK REMOVAL WITHOUT REPLACEMENT
- CURB REMOVAL AND REPLACEMENT
- INTEGRAL CURB REMOVAL AND REPLACEMENT
- CONCRETE MEDIAN REMOVAL AND REPLACEMENT
- DRIVE APRON REPLACEMENT
- WEARING COURSE REMOVED AND RESURFACING
- PAVEMENT RESURFACING
- PAVEMENT CORE LOCATION
- MONUMENT BOX
- TRAFFIC MOVEMENT

DESIGNED BY:	CHECKED BY:
DATE:	DATE:
DRAWN BY:	REVISED BY: MAL
DATE:	DATE: 10/26/98
CAD FILE NAME:	HCSU0600/HCU10600

HORIZONTAL SCALE IN METERS

CALCULATED / CHECKED

PLAN - C.R. 297
STA. 11+640 TO STA. 11+880

CITY - LAKEWOOD HEIGHTS BOULEVARD

79
152

FOR ROADWAY QUANTITIES, SEE SHEETS 58-65A

FOR ROADWAY PROFILES SEE SHEETS 86-88

FOR DRAINAGE QUANTITIES, SEE SHEETS 66-67A

FOR DRIVE DETAILS AND QUANTITIES, SEE SHEETS 68-71

FOR BUS PAD DETAILS AND QUANTITIES, SEE SHEET 93

LEGEND

- FULL DEPTH PAVEMENT REMOVAL AND REPLACEMENT (FIELD VERIFY DURING CONSTR.)
- SIDEWALK REMOVAL AND REPLACEMENT
- SIDEWALK REMOVAL WITHOUT REPLACEMENT
- CURB REMOVAL AND REPLACEMENT
- INTEGRAL CURB REMOVAL AND REPLACEMENT
- CONCRETE MEDIAN REMOVAL AND REPLACEMENT
- DRIVE APRON REPLACEMENT
- WEARING COURSE REMOVED AND RESURFACING
- PAVEMENT RESURFACING
- PAVEMENT CORE LOCATION
- MONUMENT BOX
- TRAFFIC MOVEMENT

DESIGNED BY:	CHECKED BY:
DATE:	DATE:
DRAWN BY:	REVISED BY: MAL
DATE:	DATE: 10/26/98
CAD FILE NAME:	HOSU0900/HCUT0900

SEE SHEET NO. 79
MATCH LINE STA. 11+880

MATCH LINE STA. 12+000
SEE SHEET NO. 81

MATCH LINE STA. 12+000

MATCH LINE STA. 12+120

HORIZONTAL SCALE IN METERS

CALCULATED / DRAWN

PLAN - C.R. 297
STA. 11+880 TO STA. 12+120

CUY - LAKEWOOD HEIGHTS BOULEVARD

80
162

FOR ROADWAY QUANTITIES, SEE SHEETS 58-65A.

FOR ROADWAY PROFILES SEE SHEETS 86-88.

FOR DRAINAGE QUANTITIES, SEE SHEETS 66-67A.

FOR DRIVE DETAILS AND QUANTITIES, SEE SHEETS 68-71.

FOR BUS PAD DETAILS AND QUANTITIES, SEE SHEET 93

SEE SHEET NO. 80

MATCH LINE STA. 12+120

MATCH LINE STA. 12+240

SEE SHEET NO. 82

MATCH LINE STA. 12+240

MATCH LINE STA. 12+360

LEGEND

- FULL DEPTH PAVEMENT REMOVAL AND REPLACEMENT (FIELD VERIFY DURING CONSTR.)
- SIDEWALK REMOVAL AND REPLACEMENT
- SIDEWALK REMOVAL WITHOUT REPLACEMENT
- CURB REMOVAL AND REPLACEMENT
- INTEGRAL CURB REMOVAL AND REPLACEMENT
- CONCRETE MEDIAN REMOVAL AND REPLACEMENT
- DRIVE APRON REPLACEMENT
- WEARING COURSE REMOVED AND RESURFACING
- PAVEMENT RESURFACING
- PAVEMENT CORE LOCATION
- M MONUMENT BOX
- TRAFFIC MOVEMENT

(A) CONTRACTION JOINT PER BP-2.2M

(B) LONGITUDINAL JOINT PER BP-2.1M

(C) 25mm DOWELED EXPANSION JOINT PER BP-2.2M

(D) THICKENED EDGE JOINT PER BP-2.6C

(•) FOR JOINTING, SEE APPROPRIATE CATCH BASIN/ INLET STD. DWG.

NOTE: CONTRACTOR MUST HAVE ENGINEER'S APPROVAL OF COMPLIANCE WITH PLAN JOINTING LAYOUT PRIOR TO SETTING JOINT STEEL

DESIGNED BY:	CHECKED BY:
DATE:	DATE:
DRAWN BY:	REVISED BY: MAL
DATE:	DATE: 10/26/98
CAD FILE NAME:	HOSJU00/NCU1000

PLAN - C.R. 297
STA. 12+120 TO STA. 12+360

CUY - LAKEWOOD HEIGHTS BOULEVARD

BENCHMARK

BM-27 STA. 12+567.6, 11.940 m RT. "□" IN CORNER OF SW WINGWALL, EL 235.034

FOR ROADWAY QUANTITIES, SEE SHEETS 58-65A

FOR ROADWAY PROFILES, SEE SHEETS 86-88

FOR DRAINAGE QUANTITIES, SEE SHEETS 66-67A

FOR DRIVE DETAILS AND QUANTITIES, SEE SHEETS 68-71

FOR BRIDGE PLANS, SEE SHEETS 90-91, 132-162

LEGEND

- FULL DEPTH PAVEMENT REMOVAL AND REPLACEMENT (FIELD VERIFY DURING CONSTR.)
- SIDEWALK REMOVAL AND REPLACEMENT
- SIDEWALK REMOVAL WITHOUT REPLACEMENT
- CURB REMOVAL AND REPLACEMENT
- INTEGRAL CURB REMOVAL AND REPLACEMENT
- CONCRETE MEDIAN REMOVAL AND REPLACEMENT
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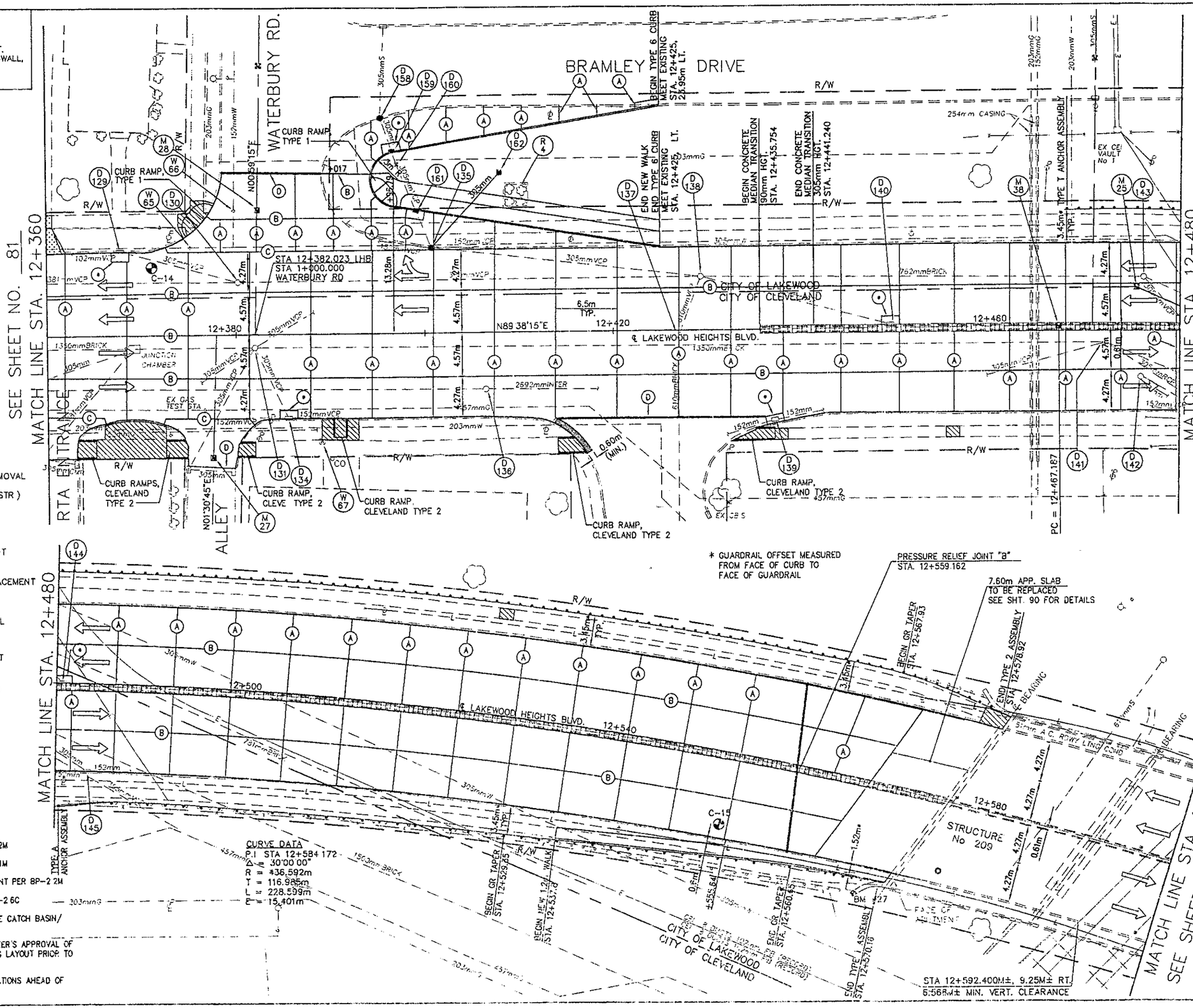
- PAVEMENT RESURFACING
- PAVEMENT CORE LOCATION
- MONUMENT BOX
- TRAFFIC MOVEMENT
- (A) CONTRACTION JOINT PER BP-2.2M
- (B) LONGITUDINAL JOINT PER BP-2.1M
- (C) 25mm DOWELED EXPANSION JOINT PER BP-2.2M
- (D) THICKENED EDGE JOINT PER BP-2.6C
- (•) FOR JOINTING, SEE APPROPRIATE CATCH BASIN/ INLET STD. DWG.

NOTE: CONTRACTOR MUST HAVE ENGINEER'S APPROVAL OF COMPLIANCE WITH PLAN JOINTING LAYOUT PRIOR TO SETTING JOINT STEEL.

SCALE CONTRACTION JOINT LOCATIONS AHEAD OF STA. 12+420.50



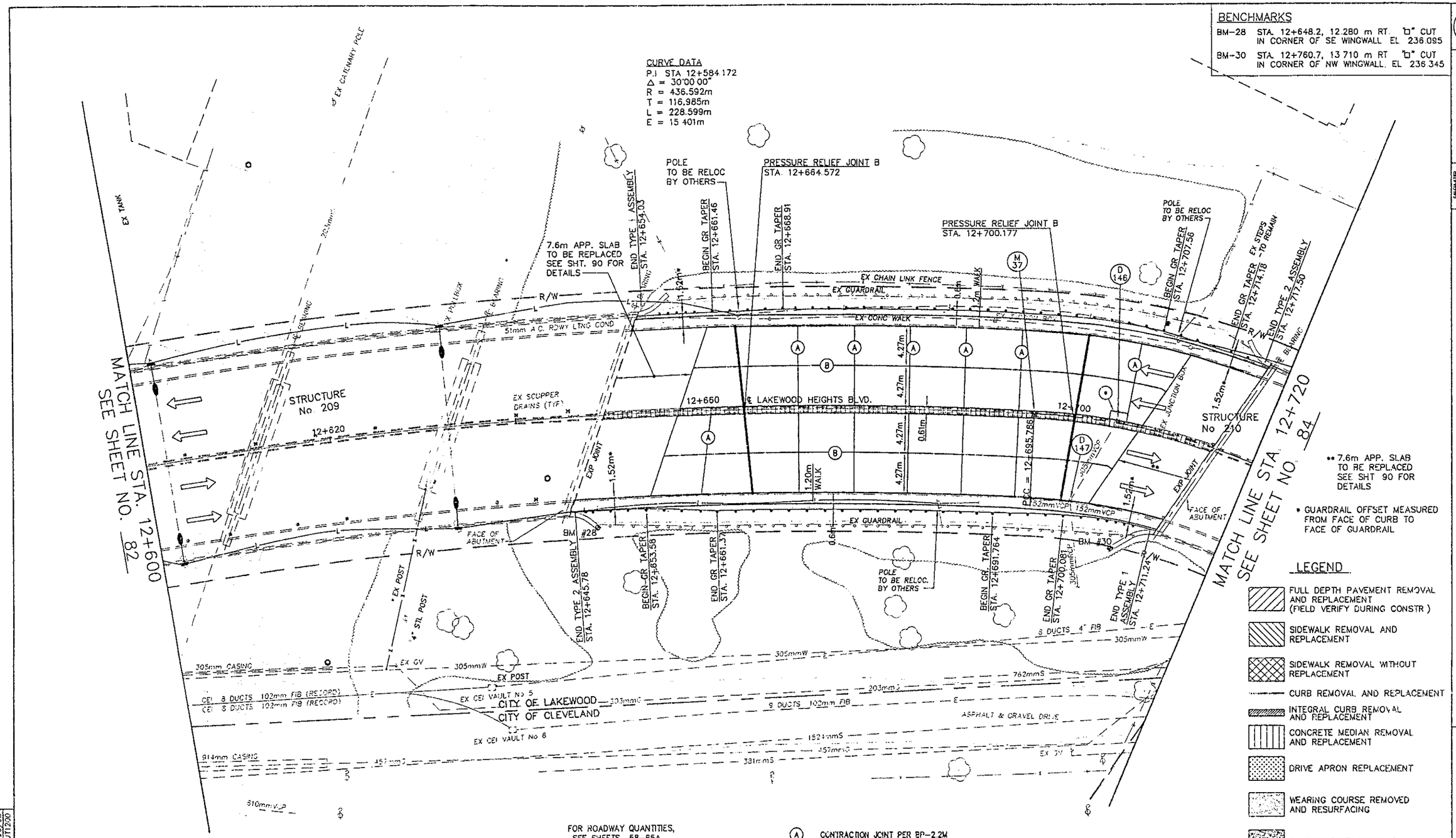
DESIGNED BY:	POH
CHECKED BY:	
DATE:	10/14/98
DRAWN BY:	MAL
REVISED BY:	
DATE:	10/26/98
CAD FILE NAME:	NGS01TCD/HCD1T100

HORIZONTAL SCALE IN METERS

PLAN - C.R. 297
STA. 12+360 TO STA. 12+600

CUY-LAKEWOOD HEIGHTS BOULEVARD

82
182


BENCHMARKS
BM-28 STA. 12+648.2, 12.280 m RT. "D" CUT IN CORNER OF SE WINGWALL EL 236.095
BM-30 STA. 12+760.7, 13.710 m RT "D" CUT IN CORNER OF NW WINGWALL. EL 236.345
CURVE DATA
P.I. STA 12+584.172
Δ = 30°00'00"
R = 436.592m
T = 116.985m
L = 228.599m
E = 15.401m
MATCH LINE STA. 12+600 SEE SHEET NO. 82
MATCH LINE STA. 12+720 SEE SHEET NO. 84
STRUCTURE No. 209
STRUCTURE No. 210
℄ LAKEWOOD HEIGHTS BLVD.
12+650
12+700
12+620
POLE TO BE RELOC BY OTHERS
PRESSURE RELIEF JOINT B STA. 12+664.572
PRESSURE RELIEF JOINT B STA. 12+700.177
7.6m APP. SLAB TO BE REPLACED SEE SHT. 90 FOR DETAILS
END TYPE 1 ASSEMBLY STA. 12+654.03
BEGIN GR TAPER STA. 12+661.46
END GR TAPER STA. 12+668.91
BEGIN GR TAPER STA. 12+707.56
END GR TAPER STA. 12+714.78
EX STEPS TO REMAIN
END TYPE 2 ASSEMBLY STA. 12+717.50
END TYPE 2 ASSEMBLY STA. 12+645.78
BEGIN GR TAPER STA. 12+653.58
END GR TAPER STA. 12+661.37
BEGIN GR TAPER STA. 12+691.764
END GR TAPER STA. 12+700.081
END TYPE 1 ASSEMBLY STA. 12+711.24
EX CHAIN LINK FENCE
EX GUARDRAIL
EX CONC WALK
EX SCUPPER DRAINS (TYP)
EX JUNCTION BOX
EX GUARDRAIL
EX POST
EX STL POST
EX GV
EX CEI VAULT No 5
EX CEI VAULT No 6
CITY OF LAKEWOOD
CITY OF CLEVELAND
CEI 8 DUCTS 102mm FIB (RECORD)
8 DUCTS 102mm FIB
9 DUCTS 102mm FIB
5 DUCTS 4" FIB
ASPHALT & GRAVEL DRIVE
FACE OF ABUTMENT
BM #28
BM #30
R/W
EX TANK
℄ EX CATENARY POLE
51mm A.C. ROWY LTNG COND
305mm CASING
914mm CASING
510mmVCP
762mmS
610mmS
457mmS
381mmS
305mmW
203mmS
152mmS
152mmVCP
1.52m*
1.54m*
1.20m WALK
0.61m
0.6m
4.27m
12+695.788 PCC
** 7.6m APP. SLAB TO BE REPLACED SEE SHT 90 FOR DETAILS
* GUARDRAIL OFFSET MEASURED FROM FACE OF CURB TO FACE OF GUARDRAIL
LEGEND
FULL DEPTH PAVEMENT REMOVAL AND REPLACEMENT (FIELD VERIFY DURING CONSTR.)
SIDEWALK REMOVAL AND REPLACEMENT
SIDEWALK REMOVAL WITHOUT REPLACEMENT
CURB REMOVAL AND REPLACEMENT
INTEGRAL CURB REMOVAL AND REPLACEMENT
CONCRETE MEDIAN REMOVAL AND REPLACEMENT
DRIVE APRON REPLACEMENT
WEARING COURSE REMOVED AND RESURFACING
PAVEMENT RESURFACING
PAVEMENT CORE LOCATION
MONUMENT BOX
TRAFFIC MOVEMENT
HORIZONTAL STOPPING SIGHT DISTANCE = 45m (NDC=74m MIN. ACTUAL DESIGN SPEED 42km/h)
FOR ROADWAY QUANTITIES, SEE SHEETS 58-65A
FOR ROADWAY PROFILES, SEE SHEETS 86-88
FOR DRAINAGE QUANTITIES SEE SHEETS 66-67A
FOR DRIVE DETAILS AND QUANTITIES, SEE SHEETS 68-71
FOR BRIDGE PLANS, SEE SHEET 90-91, 132-152
(A) CONTRACTION JOINT PER BP-2.2M
(B) LONGITUDINAL JOINT PER BP-2.1M
(C) 25mm DOWELED EXPANSION JOINT PER BP-2.2M
(D) THICKENED EDGE JOINT PER BP-2.6C
(•) FOR JOINTING, SEE APPROPRIATE CATCH BASIN/ INLET STD. DWG.
NOTE: CONTRACTOR MUST HAVE ENGINEER'S APPROVAL OF COMPLIANCE WITH PLAN JOINTING LAYOUT PRIOR TO SETTING JOINT STEEL.
SCALE CONTRACTION JOINT LOCATIONS AHEAD OF STA. 12+420.50
CURVE DATA
P.I. STA N.A.
Δ = 194°19'54"
R = 70.104m
T = N.A.
L = 237.774m
E = N.A.
DESIGNED BY: JAN
CHECKED BY:
DATE: 8/08/97
DRAWN BY: MAL
REVISED BY:
DATE: 10/26/98
CAD FILE NAME: HOSU1200/HCUT1200
HORIZONTAL SCALE IN METERS
CALCULATED
CHECKED
PLAN - C.R. 297
STA. 12+600 TO STA. 12+720
CUY - LAKEWOOD HEIGHTS BOULEVARD
83
162

BENCHMARKS

BM-29 STA. 12+767.6, 11.310m RT "□" CUT IN CORNER OF SW WINGWALL, EL 233.320

• GUARDRAIL OFFSET MEASURED FROM FACE OF CURB TO FACE OF GUARDRAIL.

FOR ROADWAY QUANTITIES SEE SHEETS 58-65A

FOR ROADWAY PROFILES, SEE SHEETS 86-88

FOR DRAINAGE QUANTITIES, SEE SHEETS 66-67A

FOR DRIVE DETAILS AND QUANTITIES, SEE SHEETS 68-71

FOR BRIDGE PLANS, SEE SHEETS 90-91, 132-162

HORIZONTAL SCALE IN METERS

CALCULATED | CHECKED

PLAN - C.R. 297
STA. 12+720 TO STA. 12+840

CITY - LAKEWOOD HEIGHTS BOULEVARD

84
162

7.60m APP. SLAB TO BE REPLACED SEE SHT 90 FOR DETAILS

PRESSURE RELIEF JOINT B STA. 12+776.555

POLE TO BE RELOCATED BY OTHERS

EXIST. LIGHTING FED. OVERHEAD

EX CHAIN LINK FENCE

CONC RETAINING WALL W/ CL FENCE

EX GUARDRAIL

STRUCTURE No 210

12+780 LAKEWOOD HEIGHTS BLVD.

12+740

12+820

12+840

BM#29

FACE OF ABUTMENT

EXP JOINT

CITY OF CLEVELAND S61°49'15"W

CITY OF LAKEWOOD

BEREA ROAD

N61°49'15"E

MATCH LINE STA 12+720 SEE SHEET NO. 83

MATCH LINE STA. 12+840 SEE SHEET NO. 85

Δ = 194°19.5'
R = 70.104m
T = 557.609m
L = 237.771m

HORIZONTAL STOPPING SIGHT DISTANCE = 45m
(NDC=74m MIN. ACTUAL DESIGN SPEED 42km/h)

LEGEND

- FULL DEPTH PAVEMENT REMOVAL AND REPLACEMENT (FIELD VERIFY DURING CONSTR.)
- SIDEWALK REMOVAL AND REPLACEMENT
- SIDEWALK REMOVAL WITHOUT REPLACEMENT
- CURB REMOVAL AND REPLACEMENT
- INTEGRAL CURB REMOVAL AND REPLACEMENT
- CONCRETE MEDIAN REMOVAL AND REPLACEMENT
- DRIVE APRON REPLACEMENT
- WEARING COURSE REMOVED AND RESURFACING
- PAVEMENT RESURFACING
- PAVEMENT CORE LOCATION
- MONUMENT BOX
- TRAFFIC MOVEMENT

(A) CONTRACTION JOINT PER BP-2.2M

(B) LONGITUDINAL JOINT PER BP-2.1M

(C) 25mm DOWELED EXPANSION JOINT PER BP-2.2M

(D) THICKENED EDGE JOINT PER BP-2.6C

(•) FOR JOINTING, SEE APPROPRIATE CATCH BASIN/ INLET STD. DWG.

NOTE: CONTRACTOR MUST HAVE ENGINEER'S APPROVAL OF COMPLIANCE WITH PLAN JOINTING LAYOUT PRIOR TO SETTING JOINT STEEL.

SCALE CONTRACTION JOINT LOCATIONS AHEAD OF STA. 12+420.50

DESIGNED BY:	CHECKED BY: JAN
DATE:	DATE: 8/08/97
DRAWN BY:	REVISED BY: MAL
DATE:	DATE: 10/26/98
CAD FILE NAME:	HGSC1300/HCUT1300

JOINT TERMINATION DETAIL

CURB
0.6m TYP.

FOR ROADWAY QUANTITIES, SEE SHEETS 58-65A

FOR ROADWAY PROFILES, SEE SHEETS 86-88

FOR DRAINAGE QUANTITIES SEE SHEETS 66-67A

FOR DRIVE DETAILS AND QUANTITIES, SEE SHEETS 68-71

EX STEEL BUILDING

EX BRICK BUILDING

EX CHAIN LINK FENCE

EX CONC WALK

STA. 12+923.754 BEGIN CONCRETE MEDIAN TRANSITION 305mm HGT

STA. 12+929.240 END CONCRETE MEDIAN TRANSITION 90mm HGT.

TYP.

D 151

D 153

D 156

D 148

D 149

D 150

D 152

D 154

D 155

TYPE A ANCHOR ASSEMBLY

R/W

4.27m

0.61m

12+900

305mmRCP

152mmVCP

152mmRCP

CMP

EX CB

EX MH

EX CATCH BASIN

EX CB LEADS

EX CB DUCTS

305mmVCP

SIGNAL SUPPORT POLE

STA 12+944.151 LHB=
STA 1+000.000 BEREA ROAD

N46°01'51"W

1+000

SIGNAL CONTROL BOX ON CONCRETE PAD

CONC

EX CHAIN LINK FENCE

EX POST

GRASS

ASPHALT

BEREA ROAD

EX BUSHES

EX POSTS

EX STL POST

EX GT VAULT

EX BRICK BLDG

PLANTER

PC

0+950.075

N61°45'15"E

EX GT VAULT

END WORK
END PROJECT
STA. 12+937

STP-- BHF 93C( )

SEE SHEET NO. 84
MATCH LINE STA. 12+840

CURVE DATA
P.I. STA N.A.
Δ = 194°19'54"
R = 70.104m
T = N.A.
L = 237.774m
E = N.A

CURVE DATA
P.I. STA. 0+109.996
Δ = 41°17'10"
R = 159.054m
T = 59.921m
L = 114.611m
E = 10.913m

LEGEND

- FULL DEPTH PAVEMENT REMOVAL AND REPLACEMENT (FIELD VERIFY DURING CONSTR.)
- SIDEWALK REMOVAL AND REPLACEMENT
- SIDEWALK REMOVAL WITHOUT REPLACEMENT
- CURB REMOVAL AND REPLACEMENT
- INTEGRAL CURB REMOVAL AND REPLACEMENT
- CONCRETE MEDIAN REMOVAL AND REPLACEMENT
- DRIVE APRON REPLACEMENT
- WEARING COURSE REMOVED AND RESURFACING
- PAVEMENT RESURFACING
- PAVEMENT CORE LOCATION
- MONUMENT BOX
- TRAFFIC MOVEMENT

(A) CONTRACTION JOINT PER BP-2.2M
(B) LONGITUDINAL JOINT PER BP-2.1M
(C) 25mm DOWELED EXPANSION JOINT PER BP-2.2M
(D) THICKENED EDGE JOINT PER BP-2.6C
(•) FOR JOINTING, SEE APPROPRIATE CATCH BASIN/ INLET STD. DWG.

NOTE: CONTRACTOR MUST HAVE ENGINEER'S APPROVAL OF COMPLIANCE WITH PLAN JOINTING LAYOUT PRIOR TO SETTING JOINT STEEL.

SCALE CONTRACTION JOINT LOCATIONS AHEAD OF STA 12+420.50

DESIGNED BY:	CHECKED BY: PDH
DATE:	DATE: 10/14/98
DRAWN BY:	REVISED BY: MAL
DATE:	DATE: 10/26/98
CAD FILE NAME:	HCSD1400/HCUT1400

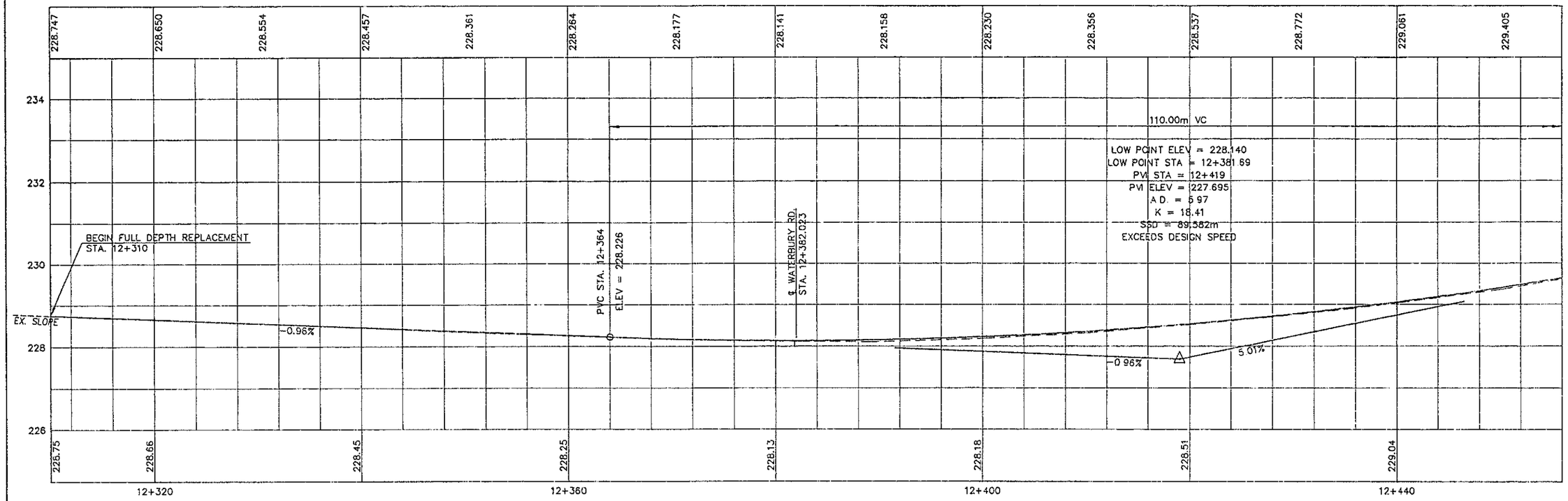
HORIZONTAL SCALE IN METERS

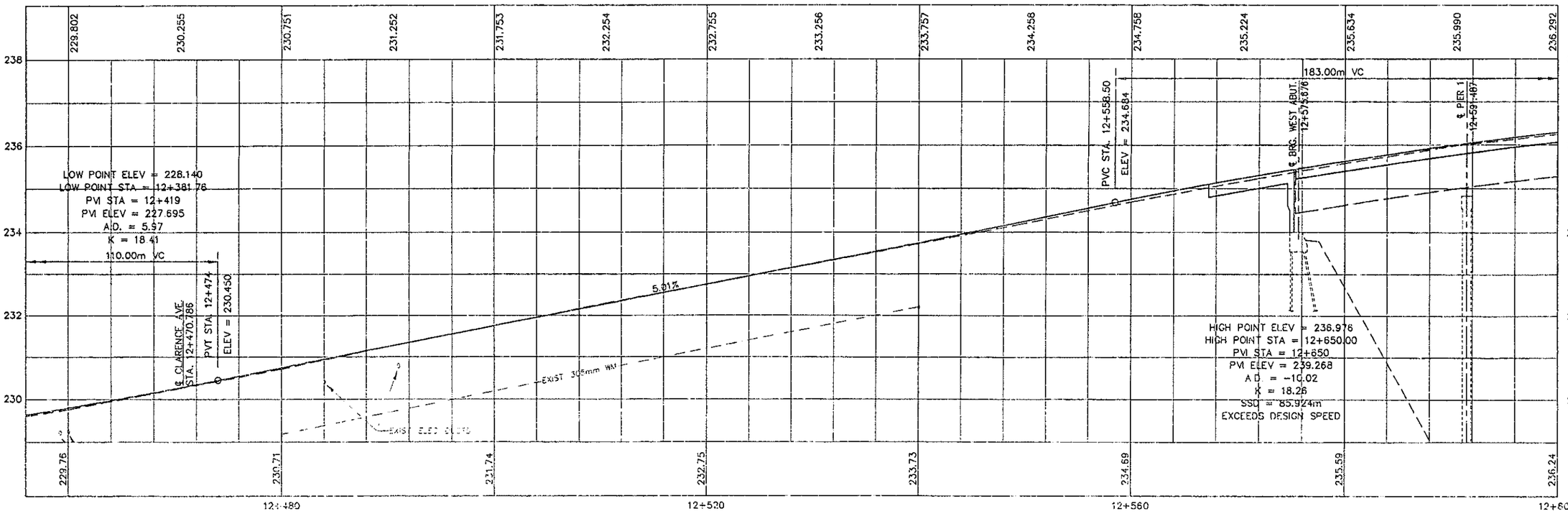
CALCULATED

CHECKED

PLAN - C.R. 297
STA. 12+840 TO STA. 12+960

CUY - LAKEWOOD HEIGHTS BOULEVARD





DESIGNED BY: CHECKED BY:
DATE: DATE:
DRAWN BY: MAL REVISED BY: MAL
DATE: 7/29/99 DATE: 10/26/99
CAD FILE NAME: NGP0001

CALCULATED JAN CHECKED PDH

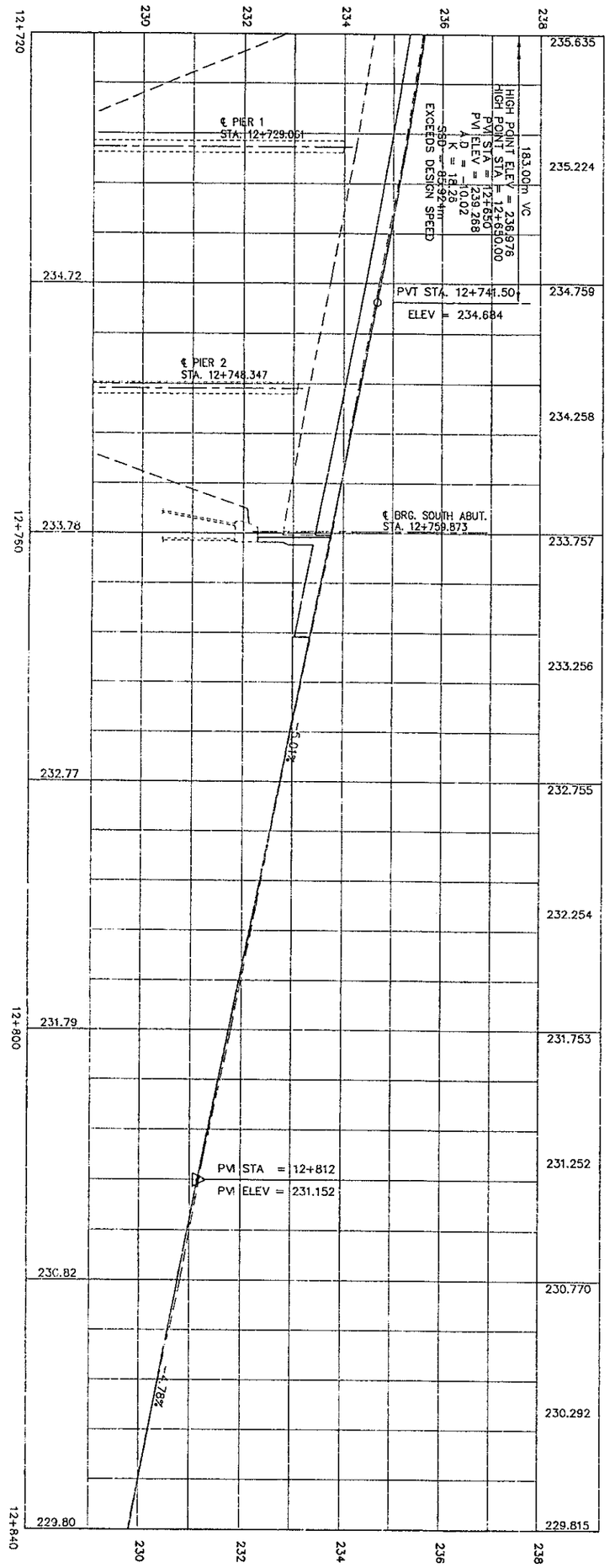
VERTICAL SCALE IN METERS 0 1 2

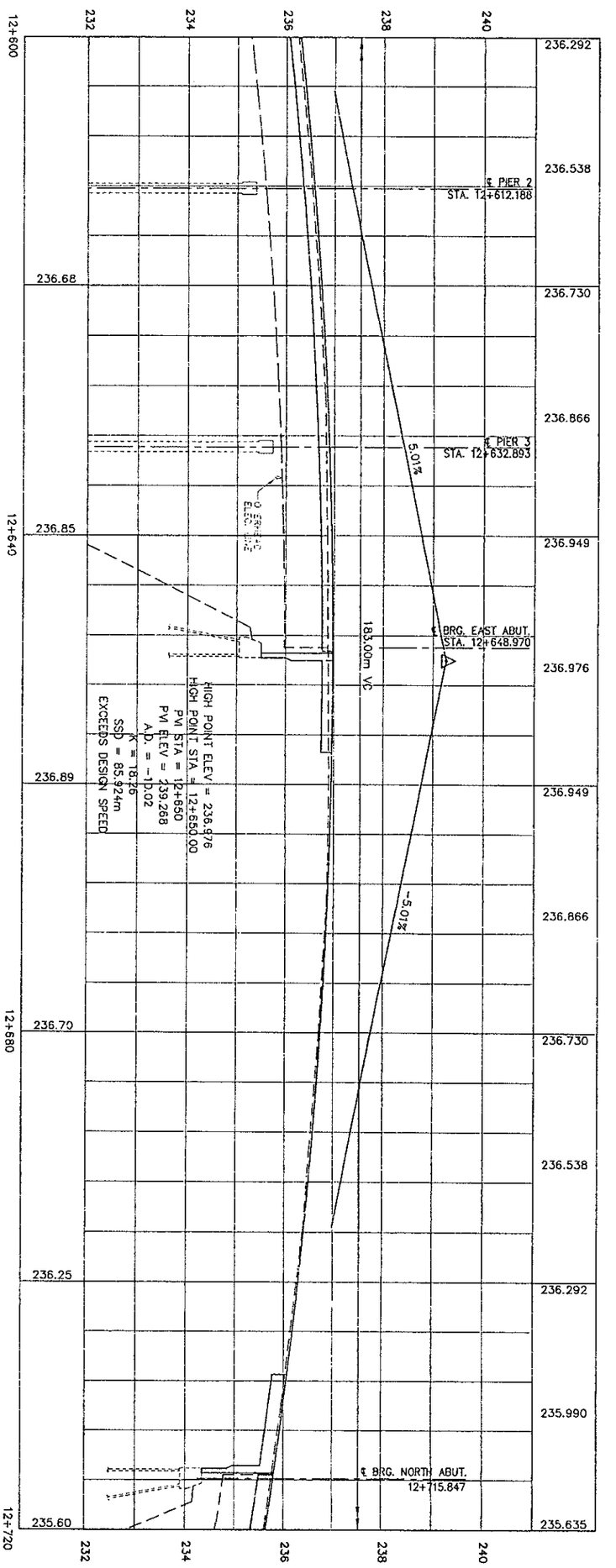
HORIZONTAL SCALE IN METERS 0 2 4 8

PROFILE - C.R. 297
STA. 12+310 TO STA. 12+600

CITY - LAKEWOOD HEIGHTS BOULEVARD

DESIGNED BY:		CHECKED BY:	
DATE:		DATE:	
DRAWN BY:	MAL	REVISED BY:	MAL
DATE:	7/28/97	DATE:	10/26/98
CAD FILE NAME:		HGPH0101	





87 / 162	CSV - LAKEWOOD HEIGHTS BOULEVARD	PROFILE - C.R. 297 STA. 12+600 TO STA. 12+840	HORIZONTAL SCALE IN METERS	VERTICAL SCALE IN METERS	CALCULATED JAN CHECKED PDH

DESIGNED BY:	CHECKED BY:
DATE:	DATE:
DRAWN BY: JAN	REVISED BY: VAL
DATE: 7/25/07	DATE: 10/26/09
CAD FILE NAME:	HGPR0102

CALCULATED JAN
CHECKED PDH

VERTICAL SCALE IN METERS

HORIZONTAL SCALE IN METERS

PROFILE - C.R. 297
STA. 12+840 TO STA. 12+937

GUY - LAKEWOOD HEIGHTS BOULEVARD

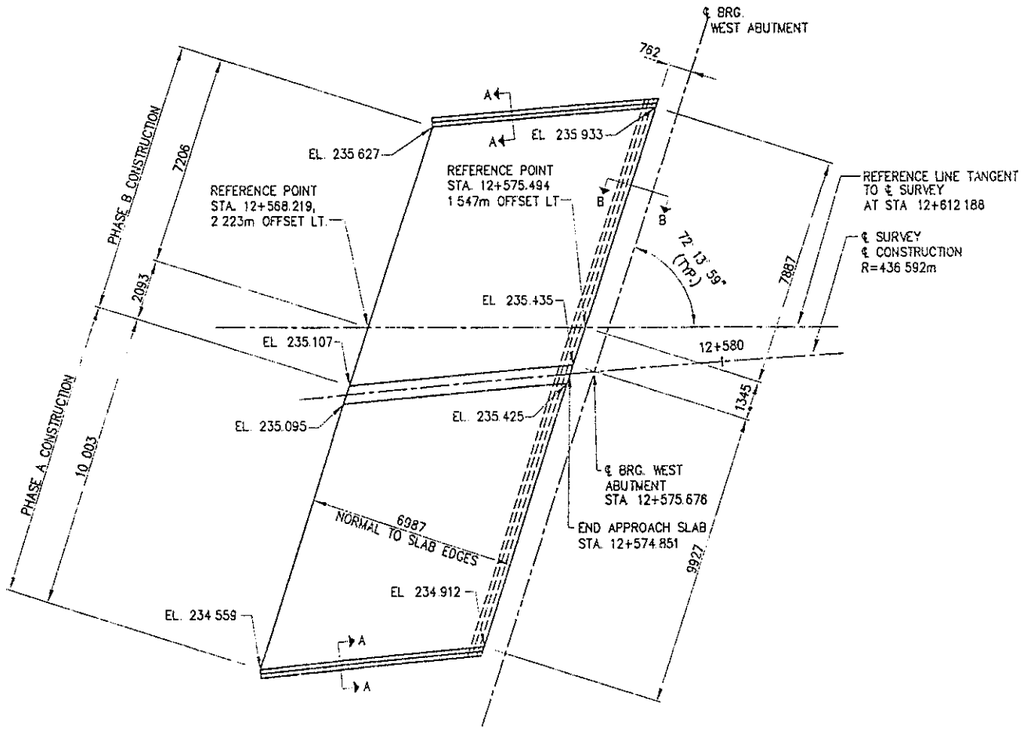
PAVEMENT ELEVATION TABLE – LAKEWOOD HTS BLVD.

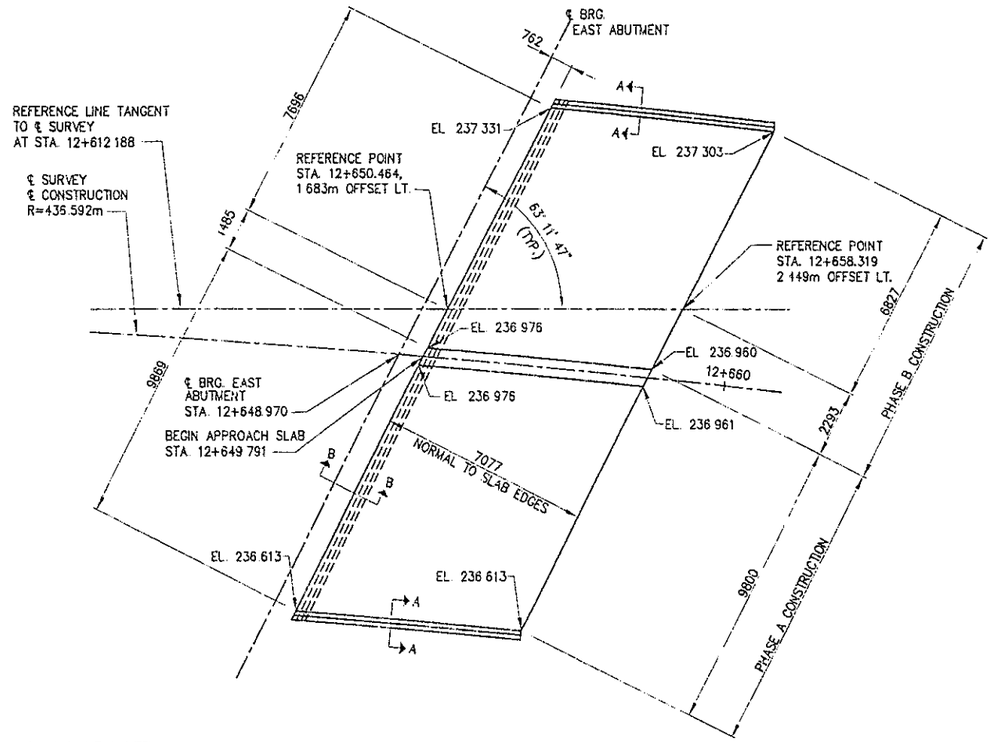
STATION	LEFT EDGE OF PAVEMENT		LEFT LANE LINE		LEFT EDGE OF MEDIAN		PAVEMENT CROSS SLOPE LEFT	℄ PROFILE GRADE	PAVEMENT CROSS SLOPE RIGHT	RIGHT EDGE OF MEDIAN		RIGHT LANE LINE		RIGHT EDGE OF PAVEMENT		REMARKS
	OFFSET	ELEVATION	OFFSET	ELEVATION	OFFSET	ELEVATION				OFFSET	ELEVATION	OFFSET	ELEVATION	OFFSET	ELEVATION	
12+310	8.00	228.622	4.00	228.685			−0.0156	228.747	−0.0156			4.00	228.685	8.20	228.619	BEGIN EOP TAPER, LT. & RT.
12+320	8.12	228.523	4.08	228.586			−0.0156	228.650	−0.0156			4.08	228.586	8.29	228.521	
12+330	8.23	228.426	4.16	228.489			−0.0156	228.554	−0.0156			4.16	228.489	8.38	228.423	
12+340	8.35	228.327	4.24	228.391			−0.0156	228.457	−0.0156			4.24	228.391	8.47	228.325	
12+350	8.47	228.229	4.32	228.294			−0.0156	228.361	−0.0156			4.32	228.294	8.56	228.228	
12+360	8.58	228.130	4.40	228.195			−0.0156	228.264	−0.0156			4.40	228.195	8.64	228.129	
12+370	8.70	228.042	4.47	228.108			−0.0156	228.178	−0.0156			4.47	228.108	8.73	228.042	
12+380	8.82	228.003	4.55	228.070			−0.0156	228.141	−0.0156			4.55	228.070	8.82	228.003	
12+382.023	8.84	228.002	4.57	228.069			−0.0156	228.140	−0.0156			4.57	228.069	8.84	228.002	END EOP TAPER, LT. & RT.
12+382.483	8.84	228.021	4.57	228.087			−0.0155	228.158	−0.0156			4.57	228.087	8.84	228.020	BEGIN SUPERELEVATION RUNOUT
12+390	8.84	228.041	4.57	228.097			−0.0133	228.158	−0.0156			4.57	228.087	8.84	228.020	
12+400	12.77	228.097	4.57	228.183			−0.0104	228.230	−0.0156			4.57	228.159	8.84	228.092	
12+410	11.20	228.273	4.57	228.323			−0.0075	228.357	−0.0156			4.57	228.286	8.84	228.219	
12+420	9.63	228.493	4.57	228.516			−0.0046	228.537	−0.0156			4.57	228.466	8.84	228.399	
12+430	8.84	228.757	4.57	228.764			−0.0017	228.772	−0.0156			4.57	228.701	8.84	228.634	
12+435.754	8.84	228.932	4.57	228.932	0.3	228.932	−0.0000	228.932	−0.0156	0.3	228.927	4.57	228.861	8.84	228.794	BEGIN CONCRETE MEDIAN
12+435.823	8.84	228.934	4.57	228.934	0.3	228.934	0.0000	228.934	−0.0156	0.3	228.929	4.57	228.863	8.84	228.796	BEGIN SUPERELEVATION RUNOFF
12+440	8.84	229.086	4.57	229.074	0.3	229.062	0.0028	229.061	−0.0156	0.3	229.056	4.57	228.990	8.84	228.923	
12+450	8.84	229.489	4.57	229.448	0.3	229.408	0.0095	229.405	−0.0156	0.3	229.400	4.57	229.334	8.84	229.267	
12+459.159	8.84	229.905	4.57	229.838	0.3	229.772	0.0156	229.767	−0.0156	0.3	229.762	4.57	229.696	8.84	229.629	
12+460	8.84	229.945	4.57	229.876	0.3	229.807	0.0162	229.802	−0.0162	0.3	229.797	4.57	229.728	8.84	229.659	
12+467.187	8.84	230.307	4.57	230.218	0.3	230.128	0.0210	230.122	−0.0210	0.3	230.116	4.57	230.026	8.84	229.937	P.C. STATION
12+470	8.84	230.456	4.57	230.358	0.3	230.261	0.0229	230.254	−0.0229	0.3	230.247	4.57	230.150	8.84	230.052	
12+480	8.84	231.012	4.57	230.886	0.3	230.760	0.0296	230.751	−0.0296	0.3	230.742	4.57	230.616	8.84	230.490	
12+490	8.84	231.573	4.57	231.418	0.3	231.263	0.0363	231.252	−0.0363	0.3	231.241	4.57	231.086	8.84	230.931	
12+498.551	8.84	232.051	4.57	231.872	0.3	231.693	0.0420	231.680	−0.0420	0.3	231.667	4.57	231.488	8.84	231.309	BEGIN FULL SUPER 0.042
12+500	8.84	232.124	4.57	231.945	0.3	231.766	0.0420	231.753	−0.0420	0.3	231.740	4.57	231.561	8.84	231.382	
12+510	8.84	232.625	4.57	232.446	0.3	232.267	0.0420	232.254	−0.0420	0.3	232.241	4.57	232.062	8.84	231.883	
12+520	8.84	233.126	4.57	232.947	0.3	232.768	0.0420	232.755	−0.0420	0.3	232.742	4.57	232.563	8.84	232.384	
12+530	8.84	233.627	4.57	233.448	0.3	233.269	0.0420	233.256	−0.0420	0.3	233.243	4.57	233.064	8.84	232.885	
12+540	8.84	234.128	4.57	233.949	0.3	233.770	0.0420	233.757	−0.0420	0.3	233.744	4.57	233.565	8.84	233.386	
12+550	8.84	234.629	4.57	234.450	0.3	234.271	0.0420	234.258	−0.0420	0.3	234.245	4.57	234.066	8.84	233.887	
12+560	8.84	235.129	4.57	234.950	0.3	234.771	0.0420	234.758	−0.0420	0.3	234.745	4.57	234.566	8.84	234.387	
12+570	8.84	235.595	4.57	235.416	0.3	235.237	0.0420	235.224	−0.0420	0.3	235.211	4.57	235.032	8.84	234.853	
12+580	8.84	236.005	4.57	235.826	0.3	235.647	0.0420	235.634	−0.0420	0.3	235.621	4.57	235.442	8.84	235.263	
12+590	8.84	236.361	4.57	236.182	0.3	236.003	0.0420	235.990	−0.0420	0.3	235.977	4.57	235.798	8.84	235.619	
12+600	8.84	236.663	4.57	236.484	0.3	236.305	0.0420	236.292	−0.0420	0.3	236.279	4.57	236.100	8.84	235.921	
12+610	8.84	236.909	4.57	236.730	0.3	236.551	0.0420	236.538	−0.0420	0.3	236.525	4.57	236.346	8.84	236.167	
12+620	8.84	237.101	4.57	236.922	0.3	236.743	0.0420	236.730	−0.0420	0.3	236.717	4.57	236.538	8.84	236.359	
12+630	8.84	237.237	4.57	237.058	0.3	236.879	0.0420	236.866	−0.0420	0.3	236.853	4.57	236.674	8.84	236.495	
12+640	8.84	237.320	4.57	237.141	0.3	236.962	0.0420	236.949	−0.0420	0.3	236.936	4.57	236.757	8.84	236.578	
12+650	8.84	237.347	4.57	237.168	0.3	236.989	0.0420	236.976	−0.0420	0.3	236.963	4.57	236.784	8.84	236.605	
12+660	8.84	237.320	4.57	237.141	0.3	236.962	0.0420	236.949	−0.0420	0.3	236.936	4.57	236.757	8.84	236.578	
12+670	8.84	237.237	4.57	237.058	0.3	236.879	0.0420	236.866	−0.0420	0.3	236.853	4.57	236.674	8.84	236.495	
12+679.447	8.84	237.110	4.57	236.931	0.3	236.752	0.0420	236.739	−0.0420	0.3	236.726	4.57	236.547	8.84	236.368	END FULL SUPER 0.042 BEGIN SUPERELEVATION TRANSITION
12+680	8.84	237.104	4.57	236.923	0.3	236.743	0.0423	236.730	−0.0423	0.3	236.717	4.57	236.537	8.84	236.356	
12+690	8.84	236.964	4.57	236.758	0.3	236.552	0.0482	236.538	−0.0482	0.3	236.524	4.57	236.318	8.84	236.112	
12+695.786	8.84	236.859	4.57	236.638	0.3	236.417	0.0516	236.402	−0.0516	0.3	236.387	4.57	236.166	8.84	235.945	P.C.C. STATION
12+700	8.84	236.771	4.57	236.539	0.3	236.308	0.0541	236.292	−0.0541	0.3	236.278	4.57	236.045	8.84	235.813	
12+709.927	8.84	236.523	4.57	236.267	0.3	236.011	0.0600	235.993	−0.0600	0.3	235.975	4.57	235.719	8.84	235.463	BEGIN FULL SUPER 0.060
12+710	8.84	236.520	4.57	236.264	0.3	236.008	0.0600	235.990	−0.0600	0.3	235.972	4.57	235.716	8.84	235.460	
12+720	8.84	236.165	4.57	235.909	0.3	235.653	0.0600	235.635	−0.0600	0.3	235.617	4.57	235.361	8.84	235.105	
12+730	8.84	235.754	4.57	235.498	0.3	235.242	0.0600	235.224	−0.0600	0.3	235.206	4.57	234.950	8.84	234.694	
12+740	8.84	235.288	4.57	235.032	0.3	234.776	0.0600	234.758	−0.0600	0.3	234.740	4.57	234.484	8.84	234.228	
12+750	8.84	234.788	4.57	234.532	0.3	234.276	0.0600	234.258	−0.0600	0.3	234.240	4.57	233.984	8.84	233.728	
12+760	8.84	234.287	4.57	234.031	0.3	233.775	0.0600	233.757	−0.0600	0.3	233.739	4.57	233.483	8.84	233.227	
12+770	8.84	233.786	4.57	233.530	0.3	233.274	0.0600	233.256	−0.0600	0.3	233.238	4.57	232.982	8.84	232.726	
12+780	8.84	233.285	4.57	233.029	0.3	232.773	0.0600	232.755	−0.0600	0.3	232.737	4.57	232.481	8.84	232.225	
12+790	8.84	232.784	4.57	232.528	0.3	232.272	0.0600	232.254	−0.0600	0.3	232.236	4.57	231.980	8.84	231.724	
12+800	8.84	232.283	4.57	232.027	0.3	231.771	0.0600	231.753	−0.0600	0.3	231.735	4.57	231.479	8.84	231.223	
12+810	8.84	231.782	4.57	231.526	0.3	231.270	0.0600	231.252	−0.0600	0.3	231.234	4.57	230.978	8.84	230.722	
12+820	8.84	231.300	4.57	231.044	0.3	230.788	0.0600	230.770	−0.0600	0.3	230.752	4.57	230.496	8.84	230.240	
12+820.875	8.84	231.258	4.57	231.002	0.3	230.746	0.0600	230.728	−0.0600	0.3	230.710	4.57	230.454	8.84	230.198	END FULL SUPER 0.060, BEGIN SUPERELEVATION TRANSITION
12+830	8.84	230.775	4.57	230.542	0.3	230.308	0.0547	230.292	−0.0547	0.3	230.276	4.57	230.042	8.84	229.809	
12+840	8.84	230.246	4.57	230.038	0.3	229.830	0.0488	229.815	−0.0488	0.3	229.800	4.57	229.592	8.84	229.384	
12+850	8.84	229.778	4.57	229.595	0.3	229.412	0.0429	229.399	−0.0429	0.3	229.386	4.57	229.203	8.84	229.020	
12+860	8.84	229.373	4.57	229.214	0.3	229.056	0.0371	229.045	−0.0371	0.3	229.034	4.57	228.876	8.84	228.717	
12+870	8.84	228.966	4.57	228.833	0.3	228.699	0.0312	228.690	−0.0312	0.3	228.681	4.57	228.547	8.84	228.414	
12+880	8.84	228.574	4.57	228.466	0.3	228.358	0.0253	228.350	−0.0253	0.3	228.342	4.57	228.234	8.84	228.126	
12+890	8.84	228.283	4.57	228.200	0.3	228.117	0.0195	228.111	−0.0195	0.3	228.105	4.57	228.022	8.84	227.939	
12+900	8.84	228.106	4.57	228.048	0.3	227.990	0.0136	227.986	−0.0136	0.3	227.982	4.57	227.924	8.84	227.866	
12+910	8.84	228.046	4.57	228.012	0.3	227.979	0.0078	227.977	−0.0078	0.3	227.975	4.57	227.942	8.84	227.908	
12+920	8.84	228.099	4.57	228.091	0.3	228.083	0.0019	228.082	−0.0019	0.3	228.081	4.57	228.073	8.84	228.065	
12+923.240	8.84	228.140	4.57	228.140	0.3	228.140	0.0000	228.140	0.0000	0.3	228.140	4.57	228.140	8.84	228.140	END CONCRETE MEDIAN
12+923.288	8.84	228.141	4.57	228.141	0.3	228.141	0.0000	228.141	0.0000	0.3	228.141	4.57	228.141	8.84	228.141	LEVEL, SEE INTERSECTION DETAIL SHEET 92
12+930								228.302								
12+933.559								228.408								
12+937.000								228.522								

DESIGNED BY: JAN SCHLAKER
DATE: 8/6/97
DRAWN BY: JAN
DATE: 8/7/97
CHECKED BY:
DATE:
REV. BY: MAL
DATE: 10/26/98
CAD FILE NAME: 9005A7\SHPLRTBL

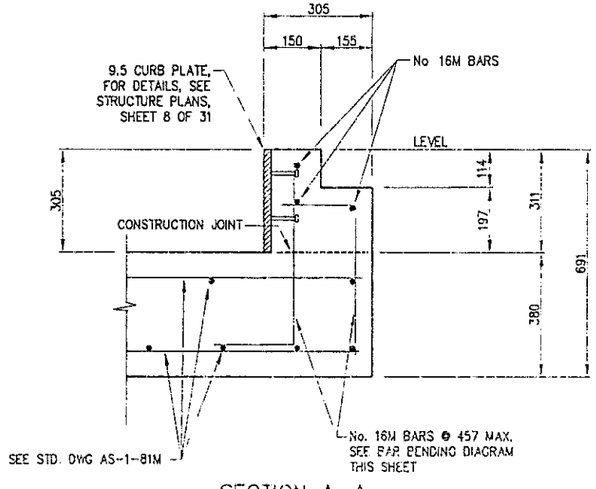
PAVEMENT ELEVATION TABLE
STA. 12+310 TO STA. 12+937

CUY - LAKEWOOD HEIGHTS BOULEVARD

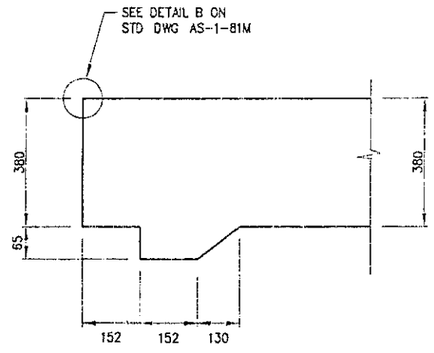




APPROACH SLAB LAYOUT



SECTION A–A
NOT TO SCALE



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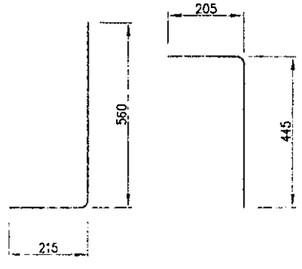
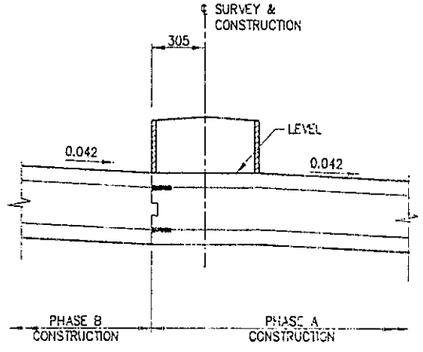
NOT TO SCALE



BAR BENDING DIAGRAM
NOT TO SCALE



CONSTRUCTION JOINT DETAIL
NOT TO SCALE

PROVIDE EPOXY COATED MECHANICAL CONNECTORS FOR TRANSVERSE REINFORCING STEEL. SEE NOTE ①

NOTES

① FOR ADDITIONAL NOTES, DETAILS, SECTIONS AND REINFORCING BARS NOT SHOWN HERE SEE STATE OF OHIO STANDARD DRAWING – REINFORCED CONCRETE APPROACH SLABS, AS–1–81M, SHEETS 1–3 AND THE GENERAL NOTE ON SHEET 8 OF 31. LONGITUDINAL BARS SHALL BE PLACED CONCENTRIC TO THE ℄ SURVEY. TRANSVERSE BARS SHALL BE PLACED PARALLEL TO THE ABUTMENTS AND MAY REQUIRE FIELD BENDING AT THE MEDIAN.

② ELEVATIONS SHOWN ARE THE FINISHED PAVEMENT ELEVATIONS AT TOE OF CURB.

③ ESTIMATED SQUARE METERS OF APPROACH SLABS:

WEST –	PHASE A =	72 SQ. METERS
	PHASE B =	67 SQ. METERS
EAST –	PHASE A =	72 SQ. METERS
	PHASE B =	67 SQ. METERS
	TOTAL =	278 SQ. METERS

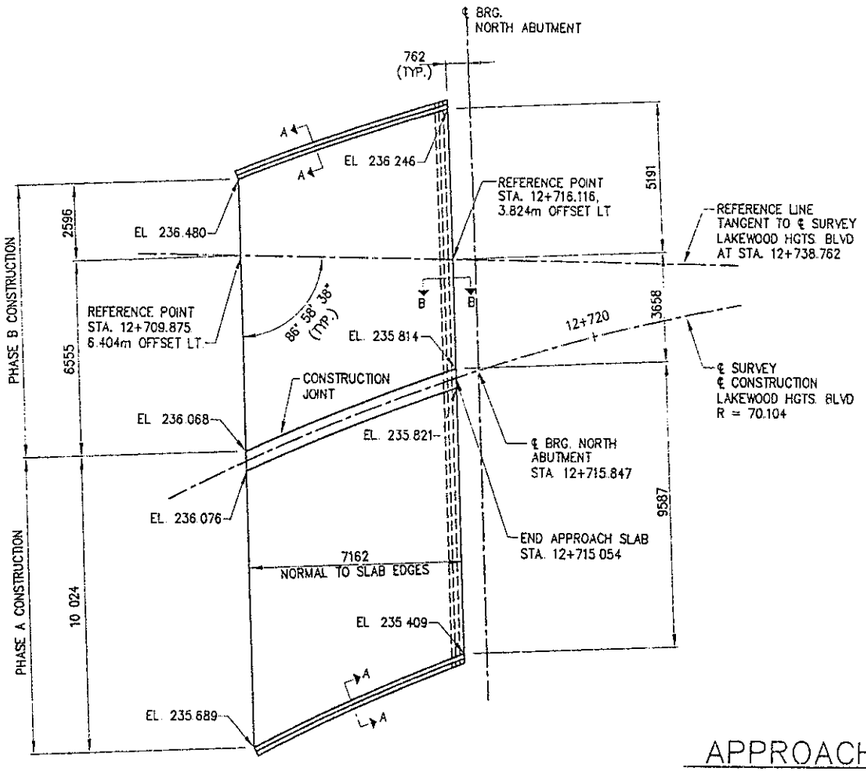
DESIGNED BY:	LJG	CHECKED BY:	RSC
DATE:	1/11/97	DATE:	8/21/97
DRAWN BY:	MAL	REVISED BY:	MAL
DATE:	8/21/97	DATE:	10/2/98
CAD FILE NAME:			HGBR0105

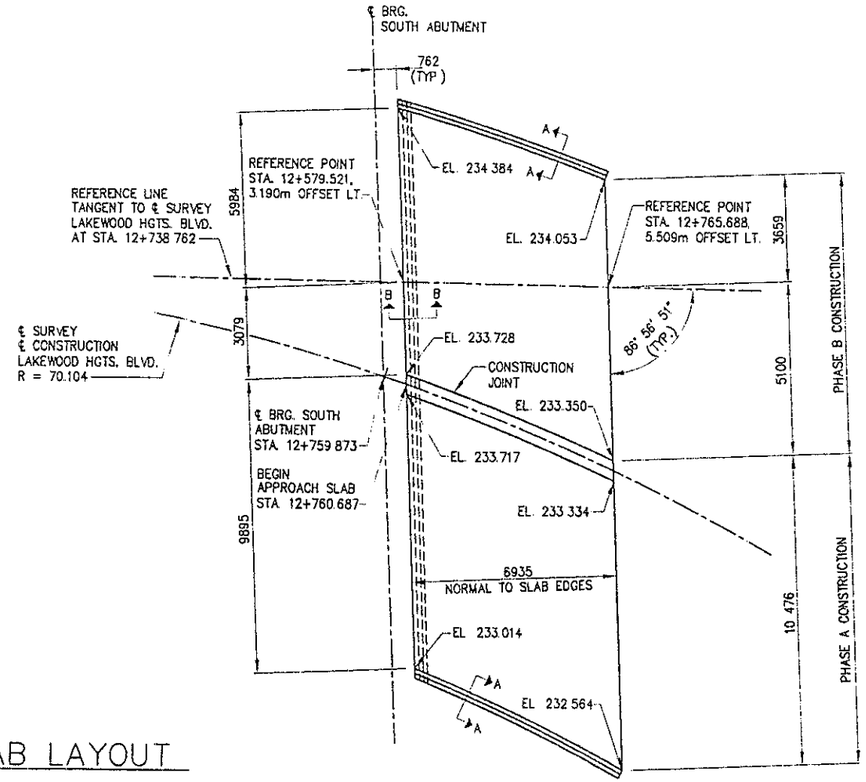
CALCULATED LJG
CHECKED RSC

HORIZONTAL SCALE IN METERS

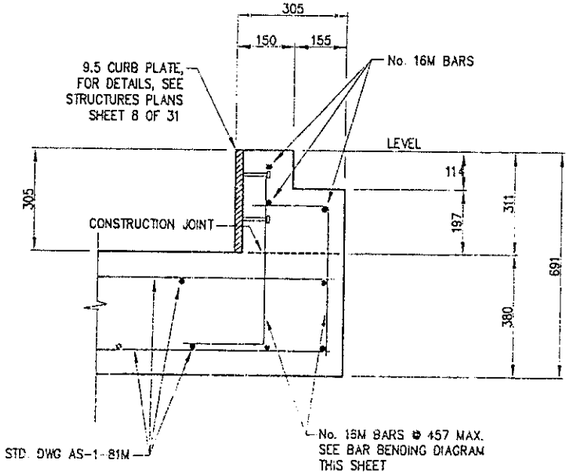
APPROACH SLAB DETAILS
CUYAHOGA COUNTY BRIDGE No. 209

CITY - LAKEWOOD HEIGHTS BOULEVARD

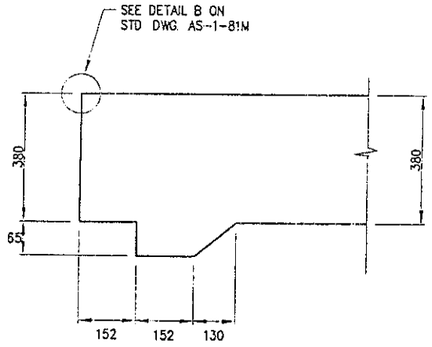




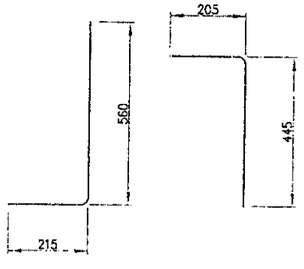
APPROACH SLAB LAYOUT



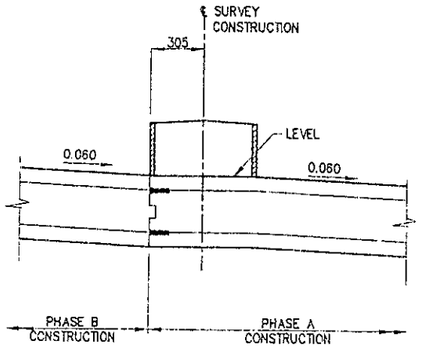
SECTION A–A
NOT TO SCALE



SECTION B–B
NOT TO SCALE



BAR BENDING DIAGRAM
NOT TO SCALE



CONSTRUCTION JOINT DETAIL
NOT TO SCALE

PROVIDE EPOXY COATED MECHANICAL CONNECTORS FOR TRANSVERSE REINFORCING STEEL, SEE NOTE (1)

NOTES

(1) FOR ADDITIONAL NOTES, DETAILS, SECTIONS AND REINFORCING BARS NOT SHOWN HERE SEE STATE OF OHIO STANDARD DRAWING – REINFORCED CONCRETE APPROACH SLABS, AS-1-81M, SHEETS 1–3 AND THE GENERAL NOTE ON SHEET 8 OF 31. LONGITUDINAL BARS SHALL BE PLACED CONCENTRIC TO THE ℄ SURVEY. TRANSVERSE BARS SHALL BE PLACED PARALLEL TO THE ABUTMENTS AND MAY REQUIRE FIELD BENDING AT THE MEDIAN

(2) ELEVATIONS SHOWN ARE THE FINISHED PAVEMENT ELEVATIONS AT TOE OF CURB.

(3) ESTIMATED SQUARE METERS OF APPROACH SLABS:

NORTH – PHASE A = 73 SQ. METERS
PHASE B = 67 SQ. METERS

SOUTH – PHASE A = 73 SQ. METERS
PHASE B = 67 SQ. METERS

TOTAL = 280 SQ. METERS

DESIGNED BY:	LJC	CHECKED BY:	RSC
DATE:	1/10/97	DATE:	8/22/97
DRAWN BY:	MAL	REVISED BY:	MAL
DATE:	9/22/97	DATE:	10/2/98
CAD FILE NAME:			HGBR0200

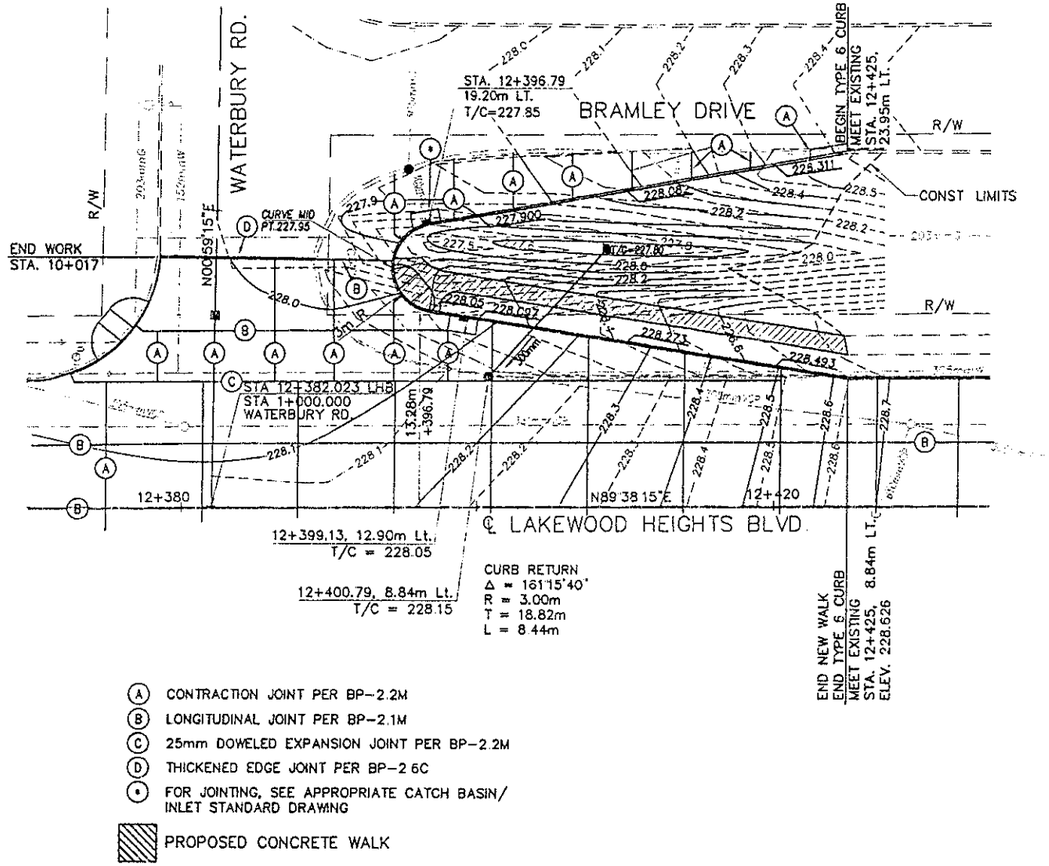
HORIZONTAL SCALE IN METERS
0 1 2 4

CALCULATED LJG
CHECKED RSC

APPROACH SLAB DETAILS
CUYAHOGA COUNTY BRIDGE No. 210

CUY - LAKEWOOD HEIGHTS BOULEVARD

91
162



(A) CONTRACTION JOINT PER BP-2.2M
(B) LONGITUDINAL JOINT PER BP-2.1M
(C) 25mm DOWELED EXPANSION JOINT PER BP-2.2M
(D) THICKENED EDGE JOINT PER BP-2.6C
(•) FOR JOINTING, SEE APPROPRIATE CATCH BASIN/ INLET STANDARD DRAWING

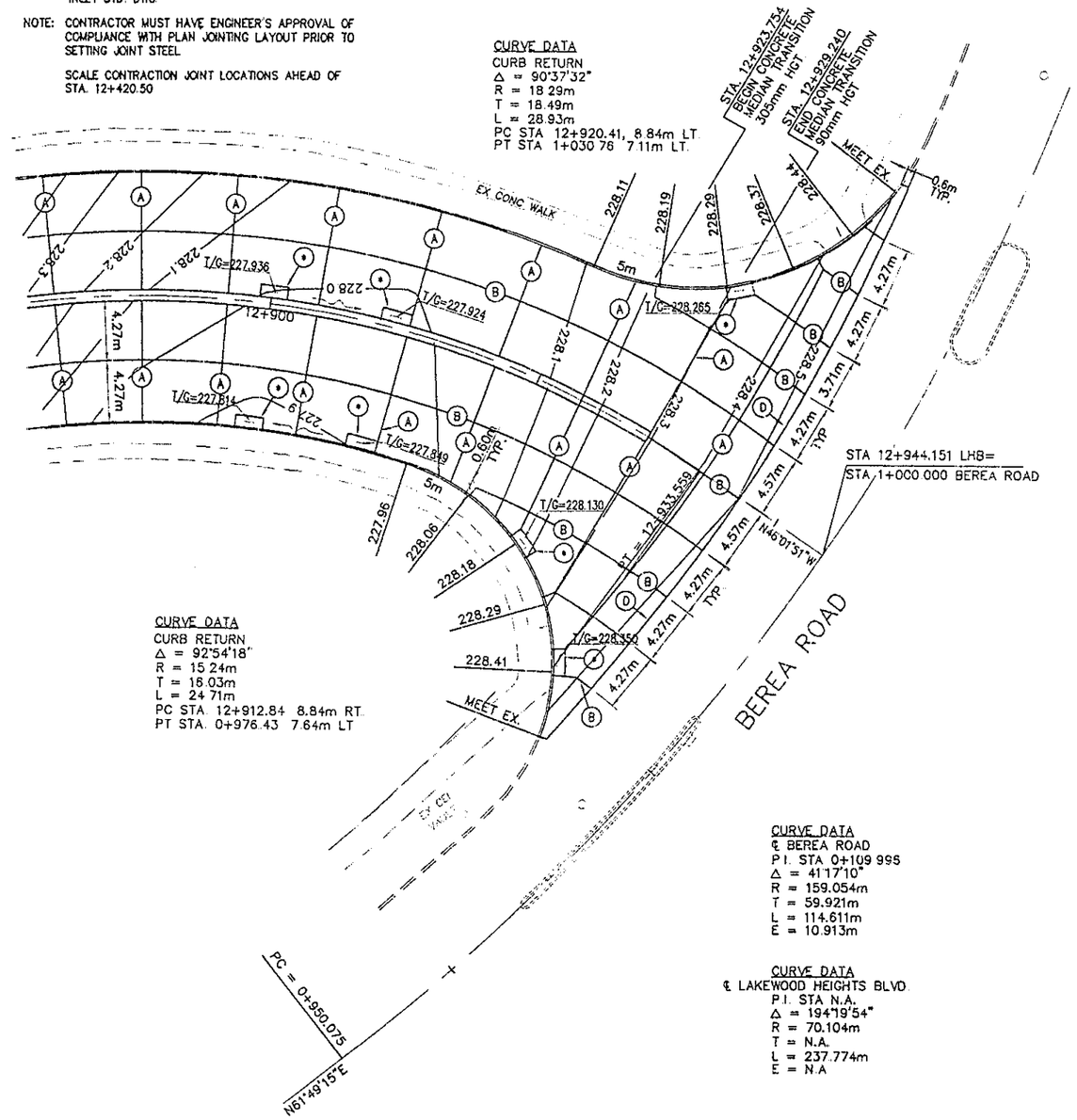
PROPOSED CONCRETE WALK

INTERSECTION DETAIL
LAKEWOOD HEIGHTS BLVD. & WATERBURY ROAD

(A) CONTRACTION JOINT PER BP-2.2M
(B) LONGITUDINAL JOINT PER BP-2.1M
(C) 25mm DOWELED EXPANSION JOINT PER BP-2.2M
(D) THICKENED EDGE JOINT PER BP-2.6C
(•) FOR JOINTING, SEE APPROPRIATE CATCH BASIN/ INLET STD. DWG

NOTE: CONTRACTOR MUST HAVE ENGINEER'S APPROVAL OF COMPLIANCE WITH PLAN JOINTING LAYOUT PRIOR TO SETTING JOINT STEEL.

SCALE CONTRACTION JOINT LOCATIONS AHEAD OF STA. 12+420.50



INTERSECTION DETAIL
LAKEWOOD HEIGHTS BLVD. & BEREA ROAD

DESIGNED BY:	JAN	CHECKED BY:	PDH
DATE:		DATE:	10/14/98
DRAWN BY:	JAN	REVISED BY:	MAL
DATE:		DATE:	10/26/98
C:\D FILE NAME:			PVDBEREA

HORIZONTAL SCALE IN METERS

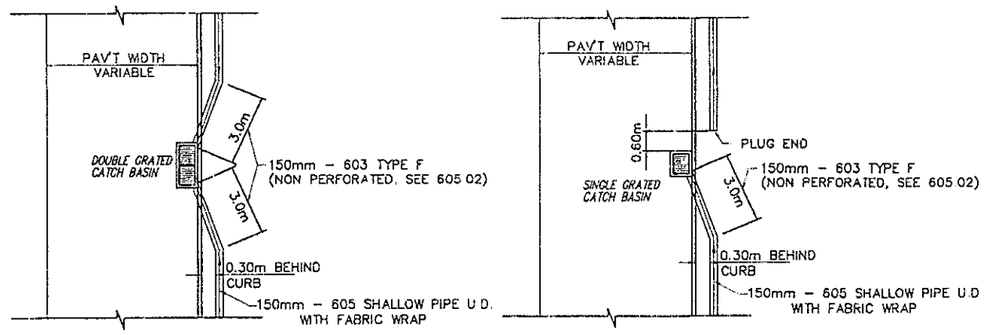
INTERSECTION DETAILS
LAKEWOOD HEIGHTS BLVD. & BEREA, LAKEWOOD HEIGHTS & WATERBURY

CUY - LAKEWOOD HEIGHTS BOULEVARD

CORE DIAMETER (mm) : 152

CORE INFORMATION

CORE NO	STATION	OFFSET	ACTUAL LENGTH	DESCRIPTION
	(m)	(m)	(m)	
C-1	10+016.528	3.004 Right	235	235 = Concrete
C-2	10+160.506	3.080 Left	225	22 = 404 Limestone Mix 19 = 402 Limestone Mix 38 = 301 Limestone Mix 146 = Concrete
C-3	10+344.544	3.081 Right	250	38 = 404 Limestone Mix 22 = 402 Limestone Mix 25 = 301 Limestone Mix 165 = Concrete
C-4	10+530.980	3.303 Left	298	32 = 404 Limestone Mix 38 = 402 Limestone Mix 57 = 301 Limestone Mix 171 = Concrete N/A = Fill
C-5	10+710.948	2.956 Right	263	32 = 404 Limestone Mix 32 = 402 Limestone Mix 44 = 301 Limestone Mix 155 = Concrete
C-6	10+893.805	3.016 Left	292	25 = 404 Limestone Mix 38 = 402 Limestone Mix 33 = 301 Limestone Mix 196 = Concrete
C-7	11+080.002	4.826 Right	428	35 = 404 Slag Mix 35 = 402 Limestone/Slag Mix 51 = 301 Limestone Mix 76 = Brick 231 = Concrete
C-8	11+262.825	4.853 Left	407	32 = 404 Slag Mixture 38 = 402 Slag Limestone Mix 32 = 301 Slag/Limestone Mix 76 = Brick 229 = Concrete
C-9	11+446.753	1.232 Right	401	44 = 404 Limestone Mix 44 = 402 Limestone Mix 76 = Brick 237 = Concrete
C-10	11+631.039	4.724 Left	383	29 = 404 Limestone Mix 51 = 402 Limestone Mix 75 = Brick 6 = Fill 222 = Concrete N/A = Fill
C-11	11+813.551	6.384 Right	311	60 = 404 Asphalt (bad recovery) 76 = Brick 235 = Concrete
C-12	11+998.098	4.669 Left	387	24 = 404 Limestone Mix 40 = 402 Limestone Mix 75 = Brick 248 = Concrete
C-13	12+181.811	5.021 Right	372	57 = 404 Limestone Mix 76 = Brick 239 = Concrete
C-14	12+371.122	7.131 Left	373	64 = 404 Limestone Mix 249 = Brick 60 = Fill
C-15	12+552.117	7.395 Right	337	19 = 404 Limestone Mix 32 = 402 Limestone Mix 248 = Concrete 38 = Base
C-16	12+797.167	7.687 Left	294	59 = 404 Limestone Mix (Lack of Bond) 235 = Concrete



SUMP CONDITION

CONTINUOUS GRADE CONDITION

TYPICAL UNDERDRAIN OUTLET DETAIL

DESIGNED BY: CHECKED BY:
DATE: DATE:
DRAWN BY: MAL REVISED BY: MAL
DATE: 7/25/97 DATE: 10/28/98
CAD FILE NAME: M201003

MISCELLANEOUS DETAILS
ROADWAY DETAILS AND CORE INFORMATION

CITY - LAKEWOOD HEIGHTS BOULEVARD

92A
162

LOCATION			202		203		255		304		451		609		609	
SHEET No.	STATION TO STATION	SIDE	PAVEMENT REMOVED		SUBGRADE COMPACTION		FULL DEPTH PAVEMENT SAWING		150mm AGGREGATE BASE, AS PER PLAN		260mm REINFORCED CONCRETE PAVEMENT, AS PER PLAN		CURB, TYPE 2-A AS PER PLAN		CURB, TYPE 8 AS PER PLAN	
			SQ. METER		SQ. METER		METER		CU. METER		SQ. METER		METER		METER	
			LAKE.	CLEVE.	LAKE.	CLEVE.	LAKE.	CLEVE.	LAKE.	CLEVE.	LAKE.	CLEVE.	LAKE.	CLEVE.	LAKE.	CLEVE.
79-80	11+868.55 TO 11+895.95	RT.		102.8		102.8		35.1		15.41		102.8		27.4		
79-80	11+879.4 TO 11+925.4	LT.	99.7	75.8	99.7	75.8	4.4	49.2	14.96	11.37	99.7	75.8	25.4		21.9	
80	12+052.1 TO 12+098.1	RT.		172.5		172.5		53.2		25.88		172.5		46.0		
81	12+134.7 TO 12+180.7	LT.	105.5	67.0	105.5	67.0	4.3	48.9	15.83	10.05	105.5	67.0	46.0			
81	12+141 TO 12+187	RT.		172.5		172.5		53.2		25.88		172.5		46.0		
TOTAL			205.2	590.6	205.2	590.6	8.7	239.6	30.79	88.59	205.2	590.6	71.4	119.4	21.9	0

ITEM 609 - CURB, TYPE 8 AS PER PLAN

THIS CURB SHALL BE IN ACCORDANCE WITH ITEM 609 - CURB, TYPE 8 EXCEPT IT SHALL BE CONSTRUCTED MONOLITHICALLY WITH ITEM 451 AND PAID IN THE SAME MANNER AS TYPE 2A CURB. WEEP HOLES FOR TREE LAWN DRAINAGE SHALL BE PROVIDED AT 2.5M C/C IF REQUIRED.

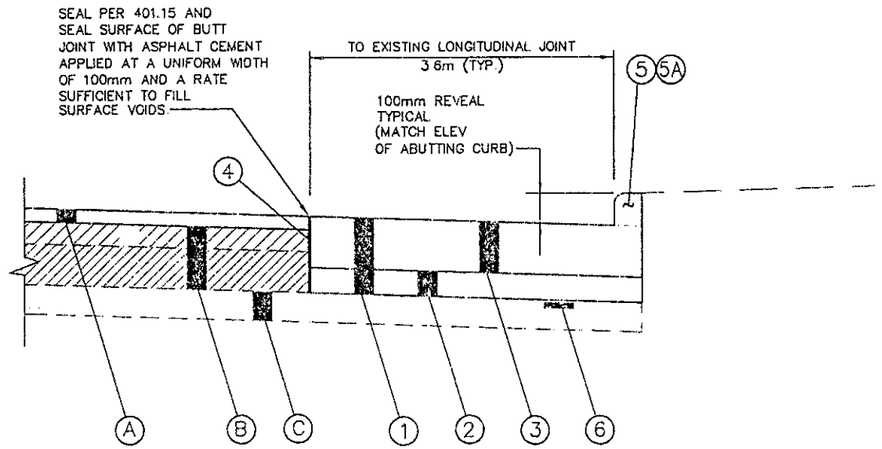
CURB, TYPE 8 AS PER PLAN SHALL BE CONSTRUCTED AT THE FOLLOWING LOCATION:

STA. 11+879.4 TO STA. 11+900 LT.

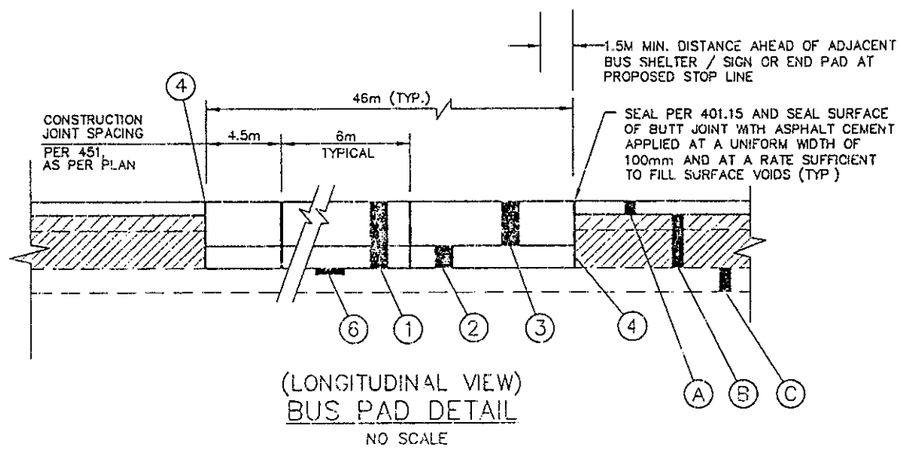
LEGEND

- (1) ITEM 202 PAVEMENT REMOVED
- (2) ITEM 304 150mm AGGREGATE BASE, AS PER PLAN
- (3) ITEM 451 260mm REINFORCED CONCRETE PAVEMENT AS PER PLAN
- (4) ITEM 255 FULL DEPTH PAVEMENT SAWING
- (5) ITEM 609 CURB, TYPE 2-A, AS PER PLAN
- (5A) ITEM 609 CURB, TYPE 8, AS PER PLAN
- (6) ITEM 203 SUBGRADE COMPACTION

- (A) PROPOSED OVERLAY
- (B) EXISTING PAVEMENT
- (C) EXISTING SUBBASE



(TRANSVERSE VIEW)
BUS PAD DETAIL
NO SCALE

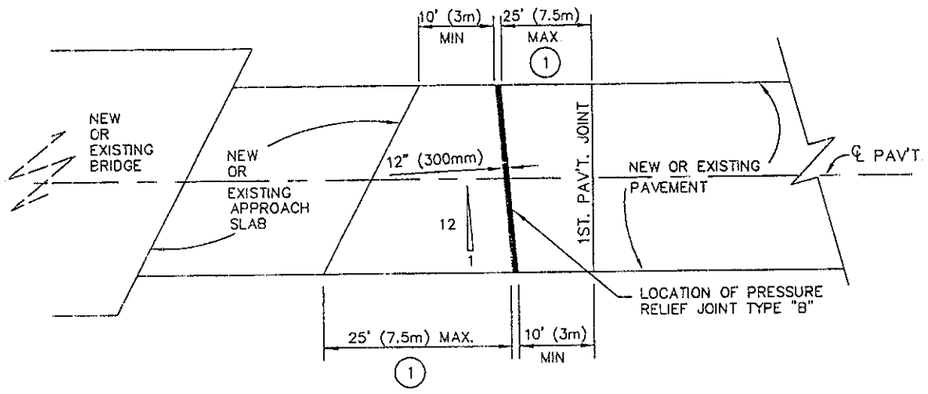


(LONGITUDINAL VIEW)
BUS PAD DETAIL
NO SCALE

DESIGNED BY:		CHECKED BY:	
DETAIL:		DATE:	
DRAWN BY:	MAL	REVISED BY:	MAL
DATE:	6/98	DATE:	10/27/98
CAD FILE NAME:			BUSPAD

MISCELLANEOUS DETAIL
BUS PAD DETAILS AND QUANTITIES

CITY - LAKEWOOD HEIGHTS BOULEVARD



LEGEND

(1) WHERE THERE ARE CONFLICTS SUCH AS UTILITIES, DRAINAGE STRUCTURES, INTERSECTIONS, EXCESSIVE BRIDGE SKEW, ETC., THIS DIMENSION MAY BE VARIED TO FIT THE SITUATION

(2) CARE SHALL BE TAKEN IN THIS AREA TO BE SURE THE SURFACE OF THE COMPACTED SUBBASE OR SUB-GRADE IS FINISHED SMOOTH AND FLUSH WITH OR SLIGHTLY HIGHER THAN THE SURFACE OF THE SLEEPER SLAB.

(3) STEEL TROWEL FINISH TOP OF SLEEPER SLAB

(4) POLYETHYLENE BOND-BREAKER OR EQUAL

(5) CONSTRUCTION JOINT USING DEFORMED BARS AT 12" (300mm) CENTERS, INSTALLED PER CUYAHOGA COUNTY CONSTRUCTION DRAWING BP-2.5C "SECTION-TYPE T". OMIT CONSTRUCTION JOINT WHEN PLACED IN NEW PAVEMENT.

NOTES

PRESSURE RELIEF JOINTS SHALL ONLY BE USED AT THE LOCATIONS REQUIRED AND SPECIFIED ON THE PLANS OR DESIGNATED BY THE ENGINEER

ALL JOINTS SHALL BE SAWED FULL DEPTH. AS NECESSARY, CUTS MAY BE OPTION-ALLY MADE IN TWO PASSES. TO REDUCE THE POSSIBILITY OF SAW BINDING, JOINTS SHOULD BE CUT ON OVERCAST DAYS AND/OR WHEN THE TEMPERATURE, IF POSSIBLE, IS LESS THAN 70? F (21°C)

ON CURBED PAVEMENTS, THE PRESSURE RELIEF JOINT SHALL BE CUT THROUGH TO THE BACK OF CURB. AFTER FILLING THE JOINT, ASPHALT CONCRETE SHALL BE FORMED AND TAMPED IN PLACE TO CONFORM TO THE ADJACENT CURB

SKEW OF THE PRESSURE RELIEF JOINT SHALL BE 12:1 OR GREATER UNLESS OTHERWISE DIRECTED BY THE ENGINEER

ANY OF THE PRESSURE RELIEF JOINT TYPES SHOWN MAY BE FILLED WITH THREE LIFTS OF LOOSELY COMPACTED 405 OR 921 ASPHALT CONCRETE. (*)IN PAVEMENT THAT IS NOT TO BE RESURFACED IN THE NEAR FUTURE, THE TYPE D JOINT MAY BE FILLED WITH MATERIAL MANUFACTURED FOR PRESSURE RELIEF JOINTS (IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS), SUCH AS MEADOWS SEALTIGHT CERAMAR, FROTH PAK URETHANE FOAM OR APPROVED EQUAL

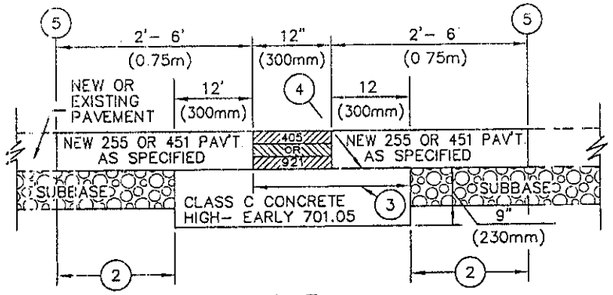
MEASUREMENT OF THE PRESSURE RELIEF JOINT FOR PAYMENT PURPOSES SHALL BE ALONG THE CENTERLINE OF THE JOINT, EDGE TO EDGE OF PAVEMENT, EDGE TO EDGE OF CONCRETE SHOULDERS OR BACK TO BACK OF CURBS. PAYMENT SHALL BE PER LINEAR FOOT (METER) FOR "ITEM SPECIAL-- PRESSURE RELIEF JOINT, TYPE_____, AS PER PLAN" WHICH PRICE AND PAYMENT SHALL BE FULL COMPENSATION FOR FURNISH-ING AND PLACING ALL MATERIALS INCLUDING INSTALLATION OF SLEEPER SLABS, FILL-ING JOINTS, PLACING BOND- BREAKER AND ALL LABOR, EQUIPMENT, TOOLS AND INCI--DENTALS NECESSARY TO COMPLETE THE JOINT; EXCEPT THAT PIPE UNDERDRAIN, WHEN SPECIFIED, SHALL BE PAID FOR SEPARATELY

CEMENT OTHER THAN THE 701 05 SPECIFIED MAY BE USED IF APPROVED BY THE ENGINEER, PROVIDED AN ACCELERATING ADMIXTURE MEETING THE REQUIREMENTS OF ASTM- C 494 TYPE C OR E, AND AN AIR ENTRAINING ADMIXTURE MEETING THE REQUIREMENTS OF 705.10 IS ADDED AT THE MIXER

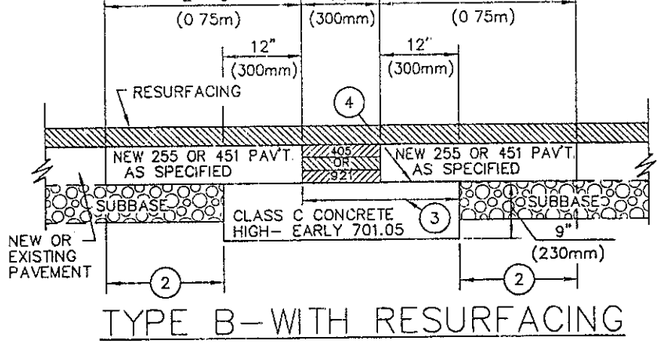
UNDERDRAIN: A PERFORATED PLASTIC PIPE UNDERDRAIN [707 17; ASTM D 3034 (SDR 35) SS 931 OR SS 944 PERFORATED PER 707.15] SHALL BE PLACED ALONG THE UPGRADE SIDE OF THE SLEEPER SLAB. IT SHALL EXTEND FROM EDGE TO EDGE OF SLEEPER SLAB AND SHALL BE OUTLETTED TO THE LONGITUDINAL UNDERDRAINS, CATCH BASINS OR THROUGH THE EMBANKMENT OR DITCH INSLOPE. THE FLOW LINE SLOPE SHALL GENERALLY FOLLOW THE PAVEMENT SUBGRADE CROSS SLOPE (1% MIN.) EXCEPT AS REQUIRED TO OUTLET. INSTALLATION IS REQUIRED FOR ALL TYPE B JOINTS AND OPTIONAL FOR TYPE D JOINTS. THESE DRAINS SHALL BE PAID FOR PER LINEAR FOOT (METER) OF "ITEM 605- 6" (150mm) SHALLOW PIPE UNDERDRAIN, 707 17; ASTM D 3034 (SDR 35), SS-931 OR SS 944 PERFORATED PER 707.15 WITH FABRIC WRAP."

THIS DRAWING IS USED IN CONJUNCTION WITH O.D.O.T. S.C.D. BP-1.1 (BP-1.1M), BP-2.1 (BP-2.1M) & BP-2.2 (BP-2.2M); CUYAHOGA COUNTY CONSTRUCTION DRAWING BP-2.5C AND O.D.O.T. SUPPLEMENTAL SPECIFICATION 921.

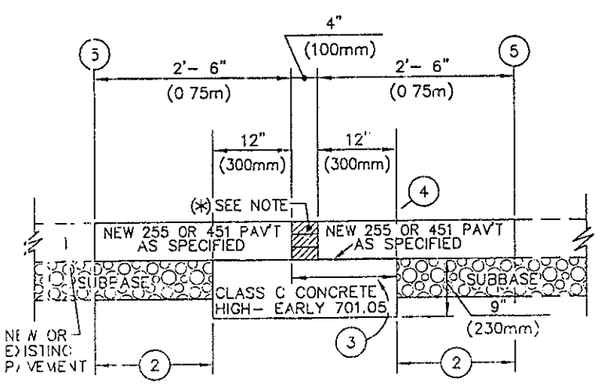
PRESSURE RELIEF JOINT, TYPE B, LOCATION PLAN



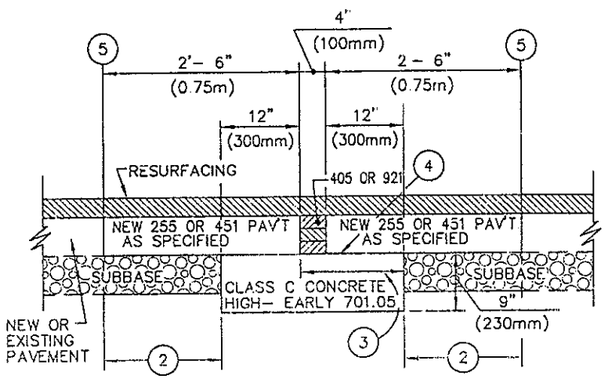
TYPE B



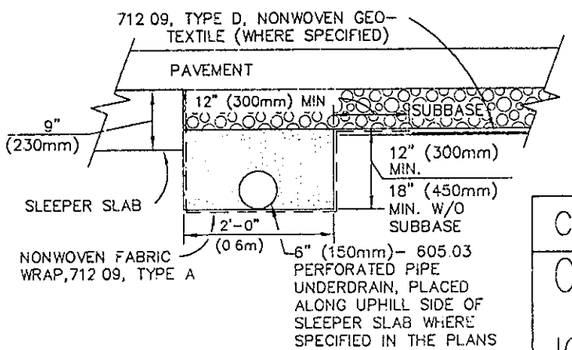
TYPE B-WITH RESURFACING



TYPE D



TYPE D--WITH RESURFACING



UNDERDRAIN PLACEMENT DETAIL

CUYAHOGA COUNTY ENGINEER

CUYAHOGA COUNTY PRESSURE RELIEF JOINT, TYPES B & D

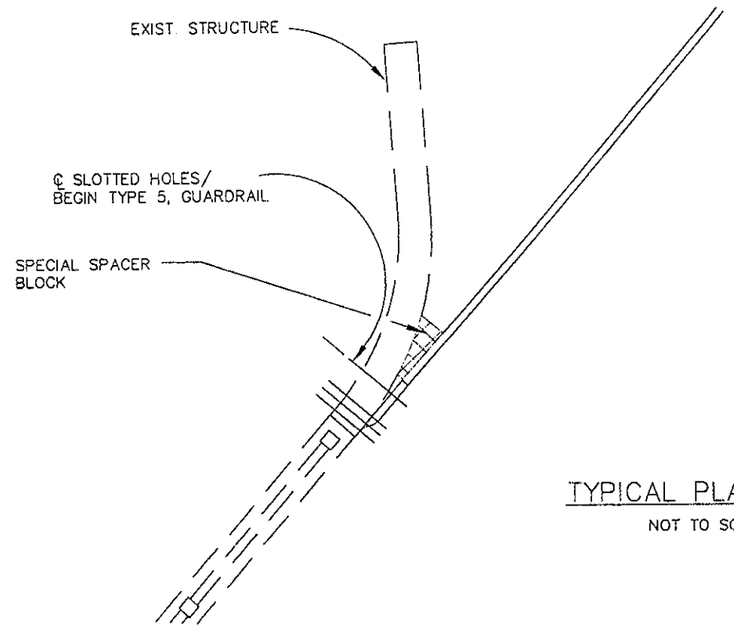
DATE
2-8-88
3-9-92
5-22-95

CONSTRUCTION DRAWING BP-2.4C

CUYAHOGA COUNTY PRESSURE RELIEF JOINT, TYPES B & D

CUY-LAKEWOOD HEIGHTS BOULEVARD

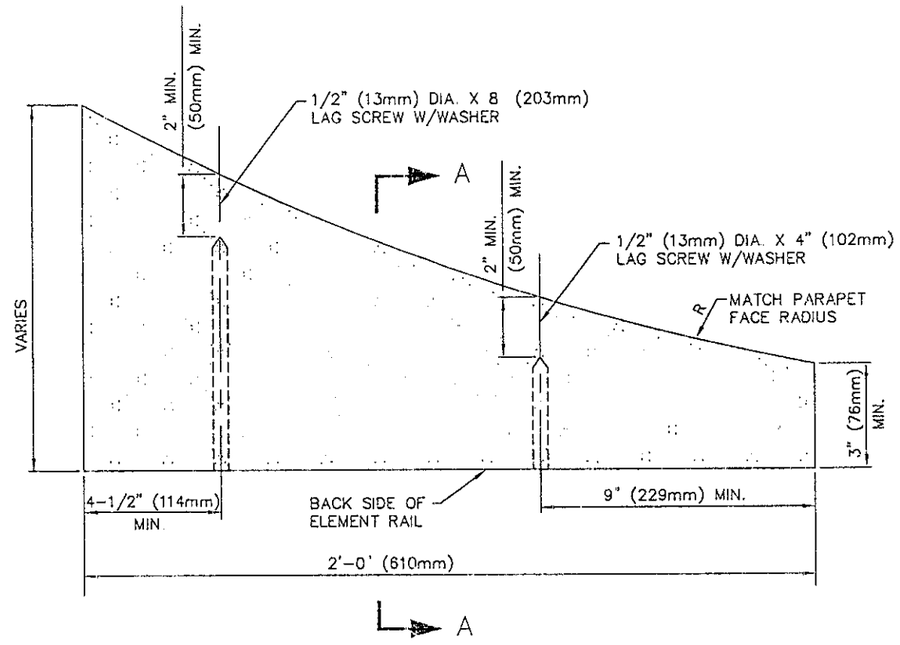
93A 162



TYPICAL PLAN VIEW

NOT TO SCALE

NOTE:
EXACT SHAPE/DIMENSIONS OF SPECIAL SPACER BLOCK AND LOCATIONS OF THE LAG SCREWS SHALL BE DETERMINED IN THE FIELD BASED ON THE CONDITIONS ENCOUNTERED: ALL AT THE DIRECTION OF THE ENGINEER AND IN CONFORMANCE WITH SECTION 710 14 OF THE SPECIFICATIONS.



SPECIAL SPACER BLOCKS TO BE CUT TO SHAPES CONFORMING TO FIELD CONDITIONS ENCOUNTERED.
WOOD TO CONFORM TO 710 14

SPACER BLOCK DETAIL

NOT TO SCALE

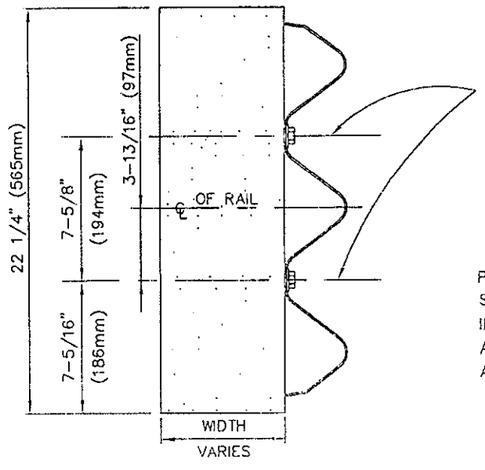
THE TERMINAL CONNECTION SHALL BE INSTALLED AS SHOWN ON STANDARD CONSTRUCTION DRAWINGS GR-3 1 (GR-3 1M) AND/OR GR-3 2 (GR-3.2M)

THE CENTERLINE OF RAIL ELEVATION SHALL BE 1'-9" (533mm) FROM THE TOP OF THE SIDEWALK

PAYMENT FOR SPECIAL SPACER BLOCK TO BE INCLUDED IN :

ITEM 606 - BRIDGE TERMINAL ASSEMBLY, TYPE 1, AS PER PLAN
-OR-
ITEM 606 - BRIDGE TERMINAL ASSEMBLY, TYPE 2, AS PER PLAN

TYPE 1



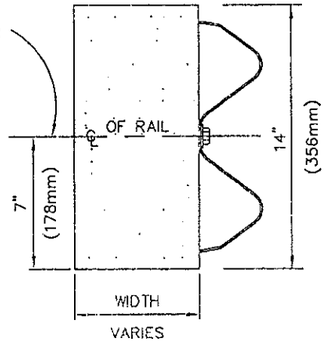
? 1/2" (13mm)? LAG SCREW W/WASHER
5/8" (16mm)? HOLE IN RAIL ELEMENT

PAYMENT FOR 1/2" (13mm)? LAG SCREW AND WASHERS TO BE INCLUDED IN ITEM 606 - BRIDGE TERMINAL ASSEMBLY, TYPES 1 AND/OR 2, AS PER PLAN

SECTION A - A

NOT TO SCALE

TYPE 2



CUYAHOGA COUNTY ENGINEER

BRIDGE TERM., ASSY., TYPE 1, A.P.P.
BRIDGE TERM., ASSY., TYPE 2, A.P.P

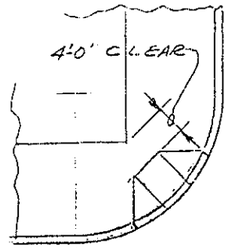
DATE 5-22-95

CONSTRUCTION DRAWING MD-8C

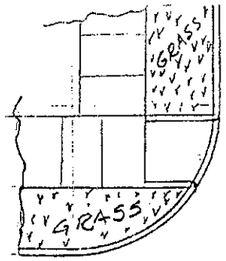
BRIDGE TERMINAL ASSEMBLY DETAILS, TYPE 1 & 2

CUY-LAKEWOOD HEIGHTS BOULEVARD

1935
162

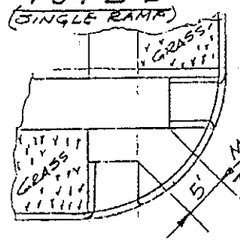


TYPE 1

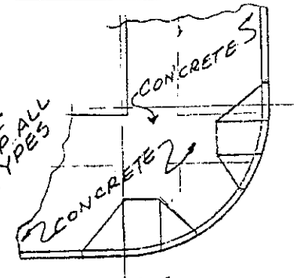


TYPE 2

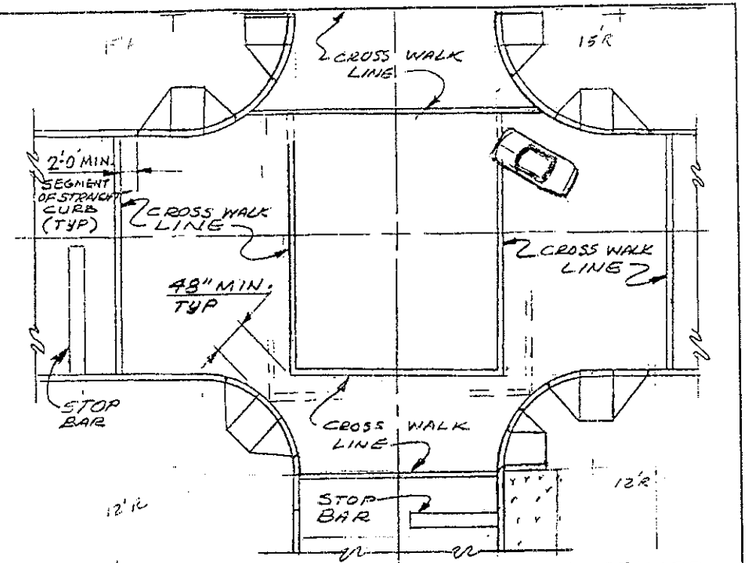
(SINGLE RAMP)



TYPE 3



TYPE 1

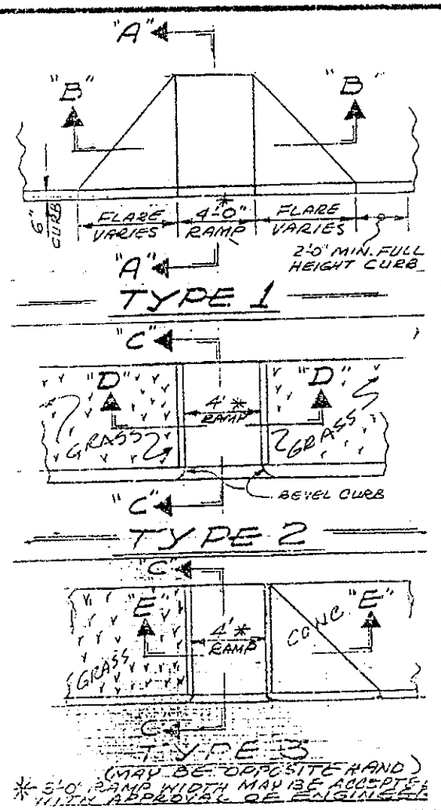


* CURB RAMPS @ MARKED CROSSINGS

* NOTE:
THIS INTERSECTION SKETCH IS SHOWING A COMPOSITE OF VARIOUS CURB RAMPS AND CROSS WALK CONDITIONS AS PER A.D.A. SPECS

CITY OF CLEVELAND
DIV. OF ENGINEERING & CONSTRUCTION
CURB RAMPS
DRAWN BY Kostura DATE 9/95

CR-2



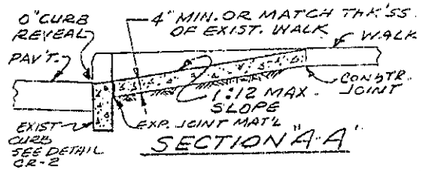
TYPE 1

TYPE 2

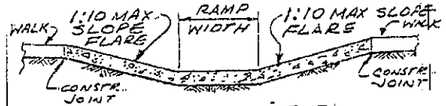
TYPE 3

(MAY BE OPPOSITE HAND)

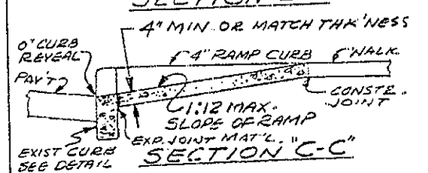
* 5'-0" RAMP WIDTH MAY BE ADAPTED WITH APPROVAL OF ENGINEER



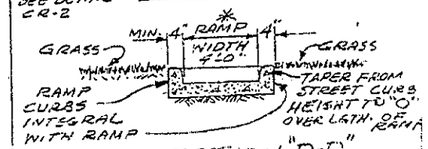
SECTION "A-A"



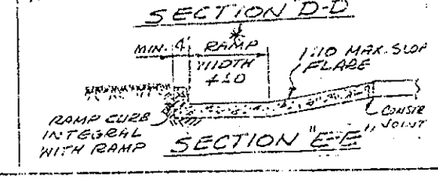
SECTION B-B



SECTION C-C



SECTION "D-D"



SECTION "E-E"

SLOPE:
Where space limitations prohibit the use of 1:12 slope or less, ramps may have slopes as follows if approved by the Engineer:

- A slope between 1:10 and 1:12 is allowed for a max rise of 6".
- A slope between 1:8 and 1:10 is allowed for a max rise of 3".

WIDTH:
A minimum width of 3 feet may be used, if approved by the Engineer

TYPE:
The type of the curb ramp shall be the type called for in the plans or as directed by the engineer.

JOINTS:
A 1/2 inch 705.03 expansion joint filler shall be provided around the edge of the ramp

PAYMENT:
Payment for the curb ramp shall be made as specified in Item 608.

WORK THIS DWG. WITH DWG. CR-2

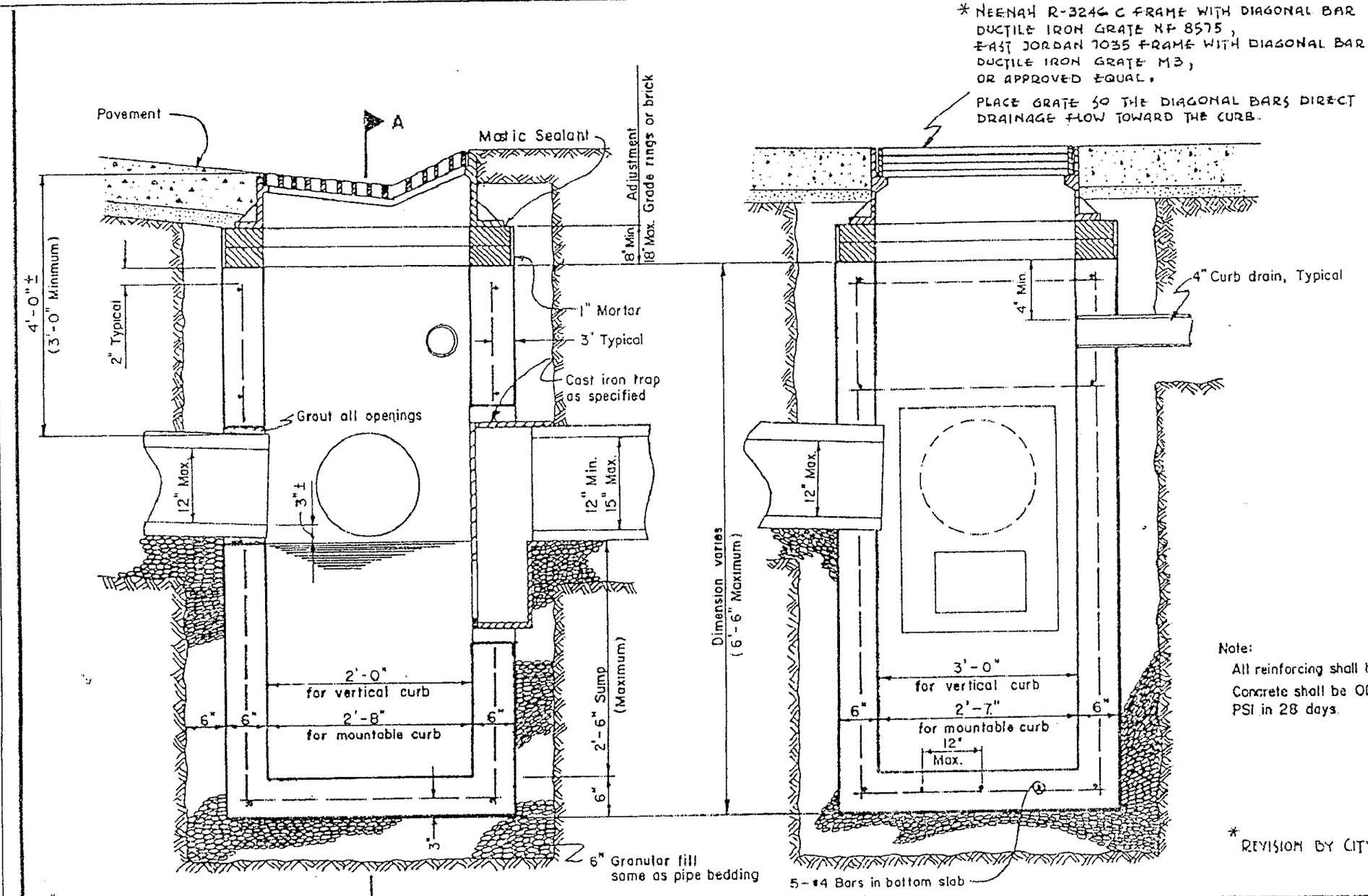
CITY OF CLEVELAND
DIV. OF ENGINEERING & CONSTRUCTION
CURB RAMPS
DRAWN BY Kostura DATE 9/95

CR-1

CITY OF CLEVELAND STANDARD CONSTRUCTION DRAWING
CURB RAMPS CR-1 & CR-2

94
162

DESIGNED BY:		CHECKED BY:		
DATE:		DATE:		
DRAWN BY:		REVISED BY:		
DATE:		DATE:		
CAD FILE NAME:				CLEVRAMP



SECTION "A-A"

Note:
All reinforcing shall be #4 deformed bars
Concrete shall be ODOT class "C" #4000 PSI in 28 days.

* REVISION BY CITY 8-31-81

* CONSTRUCTION DIMENSIONS

INSIDE DIMENSIONS TO BE 2'-0 × 3'-0
MINIMUM COVER OVER THE PIPE 1'-6"

* CONSTRUCTION MATERIALS

CAST-IN-PLACE CONCRETE, BRICK OR CONCRETE BLOCK MAY BE USED IN LIEU OF PRECAST CONCRETE

RECTANGULAR PRECAST CONCRETE CATCH BASIN

REVISIONS:	SCALE	DATE	REVIEWED:
	No Scale	5-11-78	CLEVELAND — CUYAHOGA COUNTY — CLEVELAND REGIONAL SEWER DISTRICT

UNIFORM STANDARDS:

DESIGNED BY:	CHECKED BY:		CLEV-CBI
DATE:	DATE:		
DRAWN BY:	REVISED BY:		
DATE:	DATE:		
CAD FILE NAME:			

CITY OF CLEVELAND STANDARD CONSTRUCTION DRAWING
CATCH BASIN No. 1

94A / 162

ITEM 630 – SIGNS ERECTED, FLAT SHEET

The signs listed below, to be erected under this item, will be supplied by the Cuyahoga County Engineer. Two weeks advance notice must be given to the county sign shop, 4000 Brookpark Road, Cleveland, Ohio 44134 (216–741–3019), prior to pickup of the signs by the Contractor, at the above address.

W–68
CUY–D500

The signs listed below, to be erected under this item, will be supplied by the City of Cleveland Two weeks advance notice must be given to the division of traffic engineering sign shop, 4150 East 49th Street, Building No.4, Cleveland, Ohio 44105 (216–420–8282), prior to pickup of the signs by the Contractor, at the above address.

R–SNOW–CLV
R–55 Signs in Cleveland

The signs listed below, to be erected under this item will be supplied by the City of Lakewood Two weeks advance notice must be given to the City of Lakewood Service Department Sign Shop, 1437 Wayne Avenue Lakewood Ohio 44107 (216–529–5695), prior to pickup of the signs by the Contractor, at the above address.

R–SNOW–LKWD
R–PKG

ITEM 632 – DETECTOR LOOP, AS PER PLAN

In addition to the requirements of 632.10, Loop Detector pavement slots shall be 100mm deep in asphalt pavement. The installationof poured epoxy insulated splices between the loop detector wires and the existing loop detector lead–in cable shall be considered as incidental to this item of work No separate poyment for these splices will be made

ITEM 630 – SIGN, DOUBLE FACED STREET NAME, AS PER PLAN

Signs supplied under this item shall meet the requirements of 630, with the following exceptions:
The background color of the sign shall be blue.
Type G sheeting shall be used for the background and legend.
The legend shall be 175mm high upper case letters using the universe 65 font
The backing material shall be 250mm high flat sheet plate
The sign shall be installed using full length edge stiffeners along the top and bottom.
There shall be no border.

Payment for Item 630 – sign, double faced street name, as per plan, will be made at the contract unit price bid per each, (complete and in place), and shall include mounting hardware.

ITEM 630 – SIGN SUPPORT ASSEMBLY, POLE MOUNTED, AS PER PLAN

This item is to be used for wing mounting double–faced street name signs to strain poles, mast arm poles, or wood poles

The mounting racket shall be one of the following, or an approved equal:

#8 Wing Bracket
Decker Supply Co., Inc
P O. Box 8008
Madison, WI 53708
(800–274–5495)

GX–3 Cantilevered Wing Bracket
Superior Precision Design. Inc.
3 Spielman Road
Fairfield, NJ 07004
(800–377–4160)

VS–1C Cantilever Bracket
Vulcan Signs
P O. Box 850
Foley. AL 36536
(800–633–6845)

The bracket shall be suitable for mounting extruded double–faced street name signs with thickened edges.

Payment for "Item 630 – Sign Support Assembly, Pole Mounted, As Per Plan" shall be made at the contract unit price bid per each. Payment shall be full compensation for all labor, materials. tools. equipment, and other incidentals necessary to attach one sign

ITEM 630 – SIGN SUPPORT ASSEMBLY, POLE MOUNTED

When utility poles are in close proximity to the proposed location of ground mounted signs, miscellaneous flat sheet signs shall be attached to existing or new utility poles in lieu of single ground mounted post supports. using sign support assembly, pole mounted, as shown on Standard Construction Drawing TC–41 40M. For this purpose, a contingency quantity of 10 each of this item has been carried to the general summary for use as directed by the engineer

SCHEDULING OF DETECTOR LOOP INSTALLATION AND INSTALLATION OF PAVEMENT MARKINGS

The Contractor shall schedule his work, and that of his subcontractors, to ensure that detector loop installation, (including pavement cutting, the installation of loop detector wires, and sealing of the loop detector slots) is completed prior to the installation of the various pavement markings to be installed in the same locations (such as, stop lines, crosswalk lines, words on pavement, and lane arrows) and he shall further insure that these pavement markings are installed as soon as practicable after the surface is installed and the road is ready to open to traffic

642 – PAVEMENT MARKINGS

Existing pavement markings on side streets shall be repainted a distance of 15 meters from the stop bar. A quantity of 375 meters of center line. double, solid, 60 meters of channelizing line, and 60 meters of lane line has been carried to the General Summary for this work

ITEM SPECIAL – PAVEMENT MARKINGS, MISC.; (EPOXY)

A. DESCRIPTION:

This work shall consist of furnishing and applying epoxy pavement markings in accordance with the requirements described herein. Except where otherwise indicated in these specifications, the requirements of Sections 641 and 740 of the Construction and Material Specifications shall apply to the installation and use of this material.

In general, the markings shall consist of four components:

1. Part A (White or Yellow)
2. Part B
3. Size I Glass Beads, and
4. Size II Glass Beads. as described below.

B. EPOXY MATERIAL:

Material supplied shall be a two–part epoxy system capable of being applied at ambient temperatures down to 10 degrees C The material shall be capable of retaining reflective glass beads of the drop – on or spray – on type.

The epoxy shall comply with the following requirements:

1. Formulation:

The epoxy shall be formulated as a long–life pavement marking system free of any peroxides, and/or TMPTA (Tri–Methylol Propane Tri–Acrylate) and other such multi–functional monomers. The epoxy should be designed to provide simple volumetric mixing ratio of its components (such as 2:1)

2 Viscosity:

The viscosity of the various parts shall be as follows:

Part A White	19,000 – 20,000 cP
Part A Yellow	25,000 – 26,000 cP
Part B	1,950 – 2,050 cP

At the point of application the viscosities shall be within 10 percent of each other.

3. Weight:

The weight of each part shall be as follows:

Part A White	1,414 g/L +/– 23 g/L
Part A Yellow	1,534 g/L +/– 24 g/L
Part B	1,150 g/L. +/– 24 g/L

4 Epoxide Number:

The epoxide number of the epoxy resin shall be 0.51 +/– 0.05 as determined by ASTM D–1652 for both White and Yellow Part A on a pigment–free basis.

5. Amine Number:

The amine number of the curing agent (Part B) shall be +/– 50 as per ASTM D–2074

6 Toxicity:

Upon heating to application temperature, the material shall not exude fumes which are toxic or injurious to persons or property. Upon curing, the materials should be completely inert with all components fully reacted and environmentally safe

7 Laboratory Drying Time:

The pavement marking material, when mixed in the proper ratio and applied at the properly prescribed wet film thickness at 24 degrees C+/–0.5 degrees C and with the proper saturation of glass spheres, shall exhibit a no tracking time of 45–50 minutes when tested according to ASTM D–711.

8 Field Drying Time:

The pavement marking material shall have a setting time to a no–tracking condition of not more than 35 minutes at 24 degrees C+/– 0.5 degrees C The line must be protected from tracking during the setting period by one or more of the following materials

a. Coning off the wet line from traffic,
b. Use of a convoy of moving vehicles to prevent traffic crossing the wet line, and
c Saturation of the line with glass beads to prevent tracking

9. Curing:

The epoxy material shall be capable of fully curing under a constant surface temperature of 7 degrees C or above.

10 Adhesion to Pavement (Concrete and Asphalt):

The cured pavement marking materials, when tested according to ACI Method 503, shall have such a high degree of adhesion to the specified concrete (compressive strength 27,579 kPa minimum) or asphalt surface that there shall be a 100 percent substrate failure in the performance of this test

The prepared specimens shall be conditioned at room temperature (24 degrees C +/– 0.5 degrees C) for a minimum of 24 hours and a maximum of 72 hours prior to the performance of the tests indicated

11 Hardness:

The pavement marking materials, when tested according to ASTM D–2240–75, shall have a Shore D Hardness of between 70 and 90.

Samples shall be allowed to cure at room temperature (24 degrees C +/– 0.5 degrees C) for a a minimum of 24 hours and a maximum of 72 hours prior to performing the indicated test.

12 Tensile Strength:

When tested according to ASTM D–638, the epoxy pavement marking materials shall have a tensile strength of not less than 34, 474 kPa.

The Type IV specimens shall be cast in a suitable mold and pulled at a rate of 6 mm per minute by a suitable dynamic testing machine.

The samples shall be allowed to cure at room temperature (24 degrees C +/– 0.5 degrees C) for a minimum of 72 hours before performing the indicated tests.

13. Compressive Strength:

When tested according to ASTM D–695, the catalyzed epoxy pavement marking materials shall have a compressive strength of not less than 82 738 kPa.

The cast sample shall be conditioned at room temperature (24 degrees C +/– 0.5 degrees C) for a minimum of 72 hours before performing the indicated tests

The rate of compression of these samples shall be no more than 6mm per minute.

14 Abrasion Resistance:

The abrasion resistance shall be evaluated on a Taber Abrader with a 1,000 gram load and CS–17 wheels. The duration of the test shall be 1,000 cycles The wear index shall be calculated based on ASTM test method C–301 and the wear index for the catalyzed material shall not be more than 100 mg.

The tests shall be run on cured samples of material which have been applied at a film thickness of 0.5mm to code S–16 stainless steel plates.

The samples shall be allowed to cure at 24 degrees C +/– 0.5 degrees C for a minimum of 24 hours and a maximum of 72 hours prior to performing the indicated tests.

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TRAFFIC CONTROL GENERAL NOTES

CUY–LAKEWOOD HEIGHTS BOULEVARD

15 Impact Strength:

Properly mixed material shall be applied on a minimum of 28-day old clean concrete and shall be allowed to cure for 72 hours at 24 degrees C +/- 0 5 degrees C. Film thickness of the material shall be at the appropriately prescribed thickness.

At a temperature of 24 degrees C +/- 0 5 degrees C, a one kilogram (1 kg) round steel ball shall be dropped from a height of 1 25m onto the cured sample. No cracking or chipping of the material shall take place.

16 Color:

The mixed epoxy compound, both White and Yellow, must be applied to two (2) sets of 75mm x 150mm aluminum panels at 0.5mm in thickness, one set with no glass spheres and one set with glass spheres as specified in this Specification (ensure the 50/50 distribution of Size I and Size II spheres, for this will impact the results of this test). Expose the prepared samples in a Q.U.V. Environmental Testing Chamber, as described in ASTM G-53, and they shall conform to the following requirements

The test shall be conducted for 75 hours at 50 degrees C, 4 hours humidity and 4 hours U.V., in alternating cycles. The prepared panels shall be cured at 25 degrees C for 72 hours prior to exposure.

The color of the White epoxy material shall not be darker than Federal Standard No 595A-17855.

The color of the Yellow epoxy material shall be reasonably close to Federal Standard No. 595A-13415.

17. Accelerated Life -- Cycle Aging Test:

The material must now show any evidence of blistering, bubbling, or delaminating when submitted to test method ATR-931.

C. GLASS BEADS:

In addition to the requirements of 740 10, the following shall apply:

1. The glass spheres shall be colorless, clean, transparent, free from milkiness or excessive air bubbles, and essentially clean from surface scarring or scratching

2. The glass spheres shall have the following gradation when tested in accordance with ASTM D-1214:

Size I:	Sieve Size	Percent Retained
	2.00 mm	0
	1.70 mm	0-5
	1 40 mm	5-20
	1.20 mm	40-80
	1.00 mm	10-40
	0 85 mm	0-5
	Pan	0-2

Size II:	Sieve Size	Percent Retained
	0.85 mm	0-5
	0.60 mm	5-20
	0.30 mm	30-75
	0 18 mm	9-32
	0.15 mm	0-5
	Pan	0-2

3. Size I and Size II glass beads shall be spherical in shape and at least 70 percent shall be true spheres. Size I spheres shall be tested for roundness according to the procedural directives of the Materials Bureau. Size II spheres shall be tested in accordance with ASTM D-1155

4. The refractive index of the spheres shall be a minimum of 1.50 as determined by the liquid immersion method at 25 degrees C. The silica content of the glass spheres shall not be less than 60 percent.

5. The Size I beads shall be coated with a silane-type adherence coating to enhance their embedment in, and adherence to the applied binder film. The coated beads shall emit a yellow-green fluorescence when tested by the Dansyl Chloride test procedure The Size II beads shall be treated with a moisture-proof coating. Both sizes of glass beads shall show no tendency to absorb moisture in storage and shall remain free of clusters and lumps

They shall flow freely from dispensing equipment at any time when surface and atmospheric conditions are satisfactory for marking operations

6 The moisture-resistance of the glass spheres shall be determined on the basis of the following test:

Place one kilogram (1 kg) of spheres in a washed cotton bag, having a thread count of 323 per square centimeter (warp and woof) and immerse the bag in a container of water for 30 seconds

Remove the bag and force excess water from the sample by squeezing the bag. Suspend and allow to drain for two hours at room temperature (21-22 degrees C), then mix the sample in the bag, shaking thoroughly

Transfer a sample slowly to a clean, dry glass funnel having a stem 100mm in length, with a 10mm inside diameter stem entrance opening and a minimum stem exit opening of 6mm.

The entire sample shall flow freely through the funnel without stoppage. When first introduced into the funnel, if the spheres clog, it is permissible to lightly tap the funnel to initiate the flow.

D. STRIPING EQUIPMENT

Equipment for applying the epoxy pavement marking shall be capable of mixing the components in proportions recommended by the manufacturer and applying glass beads at the time of line placement. The marking equipment used shall be capable of applying epoxy material at the specified thickness, width, and pattern The Contractor shall provide a calibrated measuring device acceptable to the Engineer to measure the epoxy resin in the striper tanks.

In general, the applicating equipment shall be a mobile, truck-mounted and self-contained pavement marking machine, specifically designed to apply epoxy binder and reflective glass spheres in continuous and skip line patterns. The applicating equipment shall be maneuverable to the extent that straight lines can be followed and normal curves can be made in a true arc. In addition, the truck-mounted unit shall be provided with accessories to allow for the marking of legends, symbols, crosswalks and other special patterns.

The Engineer and the material manufacturer together may approve the use of a portable applicator in lieu of truck-mounted accessories for use in applying special markings only, provided such equipment can demonstrate satisfactory application of reflectorized markings in accordance with these specifications

The mobile applicator shall include the following features:

1 Individual material reservoirs, for the storage of Part A and Part B of the epoxy binder.

2. Heating equipment of sufficient capacity to maintain the individual binder components at the manufacturer's recommended temperature; and produce the required amount of heat at the mixing heat and gun tip; and maintain those temperatures with the tolerances recommended by the material manufacturer for spray application.

3. Adequate individual tanks for the storage and dispensing of Size I and Size II glass spheres.

4. Individual dispensers for the simultaneous application of Size I and Size II glass spheres, respectively. Each dispenser shall be capable of applying spheres at a rate of one to two kilograms per liter of the epoxy binder (1-2 kg/L). The applied combined total of both sizes of beads should be a minimum of kilograms per liter (3 kg/L) (1,450 - 1,550 grams of each size per liter)

5. Individual metering devices or pressure gauges, on the proportioning pumps (one indicator per pump) as well as stroke counters to monitor gallon usage All such devices shall be visible to the Engineer.

6. All the necessary spray equipment, mixers, compressors and other appurtenances to allow for the placement of a reflectorized pavement marking system in a simultaneous sequence of operations.

7. A minimum 610mm long static mixer unit as manufactured by Kenics Company or equal for proper mixing of the two components.

8. A completely enclosed flush and purge system to clean the lines and the guns without exuding any of the solution into the environment

E. CLEANING AND SURFACE PREPARATION:

The Contractor shall clean the surface to remove all debris, laitance and any other contaminants that may hinder the adhesion of the system to the surface. Whenever grinding, scarifying, sandblasting, shot blasting or other operations are performed, the debris generated must be contained through vacuum-type equipment or equivalent and the work shall be conducted in such a manner that the finished pavement surface is not damaged or left in a pattern that will mislead or misdirect the motorist. When these operations are completed, the pavement surface shall first be power broomed and then blown off with compressed air to remove residue and debris resulting from the cleaning work. All such debris must be properly contained (especially when removing Yellow paint lines) and disposed of in the appropriate manner.

Removal and cleaning work shall be conducted in such a manner as to control and minimize airborne dust, and similar debris so as to prevent a hazard to motor vehicle operation or nuisance to property

Care shall be taken on Bituminous and Portland Cement Concrete surfaces when performing removal and cleaning work to prevent damage to transverse and longitudinal joint sealers

1 Limits of Work:

Cleaning and surface preparation work shall be confined to the surface area specified for the application of pavement marking materials; or the surface area of existing pavement markings that are specified for removal on the plans; or, as directed by the Engineer.

Surface preparation work includes cleaning for lines or cleaning for words and symbols. Lines will be meant to include: Center Lines, Lane Lines, Dotted Lines, Channelizing Lines, Edge Lines, Stop Lines, Crosswalk Lines, and Transverse Lines

When lines are cleaned, the area of preparation will be the width of the new pavement marking, or existing line, plus 25mm on each side.

When words, symbols, or other miscellaneous markings are cleaned, the area of preparation will be sufficiently large to accommodate the new marking, or to remove the existing marking No new marking shall be applied on any pavement that has not been properly prepared as per this specification.

2. Removal of Concrete Curing Compounds:

On new Portland Cement Concrete pavements, cleaning operations shall not begin until a minimum of 30 days after the installation of concrete The extent of the blasting work shall be to clean and prepare the concrete surface such that:

a. There is not visible evidence of curing compound on the concrete surface

b. There are no heavy puddled deposits of curing compound in the valleys of the textured concrete surface

c. All remaining curing compound is intact; all loose and flaking material is removed.

d The peaks of the textured pavement surface are rounded in profile and free of sharp edges and irregularities

e The extent of the removal should be as such to insure the laitance is removed on both old as well as new concrete.

3. Removal of Existing Pavement Markings:

Existing pavement markings shall be cleaned for the purpose of:

a Preparing the pavement surface for the application of new pavement marking in the same location as the existing markings.

b. To remove existing markings that are in good condition which, if allowed to remain, will interfere with or otherwise conflict with newly applied marking patterns

It shall be understood that in this context, cleaning means the removal of an existing marking.
It is not intended that all deteriorated existing pavement markings be removed

Example: If a new marking is applied to an unmarked "gap" in a broken line and the existing broken line pattern is worn or deteriorated, (as determined by the Engineer), to the extent that it is not misleading or confusing to the motorist, the existing markings do not require removal

Pavement markings shall be cleaned to the extent that 95 percent to 100 percent of the existing marking is removed. Removal operations shall be conducted in such a manner that no more than moderate color and/or surface texture change results on the surrounding pavement surface.

The cost of cleaning and surface preparation, including removal of concrete curing compounds and removal of existing pavement markings, as indicated above, shall be included in the unit costs for the various items of work listed in the proposal No separate payment for cleaning or surface preparation shall be made.

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TRAFFIC CONTROL GENERAL NOTES

CUY-LAKEWOOD HEIGHTS BOULVEVARD

F. INSTALLATION:

Epoxy marking material shall only be applied when the surface is clean and dry and when the pavement and air temperatures are above 10 degrees C, unless approved in advance by the Engineer and the material manufacturer The Contractor shall transfer the entire contents of each material container to the striper tanks The material shall be thoroughly mixed at all times during application.

Both components (Part I and Part II) shall be brought to the temperature recommended by the manufacturer prior to mixing and spraying.

Epoxy marking material, plus resin, shall be applied uniformly to the surface to be marked at the following rates in Gallons per Mile of Line:

Line Type	Width of Line (millimeters)				
	100	150	200	300	600
Solid Line	52.00	78.00	104.00	156.00	312.00
Broken Line	3.00	19.50	26.00	39.00	78.00
Dotted Line	17.33	26.00	34.67	52.00	104.00
Areas, Symbols, Arrows, or Words	0.3 Liter per Square Meter				

Thinning shall not be permitted.

Glass beads shall be applied to the uncured epoxy material in sufficient quantity so that the beads completely fill the epoxy film from the film pavement interface to the top surface of the film pavement interface to the top surface of the film to the extent that there are loose beads on the surface of the uncured line The rate of application shall not be less than 3 kg of glass beads per liter of epoxy material applied (3 kg/L).

The Size I and Size II reflective beads shall be dispensed sequentially through individual dispensing guns on the wet material, with the large gradation beads (Size I) applied first, and the smaller gradation (Size II) applied second, in the same pass of the equipment. The combined application rate shall be 3 kg of glass beads per liter of epoxy material (3 kg/L) with each size ranging between 1,450 and 1,550 grams per liter (1,450 – 1,550 g/L)

If the epoxy marking does not dry to a no-tracking condition consistently and shows a cyclical soft spot, the Contractor shall cease marking application until the problem is corrected

G CERTIFICATION OF COMPLIANCE:

The material manufacturer shall furnish a notarized certification that the material complies with the provisions of this specification. It shall not be inferred that the provisions of a certification of compliance waives state inspection, sampling or testing

H. LABORATORY SAMPLES:

Promptly after execution of the contract the Contractor shall notify the engineer of the sources of material they expect to use The material manufacturer shall furnish samples of the epoxy materials as may be required by the Engineer, a minimum of 10 days before the date of intended use of these materials.

I INFRARED SPECTRA:

A copy of the infrared spectra of each component on each lot number shall be supplied by the manufacturer along with the certification papers This infrared spectra will be on record with the department to serve as a quality control measure for the future supply of this system to the state

J. QUALIFYING A MANUFACTURER:
The manufacturer must have expertise reinforced with history in this particular field to qualify such as:

1 Completed and passed the service test in accordance with Supplemental Specification 1047

2. Verifiable Installations

3. Ample production capacity

4 Proper facility

5 Compliance with EPA regulations

6. A verifiable quality control program.

K QUALIFYING A Contractor:

In order for an Installer of such pavement marking material to be approved, the Contractor must submit a certificate from a pre-approved manufacturer of such epoxy pavement marking materials certifying that such a Contractor has functional appropriate equipment to install the epoxy pavement marking material stated with the technology in this specification and he continues to be successful at performing this type of work

L PERFORMANCE REQUIREMENTS:

The system shall provide effective delineation on concrete as well as asphalt pavement for the specified period and provide the following initial retroreflectively requirements, as measured with a Mirolux-12:

	Specific Luminance (millicandelas/square meter/1x)
White Lines, Symbols and legends	250 min.
Yellow Line	175 min

M. METHOD OF MEASUREMENT:

In addition to the requirements of Section 641.12. the following shall apply:

1 The Contractor must submit certified documents from the manufacturer of the amount of gallons and pounds of beads shipped for a particular project

2 In the field, the Contractor shall furnish a calibrated measuring device to be used to measure the quantity of materials used, such as stroke counters mounted on the dispensing pumps Stroke counter readings must be taken at the beginning and end of each day by the state authorized inspector. Caution must be taken while re-circulating the material to turn off the stroke counter on the pump (Using the "dipping the tank" method as the only measure is not sufficient)

3 The rate of application of materials shall be verified by comparing the amount of material used with the computed amount needed for each section.

Where short sections are involved and it is not practical or feasible to determine the quantities used on each and every short section, such sections may, by agreement between the Engineer and Contractor, be grouped together to verify the quantities used

N DEDUCTION FOR DEFICIENCY:

In lieu of the requirements of Section 641.11, the following shall apply:

The amount of marking material (including Part A, Part B, Size I glass beads and Size II glass beads) applied per unit of measurement will be computed each day by the Engineer. The following tolerances shall be used for purposes of adjusting the unit price for each item:

A tolerance of 5 percent for deficiency of marking material (Part A, Part B, Size I Glass Beads, and Size II Glass Beads) shall be permissible without deductions. If calculations reveal that the 5 percent tolerance has been exceeded, and an insufficient amount of material has been applied the contract unit price shall be reduced in the following manner:

For a deficiency greater than 5 percent, but less than or equal to 12.5 percent payment will be based on 90 percent of the contract unit price

For a deficiency greater than 12.5 percent, but less than 20 percent, payment will be based on 80 percent of the contract unit price.

If the deficiency for any material is 20 percent or more, the work shall be considered unsatisfactory and shall be replaced at the expense of the Contractor, including all labor, equipment, traffic control, and material requirements The re-application shall be applied over the existing binder with the proper surface preparation as stated in 641.05.

If the deficiency exceeds 50 percent. the material shall be applied at the rates stated under INSTALLATION above. If the deficiency is between 20 and 50 percent, the rates of re-application of Parts A & B shall be at one half the rates stated under INSTALLATION above. In either case the glass beads shall be applied at 25 pounds of glass beads per gallon of epoxy material applied.

O. FINAL ACCEPTANCE:

Pavement markings which are unacceptable, or become unacceptable prior to final acceptance, as determined by the Engineer, for causes such as, but not limited to, improper application, loss of adhesion to the pavement, non-uniform retroreflectivity, or non-retroreflectivity, shall be replaced by the Contractor with markings conforming to these specifications and requirements at his expense without delay, or the Contractor may request that the work be considered non-performed. The Contractor will receive no payment for unacceptable work which is considered non-performed

P. BASIS OF PAYMENT:

All work performed and measured as described above will be paid at the contract unit price bid (subject to adjustment for deficiency) for the following items:

ITEM	DESCRIPTION	UNIT
SPECIAL	Pavement Marking Misc.: Edge Line	KILOMETER
SPECIAL	Pavement Marking Misc.: Lane Line	KILOMETER
SPECIAL	Pavement Marking, Misc.: Center Line	KILOMETER
SPECIAL	Pavement Marking. Misc.: Channelizing Line	METER
SPECIAL	Pavement Marking, Misc.: Stop Line	METER
SPECIAL	Pavement Marking, Misc.: Crosswalk Line	METER
SPECIAL	Pavement Marking. Misc.: Transverse Line	METER
SPECIAL	Pavement Marking, Misc.: Curb Marking	METER
SPECIAL	Pavement Marking, Misc.: Parking Lot Stall Marking	METER
SPECIAL	Pavement Marking, Misc.: Dotted Line. _____ mm	METER
SPECIAL	Pavement Marking, Misc.: Island Marking	SQUARE METER
SPECIAL	Pavement Marking, Misc.: Handicap Symbol Marking	EACH
SPECIAL	Pavement Marking. Misc.: Railroad Symbol Marking	EACH
SPECIAL	Pavement Marking, Misc.: School Symbol Marking, 1800mm	EACH
SPECIAL	Pavement Marking, Misc.: Word on Pavement, 1800mm	EACH
SPECIAL	Pavement Marking. Misc.: Lane Arrow	EACH

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TRAFFIC CONTROL GENERAL NOTES

CUY-LAKEWOOD HEIGHTS BOULEVARD

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ITEM PAID FOR BY CITY OF LAKEWOOD
XXXX / XXXX
ITEM PAID FOR BY CITY OF CLEVELAND

GENERAL SUMMARY

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SHEET NUMBER																PARTICIPATION		ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	AS PER PLAN SHEET REF.
95	113	114	115	116	117	117A	117B	118	119	120	120A	120B	121	122	123	124	CITY OF LAKEWOOD	CITY OF CLEVELAND						
								57.1 / –	58.3 / –	55.0 / –	34.9 / 26.9	22.8 / 30.5	38.6 / 35.1	30.4 / 23.4	34.8 / 26.6	33.6 / 22.8	365.5	215.7	630		581.2	METER	GROUND MOUNTED SUPPORT, NO.2 POST	
								33.3 / –	29.3 / –	12.3 / 12.3	16.7 / 16.1	12.9 / 8.3	8.2 / 4.1	16.4 / 17.0	4.1 / 8.2	– / 8.2	133.2	74.2	630		207.4	METER	GROUND MOUNTED SUPPORT, NO.3 POST	
										– / 10.2				10.2 / –			10.2	10.2	630		20.4	METER	GROUND MOUNTED SUPPORT, NO.4 POST	
								16.4 / –	8.2 / –	8.2 / 16.4							32.8	16.4	630		49.2	METER	ONE-WAY SUPPORT, NO.3 POST	
									1 / –			1 / –	– / 1	– / 2	1 / 1		3	4	630		7	EACH	STREET NAME SIGN SUPPORT	
								3 / –	2 / –	2 / –	5 / 1	1 / 8	4 / 9	1 / 7	4 / 7	5 / 14	27	46	630		73	EACH	SIGN SUPPORT ASSEMBLY, POLE MOUNTED	
								3 / –	2 / –	2 / –	5 / –	2 / –	5 / 2	4 / 2	1 / –	– / 2	24	6	630		30	EACH	SIGN SUPPORT ASSEMBLY, POLE MOUNTED, AS PER PLAN	95
								15.21 / –	10.93 / –	7.19 / 7.02	7.20 / 3.58	4.14 / 4.45	3.83 / 3.05	4.67 / 3.30	3.95 / 3.25	1.99 / 7.33	59.11	31.98	630		91.09	SQ. METER	SIGN, FLAT SHEET, TYPE G	
								– / –	1.80 / –	2.31 / 1.24	0.68 / 1.52	0.45 / 1.74	0.45 / 1.43	0.68 / 1.85	– / 1.40	– / 1.94	6.37	11.12	630		17.49	SQ. METER	SIGN, ERECTED, FLAT SHEET	95
								3 / –	4 / –	2 / –	5 / –	3 / –	5 / 4	4 / 4	4 / 2	– / 2	30	12	630		42	EACH	SIGN, DOUBLE FACED, STREET NAME, AS PER PLAN	95
								4 / –		2 / 1	2 / 1						8	2	630		10	EACH	SIGN HANGER ASSEMBLY, SPAN WIRE	
								29 / –	34 / –	21 / 10	22 / 7	17 / 14	17 / 18	11 / 15	15 / 18	2 / 23	168	105	630		273	EACH	REMOVAL OF GROUND MOUNTED SIGN AND STORAGE	
								13 / –	10 / –	11 / 4	6 / 3	3 / 3	3 / 3	5 / 4	7 / 6	– / 1	58	24	630		82	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	
								4 / –		2 / 1	2 / 1						8	2	630		10	EACH	REMOVAL OF OVERHEAD MOUNTED SIGN AND STORAGE	
		2 / 3	– / 1	– / 1													2	5	632		7	EACH	DETECTOR LOOP, AS PER PLAN	95
		–				0.23 / 0.09	.277 / .385																	
0.03 / 0.03	.669 / –	.045 / .311	.435 / .045	– / 0.24	– / .208	.308 / .101	.277 / 0.33										0.507	0.520	SPECIAL		1.027	KILOMETER	PAVEMENT MARKING, MISC.: EDGE LINE	95
0.19 / 0.19			– / .218	– / 0.24	– / .193	– / 0.04	– / .003										2.439	1.265	SPECIAL		3.704	KILOMETER	PAVEMENT MARKING, MISC.: LANE LINE	95
30.0 / 30.0		27.9 / 100.6					65.8 / 46.3										0.190	0.884	SPECIAL		1.074	KILOMETER	PAVEMENT MARKING, MISC.: CENTER LINE	95
	44.1 / –	24.8 / 16.6	31.6 / 25.2	29.2 / 20.4	7.6 / 27.8	8.1 / 14.6	11.6 / 18.9										123.7	176.9	SPECIAL		300.6	METER	PAVEMENT MARKING, MISC.: CHANNELIZING LINE	95
																	157.0	123.5	SPECIAL		280.5	METER	PAVEMENT MARKING, MISC.: STOP LINE	95
	193.0 / –	125.8 / 63.5	125.4 / 104.5	153.2 / 90.4	52.3 / 19.2	61.2 / 98.4	35.5 / 72.7																	
							58.9 / –										746.5	548.7	SPECIAL		1295.2	METER	PAVEMENT MARKING, MISC.: CROSSWALK LINE	95
					–	113	32 / 64										58.9	–	SPECIAL		58.9	METER	PAVEMENT MARKING, MISC.: TRANSVERSE LINE	95
		1.9 / 3.8	9.7 / –	5.9 / 3.5			– / 3.1										32.0	178.2	SPECIAL		209	METER	PAVEMENT MARKING, MISC.: DOTTED LINE	95
	2 / –						– / 3.1										17.5	13.5	SPECIAL		31	SQ. METER	PAVEMENT MARKING, MISC.: ISLAND MARKING	95
							– / 2										2	–	SPECIAL		2	EACH	PAVEMENT MARKING, MISC.: SCHOOL SYMBOL MARKING, 1800mm	95
							– / 6																	
																	–	2	SPECIAL		2	EACH	PAVEMENT MARKING, MISC.: WORD ON PAVEMENT, 1800mm	95
																	–	6	SPECIAL		6	EACH	PAVEMENT MARKING, MISC.: LANE ARROW	95

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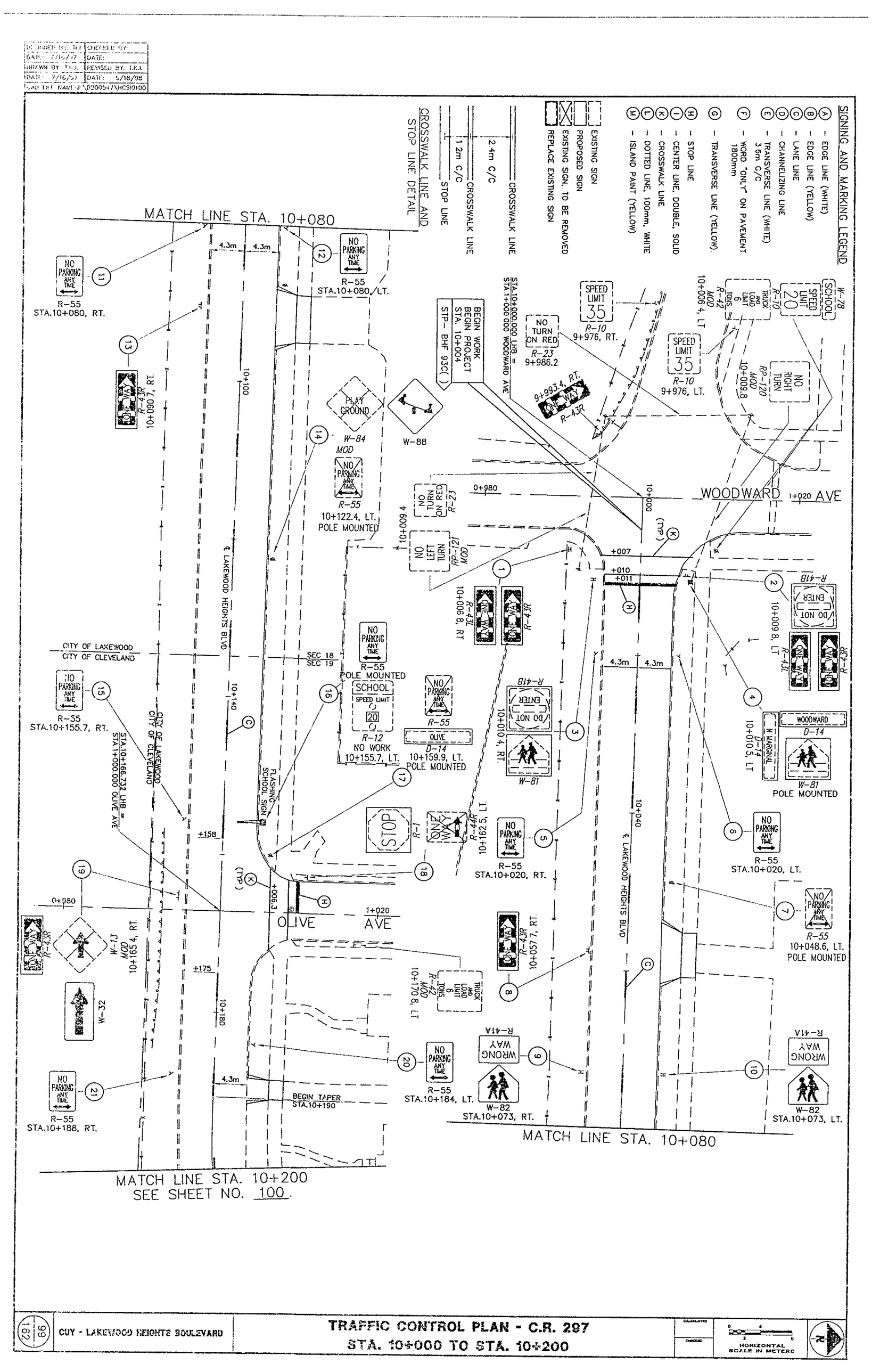
GENERAL SUMMARY

CUY-LAKEWOOD HEIGHTS BOULEVARD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DATE: 7/16/97
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DATE:
REVISED BY: T.K.L.
DATE: 5/18/98
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SIGNING AND MARKING LEGEND
(A) - EDGE LINE (WHITE)
(B) - EDGE LINE (YELLOW)
(C) - LANE LINE
(D) - CHANNELIZING LINE
(E) - TRANSVERSE LINE (WHITE) 3.6m C/C
(F) - WORD "ONLY" ON PAVEMENT. 1800mm
(G) - TRANSVERSE LINE (YELLOW).
(H) - STOP LINE
(J) - CENTER LINE, DOUBLE, SOLID
(K) - CROSSWALK LINE
(L) - DOTTED LINE, 100mm, WHITE
(M) - ISLAND PAINT (YELLOW)
EXISTING SIGN
PROPOSED SIGN
EXISTING SIGN, TO BE REMOVED
REPLACE EXISTING SIGN
CROSSWALK LINE
2.4m C/C
CROSSWALK LINE
1.2m C/C
STOP LINE
CROSSWALK LINE AND STOP LINE DETAIL
MATCH LINE STA. 10+080
MATCH LINE STA. 10+200
SEE SHEET NO. 100
MATCH LINE STA. 10+080
WOODWARD AVE
OLIVE AVE
CITY OF LAKEWOOD
CITY OF CLEVELAND
LAKEWOOD HEIGHTS BLVD
SEC 18
SEC 19
STA.10+000.000 LHB = STA.1+000.000 WOODWARD AVE
STA.10+166.732 LHB = STA.1+000.000 OLIVE AVE
BEGIN WORK
BEGIN PROJECT
STA. 10+004
STP- BHF 93C( )
NO PARKING ANY TIME
R-55
STA.10+080, RT.
STA.10+080, LT.
STA.10+155.7, RT.
STA.10+020, RT.
STA.10+020, LT.
10+048.6, LT.
POLE MOUNTED
STA.10+188, RT.
STA.10+184, LT.
10+122.4, LT.
POLE MOUNTED
10+159.9, LT.
POLE MOUNTED
NO TURN ON RED
R-23
9+986.2
SPEED LIMIT 35
R-10
9+976, RT.
9+976, LT.
9+993.4, RT.
ONE WAY
R-43R
10+090.7, RT.
10+006.4, LT
MOD
R-42
TRUCK AND LOAD LIMIT 9 TONS
R-10
SCHOOL SPEED LIMIT 20
W-78
NO RIGHT TURN
RP-120
MOD
10+009.8
PLAY GROUND
W-84
MOD
W-88
NO TURN ON RED
R-23
0+980
10+000
(TYP)
10+000.4
NO LEFT TURN
RP-121
MOD
10+006.8, RT
ONE WAY
R-43L
R-43R
+007
+010
+011
R-41B
ENTER
DO NOT
10+009.8, LT
10+010.4, RT.
10+010.5, LT
WOODWARD
D-14
N. MARGINAL
W-81
SCHOOL
SPEED LIMIT
20
R-12
NO WORK
10+155.7, LT.
OLIVE
D-14
FLASHING SCHOOL SIGN
STOP
R-1
ONE WAY
R-43R
10+162.5, LT
+158
+040
+175
10+180
0+980
W-13
MOD
10+165.4, RT.
W-32
10+057.7, RT.
10+170.8, LT
WRONG WAY
R-41A
W-82
STA.10+073, RT.
STA.10+073, LT.
BEGIN TAPER
STA.10+190
4.3m
10+100
10+140
10+180
CUY - LAKEWOOD HEIGHTS BOULEVARD
TRAFFIC CONTROL PLAN - C.R. 297
STA. 10+000 TO STA. 10+200
CALCULATED
CHECKED
HORIZONTAL SCALE IN METERS
99
1822

SIGNING AND MARKING LEGEND

- (A) – EDGE LINE (WHITE)
- (B) – EDGE LINE (YELLOW)
- (C) – LANE LINE
- (D) – CHANNELIZING LINE
- (E) – TRANSVERSE LINE (WHITE). 3.6m C/C
- (F) – WORD "ONLY" ON PAVEMENT. 1800mm
- (G) – TRANSVERSE LINE (YELLOW) 3.6m C/C
- (H) – STOP LINE
- (I) – CENTER LINE. DOUBLE, SOLID
- (K) – CROSSWALK LINE
- (L) – DOTTED LINE, 100mm, WHITE
- (M) – ISLAND PAINT (YELLOW)

EXISTING SIGN
PROPOSED SIGN
EXISTING SIGN, TO BE REMOVED
REPLACE EXISTING SIGN

CROSSWALK LINE
2.4m C/C
CROSSWALK LINE
1.2m C/C
STOP LINE

CROSSWALK LINE AND STOP LINE DETAIL

SEE SHEET NO. 99
MATCH LINE STA. 10+200

MATCH LINE STA. 10+320

MATCH LINE STA. 10+320
SEE SHEET NO. 101

MATCH LINE STA. 10+440

¢ LAKEWOOD HEIGHTS BLVD.

CARABEL AVENUE

STA.10+250.737 LHB = STA.1+000.000 CARABEL AVE.

CITY OF LAKEWOOD
CITY OF CLEVELAND

TOLEDO WEST

EX CONC WALK

EX CONCRETE WALK

END TAPER STA.10+235

RELOCATE TO STA.10+220, LT.

10+328.7, LT.

10+337.9, LT. POLE MOUNTED RELOCATE TO STA.10+328.7, LT.

10+389.3, LT. POLE MOUNTED

10+404, LT.

10+428, LT.

10+428.4, RT.

10+298.8, RT.

10+298.2, LT. POLE MOUNTED

10+280, LT.

10+269, LT.

10+264.9, LT.

10+261.1, RT.

10+259.8, LT.

10+258.2, LT.

10+256.5, RT.

10+245.3, RT.

10+239.1, RT.

10+220.1, RT.

10+210.1, LT. POLE MOUNTED

10+206.1, RT.

10+200.6, RT.

THE JACOBS ENGINEERING GROUP	
DATE: 7/19/99	
DRAWN BY: TKH	REVISED BY: TKH
DATE: 7/19/99	DATE: 5/19/98
CAD FILE NAME: J:\020254\Vis\302900	

HORIZONTAL SCALE IN METERS

CALCULATED
CHECKED

TRAFFIC CONTROL PLAN - C.R. 297
STA. 10+200 TO STA. 10+440

CUY - LAKEWOOD HEIGHTS BOULEVARD

100
162

SIGNING AND MARKING LEGEND

- (A) – EDGE LINE (WHITE)
- (B) – EDGE LINE (YELLOW)
- (C) – LANE LINE
- (D) – CHANNELIZING LINE
- (E) – TRANSVERSE LINE (WHITE), 3.6m C/C
- (F) – WORD "ONLY" ON PAVEMENT, 1800mm
- (G) – TRANSVERSE LINE (YELLOW), 3.6m C/C
- (H) – STOP LINE
- (I) – CENTER LINE, DOUBLE, SOLID
- (K) – CROSSWALK LINE
- (L) – DOTTED LINE, 100mm, WHITE
- (M) – ISLAND PAINT (YELLOW)

EXISTING SIGN

PROPOSED SIGN

EXISTING SIGN, TO BE REMOVED

REPLACE EXISTING SIGN

CROSSWALK LINE

2.4m C/C

CROSSWALK LINE

1.2m C/C

STOP LINE

CROSSWALK LINE AND STOP LINE DETAIL

SEE SHEET NO. 100
MATCH LINE STA. 10+440

MATCH LINE STA. 10+560

MATCH LINE STA. 10+560

MATCH LINE STA. 10+680
SEE SHEET NO. 102

℄ LAKEWOOD HEIGHTS BLVD.

ARTHUR AVENUE

STA.10+588.951 LH8=
STA.1+000.000 ARTHUR AVE.

10+583, LT. R-43R ONE WAY R-43L ONE WAY I-R

TRUCK AND LOAD LIMIT 6 TONS R-42 MOD

NO PARKING ANY TIME R-55 MOD 10+594.2, LT

R-SNOW-LKWD STA.10+561, LT. & RT.

10+454.2, LT. & RT.

R-SNOW-LKWD STA.10+573, LT.

NO PARKING ANY TIME R-55 STA.10+573, LT.

NO PARKING ANY TIME R-55 10+463, LT. POLE MOUNTED RELOCATE TO STA.10+454.2, LT.

NO PARKING ANY TIME R-55 10+538.2 LT. POLE MOUNTED RELOCATE TO STA.10+522, LT.

NO PARKING ANY TIME R-55 10+614.2, LT. POLE MOUNTED RELOCATE TO STA.10+610, LT.

W-81 STA.10+604, LT.

W-82

NO PARKING ANY TIME R-55 STA.10+670, LT.

10+649.9, RT. R-SNOW-LKWD

10+583.4, RT. W-48 NO OUTLET

STOP R-1 10+589.4, RT

ONE WAY R-43L 10+599.3, RT.

DO NOT ENTER R-41B

ONE WAY R-43L STA.10+600, LT.

LAKEWOOD HTS D-14 10+580.3, LT.

ARTHUR D-14

10+580

10+620

10+660

10+540

10+500

10+980

1+020

+565

+602

2.1m 3.25m 3.25m

DESIGNED BY: TH	CHECKED BY:		
DATE: 7/16/97	DATE:		
DRAWN BY: T.N.T.	REVISED BY: T.N.T.		
DATE: 7/16/97	DATE: 5/19/98		
CAD FILE NAME: N:\0200\47\VICS0300			

HORIZONTAL SCALE IN METERS

TRAFFIC CONTROL PLAN - C.R. 297
STA. 10+440 TO STA. 10+680

CITY - LAKEWOOD HEIGHTS BOULEVARD

101
162

DESIGNED BY: JG	CHECKED BY:
DATE: 7/16/97	DATE:
DRAWN BY: TKL	REVISED BY: TKL
DATE: 7/16/97	DATE: 5/20/98
CAD FILE NAME: J:\D200547\TCS10400	

SIGNING AND MARKING LEGEND

- (A) – EDGE LINE (WHITE)
- (B) – EDGE LINE (YELLOW)
- (C) – LANE LINE
- (D) – CHANNELIZING LINE
- (E) – TRANSVERSE LINE (WHITE), 3.6m C/C
- (F) – WORD "ONLY" ON PAVEMENT, 1800mm
- (G) – TRANSVERSE LINE (YELLOW), 3.6m C/C
- (H) – STOP LINE
- (K) – CENTER LINE, DOUBLE SOLID
- (L) – CROSSWALK LINE
- (M) – DOTTED LINE, 100mm, WHITE
- (N) – ISLAND PAINT (YELLOW)

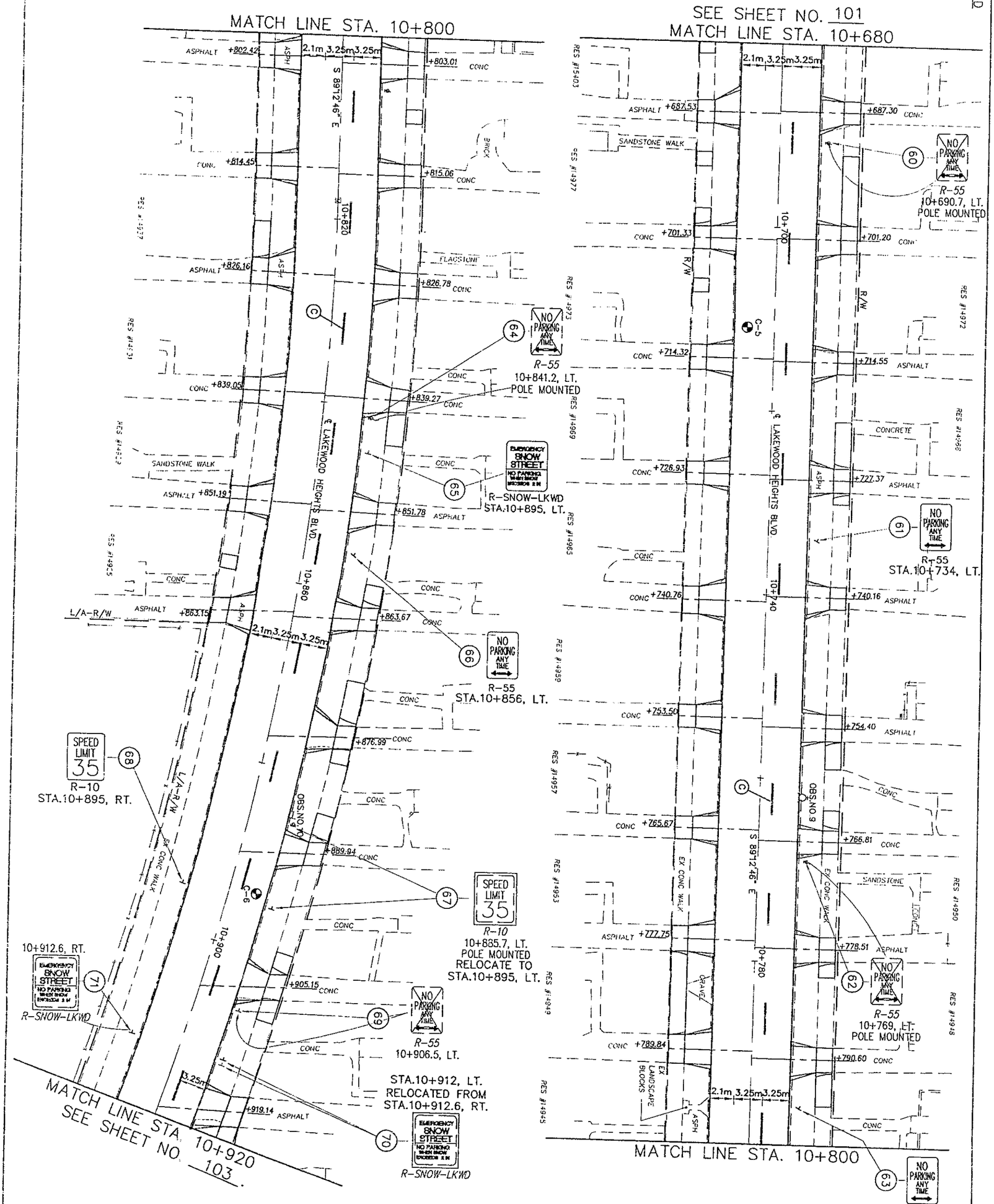
EXISTING SIGN
PROPOSED SIGN
EXISTING SIGN, TO BE REMOVED
REPLACE EXISTING SIGN

CROSSWALK LINE AND STOP LINE DETAIL

CROSSWALK LINE
2.4m C/C
CROSSWALK LINE
1.2m C/C
STOP LINE

MATCH LINE STA. 10+800
SEE SHEET NO. 101

SEE SHEET NO. 101
MATCH LINE STA. 10+680



CUY - C.R. 297
LAKEWOOD HEIGHTS BOULEVARD

TRAFFIC CONTROL PLAN - C.R. 297
STA. 10+680 TO STA. 10+920

HORIZONTAL SCALE IN METERS

SIGNING AND MARKING LEGEND

- (A) – EDGE LINE (WHITE)
- (B) – EDGE LINE (YELLOW)
- (C) – LANE LINE
- (D) – CHANNELIZING LINE
- (E) – TRANSVERSE LINE (WHITE), 3.6m C/C
- (PA) – PAVEMENT ARROW, 1800mm
- (F) – WORD "ONLY" ON PAVEMENT
- (G) – TRANSVERSE LINE (YELLOW), 3.6m C/C
- (H) – STOP LINE
- (I) – CENTER LINE, DOUBLE, SOLID
- (K) – CROSSWALK LINE
- (L) – DASHED CENTERLINE (YELLOW)
- (M) – ISLAND PAINT (YELLOW)

EXISTING SIGN
PROPOSED SIGN
EXISTING SIGN, TO BE REMOVED
REPLACE EXISTING SIGN

SEE SHEET NO. 102
MATCH LINE STA. 10+920

10+931.5, LT
R-55 STA.10+921, LT.
NO PARKING ANY TIME
NO PARKING ANY TIME R-55
CONC
EX CONC WALK
ROAD
1+020
+013.7
R-55 10+939.4, LT.
RIGHT TURN ONLY AT WARREN R-25A MOD 10+945.1, LT.
R-4JR ONE WAY
R-31K ONLY
R-4IB DO NOT ENTER
10+952.5, LT.
R-55 10+978.3, LT. RELOCATE TO STA.10+960, LT.
11+004.8, LT
R-1 STOP
EX POSTS
ASPHALT
R-41A WRONG WAY 11+014.3, LT.
R-55 11+024, LT. RELOCATE TO STA.11+016, LT.
R-29A
R-30A ONLY 11+037
R-28A
+931
5.35m
+934
+936.7
10+940
73
LAKEWOOD HTS D-14 ALGER D-14
10+936.6, RT. POLE MOUNTED
CITY OF LAKEWOOD CITY OF CLEVELAND
STA.10+944.555 LHB= STA.11+000.000 ALGER RD.
+952.2
PMT.
+954.9
+956.2
3.25m
3.25m
+967.6
LOOP DETECTOR 2m X 7.3m LD1
EX SIGN BASE
0.9m
+976
+984.1
10+980
EXISTING PULL BOX
+003.4
3.8m
4.2m
11+020
℄ LAKEWOOD HEIGHTS BLVD.
0.6m
+975
4.2m
LD3 LOOP DETECTOR 2m X 11m
+007
0.6m
4.2m
+016
EX GUARDRAIL
OVERHEAD SIGN
MATCH LINE STA. 11+040
R-4JR ONE WAY R-121
POLE MOUNTED
10+940.4, RT.
X-4A 10+940.8
EX MARKER
EX POSTS
K (TYP.)
R-4AR ONE WAY
10+936.6
ALGER
LD2 LOOP DETECTOR 2m X 3.6m
CONC
R-24 MOD
PLACE AT EXISTING LOCATIONS
R-4JR ONE WAY
R-4IB ONE WAY
R-4IB DO NOT ENTER
R-4JR ONE WAY
R-44L 10+956
10+961.9, RT.
R-43L
EX CONC WAVE RACK
R-4JR ONE WAY
R-4IB ENTER
R-4JR ONE WAY
R-4IB DO NOT ENTER
R-55 STA.10+972
10+956.2, RT.
EXISTING PULL BOX
R-41A WRONG WAY
R-55 STA.11+025, RT.
R-41A WRONG WAY 11+037, RT.
BRUSH
CONC RET. WALL
R-4JR ONE WAY
R-121
10+998.5, RT.
EXIST. BRICK BUILDING
Lakewood Hts Blvd RIGHT TWO LANES
GE 11+138.6
WEST TOLEDO 90
10+929, RT.
WEST TOLEDO 90
10+951.3, RT
LEFT TURN ONLY AT NEXT INTERSECTION
10+953.4, RT
R-55 STA.11+053, LT.
R-PKG
11+079, LT.
R-55 STA.11+095, LT.
R-PKG
11+140, LT.
EX CONC WALK
CONC
11+060 ℄ LAKEWOOD HEIGHTS BLVD. 11+100
CITY OF LAKEWOOD CITY OF CLEVELAND 11+140
OVERHEAD SIGN
MATCH LINE STA. 11+160
SEE SHEET NO. 104
TO WEST 2
M-45 STA.11+065, RT.
R-55 STA.11+050, RT.
39
LAKEWOOD HTS BLVD
ALGER ROAD
500 FEET
CUY-0500 (900mm x 750mm) STA.11+100, LT. & RT.
R-55 STA.11+140, LT.
EX CONCRETE RETAINING WALL
BRUSH

CROSSWALK LINE
2.4m C/C
CROSSWALK LINE
1.2m C/C
STOP LINE

CROSSWALK LINE AND STOP LINE DETAIL

DESIGNED BY: HH | CHECKED BY:
DATE: 2/16/97 | DATE:
DRAWN BY: LKL | REVISED BY: LKL
DATE: 2/16/97 | DATE: 5/29/98
CAD FILE NAME: \D2004\TICS10506

N
HORIZONTAL SCALE IN METERS
DESIGNED
DRAWN
CHECKED

TRAFFIC CONTROL PLAN - C.R. 297
STA. 10+920 TO STA. 11+160

CUY - LAKEWOOD HEIGHTS BOULEVARD

103
162

SIGNING AND MARKING LEGEND

- (A) – EDGE LINE (WHITE)
- (B) – EDGE LINE (YELLOW)
- (C) – LANE LINE
- (D) – CHANNELIZING LINE
- (E) – TRANSVERSE LINE (WHITE), 3.6m C/C
- (F) – WORD "ONLY" ON PAVEMENT, 1800mm
- (G) – TRANSVERSE LINE (YELLOW), 3.6m C/C
- (H) – STOP LINE
- (I) – CENTER LINE, DOUBLE, SOLID
- (K) – CROSSWALK LINE
- (L) – DOTTED LINE, 100mm, WHITE
- (M) – ISLAND PAINT (YELLOW)

EXISTING SIGN
PROPOSED SIGN
EXISTING SIGN, TO BE REMOVED
REPLACE EXISTING SIGN

CROSSWALK LINE
2.4m C/C
CROSSWALK LINE
1.2m C/C
STOP LINE

CROSSWALK LINE AND STOP LINE DETAIL

SEE SHEET NO. 103
MATCH LINE STA. 11+160

MATCH LINE STA. 11+280

MATCH LINE STA. 11+280
SEE SHEET NO. 105

MATCH LINE STA. 11+400

WARREN ROAD
LINCOLN AVE.
LAKEWOOD HEIGHTS BLVD.
CITY OF LAKEWOOD
CITY OF CLEVELAND
EXISTING PULL BOX
LOOP DETECTOR 11m x 2m (LD4)
LOOP DETECTOR 2 x 2.4m (LD5)
STA.11+212.770 LHB≈ STA.11+000.000 WARREN RD.
STA 11+395.132 LHB≈ STA 11+000.000 LINCOLN AVE
LAKEWOOD OHIO CORPORATION LIMIT 11+224.6, LT
POLE MOUNTED 11+225.8, LT.
POLE MOUNTED 11+385.3, LT.
POLE MOUNTED 11+202.3, RT.
POLE MOUNTED 11+183.1, RT.
POLE MOUNTED 11+314.4, LT.
R-38P 11+208.3, LT
11+393.9, RT.
11+391.1, LT.
11+380, LT.
11+242, RT.
11+229, RT.
11+228.8, RT
11+184, LT.
11+191.7, LT.
11+179, LT.
11+165, LT.
11+165, RT.
11+180, RT.
11+301, LT.
11+310, LT.
11+301, RT.
11+310, RT.
11+360, RT.
11+379.2, RT.
11+364, RT.
11+280.8, LT.
11+280.8, RT.
11+236.7, LT.
11+255.1, LT.
RELOCATE TO STA.11+242, LT.
11+279.6, LT.
11+225.8 ONE WAY
11+020
+014
+253.00
+283.65
+296.46
+316.03
+346.41
+358.56
+370.67
+387
+336
+327
+187
+196.5
+198.5
+227.9
+226.7
+224.2
+232
+020
+080
0.6m
10.3m
4.2m
3.8m
4.3m
4.4m
R-10 SPEED LIMIT 35
R-55 NO PARKING ANY TIME
R-42 MOD TRUCK AND TRUCK LIGHT 6 TONS
R-43L ONE WAY
R-43R ONE WAY
R-44L ONE WAY
R-44R ONE WAY
R-42A MOD THROUGH VEHICLES PROHIBITED OVER 4 TONS EMPTY WEIGHT
R-29A ONLY
R-30A
R-26A
R-57 NO STOPPING 1 HR 7 AM-9 AM
R-68A
R-SNOW-LKWD SNOW STREET NO PARKING
N-29
N-15
D-14 WARREN
D-14 LAKEWOOD HTS
D-14 LINCOLN
R-41A WRONG WAY
R-41B ENTER
R-2 STOP
WEST TOLEDO 90
TOLEDO 90
LAKEWOOD HTS BLVD WARREN ROAD 500 FEET CUY-D500 (900mm X 750mm)
OVERHEAD SIGN
HELD
HORIZONTAL SCALE IN METERS
0 1 2 3 4

TRAFFIC CONTROL PLAN - C.R. 297
STA. 11+160 TO STA. 11+400

CUY - LAKEWOOD HEIGHTS BOULEVARD

104
162

DESIGNED BY: JRT CHECKED BY:
DATE: 7/16/97 DATE:
DRAWN BY: JRT REVISED BY: TRT
DATE: 7/16/97 DATE: 5/21/98
CAD FILE NAME: J:\02005\47\TCS10600

SIGNING AND MARKING LEGEND

- (A) – EDGE LINE (WHITE)
- (B) – EDGE LINE (YELLOW)
- (C) – LANE LINE
- (D) – CHANNELIZING LINE
- (E) – TRANSVERSE LINE (WHITE), 3.6m C/C
- (F) – WORD "ONLY" ON PAVEMENT, 1800mm
- (G) – TRANSVERSE LINE (YELLOW), 3.6m C/C
- (H) – STOP LINE
- (I) – CENTER LINE, DOUBLE, SOLID
- (K) – CROSSWALK LINE
- (L) – DOTTED LINE, 100mm, WHITE
- (M) – ISLAND PAINT (YELLOW)

EXISTING SIGN
PROPOSED SIGN
EXISTING SIGN, TO BE REMOVED
REPLACE EXISTING SIGN

CROSSWALK LINE
2.4m C/C
CROSSWALK LINE
1.2m C/C
STOP LINE

CROSSWALK LINE AND STOP LINE DETAIL

SEE SHEET NO. 104
MATCH LINE STA. 11+400
MATCH LINE STA. 11+520
MATCH LINE STA. 11+520
SEE SHEET NO. 106
MATCH LINE STA. 11+640
℄ LAKEWOOD HEIGHTS BLVD.
CITY OF LAKEWOOD
CITY OF CLEVELAND
CONC. MEDIAN
ADELINE ST.
HILDA ST.
STA.11+492.167 LHB= STA 1+000.000 ADELINE ST.
STA.11+577.820 LHB= STA.1+000.000 HILDA ST.
RELOCATE TO STA.11+588, LT.
STA.11+577.6, RT. POLE MOUNTED
11+582.6, LT
11+574.1, LT.
11+534.9, LT. POLE MOUNTED
11+455, LT. POLE MOUNTED
11+401, LT.
11+410, LT.
11+470, LT.
11+481.9, LT. POLE MOUNTED
11+488.6, LT.
11+497.2, LT.
11+505, LT.
11+432, RT.
11+482, RT.
11+530.1, RT.
11+552, RT.
11+565, LT.
11+588, LT.
11+588.8, LT. POLE MOUNTED
11+602, LT.
11+602, RT.
11+611.7, LT. POLE MOUNTED
11+639, LT.
11+491.2, RT. POLE MOUNTED
11+691.7, RT.
11+400
11+420
11+460
11+500
11+520
11+540
11+580
11+620
11+640
+407
+482
+503
+566
+589
+014.3
+020
4.3m
(TYP.)
(C) (H) (K)
R-55 MOD
R-42 MOD
R-42
R-43R
R-41A
R-41A
R-2
R-1
R-57
R-68A
R-10
R-55
R-SNOW-LKWD
W-49L
D-14
NO PARKING HERE TO CORNER
NO PARKING ANY TIME
STOPPING
ONE WAY
WRONG WAY
STOP
YIELD
SPEED LIMIT 25
HILDA
EMERGENCY SNOW STREET NO PARKING SNOW EMERGENCY IN EFFECT
TRUCK AND LOAD LIMIT 6 TONS
122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141

CALCULATED: CHECKED BY:
DATE: 7/16/97 DATE:
DRAWN BY: T.K.I. REVISED BY: T.K.I.
DATE: 7/16/97 DATE: 4/21/98
CAD FILE NAME: J:\020547\tr\sh0700

HORIZONTAL SCALE IN METERS
0 2 4

TRAFFIC CONTROL PLAN - C.R. 297
STA. 11+400 TO STA. 11+640

CITY - LAKEWOOD HEIGHTS BOULEVARD

105
162

CROSSWALK LINE
2.4m C/C
CROSSWALK LINE
1.2m C/C
STOP LINE

CROSSWALK LINE AND STOP LINE DETAIL

SIGNING AND MARKING LEGEND

- (A) – EDGE LINE (WHITE)
- (B) – EDGE LINE (YELLOW)
- (C) – LANE LINE
- (D) – CHANNELIZING LINE
- (E) – TRANSVERSE LINE (WHITE), 3.6m C/C
- (F) – WORD "ONLY" ON PAVEMENT, 1800mm
- (G) – TRANSVERSE LINE (YELLOW), 3.6m C/C
- (H) – STOP LINE
- (I) – CENTER LINE, DOUBLE, SOLID
- (K) – CROSSWALK LINE
- (L) – DOTTED LINE, 100mm, WHITE
- (M) – ISLAND PAINT (YELLOW)

EXISTING SIGN
PROPOSED SIGN
EXISTING SIGN, TO BE REMOVED
REPLACE EXISTING SIGN

SEE SHEET NO. 105
MATCH LINE STA. 11+640

MATCH LINE STA. 11+760

MATCH LINE STA. 11+880
SEE SHEET NO. 107

BROWN RD
LAKEWOOD HTS D-14 11+640.4, LT. POLE MOUNTED
STOP R-1 11+645.6, LT.
TRUCK AND LOAD LIMIT 6 TONS R-42 MOD 11+656.6, LT.
NO PARKING ANY TIME R-55 STA.11+647, RT.
NO PARKING ANY TIME R-55 STA.11+662, LT.
11+681.3, LT. POLE MOUNTED
BUS STOP R-56A MOD
11+701.7 LT. POLE MOUNTED
NO STOPPING ANY TIME R-57
R-68A 11+719.7 LT. POLE MOUNTED
NO PARKING ANY TIME R-55 STA.11+740, LT.
STOP R-1 11+745.6, LT
TRUCK AND LOAD LIMIT 6 TONS R-42 MOD 11+755.4, LT.
1+020
AVENUE
OBS.NO.11
NO PARKING ANY TIME R-55 MOD 11+755.6, LT
RICHLAND D-14 11+757.9, LT. POLE MOUNTED
NO PARKING ANY TIME R-55 STA.11+758, RT.
STOP R-1 11+751.6, LT
STA.11+649.902 LHB= STA.1+000.000 BROWN RD
STA 11+749.117 LHB= STA.1+000.000 RICHLAND AVE (N)
STA.11+747.398 LHB= STA.1+000.000 RICHLAND AVE (S)
(TYP)
℄ LAKEWOOD HEIGHTS BLVD.
CITY OF LAKEWOOD
CITY OF CLEVELAND
11+660
11+700
11+740
±662
±737
±756
4.25m
3.6m
BUNTS RD
W 140TH ST
500 FEET
CUY-D500 (750mm X 600mm) STA.11+702, RT. (11+6
R-SNOW-CLV STA.11+670, RT.
R-10 STA.11+680, RT.
SPEED LIMIT 35
BUS STOP R-56A MOD POLE MOUNTED 11+703.3, RT.
NO PARKING ANY TIME R-55 STA.11+720, RT.
R-SNOW-CLV 11+737.3, RT. POLE MOUNTED
RTA3
LAKEWOOD HTS D-14 POLE MOUNTED 11+842.8, LT.
W-48 OUTLET NO 11+740.8, RT.
RICHLAND
0+980
11+861.7, LT.
LAKEWOOD CORPORATION LIMIT N-1 STA.11+871.4, LT.
BUNTS ROAD
R-38R
W-30
11+648, RT
R-55
NO PARKING ANY TIME R-42 MOD
TRUCK AND LOAD LIMIT 6 TONS
KEEP RIGHT R-37R
R-55 STA.11+647, RT.
R-10 STA.11+803, LT.
R-SNOW-CLV STA.11+762, RT.
11+785.5, LT. POLE MOUNTED
R-SNOW-LKWD
R-55 STA.11+770, LT.
11+815, LT. R-57 NO STOPPING ANY TIME R-60A
POLE MOUNTED
11+839.8, LT. TO M-8
WEST M-40
2 M-2-2
M-26
R-SNOW-LKWD STA.11+818, LT.
NO PARKING ANY TIME R-55 STA.11+835, LT.
LOOP DETECTOR (LD6) 2m x 12m
℄ LAKEWOOD HEIGHTS BLVD
11+820
11+780
±760
±835
±839.2
±839.4
±841.9
±865.8
±868.5
±872
±880
EXISTING PULL BOX
11+832.4, RT.
TOLEDO WEST 90
LAKEWOOD HTS BLVD D-14 W 140
R-424 MOD PROHIBITED DUE TO PROPERTY WEIGHT THROUGH VEHICLES OVER 4 TONS
11+832.4, RT. POLE MOUNTED
11+815, RT. POLE MOUNTED
NO PARKING ANY TIME R-55
11+782.1, RT. POLE MOUNTED
R-SNOW-CLV STA.11+762, RT.
11+852, RT
KEEP RIGHT R-37R
R-43R
11+852, RT.
TO M-8 ALT M-9 6 M-1-2 M-24
11+864.4, RT.
POLE MOUNTED
11+878.3, RT.
R-56A MOD
BUS STOP
RTA
11+874.8, LT. POLE MOUNTED
NO PARKING ANY TIME R-55 STA.11+875, RT.
STA.11+852.124 LHB= STA.1+004.170 BUNTS RD (N)
STA.11+852.124 LHB= STA.1+000.000 W. 140th ST.(S)
CITY OF LAKEWOOD
CITY OF CLEVELAND
℄ LAKEWOOD HEIGHTS BLVD
W 140TH ST

HORIZONTAL SCALE IN METERS
0 2 4 6 8
CALCULATED
CHECKED

CITY - LAKEWOOD CORRECTS BOULEVARD

106
162

TRAFFIC CONTROL PLAN - C.R. 297
STA. 11+880 TO STA. 12+120

CITY OF LAKEWOOD — CUYAHOGA COUNTY

HORIZONTAL SCALE IN METERS

DESIGNED — DRAWN — CHECKED

DATE: 7/16/97 — REVISED BY: T.K.L. — DATE: 5/22/98

CAD FILE NAME: \D0005417\IC509000

SEE SHEET NO. 106
MATCH LINE STA. 11+880

MATCH LINE STA. 12+000

MATCH LINE STA. 12+000

MATCH LINE STA. 12+120
SEE SHEET NO. 108

CITY OF LAKEWOOD
CITY OF CLEVELAND

STA.11+953.418 LHB=
STA.1+000 000 W. 139th ST.

STA.11+953.440 LHB=
STA.1+000 000 WASCANA AVE

STA.12+039.208 LHB=
STA.1+000.000
WYANDOTTE AVE.

STA.12+039.186 LHB=
STA 1+000.000 W. 138th ST.

STA.12+119.997 LHB=
STA 1+000.000 W. 137th ST.

WASCANA AVE

W 139TH ST.

WYANDOTTE AVE

ELBUR AVE.

W 138TH ST.

W 137TH ST.

BUNTS RD

W 140TH ST

LAKEWOOD HTS BLVD

11+959.6, LT.

11+980
℄ LAKEWOOD HEIGHTS BLVD.

12+060
℄ LAKEWOOD HEIGHTS BLVD.

POLE MOUNTED
LAKEWOOD HTS
D-14

EXISTING PULL BOX

LOOP DETECTOR
2m X 7m (LD7)

11+900

11+919.5, RT.
POLE MOUNTED

11+948.6, LT
R-1

11+958.4, LT
R-55

11+957.8, RT.
POLE MOUNTED
R-1

11+966, RT.
R-55

11+995.5, RT.
POLE MOUNTED
RELOCATE TO
STA.11+994, RT.

11+998.2, LT.
R-57

R-55
RELOCATE TO
STA.11+989, LT.

11+882, LT.
R-55

11+940, LT.
R-55

11+940, RT.
R-55

11+902, RT.
R-10

12+033.8, LT.
POLE MOUNTED
WYANDOTTE
D-14

12+034.7, LT
R-1

12+044.7, LT
TRUCK AND LOAD LIMIT 6 TONS
R-47 MOD

11+947.7, RT
LAKEWOOD HTS
D-14

12+025, LT.
R-55

12+053, LT.
R-55

12+081.6, LT.
R-57

12+107, LT.
R-55

12+114.5, LT
R-1

12+114.6, RT

12+043.6, RT.
R-1

12+053, RT.
R-55

12+096.6, RT.
POLE MOUNTED

12+105, RT.
R-55

12+025, RT.
R-55

CUY-0500
(900mm X 750mm)
STA.12+010, LT.

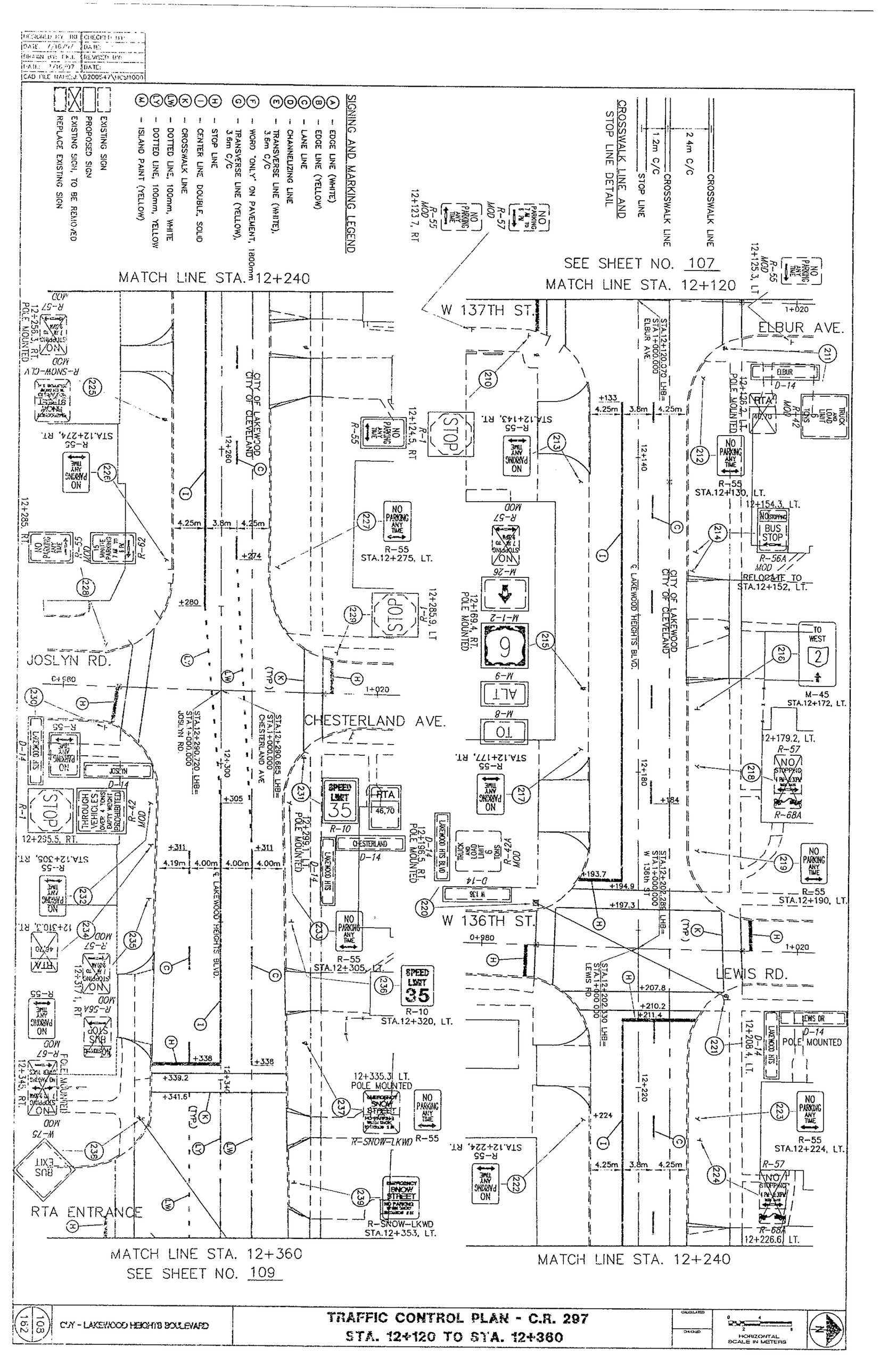
CROSSWALK LINE
2.4m C/C
CROSSWALK LINE
1.2m C/C
STOP LINE

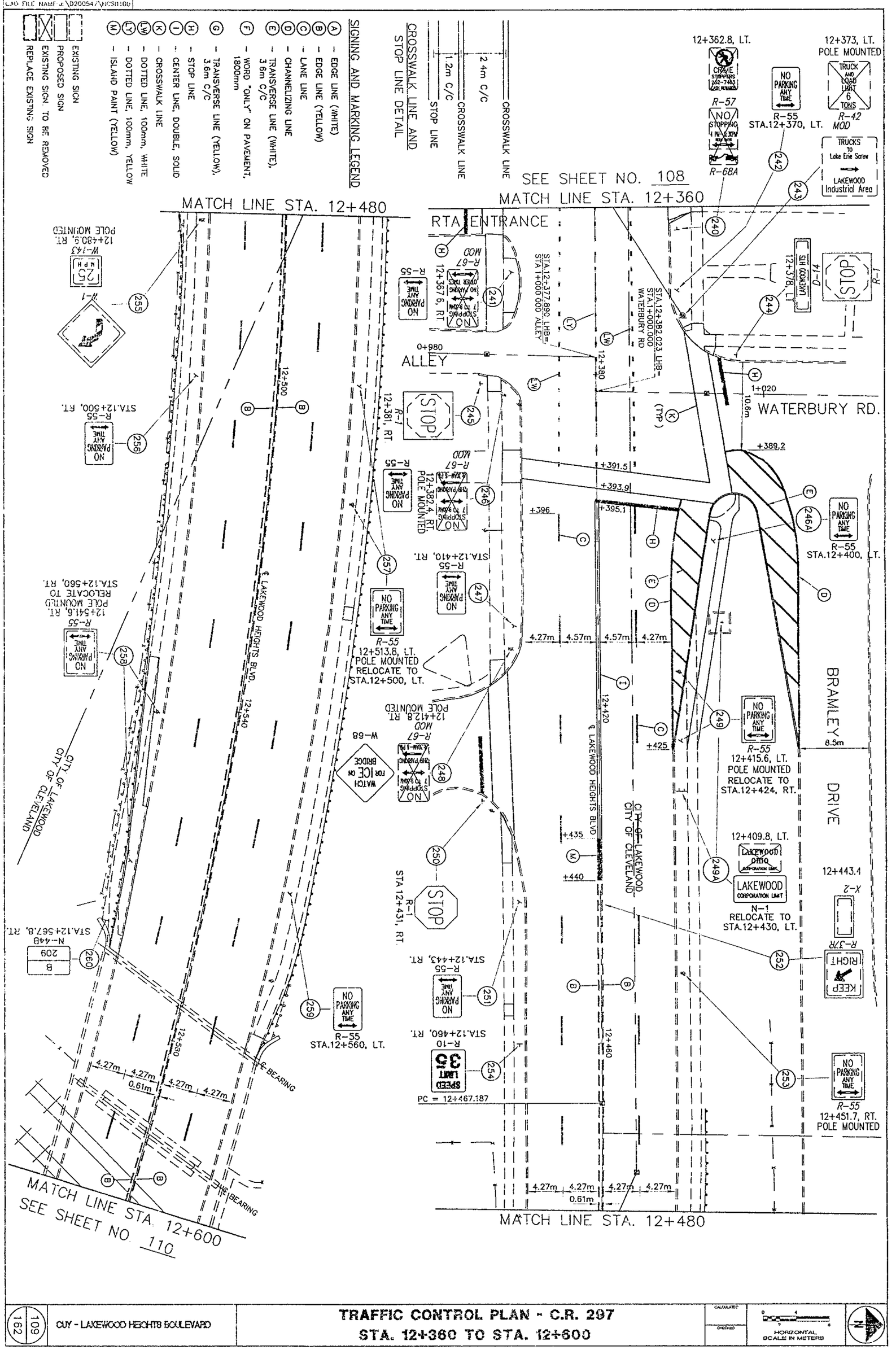
CROSSWALK LINE AND
STOP LINE DETAIL

SIGNING AND MARKING LEGEND

- (A) – EDGE LINE (WHITE)
- (B) – EDGE LINE (YELLOW)
- (C) – LANE LINE
- (D) – CHANNELIZING LINE
- (E) – TRANSVERSE LINE (WHITE) 3.6m C/C
- (F) – WORD "ONLY" ON PAVEMENT, 1800mm
- (G) – TRANSVERSE LINE (YELLOW), 3.6m C/C
- (H) – STOP LINE
- (I) – CENTER LINE, DOUBLE, SOLID
- (K) – CROSSWALK LINE
- (L) – DOTTED LINE, 100mm, WHITE
- (M) – ISLAND PAINT (YELLOW)

EXISTING SIGN
PROPOSED SIGN
EXISTING SIGN, TO BE REMOVED
REPLACE EXISTING SIGN


DESIGNED BY: RK
CHECKED BY:
DATE: 7/16/97
DATE:
DRAWN BY: TKL
REVISED BY:
DATE: 7/16/97
DATE:
CAD FILE NAME: J:\0200547\TICS1000
SIGNING AND MARKING LEGEND
(A) - EDGE LINE (WHITE)
(B) - EDGE LINE (YELLOW)
(C) - LANE LINE
(D) - CHANNELIZING LINE
(E) - TRANSVERSE LINE (WHITE), 3.6m C/C
(F) - TRANSVERSE LINE (YELLOW), 3.6m C/C
(G) - WORD "ONLY" ON PAVEMENT, 1800mm
(H) - STOP LINE
(K) - CROSSWALK LINE
(L) - CENTER LINE DOUBLE, SOLID
(LW) - DOTTED LINE, 100mm, WHITE
(LY) - DOTTED LINE, 100mm, YELLOW
(M) - ISLAND PAINT (YELLOW)
EXISTING SIGN
PROPOSED SIGN
EXISTING SIGN, TO BE REMOVED
REPLACE EXISTING SIGN
CROSSWALK LINE AND STOP LINE DETAIL
CROSSWALK LINE
2.4m C/C
CROSSWALK LINE
1.2m C/C
STOP LINE
MATCH LINE STA. 12+240
SEE SHEET NO. 107
MATCH LINE STA. 12+120
W 137TH ST.
ELBUR AVE.
JOSLYN RD.
CHESTERLAND AVE.
W 136TH ST.
LEWIS RD.
RTA ENTRANCE
CITY OF LAKEWOOD
CITY OF CLEVELAND
E. LAKEWOOD HEIGHTS BLVD.
MATCH LINE STA. 12+360
SEE SHEET NO. 109
MATCH LINE STA. 12+240
CITY - LAKEWOOD HEIGHTS BOULEVARD
TRAFFIC CONTROL PLAN - C.R. 297
STA. 12+120 TO STA. 12+360
CALCULATED
DRAWN
HORIZONTAL SCALE IN METERS
108
162


DESIGNED BY: RK
CHECKED BY:
DATE: 7/16/97
DATE:
DRAWN BY: T.K.L.
REVISED BY: T.K.L.
DATE: 7/16/97
DATE: 5/27/98
CAD FILE NAME: X:\D20054\MCS1100
SIGNING AND MARKING LEGEND
(A) - EDGE LINE (WHITE)
(B) - EDGE LINE (YELLOW)
(C) - LANE LINE
(D) - CHANNELIZING LINE
(E) - TRANSVERSE LINE (WHITE), 3.6m C/C
(F) - WORD "ONLY" ON PAVEMENT, 1800mm
(G) - TRANSVERSE LINE (YELLOW), 3.6m C/C
(H) - STOP LINE
(I) - CENTER LINE, DOUBLE, SOLID
(K) - CROSSWALK LINE
(LW) - DOTTED LINE, 100mm, WHITE
(LY) - DOTTED LINE, 100mm, YELLOW
(M) - ISLAND PAINT (YELLOW)
EXISTING SIGN
PROPOSED SIGN
EXISTING SIGN TO BE REMOVED
REPLACE EXISTING SIGN
CROSSWALK LINE AND STOP LINE DETAIL
2.4m C/C
CROSSWALK LINE
1.2m C/C
CROSSWALK LINE
STOP LINE
SEE SHEET NO. 108
MATCH LINE STA. 12+480
MATCH LINE STA. 12+360
RTA ENTRANCE
ALLEY
WATERBURY RD.
BRAMLEY DRIVE
LAKEWOOD HEIGHTS BLVD.
CITY OF LAKEWOOD
CITY OF CLEVELAND
12+362.8, LT.
CRAVE STOPPERS 795-7867
R-57
NO STOPPING
R-68A
12+373, LT.
POLE MOUNTED
TRUCK AND LOAD LIMIT 6 TONS
R-42 MOD
NO PARKING ANY TIME
R-55
STA.12+370, LT.
TRUCKS to Lake Erie Screw
LAKEWOOD Industrial Area
STOP
R-1
STA12+382.023 LHB= STA1+000.000 WATERBURY RD
STA12+377.890 LHB= STA1+000.000 ALLEY
12+380
0+980
1+020
10.6m
+389.2
+391.5
+393.9
+396
+395.1
+425
+435
+440
12+420
12+460
12+540
12+580
4.27m
4.57m
4.57m
4.27m
0.61m
8.5m
W-143
25 MPH
12+480.9, RT. POLE MOUNTED
R-55
NO PARKING ANY TIME
STA.12+500, RT.
R-7
12+381, RT.
R-67 MOD
12+367.6, RT.
12+382.4, RT. POLE MOUNTED
STA.12+410, RT.
12+513.6, LT. POLE MOUNTED RELOCATE TO STA.12+500, LT.
12+541.6, RT. POLE MOUNTED RELOCATE TO STA.12+560, RT.
W-68
MATCH ICE ON BRIDGE
12+412.8, RT. POLE MOUNTED
STA 12+431, RT.
STA.12+443, RT.
STA.12+460, RT.
R-10
SPEED LIMIT 35
PC = 12+467.187
STA.12+567.8, RT.
N-44B
209
R-55
STA.12+560, LT.
STA.12+400, LT.
12+415.6, LT. POLE MOUNTED RELOCATE TO STA.12+424, RT.
12+409.8, LT.
LAKEWOOD OHIO
CORPORATION LIMIT
N-1
RELOCATE TO STA.12+430, LT.
12+443.4
X-2
R-3R
KEEP RIGHT
12+451.7, RT. POLE MOUNTED
BEARING
MATCH LINE STA. 12+600
SEE SHEET NO. 110
MATCH LINE STA. 12+480
CUY - LAKEWOOD HEIGHTS BOULEVARD
TRAFFIC CONTROL PLAN - C.R. 297
STA. 12+360 TO STA. 12+600
HORIZONTAL SCALE IN METERS
109
162

SIGNING AND MARKING LEGEND

- (A) – EDGE LINE (WHITE)
- (B) – EDGE LINE (YELLOW)
- (C) – LANE LINE
- (D) – CHANNELIZING LINE
- (E) – TRANSVERSE LINE (WHITE), 3.6m C/C
- (F) – WORD "ONLY" ON PAVEMENT, 1800mm
- (G) – TRANSVERSE LINE (YELLOW), 3.6m C/C
- (H) – STOP LINE
- (I) – CENTER LINE, DOUBLE, SOLID
- (K) – CROSSWALK LINE
- (L) – DOTTED LINE, 100mm, WHITE
- (M) – ISLAND PAINT (YELLOW)

EXISTING SIGN
PROPOSED SIGN
EXISTING SIGN, TO BE REMOVED
REPLACE EXISTING SIGN

HORIZONTAL SCALE IN METERS

TRAFFIC CONTROL PLAN - C.R. 297
STA. 12+600 TO STA. 12+720

GUY - LAKEWOOD HEIGHTS BOULEVARD

TRAFFIC CONTROL PLAN - C.R. 297
STA. 12+720 TO STA. 12+840

CITY - LAKEWOOD HEIGHTS BOULEVARD

HORIZONTAL SCALE IN METERS

CALCULATED | CHECKED

12+780 ℄ LAKEWOOD HEIGHTS BLVD.

℄ BEARING

CITY OF LAKEWOOD
CITY OF CLEVELAND

BEREA ROAD

B 210 N-448 STA.12+760, LT.

268

LAKEWOOD CORPORATION LIMIT N-1

CLEVELAND CORPORATION LIMIT

12+766.1, LT.

269

NO PARKING ANY TIME R-55 POLE MOUNTED

271

NO PARKING ANY TIME R-55 STA.12+774, LT.

WATCH FOR ICE ON BRIDGE

273

W-66 STA.12+820.9, LT. POLE MOUNTED

275

NO PARKING ANY TIME R-55 STA.12+839 LT.

12+820

4.27m 4.27m 0.61m 4.27m 4.27m

2+740

+738.6

270

NO PARKING ANY TIME R-55 STA.12+774, RT.

272

LAKEWOOD HTS BLVD

BEREA ROAD

500 FEET

CUY-D500 (900mm x 750mm) STA.12+794, RT.

274

NO PARKING ANY TIME R-55 STA.12+839, RT.

MATCH LINE STA. 12+720
SEE SHEET NO. 110

MATCH LINE STA. 12+840
SEE SHEET NO. 112

10+105.4, LT.

CLEVELAND 1936 FOUND

SIGNING AND MARKING LEGEND

- (A) – EDGE LINE (WHITE)
- (B) – EDGE LINE (YELLOW)
- (C) – LANE LINE
- (D) – CHANNELIZING LINE
- (E) – TRANSVERSE LINE (WHITE). 3.6m C/C
- (F) – WORD "ONLY" ON PAVEMENT, 1800mm
- (G) – TRANSVERSE LINE (YELLOW), 3.6m C/C
- (H) – STOP LINE
- (I) – CENTER LINE, DOUBLE, SOLID
- (K) – CROSSWALK LINE
- (L) – DOTTED LINE 100mm WHITE
- (M) – ISLAND PAINT (YELLOW)

- EXISTING SIGN
- PROPOSED SIGN
- EXISTING SIGN, TO BE REMOVED
- REPLACE EXISTING SIGN

DESIGNED BY	CHECKED BY	
DRAWN BY	DATE	
CHECKED BY	APPROVED BY	
DATE	DATE	
2D FILE NAME	VOSS-PLN-NGS1360	

111
162

CITY OF CLEVELAND

SEE SHEET NO. 111
MATCH LINE STA. 12+840

SIGNING AND MARKING LEGEND

- (A) – EDGE LINE (WHITE)
- (B) – EDGE LINE (YELLOW)
- (C) – LANE LINE
- (D) – CHANNELIZING LINE
- (E) – TRANSVERSE LINE (WHITE), 3.6m C/C
- (F) – WORD "ONLY" ON PAVEMENT, 1800mm
- (G) – TRANSVERSE LINE (YELLOW), 3.6m C/C
- (H) – STOP LINE
- (I) – CENTER LINE, DOUBLE, SOLID
- (K) – CROSSWALK LINE
- (L) – DOTTED LINE, 100mm, WHITE
- (M) – ISLAND PAINT (YELLOW)
- (N) – LANE ARROW, 1600mm

EXISTING SIGN
PROPOSED SIGN
EXISTING SIGN, TO BE REMOVED
REPLACE EXISTING SIGN

CROSSWALK LINE AND STOP LINE DETAIL

CROSSWALK LINE
2.4m C/C
CROSSWALK LINE
1.2m C/C
STOP LINE

TRAFFIC CONTROL PLAN - C.R. 287
STA. 12+840 TO STA. 12+960

CUY - LAKEWOOD HEIGHTS BOULEVARD

HORIZONTAL SCALE IN METERS

CALCULATED
CHECKED

* MARKED QUANTITIES ARE CITY OF CLEVELAND
UNMARKED QUANTITIES ARE CITY OF LAKEWOOD

CALCULATION OF PAVEMENT MARKING QUANTITIES

ITEM 642

SHEET NUMBER	LOCATION			EDGE LINE		LANE LINE	CENTER LINE					CHANNELIZING LINE	STOP LINE	CROSSWALK LINE	TRANSVERSE LINE		ISLAND MARKING		RAILROAD SYMBOL MARKING	SCHOOL SYMBOL MARKING, 1800mm	LANE ARROW	WORD ON PAVEMENT, 1800mm	DOTTED LINE				REMOVAL OF PAVEMENT MARKING	REMOVAL OF PAVEMENT MARKING	REMOVAL OF PAVEMENT MARKING		
				WHITE	YELLOW		DOUBLE SOLID	DOUBLE SOLID & BROKEN	DOUBLE BROKEN (LONG)	DOUBLE BROKEN (SHORT)	SINGLE BROKEN				WHITE	YELLOW	WHITE	YELLOW					100mm, WHITE	100mm, YELLOW	150mm, WHITE	150mm, YELLOW					
	BEGIN STATION	END STATION	SIDE	METER	METER	METER	METER	METER	METER	METER	METER	METER	METER	METER	METER	METER	SQ. M	SQ. M	EACH	EACH	EACH	EACH	METER	METER	METER	METER	METER	SQ M	EACH		
	LAKEWOOD HEIGHTS BLVD.																														
99	10+011	10+200	℄			189																									
|	10+011	–	LT./RT.										9.1																		
|	10+007.4	–	LT./RT.											11.7																	
99	10+009.8	–	LT./RT.											9.6																	
	OLIVE AVE.																														
99	–	–	LT.										4.1																		
|	–	–	LT.											7.6																	
99	–	–	LT.											10.3																	
	LAKEWOOD HEIGHTS BLVD.																														
100	10+200	10+440	RT.			240																									
|	10+262.3	–	LT./RT.										12.2																		
|	10+240.3	–	LT./RT.											12.1																	
|	10+242.8	–	LT./RT.											14.5																	
|	10+258.6	–	LT./RT.											14.3																	
|	10+261.1	–	LT./RT.											13.1																	
100	10+217	–	LT./RT.																	2											
	CARABEL AVE.																														
100	–	–	LT.										4.2																		
|	–	–	LT.											11.2																	
|	–	–	LT.											12.3																	
|	–	–	RT.											14.2																	
|	–	–	RT.											11.0																	
100	–	–	RT.										4.7																		
	LAKEWOOD HEIGHTS BLVD.																														
101	10+440	10+680	RT.			240																									
	ARTHUR AVE.																														
101	–	–	LT.										5.1																		
|	–	–	LT.											11.2																	
|	–	–	LT.											14.8																	
|	–	–	RT.											14.5																	
|	–	–	RT.											10.6																	
101	–	–	RT.										4.7																		
	SUBTOTAL																														
	TOTALS			METER	669.0m		METER					METER	44.1	193.0	METER		SQ. METER		EACH	2	EACH	EACH	METER		METER		METER	SQ. M	EACH		
				KM	0.67km		KM					METER	METER	METER						EACH											

DESIGNED BY T.K.J. CHECKED BY
NAME: 7/24/97 DATE:
DRAWN BY T.K.J. REVISED BY T.K.J.
DATE: 7/24/97 DATE: 5/29/98
CAD FILE NAME: P:\2006437\MISC\SUM1

CALCULATED T.K.J. CHECKED P.D.H.

PAVEMENT MARKING SUB-SUMMARY

CUY-LAKEWOOD HEIGHTS BOULEVARD

* MARKED QUANTITIES ARE CITY OF CLEVELAND
UNMARKED QUANTITIES ARE CITY OF LAKEWOOD

CALCULATION OF PAVEMENT MARKING QUANTITIES

ITEM 642

ITEM 632

SHEET NUMBER	LOCATION			EDGE LINE		LANE LINE	CENTER LINE					CHANNELIZING LINE	STOP LINE	CROSSWALK LINE	TRANSVERSE LINE		ISLAND MARKING		RAILROAD SYMBOL MARKING	SCHOOL SYMBOL MARKING, 1800mm	LANE ARROW	WORD ON PAVEMENT, 1800mm	DOTTED LINE				REMOVAL OF PAVEMENT MARKING	REMOVAL OF PAVEMENT MARKING	REMOVAL OF PAVEMENT MARKING	DETECTOR LOOP, AS PER PLAN
	BEGIN STATION	END STATION	SIDE	WHITE	YELLOW		DOUBLE SOLID	DOUBLE SOLID & BROKEN	DOUBLE BROKEN	DOUBLE BROKEN (LONG)	DOUBLE BROKEN (SHORT)	SINGLE BROKEN				WHITE	YELLOW	WHITE	YELLOW					100mm, WHITE	100mm, YELLOW	150mm, WHITE	150mm, YELLOW				
				METER	METER	METER	METER	METER	METER	METER	METER	METER	METER	METER	METER	METER	SQ. M	SQ. M	EACH	EACH	EACH	EACH	METER	METER	METER	METER	METER	SQ. M	EACH	EACH
	LAKEWOOD HEIGHTS BLVD.																													
102	10+680	10+920	RT.			240																								1
103	10+967.6	–	LT.																											1*
	10+967.6	–	RT.																											1*
	11+003.4	–	LT./RT.																											
	10+920	11+160	LT.			240																								
	11+016	11+160	RT.			144*																								
	10+956.2	10+984.1	LT.									27.9																		
	10+984.1	11+007	RT.(x2)									55.6*						1.9												
	10+952	–	RT.															1.9*												
	10+957	–	RT.															1.9*												
	10+975	–	RT.											15.6																
	10+934	–	LT./RT.											16.2																
	10+936.7	–	LT./RT.											11.2																
	10+952.2	–	LT./RT.											10.2																
	10+954.9	–	LT./RT.											8.3*																
	–	–	RT.											6.6*																
	–	–	RT.														10.0													
	10+956.2	–	LT./RT.														6.0*													
103	–	–	RT.																											
	ALGER ROAD																													
103	–	–	LT.														7.1													
	–	–	LT.											13.8																
	–	–	LT.											14.9																
	–	–	RT.														4.2*													
	–	–	RT.											7.9*																
103	–	–	RT.											11.6*																
	LAKEWOOD HEIGHTS BLVD.																													1*
104	11+220	–	RT.																											1
	11+232	–	LT./RT.																											
	11+160	11+400	LT.			240																								
	11+160	11+327	RT.			187*																								
	11+338	11+381	RT.	45*								45*																		
	11+336	11+381	RT.											12.2																
	11+196.5	–	LT.											7.6*																
	11+196.5	–	RT.											12.4																
	11+199.5	–	LT.											7.7*																
	11+199.5	–	RT.											10.8																
	11+224.2	–	LT.											7.3*																
	11+224.2	–	RT.											8.6																
	11+226.7	–	LT.											6.5*																
	11+226.7	–	RT.														7.7													
	11+227.9	–	LT.														6.4*													2
104	11+227.9	–	RT.																											3*
	SUBTOTAL			45*		720 311*						27.9 100.6*	24.8 16.6*	125.9 63.5*				1.9 3.8*												5
	TOTALS			45m		1031m 1.031km						128.5 METER	41.4 METER	189.4 METER	METER			5.7 SQ. METER	EACH	EACH	EACH	EACH	METER	METER	METER	METER	METER	SQ. M	EACH	EACH

CALCULATED T.K.I.
CHECKED P.D.H.

PAVEMENT MARKING SUB-SUMMARY

CUY-LAKEWOOD HEIGHTS BOULEVARD

114
102

SIGNED BY THE ENGINEER: [illegible]
DATE: 7/24/97
CHECKED BY: T.K.I. DATE: 7/24/97
FILE NAME: J:\PROJECTS\97-0057\PLANS\MISC\

* MARKED QUANTITIES ARE CITY OF CLEVELAND
UNMARKED QUANTITIES ARE CITY OF LAKEWOOD

CALCULATION OF PAVEMENT MARKING QUANTITIES

ITEM 642

SHEET NUMBER	LOCATION			EDGE LINE		LANE LINE	CENTER LINE					CHANNELIZING LINE	STOP LINE	CROSSWALK LINE	TRANSVERSE LINE		ISLAND MARKING		RAILROAD SYMBOL MARKING	SCHOOL SYMBOL MARKING, 1800mm	LANE ARROW	WORD ON PAVEMENT, 1800mm	DOTTED LINE				REMOVAL OF PAVEMENT MARKING	REMOVAL OF PAVEMENT MARKING	REMOVAL OF PAVEMENT MARKING	ITEM 632 DETECTOR LOOP, AS PER PLAN
	BEGIN STATION	END STATION	SIDE	WHITE	YELLOW		DOUBLE SOLID	DOUBLE SOLID & BROKEN	DOUBLE BROKEN (LONG)	DOUBLE BROKEN (SHORT)	SINGLE BROKEN				WHITE	YELLOW	WHITE	YELLOW					100mm, WHITE	100mm, YELLOW	150mm, WHITE	150mm, YELLOW				
				METER	METER	METER	METER	METER	METER	METER	METER	METER	METER	METER	METER	METER	SQ. M	SQ. M	EACH	EACH	EACH	EACH	METER	METER	METER	METER	METER	SQ. M	EACH	EACH
	WARREN ROAD																													
104	–	–	LT.															9.7												
	–	–	LT.										14.1																	
	–	–	LT.											24.4																
	–	–	LT.											25.4																
	–	–	RT.											21.8*																
	–	–	RT.											20.2*																
104	–	–	LT.										9.1*																	
	LINCOLN AVE.																													
104	–	–	LT.										4.0																	
104	–	–	LT.											8.1																
104	–	–	LT.											8.8																
	LAKEWOOD HEIGHTS BLVD.																													
105	11+400	11+640	LT.			240																								
	ADELINE STREET																													
105	–	–	LT.										3.7																	
105	–	–	LT.											7.4																
105	–	–	LT.											8.5																
	HILDA STREET																													
105	–	–	LT.										3.8																	
105	–	–	LT.											7.4																
105	–	–	LT.											8.8																
	LAKEWOOD HEIGHTS BLVD.																													
106	11+640	11+835	LT.			195																								
	11+835	11+880	LT.			45*																								
	11+662	11+880	RT.				218*																							
	11+835.2	–	RT.																											
	11+838.2	–	RT.																											1*
	11+839.4	–	LT.										9.3*																	
	11+839.4	–	RT.											6.0																
	11+841.9	–	LT.											15.2*																
	11+841.9	–	RT.											7.7																
	11+365.8	–	LT.											15.5*																
	11+865.8	–	RT.											6.3																
	11+868.5	–	LT.											16.5*																
	11+868.5	–	RT.											6.6																
	11+872	–	LT.											15.3*																
106	11+872	–	LT./RT.										6.0																	
													6.8*																	
	SUBTOTAL					435							31.6	125.4				9.7												
						45*	218*						25.2*	104.5*																1*
	TOTALS			METER		480m	218m					METER	56.8	229.9	METER		9.7		METER				METER				METER	SQ. M	EACH	1
				KILOMETER		0.48km	0.18km						METER	METER			SQ. METER			EACH	EACH	EACH	EACH	METER		METER				EACH

DESIGNED BY T.K.I. | CHECKED BY
DATE 7/29/97 | DATE
DRAWN BY T.K.I. | REVISED T.K.I.
DATE 7/29/97 | DATE 5/29/98
LOAD FILE NAME = D:\05547\MISC\M3

CALCULATED T.K.I. | CHECKED P.D.H.

PAVEMENT MARKING SUB-SUMMARY

GUY-LAKEWOOD HEIGHTS BOULEVARD

115
162

* MARKED QUANTITIES ARE CITY OF CLEVELAND.
UNMARKED QUANTITIES ARE CITY OF LAKEWOOD.

CALCULATION OF PAVEMENT MARKING QUANTITIES

ITEM 642

ITEM 632

SHEET NUMBER	LOCATION			EDGE LINE		LANE LINE	CENTER LINE					CHANNELIZING LINE	STOP LINE	CROSSWALK LINE	TRANSVERSE LINE		ISLAND MARKING		RAILROAD SYMBOL MARKING	SCHOOL SYMBOL MARKING, 1800mm	LANE ARROW	WORD ON PAVEMENT, 1800mm	DOTTED LINE				REMOVAL OF PAVEMENT MARKING	REMOVAL OF PAVEMENT MARKING	REMOVAL OF PAVEMENT MARKING	DETECTOR LOOP, AS PER PLAN
	BEGIN STATION	END STATION	SIDE	WHITE	YELLOW		DOUBLE SOLID	DOUBLE SOLID & BROKEN	DOUBLE BROKEN (LONG)	DOUBLE BROKEN (SHORT)	SINGLE BROKEN				WHITE	YELLOW	WHITE	YELLOW					100mm, WHITE	100mm, YELLOW	150mm, WHITE	150mm, YELLOW				
				METER	METER	METER	METER	METER	METER	METER	METER	METER	METER	METER	METER	METER	SQ. M	SQ. M	EACH	EACH	EACH	EACH	METER	METER	METER	METER	METER	SQ. M	EACH	EACH
	BROWN ROAD																													
106	–	–	LT.										4.3																	
106	–	–	LT.											10.1																
106	–	–	LT.											15.9																
	RICHLAND AVE.																													
106	–	–	LT.										4.4																	
|	–	–	LT.											10.1																
|	–	–	LT.											15.9																
|	–	–	RT.											15.9*																
|	–	–	RT.											10.0*																
106	–	–	RT.										4.5*																	
	BUNTS ROAD																													
106	–	–	LT.										11.3																	
|	–	–	LT.											24.9																
|	–	–	LT.											25.4																
|	–	–	LT.															5.9												
106	–	–	RT.																											
	W. 140th STREET																													
106	–	–	RT.											21.4*				3.5*												
106	–	–	RT.											23.2*																
106	–	–	RT.										11.8*																	
	LAKEWOOD HEIGHTS BLVD.																													
107	11+686.4	–	LT./RT.																										1*	
107	11+880	12+120	LT.			240*																								
107	11+680	12+120	LT.				240*																							
	WASCANA AVE.																													
107	–	–	LT.										4.6																	
107	–	–	LT.											10.5																
107	–	–	LT.											14.6																
	W. 139th STREET																													
107	–	–	RT.											11.0*																
107	–	–	RT.											8.9*																
107	–	–	RT.										4.1*																	
	WYANDOTTE AVE.																													
107	–	–	LT.										4.6																	
107	–	–	LT.											10.5																
107	–	–	LT.											15.2																
	SUBTOTAL												29.2	153.2				5.9												
	TOTALS			METER		240*	240*					METER	49.6	243.6	METER		9.4		EACH	EACH	EACH	EACH	METER		METER		METER	SQ. M	EACH	1
				KILOMETER		0.24km				0.24km			METER	METER			SQ. METER													EACH
							240m						20.4*	90.4*				3.5*												1*

* DENOTES ITEM NOT SHOWN ON PLAN

CALCULATED BY: T.K.L. DATE: 7/24/96 DRAWN BY: T.K.L. REVISED BY: T.K.L. DATE: 9/23/96 CAD FILE NAME: J:\2000547\PMSUM4

CALCULATED T.K.L. CHECKED P.D.H.

PAVEMENT MARKING SUB-SUMMARY

CUY-LAKEWOOD HEIGHTS BOULEVARD

116
162

* MARKED QUANTITIES ARE CITY OF CLEVELAND.
UNMARKED QUANTITIES ARE CITY OF LAKEWOOD.

CALCULATION OF PAVEMENT MARKING QUANTITIES

ITEM 642

ITEM 632

SHEET NUMBER	LOCATION			EDGE LINE		LANE LINE	CENTER LINE					CHANNELIZING LINE	STOP LINE	CROSSWALK LINE	TRANSVERSE LINE		ISLAND MARKING		RAILROAD SYMBOL MARKING	SCHOOL SYMBOL MARKING, 1800mm	LANE ARROW	WORD ON PAVEMENT, 1800mm	DOTTED LINE				REMOVAL OF PAVEMENT MARKING	REMOVAL OF PAVEMENT MARKING	REMOVAL OF PAVEMENT MARKING	DETECTOR LOOP, AS PER PLAN	
	BEGIN STATION	END STATION	SIDE	WHITE	YELLOW		DOUBLE SOLID	DOUBLE SOLID & BROKEN	DOUBLE BROKEN (LONG)	DOUBLE BROKEN (SHORT)	SINGLE BROKEN				WHITE	YELLOW	WHITE	YELLOW					100mm, WHITE	100mm, YELLOW	150mm, WHITE	150mm, YELLOW				
				METER	METER	METER	METER	METER	METER	METER	METER	METER	METER	METER	METER	METER	SQ. M	SQ. M	EACH	EACH	EACH	EACH	METER	METER	METER	METER	METER	SQ. M	EACH	EACH	
	W. 138th STREET																														
107	–	–	RT.											11.2*																	
107	–	–	RT.											8.8*																	
107	–	–	RT.										3.8*																		
	ELBUR AVE.																														
107	–	–	LT.										4.4																		
107	–	–	LT.											4.9																	
107	–	–	LT.											6.9																	
108	–	–	LT.											4.9																	
108	–	–	LT.											5.8																	
	W. 137th STREET																														
107	–	–	RT.											5.9*																	
107	–	–	RT.											4.7*																	
107	–	–	RT.																												
108	–	–	RT.											5.9*																	
108	–	–	RT.											4.4*																	
108	–	–	RT.										4.0*																		
	LAKEWOOD HEIGHTS BLVD.																														
108	12+120	12+274	LT.			154*																									
	12+311	12+338	LT.			27*																									
	12+311	12+338	RT.			27*																									
	12+120	12+280	RT.				160*																								
	12+305	12+338	℄				33*																								
	12+274	12+311	LT.																				37*								
	12+341.6	12+360	LT.																				18*								
	12+341.6	12+360	RT.																				18*								
	12+280	12+305	RT.																					25*							
	12+341.6	12+360	℄																					15*							
	12+193.7	–	RT.										5.7*																		
	12+194.9	–	LT.											3.9																	
	12+194.9	–	LT./RT.											12.6*																	
	12+197.3	–	LT.											6.4																	
	12+197.3	–	LT./RT.											14.5*																	
	12+207.8	–	LT.											6.7																	
	12+207.8	–	LT./RT.											13.9*																	
	12+210.2	–	LT.											4.0																	
	12+210.2	–	LT./RT.											11.5*																	
	12+211.4	–	LT.										3.2																		
	12+211.4	–	LT./RT.										6.1*																		
	12+338	–	RT.										8.2*																		
	12+339.2	–	LT.											4.4																	
	12+339.2	–	LT./RT.											12.9*																	
	12+341.6	–	LT.											4.4																	
108	12+341.6	–	LT./RT.											12.9*																	
	SUBTOTAL					208*	193*						7.6	52.3									73*	40*							
	TOTALS			METER		208m	193m					METER	35.4	171.5	METER		SQ. METER		EACH	EACH	EACH	EACH	113		METER		METER	SQ. M	EACH	EACH	
				KILOMETER		0.21km	0.193km						METER	METER									METER								

CALCULATED T.K.I.
CHECKED P.D.H.

PAVEMENT MARKING SUB-SUMMARY

CUY-LAKEWOOD HEIGHTS BOULEVARD

117
162

* MARKED QUANTITIES ARE CITY OF CLEVELAND
UNMARKED QUANTITIES ARE CITY OF LAKEWOOD.

CALCULATION OF PAVEMENT MARKING QUANTITIES

ITEM 642

ITEM 632

SHEET NUMBER	LOCATION			EDGE LINE		LANE LINE	CENTER LINE					CHANNELIZING LINE	STOP LINE	CROSSWALK LINE	TRANSVERSE LINE		ISLAND MARKING		RAILROAD SYMBOL MARKING	SCHOOL SYMBOL MARKING, 1800mm	LANE ARROW	WORD ON PAVEMENT, 1800mm	DOTTED LINE				REMOVAL OF PAVEMENT MARKING	REMOVAL OF PAVEMENT MARKING	REMOVAL OF PAVEMENT MARKING	DETECTOR LOOP, AS PER PLAN	
	BEGIN STATION	END STATION	SIDE	WHITE	YELLOW		DOUBLE SOLID	DOUBLE SOLID & BROKEN	DOUBLE BROKEN (LONG)	DOUBLE BROKEN (SHORT)	SINGLE BROKEN				WHITE	YELLOW	WHITE	YELLOW					100mm, WHITE	100mm, YELLOW	150mm, WHITE	150mm, YELLOW				
				METER	METER	METER	METER	METER	METER	METER	METER	METER	METER	METER	METER	METER	SQ. M	SQ. M	EACH	EACH	EACH	EACH	METER	METER	METER	METER	METER	SQ. M	EACH	EACH	
	LEWIS ROAD																														
108	–	–	LT.										3.9																		
108	–	–	LT.											8.4																	
108	–	–	LT.											10.3																	
	W. 136th STREET																														
108	–	–	RT.											9.8*																	
108	–	–	RT.											8.7*																	
108	–	–	RT.										4.1*																		
	CHESTERLAND AVE.																														
108	–	–	LT.										4.2																		
108	–	–	LT.											10.1																	
108	–	–	LT.											13.0																	
	JOSLYN ROAD																														
108	–	–	RT.											14.8*																	
108	–	–	RT.											10.8*																	
108	–	–	RT.										4.6*																		
	RTA ENTRANCE																														
108	–	–	RT.											11.8*																	
108	–	–	RT.											10.0*																	
108	–	–	RT.										2.8*																		
109	–	–	RT.											3.2*																	
109	–	–	RT.											3.1*																	
109	–	–	RT.										3.1*																		
	LAKEWOOD HEIGHTS BLVD.																														
109	12+395.1	12+600	LT.			204.9																									
	12+396	12+497	RT.			101*																									
	12+497.3	12+600	RT.			102.7																									
	12+395.1	12+435	℄				39.9*																								
	12+440	12+485	LT./RT.(x 2)		90*																										
	12+485	12+600	LT./RT.(x 2)		230																										
	12+435	12+440	LT./RT.															3.1*													
	12+360	12+392	LT.																				32								
	12+360	12+392	℄																					32*							
	12+360	12+392	RT.																				32*								
	12+391.5	–	LT.											9.5																	
	12+391.5	–	LT./RT.											13.1*																	
	12+393.9	–	LT.											9.9																	
109	12+393.9	–	LT./RT.											13.1*																	
	SUBTOTAL				230	307.6							8.1	61.2				3.1*					32								
					90*	101*	39.9*						14.6*	98.4*									32*	32*							
	TOTALS				320m	406.6m	39.9m						22.7	159.6				3.1					96								
					0.32km	0.41km	.04km						METER	METER	METER	METER		SQ. METER	EACH	EACH	EACH	EACH	METER		METER	METER	METER	SQ. M	EACH	EACH	

DESIGNED T.K.I. CHECKED P.J.
DATE: 7/29/98 DATE:
DRAWN T.K.I. LETTERED BY T.K.I.
DATE: 7/29/98 DATE: 7/29/98
C:\DGN FILE NAME: 7CUY00517PAVMSS.DGN

CALCULATED T.K.I. CHECKED P.D.H.

PAVEMENT MARKING SUB-SUMMARY

CUY-LAKEWOOD HEIGHTS BOULEVARD

117A
162

* MARKED QUANTITIES ARE CITY OF CLEVELAND.
UNMARKED QUANTITIES ARE CITY OF LAKEWOOD.

CALCULATION OF PAVEMENT MARKING QUANTITIES

ITEM 642

ITEM 632

SHEET NUMBER	LOCATION			EDGE LINE		LANE LINE	CENTER LINE					CHANNELIZING LINE	STOP LINE	CROSSWALK LINE	TRANSVERSE LINE		ISLAND MARKING		RAILROAD SYMBOL MARKING	SCHOOL SYMBOL MARKING, 1800mm	LANE ARROW	WORD ON PAVEMENT, 1800mm	DOTTED LINE				REMOVAL OF PAVEMENT MARKING	REMOVAL OF PAVEMENT MARKING	REMOVAL OF PAVEMENT MARKING	DETECTOR LOOP, AS PER PLAN	
				WHITE	YELLOW		DOUBLE SOLID	DOUBLE SOLID & BROKEN	DOUBLE BROKEN (LONG)	DOUBLE BROKEN (SHORT)	SINGLE BROKEN				WHITE	YELLOW	WHITE	YELLOW					100mm, WHITE	100mm, YELLOW	150mm, WHITE	150mm, YELLOW				
	BEGIN STATION	END STATION	SIDE	METER	METER	METER	METER	METER	METER	METER	METER	METER	METER	METER	METER	METER	SQ M	SQ M	EACH	EACH	EACH	EACH	METER	METER	METER	METER	METER	SQ M	EACH	EACH	
	LAKEWOOD HEIGHTS BLVD.																														
109	12+395.1	–	LT.										5.8																		
109	12+395.1	–	LT.										4.2*																		
109	12+389.2	12+425	LT.									65.8			58.9																
	WATERBURY ROAD																														
109	–	–	LT.										5.8																		
109	–	–	LT.											17.1																	
109	–	–	LT.											18.4																	
	LAKEWOOD HEIGHTS BLVD.																														
110	12+600	12+720	LT./RT.(x2)		240																										
110	12+600	12+720	LT./RT.(x2)			240																									
	LAKEWOOD HEIGHTS BLVD.																														
111	12+720	12+738.6	LT./RT.(x2)		37.2	37.2																									
111	12+738.6	12+840	LT./RT.(x2)		202.8*	202.8*																									
	LAKEWOOD HEIGHTS BLVD.																														
112	12+840	12+931.3	LT./RT.(x2)		182.6*																										
112	12+840	12+885	LT./RT.(x2)			90.0*																									
112	12+885	12+921.8	LT.			36.8*																									
112	12+923.8	12+928.8	LT./RT.															3.1*													
112	12+931.3	–	RT.										14.7*																		
112	12+932.5	–	LT./RT.											32.4*																	
112	12+934.9	–	LT./RT.											40.3*																	
112	12+885	12+931.3	RT.									46.3*										6*	2*								
112	12+928.8	12+931.3	℄				2.5*																								
	SUBTOTAL				277.2	277.2						65.8	11.6	35.5	58.9			3.1*				6*	2*								
	TOTALS				385.4*	329.6*	2.5*					46.3*	18.9*	72.7*																	
				662.6m		606.8m	2.5m					112.1	30.5	108.2	58.9		3.1					6	2								
				0.663km		0.607km	0.0025km					METER	METER	METER	METER		SQ. METER		EACH	EACH		EACH	EACH	METER		METER		METER	SQ. M	EACH	EACH	

CALCULATED T.K.I. CHECKED P.D.H.

PAVEMENT MARKING SUB-SUMMARY

CUY-LAKEWOOD HEIGHTS BOULEVARD

1178
162

DESIGNED BY [illegible]
DATE: 7/24/97
DRAWN BY: T.K.I.
DATE: 7/25/97
CHECKED BY: P.D.H.
DATE: 7/1/98
CAD FILE NAME: J:\DGN\STANDARD\PAVSUM7

* MARKED QUANTITIES ARE CITY OF CLEVELAND.
UNMARKED QUANTITIES ARE CITY OF LAKEWOOD.

GROUND MOUNTED SIGNING SUB-SUMMARY

ITEM 630

SHEET NUMBER	REFERENCE NUMBER	LOCATION		CODE	SIZE (MILLIMETER)	GROUND MOUNTED SUPPORT, POST			ONE WAY SUPPORT, POST		STREET NAME SIGN SUPPORT	SIGN SUPPORT ASSEMBLY POLE MOUNTED	SIGN, FLAT SHEET	SIGN, FLAT SHEET, TYPE G	SIGN, DOUBLE FACED, ST. NAME, AS PER PLAN	SIGNS ERECTED, FLAT SHEET	SIGN HANGER ASSEMBLY, SPAN WIRE	REMOVAL OF GROUND MOUNTED SIGN AND STORAGE	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	REMOVAL OF OVERHEAD MOUNTED SIGN AND STORAGE	SIGN SUPPORT ASSEMBLY, POLE MOUNTED, AS PER PLAN	
		STATION	SIDE			#2	#3	#4	#3	#4												
						METER	METER	METER	METER	METER	EACH	EACH	SQ. M	SQ. M	EACH	SQ. M	EACH	EACH	EACH	EACH	EACH	
99	1	10+006.8	RT.	R-43L	900 x 300	3.6								0.27				1	2			
	1	10+006.8	RT.	R-43R	900 x 300									0.27				1				
	2	10+009.8	LT.	R-43L	900 x 300				8.2					0.27				1	2			
	2	10+009.8	LT.	R-43R	900 x 300									0.27				1				
	2	10+009.8	LT.	R-41B	750 x 750									0.56				1				
	3	10+010.4	RT.	R-41B	750 x 750		4.1							0.56				1	1			
	3	10+010.4	RT.	W-81	750 x 750									0.56				1				
	4	10+010.5	LT.	W-81	750 x 750							1		0.56				1				
	4	10+010.5	LT.	D-14											1			1			1	
	4	10+010.5	LT.	D-14											1			1			1	
	5	10+020	RT.	R-55	300 x 450	3.8								0.14								
	6	10+020	LT.	R-55	300 x 450	3.8								0.14								
	7	10+048.6	LT.	R-55	300 x 450													1				
	8	10+057.7	RT.	R-43R	1200 x 450	7.6								0.54				1	1			
	9	10+073	RT.	W-82	750 x 750		4.1							0.56								
	9	10+073	RT.	R-41A	900 x 600									0.54								
	10	10+073	LT.	W-82	750 x 750		4.1							0.56								
	10	10+073	LT.	R-41A	900 x 600									0.54								
	11	10+080	RT.	R-55	300 x 450	3.8								0.14								
	12	10+080	LT.	R-55	300 x 450	3.8								0.14								
	13	10+090.7	RT.	R-43R	1200 x 450	7.6								0.54				1	1			
	14	10+122.4	LT.	W-88	750 x 750							1		0.56				2				
	15	10+155.7	RT.	R-55	300 x 450	3.8								0.14								
	16	10+155.7	LT.	R-55	300 X 450							1		0.14								
	17	10+159.9	LT.	D-14											1			2			1	
	18	10+162.5	LT.	R-1	750 X 750		4.1							0.56				1	1			
	18	10+162.5	LT.	R-44R	450 X 600													1				
	19	10+165.4	RT.	W-32	1200 x 600		8.7							0.72				1	2			
	19	10+165.4	RT.	R-43R	1200 x 450									0.54				1				
	20	10+184	LT.	R-55	300 x 450	3.8								0.14								
99	21	10+188	RT.	R-55	300 x 450	3.8								0.14								
100	22	10+200.6	RT.	R-41A	900 x 600	4.1								0.54				1	1			
	22	10+200.6	RT.	R-SNOW-LKWD	600 x 750									0.45				1				
	23	10+206	RT.	R-55	300 x 450	3.8								0.14								
	24	10+220	LT.	W-82	750 x 750		4.1							0.56				3				
	25	10+220	RT.	W-82	750 x 750		4.1							0.56								
	26	10+240	LT.	R-55	300 x 450	3.8								0.14								
	27	10+241.5	LT.	R-23	600 x 600									0.36			1			1		
	27	10+241.5	LT.	RP-23	600 x 150									0.09								
	28	10+245	RT.	R-23	600 x 600									0.36			1			1		
	28	10+245	RT.	RP-23	600 x 150									0.09								
	29	10+250.3	RT.	R-121	600 x 600									0.36			1			1		
	30	10+258.2	LT.	R-120	600 x 600									0.36			1			1		
	31	10+256.5	RT.	R-43L	900 x 300				8.2					0.27				1	2			
	31	10+256.5	RT.	R-43R	900 x 300									0.27				1				
100	31	10+256.5	RT.	R-41B	750 x 750									0.56				1				
				TOTALS		57.1 METER	33.3 METER	METER	16.4 METER	METER	EACH	3 EACH	SQ. M	15.21 SQ. M	3 EACH	SQ. M	4 EACH	29 EACH	13 EACH	4 EACH	3 EACH	

CALCULATED T.K.I. CHECKED P.D.H.

SIGNING SUB-SUMMARY

CUY-LAKEWOOD HEIGHTS BOULEVARD

* MARKED QUANTITIES ARE CITY OF CLEVELAND.
UNMARKED QUANTITIES ARE CITY OF LAKEWOOD

GROUND MOUNTED SIGNING SUB-SUMMARY

ITEM 630

SHEET NUMBER	REFERENCE NUMBER	LOCATION		CODE	SIZE (MILLIMETER)	GROUND MOUNTED SUPPORT, POST			ONE WAY SUPPORT, POST		STREET NAME SIGN SUPPORT	SIGN SUPPORT ASSEMBLY POLE MOUNTED	SIGN, FLAT SHEET	SIGN, FLAT SHEET, TYPE G	SIGN, DOUBLE FACED, ST. NAME, AS PER PLAN	SIGN, ERECTED, FLAT SHEET	SIGN HANGER ASSEMBLY, SPAN WIRE	REMOVAL OF GROUND MOUNTED SIGN AND STORAGE	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	REMOVAL OF OVERHEAD MOUNTED SIGN AND STORAGE	SIGN SUPPORT ASSEMBLY, POLE MOUNTED, AS PER PLAN	
		STATION	SIDE			#2	#3	#4	#3	#4												
						METER	METER	METER	METER	METER	EACH	EACH	SQ M	SQ. M	EACH	SQ M	EACH	EACH	EACH	EACH	EACH	
100	32	10+261.1	RT.	R-32L	750 X 750													1				
	33	10+264.9	LT.	D-14											2			2			2	
	34	10+269	LT.	R-43R	900 X 300							1		0.27				1				
	34	10+269	LT.	R-43L	900 X 300									0.27				1				
	34	10+269	LT.	R-41B	750 X 750									0.56				1				
	34	10+269	LT.	W-81	750 X 750									0.56				1				
	35	10+280	LT.	R-55	300 X 450	3.8								0.14								
	36	10+298.8	RT.	R-SNOW-LKWD	600 X 750	4.1										0.45		1	1			
	36	10+298.8	RT.	R-55	300 X 450									0.14				1				
	37	10+298.2	LT.	R-SNOW-LKWD	600 X 750							1				0.45		1				
	37	10+298.2	LT.	R-55	300 X 450													1	1			
	38	10+328.1	RT.	R-41A	900 X 600		4.1							0.54								
	38	10+328.1	RT.	W-82	750 X 750									0.56				1				
	39	10+328.7	LT.	R-41A	900 X 600		4.1							0.54				1				
	39	10+328.7	LT.	W-82	750 X 750									0.56								
	39	10+328.7	LT.	R-55	300 X 450	3.8								0.14				1				
	40	10+340	LT.	R-55	300 X 450																	
	41	10+389.3	LT.	R-55	300 X 450									0.14								
	42	10+404	LT.	R-55	300 X 450	3.8								0.45								
	43	10+428	RT.	R-10	600 X 750	4.1								0.45								
100	44	10+428	LT.	R-10	600 X 750	4.1												2	2			
101	45	10+454.2	LT./RT.	R-SNOW-LKWD	600 X 750									0.14				1				
	46	10+454.2	LT.	R-55	300 X 450	3.8								0.14				1				
	47	10+522	LT.	R-55	300 X 450	3.8										0.90						
	48	10+561	LT./RT.	R-SNOW-LKWD	600 X 750	8.2								0.14								
	49	10+573	LT.	R-55	300 X 450	3.8									2			2	1			
	50	10+580.3	LT.	D-14							1			0.56				1	1			
	51	10+583	LT.	R-1	750 X 750		4.4							0.23				1				
	51	10+583	LT.	R-43R	750 X 300									0.23				1				
	51	10+583	LT.	R-43L	750 X 300									0.56				1	1			
	52	10+583.4	RT.	W-48	750 X 750		4.4							0.56				1	1			
	53	10+589.4	RT.	R-1	750 X 750		4.1							0.27				1	1			
	54	10+599.3	RT.	R-43L	900 X 300				8.2					0.27				1				
	54	10+599.3	RT.	R-43R	900 X 300									0.56				1				
	54	10+599.3	RT.	R-41B	750 X 750									0.27								
	55	10+600	LT.	R-43L	900 X 300	3.6								0.56								
	56	10+604	LT.	W-81	750 X 750		4.1							0.14				1				
	57	10+610	LT.	R-55	300 X 450	3.8												1	1			
	58	10+649.9	RT.	R-SNOW-LKWD	600 X 750									0.56								
	59	10+670	LT.	W-82	750 X 750		4.1							0.14				1				
101	59	10+670	LT.	R-55	300 X 450																	
102	60	10+690.7	LT.	R-55	300 X 450									0.14				1				
	61	10+734	LT.	R-55	300 X 450	3.8																
	62	10+769	LT.	R-55	300 X 450									0.14				1				
	63	10+796	LT.	R-55	300 X 450	3.8																
102	64	10+841.2	LT.	R-55	300 X 450																	
		TOTALS				58.3 METER	29.3 METER	METER	8.2 METER	METER	1 EACH	2 EACH	SQ. M	10.93 SQ. M	4 EACH	1.80 SQ. M	EACH	34 EACH	10 EACH	EACH	2 EACH	

CALCULATED T.K.I. CHECKED P.D.H.

SIGNING SUB-SUMMARY

CUY-LAKEWOOD HEIGHTS BOULEVARD

119
162

* MARKED QUANTITIES ARE CITY OF CLEVELAND

UNMARKED QUANTITIES ARE CITY OF LAKEWOOD

GROUND MOUNTED SIGNING SUB-SUMMARY

ITEM 630

SHEET NUMBER	REFERENCE NUMBER	LOCATION		CODE	SIZE (MILLIMETER)	GROUND MOUNTED SUPPORT, POST			ONE WAY SUPPORT, POST		STREET NAME SIGN SUPPORT	SIGN SUPPORT ASSEMBLY POLE MOUNTED	SIGN, FLAT SHEET	SIGN, FLAT SHEET, TYPE G	SIGN, DOUBLE FACED, ST. NAME, AS PER PLAN	SIGN, ERECTED, FLAT SHEET	SIGN HANGER ASSEMBLY, SPAN WIRE	REMOVAL OF GROUND MOUNTED SIGN AND STORAGE	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	REMOVAL OF OVERHEAD MOUNTED SIGN AND STORAGE	SIGN SUPPORT ASSEMBLY, POLE MOUNTED, AS PER PLAN	
		STATION	SIDE			#2	#3	#4	#3	#4												
						METER	METER	METER	METER	METER	EACH	EACH	SQ. M	SQ. M	EACH	SQ. M	EACH	EACH	EACH	EACH	EACH	
102	65	10+895	LT.	R-SNOW-LKWD	600 x 750	4.1								0.14								
	66	10+856	LT.	R-55	300 x 450	3.8								0.45				1				
	67	10+895	LT.	R-10	600 x 750	4.1								0.45								
	68	10+895	RT.	R-10	600 x 750	4.1												1	1			
	69	10+906.5	LT.	R-55	300 x 450											0.45		1	1			
	70	10+912.0	LT.	R-SNOW-LKWD	600 x 750	4.1										0.45		1	1			
102	71	10+912.0	RT.	R-SNOW-LKWD	600 x 750	4.1								0.14								
103	72	10+921	LT.	R-55	300 x 450	3.8									2			2			2	
	73	10+936.6	RT.	D-14								1		0.36				1				
	74	10+940.4	RT.	R-121	600 x 600							1		0.27				1				
	74	10+940.4	RT.	R-43R	900 x 300				8.2					0.27				1	1			
	75	10+952.5	LT.	R-41B	750 X 750									0.56				1				
	75	10+952.5	LT.	R-31K	900 X 750									0.68				1				
	75	10+952.5	LT.	R-43R	900 x 300				8.2•					0.27•				1•	1•			
	76	10+956.2	RT.	R-43L	900 X 300									0.27•				1•				
	76	10+956.2	RT.	R-41B	750 X 750									0.56•				1•				
	76	10+956.2	RT.	R-43R	900 x 300				8.2•					0.27•				1•	1•			
	77	10+961.9	RT.	R-43L	900 X 300									0.27•				1•				
	77	10+961.9	RT.	R-41B	750 X 750									0.56•				1•				
	77	10+961.9	RT.	R-41B	750 X 750									0.14				1	1			
	78	10+960	LT.	R-55	300 x 450	3.8										0.14•						
	78A	10+972	RT.	R-55	300 x 450	3.8•								0.54•				1•	1•			
	79	10+998.5	RT.	R-43R	1200 x 450	7.6•								0.36•				1•				
	79	10+998.5	RT.	R-121	600 x 600									0.54•								
	80	11+014.3	RT.	R-41A	900 x 600		4.1•							0.54				1	1			
	81	11+014.3	LT.	R-41A	900 x 600		4.1							0.14				1	1			
	82	11+016	LT.	R-55	300 x 450	3.8										0.14•						
	83	11+025	RT.	R-55	300 x 450	3.8•								0.95			1			1		
	84	11+037	LT.	R-29A	900 x 1050									0.95			1			1		
	84	11+037	℄	R-30A	900 x 1050									0.95•			1•			1•		
	84	11+037	RT.	R-28A	900 x 1050													1•				
	85	11+037	RT.	R-41A	900 x 600									0.14				1	1			
	86	11+053	LT.	R-55	300 x 450	3.8										0.14		1				
	86	11+053	LT.	R-PKG	300 x 450									1.98•								
	87	11+065	RT.	M-45	1050 x 1800				10.2•					0.14				1	1			
	88	11+079	LT.	R-55	300 x 450	3.8										0.14		1				
	88	11+079	LT.	R-PKG	300 x 450											0.14•						
	89	11+080	RT.	R-55	300 x 450	3.8•								0.14				1	1			
	90	11+095	LT.	R-55	300 x 450	3.8								0.14				1				
	90	11+095	LT.	R-PKG	300 x 450											0.68•						
	91	11+100	RT.	CUY-D500	900 x 750		8.2•									0.68						
	91	11+100	LT.	CUY-D500	900 x 750		8.2									0.14•		1•	1•			
	92	11+140	RT.	R-55	300 x 450	3.8•								0.14				1	1			
103	93	11+140	LT.	R-55	300 x 450	3.8								0.45•								
104	94	11+165	RT.	R-10	600 x 750	4.1								0.43								
104	95	11+165	LT.	R-10	600 x 750	4.1								7.19	2	2.31	2	21	11	2	2	
		SUBTOTAL				55.0	12.3		8.2			2		7.02•		1.24•	1•	10•	4•	1•		
						26.9•	12.3•	10.2•	16.4•					14.21	2 EA	3.55	3 EACH	31 EACH	15 EACH	3 EACH	2 EACH	
						METER	METER	METER	METER	METER	EACH	2 EA	SQ. M									

SIGNING SUB-SUMMARY

CUY-LAKEWOOD HEIGHTS BOULEVARD

120
162

CALCULATED T.K.L. CHECKED P.D.H.

* MARKED QUANTITIES ARE CITY OF CLEVELAND.
UNMARKED QUANTITIES ARE CITY OF LAKEWOOD

GROUND MOUNTED SIGNING SUB-SUMMARY

ITEM 630

SHEET NUMBER	REFERENCE NUMBER	LOCATION		CODE	SIZE (MILLIMETER)	GROUND MOUNTED SUPPORT, POST			ONE WAY SUPPORT, POST		STREET NAME SIGN SUPPORT	SIGN SUPPORT ASSEMBLY POLE MOUNTED	SIGN, FLAT SHEET	SIGN, FLAT SHEET, TYPE G	SIGN, DOUBLE FACED, ST. NAME, AS PER PLAN	SIGN, ERECTED, FLAT SHEET	SIGN HANGER ASSEMBLY, SPAN WIRE	REMOVAL OF GROUND MOUNTED SIGN AND STORAGE	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	REMOVAL OF OVERHEAD MOUNTED SIGN AND STORAGE	SIGN SUPPORT ASSEMBLY, POLE MOUNTED AS PER PLAN	
		STATION	SIDE			#2	#3	#4	#3	#4												
						METER	METER	METER	METER	METER	EACH	EACH	SQ. M	SQ M	EACH	SQ M	EACH	EACH	EACH	EACH	EACH	
104	96	11+179	LT.	R-55	300 X 450	3.8								0.14				1	1			
	97	11+180	RT.	R-55	300 X 450	3.8*										0.14*						
	98	11+183.1	RT.	R-42	600 X 750													1*				
	99	11+184	LT.	R-55	300 X 450							1		0.14				1				
	99	11+184	LT.	R-42	600 X 750													1*				
	100	11+208.3	LT.	R-38R	600 X 750	4.1								0.45				1	1			
	101	11+225.8	LT.	R-43R	900 X 300							1		0.27				1				
	101	11+225.8	LT.	R-43L	900 X 300							1		0.27				1				
	101	11+225.8	LT.	D-14											2			2			2	
	102	11+228.8	RT.	R-43R	900 X 300	3.6*								0.27*				1*	1*			
	102	11+228.8	RT.	R-43L	900 X 300									0.27*				1*				
	103	11+229	RT.	R-41B	750 X 750		4.1*							0.56*				1*	1*			
	104	11+236.7	LT.	N-29	600 X 600	3.9								0.36				1	1			
	104	11+236.7	LT.	N-15	600 X 150									0.09				1				
	105	11+242	RT.	R-55	300 X 450	3.8*										0.14*						
	106	11+242	LT.	R-55	300 X 450	3.8								0.14				1	1			
	107	11+279.6	LT.	R-41A	900 X 600		4.1							0.54				1	1			
	108	11+280.8	LT.	R-29A	900 X 1050									0.95			1			1		
	108	11+280.8	℄	R-30A	900 X 1050									0.95			1			1		
	108	11+280.8	RT.	R-28A	900 X 1050									0.95*			1*			1*		
	109	11+280.8	RT.	R-41A	900 X 600							1*		0.54*				1*				
	110	11+301	RT.	R-55	300 X 450	3.8*										0.14*						
	111	11+301	LT.	R-55	300 X 450	3.8								0.14								
	112	11+310	RT.	R-10	600 X 750	4.1*								0.45*								
	113	11+310	LT.	R-10	600 X 750	4.1								0.45								
	114	11+314.4	LT.	R-SNOW-LKWD	600 X 750													1				
	114	11+314.4	LT.	R-57	300 X 600													1				
	115	11+360	RT.	R-55	300 X 450	3.8*										0.14*						
	116	11+364	RT.	CUY-D500	900 X 750		8.2*									0.68*						
	117	11+364	LT.	CUY-D500	900 X 750		8.2									0.68						
	118	11+380	LT.	R-55	300 X 450	3.8								0.14								
	119	11+385.3	LT.	R-57	300 X 600													1				
	119	11+385.3	LT.	D-14											2			2			2	
	120	11+391.1	LT.	R-1	750 X 750		4.4							0.56				1	1			
	120	11+391.1	LT.	R-43R	750 X 300									0.23				1				
104	121	11+393.9	RT.	R-43R	1200 X 450		3.8*							0.54*				1*	1*			
105	122	11+410	LT.	R-55	300 X 450	3.8								0.14								
	123	11+432	RT.	R-55	300 X 450	3.8*										0.14*						
	124	11+455	LT.	R-57	300 X 600													1				
	125	11+470	LT.	R-55	300 X 450	3.8								0.14								
	126	11+481.9	LT.	D-14											1			1			1	
	126	11+481.9	LT.	R-41A	900 X 600							1		0.54				1				
	126	11+481.9	LT.	W-49L	750 X 750							1		0.56				1				
105	127	11+482	RT.	R-55	300 X 450	3.8*										0.14*						
		SUBTOTAL				34.9	16.7					5		7.20	5	0.68	2	22	6	2	5	
						30.5*	16.1*					1*		3.58*		1.52*	1*	7*	3*	1*		
		TOTALS				55.4m	32.8m	METER	METER	METER	EACH	6 EACH	SQ. M	10.78	5 EA	2.20	3 EACH	29 EACH	9 EACH	3 EACH	5 EACH	

SIGNING SUB-SUMMARY

CUY-LAKEWOOD HEIGHTS BOULEVARD

120A
162

CALCULATED T.K.I.
CHECKED P.D.H.

SIGNED BY: [illegible] CHECKED BY: [illegible]
DATE: 7/24/09 DRAWN BY: [illegible]
CHECKED BY: [illegible] DRAWN BY: [illegible]
DATE: 7/24/09 DATE: [illegible]
AS BUILT NAME: J:\96547\SHSSUM4

* MARKED QUANTITIES ARE CITY OF CLEVELAND

UNMARKED QUANTITIES ARE CITY OF LAKEWOOD

GROUND MOUNTED SIGNING SUB-SUMMARY

ITEM 630

SHEET NUMBER	REFERENCE NUMBER	LOCATION		CODE	SIZE (MILLIMETER)	GROUND MOUNTED SUPPORT, POST			ONE WAY SUPPORT, POST		STREET NAME SIGN SUPPORT	SIGN SUPPORT ASSEMBLY POLE MOUNTED	SIGN, FLAT SHEET	SIGN, FLAT SHEET, TYPE G	SIGN, DOUBLE FACED, ST. NAME, AS PER PLAN	SIGN, ERECTED, FLAT SHEET	SIGN HANGER ASSEMBLY, SPAN WIRE	REMOVAL OF GROUND MOUNTED SIGN AND STORAGE	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	REMOVAL OF OVERHEAD MOUNTED SIGN AND STORAGE	SIGN SUPPORT ASSEMBLY, POLE MOUNTED, AS PER PLAN	
		STATION	SIDE			#2	#3	#4	#3	#4												
						METER	METER	METER	METER	METER	EACH	EACH	SQ. M	SQ. M	EACH	SQ. M	EACH	EACH	EACH	EACH	EACH	
105	128	11+488.6	LT.	R-1	750 x 750		4.4							0.56				1	1			
	128	11+488.6	LT.	R-43R	900 x 300									0.27								
	129	11+491.2	RT.	R-41A	900 x 600							1•		0.54•				1•				
	129	11+491.2	RT.	W-49L	750 x 750							1•		0.56•				1•				
	129	11+491.2	RT.	R-43R	1200 x 450							1•		0.54•				1•				
	130	11+505	LT.	R-55	300 x 450	3.8								0.14								
	131	11+534.9	LT.	R-41A	900 x 600							1•		0.54				1				
	131	11+534.9	LT.	R-SNOW-LKWD	600 x 750							1•				0.45		1				
	131	11+534.9	LT.	R-57	300 x 600													1				
	132	11+552	RT.	R-55	300 x 450	3.8•										0.14•						
	133	11+565	LT.	R-55	300 x 450	3.8								0.14								
	134	11+574.1	LT.	R-1	750 x 750		4.4							0.56				1	1			
	134	11+574.1	LT.	R-43R	900 x 300									0.27				1				
	135	11+577.6	RT.	R-43R	1200 x 450							1•		0.54•				1•				
	136	11+588	LT.	D-14							1				1			1				
	136	11+588	LT.	R-10	600 x 750													1				
	137	11+602	RT.	R-55	300 x 450	3.8•										0.14•						
	138	11+602	LT.	R-55	300 x 450	3.8								0.14								
	139	11+611.7	RT.	R-41A	900 x 600		3.9•							0.54•								
	140	11+611.7	LT.	R-41A	900 x 600							1		0.54				1				
	140	11+611.7	LT.	R-57	300 x 600													1				
105	141	11+639	LT.	R-55	300 x 450	3.8								0.14								
106	142	11+640.4	LT.	D-14											2			2			2	
	143	11+645.6	LT.	R-1	750 x 750		4.1							0.56				1	1			
	144	11+647	RT.	R-55	300 x 450	3.8•										0.14•						
	145	11+648	RT.	W-30	1200 x 600	7.8•								0.72•				1•	2•			
	146	11+658.5	RT.	R-55	300 x 450							1•				0.14•		1•				
	146	11+658.5	RT.	R-42	600 x 750													1•				
	146	11+658.5	RT.	R-37R	600 x 750													1•				
	147	11+662	LT.	R-55	300 x 450	3.8								0.14								
	148	11+670	RT.	R-SNOW-CLV	600 x 750	4.1•										0.45•						
	149	11+680	RT.	R-10	600 x 750	4.1•								0.45•								
	150	11+681.3	LT.	RTA	300 X 450													1				
	150	11+681.3	LT.	R-56A	300 X 450													1				
	151	11+701.7	LT.	R-56A	300 X 450													1				
	152	11+702	RT.	CUY-D500	750 x 600	3.9•										0.45•						
	153	11+703.3	RT.	RTA	300 X 450													1•				
	153	11+703.3	RT.	R-55	300 X 450													1•				
	153	11+703.3	RT.	R-SNOW-CLV	600 X 750													1•				
	153	11+703.3	RT.	R-56A-MOD	300 X 450							1•				0.14•						
	154	11+719.2	LT.	R-57	300 x 600													1				
	155	11+720	RT.	R-55	300 x 450	3.8•										0.14•						
	156	11+737.3	RT.	RTA	300 X 450													1•				
	156	11+737.3	RT.	R-SNOW-CLV	600 X 750													1•				
	157	11+740	LT.	R-55	300 x 450	3.8								0.14								
106	158	11+740.8	RT.	W-48	750 x 750		4.4•							0.56•				1•	1•			
		SUBTOTAL				22.8	12.9				1	1		4.14	3	0.45		17	3		2	
						35.1•	8.3•					8•		4.45•		1.74•		14•	3•			
		TOTALS				57.9m	21.2m	METER	METER	METER	1 EA	9 EACH	SQ. M	8.59	3 EA	2.19	EACH	31 EACH	6 EACH	EACH	2 EACH	

CALCULATED T.K.I.
CHECKED P.D.H.

SIGNING SUB-SUMMARY

CUY-LAKEWOOD HEIGHTS BOULEVARD

1208
162

GROUND MOUNTED SIGNING SUB-SUMMARY ITEM 630

* MARKED QUANTITIES ARE CITY OF CLEVELAND.
UNMARKED QUANTITIES ARE CITY OF LAKEWOOD.

SHEET NUMBER	REFERENCE NUMBER	LOCATION		CODE	SIZE (MILLIMETER)	GROUND MOUNTED SUPPORT, POST			ONE WAY SUPPORT, POST		STREET NAME SIGN SUPPORT	SIGN SUPPORT ASSEMBLY POLE MOUNTED	SIGN, FLAT SHEET	SIGN, FLAT SHEET, TYPE G	SIGN, DOUBLE FACED, ST. NAME, AS PER PLAN	SIGN, ERECTED, FLAT SHEET	SIGN HANGER ASSEMBLY, SPAN WIRE	REMOVAL OF GROUND MOUNTED SIGN AND STORAGE	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	REMOVAL OF OVERHEAD MOUNTED SIGN AND STORAGE	SIGN SUPPORT ASSEMBLY, POLE MOUNTED, AS PER PLAN	
		STATION	SIDE			#2	#3	#4	#3	#4												
						METER	METER	METER	METER	METER	EACH	EACH	SQ. M	SQ. M	EACH	SQ. M	EACH	EACH	EACH	EACH	EACH	
106	159	11+745.6	LT.	R-1	750 x 750		4.1							0.56				1	1			
	160	11+751.6	RT.	R-1	750 x 750		4.1•							0.56•				1•	1•			
	161	11+757.9	LT.	D-14											1			1			1	
	162	11+758	RT.	R-55	300 x 450	3.8•										0.14•						
	163	11+770	LT.	R-55	300 x 450	3.8								0.14		0.45•						
	163A	11+762	RT.	R-SNOW-CLV	600 x 750	4.1•												1•				
	164	11+782.1	RT.	R-55	300 x 450													1•				
	164	11+782.1	RT.	R-SNOW-CLV	600 x 750													1				
	165	11+785.5	LT.	R-SNOW-LKWD	600 x 750									0.45								
	166	11+803	LT.	R-10	600 x 750	4.1												1				
	167	11+815	LT.	R-57	300 X 600							1•				0.14•		1•				
	168	11+815	RT.	R-55	300 x 450											0.45						
	169	11+818	LT.	R-SNOW-LKWD	600 x 750	4.1									2•			2•				2•
	170	11+832.4	RT.	D-14										0.14								
	171	11+833	LT.	R-55	300 x 450	3.8						1		0.18				1				
	172	11+839.8	LT.	M-8	600 x 300							1		0.18				1				
	172	11+839.8	LT.	M-40	600 x 300							1		0.36				1				
	172	11+839.8	LT.	M-2-2	600 x 600							1		0.20				1				2
	172	11+839.8	LT.	M-26	525 X 375										2			2				
	173	11+842.8	LT.	D-14								1•		0.18•				1•				
	174	11+864.4	RT.	M-8	600 x 300							1•		0.18•				1•				
	174	11+864.4	RT.	M-9	600 x 300							1•		0.36•				1•				
	174	11+864.4	RT.	M-1-2	600 x 600							1•		0.20•				1•				
	174	11+864.4	RT.	M-24	525 X 375									0.50								
	175	11+871.4	LT.	N-1	1000 X 500	7.6												1				
	176	11+874.8	LT.	N-1	1000 X 500													1				
	176	11+874.8	LT.	RTA	300 X 450											0.14•						
	177	11+875	RT.	R-55	300 x 450	3.8•												1•				
	178	11+878.3	RT.	RTA	300 X 450													1•				
106	178	11+878.3	RT.	R-56A	300 X 450									0.14								
107	179	11+882	LT.	R-55	300 x 450	3.8								0.45•								
	180	11+902	RT.	R-10	600 x 750	4.1•												1•				
	181	11+919.5	RT.	R-SNOW-CLV	600 x 750							1•				0.14•		1•				
	181	11+919.5	RT.	R-56A	300 x 450							1•				0.14•		1•				
	181	11+919.5	RT.	R-57	300 x 450											0.14•						
	182	11+940	RT.	R-55	300 x 450	3.8•								0.14								
	183	11+940	LT.	R-55	300 x 450	3.8									2•			2•	1•			
	184	11+947.7	RT.	D-14							1•								1•			
	184	11+947.7	RT.	W-48	750 x 750							1•		0.56•				1	1			
	185	11+948.6	LT.	R-1	750 x 750		4.1							0.56				1•				
	186	11+957.8	RT.	R-1	750 x 750							1•		0.56•				2				2
	187	11+959.6	LT.	D-14											2			1				
	187	11+959.6	LT.	R-SNOW-LKWD	600 x 750											0.14•						
	188	11+966	RT.	R-55	300 x 450	3.8•								0.14								
	189	11+966	LT.	R-55	300 x 450	3.8								0.14								
	190	11+989	LT.	R-55	300 x 450	3.8												1	1			5
107	190	11+989	LT.	R-57	300 x 600													17	3			
		SUBTOTAL				38.6	8.2					4		3.83	5	0.45		18•	3•			2•
						23.4•	4.1•				1•	9•		3.05•	4•	1.43•		35 EACH	6 EACH	EACH		7 EACH
						62.0m	12.3m	METER	METER	METER	1 EA	13 EACH	SQ. M	6.88	9 EA	1.88	EACH					

SIGNING SUB-SUMMARY

CUY-LAKEWOOD HEIGHTS BOULEVARD

121
162

* MARKED QUANTITIES ARE CITY OF CLEVELAND.
UNMARKED QUANTITIES ARE CITY OF LAKEWOOD.

GROUND MOUNTED SIGNING SUB-SUMMARY

ITEM 630

SHEET NUMBER	REFERENCE NUMBER	LOCATION		CODE	SIZE (MILLIMETER)	GROUND MOUNTED SUPPORT, POST			ONE WAY SUPPORT, POST		STREET NAME SIGN SUPPORT	SIGN SUPPORT ASSEMBLY POLE MOUNTED	SIGN, FLAT SHEET	SIGN, FLAT SHEET, TYPE G	SIGN, DOUBLE FACED, ST. NAME, AS PER PLAN	SIGN, ERECTED, FLAT SHEET	SIGN HANGER ASSEMBLY, SPAN WIRE	REMOVAL OF GROUND MOUNTED SIGN AND STORAGE	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	REMOVAL OF OVERHEAD MOUNTED SIGN AND STORAGE	SIGN SUPPORT ASSEMBLY, POLE MOUNTED, AS PER PLAN	
		STATION	SIDE			#2	#3	#4	#3	#4												
						METER	METER	METER	METER	METER	EACH	EACH	SQ. M	SQ. M	EACH	SQ. M	EACH	EACH	EACH	EACH	EACH	
107	191	11+994	RT.	R-55	300 x 450	3.8*										0.14*		1*				
	191	11+994	RT.	R-57	300 x 450											0.68						
	192	12+010	LT.	CUY-D500	900 X 750		8.2									0.14*						
	193	12+025	RT.	R-55	300 x 450	3.8*								0.14								
	194	12+025	LT.	R-55	300 x 450	3.8								0.56*							1	
	195	12+033.5	RT.	W-48	750 X 750		4.4*								1			1				
	196	12+033.8	LT.	D-14										0.56				1	1			
	197	12+034.7	LT.	R-1	750 X 750		4.1							0.56*				1*	1*			
	198	12+043.6	RT.	R-1	750 X 750		4.1*				1*				1*							
	199	12+047	RT.	D-14										0.14								
	200	12+053	LT.	R-55	300 x 450	3.8										0.14*						
	201	12+053	RT.	R-55	300 x 450	3.8*						1*				0.14*						
	202	12+080	RT.	R-56A	300 x 450							1*				0.45*						
	202	12+080	RT.	R-SNOW-CLV	600 x 750									0.14								
	203	12+081.6	LT.	R-55	300 x 450	3.8												1	1			
	203	12+081.6	LT.	R-57	300 x 600							1*		0.14*				1*				
	204	12+096.6	RT.	RTA	300 x 450											0.14*						
	205	12+105	RT.	R-55	300 x 450	3.8*								0.14								
	206	12+107	LT.	R-55	300 x 450	3.8					1*				1*			1*	1*			
	207	12+111.5	RT.	D-14										0.56				1	1			
	208	12+114.5	LT.	R-1	750 X 750		4.1							0.56*								
	209	12+114.6	RT.	W-48	750 X 750		4.4*									0.14*		1*	1*			
	209	12+114.6	RT.	R-55	300 x 450													1*				
	209	12+114.6	RT.	R-42A	600 x 750													1*	1*			
107	209	12+114.6	RT.	R-1	750 X 750		4.1*							0.56*				1*				
108	210	12+124.5	RT.	R-55	300 x 450											0.14*		1			1	
	210	12+124.5	RT.	D-14											1			1				
	211	12+126.2	LT.	R-42	600 X 750								1	0.45				1				
	211	12+126.2	LT.	RTA	300 x 450																	
	211	12+126.2	LT.	R-55	300 x 450	3.8								0.14								
	212	12+130	LT.	R-55	300 x 450	3.8*										0.14*						
	213	12+143	RT.	R-56A	300 x 450	3.8								0.14				1	1			
	214	12+152	RT.	M-8	600 X 300							1*		0.18*				1*				
	215	12+169.4	RT.	M-9	600 X 300							1*		0.18*				1*				
	215	12+169.4	RT.	M-1-2	600 X 600							1*		0.36*				1*				
	215	12+169.4	RT.	M-26	525 X 375							1*		0.20*				1*				
	215	12+169.4	RT.	R-57	300 x 450																	
	216	12+172	LT.	M-45	1050 X 1800			10.2						1.98								
	217	12+177	RT.	R-55	300 x 450	3.8*										0.14*		1	1			
	218	12+179.2	LT.	R-57	300 x 600									0.14								
	219	12+190	LT.	R-55	300 x 450	3.8									2*			2*			2*	
	220	12+196.5	RT.	D-14											2			2			2	
	221	12+208.4	LT.	D-14												0.14*						
	222	12+224	RT.	R-55	300 x 450	3.8*								0.14								
108	223	12+224	LT.	R-55	300 x 450	3.8									4	0.68		11	5		4	
		SUBTOTAL				30.4	16.4	10.2				1		4.67	4	1.85*		15*	4*		2*	
		TOTALS				26.6*	17.0*				2*	7*		3.30*	4*	2.53	EACH	26 EACH	9 EACH	EACH	6 EACH	
						57.0m	33.4m	10.2m	METER	METER	2 EA	8 EACH	SQ. M	7.97	8 EA		EACH					

DESIGNED BY: M.J. CHECKED BY:
DATE: 7/24/97 DATE:
DRAWN BY: T.K.I. REVISED BY: T.K.I.
DATE: 7/24/97 DATE: 6/3/98
CAD FILE NAME: J:\2000\647\SNYSUM7

CALCULATED T.K.I.

GROUND MOUNTED SIGNING SUB-SUMMARY

ITEM 630

* MARKED QUANTITIES ARE CITY OF CLEVELAND.
UNMARKED QUANTITIES ARE CITY OF LAKEWOOD.

SHEET NUMBER	REFERENCE NUMBER	LOCATION		CODE	SIZE (MILLIMETER)	GROUND MOUNTED SUPPORT, POST			ONE WAY SUPPORT, POST		STREET NAME SIGN SUPPORT	SIGN SUPPORT ASSEMBLY POLE MOUNTED	SIGN, FLAT SHEET	SIGN, FLAT SHEET, TYPE G	SIGN, DOUBLE FACED, ST. NAME, AS PER PLAN	SIGN, ERECTED, FLAT SHEET	SIGN HANGER ASSEMBLY, SPAN WIRE	REMOVAL OF GROUND MOUNTED SIGN AND STORAGE	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	REMOVAL OF OVERHEAD MOUNTED SIGN AND STORAGE	SIGN SUPPORT ASSEMBLY, POLE MOUNTED, AS PER PLAN	
		STATION	SIDE			#2	#3	#4	#3	#4												
						METER	METER	METER	METER	METER	EACH	EACH	SQ. M	SQ. M	EACH	SQ M	EACH	EACH	EACH	EACH	EACH	
108	224	12+226.6	LT.	R-57	300 x 600													1	1			
	225	12+256.3	RT.	R-57	300 x 600													1*				
	225	12+256.3	RT.	R-SNOW-CLV	600 x 750											0.14*		1*				
	226	12+274	RT.	R-55	300 X 450	3.8*								0.14								
	227	12+275	LT.	R-55	300 X 450	3.8										0.14*		1*	1*			
	228	12+285	RT.	R-55	300 X 450	3.8*										0.14*		1*				
	228	12+285	RT.	R-62	300 X 450									0.56				1	1			
	229	12+285.9	LT.	R-1	750 X 750		4.1				1*				2*			2*	1*			
	230	12+295.5	RT.	D-14								1*		0.56*				1*				
	230	12+295.5	RT.	R-1	750 X 750							1*				0.14*		1*				
	230	12+295.5	RT.	R-55	300 X 450							1*		0.45*				1*			1	
	230	12+295.5	RT.	R-42	600 X 750										2			2	1			
	231	12+299.1	LT.	D-14								1		0.45				1				
	231	12+299.1	LT.	R-10	600 X 750							1		0.14								
	231	12+299.1	LT.	RTA	300 X 450											0.14*						
	232	12+305	RT.	R-55	300 X 450	3.8*								0.14				1*	1*			
	233	12+305	LT.	R-55	300 X 450	3.8												1*	1*			
	234	12+310.3	RT.	RTA	300 X 450													1*				
	235	12+317.1	RT.	R-56A	300 X 450																	
	235	12+317.1	RT.	R-57	300 X 450									0.45								
	236	12+320	LT.	R-10	600 X 750	4.1						1		0.14								
	237	12+335.3	LT.	R-55	300 X 450													1				
	237	12+335.3	LT.	R-SNOW-LKWD	600 X 750							1*				0.14*						
	238	12+345	RT.	R-55	300 X 450							1*		0.56*				1*				
	238	12+345	RT.	W-75	750 X 750													1*				
	238	12+345	RT.	R-67	300 X 600									0.45								
108	239	12+353	LT.	R-SNOW-LKWD	600 X 750	4.1												1	1			
109	240	12+362.8	LT.	R-57	300 X 600													1				
	240	12+362.8	LT.	CRIME	300 X 450													1*	1*			
	241	12+367.6	RT.	R-67	300 X 600											0.14*						
	241	12+367.6	RT.	R-55	300 X 450	3.8*								0.14								
	242	12+370	LT.	R-55	300 X 450	3.8												1				
	243	12+373	LT.	R-42	600 X 750										2			2	1			
	244	12+378	LT.	D-14							1							1				
	244	12+378	LT.	R-1	750 X 750							1		0.56				1*	1*			
	245	12+381	RT.	R-1	750 X 750		4.1*							0.56*				1*				
	246	12+382.4	RT.	R-67	300 X 600							1*				0.14*						
	246	12+382.4	RT.	R-55	300 X 450									0.14								
	246A	12+400	LT.	R-55	300 X 450	3.8										0.14*						
	247	12+410	RT.	R-55	300 X 450	3.8*												1*				
	248	12+412.8	RT.	R-67	300 X 600							1*		0.56*								
	248	12+412.8	RT.	W-68	750 X 750									0.14				1				
	249	12+424	LT.	R-55	300 X 450	3.8								0.50				1	2			
	249A	12+430	LT.	N-1	1000 X 500	7.6								0.56*								
	250	12+431	RT.	R-1	750 X 750		4.1*									0.14*						
109	251	12+443	RT.	R-55	300 X 450	3.8*												15	7			
				SUBTOTAL		34.8	4.1				1	4		3.95	4			18*	6*			
						22.8*	8.2*				1*	7*		3.25*	2*	1.40*		33 EACH	13 EACH	EACH	1 EACH	
				TOTALS		57.6m	12.3m	METER	METER	METER	2 EA	11 EACH	SQ. M	7.20	6 EA	1.40	EACH					

DESIGNED BY: T.K.I. CHECKED BY:
DATE: 6/3/98 DATE:
DRAWN BY: T.K.I. REVIEWED BY:
DATE: 6/3/98 DATE:
CAD FILE NAME: P:\630SUM\GRSIGSUMS

* MARKED QUANTITIES ARE CITY OF CLEVELAND.
UNMARKED QUANTITIES ARE CITY OF LAKEWOOD.

GROUND MOUNTED SIGNING SUB-SUMMARY

ITEM 630

SHEET NUMBER	REFERENCE NUMBER	LOCATION		CODE	SIZE (MILLIMETER)	GROUND MOUNTED SUPPORT, POST			ONE WAY SUPPORT, POST		STREET NAME SIGN SUPPORT	SIGN SUPPORT ASSEMBLY POLE MOUNTED	SIGN, FLAT SHEET	SIGN, FLAT SHEET, TYPE G	SIGN, DOUBLE FACED, ST. NAME, AS PER PLAN	SIGN, ERECTED, FLAT SHEET	SIGN HANGER ASSEMBLY, SPAN WIRE	REMOVAL OF GROUND MOUNTED SIGN AND STORAGE	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	REMOVAL OF OVERHEAD MOUNTED SIGN AND STORAGE	SIGN SUPPORT ASSEMBLY, POLE MOUNTED, AS PER PLAN	
		STATION	SIDE			#2	#3	#4	#3	#4												
						METER	METER	METER	METER	METER	EACH	EACH	SQ M	SQ. M	EACH	SQ. M	EACH	EACH	EACH	EACH	EACH	
109	252	12+443.4	℄	R-37R	600 x 750									0.45*				1*	1*			
	252	12+443.4	℄	X-2	150 x 375									0.06*				1*				
	253	12+451.7	LT.	R-55	300 x 450							1		0.14								
	254	12+460	RT.	R-10	600 X 750	4.1*								0.45*								
	255	12+480.9	RT.	W-1	750 X 750							1		0.56*				1*				
	255	12+480.9	RT.	W-143	450 X 450							1		0.20*				1*				
	256	12+500	RT.	R-55	300 X 450	3.8*										0.14*						
	257	12+500	LT.	R-55	300 X 450	3.8								0.14				1				
	258	12+560	RT.	R-55	300 X 450	3.8								0.14				1				
	259	12+560	LT.	R-55	300 X 450	3.8								0.14								
109	260	12+567.8	RT.	N-44B	450 X 300	3.6								0.14								
110	261	12+657.2	LT.	N-44B	450 X 300	3.6								0.14								
	262	12+660	RT.	R-55	300 X 450	3.8								0.14								
	263	12+664.2	LT.	R-55	300 X 450							1		0.14								
	264	12+706	RT.	R-55	300 X 450	3.8								0.14								
	265	12+706.5	RT.	N-44B	450 X 300	3.6								0.14								
	266	12+709	LT.	R-10	600 X 750							1		0.45								
110	267	12+713	LT.	R-55	300 X 450	3.8								0.14								
111	268	12+760	LT.	N-44B	450 X 300	3.6*								0.14*								
	269	12+766.1	LT.	N-1	1000 X 500							1*		0.50*				1*				
	269	12+766.1	LT.	R-55	300 X 450											0.14*		1*				
	270	12+774	RT.	R-55	300 X 450	3.8*										0.14*						
	271	12+774	LT.	R-55	300 X 450	3.8*										0.68*						
	272	12+794	RT.	CUY-D500	900 X 750		8.2*					1*		0.56*								
	273	12+820.9	LT.	W-68	750 X 750											0.14*						
	274	12+839	RT.	R-55	300 X 450	3.8*										0.14*						
111	275	12+839	LT.	R-55	300 X 450	3.8*						1*		0.68*				1*				
112	276	12+850.5	RT.	R-31F	900 X 750							1*		0.56*				1*				
	277	12+882.4	LT.	W-2	750 X 750							1*		0.20*				1*				
	277	12+882.4	LT.	W-143	450 X 450							1*				0.14*		1*				
	277	12+882.4	LT.	R-55	300 X 450													1*				
	277	12+882.4	LT.	RTA	300 X 450											0.14*						
	278	12+900	RT.	R-55	300 X 450	3.8*										0.14*						
	279	12+900	LT.	R-55	300 X 450	3.8*								0.45*								
	280	12+910	LT.	R-10	600 X 750	4.1*										0.14*						
	280A	12+922	LT.	R-55	300 X 450	3.8*								0.68*								
	281	12+920	RT.	R-31F	900 X 750	8.2*						1*		0.18*				1*				
	282	12+929.5	LT.	M-8	600 X 300							1*		0.18*				1*				
	282	12+929.5	LT.	M-40	600 X 300							1*		0.36*				1*				
	282	12+929.5	LT.	M-2-2	600 X 600							1*		0.20*				1*				2*
	282	12+929.5	LT.	M-24	525 X 375										2*			1*				
	283	12+929.1	RT.	D-14								1*		0.18*				1*				
	283	12+929.1	RT.	M-8	600 X 300							1*		0.18*				1*				
	283	12+929.1	RT.	M-9	600 X 300							1*		0.36*				1*				
	283	12+929.1	RT.	M-1-2	600 X 600							1*		0.20*				1*				
112	283	12+929.1	RT.	M-24	525 X 375							5		1.99				2				
		SUBTOTAL				33.6						14*		7.33*	2*	1.94*		23*	1*			2*
		TOTALS				84.0m	8.2m	METER	METER	METER	EACH	19 EACH	SQ. M	9.32	2 EA	1.94	EACH	25 EACH	1 EACH	EACH	2 EACH	

CALCULATED T.K.I.

DESIGNED BY ITE: INCHES BY: DATE:
DRAWN BY: T.K.I. CHECKED BY:
DATE: 7/23/98 DATE:
CAD FILE NAME: J:\PROJ\97\SIGNSUMS

LIGHTING GENERAL NOTES

SPECIFICATIONS

THESE NOTES ARE SUPPLEMENTAL TO ITEMS 625 AND 713 OF THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS

REFERENCE SHALL BE MADE TO STANDARD CONSTRUCTION DRAWINGS LISTED ON THE TITLE SHEET OF THESE PLANS

CONNECTOR KITS

WHEN TYPE II OR TYPE III CABLE CONNECTION KITS ARE SPECIFIED, TYPE IX KITS MAY NOT BE SUBSTITUTED.

HIGH VOLTAGE DIRECT CURRENT TEST

A HIGH VOLTAGE DIRECT CURRENT TEST, AS DESCRIBED IN SUPPLEMENTAL SPECIFICATION 839, SHALL BE PERFORMED ON ALL (DISTRIBUTION CABLE) (AND) (DUCT CABLE) SYSTEMS TO BE INSTALLED ON THIS PROJECT. THE TEST SHALL NOT BE PERFORMED UNTIL AFTER ALL NEW CONSTRUCTION, SUCH AS GUARDRAIL FENCE, DELINEATOR POSTS, SIGN SUPPORTS, ETC., IN THE IMMEDIATE VICINITY OF THE LOCATION OF THE CABLE RUN BEING TESTED HAS BEEN COMPLETED

THE CONTRACTOR SHALL NOT TEST EXISTING CABLES. PAYMENT SHALL BE MADE AT THE LUMP SUM PRICE BID HIGH VOLTAGE DIRECT CURRENT TEST.

UTILITIES

SEE SHEET 6 FOR A LIST OF UTILITIES AND OWNERS WITHIN THE WORK AREA OF THE PROJECT

ITEM 202 – LUMINAIRE REMOVED FOR STORAGE, AS PER PLAN

THIS ITEM WORK SHALL CONSIST OF REMOVING AN EXISTING LUMINAIRE AND STORING IT ON THE PROJECT SITE FOR THE CITY OF LAKEWOOD TO TAKE POSSESSION OF ITEMS IT WANTS. ALL ITEMS LEFT UNWANTED BY THE CITY OF LAKEWOOD SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE PROPERLY DISPOSED OF BY THE CONTRACTOR OFF THE PROJECT SITE

PAYMENT WILL BE MADE FOR LUMP SUM BID PRICE ITEM 202 – LUMINAIRE REMOVED FOR STORAGE, AS PER PLAN

ITEM 202 – LIGHT POLE REMOVED FOR STORAGE, AS PER PLAN

THE ITEM OF WORK SHALL CONSIST OF REMOVING AND EXISTING LIGHT POLE INCLUDING THE BRACKET ARM(S) AND THE TRANSFORMER BASED (IF USED). THE EXISTING WIRING SHALL BE REMOVED FROM THE POLE AND BRACKET ARM AND DISPOSED OF. THE POLE, BRACKET ARM(S) AND TRANSFORMER BASE SHALL BE SEPARATED AND STORED ON THE SITE FOR REMOVAL BY THE CITY OF LAKEWOOD.

PAYMENT WILL BE MADE AT THE LUMP SUM BID PRICE FOR EACH ITEM 202 – LIGHT POLE REMOVAL FOR STORAGE, AS PER PLAN

ITEM 625 – LUMINAIRES

STYLE B LUMINARIES SHALL BE SINGLE RATED 120 VOLT, 250 WATT WITH INTEGRAL REGULATOR BALLASTS FOR USE WITH HIGH-PRESSURE SODIUM LAMPS AND SHALL BE GENERAL ELECTRIC M-400, CROUSE-HINDS OVM, AMERICAN 25/26, OR EQUAL APPROVED BY THE ENGINEER. ALL LUMINAIRES SHALL CONFORM TO SECTION 713.11 OF THE SPECIFICATIONS.

HIGH-PRESSURE SODIUM LAMPS

HIGH-PRESSURE SODIUM LAMPS SHALL BE GENERAL ELECTRIC "LUCALOX", SYLVANIA "LUMALUX", WESTINGHOUSE "CERAMALUX", OR EQUAL APPROVED BY THE ENGINEER AND SHALL CONFORM TO SECTION 713.14 OF THE SPECIFICATIONS.

625.03 – GENERAL

THE POWER SUPPLYING AGENCY FOR THIS PROJECT IS:

CENTERIOR ENERGY CORPORATION
6200 OAK TREE DRIVE
INDEPENDENCE, OHIO 44131
TELEPHONE: (216) 447-3100

SERVICE SHALL BE 120 VOLT/240 VOLT 3-WIRE GROUNDED NEUTRAL ELECTRICAL ENERGY FROM EXISTING POWER SERVICES SHALL CONTINUE TO BE CHARGED TO THE MAINTAINING AGENCY

CENTERIOR ENERGY OWNS THE POINT OF SOURCE, THE LUMINAIRE TRIPLEX CABLE FOR THE CIRCUITS FROM POLE TO POLE. THE CITY OF LAKEWOOD AND THE CITY OF CLEVELAND OWN THE LIGHT POLES AND BRACKET ARMS

ITEM SPECIAL – MAINTAIN EXISTING LIGHTING

EXISTING ROADWAYS WHICH ARE TO REMAIN OPEN TO TRAFFIC DURING CONSTRUCTION OF THIS PROJECT AND ARE LIGHTED SHALL HAVE THE LIGHTING MAINTAINED AS DESCRIBED HEREIN.

BEFORE ANY WORK IS STARTED IN THE IMMEDIATE VICINITY OF ANY EXISTING LIGHTING CIRCUITS, REPRESENTATIVES OF THE CITY OF LAKEWOOD, THE MAINTAINING AGENCY, AND THE CONTRACTOR SHALL MAKE A VISUAL INSPECTION OF THE EXISTING ROADWAY LIGHTING CIRCUITS TO BE MAINTAINED. DURING THIS INSPECTION A WRITTEN RECORD OF THE CONDITION OF THE EXISTING LIGHTING SHALL BE MADE BY THE CITY'S REPRESENTATIVE. THIS WRITTEN REPORT SHALL NOTE INDIVIDUAL LUMINAIRES WHICH ARE NOT STANDING, AND INDIVIDUAL CIRCUITS WHICH ARE NOT IN WORKING ORDER. THE COMPLETED REPORT SHALL BE SIGNED BY THE REPRESENTATIVES OF THE CITY, THE MAINTAINING AGENCY, AND THE CONTRACTOR. IF, AS A RESULT OF THIS INSPECTION IT IS DETERMINED THAT THE CONDITION OF THE EXISTING SYSTEM IS BELOW THAT REQUIRED FOR THE SAFETY OF THE TRAVELING PUBLIC, THEN THE MAINTAINING AGENCY SHALL MAKE REPAIRS NECESSARY TO RETURN THE SYSTEM TO AN ACCEPTABLE CONDITION FOLLOWING THESE REPAIRS, THE SYSTEM SHALL AGAIN BE INSPECTED AND A REPORT MADE AND SIGNED AS OUTLINED HEREIN

WHEN THE EXISTING SYSTEM IS IN AN ACCEPTABLE CONDITION, IT SHALL BE TURNED OVER TO THE CONTRACTOR WHO SHALL THEN BE REQUIRED TO MAINTAIN THE EXISTING LIGHTING TO THE CONDITION OUTLINED IN THIS REPORT WITH THE EXCEPTION OF KNOCKDOWNS DUE TO TRAFFIC ACCIDENTS. REPLACEMENTS OF KNOCKED DOWN UNITS SHALL BE DONE ONLY WHEN THE ENGINEER HAS DETERMINED THAT THE REPLACEMENT OF THE KNOCKED DOWN UNIT IS NECESSARY AND SHALL BE PAID SEPARATELY ON A PER UNIT BASIS. BETTERMENTS SHALL BE COVERED IN ITEMS OF WORK PERTAINING TO THE CONSTRUCTION OF PERMANENT IMPROVEMENTS.

SHOULD THE CONTRACTOR DESIRE THE REMOVAL OF THE EXISTING LIGHTING BEFORE THE NEW LIGHTING IS OPERATIONAL, THE CONTRACTOR SHALL THEN BE RESPONSIBLE FOR ADEQUATE TEMPORARY LIGHTING OF THAT PORTION OF THE EXISTING ROADWAY AFFECTED BY THE REMOVAL OF THE EXISTING LIGHTING. PRIOR TO INSTALLING SUCH LIGHTING, THE CONTRACTOR SHALL PREPARE AND SUBMIT FOUR (4) SETS OF THE TEMPORARY LIGHTING PLANS TO THE DIRECTOR FOR REVIEW AND APPROVAL. THIS PLAN SHALL SHOW LOCATION OF POLES, LENGTH OF BRACKET ARMS, STYLE OF LUMINAIRES, MOUNTING HEIGHT, WIRING METHODS, AND OTHER PERTINENT INFORMATION. THE TEMPORARY LIGHTING SHALL PROVIDE AN AVERAGE INITIAL INTENSITY OF 1.2 FOOT-CANDLES WITH AN AVERAGE TO MINIMUM UNIFORMITY RATIO NOT TO EXCEED 4:1. MOUNTING HEIGHT FOR TEMPORARY LUMINAIRES SHALL NOT BE LESS THAN 27 FEET AND MINIMUM OVERHEAD CONDUCTOR CLEARANCE SHALL BE 20 FEET. TEMPORARY OVERHEAD CONSTRUCTION SHALL NOT BE LESS THAN GRADE "A" FOR STRENGTH REQUIREMENTS AS DEFINED BY THE NATIONAL ELECTRIC SAFETY CODE. WOOD POLES WITH OVERHEAD WIRING MAY BE USED. HOWEVER, TEMPORARY LIGHTING SHALL MEET FEDERAL AND STATE SAFETY CRITERIA. IF BREAKAWAY POLES ARE USED TO MEET THIS CRITERIA, THEN UNDERGROUND WIRING WILL BE USED. RECONDITIONED OR USED MATERIALS MAY BE FURNISHED FOR TEMPORARY LIGHTING. ALL MATERIALS NECESSARY TO COMPLETE THE TEMPORARY LIGHTING SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR. WHEN NO LONGER NEEDED, THE TEMPORARY LIGHTING INSTALLATION SHALL BE REMOVED AND PROPERLY DISPOSED OF BY THE CONTRACTOR.

THE LUMP SUM BID FOR ITEM SPECIAL – MAINTAIN EXISTING LIGHTING, SHALL INCLUDE PAYMENT FOR ALL LABOR, EQUIPMENT, MATERIALS, INCIDENTALS, AND TEMPORARY POWER SERVICES NECESSARY TO MAINTAIN THE EXISTING LIGHTING AS SPECIFIED HEREIN. THE UNIT BID PRICE FOR EACH ITEM SPECIAL – REPLACING EXISTING LIGHTING UNIT, SHALL BE FULL PAYMENT FOR THE REPLACEMENT OF AN EXISTING UNIT WHICH HAS BEEN KNOCKED DOWN AFTER THE AFOREMENTIONED INSPECTION AND SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO PROVIDE A REPLACEMENT FOR SUCH UNIT. THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED IN THE LIGHTING GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER

ITEM SPECIAL – REPLACING EXISTING LIGHTING UNIT	10 EACH
ITEM SPECIAL – MAINTAINING EXISTING LIGHTING	LUMP

ITEM SPECIAL – DISCONNECT EXISTING CIRCUIT

THIS ITEM OF WORK SHALL CONSIST OF DISCONNECTING EXISTING CIRCUIT AT SIX LOCATIONS WHICH SHALL REMAIN UNDISTURBED BY CONSTRUCTION:

PHASE 1 (SOUTH SIDE) BRIDGE No. 209

DISCONNECT EXISTING LIGHT POLES:
STA 12+541.5 RT. CIR 4D POLE #615047
STA. 12+602.3 RT CIR 4D POLE #PC:1185
STA 12+632.8 RT CIR 4D POLE #PC:1190
STA 12+685.5 RT CIR 4D POLE #615036 END CIRCUIT C.E.I.

PHASE 1 (SOUTH SIDE) BRIDGE No. 210

NO LIGHTING

PHASE 2 (NORTH SIDE) BRIDGE No. 209

DISCONNECT EXISTING LIGHT POLES:
STA 12+570.5 LT CIR 4D POLE #615048
STA 12+602.3 LT CIR 4D POLE #PC:1186
STA 12+632.8 LT CIR 4D POLE #PC:1189
STA 12+664.0 LT. CIR 4D POLE #615037 END CIRCUIT C.E.I.

PHASE 2 (NORTH SIDE) BRIDGE No. 210

DISCONNECT EXISTING LIGHT POLES:
STA 12+709.0 LT. CIR 4D POLE #615035 END CIRCUIT C.E.I.
STA. 12+729.9 LT CIR. 4D POLE #PC:1188
STA 12+746.5 LT CIR. 4D POLE #PC:1187
STA 12+766.0 LT CIR. 4D POLE #615034

DISCONNECTION IN THE LIGHT POLE SHALL CONSIST OF REMOVING THE ENDS OF CABLES OF CIRCUIT(S) TO BE ABANDONED. THOSE ENDS OF CONNECTOR KITS FROM WHICH THE ABANDONED CABLES ARE REMOVED SHALL BE PLUGGED AND TAPED SHUT.

PAYMENT WILL BE MADE AT THE UNIT PRICE BID FOR ITEM SPECIAL – DISCONNECT EXISTING CIRCUIT, WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS, AND INCIDENTALS REQUIRED FOR COMPLETING THE WORK IN A SATISFACTORY WORKERLIKE MANNER

PAYMENT FOR CIRCUIT CONNECTIONS IS INCIDENTAL TO THE PRICE BID FOR EACH ITEM 625 CONNECTOR KIT OR EACH ITEM 625 CABLE SPLICING KIT

DESIGNED BY:	EDR	CHECKED BY:	
DATE:	8/04/97	DATE:	
DRAWN BY:	MAL	REVISED BY:	MAL
DATE:	8/04/97	DATE:	10/27/98
CAD FILE NAME:			LTGNOTE0

CALCULATED EDR

CHECKED

LIGHTING GENERAL NOTES - SHEET 1

LIGHTING GENERAL NOTES

SPECIFICATIONS

THESE NOTES ARE SUPPLEMENTAL TO ITEMS 625 AND 713 OF THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS.

REFERENCE SHALL BE MADE TO STANDARD CONSTRUCTION DRAWINGS LISTED ON THE TITLE SHEET OF THESE PLANS.

All Lighting work shall be performed by an licensed electrical contractor

CONNECTOR KITS

WHEN TYPE II OR TYPE III CABLE CONNECTION KITS ARE SPECIFIED, TYPE IX KITS MAY NOT BE SUBSTITUTED.

UTILITIES

SEE SHEET 6 FOR A LIST OF UTILITIES AND OWNERS WITHIN THE WORK AREA OF THE PROJECT.

ITEM 625 – LUMINAIRES

STYLE B LUMINARIES SHALL BE SINGLE RATED 120 VOLT, 250 WATT WITH INTEGRAL REGULATOR BALLASTS FOR USE WITH HIGH-PRESSURE SODIUM LAMPS AND SHALL BE GENERAL ELECTRIC M-400, CROUSE-HINDS OVM, AMERICAN 25/26, OR EQUAL APPROVED BY THE ENGINEER. ALL LUMINAIRES SHALL CONFORM TO SECTION 713.11 OF THE SPECIFICATIONS.

HIGH-PRESSURE SODIUM LAMPS

HIGH-PRESSURE SODIUM LAMPS SHALL BE GENERAL ELECTRIC "LUCALOX", SYLVANIA "LUMALUX", WESTINGHOUSE "CERAMALUX", OR EQUAL APPROVED BY THE ENGINEER AND SHALL CONFORM TO SECTION 713.14 OF THE SPECIFICATIONS.

POWER SERVICE

THIS ITEM OF WORK SHALL CONSIST OF PROVIDING SERVICE TO THE FOLLOWING LIGHTING CIRCUIT 4D. PAYMENT FOR THIS ITEM SHALL INCLUDE ALL CONNECTIONS AND ALL WORK AND EQUIPMENT NECESSARY TO COMPLETE THE WORK AS SPECIFIED.

COMPONENT PARTS NOT SPECIFICALLY MENTIONED BUT REQUIRED FOR SATISFACTORY OPERATION OF THIS ITEM SHALL BE FURNISHED AND CONSIDERED PAID AS PART OF THIS ITEM.

LIGHTING MISC.: OVERHEAD CIRCUIT, AS PER PLAN

THE OVERHEAD CIRCUIT SHALL BE PERFORMED BY CENTERIOR ENERGY CORPORATION, WHICH OWNS THE POINT OF SOURCE, LIGHTING SYSTEM, AND THE LUMINAIRES.

STRUCTURE GROUNDING SYSTEM, AS PER PLAN

A STRUCTURE GROUNDING SYSTEM SHALL BE PROVIDED FOR EACH BRIDGE, WALL, OR OTHER STRUCTURE, HAVING ELECTRIC ELEMENTS CONTAINED THEREIN OR ATTACHED THERETO.

THE FOLLOWING BRIDGES SHALL BE INCLUDED AS FOLLOWS:

STRUCTURE No. 209
STRUCTURE No. 210

ALSO, THE CHAIN LINK FENCE EACH SIDE OF THE BRIDGE SHALL BE GROUNDED AS PER HL-50.11M.

THE FURNISHING OF ALL MATERIALS NECESSARY TO PROVIDE THE ENTIRE STRUCTURE GROUNDING SYSTEM INCLUDING GROUND RODS, COMPLETE IN PLACE, SHALL BE INCLUDED IN THIS ITEM – STRUCTURE GROUNDING SYSTEM.

625.03 – GENERAL

THE POWER SUPPLYING AGENCY FOR THIS PROJECT IS:
THE ILLUMINATING CO.
4141 ROCKSIDE ROAD
SEVEN HILLS, OHIO 44131
TELEPHONE: (216) 520-9579

SERVICE SHALL BE 120 VOLT/240 VOLT 3-WIRE GROUNDED NEUTRAL ELECTRICAL ENERGY FROM EXISTING POWER SERVICES SHALL CONTINUE TO BE CHARGED TO THE MAINTAINING AGENCY.

THE ILLUMINATING COMPANY OWNS THE POINT OF SOURCE, THE CITY OF LAKEWOOD AND THE CITY OF CLEVELAND OWN THE LIGHTING SYSTEM, INCLUDING THE LUMINAIRES, LIGHT POLES AND BRACKET ARMS.

ITEM SPECIAL – MAINTAIN EXISTING LIGHTING

EXISTING ROADWAYS WHICH ARE TO REMAIN OPEN TO TRAFFIC DURING CONSTRUCTION OF THIS PROJECT AND ARE LIGHTED SHALL HAVE THE LIGHTING MAINTAINED AS DESCRIBED HEREIN.

BEFORE ANY WORK IS STARTED IN THE IMMEDIATE VICINITY OF ANY EXISTING LIGHTING CIRCUITS, REPRESENTATIVES OF THE CITY OF LAKEWOOD, THE MAINTAINING AGENCY, AND THE CONTRACTOR SHALL MAKE A VISUAL INSPECTION OF THE EXISTING ROADWAY LIGHTING CIRCUITS TO BE MAINTAINED. DURING THIS INSPECTION A WRITTEN RECORD OF THE CONDITION OF THE EXISTING LIGHTING SHALL BE MADE BY THE CITY'S REPRESENTATIVE. THIS WRITTEN REPORT SHALL NOTE INDIVIDUAL LUMINAIRES WHICH ARE NOT STANDING, AND INDIVIDUAL CIRCUITS WHICH ARE NOT IN WORKING ORDER. THE COMPLETED REPORT SHALL BE SIGNED BY THE REPRESENTATIVES OF THE CITY, THE MAINTAINING AGENCY, AND THE CONTRACTOR. IF, AS A RESULT OF THIS INSPECTION, IT IS DETERMINED THAT THE CONDITION OF THE EXISTING SYSTEM IS BELOW THAT REQUIRED FOR THE SAFETY OF THE TRAVELING PUBLIC, THEN THE MAINTAINING AGENCY SHALL MAKE REPAIRS NECESSARY TO RETURN THE SYSTEM TO AN ACCEPTABLE CONDITION. FOLLOWING THESE REPAIRS, THE SYSTEM SHALL AGAIN BE INSPECTED AND A REPORT MADE AND SIGNED AS OUTLINED HEREIN.

WHEN THE EXISTING SYSTEM IS IN AN ACCEPTABLE CONDITION, IT SHALL BE TURNED OVER TO THE CONTRACTOR WHO SHALL THEN BE REQUIRED TO MAINTAIN THE EXISTING LIGHTING TO THE CONDITION OUTLINED IN THIS REPORT WITH THE EXCEPTION OF KNOCKDOWNS DUE TO TRAFFIC ACCIDENTS. REPLACEMENTS OF KNOCKED DOWN UNITS SHALL BE DONE ONLY WHEN THE ENGINEER HAS DETERMINED THAT THE REPLACEMENT OF THE KNOCKED DOWN UNIT IS NECESSARY AND SHALL BE PAID SEPARATELY ON A PER UNIT BASIS. BETTERMENTS SHALL BE COVERED IN ITEMS OF WORK PERTAINING TO THE CONSTRUCTION OF PERMANENT IMPROVEMENTS.

SHOULD THE CONTRACTOR DESIRE THE REMOVAL OF THE EXISTING LIGHTING BEFORE THE NEW LIGHTING IS OPERATIONAL, THE CONTRACTOR SHALL THEN BE RESPONSIBLE FOR ADEQUATE TEMPORARY LIGHTING OF THAT PORTION OF THE EXISTING ROADWAY AFFECTED BY THE REMOVAL OF THE EXISTING LIGHTING. PRIOR TO INSTALLING SUCH LIGHTING, THE CONTRACTOR SHALL PREPARE AND SUBMIT FOUR (4) SETS OF THE TEMPORARY LIGHTING PLANS TO THE DIRECTOR FOR REVIEW AND APPROVAL. THIS PLAN SHALL SHOW LOCATION OF POLES, LENGTH OF BRACKET ARMS, STYLE OF LUMINAIRES, MOUNTING HEIGHT, WIRING METHODS, AND OTHER PERTINENT INFORMATION. THE TEMPORARY LIGHTING SHALL PROVIDE AN AVERAGE INITIAL INTENSITY OF 1.2 FOOT-CANDLES WITH AN AVERAGE TO MINIMUM UNIFORMITY RATIO NOT TO EXCEED 4:1. MOUNTING HEIGHT FOR TEMPORARY LUMINAIRES SHALL NOT BE LESS THAN 27 FEET AND MINIMUM OVERHEAD CONDUCTOR CLEARANCE SHALL BE 20 FEET. TEMPORARY OVERHEAD CONSTRUCTION SHALL NOT BE LESS THAN GRADE "A" FOR STRENGTH REQUIREMENTS AS DEFINED BY THE NATIONAL ELECTRIC SAFETY CODE. WOOD POLES WITH OVERHEAD WIRING MAY BE USED. HOWEVER, TEMPORARY LIGHTING SHALL MEET FEDERAL AND STATE SAFETY CRITERIA. IF BREAKAWAY POLES ARE USED TO MEET THIS CRITERIA, THEN UNDERGROUND WIRING WILL BE USED. RECONDITIONED OR USED MATERIALS MAY BE FURNISHED FOR TEMPORARY LIGHTING. ALL MATERIALS NECESSARY TO COMPLETE THE TEMPORARY LIGHTING SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR. WHEN NO LONGER NEEDED, THE TEMPORARY LIGHTING INSTALLATION SHALL BE REMOVED AND PROPERLY DISPOSED OF BY THE CONTRACTOR.

THE LUMP SUM BID FOR ITEM SPECIAL – MAINTAIN EXISTING LIGHTING, SHALL INCLUDE PAYMENT FOR ALL LABOR, EQUIPMENT, MATERIALS, INCIDENTALS, AND TEMPORARY POWER SERVICES NECESSARY TO MAINTAIN THE EXISTING LIGHTING AS SPECIFIED HEREIN. THE UNIT BID PRICE FOR EACH ITEM SPECIAL – REPLACEMENT OF EXISTING LIGHTING UNIT, SHALL BE FULL PAYMENT FOR THE REPLACEMENT OF AN EXISTING UNIT WHICH HAS BEEN KNOCKED DOWN AFTER THE AFOREMENTIONED INSPECTION AND SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO PROVIDE A REPLACEMENT FOR SUCH UNIT. THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED IN THE LIGHTING GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER.

ITEM SPECIAL – REPLACEMENT OF EXISTING LIGHTING UNIT	10 EACH
ITEM SPECIAL – MAINTAINING EXISTING LIGHTING	LUMP

ITEM SPECIAL – DISCONNECT EXISTING CIRCUIT

THIS ITEM OF WORK SHALL CONSIST OF DISCONNECTING EXISTING CIRCUIT AT SIX LOCATIONS WHICH SHALL REMAIN UNDISTURBED BY CONSTRUCTION:

PHASE 1 (SOUTH SIDE) BRIDGE No. 209

DISCONNECT EXISTING LIGHT POLES:
STA. 12+541.5 RT. CIR. 4D POLE #615047
STA. 12+602.3 RT. CIR. 4D POLE #PC:1185
STA. 12+632.8 RT. CIR. 4D POLE #PC:1190
STA. 12+685.5 RT. CIR. 4D POLE #615036 END CIRCUIT C.E.I.

PHASE 1 (SOUTH SIDE) BRIDGE No. 210

NO LIGHTING

PHASE 2 (NORTH SIDE) BRIDGE No. 209

DISCONNECT EXISTING LIGHT POLES:
STA. 12+570.5 LT. CIR. 4D POLE #615048
STA. 12+602.3 LT. CIR. 4D POLE #PC:1186
STA. 12+632.8 LT. CIR. 4D POLE #PC:1189
STA. 12+664.0 LT. CIR. 4D POLE #615037 END CIRCUIT C.E.I.

PHASE 2 (NORTH SIDE) BRIDGE No. 210

DISCONNECT EXISTING LIGHT POLES:
STA. 12+709.0 LT. CIR. 4D POLE #615035 END CIRCUIT C.E.I.
STA. 12+729.9 LT. CIR. 4D POLE #PC:1188
STA. 12+746.5 LT. CIR. 4D POLE #PC:1187
STA. 12+766.0 LT. CIR. 4D POLE #615034

DISCONNECTION IN THE LIGHT POLE SHALL CONSIST OF REMOVING THE ENDS OF CABLES OF CIRCUIT(S) TO BE ABANDONED. THOSE ENDS OF CONNECTOR KITS FROM WHICH THE ABANDONED CABLES ARE REMOVED SHALL BE PLUGGED AND TAPED SHUT.

PAYMENT WILL BE MADE AT THE UNIT PRICE BID FOR ITEM SPECIAL – DISCONNECT EXISTING CIRCUIT, WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS, AND INCIDENTALS REQUIRED FOR COMPLETING THE WORK IN A SATISFACTORY WORKMANLIKE MANNER

PAYMENT FOR CIRCUIT CONNECTIONS IS INCIDENTAL TO THE PRICE BID FOR EACH ITEM 625 CONNECTOR KIT OR EACH ITEM 625 CABLE SPLICING KIT.

DESIGNED BY:	EDR	CHECKED BY:	
DRAWN BY:	MAL	REVISED BY:	MAL
FILE NAME:	LTGN0100	DATE:	5/24/99

CALCULATED EDR CHECKED TAM

LIGHTING GENERAL NOTES

CUY - LAKEWOOD HEIGHTS BOULEVARD

LIGHTING GENERAL SUMMARY

SHEET NUMBER		PROJECT FIELD PARTICIPATION		ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	AS PER PLAN SHEET REF.
		CITY OF CLEVELAND	CITY OF LAKEWOOD						
								LIGHTING	
125	127								
	6	1	5	202	75503	6	EACH	LIGHT POLE REMOVED FOR STORAGE, AS PER PLAN	125
	6	1	5	202	75505	6	EACH	LUMINAIRE REMOVED FOR STORAGE, AS PER PLAN	125
	18	4	14	625	00500	18	EACH	CONNECTOR KIT, TYPE II	
	6	1	5	625	02912	6	EACH	LIGHT POLE, DESIGN A2.4B9.1	
	24	4	20	625	10600	24	EACH	LIGHT POLE ANCHOR L-BOLTS	
	70.2	15.6	54.6	625	23400	70.2	METER	No. 10 AWG POLE AND BRACKET CABLE	
	246.4	75.3	171.1	625	25400	246.4	METER	CONDUIT, 50mm, 713.04	
	6	1	5	625	26250	6	EACH	LUMINAIRE, CONVENTIONAL STYLE B, TYPE III, 250 WATT,	
								HIGH PRESSURE SODIUM, 713.11, 120 VOLT (BY OTHERS)	
	6	1	5	625	29900	6	EACH	JUNCTION BOX, 457mm x 203mm x 171mm	
	2	1	1	625	33000	2	EACH	STRUCTURE GROUNDING SYSTEM	
				625	38000	LUMP		HIGH VOLTAGE TEST	
	292.3	44	248.3	625	98000	292.3	METER	LIGHTING MISC.: OVERHEAD CIRCUIT, AS PER PLAN (BY OTHERS)	125
				SPECIAL	40000	LUMP		MAINTAIN EXISTING LIGHTING	
10		5	5	SPECIAL	40010	10	EACH	REPLACEMENT OF EXISTING LIGHTING UNIT	
10		1	9	SPECIAL	40020	10	EACH	DISCONNECT EXISTING CIRCUIT	

DESIGNED BY:	EDR	CHECKED BY:	
DATE:	5/05/97	DATE:	
DRAWN BY:	MAL	REVISED BY:	MAL
DATE:	8/06/97	DATE:	10/27/98
CAD FILE NAME:			L1QS0100

CALCULATED EDR CHECKED

LIGHTING GENERAL SUMMARY

CUY - LAKEWOOD HEIGHTS BOULEVARD

126
162

LIGHTING GENERAL SUMMARY

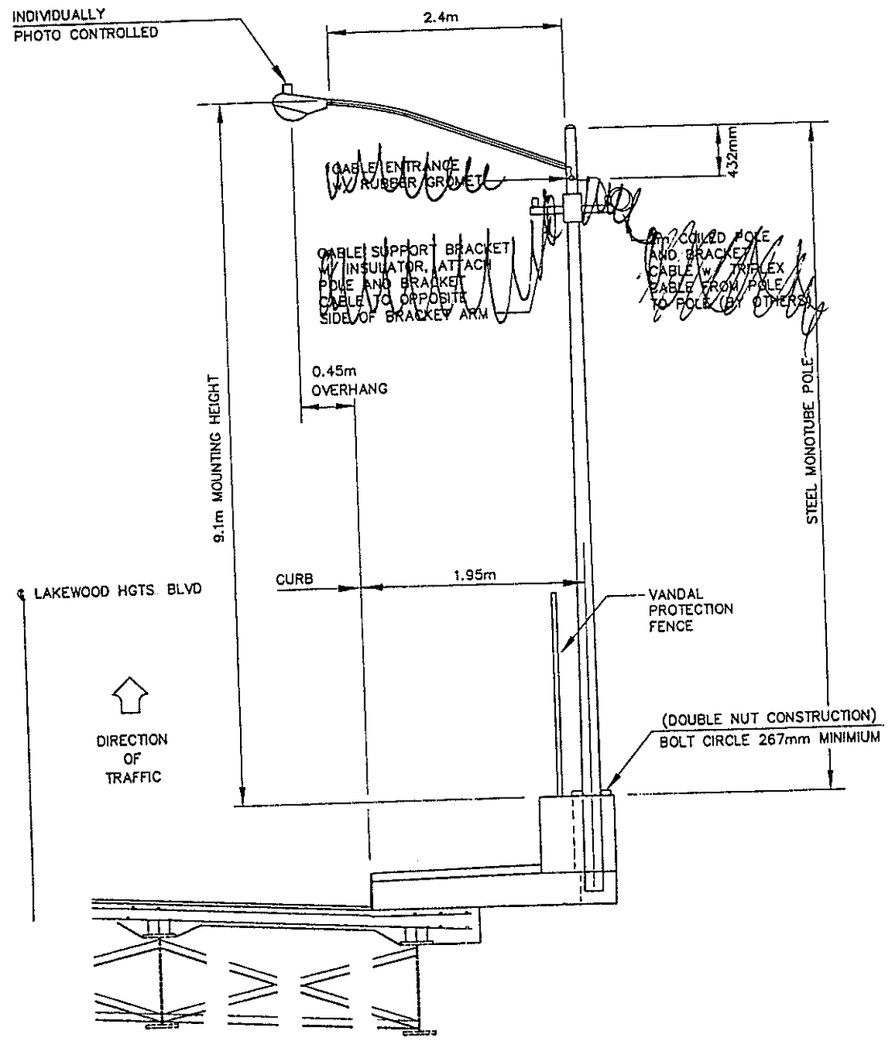
REF. NO.	SHEET NUMBER 125	SHEET NUMBER 127	PROJECT FIELD PARTICIPATION CITY OF CLEVELAND	PROJECT FIELD PARTICIPATION CITY OF LAKEWOOD	ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	AS PER PLAN SHEET REF.	REF. NO.
									LIGHTING		
											81
		6	1	5	202	75400	6	EACH	LIGHT POLE REMOVED		82
81		6	1	5	202	75506	6	EACH	LUMINAIRE REMOVED		
82											83
		18	4	14	625	00500	18	EACH	CONNECTOR KIT, TYPE II		84
83		6	1	5	625	02912	6	EACH	LIGHT POLE, DESIGN A2.4B9.1		85
84		24	4	20	625	10600	24	EACH	LIGHT POLE ANCHOR L-BOLTS		86
85		70.2	15.6	54.6	625	23400	70.2	METER	No. 10 AWG POLE AND BRACKET CABLE		87
86		246.4	75.3	171.1	625	25400	246.4	METER	CONDUIT, 51mm, 713.04		
87											88
		6	1	5	625	26250	6	EACH	LUMINAIRE, CONVENTIONAL STYLE B, TYPE III, 250 WATT, HIGH PRESSURE SODIUM, 713.11, 120 VOLT		
88											89
		6	1	5	625	29900	6	EACH	JUNCTION BOX, 457mm x 203mm x 171mm		90
89		2	1	1	625	33001	2	EACH	STRUCTURE GROUNDING SYSTEM, AS PER PLAN	125	
90									Conductor Cable (No. 4 AWG)		91
		292.3	44	248.3	625	98100	292.3	METER	ELECTRIC MASON OVERHEAD CIRCUIT, AS PER PLAN	125	92
91		1		1	625	34000	1	EACH	POWER SERVICE		93
92					SPECIAL	62540000	LUMP		MAINTAIN EXISTING LIGHTING	125	94
93	10		5	5	SPECIAL	62540010	10	EACH	REPLACEMENT OF EXISTING LIGHTING UNIT	125	95
94	10		1	9	SPECIAL	62540020	10	EACH	DISCONNECT EXISTING CIRCUIT	125	
95											

DESIGNED BY: EDR | CHECKED BY:
DRAWN BY: MAL | DATE: 8/05/97
REVISED | DATE: 8/08/97
DATE: 5/24/99
FILE NAME: LTGSD100

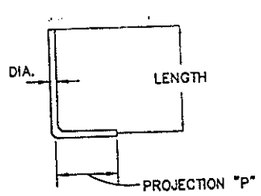
LIGHTING QUANTITY SUBSUMMARY

SHEET No.	REFERENCE No.	STATION TO STATION	SIDE	202 LIGHT POLE REMOVED (EACH) CLEVE.	202 LIGHT POLE REMOVED (EACH) LAKE.	202 LUMINAIRE REMOVED (EACH) CLEVE.	202 LUMINAIRE REMOVED (EACH) LAKE.	625 LIGHT POLE, DESIGN A2.4B9.1 (EACH) CLEVE.	625 LIGHT POLE, DESIGN A2.4B9.1 (EACH) LAKE.	625 LUMINAIRE, CONVENTIONAL STYLE B, TYPE III, 250 WATT (EACH) CLEVE.	625 LUMINAIRE, CONVENTIONAL STYLE B, TYPE III, 250 WATT (EACH) LAKE.	625 CONDUIT, 713.04, 51mm (METER) CLEVE.	625 CONDUIT, 713.04, 51mm (METER) LAKE.	625 Conductor Cable No. 4 AWG (~~LIGHTING MISC. OVERHEAD CIRCUIT AS PER PLAN (BY OTHERS)~~) (METER) CLEVE.	625 Conductor Cable No. 4 AWG (~~LIGHTING MISC. OVERHEAD CIRCUIT AS PER PLAN (BY OTHERS)~~) (METER) LAKE.	625 No. 10 AWG POLE AND BRACKET CABLE (METER) CLEVE.	625 No. 10 AWG POLE AND BRACKET CABLE (METER) LAKE.	625 CONNECTOR KIT, TYPE II (EACH) CLEVE.	625 CONNECTOR KIT, TYPE II (EACH) LAKE.	625 JUNCTION BOX, 457mm x 203mm x 171mm (EACH) CLEVE.	625 JUNCTION BOX, 457mm x 203mm x 171mm (EACH) LAKE.	625 LIGHT POLE ANCHOR L-BOLTS (EACH) CLEVE.	625 LIGHT POLE ANCHOR L-BOLTS (EACH) LAKE.	625 STRUCTURE GROUNDING SYSTEM (EACH) CLEVE.	625 STRUCTURE GROUNDING SYSTEM (EACH) LAKE.	POWER SERVICE (EACH) LAKE.
		<u>LAKEWOOD HGTS. BLVD.</u>																								
		<u>BRIDGE No. 209</u>																								
129–130		STA. 12+570.5 TO STA. 12+602.3	LT.		1		1		1		1		23.5		34.8		7.8		2		1		4		1	
130		STA. 12+602.3 TO STA. 12+632.8	LT.		1		1		1		1		30.5		33.5		7.8		2		1		4			
130		STA. 12+632.8 TO STA. 12+664.0	LT.										21.5		34.5		7.8		2							
129–130		STA. 12+541.5 TO STA. 12+602.3	RT.		1		1		1		1		31.3		34.5		7.8		2		1		4			
130		STA. 12+602.3 TO STA. 12+632.8	RT.		1		1		1		1		30.5		33.5		7.8		2		1		4			
130		STA. 12+632.8 TO STA. 12+685.5	RT.										12.0		54		7.8		2							
		<u>BRIDGE No. 210</u>																								
130–131		STA. 12+709.0 TO STA. 12+729.5	LT.		1		1		1		1		13.5		23.5		7.8		2		1		4	1		
131		STA. 12+729.5 TO STA. 12+746.5	LT.	1		1		1		1		8.3	8.3	21.5		7.8		2		1		4				
131		STA. 12+746.5 TO STA. 12+766.0	LT.									12		22.5		7.8		2								
131		STA. 12+711.0 TO STA. 12+766.0	RT.									55														

DESIGNED BY: EDR 8/05/97 CHECKED DATE:
DRAWN BY: MAL 8/05/97 REVISED BY: MAL DATE: 5/24/99
FILE NAME: LTSS0100



COBRA HEAD STANDARD
FOR LIGHT POLES (BRIDGES)
FOR BRIDGES No. 209 AND BRIDGE No. 210
A2.4B9.1



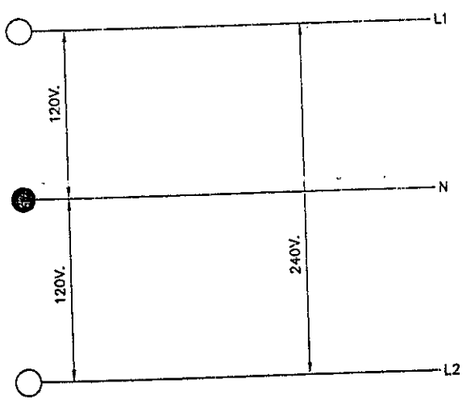
ANCHOR BOLT

LIGHTING LEGEND

- EXISTING LIGHT POLE
- EXISTING LIGHT POLE TO BE REMOVED
- LUMINAIRE, STYLE B, 250 WATT HIGH-PRESSURE SODIUM, TYPE III, 9.1m MOUNTING HEIGHT
- CONDUIT, 713.04, 50mm
- EXISTING LIGHTING FED OVERHEAD
- PROPOSED LIGHTING FED OVERHEAD
- 46m 60m EXISTING PULL BOX

DESIGN CRITERIA

MAXIMUM ROADWAY WIDTH CONSIDERED	17.67m
LUMINAIRE	
OVERHANG (FOR 2.4m BRACKET)	9.1m
MOUNTING HEIGHT	TYPE III
DISTRIBUTION	MEDIUM
LATERAL	SEMI-CUTOFF
VERTICAL	
VERTICAL CONTROL	
LAMP LIGHT CHARACTERISTICS	
TYPE	HPS
WATTS	250
DESIGNATION	27500 LUMENS
INITIAL VERTICAL	27500 LUMENS
INITIAL HORIZONTAL	20075 LUMENS
END OF LIFE	
FACTORS	0.95
DIRT	0.6935
MAINTENANCE	
ILLUMINATION LEVEL	7.5 LUX (AVERAGE MAINTAINED)
UNIFORMITY RATIO	4:1 (AVERAGE MINIMUM, 10:1 MAX./MIN.)
CIRCUIT TYPE	MULTIPLE
CONDUCTOR SIZE	# 4 AWG (EXCEPT AS INDICATED)
CIRCUIT VOLTAGE	120 VOLTS
TRANSFORMER	25 KVA
CAPACITY	POLE MOUNTED
TYPE	CONSULT AT POWER CO. (120V/240V)
VOLTAGE	
VOLTAGE DROP	5% MAXIMUM
BALLAST	250 WATTS
CAPACITY	REGULATOR
TYPE	98%
POWER FACTOR	BUILT IN
MOUNTING	120 VOLTS
RATED INPUT VOLTAGE	



120/240, 1ø, 3W,
120 VOLT LUMINAIRE
LINE BALANCE

POWER COMPANY TRANSFER CONNECTIONS

LIGHT POLE DATA

REFERENCE NUMBER	POLE DESIGN NUMBER	FOUNDATION ANCHOR BOLTS		
		SIZE ø x LENGTH x "P"	BOLT CIRCLE DIAMETER	TRANSFORMER BASE STYLE
A	A2.4B9.1	25mm x 914mm x 102mm	267mm	N. A.

ED BY:	EDR	CHECKED B	
	8/04/97	DATE:	
BY:	MAL	REVISED BY:	MAL
	8/04/97	DATE:	10/6/98
LE NAME:			LTGN0101

LIGHTING DETAILS AND DESIGN CRITERIA

LIGHTING PLAN - C.R. 297

STA. 12+260 TO STA. 12+600

CITY - LAKEWOOD HEIGHTS BOULEVARD

12/16

HORIZONTAL SCALE IN METRES

CHECKED

CALCULATED

MATCH LINE STA. 12+480

SEE SHEET NO. 130

MATCH LINE STA. 12+360

SEE SHEET NO. N/A

BEGIN TYPE 6 CURB MEET EXISTING STA. 12+395 23.95m LT.

END TYPE 6 CURB MEET EXISTING STA. 12+425 LT.

END NEW WALK

BRAMLEY DRIVE

CITY OF LAKEWOOD / CITY OF CLEVELAND

LAKEWOOD HEIGHTS BLVD. 12+420

N89°38'15"E

STA. 12+413.5, 23.2m LT. EXIST. CEI POWER POLE #615039 WITH BRACKET ARM, LUMINAIRE TO BE REMOVED AND RELOCATED BY OTHERS

STA. 12+373, 10.1m LT EXIST. CEI POWER POLE #316310 W/ BRACKET ARM, LUMINAIRE, OVERHEAD FEED BY OTHERS

STA 12+382.023 LHB STA 1+000.000 WATERBURY RD. END PVMT. WIDTH TAPER

WATERBURY RD.

N00°59'15"E

ALLEY

N01°30'45"E

RESIDENCE

RES #13402

BUSINESS #13333

#13401

EX GAS TEST STA.

JUNCTION CHAMBER

EX CONC WALK

EX CONC WALK

EX SIGN

EX CHAIN LINK FENCE

EX GUARDRAIL

EX POSTS

E.O.G. BLDG

EXIST. LIGHT POLE STA. 12+570.5 LT. CIR 40 CEI

EXIST. LIGHT POLE STA. 12+541.5 RT. CIR 40 CEI

EXIST. LIGHTING FED OVERHEAD (TYP.)

NOTE: ALL WORK ASSOCIATED WITH CONNECTION OF NEW SERVICE TO EXISTING LIGHT POLE SHALL APPLY TO RELOCATED EXISTING LIGHT POLE.

CONDUIT, 713.04, 50mm

CHAIN LINK FENCE

FACE OF ABUTMENT

PROPOSED RETAINING WALL

STA 12+592.400M±, 9.25M± RT.

CEI & DUCTS 4-#8 (RECORD) 4-#6 (RECORD)

CITY OF CLEVELAND

CURVE DATA
P.I. STA 12+584.172
Δ = 30°00'00"
R = 436.592m
T = 116.985m
L = 228.599m
E = 15.401m

CONCRETE

FOR LIGHTING LEGEND, SEE SHEET 128

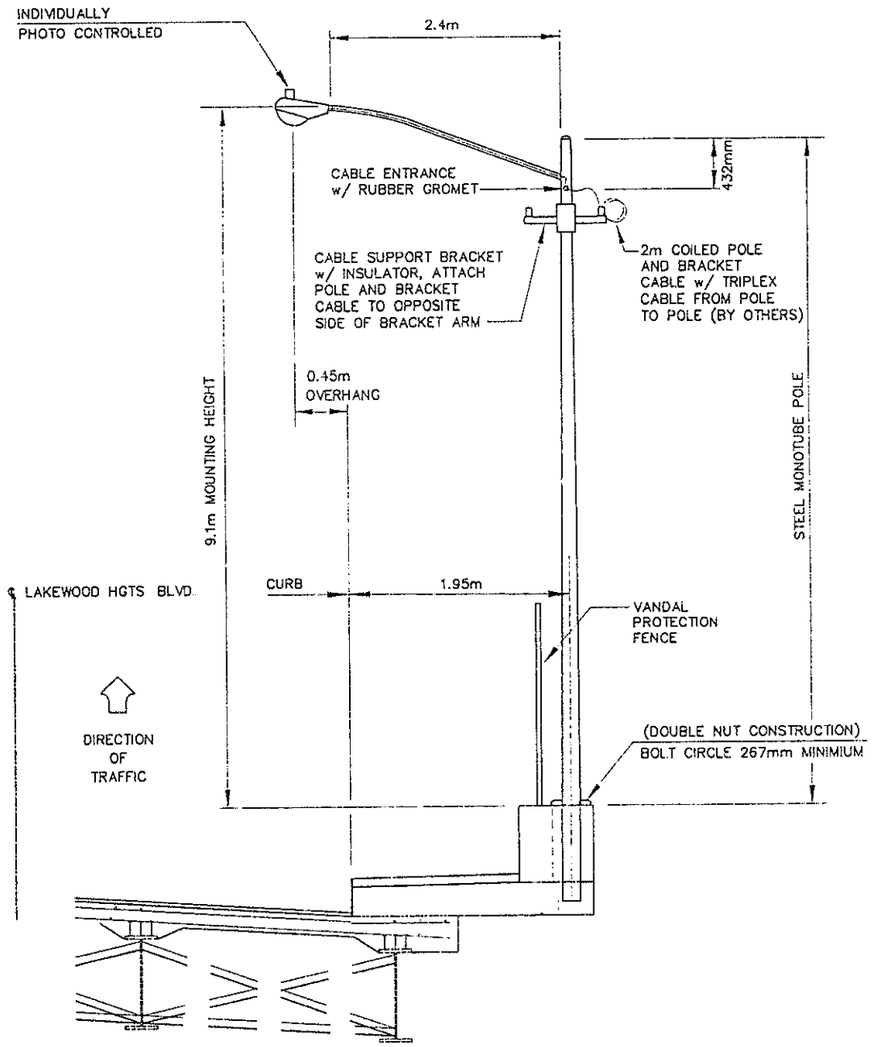
FILE NAME:	LTGP1100		
	DATE:	10/27/98	MAL
N BY:		REVISED BY:	
	8/04/97	DATE:	
NED BY:	ELDR	CHECKED	

LIGHTING QUANTITY SUBSUMMARY

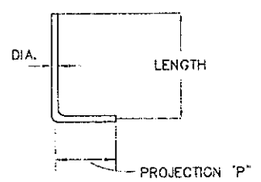
CALCULATED EDR

LOCATION				ITEM NUMBERS																					
				202				625																	
SHEET No.	REFERENCE No.	STATION TO STATION	SIDE	LIGHT POLE REMOVED FOR STORAGE, AS PER PLAN		LUMINAIRE REMOVED FOR STORAGE, AS PER PLAN		LIGHT POLE, DESIGN A2.4B9.1		LUMINAIRE, CONVENTIONAL STYLE B, TYPE III, 250 WATT		CONDUIT, 713.04, 50mm		LIGHTING MISC.: OVERHEAD CIRCUIT, AS PER PLAN (BY OTHERS)		No. 10 AWG POLE AND BRACKET CABLE		CONNECTOR KIT, TYPE II		JUNCTION BOX, 457mm x 203mm x 171mm		LIGHT POLE ANCHOR L-BOLTS		STRUCTURE GROUNDING SYSTEM	
				EACH		EACH		EACH		EACH		METER		METER		METER		EACH		EACH		EACH		EACH	
				CLEVE.	LAKE.	CLEVE.	LAKE.	CLEVE.	LAKE.	CLEVE.	LAKE.	CLEVE.	LAKE.	CLEVE.	LAKE.	CLEVE.	LAKE.	CLEVE.	LAKE.	CLEVE.	LAKE.	CLEVE.	LAKE.	CLEVE.	LAKE.
		LAKEWOOD HGTS. BLVD.																							
		BRIDGE No. 209																							
131		STA. 12+570.5 TO STA. 12+602.3	LT.		1		1		1		1		23.5		34.8		7.8		2		1		4		1
132		STA. 12+602.3 TO STA. 12+632.8	LT.		1		1		1		1		30.5		33.5		7.8		2		1		4		
132		STA. 12+632.8 TO STA. 12+664.0	LT.										21.5		34.5		7.8		2						
131		STA. 12+541.5 TO STA. 12+602.3	RT.		1		1		1		1		31.3		34.5		7.8		2		1		4		
132		STA. 12+602.3 TO STA. 12+632.8	RT.		1		1		1		1		30.5		33.5		7.8		2		1		4		
132		STA. 12+632.8 TO STA. 12+685.5	RT.										12.0		54		7.8		2						
		BRIDGE No. 210																							
132		STA. 12+709.0 TO STA. 12+729.5	LT.		1		1		1		1		13.5		23.5		7.8		2		1		4	1	
133		STA. 12+729.5 TO STA. 12+746.5	LT.	1		1		1		1		8.3	8.3	21.5		7.8		2		1		4			
133		STA. 12+746.5 TO STA. 12+766.0	LT.									12		22.5		7.8		2							
133		STA. 12+711.0 TO STA. 12+766.0	RT.									55													
			TOTAL	1	5	1	5	1	5	1	5	75.3	171.[illegible]	44	248.3	15.6	54.6	4	14	1	5	4	20	1	1

DESIGNED BY: EDR	CHECKED BY:
DATE: 8/05/97	DATE:
DRAWN BY: MAL	REVISED BY: MAL
DATE: 8/05/97	DATE: 10/27/98
CAD FILE NAME: LTSS0100	



COBRA HEAD STANDARD
FOR LIGHT POLES (BRIDGES)
FOR BRIDGES No 209 AND BRIDGE No. 210
A2.489.1



ANCHOR BOLT

LIGHTING LEGEND

- EXISTING LIGHT POLE
- EXISTING LIGHT POLE TO BE REMOVED
- LUMINAIRE, STYLE B, 250 WATT HIGH-PRESSURE SODIUM TYPE III, 9 1m MOUNTING HEIGHT
- CONDUIT, 713 04. 50mm
- EXISTING LIGHTING FED OVERHEAD
- PROPOSED LIGHTING FED OVERHEAD
- 46m 60m EXISTING PULL BOX

DESIGN CRITERIA

MAXIMUM ROADWAY WIDTH CONSIDERED ____ 17 67m

LUMINAIRE
- OVERHANG (FOR 2.4m BRACKET)
- MOUNTING HEIGHT ____ 9 1m
- DISTRIBUTION
  - LATERAL ____ TYPE III
  - VERTICAL ____ MEDIUM
- VERTICAL CONTROL ____ SEMI-CUTOFF

LAMP LIGHT CHARACTERISTICS
- TYPE ____ HPS
- WATTS ____ 250
- DESIGNATION
  - INITIAL VERTICAL ____ 27500 LUMENS
  - INITIAL HORIZONTAL ____ 27500 LUMENS
  - END OF LIFE ____ 20075 LUMENS
- FACTORS
  - DIRT ____ 0 95
  - MAINTENANCE ____ 0 6935

ILLUMINATION LEVEL ____ 7 5 LUX (AVERAGE MAINTAINED)

UNIFORMITY RATIO ____ 4:1 (AVERAGE MINIMUM 10:1 MAX /MIN.)

CIRCUIT TYPE ____ MULTIPLE

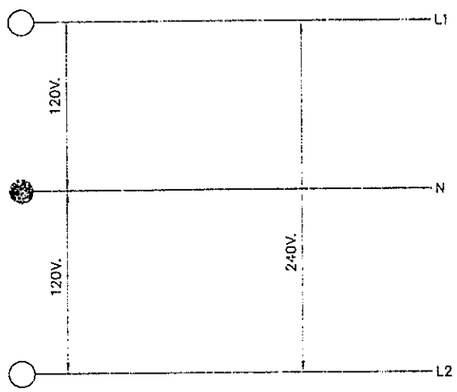
CONDUCTOR SIZE ____ # 4 AWG (EXCEPT AS INDICATED)

CIRCUIT VOLTAGE ____ 120 VOLTS

TRANSFORMER
- CAPACITY ____ 25 KVA
- TYPE ____ POLE MOUNTED
- VOLTAGE ____ CONSULT AT POWER CO (120V/240V)

VOLTAGE DROP ____ 5% MAXIMUM

BALLAST
- CAPACITY ____ 250 WATTS
- TYPE ____ REGULATOR
- POWER FACTOR ____ 98%
- MOUNTING ____ BUILT IN
- RATED INPUT VOLTAGE ____ 120 VOLTS



120/240, 1ø, 3W,
120 VOLT LUMINAIRE
LINE BALANCE

POWER COMPANY TRANSFER CONNECTIONS

LIGHT POLE DATA

REFERENCE NUMBER	POLE DESIGN NUMBER	FOUNDATION ANCHOR BOLTS		
		SIZE ø x LENGTH x "P"	BOLT CIRCLE DIAMETER	TRANSFORMER BASE STYLE
A	A2.489.1	25mm x 914mm x 102mm	267mm	N. A.

DESIGNED BY:	EDR
CHECKED BY:	
DATE:	8/04/97
DRAWN BY:	MAL
REVISED BY:	MAL
DATE:	8/04/97
DATE:	10/6/98
CAD FILE NAME:	LTGNOTE1

CALCULATED

ELECTRICAL DESIGN & WIRING CRITERIA

LIGHTING PLAN - C.R. 297

BRAMLEY DRIVE

WATERBURY RD.

STA. 12+413.5, 23.2m LT.
EXIST. CEI POWER POLE #615039
WITH BRACKET ARM, LUMINAIRE
TO BE REMOVED AND RELOCATED
BY OTHERS

BEGIN TYPE 6 CURB
MEET EXISTING
STA. 12+425,
23.95m LT.

END NEW WALK
END TYPE 6 CURB
MEET EXISTING
STA. 12+425, LT.

EX MAILBOX
ON CONC PAD

RES
#13402

STA. 12+373, 10.1m LT
EXIST. CEI POWER POLE
#316310 W/ BRACKET ARM
LUMINAIRE, OVERHEAD
FEED BY OTHERS

EX CONC WALK

E OVERHEAD

E CLEARHEAD

CONC

PLANTER

N00°59'15"E

STA 12+382.023 LHB
STA 1+000.000
WATERBURY RD

SEE SHEET NO. N/A
MATCH LINE STA. 12+360

RTA ENTRANCE

CONC

EX CONC WALK

#13401

ALLEY

N01°30'45"E

CITY OF LAKEWOOD
CITY OF CLEVELAND

12+380

12+420

N89°38'15"E

℄ LAKEWOOD HEIGHTS BLVD

12+460

ASPHALT

EX CONC WALK

EX SIGN

BUSINESS
#13333

CONC

PC = 12+467.187

MATCH LINE STA. 12+480

4.27m
4.57m
13.28m
0.61m

NOTE:
ALL WORK ASSOCIATED WITH CONNECTION OF NEW
SERVICE TO EXISTING LIGHT POLE SHALL APPLY TO
RELOCATED EXISTING LIGHT POLE

MATCH LINE STA. 12+480

EX CONC WALK

EX GUARDRAIL

EXIST. LIGHTING
FED OVERHEAD (TYP.)

EX POSTS

E.O.G.
BLDG

GUARDRAIL

EXIST. LIGHT POLE
STA. 12+570.5 LT
CIR 4D
CEI

CONDUIT TO
BE CAPPED

CONDUIT,
713.04, 50mm

BY ARING

BEARING

12+500

℄ LAKEWOOD HEIGHTS BLVD.

12+540

EXIST. LIGHT POLE
STA. 12+541.5 RT.
CIR 4D
CEI

EX CONC WALK

EX CHAIN LINK FENCE

EX GUARDRAIL

EXP. JOINT

12+580

CONDUIT,
713.04, 50mm

CURVE DATA
P.I. STA 12+584.172
Δ = 30°00'00"
R = 436.592m
T = 116.935m
L = 228.599m
E = 15.401m

EXIST. LIGHTING
FED OVERHEAD (TYP.)

CITY OF LAKEWOOD
CITY OF CLEVELAND

EX CHAIN LINK FENCE

FACE OF
ABUTMENT

CONDUIT TO
BE CAPPED

PROPOSED LIGHTING
FED OVERHEAD

CHAIN LINK FNC.

BRUSH

STA 12+592.400M±, 9.25M± RT.
6.568M± MIN. VERT. CLEARANCE

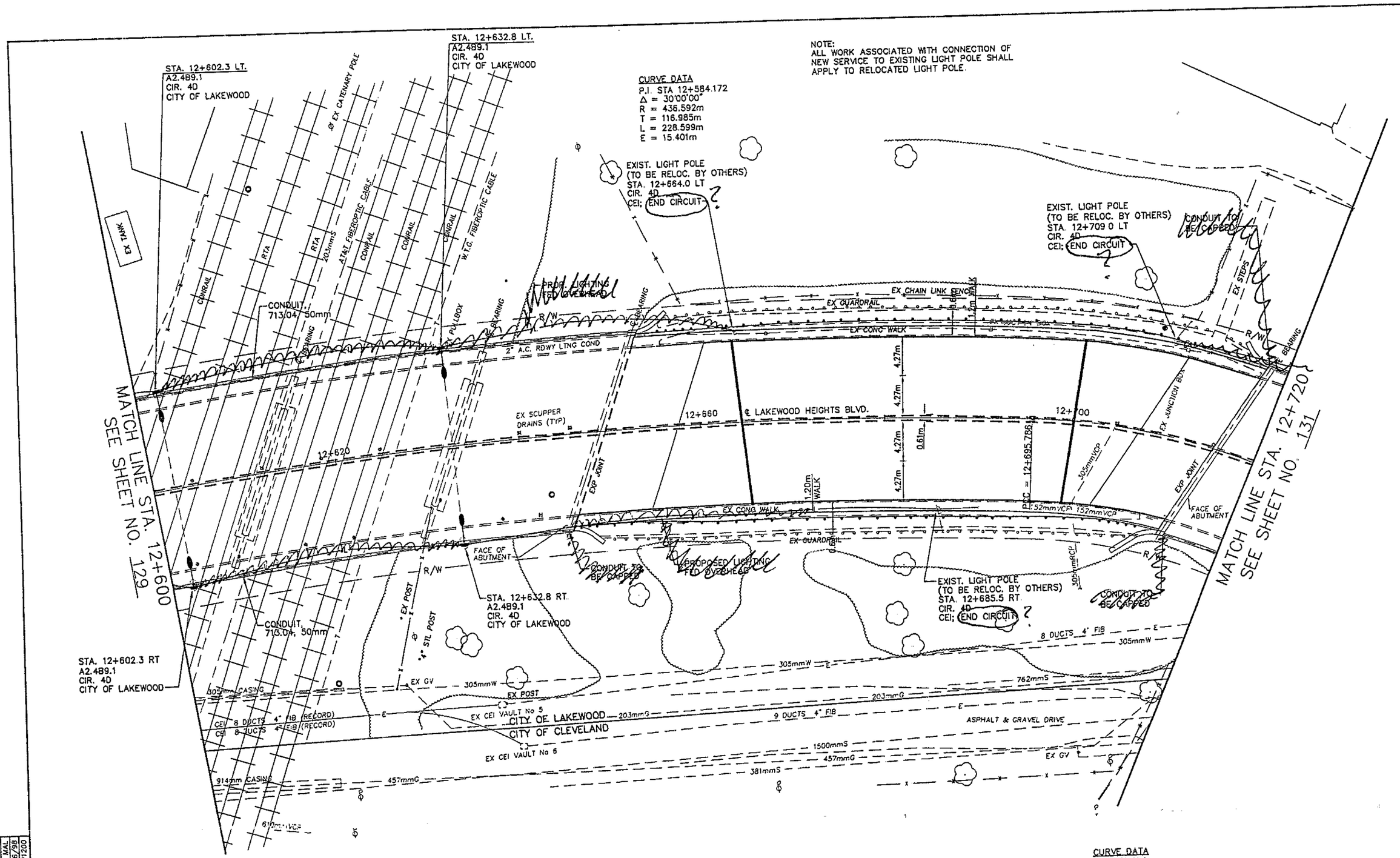
MATCH LINE STA. 12+600
SEE SHEET NO 130

FOR LIGHTING LEGEND. SEE SHEET 128

CONCRETE

DESIGNED BY:	EDR
CHECKED BY:	
DATE:	9/25/97
DRAWN BY:	VAL
REVISED BY:	
DATE:	10/27/98
CAD FILE NAME:	LTGP1100

HORIZONTAL



CURVE DATA
P.I. STA N.A.
Δ = 194°19'54"
R = 70.104m
T = N.A.
L = 237.774m
E = N.A.

FOR LIGHTING LEGEND, SEE SHEET 128

DWN BY:	EDR	CHECKED:	
	DATE:	8/04/97	
REVISED BY:			MAL
DATE:			10/6/98
FILE NAME:			LTCP1200

LIGHTING PLAN - C.R. 297

NOTE:
ALL WORK ASSOCIATED WITH CONNECTION OF NEW SERVICE TO EXISTING LIGHT POLE SHALL APPLY TO RELOCATED LIGHT POLE

STA. 12+502.3 LT.
A2.4B9.1
CIR. 4D
CITY OF LAKEWOOD

STA. 12+632.8 LT.
A2.4B9.1
CIR. 4D
CITY OF LAKEWOOD

CURVE DATA
P.I. STA 12+584.172
Δ = 30°00'00"
R = 436.592m
T = 116.985m
L = 228.599m
E = 15.401m

EXIST. LIGHT POLE
(TO BE RELOC. BY OTHERS)
STA 12+664.0 LT.
CIR. 4D
CEI; END CIRCUIT

EXIST. LIGHT POLE
(TO BE RELOC. BY OTHERS)
STA. 12+709.0 LT.
CIR. 4D
CEI; END CIRCUIT

CONDUIT TO BE CAPPED

EX TANK

CONDUIT, 713.04, 50mm

PROP. LIGHTING FED OVERHEAD

R/W

EX GUARDRAIL

EX CHAIN LINK FENCE

0.61m

1.20m WALK

EX CONC WALK

EX STEPS

MATCH LINE STA. 12+600
SEE SHEET NO. 129

12+620

12+660

℄ LAKEWOOD HEIGHTS BLVD.

12+700

MATCH LINE STA. 12+720
SEE SHEET NO. 131

4.27m

EXP JOINT

FACE OF ABUTMENT

PCC = 12+695.786

CONDUIT TO BE CAPPED

PROPOSED LIGHTING FED OVERHEAD

STA. 12+632.8 RT.
A2.4B9.1
CIR. 4D
CITY OF LAKEWOOD

EX POST

STL POST

EXIST. LIGHT POLE
(TO BE RELOC. BY OTHERS)
STA. 12+685.5 RT
CIR. 4D
CEI; END CIRCUIT

STA. 12+602.3 RT
A2.4B9.1
CIR. 4D
CITY OF LAKEWOOD

CITY OF LAKEWOOD
CITY OF CLEVELAND

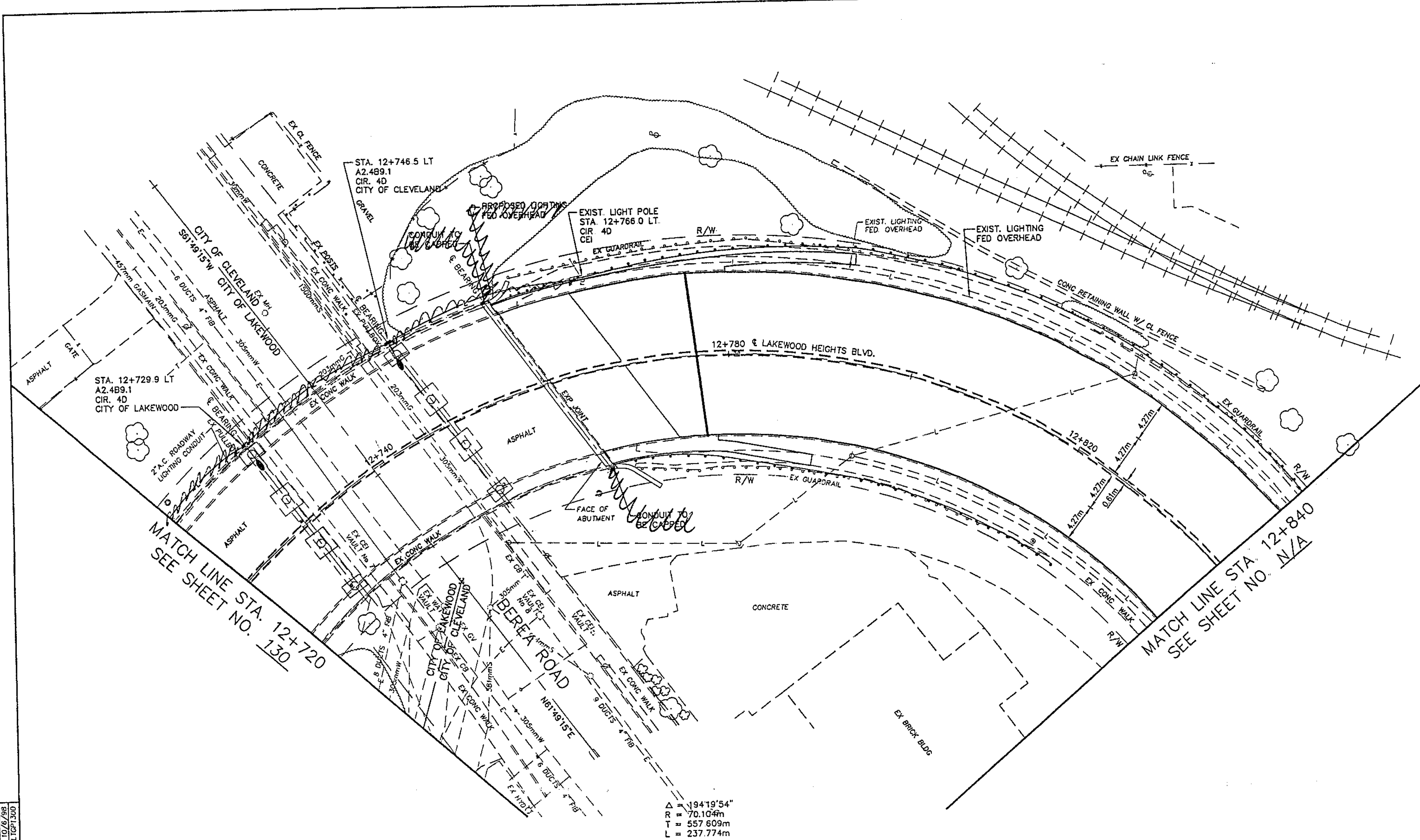
ASPHALT & GRAVEL DRIVE

CURVE DATA
P.I. STA N.A.
Δ = 194°19'54"
R = 70.104m
T = N.A.
L = 237.774m
E = N.A.

FOR LIGHTING LEGEND, SEE SHEET 12S

DESIGNED BY:		CHECKED BY:	
DATE:	R/01/97	DATE:	
DRAWN BY:		REVISED BY:	MAL
DATE:		DATE:	10/6/98
CAD FILE NAME:			L1GP1200

LIGHTING PLAN - C.R. 297
CITY - LAKEWOOD HEIGHTS BOULEVARD



FOR LIGHTING LEGEND, SEE SHEET 128

HORIZONTAL

CALCULATED

CHECKED

LIGHTING PLAN - C.R. 297

STA. 12+720 TO STA. 12+840

CUY - LAKEWOOD HEIGHTS BOULEVARD

...NED BY:	EDR	CHECKED	
	8/04/97	DATE:	
...N BY:		REVISED BY:	MAL
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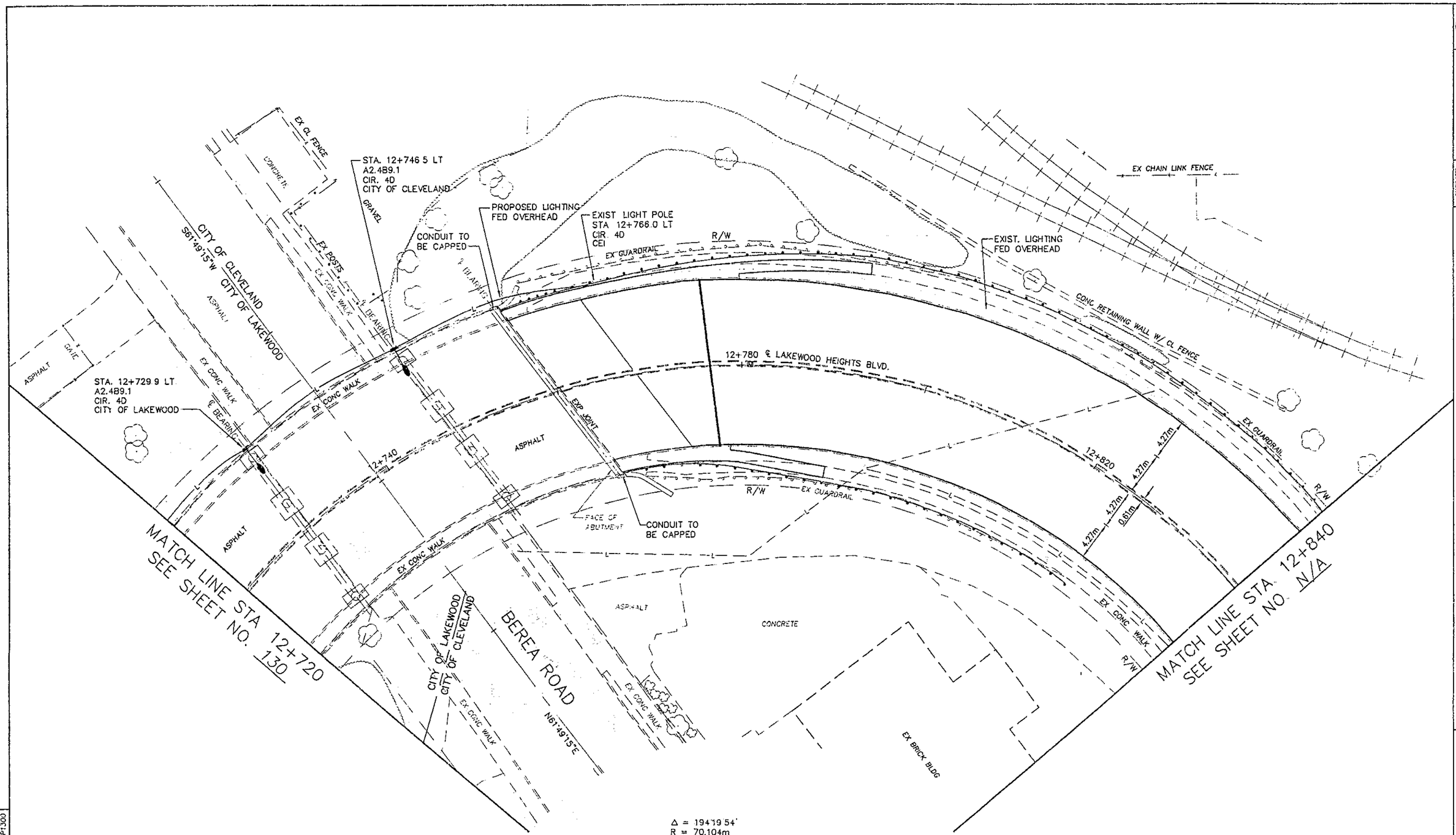

Δ = 194°19'54"
R = 70.104m
T = 557.609m
L = 237.774m

FOR LIGHTING LEGEND, SEE SHEET 128

DESIGNED BY:	EJK
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LIGHTING PLAN - C.R. 297

CITY - LAKEWOOD HEIGHTS BOULEVARD

CALCULATED

13
16

STRUCTURE GENERAL NOTES

(ALL REFERENCES TO THE DIRECTOR IN THESE NOTES SHALL BE CONSTRUED AS THE COUNTY ENGINEER OR HIS AUTHORIZED REPRESENTATIVE)

metric units

DESIGN SPECIFICATIONS

THE MODIFICATION OF THESE STRUCTURES CONFORMS TO THE 'STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES' ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 1996, INCLUDING THE 1997 INTERM SPECIFICATIONS AND THE ODOT BRIDGE DESIGN MANUAL.

DESIGN DATA

DESIGN LOADING	- MS18, CASE II AND THE ALTERNATE MILITARY LOADING
CLASS S CONCRETE	- COMPRESSIVE STRENGTH 31 0 MPa - SUPERSTRUCTURE
CLASS C CONCRETE	- COMPRESSIVE STRENGTH 27 5 MPa - SUBSTRUCTURE
EXISTING STRUCTURAL STEEL	- ASTM A-7M - YIELD STRENGTH 230 MPa (ASSUMED)
NEW STRUCTURAL STEEL	- ASTM A709M - YIELD STRENGTH 250 MPa
REINFORCING STEEL	- ASTM A615M A616M, OR A617M - GRADE 400. MINIMUM YIELD STRENGTH 400 MPa
DECK PROTECTIVE METHOD	- EPOXY COATED REINFORCING STEEL, 65mm CONCRETE COVER AND LATEX MODIFIED CONCRETE OVERLAY

REFERENCES

REFERENCE SHALL BE MADE TO THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS AND STANDARD DRAWINGS OF THE STATE OF OHIO:

SS815	- FIELD PAINTING OF EXISTING STEEL SYSTEM OZEU DATE 5/30/96
SS845	- BRIDGE DECK REPAIR & OVERLAY WITH LATEX MODIFIED CONCRETE. DATED 7-17-95
SS863	- STRUCTURAL STEEL MEMBERS DATED 9-9-97
SS910	- OZEU STRUCTURAL STEEL PAINT. DATED 7-28-98
SS911	- PLASTIC SUPPORTS FOR REINFORCING STEEL DATED 7-10-97
SS953	- LATEX FOR CONCRETE MODIFICATION DATED 6-14-95
SS954	- HIGH MOLECULAR WEIGHT METHACRYLATE (HMWM) RESIN DATED 9-9-97
STANDARD DRAWING AS-1-81M	- REINFORCED CONCRETE APPROACH SLABS SHEETS 1 THROUGH 3 DATED 10-25-94
STANDARD DRAWING PCB-91M	- PORTABLE CONCRETE BARRIER DETAILS DATED 3-20-95.
STANDARD DRAWING EXJ-4-87M	- STRIP SEAL EXPANSION JOINTS FOR STEEL STRINGER STRUCTURES SHEETS 1 THROUGH 5 DATED 2-18-97.
STANDARD DRAWING VPF-1-90M	- VANDAL PROTECTION FENCE GENERAL NOTES AND RAILING TYPES, SHEETS 1 THROUGH 7 DATED 3-20-95
STANDARD DRAWING RB-1-55M	- ROCKERS AND BOLSTERS FOR STEEL BEAM AND GIRDER BRIDGES. DATED 10-25-94

UTILITY LINES

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

LIGHTING:

CENTERIOR ENERGY CORP
6200 OAK TREE BLVD
INDEPENDENCE, OHIO 44131
(216) 447-3100
ATTN. MR KEN STINZIANO

ALSO SEE SHEETS 125-131 FOR LIGHTING DETAILS

EXISTING STRUCTURE VERIFICATION

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURES HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURES AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY THEY ARE INDICATIVE OF THE EXISTING STRUCTURES AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05, 105.02 AND 513 02

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

CONSTRUCTION CLEARANCE

HORIZONTAL AND VERTICAL CONSTRUCTION CLEARANCES SHALL BE NOT LESS THAN THE FIELD SURVEYED EXISTING CLEARANCES SHOWN ON THE SITE PLANS. THESE MINIMUM CLEARANCES SHALL BE MAINTAINED AT ALL TIMES DURING REMOVAL AND CONSTRUCTION OPERATIONS. SEE NOTES ON SHEET 4 OF 31 FOR ADDITIONAL REQUIREMENTS FOR WORK IN THE VICINITY OF RAILROADS

ORIGINAL PLANS

ORIGINAL PLANS MAY BE REVIEWED AT THE OFFICE OF THE CUYAHOGA COUNTY ENGINEER 1370 ONTARIO STREET CLEVELAND OHIO 44113.

REPLACEMENT OF EXISTING REINFORCING STEEL

ANY EXISTING REINFORCING BARS WHICH ARE TO BE INCORPORATED INTO THE NEW WORK AND WHICH ARE MADE UNUSABLE BY CONCRETE REMOVAL OPERATIONS SHALL BE REPLACED WITH NEW STEEL AT THE CONTRACTOR'S COST ANY EXISTING REINFORCING BARS DEEMED BY THE ENGINEER TO BE UNUSABLE BECAUSE OF CORROSION SHALL BE REPLACED WITH NEW STEEL. AN ALLOWANCE OF 100 Kg SHALL BE MADE BY THE CONTRACTOR IN THE BID PRICE FOR ITEM 511- CLASS C CONCRETE.

PORTIONS OF THE STRUCTURE REMOVED, AS PER PLAN

THIS WORK SHALL CONSIST OF THE PHASED REMOVAL OF THE CONCRETE DECKS INCLUDING ASPHALT WEARING SURFACE, MEDIAN CURBS, SIDEWALKS, RAILINGS DECK JOINTS AND OTHER APPURTENANCES FROM STEEL SUPPORTING SYSTEMS. CARE SHALL BE TAKEN DURING DECK REMOVALS TO PROTECT PORTIONS OF SUCH SYSTEMS THAT ARE TO BE SALVAGED AND INCORPORATED INTO THE PROPOSED STRUCTURES. IN THIS RESPECT THE USE OF EXPLOSIVES HEADACHE BALLS AND/OR HOE RAM TYPE OF EQUIPMENT IS PROHIBITED.

PROTECTION OF TRAFFIC: PRIOR TO DEMOLITION OF ANY PORTIONS OF THE EXISTING SUPERSTRUCTURE THE CONTRACTOR SHALL SUBMIT PLANS FOR THE PROTECTION OF TRAFFIC (VEHICULAR, PEDESTRIAN, RAILROAD, ETC.) ADJACENT TO AND/OR UNDER THE STRUCTURES TO THE DIRECTOR FOR APPROVAL. THESE PLANS SHALL INCLUDE PROVISIONS FOR ANY DEVICES AND STRUCTURES THAT MAY BE NECESSARY TO ENSURE SUCH PROTECTION. TEMPORARY VERTICAL CLEARANCES SPECIFIED ON THE PLANS OR IN THE PROPOSAL SHALL BE MAINTAINED AT ALL TIMES EXCEPT AS OTHERWISE APPROVED BY THE DIRECTOR

PROTECTION OF STEEL SUPPORT SYSTEMS: BEFORE DECK SLAB CUTTING IS PERMITTED, THE OUTLINE OF PRIMARY STEEL MEMBERS IN CONTACT WITH THE BOTTOM OF THE DECK SHALL BE DRAWN ON THE SURFACE OF DECK. SMALL DIAMETER PILOT HOLES SHALL BE DRILLED 50mm OUTSIDE THESE LINES TO CONFIRM THE LOCATION OF FLANGE EDGES. DECK CUTS OVER OR WITHIN 50mm OF FLANGE EDGES SHALL NOT EXTEND LOWER THAN THE BOTTOM LAYER OF DECK SLAB REINFORCING STEEL. CUTS MADE OUTSIDE 50mm OF FLANGE EDGES MAY EXTEND THE FULL DEPTH OF THE DECK. DURING CUTTING OF THE DECK SLAB, CARE SHALL BE TAKEN NOT TO DAMAGE STEEL MEMBERS THAT ARE TO BE INCORPORATED INTO THE PROPOSED STRUCTURES.

REMOVAL METHODS: CONCRETE MAY BE REMOVED BY CUTTING AND BY MEANS OF HAND OPERATED PNEUMATIC HAMMERS EMPLOYING POINTED OR BLUNTED CHISEL TYPE TOOLS FOR REMOVALS ABOVE STEEL MEMBERS, A HAMMER HEAVIER THAN 16 KILOGRAMS BUT NOT TO EXCEED 41 KILOGRAMS MAY BE USED AT THE APPROVAL OF THE ENGINEER, TO ENSURE ADEQUATE DEPTH CONTROL AND PREVENT NICKING OR GOUGING THE PRIMARY STEEL MEMBERS.

DECK REMOVALS: DUE TO THE POSSIBLE PRESENCE OF WELDED ATTACHMENTS TO EXISTING STRUCTURAL STEEL (FINISHING MACHINE, SCUPPER AND FORM SUPPORTS, ETC), CARE SHALL BE TAKEN DURING DECK REMOVAL TO AVOID DAMAGING GIRDERS WHICH ARE TO REMAIN GIRDERS DAMAGED BY THE CONTRACTOR S REMOVAL OPERATIONS SHALL, AT NO COST TO THE PROJECT BE REPLACED OR REPAIRED PROPOSED REPAIRS, DEVELOPED BY A REGISTERED PROFESSIONAL ENGINEER SHALL BE SUBMITTED IN WRITING FOR REVIEW AND APPROVAL BY THE DIRECTOR

EXTRANEOUS MEMBERS: EXISTING EXTRANEOUS MEMBERS (I.E. FINISHING MACHINE AND FORM SUPPORTS, ETC. AND THE SUPPORT FOR SCUPPERS AND BULB ANGLES WHICH ARE TO BE REMOVED) ATTACHED BY WELDED CONNECTIONS TO PORTIONS OF THE TOP FLANGES DESIGNATED 'TENSION' SHALL BE REMOVED AND THE FLANGE SURFACES GROUND SMOOTH. GRINDING SHALL BE CAREFULLY DONE AND PARALLEL TO THE FLANGES

LOADING LIMITATIONS: NO PART OF THE STRUCTURES SHALL BE SUBJECTED TO UNIT STRESSES THAT EXCEED 136.5% OF THE ALLOWABLE UNIT STRESSES GIVEN IN THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES DUE EITHER TO DEMOLITION ERECTION OR CONSTRUCTION METHODS, OR TO THE USE OR MOVEMENT OF DEMOLITION OR ERECTION EQUIPMENT ON OR ACROSS THE STRUCTURES. STRUCTURAL ANALYSIS COMPUTATIONS, BY A REGISTERED PROFESSIONAL ENGINEER, SHOWING THE ALLOWABLE STRESSES AND THE MAXIMUM STRESSES PRODUCED BY THE CONTRACTOR S METHODS OR EQUIPMENT SHALL BE SUBMITTED TO THE DIRECTOR FOR REVIEW AND APPROVAL AT LEAST TWO WEEKS PRIOR TO THE START OF THE WORK

CUT LINE CONSTRUCTION JOINT PREPARATION: SAW CUT BOUNDARIES OF PROPOSED CONCRETE REMOVALS 25 mm DEEP. REMOVE CONCRETE TO A ROUGH SURFACE. WHERE PRACTICABLE, THE EXISTING REINFORCING STEEL WHERE REQUIRED IN THE PLANS SHALL BE LEFT IN PLACE INSTALL DOWEL BARS IF SPECIFIED. PRIOR TO CONCRETE PLACEMENT ABRASIVELY CLEAN JOINT SURFACE AND EXPOSED REINFORCEMENT TO REMOVE LOOSE AND DISINTEGRATED CONCRETE AND LOOSE RUST THE JOINT SURFACE AND EXPOSED REINFORCEMENT SHALL BE THOROUGHLY CLEANED OF ALL DIRT, DUST, OR OTHER FOREIGN MATERIAL BY THE USE OF WATER, AIR UNDER PRESSURE, OR OTHER METHODS THAT PRODUCE SATISFACTORY RESULTS. CONCRETE BONDING SURFACES SHALL BE WET WITHOUT FREE WATER AS CONCRETE IS PLACED

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DESIGNED LJG | DRAWN F.F.F. | REVIEWED RSC | DATE 6/05/98

STRUCTURE GENERAL NOTES

CUY-LAKEWOOD HTS. BLVD.

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132
162

STRUCTURE GENERAL NOTES

(ALL REFERENCES TO THE DIRECTOR IN THESE NOTES SHALL BE CONSTRUED AS THE COUNTY ENGINEER OR HIS AUTHORIZED REPRESENTATIVE)

metric units

PORTIONS OF THE STRUCTURE REMOVED, AS PER PLAN (CONT.)

SUBSTRUCTURE CONCRETE REMOVAL SHALL BE BY MEANS OF APPROVED PNEUMATIC HAMMERS EMPLOYING POINTED AND BLUNT CHISEL TOOLS. HYDRAULIC HOE-RAM TYPE HAMMERS WILL NOT BE PERMITTED. THE WEIGHT OF THE HAMMER SHALL NOT BE MORE THAN 16 KILOGRAMS FOR REMOVAL WITHIN 450mm OF PORTIONS TO BE PRESERVED. OUTSIDE THE 450mm LIMIT, A HAMMER HEAVIER THAN 16 KILOGRAMS, BUT NOT TO EXCEED 41 KILOGRAMS, MAY BE USED AT THE APPROVAL OF THE ENGINEER. PNEUMATIC HAMMERS SHALL NOT BE PLACED IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURES.

PAYMENT: THIS WORK WILL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE BID, WHICH PRICE AND PAYMENT SHALL BE FULL COMPENSATION FOR ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE WORK IN CONFORMANCE WITH THESE REQUIREMENTS WITH PERTINENT PROVISIONS OF 202 AND TO THE SATISFACTION OF THE ENGINEER.

ITEM 202-REMOVAL MISCELLANEOUS: BRONZE PLAQUE, REMOVED FOR REUSE

THE CONTRACTOR SHALL CAREFULLY REMOVE THE EXISTING BRONZE PLAQUES FROM THE BRIDGE RAILINGS. REFURBISHING OF THE PLAQUES SHALL BE DONE BY SANDBLAST, OXIDIZE, SAND AND POLISH METHOD OR BY OTHER APPROVED METHODS TO RESTORE PLAQUES TO A "LIKE NEW" CONDITION

THE BRONZE PLAQUES SHALL BE INSTALLED BY THE CONTRACTOR ON THE FACES OF THE NEW BRIDGE PARAPETS AS DIRECTED BY THE ENGINEER THE CONTRACTOR SHALL SUBMIT DETAILS OF THE METHOD OF ATTACHING THE PLAQUES TO THE POSTS TO THE CUYAHOGA COUNTY ENGINEER FOR APPROVAL.

THE COST OF ALL LABOR, MATERIALS TOOLS AND INCIDENTALS NECESSARY TO REMOVE, REFURBISH AND REINSTALL THE BRONZE PLAQUES AS OUTLINED ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID PER EACH FOR ITEM 202 - REMOVAL MISCELLANEOUS: BRONZE PLAQUE, REMOVED FOR REUSE.

ITEM 519 - PATCHING CONCRETE STRUCTURE

THIS ITEM SHALL BE USED TO MAKE STRUCTURAL REPAIRS TO THE EXPOSED FACES OF ABUTMENTS, WING WALLS, AND PIERS OF THE STRUCTURES AS DIRECTED BY THE ENGINEER AND AS INDICATED ON THE PLANS, AND ESTIMATED QUANTITY IN SQUARE METERS IS PROVIDED FOR THIS REPAIR.

PAYMENT SHALL BE AT THE CONTRACT UNIT PRICE BID PER SQUARE METER FOR ITEM 519 - PATCHING CONCRETE STRUCTURE AND SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

BONDING NEW CONCRETE TO EXISTING CONCRETE

SIKA ARMETEC 110 AS MANUFACTURED BY THE SIKA CORPORATION, LYNDHURST, NEW JERSEY EMACO P24 AS MANUFACTURED BY MASTER BUILDERS, INC., CLEVELAND, OHIO, OR AN APPROVED ALTERNATIVE CEMENT BASED MORTAR CONTAINING EPOXY RESIN SHALL BE USED FOR BONDING AT ALL LOCATIONS WHERE NEW CONCRETE IS PLACED IN CONTACT WITH EXISTING CONCRETE.
PREPARATION OF THE SURFACE INCLUDING SCARIFICATION OF THE EXISTING CONCRETE, APPLICATION OF THE BONDING AGENT AND PLACEMENT OF THE NEW CONCRETE SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND AS SHOWN IN THE PLANS.

NO SEPARATE PAYMENT WILL BE MADE FOR BONDING NEW CONCRETE TO THE OLD USING EPOXY RESIN CEMENT BONDING AGENT THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CLASS C CONCRETE, ABUTMENT.THIS PRICE SHALL INCLUDE ALL LABOR MATERIAL AND EQUIPMENT INCLUDING CLEANING, PREPARATION, AND SCARIFICATION OF THE EXISTING CONCRETE SURFACES.

ITEM 516 - REFURBISHING BEARING DEVICES, AS PER PLAN

THIS ITEM SHALL INCLUDE ALL WORK NECESSARY TO PROPERLY ALIGN BRIDGE BEARINGS AS WELL AS THEIR CLEANING AND PAINTING. INCLUDED SHALL BE THE DISASSEMBLY OF THE BEARINGS HAND TOOL CLEANING (GRINDING IF NECESSARY), PAINTING AS REQUIRED BY SYSTEM OZEU. REPLACEMENT OF ANY DAMAGED SHEET LEAD (711.19), INSTALLATION OF ANY NECESSARY STEEL SHIMS OF THE SAME SIZE AS THE BEARINGS TO PROVIDE A SNUG FIT REALIGNMENT OF THE UPPER BEARING PLATE BY REMOVING EXISTING WELDS AND REWELDING SO THAT THE BEARINGS ARE VERTICALLY ALIGNED AT 16 DEGREES C, AND REASSEMBLY OF THE BEARINGS.
THE CONTRACTOR SHALL BE SURE THAT ALL BEARINGS ARE SHIMMED ADEQUATELY AND THAT NO BEAMS AND/OR BEARING DEVICES ARE "FLOATING" AT THE OPTION OF THE CONTRACTOR AND AT NO ADDITIONAL COST TO THE COUNTY NEW BEARINGS OF THE SAME TYPE AS THE EXISTING MAY BE INSTALLED IN PLACE OF REFURBISHING THE BEARINGS ALL WORK SHALL BE TO THE SATISFACTION OF THE ENGINEER. PAYMENT FOR ALL THE ABOVE DESCRIBED LABOR AND MATERIALS WILL BE MADE AT THE CONTRACT PRICE BID FOR ITEM 516 - REFURBISH BEARING DEVICES AS PER PLAN.

ITEM SPECIAL - JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN

THIS ITEM SHALL CONSIST OF FURNISHING ALL NECESSARY LABOR, MATERIALS, AND EQUIPMENT TO RAISE OR REPOSITION ANY EXISTING STRUCTURES TO THE DIMENSIONS AND REQUIREMENTS DEFINED IN THE PLANS

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN, INSTALLATION AND OPERATION OF AN ADEQUATE JACKING SYSTEM INCLUDING ANY TEMPORARY OR PERMANENT SUPPORTS, NECESSARY TO PERFORM THE WORK DESCRIBED IN THE PROJECT PLANS. THREE (3) SETS OF JACKING PLANS, WHICH INCLUDE THE INFORMATION DESCRIBED IN THIS NOTE, SHALL BE SUBMITTED TO THE DIRECTOR FOR APPROVAL AT LEAST THIRTY (30) DAYS BEFORE ACTUAL WORK IS TO BEGIN. THE PLANS SHALL BE PREPARED AND STAMPED BY A REGISTERED PROFESSIONAL ENGINEER.

JACKING SUBMITTALS SHALL INCLUDE AT LEAST THE FOLLOWING:

1. THE SIGNATURE AND NUMBER, OR PROFESSIONAL SEAL, OF THE REGISTERED PROFESSIONAL ENGINEER WHO PREPARED THE SUBMITTAL.
2. CALCULATIONS AND ANALYSIS OF THE STRUCTURE TO DETERMINE AND DEFINE THE ACTUAL LOADING APPLIED AT THE CONTRACTOR S SELECTED JACKING POINTS
3. A DRAWING SHOWING THE PHYSICAL AND DIMENSIONAL POSITION OF THE JACKS WITH RESPECT TO THE STRUCTURE INCLUDING CLEARANCES AND CENTER OF LIFT
4. A SCHEMATIC LAYOUT OF JACKS, CHECK VALVES PUMPS WITH 3 WAY RETRACTOR VALVE, PRESSURE GAGES FLOW CONTROL VALVES, ETC. IN ACCORDANCE WITH MANUFACTURER S RECOMMENDATIONS. ALL JACKS FOR EACH ABUTMENT OR PIER SHALL BE CONNECTED TOGETHER. ALL JACKS AT EACH ABUTMENT OR PIER SHALL BE THE SAME SIZE
5. ANALYSIS AND CALCULATIONS OF THE STRESSES INDUCED OR CREATED IN THE STRUCTURE AND ANY TEMPORARY OR PERMANENT SUPPORTS. DESIGN CALCULATIONS FOR ANY TEMPORARY OR PERMANENT SUPPORTS.
6. PHYSICAL DIMENSIONS, MATERIALS, AND FABRICATION DETAILS OF ANY TEMPORARY OR PERMANENT SUPPORTS. HORIZONTAL AND VERTICAL MOVEMENT RESTRAINT SHALL BE PROVIDED.
7. A STEP BY STEP PROCEDURE DETAILING ALL STEPS IN THE JACKING OPERATION
8. METHOD OF ATTACHMENT TO STRUCTURAL MEMBERS WELDING TO TENSION AREAS WILL NOT BE PERMITTED

THE ENTIRE SYSTEM INCLUDING JACKS SHALL HAVE 20% MORE CAPACITY THAN REQUIRED BASED ON CALCULATED LOADS.

FOR LIFTS GREATER THAN 25 mm, JACKS SHALL HAVE LOCKING NUTS TO POSITIVELY LOCK AND SUPPORT THE STRUCTURE DURING THE LIFT.

JACKS SHALL HAVE A SWIVEL LOAD CAP, A DOMED PISTON HEAD OR SOME OTHER DEVICE TO PROTECT AGAINST THE EFFECTS OF SIDE LOAD ON THE JACK.

JACKS ALONE SHALL NOT BE USED TO SUPPORT LOADS EXCEPT DURING THE ACTUAL JACKING OPERATION. TEMPORARY SUPPORTS, BLOCKING OR OTHER METHODS APPROVED BY THE DIRECTOR SHALL BE USED.

SINGLE ACTING RAMS WITH NO OVER-TRAVEL PROTECTION SYSTEM SHALL NOT BE USED.

SPARE EQUIPMENT SHALL BE AVAILABLE ON SITE FOR THE REQUIRED STRUCTURE RAISING TO PROCEED IN THE EVENT OF BREAKDOWN. A LIST OF SPARE EQUIPMENT SHALL BE PROVIDED TO THE ENGINEER

AT A MINIMUM JACKING OPERATION SHALL LIFT ALL BEAMS AT ANY ONE ABUTMENT OR PIER SIMULTANEOUSLY. THE ONLY EXCEPTION IS THE SITUATION WHERE THE WORK INVOLVES REPLACING OR REHABILITATING INDIVIDUAL BEARINGS; NO PERMANENT SHIMMING IS REQUIRED AND THE HEIGHT OF THE LIFT SHALL NOT EXCEED 6mm.

MAXIMUM DIFFERENTIAL JACKING HEIGHT BETWEEN ANY ADJACENT ABUTMENTS OR PIERS SHALL BE 25mm OR LESS.

IF, DURING THE JACKING OPERATIONS CRACKING OF THE CONCRETE SUPERSTRUCTURE, SEPARATION OF THE CONCRETE DECK FROM THE STEEL STRINGERS, OR OTHER DAMAGE TO THE STRUCTURE IS VISUALLY OBSERVED THE JACKING OPERATION SHALL IMMEDIATELY CEASE AND APPROVED SUPPORTS SHALL BE INSTALLED THE CONTRACTOR SHALL THEN ANALYZE THE DAMAGE AND SUBMIT A METHOD OF CORRECTION TO THE ENGINEER FOR APPROVAL. ANY BEAMS THAT SEPARATE FROM THE DECK SHALL BE EPOXY INJECTED FOR THE DISTANCE OF THE SEPARATION IN ACCORDANCE WITH THE PROPOSAL NOTE "CONCRETE REPAIR BY EPOXY INJECTION". COST OF THIS EPOXY INJECTION OR OTHER REQUIRED REPAIRS SHALL BE BORNE BY THE CONTRACTOR.

THE CONTRACTOR SHALL DEMONSTRATE TO THE ENGINEER THAT THE BRIDGE BEARINGS ARE FULLY SEATED BETWEEN ALL CONTACT AREAS IF FULL SEATING IS NOT ATTAINED, SUITABLE MEANS OF REPAIR, SUBJECT TO THE APPROVAL OF THE ENGINEER, WILL BE REQUIRED AT THE CONTRACTOR S EXPENSE

THE JACKING OPERATION SHALL BE DIRECTED BY A PROFESSIONAL ENGINEER EMPLOYED BY THE CONTRACTOR FAILURE TO HAVE A PROFESSIONAL ENGINEER PRESENT SHALL BE CAUSE FOR CEASING JACKING OPERATIONS

PAYMENT SHALL BE MADE AT THE LUMP SUM PRICED BID FOR ITEM 516 JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN AND SHALL INCLUDE ALL NECESSARY TOOLS, LABOR, EQUIPMENT AND MATERIALS NECESSARY TO COMPLETE THIS ITEM OF WORK.

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URS Greiner

DESIGNED	LJG
DRAWN	F.F.F.
REVIEWED	RSC
DATE	6/05/98

STRUCTURE GENERAL NOTES

STRUCTURE GENERAL NOTES

(ALL REFERENCES TO THE DIRECTOR IN THESE NOTES SHALL BE CONSTRUED AS THE COUNTY ENGINEER OR HIS AUTHORIZED REPRESENTATIVE)

metric units

DOWEL HOLES, AS PER PLAN

THIS ITEM SHALL INCLUDE THE DRILLING OF HOLES INTO CONCRETE OR MASONRY AND THE FURNISHING AND PLACING OF GROUT INTO HOLES. NONSHRINKING EPOXY GROUT SHALL BE USED IN ACCORDANCE WITH CMS 510AND CMS 705.20 ANCHORING SHALL CONFORM TO CMS 510 AND CMS 705.20. PAYMENT SHALL BE INCLUDED WITH THE PERTINENT 511 ITEM.

CONCRETE PARAPETS

AS SOON AS A CONCRETE SAW CAN BE OPERATED WITHOUT DAMAGING THE FRESHLY PLACED CONCRETE, 25 mm DEEP CONTROL JOINTS SHALL BE SAWED INTO THE PERIMETER OF THE CONCRETE PARAPET. THE SAW CUT SHALL BE MADE IN THE COMPLETE CIRCUMFERENCE OF THE PARAPET, STARTING AND ENDING AT THE ELEVATION OF THE CONCRETE SIDEWALK. THE SAWCUTS SHALL BE PLACED AT A MINIMUM OF 2000mm AND A MAXIMUM OF 3000mm CENTERS. THE USE OF AN EDGE GUIDE, FENCE OR JIG IS REQUIRED TO INSURE THAT THE CUT JOINT IS STRAIGHT, TRUE AND ALIGNED ON ALL FACES OF THE PARAPET. THE JOINT WIDTH SHALL BE THE WIDTH OF THE SAW BLADE, A NOMINAL WIDTH OF 6mm. THE PERIMETER OF THE DEFLECTION CONTROL JOINT SHALL BE SEALED TO A MINIMUM DEPTH OF 25mm WITH A CAULKING MATERIAL CONFORMING TO FEDERAL SPECIFICATION TT-S-00227E TO A MINIMUM DEPTH OF 25 mm

MINIMUM BAR LAPS

MINIMUM REINFORCING LAPS SHALL BE SHOWN ON THE DETAIL DRAWINGS WHERE REQUIRED:

ABBREVIATIONS

ALT	-	ALTERNATE
B.O.S.	-	BOTTOM OF SLAB
BOTT	-	BOTTOM
BMS	-	BEAMS
BRG	-	BEARING
BTW	-	BETWEEN
C.J.	-	CONSTRUCTION JOINT
CLR.	-	CLEARANCE
E.B.L.	-	EASTBOUND LANES
E.F.	-	EACH FACE
EXIST.	-	EXISTING
F.F.	-	FAR FACE
JT.	-	JOINT
MIN.	-	MINIMUM
N.F.	-	NEAR FACE
SP	-	SPACES
SER	-	SERIES
SHT	-	SHEET
T.O.S.	-	TOP OF SLAB
TYP.	-	TYPICAL
W/	-	WITH
OPP.	-	OPPOSITE
U.N.O.	-	UNLESS NOTED OTHERWISE
W.B.L.	-	WESTBOUND LANES
W.P.	-	WORK POINT
N.A.	-	NORTH ABUTMENT
S.A.	-	SOUTH ABUTMENT

COFFERDAMS, CRIBS, AND SHEETING, AS PER PLAN

TEMPORARY SHORING SHALL BE USED TO ACCOMPLISH THE PROPOSED CONSTRUCTION IN STAGES. THE DESIGN OF THE TEMPORARY SHORING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, BE DESIGNED BY A REGISTERED PROFESSIONAL ENGINEER, AND CONFORM WITH 501.05. FOR APPROVAL, FIVE COPIES OF THE DRAWINGS SHALL BE SUBMITTED TO THE DIRECTOR AND CONCURRENTLY, ONE COPY TO THE BUREAU OF BRIDGES AND STRUCTURAL DESIGN. CONSTRUCTION OF THE SHORING SHALL NOT BEGIN UNTIL AFTER WRITTEN APPROVAL HAS BEEN RECEIVED FROM THE DIRECTOR. PORTIONS OF THE TEMPORARY SHORING COMPOSED OF STEEL OR CONCRETE MAY BE LEFT IN PLACE AT THE DISCRETION OF THE ENGINEER. PORTIONS COMPOSED OF OTHER MATERIALS SHALL BE REMOVED PRIOR TO COMPLETION OF THE WORK.

INSPECTION OF STRUCTURAL STEEL: THE ENGINEER SHALL VISUALLY INSPECT ALL EXISTING BUTT-WELDED SPLICES AND/OR TOP FLANGE COVER PLATE FILLET WELDS TO ENSURE THAT THEY ARE FREE OF DEFECTS. THE DECK SLAB HAUNCH FORMS IMMEDIATELY ADJACENT TO SUCH WELDS SHALL NOT BE ERECTED UNTIL AFTER THE ENGINEER HAS COMPLETED THIS INSPECTION. THIS INSPECTION SHALL NOT TAKE PLACE UNTIL AFTER THE TOP FLANGES ARE CLEANED AS SPECIFIED IN 511.08, BUT IT SHALL BE DONE BEFORE THE DECK SLAB REINFORCEMENT IS INSTALLED. THE COST ASSOCIATED WITH THIS INSPECTION SHALL BE INCLUDED WITH ITEM 511 SUPERSTRUCTURE CONCRETE FOR PAYMENT.

ITEM 845 - LATEX MODIFIED CONCRETE OVERLAY (32mm THICK), AS PER PLAN

THE COST OF HOT APPLIED JOINT SEALER 705.04, INSTALLED AS DETAILED IN THE PLANS SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE BID FOR:

ITEM 845 - LATEX MODIFIED CONCRETE OVERLAY (32mm THICK) AS PER PLAN SQ. METER

A 28-DAY DRY AIR CURE PERIOD SHALL ELAPSE AFTER THE NORMAL DECK CONCRETE CURING PERIOD PRIOR TO PLACING THE LATEX OVERLAY.

ITEM 516 - STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN

THIS ITEM CONSISTS OF CONSTRUCTING EXPANSION JOINTS AS DETAILED IN STANDARD DRAWING EXJ-4-87M AND THE MODIFICATIONS TO STANDARD DRAWING EXJ-4-87M AS SHOWN ON SHEET 8 OF 31 OF THESE PLANS.

THE CONTRACTOR SHALL PROVIDE CONTINUOUS ONE-PIECE STRIP SEALS FOR EACH JOINT. IN ORDER TO ASSURE A CONTINUOUS SEAL FOR PART-WIDTH CONSTRUCTION. THE CONTRACTOR SHALL INSTALL STRIP SEALS OF THE LENGTHS NECESSARY FOR PHASE I CONSTRUCTION. UPON COMPLETION OF PHASE II WORK, AND PRIOR TO OPENING THE NORTHERN HALF OF THE STRUCTURES TO TRAFFIC THE CONTRACTOR SHALL REMOVE THE STRIP SEALS INSTALLED DURING PHASE I AND INSTALL NEW STRIP SEALS IN ONCE PIECE ACROSS THE ENTIRE WIDTH OF THE JOINT. THE PART WIDTH SEALS REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL IN NO WAY BE INCORPORATED INTO THE FINISHED STRUCTURES

THE COST OF FURNISHING, INSTALLING AND REMOVING THE PART WIDTH SEALS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THIS ITEM

EXPANSION JOINTS, PARAPET SLIDING PLATES AND CURB PLATES:

STEEL MEMBERS SHALL BE FURNISHED IN LENGTHS AS LONG AS PRACTICABLE. AT ALL FIELD BUTT JOINTS THEY SHALL BE RIGIDLY FASTENED TOGETHER AS REQUIRED, PRIOR TO PLACEMENT OF CONCRETE. ALL STEEL SHALL BE ASTM -A709M GRADE 250 WITH SYSTEM OZEU FIELD PAINT ON THE EXPOSED SURFACES.

ITEM 511 - CLASS S CONCRETE, MISC.: SIDEWALK WEARING SURFACE, AS PER PLAN

ALL APPLICABLE PROVISIONS OF ITEM 511 AS SET FORTH IN THE CONSTRUCTION AND MATERIAL SPECIFICATIONS SHALL APPLY, UNLESS MODIFIED HEREIN AND THE FOLLOWING SHALL BE CONSIDERED AS SUPPLEMENTAL TO THE PROVISIONS SET FORTH THEREIN

DESCRIPTION:

THIS WORK SHALL CONSIST OF CONSTRUCTING A PORTLAND CEMENT CONCRETE SIDEWALK WEARING COURSE IN REASONABLY CLOSE CONFORMITY WITH LINES, GRADES, AND DIMENSIONS SHOWN ON THE PLANS OR ESTABLISHED BY THE ENGINEER.

MATERIALS:

THE MATERIALS SHALL CONFORM TO THE FOLLOWING:

CONCRETE (CLASS S)	499
REINFORCING STEEL	709 10
JOINT SEALER	705 04
CURING COMPOUND MATERIALS	451 02
PRIMER COAT	512 04
TYPE A WATERPROOFING	512.05 AS MODIFIED BELOW

PLACING AND FINISHING:

THE CONCRETE SHALL BE DEPOSITED IN A SINGLE LAYER. IT SHALL BE STRUCK OFF WITH A TEMPLATE AND SMOOTHED WITH A FLOAT TO PRODUCE A SANDY TEXTURE. NO PLASTERING WILL BE PERMITTED. THE SURFACE SHALL BE DIVIDED INTO EQUALLY SPACED BLOCKS WITH TRANSVERSE JOINTS APPROXIMATELY 1525 mm ON CENTER. ALL TRANSVERSE AND LONGITUDINAL JOINTS SHALL BE CONSTRUCTED AS DETAILED ON THE DRAWINGS AND SHALL BE FILLED WITH JOINT SEALER IN ACCORDANCE WITH 516.04 THE SURFACE SHALL HAVE A TRANSVERSE SLOPE OF 0.020, WITH THE LOW SIDE ADJACENT TO THE ROADWAY. THE REINFORCING SHALL BE 150 X 150 X W2.9 X W2.9 WELDED WIRE FABRIC PLACED IN ACCORDANCE WITH 509.

CURING:

EXPOSED SURFACES OF THE CONCRETE SIDEWALK WEARING SURFACE SHALL BE CURED AS REQUIRED IN 451.10 USING THE CURING COMPOUND SPECIFIED IN MATERIALS, ABOVE. WHEN THE WEATHER CONDITIONS ARE SUCH THAT IT IS IMPRACTICAL TO USE THE CURING COMPOUND OTHER MEANS FOR CURING CONCRETE MAY BE USED HOWEVER, AFTER CONDITIONS BECOME FAVORABLE THE CURING COMPOUND SHALL THEN BE APPLIED. RESIN BASE CURING COMPOUNDS WILL NOT BE PERMITTED

WATERPROOFING:

THE BASE SLAB FOR THE CONCRETE SIDEWALK WEARING SURFACE SHALL BE WATERPROOFED AS REQUIRED IN 512 EXCEPT THAT ONLY ONE COAT OF TYPE A WATERPROOFING OF NOT LESS THAN 3.0 LITERS OF ASPHALT OR PITCH PER SQUARE METER SHALL BE APPLIED OVER THE PRIMER COAT.

METHOD OF MEASUREMENT: THE SIDEWALK WEARING SURFACE WILL BE MEASURED BY THE SQUARE METERS OF FINISHED SURFACE COMPLETE AND ACCEPTED IN PLACE.

BASIS OF PAYMENT:

THE ACCEPTED QUANTITIES OF CONCRETE SIDEWALK WEARING SURFACE WILL BE PAID FOR AT THE CONTRACT UNIT PRICE, COMPLETE IN PLACE REINFORCING STEEL, JOINTS AND JOINT MATERIAL, CURING COMPOUND WATERPROOFING AND OTHER RELATED MISCELLANEOUS ITEMS WILL NOT BE PAID FOR SEPARATELY, BUT THE COST THEREOF SHALL BE INCLUDED IN THE COST OF THE CONCRETE SIDEWALK WEARING COURSE OF WHICH THEY ARE A PART

PAYMENT WILL BE MADE AT THE CONTRACT UNIT PRICE FOR:

ITEM 511 CLASS S CONCRETE, MISC.:
SIDEWALK WEARING SURFACE AS PER PLAN SQ METERS

DESIGNED BY: RSC	CHECKED BY:
DATE: 5/15/97	DATE:
DRAWN BY: FFF	REVISED BY:
DATE: 5/30/97	DATE:
CAD FILE NAME: J:\0200547\BRIDGE\STRNOTE3	

URS Gradner Engineering & Architectural Services

REVIEWED	RSC
DATE	6/05/98
DRAWN	F.F.F.
DESIGNED	LJG

STRUCTURE GENERAL NOTES

SHEET 3 OF 31 SHEETS

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STRUCTURE GENERAL NOTES

(ALL REFERENCES TO THE DIRECTOR IN THESE NOTES SHALL BE CONSTRUED AS THE COUNTY ENGINEER OR HIS AUTHORIZED REPRESENTATIVE)

metric units

WORK IN THE VICINITY OF RAILROADS - BRIDGE 209

REFER TO THE SPECIAL CLAUSES IN THE PROPOSAL FOR SPECIFIC REQUIREMENTS FOR WORK ON THE PROPERTY OF THE CONSOLIDATED RAIL CORPORATION AND THE GREATER CLEVELAND REGIONAL TRANSIT AUTHORITY RIGHT OF WAYS

HORIZONTAL AND VERTICAL CONSTRUCTION CLEARANCES SHALL NOT BE LESS THAN THE FIELD SURVEYED EXISTING CLEARANCES SHOWN ON SHEET 10 OF 31. HORIZONTAL CLEARANCE IS MEASURED TO THE CENTER OF TRACKS, VERTICAL CLEARANCE IS MEASURED FROM A POINT LEVEL WITH THE TOP OF THE HIGHER RAIL

IF NECESSARY, RAILROAD AERIAL LINES WILL BE RELOCATED BY THE RAILROAD. THE CONTRACTOR SHALL USE ALL PRECAUTIONS NECESSARY TO SEE THAT THE LINES ARE NOT DISTURBED DURING THE CONSTRUCTION STAGE AND SHALL COOPERATE WITH THE RAILROAD IN THE RELOCATION OF THESE LINES. THE COST OF THE RELOCATION SHALL BE INCLUDED IN THE RAILROAD FORCE ACCOUNT WORK

THE CONTRACTOR SHALL COOPERATE AT ALL TIMES WITH THE LOCAL OFFICIALS OF THE RAILROAD COMPANY. HE SHALL USE ALL REASONABLE CARE AND DILIGENCE IN THE WORK IN ORDER TO AVOID ACCIDENTS, DAMAGE OR INTERFERENCE WITH THE TRACKS OR PROPERTY OF THE RAILROAD. THE CONTRACTOR SHALL NOTIFY THE LOCAL OFFICIALS OF THE RAILROAD PRIOR TO STARTING WORK THAT MAY AFFECT THE RAILROAD COMPANY AND FACILITIES

PRIOR TO COMMENCING ANY WORK INVOLVING THE REMOVAL OF PORTIONS OF THE EXISTING STRUCTURE, THE CONTRACTOR SHALL SUBMIT TO THE DIRECTOR FOR APPROVAL BY DIRECTOR AND RAILROADS, COMPLETE DETAILS OF THE PROPOSED METHOD FOR REMOVING PORTIONS OF THE EXISTING STRUCTURE. NO DEMOLITION SHALL BEGIN UNTIL WRITTEN APPROVAL IS RECEIVED FROM THE DIRECTOR

THE CONTRACTOR SHALL NOT AT ANY TIME PERMIT EQUIPMENT IN HIS USE TO ENTER UPON OR FOUL THE RAILROAD TRACKS EXCEPT WHEN SUCH EQUIPMENT IS PROTECTED BY AUTHORIZED EMPLOYEES OF THE RAILROADS. SEE SPECIAL CLAUSES FR ADDITIONAL DETAILS

THE CONTRACTOR SHALL NOT AT ANY TIME INTERRUPT ANY TRAIN MOVEMENTS. THE CONTRACTOR'S CRANES AND EQUIPMENT WILL BE REQUIRED TO MAINTAIN THE CONSTRUCTION CLEARANCES AND ALL OF THE TRACKS WILL REMAIN IN SERVICE. THE DECK SLAB CONSTRUCTION OR REMOVAL MUST TAKE PLACE BETWEEN TRAIN MOVEMENTS. THE CONTRACTOR MUST SCHEDULE AROUND A HIGH VOLUME OF TRAINS PASSING THROUGH THIS PROJECT SITE. THE APPROXIMATE NUMBER OF TRAINS AND THEIR SPEEDS ARE ESTIMATED IN THE SPECIAL CLAUSES. SLOWER MOVING TRAINS OR STOPPED TRAINS, LIMITED SIGHT DISTANCE, ETC., MUST BE FIGURED INTO THE ALLOWED CONSTRUCTION TIME BETWEEN TRAINS. NO ADDITIONAL COMPENSATION SHALL BE PROVIDED TO THE CONTRACTOR FOR ANY DELAYS TO THE CONTRACTOR DUE TO RAILROAD OPERATIONS AND/OR RESTRICTIONS

NO SCAFFOLDING, PLANKS OR OTHER EQUIPMENT SHALL BE SUSPENDED OR ERECTED ABOVE OR WITHIN 3 METERS HORIZONTALLY AND 7 METERS VERTICALLY OF A RAIL OVER WHICH TRAINS ARE OPERATING WITHOUT PRIOR WRITTEN APPROVAL OF THE CHIEF ENGINEER OF THE RAILROAD COMPANY OR HIS AUTHORIZED REPRESENTATIVE

FAILURE TO NOTIFY THE RAILROAD COMPANY AS NOTED ABOVE SHALL BE CAUSE FOR STOPPING WORK UNTIL ALL PROVISIONS FOR PROTECTING RAILROAD PROPERTY HAVE BEEN PROVIDED

ALL COSTS TO CONSOLIDATED RAIL CORPORATION IN CONNECTION WITH 1) FLAGGING; 2) PROTECTIVE PERSONNEL; AND 3) ENGINEERING INSPECTION WILL BE BORNE BY THE COUNTY WITH PAYMENT MADE TO THE RAILROAD BY THE COUNTY. ALL COSTS TO THE CONTRACTOR IN CONNECTION WITH GREATER CLEVELAND REGIONAL TRANSIT AUTHORITY FLAGGING WILL BE BORNE BY THE CONTRACTOR AND SHALL BE INCLUDED FOR PAYMENT IN THE CONTRACT LUMP SUM PRICE BID FOR ITEM 614 - MAINTAING TRAFFIC AS PER PLAN. ALL COSTS ASSOCIATED WITH THE REPAIR OF DAMAGE TO RAILROAD FACILITIES CAUSED BY THE CONTRACTOR'S OPERATIONS WILL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR WITH PAYMENT MADE BY THE CONTRACTOR TO THE RAILROAD THROUGH THE COUNTY

THE FOLLOWING RAILROADS ARE LOCATED WITHIN THE WORK LIMITS OF THIS PROJECT:

CONRAIL
DIVISION ENGINEER
HOLIDAY DRIVE
PITTSBURGH, PA 15220
TELEPHONE (412) 928-7255

GCRTA
1240 WEST 6TH STREET
CLEVELAND, OHIO 44113-1331
TELEPHONE (216) 566-5100

ADDITIONAL RESTRICTIONS BY GCRTA (FROM GCRTA STANDARD SPECIFICATION SECTION 01501):

3.1 RESTRICTIONS BY GCRTA

A. THE CONTRACTOR MUST RECEIVE A PERMIT PRIOR TO STARTING WORK THAT MAY AFFECT GCRTA PROPERTY AND FACILITIES. EACH CONTRACTOR MUST SUBMIT REQUESTS THROUGH THE E&C PROJECT MANAGER FOR PRIOR AUTHORITY APPROVAL FOR OCCUPYING THE RAIL RIGHT-OF-WAY. THESE REQUESTS WILL BE OF THREE TYPES:

1. RAIL RIGHT-OF-WAY OCCUPANCY PERMIT-REQUIRED FOR ALL WORK PERFORMED ON THE RAIL RIGHT-OF-WAY.
2. TRACK OUTAGE PERMIT-REQUIRED FOR ANY SINGLE TRACKING OPERATION WHERE ONE TRACK IS TAKEN OUT OF SERVICE.
3. POWER OUTAGE PERMIT-REQUIRED FOR ANY WORK ON THE RAIL RIGHT-OF-WAY THAT IS WITHIN 1.5 METERS OF THE CONDUCTOR WIRE

ALL REQUESTS MUST BE SUBMITTED IN WRITING TO THE DIRECTOR OF ENGINEERING AND CONSTRUCTION SUPPORT BY NO LATER THAN 12:00 NOON OF THE PRECEDING WEDNESDAY FOR CONSIDERATION BY THE SUPERINTENDENT OF RAIL OPERATIONS. DUE TO OTHER ONGOING CONSTRUCTION AND MAINTENANCE PROJECTS, THERE IS NO GUARANTEE THAT ANY REQUEST WILL BE APPROVED. ALL REQUESTS WILL BE APPROVED OR DISAPPROVED IN WRITING

B. IN THE EVENT OF A REVERSAL BY EITHER GCRTA OR THE CONTRACTOR OF ANY TRACK OR POWER OUTAGE PERMIT, A GOOD FAITH EFFORT MUST BE MADE TO NOTIFY THE OTHER PARTY PRIOR TO THE SCHEDULED OUTAGE. FAILURE TO CANCEL 12 HOURS PRIOR TO THE SCHEDULED OUTAGE WILL RESULT IN THE CONTRACTOR BEING ASSESSED LIQUIDATED DAMAGES IN THE AMOUNT OF $500 FOR EACH OCCURRENCE. THIS COST SHOULD BE PAID DIRECTLY BY THE CONTRACTOR TO RTA. FAILURE TO PAY WILL RESULT IN A REJECTION OF ALL FUTURE OUTAGE REQUESTS. RTA WILL MAKE A GOOD FAITH EFFORT TO NOTIFY THE CONTRACTOR 12 HOURS PRIOR TO ANY CANCELLATION. HOWEVER, IT IS UNDERSTOOD THAT EMERGENCIES MAY OCCUR WHICH MAY PREVENT RTA FROM CANCELING WITHIN THIS TIME FRAME

C. POWER OUTAGES WILL NOT BE ALLOWED DURING THE FOLLOWING CONDITIONS:

1. ON HOLIDAYS OR DURING SPECIAL EVENTS.
2. WHERE WEATHER CONDITIONS ARE SUCH THAT ICING OF THE CATENARY MAY OCCUR. RTA HAS EXPERIENCED ICING CONDITIONS WHEN THE TEMPERATURE IS BETWEEN (-4) AND 2 DEGREES CELSIUS WITH A CHANCE OF PRECIPITATION

TO CONFIRM WHETHER CONDITIONS WILL BE AFFECTING RAIL OPERATIONS, THE CONTRACTOR MAY CALL EITHER THE TOWER AT 575-3918 OR THE LOAD DISPATCHER AT 575-3901

D. ANY UNEXPECTED EFFECTS UPON THE OPERATIONS OF SCHEDULED/UNSCHEDULED TRAIN MOVEMENTS SHALL BE IMMEDIATELY CALLED IN TO THE TOWER DISPATCHER AT 575-3918

E. THE CONTRACTOR MUST RECEIVE A RIGHT-OF-WAY OCCUPANCY PERMIT PRIOR TO LIFTING OF ANY BRIDGE SPAN OVER TRACKS. GCRTA RAIL PERSONNEL SHALL BE PRESENT IN THE AREA TO ENSURE A SAFE AND CLEAR AREA AFTER SPAN LIFT. DEMOLITION WORK SHALL STOP WHEN TRAINS PASS THROUGH A DEMOLITION AREA OR TRAINS SHALL BE STOPPED AT A SAFE DISTANCE IF IMMINENT DANGER IS SHOWN

F. ALL WORK OVER GCRTA TRACKS SHALL BE DONE WITH THE OVERHEAD POWER OFF UNLESS AUTHORIZED BY BOTH DIRECTOR OF RAIL OPERATIONS AND DIRECTOR OF ENGINEERING AND CONSTRUCTION SUPPORT. IF THE CONTRACTOR REQUIRES THE DE-ENERGIZATION OF THE OVERHEAD POWER TO THE CATENARY SYSTEM A POWER OUTAGE PERMIT MUST BE APPROVED

3.2 RESUMPTION OF REVENUE SERVICE

A. THE TRACK MUST BE RETURNED TO THE AUTHORITY ONE HALF HOUR BEFORE THE START OF A SCHEDULED REVENUE SERVICE. AT THE COMPLETION OF THE WEEK NIGHT SHIFT AND AT THE COMPLETION OF THE WEEKEND WORK, THE CONTRACTOR IS TO INSPECT AND SUBSEQUENTLY RELEASE THE WORK ZONE BACK TO THE AUTHORITY FOR RESUMPTION OF REVENUE SERVICE. THIS WILL REQUIRE THE CONTRACTOR TO ADHERE TO THE FOLLOWING PROCEDURES:

1. PRIOR TO RELEASE OF WORK ZONE, THE CONTRACTOR IS TO CLEAR HIS EQUIPMENT, MANPOWER AND MATERIALS FROM THE RIGHT-OF-WAY, AN AREA DEFINED AS 3 METERS FROM THE CENTERLINE OF EACH TRACK

2. THE CONTRACTOR ALONG WITH AN E & C REPRESENTATIVE WILL INSPECT THE ENTIRE WORK ZONE TO ASSURE THAT THE WORK COMPLETED COMPLIES WITH THE REQUIREMENTS OF THE AUTHORITY FOR THE RESUMPTION OF REVENUE SERVICE WITHIN A WORK ZONE. THE CONSTRUCTION, AT A MINIMUM, MUST COMPLY WITH FRA CLASS 4 SAFETY STANDARDS FOR TRACK OR COMPLIANCE WITH THESE CONSTRUCTION TOLERANCES

3. OTHER REQUIREMENTS MAY BE IMPOSED BY THE AUTHORITY BASED ON A.R.E.A. CONSTRUCTION TOLERANCES. PROCEDURES AND/OR PRACTICES IMPOSITION OF SLOW ORDERS AND OTHER MEANS CAN BE REQUESTED BY THE CONTRACTOR IN ORDER TO ASSURE THE RESUMPTION OF SAFE REVENUE OPERATIONS

4. WHEN EACH ITEM ABOVE HAS BEEN COMPLETED, THE CONTRACTOR SHALL CONTACT THE CUT TOWER AND NOTIFY THE SUPERVISOR OF THE RELEASE OF THE WORK ZONE BACK TO THE AUTHORITY

5. AT THE COMPLETION OF EACH NIGHT SHIFT AND WEEKEND WORK, THE CONTRACTOR MUST INSPECT THE WORK SITE AND RELEASE IT TO GCRTA IN AN AESTHETICALLY PLEASING MANNER AS DETERMINED BY THE ENGINEER

B. THE CONTRACTOR MUST COMPLY WITH THE PROVISIONS OF THESE GENERAL REQUIREMENTS AS REPRESENTING AN INTEGRAL PART OF HIS LEGAL OBLIGATION UNDER THIS CONTRACT

3.3 TEMPORARY FALSEWORK AND PROTECTIVE STRUCTURES

A. IN ORDER TO PROTECT GCRTA TRAFFIC AGAINST DAMAGE FROM FALLING MATERIAL AND DEBRIS DURING DEMOLITION AND WHILE SUPERSTRUCTURE STEEL AND CONCRETE IS BEING PLACED OR WHILE WORK IS IN PROGRESS OVERHEAD, THE CONTRACTOR SHALL FURNISH AND ERECT A TEMPORARY STRUCTURE UNDER THE SPANS THAT ARE DIRECTLY OVER THE GCRTA TRACKS

B. THE FLOORING AND SIDING OF THE TEMPORARY STRUCTURE SHALL HAVE NO CRACKS OR OPENINGS THROUGH WHICH MATERIAL PARTICLES MAY FALL. AS A MINIMUM, ONE LAYER OF 230 mm PLYWOOD WITH LAPPED JOINTS OR AN EQUIVALENT DESIGN SHALL BE PLACED BETWEEN THE LOWER FLANGES OF THE STRUCTURAL STEEL BEAMS ABOVE THE TRACK BED AND THE SHOULDERS OF THE GCRTA TRACKS

C. THE TEMPORARY FALSEWORK SHALL BE SUITABLE FOR ATTACHMENT OF THE LIVE CATENARY WIRE SYSTEM AND ALL SIGNAL, POWER AND COMMUNICATION CABLES. THE FALSEWORK SHALL BE REMOVED BY CONTRACTOR WHEN WORK IS COMPLETED.

D. DETAILS OF THE TEMPORARY FALSEWORK AND PROTECTIVE STRUCTURES INCLUDING THE PROPOSED TEMPORARY UNDER CLEARANCES TO THE GCRTA TRACKS, SHALL BE PREPARED BY A PROFESSIONAL ENGINEER FOR APPROVAL BY GCRTA DIRECTOR OF ENGINEERING AND CONSTRUCTION SUPPORT PRIOR TO STARTING ANY DEMOLITION OR CONSTRUCTION WORK

E. THIS PROTECTIVE WORK SHALL BE PERFORMED AT THE CONTRACTOR'S COST

F. BEFORE STARTING THE WORK OF ERECTING THE TEMPORARY FALSEWORK, THE CONTRACTOR MUST CONTACT LITEL COMMUNICATIONS SYSTEM, INC., MR. CLIFF CALDWELL, AT (216) 948-1884 FOR THE PURPOSE OF MAKING ARRANGEMENTS TO PROTECT AND REATTACH THE FIBER OPTIC CABLE.

3.4 SPECIAL GCRTA REQUIREMENTS

A. OVERHEAD PROPULSIONS POWER CABLES (600 VOLTS, D.C.) SHALL ALWAYS BE CONSIDERED ENERGIZED. THE CONTRACTOR MUST NOT ASSUME THE POWER IS SHUT OFF UNTIL ACTUALLY CONFIRMED BY GCRTA ON A DAILY BASIS THAT SHUTDOWN HAS ACTUALLY BEEN ACCOMPLISHED. DESPITE POWER SHUT OFF, THE OVERHEAD PROPULSION CABLES ARE ALWAYS TO BE CONSIDERED HOT

B. RTA AERIAL LINES ON GCRTA PROPERTY CAN BE RELOCATED BY GCRTA PERSONNEL IF NOTED AS SUCH ON THE PLANS AND SPECIFICATIONS OTHERWISE RESPONSIBILITY FALLS TO THE CONTRACTOR WITH RTA APPROVAL. THE CONTRACTOR SHALL USE ALL PRECAUTIONS NECESSARY TO SEE THAT THE LINES ARE NOT DISTURBED DURING THE CONSTRUCTION STAGE AND SHALL COOPERATE WITH GCRTA IN RELOCATION OF THESE LINES. THE COST OF THE RELOCATION SHALL BE PAID BY THE CONTRACTOR

See Rev. Sht. at back

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STRUCTURE GENERAL NOTES

STRUCTURE GENERAL NOTES

(ALL REFERENCES TO THE DIRECTOR IN THESE NOTES SHALL BE CONSTRUED AS THE COUNTY ENGINEER OR HIS AUTHORIZED REPRESENTATIVE)

metric units

WORK IN THE VICINITY OF RAILROADS - BRIDGE 209

REFER TO THE SPECIAL CLAUSES IN THE PROPOSAL FOR SPECIFIC REQUIREMENTS FOR WORK ON THE PROPERTY OF THE CONSOLIDATED RAIL CORPORATION AND THE GREATER CLEVELAND REGIONAL TRANSIT AUTHORITY RIGHT OF WAYS.

HORIZONTAL AND VERTICAL CONSTRUCTION CLEARANCES SHALL NOT BE LESS THAN THE FIELD SURVEYED EXISTING CLEARANCES SHOWN ON SHEET 10 OF 31. HORIZONTAL CLEARANCE IS MEASURED TO THE CENTER OF TRACKS, VERTICAL CLEARANCE IS MEASURED FROM A POINT LEVEL WITH THE TOP OF THE HIGHER RAIL.

IF NECESSARY, RAILROAD AERIAL LINES WILL BE RELOCATED BY THE RAILROAD. THE CONTRACTOR SHALL USE ALL PRECAUTIONS NECESSARY TO SEE THAT THE LINES ARE NOT DISTURBED DURING THE CONSTRUCTION STAGE AND SHALL COOPERATE WITH THE RAILROAD IN THE RELOCATION OF THESE LINES. THE COST OF THE RELOCATION SHALL BE INCLUDED IN THE RAILROAD FORCE ACCOUNT WORK.

THE CONTRACTOR SHALL COOPERATE AT ALL TIMES WITH THE LOCAL OFFICIALS OF THE RAILROAD COMPANY. HE SHALL USE ALL REASONABLE CARE AND DILIGENCE IN THE WORK IN ORDER TO AVOID ACCIDENTS, DAMAGE OR INTERFERENCE WITH THE TRAINS OR PROPERTY OF THE RAILROAD. THE CONTRACTOR SHALL NOTIFY THE LOCAL OFFICIALS OF THE RAILROAD PRIOR TO STARTING WORK THAT MAY AFFECT THE RAILROAD COMPANY AND FACILITIES.

PRIOR TO COMMENCING ANY WORK INVOLVING THE REMOVAL OF PORTIONS OF THE EXISTING STRUCTURE, THE CONTRACTOR SHALL SUBMIT TO THE DIRECTOR FOR APPROVAL BY DIRECTOR AND RAILROADS, COMPLETE DETAILS OF THE PROPOSED METHOD FOR REMOVING PORTIONS OF THE EXISTING STRUCTURE. NO DEMOLITION SHALL BEGIN UNTIL WRITTEN APPROVAL IS RECEIVED FROM THE DIRECTOR.

THE CONTRACTOR SHALL NOT AT ANY TIME PERMIT EQUIPMENT IN HIS USE TO ENTER UPON OR FOUL THE RAILROAD TRACKS EXCEPT WHEN SUCH EQUIPMENT IS PROTECTED BY AUTHORIZED EMPLOYEES OF THE RAILROADS, SEE SPECIAL CLAUSES FOR ADDITIONAL DETAILS.

THE CONTRACTOR SHALL NOT AT ANY TIME INTERRUPT ANY TRAIN MOVEMENTS. THE CONTRACTOR'S CRANES AND EQUIPMENT WILL BE REQUIRED TO MAINTAIN THE CONSTRUCTION CLEARANCES AND ALL OF THE TRACKS WILL REMAIN IN SERVICE. THE DECK SLAB CONSTRUCTION OR REMOVAL MUST TAKE PLACE BETWEEN TRAIN MOVEMENTS. THE CONTRACTOR MUST SCHEDULE AROUND A HIGH VOLUME OF TRAINS PASSING THROUGH THIS PROJECT SITE. THE APPROXIMATE NUMBER OF TRAINS AND THEIR SPEEDS ARE ESTIMATED IN THE SPECIAL CLAUSES. SLOWER MOVING TRAINS OR STOPPED TRAINS, LIMITED SIGHT DISTANCE, ETC., MUST BE FIGURED INTO THE ALLOWED CONSTRUCTION TIME BETWEEN TRAINS. NO ADDITIONAL COMPENSATION SHALL BE PROVIDED TO THE CONTRACTOR FOR ANY DELAYS TO THE CONTRACTOR DUE TO RAILROAD OPERATIONS AND/OR RESTRICTIONS.

NO SCAFFOLDING, PLANKS OR OTHER EQUIPMENT SHALL BE SUSPENDED OR ERECTED ABOVE OR WITHIN 3 METERS HORIZONTALLY AND 7 METERS VERTICALLY OF A RAIL OVER WHICH TRAINS ARE OPERATING WITHOUT PRIOR WRITTEN APPROVAL OF THE CHIEF ENGINEER OF THE RAILROAD COMPANY OR HIS AUTHORIZED REPRESENTATIVE.

FAILURE TO NOTIFY THE RAILROAD COMPANY AS NOTED ABOVE SHALL BE CAUSE FOR STOPPING WORK UNTIL ALL PROVISIONS FOR PROTECTING RAILROAD PROPERTY HAVE BEEN PROVIDED.

ALL COSTS TO CONSOLIDATED RAIL CORPORATION IN CONNECTION WITH 1) FLAGGING; 2) PROTECTIVE PERSONNEL; AND 3) ENGINEERING INSPECTION WILL BE BORNE BY THE COUNTY WITH PAYMENT MADE TO THE RAILROAD BY THE COUNTY. ALL COSTS TO THE CONTRACTOR IN CONNECTION WITH GREATER CLEVELAND REGIONAL TRANSIT AUTHORITY FLAGGING WILL BE BORNE BY THE CONTRACTOR AND SHALL BE INCLUDED FOR PAYMENT IN THE CONTRACT LUMP SUM PRICE BID FOR ITEM 614 - MAINTAING TRAFFIC AS PER PLAN. ALL COSTS ASSOCIATED WITH THE REPAIR OF DAMAGE TO RAILROAD FACILITIES CAUSED BY THE CONTRACTOR'S OPERATIONS WILL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR WITH PAYMENT MADE BY THE CONTRACTOR TO THE RAILROAD THROUGH THE COUNTY

THE FOLLOWING RAILROADS ARE LOCATED WITHIN THE WORK LIMITS OF THIS PROJECT:

~~CONRAIL~~
DIVISION ENGINEER
HOLIDAY DRIVE
PITTSBURGH, PA 15220
TELEPHONE (412) 928-7255

GCRTA
1240 WEST 6TH STREET
CLEVELAND, OHIO 44113-1331
TELEPHONE (216) 566-5100

ADDITIONAL RESTRICTIONS BY GCRTA (FROM GCRTA STANDARD SPECIFICATION SECTION 01501):

3 1 RESTRICTIONS BY GCRTA

A. THE CONTRACTOR MUST RECEIVE A PERMIT PRIOR TO STARTING WORK THAT MAY AFFECT GCRTA PROPERTY AND FACILITIES. EACH CONTRACTOR MUST SUBMIT REQUESTS THROUGH GCRTA'S E&C PROJECT MANAGER FOR PRIOR AUTHORITY APPROVAL FOR OCCUPYING THE RAIL RIGHT-OF-WAY THESE REQUESTS WILL BE OF THREE TYPES:

1. RAIL RIGHT-OF-WAY OCCUPANCY PERMIT-REQUIRED FOR ALL WORK PERFORMED ON THE RAIL RIGHT-OF-WAY.
2. TRACK OUTAGE PERMIT-REQUIRED FOR ANY SINGLE TRACKING OPERATION WHERE ONE TRACK IS TAKEN OUT OF SERVICE
3. POWER OUTAGE PERMIT-REQUIRED FOR ANY WORK ON THE RAIL RIGHT-OF-WAY THAT IS WITHIN ! 5 METERS OF THE CONDUCTOR WIRE

ALL REQUESTS MUST BE SUBMITTED IN WRITING TO GCRTA'S DIRECTOR OF ENGINEERING AND CONSTRUCTION SUPPORT BY NO LATER THAN 12:00 NOON OF THE PRECEDING WEDNESDAY FOR CONSIDERATION BY THE SUPERINTENDENT OF RAIL OPERATIONS. DUE TO OTHER ONGOING CONSTRUCTION AND MAINTENANCE PROJECTS, THERE IS NO GUARANTEE THAT ANY REQUEST WILL BE APPROVED. ALL REQUESTS WILL BE APPROVED OR DISAPPROVED IN WRITING

B. IN THE EVENT OF A REVERSAL BY EITHER GCRTA OR THE CONTRACTOR OF ANY TRACK OR POWER OUTAGE PERMIT, A GOOD FAITH EFFORT MUST BE MADE TO NOTIFY THE OTHER PARTY PRIOR TO THE SCHEDULED OUTAGE. FAILURE TO CANCEL 12 HOURS PRIOR TO THE SCHEDULED OUTAGE WILL RESULT IN THE CONTRACTOR BEING ASSESSED LIQUIDATED DAMAGES IN THE AMOUNT OF $500 FOR EACH OCCURRENCE. THIS COST SHOULD BE PAID DIRECTLY BY THE CONTRACTOR TO RTA. FAILURE TO PAY WILL RESULT IN A REJECTION OF ALL FUTURE OUTAGE REQUESTS. RTA WILL MAKE A GOOD FAITH EFFORT TO NOTIFY THE CONTRACTOR 12 HOURS PRIOR TO ANY CANCELLATION. HOWEVER, IT IS UNDERSTOOD THAT EMERGENCIES MAY OCCUR WHICH MAY PREVENT RTA FROM CANCELING WITHIN THIS TIME FRAME

C. POWER OUTAGES WILL NOT BE ALLOWED DURING THE FOLLOWING CONDITIONS:

1. ON HOLIDAYS OR DURING SPECIAL EVENTS.
2. WHERE WEATHER CONDITIONS ARE SUCH THAT ICING OF THE CATENARY MAY OCCUR. RTA HAS EXPERIENCED ICING CONDITIONS WHEN THE TEMPERATURE IS BETWEEN (-4) AND 2 DEGREES CELSIUS WITH A CHANCE OF PRECIPITATION

TO CONFIRM WHETHER CONDITIONS WILL BE AFFECTING RAIL OPERATIONS, THE CONTRACTOR MAY CALL EITHER THE TOWER AT 575-3918 OR THE LOAD DISPATCHER AT 575-3901

D. ANY UNEXPECTED EFFECTS UPON THE OPERATIONS OF SCHEDULED/UNSCHEDULED TRAIN MOVEMENTS SHALL BE IMMEDIATELY CALLED IN TO THE TOWER DISPATCHER AT 575-3918.

E. THE CONTRACTOR MUST RECEIVE A RIGHT-OF-WAY OCCUPANCY PERMIT PRIOR TO LIFTING OF ANY BRIDGE SPAN OVER TRACKS. GCRTA RAIL PERSONNEL SHALL BE PRESENT IN THE AREA TO ENSURE A SAFE AND CLEAR AREA AFTER SPAN LIFT. DEMOLITION WORK SHALL STOP WHEN TRAINS PASS THROUGH A DEMOLITION AREA OR TRAINS SHALL BE STOPPED AT A SAFE DISTANCE IF IMMINENT DANGER IS SHOWN.

F. ALL WORK OVER GCRTA TRACKS SHALL BE DONE WITH THE OVERHEAD POWER OFF UNLESS AUTHORIZED BY GCRTA'S DIRECTOR OF RAIL OPERATIONS AND GCRTA'S DIRECTOR OF ENGINEERING AND CONSTRUCTION SUPPORT. IF THE CONTRACTOR REQUIRES THE DE-ENERGIZATION OF THE OVERHEAD POWER TO THE CATENARY SYSTEM A POWER OUTAGE PERMIT MUST BE APPROVED

3 2 RESUMPTION OF REVENUE SERVICE

A. THE TRACK MUST BE RETURNED TO THE AUTHORITY ONE HALF HOUR BEFORE THE START OF A SCHEDULED REVENUE SERVICE. AT THE COMPLETION OF THE WEEK NIGHT SHIFT AND AT THE COMPLETION OF THE WEEKEND WORK, THE CONTRACTOR IS TO INSPECT AND SUBSEQUENTLY RELEASE THE WORK ZONE BACK TO THE AUTHORITY FOR RESUMPTION OF REVENUE SERVICE. THIS WILL REQUIRE THE CONTRACTOR TO ADHERE TO THE FOLLOWING PROCEDURES:

1 PRIOR TO RELEASE OF WORK ZONE, THE CONTRACTOR IS TO CLEAR HIS EQUIPMENT, MANPOWER AND MATERIALS FROM THE RIGHT-OF-WAY. AN AREA DEFINED AS 3 METERS FROM THE CENTERLINE OF EACH TRACK.

2 THE CONTRACTOR, ALONG WITH GCRTA S E & C REPRESENTATIVE WILL INSPECT THE ENTIRE WORK ZONE TO ASSURE THAT THE WORK COMPLETED COMPLIES WITH THE REQUIREMENTS OF THE AUTHORITY FOR THE RESUMPTION OF REVENUE SERVICE WITHIN A WORK ZONE. THE CONSTRUCTION, AT A MINIMUM, MUST COMPLY WITH FRA CLASS 4 SAFETY STANDARDS FOR TRACK OR COMPLIANCE WITH THESE CONSTRUCTION TOLERANCES

3. OTHER REQUIREMENTS MAY BE IMPOSED BY THE AUTHORITY BASED ON A.R.E.A. CONSTRUCTION TOLERANCES, PROCEDURES AND/OR PRACTICES. IMPOSITION OF SLOW ORDERS AND OTHER MEANS CAN BE REQUESTED BY THE CONTRACTOR IN ORDER TO ASSURE THE RESUMPTION OF SAFE REVENUE OPERATIONS

4. WHEN EACH ITEM ABOVE HAS BEEN COMPLETED THE CONTRACTOR SHALL CONTACT THE CUT TOWER AND NOTIFY THE SUPERVISOR OF THE RELEASE OF THE WORK ZONE BACK TO THE AUTHORITY.

5. AT THE COMPLETION OF EACH NIGHT SHIFT AND WEEKEND WORK, THE CONTRACTOR MUST INSPECT THE WORK SITE AND RELEASE IT TO GCRTA IN AN AESTHETICALLY PLEASING MANNER AS DETERMINED BY THE GCRTA ENGINEER

B. THE CONTRACTOR MUST COMPLY WITH THE PROVISIONS OF THESE GENERAL REQUIREMENTS AS REPRESENTING AN INTEGRAL PART OF HIS LEGAL OBLIGATION UNDER THIS CONTRACT

3 3 TEMPORARY FALSEWORK AND PROTECTIVE STRUCTURES

A. IN ORDER TO PROTECT GCRTA TRAFFIC AGAINST DAMAGE FROM FALLING MATERIAL AND DEBRIS DURING DEMOLITION AND WHILE SUPERSTRUCTURE STEEL AND CONCRETE IS BEING PLACED OR WHILE WORK IS IN PROGRESS OVERHEAD, THE CONTRACTOR SHALL FURNISH AND ERECT A TEMPORARY STRUCTURE UNDER THE SPANS THAT ARE DIRECTLY OVER THE GCRTA TRACKS.

B. THE FLOORING AND SIDING OF THE TEMPORARY STRUCTURE SHALL HAVE NO CRACKS OR OPENINGS THROUGH WHICH MATERIAL PARTICLES MAY FALL. AS A MINIMUM, ONE LAYER OF 230 mm PLYWOOD WITH LAPPED JOINTS OR AN EQUIVALENT DESIGN SHALL BE PLACED BETWEEN THE LOWER FLANGES OF THE STRUCTURAL STEEL BEAMS ABOVE THE TRACK BED AND THE SHOULDERS OF THE GCRTA TRACKS

C. THE TEMPORARY FALSEWORK SHALL BE SUITABLE FOR ATTACHMENT OF THE LIVE CATENARY WIRE SYSTEM, AND ALL SIGNAL, POWER AND COMMUNICATION CABLES. THE FALSEWORK SHALL BE REMOVED BY THE CONTRACTOR WHEN WORK IS COMPLETED

D. DETAILS OF THE TEMPORARY FALSEWORK AND PROTECTIVE STRUCTURES INCLUDING THE PROPOSED TEMPORARY UNDER CLEARANCES TO THE GCRTA TRACKS, SHALL BE PREPARED BY A PROFESSIONAL ENGINEER FOR APPROVAL BY GCRTA DIRECTOR OF ENGINEERING AND CONSTRUCTION SUPPORT PRIOR TO STARTING ANY DEMOLITION OR CONSTRUCTION WORK.

E. THIS PROTECTIVE WORK SHALL BE PERFORMED AT THE CONTRACTOR S COST.

F. BEFORE STARTING THE WORK OF ERECTING THE TEMPORARY FALSEWORK, THE CONTRACTOR MUST CONTACT MR. CLIFF CALDWELL OF QUEST COMMUNICATIONS INTERNATIONAL, INC., FOR THE PURPOSE OF MAKING ARRANGEMENTS TO PROTECT AND REATTACH THE FIBER OPTIC CABLE. MR CALDWELL MAY BE REACHED AT:

MR. CLIFF CALDWELL
1064 WILLIAMS ROAD
WEST SALEM OHIO 44287

OFFICE PHONE: (330) 948-1884
MOBILE PHONE: (216) 469-8107
24 HR PAGER: (419) 884-0400

3 4 SPECIAL GCRTA REQUIREMENTS

A. OVERHEAD PROPULSIONS POWER CABLES (600 VOLTS, D.C.) SHALL ALWAYS BE CONSIDERED ENERGIZED. THE CONTRACTOR MUST NOT ASSUME THE POWER IS SHUT OFF UNTIL ACTUALLY CONFIRMED BY GCRTA ON A DAILY BASIS THAT SHUTDOWN HAS ACTUALLY BEEN ACCOMPLISHED. DESPITE POWER SHUT OFF, THE OVERHEAD PROPULSION CABLES ARE ALWAYS TO BE CONSIDERED HOT.

B. RTA AERIAL LINES ON GCRTA PROPERTY CAN BE RELOCATED BY GCRTA PERSONNEL IF NOTED AS SUCH ON THE PLANS AND SPECIFICATIONS. OTHERWISE RESPONSIBILITY FALLS TO THE CONTRACTOR WITH RTA APPROVAL. THE CONTRACTOR SHALL USE ALL PRECAUTIONS NECESSARY TO SEE THAT THE LINES ARE NOT DISTURBED DURING THE CONSTRUCTION STAGE AND SHALL COOPERATE WITH GCRTA IN RELOCATION OF THESE LINES. THE COST OF THE RELOCATION SHALL BE PAID BY THE CONTRACTOR.

DESIGNED BY: RSC	CHECKED BY:
DATE: 5/15/97	DATE:
DRAWN BY: FFF	REVISED BY: MAL
DATE: 5/30/97	DATE: 10/27/98
CAD FILE NAME: J:\020054?\BRIDGE\STRNOTE4	

URS Greiner Consulting Engineers & Architects Service

DESIGNED	LJG
DRAWN	F.F.F.
REVIEWED	RSC
DATE	6/05/98

STRUCTURE GENERAL NOTES

STRUCTURE GENERAL NOTES

(ALL REFERENCES TO THE DIRECTOR IN THESE NOTES SHALL BE CONSTRUED AS THE COUNTY ENGINEER OR HIS AUTHORIZED REPRESENTATIVE)

C. NO EQUIPMENT OR MATERIAL SHALL BE SUSPENDED OR ERECTED ABOVE, WITHIN 4.9 METERS VERTICALLY OR HIGHER BASED ON EXISTING CATENARY HEIGHTS, OR WITHIN 2.3 METERS HORIZONTALLY FROM THE CENTER OF THE TRACK OVER WHICH TRAINS ARE OPERATING UNLESS OTHERWISE APPROVED BY GCRTA.

D. TRACK BALLAST MUST BE PROTECTED FROM CONTAMINATION DURING DEMOLITION AND CONSTRUCTION. SIGNAL EQUIPMENT MUST ALSO BE PROTECTED. THE CONTRACTOR MUST FURNISH DETAILS ON HOW HE PLANS TO PROTECT BOTH ITEMS.

E. IF PROPOSED CONSTRUCTION IS IN THE VICINITY OF A RAPID STATION, PEDESTRIAN TRAFFIC TO THE GCRTA STATION SHALL BE MAINTAINED AT ALL TIMES BY THE CONTRACTOR. STRUCTURALLY SOUND FENCING, BARRICADES, AND/OR SHELTERS SHALL BE PROVIDED TO PROTECT GCRTA USERS AT THE STATION ENTRANCES AND PLATFORMS. THE CONTRACTOR SHALL SUBMIT DETAILS OF THE PROTECTION SYSTEM FOR GCRTA'S APPROVAL BEFORE DEMOLITION IS STARTED.

F. NO CONSTRUCTION ACTIVITY SHALL TAKEN PLACE WITHIN GCRTA CONSTRUCTION CLEARANCE LIMITS WHILE TRACK IS ACTIVE EXCEPT WITH FLAGGERS AND A RAIL RIGHT-OF-WAY OCCUPANCY PERMIT. DURING COMPLETE SHUTDOWN, CONTRACTOR IS CAUTIONED TO THE POSSIBILITY OF TRACK UTILIZATION BY RTA WORK TRAINS AND OTHER SERVICE EQUIPMENT.

G. NO AT-GRADE CROSSING OF GCRTA TRACKS IS PERMITTED BY VEHICLES OR EQUIPMENT, WITHOUT PRIOR APPROVAL OF THE SUPERINTENDENT OF RAIL OPERATIONS.

H. THE CONTRACTOR SHALL PROVIDE, INSTALL, ERECT AND MAINTAIN SUITABLE LIGHTING AND PROTECTIONS FOR SAFE AND EFFICIENT PROGRESS AND FOR ANY WORK THAT IS TO BE PERFORMED AFTER DAYLIGHT HOURS.

I. FLAGGERS SHALL BE PROVIDED BY THE CONTRACTOR, EITHER THROUGH COMPANIES WHO SUPPLY CERTIFIED FLAGGER (OBTAIN LIST FROM GCRTA) OR BY TRAINING AND CERTIFYING THEIR OWN EMPLOYEES THROUGH GCRTA. FOR FLAGGING PROCEDURES, FLAGGER TRAINING, AND SET-UP OF WORK ZONES, SEE SECTION 01502 - STANDARD RAIL FLAGGING PROCEDURES.

J. ANY VIOLATION TO GCRTA CONSTRUCTION RESTRICTIONS BY THE CONTRACTOR MAY RESULT IN IMMEDIATE SHUTDOWN OF CONSTRUCTION ACTIVITIES UNTIL VIOLATION IS CORRECTED.

K. THESE PROCEDURES ARE APPLICABLE WHENEVER ANY PERSONNEL OR EQUIPMENT OF ANY CONTRACTOR ARE ON AUTHORITY RAIL PROPERTY AND/OR MORE SPECIFICALLY, WITHIN A DISTANCE OF 3.0 METERS FROM THE CENTERLINE OF EACH TRACK, INCLUDING ANY AND ALL WORK PERFORMED OVER TRACKS INCLUDING WORK BEING PERFORMED ON OVERHEAD HIGHWAY STRUCTURES.

L THE EXISTING CATENARY SHOULD BE KEPT AT ITS PRESENT ELEVATION IF POSSIBLE. 0.6m CLEARANCE ABOVE THIS ELEVATION SHOULD BE ALLOWED FOR THE CATENARY AND INSULATORS. IF IT IS NECESSARY TO LOWER THE CATENARY, THE CONTRACTOR MUST HIRE A QUALIFIED CATENARY ENGINEER TO DESIGN THE LOWERING INCLUDING DISTANCES IN EITHER DIRECTION THAT IT MUST BE LOWERED. ALL DESIGN MODIFICATIONS MUST BE APPROVED BY THE GCRTA.

ITEM SPECIAL - ASBESTOS ABATEMENT

AN ASBESTOS SURVEY OF THE LAKEWOOD HEIGHTS BOULEVARD BRIDGE OVER BEREA ROAD AND THE LAKEWOOD HEIGHTS BOULEVARD BRIDGE OVER THE RAILROAD SCHEDULED FOR DECK REPLACEMENT WAS COMPLETED IN NOVEMBER 1997 BY A CERTIFIED ASBESTOS HAZARD EVALUATION SPECIALIST. 51mm ID ASBESTOS CONTAINING TRANSITE CONDUIT WAS FOUND UNDER THE NORTH CURB IN BOTH BRIDGES.

THE REMOVAL AND DISPOSAL OF ALL THE ASBESTOS CONTAINING MATERIAL WITHIN THE PROJECT WORK LIMITS DURING DEMOLITION OF THE BRIDGE MUST COMPLY WITH THE OHIO ADMINISTRATIVE CODE, THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REGULATIONS, AND THE NATIONAL EMISSION STANDARD FOR HAZARDOUS AIR POLLUTANTS (NESHAP) STANDARD FOR ASBESTOS.

A COPY OF THE OHIO ENVIRONMENTAL PROTECTION AGENCY (OEPA) NOTIFICATION OF DEMOLITION AND RENOVATION FORM WITH SECTIONS I-VII, X, XI AND XVI COMPLETED IS INCLUDED WITH THE BID PACKAGE. A COPY OF THIS FORM SIGNED BY THE BRIDGE OWNER WILL BE PROVIDED TO THE SUCCESSFUL BIDDER. THE CONTRACTOR SHALL COMPLETE SECTIONS VII, IX, XI-XIII OF THE SIGNED FORM AND SUBMIT THE COMPLETED FORM TO THE LOCAL AIR AUTHORITY AT LEAST TEN (10) DAYS PRIOR TO DEMOLITION OF THE BRIDGE DECKS. THE CONTRACTOR SHALL ALSO
PROVIDE A COPY OF THE COMPLETED FORM TO THE ENGINEER. THE LOCAL AIR AUTHORITY IS:

CLEVELAND BOARD OF HEALTH
DIVISION OF AIR POLLUTION
1925 ST. CLAIR AVENUE
CLEVELAND, OHIO 44114
ATTENTION: SHARON MCDUFFY
PHONE: (216) 664-2300

A COPY OF THE OHIO DEPARTMENT OF HEALTH NOTIFICATION FORM IS INCLUDED WITH THE BID PACKAGE. A COPY OF THIS FORM SHOULD BE COMPLETED AND SUBMITTED TO THE OHIO DEPARTMENT OF HEALTH AT LEAST TEN (10) DAYS PRIOR TO THE DEMOLITION OF THE BRIDGE DECKS. THE CONTRACTOR SHALL PROVIDE A COPY OF THE COMPLETED FORM TO THE ENGINEER.

THE CONTRACTOR SHALL PROVIDE AN INDIVIDUAL TRAINED IN THE PROVISIONS OF NESHAP THAT WILL BE ON-SITE DURING REMOVAL OF THE ASBESTOS CONTAINING MATERIALS. IN ADDITION TO THE ASBESTOS CONTAINING MATERIAL IDENTIFIED IN THE ASBESTOS SURVEY REPORT, ANY ADDITIONAL ASBESTOS CONTAINING MATERIALS ENCOUNTERED WITHIN THE PROJECT WORK LIMITS SHALL ALSO BE MONITORED BY THIS INDIVIDUAL.

THE CONTRACTOR SHALL FURNISH ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO COMPLETE, SUBMIT, AND COMPLY WITH THE OEPA NOTIFICATION FORM AND TO REMOVE, TRANSPORT, AND DISPOSE OF THE MATERIALS CONTAINING ASBESTOS FROM WITHIN THE PROJECT WORK LIMITS. PAYMENT OF THIS WORK SHALL BE INCLUDED IN THE BID FOR LUMP SUM PRICE ITEM SPECIAL - ASBESTOS ABATEMENT.

ITEM SPECIAL - ASBESTOS ABATEMENT LUMP SUM

ITEM 518-150mm PERFORATED CORRUGATED PLASTIC PIPE, AS PER PLAN

CORRUGATED PIPE USED IN ABUTMENT DRAINAGE SHALL BE 150mm DIAMETER PLASTIC CORRUGATED AS PER CMS 707.33, AASHTO M294, TYPE SP.

ITEM 518-150mm NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS, AS PER PLAN

CORRUGATED PIPE USED IN ABUTMENT DRAINAGE SHALL BE 150mm DIAMETER PLASTIC CORRUGATED AS PER CMS 707.33 AASHTO M294, TYPE S. THIS ITEM SHALL INCLUDE ALL ELBOWS, TEES AND END CAPS REQUIRED TO COMPLETE THE ABUTMENT DRAINAGE SYSTEM AS WELL AS CRUSHED AGGREGATE SLOPE PROTECTION MATERIAL PER CMS 601.05 AT THE PIPE OUTLET.

See Rev. Sht. 2 back.

metric units

URS Greiner

DESIGNED BY: RSC	CHKD BY:
DATE: 5/15/97	DATE:
DRAWN BY: FFF	REVISED BY:
DATE: 5/30/97	DATE:
CAD FILE NAME: J:\020054?\BRIDGE\STRNOTES	

DESIGNED LAG | DRAWN FFF | REVIEWED RSC | DATE 6/05/98

STRUCTURE GENERAL NOTES

STRUCTURE GENERAL NOTES

(ALL REFERENCES TO THE DIRECTOR IN THESE NOTES SHALL BE CONSTRUED AS THE COUNTY ENGINEER OR HIS AUTHORIZED REPRESENTATIVE)

metric units

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DESIGNED BY: RSC	CHECKED BY:
DATE: 5/15/97	DATE:
DRAWN BY: FFF	REVISED BY: MAL
DATE: 5/30/97	DATE: 10/27/98
CAD FILE NAME: J:\D200547\BRIDGE\STRNOTES	

URS Greiner Engineering & Architectural Services

DESIGNED	LJG
DRAWN	F.F.F.
REVIEWED	RSC
DATE	6/05/98

STRUCTURE GENERAL NOTES

ESTIMATED QUANTITES

* SEE PROPOSAL NOTE
** 100% COUNTY FUNDS

QUANTITIES			
CALCULATED BY:	LJG	DATE:	3/97
CHECKED BY:	RSC	DATE:	6/97

REF NO.	ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	BRIDGE NO. 209 SUPER.	ABUT.	PIERS	GEN.	TOTAL	BRIDGE NO. 210 SUPER.	ABUT.	PIERS	GEN.	TOTAL	AS PER PLAN SHEET NO.	REF NO.
124	202	11201	LUMP		PORTIONS OF STRUCTURE REMOVED, AS PER PLAN				LUMP					LUMP		1	124
125	202	98100	4	EACH	REMOVAL MISC.: BRONZE PLAQUE REMOVED FOR RE-USE	2				2	2				2	2	125
126	503	11101	LUMP		COFFERDAMS, CRIBS AND SHEETING, AS PER PLAN				LUMP	LUMP				LUMP	LUMP	3	126
127	511	33404	860	CU. METERS	CLASS S CONCRETE, SUPERSTRUCTURE (USING SHRINKAGE COMPENSATING CEMENT)	410				410	250				250		127
128	511	33410	LUMP		CLASS S CONCRETE, USING SHRINKAGE COMPENSATING CEMENT, FOR PRE-PLACEMENT TESTING				LUMP	LUMP				LUMP	LUMP		128
129	511	34440	370	SQ. METER	CLASS S CONCRETE, MISC.: SIDEWALK WEARING SURFACE, AS PER PLAN **	230				230	140				140	3	129
130	511	45700	57	CU. METERS	CLASS C CONCRETE, ABUTMENT		29			29		28			28		130
131	SPECIAL	51267502	2572	SQ. METER	SEALING OF CONCRETE SURFACES (EPOXY) *	772	171	765		1708	470	174	220		864		131
132	863	10200	6690	KILOGRAM	STRUCTURAL STEEL MEMBERS, MISCELLANEOUS LEVEL FABRICATION	4169				4169	2521				2521		132
133	863	20000	6723	EACH	WELDED STUD SHEAR CONNECTORS	4185				4185	2538				2538		133
134	516	11211	92	METER	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN	47				47	45				45	3	134
135	516	45305	45	EACH	REFURBISH BEARING DEVICE, AS PER PLAN		18	9		27		18			18	2	135
136	516	47001	LUMP		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN	LUMP				LUMP	LUMP				LUMP	2	136
137	518	21200	86	CU. METER	POROUS BACKFILL WITH FILTER FABRIC		45			45		41			41		137
138	518	40001	108	METER	150mm PERFORATED CORRUGATED PLASTIC PIPE, AS PER PLAN		55			55		53			53	5	138
139	518	40011	20	METER	150mm NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS, AS PER PLAN		10			10		10			10	5	139
140	519	11100	12	SQ. METER	PATCHING CONCRETE STRUCTURE		3			3		3	6		9		140
141	SPECIAL	60739900	240	METER	VANDAL PROTECTION FENCE, 1.8 METER STRAIGHT, COATED FABRIC	150				150	90				90		141
142	815	00050	3160	SQ. METER	SURFACE PREPARATION OF EXISTING STEEL, SYSTEM OZEU	2020				2020	1140				1140		142
143	815	00056	3160	SQ. METER	FIELD PAINTING OF EXISTING STEEL, PRIME COAT, SYSTEM OZEU	2020				2020	1140				1140		143
144	815	00060	3160	SQ. METER	FIELD PAINTING OF EXISTING STEEL, INTERMEDIATE COAT, SYSTEM OZEU	2020				2020	1140				1140		144
145	815	00066	3160	SQ. METER	FIELD PAINTING OF EXISTING STEEL, FINISH COAT, SYSTEM OZEU	2020				2020	1140				1140		145
146	815	00504	40	MAN HOUR	GRINDING FINS, TEARS, SLIVERS	20				20	20				20		146
147	815	00508	693	METER	GRINDING FLANGE EDGE						693				693		147
148	815	00500	1	METER	CAULKING						1				1		148
149	845	10201	2114	SQ. METER	LATEX MODIFIED CONCRETE OVERLAY (32mm THICK), AS PER PLAN * *	1279				1279	835				835	3	149
150	SPECIAL	69071000	LUMP		ASBESTOS ABATEMENT	LUMP				LUMP	LUMP				LUMP		150

DESIGNED BY: RSC
DATE: X/XX/XX
DRAWN BY: FFF
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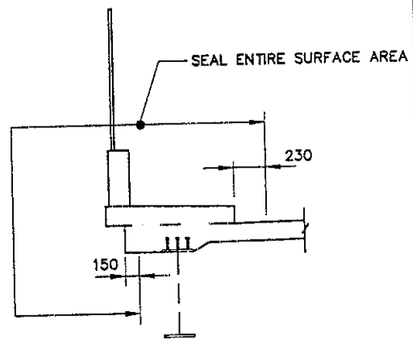
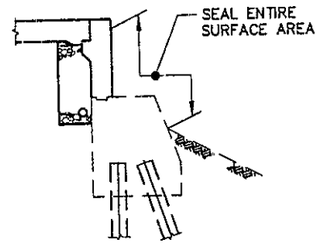
CAD FILE NAME: J:\200547\BRIDGE\ESTQUAN

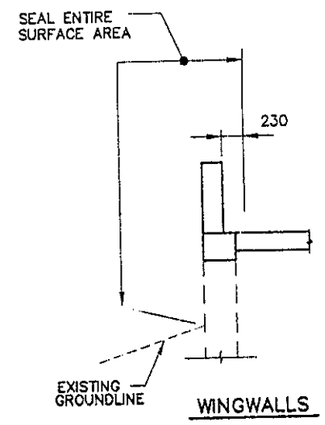
metric units



SUPERSTRUCTURE



ABUTMENTS



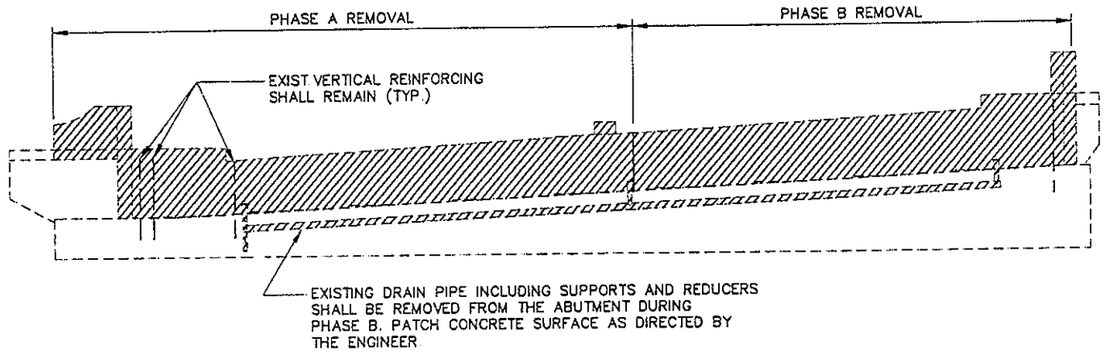
WINGWALLS

LIMITS OF SEALING CONCRETE SURFACES ①

① AT PIERS, SEAL ALL EXPOSED SURFACES EXCEPT FOR TOP OF PIER CAPS.

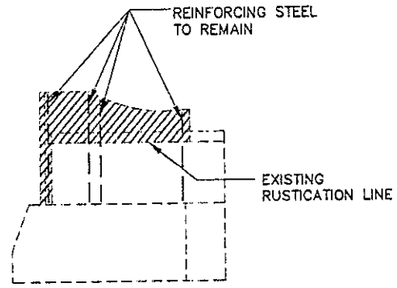
DATE 6/05/98
REVIEWED RSC
DRAWN FFF
DESIGNED

metric units

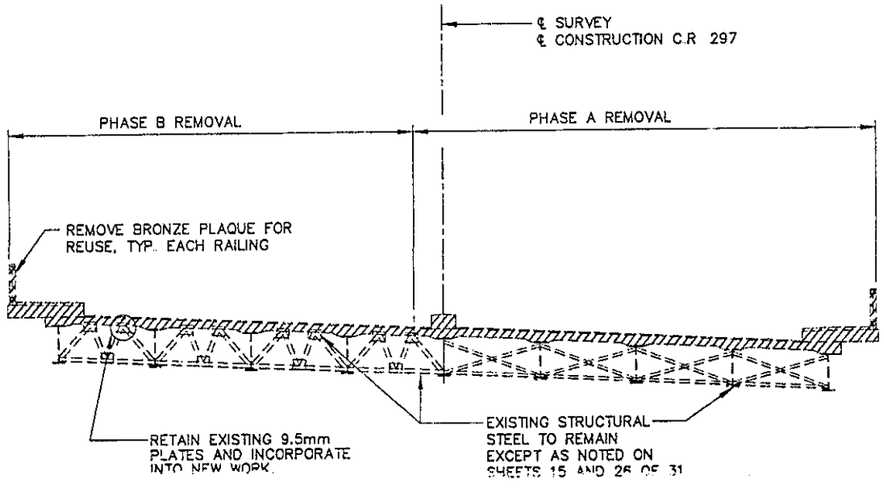


ABUTMENT ELEVATION

(WEST ABUTMENT SHOWN, EAST ABUTMENT OPP. HAND – BRIDGE 209)
(NORTH ABUTMENT SHOWN, SOUTH ABUTMENT OPP. HAND – BRIDGE 210)

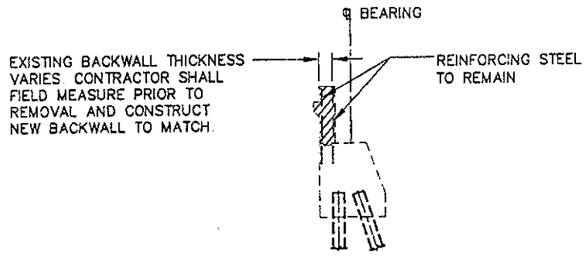


WINGWALL ELEVATION



TYPICAL SECTION *

*FOR ADDITIONAL DETAILS OF PHASED CONSTRUCTION METHODS AND DETAILS OF TEMPORARY SUPPORTS SEE MAINTENANCE OF TRAFFIC TYPICAL SECTIONS ON SHEETS 10 – 12.



ABUTMENT SECTION

LEGEND

▨ PORTION TO BE REMOVED

REMOVAL NOTES

ABUTMENTS:

REMOVAL INCLUDES BACKWALL CONCRETE DOWN TO THE EXISTING BEAMSEAT, WINGWALL PARAPETS AND A PORTION OF THE WINGWALL AS SHOWN, VERTICAL REINFORCING IN THE BACKWALLS AND WINGWALLS SHALL BE SALVAGED AND INCORPORATED INTO THE FINAL STRUCTURE, FOR ABUTMENT DETAILS SEE SHEETS 14 AND 25 OF 31.

PIERS:

REMOVAL INCLUDES ONLY THE EXISTING DRAIN PIPES AND SUPPORTS THAT ARE MOUNTED TO THE PIERS. DRAIN PIPE REMOVAL SHALL BE PERFORMED IN PHASE B. PATCHING OF THE CONCRETE SURFACES AFTER PIPES ARE REMOVED SHALL BE AT THE DIRECTION OF THE ENGINEER. IN ACCORDANCE WITH THE GENERAL NOTE ON SHEET 2 OF 31.

SUPERSTRUCTURE:

REMOVAL INCLUDES THE ASPHALT WEARING SURFACE, DECK SLAB, SIDEWALKS, MEDIAN, METAL RAILING, LIGHT STANDARDS, EXPANSION JOINT ANGLES, GUTTER ANGLES AND DRAINAGE SYSTEM MEMBERS ATTACHED TO THE STEEL BEAMS. BRONZE PLAQUES ON THE EXISTING BRIDGE RAILINGS SHALL BE REMOVED AND RE-USED, SEE GENERAL NOTES

DESIGNED BY: RSC	CHECKED BY:		
DATE: X/XX/XX	DATE:		
DRAWN BY: FFF	REVISED BY:		
DATE: XX/XX/XX	DATE:		
CAD FILE NAME: J:\D200547\BRIDGE\REMOVAL			

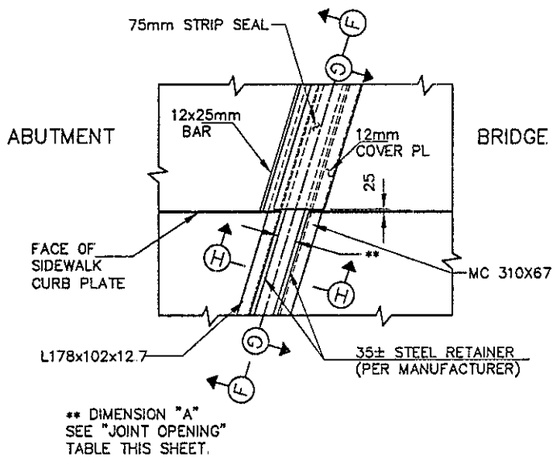
URS Greiner Engineering & Architectural Services

DESIGNED	DRAWN	REVIEWED	DATE
LJG	F.F.F.	RSC	6/05/98

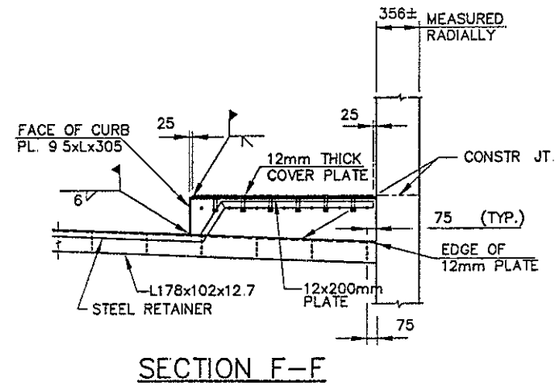
TYPICAL REMOVAL DETAILS

metric units

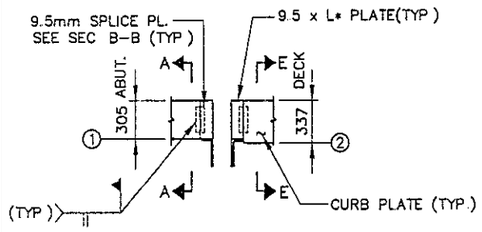
JOINT OPENING TABLE			
TEMPERATURE (°C)	DIMENSION "A" (mm)		
	BRIDGE 209	BRIDGE 210	
		NORTH	SOUTH
0	47	47	46
5	45	45	45
10	43	43	44
15	41	41	43
20	39	39	42
25	37	37	41
30	35	35	40
35	33	33	39



PLAN



SECTION F–F

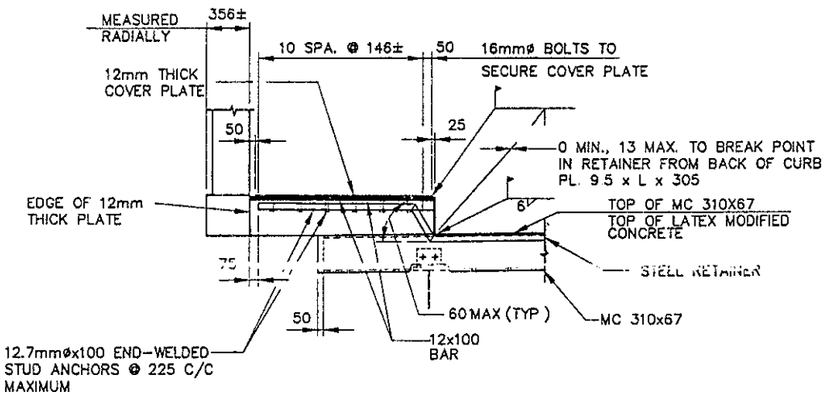


VIEW H–H

* L TO MATCH SKEWED WIDTH OF ANGLE LEG OR CHANNEL FLANGE
SEE SHEET 9 OF 31 FOR SECTIONS A–A, E E

① TOP OF CONCRETE APPROACH SLAB

② TOP OF PORTLAND CEMENT DECK SLAB PRIOR TO PLACEMENT OF LATEX MODIFIED CONCRETE OVERLAY (32mm BELOW TOP OF MC310X67)

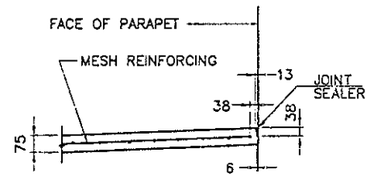


SECTION G–G

EXPANSION JOINT DETAILS

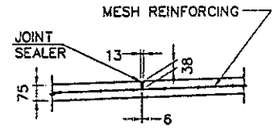
NOTE: FOR EXPANSION JOINT DETAILS NOT SHOWN SEE ODOT STANDARD DRAWING EXJ-4-87M, SECTIONS X–X & Y–Y

NOTE: JOINTS SHALL BE ITEM 705.04 (HOT APPLIED JOINT SEALER) TO BE INCLUDED WITH ITEM 511 CLASS "S" CONCRETE, SIDEWALK WEARING SURFACE AS PER PLAN, FOR PAYMENT



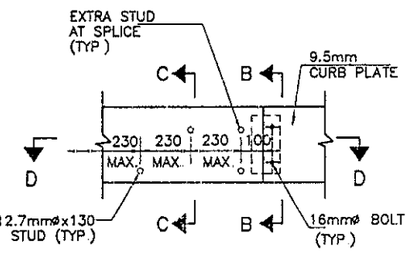
LONGITUDINAL SIDEWALK JOINT DETAIL

(USE THIS DETAIL OPPOSITE HAND AT CURBS SEE NOTE.)

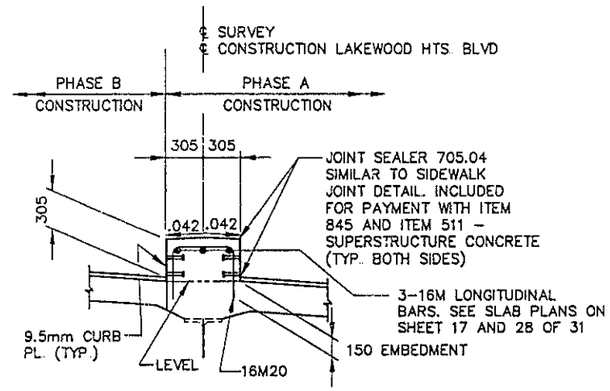


TRANSVERSE SIDEWALK JOINT DETAIL

(LOCATE AT 1525mm CENTERS MAX., SEE NOTE.)

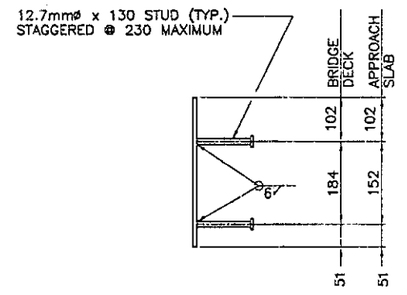


ELEVATION

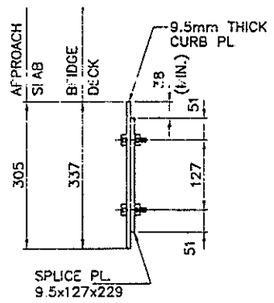


MEDIAN CURB DETAIL

(SEE VIEW H–H, THIS SHEET, SHEET 9 OF 31 FOR FOR TREATMENT AT EXPANSION JTS.)



SECTION C–C

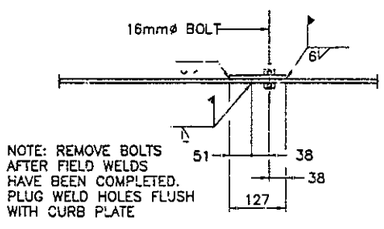


SECTION B–B

CURB PLATE RADII		
BRIDGE NO	CURB	RADIUS (m)
209	NORTH	445.431
	SOUTH	427 753
210	EAST	78.943
	WEST	61.265

CURB SPLICE PLATE DETAILS

ALL CURB PLATE AND SPLICE PLATE MATERIAL, 12.7mmø STUDS AND WELDING SHALL BE INCLUDED WITH ITEM 863 – STRUCTURAL STEEL MEMBERS–MISCELLANEOUS LEVEL FABRICATION FOR PAYMENT.



SECTION D–D

DESIGNED BY: RSC	CHECKED BY:
DATE: X/XX/XX	DATE:
DRAWN BY: FFF	REVISED BY:
DATE: 6/4/97	DATE:
CAD FILE NAME: J:\D20054700\BRIDGE\SUPEDET1	

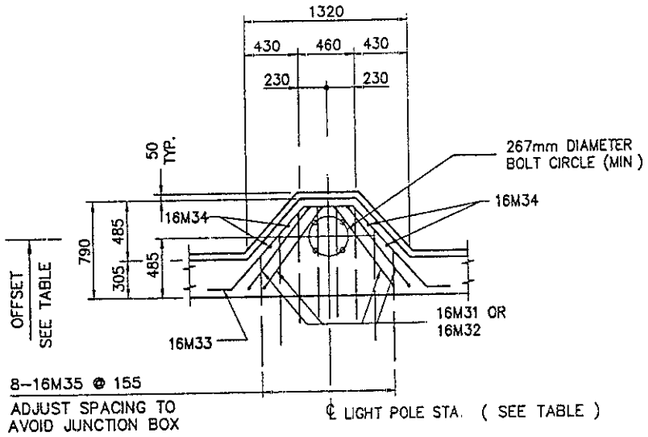
URS Greiner

DESIGNED RSC | DRAWN FFF | REVIEWED RSC | DATE 6/05/98

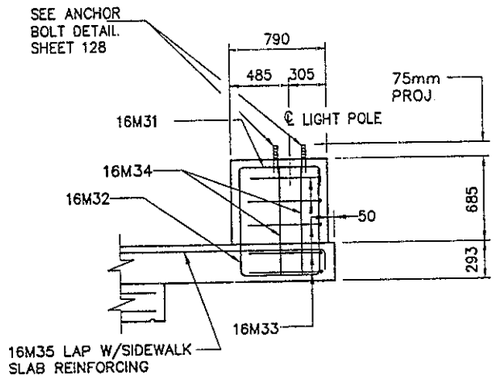
COMMON DETAILS I

8

metric units



PLAN



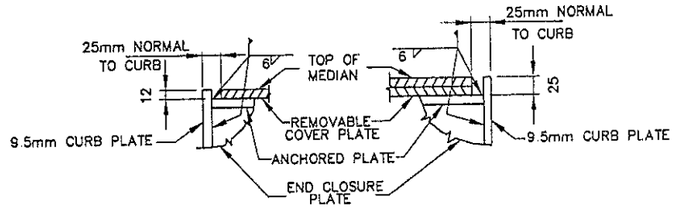
SECTION

LIGHT POLE LOCATION TABLE		
℄ STATION	DIST. LEFT (m)	DIST. RIGHT (m)
12+602.300	10.848	10.848
12+632.800	10.848	10.848
12+729.900	10.848	–
12+746.500	10.848	–

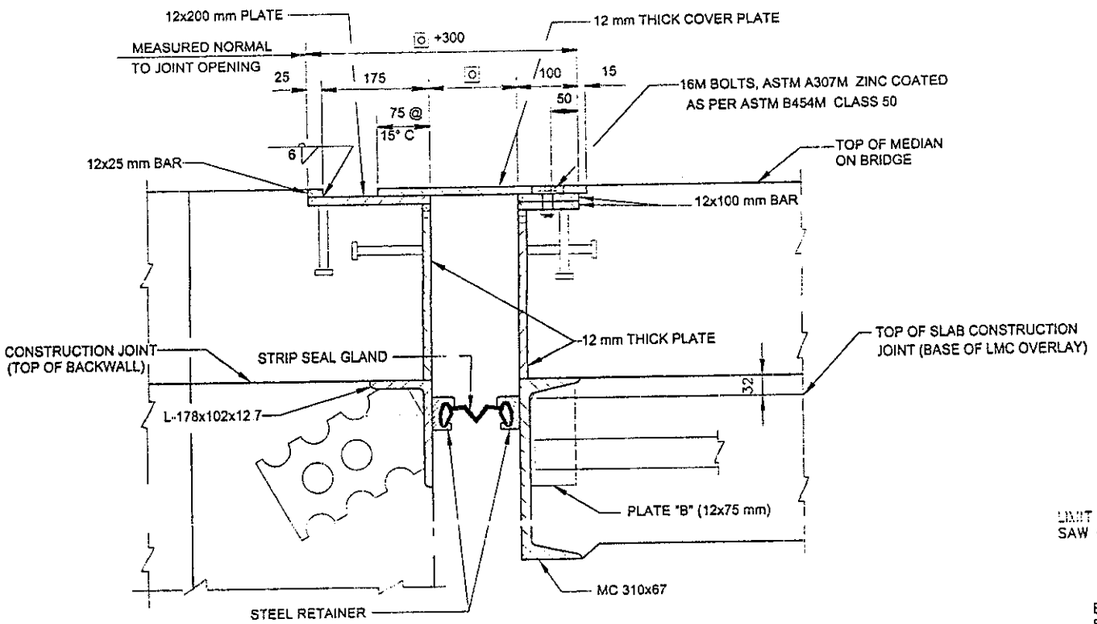
NOTES

1. FOR ADDITIONAL DETAILS NOT SHOWN HERE SEE ODOT STD. DWG. HL-20.14M AND SHEETS 125-131.
2. THE PREFIX "ES" SHALL BE ADDED TO ALL REINFORCING BAR MARKS SHOWN ON THIS SHEET. SEE SHEET 20 AND 31 OF 31 FOR REINFORCING SCHEDULES.
3. FOR LOCATIONS OF SECTION C-C AND D-D SEE SHEETS 12, 13, 23, AND 24 OF 31

LIGHT POLE PILASTER DETAILS



SECTION A-A SECTION E-E

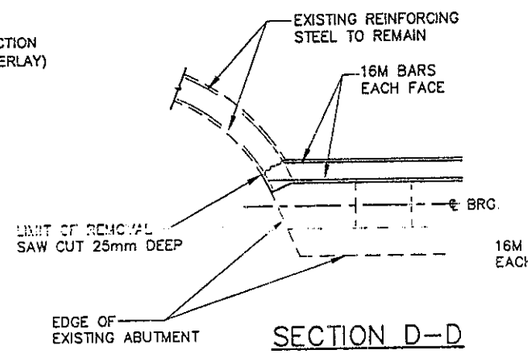


[o] - THIS DIMENSION IS THE SUM OF (2xSTEEL RETAINER WIDTH+DIM "A"). SEE JOINT OPENING TABLE ON SHEET 8 OF 31

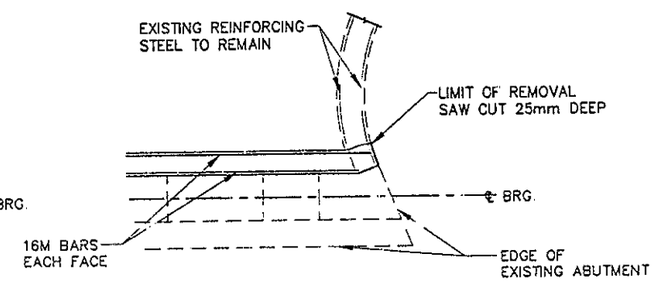
SECTION AT MEDIAN CURB

EXPANSION JOINT DETAILS

FOR DETAILS NOT SHOWN SEE ODOT STD DWG EXJ-4-87M



SECTION D-D



SECTION C-C

DESIGNED BY: RSC CHECKED BY:
DATE: X/XX/XX DATE:
DRAWN BY: FFF REVISED BY:
DATE: 6/4/97 DATE:
CAD FILE NAME: J:\020054700\BRIDGE\SUPEDET2

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DATE 6/05/98 | REVIEWED R.S.C. | DRAWN F.F.F. | DESIGNED L.J.C.

COMMON DETAILS II

metric units

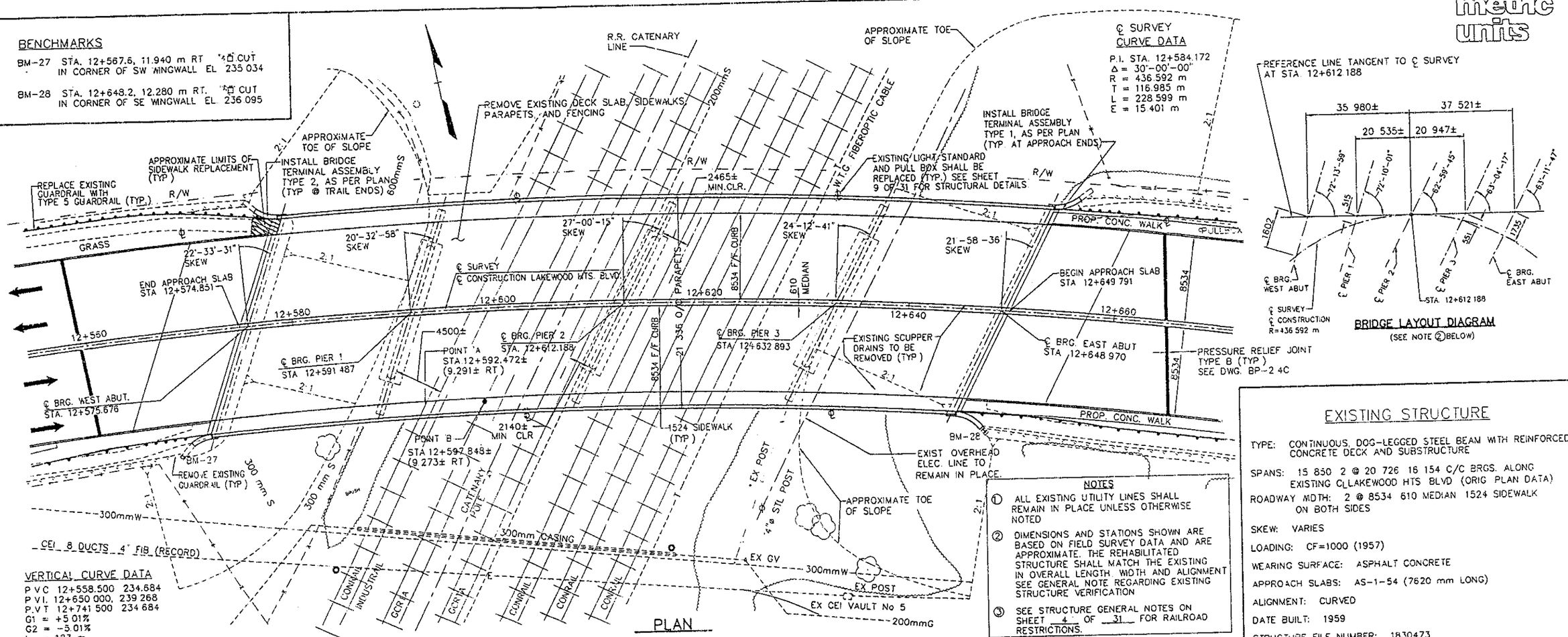
BENCHMARKS

BM-27 STA. 12+567.6, 11.940 m RT. "X" CUT IN CORNER OF SW WINGWALL EL. 235.034

BM-28 STA. 12+648.2, 12.280 m RT. "X" CUT IN CORNER OF SE WINGWALL EL. 236.095

℄ SURVEY CURVE DATA

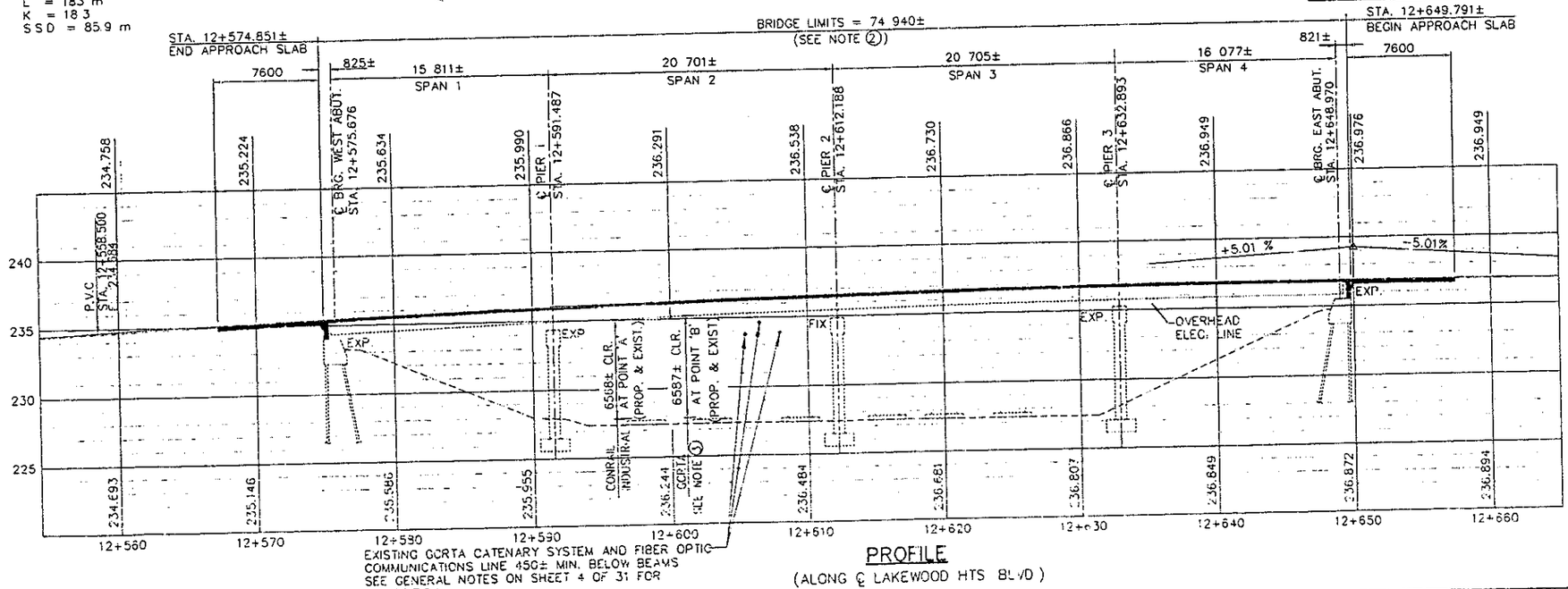
P.I. STA. 12+584.172
Δ = 30°-00'-00"
R = 436.592 m
T = 116.985 m
L = 228.599 m
E = 15.401 m



PLAN

VERTICAL CURVE DATA

P.V.C. 12+558.500 234.684
P.V.I. 12+650.000, 239.268
P.V.T. 12+741.500 234.684
G1 = +5.01%
G2 = -5.01%
L = 183 m
K = 18.3
S.S.D. = 85.9 m



EXISTING GCRTA CATENARY SYSTEM AND FIBER OPTIC COMMUNICATIONS LINE 450± MIN. BELOW BEAMS SEE GENERAL NOTES ON SHEET 4 OF 31 FOR DISPOSITION

PROFILE
(ALONG ℄ LAKEWOOD HTS BLVD)

BRIDGE LAYOUT DIAGRAM
(SEE NOTE ② BELOW)

NOTES

① ALL EXISTING UTILITY LINES SHALL REMAIN IN PLACE UNLESS OTHERWISE NOTED

② DIMENSIONS AND STATIONS SHOWN ARE BASED ON FIELD SURVEY DATA AND ARE APPROXIMATE. THE REHABILITATED STRUCTURE SHALL MATCH THE EXISTING IN OVERALL LENGTH, WIDTH AND ALIGNMENT SEE GENERAL NOTE REGARDING EXISTING STRUCTURE VERIFICATION

③ SEE STRUCTURE GENERAL NOTES ON SHEET 4 OF 31 FOR RAILROAD RESTRICTIONS.

EXISTING STRUCTURE

TYPE: CONTINUOUS, DOG-LEGGED STEEL BEAM WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE

SPANS: 15 850 2 @ 20 726 16 154 C/C BRGS. ALONG EXISTING ℄LAKEWOOD HTS BLVD (ORIG PLAN DATA)

ROADWAY WIDTH: 2 @ 8534 610 MEDIAN 1524 SIDEWALK ON BOTH SIDES

SKEW: VARIES

LOADING: CF=1000 (1957)

WEARING SURFACE: ASPHALT CONCRETE

APPROACH SLABS: AS-1-54 (7620 mm LONG)

ALIGNMENT: CURVED

DATE BUILT: 1959

STRUCTURE FILE NUMBER: 1830473

REHABILITATED STRUCTURE

PROPOSED WORK: NEW REINFORCED CONCRETE DECK, SIDEWALKS, PARAPETS AND FENCING ON EXISTING STEEL BEAMS AND NEW ABUTMENT BACKWALLS ON EXISTING ABUTMENTS

TYPE: CONTINUOUS, DOG-LEGGED STEEL BEAMS MADE COMPOSITE WITH REINFORCED CONCRETE DECK

SPANS: 15 850. 2 @ 20 726 16 154 C/C BRGS. ALONG EXISTING ℄LAKEWOOD HTS BLVD (ORIG PLAN DATA)

ROADWAY WIDTH: 2 @ 8534 610 MEDIAN 1524 SIDEWALK ON BOTH SIDES

SKEW: VARIES

LOADING: MS18 AND ALT MILITARY (CASE II)

WEARING SURFACE: LATEX MODIFIED CONCRETE

APPROACH SLABS: AS-1-81M (7600 mm LONG)

ALIGNMENT: CURVED

SUPERELEVATION: FULL, 0.042

LATITUDE: N 41°-28'-12" LONGITUDE: W 81°-46'-49"

ADT (2000): 3650
ADT(2020): 4000 — WATERBURY ROAD TO BEREA ROAD AS PER ODOT I.O.C. DATED 11/13/96
ADTT(2020): 160

See Sht. 8 ct. B

URS Greiner Engineering Excellence Delivered

DATE 6/05/98
REVISED RSC
DRAWN HWC
DESIGNED LJC
CUYAHOGA COUNTY

SITE PLAN

DESIGNED BY: XXX CHECKED BY:
DATE: X/X/XX ITE:
DRAWN BY: XXX REVISED BY: MAL
DATE: X/X/XX DATE: 6/19/98
CAD FILE NAME: D200547/BRIDGE/BSIT209

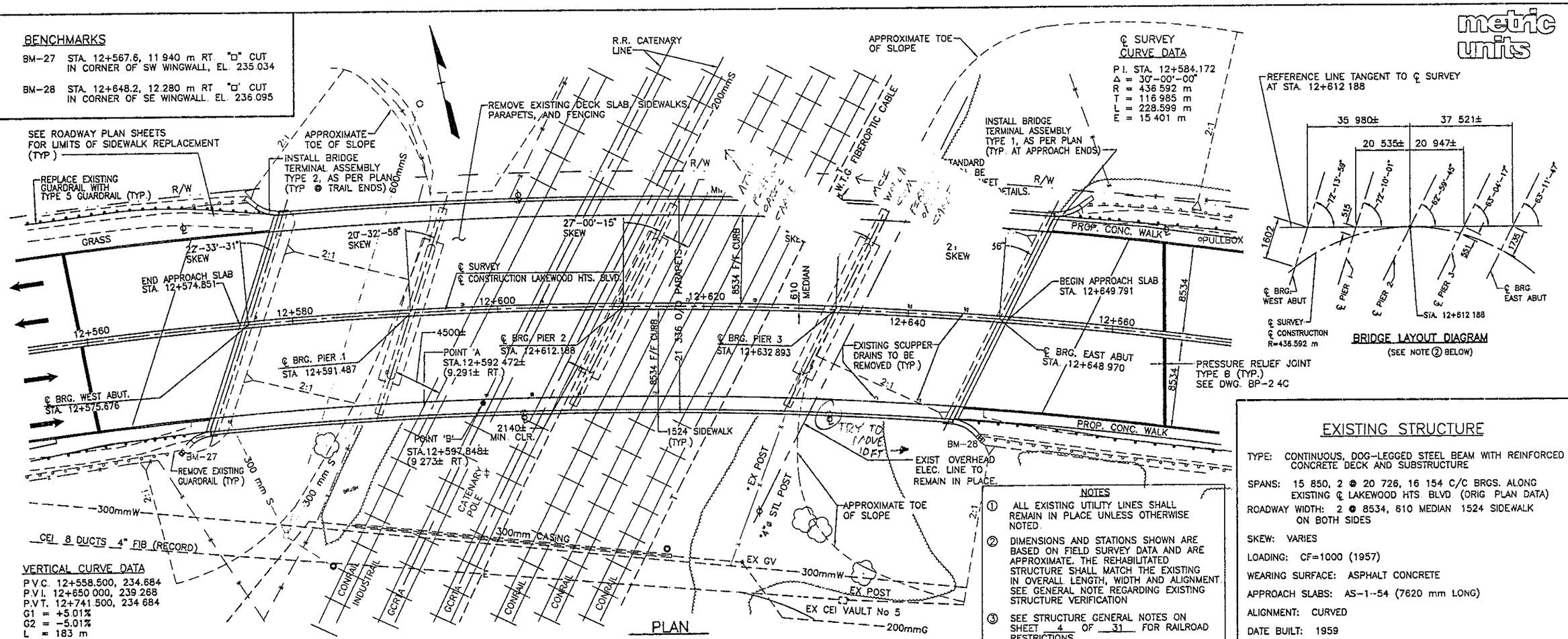
P:\D200547\BRIDGE\BSIT0100.DWG

metric units

BENCHMARKS

BM–27 STA. 12+567.6, 11 940 m RT. "□" CUT IN CORNER OF SW WINGWALL, EL. 235.034

BM–28 STA. 12+648.2, 12.280 m RT. "□" CUT IN CORNER OF SE WINGWALL. EL. 236.095



PLAN

VERTICAL CURVE DATA

P.V.C. 12+558.500, 234.684
P.V.I. 12+650 000, 239.268
P.V.T. 12+741.500, 234 684
G1 = +5.01%
G2 = –5.01%
L = 183 m
K = 18 3
S.S.D. = 85.9 m

℄ SURVEY CURVE DATA

P.I. STA. 12+584.172
Δ = 30°–00'–00"
R = 436 592 m
T = 116 985 m
L = 228.599 m
E = 15 401 m

BRIDGE LAYOUT DIAGRAM
(SEE NOTE ② BELOW)

NOTES

① ALL EXISTING UTILITY LINES SHALL REMAIN IN PLACE UNLESS OTHERWISE NOTED.

② DIMENSIONS AND STATIONS SHOWN ARE BASED ON FIELD SURVEY DATA AND ARE APPROXIMATE. THE REHABILITATED STRUCTURE SHALL MATCH THE EXISTING IN OVERALL LENGTH, WIDTH AND ALIGNMENT. SEE GENERAL NOTE REGARDING EXISTING STRUCTURE VERIFICATION

③ SEE STRUCTURE GENERAL NOTES ON SHEET 4 OF 31 FOR RAILROAD RESTRICTIONS.

EXISTING STRUCTURE

TYPE: CONTINUOUS, DOG–LEGGED STEEL BEAM WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE

SPANS: 15 850, 2 @ 20 726, 16 154 C/C BRGS. ALONG EXISTING ℄ LAKEWOOD HTS. BLVD (ORIG PLAN DATA)

ROADWAY WIDTH: 2 @ 8534, 610 MEDIAN 1524 SIDEWALK ON BOTH SIDES

SKEW: VARIES

LOADING: CF=1000 (1957)

WEARING SURFACE: ASPHALT CONCRETE

APPROACH SLABS: AS–1–54 (7620 mm LONG)

ALIGNMENT: CURVED

DATE BUILT: 1959

STRUCTURE FILE NUMBER: 1830473

REHABILITATED STRUCTURE

PROPOSED WORK: NEW REINFORCED CONCRETE DECK, SIDEWALKS, PARAPETS AND FENCING ON EXISTING STEEL BEAMS AND NEW ABUTMENT BACKWALLS ON EXISTING ABUTMENTS.

TYPE: CONTINUOUS, DOG–LEGGED STEEL BEAMS MADE COMPOSITE WITH REINFORCED CONCRETE DECK

SPANS: 15 850, 2 @ 20 726, 16 154 C/C BRGS. ALONG EXISTING ℄ LAKEWOOD HTS. BLVD. (ORIG. PLAN DATA.)

ROADWAY WIDTH: 2 @ 8534, 610 MEDIAN, 1524 SIDEWALK ON BOTH SIDES

SKEW: VARIES

LOADING: MS18 AND ALT MILITARY (CASE II)

WEARING SURFACE: LATEX MODIFIED CONCRETE

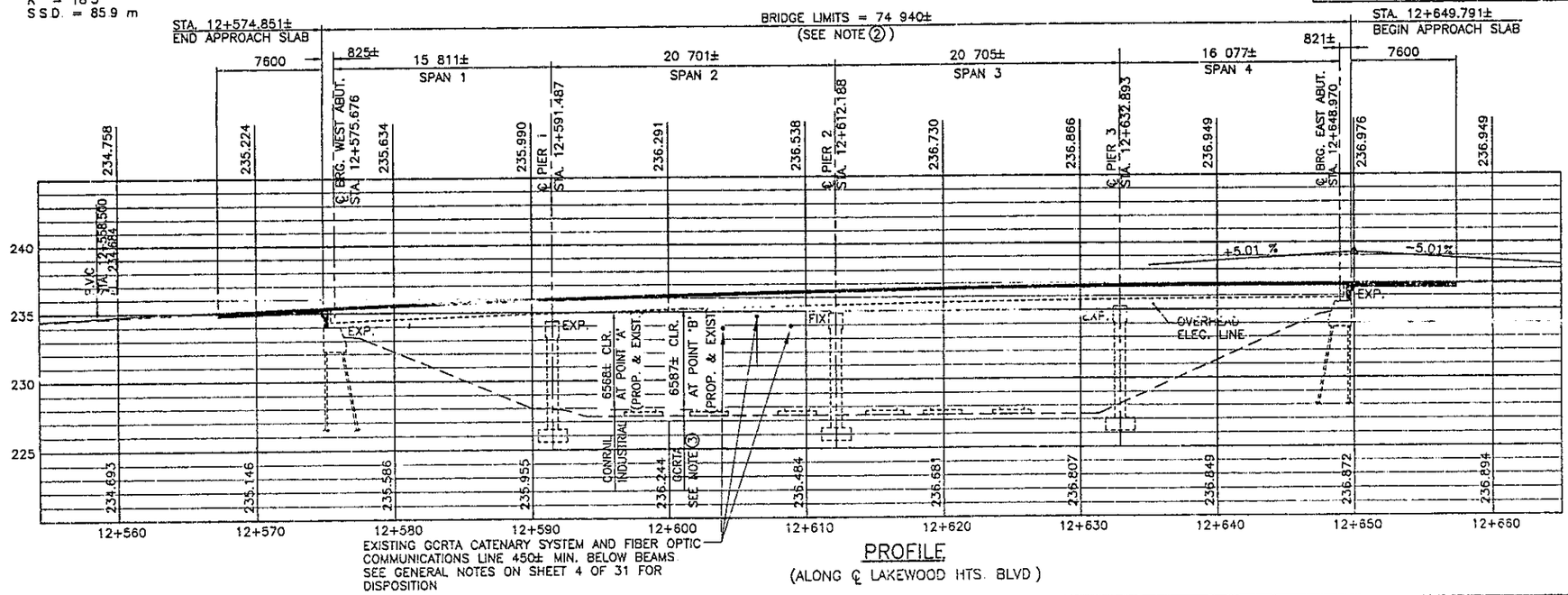
APPROACH SLABS: AS–1–81M (7600 mm LONG)

ALIGNMENT: CURVED

SUPERELEVATION: FULL 0.042

LATITUDE: N 41°–28'–12" LONGITUDE: W 81 –46 –49"

ADT (2000): 3650
ADT(2020): 4000 — WATERBURY ROAD TO BEREA ROAD AS PER ODOT T.O.C. DATED 11/13/96
ADTT(2020): 160



EXISTING GCRTA CATENARY SYSTEM AND FIBER OPTIC COMMUNICATIONS LINE 450± MIN. BELOW BEAMS. SEE GENERAL NOTES ON SHEET 4 OF 31 FOR DISPOSITION

PROFILE
(ALONG ℄ LAKEWOOD HTS. BLVD.)

DESIGNED BY: XXX	CHECKED BY:		
DATE: X/X/XX	DATE:		
DRAWN BY: XXX	REVISED BY: MAL		
DATE: X/X/XX	DATE: 10/27/98		
CAD FILE NAME: D200547/BRIDGE/BSIT209			

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URS Greiner Engineering & Architectural Services
564 WHITE POND DRIVE

DATE 6/05/98
REVISED RSC
DRAWN HWC
DESIGNED LJG
CHECKED
STRUCTURE FILE NUMBER

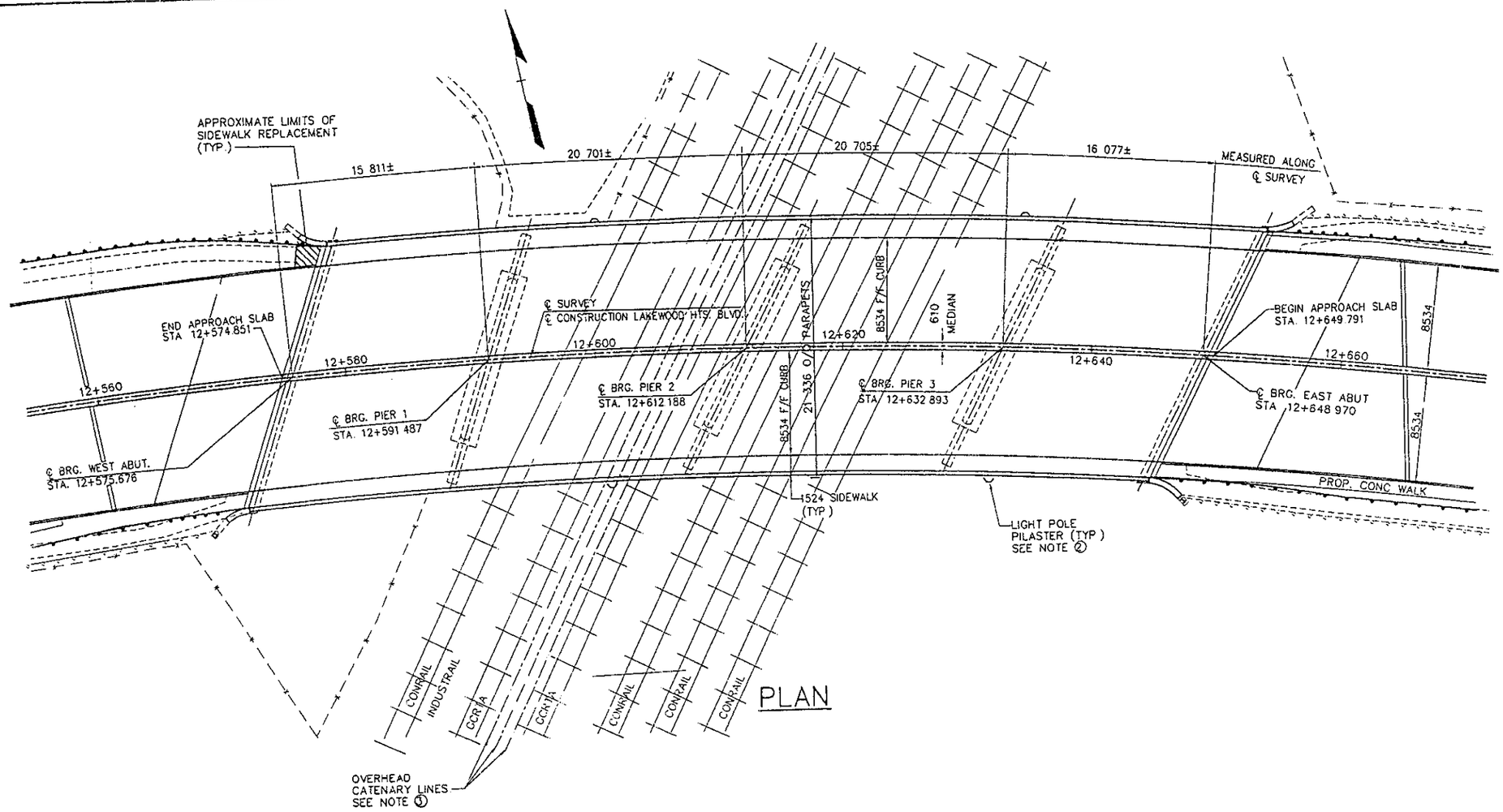
CUYAHOGA COUNTY
STA. 12+574.851

SITE PLAN
CUYAHOGA COUNTY BRIDGE NO. 209

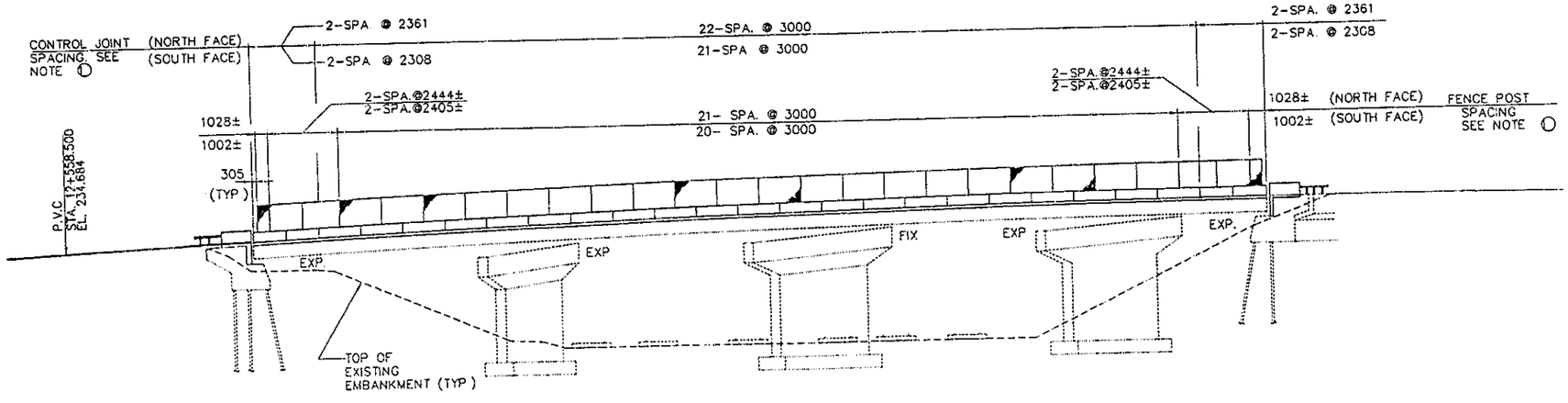
CUY–LAKEWOOD H.S. BLVD.

10
11
14
16

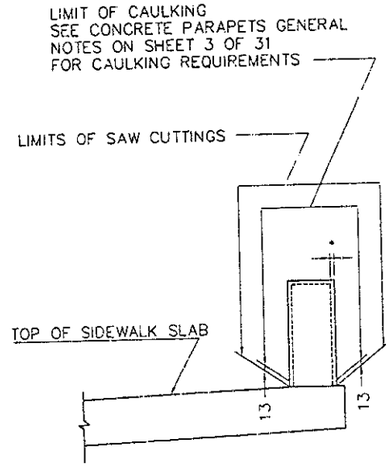
metric units



PLAN



ELEVATION



SAW CUT JOINT DETAIL

NOTES

① FENCE POST SPACINGS SHOWN ARE MEASURED ALONG THE INSIDE FACE OF THE PARAPET. CONTROL JOINTS SHALL BE LOCATED BETWEEN THE POSTS AS SHOWN. SEE STD DWG VPF-1-90M FOR FENCE DETAILS.

② FOR DETAILS OF LIGHT POLE PILASTERS SEE SHEET 9 OF 31 AND SHEETS 125-131.

③ SEE STRUCTURE GENERAL NOTES FOR REQUIREMENTS REGARDING DISPOSITION OF THE EXISTING RTA CATENARY POWER (600 VOLTS D.C.)

See Rel. Sht. # Back

URS Greiner

DATE 6/05/98
REVIEWED RSC
DRAWN FFF
DESIGNED J.JC

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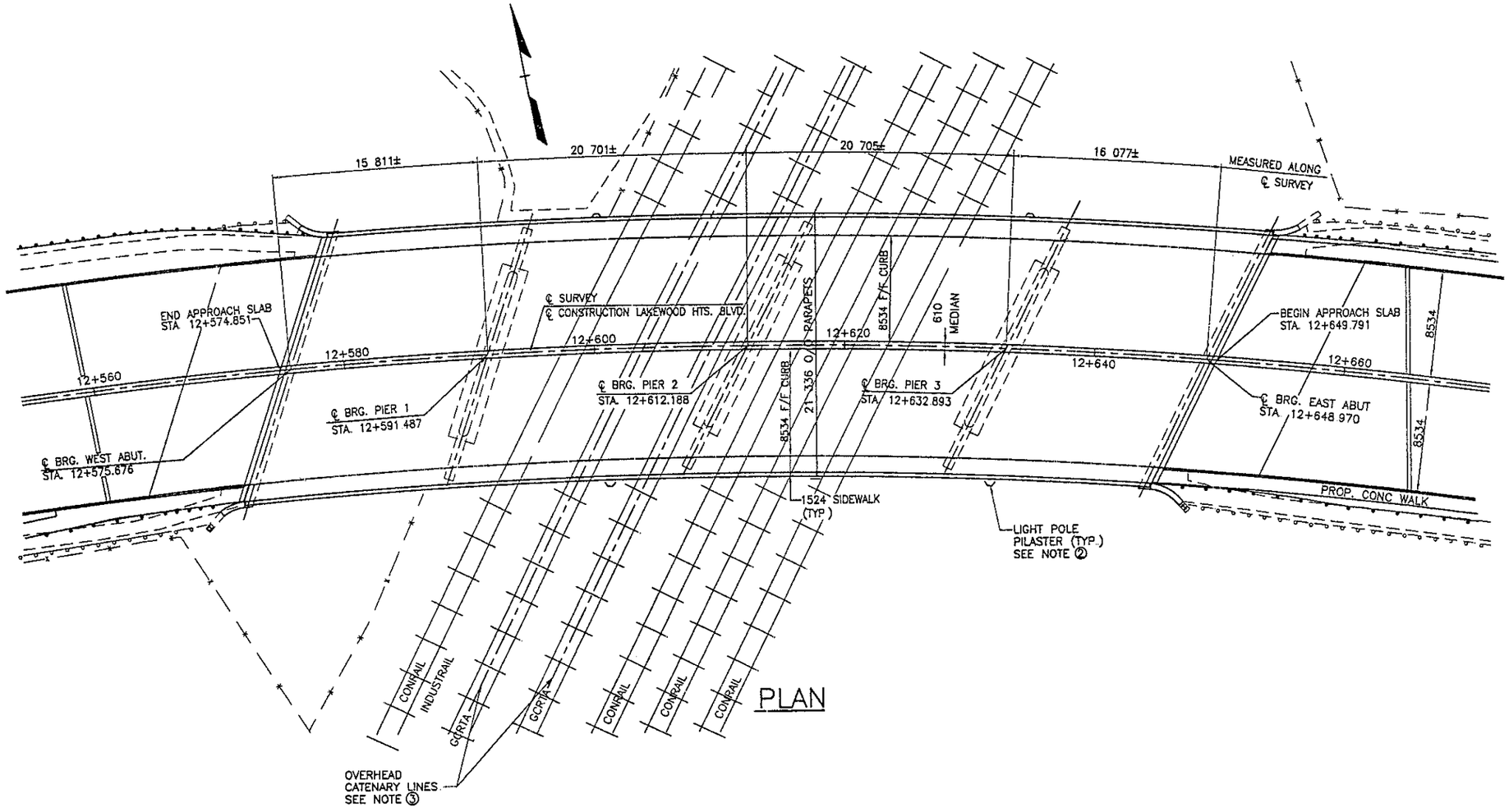
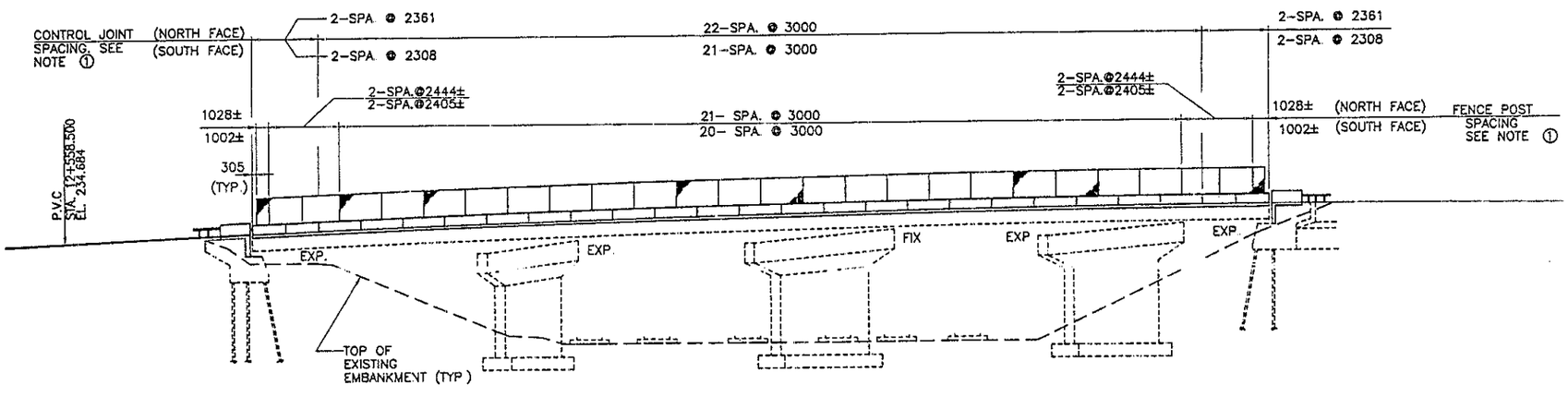
DATE: 6/6/97 | DATE:
CAD FILE NAME: J:\D2005\4700\BRIDGE\GENPL209

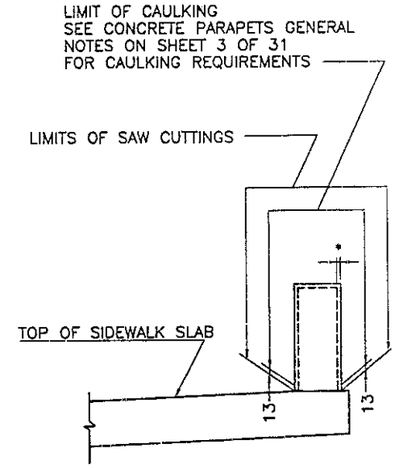
metric units



PLAN



ELEVATION



* SAWCUT 25mm DEEP (TYP.)

SAW CUT JOINT DETAIL

NOTES

① FENCE POST SPACINGS SHOWN ARE MEASURED ALONG THE INSIDE FACE OF THE PARAPET. CONTROL JOINTS SHALL BE LOCATED BETWEEN THE POSTS AS SHOWN SEE STD DWG VPF-1-90M FOR FENCE DETAILS.

② FOR DETAILS OF LIGHT POLE PILASTERS SEE SHEET 9 OF 31 AND SHEETS 125-131.

③ SEE STRUCTURE GENERAL NOTES FOR REQUIREMENTS REGARDING DISPOSITION OF THE EXISTING RTA CATENARY POWER (600 VOLTS D.C.)

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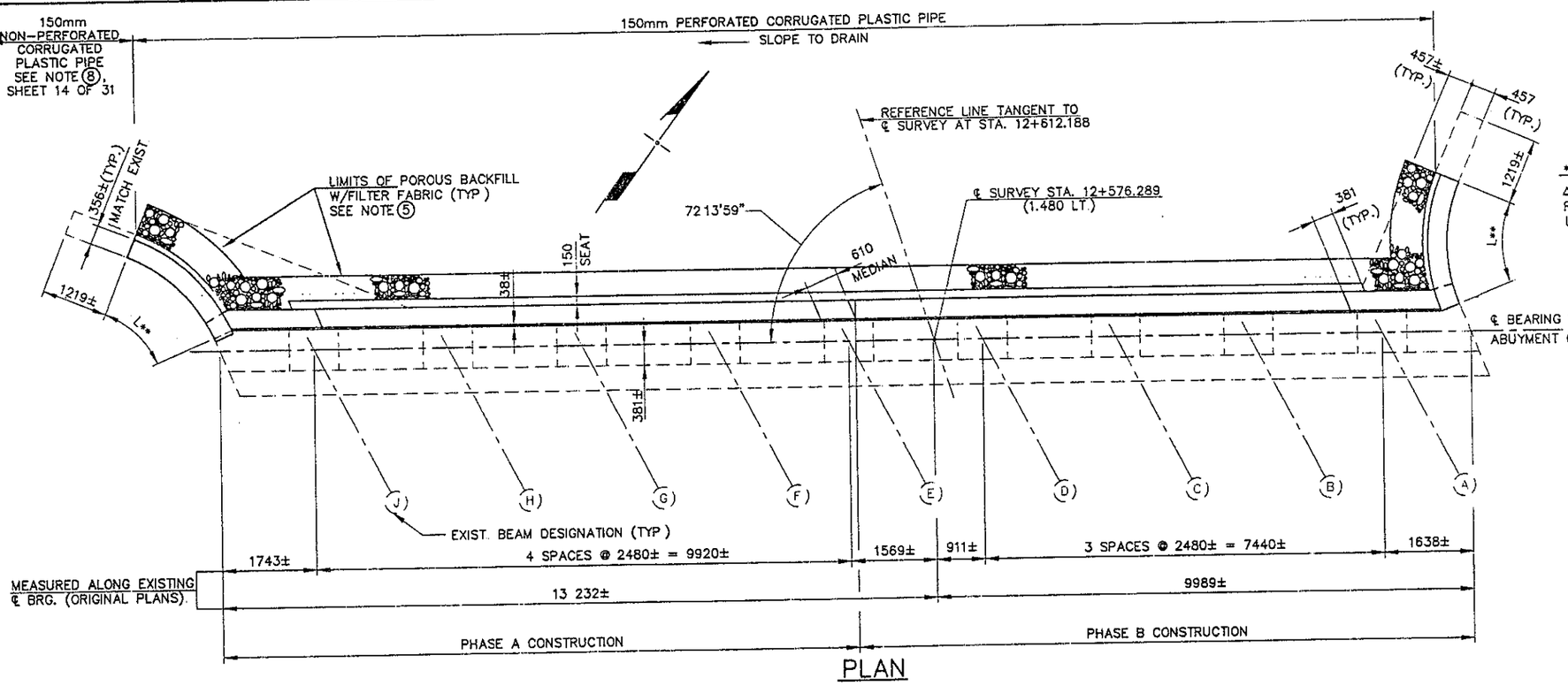
GENERAL PLAN AND ELEVATION

1

metric units



PLAN

** WINGWALL CURVE DATA (TYP.)

Δ = 45°00'00"
R = 2.921m ALONG OUTSIDE FACE
L = 2296± ALONG OUTSIDE FACE

NOTES

① FOR SECTIONS C–C AND D–D, SEE SHEET 9 OF 31. FOR WINGWALL DETAILS, AND SECTION A–A SEE SHEET 14 OF 31.

② ALL REINFORCING STEEL SHALL BE EPOXY COATED.

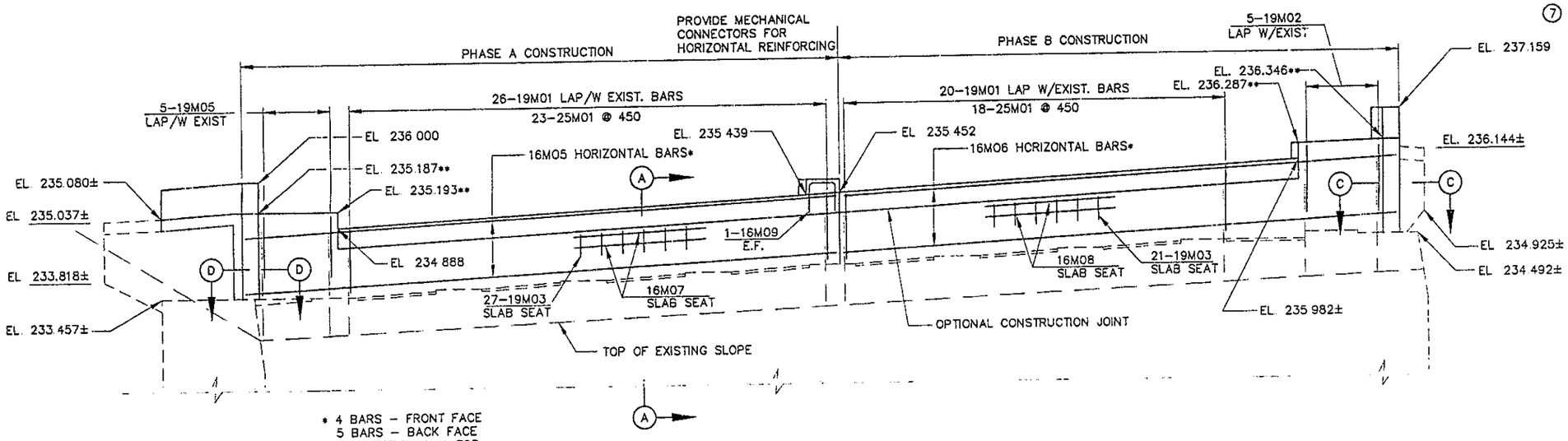
③ ALL EXCAVATION REQUIRED FOR THE REHABILITATION OF THE WEST ABUTMENT SHALL BE INCLUDED WITH ITEM 202 – PORTIONS OF STRUCTURE REMOVED, AS PER PLAN FOR PAYMENT

④ NEW REINFORCING STEEL MAY REQUIRE FIELD CUTTING OR BENDING TO BE PROPERLY FITTED PAYMENT SHALL BE INCLUDED WITH THE PERTINENT CONCRETE ITEM.

⑤ POROUS BACKFILL WITH FILTER FABRIC, 600mm THICK SHALL EXTEND UP TO THE PLANE OF THE SUBGRADE AND LATERALLY TO THE ENDS OF THE WINGWALL PARAPETS AS SHOWN

⑥ THE PREFIX "EA" SHOULD BE ADDED TO THE BAR MARKS SHOWN ON THIS SHEET. SEE THE REINFORCING SCHEDULE ON SHEET 20 OF 31.

⑦ ELEVATIONS SHOWN AS ± ARE FIELD SURVEY ELEVATIONS WHICH MUST BE VERIFIED



ELEVATION
(SEE NOTE ⑦)

* 4 BARS – FRONT FACE
5 BARS – BACK FACE
SEE SECTION A–A FOR PLACEMENT SEE NOTE ④

** ELEVATIONS SHOWN ARE TO TOP OF SIDEWALK SURFACE.

EXISTING BEAMSEAT ELEVATIONS*	
A	234.512±
B	234.378±
C	234.255±
D	234.119±
E	233.999±
F	233.872±
G	233.736±
H	233.595±
J	233.457±

* BASED ON FIELD SURVEY

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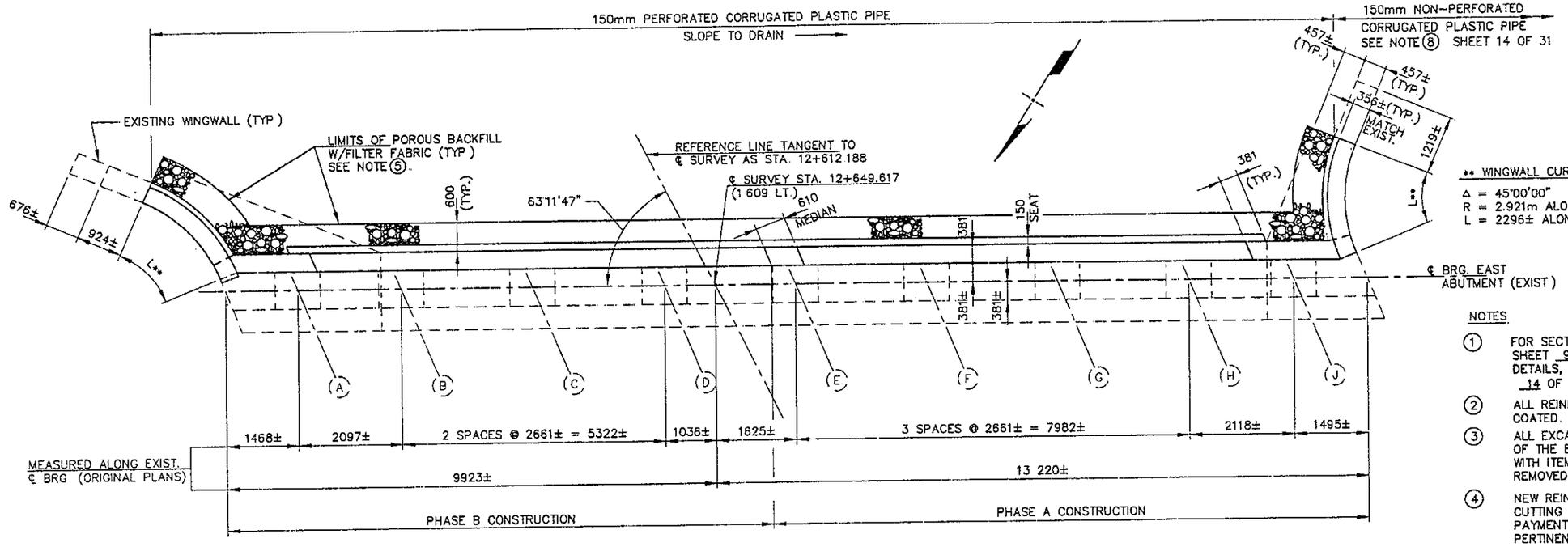
WEST ABUTMENT

12

metric units



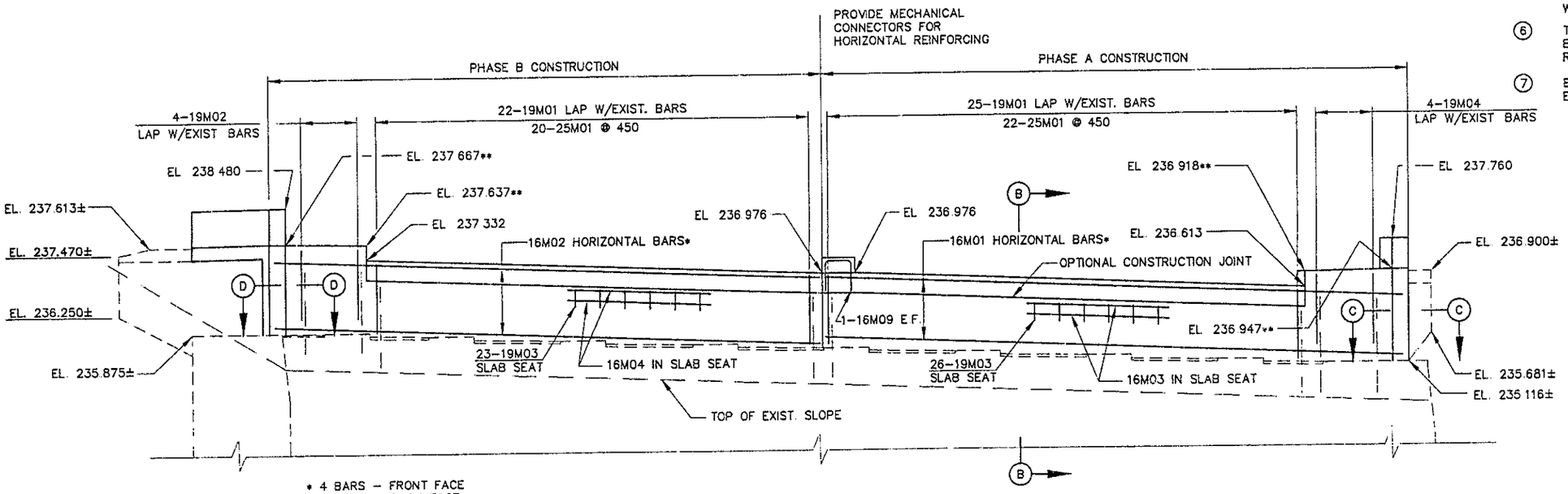
** WINGWALL CURVE DATA (TYP.)

Δ = 45°00'00"
R = 2.921m ALONG OUTSIDE FACE
L = 2296± ALONG OUTSIDE FACE

NOTES

1. FOR SECTIONS C–C AND D–D, SEE SHEET 9 OF 31. FOR WINGWALL DETAILS, AND SECTION B–B SEE SHEET 14 OF 31.
2. ALL REINFORCING STEEL SHALL BE EPOXY COATED.
3. ALL EXCAVATION REQUIRED FOR THE REHABILITATION OF THE EAST ABUTMENT SHALL BE INCLUDED WITH ITEM 202 – PORTIONS OF STRUCTURE REMOVED, AS PER PLAN FOR PAYMENT.
4. NEW REINFORCING STEEL MAY REQUIRE FIELD CUTTING OR BENDING TO BE PROPERLY FITTED PAYMENT SHALL BE INCLUDED WITH THE PERTINENT CONCRETE ITEM.
5. POROUS BACKFILL WITH FILTER FABRIC, 600mm THICK SHALL EXTEND UP TO THE PLANE OF THE SUBGRADE AND LATERALLY TO THE ENDS OF THE WINGWALL PARAPETS AS SHOWN
6. THE PREFIX "EA" SHOULD BE ADDED TO THE BAR MARKS SHOWN ON THIS SHEET. SEE THE REINFORCING SCHEDULE ON SHEET 20 OF 31.
7. ELEVATIONS SHOWN AS ± ARE FIELD SURVEY ELEVATIONS WHICH MUST BE VERIFIED.

PLAN



ELEVATION

(SEE NOTE 7)

* 4 BARS – FRONT FACE
5 BARS – BACK FACE
SEE SECTION B–B FOR
PLACEMENT AND NOTE (4)

** ELEVATIONS SHOWN ARE TO
TOP OF SIDEWALK SURFACE.

EXISTING BEAMSEAT ELEVATIONS*	
A	235.875±
B	235.792±
C	235.688±
D	235.586±
E	235.498±
F	235.405±
G	235.302±
H	235.193±
J	235.116±

* BASED ON FIELD SURVEY

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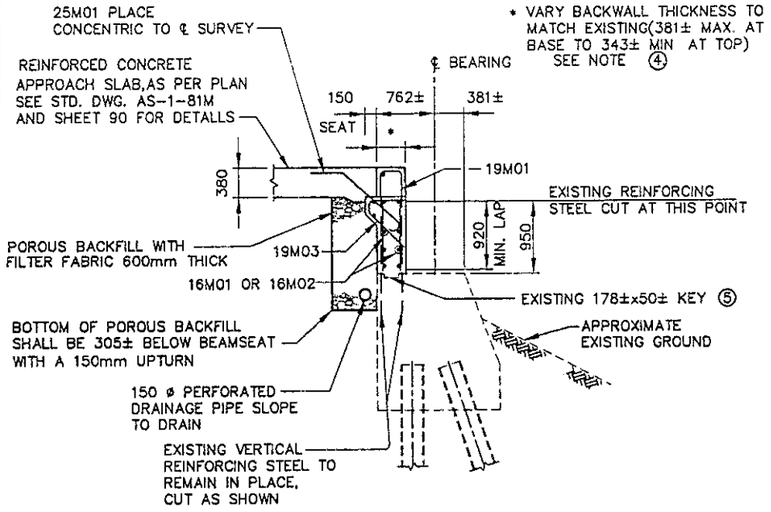
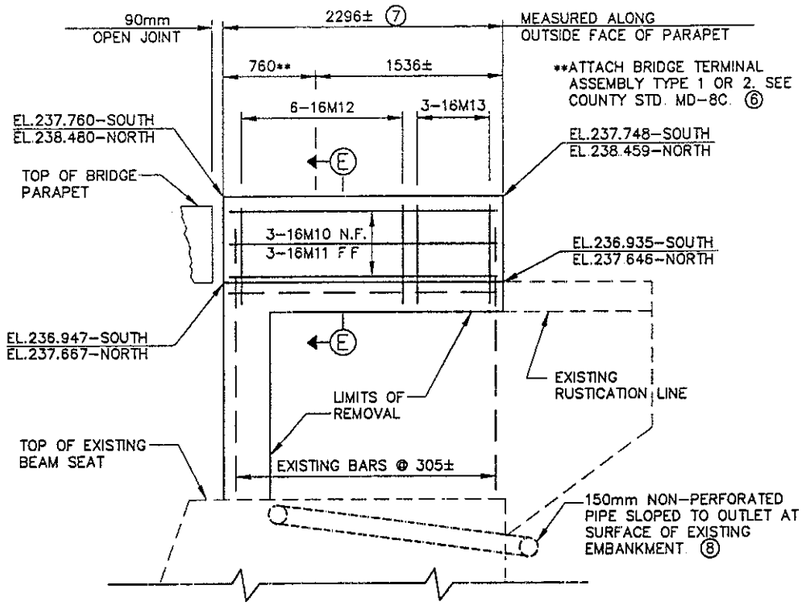
DRAWN CDG
DESIGNED RSC

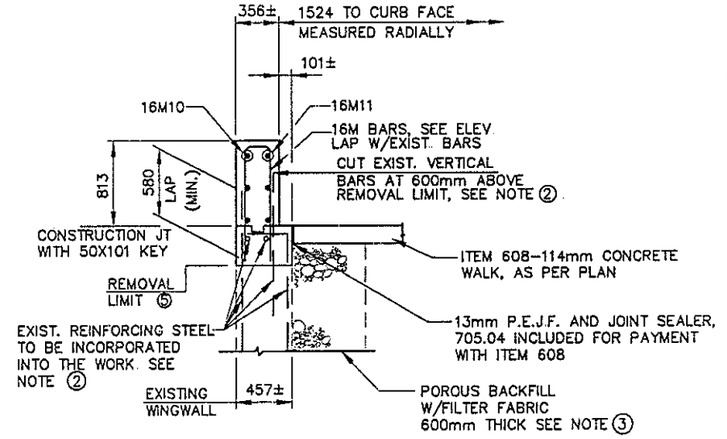
FAST ABUTMENT



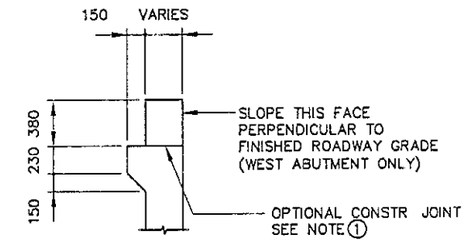
SECTION A-A
WEST ABUTMENT



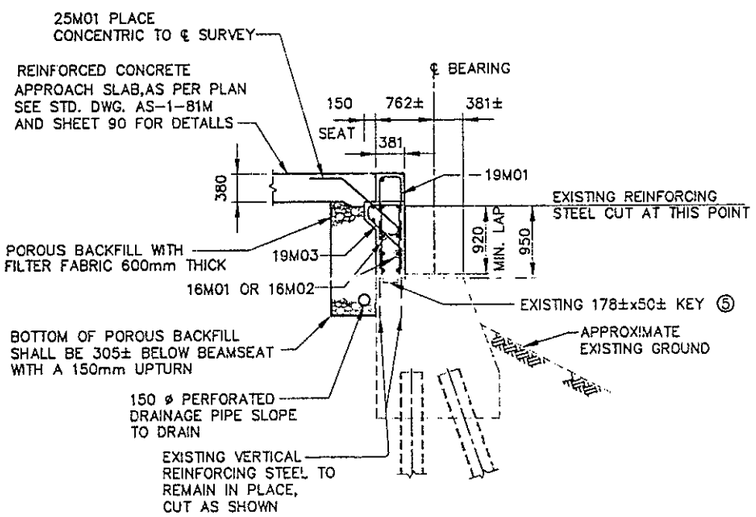
EAST ABUTMENT WINGWALL
SOUTH WINGWALL SHOWN, NORTH WINGWALL OPP. HAND



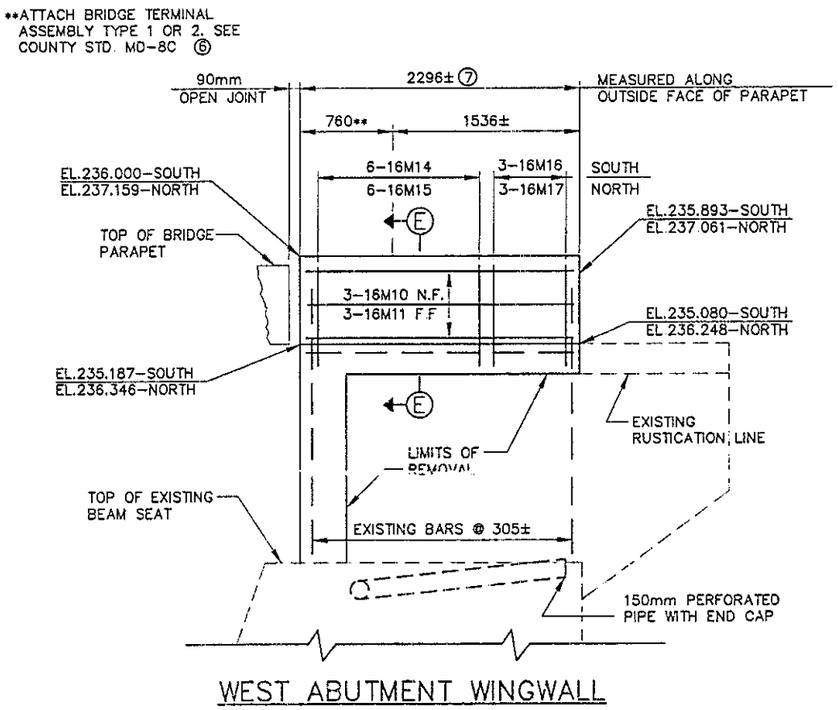
SECTION E-E



SLAB SEAT DETAIL



SECTION B-B
EAST ABUTMENT



WEST ABUTMENT WINGWALL

NOTES

① IN ADDITION TO THE PROVISIONS OF 511.08, BACKWALL CONCRETE ABOVE THE OPTIONAL CONSTRUCTION JOINT AT THE APPROACH SLAB SEAT SHALL NOT BE PLACED UNTIL AFTER THE DECK CONCRETE IN THE SPAN ADJACENT TO THE ABUTMENT HAS BEEN PLACED

② WHERE REQUIRED MINIMUM LAP LENGTH IS NOT AVAILABLE ON EXISTING VERTICAL BARS, CUT BARS OFF JUST ABOVE JOINT AND INSTALL MECHANICAL CONNECTORS TO COMPLETE THE SPLICE

③ POROUS BACKFILL WITH FILTER FABRIC, 600mm THICK SHALL EXTEND UP TO THE CONCRETE SIDEWALK AND DOWN TO 305± BELOW THE PLANE OF THE BEAM SEAT

④ SEE ABUTMENT SECTION ON SHEET 7 OF 31 FOR ADDITIONAL BACKWALL REQUIREMENTS. THE DIMENSIONS SHOWN HERE ARE BASED ON ORIGINAL PLAN INFORMATION AND MAY NOT BE AS-BUILT

⑤ SEE GENERAL NOTE ON SHEET 2 OF 31 FOR REQUIRMENTS FOR BONDING NEW CONCRETE TO EXISTING CONCRETE.

⑥ INSTALL TYPE 1 TERMINAL ASSEMBLY AT APPROACH ENDS OF BRIDGE. INSTALL TYPE 2 TERMINAL ASSEMBLY AT TRAILING ENDS OF BRIDGE.

⑦ AT SOUTHWEST AND NORTHEAST CORNERS, INCREASE LENGTH OF PARAPET AS NECESSARY TO OBTAIN A 90mm JOINT OPENING IN ACCORDANCE WITH ODOT STANDARD DWG EXJ-4-87M.

⑧ NON-PERFORATED OUTLET PIPE SHALL BE PLACED AS DIRECTED BY THE ENGINEER. AT END OF PIPE, PLACE A BED OF CRUSHED AGGREGATE SLOPE PROTECTION MATERIAL 1200mmø BY 300mm DEEP, GRADED FLUSH WITH THE EXISTING GROUND. AN ESTIMATED QUANTITY OF 10 METERS OF NON-PERFORATED PIPE IS SHOWN IN THE ESTIMATED QUANTITIES.

metric units

USS Gredner

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DRAWN BY: FFF | REVISED BY: KAH
DATE: 6/19/97 | DATE: 6/27/97
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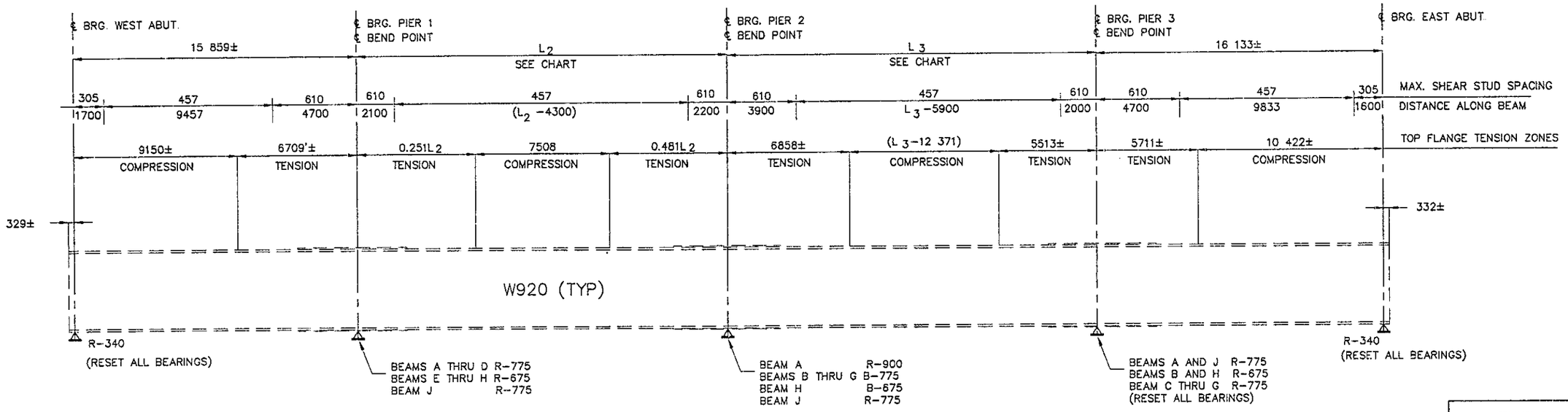
DESIGNED I.KG | DRAWN F.F.F. | REVIEWED RSC | DATE 6/05/98

ABUTMENT DETAILS

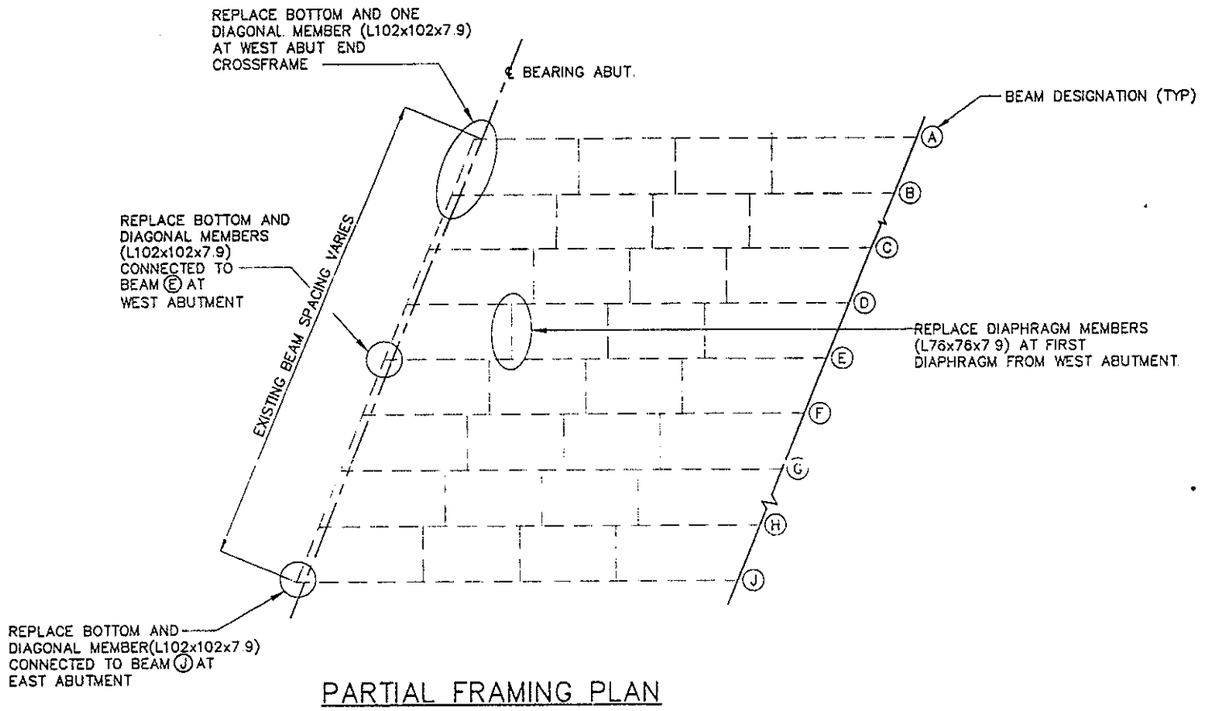
metric units



TYPICAL EXISTING BEAM ELEVATION

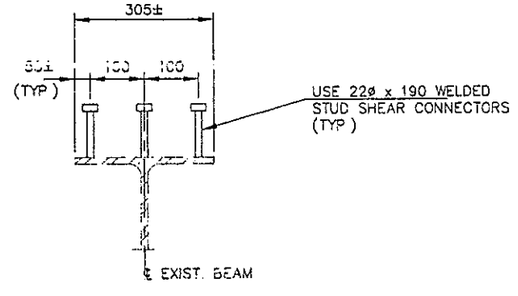
(SEE NOTE ①)

EXISTING BEAM LENGTH (mm)		
BEAM	L_2	L_3
A	22 368±	20 630±
B	22 084±	20 722±
C	21 633±	20 722±
D	21 184±	20 722±
E	20 734±	20 722±
F	20 285±	20 722±
G	19 836±	20 722±
H	19 387±	20 722±
J	19 080±	20 828±



PARTIAL FRAMING PLAN

(SEE NOTE ③)



TYPICAL STUD SPACING

NOTES

① EXISTING BEAM SIZE VARIES BETWEEN W920 x 223 TO W920 x 271. REFER TO ORIGINAL CONTRACT PLANS FOR ADDITIONAL DETAILS. PIER CENTERLINES CORRESPOND TO BEAM SPLICE POINTS AND BEND POINTS.

② FOR DETAILS OF THE EXISTING BEARINGS SEE THE ORIGINAL CONTRACT PLANS AND STD. DWG. RB-1-55M

③ ALL NEW STEEL SHALL BE A709M GRADE 250 AND BE INCLUDED FOR PAYMENT WITH ITEM 863-STRUCTURAL STEEL MEMBERS, MISCELLANEOUS LEVEL FABRICATION

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DATE: 6/4/97 | DATE: 6/27/97
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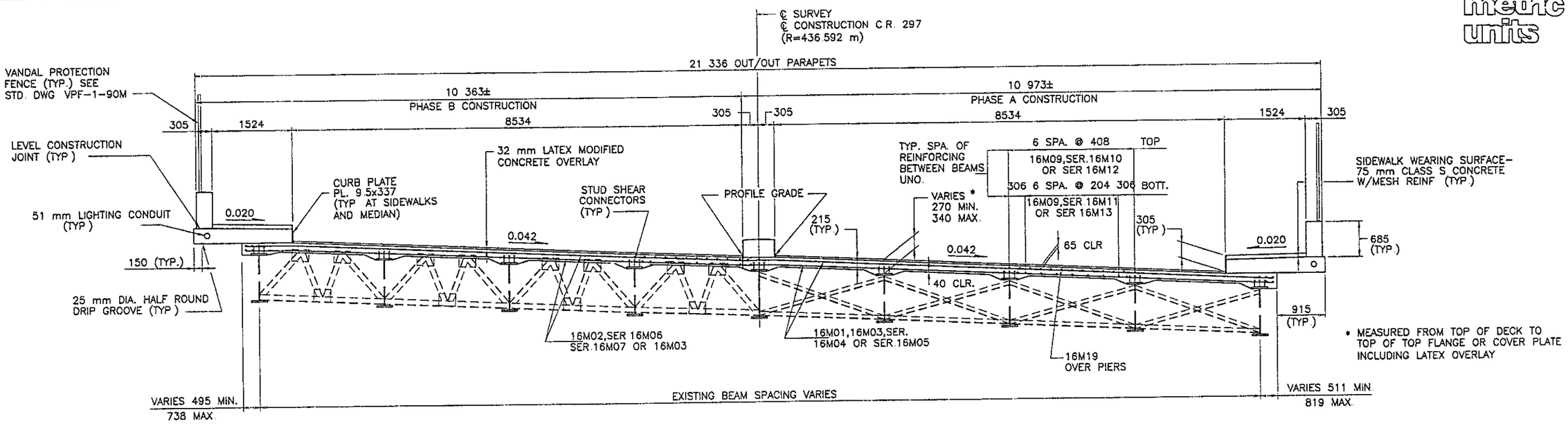
DESIGN REVIEWED DRAWN CHECKED DATE 6/05/98

SUPERSTRUCTURE DETAILS

15

metric units

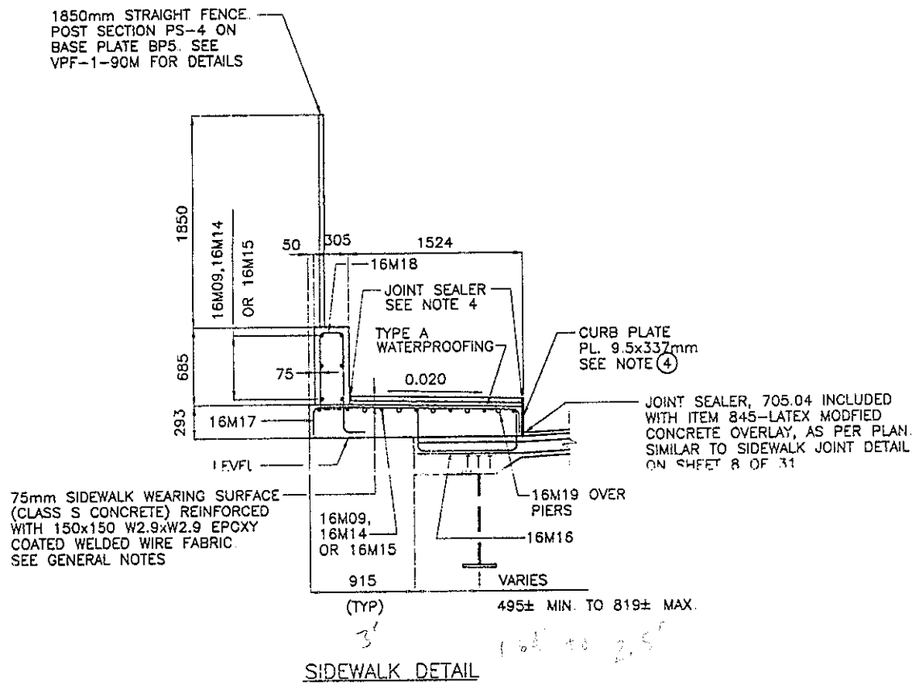


HALF SECTION THRU END DIAPHRAGMS

HALF SECTION AT INTERMEDIATE DIAPHRAGMS

TRANSVERSE DECK SECTION

(ALL DIMENSIONS ARE MEASURED RADIALLY)



SIDEWALK DETAIL

NOTES

1. THE DISTANCE SHOWN FROM TOP OF DECK SLAB TO TOP OF STEEL BEAM IS THE THEORETICAL DESIGN DIMENSION INCLUDING THE DESIGN HAUNCH THICKNESS OF 95 mm. THE QUANTITY OF DECK CONCRETE TO BE PAID FOR SHALL BE BASED ON THIS DIMENSION MINUS 32mm, MINUS THE DESIGN HAUNCH THICKNESS, EVEN THOUGH DEVIATION FROM IT MAY BE NECESSARY BECAUSE THE TOP FLANGE OF THE BEAM MAY NOT HAVE THE EXACT CAMBER OR CONFORMATION REQUIRED TO PLACE IT PARALLEL TO THE FINISHED GRADE

2. A HAUNCH WIDTH OF 225mm SHALL BE USED FOR COMPUTING QUANTITY OF CONCRETE. HOWEVER, THE HAUNCH WIDTH MAY VARY BETWEEN 150mm AND 300mm.

3. WELDED ATTACHMENT OF SUPPORTS FOR CONCRETE DECK FINISHING MACHINE MAY BE MADE TO AREAS OF THE FASCIA STRINGER FLANGES DESIGNATED "COMPRESSION". ATTACHMENTS SHALL NOT BE MADE TO AREAS DESIGNATED "TENSION". FILLET WELDS TO COMPRESSION FLANGES SHALL NOT BE CLOSER THAN 25mm FROM THE EDGE OF FLANGE, BE NOT MORE THAN 50mm LONG, AND BE NOT SMALLER THAN THE MINIMUM SIZE REQUIRED BY AASHTO. SEE BEAM ELEVATION ON SHEET 15 OF 31.

4. FOR DETAILS OF MEDIAN CURB, SIDEWALK JOINTS AND JOINT SEALER, AND STEEL CURB PLATES, SEE SHEET 8 OF 31.

5. FOR DECK SLAB PLAN AND REINFORCING LAYOUT SEE SHEET 17 OF 31.

6. FOR REMOVAL LIMITS SEE SHEET 7 OF 31.

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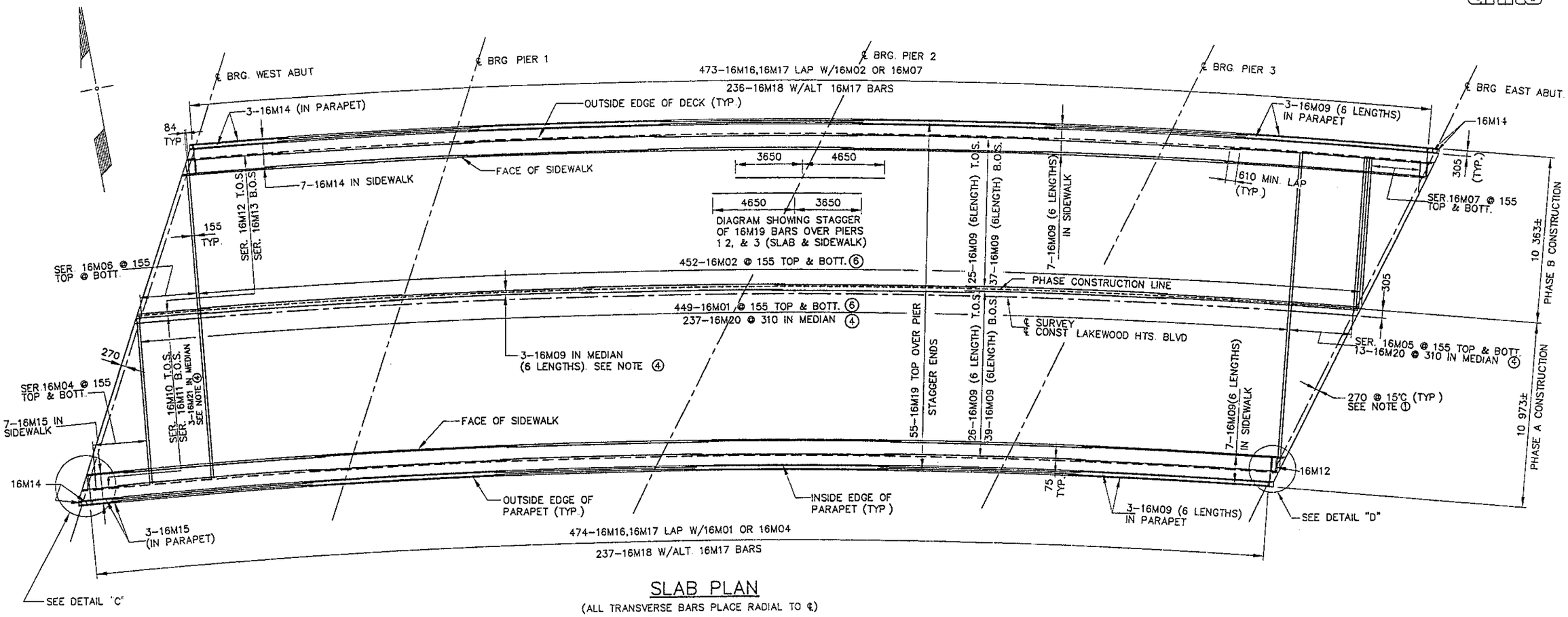
TRANSVERSE SECTION & DETAILS

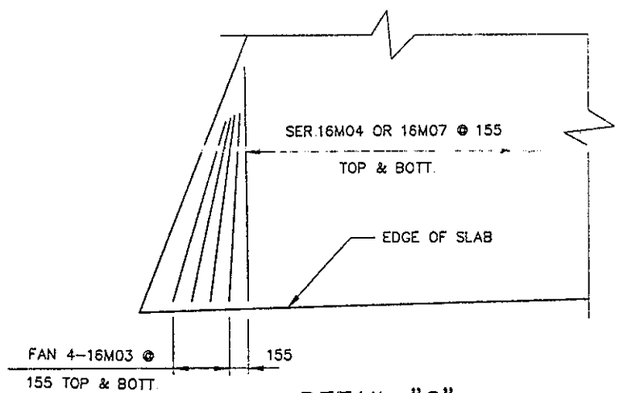
16

metric units



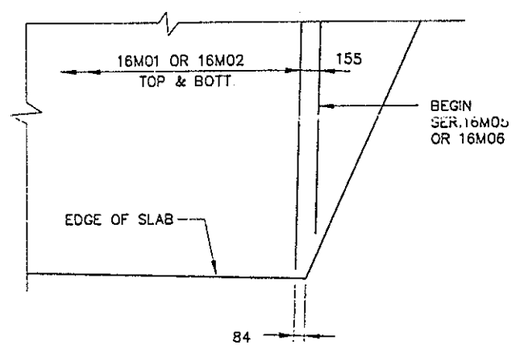
SLAB PLAN

(ALL TRANSVERSE BARS PLACE RADIAL TO ℄)



DETAIL "C"

(SOUTH CONER SHOWN, NORTH CORNER OPP HAND)



DETAIL "D"

(SOUTH CORNER SHOWN, NORTH CORNER OPP HAND)

NOTES

1. DIMENSION IS BASED ON A 75mm STRIP SEAL GLAND WITH 35mm WIDE RETAINERS. SEE SHEET 8 OF 31 FOR JOINT OPENING TABLE.
2. THE PREFIX 'ES' SHALL BE ADDED TO ALL REINFORCING BAR MARKS SHOWN ON THIS SHEET. SEE SHEET 20 OF 31 FOR REINFORCING SCHEDULE
3. FOR LEGEND OF ABBREVATIONS SEE GENERAL NOTES SHEET 3 OF 31.
4. FOR MEDIAN DETAIL SEE COMMON DETAILS SHEET 8 OF 31.
5. WORK THIS SHEET WITH SHEETS 16, AND 20 OF 31.
6. TRANSVERSE SLAB REINFORCING SHALL BE PROVIDED WITH EPOXY COATED MECHANICAL CONNECTORS AT THE PHASE CONSTRUCTION LINE

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DESIGNED RSC

SLAB PLAN

1

DECK SCREED ELEVATION TABLE (PHASE A) *

ELEVATION LOCATION		SPAN 1		SPAN 2		SPAN 3		SPAN 4		
		℄ BEARING WEST ABUT.	1/2 SPAN	℄ PIER 1	1/2 SPAN	℄ PIER 2	1/2 SPAN	℄ PIER 3	1/2 SPAN	℄ BEARING EAST ABUT
CONSTR. JT. FINAL TOP DECK ELEV.		235.437	235.741	236.010	236.312	236.556	236.740	236.865	236.922	236.944
P.G.L. / GUTTER FINAL TOP DECK ELEV.		235.426	235.732	236.003	236.305	236.549	236.735	236.863	236.921	236.944
BEAM E	# ELEV. AFTER DECK REMOVAL									
	# ELEV. BEFORE DECK REMOVAL									
	## SURVEYED REBOUND									
	### ADJUSTED REBOUND									
	FINAL TOP DECK ELEV.	235.428	235.734	236.009	236.302	236.554	236.743	236.864	236.922	236.944
	#### DECK SCREED ELEV.									
BEAM F	# ELEV. AFTER DECK REMOVAL									
	# ELEV. BEFORE DECK REMOVAL									
	## SURVEYED REBOUND									
	### ADJUSTED REBOUND									
	FINAL TOP DECK ELEV.	235.298	235.619	235.898	236.191	236.446	236.635	236.768	236.828	236.850
	#### DECK SCREED ELEV.									
BEAM G	# ELEV. AFTER DECK REMOVAL									
	# ELEV. BEFORE DECK REMOVAL									
	## SURVEYED REBOUND									
	### ADJUSTED REBOUND									
	FINAL TOP DECK ELEV.	235.163	235.482	235.774	236.068	236.319	236.514	236.656	236.719	236.746
	#### DECK SCREED ELEV.									
BEAM H	# ELEV. AFTER DECK REMOVAL									
	# ELEV. BEFORE DECK REMOVAL									
	## SURVEYED REBOUND									
	### ADJUSTED REBOUND									
	FINAL TOP DECK ELEV.	235.039	235.350	235.643	235.943	236.192	236.396	236.543	236.609	236.653
	#### DECK SCREED ELEV.									
BEAM J	# ELEV. AFTER DECK REMOVAL									
	# ELEV. BEFORE DECK REMOVAL									
	## SURVEYED REBOUND									
	### ADJUSTED REBOUND									
	FINAL TOP DECK ELEV.	234.906	235.236	235.533	235.841	236.090	236.313	236.461	236.541	236.579
	#### DECK SCREED ELEV.									
RIGHT GUTTER FINAL TOP DECK ELEV.		234.917	235.244	235.537	235.841	236.093	236.309	236.463	236.540	236.580
RIGHT GUTTER DECK SCREED ELEV.										

SCREED ELEVATIONS :

FIELD PROCEDURES DURING PHASED CONSTRUCTION OF DECKS WITHOUT CLOSURE POURS

1. SURVEY BOTTOM OF EXIST. BEAMS IN PHASE A AT THE LOCATIONS SHOWN IN THE TABLE PRIOR TO PHASE A DECK REMOVAL AND AFTER PHASE A DECK REMOVAL.
2. COMPUTE THE AMOUNT OF SURVEYED REBOUND FOR THESE BEAMS BY SUBTRACTING THE ELEVATIONS AFTER THE REMOVAL FROM THE ELEVATIONS BEFORE REMOVAL.
3. COMPUTE THE ADJUSTED REBOUND FOR THESE BEAMS BY MULTIPLYING THE SURVEYED REBOUND BY THE RATIO OF THE PROPOSED DEAD LOAD TO THE EXIST. DEAD LOAD.
4. ADD THE AMOUNT OF ADJUSTED REBOUND TO THE FINAL TOP OF DECK ELEVATIONS TO OBTAIN THE DECK SCREED ELEVATIONS.
5. AFTER PHASE A DECK PLACEMENT, REPEAT STEPS 1 THRU 4 FOR REMAINING BEAMS PRIOR TO AND AFTER PHASE B DECK REMOVAL.
6. THE COST OF SURVEYING IS CONSIDERED INCIDENTAL TO DECK CONSTRUCTION AND SHALL BE INCLUDED WITH ITEM 511 – CLASS 'S' CONCRETE. SUPERSTRUCTURE FOR PAYMENT.

* ELEVATIONS SHOWN ARE TO TOP OF PORTLAND CEMENT CONCRETE DECK SLAB, PRIOR TO PLACEMENT OF LATEX OVERLAY. WORK THIS SHEET WITH SHEET 19 AND SLAB DEPTH TABLE SHOWN ON THIS SHEET

\# – BOTTOM OF BEAM ELEVATION SURVEYED DURING CONSTRUCTION

– SURVEYED REBOUND = BEAM ELEVATION AFTER DECK REMOVAL MINUS BEAM ELEVATION BEFORE DECK REMOVAL.

– ADJUSTED REBOUND = RATIO OF PROPOSED DEAD LOAD TO EXISTING DEAD LOAD MULTIPLIED TIMES THE SURVEYED REBOUND

$$\frac{\text{PROPOSED DEAD LOAD}}{\text{EXISTING DEAD LOAD}} = 0.794$$

– DECK SCREED ELEVATION = ADJUSTED REBOUND ADDED TO THE FINAL TOP OF DECK ELEVATION

ANTICIPATED DECK SLAB DEPTHS* (PHASE A)

LOCATION	SPAN 1		SPAN 2		SPAN 3		SPAN 4		
	℄ BEARING WEST ABUT.	1/2 SPAN	℄ PIER 1	1/2 SPAN	℄ PIER 2	1/2 SPAN	℄ PIER 3	1/2 SPAN	℄ BEARING EAST ABUT.
BEAM E	260	278	272	265	273	289	285	287	285
BEAM F	252	261	261	250	274	274	290	282	281
BEAM G	257	265	266	268	270	289	293	281	278
BEAM H	272	256	266	274	271	285	242	294	295
BEAM J	285	278	291	288	278	297	301	292	308

* DEPTHS, IN MILLIMETERS, ARE SHOWN FROM TOP OF PORTLAND CEMENT CONCRETE DECK TO TOP OF EXISTING BEAM, PRIOR TO PLACEMENT OF LATEX OVERLAY ANTICIPATED DRY RUN DISTANCES CAN BE OBTAINED BY ADDING THE ADJUSTED REBOUND SHOWN ABOVE TO THE ANTICIPATED DECK SLAB DEPTHS

DECK SLAB NOTES :

1. WORK THIS TABLE WITH THE DECK SCREED ELEVATIONS SHOWN ABOVE
2. DECK SLAB DEPTH: THE QUANTITY OF DECK SLAB CONCRETE TO BE PAID FOR SHALL BE BASED ON THE MINIMUM REQUIRED DECK SLAB THICKNESS OF 183mm. THE QUANTITY OF CONCRETE REQUIRED FOR THE HAUNCH SHALL BE BASED ON THE DESIGN HAUNCH OF 95mm EVEN THOUGH DEVIATION FROM THAT DEPTH MAY BE NECESSARY BECAUSE THE TOP FLANGE OF THE GIRDER MAY NOT BE PARALLEL TO THE FINISHED GRADE. ACTUAL HAUNCH DEPTHS, MEASURED TO THE TOP OF THE BEAM, MAY VARY FROM 27mm MINIMUM TO 140mm MAXIMUM.
3. A HAUNCH WIDTH OF 225mm SHALL BE USED FOR COMPUTING QUANTITY OF CONCRETE. HOWEVER, THE HAUNCH WIDTH MAY VARY BETWEEN 150mm AND 305mm

metric units

DESIGNED BY: RSC | CHECKED BY:
DATE: XX/XX/XX | DATE:
DRAWN BY: CDG | REVISED BY: CDG
DATE: 2/6/97 | DATE: 6/27/97
CAD FILE NAME: J:\D2000527\SCREED3

URS Greiner

DESIGNED | DRAWN C.D.G. | REVIEWED R.S.C. | DATE 6/05/98

DECK SCREED ELEVATIONS, AND

DECK SCREED ELEVATION TABLE (PHASE B) *

ELEVATION LOCATION		SPAN 1		SPAN 2		SPAN 3		SPAN 4		
		℄ BEARING WEST ABUT.	1/2 SPAN	℄ PIER 1	1/2 SPAN	℄ PIER 2	1/2 SPAN	℄ PIER 3	1/2 SPAN	℄ BEARING EAST ABUT
LEFT GUTTER FINAL TOP DECK ELEV.		235.933	236.216	236.466	236.734	236.997	237.154	237.255	237.294	237.301
LEFT GUTTER DECK SCREED ELEV.										
BEAM A	# ELEV. AFTER DECK REMOVAL									
	# ELEV. BEFORE DECK REMOVAL									
	## SURVEYED REBOUND									
	### ADJUSTED REBOUND									
	FINAL TOP DECK ELEV.	235.932	236.211	236.474	236.751	237.000	237.138	237.256	237.294	237.300
	#### DECK SCREED ELEV.									
BEAM B	# ELEV. AFTER DECK REMOVAL									
	# ELEV. BEFORE DECK REMOVAL									
	## SURVEYED REBOUND									
	### ADJUSTED REBOUND									
	FINAL TOP DECK ELEV.	235.808	236.095	236.370	236.660	236.910	237.066	237.187	237.230	237.237
	#### DECK SCREED ELEV.									
BEAM C	# ELEV. AFTER DECK REMOVAL									
	# ELEV. BEFORE DECK REMOVAL									
	## SURVEYED REBOUND									
	### ADJUSTED REBOUND									
	FINAL TOP DECK ELEV.	235.677	235.968	236.247	236.248	236.792	236.960	237.077	237.122	237.135
	#### DECK SCREED ELEV.									
BEAM D	# ELEV. AFTER DECK REMOVAL									
	# ELEV. BEFORE DECK REMOVAL									
	## SURVEYED REBOUND									
	### ADJUSTED REBOUND									
	FINAL TOP DECK ELEV.	235.547	235.843	236.122	236.411	236.668	236.847	236.966	237.017	237.032
	#### DECK SCREED ELEV.									
CONSTR. JT./GUTTER	FINAL TOP DECK ELEV.	235.437	235.741	236.010	236.312	236.556	236.740	236.865	236.922	236.944

* ELEVATIONS SHOWN ARE TO TOP OF PORTLAND CEMENT CONCRETE DECK SLAB, PRIOR TO PLACEMENT OF LATEX OVERLAY. WORK THIS SHEET WITH SHEET 18 AND SLAB DEPTH TABLE SHOWN ON THIS SHEET

\# -- BOTTOM OF BEAM ELEVATION SURVEYED DURING CONSTRUCTION

\## -- SURVEYED REBOUND = BEAM ELEVATION AFTER DECK REMOVAL MINUS BEAM ELEVATION BEFORE DECK REMOVAL

– ADJUSTED REBOUND = RATIO OF PROPOSED DEAD LOAD TO EXISTING DEAD LOAD MULTIPLIED TIMES THE SURVEYED REBOUND.

$$\frac{\text{PROPOSED DEAD LOAD}}{\text{EXISTING DEAD LOAD}} = 0.794$$

– DECK SCREED ELEVATION = ADJUSTED REBOUND ADDED TO THE FINAL TOP OF DECK ELEVATION

ANTICIPATED DECK SLAB DEPTHS * (PHASE B)

LOCATION	SPAN 1		SPAN 2		SPAN 3		SPAN 4		
	℄ BEARING WEST ABUT.	1/2 SPAN	℄ PIER 1	1/2 SPAN	℄ PIER 2	1/2 SPAN	℄ PIER 3	1/2 SPAN	℄ BEARING EAST ABUT.
BEAM A	258	256	240	264	261	274	285	265	265
BEAM B	261	262	262	260	272	278	290	287	261
BEAM C	259	257	254	250	275	286	291	286	278
BEAM D	257	251	260	263	279	271	281	285	288

* DEPTHS, IN MILLIMETERS, ARE SHOWN FROM TOP OF PORTLAND CEMENT CONCRETE DECK TO TOP OF EXISTING BEAM, PRIOR TO PLACEMENT OF LATEX OVERLAY. ANTICIPATED DRY RUN DISTANCES CAN BE OBTAINED BY ADDING THE ADJUSTED REBOUND SHOWN ABOVE TO THE ANTICIPATED DECK SLAB DEPTHS

DECK SLAB NOTES :

1. WORK THIS TABLE WITH THE DECK SCREED ELEVATIONS SHOWN ABOVE.
2. DECK SLAB DEPTH: THE QUANTITY OF DECK SLAB CONCRETE TO BE PAID FOR SHALL BE BASED ON THE MINIMUM REQUIRED DECK SLAB THICKNESS OF 183mm. THE QUANTITY OF CONCRETE REQUIRED FOR THE HAUNCH SHALL BE BASED ON THE DESIGN HAUNCH OF 95mm EVEN THOUGH DEVIATION FROM THAT DEPTH MAY BE NECESSARY BECAUSE THE TOP FLANGE OF THE GIRDER MAY NOT BE PARALLEL TO THE FINISHED GRADE. ACTUAL HAUNCH DEPTHS, MEASURED TO THE TOP OF THE BEAM, MAY VARY FROM 27mm MINIMUM TO 140mm MAXIMUM.
3. A HAUNCH WIDTH OF 225mm SHALL BE USED FOR COMPUTING QUANTITY OF CONCRETE. HOWEVER, THE HAUNCH WIDTH MAY VARY BETWEEN 150mm AND 305mm.

metric units

URS Greiner

DESIGNED L.J.G. | DRAWN C.D.G. | REVIEWED R.S.C. | DATE 6/05/98

DECK SCREED ELEVATIONS AND [illegible]

19

DESIGNED BY: RSC | CHECKED BY:
DATE: XX/XX/XX | DATE:
DRAWN BY: CDG | REVISED BY: CDG
DATE: 2/6/97 | DATE: 6/27/97
CAD FILE NAME: J:\D200527\SCREED4

REINFORCING SCHEDULE

MARK	No. REQD.	LGTH.	TYPE	DIMENSIONS A	B	C	D	INCRM.	MASS Kg
ABUTMENTS									
EA 16M01	9	11800	ST						165
EA 16M02	9	11025	ST						154
EA 16M03	2	10200	ST						32
EA 16M04	2	9500	ST						29
EA 16M05	9	11850	ST						166
EA 16M06	9	11125	ST						155
EA 16M07	2	10100	ST						31
EA 16M08	2	9575	ST						30
EA 16M09	4	1675	2	610	530				10
EA 16M10	12	2225	10	2235	2972				41
EA 16M11	12	2425	10	2430	3225				45
EA 16M12	12	2100	2	960	250				39
EA 16M13	6	2100	2	960	250				20
EA 16M14	6	2100	2	960	250				20
EA 16M15	6	2100	2	960	250				20
EA 16M16	3	2100	2	960	250				10
EA 16M17	3	2100	2	960	250				10
EA 19M01	93	2975	2	1420	240				618
EA 19M02	9	3500	2	1680	240				70
EA 19M03	97	1025	16	385	180	385	540		222
EA 19M04	4	3625	2	1740	240				32
EA 19M05	5	3450	2	1650	240				39
EA 25M01	83	1525	38	850	435	305			503
TOTAL ABUTMENTS - 2461									

REINFORCING SCHEDULE

MARK	No. REQD.	LGTH.	TYPE	DIMENSIONS A	B	C	D	INCRM.	MASS Kg
SUPERSTRUCTURE									
ES 16M01	898	10025	62	10035					13972
ES 16M02	904	9425	61	9420					13223
ES 16M03	16	1550	ST						38
SERIES OF ES 16M04	2-SETS OF 22-44 BARS	1925 TO 9900	ST					380	404
SERIES OF ES 16M05	2-SETS OF 25-50BARS	9700 TO 675	62					376	403
SERIES OF ES 16M06	2-SETS OF 23-46BARS	675 TO 9075	61					382	348
SERIES OF ES 16M07	2-SETS OF 20-40 BARS	8925 TO 1775	ST					376	332
ES 16M09	936	12200	ST						17723
SERIES OF ES 16M10	1-SET OF 27-27 BARS	2700 TO 4275	ST					61	146
SERIES OF ES 16M11	1-SET OF 40-40 BARS	2700 TO 4275	ST					40	217
SERIES OF ES 16M12	1-SET OF 24-24 BARS	4325 TO 5700	ST					60	187
SERIES OF ES 16M13	1-SET OF 36-36 BARS	4325 TO 5700	ST					39	280
ES 16M14	13	5875	ST						119
ES 16M15	13	2800	ST						56
ES 16M16	947	8275	2	3750	865				12162
ES 16M17	947	2125	2	200	1805				3123
ES 16M18	473	2175	51						1597
ES 16M19	165	8300	ST						2125
ES 16M20	250	1250	2	420	500				485
ES 16M21	3	4225	ST						20
ES 16M31	16	1325	2	305	800				33
ES 16M32	16	2375	2	830	800				59
ES 16M33	20	2475	25	190	595	405	665		77
ES 16M34	16	825	ST						20
ES 16M35	32	1025	1	170	900				51
TOTAL SUPERSTRUCTURE - 67200									

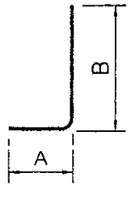
metric units

NOTES

① ALL REINFORCING STEEL SHALL BE EPOXY-COATED.

② REINFORCING SAMPLES

REFER TO CMS SECTIONS 106.03, 700, 709.01 THROUGH 709.05 AND 709.08. SUFFICIENT ADDITIONAL REINFORCING STEEL SHALL BE PROVIDED FOR SAMPLING. RANDOM SAMPLES SHALL BE REPLACED IN THE STRUCTURES BY THE ADDITIONAL STEEL. SPLICED IN ACCORDANCE WITH 509.08.



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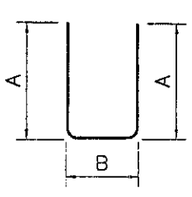

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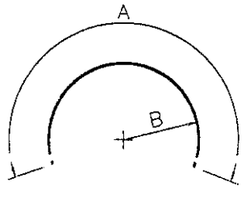

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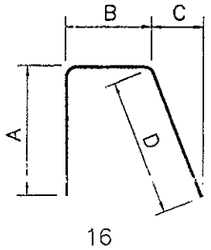

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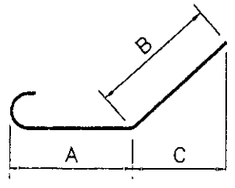

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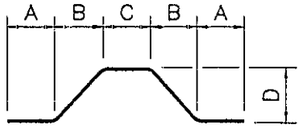

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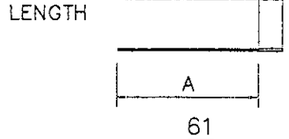

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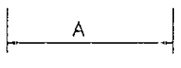

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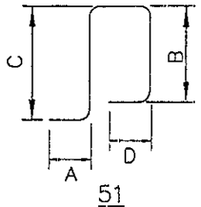


51

EPOXY COATED REINFORCING STEEL
GRADE 400

ABUTMENTS	2461
SUPERSTRUCTURE	67200
TOTAL	69661 Kg

DESIGNED BY: FFF | CHECKED BY:
DATE: 2/14/97 | DATE:
DRAWN BY: CDG | REVISED BY:
DATE: 6/30/97 | DATE:
CAD FILE NAME: K:\020054?\BRIDGE\BAR209

URS Greiner

REINFORCING SCHEDULE

20

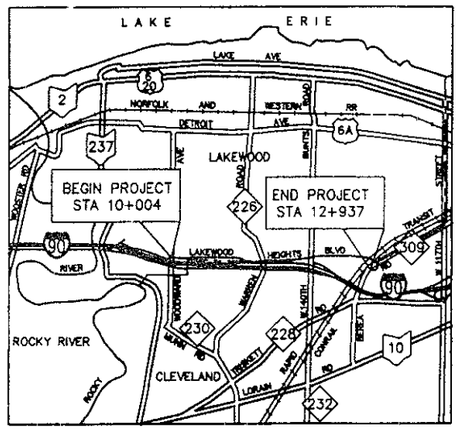
COUNTY OF CUYAHOGA

CUY - LAKEWOOD HEIGHTS BLVD.
COUNTY ROAD No. 297

RECONSTRUCTION OF EXISTING SEPARATED GRADE CROSSING WITH CONSOLIDATED RAIL CORPORATION AND GREATER CLEVELAND REGIONAL TRANSIT AUTHORITY RAILROADS

CITY OF CLEVELAND
CITY OF LAKEWOOD

metric units



LOCATION MAP

LATITUDE: N41°28'12" LONGITUDE: W81°47'45"

SCALE IN KILOMETERS
0 1 2 3 4 5
1:40000

INTERSTATE ROUTE (90) · U.S. ROUTE (6) · STATE ROUTE (10) · COUNTY ROAD (297) · OTHER ROADS

DESIGN DESIGNATION

CURRENT A.D.T. (2000)	= 9600
DESIGN YEAR A.D.T. (2020)	= 10540
DESIGN HOURLY VOLUME (2020)	= 1100
DIRECTIONAL DISTRIBUTION	= 100% (STA 10+004 TO STA 11+649.902)/ 60% (STA 11+649 902 TO STA 12+937)
TRUCKS (24 HOUR B&C)	= 4%
LEGAL SPEED	= 35 MPH
DESIGN SPEED	= 3R SECTION / 56 km/h (STA 10+004 TO STA 12+310) RECONST. SECTION / 60 km/h (STA 12+310 TO STA 12+937)
FUNCTIONAL CLASSIFICATION	= URBAN COLLECTOR

DESIGN EXCEPTIONS

DESIGN FEATURE	APPROVAL DATE	SHEET
HORIZONTAL STOPPING SIGHT DISTANCE	10-23-98	83,84
VERTICAL STOPPING SIGHT DISTANCE	10-23-98	88
HORIZONTAL ALIGNMENT	10-23-98	2
VERTICAL ALIGNMENT	10-23-98	88

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SHEETS NOT USED: 46-54 96,97

PROJECT DESCRIPTION

REHABILITATION, RESURFACING OF ROADWAY AND RECONSTRUCTION OF BRIDGE NOS. 209 & 210 ON 2.9 Km OF C.R. 297 (LAKEWOOD HEIGHTS BOULEVARD) IN THE CITIES OF CLEVELAND AND LAKEWOOD, CUYAHOGA COUNTY, INCLUDING REPAIR OR REPLACEMENT OF ANY DETERIORATED PAVEMENT, CURB, DRIVE APRONS, SIDEWALKS AND CATCH BASINS; AND INCLUDING NEW PAVEMENT MARKINGS AND TRAFFIC CONTROL SIGNING.

BOARD OF COMMISSIONERS CUYAHOGA COUNTY

APPROVED _____
DATE _____ COUNTY COMMISSIONER

APPROVED _____
DATE _____ COUNTY COMMISSIONER

APPROVED _____
DATE _____ COUNTY COMMISSIONER

JOURNAL _____ PAGE _____

1997 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 FOR SHORT TERM DETOUR SHOWN ON SHEETS 12 & 13, AND PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

APPROVED _____
DATE _____ CUYAHOGA COUNTY ENGINEER

UNDERGROUND UTILITIES
TWO WORKING DAYS BEFORE YOU DIG
Call 800-362-2764 (Toll Free)
OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS MUST BE CALLED DIRECTLY

URS Greiner
Engineering & Architectural Services
564 W[illegible]POND DRIVE
AKRON OH[illegible] 44320[illegible]

REGISTERED PROFESSIONAL ENGINEER 44924

PAUL D HAWKINS REG. ENGINEER NO 44924

STANDARD CONSTRUCTION DRAWINGS

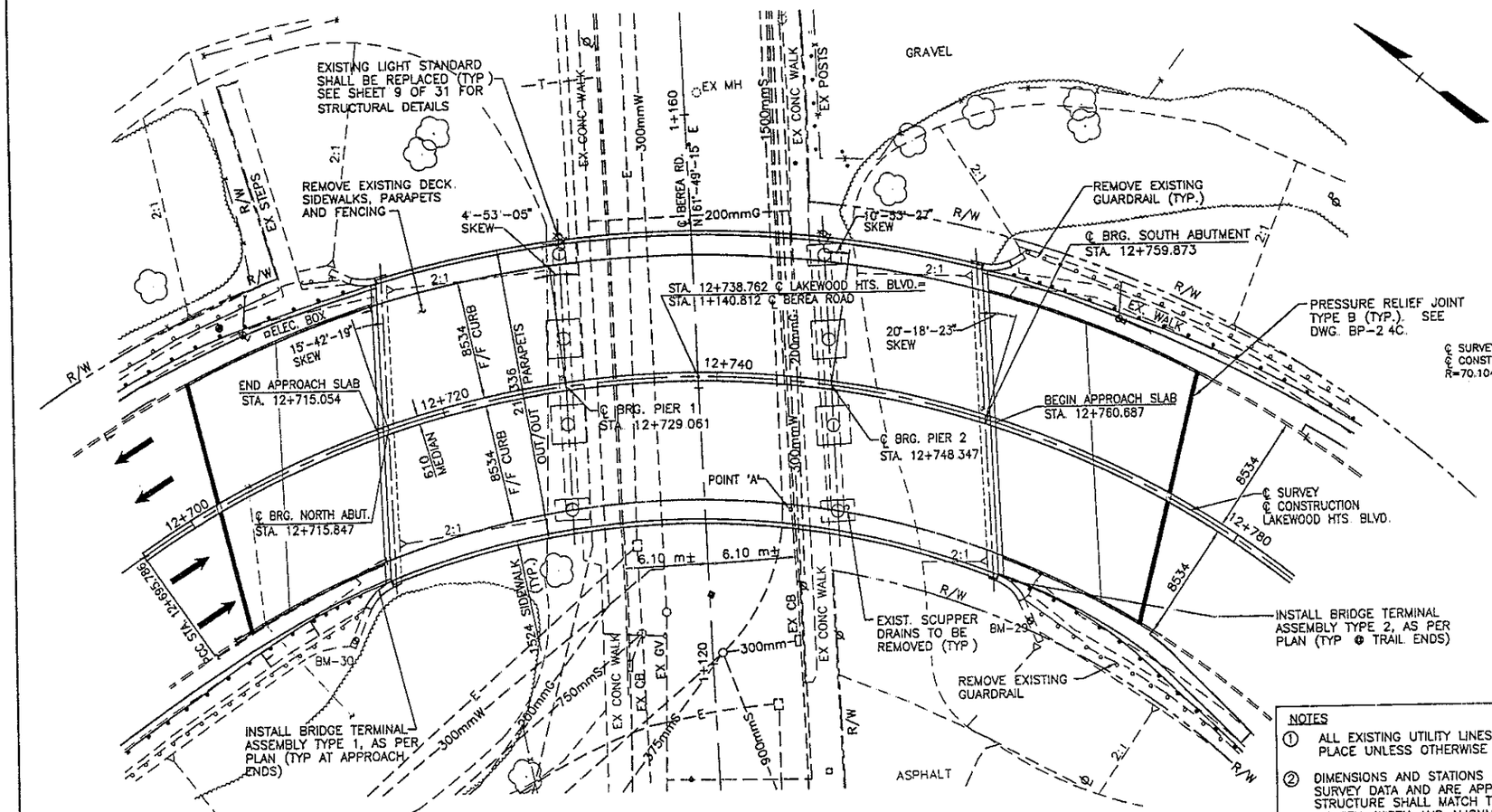
										SUPPLEMENTAL SPECIFICATIONS	
BP-1.1M	10-28-94	GR-4.1M	11-30-94	MT-35.10M	1-30-95	TC-42.20M	3-31-94	BP-2.4C	5-5-97	806	9/9/97
BP-2.1M	4-8-97	GR-4.2M	10-21-97	MT-35.11M	1-30-95	TC-52.10M	7-29-94	BP-2.5C	5-5-97	815	5/30/96
BP-2.2M	4-8-97	GR-5.1M	4-21-95	MT-95.30M	4-25-94	TC-52.20M	7-29-94	BP-2.6C	5-5-97	845	7/17/95
BP-2.5M	4-8-97	GR-6.1M	1-03-96	MT-95.31M	4-25-94	TC-71.10M	9-01-93	BP-4.1C	5-2-97	828	7/28/98
BP-3.1M	10-28-94			MT-95.32M	4-25-94	TC-82.10M	11-24-93	CB-3C	5-5-97	863	9/9/97
BP-5.1M	10-28-94	HL-10.11M	5-01-95	MT-105.10M	1-30-95	MT-95.40M	4-25-94	CB-3C2	5-22-95	910	4/21/97
BP-7.1M	10-28-94	HL-10.12M	5-01-95	MT-105.20M	1-30-95			MB-1C	12-2-97	911	7/10/97
CB-2.3M	7-12-95	HL-10.13M	5-01-95	MT-110.20M	3-01-96	AS-1-81M	10-25-94	MD-1C	5-5-97	953	6/14/95
		HL-20.14M	5-01-95	RM-3.1M	10-21-97	EXJ-4-87M	2-18-97	MD-3C	5-5-97	954	9/9/97
GR-1.1M	10-21-97	HL-30.31M	5-01-95	RM-4.2M	10-21-97	VPF-1-90M	3-20-95	MD-5C	5-5-97	906	5/5/98
GR-1.2M	1-03-96	HL-50.21M	5-01-95	TC-41.10M	3-31-94	PCB-91M	3-20-95	MD-8C	5-22-95	908	1/6/99
GR-1.3M	11-30-94	HL-80.11M	5-01-95	TC-41.20M	7-01-94	RB-1-55M	10-25-94	MH-10C	5-22-95	905	4/1/98
GR-2.1M	10-21-97	HL-50.11M	3-31-95	TC-41.40M	3-31-94			CB-3C 6/T	5-22-95	907	10/21/98
GR-3.1M	10-21-97	MH-1.1M	10-21-97	TC-41.41M	3-31-94					899	10/21/98
GR-3.2M	10-21-97	MH-1.2M	9-06-95	TC-41.50M	7-01-94			*CB-1	6-7-90		

*CITY OF CLEVELAND STD. DWG.

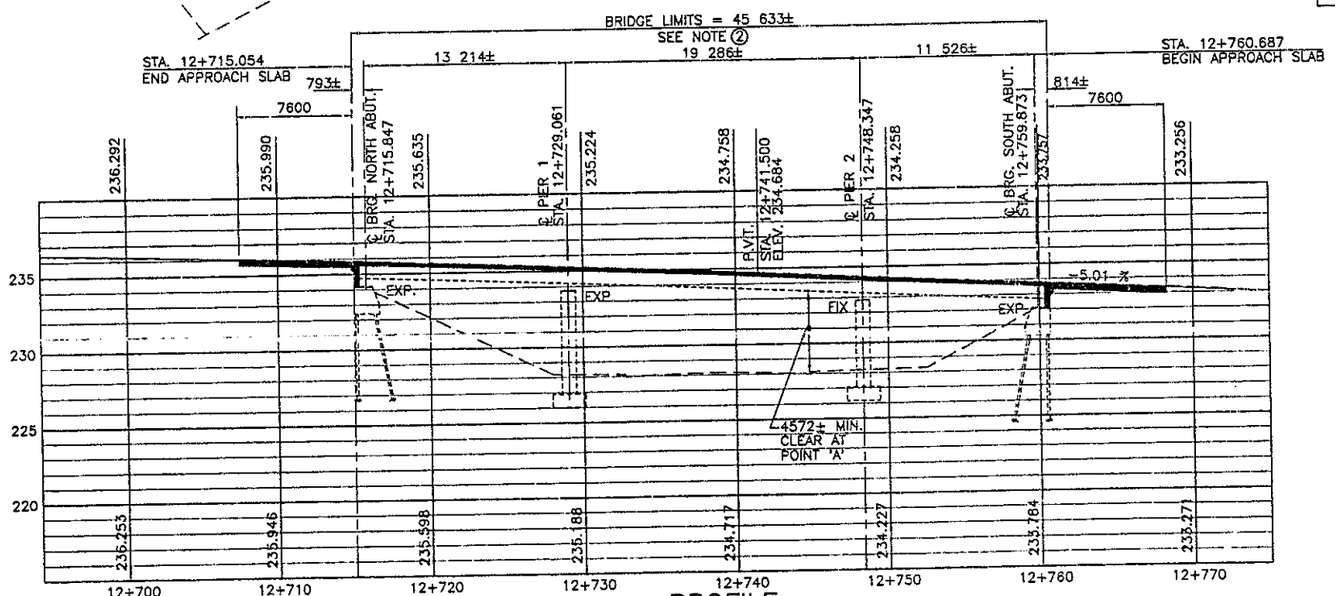
DESIGNED BY:	CHECKED BY:
DATE:	DATE:
DRAWN BY: MAL	REVISED BY: MAL
DATE: 6/03/98	DATE:
CAD FILE NAME: HGCS0200	

FEDERAL PROJECT NO.
PID NO.
CONSTRUCTION PROJECT NO.
RAILROAD INVOLVEMENT

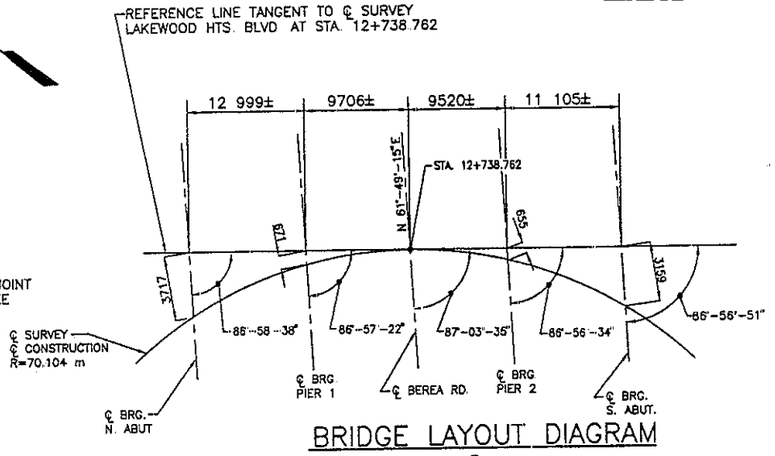
metric units



PLAN



PROFILE
(ALONG ℄ SURVEY LAKEWOOD HTS BLVD.)



BRIDGE LAYOUT DIAGRAM
SEE NOTE ② BELOW

NOTES
① ALL EXISTING UTILITY LINES SHALL REMAIN IN PLACE UNLESS OTHERWISE NOTED.
② DIMENSIONS AND STATIONS SHOWN ARE BASED ON FIELD SURVEY DATA AND ARE APPROXIMATE. THE REHABILITATED STRUCTURE SHALL MATCH THE EXISTING IN OVERALL LENGTH, WIDTH AND ALIGNMENT. SEE GENERAL NOTE REGARDING EXISTING STRUCTURE VERIFICATION.

EXISTING STRUCTURE

TYPE: CONTINUOUS, DOG-LEGGED STEEL BEAM WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE

SPANS: 13 259, 19 291, 11 582, C/C BRGS. ALONG EXISTING ℄ LAKEWOOD HTS. BLVD (ORIG. PLAN DATA)

ROADWAY WIDTH: 2 @ 8534, 610 MEDIAN, 1524 SIDEWALK ON BOTH SIDES

SKEW: VARIES

LOADING: CF=1000 (1957)

WEARING SURFACE: ASPHALT CONCRETE

APPROACH SLABS: AS-1-54 (7620 mm LONG)

ALIGNMENT: CURVED

DATE BUILT: 1959

STRUCTURE FILE NUMBER: 1830481

REHABILITATED STRUCTURE

PROPOSED WORK: NEW REINFORCED CONCRETE DECK, SIDEWALKS, PARAPETS AND FENCING ON EXISTING STEEL BEAMS, AND NEW ABUTMENT BACKWALLS ON EXISTING ABUTMENTS

TYPE: CONTINUOUS, DOG-LEGGED STEEL BEAMS MADE COMPOSITE WITH REINFORCED CONCRETE DECK

SPANS: 13 259, 19 291, 11 582, C/C BRGS. ALONG EXISTING ℄ LAKEWOOD HTS. BLVD. (ORIG. PLAN DATA)

ROADWAY WIDTH: 2 @ 8534, 610 MEDIAN, 1524 SIDEWALK ON BOTH SIDES

SKEW: VARIES

LOADING: MS18 AND ALT. MILITARY (CASE II)

WEARING SURFACE: LATEX MODIFIED CONCRETE

APPROACH SLABS: AS-1-81M (7600 mm LONG)

ALIGNMENT: CURVED

SUPERELEVATION: FULL, 0.060

LATITUDE: N 41°-28'-11" LONGITUDE: W 81°-46'-46"

ADT (2000): 3650
ADT (2020): 4000
ADTT (2020): 160
— WATERBURY ROAD TO BEREA ROAD AS PER ODOT I.O.C. DATED 11/13/96

℄ SURVEY CURVE DATA
P.C.C. STA. 12+695.786
Δ = 194°-19'-54"
R = 70.104 m
L = 238.006 m

BENCHMARKS
BM-29 STA. 12+767.600, 11.310 m RT. "□" CUT IN CORNER OF SW WINGWALL, EL. 233.320
BM-30 STA. 12+706.700, 13.710 m RT. "□" CUT IN CORNER OF NW WINGWALL, EL. 236.345

VERTICAL CURVE DATA
P.V.C. 12+558.500, 234.684
P.V.I. 12+650.000, 239.268
P.V.T. 12+741.500, 234.684
G1 = +5.010%
G2 = -5.010%
L = 183 m
K = 18.3
S.S.D. = 85.9 m

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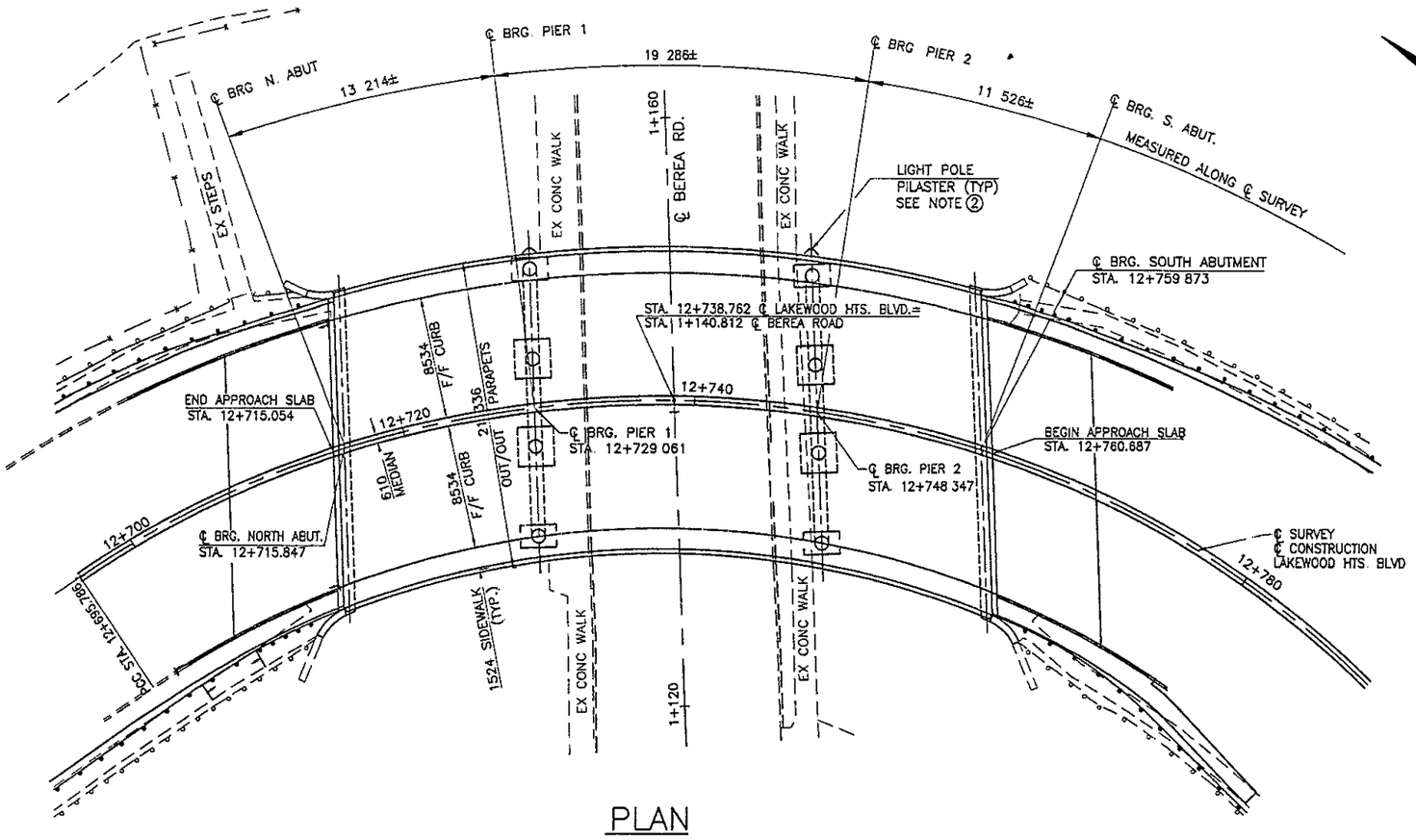
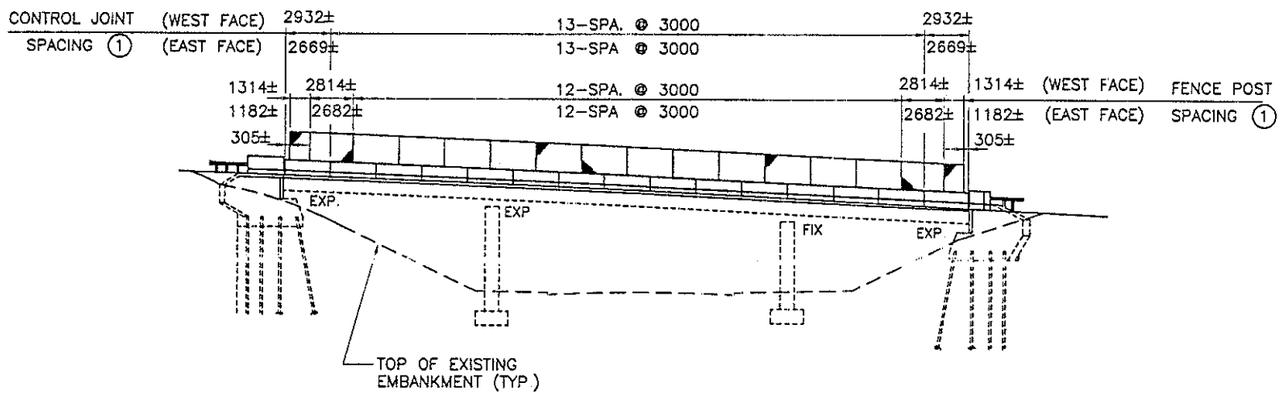
DATE: X/X/XX DATE:
DRAWN BY: XXX REVISED BY: KAH
DATE: X/X/XX DATE: 6/27/97
CAD FILE NAME: J:\BRIDGE\1831210

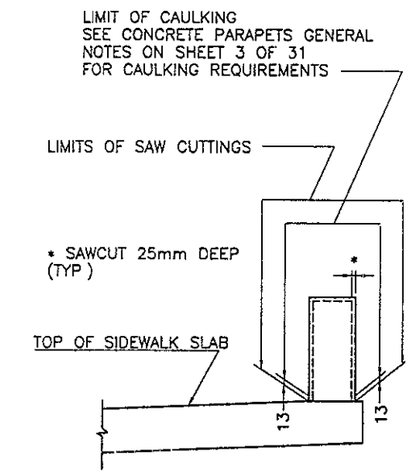
URS Greiner Formerly Greiner Architectural Services
DATE 6/05/98
REVISED RSC
DRAWN HWC
DESIGNED LJG
CUYAHOGA COUNTY
SITE PLAN
2



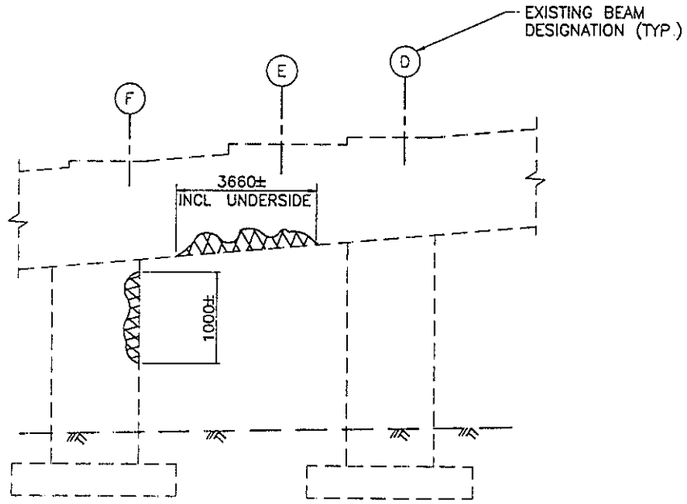
PLAN



ELEVATION



SAW CUT JOINT DETAIL



PARTIAL ELEVATION – PIER 1
(SEE NOTE ③)

NOTES

① FENCE POST SPACINGS SHOWN ARE MEASURED ALONG THE INSIDE FACE OF THE PARAPET. CONTROL JOINTS SHALL BE LOCATED BETWEEN THE POST AS SHOWN. SEE STD. DWG. VPF-1-90M FOR FENCE DETAILS

② FOR DETAILS OF LIGHT POLE PILASTERS SEE SHEET 9 OF 31 AND SHEETS 125-131

③ AREAS MARKED ▨ ARE APPROXIMATE LIMITS OF DETERIORATED CONCRETE. ACTUAL LIMITS OF DETERIORATION SHALL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION. PAYMENT FOR PATCHING WORK SHALL BE INCLUDED IN ITEM 519-PATCHING CONCRETE STRUCTURE

metric units

URS Greiner

DATE 6/05/98
REVISED RSC
DRAWN FFF
DESIGNED LJG

GENERAL PLAN AND ELEVATION

CITY-LAKEWOOD HTS. BLVD

22/15/16

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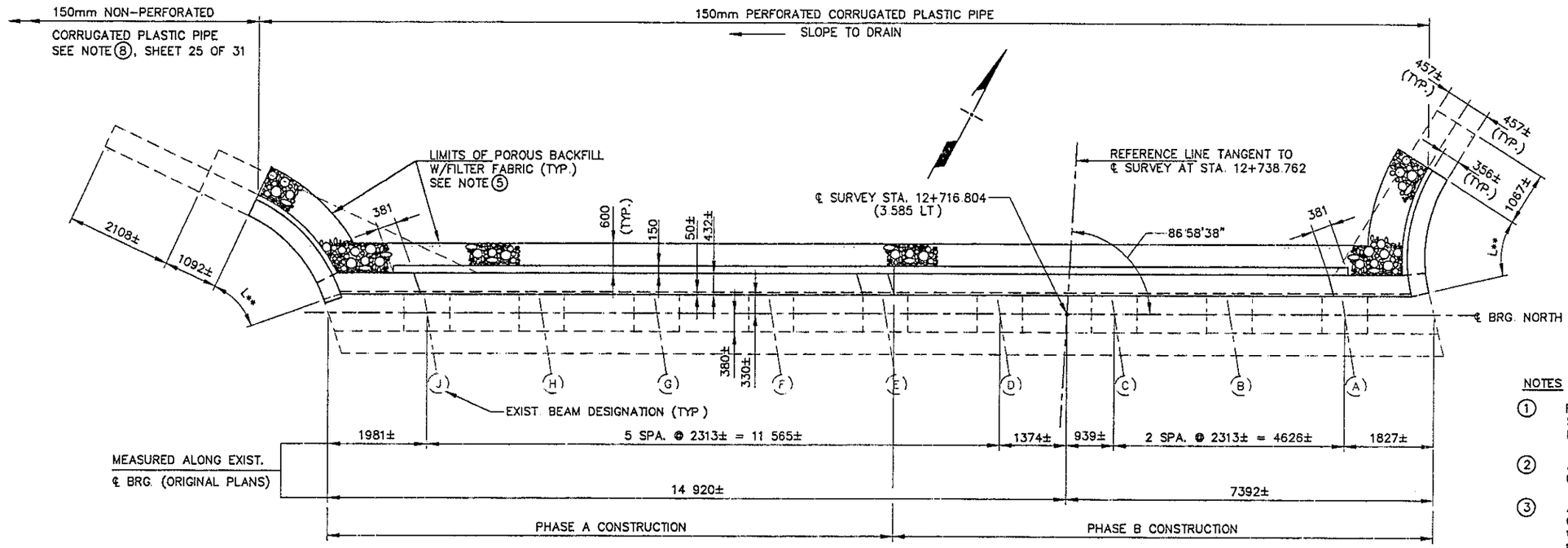
DATE: X/X/XX | DATE:
DRAWN BY: FFF | REVISED BY:
DATE: 5/25/97 | DATE:
CAD FILE NAME: J:\D200547\BRIDGE\GENPL210



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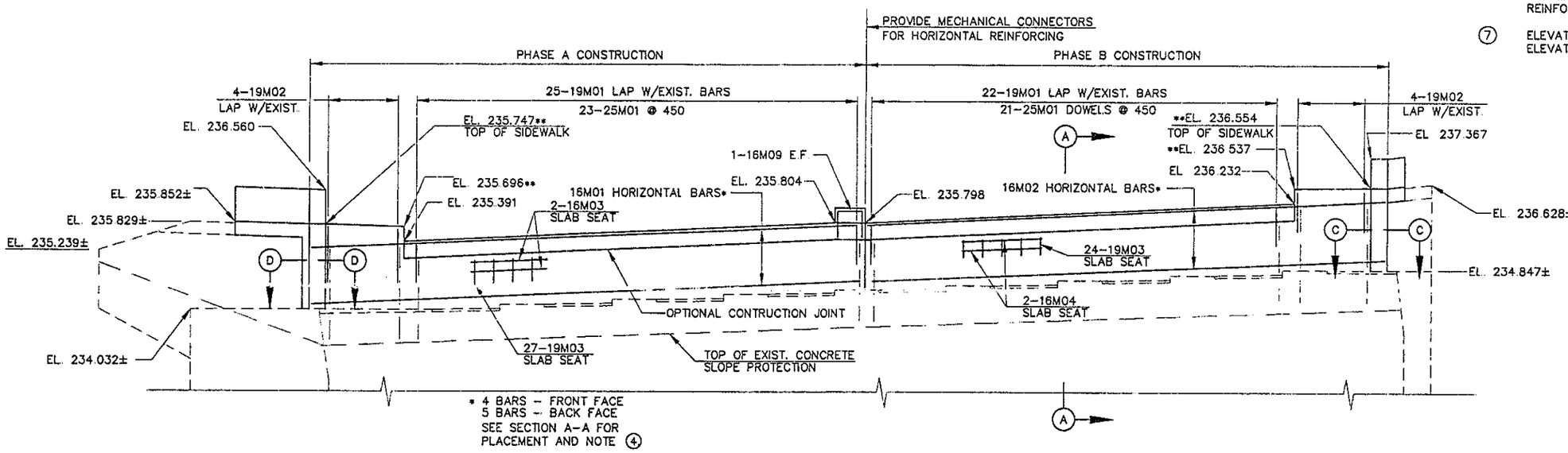


ELEVATION
(SEE NOTE (7))

* 4 BARS – FRONT FACE
5 BARS – BACK FACE
SEE SECTION A-A FOR PLACEMENT AND NOTE (4)

** ELEVATIONS SHOWN ARE TO TOP OF SIDEWALK SURFACE

NOTES

(1) FOR SECTIONS A-A, C-C AND D-D, SEE SHEET 25 OF 31. FOR WINGWALL DETAILS, SEE SHEET 25 OF 31.

(2) ALL REINFORCING STEEL SHALL BE EPOXY COATED.

(3) ALL EXCAVATION REQUIRED FOR THE REHABILITATION OF THE NORTH ABUTMENT SHALL BE INCLUDED WITH ITEM 202 – PORTIONS OF STRUCTURE REMOVED, AS PER PLAN FOR PAYMENT.

(4) NEW REINFORCING STEEL MAY REQUIRE FIELD CUTTING OR BENDING TO BE PROPERLY FITTED. PAYMENT SHALL BE INCLUDED WITH THE PERTINENT CONCRETE ITEM.

(5) POROUS BACKFILL WITH FILTER FABRIC, 600mm THICK SHALL EXTEND UP TO THE PLANE OF THE SUBGRADE AND LATERALLY TO THE ENDS OF THE WINGWALLS.

(6) THE PREFIX "EA" SHOULD BE ADDED TO THE BAR MARKS SHOWN ON THIS SHEET. SEE THE REINFORCING SCHEDULE ON SHEET 31 OF 31.

(7) ELEVATIONS SHOWN AS ± ARE FIELD SURVEY ELEVATIONS WHICH MUST BE VERIFIED

EXISTING BEAMSEAT ELEVATIONS*	
A	234.846±
B	234.737±
C	234.617±
D	234.511±
E	234.410±
F	234.324±
G	234.214±
H	234.102±
J	234.005±

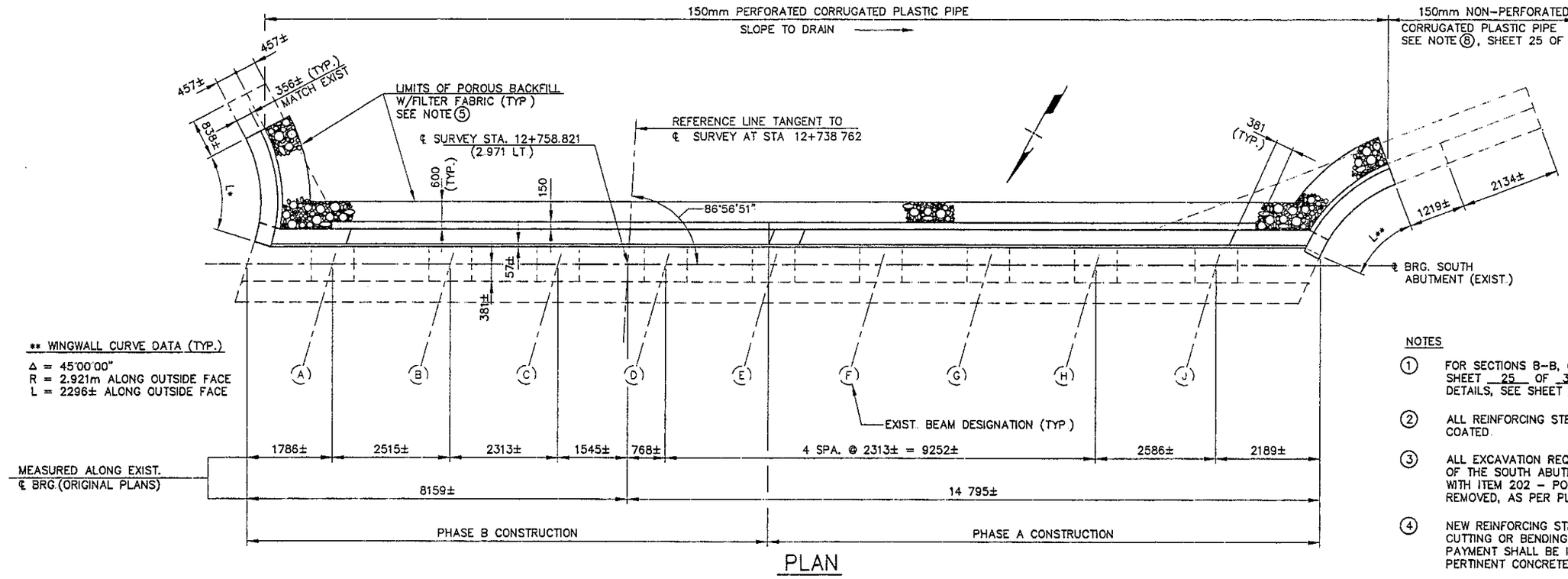
* BASED ON FIELD SURVEY

metric units

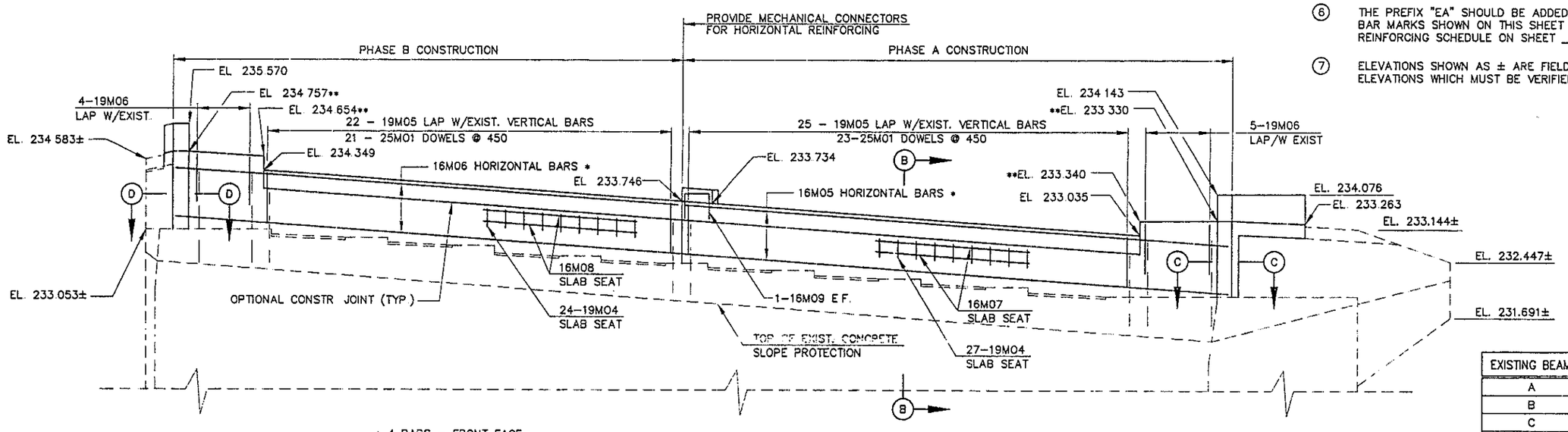
NORTH ABUTMENT

DESIGNED BY: RSC | CHECKED BY:
DATE: X/XX/XX | DATE:
DRAWN BY: CDG | REVISED BY: CDG
DATE: 6/12/97 | DATE: 6/26/97
CAD FILE NAME: \\D200547\BRIDGE\NABU1210

DESIGNED | DRAWN | REVIEWED | DATE



PLAN



ELEVATION

(SEE NOTE ⑦)

* 4 BARS – FRONT FACE
5 BARS – BACK FACE
SEE SECTION B–B FOR
PLACEMENT AND NOTE ④

** ELEVATIONS SHOWN ARE TO
TOP OF SIDEWALK SURFACE

NOTES

① FOR SECTIONS B–B, C–C AND D–D, SEE SHEET 25 OF 31. FOR WINGWALL DETAILS, SEE SHEET 25 OF 31.

② ALL REINFORCING STEEL SHALL BE EPOXY COATED.

③ ALL EXCAVATION REQUIRED FOR THE REHABILITATION OF THE SOUTH ABUTMENT SHALL BE INCLUDED WITH ITEM 202 – PORTIONS OF STRUCTURE REMOVED, AS PER PLAN FOR PAYMENT

④ NEW REINFORCING STEEL MAY REQUIRE FIELD CUTTING OR BENDING TO BE PROPERLY FITTED PAYMENT SHALL BE INCLUDED WITH THE PERTINENT CONCRETE ITEM.

⑤ POROUS BACKFILL WITH FILTER FABRIC, 600mm THICK SHALL EXTEND UP TO THE PLANE OF THE SUBGRADE AND LATERALLY TO THE ENDS OF THE WINGWALLS.

⑥ THE PREFIX "EA" SHOULD BE ADDED TO THE BAR MARKS SHOWN ON THIS SHEET SEE THE REINFORCING SCHEDULE ON SHEET 31 OF 31

⑦ ELEVATIONS SHOWN AS ± ARE FIELD SURVEY ELEVATIONS WHICH MUST BE VERIFIED.

EXISTING BEAMSEAT ELEVATIONS*	
A	233.062±
B	232.883±
C	232.718±
D	232.557±
E	232.413±
F	232.252±
G	232.075±
H	231.903±
J	231.700±

* BASED ON FIELD SURVEY

metric units

UMG Gardner

DATE 6/05/98
REVIEWED RSC
DRAWN CDG
DESIGNED LJG

SOUTH ABUTMENT

DESIGNED BY: RSC | CHECKED BY:
DATE: X/XX/XX | DATE:
DRAWN BY: CDG | REVISED BY: KAH
DATE: 6/13/97 | DATE: 6/27/97
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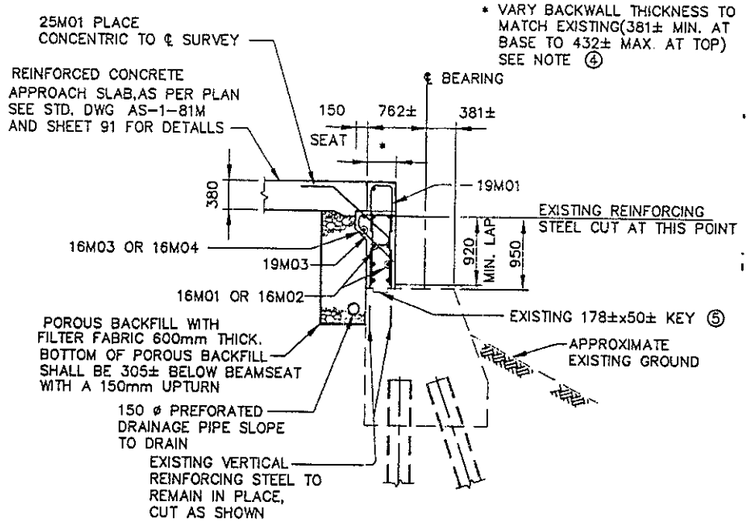
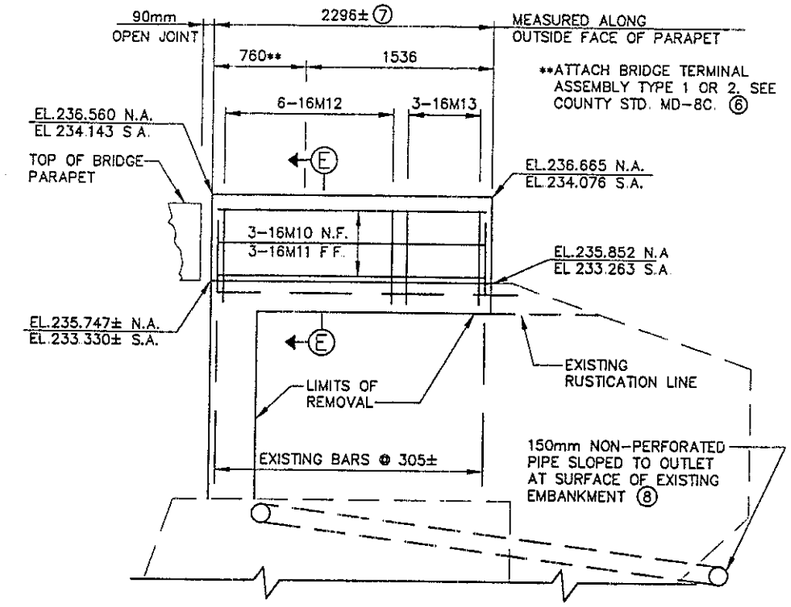
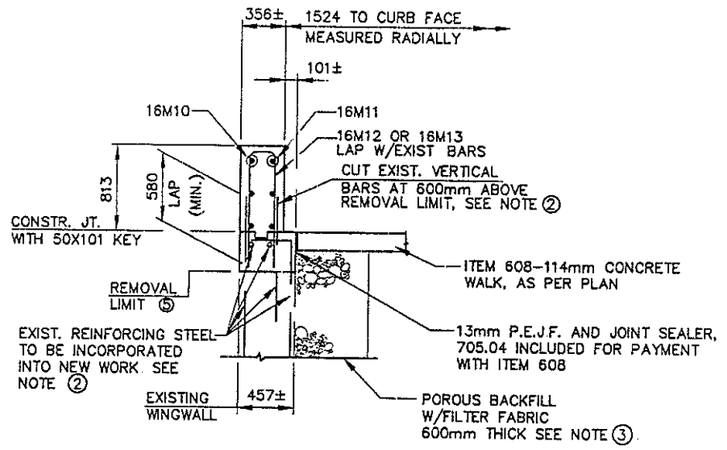


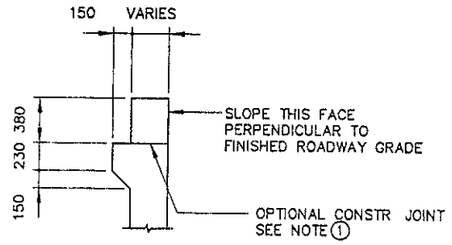
SECTION A-A
NORTH ABUTMENT



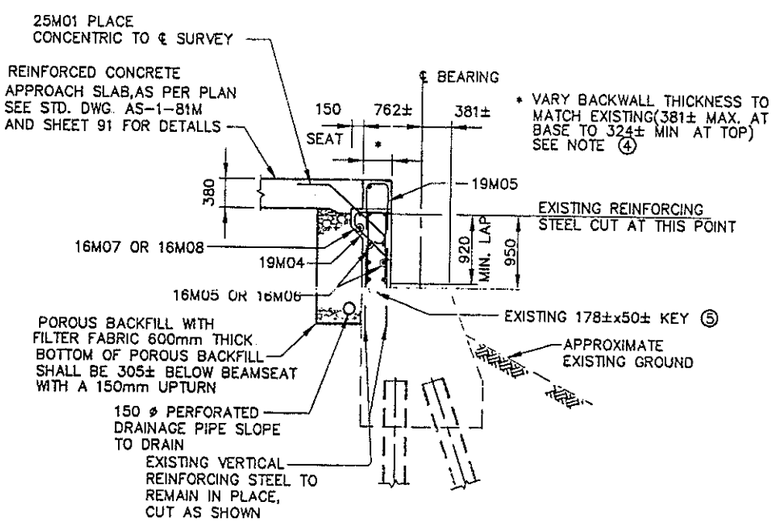
WEST WINGWALL ELEVATION
SOUTH ABUT. SHOWN. NORTH ABUT. OPP. HAND



SECTION E-E

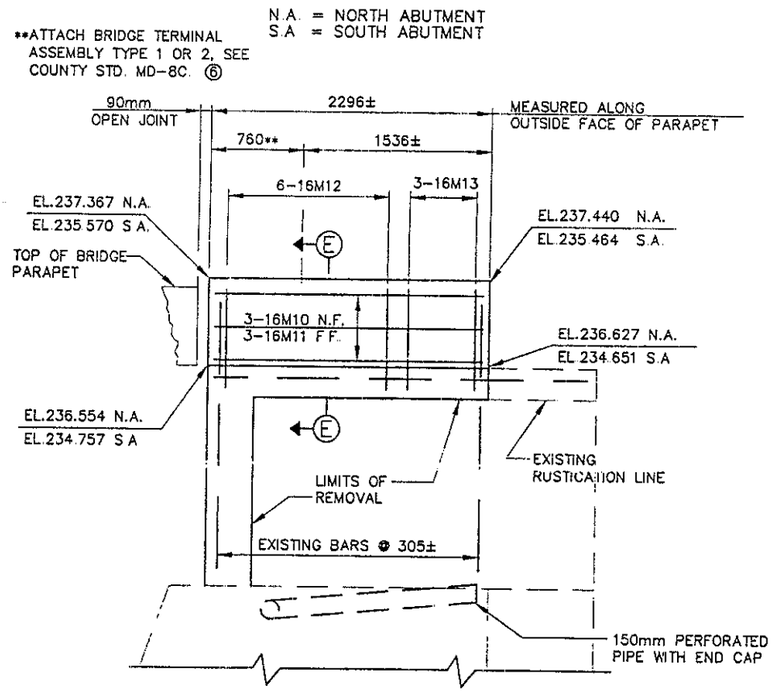


SLAB SEAT DETAIL



SECTION B-B
SOUTH ABUTMENT

N.A. = NORTH ABUTMENT
S.A = SOUTH ABUTMENT



EAST WINGWALL ELEVATION
NORTH ABUT. SHOWN. SOUTH ABUT. OPP. HAND

NOTES

① IN ADDITION TO THE PROVISIONS OF 511.08, BACKWALL CONCRETE ABOVE THE OPTIONAL CONSTRUCTION JOINT AT THE APPROACH SLAB SEAT SHALL NOT BE PLACED UNTIL AFTER THE DECK CONCRETE IN THE SPAN ADJACENT TO THE ABUTMENT HAS BEEN PLACED

② WHERE REQUIRED MINIMUM LAP LENGTH IS NOT AVAILABLE ON EXISTING VERTICAL BARS, CUT BARS OFF JUST ABOVE JOINT AND INSTALL MECHANICAL CONNECTORS TO COMPLETE THE SPLICE. SEE GENERAL NOTE ON SHEET 1 OF 31 FOR REPLACEMENT OF EXISTING REINFORCING STEEL.

③ POROUS BACKFILL WITH FILTER FABRIC, 600mm THICK SHALL EXTEND UP TO THE CONCRETE SIDEWALK AND DOWN TO 305± BELOW THE PLANE OF THE BEAM SEAT.

④ SEE ABUTMENT SECTION ON SHEET 7 OF 31 FOR ADDITIONAL BACKWALL REQUIREMENTS, THE DIMENSIONS SHOWN HERE ARE BASED ON ORIGINAL PLAN INFORMATION AND MAY NOT BE AS-BUILT.

⑤ SEE GENERAL NOTE ON SHEET 2 OF 31 FOR REQUIREMENTS FOR BONDING NEW CONCRETE TO EXISTING CONCRETE.

⑥ INSTALL TYPE 1 TERMINAL ASSEMBLY AT APPROACH ENDS OF BRIDGE. INSTALL TYPE 2 TERMINAL ASSEMBLY AT TRAILING ENDS OF BRIDGE.

⑦ AT WEST CORNERS, INCREASE LENGTH OF PARAPET AS NECESSARY TO OBTAIN A 90mm JOINT OPENING IN ACCORDANCE WITH ODOT STANDARD DWG. EXJ-4-87M.

⑧ NON-PERFORATED OUTLET PIPE SHALL BE PLACED AS DIRECTED BY THE ENGINEER. AT END OF PIPE, PLACE A BED OF CRUSHED AGGREGATE SLOPE PROTECTION MATERIAL 1200mmø BY 300mm DEEP, GRADED FLUSH WITH THE EXISTING GROUND. AN ESTIMATED QUANTITY OF 10 METERS OF NON-PERFORATED PIPE IS SHOWN IN THE ESTIMATED QUANTITIES

metric units

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DATE: X/XX/XX | DATE:
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DATE: 6/19/97 | DATE:
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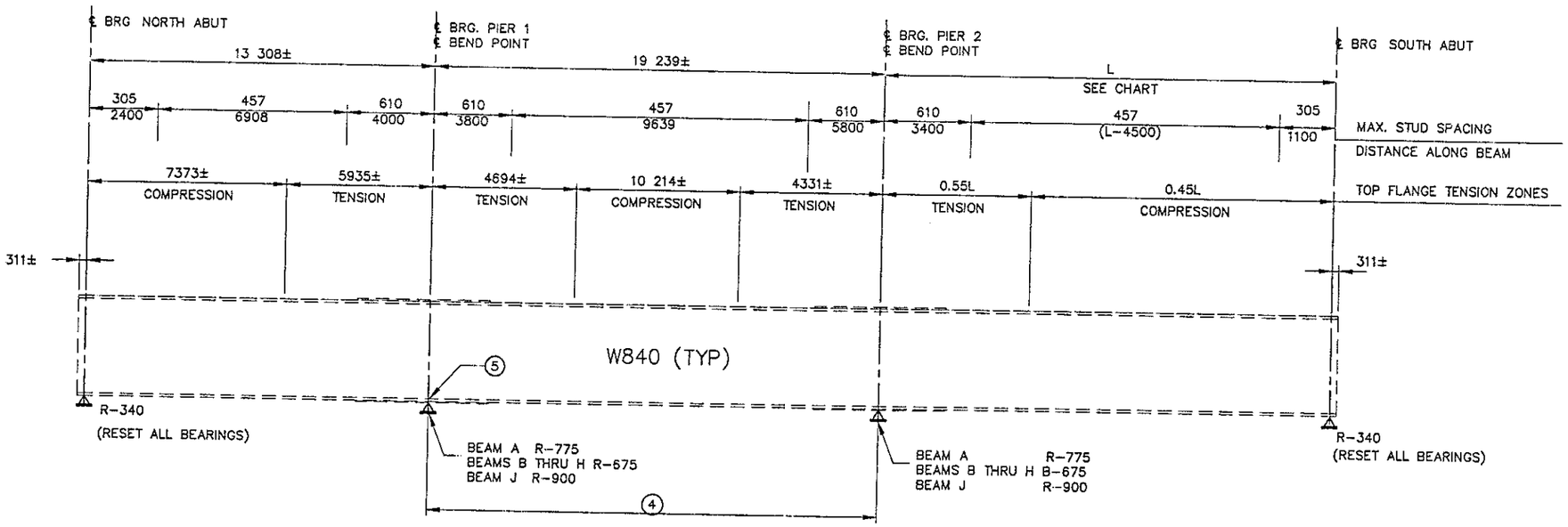
UTILS Gresham | DATE 6/19/97 | REVIEWED RSC | DRAWN F.F.F. | DESIGNED LJG

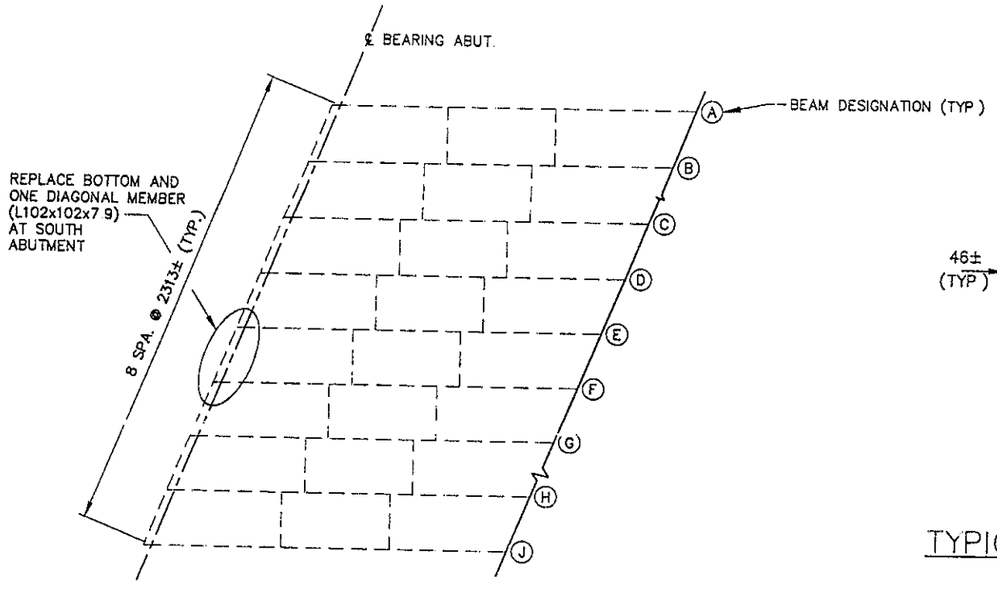
ABUTMENT DETAILS
CUYAHOGA COUNTY BRIDGE NO. 210
CITY-LAKEWOOD HTS RD



TYPICAL EXISTING BEAM ELEVATION

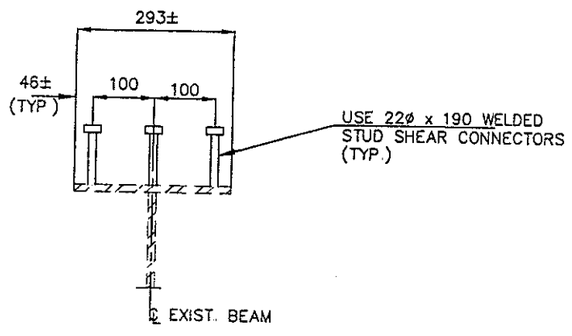
(SEE NOTE ①)

EXISTING BEAM LENGTH (mm)	
BEAM	L
A	11 576±
B-H	11 632±
J	11 714



PARTIAL FRAMING PLAN

(SEE NOTE ③)



TYPICAL STUD SPACING

NOTES

① EXISTING BEAM SIZE VARIES BETWEEN W840 x 193 TO W840 x 226. REFER TO ORIGINAL CONTRACT PLANS FOR ADDITIONAL DETAILS. PIER CENTERLINES CORRESPOND TO BEAM SPLICE POINTS AND BEND POINTS.

② FOR DETAILS OF THE EXISTING BEARINGS SEE THE ORIGINAL CONTRACT PLANS AND STD. DWG. RB-1-55M.

③ ALL NEW STEEL SHALL BE A709M GRADE 250 AND BE INCLUDED FOR PAYMENT WITH ITEM 863-STRUCTURAL STEEL MEMBERS, MISCELLANEOUS LEVEL FABRICATION.

④ GRIND BOTTOM FLANGE EDGES WITHIN THESE LIMITS SEE SUPPLEMENTAL SPECIFICATION 815.

⑤ CAULK IN GAP BETWEEN BOTTOM FLANGE AND COVER PLATE. BEAM J AT PIER 1

metric units

URS Greiner

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DRAWN BY: FFF | REVISED BY: KAH
DATE: 6/4/97 | DATE: 6/27/97
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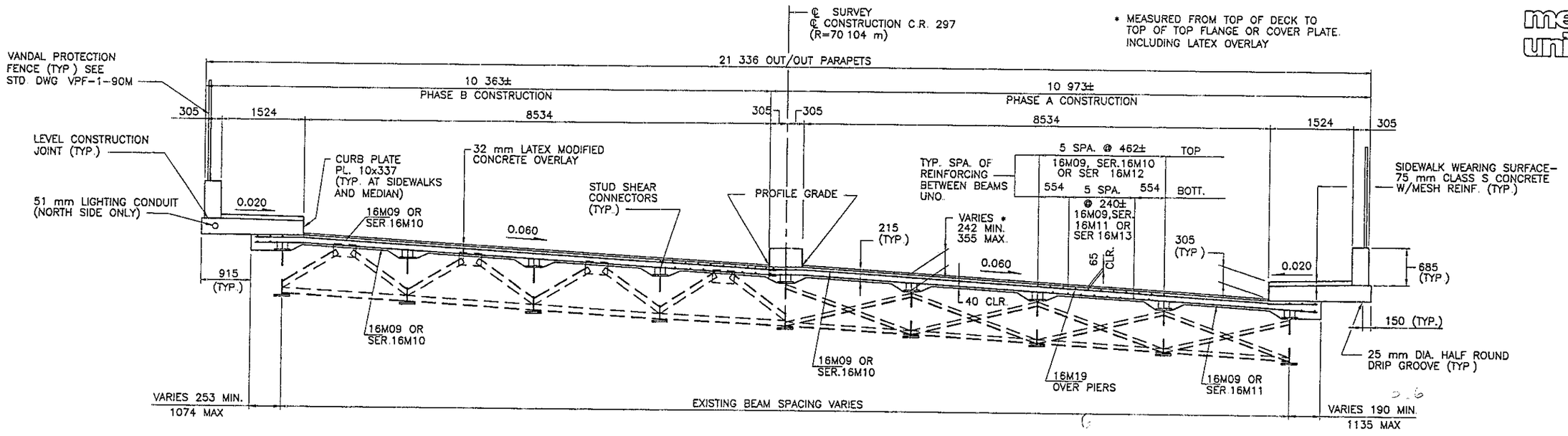
DESIGNED LJC
DRAWN FFF
REVIEWED RSC
DATE 6/25/97

SUPERSTRUCTURE DETAILS
CUYAHOGA COUNTY BRIDGE NO. 210
CUY-LAKEWOOD HTS. BL'VD.

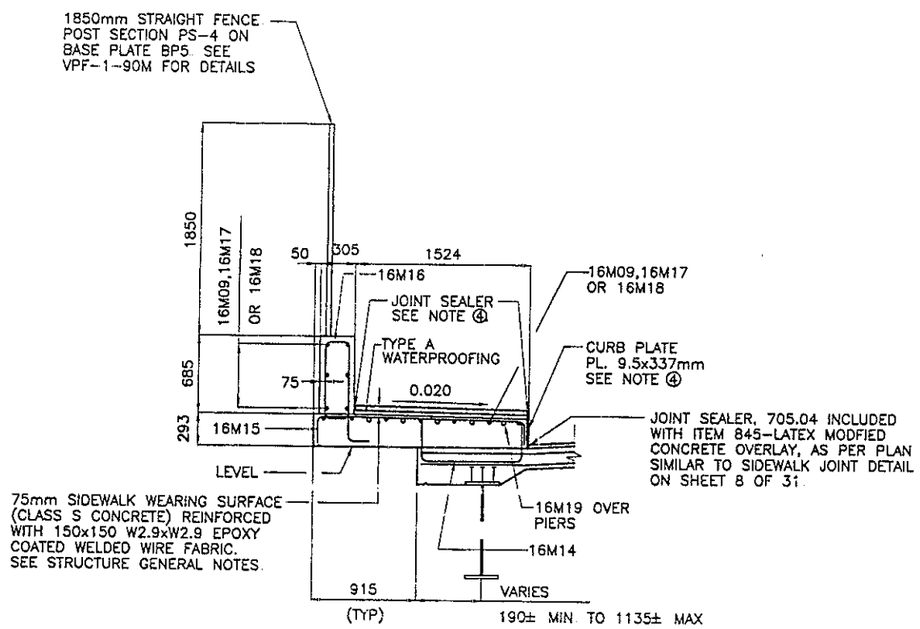
metric units



HALF SECTION THRU END DIAPHRAGMS

HALF SECTION AT INTERMEDIATE DIAPHRAGMS

TRANSVERSE DECK SECTION
(ALL DIMENSIONS ARE MEASURED RADIALLY)



SIDEWALK DETAIL

NOTES

① THE DISTANCE SHOWN FROM TOP OF DECK SLAB TO TOP OF STEEL BEAM IS THE THEORETICAL DESIGN DIMENSION INCLUDING THE DESIGN HAUNCH THICKNESS OF 95mm. THE QUANTITY OF DECK CONCRETE TO BE PAID FOR SHALL BE BASED ON THIS DIMENSION, MINUS 32mm, MINUS THE DESIGN HAUNCH THICKNESS, EVEN THOUGH DEVIATION FROM IT MAY BE NECESSARY BECAUSE THE TOP FLANGE OF THE BEAM MAY NOT HAVE THE EXACT CAMBER OR CONFORMATION REQUIRED TO PLACE IT PARALLEL TO THE FINISHED GRADE

② A HAUNCH WIDTH OF 225mm SHALL BE USED FOR COMPUTING QUANTITY OF CONCRETE. HOWEVER, THE HAUNCH WIDTH MAY VARY BETWEEN 150mm AND 300mm.

③ WELDED ATTACHMENT OF SUPPORTS FOR CONCRETE DECK FINISHING MACHINE MAY BE MADE TO AREAS OF THE FASCIA STRINGER FLANGES DESIGNATED "COMPRESSION". ATTACHMENTS SHALL NOT BE MADE TO AREAS DESIGNATED "TENSION" FILLET WELDS TO COMPRESSION FLANGES SHALL NOT BE CLOSER THAN 25mm FROM THE EDGE OF FLANGE, BE NOT MORE THAN 50mm LONG, AND BE NOT SMALLER THAN THE MINIMUM SIZE REQUIRED BY AASHTO.

④ FOR DETAILS OF MEDIAN CURB, SIDEWALK JOINTS AND JOINT SEALER, AND STEEL CURB PLATES, SEE SHEET 8 OF 31

⑤ FOR DECK SLAB PLAN AND REINFORCING LAYOUT SEE SHEET 29 OF 31

⑥ FOR REMOVAL LIMITS SEE SHEET 7 OF 31

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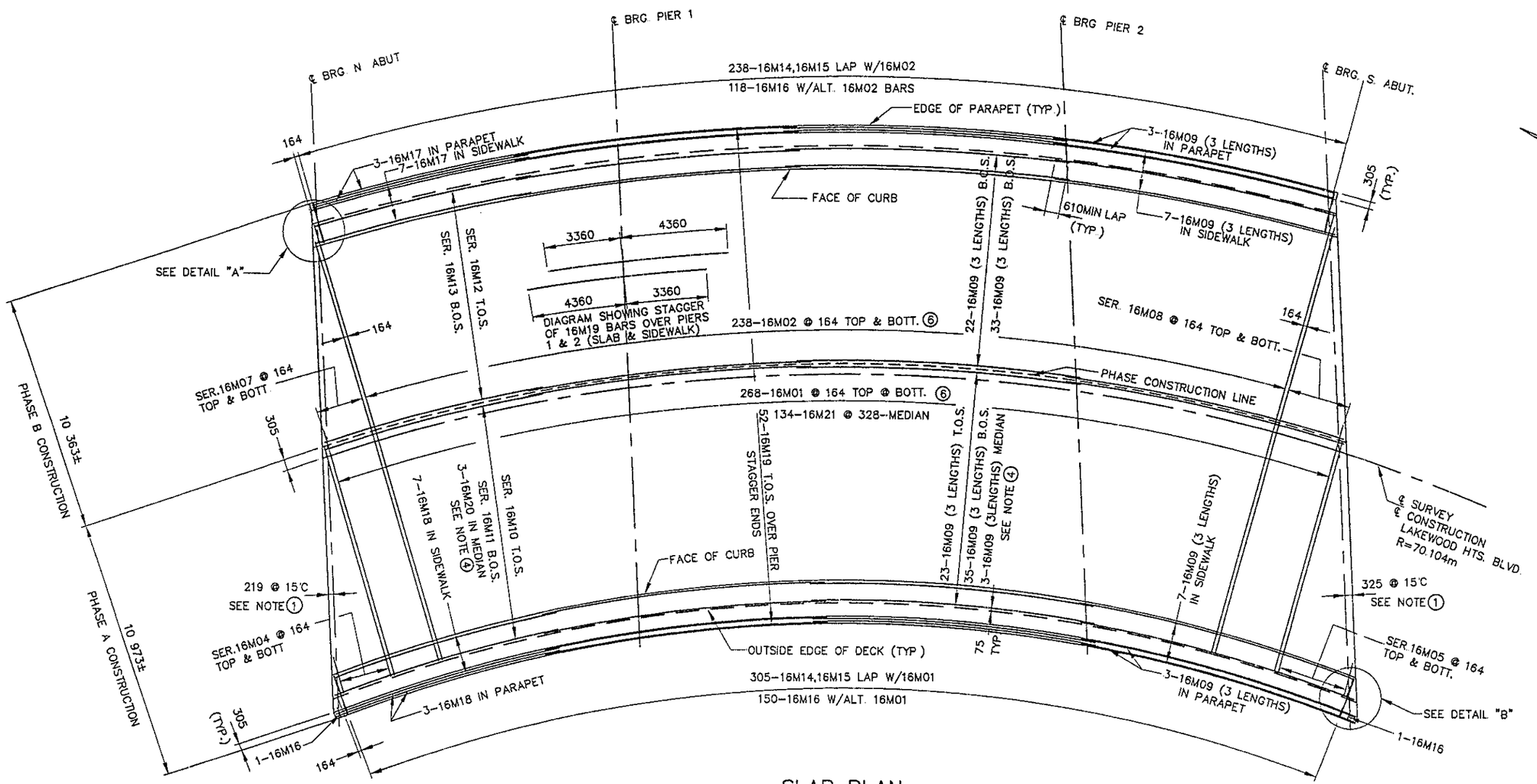
DATE: X/X/XX	DATE:		
DRAWN BY: FFF	REVISED BY:		
DATE: 6/3/97	DATE:		
CAD FILE NAME: J:\D200547\BRIDGE\BDEC0210			

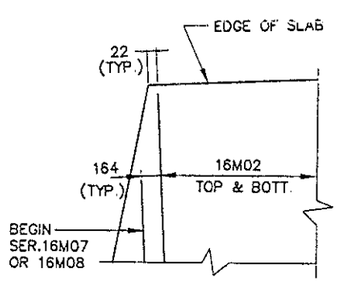
TRANSVERSE SECTION & DETAILS

DIV. I AVENUE LITE I LINE



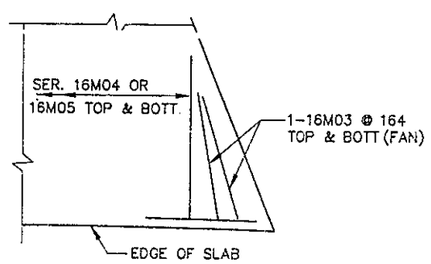
SLAB PLAN

(TRANSVERSE BARS PLACED RADIAL TO ℄)



DETAIL "A"

(NORTH CORNER SHOWN, SOUTH CORNER OPP. HAND)



DETAIL "B"

(SOUTH CORNER SHOWN, NORTH CORNER OPP. HAND)

NOTES

1. DIMENSION IS BASED ON A 75mm STRIP SEAL GLAND WITH 35mm WIDE RETAINERS. SEE SHEET 8 OF 31 FOR JOINT OPENING TABLE.
2. THE PREFIX 'ES' SHALL BE ADDED TO ALL REINFORCING BAR MARKS SHOWN ON THIS SHEET. SEE SHEET 31 OF 31 FOR REINFORCING SCHEDULE.
3. FOR LEGEND OF ABBREVATIONS SEE GENERAL NOTES SHEET 3 OF 31.
4. FOR MEDIAN DETAIL SEE COMMON DETAILS SHEET 8 OF 31.
5. WORK THIS SHEET WITH SHEETS 27 AND 31 OF 31.
6. TRANSVERSE SLAB REINFORCING SHALL BE PROVIDED WITH EPOXY COATED MECHANICAL CONNECTORS AT PHASE CONSTRUCTION JOINT.

DESIGNED BY: RSC	CHECKED BY:
DATE: X/XX/XX	DATE:
DRAWN BY: FPF	REVISED BY:
DATE: 5/19/97	DATE:
CAD FILE NAME: J: \0200547\SLAB210	

metric units

URS Greiner

DESIGNED LJG | DRAWN FPF | REVIEWED RSC | DATE 6/05/98

SLAB PLAN
CUYAHOGA COUNTY BRIDGE NO. 210
CITY OF LAKEWOOD HTS. BLVD.

28/
15/16

DECK SCREED ELEVATION TABLE (PHASE A) *

ELEVATION LOCATION		SPAN 1			SPAN 2		SPAN 3	
		℄ BEARING NORTH ABUT.	1/2 SPAN	℄ PIER 1	1/2 SPAN	℄ PIER 2	1/2 SPAN	℄ BEARING SOUTH ABUT
CONSTR. JT. FINAL TOP DECK ELEV.		235.754	235.505	235.232	234.791	234.312	234.024	233.737
P.G.L. / GUTTER FINAL TOP DECK ELEV.		235.760	235.509	235.234	234.789	234.306	234.016	233.726
BEAM E	# ELEV. AFTER DECK REMOVAL							
	# ELEV. BEFORE DECK REMOVAL							
	## SURVEYED REBOUND							
	### ADJUSTED REBOUND							
	FINAL TOP DECK ELEV.	235.757	235.498	235.236	234.781	234.308	234.027	233.727
	#### DECK SCREED ELEV.							
BEAM F	# ELEV. AFTER DECK REMOVAL							
	# ELEV. BEFORE DECK REMOVAL							
	## SURVEYED REBOUND							
	### ADJUSTED REBOUND							
	FINAL TOP DECK ELEV.	235.676	235.389	235.145	234.648	234.167	233.871	233.566
	#### DECK SCREED ELEV.							
BEAM G	# ELEV. AFTER DECK REMOVAL							
	# ELEV. BEFORE DECK REMOVAL							
	## SURVEYED REBOUND							
	### ADJUSTED REBOUND							
	FINAL TOP DECK ELEV.	235.568	235.282	235.017	234.493	234.019	233.713	233.392
	#### DECK SCREED ELEV.							
BEAM H	# ELEV. AFTER DECK REMOVAL							
	# ELEV. BEFORE DECK REMOVAL							
	## SURVEYED REBOUND							
	### ADJUSTED REBOUND							
	FINAL TOP DECK ELEV.	235.461	235.161	234.888	234.351	233.861	233.541	233.218
	#### DECK SCREED ELEV.							
BEAM J	# ELEV. AFTER DECK REMOVAL							
	# ELEV. BEFORE DECK REMOVAL							
	## SURVEYED REBOUND							
	### ADJUSTED REBOUND							
	FINAL TOP DECK ELEV.	235.355	235.062	234.764	234.249	233.697	233.371	233.027
	#### DECK SCREED ELEV.							
RIGHT GUTTER FINAL TOP DECK ELEV.		235.346	235.068	234.758	234.251	233.699	233.364	233.030
RIGHT GUTTER DECK SCREED ELEV.								

SCREED ELEVATIONS :

FIELD PROCEDURES DURING PHASED CONSTRUCTION OF DECKS WITHOUT CLOSURE POURS.

1. SURVEY BOTTOM OF EXIST. BEAMS IN PHASE A AT THE LOCATIONS SHOWN IN THE TABLE PRIOR TO PHASE A DECK REMOVAL AND AFTER PHASE A DECK REMOVAL.
2. COMPUTE THE AMOUNT OF SURVEYED REBOUND FOR THESE BEAMS BY SUBTRACTING THE ELEVATIONS AFTER THE REMOVAL FROM THE ELEVATIONS BEFORE REMOVAL.
3. COMPUTE THE ADJUSTED REBOUND FOR THESE BEAMS BY MULTIPLYING THE SURVEYED REBOUND BY THE RATIO OF THE PROPOSED DEAD LOAD TO THE EXIST. DEAD LOAD.
4. ADD THE AMOUNT OF ADJUSTED REBOUND TO THE FINAL TOP OF DECK ELEVATIONS TO OBTAIN THE DECK SCREED ELEVATIONS.
5. AFTER PHASE A DECK PLACEMENT, REPEAT STEPS 1 THRU 4 FOR REMAINING BEAMS PRIOR TO AND AFTER PHASE B DECK REMOVAL.
6. THE COST OF SURVEYING IS CONSIDERED INCIDENTAL TO DECK CONSTRUCTION AND SHALL BE INCLUDED WITH ITEM 511 – CLASS 'S' CONCRETE, SUPERSTRUCTURE FOR PAYMENT.

* ELEVATIONS SHOWN ARE TO TOP OF PORTLAND CEMENT CONCRETE DECK SLAB, PRIOR TO PLACEMENT OF LATEX OVERLAY. WORK THIS SHEET WITH SHEET 30 AND SLAB DEPTH TABLE SHOWN ON THIS SHEET.

– BOTTOM OF BEAM ELEVATION SURVEYED DURING CONSTRUCTION

– SURVEYED REBOUND = BEAM ELEVATION AFTER DECK REMOVAL MINUS BEAM ELEVATION BEFORE DECK REMOVAL.

– ADJUSTED REBOUND = RATIO OF PROPOSED DEAD LOAD TO EXISTING DEAD LOAD MULTIPLIED TIMES THE SURVEYED REBOUND

$$\frac{\text{PROPOSED DEAD LOAD}}{\text{EXISTING DEAD LOAD}} = 0.762$$

– DECK SCREED ELEVATION = ADJUSTED REBOUND ADDED TO THE FINAL TOP OF DECK ELEVATION

ANTICIPATED DECK SLAB DEPTHS * (PHASE A)

LOCATION	SPAN 1			SPAN 2		SPAN 3	
	℄ BEARING NORTH ABUT.	1/2 SPAN	℄ PIER 1	1/2 SPAN	℄ PIER 2	1/2 SPAN	℄ BEARING SOUTH ABUT.
BEAM E	251	283	283	323	279	260	216
BEAM F	256	270	285	280	257	236	210
BEAM G	260	272	286	284	275	241	218
BEAM H	261	284	290	293	277	242	218
BEAM J	256	289	288	281	277	252	230

* DEPTHS IN MILLIMETERS, ARE SHOWN FROM TOP OF PORTLAND CEMENT CONCRETE DECK TO TOP OF EXISTING BEAM, PRIOR TO PLACEMENT OF LATEX OVERLAY. ANTICIPATED DRY RUN DISTANCES CAN BE OBTAINED BY ADDING THE ADJUSTED REBOUND SHOWN ABOVE TO THE ANTICIPATED DECK SLAB DEPTHS.

DECK SLAB NOTES :

1. WORK THIS TABLE WITH THE DECK SCREED ELEVATIONS SHOWN ABOVE.
2. DECK SLAB DEPTH: THE QUANTITY OF DECK SLAB CONCRETE TO BE PAID FOR SHALL BE BASED ON THE MINIMUM REQUIRED DECK SLAB THICKNESS OF 183mm. THE QUANTITY OF CONCRETE REQUIRED FOR THE HAUNCH SHALL BE BASED ON THE DESIGN HAUNCH OF 95mm EVEN THOUGH DEVIATION FROM THAT DEPTH MAY BE NECESSARY BECAUSE THE TOP FLANGE OF THE GIRDER MAY NOT BE PARALLEL TO THE FINISHED GRADE. ACTUAL HAUNCH DEPTHS, MEASURED TO THE TOP OF THE BEAM, MAY VARY FROM 27mm MINIMUM TO 140mm MAXIMUM.
3. A HAUNCH WIDTH OF 225mm SHALL BE USED FOR COMPUTING QUANTITY OF CONCRETE. HOWEVER, THE HAUNCH WIDTH MAY VARY BETWEEN 150mm AND 305mm.

DESIGNED BY: RSC | CHECKED BY:
DATE: XX/XX/XX | DATE:
DRAWN BY: CDG | REVISED BY: CDG
DATE: 2/6/97 | DATE: 6/27/97
CAD FILE NAME: J:\72005271\SCREED1

metric units

DESIGNED L.J.G. | DRAWN C.D.G. | REVIEWED R.S.C. | DATE 6/06/98

DECK SCREED ELEVATIONS AND ANTICIPATED DECK SLAB DEPTHS (PHASE A)

CUY-LAKEWOOD HTS. BLVD.

29 / 160 / 162

metric units

DECK SCREED ELEVATION TABLE (PHASE B) *

ELEVATION LOCATION		SPAN 1		SPAN 2		SPAN 3		
		℄ BEARING NORTH ABUT.	1/2 SPAN	℄ PIER 1	1/2 SPAN	℄ PIER 2	1/2 SPAN	℄ BEARING SOUTH ABUT.
LEFT GUTTER FINAL TOP DECK ELEV.		236.188	235.961	235.716	235.322	234.896	234.642	234.388
LEFT GUTTER DECK SCREED ELEV.								
BEAM A	# ELEV. AFTER DECK REMOVAL							
	# ELEV. BEFORE DECK REMOVAL							
	## SURVEYED REBOUND							
	### ADJUSTED REBOUND							
	FINAL TOP DECK ELEV.	236.188	235.941	235.714	235.314	235.899	234.637	234.380
	### DECK SCREED ELEV.							
BEAM B	# ELEV. AFTER DECK REMOVAL							
	# ELEV. BEFORE DECK REMOVAL							
	## SURVEYED REBOUND							
	### ADJUSTED REBOUND							
	FINAL TOP DECK ELEV.	236.091	235.837	235.623	235.170	234.770	234.472	234.202
	### DECK SCREED ELEV.							
BEAM C	# ELEV. AFTER DECK REMOVAL							
	# ELEV. BEFORE DECK REMOVAL							
	## SURVEYED REBOUND							
	### ADJUSTED REBOUND							
	FINAL TOP DECK ELEV.	235.976	235.719	235.493	235.031	234.614	234.315	234.039
	### DECK SCREED ELEV.							
BEAM D	# ELEV. AFTER DECK REMOVAL							
	# ELEV. BEFORE DECK REMOVAL							
	## SURVEYED REBOUND							
	### ADJUSTED REBOUND							
	FINAL TOP DECK ELEV.	235.845	235.562	235.364	234.892	234.460	234.155	233.869
	### DECK SCREED ELEV.							
CONSTR. JT. / GUTTER FINAL TOP DECK ELEV.		235.754	235.505	235.232	234.791	234.312	234.024	233.737

* ELEVATIONS SHOWN ARE TO TOP OF PORTLAND CEMENT CONCRETE DECK SLAB, PRIOR TO PLACEMENT OF LATEX OVERLAY WORK THIS SHEET WITH SHEET 29 AND SLAB DEPTH TABLE SHOWN ON THIS SHEET.

– BOTTOM OF BEAM ELEVATION SURVEYED DURING CONSTRUCTION

– SURVEYED REBOUND = BEAM ELEVATION AFTER DECK REMOVAL MINUS BEAM ELEVATION BEFORE DECK REMOVAL

– ADJUSTED REBOUND = RATIO OF PROPOSED DEAD LOAD TO EXISTING DEAD LOAD MULTIPLIED TIMES THE SURVEYED REBOUND.

$$\frac{\text{PROPOSED DEAD LOAD}}{\text{EXISTING DEAD LOAD}} = 0.762$$

– DECK SCREED ELEVATION = ADJUSTED REBOUND ADDED TO THE FINAL TOP OF DECK ELEVATION

ANTICIPATED DECK SLAB DEPTHS * (PHASE B)

LOCATION	SPAN 1		SPAN 2		SPAN 3		
	℄ BEARING NORTH ABUT.	1/2 SPAN	℄ PIER 1	1/2 SPAN	℄ PIER 2	1/2 SPAN	℄ BEARING SOUTH ABUT.
BEAM A	249	257	241	252	244	247	222
BEAM B	262	264	283	281	277	245	219
BEAM C	262	271	290	295	282	249	219
BEAM D	242	238	288	289	277	247	213

* DEPTHS IN MILLIMETERS, ARE SHOWN FROM TOP OF PORTLAND CEMENT CONCRETE DECK TO TOP OF EXISTING BEAM, PRIOR TO PLACEMENT OF LATEX OVERLAY ANTICIPATED DRY RUN DISTANCES CAN BE OBTAINED BY ADDING THE ADJUSTED REBOUND SHOWN ABOVE TO THE ANTICIPATED DECK SLAB DEPTHS.

DECK SLAB NOTES :

1. WORK THIS TABLE WITH THE DECK SCREED ELEVATIONS SHOWN ABOVE
2. DECK SLAB DEPTH: THE QUANTITY OF DECK SLAB CONCRETE TO BE PAID FOR SHALL BE BASED ON THE MINIMUM REQUIRED DECK SLAB THICKNESS OF 183mm. THE QUANTITY OF CONCRETE REQUIRED FOR THE HAUNCH SHALL BE BASED ON THE DESIGN HAUNCH OF 95mm EVEN THOUGH DEVIATION FROM THAT DEPTH MAY BE NECESSARY BECAUSE THE TOP FLANGE OF THE GIRDER MAY NOT BE PARALLEL TO THE FINISHED GRADE. ACTUAL HAUNCH DEPTHS, MEASURED TO THE TOP OF THE BEAM, MAY VARY FROM 27mm MINIMUM TO 140mm MAXIMUM
3. A HAUNCH WIDTH OF 225mm SHALL BE USED FOR COMPUTING QUANTITY OF CONCRETE HOWEVER, THE HAUNCH WIDTH MAY VARY BETWEEN 150mm AND 305mm.

DESIGNED BY: RSC | CHECKED BY:
DATE: XX/XX/XX | DATE:
DRAWN BY: CDG | REVISED BY: CDG
DATE: 2/6/97 | DATE: 6/27/97
CAD FILE NAME: J:\0200527\SCREED2

DECK SCREED ELEVATION TABLE (PHASE B) *

ELEVATION LOCATION		SPAN 1		SPAN 2		SPAN 3		
		℄ BEARING NORTH ABUT.	1/2 SPAN	℄ PIER 1	1/2 SPAN	℄ PIER 2	1/2 SPAN	℄ BEARING SOUTH ABUT
LEFT GUTTER FINAL TOP DECK ELEV.		236.188	235.961	235.716	235.322	234.896	234.642	234.388
LEFT GUTTER DECK SCREED ELEV.								
BEAM A	# ELEV. AFTER DECK REMOVAL							
	# ELEV. BEFORE DECK REMOVAL							
	## SURVEYED REBOUND							
	### ADJUSTED REBOUND							
	FINAL TOP DECK ELEV.	236.188	235.941	235.714	235.314	235.899	234.637	234.380
	#### DECK SCREED ELEV.							
BEAM B	# ELEV. AFTER DECK REMOVAL							
	# ELEV. BEFORE DECK REMOVAL							
	## SURVEYED REBOUND							
	### ADJUSTED REBOUND							
	FINAL TOP DECK ELEV.	236.091	235.837	235.623	235.170	234.770	234.472	234.202
	#### DECK SCREED ELEV.							
BEAM C	# ELEV. AFTER DECK REMOVAL							
	# ELEV. BEFORE DECK REMOVAL							
	## SURVEYED REBOUND							
	### ADJUSTED REBOUND							
	FINAL TOP DECK ELEV.	235.976	235.719	235.493	235.031	234.614	234.315	234.039
	#### DECK SCREED ELEV.							
BEAM D	# ELEV. AFTER DECK REMOVAL							
	# ELEV. BEFORE DECK REMOVAL							
	## SURVEYED REBOUND							
	### ADJUSTED REBOUND							
	FINAL TOP DECK ELEV.	235.845	235.562	235.364	234.892	234.460	234.155	233.869
	#### DECK SCREED ELEV.							
CONSTR. JT. / GUTTER FINAL TOP DECK ELEV.		235.754	235.505	235.232	234.791	234.312	234.024	233.737

* ELEVATIONS SHOWN ARE TO TOP OF PORTLAND CEMENT CONCRETE DECK SLAB, PRIOR TO PLACEMENT OF LATEX OVERLAY. WORK THIS SHEET WITH SHEET 29 AND SLAB DEPTH TABLE SHOWN ON THIS SHEET

\# - BOTTOM OF BEAM ELEVATION SURVEYED DURING CONSTRUCTION

- SURVEYED REBOUND = BEAM ELEVATION AFTER DECK REMOVAL MINUS BEAM ELEVATION BEFORE DECK REMOVAL

- ADJUSTED REBOUND = RATIO OF PROPOSED DEAD LOAD TO EXISTING DEAD LOAD MULTIPLIED TIMES THE SURVEYED REBOUND.

$$\frac{\text{PROPOSED DEAD LOAD}}{\text{EXISTING DEAD LOAD}} = 0.762$$

- DECK SCREED ELEVATION = ADJUSTED REBOUND ADDED TO THE FINAL TOP OF DECK ELEVATION

ANTICIPATED DECK SLAB DEPTHS * (PHASE B)

LOCATION	SPAN 1		SPAN 2		SPAN 3		
	℄ BEARING NORTH ABUT.	1/2 SPAN	℄ PIER 1	1/2 SPAN	℄ PIER 2	1/2 SPAN	℄ BEARING SOUTH ABUT.
BEAM A	249	257	241	252	244	247	222
BEAM B	262	264	283	281	277	245	219
BEAM C	262	271	290	295	282	249	219
BEAM D	242	238	288	289	277	247	213

* DEPTHS IN MILLIMETERS, ARE SHOWN FROM TOP OF PORTLAND CEMENT CONCRETE DECK TO TOP OF EXISTING BEAM, PRIOR TO PLACEMENT OF LATEX OVERLAY

ANTICIPATED DRY RUN DISTANCES CAN BE OBTAINED BY ADDING THE ADJUSTED REBOUND SHOWN ABOVE TO THE ANTICIPATED DECK SLAB DEPTHS

DECK SLAB NOTES :

1. WORK THIS TABLE WITH THE DECK SCREED ELEVATIONS SHOWN ABOVE.
2. DECK SLAB DEPTH: THE QUANTITY OF DECK SLAB CONCRETE TO BE PAID FOR SHALL BE BASED ON THE MINIMUM REQUIRED DECK SLAB THICKNESS OF 183mm. THE QUANTITY OF CONCRETE REQUIRED FOR THE HAUNCH SHALL BE BASED ON THE DESIGN HAUNCH OF 95mm EVEN THOUGH DEVIATION FROM THAT DEPTH MAY BE NECESSARY BECAUSE THE TOP FLANGE OF THE GIRDER MAY NOT BE PARALLEL TO THE FINISHED GRADE. ACTUAL HAUNCH DEPTHS, MEASURED TO THE TOP OF THE BEAM, MAY VARY FROM 27mm MINIMUM TO 140mm MAXIMUM
3. A HAUNCH WIDTH OF 225mm SHALL BE USED FOR COMPUTING QUANTITY OF CONCRETE. HOWEVER, THE HAUNCH WIDTH MAY VARY BETWEEN 150mm AND 305mm.

metric units

DESIGNED BY: RSC | CHECKED BY:
DATE: XX/XX/XX | DATE:
DRAWN BY: CDG | REVISED BY: CDG
DATE: 2/6/97 | DATE: 6/27/97
CAD FILE NAME: J:\V2000527\SCREED2

DESIGNED | DRAWN | REVIEWED | DATE

DECK SCREED ELEVATIONS AND

REINFORCING SCHEDULE

MARK	No. REQD.	LGTH.	TYPE	DIMENSIONS A	B	C	D	INCRM.	MASS Kg
ABUTMENTS									
EA 16M01	9	11500	ST						161
EA 16M02	9	10675	ST						149
EA 16M03	2	10175	ST						32
EA 16M04	2	9025	ST						28
EA 16M05	9	11875	ST						166
EA 16M06	9	10850	ST						152
EA 16M07	2	10375	ST						32
EA 16M08	2	9425	ST						29
EA 16M09	4	1675	2	610	530				10
EA 16M10	12	2225	10	2235	2972				41
EA 16M11	12	2425	10	2430	3225				45
EA 16M12	24	2100	2	960	250				78
EA 16M13	12	2100	2	960	250				39
EA 19M01	47	2875	2	1320	325				302
EA 19M02	8	3475	2	1620	325				62
EA 19M03	51	1200	16	465	180	180	655		137
EA 19M04	51	1025	16	385	180	385	540		117
EA 19M05	47	2625	2	1250	220				276
EA 19M06	9	3350	2	1615	220				67
EA 25M01	88	1500	38	815	435	305			524
TOTAL ABUTMENTS - 2447									

REINFORCING SCHEDULE

MARK	No. REQD.	LGTH.	TYPE	DIMENSIONS A	B	C	D	INCRM.	MASS Kg
SUPERSTRUCTURE									
ES 16M01	536	10025	62	10035					8340
ES 16M02	476	9425	61	9420					6963
ES 16M03	8	1175	ST						15
SERIES	2-SETS	10050							
OF	OF 14-	TO	ST					652	253
ES 16M04	28 BARS	1575							
SERIES	2-SETS	10350							
OF	OF 19-	TO	ST					496	347
ES 16M05	38 BARS	1425							
ES 16M07	2 @ 13- ~~@ 17~~	~~1750~~	61	~~750~~					96
ES 16M08	~~@ 17~~	1600	61	2410					42
ES 16M09	408	12200	ST						7725
SERIES	1-SET	9625							
OF	OF 24-	TO	ST					13	364
ES 16M10	24 BARS	9925							
SERIES	1-SET	9625							
OF	OF 35-	TO	ST					9	531
ES 16M11	35 BARS	9925							
SERIES	1-SET	9625							
OF	OF 21-	TO	ST					8	311
ES 16M12	21 BARS	9475							
SERIES	1-SET	9625							
OF	OF 33-	TO	ST					5	489
ES 16M13	33 BARS	9475							
ES 16M14	543	1525	2	375	864				1285
ES 16M15	543	2125	2	200	1805				1791
ES 16M16	268	2175	51						905
ES 16M17	13	9475	ST						191
ES 16M18	13	9975	ST						201
ES 16M19	104	7725	ST						1247
ES 16M20	3	12625	ST						59
ES 16M21	134	1250	2	420	500				260
ES 16M31	8	1325	2	305	800				16
ES 16M32	8	2375	2	830	800				29
ES 16M33	10	2475	25	190	595	405	665		38
ES 16M34	8	825	ST						10
ES 16M35	16	1025	1	170	900				25
TOTAL SUPERSTRUCTURE - 31533									

metric units

NOTES

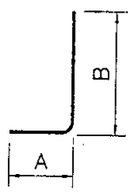
① ALL REINFORCING STEEL SHALL BE EPOXY-COATED.

② REINFORCING SAMPLES

REFER TO CMS SECTIONS 106 03, 700, 709 01 THROUGH 709.05 AND 709.08. SUFFICIENT ADDITIONAL REINFORCING STEEL SHALL BE PROVIDED FOR SAMPLING. RANDOM SAMPLES SHALL BE REPLACED IN THE STRUCTURES BY THE ADDITIONAL STEEL. SPLICED IN ACCORDANCE WITH 509 08.

EPOXY COATED REINFORCING STEEL
GRADE 400

ABUTMENTS	2447
SUPERSTRUCTURE	31533
TOTAL	33980 Kg



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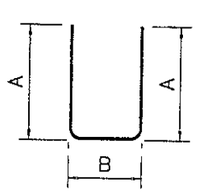

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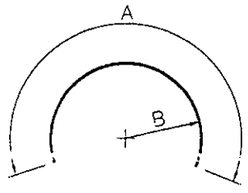

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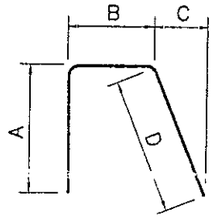

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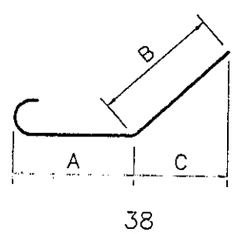

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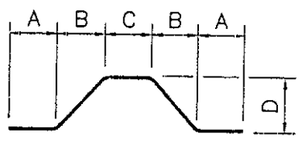

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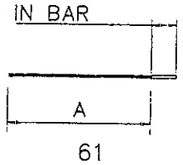
THREAD PORTION NOT INCLUDED IN BAR LENGTH



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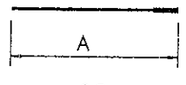

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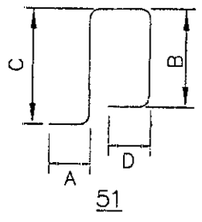

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DESIGNED BY: FFF | CHECKED BY:
DATE: 2/14/97 | DATE:
DRAWN BY: CDG | REVISED BY: CDG
DATE: 6/30/97 | DATE: 6/30/97
CAD FILE NAME: J:\D2005-47\D280GE\BAR210

URS Greiner
DATE 6/06/98
REVIEWED RSC
DRAWN CDG
DESIGNED LJG

REINFORCING SCHEDULE
CUYAHOGA COUNTY BRIDGE NO. 210
CUY-LAKEWOOD HTS. BLVD.

31/
162
162