

PLAN SYMBOLS

STATE LINE
COUNTY LINE
TOWNSHIP OR RANGE LINE
SECTION LINE
QUARTER LINE
SIXTEENTH LINE
EXISTING RIGHT OF WAY LINE
PROPOSED RIGHT OF WAY LINE
PROPERTY LINE
CORPORATE OR CITY LIMITS
RETAINING WALL
RAILROAD
RAILROAD RIGHT-OF-WAY
RIVER OR CREEK
CULVERT
GUARDRAIL
BARBED WIRE FENCE
WOVEN WIRE FENCE
CHAIN LINK FENCE
STONE WALL
HEDGE
RAILROAD CROSSING SIGN
CROSSING GATE
MEANDER CORNER
SLOPE EASEMENT (CONST. LIMITS)

MARSH
DECIDUOUS TREE
CONIFEROUS TREE
WOODS
CATCH BASIN
BRIDGE
IRON PIPE OR ROD
MONUMENT (STONE, CONCRETE OR METAL)
WOODEN HUB

UTILITY SYMBOLS

UTILITY POLE
GUY OR ANCHOR
STREET LIGHT
TELEPHONE PEDESTAL
GAS MAIN
WATER MAIN
TELEPHONE VAULT
ELECTRIC VAULT
BURIED TELEPHONE CABLE
BURIED ELECTRIC CABLE
SEWER (SANITARY OR STORM)
SEWER MANHOLE
GATE VALVE
CONTROLLER CABINET
EXISTING HYDRANT
CABLE TELEVISION CABLE

FOR PLANS AND UTILITIES SYMBOLS SEE
MN/DOT TECHNICAL MANUAL

-GOVERNING SPECIFICATIONS-

THE 1988 EDITION OF THE MINNESOTA DEPARTMENT
OF TRANSPORTATION "STANDARD SPECIFICATIONS
FOR CONSTRUCTION" AS AMENDED BY THE MAY 2,
1994 "SUPPLEMENTAL SPECIFICATIONS" SHALL
GOVERN.



DESIGN DESIGNATION

DESIGN SPEED (MPH) 35
PRESENT ADT (1996) 17,800
PROJECTED ADT (2016) 26,800
FUNCTIONAL CLASS ARTERIAL - HIGH DENSITY
NO. OF TRAFFIC LANES 2
NO. OF PARKING LANES 0
DESIGN LOAD 9 TON
R-VALUE 10
Σ N18 20 YEAR 3,290,000

• 4 LANES FROM STA. 0+45 TO STA. 12+65

DESIGN DESIGNATION

DESIGN SPEED (MPH) 35
PRESENT ADT (1996) 9,500
PROJECTED ADT (2016) 13,300
FUNCTIONAL CLASS ARTERIAL - LOW DENSITY
NO. OF TRAFFIC LANES 4
NO. OF PARKING LANES 0

BASED ON STOPPING DISTANCE
HEIGHT OF EYE: 3.50 FEET
HEIGHT OF OBJECT: 0.50 FEET

S.P. 62-651-34

GROSS LENGTH 21354 FEET 4.044 MILES
BRIDGE LENGTH 0 FEET 0 MILES
EXCEPTIONS 0 FEET 0 MILES
NET LENGTH 21354 FEET 4.044 MILES

END S.P. 62-651-34

LEXINGTON AVENUE
STA. 213+94

END S.P. 160-020-10

LEXINGTON AVENUE
STA. 162+10

BEGIN S.P. 160-020-10

LEXINGTON AVENUE
STA. 49+50

BEGIN S.P. 62-651-34

LEXINGTON AVENUE
STA. 0+40

LEXINGTON AVENUE

LARPENITEUR AVE. TO WOODHILL DR. WOODHILL DR. TO CO. RD. E

DESIGN SPEED NOT ACHIEVED
BETWEEN STA. 165+00 AND 166+50

COUNTY ROAD B COUNTY ROAD B2 COUNTY ROAD C WOODHILL DRIVE

DESIGN SPEED (MPH) 35 35 40 30
PRESENT ADT (1996) 9,500 8,050 9,500 2,800
PROJECTED ADT (2016) 13,300 11,300 13,300 4,200
FUNCTIONAL CLASS ARTERIAL - LOW DENSITY ARTERIAL - LOW DENSITY ARTERIAL - LOW DENSITY COLLECTOR - HIGH DENSITY
NO. OF TRAFFIC LANES 4 2 4 2 EAST, 4 WEST
NO. OF PARKING LANES 0 0 0 0

S.P. 160-020-10

GROSS LENGTH 11260 FEET 2.133 MILES
BRIDGE LENGTH 0 FEET 0 MILES
EXCEPTIONS 0 FEET 0 MILES
NET LENGTH 11260 FEET 2.133 MILES

MINNESOTA DEPARTMENT OF TRANSPORTATION RAMSEY COUNTY, MINNESOTA

CONSTRUCTION PLAN FOR: GRADING, AGGREGATE BASE,
MILLING, BITUMINOUS BASE AND SURFACING, STORM SEWER,
CONCRETE CURB AND GUTTER AND TRAFFIC SIGNALS

LEXINGTON AVENUE (C.S.A.H. 51)

BETWEEN: LARPENITEUR AVENUE (IN ROSEVILLE)
AND COUNTY ROAD E (IN SHOREVIEW AND ARDEN HILLS)
FROM: A POINT 52 FEET NORTH OF THE SOUTHWEST CORNER
OF SECTION 14, TOWNSHIP 29 NORTH, RANGE 23 WEST.

TO: A POINT 35 FEET SOUTH OF THE NORTHEAST CORNER
OF SECTION 34, TOWNSHIP 30 NORTH, RANGE 23 WEST.

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THIS PLAN CONTAINS 77 SHEETS

SCALES

PLAN 0 15 30 60
SCALE
CROSS SECTIONS 0 5 10 20
SCALE

PLAN REVISIONS		
DATE	SHEET NO. & DESCRIPTION	BY

DESIGN SQUAD TOLTZ, KING, DUVALL, ANDERSON & ASSOC., INC. DATE

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT
SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE
LAWS OF THE STATE OF MINNESOTA.

T. J. King REG. NO. 15400 DATE 4/25/96

RAMSEY COUNTY

RECOMMENDED FOR APPROVAL R. King DATE 5/6/96
RECOMMENDED FOR APPROVAL D. L. King DATE 5/6/96
RECOMMENDED FOR APPROVAL T. J. King DATE 5/6/96
RECOMMENDED FOR APPROVAL D. L. King DATE 5/7/96
RECOMMENDED FOR APPROVAL R. King DATE 5-6-96
RECOMMENDED FOR APPROVAL D. L. King DATE 5-6-96
RECOMMENDED FOR APPROVAL T. J. King DATE 4-30-96

RECOMMENDED FOR APPROVAL T. J. King DATE 5/9/96
APPROVED T. J. King DATE 4-26-96
APPROVED T. J. King DATE 4-30-96
APPROVED T. J. King DATE 5-13-96

MINNESOTA DEPARTMENT OF TRANSPORTATION

RECOMMENDED FOR APPROVAL T. J. King DATE 7/23/96
RECOMMENDED FOR APPROVAL T. J. King DATE
RECOMMENDED FOR APPROVAL T. J. King DATE
APPROVED T. J. King DATE 10-1-97

STATEMENT OF ESTIMATED QUANTITIES

CHART	NOTE	ITEM NO.	CONTRACT ITEM	UNIT	TOTAL QUANTITIES		S.P. 62-651-34 RAMSEY COUNTY		S.P. 167-020-10 CITY OF ROSEVILLE		S.P. 62-651-34 RAMSEY COUNTY STORM SEWER		S.P. 160-020-10 CITY OF ROSEVILLE STORM SEWER	
					ESTIMATED	FINAL	ESTIMATED	FINAL	ESTIMATED	FINAL	ESTIMATED	FINAL	ESTIMATED	FINAL
		2021.501	MOBILIZATION	LS	1		0.84		0.13		0.02		0.01	
		2031.501	FIELD OFFICE, TYPE "D"	EA	1		0.84		0.13		0.02		0.01	
A		2101.502	CLEARING	TREE	3				3					
A		2101.507	GRUBBING	TREE	3				3					
B		2104.501	REMOVE PIPE SEWERS	LF	303		222		81					
C		2104.501	REMOVE CURB AND GUTTER	LF	5724		3768		1956					
C		2104.505	REMOVE CONCRETE MEDIAN	SY	115		115							
C		2104.505	REMOVE CONCRETE DRIVEWAY PAVEMENT	SY	79		12		67					
B		2104.509	REMOVE MANHOLE	EA	1		1							
B		2104.509	REMOVE CATCH BASIN	EA	14		6		8					
		2104.511	SAWING CONCRETE PAVEMENT	LF	10				10					
D		2104.513	SAWING BITUMINOUS PAVEMENT	LF	5364		3299		2065					
	1	2105.501	COMMON EXCAVATION	CY	5828 (P)		3063 (P)		2765 (P)					
	1	2105.507	SUBGRADE EXCAVATION	CY	2478 (P)		1448 (P)		1029 (P)					
		2105.522	SELECT GRAMMAR BORROW (CV)	CY	2478		1448		1029					
		2105.525	TOPSOIL BORROW (LV)	CY	300		150		150					
	2	2130.501	WATER	MGAL	5		2.5		2.5					
F		2211.501	AGGREGATE BASE, CLASS 3	TON	2130		1203		927					
F		2211.501	AGGREGATE BASE, CLASS 4	TON	2095		1182		913					
F		2211.501	AGGREGATE BASE, CLASS 6	TON	1764		1026		738					
F		2232.501	MILL BITUMINOUS SURFACE (1.5")	SY	70602		70602							
F		2232.501	MILL BITUMINOUS SURFACE (3")	SY	40265		40265							
F		2340.508	TYPE 31 WEARING COURSE MIXTURE	TON	254		159		95					
F		2340.508	TYPE 47 WEARING COURSE MIXTURE	TON	9596		9596							
F		2340.510	TYPE 47 BINDER COURSE MIXTURE	TON	3736		3517		219					
F		2340.514	TYPE 31 BASE COURSE MIXTURE	TON	1014		652		362					
F		2357.502	BITUMINOUS MATERIAL FOR TACK COAT	GAL	13300		13230		70					
	8	2411.603	MODULAR BLOCK RETAINING WALL	SF	353		96		257					
G		2502.541	4" PE CORR PERF PIPE DRAIN	LF	3317		3347							
H		2503.541	15" RC PIPE SEWER DESIGN 3006	LF	365						196		169	
H		2503.541	24" RC PIPE SEWER DESIGN 3006	LF	148						148			
I		2504.602	RELOCATE HYDRANT	EA	3		1		2					
I		2504.602	ADJUST VALVE BOX	EA	6		4		2					
H		2506.501	CONST DRAINAGE STRUCTURE, DES C OR G	LF	31.25						11.96		19.29	
H		2506.501	CONST DRAINAGE STRUCTURE, DES H	LF	9.73						6.37		3.36	
H	9	2506.501	CONST DRAINAGE STRUCTURE, DES LP 4-4	LF	11.92						4		7.92	
H		2506.501	CONST DRAINAGE STRUCTURE, DES 48-4020	LF	15.11						15.11			
H		2506.501	CONST DRAINAGE STRUCTURE, DES 54-4020	LF	6.94						6.94			
H		2506.501	CONST DRAINAGE STRUCTURE, DES 64-4020	LF	9.35						4.89		4.46	
H		2506.516	CASTING ASSEMBLY	EA	16						9		7	
I		2506.522	ADJUST FRAME AND RING CASTING	EA	12		9		3					
I		2506.602	RECONSTRUCT CB DESIGN LP-SPECIAL	EA	7		7							
J		2521.501	4" CONCRETE WALK	SF	1367		830		537					
J		2531.501	CONCRETE CURB & GUTTER DES B612	LF	125		125							
J		2531.501	CONCRETE CURB & GUTTER DES B624	LF	5166		3324		1842					
J		2531.503	CONCRETE MEDIAN	SY	77		77							
J		2531.507	6" CONCRETE DRIVEWAY PAVEMENT	SY	68		6		62					
J		2531.603	7" CONCRETE VALLEY GUTTER	LF	216		216							
		2535.501	BITUMINOUS CURB	LF	150		150							
		2543.602	RELOCATE LIGHT STANDARD	EA	1		1							
	3	2563.601	TRAFFIC CONTROL	LS	1		0.84		0.13		0.02		0.01	
		2564.602	PAVEMENT MESSAGE (LEFT ARROW) EPOXY	EA	214		214							
		2564.602	PAVEMENT MESSAGE (RIGHT ARROW) EPOXY	EA	9		9							
		2564.602	PAVEMENT MESSAGE (RR XING) WHITE POLY PREP	EA	2		2							
		2564.603	4" SOLID LINE WHITE - EPOXY	LF	36546		36546							
		2564.603	24" STOP LINE WHITE - EPOXY	LF	61		61							
		2564.603	4" BROKEN LINE WHITE - EPOXY	LF	810		810							
		2564.603	4" SOLID LINE YELLOW - EPOXY	LF	26240		26240							
		2564.603	4" DOUBLE SOLID LINE YELLOW - EPOXY	LF	4307		4307							
		2564.603	24" SOLID LINE YELLOW - EPOXY	LF	173		173							
		2564.603	4" BROKEN LINE YELLOW - EPOXY	LF	6900		6900							
		2564.604	ZEBRA CROSSWALK WHITE - EPOXY	SF	5526		5526							
	5	2565.511	FULL TRAFFIC ACTUATED TRAFFIC CONTROL SIG SYS H	SIG SYS	1		0.50		0.50					
	6	2565.511	FULL TRAFFIC ACTUATED TRAFFIC CONTROL SIG SYS I	SIG SYS	1		0.88		0.12					
	5	2565.601	EMERGENCY VEHICLE PREEMPTION SYSTEM H	LS	1				1					
	7	2565.601	EMERGENCY VEHICLE PREEMPTION SYSTEM I	LS	1		0.67		0.33					
		2565.601	TRAFFIC CONTROL INTERCONNECTION A	LS	1		1							
		2565.601	TRAFFIC CONTROL INTERCONNECTION B	LS	1		1							
		2565.602	LOOP DETECTOR 6' X 6'	EA	13		13							
		2565.602	LOOP DETECTOR 6' X 15'	EA	8		8							
		2565.602	HANDHOLE TYPE C (INTERCONNECT)	EA	36		36							
		2565.603	2" NON-METALLIC CONDUIT (INTERCONNECT)	LF	5745		5745							
		2565.603	3" RIGID STEEL CONDUIT (INTERCONNECT)	LF	772		772							
		2565.603	6/C FIBER OPTIC CABLE (INTERCONNECT)	LF	9187		9187							
		2565.604	FLASHING BEACON SYSTEM	SYSTEM	1				1					
		2565.604	REVISE SIGNAL SYSTEM B	SYSTEM	1		1							
		2565.604	REVISE SIGNAL SYSTEM C	SYSTEM	1		1							
		2565.604	REVISE SIGNAL SYSTEM F	SYSTEM	1		1							
		2565.604	REVISE SIGNAL SYSTEM G	SYSTEM	1		1							
	4	2571.541	TRANSPLANT TREE (6" CAL DECIDUOUS)	TREE	1		1							
		2573.501	BALE CHECK	EA	50		25		25					
K		2575.535	SOODING, TYPE LAMN	SY	4170		2040		2130					
		2580.501	TEMPORARY LANE MARKING	RD STA	427		427							

QUANTITY NOTES

- (P) PLAN QUANTITY
- FOR DUST CONTROL, AS DIRECTED BY THE ENGINEER.
- ALL TRAFFIC CONTROL DEVICES AND SIGNING SHALL CONFORM TO THE MAJTCO, INCLUDING "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS" DATED APRIL, 1995.
- PROPOSED LOCATION TO BE DETERMINED BY THE ENGINEER.
- ROSEVILLE SHARE FROM S.P. 160-225-04
- 12.5% OF COUNTY COST TO BE RECOVERED FROM THE CITY OF ARDEN HILLS, CITY OF ROSEVILLE COST TO BE LOCAL FUNDS.
- COUNTY COST TO BE RECOVERED EQUALLY FROM THE CITY OF ARDEN HILLS AND CITY OF SHOREVIEW.
- COUNTY COST FOR WALL AT GARDEN AVE. CITY COST FOR WALL AT CO. RD. 82.
- SEE SHEET 5 FOR STRUCTURE DEPTHS.

BASIS FOR ESTIMATED QUANTITIES

2211.501	AGGREGATE BASE ESTIMATED AT 110 LBS/SQ YD/INCH OF THICKNESS
2340.XXX	BITUMINOUS MIXTURES ESTIMATED AT 110 LBS/SQ YD/INCH OF THICKNESS.
2357.502	BITUMINOUS MATERIAL FOR TACK COAT ESTIMATED AT 0.05 GAL/SQ YD FOR UNMILLED AREAS AND 0.085 GAL/SQ YD FOR MILLED AREAS.

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STATEMENT OF ESTIMATED QUANTITIES

 CERTIFIED BY T. A. Chalovich 15400 10/11/97
 PROFESSIONAL ENGINEER REG. NO. DATE

S.P. 62-651-34, S.P. 160-020-10, S.P. 160-225-04 Sheet No. 2 of 77 Sheets

CONSTRUCTION NOTES

1. THE CONTRACTOR SHALL COOPERATE WITH THE RAMSEY COUNTY RELATING TO PERPETUATING MONUMENTATION. ADVANCE NOTICE OF ANY DISTURBANCE OF MONUMENTS SHOULD BE MADE TO THE RAMSEY COUNTY SURVEYOR'S OFFICE AT ~~298-5278~~ 266-2600
2. THE CONTRACTOR SHALL OBTAIN FROM THE UTILITY COMPANIES THE EXACT LOCATION OF ANY UNDERGROUND UTILITIES WHICH MAY EXIST WITHIN, OR ADJACENT TO, THE CONSTRUCTION AREA.
3. PRIVATE UTILITY COMPANY FACILITIES WILL BE ADJUSTED BY OTHERS.
4. PEDESTRIAN CURB RAMPS SHALL BE INSTALLED AT LOCATIONS SHOWN IN THE PLANS. THE EXACT LOCATIONS SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER. ADDITIONAL LABOR REQUIRED FOR CURB RAMP CONSTRUCTION WILL BE CONSIDERED TO BE INCIDENTAL TO CONCRETE WALK AND CONCRETE CURB & GUTTER. NO DIRECT COMPENSATION WILL BE MADE THEREFOR.
5. STRIP TOPSOIL FROM ALL AREAS TO BE DISTURBED BY CONSTRUCTION AND STOCKPILE (IF PRACTICAL) FOR REPLACEMENT LATER AS SLOPE DRESSING.
6. PROVIDE FOR REMOVAL AND DISPOSAL OF ANY INPLACE SURFACING AND STRUCTURES THAT WILL INTERFERE WITH CONSTRUCTION IN ACCORDANCE WITH 2104.3C3.
7. FROM A SOILS STANDPOINT, TRAFFIC SHALL BE MAINTAINED NO CLOSER THAN AN IMAGINARY 2:1 LINE DRAWN FROM THE BOTTOM OF ANY EXCAVATION INTERSECTING THE SURFACING.
8. THE QUALITY COMPACTION METHOD SHALL BE USED ON THIS PROJECT FOR GRADING AND BASE.
9. PROVIDE DRAINAGE OUTLETS FOR ALL SUBCUTS DURING CONSTRUCTION. DITCHES SHOULD BE DEEPER THAN SUBCUT TO PROVIDE OUTLET DRAINAGE.
10. PROVIDE A TACK COAT, SPEC 2357.2A, BETWEEN BITUMINOUS COURSES.
11. WHERE THE PROPOSED SUBCUT IS LOCATED UNDER INPLACE BASE AND BITUMINOUS SURFACING OR CONCRETE PAVEMENT, THE ENDS OF SUBCUT SHALL BE VERTICAL FOR THE DEPTH OF THE BITUMINOUS OR CONCRETE AND 2:1 IN AGGREGATE BASE.
12. TAPER ENDS OF SUBCUT TO A 20:1 SLOPE UNLESS OTHERWISE RECOMMENDED.
13. UNSUITABLE GRADING MATERIAL SHALL CONSIST OF TOPSOIL, OTHER ORGANIC SOIL, AND DEBRIS.
14. NO TREES SHALL BE REMOVED UNTIL THE CONTRACTOR HAS VERBALLY BEEN TOLD TO DO SO BY THE ENGINEER. TREES SHALL BE MARKED FOR REMOVAL BY THE ENGINEER. THE CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO PROTECT OTHER TREES.
15. STREET NAME SIGNS AND TRAFFIC SIGNS SHALL BE REMOVED AND SALVAGED AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE CONSIDERED INCIDENTAL.
16. LOCATION AND DIMENSIONS OF DRIVEWAY REMOVALS AND CONSTRUCTION SHALL BE VERIFIED BY THE ENGINEER.
17. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL PROPERTIES DURING THE COURSE OF THE PROJECT. DURING PERIODS OF GRADING OR PAVING, WHEN ACCESS CANNOT BE PROVIDED, THE PROPERTY OWNER SHALL BE CONTACTED AT LEAST 24 HOURS IN ADVANCE TO BE MADE AWARE OF AND AGREE TO THE TEMPORARY ACCESS RESTRICTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY AGREEMENTS REACHED WITH PROPERTY OWNERS.
18. ALL TRAFFIC CONTROL DEVICES AND SIGNING SHALL CONFORM TO THE MMUTCD, INCLUDING "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS" DATED APRIL, 1995.

TOTAL EARTHWORK QUANTITIES

COMMON EXCAVATION	- 5828 C.Y.
SUBGRADE EXCAVATION	- 2478 C.Y.
EMBANKMENT (682 C.Y. X 1.3)	- 887 C.Y.
SELECT GRANULAR BORROW	- 2478 C.Y.

THE FOLLOWING STANDARD PLATES, APPROVED BY THE FEDERAL
HIGHWAY ADMINISTRATION, SHALL APPLY ON THIS PROJECT

STANDARD PLATES

PLATE NO.	DESCRIPTION
3000L	REINFORCED CONCRETE PIPE
3006G	GASKET JOINT FOR REINFORCED CONCRETE PIPE
3145E	CONCRETE PIPE TIES
4002F	MANHOLE OR CATCH BASIN
4006L	MANHOLE OR CATCH BASIN
4010H	CONCRETE SHORT CONE AND ADJUSTING RING
4011E	PRECAST CONCRETE BASE
4020G	MANHOLE OR CATCH BASIN COVER
4021E	PRECAST CURB OPENING CATCH BASIN
4101C	RING CASTING FOR MANHOLE OR CATCH BASIN
4108F	ADJUSTING RINGS
4110E	COVER CASTING FOR MANHOLE
4129G	CATCH BASIN FRAME CASTING
4154B	CATCH BASIN GRATE CASTING
4160D	CURB BOX CASTING FOR CATCH BASIN
4180H	MANHOLE OR CATCH BASIN STEP
7036D	PEDESTRIAN CURB RAMP
7100G	CONCRETE CURB AND GUTTER (DESIGN B)
7111J	INSTALLATION AND REINFORCEMENT OF CATCH BASIN CASTINGS
8000I	STANDARD BARRICADES
8110C	TRAFFIC SIGNAL BRACKETING (POLE MOUNTED)
8111B	TRAFFIC SIGNAL BRACKETING (PEDESTAL MOUNTED)
8112C	PEDESTAL FOUNDATION
8115C	PEDESTRIAN PUSH BUTTON INSTALLATION
8118C	SERVICE EQUIPMENT & POLE, TRAFFIC CONTROL SIGNALS
8120K	POLE FOUNDATION (PA85)
8121D	TRANSFORMER BASE AND POLE BASE PLATE
8122C	PEDESTAL AND PEDESTAL BASE
8123D	POLE AND MAST ARM
8124D	MAST ARM SIGNAL HEAD MOUNTS
8126F	POLE FOUNDATION (PA90 AND PAT00)
8127B	LIGHT BASE - DESIGN E
8130D	SAW CUT LOOP DETECTORS

INDEX OF TABULATION CHARTS

[illegible]

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CONSTRUCTION NOTES AND STANDARD PLATES

CERTIFIED BY T. L. A. C. L. J. 15400 12/12/90
PROFESSIONAL ENGINEER REG. NO. DATE

S.P. 62-651-34, S.P. 160-020-10 Sheet No. 3 of 77 Sheets

CLEARING & GRUBBING ①		
LOCATION	TREES EA.	SIZE
	CITY	
STA 77+55 (RT)	1	6"
STA 77+60 (RT)	1	6"
STA 78+03 (RT)	1	8"
TOTAL	3	

SAWING BITUMINOUS PAVEMENT ②		
LOCATION	L.F.	
	COUNTY	CITY
STA 4+10 TO STA 15+95 (RT)	1187	
STA 4+40 (RT) (ENT)	34	
STA 4+15 TO STA 6+35 (MEDIAN)	458	
STA 4+36 TO GARDEN ST (LT)	884	
STA 6+75 (RT) (DIONNE ST)	67	
STA 5+75 (LT) (ENT)	38	
STA 6+75 (LT) (ENT)	90	
STA 10+90 (RT) (ROMA AVE)	36	
STA 10+90 (LT) (ENT)	43	
STA 11+98 TO STA 12+60 (LT)	64	
STA 12+30 (RT) (ENT)	52	
STA 13+40 (RT) (ENT)	43	
STA 49+50 (LT) (PATH)		6
STA 49+55 TO CO RD B (LT)		307
STA 76+14 TO CO RD B2 (RT)		264
STA 81+54 (LT) (PATH)		8
CO RD B2 TO STA 81+69 (LT)		289
STA 91+43 TO STA 94+55 (RT)		312
STA 94+15 (RT) (ENT)		60
STA 100+07 TO STA 102+22 (RT)		222
STA 102+42 TO CO RD C (RT)		144
STA 102+00 (RT) (PATHS)		16
CO RD C TO STA 106+91 (LT)		429
STA 104+25 (LT) (PATH)		8
WOODHILL DR TO STA 114+82 (LT)	295	
STA 114+70 (LT) (PATH)	8	
TOTALS	3299	2065

MILL BITUMINOUS SURFACE ③		
LOCATION	1.5" DEPTH S.Y.	3" DEPTH S.Y.
	COUNTY	COUNTY
STA 0+45 TO STA 7+00		3544
STA 7+00 TO STA 24+00	8507	
STA 24+00 TO STA 51+00	13624	
STA 51+00 TO STA 66+00	8714	
STA 66+00 TO STA 71+75		3424
STA 71+75 TO STA 78+00	3109	
STA 78+00 TO STA 105+00	14796	
STA 105+00 TO STA 117+30	6093	
STA 117+30 TO STA 130+60		6606
STA 130+60 TO STA 132+00	800	
STA 132+00 TO STA 156+40	12043	
STA 156+40 TO STA 159+00		1265
STA 159+00 TO STA 185+00		13138
STA 185+00 TO STA 209+50		12288
STA 209+50 TO STA 212+00	1531	
STA 212+00 TO STA 213+94	1385	
TOTALS	70602	40265

STORM SEWER REMOVALS ④					
LOCATION	PIPE SEWER L.F.	CATCH BASIN EA.	MANHOLE EA.		
	COUNTY	CITY	COUNTY	CITY	COUNTY
STA 5+27 (RT)			1		
STA 5+27 TO STA 5+87 (RT)	55				
STA 5+87 (RT)			1		
STA 5+87 TO STA 7+09 (RT)	119				
STA 6+38 (LT)			1		
STA 7+09 (RT)					1
STA 7+09 TO STA 7+20 (RT)	8				
STA 7+20 (LT & RT)			2		
STA 10+80 TO STA 11+25 (LT)	40				
STA 11+25 (LT)			1		
STA 49+77 (LT)				1	
STA 52+29 (LT)				1	
STA 79+05 TO STA 79+40 (LT)		43			
STA 79+40 (LT)				1	
STA 93+79 (RT)				1	
STA 102+45 (RT)				1	
STA 102+45 TO STA 102+67 (RT)	18				
STA 103+52 (LT)	20			2	
STA 105+22 (LT)				1	
TOTALS	222	81	6	8	1

CONCRETE REMOVALS ⑤				
LOCATION	C & G L.F.	MEDIAN S.Y.	DRIVEWAY S.Y.	
	COUNTY	CITY	COUNTY	CITY
STA 0+45 TO STA 2+40 (LT)	30			
STA 1+00 TO STA 2+60 (RT)	130			
STA 4+10 TO DIONNE ST (RT)	286			
STA 4+15 TO STA 6+35		100		
STA 4+36 TO GARDEN AVE (LT)	875			
STA 5+00 (LT) (ENT)			12	
STA 5+75 (LT) (ENT)	58			
STA 5+90 (LT)		7		
DIONNE ST TO ROMA AVE (RT)	449			
STA 10+92 (LT) (ENT)	52			
ROMA AVE TO STA 15+95 (RT)	519			
GARDEN AVE TO 36+50 (LT)	151			
STA 13+30 (RT)		8		
STA 13+36 (RT) (ENT)	50			
STA 16+18 TO STA 58+35 (RT)	188			
STA 49+55 TO CO RD B (LT)		301		
STA 63+90 TO STA 64+40 (LT)	50			
STA 76+14 TO CO RD B2 (RT)		257		
CO RD B2 TO STA 79+35 (RT)	32			
CO RD B2 TO STA 81+69 (LT)		289		
STA 80+15 (LT) (ENT)				67
STA 84+95 TO CO RD C (LT)	70			
STA 91+43 TO STA 94+55 (RT)		310		
STA 94+15 (RT) (ENT)		28		
STA 100+07 TO STA 102+22 (RT)		215		
STA 102+42 TO CO RD C (RT)		133		
CO RD C TO STA 209+23 (RT)	125			
CO RD C TO STA 106+91 (LT)		423		
WOODHILL DR TO STA 114+82 (LT)	274			
STA 130+44 TO STA 205+60 (LT)	260			
SW QUADRANT WOODHILL DR	19			
SE QUADRANT WOODHILL DR	19			
NE QUADRANT WOODHILL DR	19			
WITH CB RECONSTRUCTION	112			
TOTALS	3768	1956	115	12 67

AGGREGATE AND BITUMINOUS SUMMARY ⑥							
LOCATION	AGGREGATE BASE CLASS 6	AGGREGATE BASE CLASS 4	AGGREGATE BASE CLASS 3	WEARING COURSE MIXTURE TYPE 31	WEARING COURSE MIXTURE TYPE 47	BINDER COURSE MIXTURE TYPE 47	BASE COURSE MIXTURE TYPE 31
	TON	TON	TON	TON	TON	TON	TON
STA 0+40 TO STA 24+00	887	1028	1047	126	1153	447	584
STA 24+00 TO STA 66+00	123	117	123	29	1970	116	41
STA 66+00 TO STA 213+94					6348	3048	
STA 76+14 TO CO RD B2	79	135	139		18	18	55
CO RD B2 TO STA 81+69	160	152	150	34	20	20	62
STA 91+43 TO STA 94+55	103	145	141	8	19	19	61
STA 100+07 TO CO RD C	95	123	127	13	14	14	43
CO RD C TO STA 106+91	158	241	247	11	32	32	100
WOODHILL DR TO STA 114+82	159	154	156	33	22	22	68
TOTALS	1764	2095	2130	254	9596	3736	1014

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QUANTITY TABULATIONS

4" PE PERFORATED PIPE DRAIN ⑥			
DRAINS FROM STRUCT. / STA.	DRAINS TO STRUCT. / STA.	L.F. COUNTY	
		LT	RT
STA 4+10	101		116
STA 4+36	105	190	
101	102		62
102	104		144
105	108	95	
109	108	405	
110	104		415
STA 12+90	109	180	
STA 15+95	110		450
STA 49+55	111	22	
112	111	255	
STA 81+69	113	230	
113	EX STRUC	50	
STA 91+43	114		216
STA 103+00	116		110
STA 106+91	119	170	
119	118	170	
118	117	38	
STA 103+50	117	28	
TOTALS		1834	1513

NOTE: 4" PE PIPE DRAINS SHALL BE INSTALLED PER SPEC 2502 AND CONNECTED TO STORM SEWER STRUCTURES PER SPEC REFERENCE 2502.3B. PIPE DRAINS SHALL BE LOCATED AT THE BOTTOM OF THE CL 3 AGGREGATE BASE, AS DIRECTED BY THE ENGINEER. WRAP WITH TYPE I GEOTEXTILE, INSTALLED PER SPEC. 3733.

STORM SEWER TABULATION ⑦												
LOCATION	STRUCTURE NO.	CONSTRUCT C.B. AND M.H.				PIPE SEWERS		DRAINS TO			REMARKS	
		TYPE	DESIGN	CAST. ASSEMB. (1)	TOP OF CASTING ELEV.	OUTLET ELEV.	PAY HEIGHT (LIN. FT.)		STRUCT. NO.	GRADE %	INVERT ELEV.	
							EST.	FINAL				
STA. 5+24 (RT)	101	CB	C OR G	A	934.27	930.87	3.36		102	2.0	929.63	LOCATE TO PROVIDE CONNECTION TO EX PIPE
STA. 5+87 (RT)	102	CB	60-4020	A	933.81	928.88 ±	4.89		12	--	--	EXTEND EX PIPE EAST TO STRUCTURE
STA. 7+09 (RT)	103	MH	C OR G	B	933.70	929.60	4.22		123	0.5	928.98	
STA. 7+30 (RT)	104	CB	H	A	933.47	930.42	3.01		22	1.0	930.20	
STA. 6+25 (LT)	105	CB	48-4020	A	933.95	926.48 ±	7.43			--	--	CONSTRUCT OVER EX PIPE
STA. 6+38 (LT)	106	MH	48-4020	B	934.11	926.55 ±	7.68		13	0.5	926.48 ±	CONSTRUCT OVER EX PIPE
STA. 7+20 (LT)	107	MH	54-4020	B	933.78	926.96	6.94			--	--	CONSTRUCT OVER EX PIPE
STA. 7+20 (LT)	108	CB	LP	C	934.13	930.13	4.00		7	2.0	929.99	
STA. 11+25 (LT)	109	CB	H	A	938.91	935.51	3.36		46	EX MH	1.0	935.05
STA. 11+43 (RT)	110	CB	C OR G	A	939.34	934.92	4.38		59	EX MH	2.0	933.74
STA. 49+77 (LT)	111	CB	LP	C	947.64	942.59 ±	5.05		12	--	--	EXTEND EX PIPE WEST TO STRUCTURE
STA. 52+24 (LT)	112	CB	C OR G	A	947.23	--	4.39 ±		12	--	--	EXTEND EX PIPE SOUTH TO STRUCTURE
STA. 79+40 (LT)	113	CB	C OR G	A	931.83	927.80	3.99		45	EX CB	1.0	927.35
STA. 93+61 (RT)	114	CB	H	A	898.62	895.22	3.36		9	115	1.0	895.13
STA. 93+69 (RT)	115	MH	60-4020	B	898.62	894.28 ±	4.46			--	--	MAKE SUITABLE CONNECTIONS TO EX PIPES
STA. 102+45 (RT)	116	CB	C OR G	A	898.86	894.66	3.96		22	EX MH	1.0	894.64
STA. 103+60 (LT)	117	CB	LP	C	900.48	897.61	2.87		39	118	1.0	897.22 ±
STA. 103+60 (LT)	118	CB	C OR G	A	900.57	897.22 ±	3.31		15	EX MH	--	EXTEND EX PIPE NORTH TO STRUCTURE
STA. 105+22 (LT)	119	CB	C OR G	A	908.44	904.76 ±	3.64		15	--	--	EXTEND EX PIPE WEST TO STRUCTURE
TOTALS									365	148		

NOTES:

- (1) CASTING FRAME/RING CASTING GRATE/COVER CASTING CURB BOX CASTING
A 802A 816 823A
B 700-7 716
C 790-2(2) 716(2)
- (2) DESIGN LP STRUCTURE CASTINGS ARE INCIDENTAL.
- (3) TOP OF CASTING ELEVATIONS FOR GRATES ARE AT GUTTERLINE. FOR DESIGN LP STRUCTURES, SEE DETAIL.
- (4) ALL PIPE IS CLASS 11.
- (5) FIELD VERIFY STRUCTURE AND PIPE ELEVATIONS.

INPLACE UTILITIES ⑧						
TYPE	LOCATION	ADJUST VALVE BOX		ADJUST RIM ELEV		RELOCATE HYDRANT
		COUNTY	CITY	COUNTY	CITY	COUNTY CITY
STM SEWER	STA 5+75 (LT)			1		
STM SEWER	STA 5+90 (LT)			1		
SAN SEWER	STA 6+76 (RT)			1		
WATER	STA 6+88 (RT)	1				
WATER	STA 7+00 (RT)	1				
WATER	STA 7+06 (RT)					1
WATER	STA 10+68 (RT)	1				
STM SEWER	STA 10+80 (LT)			1		
STM SEWER	STA 10+80 (LT)			1		
STM SEWER	STA 10+86 (RT)			1		
WATER	STA 10+87 (LT)			1		
SAN SEWER	STA 10+92 (RT)			1		
WATER	STA 11+10 (RT)	1				
STM SEWER	STA 12+80 (LT)			1		
WATER	STA 52+12 (LT)					1
WATER	STA 52+15 (LT)		1			
SAN SEWER	STA 81+32 (LT)				1	
STM SEWER	STA 102+62 (RT)				1	
STM SEWER	STA 103+68 (LT)				1	
WATER	STA 104+55 (LT)		1			1
TOTALS		4	2	9	3	1 2

CONCRETE SUMMARY ⑨									
LOCATION	CURB AND GUTTER				MEDIAN S.Y.	DRIVEWAY S.Y.		SIDEWALK S.F.	
	B612 L.F.	B624 L.F.	VALLEY GUTTER L.F.	S.Y.		S.Y.	S.F.		
	COUNTY	COUNTY	CITY	COUNTY	COUNTY	COUNTY	CITY	COUNTY	CITY
STA 0+45 TO STA 2+40		30							
STA 1+00 TO STA 2+60		130							
STA 4+10 TO DIONNE ST (RT)	34	219		62					
STA 4+15 TO STA 5+15					44				
STA 4+36 TO STA 9+00 (LT)		446			29	6			
STA 6+99 TO STA 9+00 (RT)		228							
STA 9+00 TO ROMA AVE (RT)		203							
STA 9+00 TO GARDEN AVE (LT)	36	362		41					
ROMA AVE TO STA 15+95 (RT)	55	396		113	4				
GARDEN AVE TO STA 36+50 (LT)		151							
STA 16+18 TO STA 58+35 (LT)		188							
STA 49+55 TO CO RD B (LT)			293						100
STA 63+90 TO STA 64+40 (LT)		50							
STA 76+14 TO CO RD B2 (RT)			255						100
CO RD B2 TO STA 79+35 (RT)		32							
CO RD B2 TO STA 81+69 (LT)			284				62		137
STA 84+95 TO CO RD C (LT)		70							
STA 91+43 TO STA 94+55 (RT)			272						
STA 100+07 TO CO RD C (RT)			332						100
CO RD C TO STA 209+23 (RT)		125							
CO RD C TO STA 106+91 (LT)			406						100
STA 130+44 TO STA 205+60 (LT)		260							
SW QUADRANT WOODHILL DR		19							100
SE QUADRANT WOODHILL DR		19							100
NE QUADRANT WOODHILL DR		19							100
WOODHILL DR TO STA 114+82 (LT)		265							130
WITH CB RECONSTRUCTION		112							
4 QUADRANTS CO. RD. D									400
TOTALS	125	3324	1842	216	77	6	62	830	537

TURF ESTABLISHMENT ⑩		
LOCATION	SODDING, TYPE LAWN S.Y.	
	COUNTY	CITY
STA 4+10 TO DIONNE ST (RT)	235	
STA 4+36 TO STA 9+00 (LT)	390	
DIONNE ST TO STA 9+00 (RT)	270	
STA 9+00 TO ROMA AVE (RT)	250	
STA 9+00 TO GARDEN AVE (LT)	310	
ROMA AVE TO STA 15+95 (RT)	425	
STA 49+55 TO CO RD B (LT)		305
STA 76+14 TO CO RD B2 (RT)		375
CO RD B2 TO STA 81+69 (LT)		235
STA 91+43 TO STA 95+00 (RT)		295
OAKCREST AVE TO STA 95+00 (LT)		15
STA 100+07 TO CO RD C (RT)		380
CO RD C TO STA 106+91 (LT)		525
WOODHILL DR TO STA 114+82 (LT)	160	
TOTALS	2040	2130

28-155
QUANTITY TABULATIONS

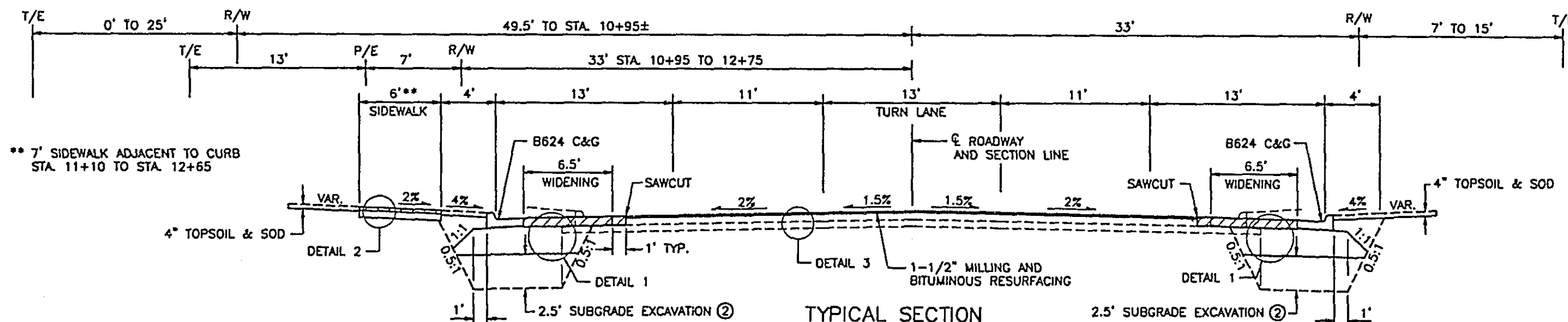
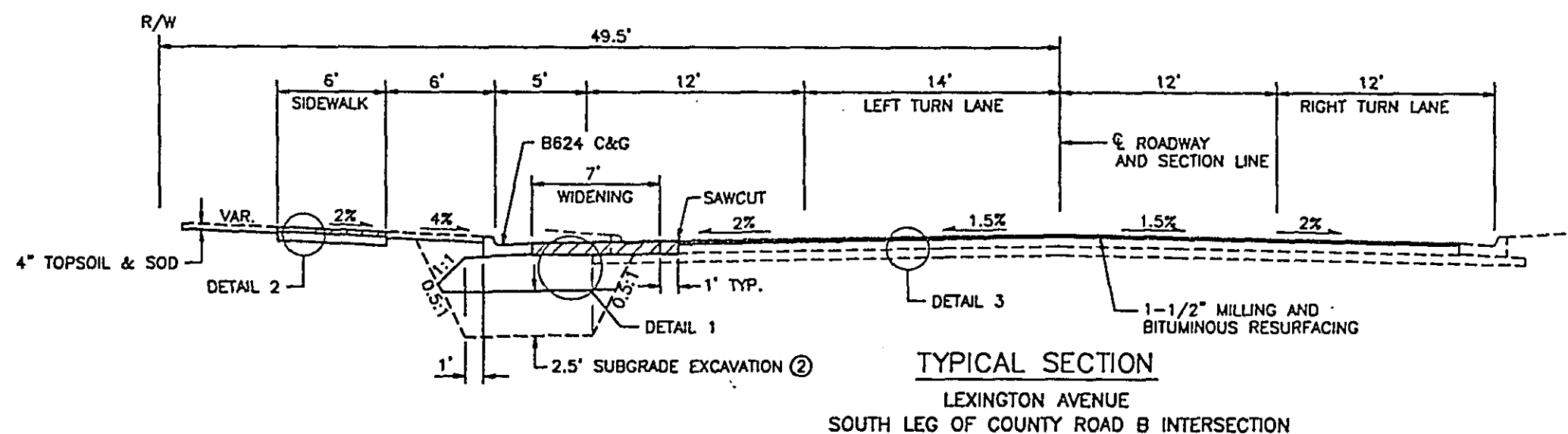
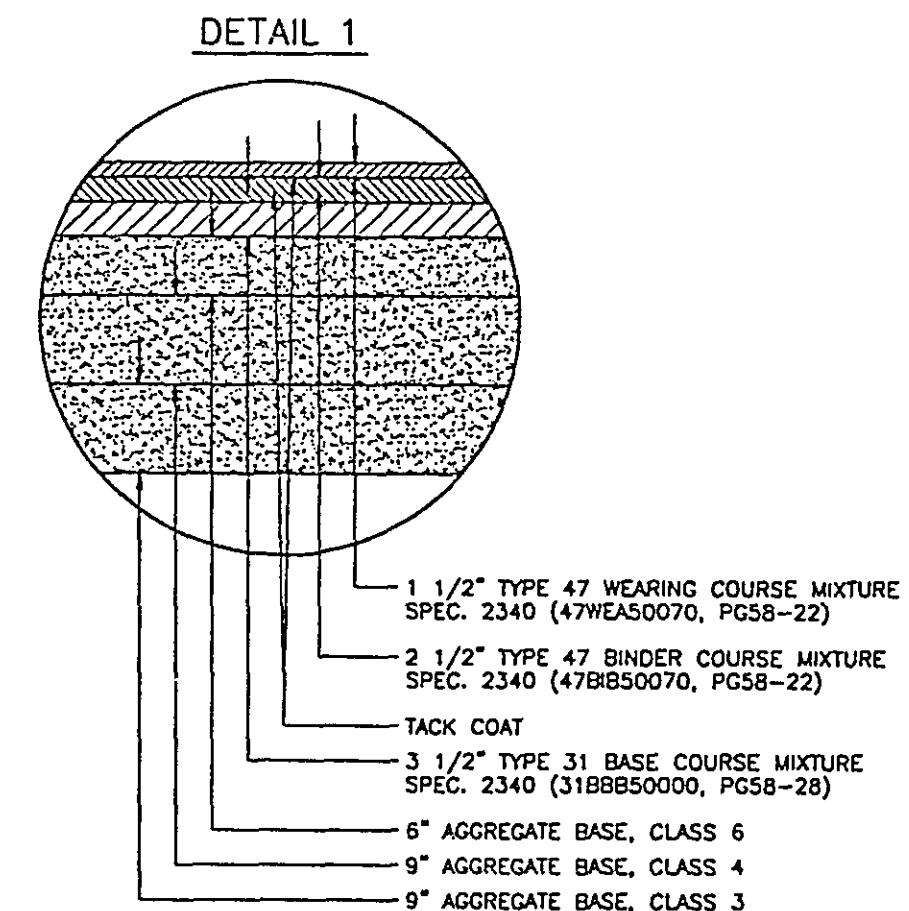
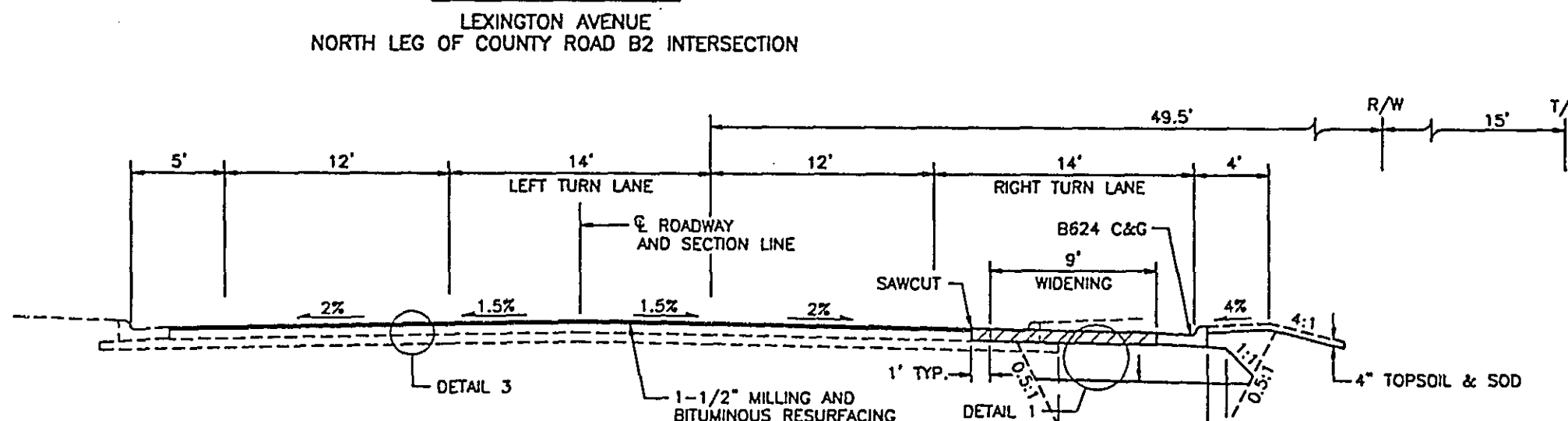
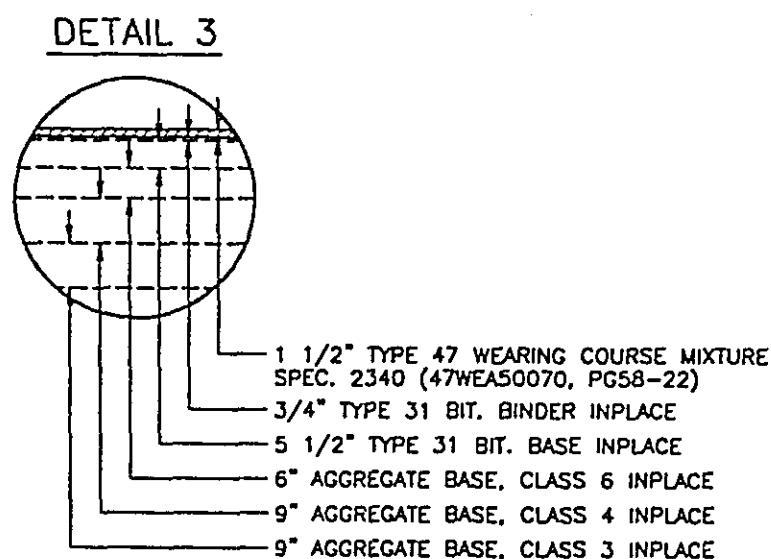
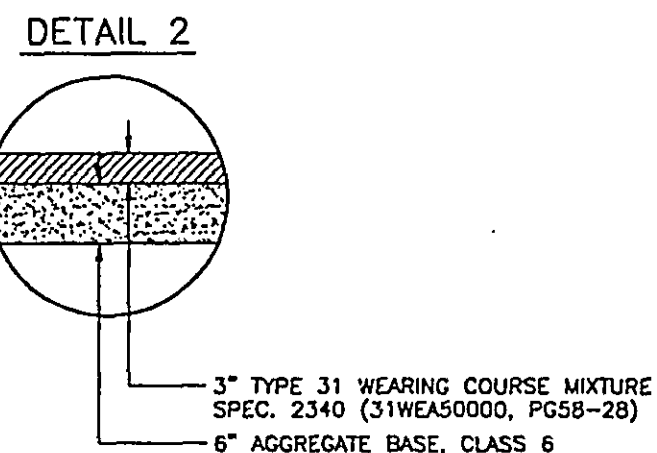
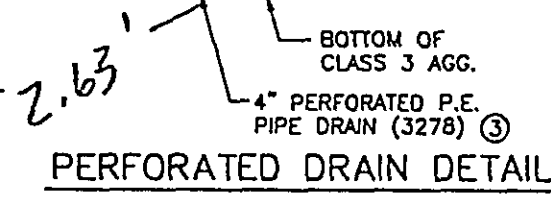
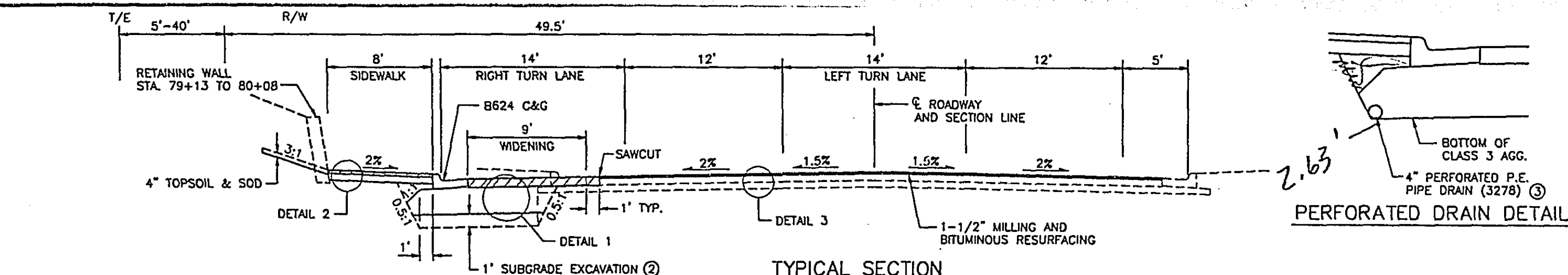
CERTIFIED BY *T. A. C. C.*
PROFESSIONAL ENGINEER

15400
REG. NO.

12/12/86
DATE

S.P. 62-651-34, S.P. 160-020-10

Sheet No. 5 of 77 Sheets



** 7' SIDEWALK ADJACENT TO CURB STA. 11+10 TO STA. 12+65

LEGEND:

- R/W EXISTING RIGHT OF WAY
- P/E PROPOSED PERMANENT EASEMENT
- T/E TEMPORARY EASEMENT

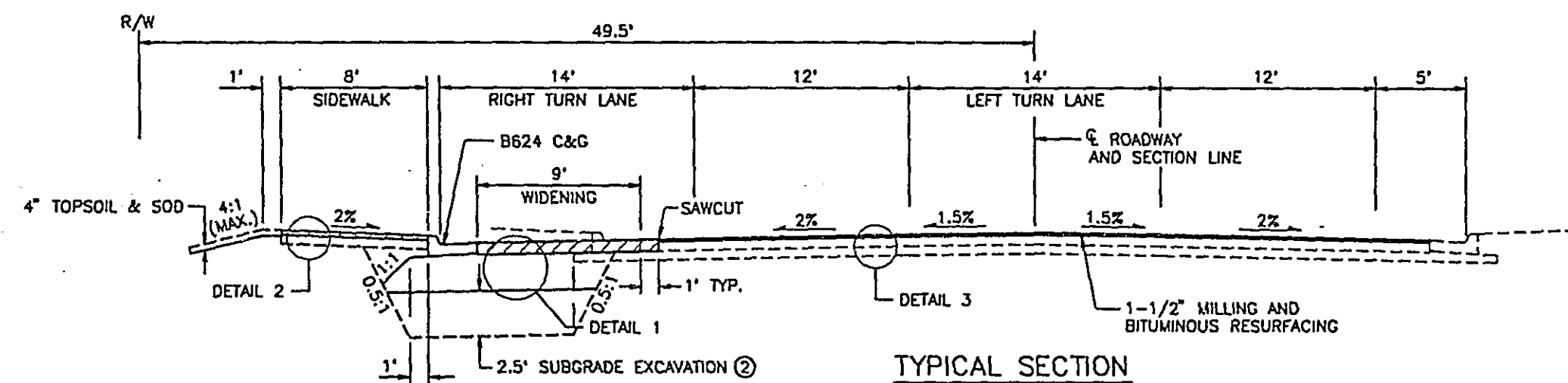
NOTES:

1. 1.5' CLEAR ZONE REQUIRED FROM CURB FACE.
2. BACKFILL WITH SELECT GRANULAR BORROW.
3. WRAP WITH TYPE 1 GEOTEXTILE INSTALLED PER. SPEC. 3733.

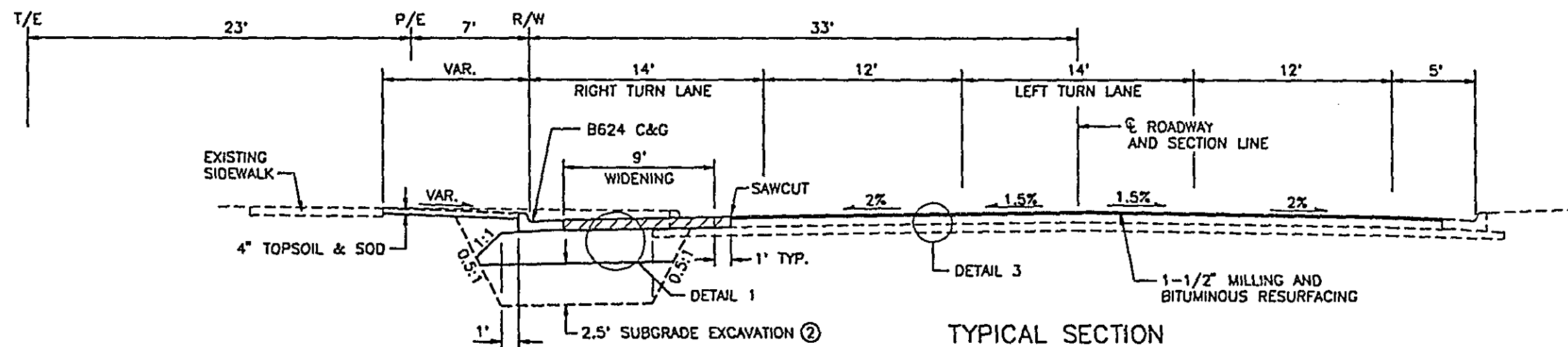
28-155 TYPICAL SECTIONS

CERTIFIED BY *Timothy A. O'Leary* 15400 10/1/97
PROFESSIONAL ENGINEER REG. NO. DATE

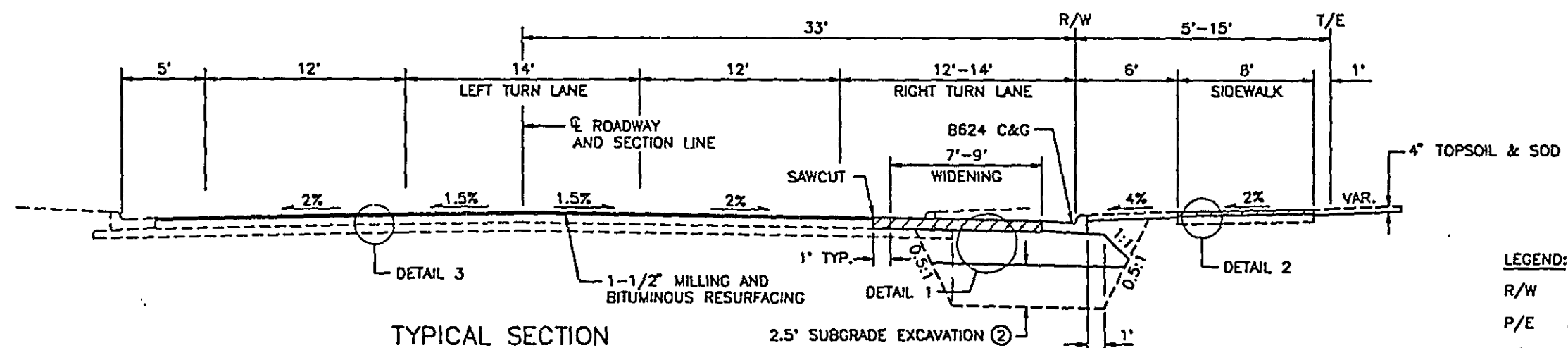
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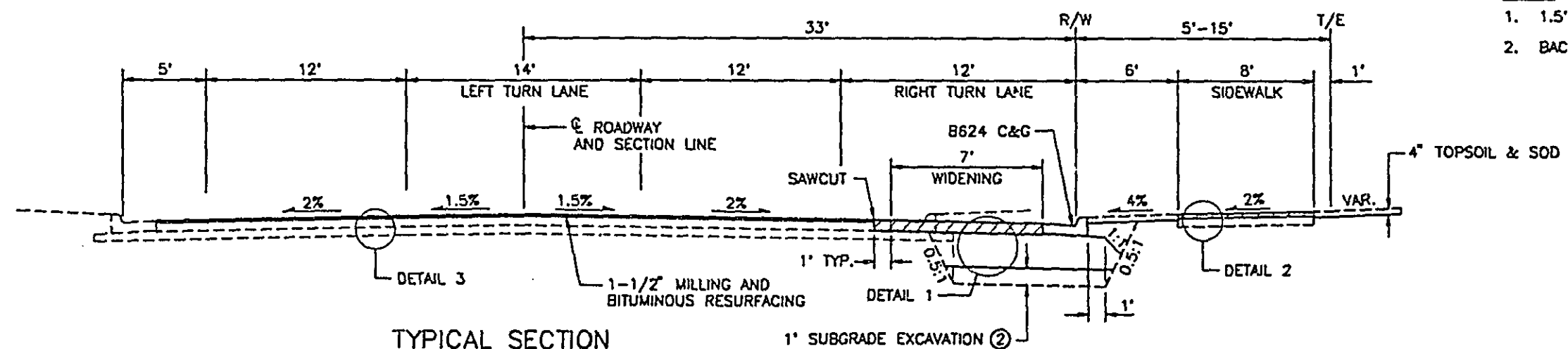
TYPICAL SECTION
LEXINGTON AVENUE
NORTH LEG OF WOODHILL DRIVE INTERSECTION



TYPICAL SECTION
LEXINGTON AVENUE
NORTH LEG OF COUNTY ROAD C INTERSECTION



TYPICAL SECTION
LEXINGTON AVENUE
SOUTH LEG OF COUNTY ROAD C INTERSECTION

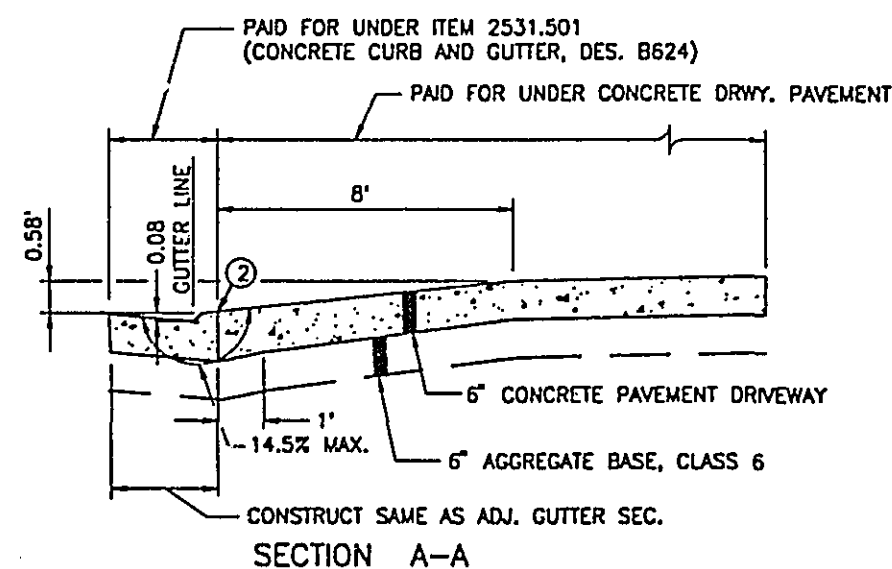
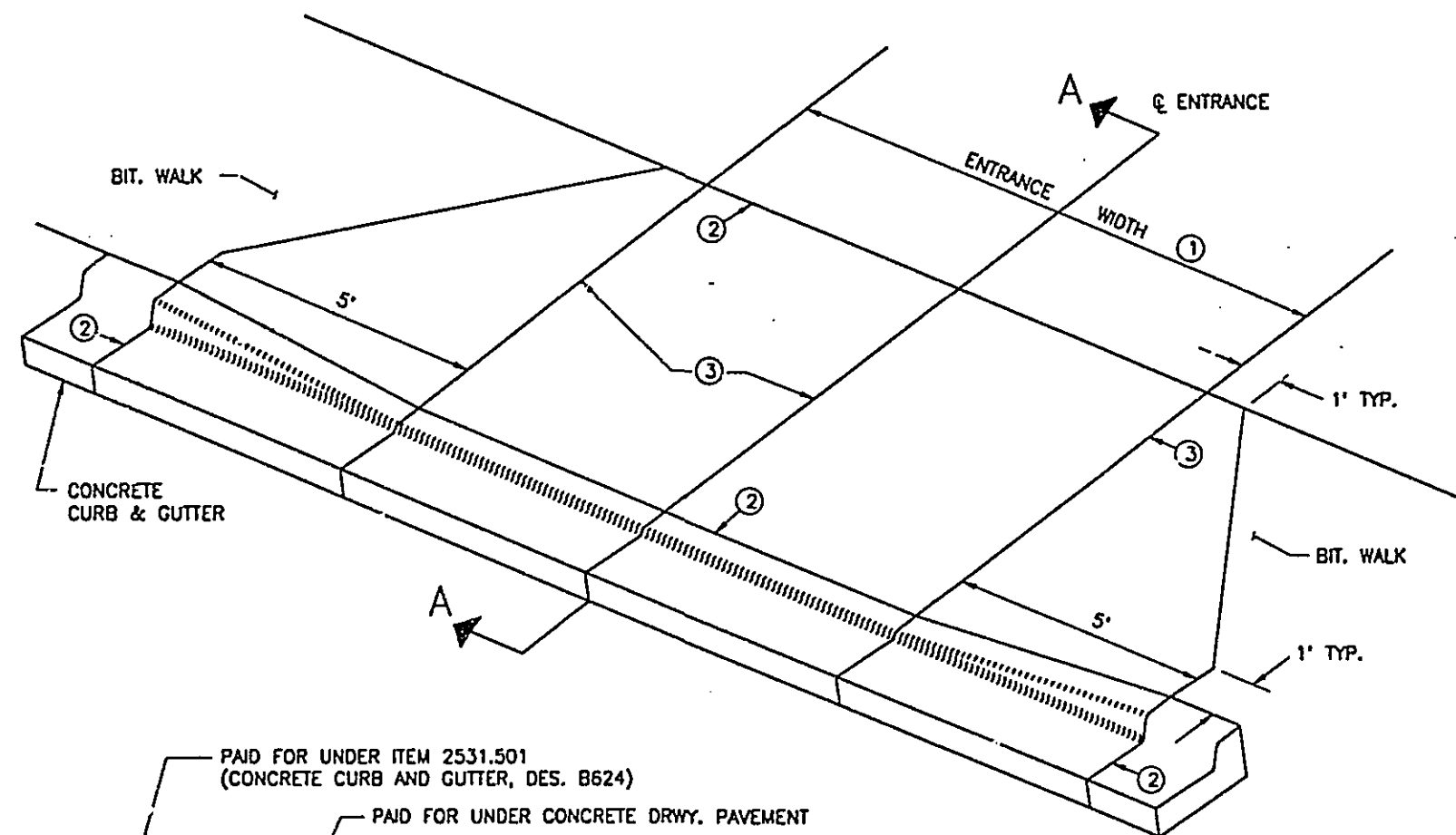


TYPICAL SECTION
LEXINGTON AVENUE
SOUTH OF CENTRAL PARK ENTRANCE

LEGEND:
R/W EXISTING RIGHT OF WAY
P/E PROPOSED PERMANENT EASEMENT
T/E TEMPORARY EASEMENT

NOTES:
1. 1.5' CLEAR ZONE REQUIRED FROM CURB FACE.
2. BACKFILL WITH SELECT GRANULAR BORROW.

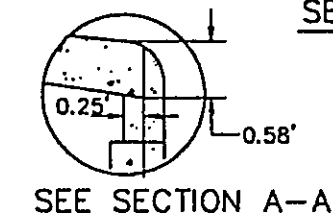
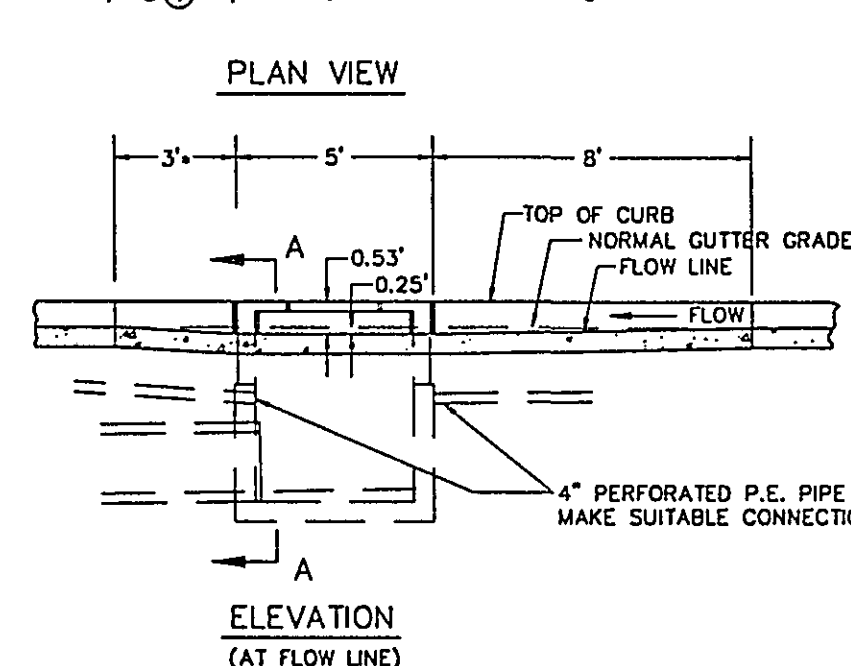
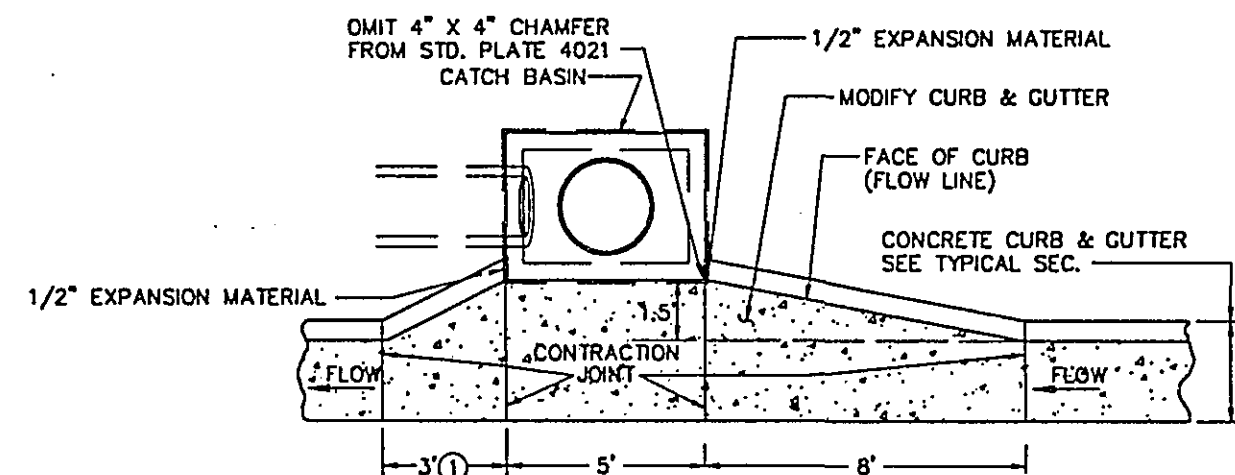
28-155
TYPICAL SECTIONS



- ① EXACT WIDTH OF ENTRANCE SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER
- ② 1/2" EXPANSION JOINT
- ③ PLACE JOINTS AS REQUIRED FOR CONCRETE CONSTRUCTION
- ④ SLOPES MAY VARY TO MATCH EXISTING CONDITIONS.

CONCRETE APRON DETAIL

STA. 80+15

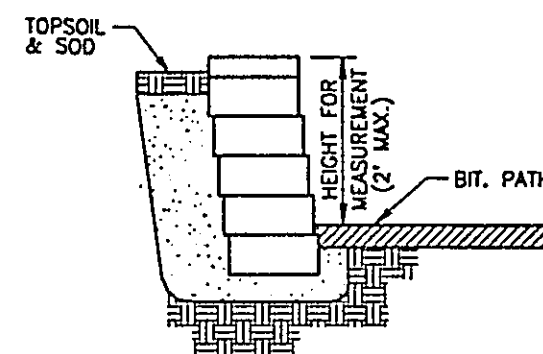


SECTION A-A

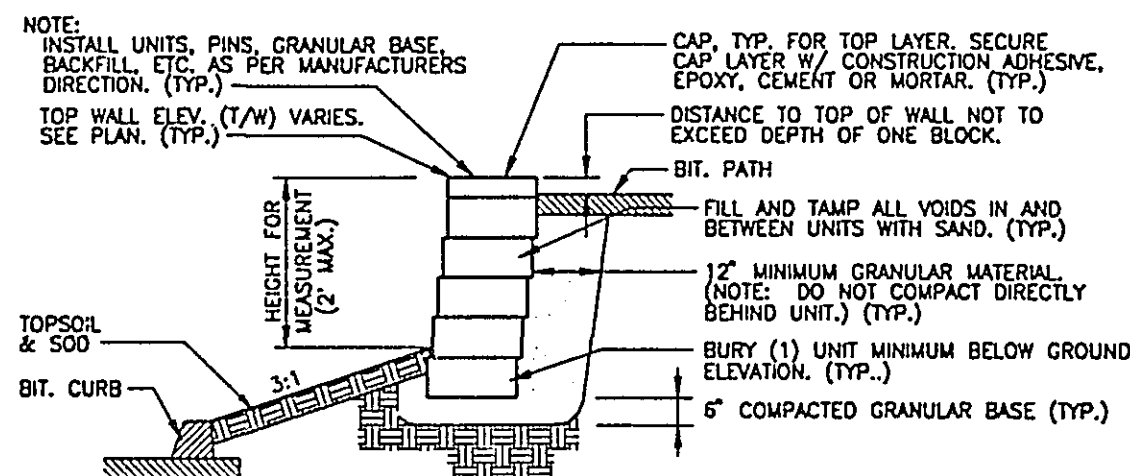
NOTES

- ① DIMENSION SHALL BE 8' WHEN STRUCTURE IS INSTALLED AT LOW POINT IN GRADE.
- ② THIS DIMENSION IS VARIABLE FOR CATCH BASIN RECONSTRUCTION
- ③ CATCH BASIN - DESIGN LP - SEE MN/DOT STD. PL. NO. 4021.
- ④ TOP OF CATCH BASIN SHALL BE INSTALLED AT SAME SLOPE AS BLVD. GRADES AND TOP OF CURB GRADE EACH SIDE OF STRUCTURE.
- ⑤ ELEVATION OF STRUCTURE IS COMPUTED AT LOCATION SHOWN IN SEC. A-A AT L OF C.B. OPENING.

CURB OPENING CATCH BASIN - DESIGN LP INSTALLATION AND RECONSTRUCTION DETAIL

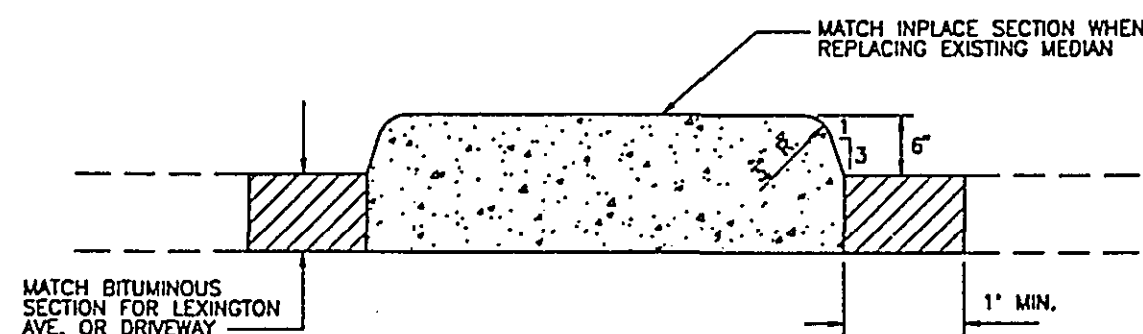


STA. 79+13 TO STA. 80+08



STA. 11+52 TO STA. 12+65

MODULAR BLOCK WALL DETAILS



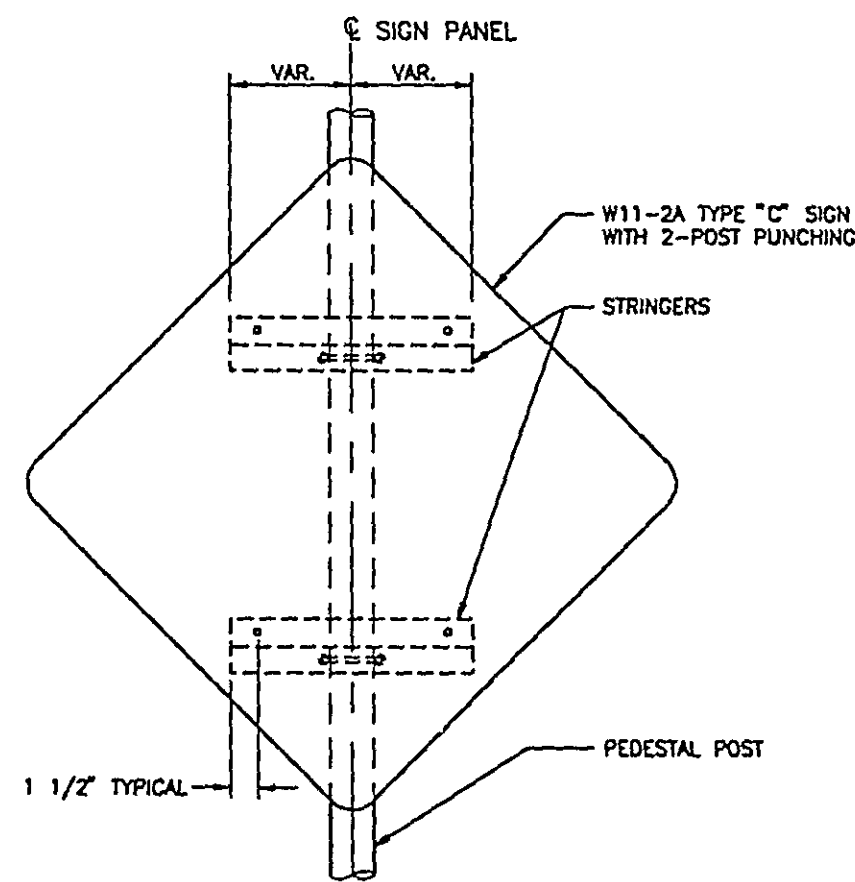
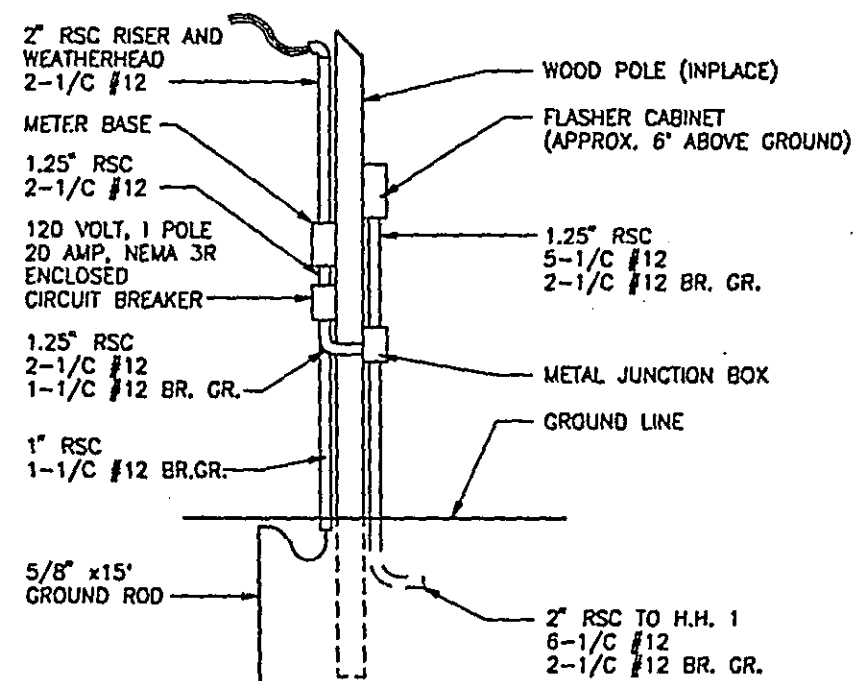
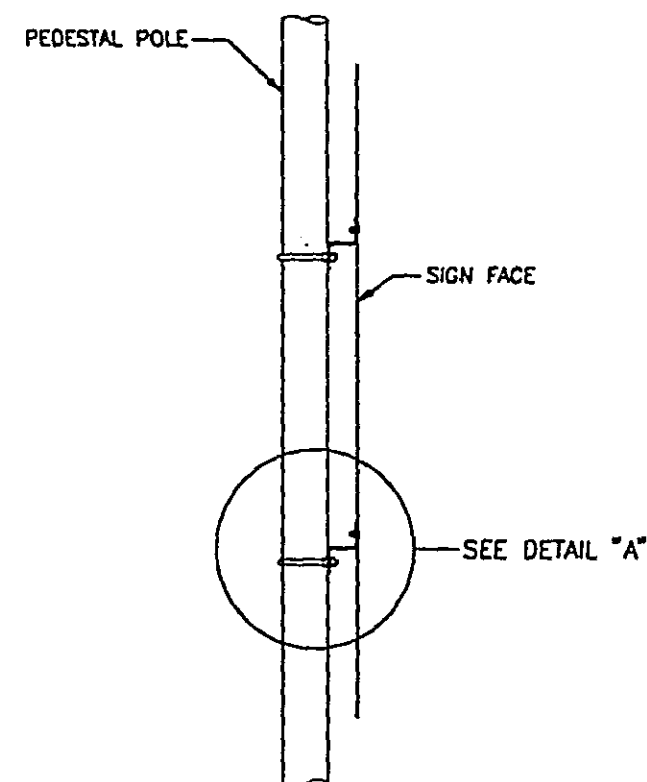
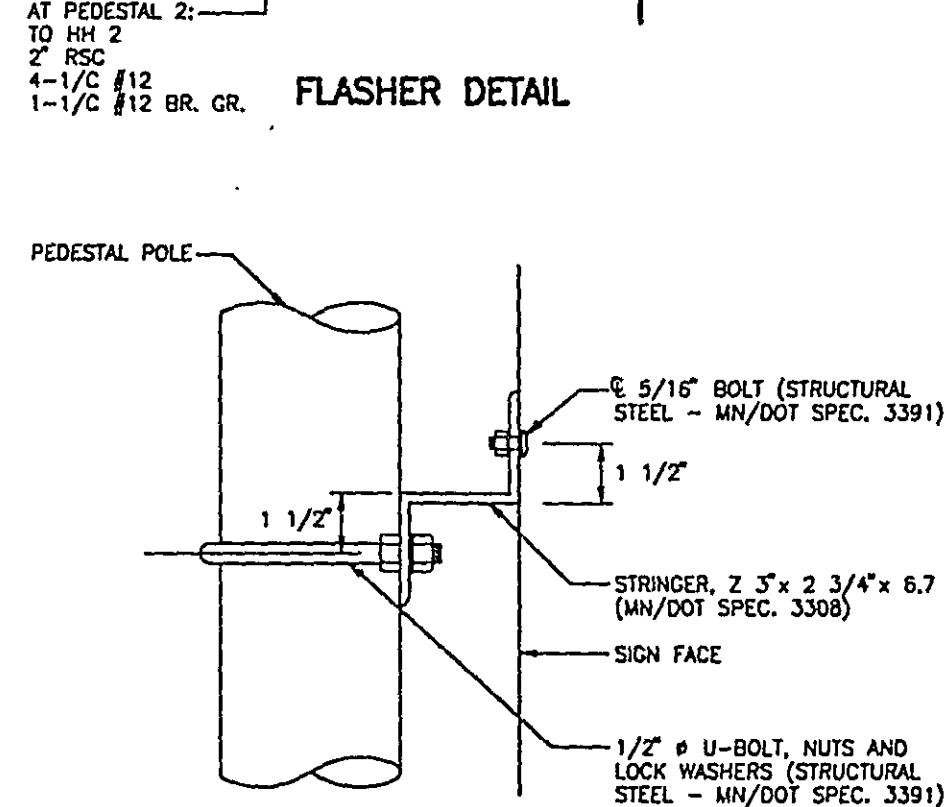
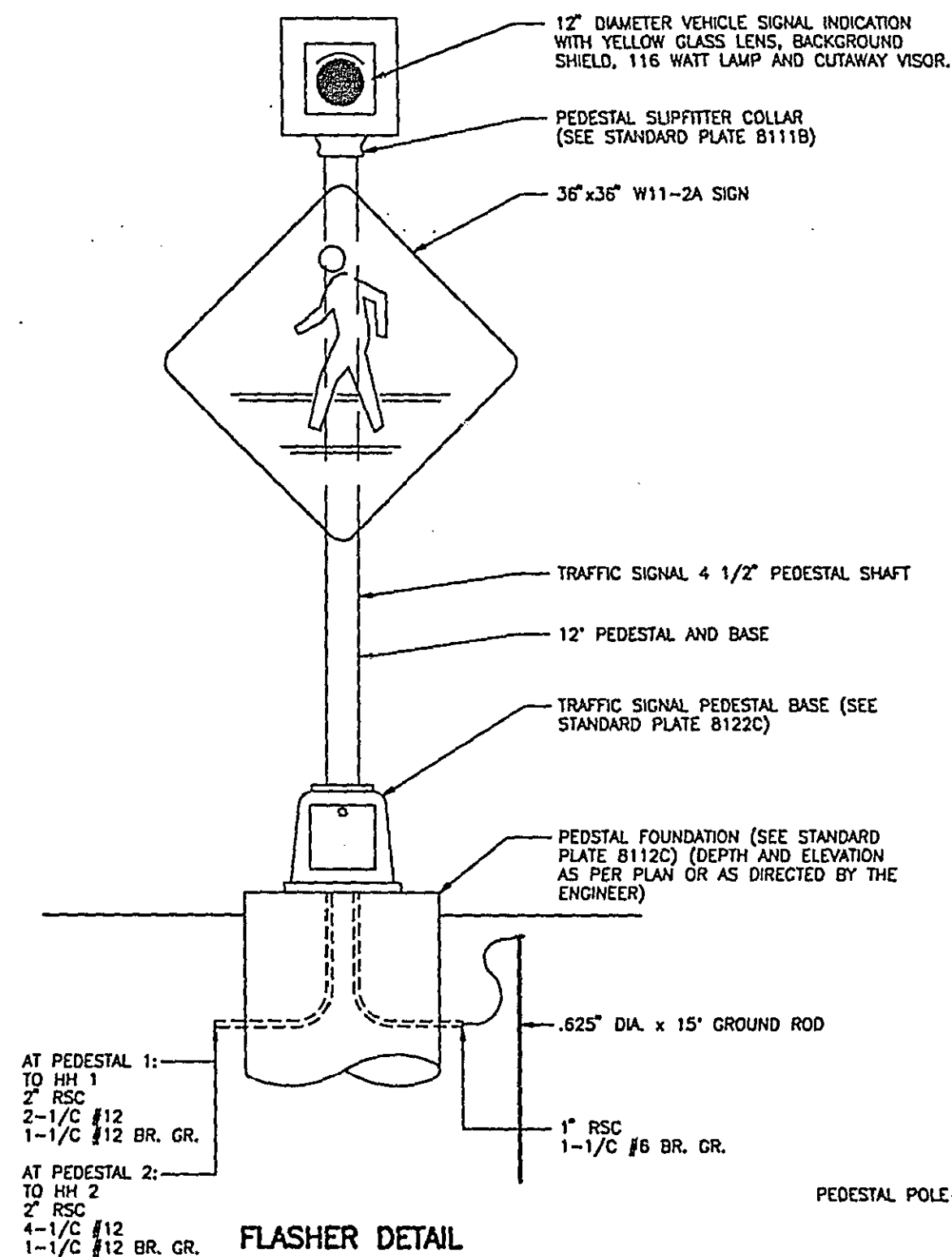
CONCRETE MEDIAN DETAIL

DRAIN TILE ??

28-155
CONSTRUCTION DETAILS

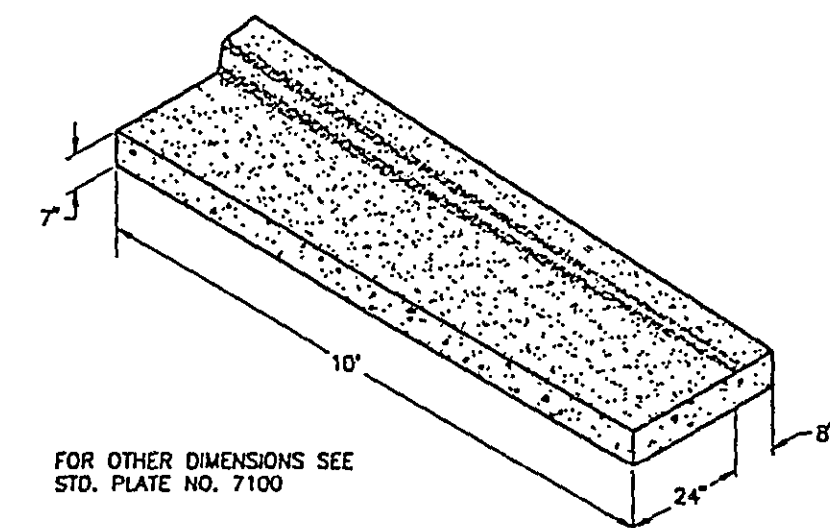
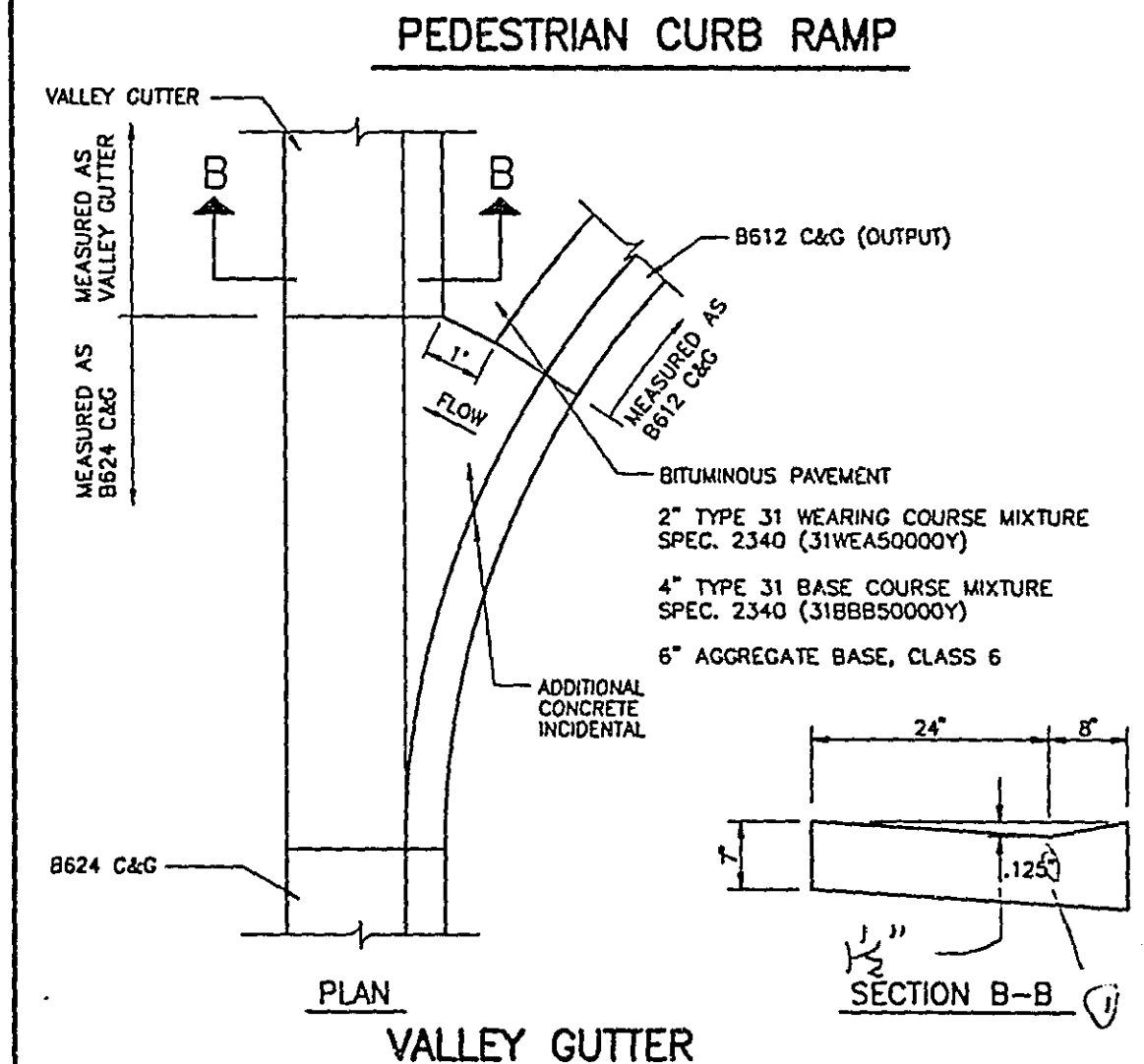
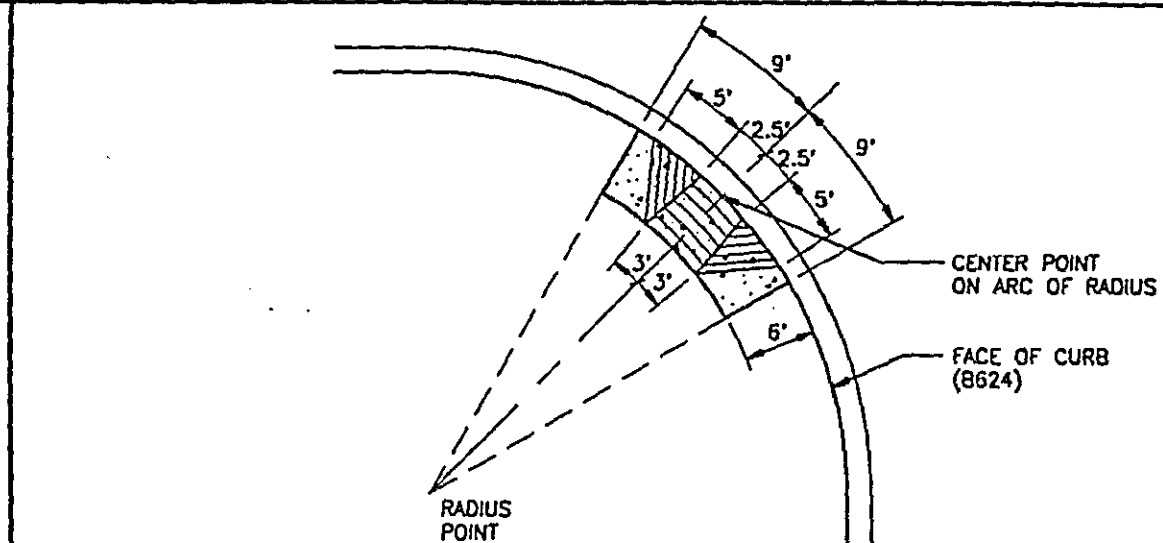
CERTIFIED BY *T. A. CL...* 15400 REG. NO. 12/12/86 DATE

S.P. 62-651-34, S.P. 160-020-10 Sheet No. 8 of 77 Sheets



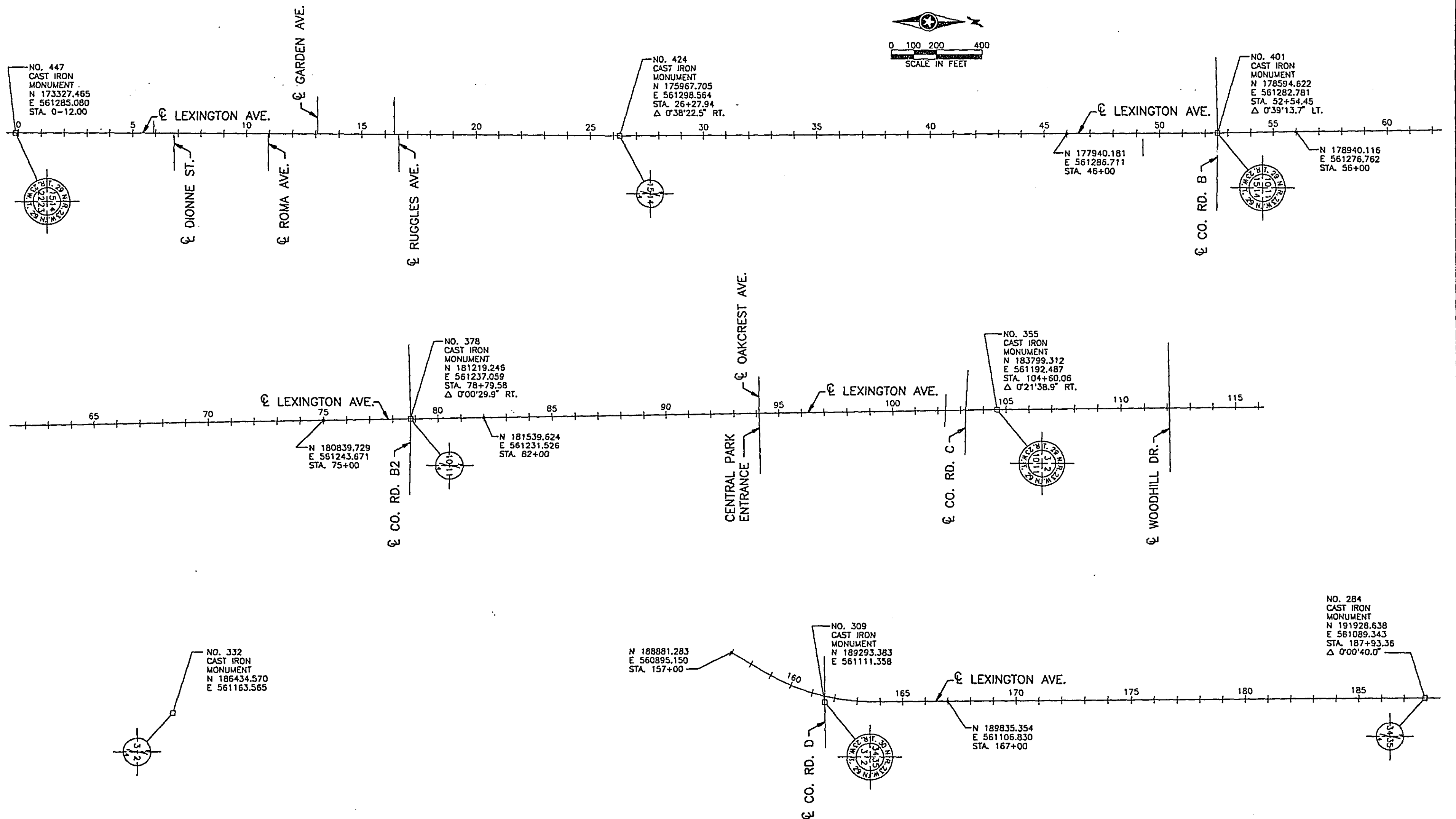
PEDESTRIAN SIGN AND FLASHER DETAILS LEXINGTON AVE. AT OAKCREST AVE.

CERTIFIED BY *T. A. Chubb* 15400 12/12/16
PROFESSIONAL ENGINEER REG. NO. DATE



28-155 CONSTRUCTION DETAILS

S.P. 62-651-34, S.P. 160-020-10 Sheet No. 9 of 77 Sheets



HORIZONTAL DATUM: RAMSEY COUNTY COORDINATE SYSTEM

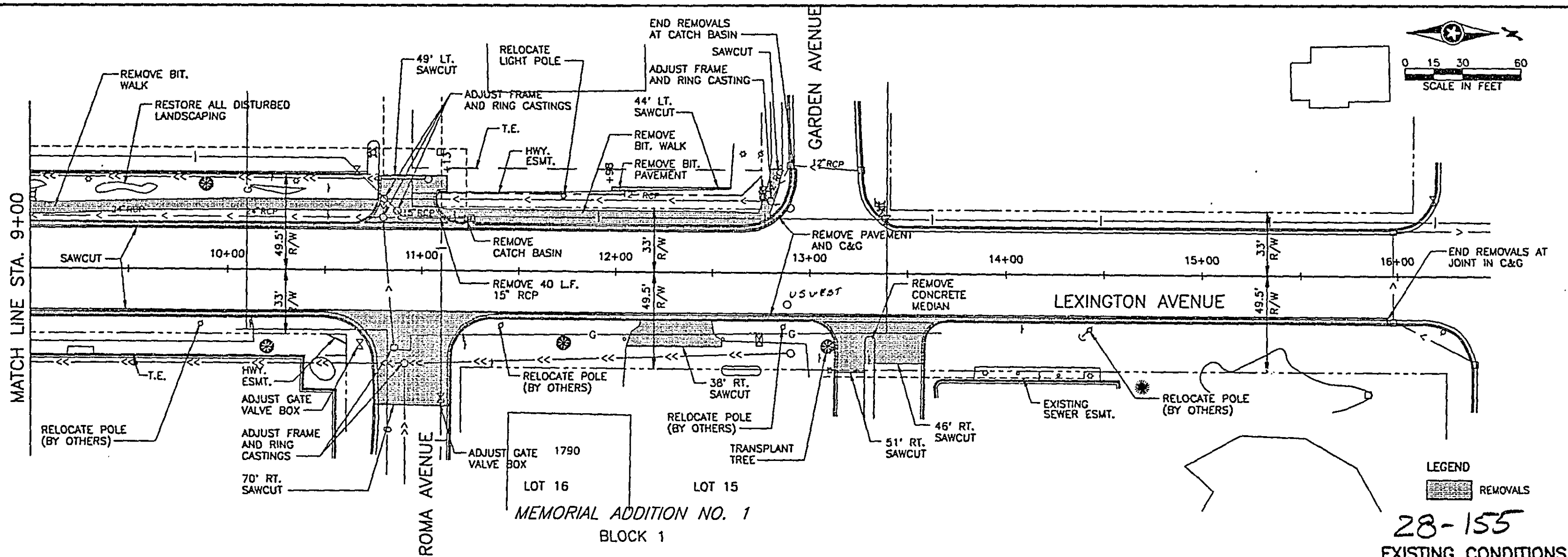
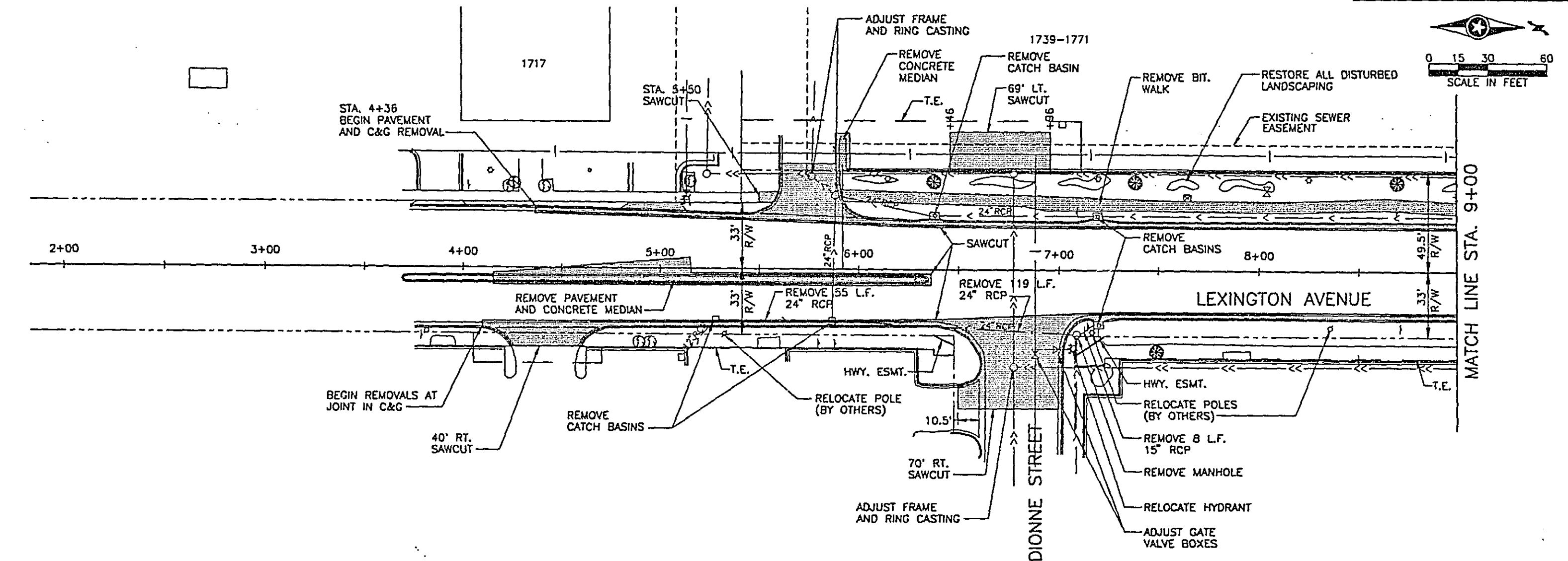
28-155
ALIGNMENT PLAN

CERTIFIED BY *T. H. A. [Signature]*
PROFESSIONAL ENGINEER

15400
REG. NO.

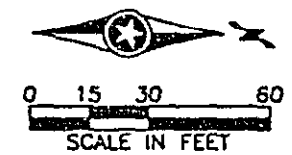
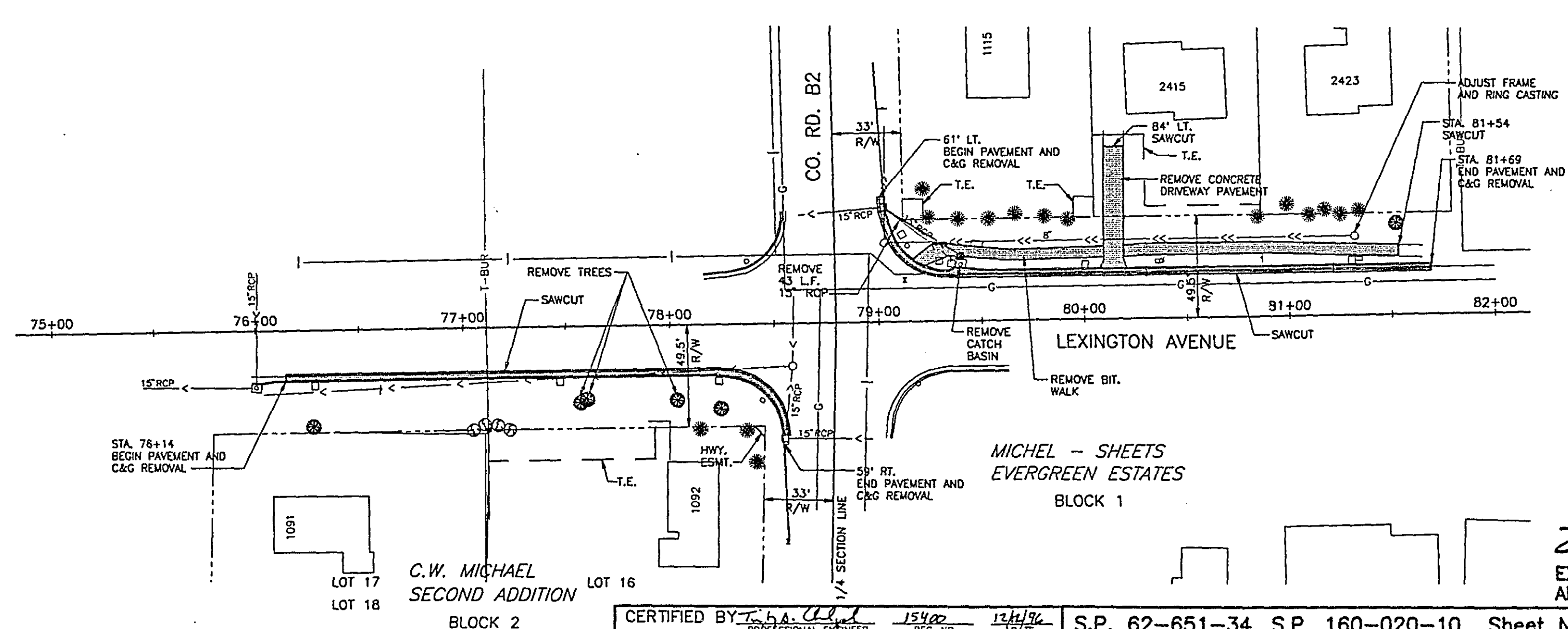
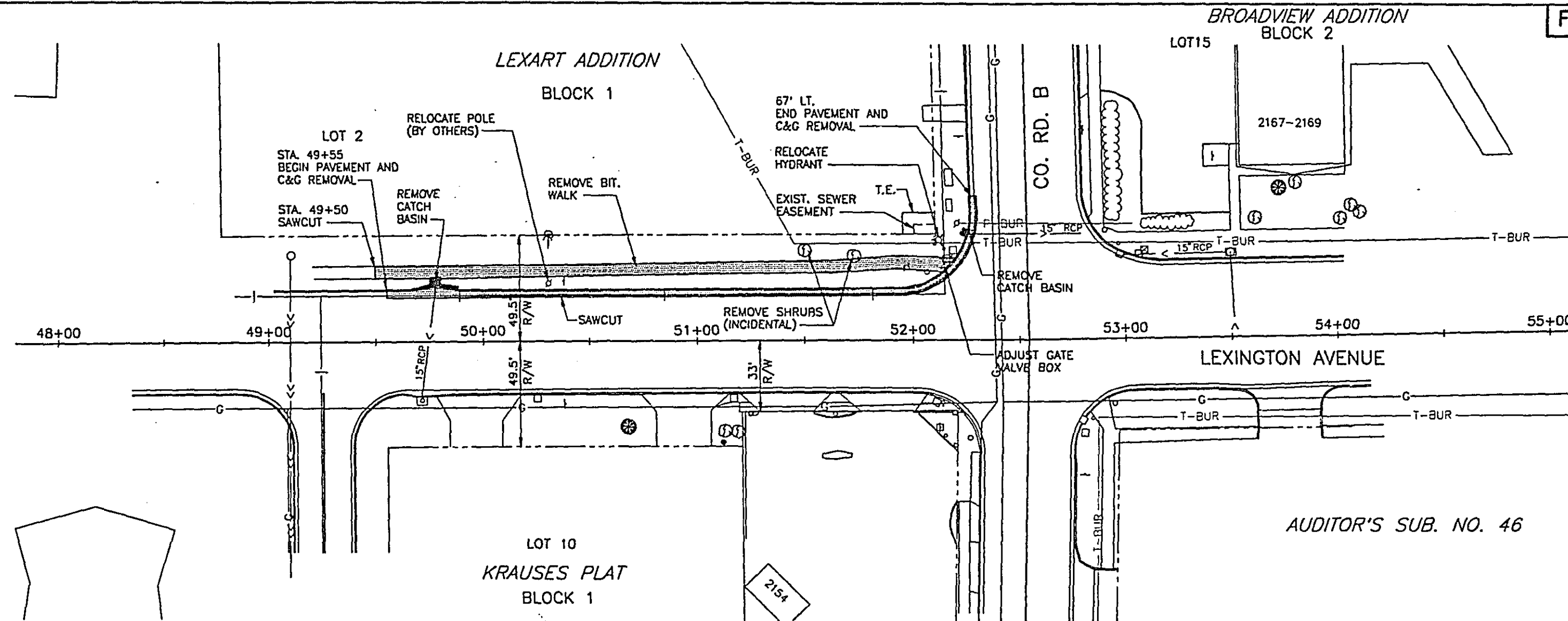
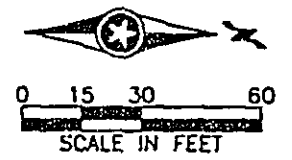
12/12/76
DATE

S.P. 62-651-34, S.P. 160-020-10 Sheet No. 10 of 77 Sheets



LEGEND
 REMOVALS

28-155
 EXISTING CONDITIONS
 AND REMOVALS PLAN



LEGEND
REMOVALS

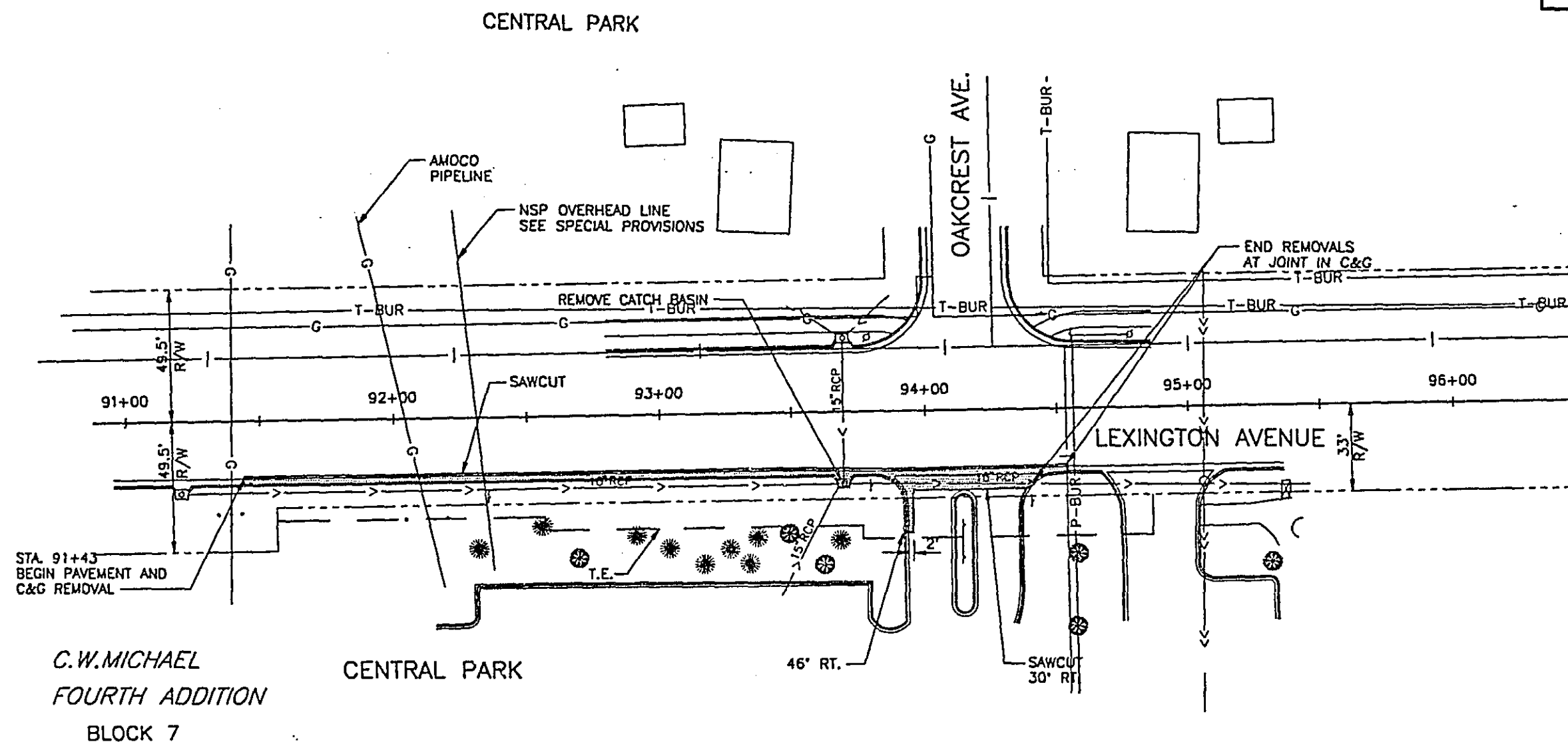
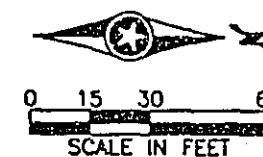
28-155
EXISTING CONDITIONS
AND REMOVALS PLAN

CERTIFIED BY *T. H. A. [Signature]*
PROFESSIONAL ENGINEER

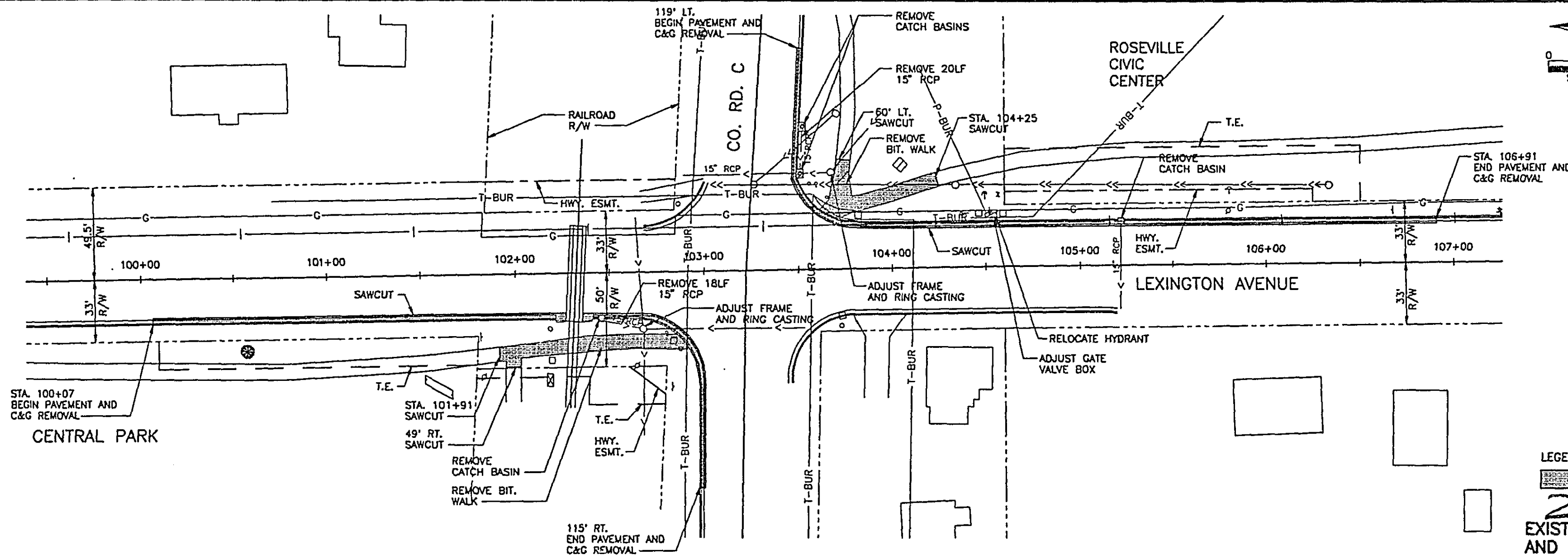
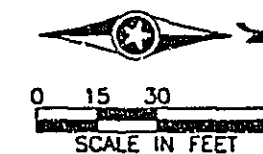
15400
REG. NO.

12/1/96
DATE

S.P. 62-651-34, S.P. 160-020-10 Sheet No. 12 of 77 Sheets



C.W.MICHAEL
FOURTH ADDITION
BLOCK 7



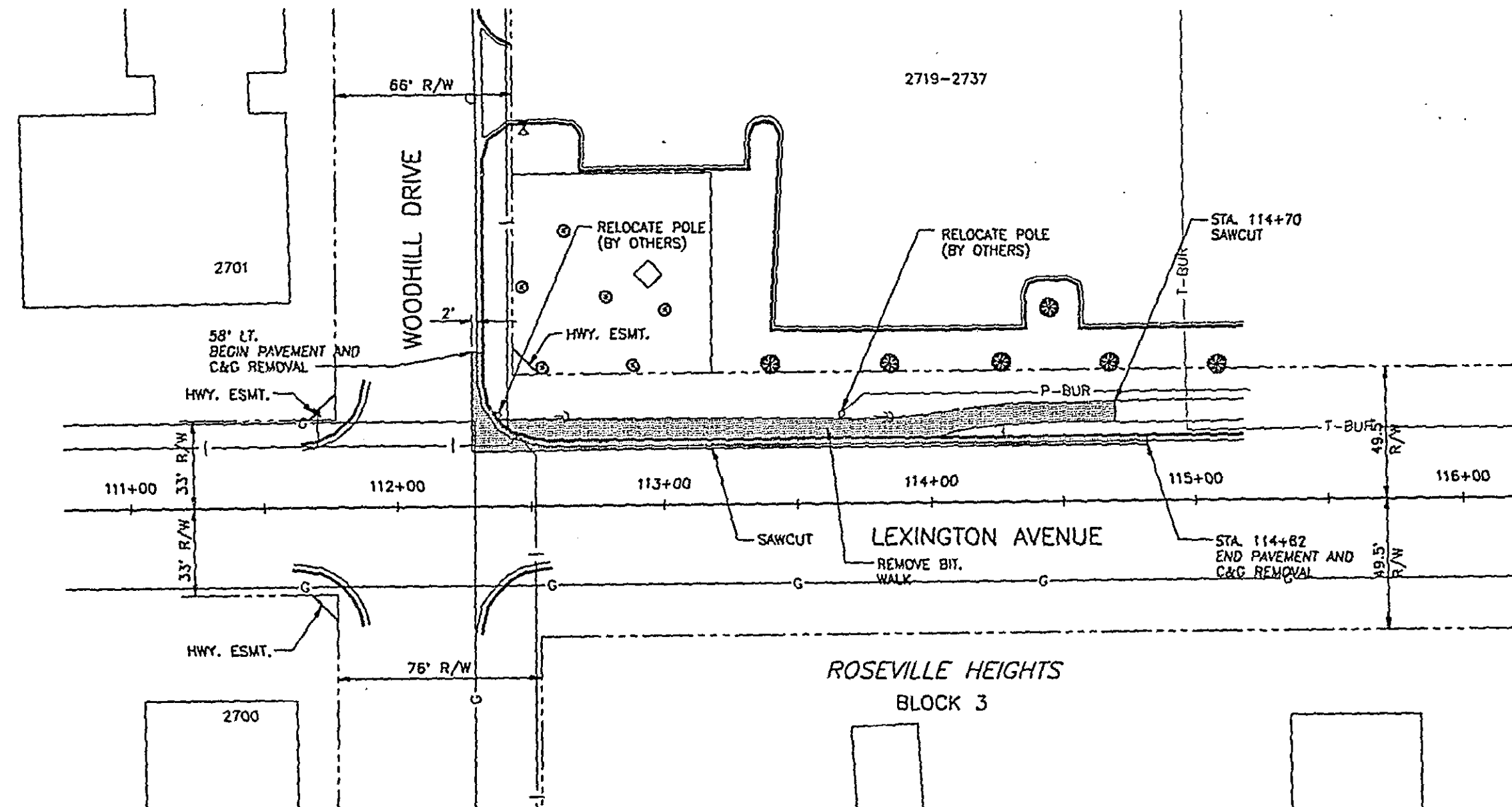
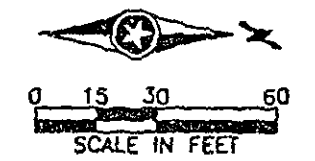
LEGEND

REMOVALS

28-155
EXISTING CONDITIONS
AND REMOVALS PLAN

CERTIFIED BY *T. A. O'Neil* 15400 12/2/96
PROFESSIONAL ENGINEER REG. NO. DATE

S.P. 62-651-34, S.P. 160-020-10 Sheet No. 13 of 77 Sheets

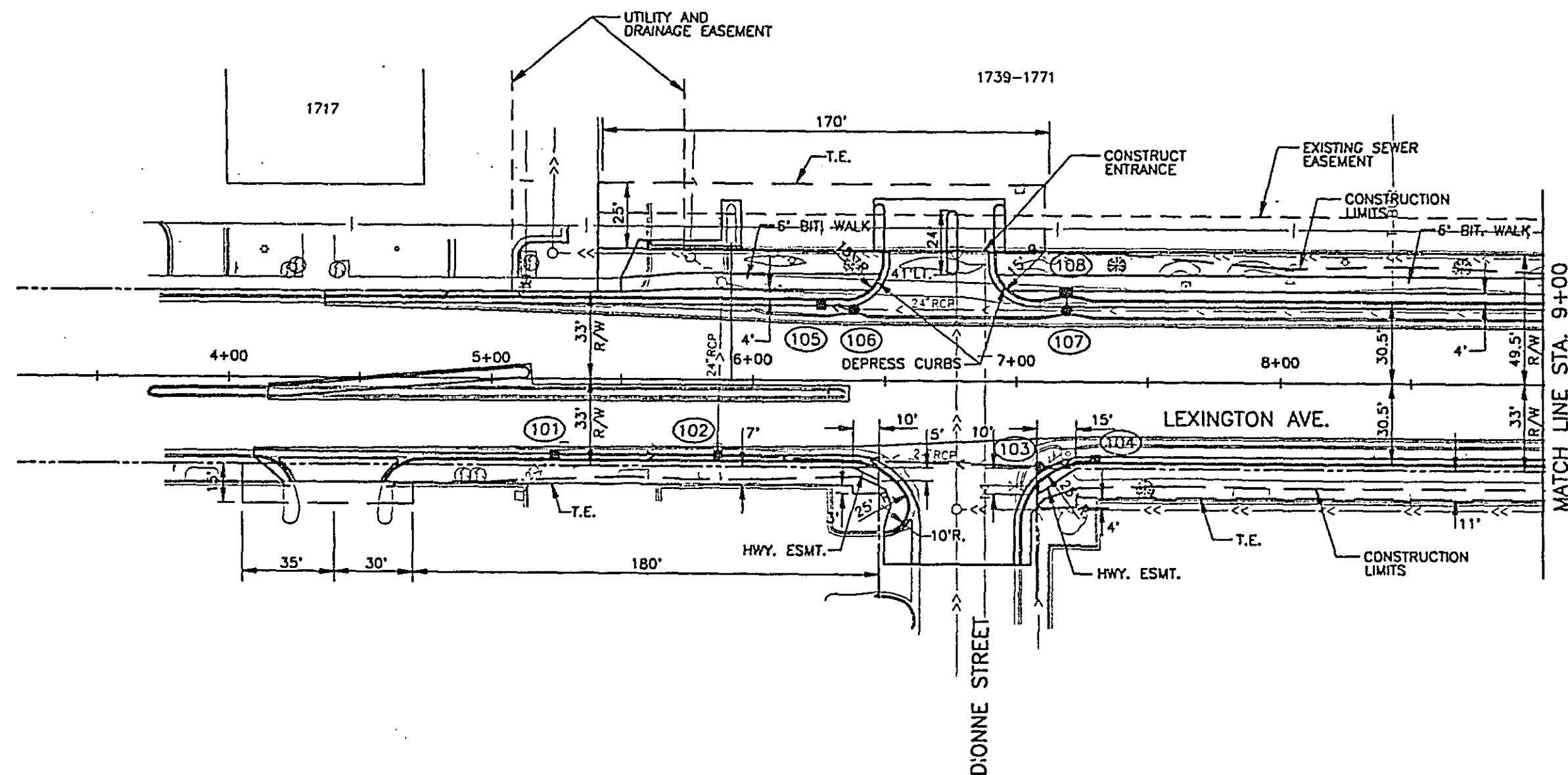
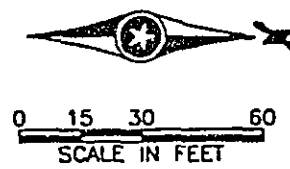


LEGEND
 REMOVALS

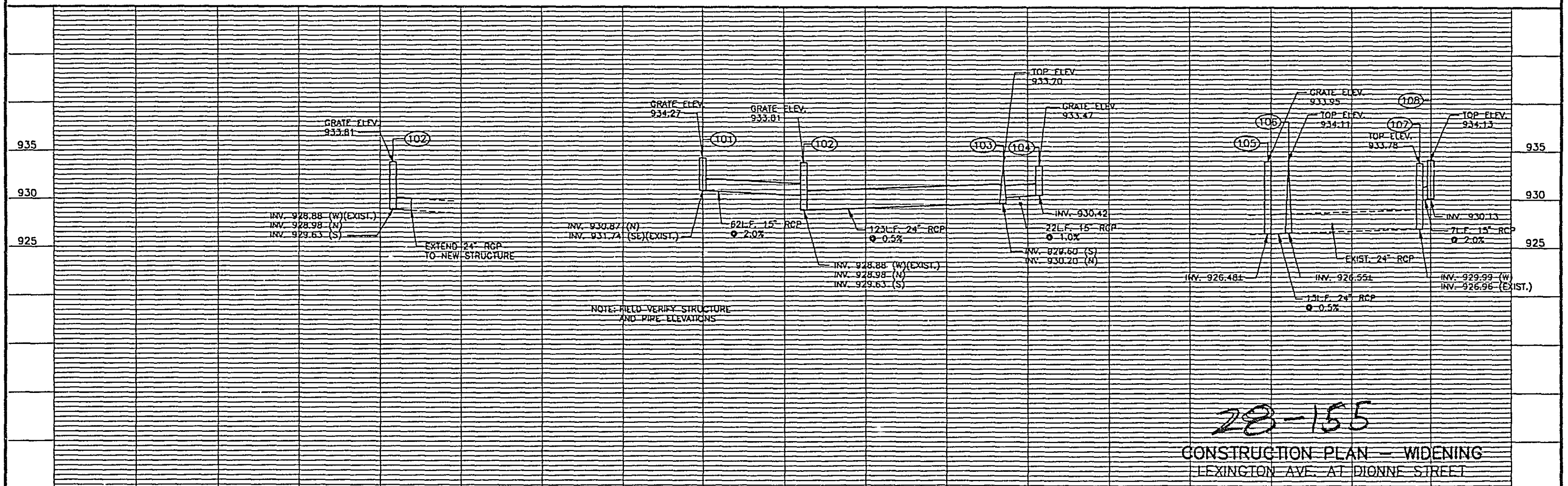
28-155
 EXISTING CONDITIONS
 AND REMOVALS PLAN

CERTIFIED BY T. S. A. C. C. 15400 12/12/96
 PROFESSIONAL ENGINEER REG. NO. DATE

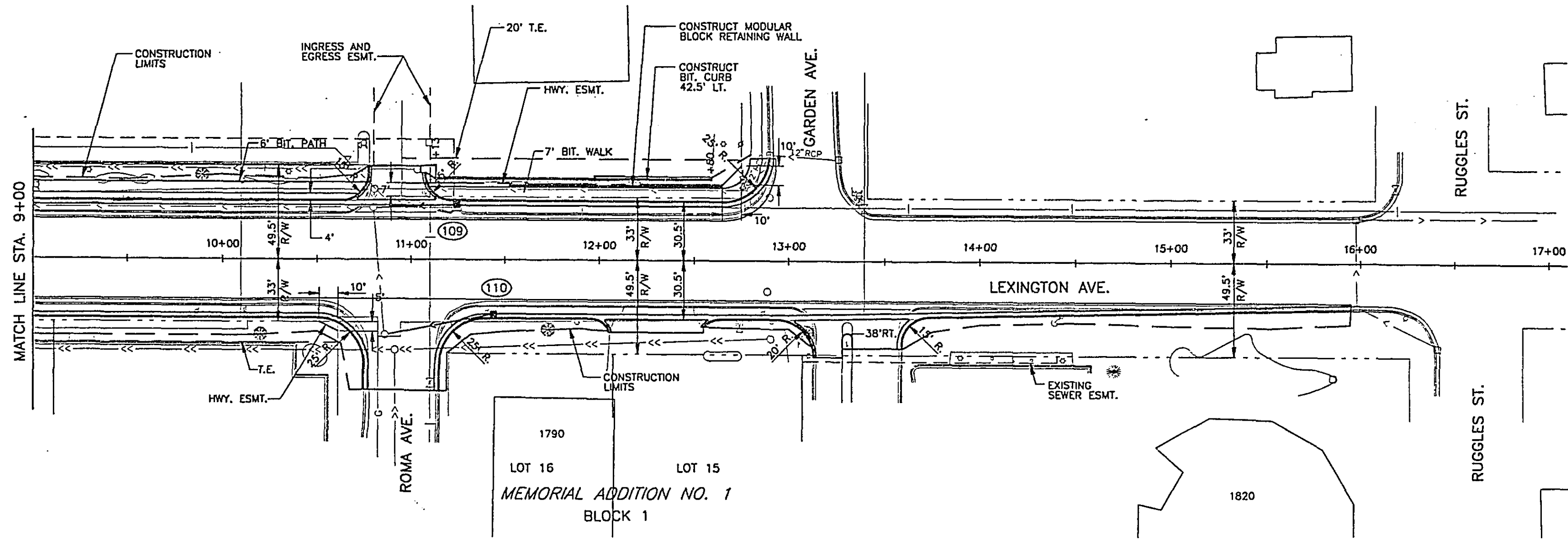
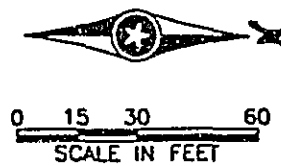
S.P. 62-651-34, S.P. 160-020-10 Sheet No. 14 of 77 Sheets



- NOTES:
1. SEE "GEOMETRIC LAYOUTS AND ELEVATIONS" SHEET FOR CURB AND GUTTER STAKING INFORMATION.

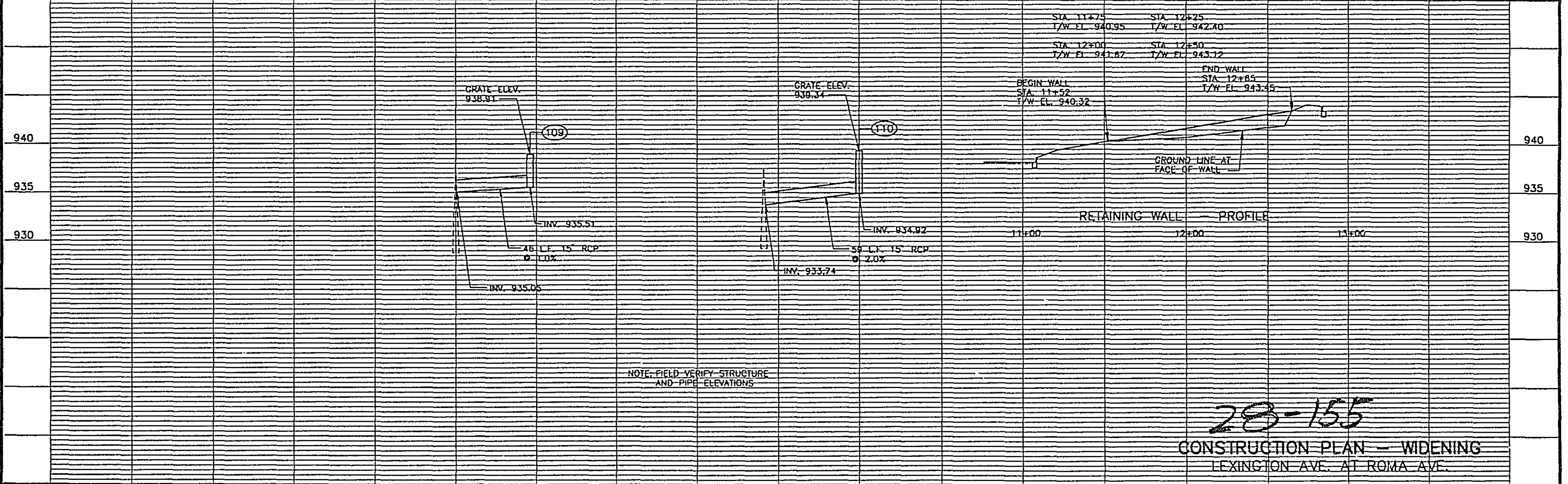


28-155
CONSTRUCTION PLAN - WIDENING
LEXINGTON AVE. AT D'ONNE STREET

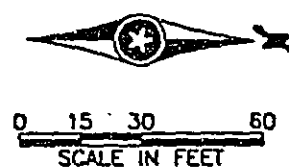


NOTES:
1. SEE "GEOMETRIC LAYOUTS AND ELEVATIONS" SHEET FOR CURB AND GUTTER STAKING INFORMATION.

B.M. TOP NUT HYDRANT, NW CORNER LEXINGTON AVE. AND GARDEN AVE. INTERSECTION
ELEV. 948.77



28-155
CONSTRUCTION PLAN - WIDENING
LEXINGTON AVE. AT ROMA AVE.



LEXART ADDITION
BLOCK 1

LOT 2

BROADVIEW ADDITION

BLOCK 2

LOT 15

2167-2169

COUNTY ROAD B

LEXINGTON AVE.

NOTES:

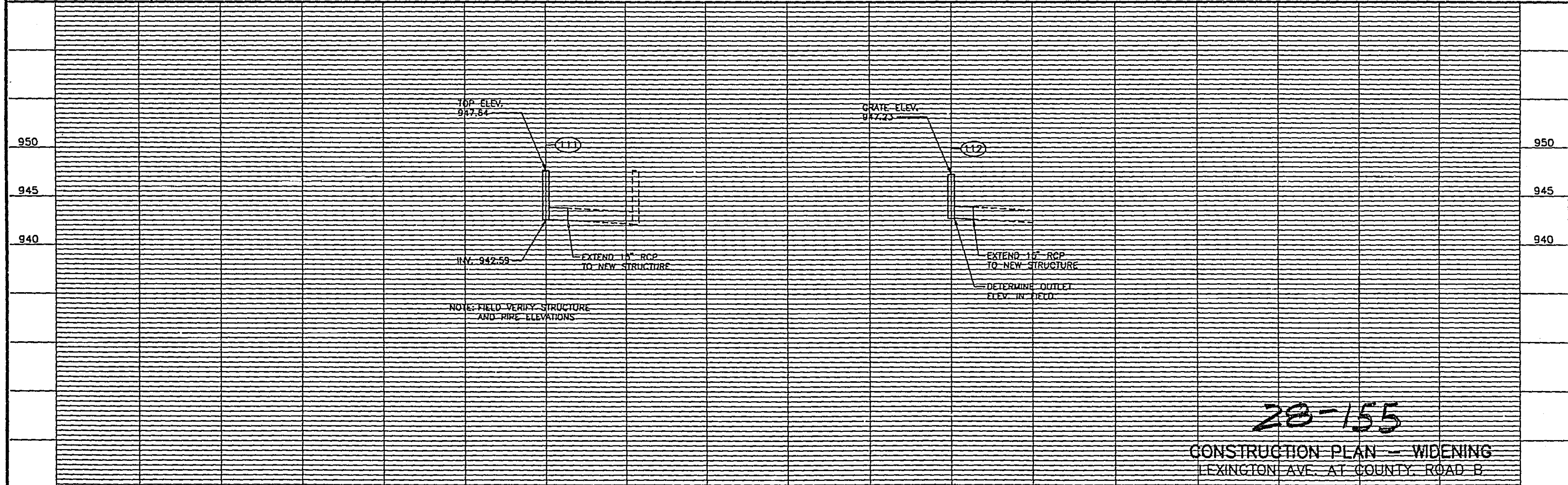
1. SEE "GEOMETRIC LAYOUTS AND ELEVATIONS" SHEET FOR CURB AND GUTTER STAKING INFORMATION.

B.M. TOP NUT HYDRANT, SW CORNER LEXINGTON AVE. AND COUNTY RD. B INTERSECTION
ELEV. 951.37

LOT 10
KRAUSES PLAT
BLOCK 1

SIGNAL SYSTEM C

17744 SF.
L = 346.8' 331
AUDITOR'S SUB. NO. 46 WAVE = 54



28-155

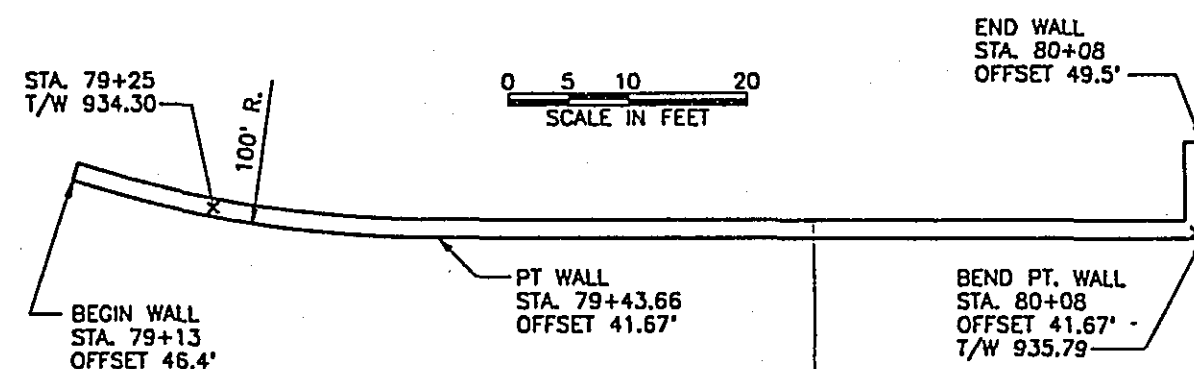
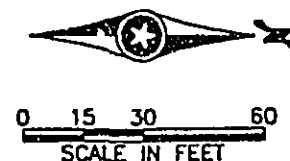
CONSTRUCTION PLAN - WIDENING
LEXINGTON AVE. AT COUNTY ROAD B

CERTIFIED BY *T. G. Allen*
PROFESSIONAL ENGINEER

15400 REG. NO. 12/12/96 DATE

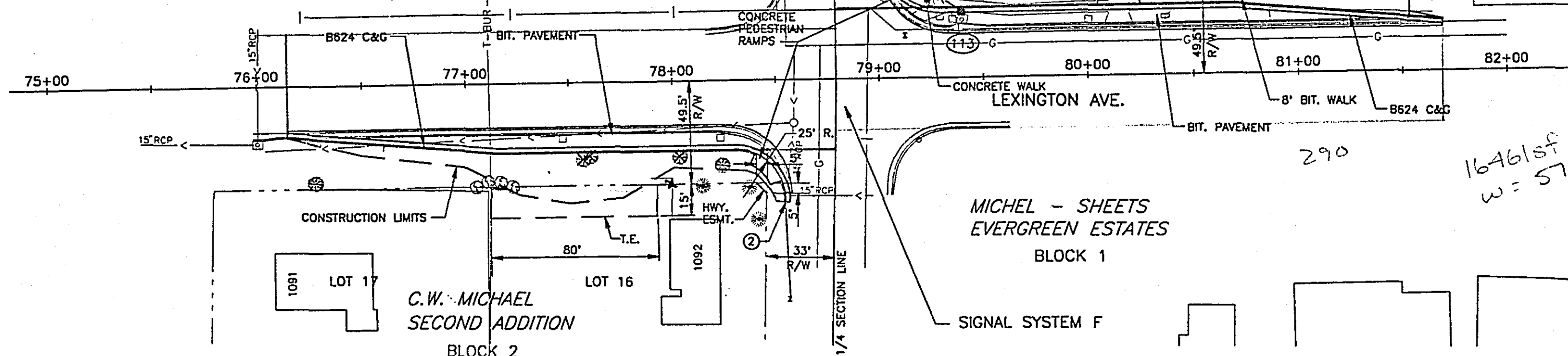
S.P. 62-651-34, S.P. 160-020-10

Sheet No. 17 of 77 Sheets

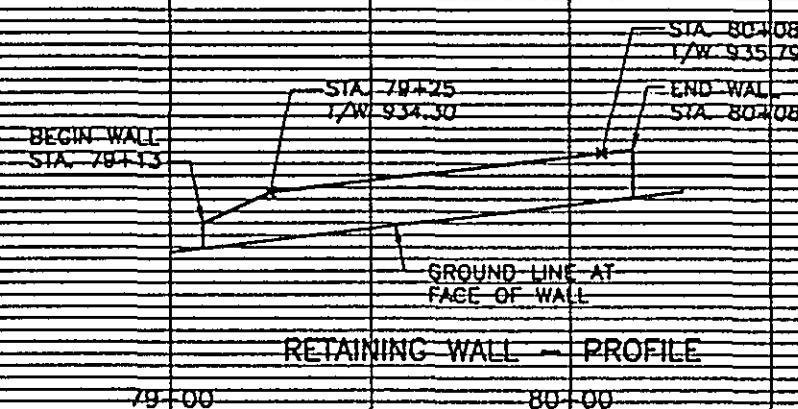


RETAINING WALL - PLAN

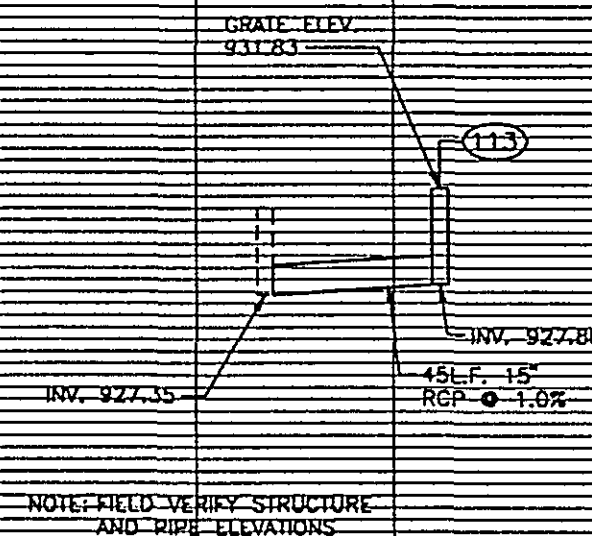
- NOTES:
- SEE "GEOMETRIC LAYOUTS AND ELEVATIONS" SHEET FOR CURB AND GUTTER STAKING INFORMATION.
 - MATCH CURB AND GUTTER TO EXISTING CATCH BASINS.



B.M. TOP NUT HYDRANT, NW CORNER LEXINGTON AVE. AND SEXTANT AVE. INTERSECTION
ELEV. 937.84



RETAINING WALL - PROFILE



28-155

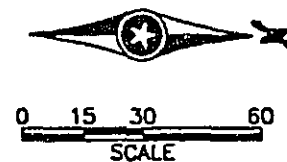
CONSTRUCTION PLAN - WIDENING
LEXINGTON AVE. AT COUNTY ROAD B2

CERTIFIED BY *T. L. O. CR...*
PROFESSIONAL ENGINEER

15400 REG. NO. 12/12/96 DATE

S.P. 62-651-34, S.P. 160-020-10

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WILLIAMS PIPE LINE
COMPANY PIPELINE

AMOCO
PIPELINE

NSP OVERHEAD LINES
SEE SPECIAL PROVISIONS

OAKCREST AVE.

LEXINGTON AVE.

CENTRAL PARK

C.W. MICHAEL
FOURTH ADDITION
BLOCK 7

NOTES:

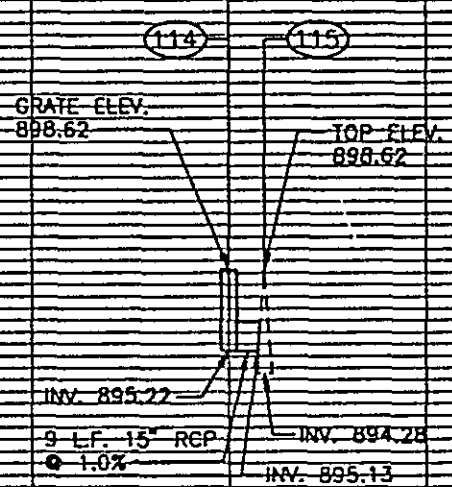
1. SEE "GEOMETRIC LAYOUTS AND ELEVATIONS" SHEET FOR CURB AND GUTTER STAKING INFORMATION.
2. FURNISHING AND INSTALLING MATERIALS AND EQUIPMENT FOR THE FLASHER SYSTEM, INCLUDING W11-2A SIGNS, HANDHOLES, CONDUIT AND CABLES SHOWN ON THIS SHEET AND IN THE DETAILS WILL BE PAID FOR UNDER ITEM NO. 0565.604 "FLASHING BEACON SYSTEM".

B.M. TOP NUT HYDRANT, NW
CORNER LEXINGTON AVE.
AND OAKCREST AVE.
INTERSECTION
ELEV. 901.30

- 1 PEDESTAL FOUNDATION
GROUND ROD
12" PEDESTAL AND BASE
FLASHER (SEE DETAIL)
SIGN W11-2A (36"x36") PEDESTAL MOUNTED
EXTEND INTO HH 1:
2" R.S.C.
4-1/C #12
1-1/C #12 BR. GR.

- A WOOD POLE (INPLACE)
INSTALL FLASHER CABINET
SERVICE EQUIPMENT-WOOD POLE MOUNTED
METER BASE AND DISCONNECT - 120/240 VOLT
ABOVE METER BASE:
2" RSC RISER AND WEATHERHEAD
2-1/C #12
ENCLOSED CIRCUIT BREAKER
BETWEEN METER BASE AND
CIRCUIT BREAKER:
1.25" RSC
2-1/C #12
METAL JUNCTION BOX
BETWEEN CIRCUIT BREAKER AND JUNCTION BOX:
1.25" RSC
2-1/C #12
1-1/C #12 BR. GR.
FLASHER CABINET
BETWEEN JUNCTION BOX AND FLASHER CABINET:
1.25" RSC
5-1/C #12
2-1/C #12 BR. GR.
BELOW JUNCTION BOX TO HH 1:
2" RSC
6-1/C #12
2-1/C #12 BR. GR.

- 2 PEDESTAL FOUNDATION
GROUND ROD
12" PEDESTAL AND BASE
FLASHER (SEE DETAIL)
CONTROL PANEL (ON/OFF SWITCH)
SIGN W11-2A (36"x36") PEDESTAL MOUNTED
EXTEND INTO HH 2:
2" R.S.C.
4-1/C #12
1-1/C #12 BR. GR.



28-155

CONSTRUCTION PLAN - WIDENING
LEXINGTON AVE. AT CENTRAL PARK

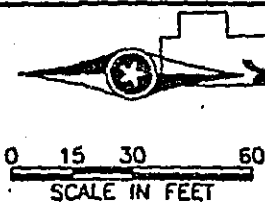
CERTIFIED BY *T. A. Chell*
PROFESSIONAL ENGINEER

15400
REG. NO.

12/12/16
DATE

S.P. 62-651-34, S.P. 160-020-10

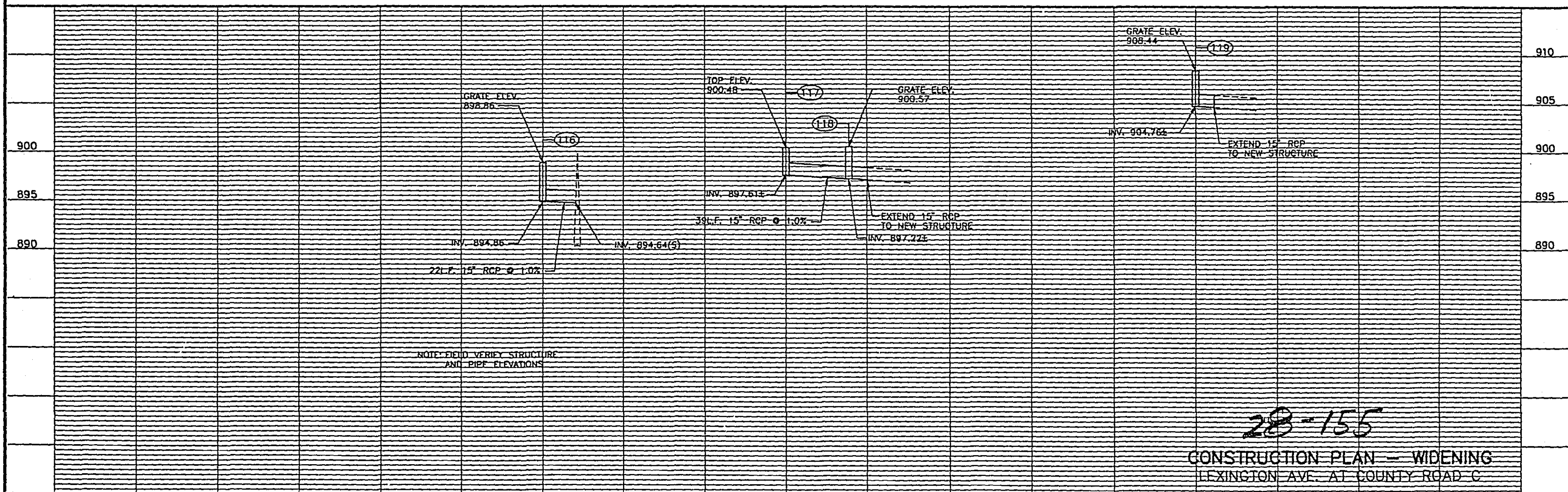
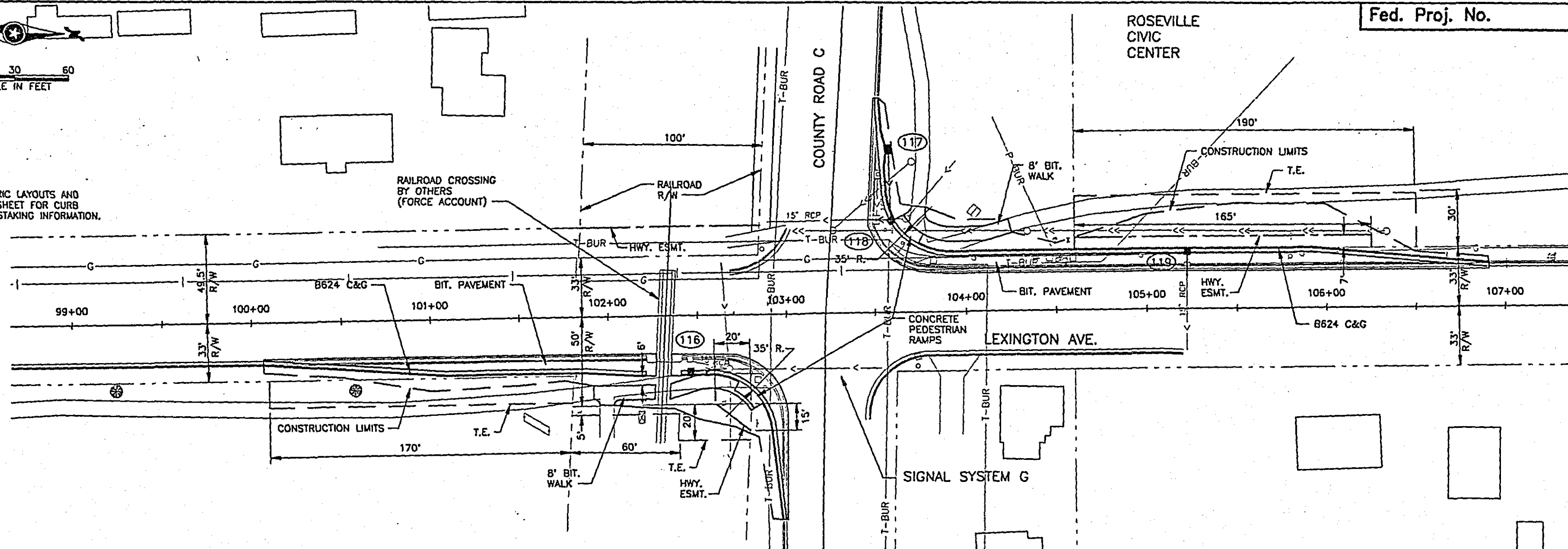
Sheet No. 19 of 77 Sheets



Fed. Proj. No.

NOTES:

1. SEE "GEOMETRIC LAYOUTS AND ELEVATIONS" SHEET FOR CURB AND GUTTER STAKING INFORMATION.



CERTIFIED BY *T. H. Chiles*
PROFESSIONAL ENGINEER

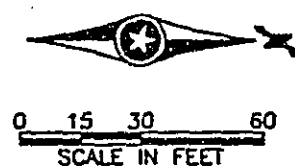
15400
REG. NO.

12/12/96
DATE

S.P. 62-651-34, S.P. 160-020-10

Sheet No. 20 of 77 Sheets

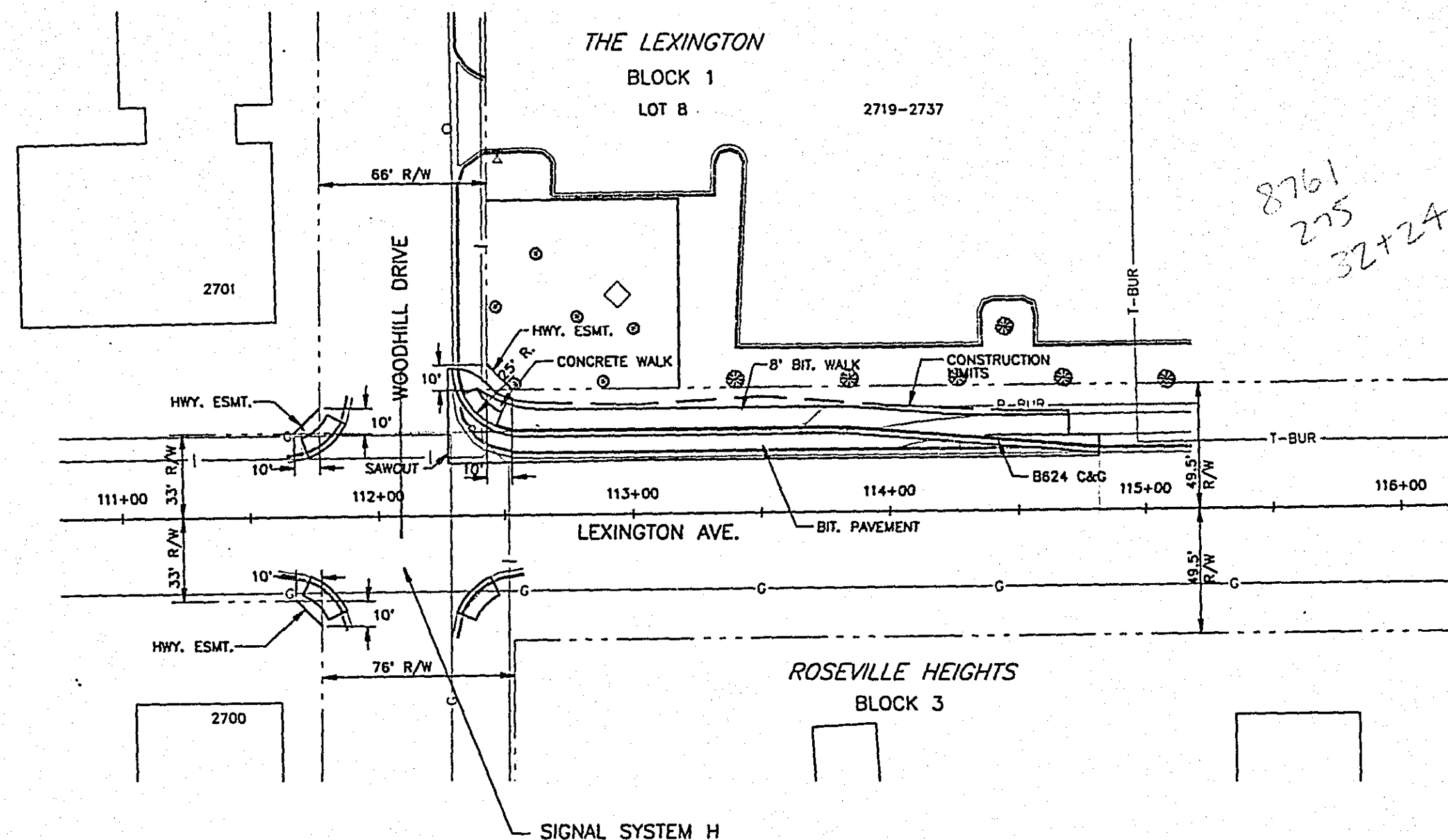
28-155
CONSTRUCTION PLAN - WIDENING
LEXINGTON AVE. AT COUNTY ROAD C



NOTES:

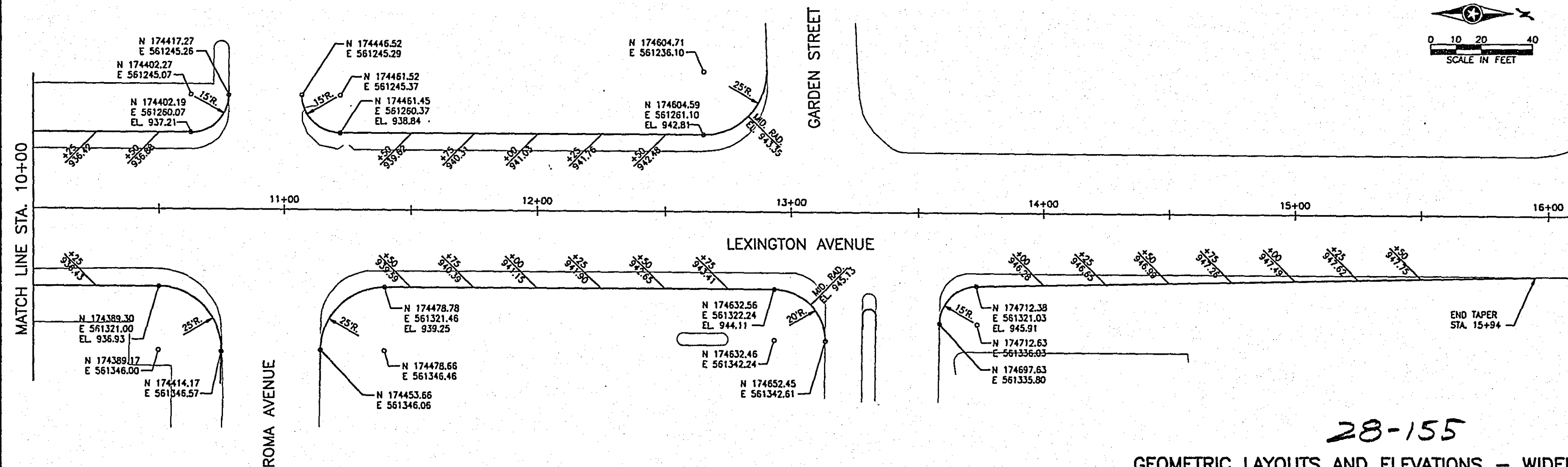
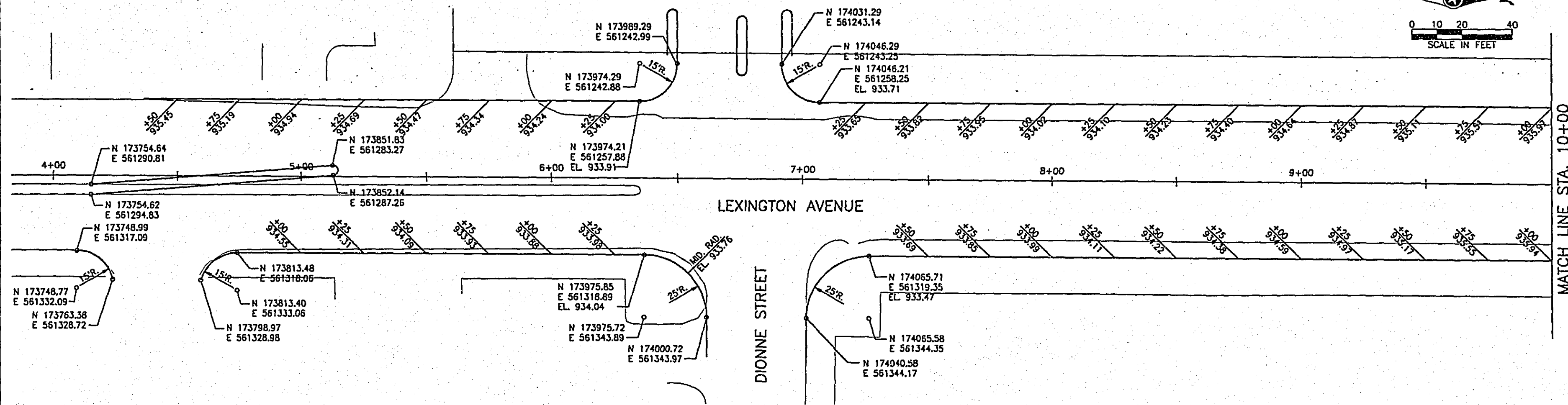
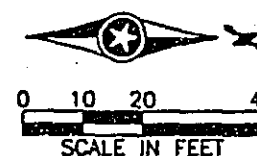
1. SEE "GEOMETRIC LAYOUTS AND ELEVATIONS" SHEET FOR CURB AND GUTTER STAKING INFORMATION.
2. CONSTRUCT CONCRETE PEDESTRIAN RAMPS IN ALL CORNERS OF THE INTERSECTION.

B.M. TOP NUT HYDRANT, SW CORNER LEXINGTON AVE. AND WOODHILL DRIVE INTERSECTION
ELEV. 938.96



28-155

CONSTRUCTION PLAN - WIDENING
LEXINGTON AVE. AT WOODHILL DRIVE



28-155

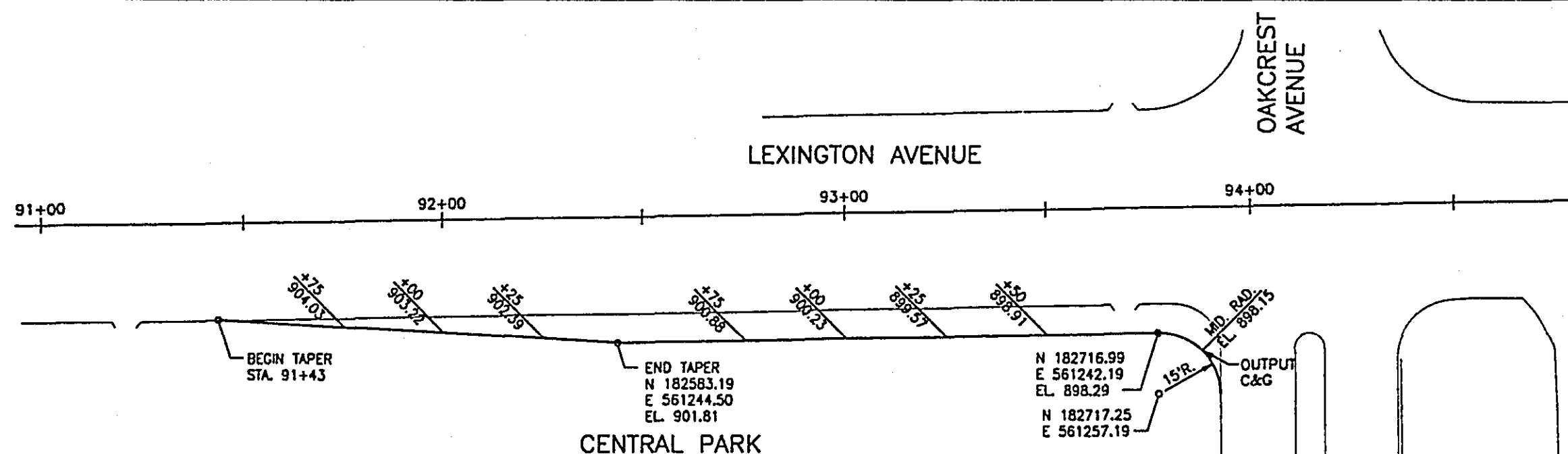
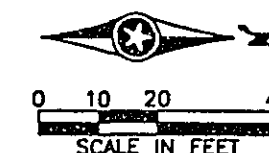
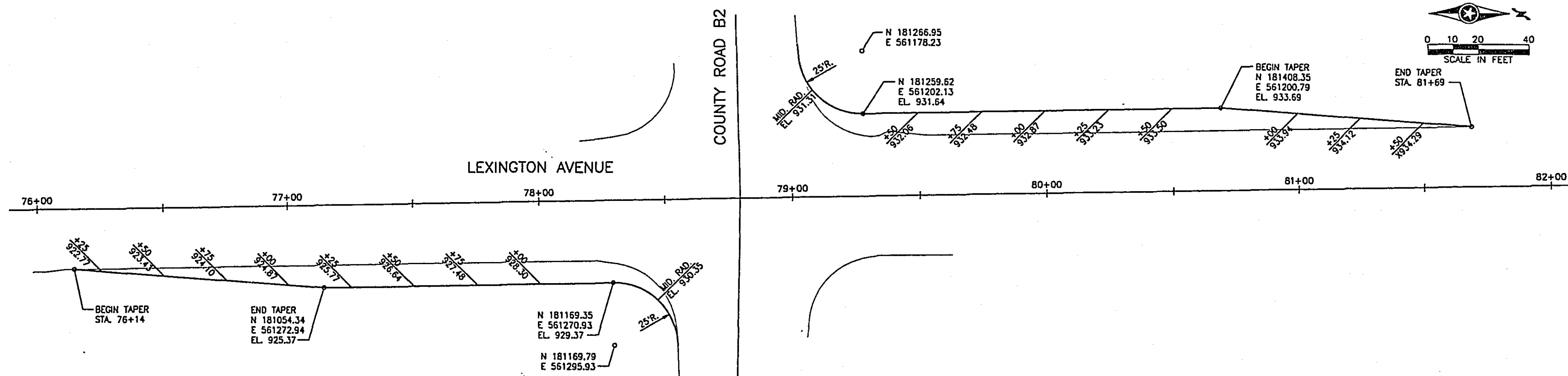
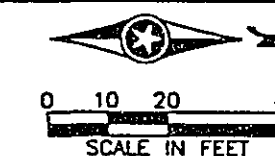
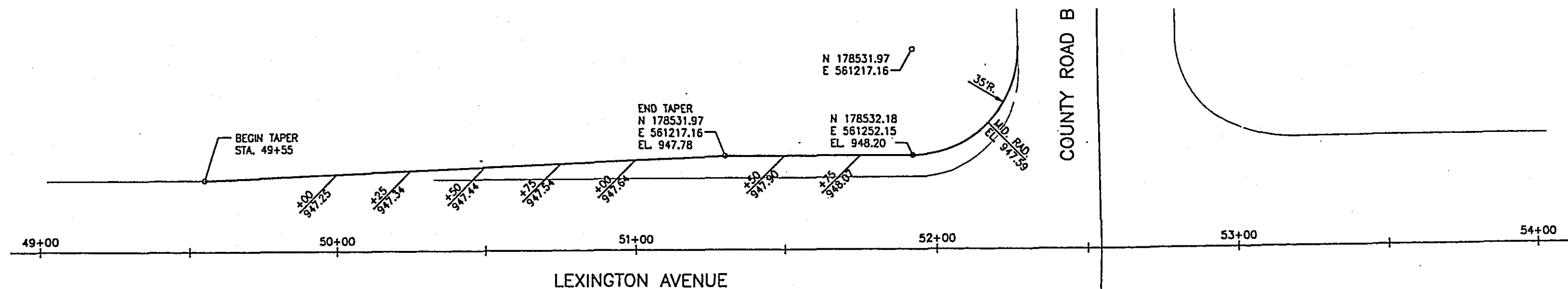
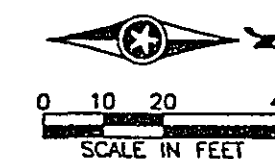
GEOMETRIC LAYOUTS AND ELEVATIONS - WIDENING

CERTIFIED BY *T. J. G. 11/1/76*
PROFESSIONAL ENGINEER

15400
REG. NO.

12/1/76
DATE

S.P. 62-651-34, S.P. 160-020-10 Sheet No. 22 of 77 Sheets

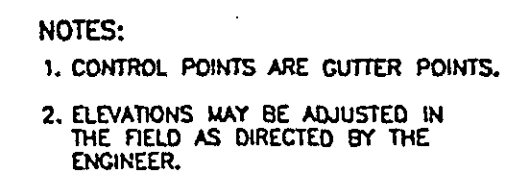
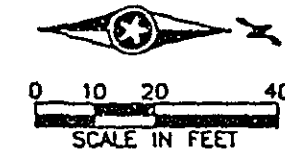


- NOTES:
1. CONTROL POINTS ARE GUTTER POINTS.
 2. ELEVATIONS MAY BE ADJUSTED IN THE FIELD AS DIRECTED BY THE ENGINEER.

28-155

GEOMETRIC LAYOUTS AND ELEVATIONS - WIDENING

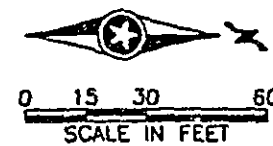
CERTIFIED BY *T. A. Chisholm* 15400 12/12/76
PROFESSIONAL ENGINEER REG. NO. DATE



28-155

CERTIFIED BY T. A. Chisholm 15400 12/12/96 S.P. 62-651-34, S.P. 160-020-10 Sheet No. 24 of 77 Sheets
PROFESSIONAL ENGINEER REG. NO. DATE

MILLING LEGEND
 TYPE FULL WIDTH - 1 1/2"
 TYPE FULL WIDTH - 3"



* DISTANCE FROM STOP LINE TO DETECTOR

STA. 0+45
 BEGIN: 3" MILLING
 1 1/2" BINDER COURSE
 1 1/2" WEARING COURSE

REMOVE AND REPLACE
 10 LF CURB AND GUTTER

2-6' X 6' PVC LOOP
 DETECTORS (5') *

2-6' X 6' PVC LOOP
 DETECTORS (155') *

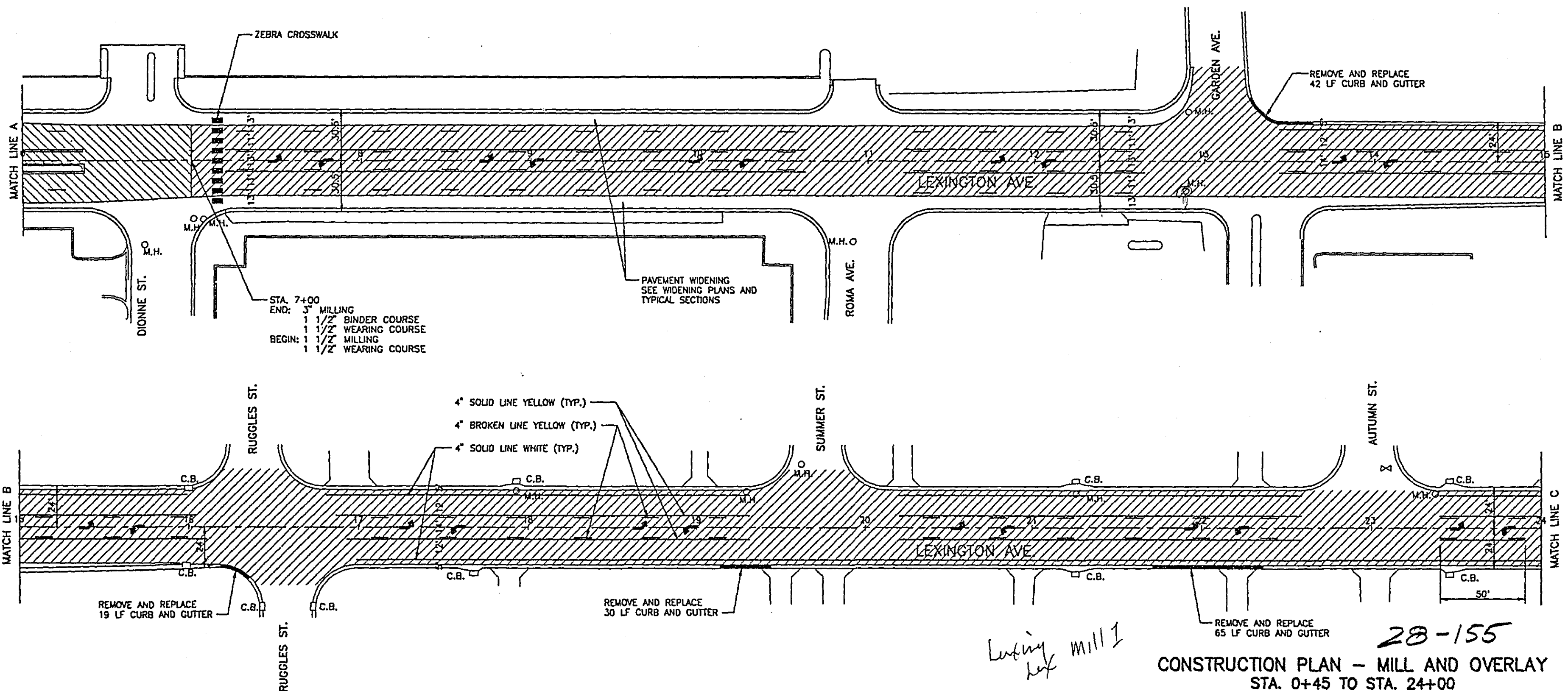
REMOVE AND REPLACE
 20 LF CURB AND GUTTER

4" BROKEN LINE WHITE

REMOVE AND REPLACE
 20 LF CURB AND GUTTER

REMOVE AND REPLACE
 110 LF CURB AND GUTTER

PAVEMENT WIDENING
 SEE WIDENING PLANS AND
 TYPICAL SECTIONS



Leaving Mill 1

28-155

CONSTRUCTION PLAN - MILL AND OVERLAY
 STA. 0+45 TO STA. 24+00

CERTIFIED BY *T. J. O'Connell*
 PROFESSIONAL ENGINEER

15400
 REG. NO.

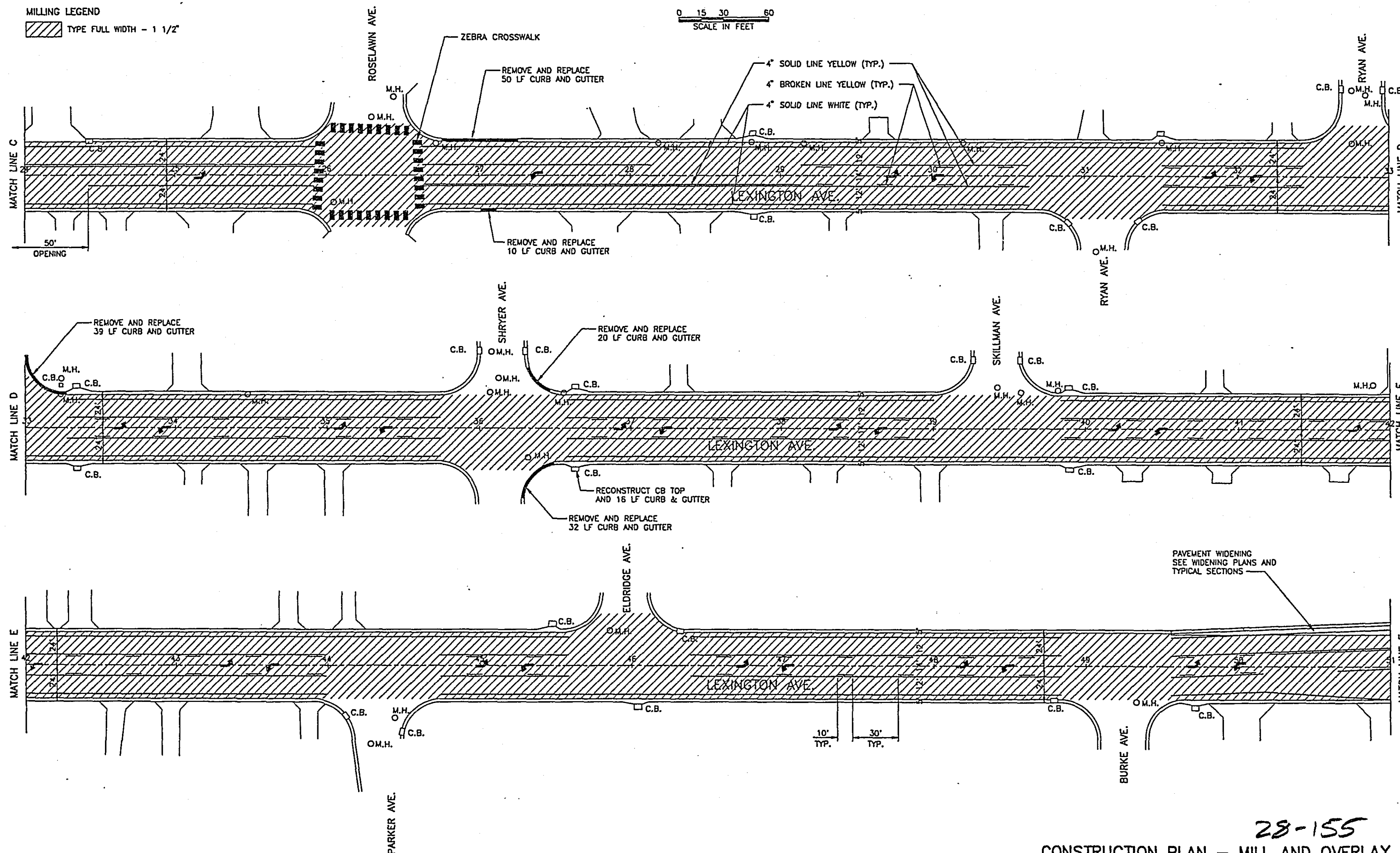
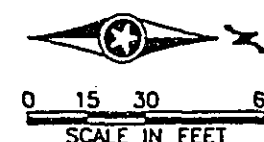
12/13/76
 DATE

S.P. 62-651-34

Sheet No. 25 of 77 Sheets

MILLING LEGEND

TYPE FULL WIDTH - 1 1/2"



28-155

CONSTRUCTION PLAN - MILL AND OVERLAY
STA. 24+00 TO STA. 51+00

CERTIFIED BY *T. A. Chubb*
PROFESSIONAL ENGINEER

15400
REG. NO.

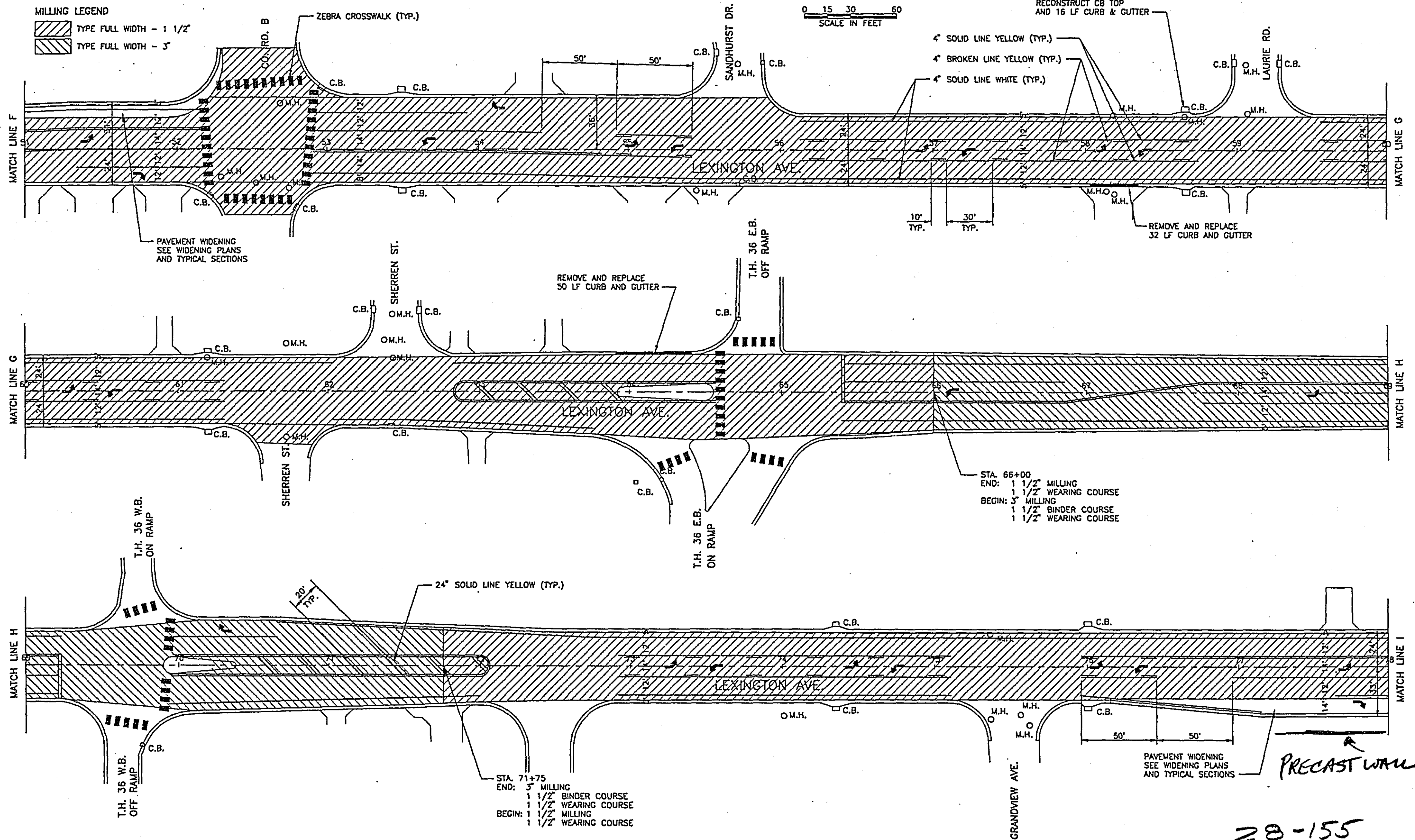
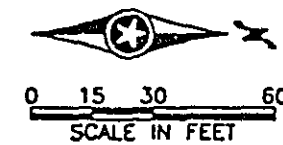
12/17/76
DATE

S.P. 62-651-34

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MILLING LEGEND

-  TYPE FULL WIDTH - 1 1/2"
-  TYPE FULL WIDTH - 3"



STA. 66+00
 END: 1 1/2" MILLING
 1 1/2" WEARING COURSE
 BEGIN: 3" MILLING
 1 1/2" BINDER COURSE
 1 1/2" WEARING COURSE

STA. 71+75
 END: 3" MILLING
 1 1/2" BINDER COURSE
 1 1/2" WEARING COURSE
 BEGIN: 1 1/2" MILLING
 1 1/2" WEARING COURSE

PAVEMENT WIDENING
 SEE WIDENING PLANS
 AND TYPICAL SECTIONS

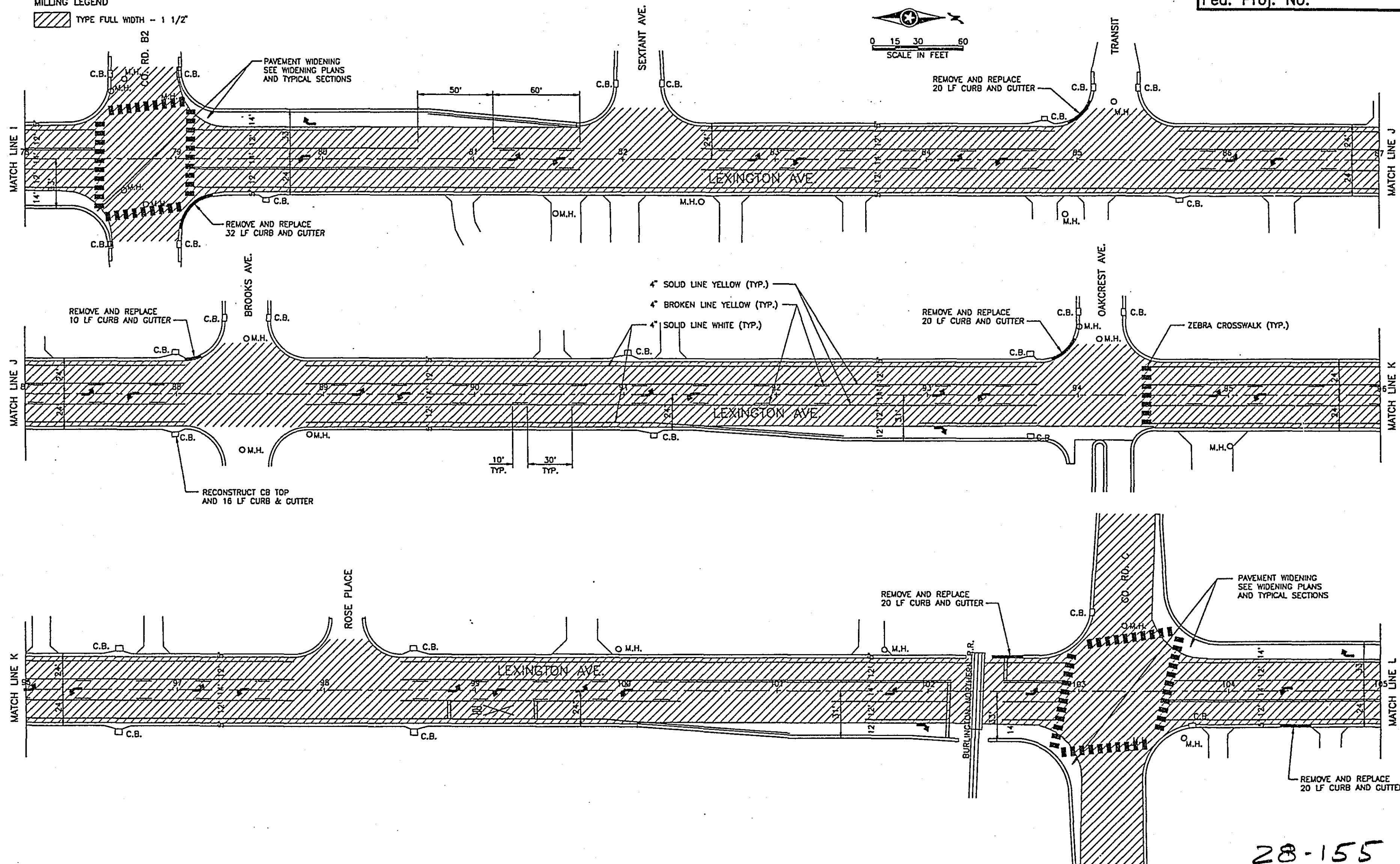
PRECAST WALL

28-155
 CONSTRUCTION PLAN - MILL AND OVERLAY
 STA. 51+00 TO STA. 78+00

MILLING LEGEND

TYPE FULL WIDTH - 1 1/2"

Fed. Proj. No.



28-155
CONSTRUCTION PLAN - MILL AND OVERLAY
STA. 78+00 TO STA. 105+00

CERTIFIED BY *T. A. C. C.*
PROFESSIONAL ENGINEER

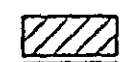
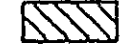
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REG. NO.

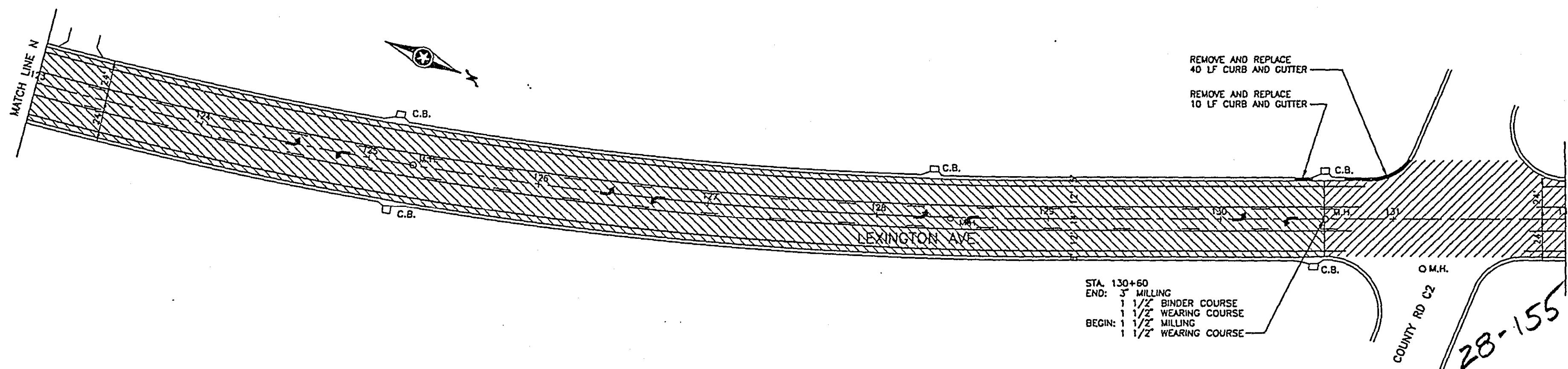
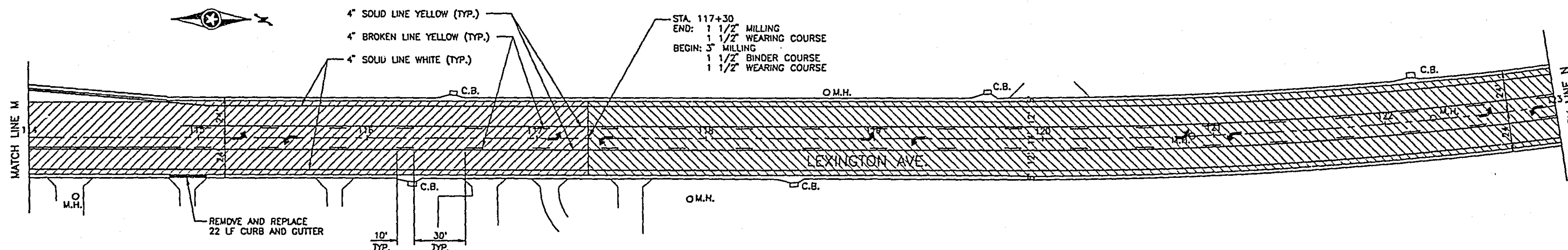
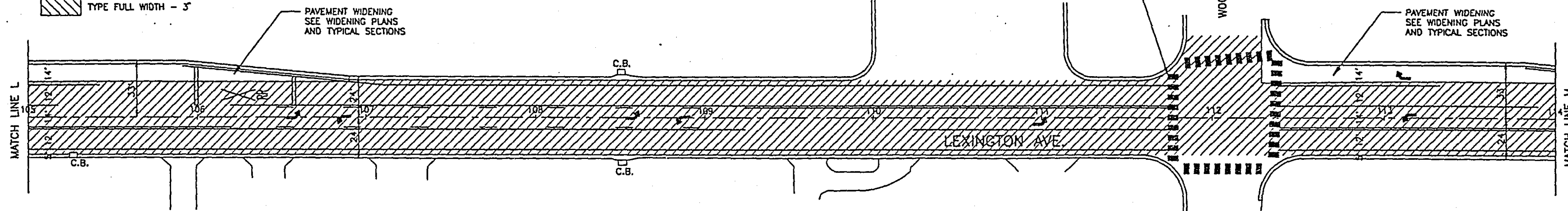
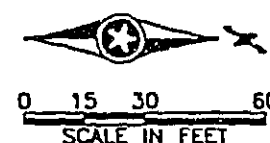
12/12/16
DATE

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MILLING LEGEND

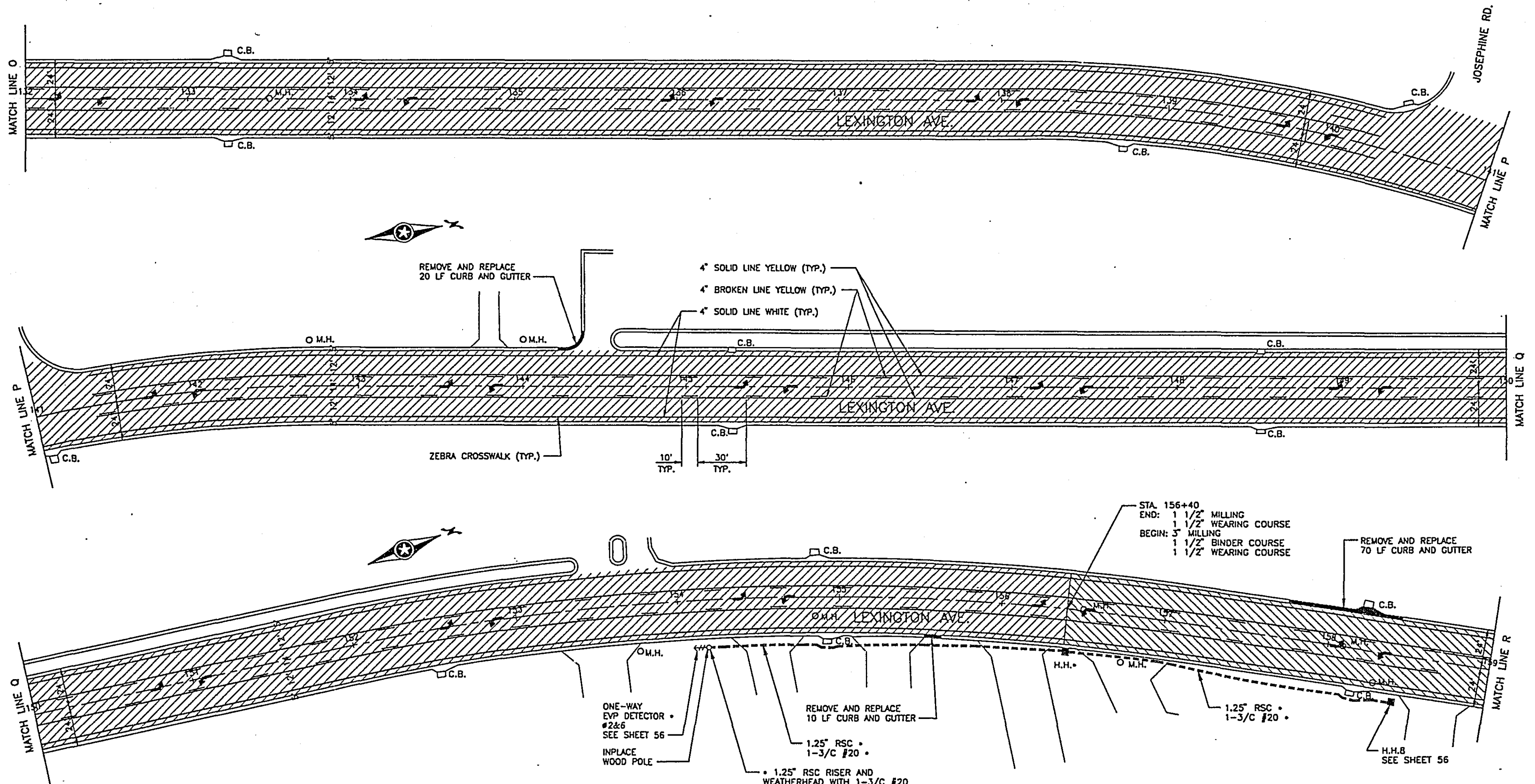
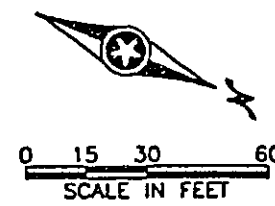
-  TYPE FULL WIDTH - 1 1/2"
-  TYPE FULL WIDTH - 3"



CONSTRUCTION PLAN - MILL AND OVERLAY
STA. 105+00 TO STA. 132+00

MILLING LEGEND

-  TYPE FULL WIDTH - 1 1/2"
-  TYPE FULL WIDTH - 3"



• DENOTES EVP ITEM FOR SYSTEM I,
SEE SHEET 56

28-155

CONSTRUCTION PLAN - MILL AND OVERLAY
STA. 132+00 TO STA. 159+00

CERTIFIED BY *T. A. Chul*
PROFESSIONAL ENGINEER

15400
REG. NO.

12/12/96
DATE

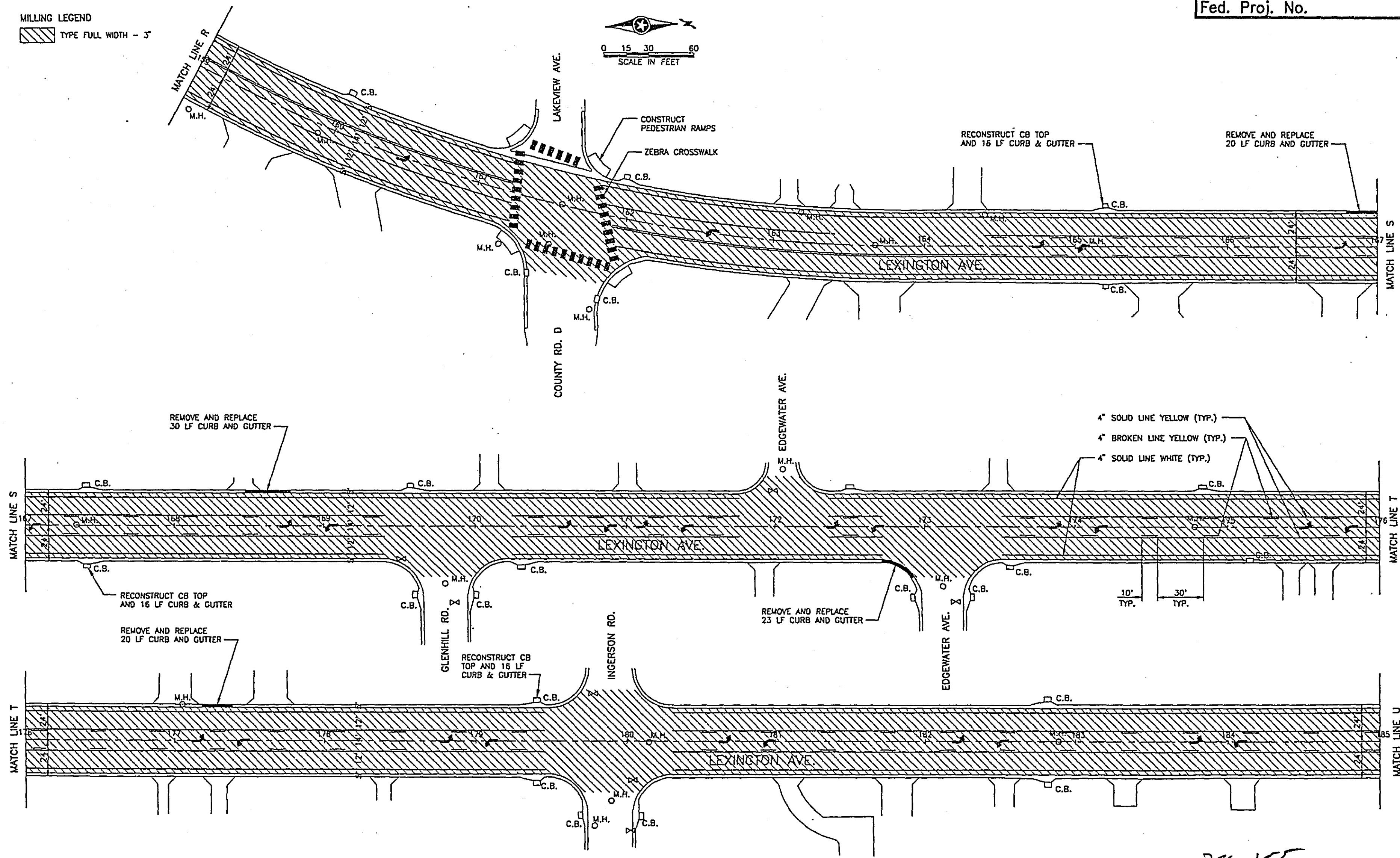
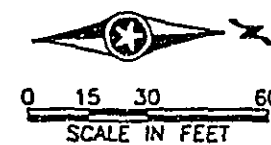
S.P. 62-651-34, S.P. 160-020-10

Sheet No. 30 of 77 Sheets

MILLING LEGEND

TYPE FULL WIDTH - 3"

Fed. Proj. No.



28-155

CONSTRUCTION PLAN - MILL AND OVERLAY
STA. 159+00 TO STA. 185+00

CERTIFIED BY *T. H. O. C. R. J.*
PROFESSIONAL ENGINEER

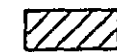
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REG. NO.

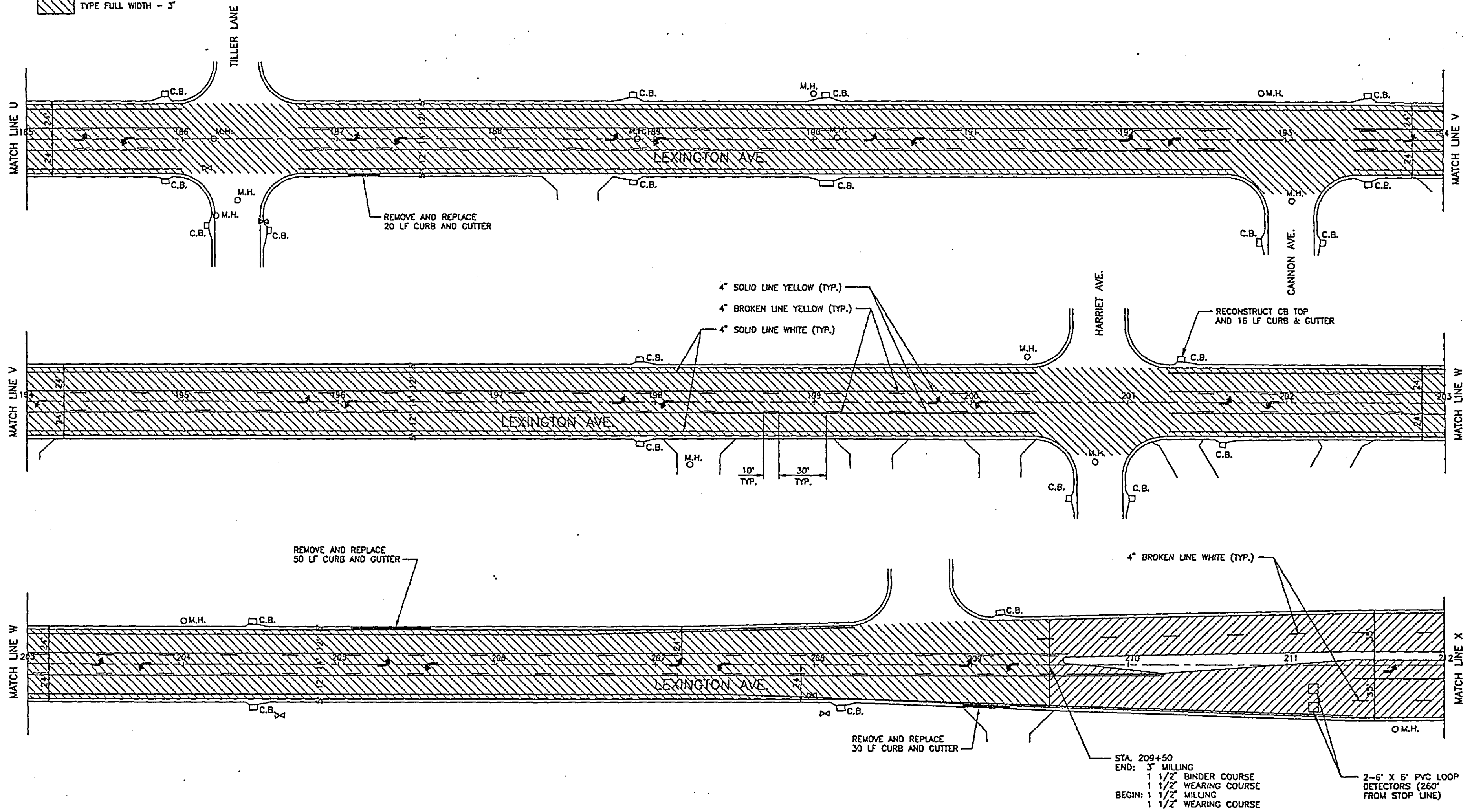
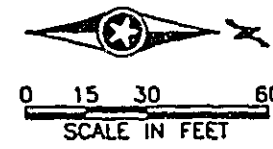
12/11/76
DATE

S.P. 62-651-34

Sheet No. 31 of 77 Sheets

MILLING LEGEND

-  TYPE FULL WIDTH - 1 1/2"
-  TYPE FULL WIDTH - 5"



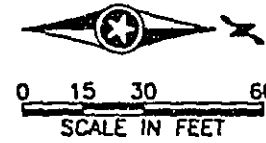
STA. 209+50
 END: 5" MILLING
 1 1/2" BINDER COURSE
 1 1/2" WEARING COURSE
 BEGIN: 1 1/2" MILLING
 1 1/2" WEARING COURSE

2-6" X 6" PVC LOOP
 DETECTORS (260'
 FROM STOP LINE)

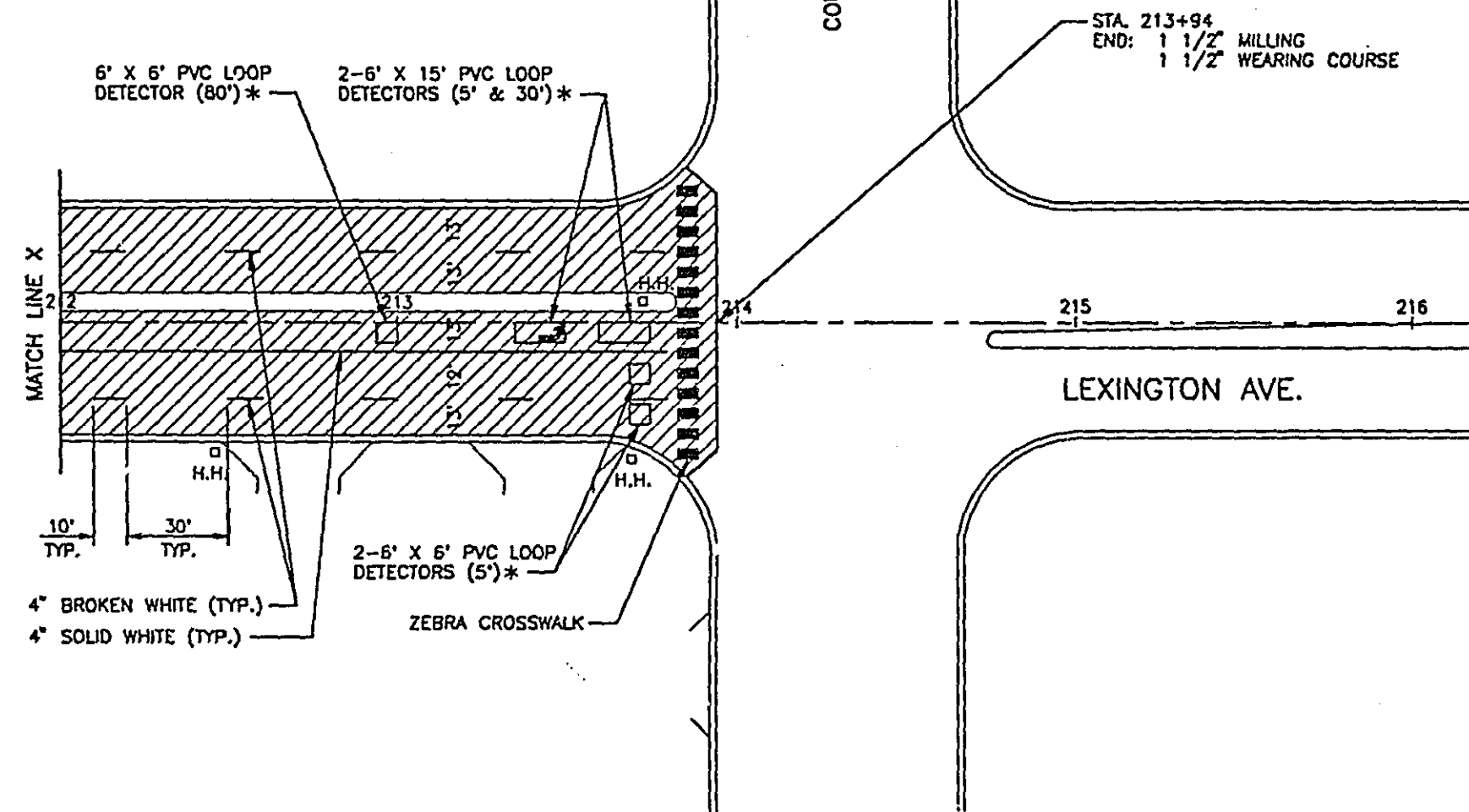
28-155
 CONSTRUCTION PLAN - MILL AND OVERLAY
 STA. 185+00 TO STA. 212+00

MILLING LEGEND

 TYPE FULL WIDTH - 1 1/2"

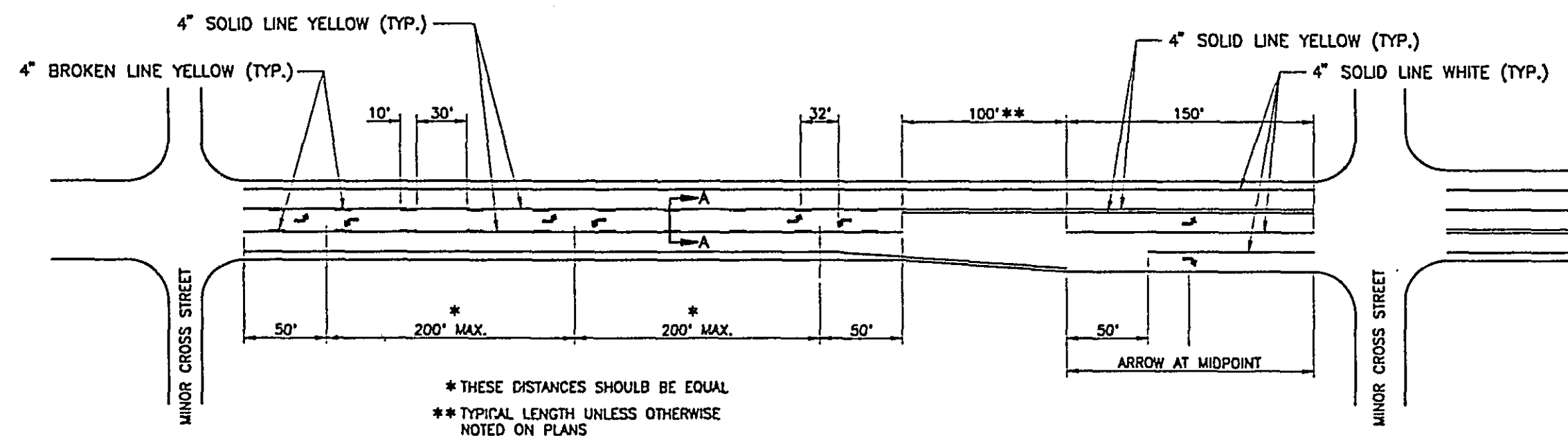


* DISTANCE FROM STOP
LINE TO DETECTOR

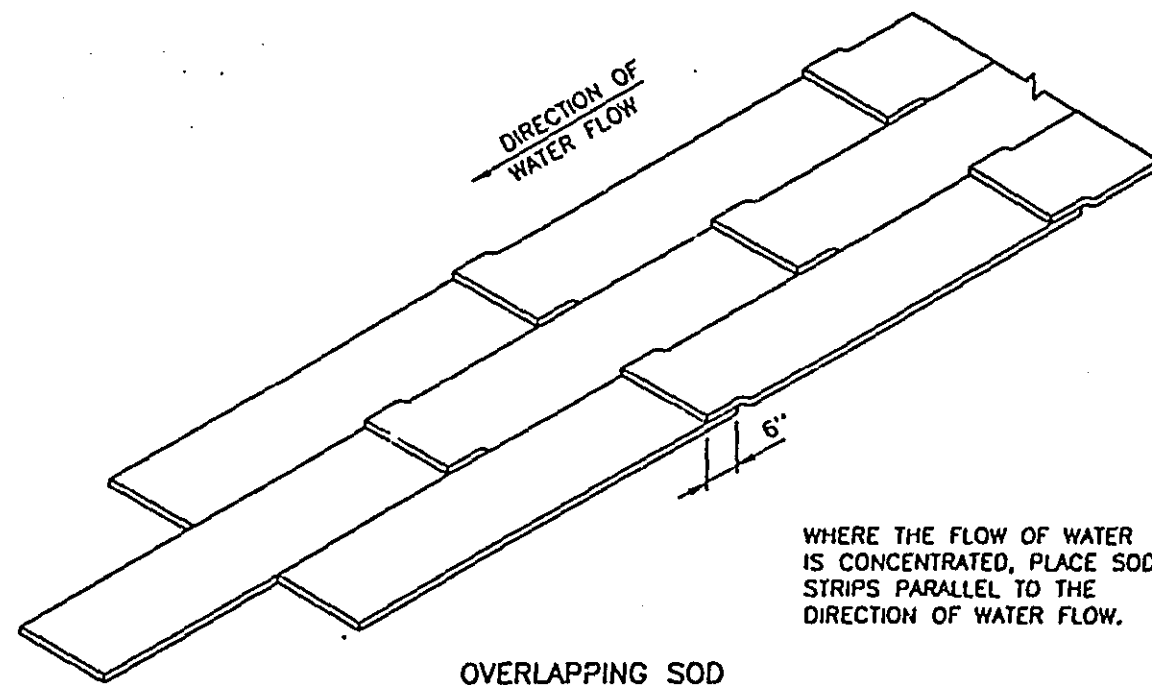


28-155

CONSTRUCTION PLAN - MILL AND OVERLAY
STA. 212+00 TO STA. 213+94

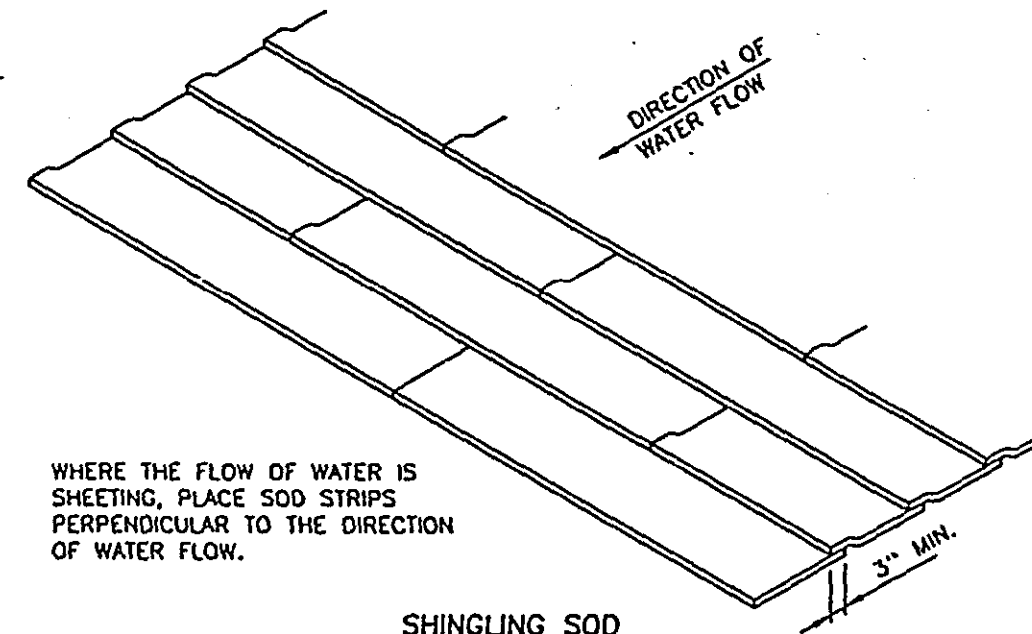


28-155
PAVEMENT MARKING DETAILS



OVERLAPPING SOD

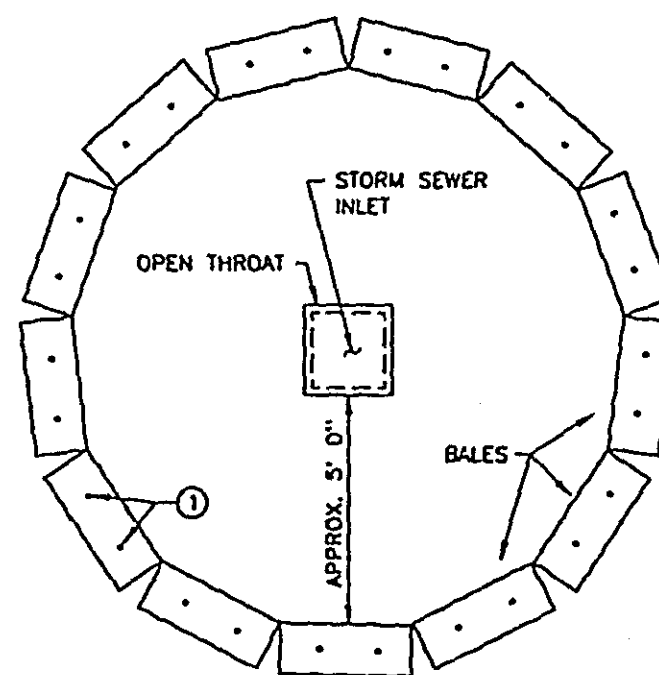
WHERE THE FLOW OF WATER IS CONCENTRATED, PLACE SOD STRIPS PARALLEL TO THE DIRECTION OF WATER FLOW.



SHINGLING SOD

WHERE THE FLOW OF WATER IS SHEETING, PLACE SOD STRIPS PERPENDICULAR TO THE DIRECTION OF WATER FLOW.

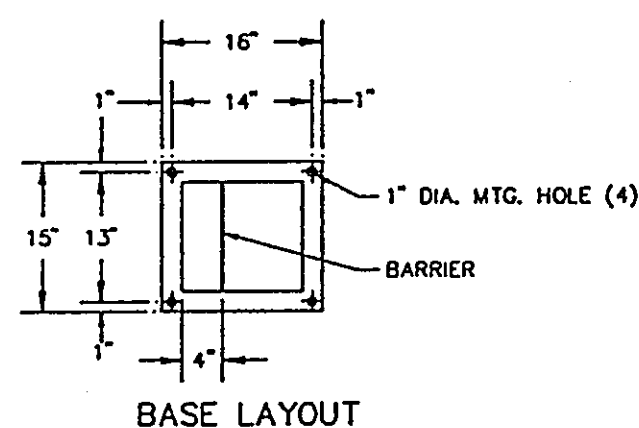
SPECIAL SOD PLACEMENT TECHNIQUES



NOTE:
① TWO 2" X 2" WOOD STAKES OR REINFORCING BARS IN EACH BALE AND EMBEDDED IN THE GROUND 10" MINIMUM.

BALE CHECK TO PROTECT STORM SEWER INLETS

28-155
EROSION CONTROL DETAILS



NOTES:

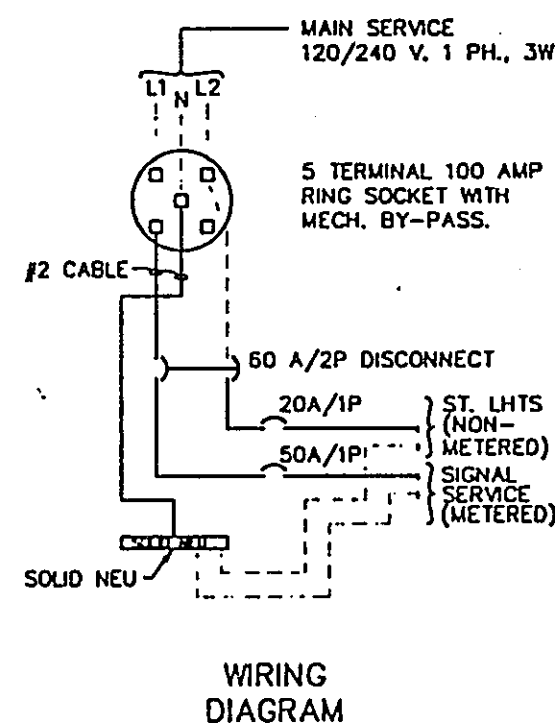
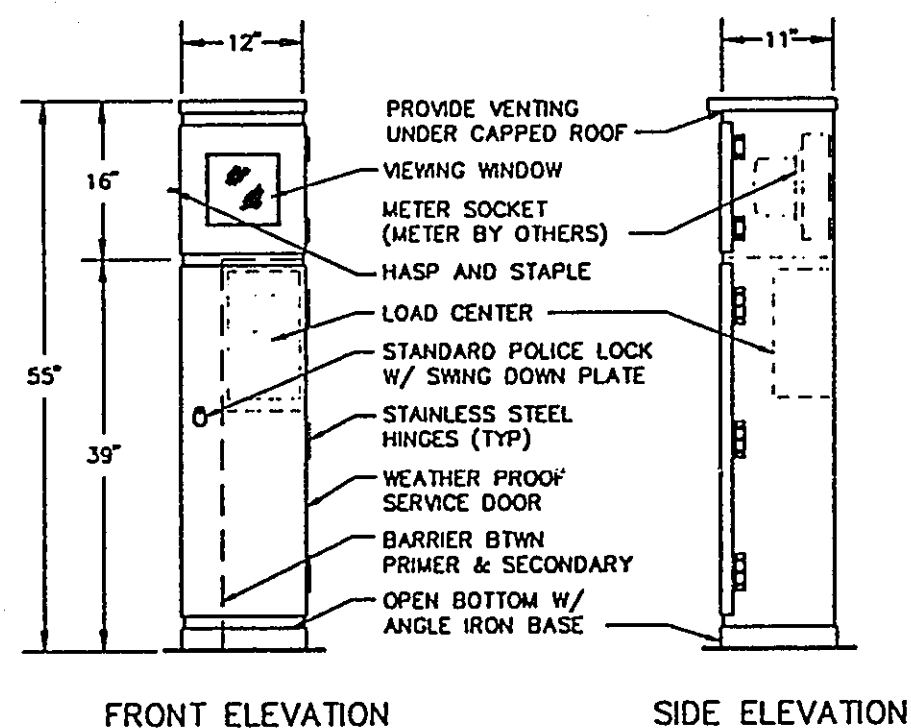
PEDESTAL SHALL BE FABRICATED FROM 0.125 INCH ALUMINUM WITH WELDED SEAMS FOR USE AS AN OUTDOOR WEATHER PROOF SERVICE.

DOOR OPENINGS SHALL BE SEALED WITH NEOPRENE GASKET. ALL HINGES, HINGE PINS AND LOCKS SHALL BE MADE FROM NON-CORRODING MATERIALS.

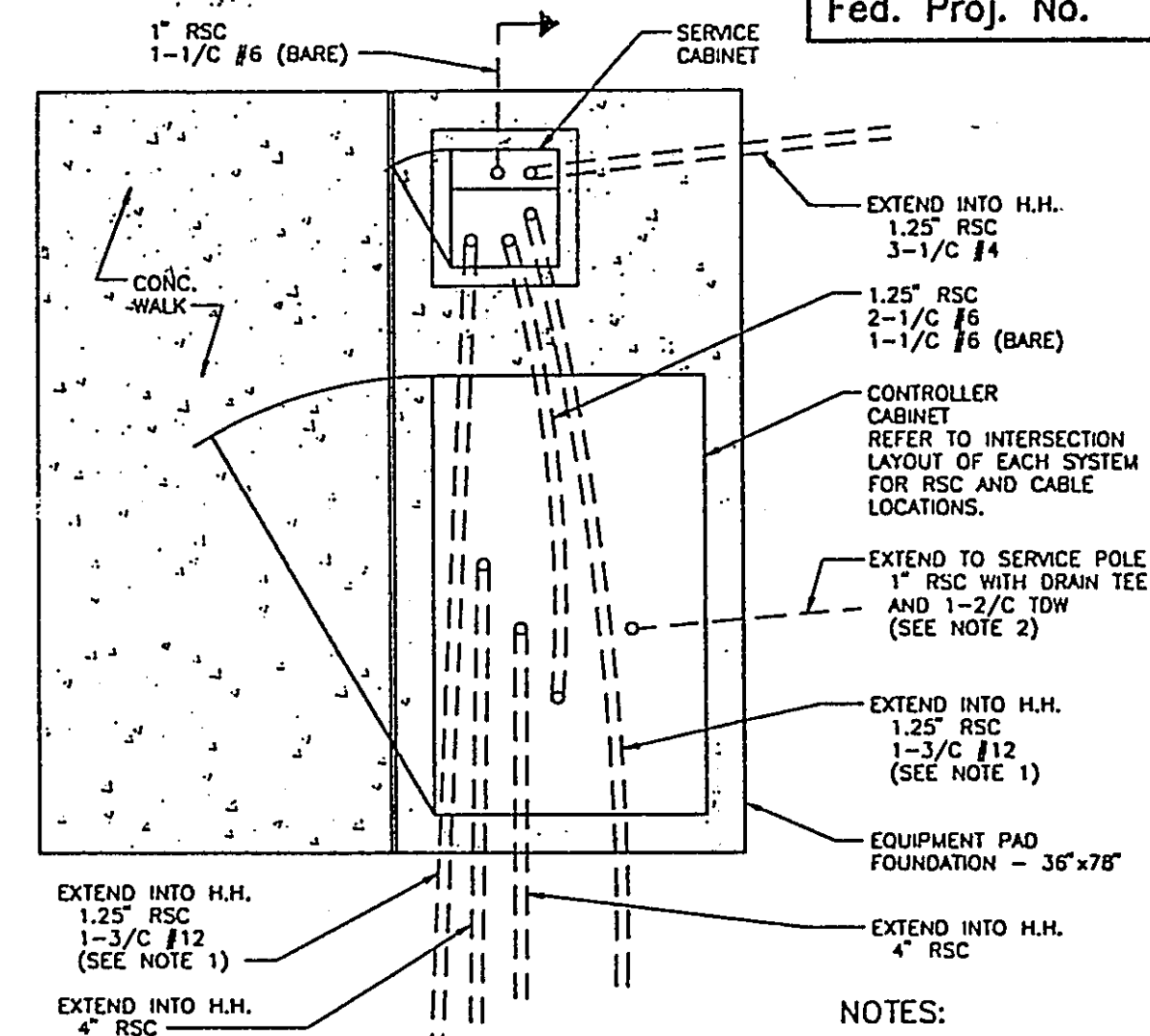
THE VIEWING WINDOW SHALL BE LEXAN MATERIAL - 7" X 7" MIN.

THE PEDESTAL CABINET SHALL BE PROTECTED INSIDE AND OUT WITH AN ANODIC COATING. SEE SPECIAL PROVISIONS

ANCHOR RODS, NUTS & WASHERS - SEE EQUIPMENT PAD FOUNDATION NOTE No. 1.



SERVICE CABINET DETAILS



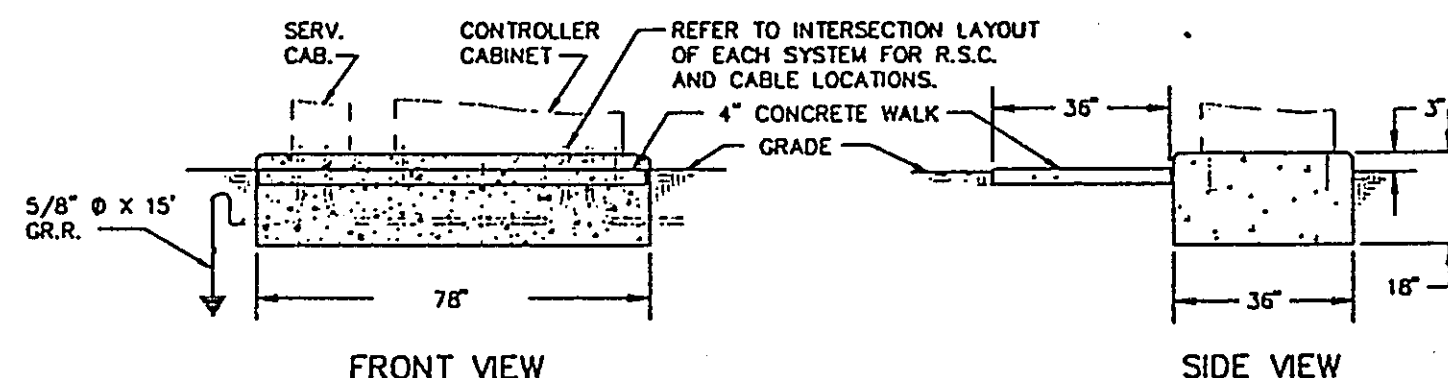
NOTES:

- ONE 1.25" RSC REQUIRED AT SYSTEMS B, F AND H. TWO 1.25" RSC REQUIRED AT SYSTEMS C, G AND I.
- REQUIRED AT SYSTEMS C AND I.

PLAN VIEW
EQUIPMENT PAD LAYOUT

NOTES:

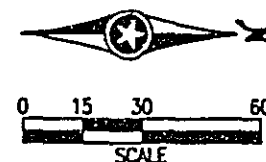
- ANCHOR RODS, NUTS AND WASHERS PER MN/DOT 3385 OR APPROVED EQUAL SET AS RECOMMENDED BY CABINET MANUFACTURER (NUMBER, SIZE AND LENGTH OF ANCHOR RODS) SHALL BE AS REQUIRED BY THE CABINET (MANUFACTURER).
- UPPER PART OF FOUNDATION SHALL BE BEVELED OR CHAMFERED IN A NEAT MANNER AS DIRECTED BY THE ENGINEER IN THE FIELD.
- TOP OF CONDUITS SHALL BE THREADED AND CAPPED AFTER INSTALLATION (UNTIL CABLES ARE INSTALLED). CONDUIT SHALL PROJECT A MINIMUM OF 2" ABOVE CONCRETE AND SHALL BE LOCATED INSIDE THE CABINET WHERE DIRECTED BY THE ENGINEER BUT SHALL NOT INTERFERE WITH CABINET FUNCTIONS.
- CONCRETE MIX 3A32 OR EQUAL SHALL BE USED FOR FOUNDATION AND CONCRETE WALK.
- CONDUITS WHICH HAVE BOTH ENDS TERMINATING WITHIN THE PAD SHALL NOT BE INSTALLED BELOW THE CONCRETE.
- EXACT LOCATIONS OF CONDUIT WITHIN THE PAD SHALL BE AS DETERMINED BY THE ENGINEER IN THE FIELD.



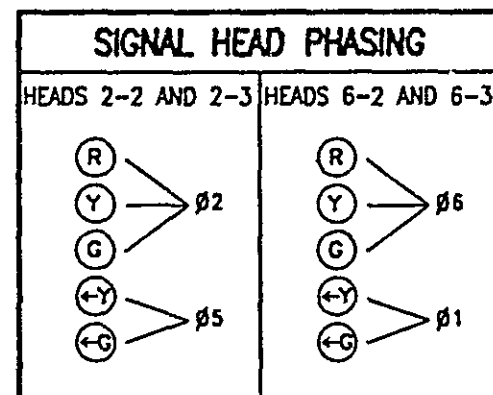
EQUIPMENT PAD FOUNDATION

EQUIPMENT PAD DETAILS

28-155



SIGNAL INDICATION CHART						
SIGNAL FACE	PHASE	R	Y	G	Y	G
2-1	2	12	12	12	—	—
2-2	2 AND 5	12	12	12	12	12
2-3	2 AND 5	12	12	12	12	12
4-1	4	12	12	12	—	—
4-2	4	12	12	12	—	—
4-3	4	12	12	12	—	—
6-1	6	12	12	12	—	—
6-2	6 AND 1	12	12	12	12	12
6-3	6 AND 1	12	12	12	12	12
8-1	8	12	12	12	—	—
8-2	8	12	12	12	—	—
8-3	8	12	12	12	—	—



SIGNAL SYSTEM OPERATION

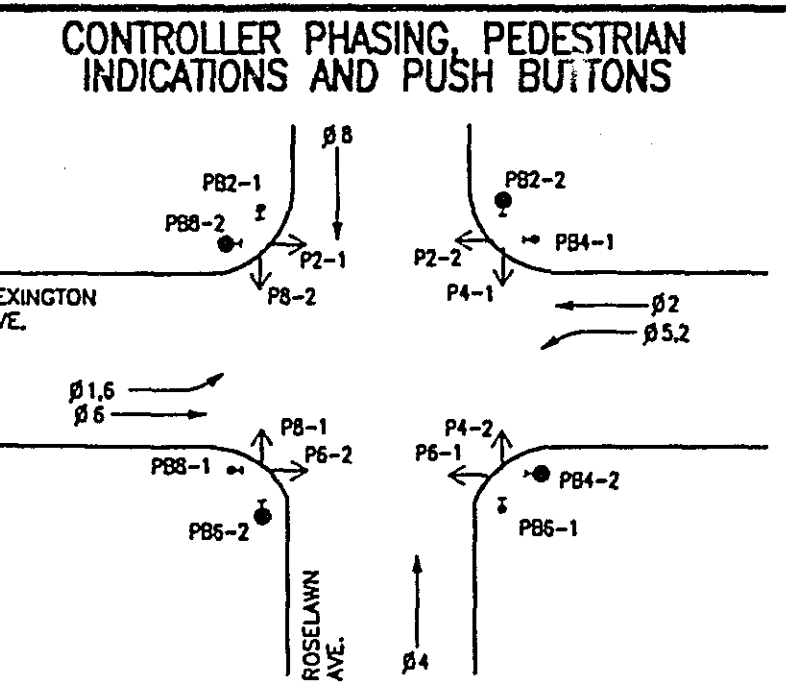
SIGNAL SYSTEM FLASH MODE IS ALL RED.

PHASES 1 AND 5 ARE PROTECTED/PERMISSIVE LEFT TURNS.

PHASES 1,4,5 AND 8 ARE NON-LOCK DETECTION.

PHASES 2 AND 6 ARE LOCK DETECTION.

PHASES 2 AND 6 ARE ON VEHICLE RECALL.



VEHICLE DETECTION			
NUMBER	SIZE (FT.)	FUNCTION	LOCATION
D1-1	2-6'x15'	C & E (TD)	5' & 30'
D1-2	6'x6'	C & E	80'
D2-1	6'x6'	C & E	200'
D4-1 (S)	6'x6'	C & E	160'
D4-2 (S)	6'x6'	C & E	70'
D4-3 (S)	6'x15'	C & E	0'
D4-4 (S)	6'x15'	C & E (TD)	0'
D5-1	2-6'x15'	C & E (TD)	5' & 30'
D5-2	6'x6'	C & E	80'
D6-1	6'x6'	C & E	200'
D8-1 (S)	6'x6'	C & E	160'
D8-2 (S)	6'x6'	C & E	70'
D8-3 (S)	6'x15'	C & E	0'
D8-4 (S)	6'x15'	C & E (TD)	0'
D1	6'x6'	COUNT	SEE PLAN
D2	6'x6'	COUNT	SEE PLAN

LOCATION: DISTANCE FROM STOP LINE TO DETECTOR

(TD) = TIME DELAY

C & E = CALL & EXTEND

(S) = SAW CUT LOOP DETECTORS.

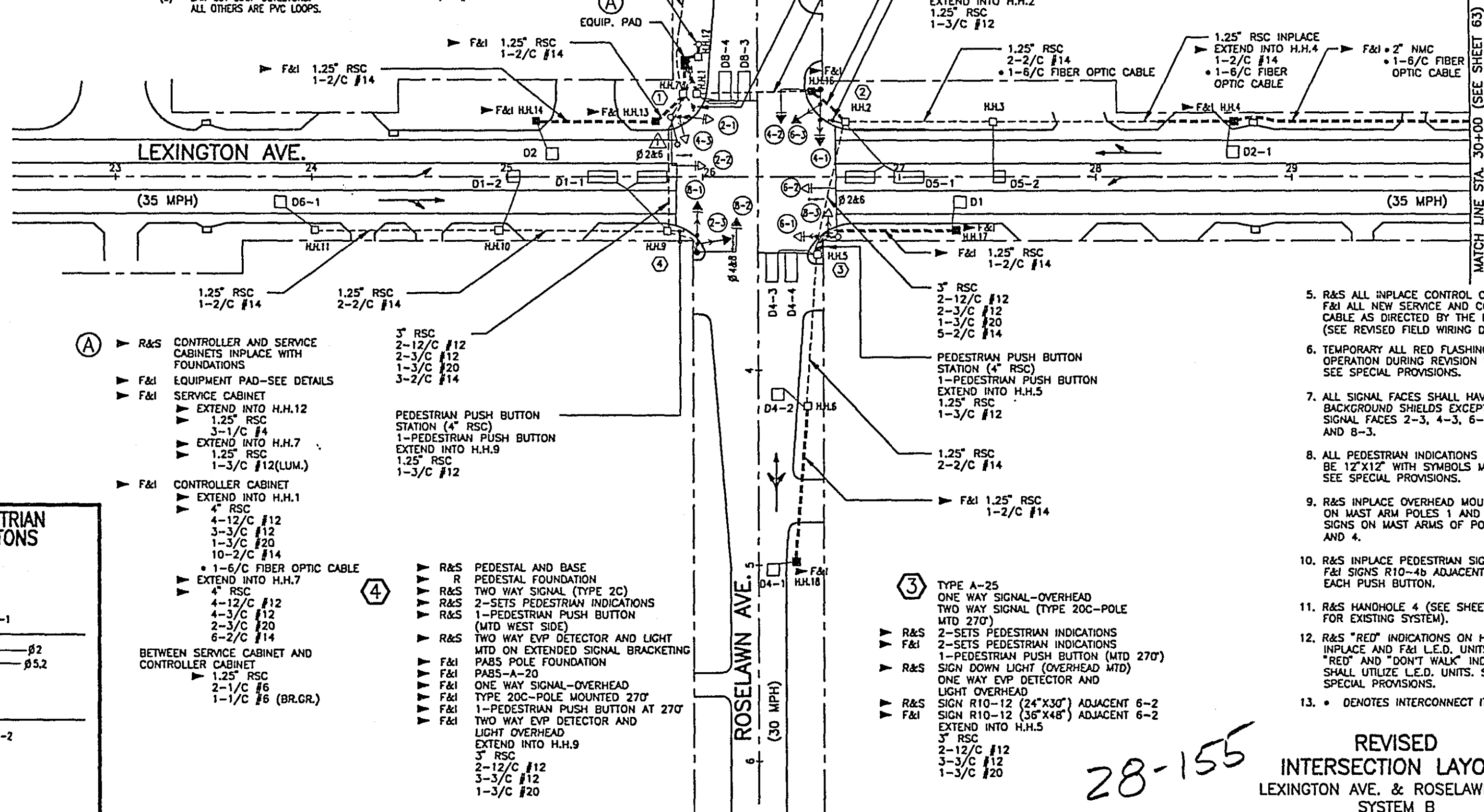
ALL OTHERS ARE PVC LOOPS.

- ① TYPE A-25-T40-10 LUMINAIRE-250 WATT HPS AT 350' ONE WAY SIGNAL-OVERHEAD TWO WAY SIGNAL (TYPE 20C-POLE MTD 270')
- R&S 2-SETS PEDESTRIAN INDICATIONS
- F&I 1-PEDESTRIAN PUSH BUTTON (MTD 270')
- R&S SIGN DOWN LIGHT (OVERHEAD MTD)
- R&S PHOTOELECTRIC CELL (DN LHTS) MTD ON TOP OF SIGNAL BRACKETS
- R&S ONE WAY EVP DETECTOR AND LIGHT OVERHEAD
- R&S SIGN R10-12 (24"X30") ADJACENT 2-2
- F&I SIGN R10-12 (36"X48") ADJACENT 2-2 EXTEND INTO H.H.7
- 3" RSC
- 2-12/C #12
- 3-3/C #12
- 1-3/C #20
- 1-3/C #12(LUM.)
- F&I 1.25" RSC
- 1-2/C #14
- 1.25" RSC
- 2-2/C #14
- S.O.P. - (POWER POLE INPLACE) 2" RSC RISER AND WEATHERHEAD WITH SERVICE CABLES
- F&I 1.25" RSC RISER AND WEATHERHEAD WITH 3-1/C #4
- 1.25" RSC
- 3-1/C #4

- ② R&S PEDESTAL AND BASE
- R PEDESTAL FOUNDATION
- R&S TWO WAY SIGNAL (TYPE 2C)
- R&S 2-SETS PEDESTRIAN INDICATIONS
- R&S 1-PEDESTRIAN PUSH BUTTON (MTD EAST SIDE)
- F&I PA85 POLE FOUNDATION
- F&I PA85-A-20
- F&I ONE WAY SIGNAL-OVERHEAD
- F&I TYPE 20C-POLE MOUNTED 270'
- F&I 1-PEDESTRIAN PUSH BUTTON AT 270' EXTEND INTO H.H.16
- 3" RSC
- 2-12/C #12
- 2-3/C #12

NOTES:

1. DETECTOR LOCATIONS SHALL BE VERIFIED IN THE FIELD BY THE TRAFFIC ENGINEER PRIOR TO INSTALLATION.
2. A 3/4 INCH HALF COUPLING SHALL BE FURNISHED APPROX. 2 FT. AND 4 FT. FROM THE END OF THE MAST ARM ON POLES 2 AND 4 PER MN/DOT 3831.2C.
3. PAINT REVERSED SIGNAL SYSTEM (SEE SPECIAL PROVISIONS).
4. ALL ITEMS (EXCEPT CABLE, SEE NOTE 5) OF THIS SIGNAL SYSTEM ARE INPLACE AND SHALL BE USED INPLACE UNLESS OTHERWISE NOTED WITH A ➤ (➤ = WORK TO BE DONE THIS SHEET ONLY).



- R&S CONTROLLER AND SERVICE CABINETS INPLACE WITH FOUNDATIONS
- F&I EQUIPMENT PAD-SEE DETAILS
- F&I SERVICE CABINET
- EXTEND INTO H.H.12
- 1.25" RSC
- 3-1/C #4
- EXTEND INTO H.H.7
- 1.25" RSC
- 1-3/C #12(LUM.)
- F&I CONTROLLER CABINET
- EXTEND INTO H.H.1
- 4" RSC
- 4-12/C #12
- 3-3/C #12
- 1-3/C #20
- 10-2/C #14
- 1-6/C FIBER OPTIC CABLE
- EXTEND INTO H.H.7
- 4" RSC
- 4-12/C #12
- 4-3/C #12
- 2-3/C #20
- 6-2/C #14
- BETWEEN SERVICE CABINET AND CONTROLLER CABINET
- 1.25" RSC
- 2-1/C #6
- 1-1/C #6 (BR.GR.)

- ④ R&S PEDESTAL AND BASE
- R PEDESTAL FOUNDATION
- R&S TWO WAY SIGNAL (TYPE 2C)
- R&S 2-SETS PEDESTRIAN INDICATIONS
- R&S 1-PEDESTRIAN PUSH BUTTON (MTD WEST SIDE)
- R&S TWO WAY EVP DETECTOR AND LIGHT MTD ON EXTENDED SIGNAL BRACKETING
- F&I PA85 POLE FOUNDATION
- F&I PA85-A-20
- F&I ONE WAY SIGNAL-OVERHEAD
- F&I TYPE 20C-POLE MOUNTED 270'
- F&I 1-PEDESTRIAN PUSH BUTTON AT 270'
- F&I TWO WAY EVP DETECTOR AND LIGHT OVERHEAD
- EXTEND INTO H.H.9
- 3" RSC
- 2-12/C #12
- 3-3/C #12
- 1-3/C #20

- ③ TYPE A-25 ONE WAY SIGNAL-OVERHEAD TWO WAY SIGNAL (TYPE 20C-POLE MTD 270')
- R&S 2-SETS PEDESTRIAN INDICATIONS
- F&I 1-PEDESTRIAN PUSH BUTTON (MTD 270')
- R&S SIGN DOWN LIGHT (OVERHEAD MTD)
- R&S ONE WAY EVP DETECTOR AND LIGHT OVERHEAD
- R&S SIGN R10-12 (24"X30") ADJACENT 6-2
- F&I SIGN R10-12 (36"X48") ADJACENT 6-2 EXTEND INTO H.H.5
- 3" RSC
- 2-12/C #12
- 3-3/C #12
- 1-3/C #20

REVISED
INTERSECTION LAYOUT
LEXINGTON AVE. & ROSELAWN AVE.
SYSTEM B

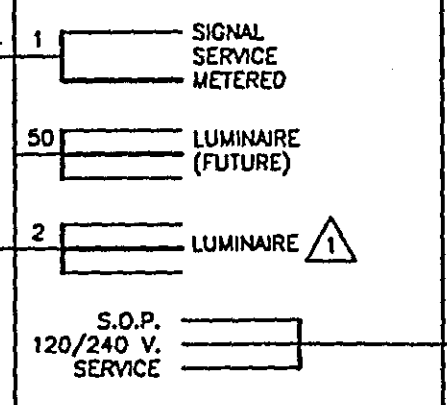
28-155

CONTROLLER CABINET

SIGNAL SERVICE	
6-3 RED	3
6-3 YEL	
6-3 GRN	
6-3 NEU	
6-3 YEL LTA	
6-3 GRN LTA	
SPR	
P2-2 NEU	
P2-2 WLK	
P2-2 DWK	
EQG	
4-1 RED	4
4-1 YEL	
4-1 GRN	
4-1 NEU	
4-2 RED	
4-2 YEL	
4-2 GRN	
P4-1 NEU	
P4-1 WLK	
P4-1 DWK	
SPR	
EQG	
2-1 RED	5
2-1 YEL	
2-1 GRN	
2-1 NEU	
2-1 WLK	
2-1 DWK	
SPR	
4-3 RED	
4-3 YEL	
4-3 GRN	
EQG	
2-2 RED	6
2-2 YEL	
2-2 GRN	
2-2 NEU	
2-2 YEL LTA	
2-2 GRN LTA	
SPR	
P8-2 NEU	
P8-2 WLK	
P8-2 DWK	
SPR	
EQG	
INTERCONNECT TO SYSTEM C	34
EVP DETECTOR	
#2&6	11
#4&8	12
#2&6	13
D5-2	26
D5-1	27
D8-1	28
D4-1	29
D4-4	30
D8-4	31
D1	32
D2	33
EVP LIGHT	
#2&6	35
#4&8	36
#2&6	37

INPLACE H.H.12

SERVICE CABINET & METER



GROUND ROD

INPLACE H.H.7

PED. PUSH BUTTON STA. PB2-1



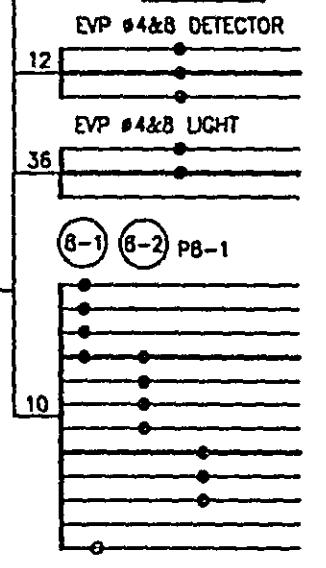
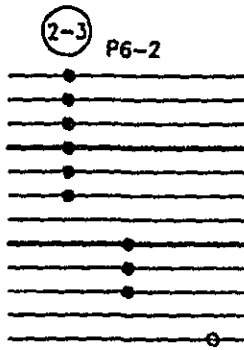
INPLACE H.H.9

PED. PUSH BUTTON STA. PB8-1



INPLACE H.H.10

INPLACE H.H.11



CONDUCTOR COLOR CODING

R	RED	3/C#12
O	WH	
BL	BLK	
WH	BLK	2/C#14
R/BLK	BLK	
O/BLK	CLEAR	
BL/BLK	R OR O	
WH/BLK	WH OR YEL	3/C#20
BLK	BLK OR BL	
BLK/WH	BLK OR BL	
G/BLK	BLK	2-1/C#6
G	WH	2-1/C#10

NOTE: ALL TERMINAL BLOCK CONNECTIONS SHALL BE ARRANGED AS SPECIFIED ABOVE.

NOTE :
1. CONTRACTOR SHALL FURNISH AND INSTALL ALL NEW CABLE AND SERVICE CONDUCTORS.

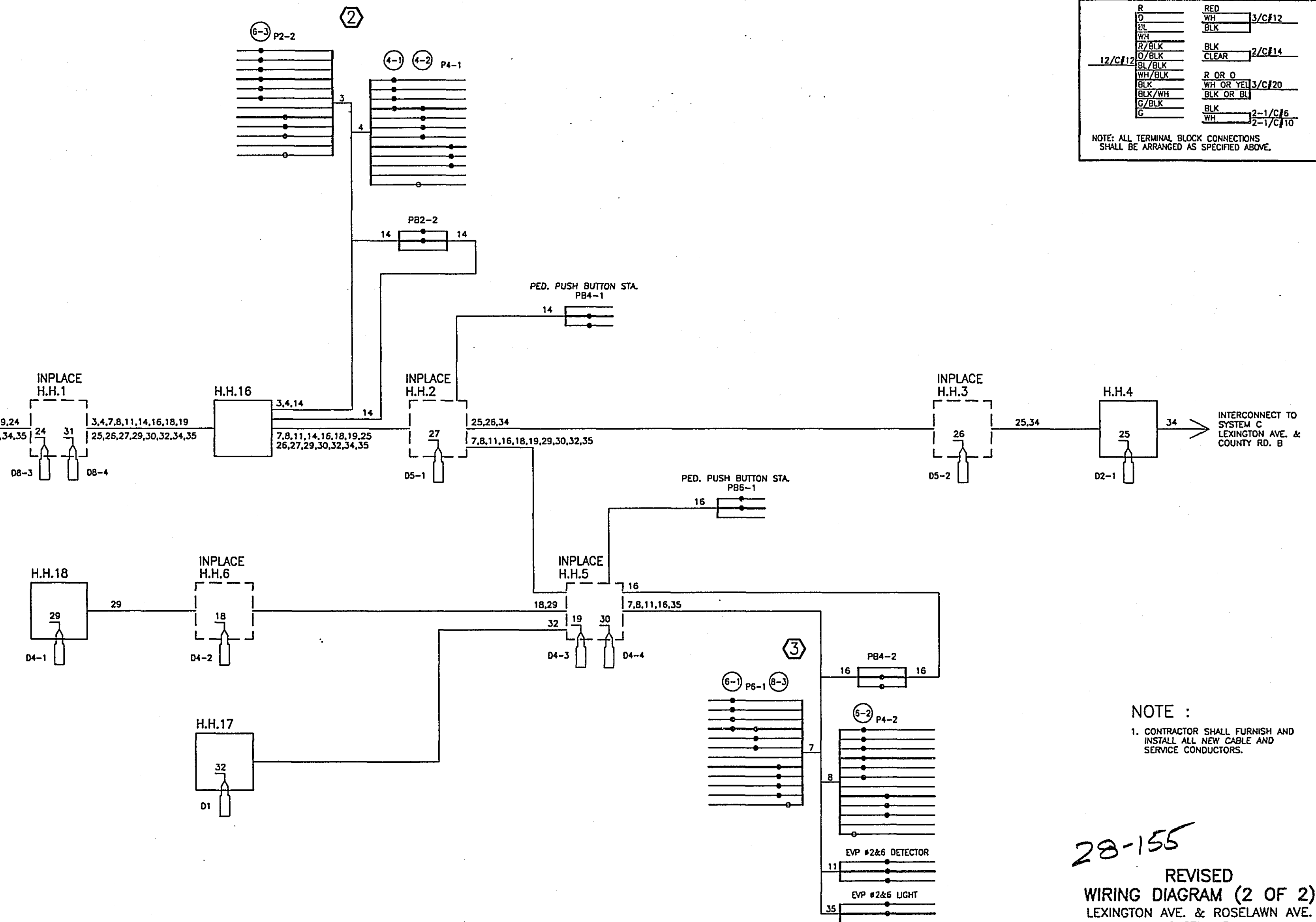
28-155
REVISED
WIRING DIAGRAM (1 OF 2)
LEXINGTON AVE. & ROSELAWN AVE.
SYSTEM B

CONDUCTOR COLOR CODING

R	RED	
O	WH	3/C#12
BL	BLK	
WH		
R/BLK	BLK	2/C#14
O/BLK	CLEAR	
BL/BLK		
WH/BLK	R OR O	
BLK	WH OR YEL	3/C#20
BLK/WH	BLK OR BL	
G/BLK	BLK	2-1/C#6
G	WH	2-1/C#10

NOTE: ALL TERMINAL BLOCK CONNECTIONS SHALL BE ARRANGED AS SPECIFIED ABOVE.

FROM CONTROLLER CABINET,
SEE PREVIOUS SHEET



NOTE :

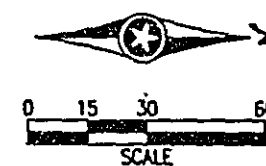
1. CONTRACTOR SHALL FURNISH AND INSTALL ALL NEW CABLE AND SERVICE CONDUCTORS.

28-155

REVISED
WIRING DIAGRAM (2 OF 2)
LEXINGTON AVE. & ROSELAWN AVE.
SYSTEM B

REVISIONS
CERTIFIED BY *[Signature]* 4943 12/19/6 S.P. 62-651-34

Sheet No. 39 of 77 Sheets



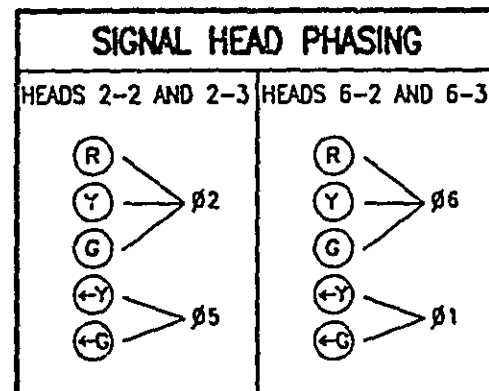
NOTES:

1. DETECTOR LOCATIONS SHALL BE VERIFIED IN THE FIELD BY THE TRAFFIC ENGINEER PRIOR TO INSTALLATION.
2. A 3/4 INCH HALF COUPLING SHALL BE FURNISHED APPROX. 2 FT. AND 4 FT. FROM THE END OF THE MAST ARM ON POLES 2 AND 4 PER MN/DOT 3831.2C.
3. PAINT REVISED SIGNAL SYSTEM (SEE SPECIAL PROVISIONS).
4. ALL ITEMS (EXCEPT CABLE, SEE NOTE 5) OF THIS SIGNAL SYSTEM ARE INPLACE AND SHALL BE USED INPLACE UNLESS OTHERWISE NOTED WITH A () = WORK TO BE DONE THIS SHEET ONLY).
5. R&S ALL INPLACE CONTROL CABLE, F&I ALL NEW SERVICE AND CONTROL CABLE AS DIRECTED BY THE ENGINEER. (SEE REVISED FIELD WIRING DIAGRAM).

6. TEMPORARY ALL RED FLASHING OPERATION DURING REVISION WORK. SEE SPECIAL PROVISIONS.
7. ALL SIGNAL FACES SHALL HAVE BACKGROUND SHIELDS EXCEPT SIGNAL FACES 2-3, 4-3, 6-3 AND 8-3.
8. ALL PEDESTRIAN INDICATIONS SHALL BE 12"X12" WITH SYMBOLS MESSAGE. SEE SPECIAL PROVISIONS.
9. R&S INPLACE OVERHEAD MOUNTED SIGNS ON MAST ARM POLES 1 AND 3. F&I SIGNS ON MAST ARMS OF POLES 1,2,3 AND 4.
10. R&S INPLACE PEDESTRIAN SIGNS. F&I SIGNS R10-4b ADJACENT TO EACH PUSH BUTTON.
11. R&S HANDHOLES 1,3,9 AND 10. (SEE SHEET 60 FOR EXISTING SYSTEM).
12. R&S "RED" INDICATIONS ON HEADS USED INPLACE AND F&I L.E.D. UNITS. NEW "RED" AND "DON'T WALK" INDICATIONS SHALL UTILIZE L.E.D. UNITS. SEE SPECIAL PROVISIONS.
13. • DENOTES INTERCONNECT ITEM.

REVISED
INTERSECTION LAYOUT
LEXINGTON AVE. & COUNTY RD. B
SYSTEM C

SIGNAL INDICATION CHART						
SIGNAL FACE	PHASE	INDICATION SIZE				
		R	Y	G	Y	G
2-1	2	12	12	12	—	—
2-2	2 AND 5	12	12	12	12	12
2-3	2 AND 5	12	12	12	12	12
4-1	4	12	12	12	—	—
4-2	4	12	12	12	—	—
4-3	4	12	12	12	—	—
6-1	6	12	12	12	—	—
6-2	6 AND 1	12	12	12	12	12
6-3	6 AND 1	12	12	12	12	12
8-1	8	12	12	12	—	—
8-2	8	12	12	12	—	—
8-3	8	12	12	12	—	—



SIGNAL SYSTEM OPERATION

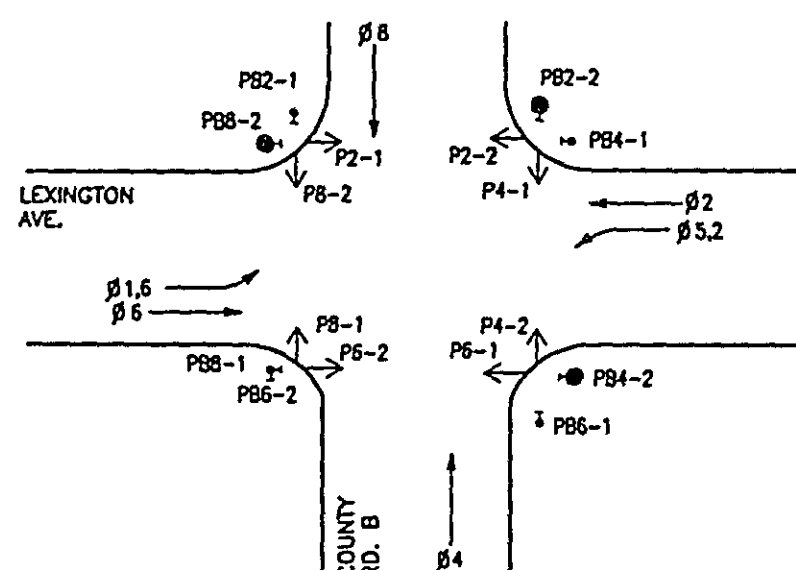
SIGNAL SYSTEM FLASH MODE IS ALL RED.

PHASES 1 AND 5 ARE PROTECTED/PERMISSIVE LEFT TURNS.

PHASES 1 AND 5 ARE NON-LOCK DETECTION.

PHASES 2, 4, 6 AND 8 ARE LOCK DETECTION.

CONTROLLER PHASING, PEDESTRIAN INDICATIONS AND PUSH BUTTONS



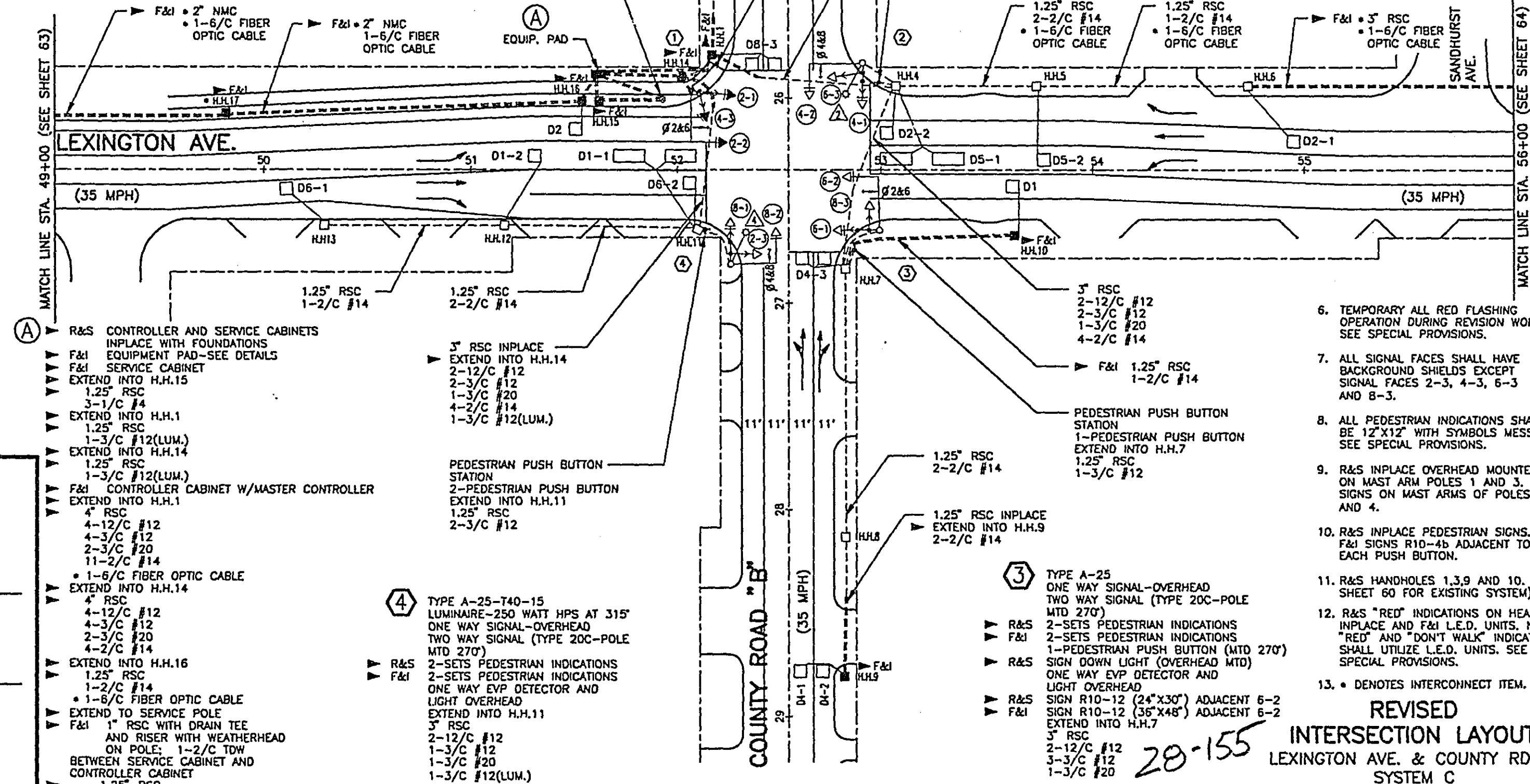
VEHICLE DETECTION			
NUMBER	SIZE (FT.)	FUNCTION	LOCATION
D1-1	2-6'x15'	C & E (TD)	5' & 30'
D1-2	6'x6'	C & E	80'
D2-1	6'x6'	C & E	200'
D2-2	6'x6'	C	5'
D4-1 (S)	6'x15'	C & E	200'
D4-2 (S)	6'x6'	C & E	200'
D4-3 (S)	2-6'x6'	C	0'
D5-1	2-6'x15'	C & E (TD)	5' & 30'
D5-2	6'x6'	C & E	80'
D6-1	6'x6'	C & E	200'
D6-2	6'x6'	C	5'
D8-1 (S)	6'x6'	C & E	200'
D8-2 (S)	6'x6'	C & E	200'
D8-3	2-6'x6'	C	0'
D1	6'x6'	COUNT	SEE PLAN
D2	6'x6'	COUNT	SEE PLAN

LOCATION: DISTANCE FROM STOP LINE TO DETECTOR

(TD) = TIME DELAY
C & E = CALL & EXTEND
C = CALL ONLY
(S) = SAW CUT LOOP DETECTORS. ALL OTHERS ARE PVC LOOPS.

- 1
- R&S TYPE A-25 POLE FOUNDATION
 - R&S ONE WAY SIGNAL-OVERHEAD
 - R&S TWO WAY SIGNAL (TYPE 20C-POLE MTD. 270')
 - R&S 2-SETS PEDESTRIAN INDICATIONS
 - R&S 1-PEDESTRIAN PUSH BUTTON (MTD. 270')
 - R&S SIGN DOWN LIGHT (OVERHEAD MTD.)
 - R&S PHOTO ELECTRIC CELL (DN. LIGHTS) MTD. ON TOP OF SIGNAL BRACKETS
 - R&S ONE WAY EVP DETECTOR AND LIGHT OVERHEAD.
 - R&S SIGN R10-12 (24"X30") ADJACENT 2-2
 - F&I PA85 POLE FOUNDATION
 - F&I INSTALL SALVAGED TYPE A-25
 - F&I ONE WAY SIGNAL-OVERHEAD
 - F&I TYPE 20C-POLE MOUNTED 270'
 - F&I 1-PEDESTRIAN PUSH BUTTON AT 270'
 - F&I ONE WAY EVP DETECTOR AND LIGHT OVERHEAD.
 - F&I SIGN R10-12 (36"X48") ADJACENT 2-2
 - F&I EXTEND INTO H.H.14
 - F&I 1.25" RSC INPLACE
 - F&I EXTEND INTO H.H.3
 - F&I 2-2/C #14
 - F&I 1.25" RSC INPLACE
 - F&I EXTEND INTO H.H.1
 - F&I 2-2/C #14
 - F&I 3" RSC
 - F&I 2-12/C #12
 - F&I 3-3/C #12
 - F&I 1-3/C #20

- 2
- R&S S.O.P. - (POWER POLE INPLACE)
 - R&S 2" RSC RISER AND WEATHERHEAD WITH SERVICE CABLES
 - F&I 1.25" RSC RISER AND WEATHERHEAD WITH 3-1/C #4
 - F&I EXTEND INTO H.H.15
 - F&I 1.25" RSC
 - F&I 3-1/C #4



- 4
- R&S TYPE A-25-T40-15 LUMINAIRE-250 WATT HPS AT 315'
 - R&S ONE WAY SIGNAL-OVERHEAD
 - R&S TWO WAY SIGNAL (TYPE 20C-POLE MTD. 270')
 - R&S 2-SETS PEDESTRIAN INDICATIONS
 - R&S 2-SETS PEDESTRIAN INDICATIONS
 - R&S 1-PEDESTRIAN PUSH BUTTON (MTD. 270')
 - R&S ONE WAY EVP DETECTOR AND LIGHT OVERHEAD
 - R&S SIGN R10-12 (24"X30") ADJACENT 6-2
 - R&S SIGN R10-12 (36"X48") ADJACENT 6-2
 - R&S EXTEND INTO H.H.7
 - R&S 3" RSC
 - R&S 2-12/C #12
 - R&S 1-3/C #12
 - R&S 1-3/C #20
 - R&S 1-3/C #12(LUM.)

- 2
- R&S TYPE A-30-T40-15 LUMINAIRE-250 WATT HPS AT 315'
 - R&S ONE WAY SIGNAL-OVERHEAD
 - R&S TWO WAY SIGNAL (TYPE 20C-POLE MTD. 270')
 - R&S 2-SETS PEDESTRIAN INDICATIONS
 - R&S 2-SETS PEDESTRIAN INDICATIONS
 - R&S 1-PEDESTRIAN PUSH BUTTON (MTD. 270')
 - R&S ONE WAY EVP DETECTOR AND LIGHT OVERHEAD
 - R&S EXTEND INTO H.H.4
 - R&S 3" RSC
 - R&S 2-12/C #12
 - R&S 3-3/C #12
 - R&S 1-3/C #20
 - R&S 1-3/C #12(LUM.)
 - R&S PEDESTRIAN PUSH BUTTON STATION
 - R&S 1-PEDESTRIAN PUSH BUTTON
 - R&S PEDESTRIAN PUSH BUTTON STATION
 - R&S 1-PEDESTRIAN PUSH BUTTON
 - R&S EXTEND INTO H.H.14
 - R&S 1.25" RSC
 - R&S 1-3/C #12
 - R&S 4" RSC INPLACE
 - R&S EXTEND INTO H.H.1
 - R&S 4-12/C #12
 - R&S 4-3/C #12
 - R&S 2-3/C #20
 - R&S 8-2/C #14
 - R&S 1-3/C #12(LUM.)
 - R&S 1-6/C FIBER OPTIC CABLE

- 3
- R&S TYPE A-25 ONE WAY SIGNAL-OVERHEAD
 - R&S TWO WAY SIGNAL (TYPE 20C-POLE MTD. 270')
 - R&S 2-SETS PEDESTRIAN INDICATIONS
 - R&S 2-SETS PEDESTRIAN INDICATIONS
 - R&S 1-PEDESTRIAN PUSH BUTTON (MTD. 270')
 - R&S ONE WAY EVP DETECTOR AND LIGHT OVERHEAD
 - R&S SIGN R10-12 (24"X30") ADJACENT 6-2
 - R&S SIGN R10-12 (36"X48") ADJACENT 6-2
 - R&S EXTEND INTO H.H.7
 - R&S 3" RSC
 - R&S 2-12/C #12
 - R&S 3-3/C #12
 - R&S 1-3/C #20
 - R&S 1-3/C #12

REVISIONS
CERTIFIED BY T. A. D. 15400 12/1/82

CONTROLLER CABINET

- RED 4-1
- YEL 4-1
- GRN 4-1
- NEU 4-1, 4-2
- RED 4-2
- YEL 4-2
- GRN 4-2
- NEU P4-1
- WLK P4-1
- DWK P4-1
- SPR P4-1
- EQG P4-1
- RED 6-3
- YEL 6-3
- GRN 6-3
- NEU 6-3
- YEL LTA 6-3
- GRN LTA 6-3
- SPR LTA 6-3
- NEU P2-2
- WLK P2-2
- DWK P2-2
- SPR P2-2
- EQG P2-2
- RED 6-1
- YEL 6-1
- GRN 6-1
- NEU 6-1, P6-1
- WLK P6-1
- DWK P6-1
- SPR P6-1
- NEU 8-3
- GRN 8-3
- YEL 8-3
- GRN 8-3
- EQG 8-3
- RED 6-2
- YEL 6-2
- GRN 6-2
- NEU 6-2
- YEL LTA 6-2
- GRN LTA 6-2
- SPR LTA 6-2
- NEU P4-2
- WLK P4-2
- DWK P4-2
- SPR P4-2
- EQG P4-2
- PB2-1
- NEU PB2-1
- PB8-2
- PB6-2
- NEU PB6-2
- PB8-1
- PB2-2
- NEU PB2-2
- PB4-1
- PB6-1
- NEU PB6-1
- PB4-2
- D1-1
- D6-2
- D1-2
- D6-1
- D8-3
- D2-2
- D5-1
- D5-2
- #2&6
- #4&8
- #4&8
- #2&6
- D2-1
- D8-2
- D8-1
- D4-3
- D4-1
- D4-2
- D1
- D2
- TELEPHONE SERVICE

SIGNAL SERVICE

- 2-2 RED
- 2-2 YEL
- 2-2 GRN
- 2-2 NEU
- 2-2 YEL LTA
- 2-2 GRN LTA
- SPR
- PB2-2 NEU
- PB2-2 WLK
- PB2-2 DWK
- SPR
- EQG
- 2-1 RED
- 2-1 YEL
- 2-1 GRN
- 2-1 NEU
- P2-1 WLK
- P2-1 DWK
- SPR
- 4-3 NEU
- 4-3 RED
- 4-3 YEL
- 4-3 GRN
- EQG
- 2-3 RED
- 2-3 YEL
- 2-3 GRN
- 2-3 NEU
- 2-3 YEL LTA
- 2-3 GRN LTA
- SPR
- P6-2 NEU
- P6-2 WLK
- P6-2 DWK
- SPR
- EQG
- 8-1 RED
- 8-1 YEL
- 8-1 GRN
- 8-2 NEU
- 8-2 RED
- 8-2 YEL
- 8-2 GRN
- PB1-1 NEU
- PB1-1 WLK
- PB1-1 DWK
- SPR
- EQG
- INTERCONNECT FROM SYSTEM B
- INTERCONNECT TO SYSTEM D
- #2&6
- #4&8
- #4&8
- #2&6
- D2-1
- D8-2
- D8-1
- D4-3
- D4-1
- D4-2
- D1
- D2
- TELEPHONE SERVICE

SERVICE CABINET & METER

- 1 SIGNAL SERVICE METERED
- 2 LUMINAIRE
- 3 LUMINAIRE
- S.O.P. 120/240 V. SERVICE

GROUND ROD

PED. PUSH BUTTON STA. PB2-1

H.H.14

4,5,6,7,12,13,16,17, 20,21,22,23,38,39

PED. PUSH BUTTON STA. PB8-1 PB6-2

INPLACE H.H.11

3,6,7,13,17,20, 21,22,23,39

H.H.16

H.H.17

35,36

35

36

8,9,10,11,14,15,18,19,24,25,26,27, 28,29,30,31,32,33,34,37,40,41

TO HANDHOLE 1 SEE NEXT SHEET

INTERCONNECT FROM SYSTEM B LEXINGTON AVE. & ROSELAWN AVE.

CONDUCTOR COLOR CODING

R	RED	
O	WH	3/C#12
BL	BLK	
WH		
R/BLK	BLK	2/C#14
O/BLK	CLEAR	
BL/BLK		
WH/BLK	R OR O	
BLK	WH OR YEL	3/C#20
BLK/WH	BLK OR BL	
G/BLK	BLK	2-1/C#6
G	WH	2-1/C#10

NOTE: ALL TERMINAL BLOCK CONNECTIONS SHALL BE ARRANGED AS SPECIFIED ABOVE.

NOTE :
1. CONTRACTOR SHALL FURNISH AND INSTALL ALL NEW CABLE AND SERVICE CONDUCTORS.

REVISED
WIRING DIAGRAM (1 OF 2)
LEXINGTON AVE. & COUNTY RD. B
SYSTEM C

Sheet No. 41 of 77 Sheets

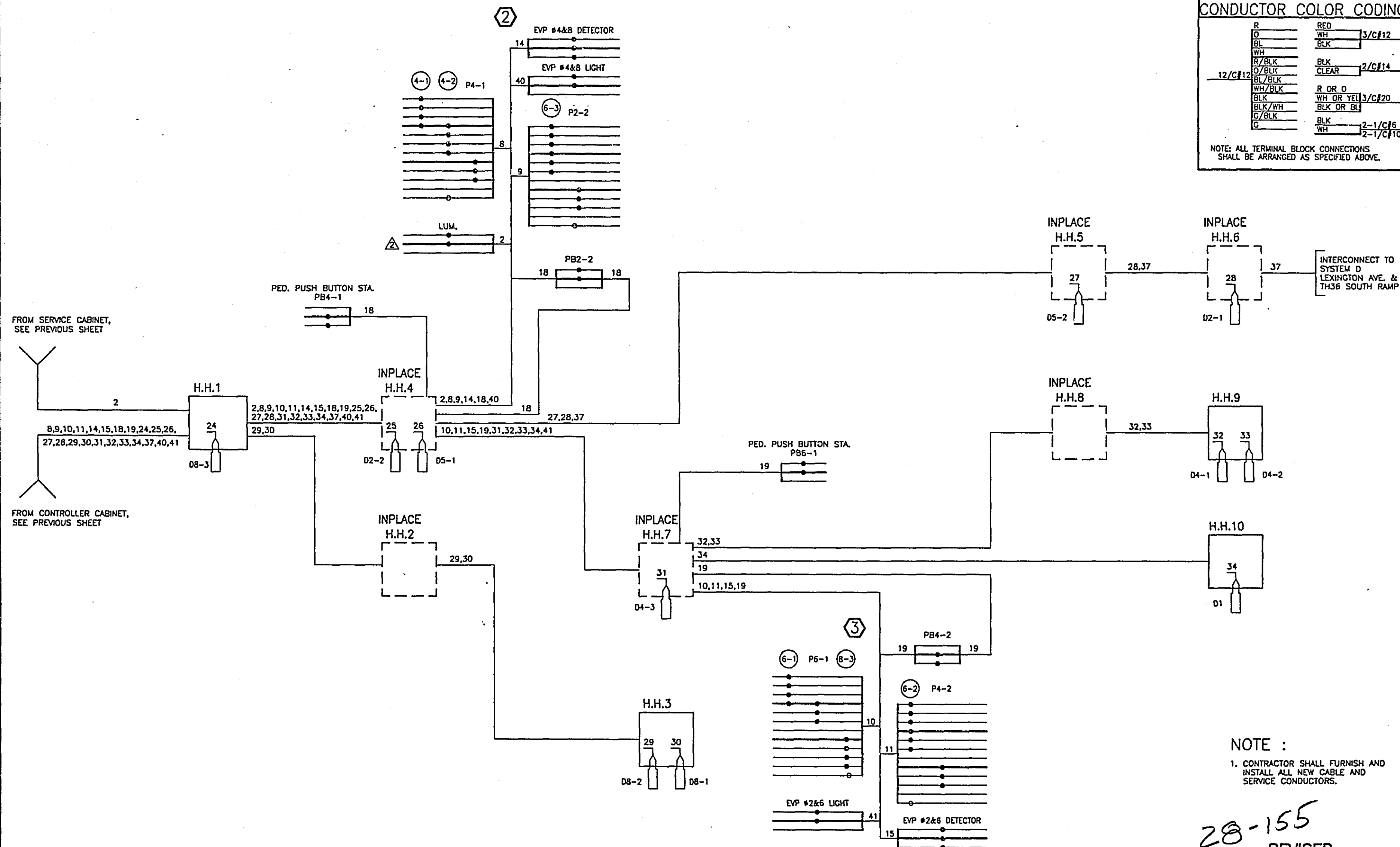
REVISIONS
CERTIFIED BY *[Signature]* 5942 12-17-96 S.P. 62-651-34

28-155

CONDUCTOR COLOR CODING

R	RED	3/C#12
O	WH	
BL	BLK	
WH		
R/BLK	BLK	2/C#14
O/BLK	CLEAR	
BL/BLK		
WH/BLK	R OR O	
BLK	WH OR YEL	3/C#20
BLK/WH	BLK OR BL	
G/BLK		
G	BLK	2-1/C#6
	WH	2-1/C#10

NOTE: ALL TERMINAL BLOCK CONNECTIONS SHALL BE ARRANGED AS SPECIFIED ABOVE.



NOTE :

1. CONTRACTOR SHALL FURNISH AND INSTALL ALL NEW CABLE AND SERVICE CONDUCTORS.

28-155
REVISED
WIRING DIAGRAM (2 OF 2)
LEXINGTON AVE. & COUNTY RD. B
SYSTEM C

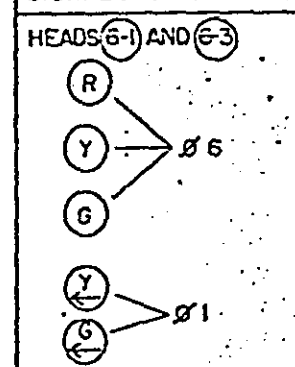
REVISIONS
CERTIFIED BY *[Signature]* 8943 12-7-96 S.P. 62-651-34

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FACE	PHASE	FLASH	TYPE AND SIZE IN INCHES				
			R	Y	G	Y	G
2-1	2	R	12"	12"	12"	-	-
2-2			12"	12"	12"	-	-
4-1			12"	12"	12"	-	-
4-2	4	R	12"	12"	12"	-	-
4-3			12"	12"	12"	-	-
6-1	6 AND 1	R	12"	12"	12"	12"	12"
6-2			12"	12"	12"	-	-
6-3			12"	12"	12"	12"	12"

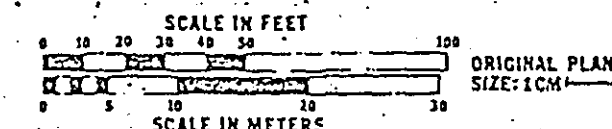
DETECTOR CHART			
DESIGNATION	PHASE	SIZE IN FT.	FUNCTION
D1-1 (P)	1	1-6' X 15'	(1)
D1-2 (P)	1	1-6' X 15'	(4)
D2-1 (P)	2	1-6' X 6'	(1)
D4-1	4	1-6' X 15'	(1)
D4-2	4	1-6' X 15'	(4)
D4-3	4	1-18' X 6'	(1)
D4-4	4	1-18' X 6'	(1)
D6-1 (P)	6	1-6' X 6'	(1)

SIGNAL HEAD PHASING



SIGNAL SYSTEM OPERATION

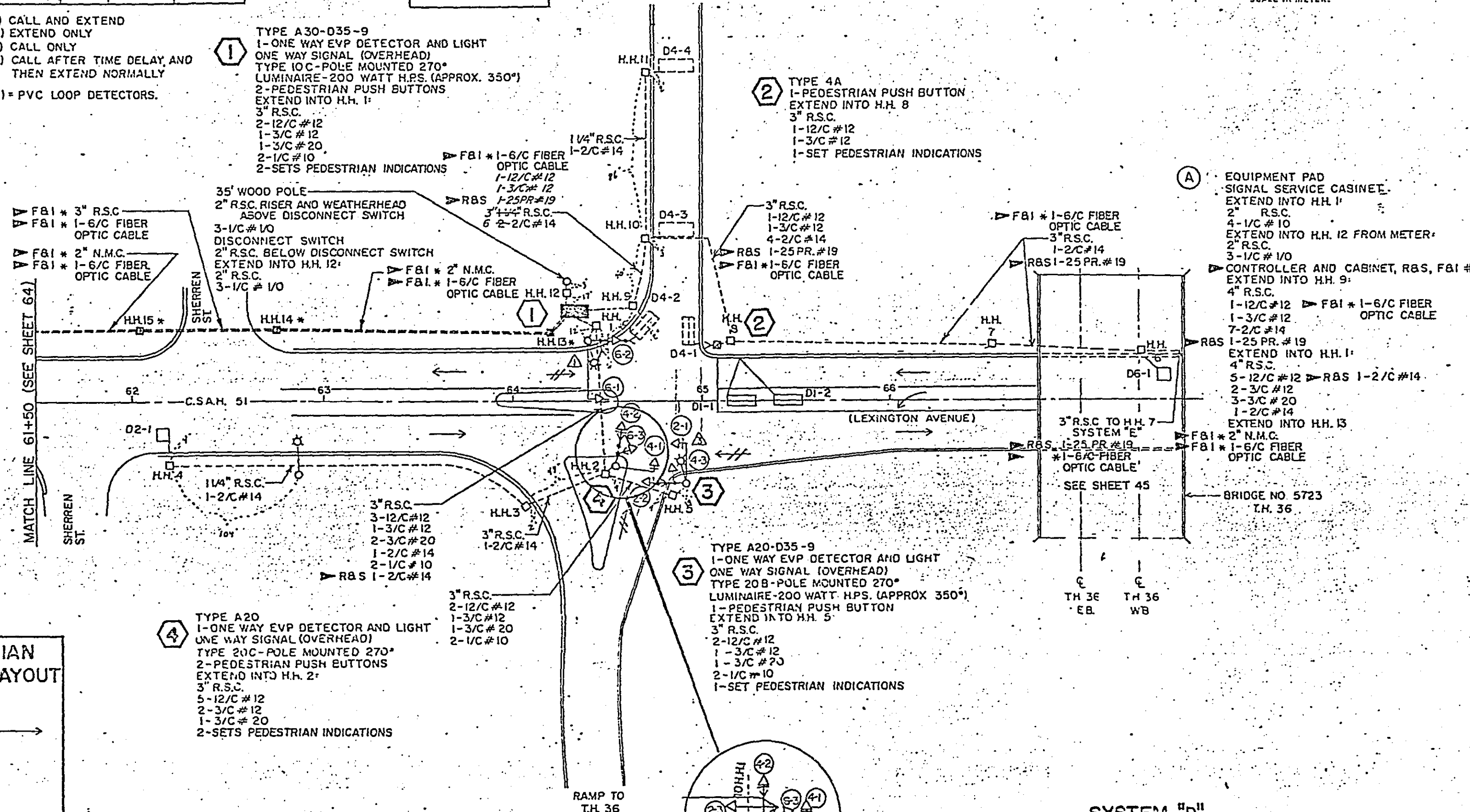
SIGNAL SYSTEM FLASH MODE IS ALL RED.
 PHASE 1 IS PROTECTED/PERMISSIVE LEFT TURNS.
 PHASES 1 AND 4 ARE NON-LOCK DETECTION.
 PHASES 2 AND 6 ARE LOCK DETECTION.
 PHASES 2 AND 6 ARE ON VEHICLE RECALL.



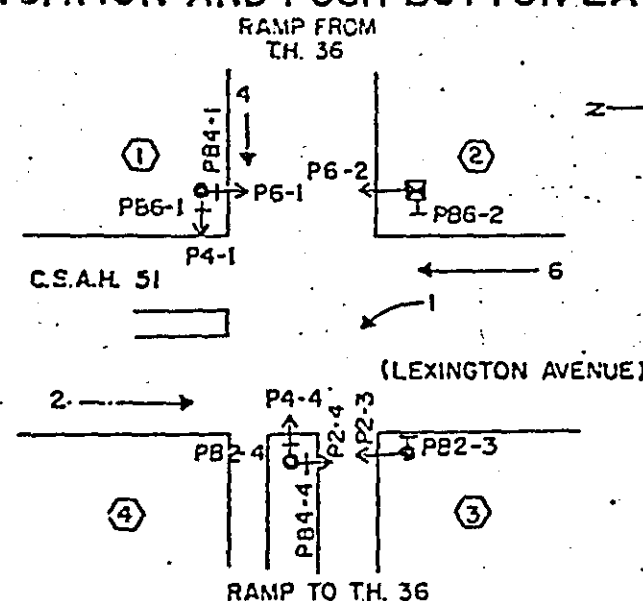
NOTES:

- ALL ITEMS OF THIS SIGNAL SYSTEM ARE IN PLACE AND SHALL BE USED IN PLACE UNLESS OTHERWISE NOTED WITH A Δ. (Δ = WORK TO BE DONE THIS SHEET ONLY).
- F&I NEW CONCRETE HANDHOLES 13, 14 AND 15.
- * DENOTES INTERCONNECT ITEM.
- * - CONTRACTOR TO FURNISH AND INSTALL NEW CONTROLLER AND CABINET, PAID FOR UNDER ITEM "TRAFFIC CONTROL INTERCONNECTION B".
- LOOP DETECTORS ON THIS SHEET SHALL BE PAID FOR UNDER ITEMS "LOOP DETECTOR 6'X6' OR "LOOP DETECTOR 6'X15'".

- (1) CALL AND EXTEND
 - (2) EXTEND ONLY
 - (3) CALL ONLY
 - (4) CALL AFTER TIME DELAY AND THEN EXTEND NORMALLY
- (P) = PVC LOOP DETECTORS.



CONTROLLER PHASING, PEDESTRIAN INDICATION AND PUSH BUTTON LAYOUT



PEDESTRIAN PUSH BUTTONS SHALL BE LOCATED AS SHOWN ABOVE.

SYSTEM "D" INTERSECTION LAYOUT

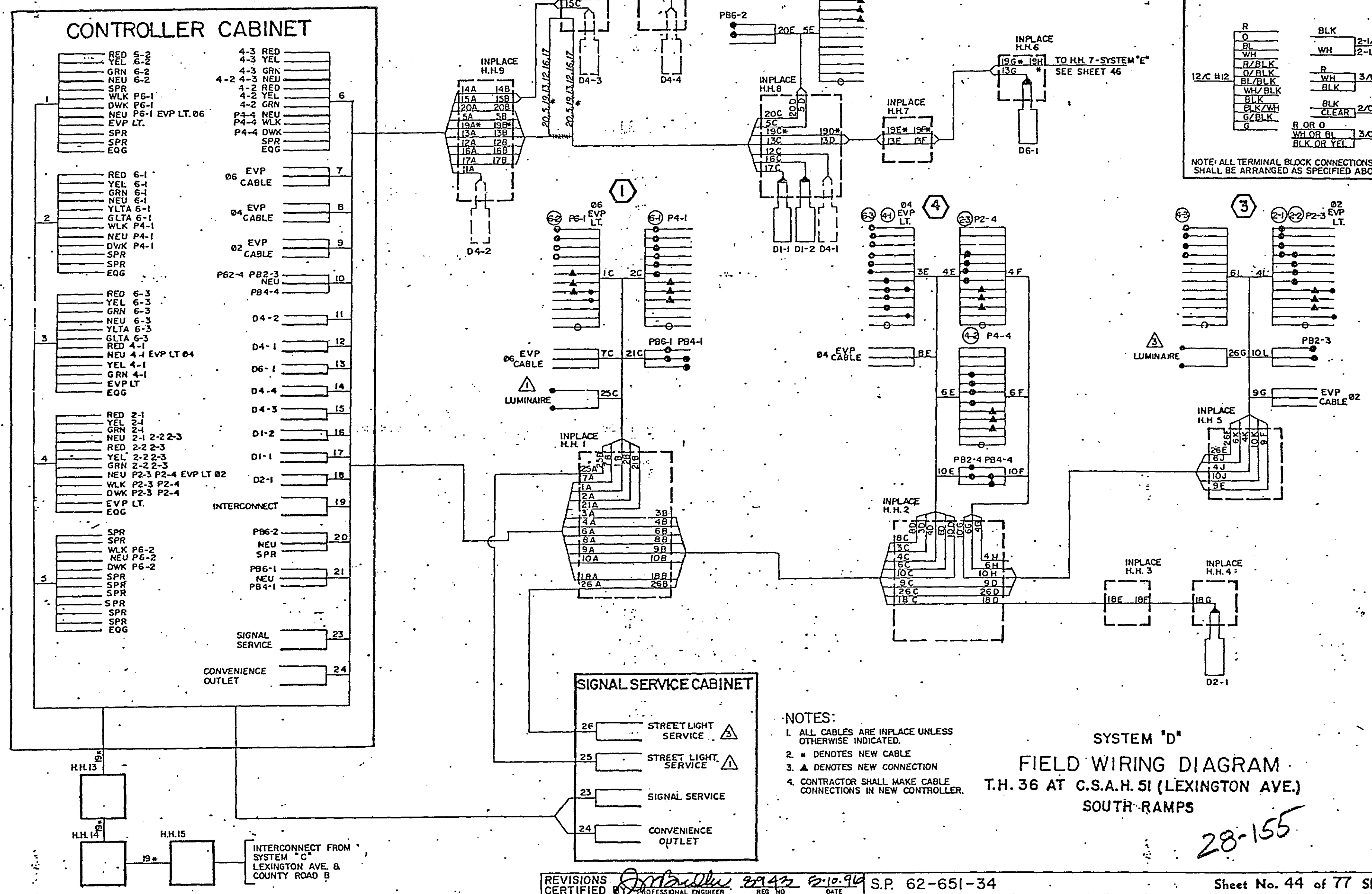
T.H. 36 AT C.S.A.H. 51 (LEXINGTON AVE.)
 SOUTH RAMPS

28-155

REVISIONS
 CERTIFIED BY *T. A. Chubb* 15400 7/18/96 S.P. 62-651-34

Fed. Proj. No.	
CONDUCTOR COLOR CODING	
R	BLK
0	WH 2-1/C#6
BL	WH 2-1/C#10
WH	R
R/BLK	WH 3/C#12
0/BLK	BLK
BL/BLK	BLK 2/C#14
WH/BLK	R OR 0
BLK	WH OR BL 3/C#20
BLK/WH	BLK OR YEL
G/BLK	
G	

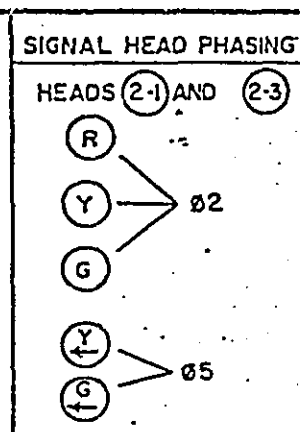
NOTE: ALL TERMINAL BLOCK CONNECTIONS SHALL BE ARRANGED AS SPECIFIED ABOVE.



FACE	PHASE	FLASH	TYPE AND SIZE IN INCHES					
			R	Y	G	Y	G	
6-1	6	R	12"	12"	12"			
6-2								
4-1	4	R	12"	12"	12"			
4-2								
4-3								
2-1	2 AND 5	R	12"	12"	12"	12"	12"	
2-2	2	R	12"	12"	12"			
2-3	2 AND 5	R	12"	12"	12"	12"	12"	

DETECTOR CHART			
DESIGNATION	PHASE	SIZE IN FT.	FUNCTION
D5-1 (P)	5	6x15	(1)
D5-2 (P)	5	6x15	(4)
D6-1 (P)	6	6x6	(1)
D2-1 (P)	2	6x6	(1)
D4-1	4	6x15	(1)
D4-2	4	18x6	(1)
D4-3	4	18x6	(1)
D4-4	4	6x15	(4)

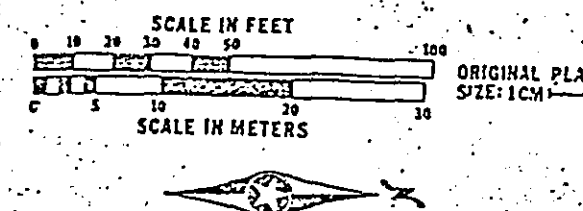
- (1) CALL AND EXTEND
(2) EXTEND ONLY
(3) CALL ONLY
(4) CALL AFTER TIME DELAY AND THEN EXTEND NORMALLY.
(P)=PVC LOOP DETECTORS.



SIGNAL SYSTEM OPERATION

SIGNAL SYSTEM FLASH MODE IS ALL RED.
PHASE 5 IS PROTECTED/PERMISSIVE LEFT TURNS.
PHASES 4 AND 5 ARE NON-LOCK DETECTION.
PHASES 2 AND 6 ARE LOCK DETECTION.
PHASES 2 AND 6 ARE ON VEHICLE RECALL.

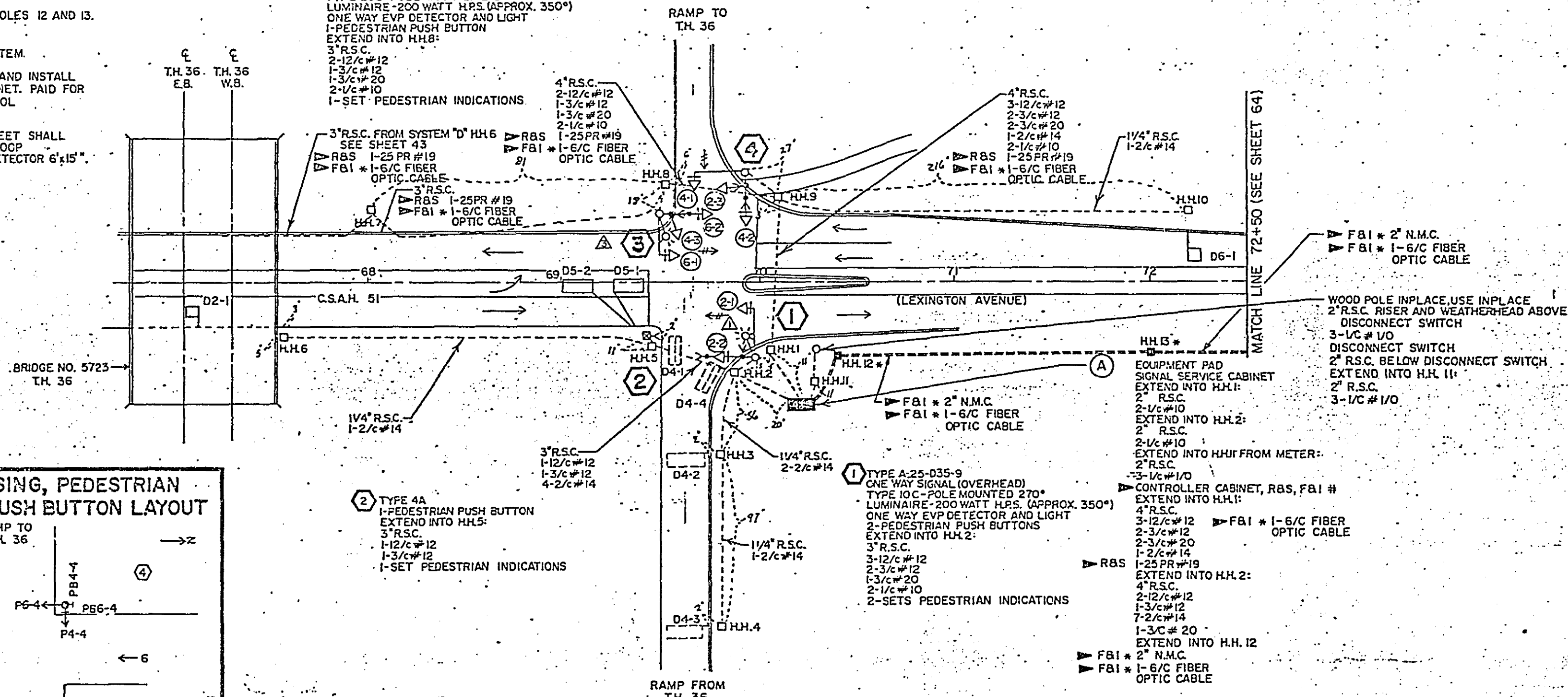
Fed. Proj. No.



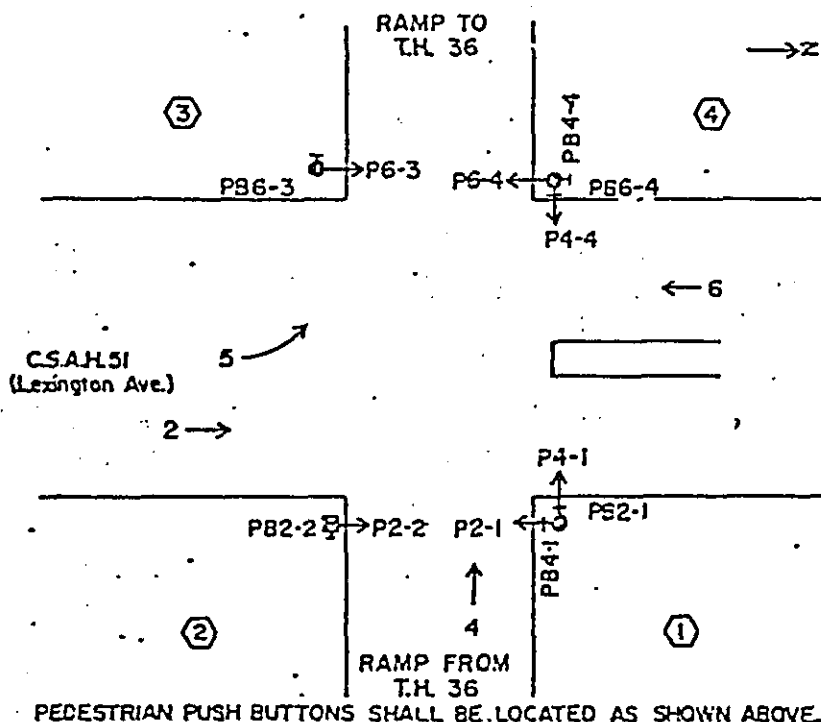
NOTES:

- ALL ITEMS OF THIS SIGNAL SYSTEM ARE IN PLACE AND SHALL BE USED IN PLACE UNLESS OTHERWISE NOTED WITH A Δ. (Δ=WORK TO BE DONE THIS SHEET ONLY).
- F&I NEW CONCRETE HANDHOLES 12 AND 13.
- * DENOTES INTERCONNECT ITEM.
- #- CONTRACTOR TO FURNISH AND INSTALL NEW CONTROLLER AND CABINET. PAID FOR UNDER ITEM "TRAFFIC CONTROL INTERCONNECTION B".
- LOOP DETECTORS ON THIS SHEET SHALL BE PAID FOR UNDER ITEMS "LOOP DETECTOR 6'x6'" OR "LOOP DETECTOR 6'x15'".

③ TYPE A-20-D35-9
ONE WAY SIGNAL (OVERHEAD)
TYPE 208-POLE MOUNTED 270°
LUMINAIRE-200 WATT H.P.S. (APPROX. 350°)
ONE WAY EVP DETECTOR AND LIGHT
1-PEDESTRIAN PUSH BUTTON
EXTEND INTO H.H.8:
3" R.S.C.
2-12/c #12
1-3/c #12
1-3/c #20
2-1/c #10
1-SET PEDESTRIAN INDICATIONS.



CONTROLLER PHASING, PEDESTRIAN INDICATION AND PUSH BUTTON LAYOUT



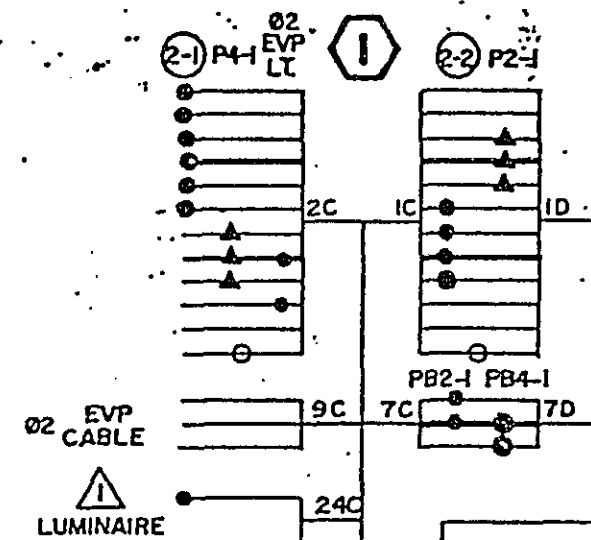
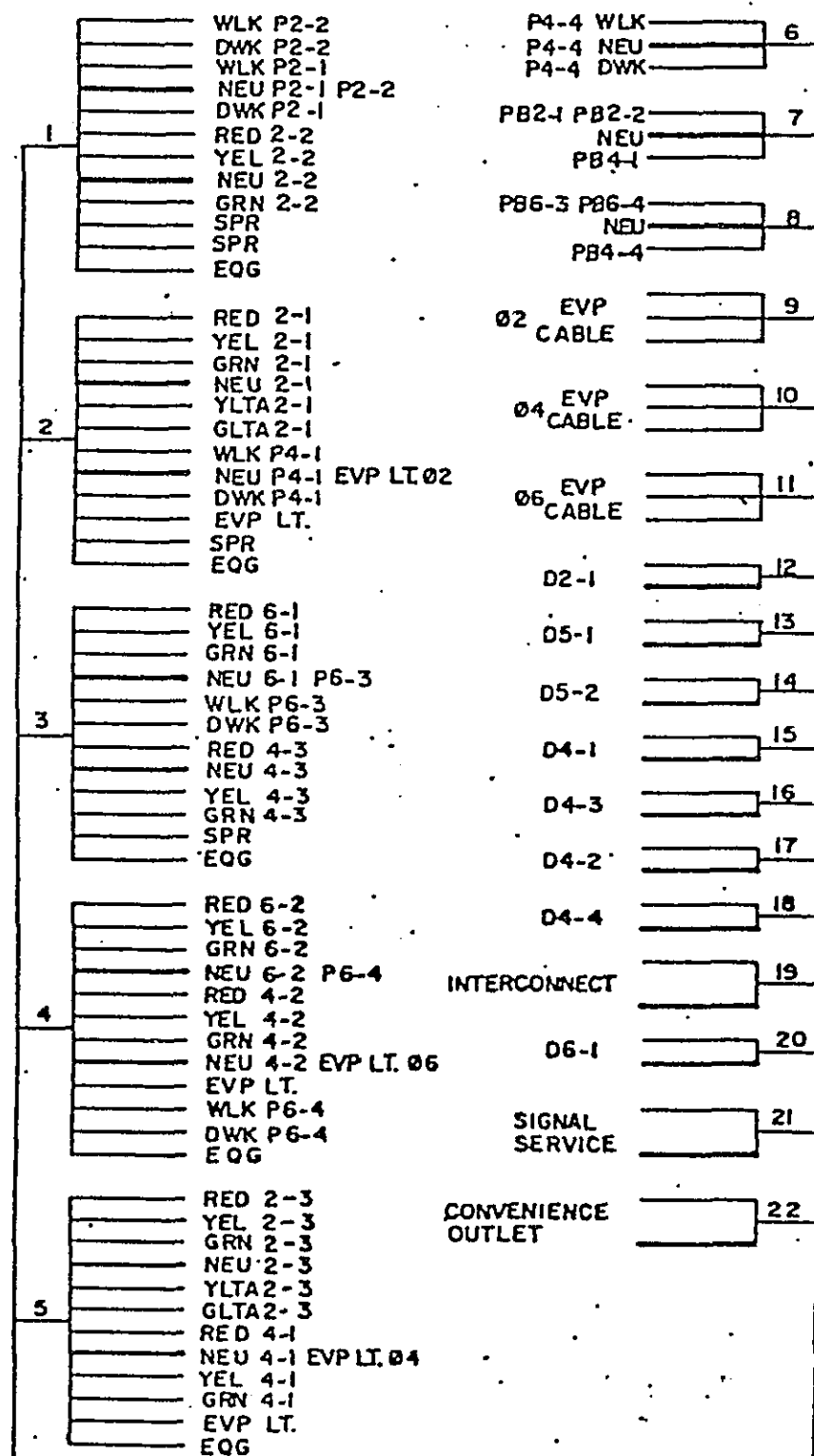
SYSTEM "E" INTERSECTION LAYOUT T.H. 36 at C.S.A.H. 51 (Lexington Ave.)-North Ramps

28-155

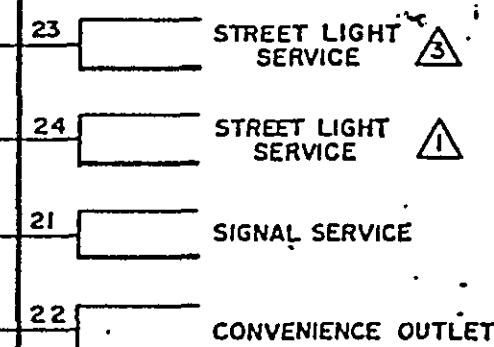
REVISIONS
CERTIFIED BY *T. A. U. L.* 15400 7/18/96 S.P. 62-651-34

Sheet No. 45 of 77 Sheets

CONTROLLER CABINET



SIGNAL SERVICE CABINET



Fed. Proj. No. CONDUCTOR COLOR CODING

R	BLK	2-1/C#6
O	WH	2-1/C#10
BL		
WH		
R/BLK	R	3/C#12
O/BLK	WH	
BL/BLK	BLK	
WH/BLK		
BLK	BLK	2/C#14
BLK/WH	CLEAR	
G/BLK		
G		
	R OR O	3/C#20
	WH OR BL	
	BLK OR YEL	

NOTE: ALL TERMINAL BLOCK CONNECTIONS SHALL BE ARRANGED AS SPECIFIED ABOVE.

NOTES:

1. ALL CABLES ARE INPLACE UNLESS OTHERWISE INDICATED.
2. * DENOTES NEW CABLE
3. ▲ DENOTES NEW CONNECTION
4. CONTRACTOR SHALL MAKE CABLE CONNECTIONS IN NEW CONTROLLER.

SYSTEM "E" FIELD WIRING DIAGRAM

T.H. 36 AT C.S.A.H. 51 (LEXINGTON AVE.)
NORTH RAMPS

28-155

REVISIONS
CERTIFIED BY

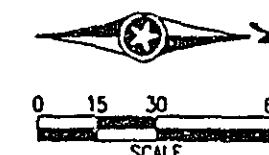
Professional Engineer

REG. NO.

DATE

S.P. 62-651-34

Sheet No. 46 of 77 Sheets



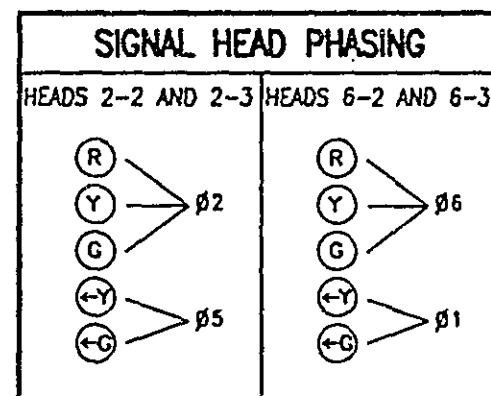
NOTES:

1. DETECTOR LOCATIONS SHALL BE VERIFIED IN THE FIELD BY THE TRAFFIC ENGINEER PRIOR TO INSTALLATION.
2. A 3/4 INCH HALF COUPLING SHALL BE FURNISHED APPROX. 2 FT. AND 4 FT. FROM THE END OF THE MAST ARM ON POLES 2 AND 4 PER MN/DOT 3831.2C.
3. PAINT REVERSED SIGNAL SYSTEM (SEE SPECIAL PROVISIONS).
4. ALL ITEMS (EXCEPT CABLE, SEE NOTE 5) OF THIS SIGNAL SYSTEM ARE INPLACE AND SHALL BE USED INPLACE UNLESS OTHERWISE NOTED WITH A (A) WORK TO BE DONE THIS SHEET ONLY).
5. R&S ALL INPLACE CONTROL CABLE. F&I ALL NEW SERVICE AND CONTROL CABLE AS DIRECTED BY THE ENGINEER. (SEE REVISED FIELD WIRING DIAGRAM).

6. TEMPORARY ALL RED FLASHING OPERATION DURING REVISION WORK. SEE SPECIAL PROVISIONS.
7. ALL SIGNAL FACES SHALL HAVE BACKGROUND SHIELDS EXCEPT SIGNAL FACES 2-3, 4-3, 6-3 AND 8-3.
8. ALL PEDESTRIAN INDICATIONS SHALL BE 12"x12" WITH SYMBOL MESSAGE. SEE SPECIAL PROVISIONS.
9. R&S INPLACE OVERHEAD MOUNTED SIGNS ON MAST ARM POLES 1 AND 3. F&I SIGNS ON MAST ARMS OF POLES 1,2,3 AND 4.
10. R&S INPLACE PEDESTRIAN SIGNS. F&I SIGNS R10-4b ADJACENT TO EACH PUSH BUTTON.
11. R&S HANDHOLES 1,3,4,5,6,8,9,10,11 AND 12. (SEE SHEET 61 FOR EXISTING SYSTEM).
12. R&S "RED" INDICATIONS ON HEADS USED INPLACE AND F&I L.E.D. UNITS. NEW "RED" AND "DON'T WALK" INDICATIONS SHALL UTILIZE L.E.D. UNITS. SEE SPECIAL PROVISIONS.
13. • DENOTES INTERCONNECT ITEM.

REVISED
INTERSECTION LAYOUT
LEXINGTON AVE. & COUNTY RD. B2
SYSTEM F

SIGNAL INDICATION CHART						
SIGNAL FACE	PHASE	INDICATION SIZE				
		R	Y	G	Y	G
2-1	2	12	12	12	—	—
2-2	2 AND 5	12	12	12	12	12
2-3	2 AND 5	12	12	12	12	12
4-1	4	12	12	12	—	—
4-2	4	12	12	12	—	—
4-3	4	12	12	12	—	—
6-1	6	12	12	12	—	—
6-2	6 AND 1	12	12	12	12	12
6-3	6 AND 1	12	12	12	12	12
8-1	8	12	12	12	—	—
8-2	8	12	12	12	—	—
8-3	8	12	12	12	—	—



SIGNAL SYSTEM OPERATION

SIGNAL SYSTEM FLASH MODE IS ALL RED.

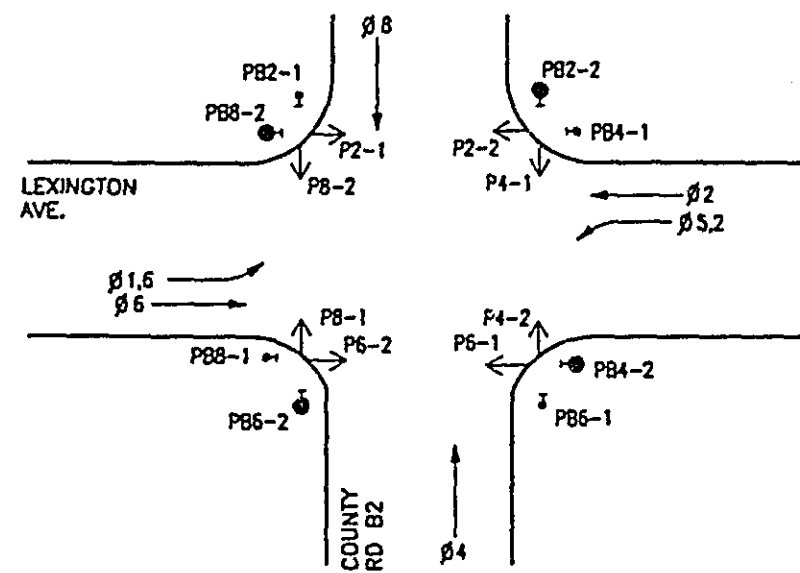
PHASES 1 AND 5 ARE PROTECTED/ PERMISSIVE LEFT TURNS.

PHASES 1,4,5 AND 8 ARE NON-LOCK DETECTION.

PHASES 2 AND 6 ARE LOCK DETECTION.

PHASES 2 AND 6 ARE ON VEHICLE RECALL.

CONTROLLER PHASING, PEDESTRIAN INDICATIONS AND PUSH BUTTONS



VEHICLE DETECTION			
NUMBER	SIZE (FT.)	FUNCTION	LOCATION
D1-1	2-6'x15'	C & E (TD)	5' & 30'
D1-2	6'x6'	C & E	80'
D2-1	6'x6'	C & E	200'
D4-1 (S)	6'x6'	C & E	160'
D4-2 (S)	6'x6'	C & E	70'
D4-3	6'x15'	C & E	0'
D4-4	6'x15'	C & E (TD)	0'
D5-1	2-6'x15'	C & E (TD)	5' & 30'
D5-2	6'x6'	C & E	80'
D6-1	6'x6'	C & E	200'
D8-1 (S)	6'x6'	C & E	200'
D8-2 (S)	6'x6'	C & E	70'
D8-3	6'x15'	C & E	0'
D8-4	6'x15'	C & E (TD)	0'
D1	6'x6'	COUNT	SEE PLAN
D2	6'x6'	COUNT	SEE PLAN

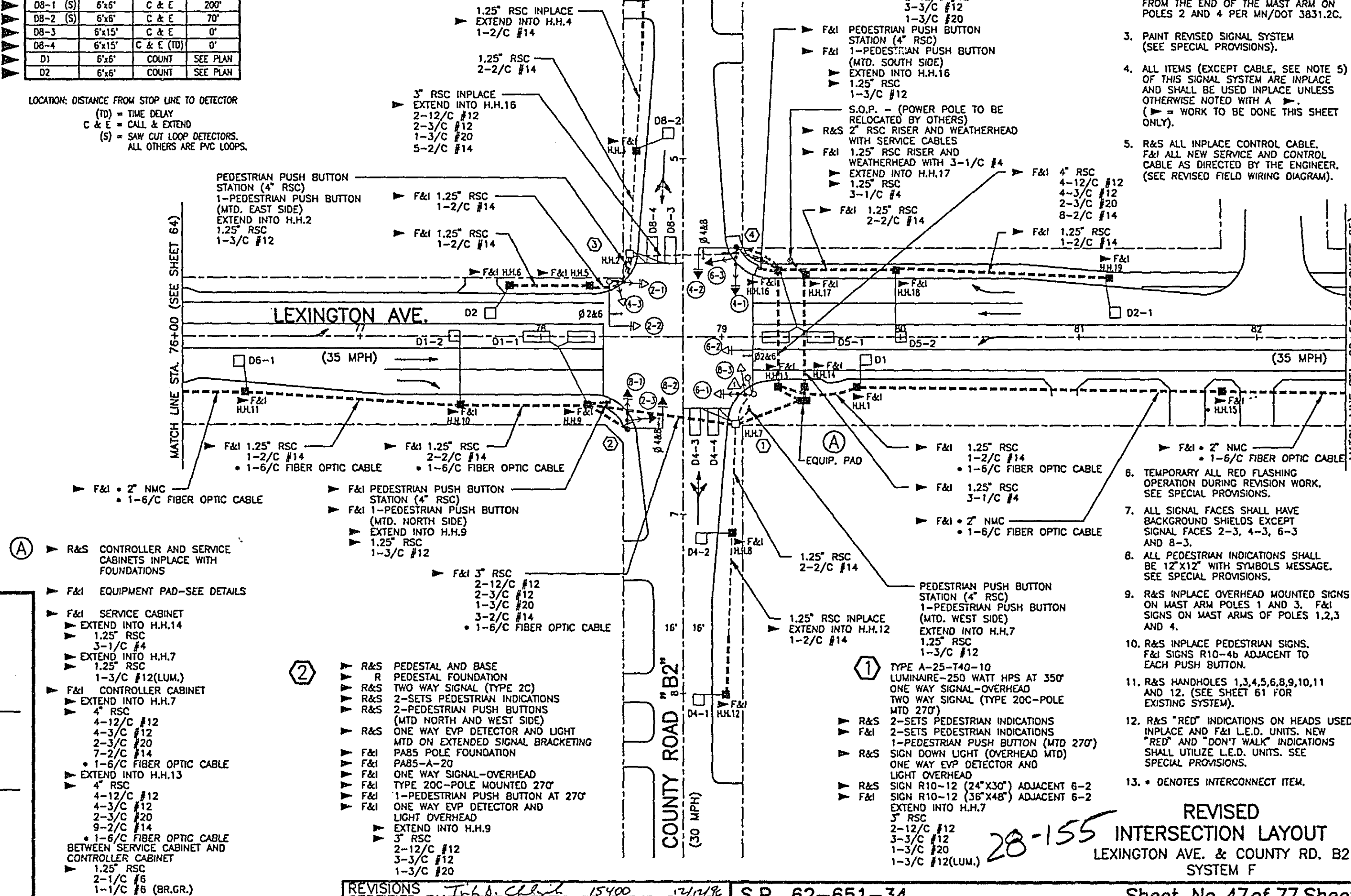
LOCATION: DISTANCE FROM STOP LINE TO DETECTOR

(TD) = TIME DELAY

C & E = CALL & EXTEND

(S) = SAW CUT LOOP DETECTORS. ALL OTHERS ARE PVC LOOPS.

- ③ TYPE A-25
ONE WAY SIGNAL-OVERHEAD
TWO WAY SIGNAL (TYPE 20C-POLE MTD 270')
- R&S 2-SETS PEDESTRIAN INDICATIONS
F&I 2-SETS PEDESTRIAN INDICATIONS
1-PEDESTRIAN PUSH BUTTON
SIGN DOWN LIGHT (OVERHEAD MTD)
ONE WAY EVP DETECTOR AND LIGHT
MTD ON EXTENDED 4' X 3/4" RSC ON MAST ARM.
- R&S SIGN R10-12 (24"x30") ADJACENT 2-2
F&I SIGN R10-12 (36"x48") ADJACENT 2-2
EXTEND INTO H.H.2
3" RSC
2-12/C #12
3-3/C #12
1-3/C #20

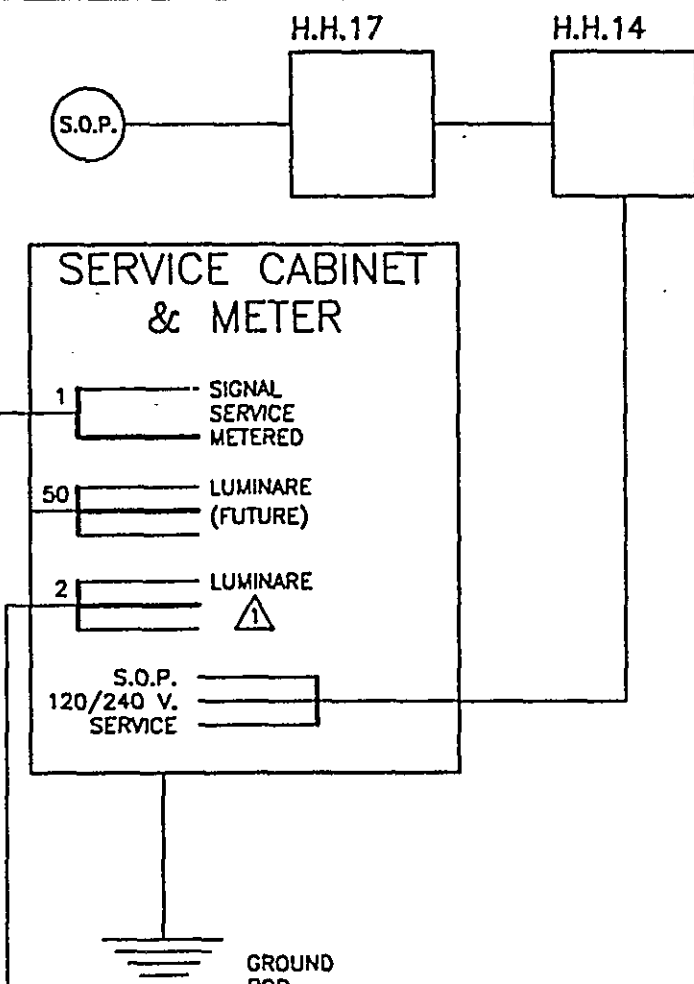
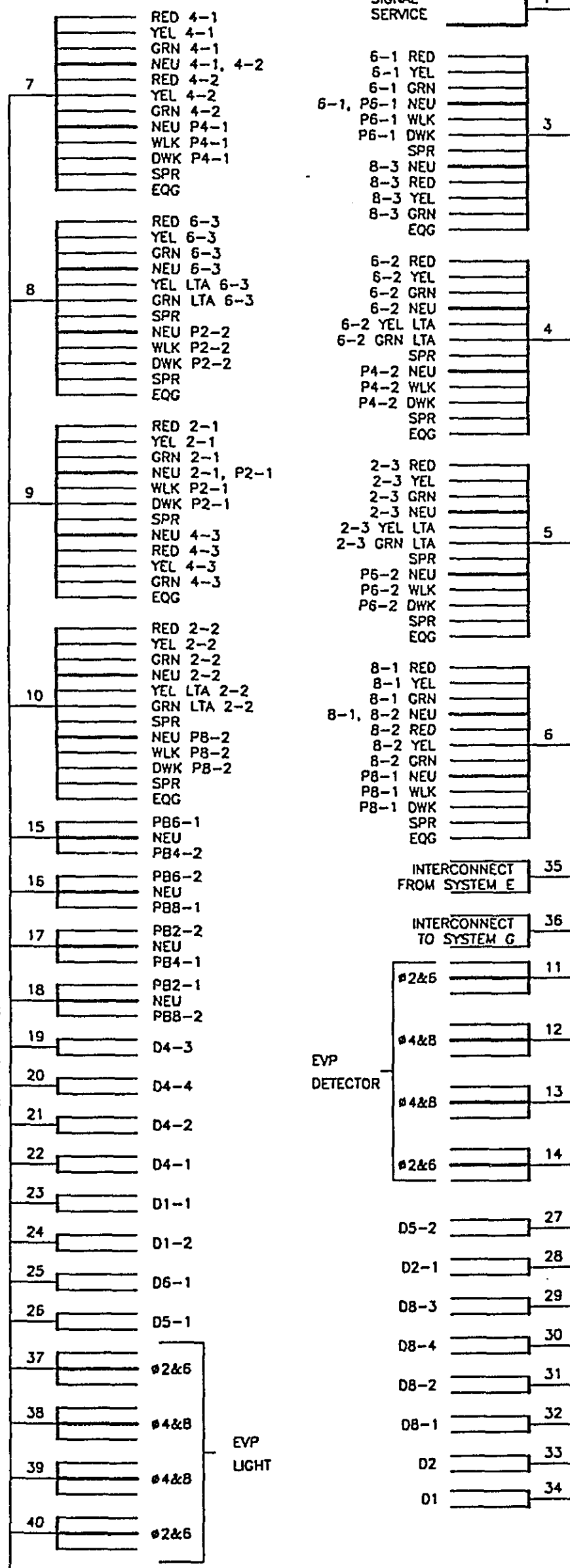


- (A) R&S CONTROLLER AND SERVICE CABINETS INPLACE WITH FOUNDATIONS
- F&I EQUIPMENT PAD-SEE DETAILS
- F&I SERVICE CABINET
EXTEND INTO H.H.14
1.25" RSC
3-1/C #4
EXTEND INTO H.H.7
1.25" RSC
1-3/C #12(LUM.)
F&I CONTROLLER CABINET
EXTEND INTO H.H.7
4" RSC
4-12/C #12
4-3/C #12
2-3/C #20
7-2/C #14
• 1-6/C FIBER OPTIC CABLE
EXTEND INTO H.H.13
4" RSC
4-12/C #12
4-3/C #12
2-3/C #20
9-2/C #14
• 1-6/C FIBER OPTIC CABLE
BETWEEN SERVICE CABINET AND CONTROLLER CABINET
1.25" RSC
2-1/C #6
1-1/C #8 (BR.GR.)

- ② R&S PEDESTAL AND BASE
R PEDESTAL FOUNDATION
R&S TWO WAY SIGNAL (TYPE 2C)
R&S 2-SETS PEDESTRIAN INDICATIONS
R&S 2-PEDESTRIAN PUSH BUTTONS
(MTD NORTH AND WEST SIDE)
ONE WAY EVP DETECTOR AND LIGHT
MTD ON EXTENDED SIGNAL BRACKETING
PA85 POLE FOUNDATION
F&I PA85-A-20
F&I ONE WAY SIGNAL-OVERHEAD
F&I TYPE 20C-POLE MOUNTED 270'
F&I 1-PEDESTRIAN PUSH BUTTON AT 270'
F&I ONE WAY EVP DETECTOR AND LIGHT OVERHEAD
EXTEND INTO H.H.9
3" RSC
2-12/C #12
3-3/C #12
1-3/C #20

- ① TYPE A-25-T40-10
LUMINAIRE-250 WATT HPS AT 350'
ONE WAY SIGNAL-OVERHEAD
TWO WAY SIGNAL (TYPE 20C-POLE MTD 270')
- R&S 2-SETS PEDESTRIAN INDICATIONS
F&I 2-SETS PEDESTRIAN INDICATIONS
1-PEDESTRIAN PUSH BUTTON (MTD 270')
SIGN DOWN LIGHT (OVERHEAD MTD)
ONE WAY EVP DETECTOR AND LIGHT OVERHEAD
EXTEND INTO H.H.7
3" RSC
2-12/C #12
3-3/C #12
1-3/C #20
1-3/C #12(LUM.)

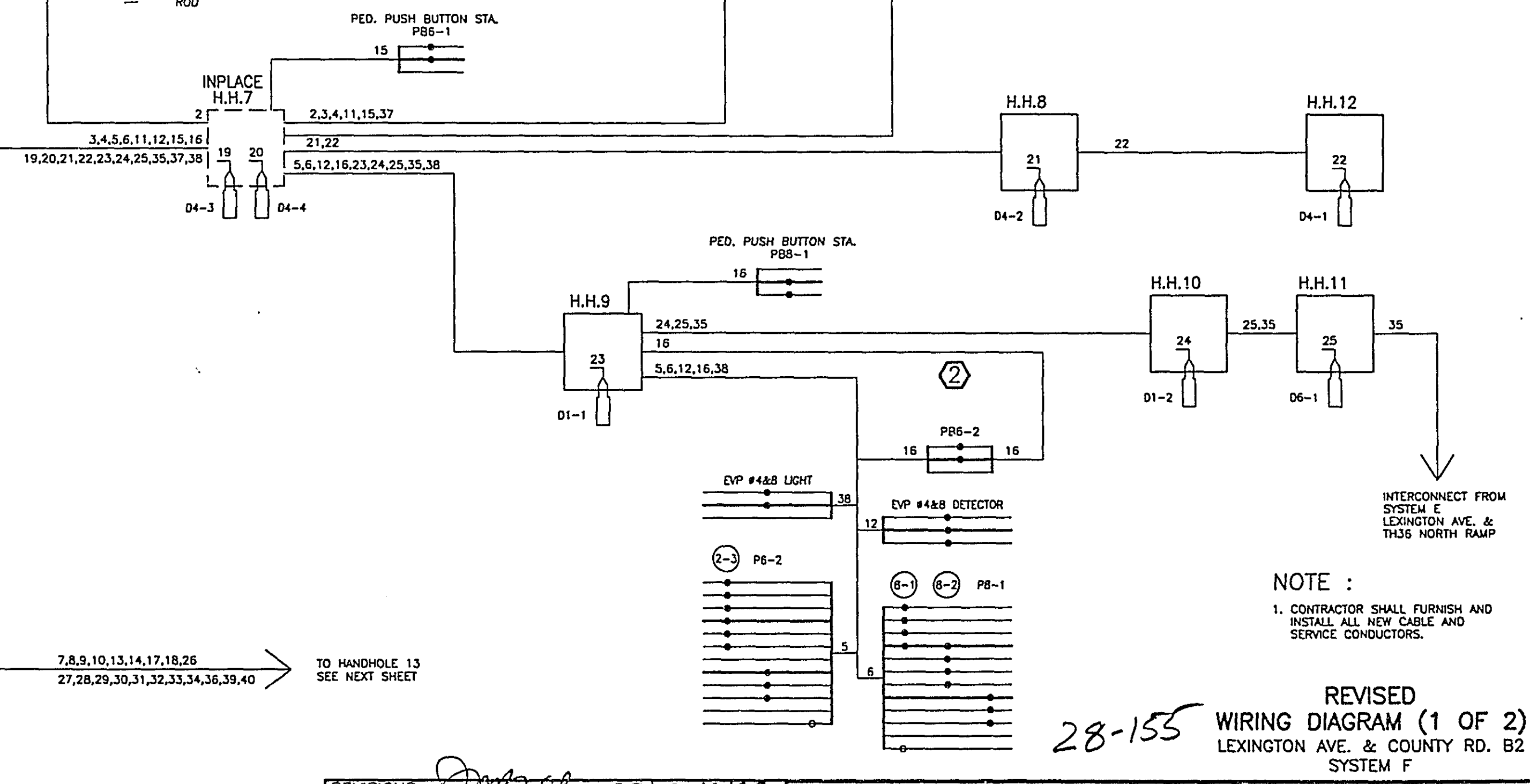
CONTROLLER CABINET



CONDUCTOR COLOR CODING

R	RED	
O	WH	3/C/12
BL	BLK	
WH	BLK	2/C/14
R/BLK	CLEAR	
O/BLK	R OR O	3/C/20
BL/BLK	WH OR YEL	
BLK	BLK OR BL	
BLK/WH	BLK	2-1/C/6
G/BLK	WH	2-1/C/10
G		

NOTE: ALL TERMINAL BLOCK CONNECTIONS SHALL BE ARRANGED AS SPECIFIED ABOVE.



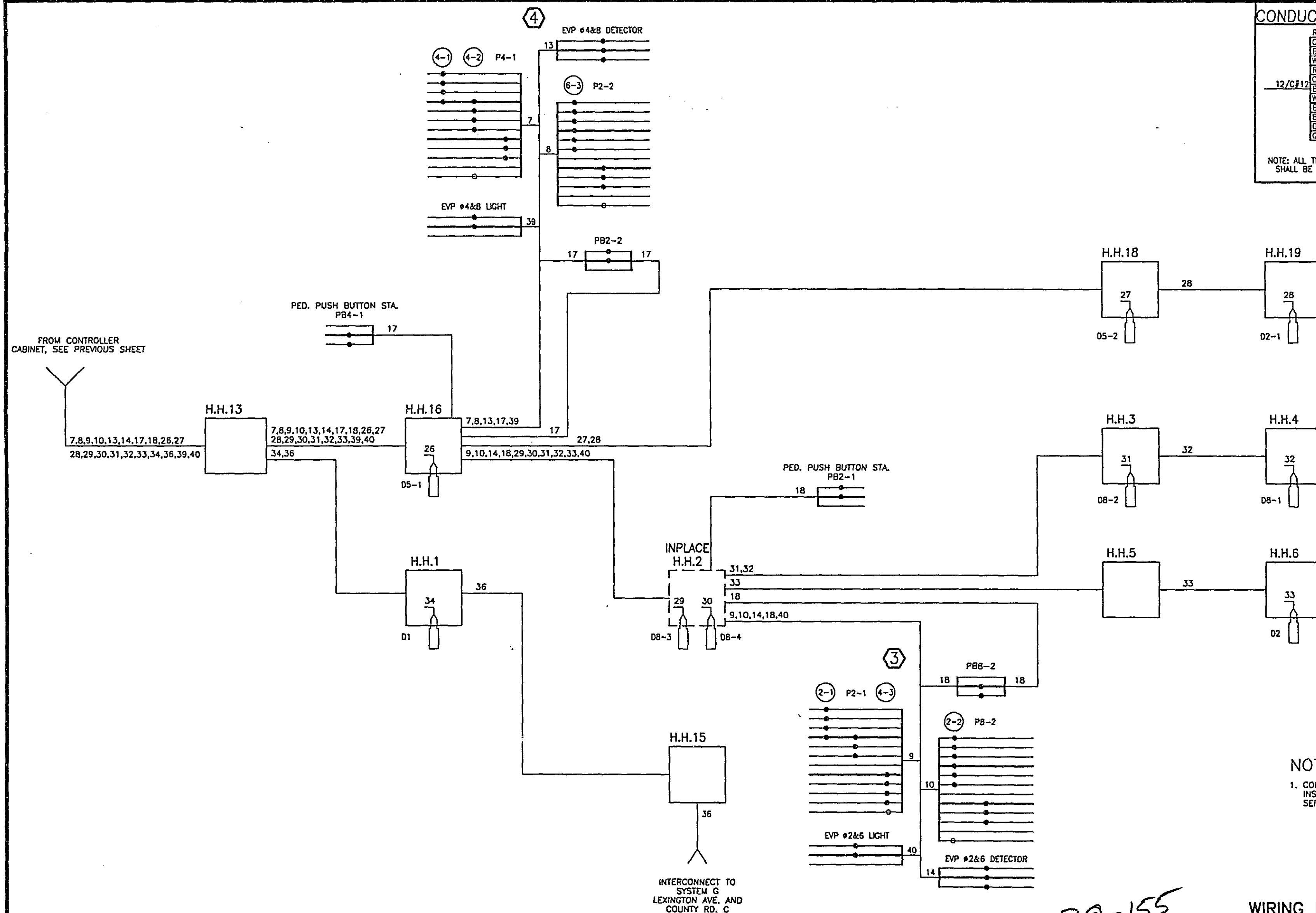
REVISIONS
 CERTIFIED BY *[Signature]* 8943 12-12-96 S.P. 62-651-34

28-155
 REVISED
 WIRING DIAGRAM (1 OF 2)
 LEXINGTON AVE. & COUNTY RD. B2
 SYSTEM F

CONDUCTOR COLOR CODING

R	RED	
W	WH	3/C#12
BL	BLK	
WH		
R/BLK	BLK	2/C#14
O/BLK	CLEAR	
BL/BLK		
WH/BLK	R OR O	
BLK	WH OR YEL	3/C#20
BLK/WH	BLK OR BL	
G/BLK	BLK	2-1/C#6
G	WH	2-1/C#10

NOTE: ALL TERMINAL BLOCK CONNECTIONS SHALL BE ARRANGED AS SPECIFIED ABOVE.



NOTE :

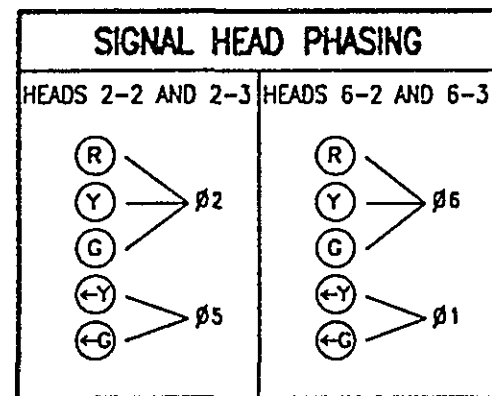
1. CONTRACTOR SHALL FURNISH AND INSTALL ALL NEW CABLE AND SERVICE CONDUCTORS.

REVISED
WIRING DIAGRAM (2 OF 2)
LEXINGTON AVE. & COUNTY RD. B2
SYSTEM F

REVISIONS
CERTIFIED BY *[Signature]* 8943 12-12-96 S.P. 62-651-34

Sheet No. 49 of 77 Sheets

SIGNAL INDICATION CHART						
SIGNAL FACE	PHASE	INDICATION SIZE				
		R	Y	G	Y	G
2-1	2	12	12	12	—	—
2-2	2 AND 5	12	12	12	12	12
2-3	2 AND 5	12	12	12	12	12
4-1	4	12	12	12	—	—
4-2	4	12	12	12	—	—
4-3	4	12	12	12	—	—
6-1	6	12	12	12	—	—
6-2	6 AND 1	12	12	12	12	12
6-3	6 AND 1	12	12	12	12	12
8-1	8	12	12	12	—	—
8-2	8	12	12	12	—	—
8-3	8	12	12	12	—	—



SIGNAL SYSTEM OPERATION

SIGNAL SYSTEM FLASH MODE IS ALL RED.

PHASES 1 AND 5 ARE PROTECTED/PERMISSIVE LEFT TURNS.

PHASES 1 AND 5 ARE NON-LOCK DETECTION.

PHASES 2, 4, 6 AND 8 ARE LOCK DETECTION.

VEHICLE DETECTION			
NUMBER	SIZE (FT.)	FUNCTION	LOCATION
D1-1	2-6'x15'	C & E (TD)	0' & 20'
D1-2	6'x6'	C & E	80'
D2-1	6'x6'	C & E	200'
D2-2	6'x6'	C	5'
D4-1 (S)	6'x6'	C & E	260'
D4-2 (S)	6'x6'	C & E	260'
D4-3	2-6'x6'	C	0'
D5-1	2-6'x15'	C & E (TD)	5' & 30'
D5-2	6'x6'	C & E	80'
D6-1	6'x6'	C & E	200'
D6-2	6'x6'	C	5'
D8-1 (S)	6'x6'	C & E	260'
D8-2 (S)	6'x6'	C & E	260'
D8-3	2-6'x6'	C	0'
D1	6'x6'	COUNT	SEE PLAN
D2	6'x6'	COUNT	SEE PLAN

LOCATION: DISTANCE FROM STOP LINE TO DETECTOR

(TD) = TIME DELAY
C & E = CALL & EXTEND
C = CALL ONLY
(S) = SAWCUT LOOP DETECTORS
ALL OTHERS ARE PVC LOOPS

- ④ TYPE A-30 SWING-AWAY HINGES
ONE WAY SIGNAL-OVERHEAD
TWO WAY SIGNAL (TYPE 20C-POLE MTD 270')
- R&S 2-SETS PEDESTRIAN INDICATIONS
F&I 2-SETS PEDESTRIAN INDICATIONS
2-PEDESTRIAN PUSH BUTTONS (MTD. 0' AND 270')
- R&S SIGN DOWN LIGHT (OVERHEAD MTD)
F&I ONE WAY EVP DETECTOR AND LIGHT OVERHEAD
- R&S SIGN R10-12 (24"X30") ADJACENT 2-2
F&I SIGN R10-12 (36"X48") ADJACENT 2-2
EXTEND INTO H.H.12
- 3" RSC
2-12/C #12
2-3/C #12
1-3/C #20

- 3" RSC, INPLACE
EXTEND INTO H.H. 2
2-12/C #12
2-3/C #12
1-3/C #20
4-2/C #14

- 1.25" RSC INPLACE
EXTEND INTO H.H.14
2-2/C #14

- F&I 1.25" RSC
1-2/C #14

- F&I 1.25" RSC
1-2/C #14

- F&I 1.25" RSC
1-2/C #14

- F&I 1.25" RSC
1-2/C #14

- F&I 1.25" RSC
1-2/C #14

- F&I 1.25" RSC
1-2/C #14

- F&I 1.25" RSC
1-2/C #14

- F&I 1.25" RSC
1-2/C #14

- F&I 1.25" RSC
1-2/C #14

- F&I 1.25" RSC
1-2/C #14

- F&I 1.25" RSC
1-2/C #14

- F&I 1.25" RSC
1-2/C #14

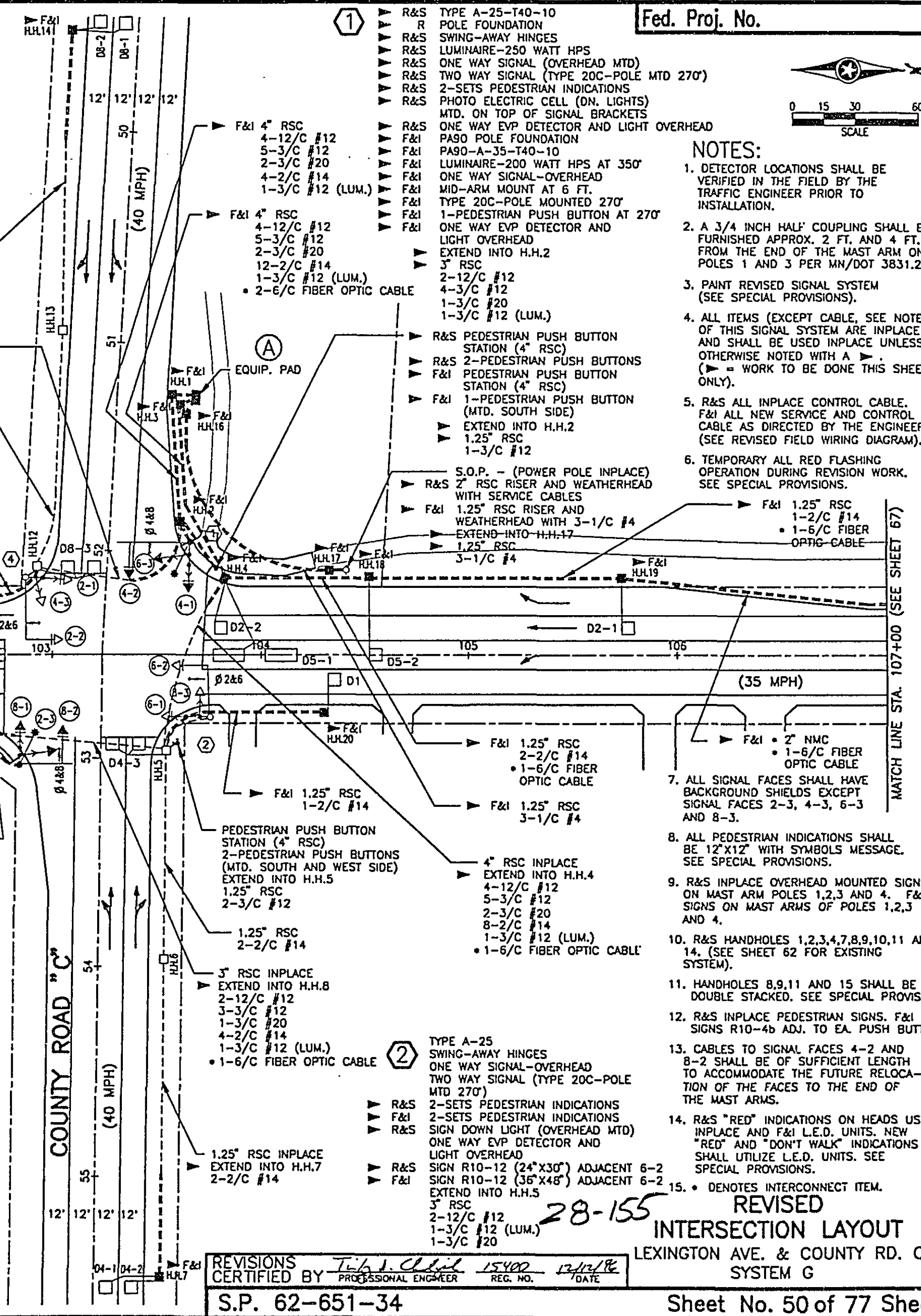
- F&I 1.25" RSC
1-2/C #14

- F&I 1.25" RSC
1-2/C #14

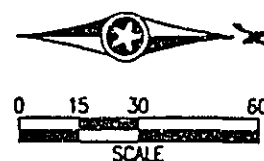
- F&I 1.25" RSC
1-2/C #14

- F&I 1.25" RSC
1-2/C #14

- F&I 1.25" RSC
1-2/C #14



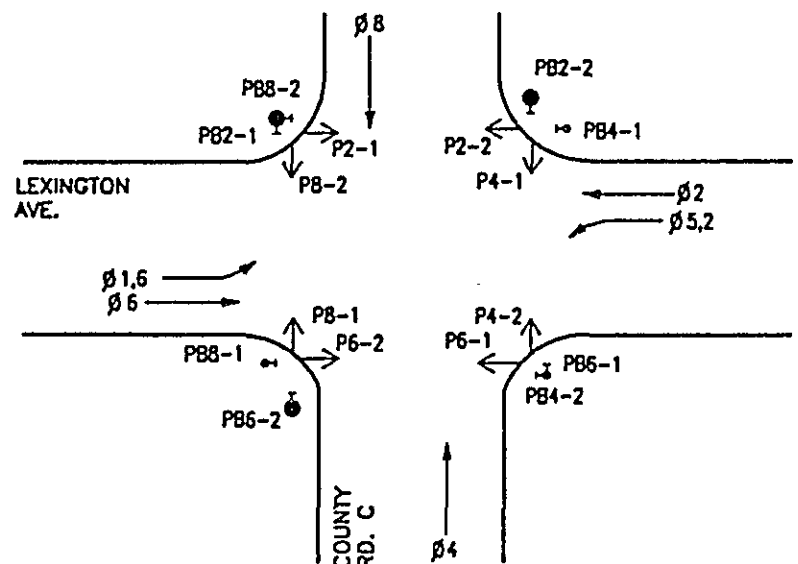
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NOTES:

- DETECTOR LOCATIONS SHALL BE VERIFIED IN THE FIELD BY THE TRAFFIC ENGINEER PRIOR TO INSTALLATION.
- A 3/4 INCH HALF COUPLING SHALL BE FURNISHED APPROX. 2 FT. AND 4 FT. FROM THE END OF THE MAST ARM ON POLES 1 AND 3 PER MN/DOT 3831.2C.
- PANT REVISION SIGNAL SYSTEM (SEE SPECIAL PROVISIONS).
- ALL ITEMS (EXCEPT CABLE, SEE NOTE 5) OF THIS SIGNAL SYSTEM ARE INPLACE AND SHALL BE USED INPLACE UNLESS OTHERWISE NOTED WITH A > . (> = WORK TO BE DONE THIS SHEET ONLY).
- R&S ALL INPLACE CONTROL CABLE. F&I ALL NEW SERVICE AND CONTROL CABLE AS DIRECTED BY THE ENGINEER. (SEE REVISED FIELD WIRING DIAGRAM).
- TEMPORARY ALL RED FLASHING OPERATION DURING REVISION WORK. SEE SPECIAL PROVISIONS.
- ALL SIGNAL FACES SHALL HAVE BACKGROUND SHIELDS EXCEPT SIGNAL FACES 2-3, 4-3, 6-3 AND 8-3.
- ALL PEDESTRIAN INDICATIONS SHALL BE 12"X12" WITH SYMBOLS MESSAGE. SEE SPECIAL PROVISIONS.
- R&S INPLACE OVERHEAD MOUNTED SIGNS ON MAST ARM POLES 1,2,3 AND 4. F&I SIGNS ON MAST ARMS OF POLES 1,2,3 AND 4.
- R&S HANDHOLES 1,2,3,4,7,8,9,10,11 AND 14. (SEE SHEET 62 FOR EXISTING SYSTEM).
- HANDHOLES 8,9,11 AND 15 SHALL BE DOUBLE STACKED. SEE SPECIAL PROVISIONS.
- R&S INPLACE PEDESTRIAN SIGNS. F&I SIGNS R10-4b ADJ. TO EA. PUSH BUTTON.
- CABLES TO SIGNAL FACES 4-2 AND 8-2 SHALL BE OF SUFFICIENT LENGTH TO ACCOMMODATE THE FUTURE RELOCATION OF THE FACES TO THE END OF THE MAST ARMS.
- R&S "RED" INDICATIONS ON HEADS USED INPLACE AND F&I L.E.D. UNITS. NEW "RED" AND "DON'T WALK" INDICATIONS SHALL UTILIZE L.E.D. UNITS. SEE SPECIAL PROVISIONS.
- > DENOTES INTERCONNECT ITEM.

CONTROLLER PHASING, PEDESTRIAN INDICATIONS AND PUSH BUTTONS



REVISED
INTERSECTION LAYOUT
LEXINGTON AVE. & COUNTY RD. C
SYSTEM G

CONTROLLER CABINET

SIGNAL SERVICE

- 8 RED 6-1
- 8 YEL 6-1
- 8 GRN 6-1
- 8 NEU 6-1, P6-1
- 8 WLK P6-1
- 8 DWK P6-1
- 8 SPR
- 8 NEU 8-3
- 8 RED 8-3
- 8 YEL 8-3
- 8 GRN 8-3
- 8 EQG
- 9 RED 6-2
- 9 YEL 6-2
- 9 GRN 6-2
- 9 NEU 6-2
- 9 YEL LTA 6-2
- 9 GRN LTA 6-2
- 9 SPR
- 9 NEU P4-2
- 9 WLK P4-2
- 9 DWK P4-2
- 9 SPR
- 9 EQG
- 10 RED 2-3
- 10 YEL 2-3
- 10 GRN 2-3
- 10 NEU 2-3
- 10 YEL LTA 2-3
- 10 GRN LTA 2-3
- 10 SPR
- 10 NEU 8-1
- 10 RED 8-1
- 10 YEL 8-1
- 10 GRN 8-1
- 10 EQG
- 11 RED 8-2
- 11 YEL 8-2
- 11 GRN 8-2
- 11 NEU 8-2
- 11 SPR
- 11 SPR
- 11 NEU P6-2
- 11 WLK P6-2
- 11 DWK P6-2
- 11 SPR
- 11 EQG
- 12 P4-1 WLK
- 12 NEU
- 12 P4-1 DWK
- 13 PB-1 WLK
- 13 NEU
- 13 PB-1 DWK
- 18 PB2-2
- 18 NEU
- 18 PB4-1
- 19 PB2-1
- 19 NEU
- 19 PB8-2
- 20 PB6-1
- 20 NEU
- 20 PB4-2
- 21 PB6-2
- 21 NEU
- 21 PB8-1
- 22 D8-3
- 23 D2
- 24 D8-1
- 25 D8-2
- 26 D2-2
- 27 D5-1
- 28 D4-3
- 29 D4-1

- 4-1 RED
- 4-1 YEL
- 4-1 GRN
- 4-1 NEU
- 4-2 RED
- 4-2 YEL
- 4-2 GRN
- 4-2 NEU
- 4-2 SPR
- 4-2 SPR
- 4-2 EQG
- 6-3 RED
- 6-3 YEL
- 6-3 GRN
- 6-3 NEU
- 6-3 YEL LTA
- 6-3 GRN LTA
- 6-3 SPR
- P2-2 NEU
- P2-2 WLK
- P2-2 DWK
- P2-2 SPR
- P2-2 EQG
- 2-2 RED
- 2-2 YEL
- 2-2 GRN
- 2-2 NEU
- 2-2 YEL LTA
- 2-2 GRN LTA
- 2-2 SPR
- P8-2 NEU
- P8-2 WLK
- P8-2 DWK
- P8-2 SPR
- P8-2 EQG
- 2-1 RED
- 2-1 YEL
- 2-1 GRN
- 2-1 NEU
- 2-1 WLK
- 2-1 DWK
- 2-1 SPR
- 4-3 NEU
- 4-3 RED
- 4-3 YEL
- 4-3 GRN
- 4-3 EQG
- INTERCONNECT FROM SYSTEM F 38
- INTERCONNECT TO SYSTEM H 39
- #4&8 14
- #2&6 15
- #4&8 16
- #2&6 17
- D4-2 30
- D1 31
- D1-1 32
- D6-2 33
- D1-2 34
- D6-1 35
- D5-2 36
- D2-1 37

SERVICE CABINET & METER

- 1 SIGNAL SERVICE METERED
- 2 LUMINARE
- 3 LUMINARE
- S.O.P. 120/240 V. SERVICE

GROUND ROD

H.H.17

H.H.16

H.H.1

H.H.2

PED. PUSH BUTTON STA. PB4-1

INPLACE H.H.12

INPLACE H.H.13

H.H.11

H.H.15

H.H.14

CONDUCTOR COLOR CODING

R	RED	3/C#12
O	WH	
BL	BLK	
WH	BLK	2/C#14
R/BLK	BLK	
O/BLK	CLEAR	
BL/BLK		
WH/BLK	R OR O	
BLK/WH	WH OR YEL	3/C#20
BLK/BLK	BLK OR BL	
G/BLK	BLK	2-1/C#6
G	WH	2-1/C#10

NOTE: ALL TERMINAL BLOCK CONNECTIONS SHALL BE ARRANGED AS SPECIFIED ABOVE.

8,9,10,11,13,16,17,20,21,26,27,28,29
30,31,32,33,34,35,36,37,38,39,42,43

TO HANDHOLE 3
SEE NEXT SHEET

EVP LIGHT

- #4&8 40
- #2&6 41
- #4&8 42
- #2&6 43

EVP #2&6 LIGHT

EVP #2&6 DETECTOR

NOTE :

1. CONTRACTOR SHALL FURNISH AND INSTALL ALL NEW CABLE AND SERVICE CONDUCTORS.

REVISED
WIRING DIAGRAM (1 OF 2)
LEXINGTON AVE. & COUNTY RD. C
SYSTEM G

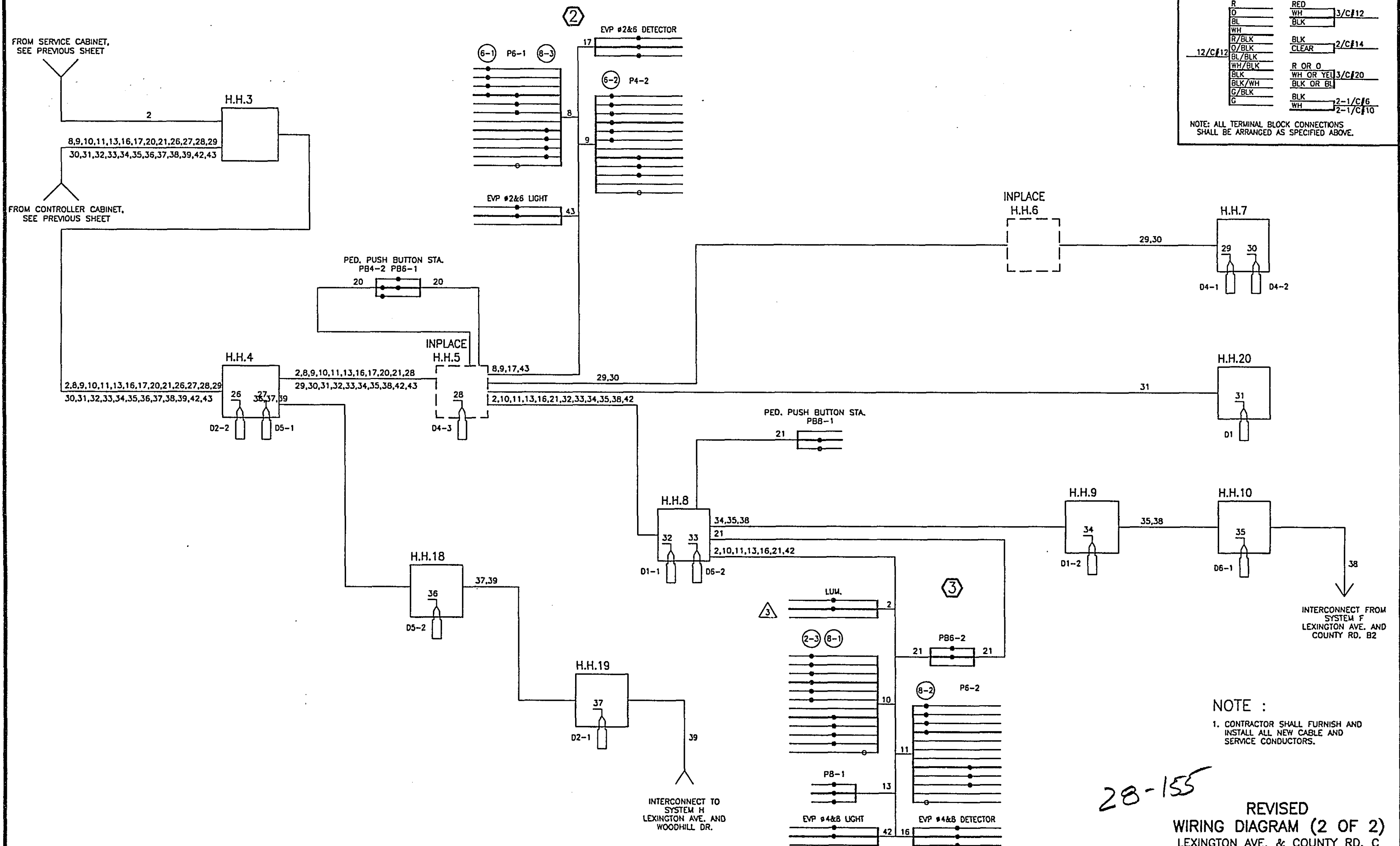
REVISIONS
CERTIFIED BY *Professional Engineer* REG. NO. *2943* DATE *12.12.96*
S.P. 62-651-34

Sheet No. 51 of 77 Sheets

CONDUCTOR COLOR CODING

R	RED	
O	WH	3/C#12
BL	BLK	
WH		
R/BLK	BLK	2/C#14
O/BLK	CLEAR	
BL/BLK		
WH/BLK	R OR O	
BLK	WH OR YEL	3/C#20
BLK/WH	BLK OR BL	
G/BLK	BLK	2-1/C#6
G	WH	2-1/C#10

NOTE: ALL TERMINAL BLOCK CONNECTIONS SHALL BE ARRANGED AS SPECIFIED ABOVE.



NOTE :

- CONTRACTOR SHALL FURNISH AND INSTALL ALL NEW CABLE AND SERVICE CONDUCTORS.

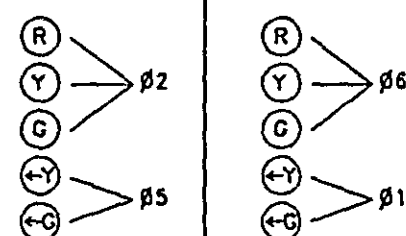
REVISED
WIRING DIAGRAM (2 OF 2)
LEXINGTON AVE. & COUNTY RD. C
SYSTEM G

SIGNAL INDICATION CHART

SIGNAL FACE	PHASE	INDICATION SIZE					
		R	Y	G	Y	G	
2-1	2	12	12	12	—	—	
2-2	2 AND 5	12	12	12	12	12	
2-3	2 AND 5	12	12	12	12	12	
4-1	4	12	12	12	—	—	
4-2	4	12	12	12	—	—	
4-3	4	12	12	12	—	—	
6-1	6	12	12	12	—	—	
6-2	6 AND 1	12	12	12	12	12	
6-3	6 AND 1	12	12	12	12	12	
8-1	8	12	12	12	—	—	
8-2	8	12	12	12	—	—	
8-3	8	12	12	12	—	—	

SIGNAL HEAD PHASING

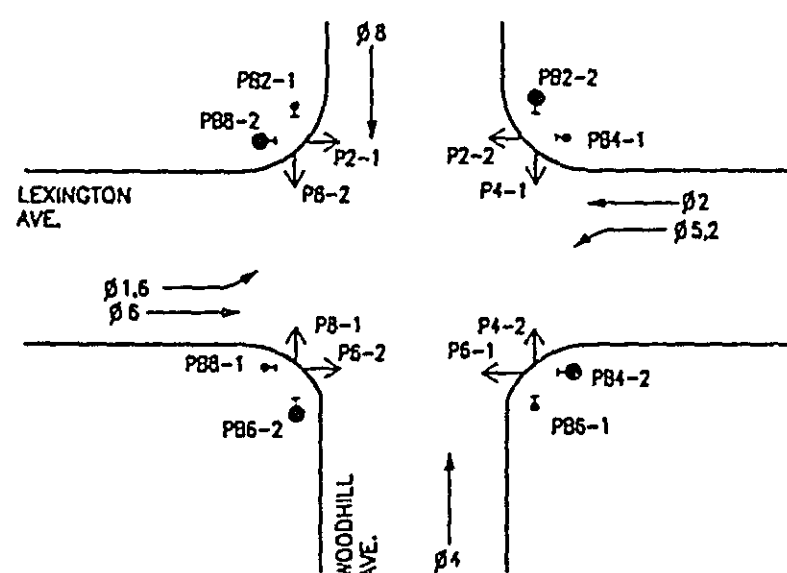
HEADS 2-2 AND 2-3 HEADS 6-2 AND 6-3



SIGNAL SYSTEM OPERATION

SIGNAL SYSTEM FLASH MODE IS ALL RED.
 PHASES 1 AND 5 ARE PROTECTED/
 PERMISSIVE LEFT TURNS.
 PHASES 1,4,5 AND 8 ARE NON-LOCK
 DETECTION.
 PHASES 2 AND 6 ARE LOCK DETECTION.
 PHASES 2 AND 6 ARE ON VEHICLE RECALL.

CONTROLLER PHASING, PEDESTRIAN INDICATIONS AND PUSH BUTTONS



VEHICLE DETECTION

NUMBER	SIZE (FT.)	FUNCTION	LOCATION
D1-1	2-6'x15'	C & E (TD)	5' & 30'
D1-2	6'x6'	C & E	80'
D2-1	6'x6'	C & E	260'
D4-1 (S)	6'x6'	C & E	160'
D4-2 (S)	6'x6'	C & E	70'
D4-4 (S)	6'x15'	C & E (TD)	0'
D5-1	2-6'x15'	C & E (TD)	5' & 30'
D5-2	6'x6'	C & E	80'
D6-1	6'x6'	C & E	200'
D8-1 (S)	2-6'x6'	C & E	160'
D8-2 (S)	2-6'x6'	C & E	70'
D8-3	6'x15'	C & E	0'
D8-4	6'x15'	C & E (TD)	0'
D1	6'x6'	COUNT	SEE PLAN
D2	6'x6'	COUNT	SEE PLAN

LOCATION: DISTANCE FROM STOP LINE TO DETECTOR
 (TD) = TIME DELAY
 C & E = CALL & EXTEND
 (S) = SAW CUT LOOP DETECTORS.
 ALL OTHERS ARE PVC LOOPS.

PEDESTRIAN PUSH BUTTON
 STATION (4" RSC)
 1-PEDESTRIAN PUSH BUTTON
 EXTEND INTO H.H.14
 1.25" RSC
 1-3/C #12

2" NMC
 1-6/C FIBER OPTIC CABLE
 2" NMC
 1-6/C FIBER OPTIC CABLE
 H.H.19

LEXINGTON AVE.

(35 MPH)

MATCH LINE STA. 109+00 (SEE SHEET 65)

EQUIPMENT PAD
 SERVICE CABINET
 EXTEND INTO H.H.1
 1.25" RSC
 3-1/C #4
 EXTEND INTO H.H.10
 1.25" RSC
 1-3/C #12(LUM.)
 CONTROLLER CABINET
 EXTEND INTO H.H.2
 4" RSC
 4-12/C #12
 4-3/C #12
 2-3/C #20
 7-2/C #14
 EXTEND INTO H.H.10
 4" RSC
 4-12/C #12
 3-3/C #12
 1-3/C #20
 8-2/C #14
 1-6/C FIBER OPTIC CABLE
 BETWEEN SERVICE CABINET AND
 CONTROLLER CABINET
 1.25" RSC
 2-1/C #6
 1-1/C #6 (BR.GR.)

4

PAB5 POLE FOUNDATION
 PAB5-A-25
 ONE WAY SIGNAL-OVERHEAD
 TYPE 20C-POLE MOUNTED 270'
 1-PEDESTRIAN PUSH BUTTON AT 270'
 ONE WAY EVP DETECTOR AND
 LIGHT OVERHEAD
 SIGN R10-12 (36"x48") ADJACENT TO 2-2
 EXTEND INTO H.H.14
 3" RSC
 2-12/C #12
 3-3/C #12
 1-3/C #20

3

PAB5 POLE FOUNDATION
 PAB5-A-20-T40-10
 LUMINAIRE-200 WATT HPS AT 350'
 ONE WAY SIGNAL-OVERHEAD
 TYPE 20C-POLE MOUNTED 270'
 1-PEDESTRIAN PUSH BUTTON AT 270'
 EXTEND INTO H.H.15
 3" RSC
 2-12/C #12
 2-3/C #12
 1-3/C #12(LUM.)

1

PAB5 POLE FOUNDATION
 PAB5-A-20
 ONE WAY SIGNAL-OVERHEAD
 TYPE 20C-POLE MOUNTED 270'
 1-PEDESTRIAN PUSH BUTTON AT 270'
 TWO WAY EVP DETECTOR AND
 LIGHT OVERHEAD
 EXTEND INTO H.H.2
 3" RSC
 2-12/C #12
 3-3/C #12
 1-3/C #20

4" RSC
 4-12/C #12
 3-3/C #12
 1-3/C #20
 8-2/C #14
 1-3/C #12(LUM.)
 1-6/C FIBER OPTIC CABLE

S.O.P. - (POWER POLE INPLACE)
 1.25" RSC RISER AND
 WEATHERHEAD WITH 3-1/C #4
 EXTEND INTO H.H.1
 1.25" RSC
 3-1/C #4

PEDESTRIAN PUSH BUTTON
 STATION (4" RSC)
 1-PEDESTRIAN PUSH BUTTON
 EXTEND INTO H.H.2
 1.25" RSC
 1-3/C #12

1.25" RSC
 1-2/C #14

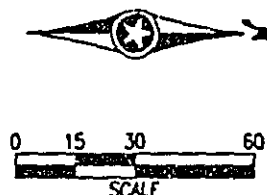
3" RSC
 2-12/C #12
 2-3/C #12
 1-3/C #20
 4-2/C #14

1.25" RSC
 3-2/C #14

PEDESTRIAN PUSH BUTTON
 STATION (4" RSC)
 1-PEDESTRIAN PUSH BUTTON
 EXTEND INTO H.H.5
 1.25" RSC
 1-3/C #12

2

PAB5 POLE FOUNDATION
 PAB5-A-25
 ONE WAY SIGNAL-OVERHEAD
 TYPE 20C-POLE MOUNTED 270'
 1-PEDESTRIAN PUSH BUTTON AT 270'
 TWO WAY EVP DETECTOR AND
 LIGHT OVERHEAD
 SIGN R10-12 (36"x48") ADJACENT TO 6-2
 EXTEND INTO H.H.5
 3" RSC
 2-12/C #12
 3-3/C #12
 1-3/C #20



NOTES:

- POLE AND DETECTOR LOCATIONS SHALL BE VERIFIED IN THE FIELD BY THE TRAFFIC ENGINEER PRIOR TO INSTALLATION.
- A 3/4 INCH HALF COUPLING SHALL BE FURNISHED APPROX. 2 FT. AND 4 FT. FROM THE END OF THE MAST ARM ON EACH POLE PER MN/DOT 3831.2C.
- ALL PEDESTRIAN INDICATIONS SHALL BE 12"x12" WITH SYMBOLS MESSAGE. SEE SPECIAL PROVISIONS.
- ALL SIGNAL FACES SHALL HAVE BACKGROUND SHIELDS EXCEPT SIGNAL FACES 2-3, 4-3, 6-3 AND 8-3.
- EACH LUMINAIRE SHALL HAVE A PHOTO ELECTRIC CELL AND STREET LIGHT CHECK SWITCH.
- "RED" AND "DON'T WALK" INDICATIONS SHALL UTILIZE L.E.D. UNITS. SEE SPECIAL PROVISIONS.
- DENOTES INTERCONNECT ITEM.

INTERSECTION LAYOUT
 LEXINGTON AVE. & WOODHILL DR.
 SYSTEM H

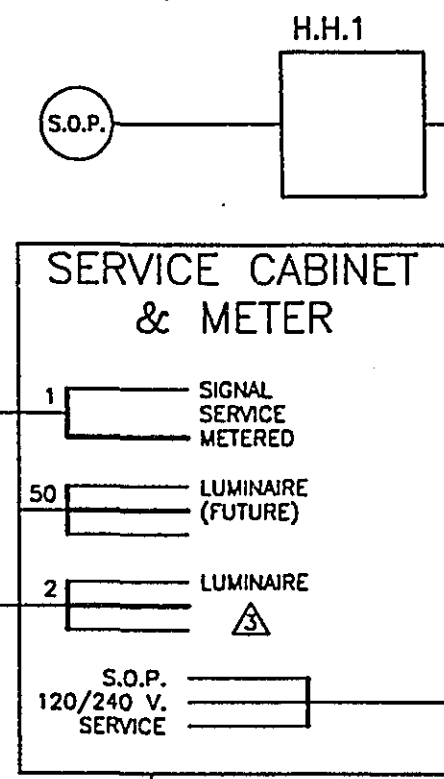
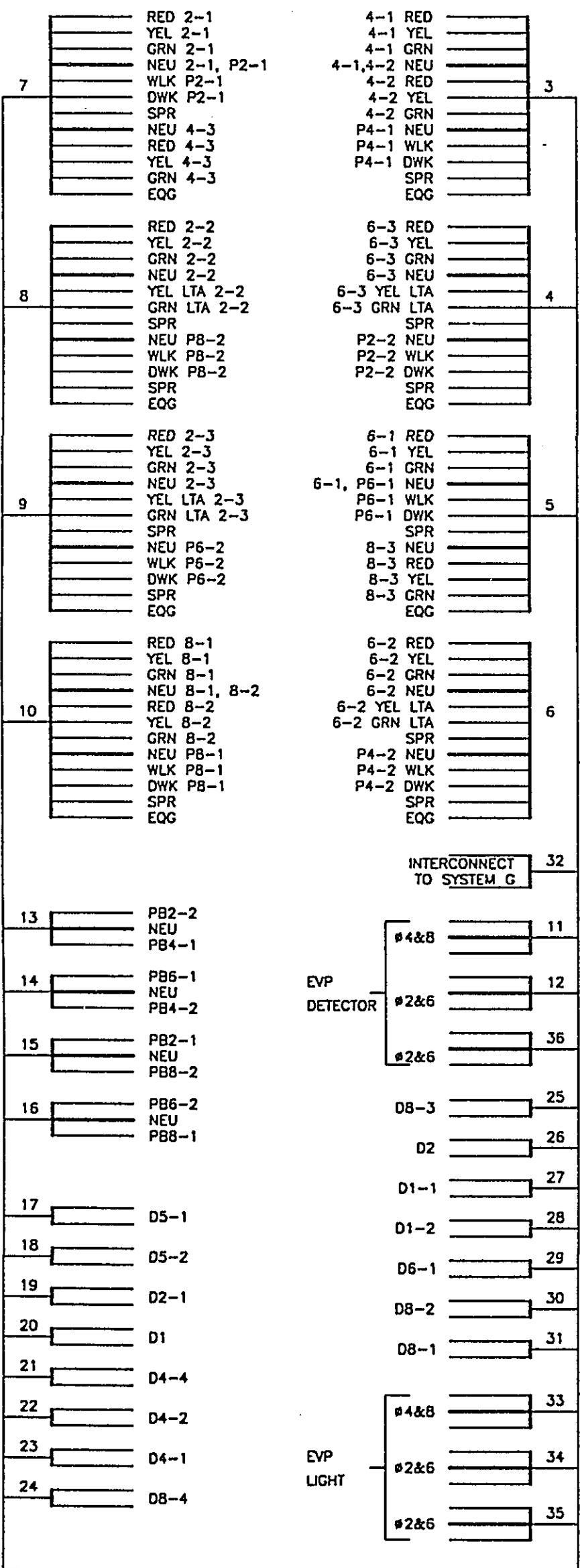
CERTIFIED BY T. G. A. C. P. E. 15400
 PROFESSIONAL ENGINEER REG. NO. DATE

S.P. 62-651-34, S.P. 160-225-04

Sheet No. 53 of 77 Sheets

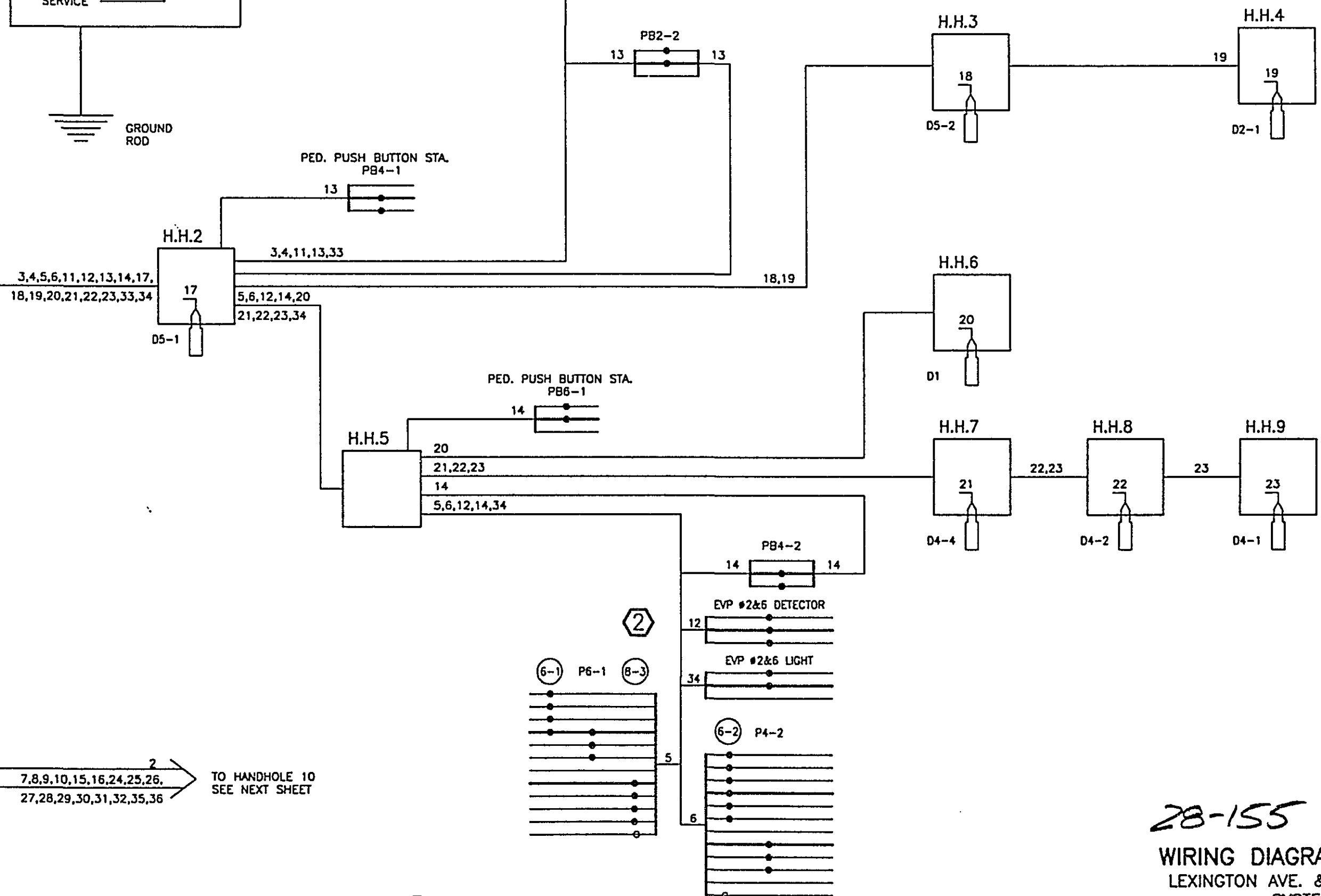
CONTROLLER CABINET

SIGNAL SERVICE



CONDUCTOR COLOR CODING			
R	RED	3/C#12	
O	WH	BLK	
BL	BLK		
WH	BLK		
R/BLK	BLK		
O/BLK	CLEAR	2/C#14	
BL/BLK			
WH/BLK	R OR O		
BLK/WH	WH OR YEL	3/C#20	
G/BLK	BLK OR BL		
G	BLK	2-1/C#6	
	WH	2-1/C#10	

NOTE: ALL TERMINAL BLOCK CONNECTIONS SHALL BE ARRANGED AS SPECIFIED ABOVE.

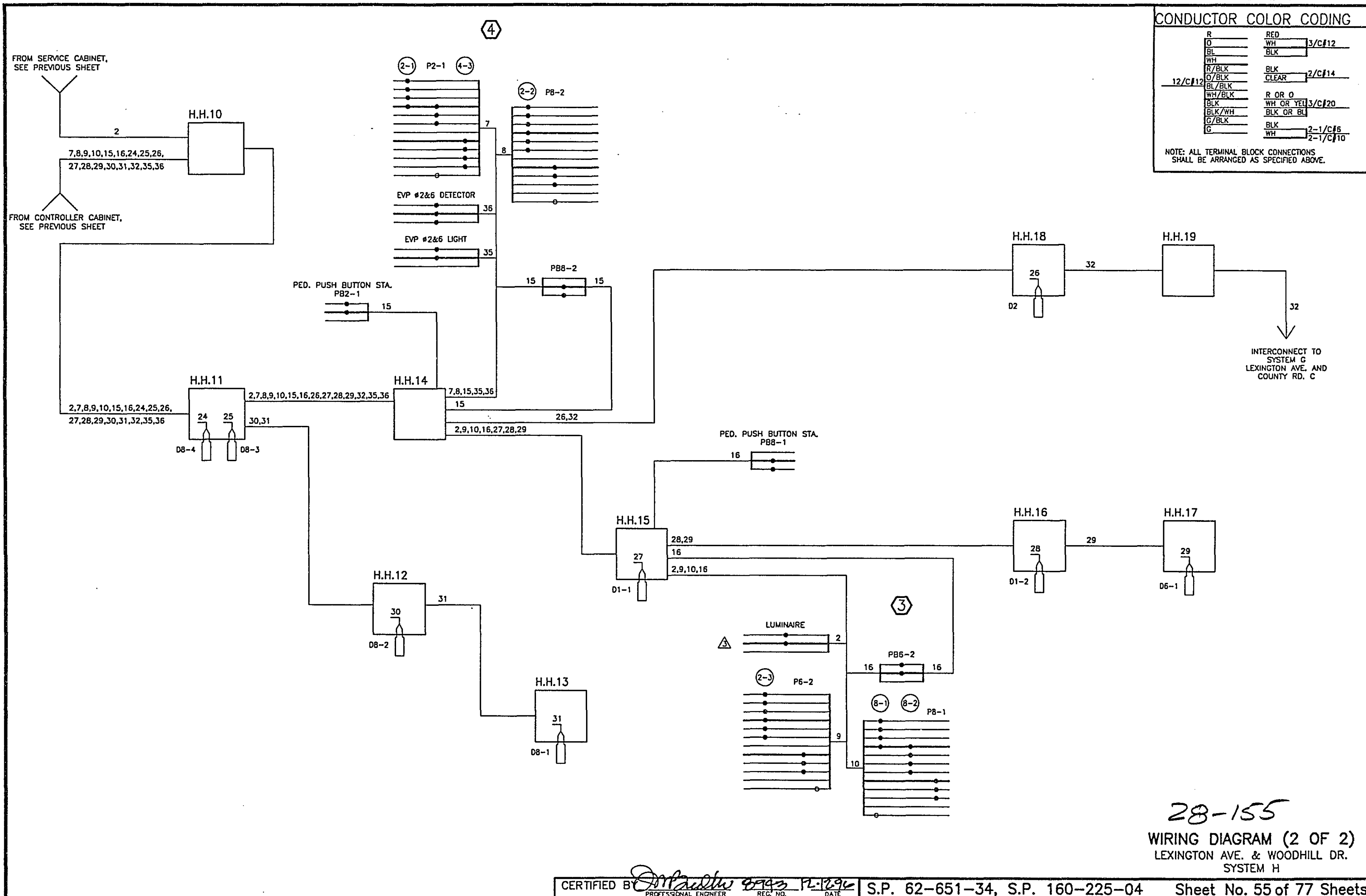


7,8,9,10,15,16,24,25,26, 27,28,29,30,31,32,35,36
TO HANDHOLE 10 SEE NEXT SHEET

CONDUCTOR COLOR CODING

R	RED	
W	WH	3/C#12
BL	BLK	
WH		
R/BLK	BLK	2/C#14
O/BLK	CLEAR	
BL/BLK		
WH/BLK	R OR O	
BLK	WH OR YEL	3/C#20
BLK/WH	BLK OR BL	
G/BLK	BLK	2-1/C#6
G	WH	2-1/C#10

NOTE: ALL TERMINAL BLOCK CONNECTIONS SHALL BE ARRANGED AS SPECIFIED ABOVE.

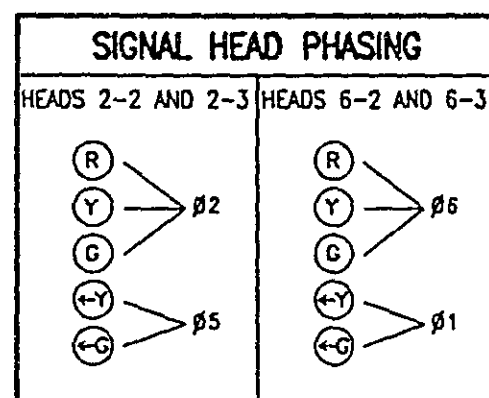


SIGNAL INDICATION CHART						
SIGNAL FACE	PHASE	INDICATION SIZE				
		R	Y	G	Y	G
2-1	2	12	12	12	—	—
2-2	2 AND 5	12	12	12	12	12
2-3	2 AND 5	12	12	12	12	12
4-1	4	12	12	12	—	—
4-2	4	12	12	12	—	—
4-3	4	12	12	12	—	—
6-1	6	12	12	12	—	—
6-2	6 AND 1	12	12	12	12	12
6-3	6 AND 1	12	12	12	12	12
8-1	8	12	12	12	—	—
8-2	8	12	12	12	—	—
8-3	8	12	12	12	—	—

VEHICLE DETECTION			
NUMBER	SIZE (FT.)	FUNCTION	LOCATION
D1-1	2-6'x15'	C & E (TD)	5' & 30'
D1-2	6'x6'	C & E	80'
D2-1	6'x6'	C & E	260'
D4-1 (S)	6'x6'	C & E	160'
D4-2 (S)	6'x6'	C & E	70'
D4-3 (S)	6'x15'	C & E	0'
D4-4 (S)	6'x15'	C & E (TD)	0'
D5-1	2-6'x15'	C & E (TD)	5' & 30'
D5-2	6'x6'	C & E	80'
D6-1	6'x6'	C & E	260'
D8-4 (S)	6'x15'	C & E (TD)	0'
D1	6'x6'	COUNT	SEE PLAN
D2	6'x6'	COUNT	SEE PLAN

LOCATION: DISTANCE FROM STOP LINE TO DETECTOR

(TD) = TIME DELAY
C & E = CALL & EXTEND
(S) = SAW CUT LOOP DETECTORS.
ALL OTHERS ARE PVC LOOPS.



SIGNAL SYSTEM OPERATION

SIGNAL SYSTEM FLASH MODE IS ALL RED.

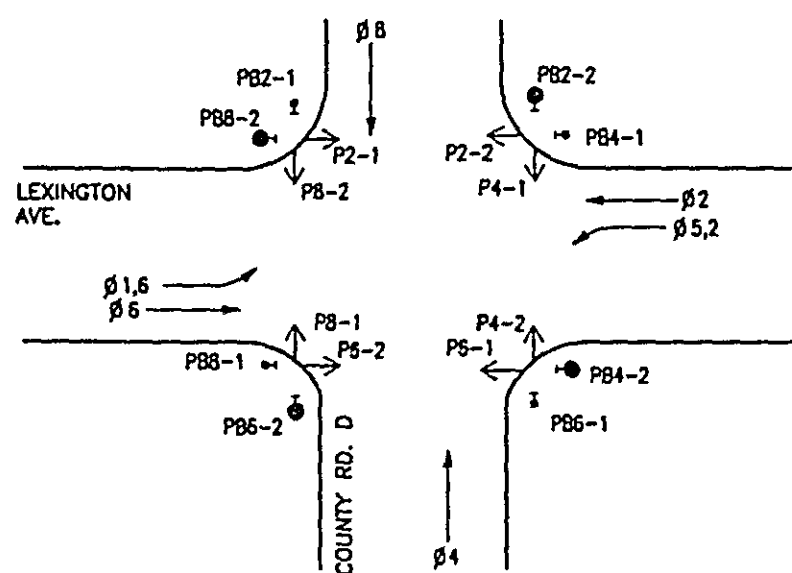
PHASES 1 AND 5 ARE PROTECTED/ PERMISSIVE LEFT TURNS.

PHASES 1, 4, 5 AND 8 ARE NON-LOCK DETECTION.

PHASES 2 AND 6 ARE LOCK DETECTION.

PHASES 2 AND 6 ARE ON VEHICLE RECALL.

CONTROLLER PHASING, PEDESTRIAN INDICATIONS AND PUSH BUTTONS



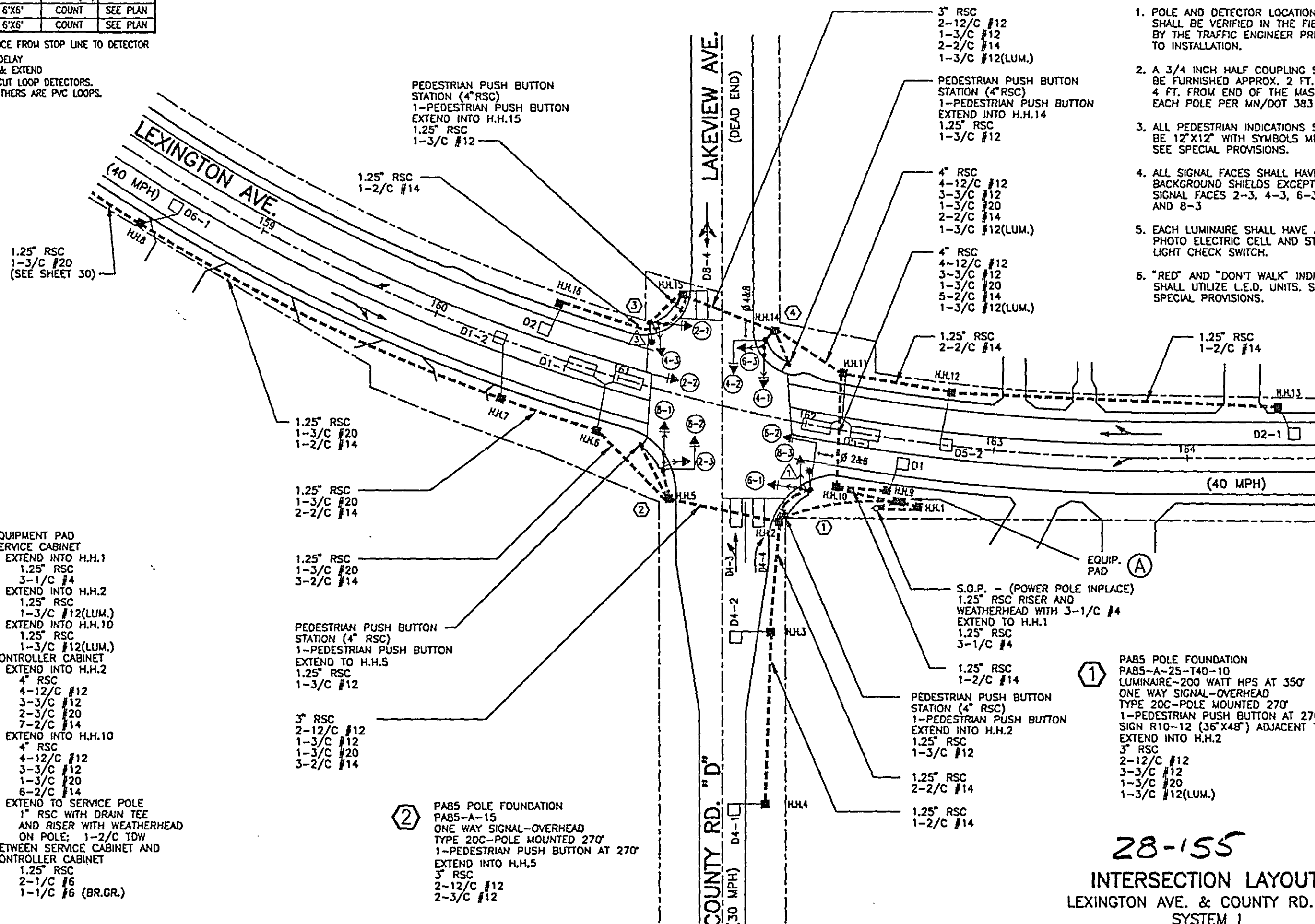
EQUIPMENT PAD SERVICE CABINET
EXTEND INTO H.H.1
1.25" RSC
3-1/C #4
EXTEND INTO H.H.2
1.25" RSC
1-3/C #12(LUM.)
EXTEND INTO H.H.10
1.25" RSC
1-3/C #12(LUM.)
CONTROLLER CABINET
EXTEND INTO H.H.2
4" RSC
4-12/C #12
3-3/C #12
2-3/C #20
7-2/C #14
EXTEND INTO H.H.10
4" RSC
4-12/C #12
3-3/C #12
1-3/C #20
6-2/C #14
EXTEND TO SERVICE POLE
1" RSC WITH DRAIN TEE
AND RISER WITH WEATHERHEAD
ON POLE: 1-2/C TDW
BETWEEN SERVICE CABINET AND
CONTROLLER CABINET
1.25" RSC
2-1/C #6
1-1/C #6 (BR.GR.)

PA85 POLE FOUNDATION
PA85-A-25-T40-10
LUMINAIRE-200 WATT HPS AT 350'
ONE WAY SIGNAL-OVERHEAD
TYPE 20C-POLE MOUNTED 270'
1-PEDESTRIAN PUSH BUTTON AT 270'
TWO WAY EVP DETECTOR AND
LIGHT OVERHEAD
SIGN R10-12 (36"x48") ADJACENT TO 2-2
EXTEND INTO H.H.15
3" RSC
2-12/C #12
3-3/C #12
1-3/C #20
1-3/C #12(LUM.)

PA85 POLE FOUNDATION
PA85-A-15
ONE WAY SIGNAL-OVERHEAD
TYPE 20C-POLE MOUNTED 270'
1-PEDESTRIAN PUSH BUTTON AT 270'
TWO WAY EVP DETECTOR AND
LIGHT OVERHEAD
EXTEND INTO H.H.14
3" RSC
2-12/C #12
3-3/C #12
1-3/C #20

NOTES:

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- A 3/4 INCH HALF COUPLING SHALL BE FURNISHED APPROX. 2 FT. AND 4 FT. FROM END OF THE MAST ON EACH POLE PER MN/DOT 3831.2C
- ALL PEDESTRIAN INDICATIONS SHALL BE 12"x12" WITH SYMBOLS MESSAGE. SEE SPECIAL PROVISIONS.
- ALL SIGNAL FACES SHALL HAVE BACKGROUND SHIELDS EXCEPT SIGNAL FACES 2-3, 4-3, 6-3 AND 8-3
- EACH LUMINAIRE SHALL HAVE A PHOTO ELECTRIC CELL AND STREET LIGHT CHECK SWITCH.
- "RED" AND "DON'T WALK" INDICATIONS SHALL UTILIZE L.E.D. UNITS. SEE SPECIAL PROVISIONS.



PA85 POLE FOUNDATION
PA85-A-25-T40-10
LUMINAIRE-200 WATT HPS AT 350'
ONE WAY SIGNAL-OVERHEAD
TYPE 20C-POLE MOUNTED 270'
1-PEDESTRIAN PUSH BUTTON AT 270'
SIGN R10-12 (36"x48") ADJACENT TO 6-2
EXTEND INTO H.H.2
3" RSC
2-12/C #12
3-3/C #12
1-3/C #20
1-3/C #12(LUM.)

28-155
INTERSECTION LAYOUT
LEXINGTON AVE. & COUNTY RD. D
SYSTEM I

CERTIFIED BY *T. A. Chisholm*
PROFESSIONAL ENGINEER

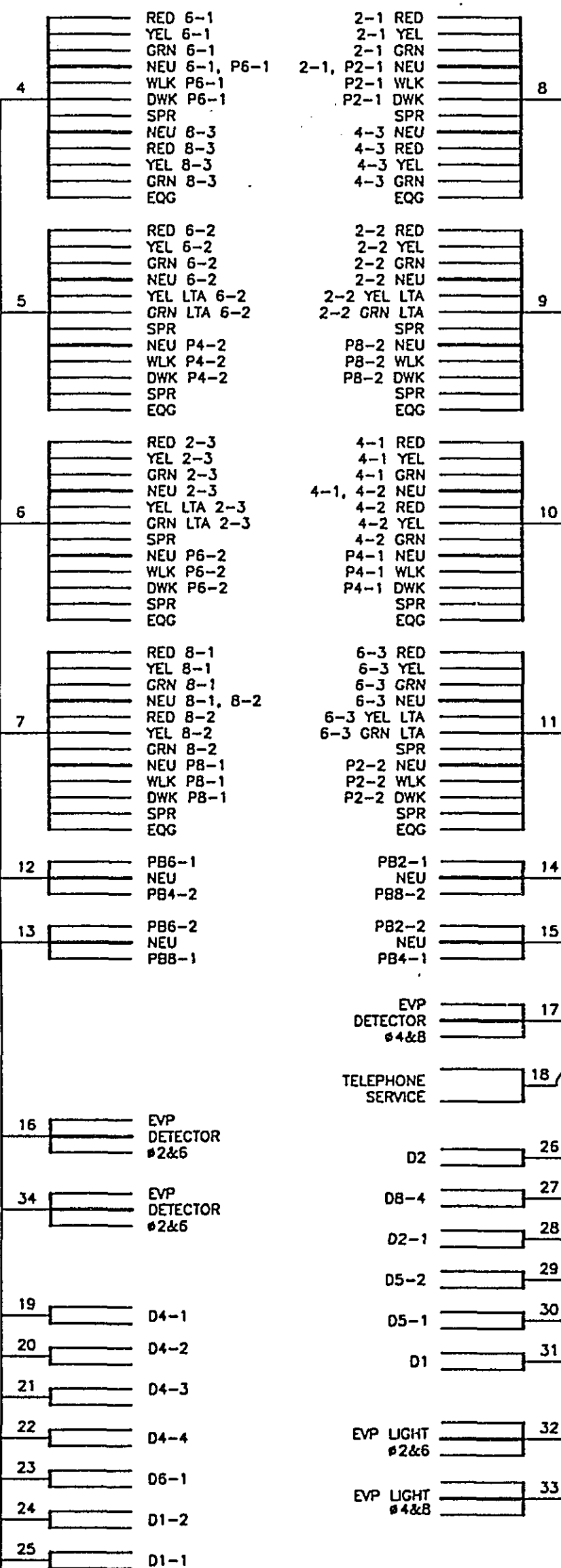
15400
REG. NO. 12/1/82
DATE

S.P. 62-651-34 S.P. 160-020-10

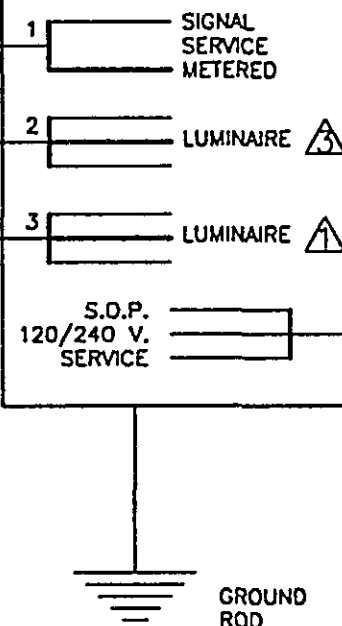
Sheet No. 56 of 77 Sheets

CONTROLLER CABINET

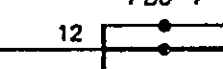
SIGNAL SERVICE



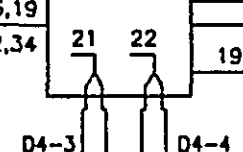
SERVICE CABINET & METER



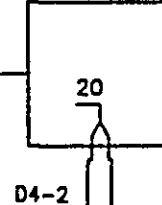
PED. PUSH BUTTON STA. PB6-1



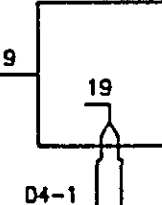
H.H.2



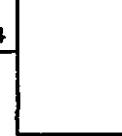
H.H.3



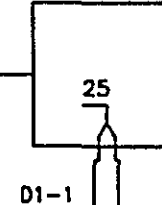
H.H.4



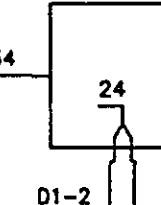
H.H.5



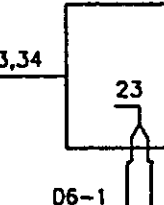
H.H.6



H.H.7



H.H.8



TO EVP DETECTOR SEE SHEET 30

CONDUCTOR COLOR CODING

R	RED	3/C#12
O	WH	
BL	BLK	
WH		
R/BLK	BLK	2/C#14
O/BLK	CLEAR	
BL/BLK		
WH/BLK	R OR O	3/C#20
BLK	WH OR YEL	
BLK/WH	BLK OR BL	
G/BLK	BLK	2-1/C#6
G	WH	2-1/C#10

NOTE: ALL TERMINAL BLOCK CONNECTIONS SHALL BE ARRANGED AS SPECIFIED ABOVE.

8,9,10,11,14,15,17, 26,27,28,29,30,31,33

TO HANDHOLE 10 SEE NEXT SHEET

CERTIFIED BY *[Signature]* PROFESSIONAL ENGINEER

REG. NO. *8893* DATE *12-1-96*

S.P. 62-651-34, S.P. 160-020-10

28-155

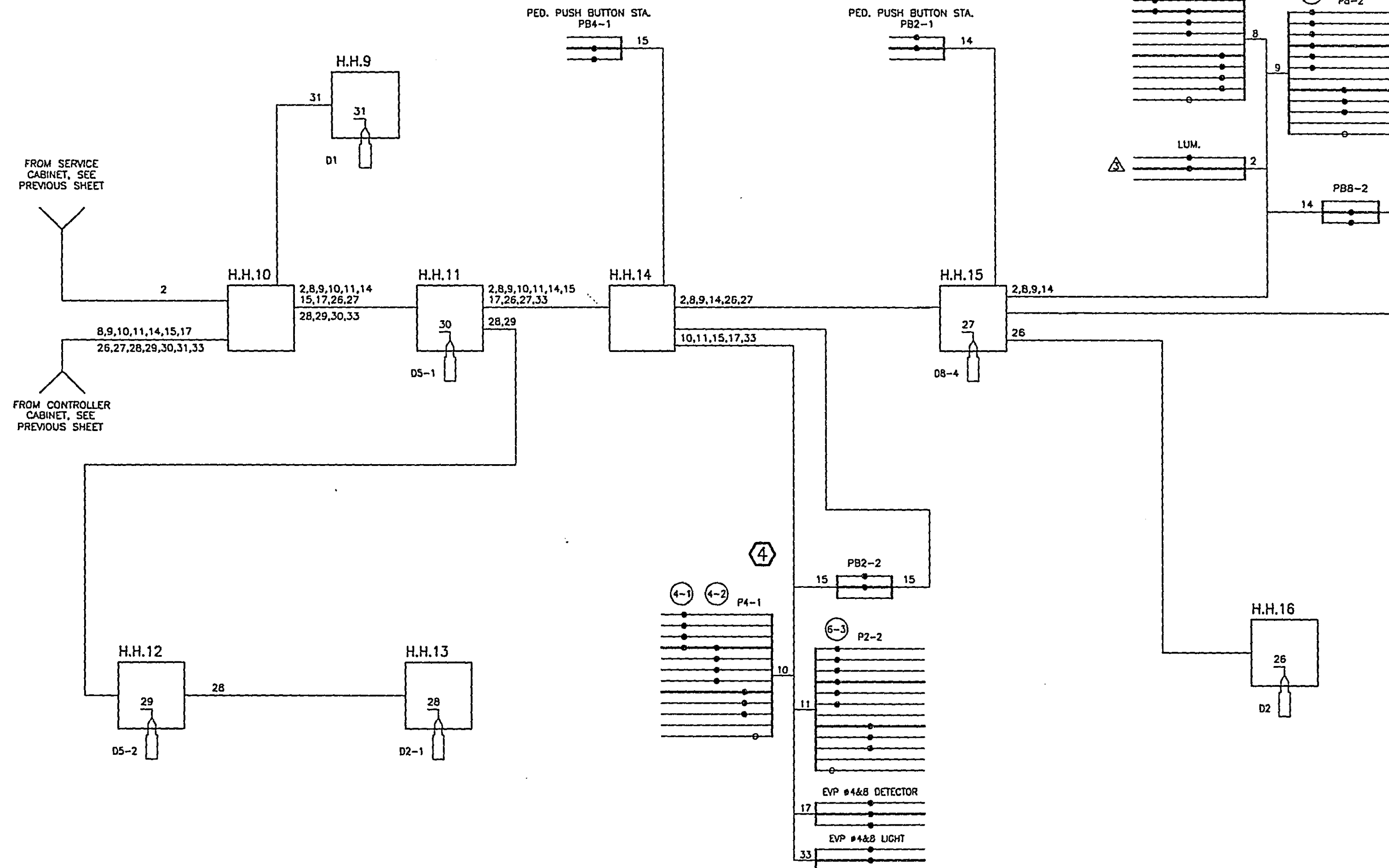
WIRING DIAGRAM (1 OF 2)
LEXINGTON AVE. & COUNTY RD. D
SYSTEM I

Sheet No. 57 of 77 Sheets

CONDUCTOR COLOR CODING

R	RED	
O	WH	3/C#12
BL	BLK	
WH		
R/BLK	BLK	2/C#14
O/BLK	CLEAR	
BL/BLK		
WH/BLK	R OR O	
BLK	WH OR YEL	3/C#20
BLK/WH	BLK OR BL	
O/BLK	BLK	2-1/C#6
G	WH	2-1/C#10

NOTE: ALL TERMINAL BLOCK CONNECTIONS SHALL BE ARRANGED AS SPECIFIED ABOVE.



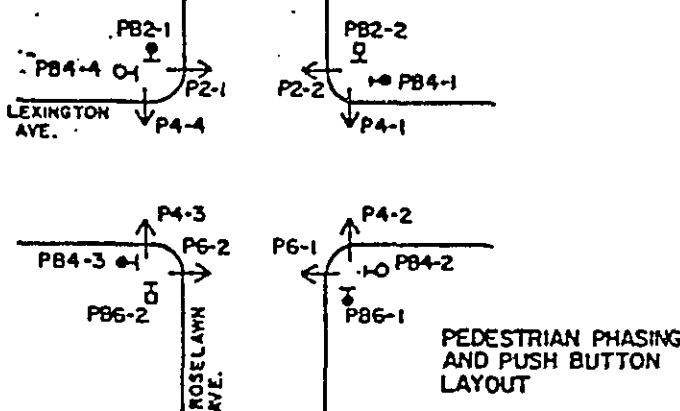
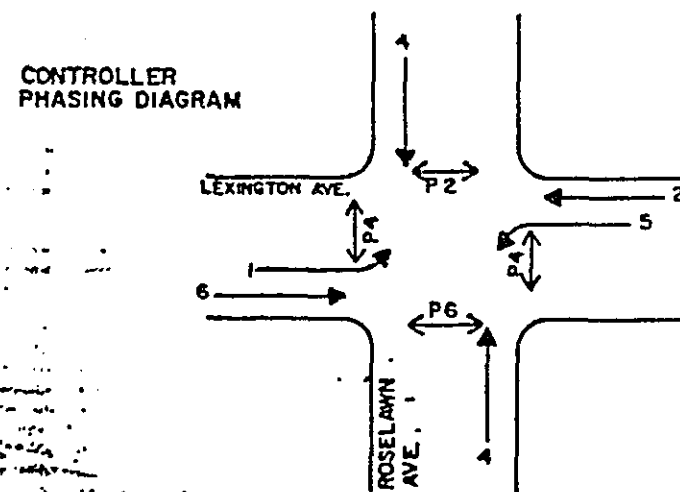
28-155

WIRING DIAGRAM (2 OF 2)
LEXINGTON AVE. & COUNTY RD. D
SYSTEM I

LEGEND OF SYMBOLS

SIGNAL BASE NO.	①
SIGNAL FACE NO.	②
CONTROLLER AND CABINET	③
CONTROLLER AND CABINET-INPLACE	④
HANDHOLE-INPLACE	⑤
RIGID STEEL CONDUIT (R.S.C.)	⑥
RIGID STEEL CONDUIT (R.S.C.)-INPLACE	⑦
SIGNAL FACE	⑧
SIGNAL FACE WITH BACKGROUND SHIELD	⑨
SIGNAL FACE-INPLACE	⑩
PEDESTRIAN INDICATIONS	⑪
PEDESTRIAN INDICATIONS-INPLACE	⑫
PEDESTRIAN PUSH BUTTON ON PEDESTAL OR POLE	⑬
PEDESTRIAN PUSH BUTTON STATION	⑭
TRAFFIC SIGNAL PEDESTAL-INPLACE	⑮
TRAFFIC SIGNAL POLE AND MAST ARM	⑯
TRAFFIC SIGNAL POLE AND MAST ARM-INPLACE	⑰
MAST ARM AND LUMINAIRE	⑱
MAST ARM AND LUMINAIRE-INPLACE	⑲
WOOD POLE-INPLACE	⑳
SOURCE OF POWER	㉑
EMERGENCY VEHICLE PRE-EMPTION DETECTOR LOCATION	㉒

CONTROLLER PHASING DIAGRAM



SIGNAL INDICATION CHART									
FACE	PHASE	FLASH	INDICATION SIZE						
			R	Y	G	YEL	GRN	→	
2-1	2	R	12"	12"	12"	-	-	-	
2-2	2 and 5	R	12"	12"	12"	12"	12"	-	
2-3	2 and 5	R	12"	12"	12"	12"	12"	-	
4-1	4	R	12"	12"	12"	-	-	-	
4-2	4	R	12"	12"	12"	-	-	-	
4-3	4	R	12"	12"	12"	-	-	-	
4-4	4	R	12"	12"	12"	-	-	-	
6-1	6	R	12"	12"	12"	-	-	-	
6-2	6 and 1	R	12"	12"	12"	12"	12"	-	
6-3	6 and 1	R	12"	12"	12"	12"	12"	-	

VEHICLE DETECTION		
NUMBER	SIZE	OPERATION
D1-1	6' x 40'	EXTEND ONLY
D1-2	6' x 25'	CALL & EXTEND
D2-1	6' x 6'	CALL & EXTEND
D2-2	8' x 15'	CALL ONLY
D4-1	6' x 15'	CALL & EXTEND
D4-2	2-6' x 15'	CALL & EXTEND
D4-3	6' x 15'	CALL & EXTEND
D4-4	2-6' x 15'	CALL & EXTEND
D5-1	6' x 40'	EXTEND ONLY
D5-2	6' x 25'	CALL & EXTEND
D6-1	6' x 6'	CALL & EXTEND
D6-2	8' x 10' 6"	CALL ONLY

SIGNAL HEAD PHASING			
HEADS 2-2 and 2-3		HEADS 6-2 and 6-3	
(R)	⊙ 2	(R)	⊙ 6
(Y)	⊙ 2	(Y)	⊙ 6
(G)	⊙ 2	(G)	⊙ 6
(←)	⊙ 5	(←)	⊙ 1
(←)	⊙ 5	(←)	⊙ 1

EQUIPMENT PAD (SEE DETAIL)
5-STEEL GUARD POSTS
SERVICE CABINET
EXTEND INTO HH.12
2" R.S.C.
3-1/c # 6
EXTEND INTO HH. 7
2" R.S.C.
2-1/c # 10
CONTROLLER AND CABINET
EXTEND INTO HH. 1
4" R.S.C.
4-12/c # 12
3-3/c # 12
2-3/c # 20
7-2/c # 14
EXTEND INTO HH. 7
4" R.S.C.
4-12/c # 12
4-3/c # 12
2-3/c # 20
5-2/c # 14
BETWEEN HH. 1 AND 7
2" R.S.C.

TYPE A-25-T40-10
LUMINAIRE-250 WATT HIGH
PRESSURE SODIUM (APPROX. 350")
ONE WAY SIGNAL (OVERHEAD MTD.)
TWO WAY SIGNAL (TYPE 20C-POLE
MTD. 270")
2-SETS PEDESTRIAN INDICATIONS
1 PEDESTRIAN PUSH BUTTON
(MTD. 270")
SIGN DOWN LIGHT OVERHEAD MTD.
PHOTOELECTRIC CELL (ON LHTS.)
MTD TOP SIGNAL BRACKETS
2-STEEL GUARD POSTS
EXTEND INTO HH.7
3" R.S.C.
2-12/c # 12
3-3/c # 12
1-3/c # 20
2-1/c # 10
ONE WAY EVP DETECTOR AND
LIGHT MTD ON MAST ARM

PEDESTRIAN PUSH
BUTTON STATION 4" R.S.C.
1-PEDESTRIAN PUSH BUTTON
(MTD. EAST SIDE)
EXTEND INTO HH.7
1 1/4" R.S.C.
2-3/c # 12

PEDESTRIAN PUSH BUTTON STATION (4" R.S.C.)
1-PEDESTRIAN PUSH BUTTON
(MTD. NORTH SIDE)
EXTEND INTO HH.9
1 1/4" R.S.C.
2-3/c # 12

TWO WAY SIGNAL (TYPE 2C)
2-SETS PEDESTRIAN INDICATIONS
1-PEDESTRIAN PUSH BUTTON
(MTD. WEST SIDE)
3-STEEL GUARD POSTS
EXTEND INTO HH. 9
3" R.S.C.
2-12/c # 12
1-3/c # 12
1-3/c # 20
ONE WAY EVP DETECTOR AND LIGHT
MTD ON EXTENDED SIGNAL BRACKETING

ASBUILT PLAN
CONFORMING TO
CONST. RECORDS
DONE BY: *[Signature]*
DATE: 6/19/62

S.O.P. (N.S.P. POLE)
EXACT LOC. TO BE DETERMINED
2" R.S.C. RISER WITH WEATHERHEAD
EXTEND INTO HH.12
2" R.S.C.
3-1/c # 6

TWO WAY SIGNAL (TYPE 2C)
2-SETS PEDESTRIAN INDICATIONS
1-PEDESTRIAN PUSH BUTTON
(MTD. EAST SIDE)
3-STEEL GUARD POSTS
EXTEND INTO HH. 2
3" R.S.C.
2-12/c # 12
1-3/c # 12
1-3/c # 20
ONE WAY EVP DETECTOR AND LIGHT
MTD ON EXTENDED SIGNAL BRACKETING

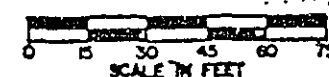
PEDESTRIAN PUSH BUTTON STATION (4" R.S.C.)
1-PEDESTRIAN PUSH BUTTON
(MTD. SOUTH SIDE)
EXTEND INTO HH.2
1 1/4" R.S.C.
2-3/c # 12

3" R.S.C.
2-12/c # 12
2-3/c # 12
1-3/c # 20
2-2/c # 14

TYPE A-25
ONE WAY SIGNAL (OVERHEAD MTD.)
TWO WAY SIGNAL (TYPE 20C POLE MTD. 270")
2-SETS PEDESTRIAN INDICATIONS
1-PEDESTRIAN PUSH BUTTON (MTD. 270")
SIGN DOWN LIGHT (OVERHEAD MTD.)
2-STEEL GUARD POSTS
EXTEND INTO HH. 5
3" R.S.C.
2-12/c # 12
2-3/c # 12
1-3/c # 20
ONE WAY EVP DETECTOR AND LIGHT
MTD ON MAST ARM

PEDESTRIAN PUSH BUTTON STATION (4" R.S.C.)
1-PEDESTRIAN PUSH BUTTON (MTD. WEST SIDE)
EXTEND INTO HH. 5
1 1/4" R.S.C.
2-3/c # 12

1 1/4" R.S.C.
1-2/c # 14



NOTES

- SUFFICIENT 3/4" # 20 TO REACH THE END OF THE MAST ARM AND TOP BRACKETING OF PEDESTAL POLES SHALL BE INSTALLED IN POLES 1,2,3 AND 4.
- LOOP DETECTOR LOCATIONS SHALL BE VERIFIED IN THE FIELD BY THE TRAFFIC ENGINEER PRIOR TO INSTALLATION.

LOCATION CHART		
STATION	LOCATION	DESCRIPTION
LEXINGTON AVE		
24+03	RT. 27'	HH.11
25+00	RT. 27'	HH.10
25+81	RT. 27'	HH.9
25+85	LT. 30'	POLE #1
25+86	RT. 28'	PED. STA.
25+93	LT. 42'	HH.7
25+93	LT. 64'	EQUIP. PAD
25+95	LT. 42'	HH.1
25+95	RT. 39'	POLE #4
25+96	LT. 36'	PED. STA.
26+00	LT. 67'	HH.12
26+58	RT. 40'	HH.3
26+59	LT. 39'	POLE #2
26+60	RT. 35'	PED. STA.
26+68	RT. 31'	POLE #3
26+69	LT. 28'	PED. STA.
26+75	LT. 27'	HH.2
27+50	LT. 27'	HH.3
28+33	LT. 27'	HH.4
ROSELAWN AVE. 26+27.94		
14+91	RT. 33'	HH.8
4+17	LT. 27'	HH.6

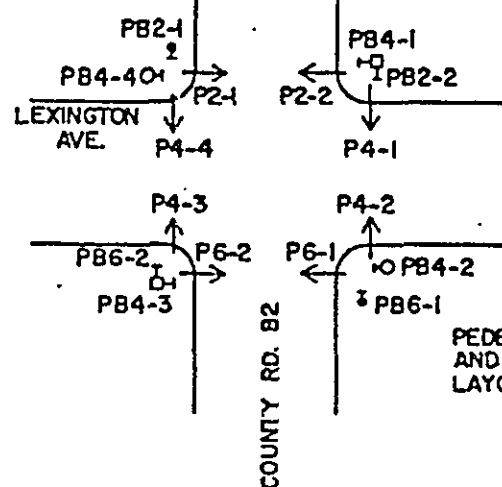
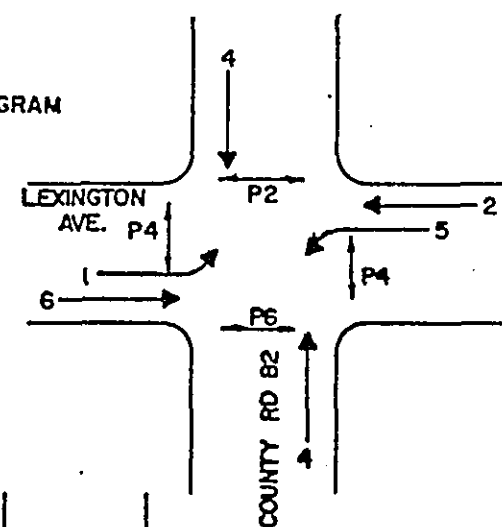
FOR INFORMATION ONLY
INTERSECTION LAYOUT
LEXINGTON AVE. & ROSELAWN AVE.

28-155

LEGEND OF SYMBOLS

SIGNAL BASE No.	1
SIGNAL FACE No.	2
CONTROLLER AND CABINET	3
CONTROLLER AND CABINET-INPLACE	4
HANDHOLE	5
HANDHOLE-INPLACE	6
RIGID STEEL CONDUIT (R.S.C.)	7
RIGID STEEL CONDUIT (R.S.C.)-INPLACE	8
SIGNAL FACE	9
SIGNAL FACE WITH BACKGROUND SHIELD	10
PEDESTRIAN INDICATIONS	11
PEDESTRIAN INDICATIONS-INPLACE	12
PEDESTRIAN PUSH BUTTON ON PEDESTAL OR POLE	13
PEDESTRIAN PUSH BUTTON STATION	14
TRAFFIC SIGNAL PEDESTAL	15
TRAFFIC SIGNAL PEDESTAL-INPLACE	16
TRAFFIC SIGNAL POLE AND MAST ARM	17
TRAFFIC SIGNAL POLE AND MAST ARM-INPLACE	18
MAST ARM AND LUMINAIRE	19
MAST ARM AND LUMINAIRE-INPLACE	20
WOOD POLE	21
WOOD POLE-INPLACE	22
SOURCE OF POWER	23
EMERGENCY VEHICLE PRE-EMPTION DETECTOR LOCATION	24

CONTROLLER PHASING DIAGRAM



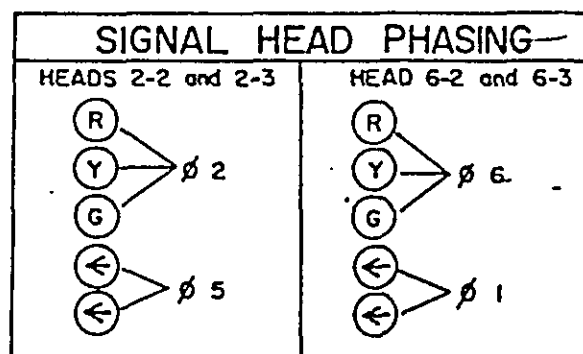
PEDESTRIAN PHASING AND PUSH-BUTTON LAYOUT

SIGNAL INDICATION CHART								
FACE	PHASE	FLASH	INDICATION SIZE					
			R	Y	G	YEL	GRN.	—
2-1	2	R	12"	12"	12"	—	—	—
2-2	2 and 5	R	12"	12"	12"	12"	12"	—
2-3	2 and 5	R	12"	12"	12"	12"	12"	—
4-1	4	R	12"	12"	12"	—	—	—
4-2	4	R	12"	12"	12"	—	—	—
4-3	4	R	12"	12"	12"	—	—	—
4-4	4	R	12"	12"	12"	—	—	—
6-1	6	R	12"	12"	12"	—	—	—
6-2	6 and 1	R	12"	12"	12"	12"	12"	—
6-3	6 and 1	R	12"	12"	12"	12"	12"	—

VEHICLE DETECTION

NUMBER	SIZE	OPERATION
DI-1	6' x 40'	EXTEND ONLY
DI-2	6' x 25'	CALL & EXTEND
D2-1	6' x 6'	CALL & EXTEND
D2-2	8' x 10' 1/2"	CALL ONLY
D4-1	6' x 8' 10"	CALL & EXTEND
D4-2	8' x 10' 1/2"	CALL ONLY
D4-3	6' x 8' 10"	CALL & EXTEND
D4-4	8' x 10' 1/2"	CALL ONLY
D5-1	6' x 40'	EXTEND ONLY
D5-2	6' x 25'	CALL & EXTEND
D6-1	6' x 6'	CALL & EXTEND
D6-2	8' x 10' 1/2"	CALL ONLY

① TIME DELAYED



ASBUILT PLAN
CONFORMING TO
CONST. RECORDS

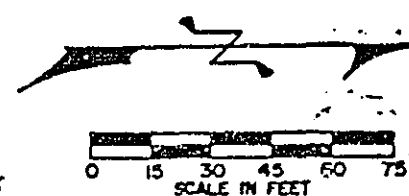
DONE BY: P. H. H.
DATE: 1-19-80

TWO WAY SIGNAL (TYPE 2C)
2-SETS PEDESTRIAN INDICATIONS
2-PEDESTRIAN PUSH BUTTONS
(MTD. SOUTH & EAST SIDE)
3-STEEL GUARD POSTS
PHOTOELECTRIC CELL (ON LHTS.)
EXTEND INTO HH. 1
ONE WAY EVP DETECTOR & LHT
MTD ON EXTENDED SIGNAL
BRACKETING

S.O.P. (N.S.P. POLE)
EXACT LOC. TO BE DETERMINED
2" R.S.C. RISER WITH WEATHERHEAD
EXTEND INTO HH. 12
2" R.S.C.
3- 1/2" # 6

EQUIPMENT PAD (SEE DETAIL)
4" STEEL GUARD POSTS
SERVICE CABINET
EXTEND INTO HH. 12
2" R.S.C.
3- 1/2" # 6
EXTEND INTO HH. 4
2" R.S.C.
2- 1/2" # 10
CONTROLLER AND CABINET
EXTEND INTO HH. 1
4" R.S.C.
4- 12/c # 12
4- 3/c # 12
2- 3/c # 20
2- 2/c # 14

EXTEND INTO HH. 4
4" R.S.C.
4- 12/c # 12
3- 3/c # 12
2- 3/c # 20
10- 2/c # 14



NOTES:

- CONTRACTOR SHALL REMOVE AND SALVAGE INPLACE SIGNAL SYSTEM.
- SUFFICIENT 3/4" # 20 TO REACH THE END OF THE MAST ARM AND TOP BRACKETING OF PEDESTAL POLES SHALL BE INSTALLED IN POLES 1, 2, 3 AND 4.
- LOOP DETECTOR LOCATIONS SHALL BE VERIFIED IN THE FIELD BY THE TRAFFIC ENGINEER PRIOR TO INSTALLATION.

LOCATION CHART

STATION	LOCATION	DESCRIPTION
LEXINGTON AVE.		
76+28	RT. 27'	HH. 11
77+48	RT. 27'	HH. 10
78+27	RT. 27'	HH. 9
78+38	LT. 31'	POLE # 4
78+42	RT. 37'	POLE # 3
78+51	LT. 39'	PED. STA.
78+52	LT. 46'	HH. 2
79+07	RT. 46'	HH. 7
79+08	RT. 38'	PED. STA.
79+16	LT. 37'	POLE # 1
79+20	RT. 31'	POLE # 2
79+21	LT. 39'	HH. 1
79+30	LT. 25'	HH. 12
79+31	LT. 27'	HH. 4
79+40	LT. 39'	EQUIP. PAD
80+01	LT. 27'	HH. 5
81+32	LT. 27'	HH. 6
CO. RD. B2 6+00 = LEX. AVE. 78+79.38		
4+34	RT. 27'	HH. 3
7+68	LT. 27'	HH. 8

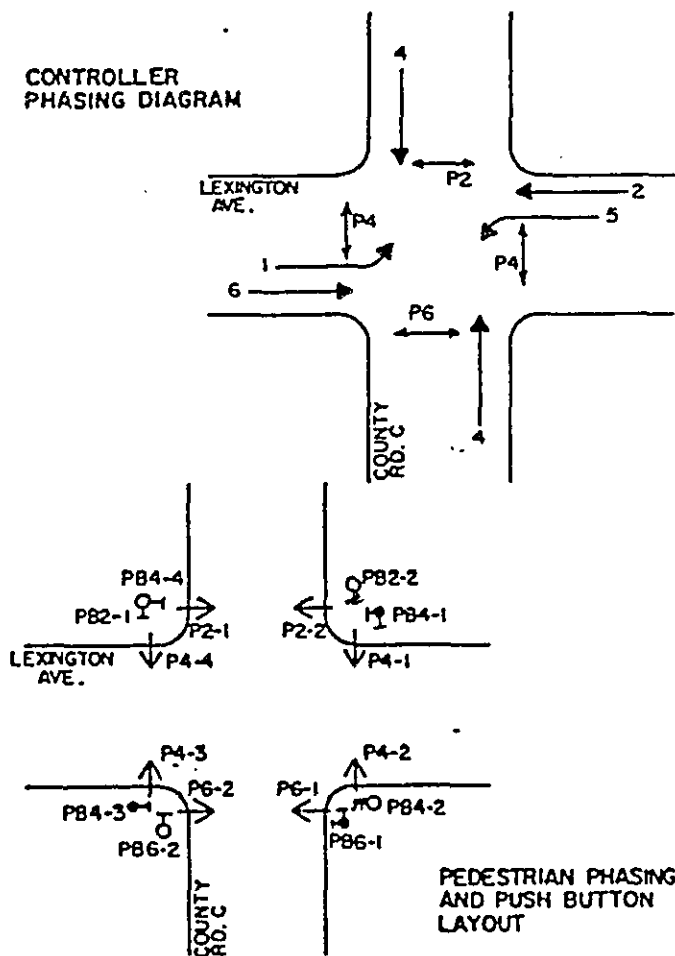
28-155

INTERSECTION LAYOUT
LEXINGTON AVE. & COUNTY RD. B2
FOR INFORMATION ONLY

LEGEND OF SYMBOLS

SIGNAL FACE No.	
SIGNAL FACE No.	
CONTROLLER AND CABINET	
CONTROLLER AND CABINET - INPLACE	
HANDHOLE	
HANDHOLE - INPLACE	
RIGID STEEL CONDUIT (R.S.C.)	
RIGID STEEL CONDUIT (R.S.C.) - INPLACE	
SIGNAL FACE	
SIGNAL FACE WITH BACKGROUND SHIELD	
SIGNAL FACE - INPLACE	
PEDESTRIAN INDICATIONS	
PEDESTRIAN INDICATIONS - INPLACE	
PEDESTRIAN PUSH BUTTON ON PEDESTAL OR POLE	
PEDESTRIAN PUSH BUTTON STATION	
TRAFFIC SIGNAL PEDESTAL	
TRAFFIC SIGNAL PEDESTAL - INPLACE	
TRAFFIC SIGNAL POLE AND MAST ARM	
TRAFFIC SIGNAL POLE AND MAST ARM - INPLACE	
MAST ARM AND LUMINAIRE	
MAST ARM AND LUMINAIRE - INPLACE	
WOOD POLE	
WOOD POLE - INPLACE	
SOURCE OF POWER	
EMERGENCY VEHICLE PRE-EMPTION DETECTOR LOCATION	

CONTROLLER PHASING DIAGRAM



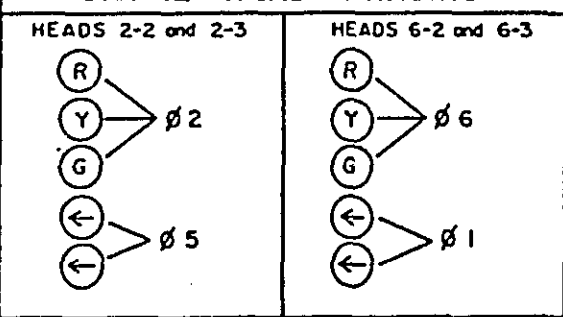
SIGNAL INDICATION CHART

FACE	PHASE	FLASH	INDICATION SIZE					
			R	Y	G	REL	GRN	→
2-1	2	R	12"	12"	12"	—	—	—
2-2	2 and 5	R	12"	12"	12"	12"	12"	—
2-3	2 and 5	R	12"	12"	12"	12"	12"	—
4-1	4	R	12"	12"	12"	—	—	—
4-2	4	R	12"	12"	12"	—	—	—
4-3	4	R	12"	12"	12"	—	—	—
4-4	4	R	12"	12"	12"	—	—	—
4-5	4	R	12"	12"	12"	—	—	—
4-6	4	R	12"	12"	12"	—	—	—
6-1	6	R	12"	12"	12"	—	—	—
6-2	6 and 1	R	12"	12"	12"	12"	12"	—
6-3	6 and 1	R	12"	12"	12"	12"	12"	—

VEHICLE DETECTION		
NUMBER	SIZE	OPERATION
D1-1	6' x 30'	EXTEND ONLY
D1-2	6' x 25' 55"	CALL & EXTEND
D2-1	6' x 6'	CALL & EXTEND
D2-2	8' x 8' 6"	CALL ONLY
D4-1	6' x 6'	CALL & EXTEND
D4-2	6' x 6'	CALL & EXTEND
D4-3	8' 6" x 8' 14"	CALL ONLY
D4-4	6' x 6'	CALL & EXTEND
D4-5	6' x 6'	CALL & EXTEND
D4-6	8' 10" x 8' 14"	CALL ONLY
D5-1	6' x 40'	EXTEND ONLY
D5-2	6' x 25'	CALL & EXTEND
D6-1	6' x 6'	CALL & EXTEND
D6-2	8' x 10' 6"	CALL ONLY

① TIME DELAYED

SIGNAL HEAD PHASING



TYPE A-30
SWING-AWAY HINGES
ONE WAY SIGNAL (OVERHEAD MTD.)
TWO WAY SIGNAL (TYPE 20C-POLE MTD. 270°)
2-SETS PEDESTRIAN INDICATIONS
2-PEDESTRIAN PUSH BUTTONS (MTD. 0° & 270°)
SIGN DOWN LIGHT (OVERHEAD MTD.)
2-STEEL GUARD POSTS
EXTEND INTO HH. 12
3" R.S.C.
2-12/c # 12
2-3/c # 12
1-3/c # 20
ONE WAY EVP DETECTOR AND LIGHT MTD ON MAST ARM

3" R.S.C.
2-12/c # 12
2-3/c # 12
1-3/c # 20
3-2/c # 14

1 1/4" R.S.C.
1-2/c # 14

1 1/4" R.S.C. (INTERCONNECT TO RAILROAD SIGNAL CONTROL)
1-3/c # 12

1 1/4" R.S.C.
2-2/c # 14
1-3/c # 12

PEDESTRIAN PUSH BUTTON STATION (4" R.S.C.)
1-PEDESTRIAN PUSH BUTTON (MTD. NORTH SIDE)
EXTEND INTO HH. 8
1 1/4" R.S.C.
2-3/c # 12

TYPE A-25-T40-10
SWING-AWAY HINGES
LUMINAIRE-250 WATT HIGH PRESSURE SODIUM (APPROX. 315°)
ONE WAY SIGNAL (OVERHEAD MTD.)
TWO WAY SIGNAL (TYPE 20C-POLE MTD. 270°)
2-SETS PEDESTRIAN INDICATIONS
1-PEDESTRIAN PUSH BUTTON (MTD. 270°)
2-STEEL GUARD POSTS
EXTEND INTO HH. 8
3" R.S.C.
2-12/c # 12
1-3/c # 12
1-3/c # 20
2-1/c # 10
ONE WAY EVP DETECTOR AND LIGHT MTD ON MAST ARM

3" R.S.C.
2-12/c # 12
2-3/c # 12
1-3/c # 20
4-2/c # 14
2-1/c # 10

TYPE A-25-T40-10
SWING-AWAY HINGES
LUMINAIRE-250 WATT HIGH PRESSURE SODIUM (APPROX. 315°)
ONE WAY SIGNAL (OVERHEAD MTD.)
TWO WAY SIGNAL (TYPE 20C-POLE MTD. 270°)
2-SETS PEDESTRIAN INDICATIONS
1-PEDESTRIAN PUSH BUTTON (MTD. 270°)
PHOTOELECTRIC CELL (DN. LIGHTS) (MTD. TOP SIGNAL BRACKETS)
2-STEEL GUARD POSTS
EXTEND INTO HH. 8
3" R.S.C.
2-12/c # 12
3-3/c # 12
1-3/c # 20
2-1/c # 10
ONE WAY EVP DETECTOR AND LIGHT MTD ON MAST ARM

PEDESTRIAN PUSH BUTTON STATION (4" R.S.C.)
1-PEDESTRIAN PUSH BUTTON (MTD. SOUTH SIDE)
EXTEND INTO HH. 2
1 1/4" R.S.C.
1-3/c # 12

EQUIPMENT PAD (SEE DETAIL)
45-STEEL GUARD POSTS
SERVICE CABINET
EXTEND INTO HH. 1
2" R.S.C.
3-1/c # 6
CONTROLLER AND CABINET
EXTEND INTO HH. 2
4" R.S.C.
4-12/c # 12
4-3/c # 12
2-3/c # 20
11-2/c # 14
EXTEND INTO HH. 11
2" R.S.C.
4-1/c # 10
EXTEND INTO HH. 11
4" R.S.C.
4-12/c # 12
4-3/c # 12
2-3/c # 20
3-2/c # 14
BETWEEN HH. 2 AND 11
2" R.S.C.
1-3/c # 12
2-1/c # 10

4" R.S.C.
4-12/c # 12
4-3/c # 12
2-3/c # 20
7-2/c # 14
2-1/c # 10
S.O.P. (N.S.P. POLE)
1-EXACT LOC. TO BE DETERMINED
2-R.S.C. RISER WITH WEATHERHEAD
EXTEND INTO HH. 1
2" R.S.C.
3-1/c # 6

TYPE A-25
SWING-AWAY HINGES
ONE WAY SIGNAL (OVERHEAD MTD.)
TWO WAY SIGNAL (TYPE 20C-POLE MTD. 270°)
2-SETS PEDESTRIAN INDICATIONS
1-PEDESTRIAN PUSH BUTTON (MTD. 270°)
SIGN DOWN LIGHT (OVERHEAD MTD.)
2-STEEL GUARD POSTS
EXTEND INTO HH. 5
3" R.S.C.
2-12/c # 12
2-3/c # 12
1-3/c # 20
ONE WAY EVP DETECTOR AND LIGHT MTD ON MAST ARM

PEDESTRIAN PUSH BUTTON STATION (4" R.S.C.)
2-PEDESTRIAN PUSH BUTTON (MTD. WEST SIDE)
EXTEND INTO HH. 5
1 1/4" R.S.C.
2-3/c # 12

1 1/4" R.S.C.
2-2/c # 14

ASBUILT PLAN
CONFORMING TO
CONST. RECORDS

DONE BY: *E. L. L.*
DATE: 6-1-80

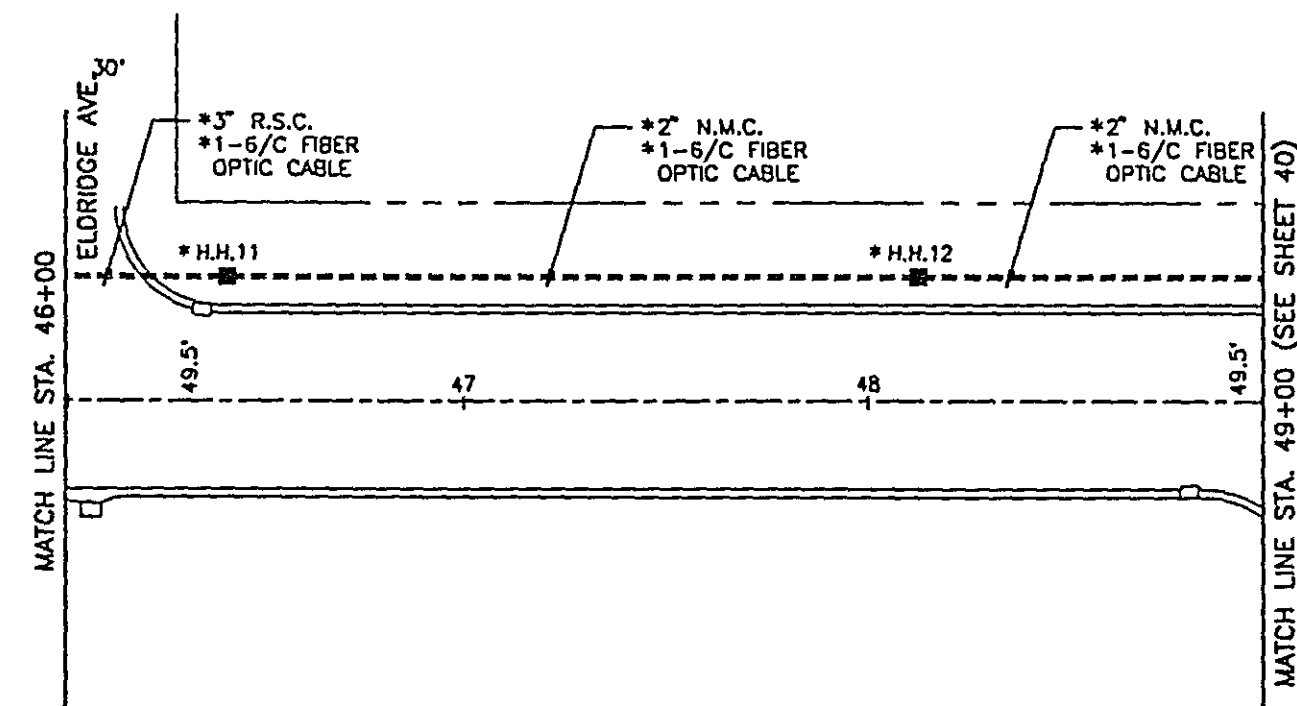
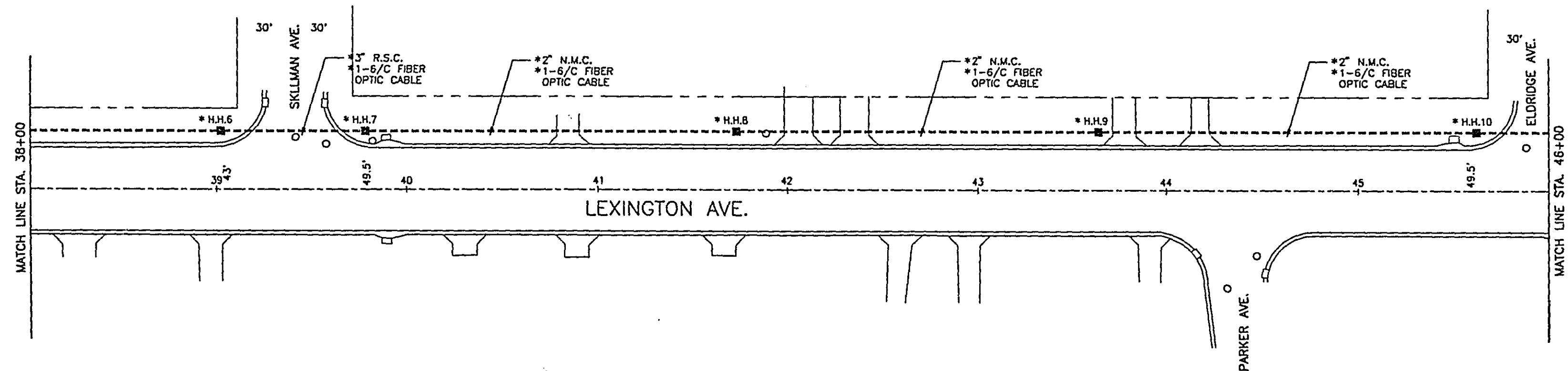
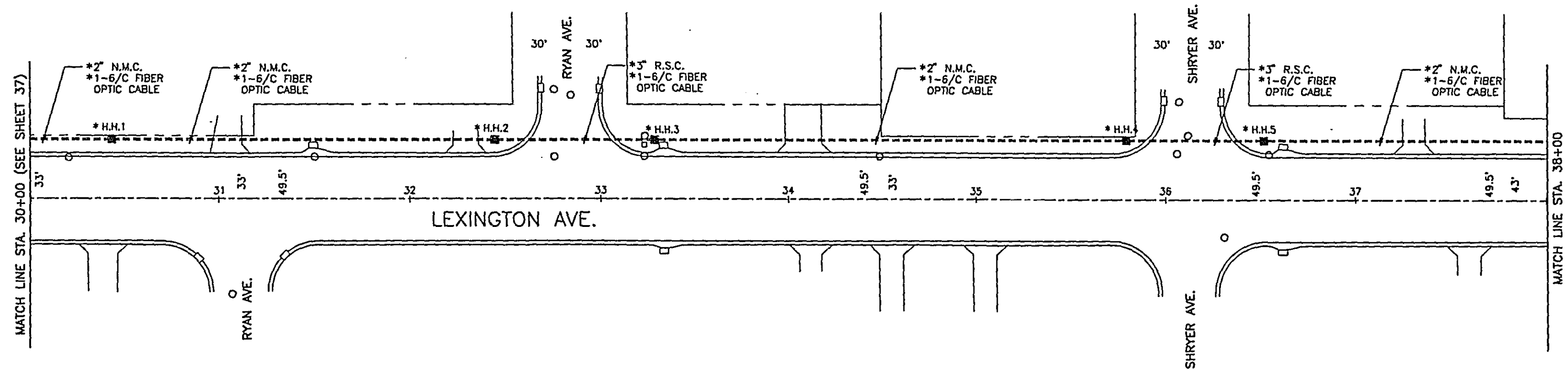
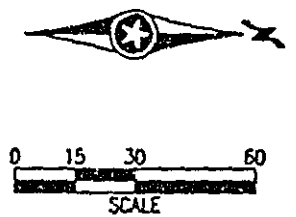
NOTES:

- SUFFICIENT 3/4" # 20 TO REACH THE END OF THE MAST ARM SHALL BE INSTALLED IN POLES 1, 2, 3, AND 4.
- LOOP DETECTOR LOCATIONS SHALL BE VERIFIED IN THE FIELD BY THE TRAFFIC ENGINEER PRIOR TO INSTALLATION.

LOCATION CHART

STATION	LOCATION	DESCRIPTION
LEXINGTON		
100+72	RT. 31'	HH. 10
101+88	RT. 31'	HH. 9
102+73	RT. 31'	HH. 8
102+79	RT. 32'	PED. STA.
102+87	LT. 36'	POLE # 4
102+87	RT. 41'	POLE # 3
102+95	LT. 47'	HH. 12
103+53	RT. 46'	HH. 5
103+57	RT. 41'	PED. STA.
103+58	LT. 47'	HH. 11
103+64	LT. 39'	POLE # 1
103+74	LT. 29'	PED. STA.
103+77	RT. 31'	POLE # 2
103+80	LT. 29'	HH. 2
104+05	LT. 55'	EQUIP. PAD
104+44	LT. 40'	HH. 1
104+56	LT. 27'	HH. 3
104+81	LT. 27'	HH. 4
CO. RD. C 52+50.70+ LEX. AVE. 103+22.41		
50+04	RT. 27'	HH. 14
51+00	RT. 27'	HH. 13
54+00	LT. 27'	HH. 6
55+00	LT. 27'	HH. 7

INTERSECTION, LAYOUT
LEXINGTON AVE. & COUNTY RD. C
FOR INFORMATION ONLY



* DENOTES INTERCONNECT ITEM

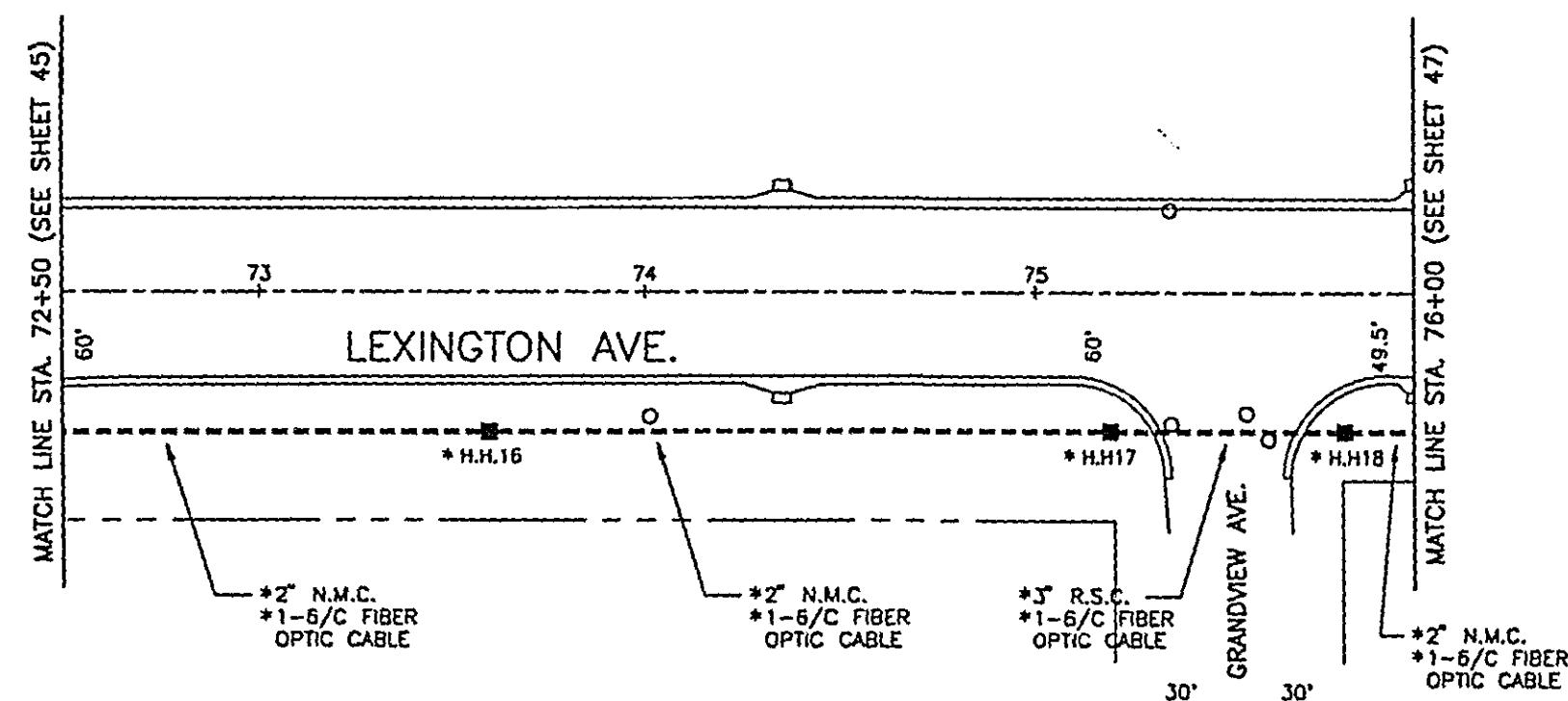
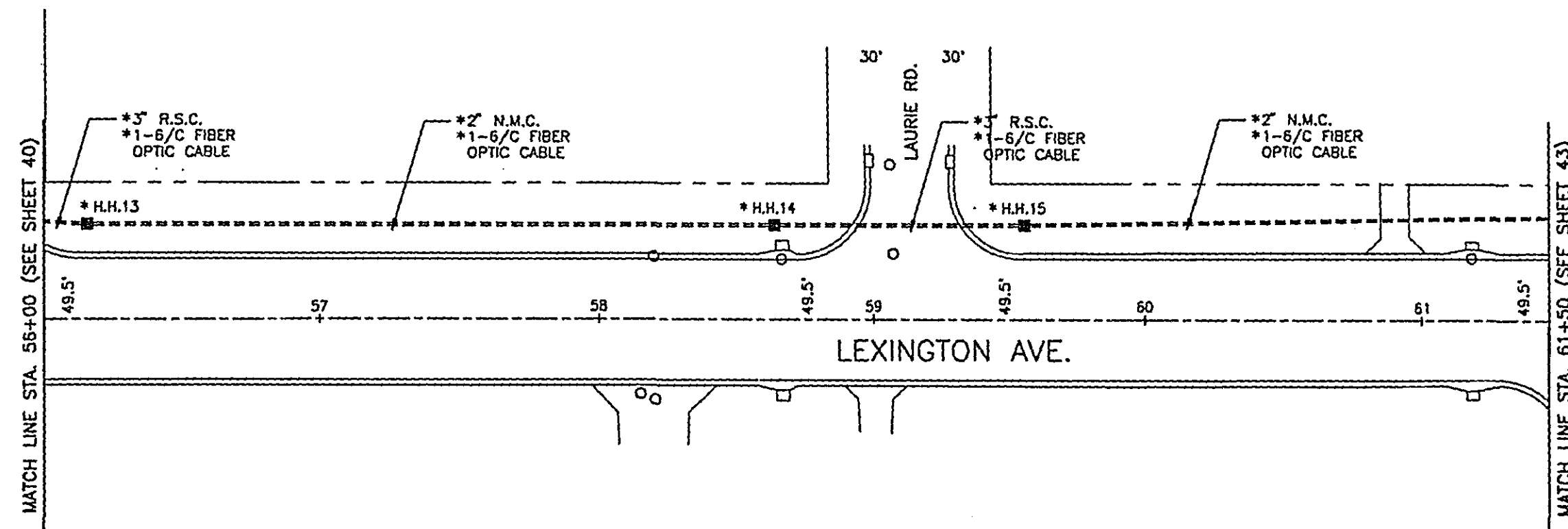
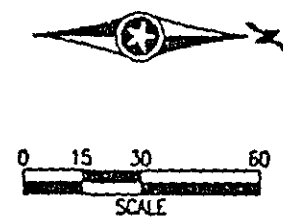
28-155
TRAFFIC SIGNAL INTERCONNECTION
 LEXINGTON AVENUE

CERTIFIED BY *T. J. O'Connell*
 PROFESSIONAL ENGINEER

15400
 REG. NO. 5/10/96
 DATE

S.P. 62-651-34

Sheet No. 63 of 77 Sheets



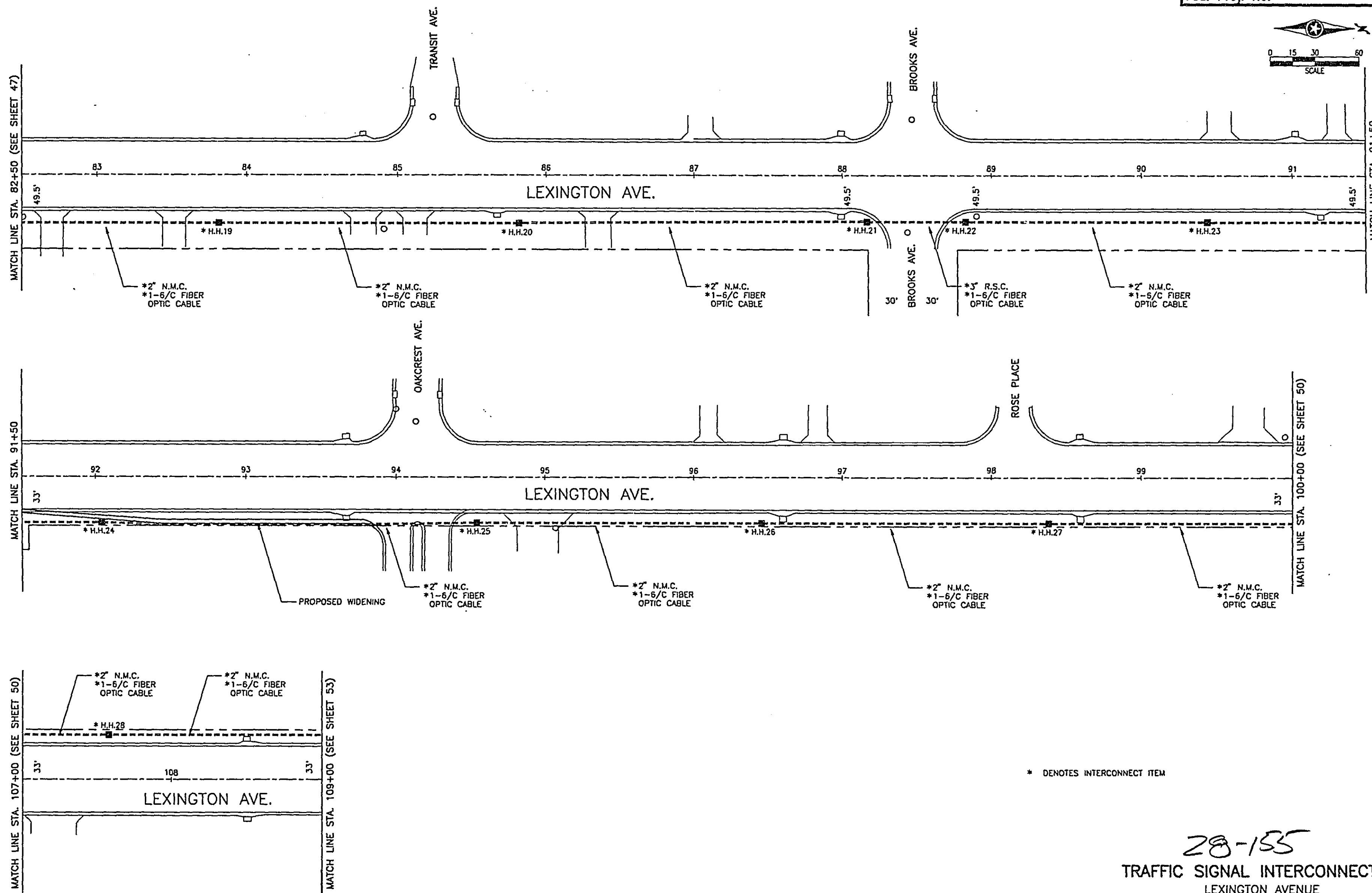
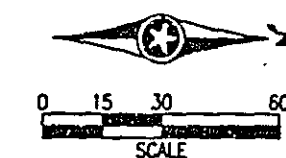
* DENOTES INTERCONNECT ITEM

28-155

TRAFFIC SIGNAL INTERCONNECTION
LEXINGTON AVENUE

CERTIFIED BY T. A. O'Connell 15400 5/10/76
PROFESSIONAL ENGINEER REG. NO. DATE
S.P. 62-651-34

Sheet No. 64 of 77 Sheets

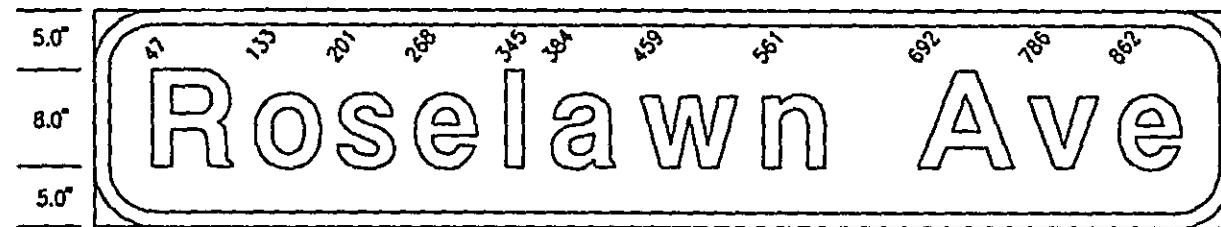


* DENOTES INTERCONNECT ITEM

28-155
TRAFFIC SIGNAL INTERCONNECTION
LEXINGTON AVENUE

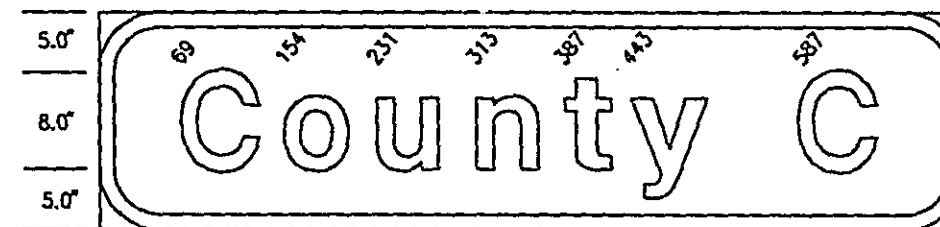
CERTIFIED BY T. A. Chisholm 15400 REG. NO. 5/10/96 DATE S.P. 62-651-34

Sheet No. 65 of 77 Sheets



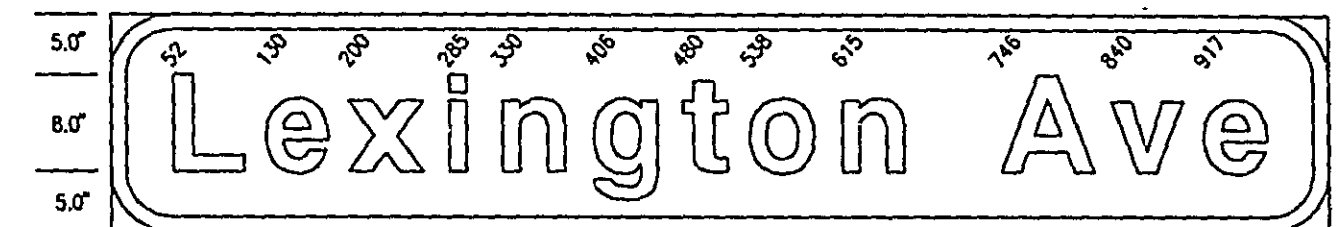
96" X 18", 3" R. 1.0"B
LINE 1 86.7 : 8'-6" E MOD.

D-1



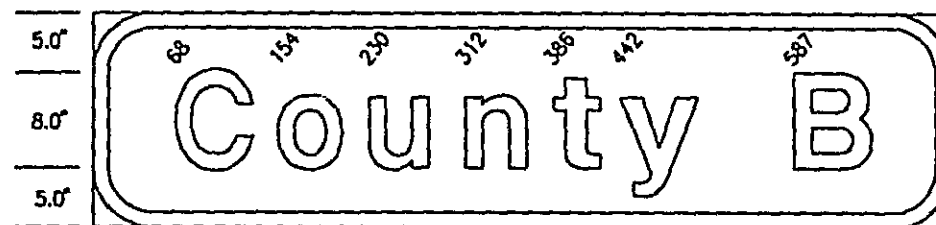
72" X 18", 3" R. 1.0"B
LINE 1 58.2 : 8'-6" E MOD.

D-4



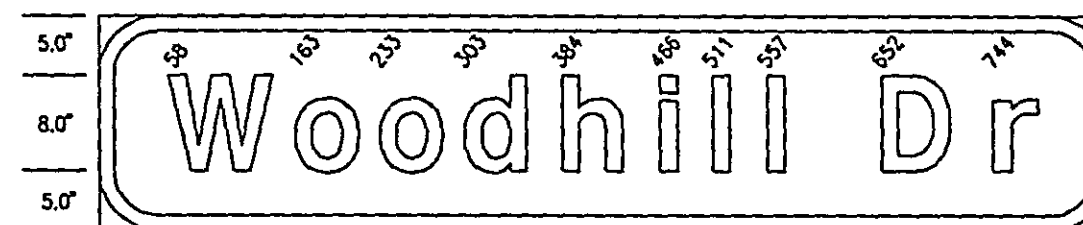
102" X 18", 3" R. 1.0"B
LINE 1 91.6 : 8'-6" E MOD.

D-7



72" X 18", 3" R. 1.0"B
LINE 1 58.4 : 8'-6" E MOD.

D-2



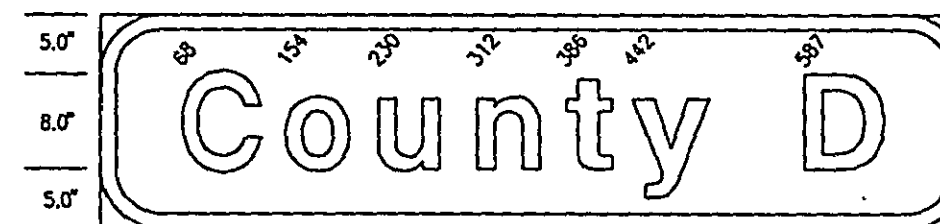
84" X 18", 3" R. 1.0"B
LINE 1 72.5 : 8'-6" E MOD.

D-5



78" X 18", 3" R. 1.0"B
LINE 1 66.7 : 8'-6" E MOD.

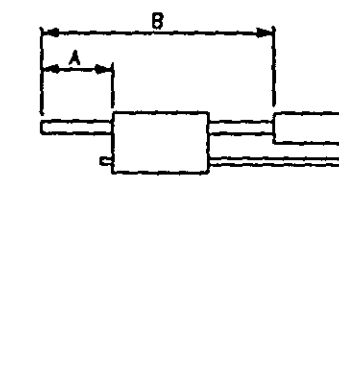
D-3



72" X 18", 3" R. 1.0"B
LINE 1 58.4 : 8'-6" E MOD.

D-6

TYPE "D" SIGNS									
SIGN PANEL	SIZE	NO. REQ.	NO. BRACKETS PER SIGN	BRACKET SPACING	SQ. FT. PER SIGN	A	B	SYSTEM/POLE NO.	
D-1	96"x18"	2	2	54"	12		8'	B/(1)	
D-2	72"x18"	2	2	42"	9		8'	B/(3)	
D-3	78"x18"	2	2	54"	9.75		8'	C/(1)	
D-4	72"x18"	2	2	42"	9		8'	C/(3)	
D-5	84"x18"	2	2	54"	10.5		8'	F/(1)	
D-6	72"x18"	2	2	42"	9		8'	F/(3)	
D-7	102"x18"	12	3	45"	12.75		8'	G/(2)	
							8'	G/(4)	
							8'	H/(2)	
							8'	H/(4)	
							8'	I/(1)	
							8'	I/(3)	
							8'	B/(2)	
							8'	B/(4)	
							8'	C/(2)	
							8'	C/(4)	
							8'	F/(2)	
							8'	F/(4)	
							10'	G/(1)	
							10'	G/(3)	
							8'	H/(1)	
							8'	H/(3)	
							5'	I/(2)	
							5'	I/(4)	



TYPE "D" SIGN NOTES:

- 1) COLOR - HIGH INTENSITY WHITE LEGEND AND BORDER ON HIGH INTENSITY GREEN BACKGROUND, FULLY REFLECTORIZED.
- 2) CORNERS EXTENDING BEYOND THE BORDER SHALL NOT BE TRIMMED.
- 3) FOR STRUCTURAL DETAILS, TYPE "D" SIGNS, SEE STANDARD SIGNS MANUAL, PG. 105A & 105B.
- 4) FOR TYPE D STRINGER AND PANEL-JOINT DETAIL, SEE STANDARD SIGNS MANUAL, PG. 105.

28-155
MAST ARM SIGN DETAILS

CERTIFIED BY T. H. A. Allen
PROFESSIONAL ENGINEER

15400
REG. NO.

5/10/96
DATE

S.P. 62-651-34, S.P. 160-020-10

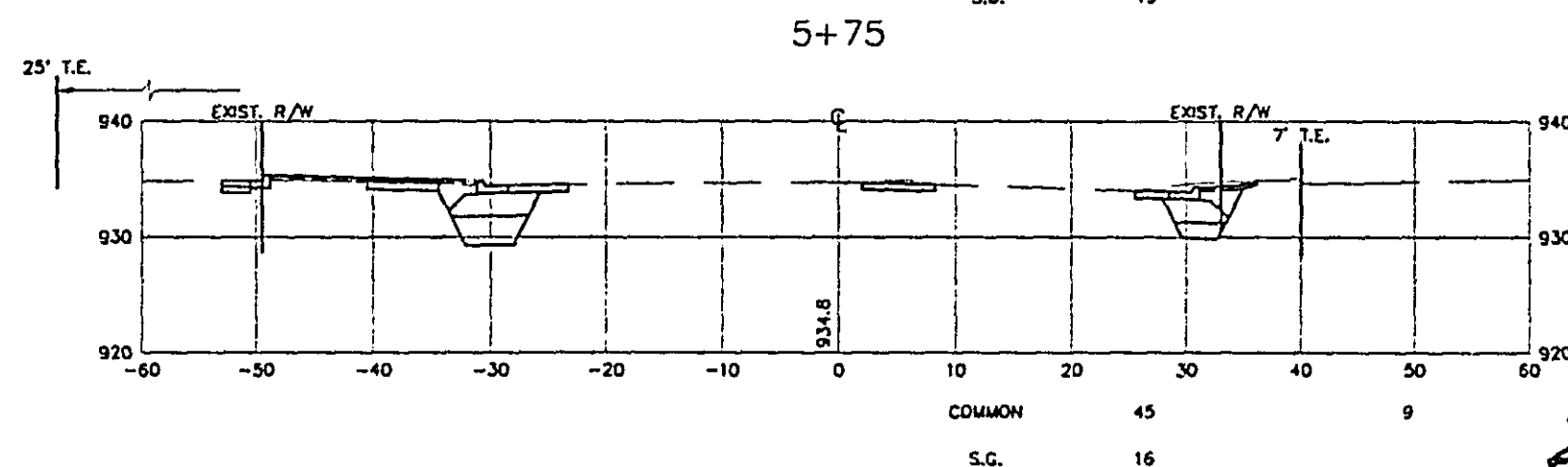
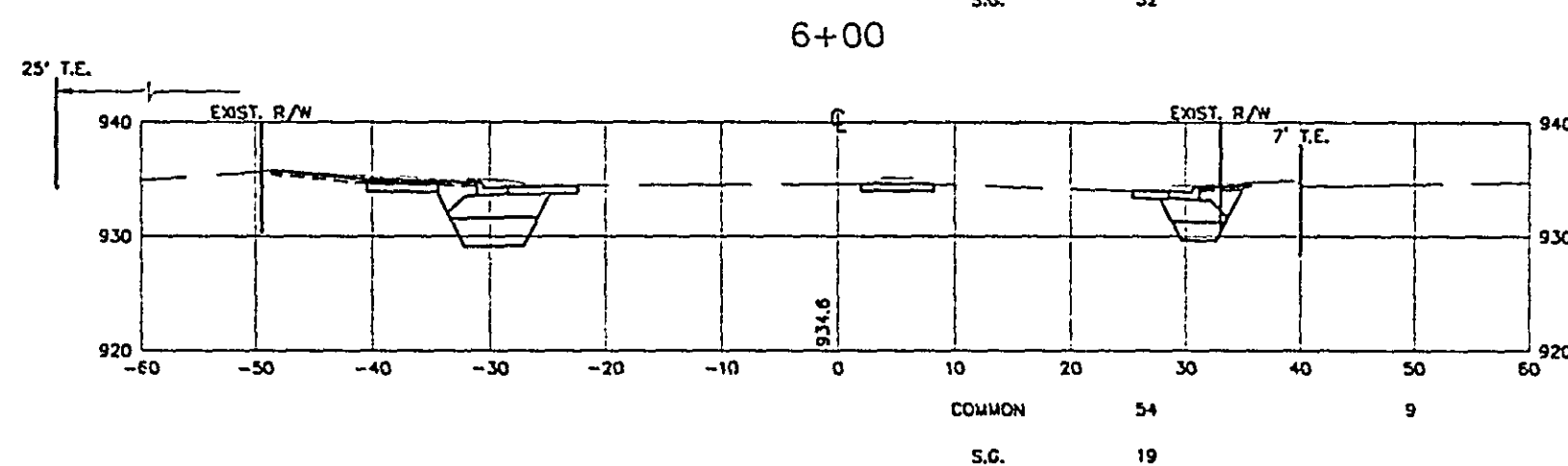
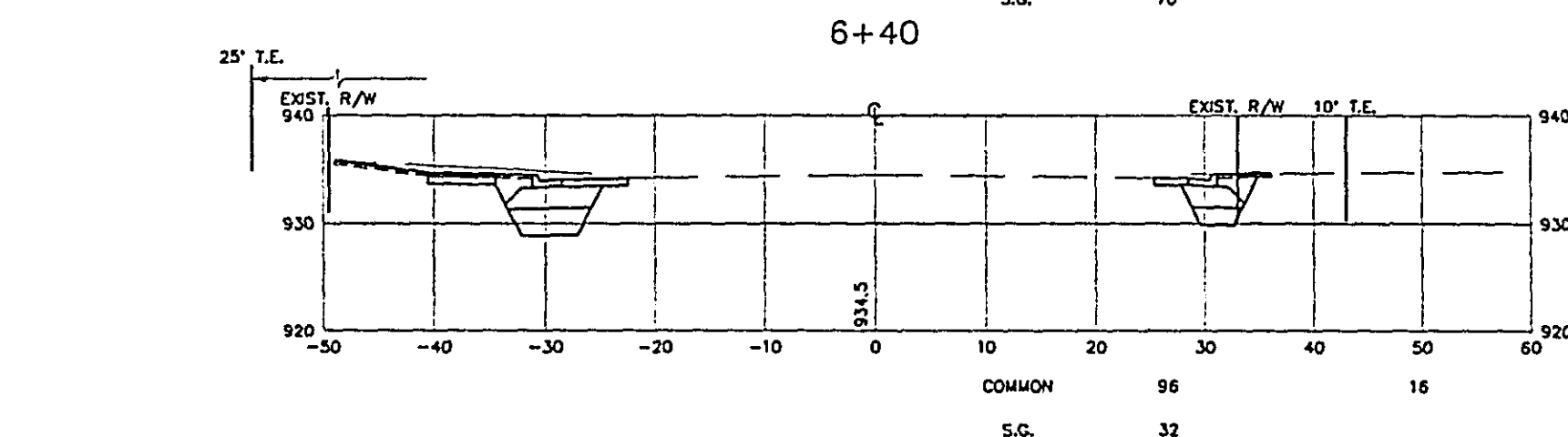
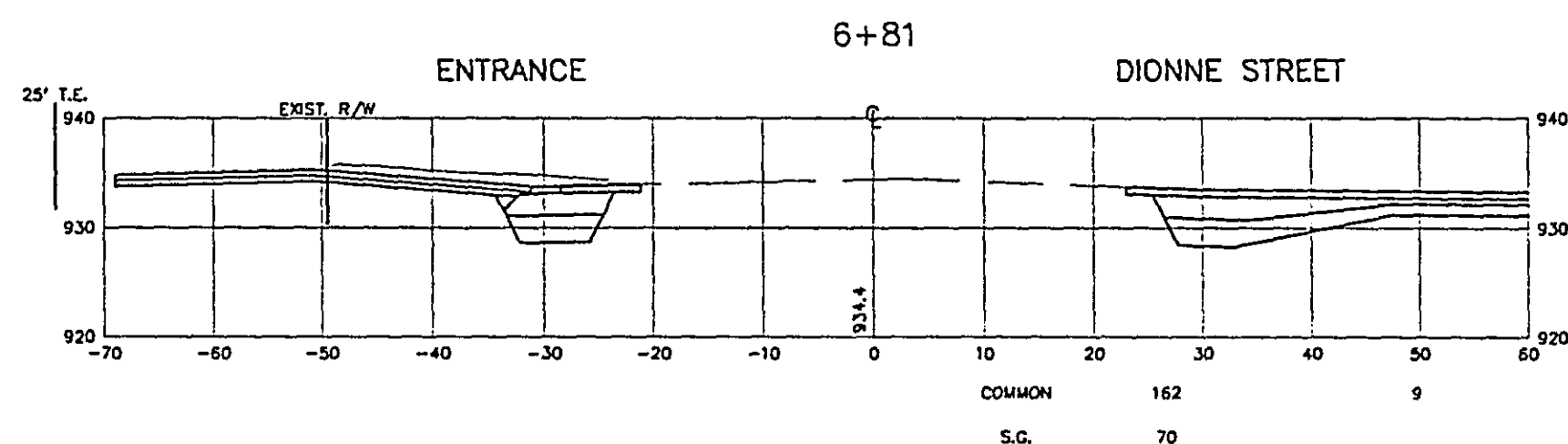
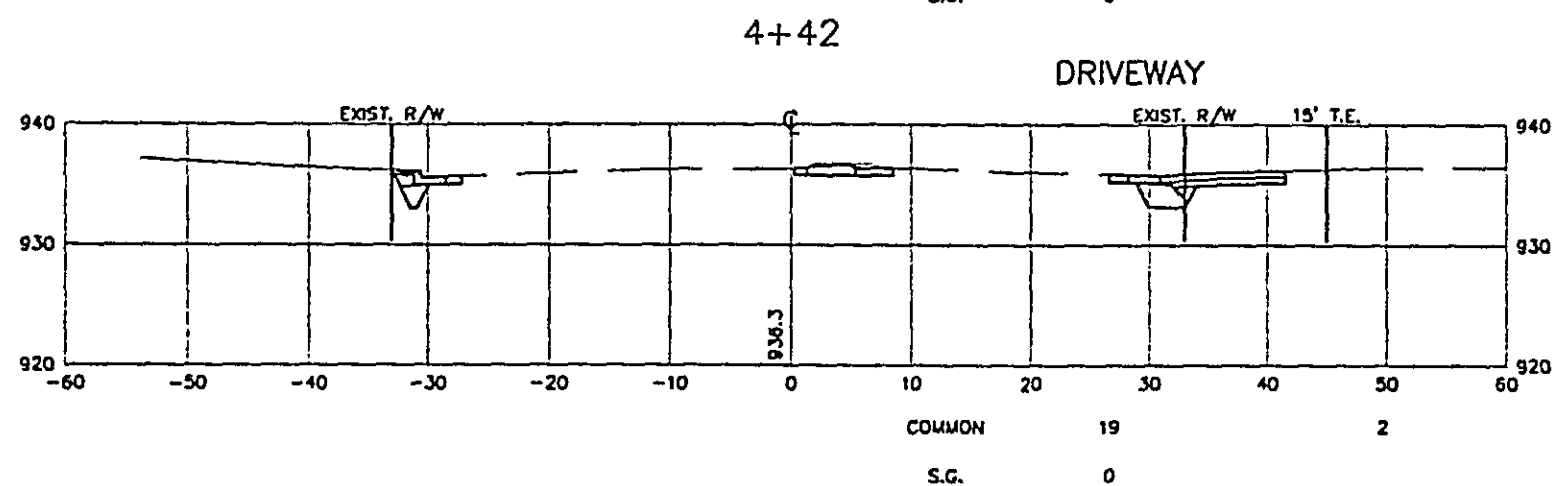
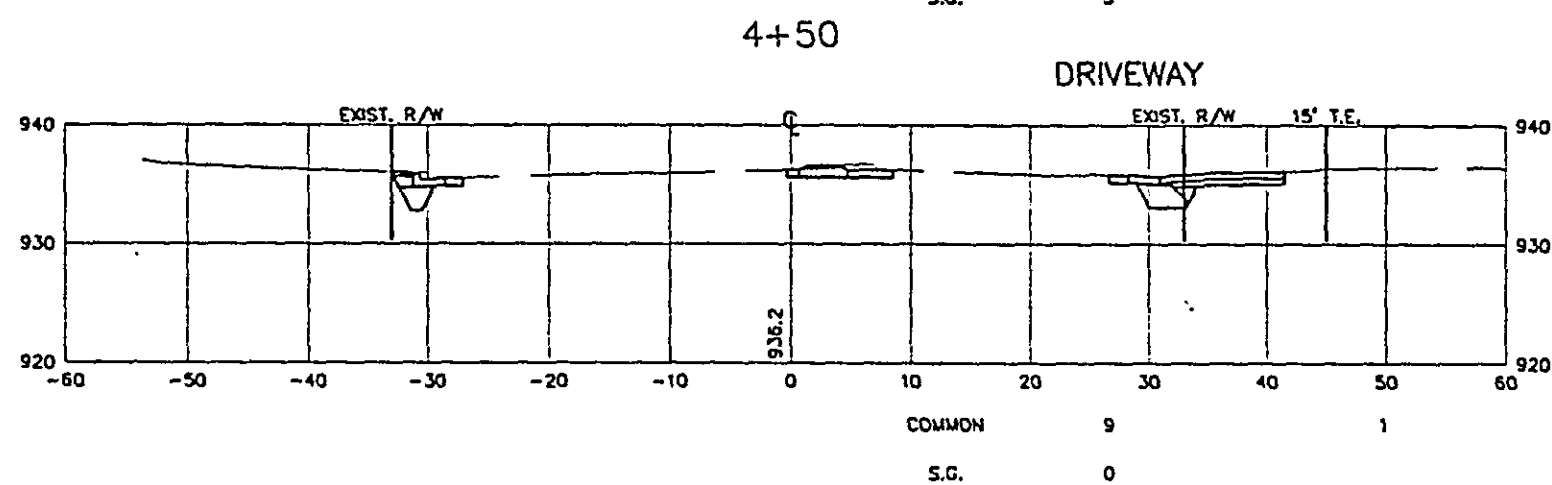
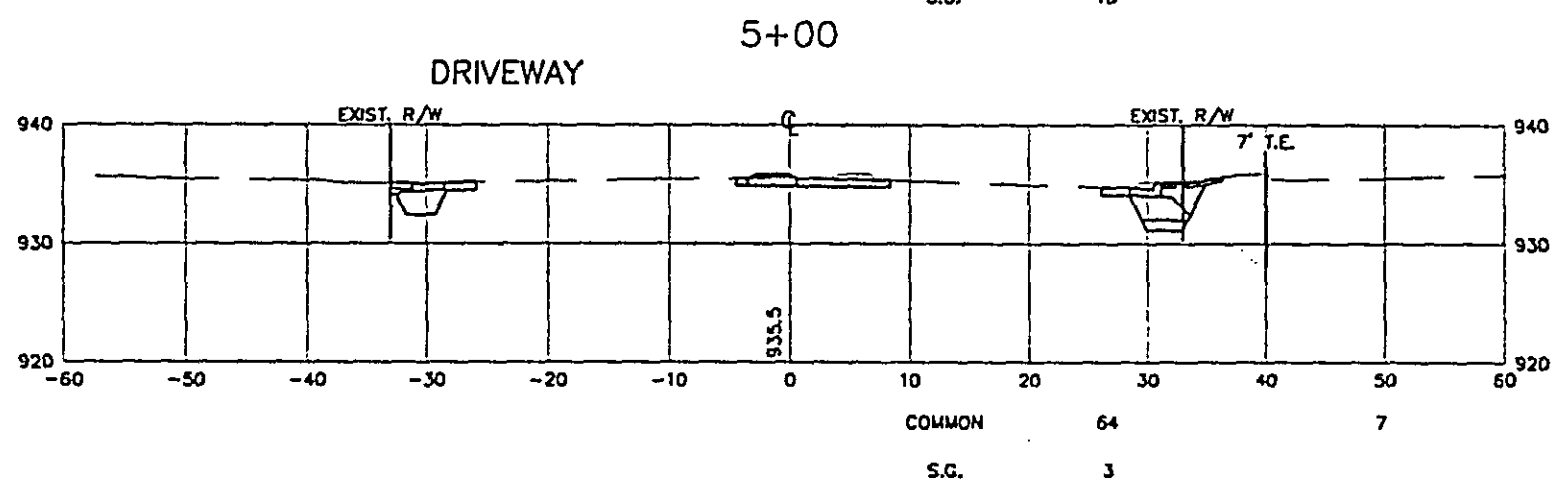
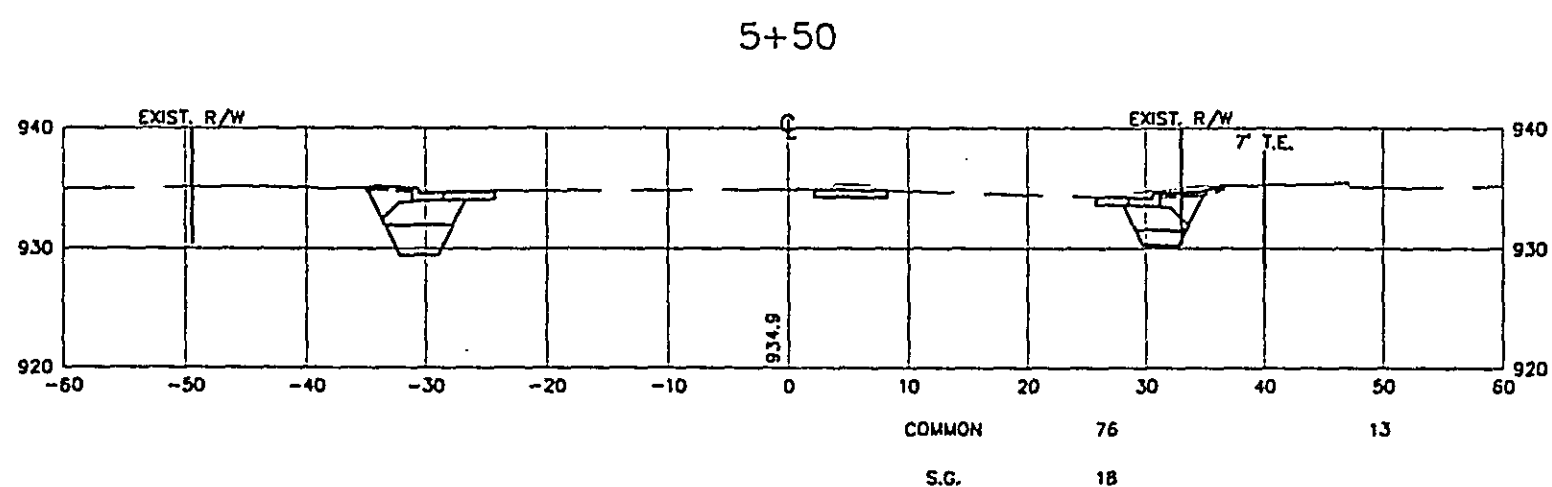
Sheet No. 66 of 77 Sheets

EXCAVATION
CU. YD

EMBANKMENT
CU. YD

EXCAVATION
CU. YD

EMBANKMENT
CU. YD



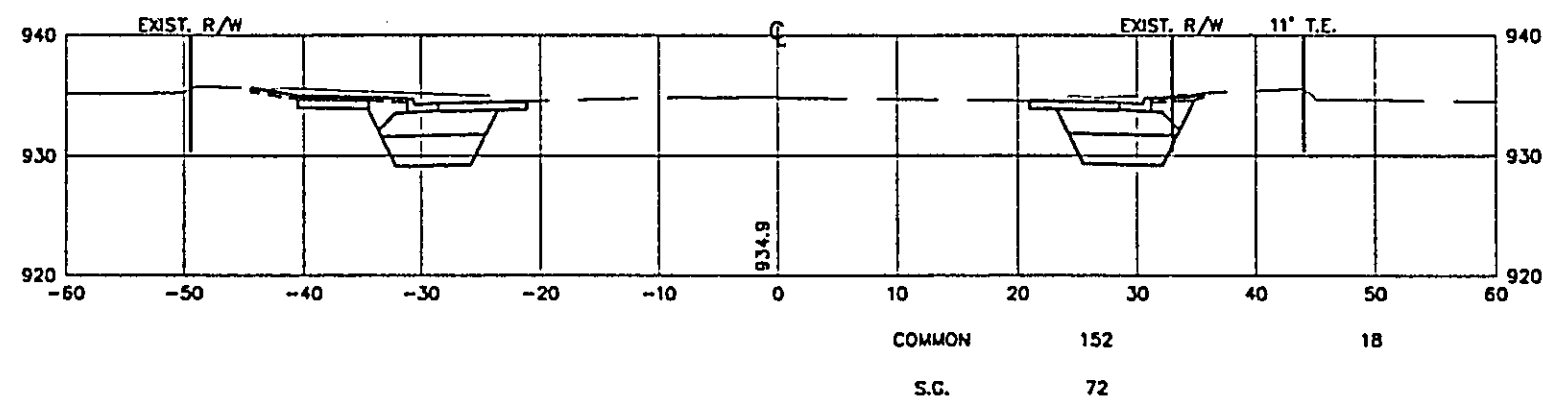
CROSS SECTIONS
STA. 4+42 TO STA. 6+81

28-155

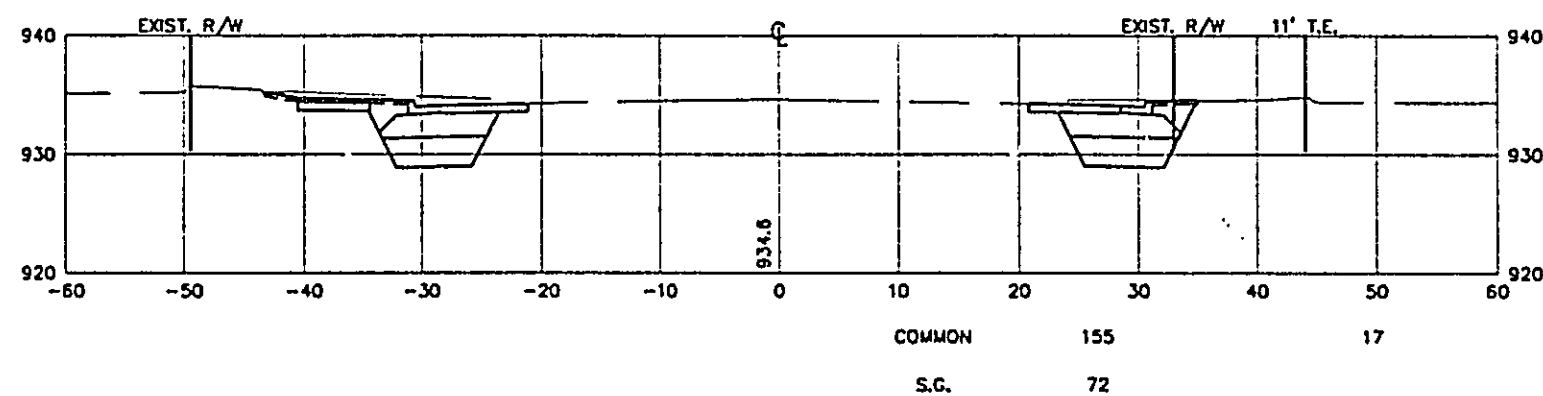
EXCAVATION EMBANKMENT
CU. YD CU. YD

EXCAVATION EMBANKMENT
CU. YD CU. YD

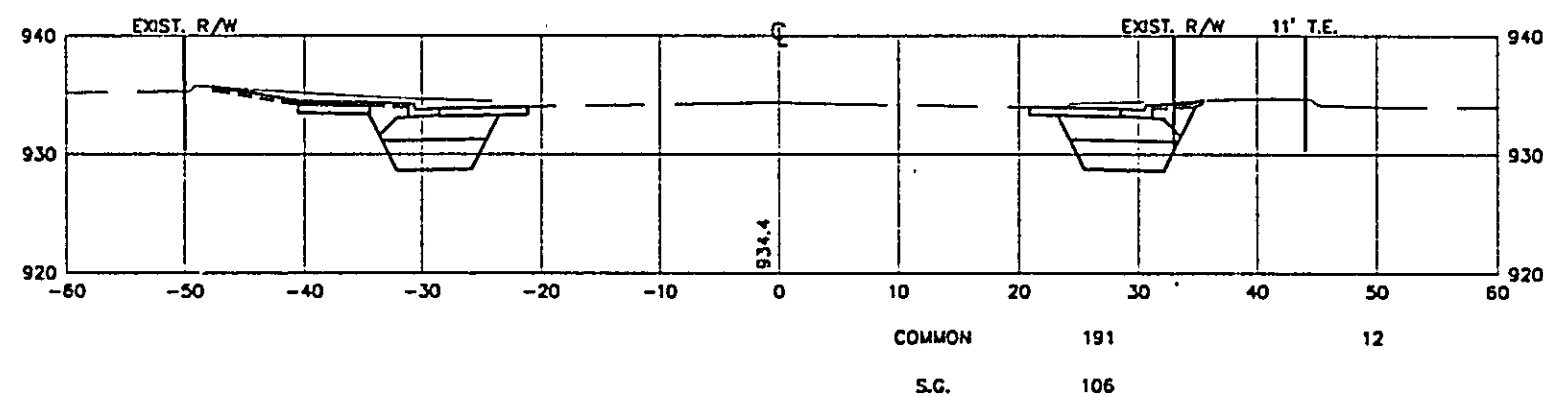
8+50



8+00

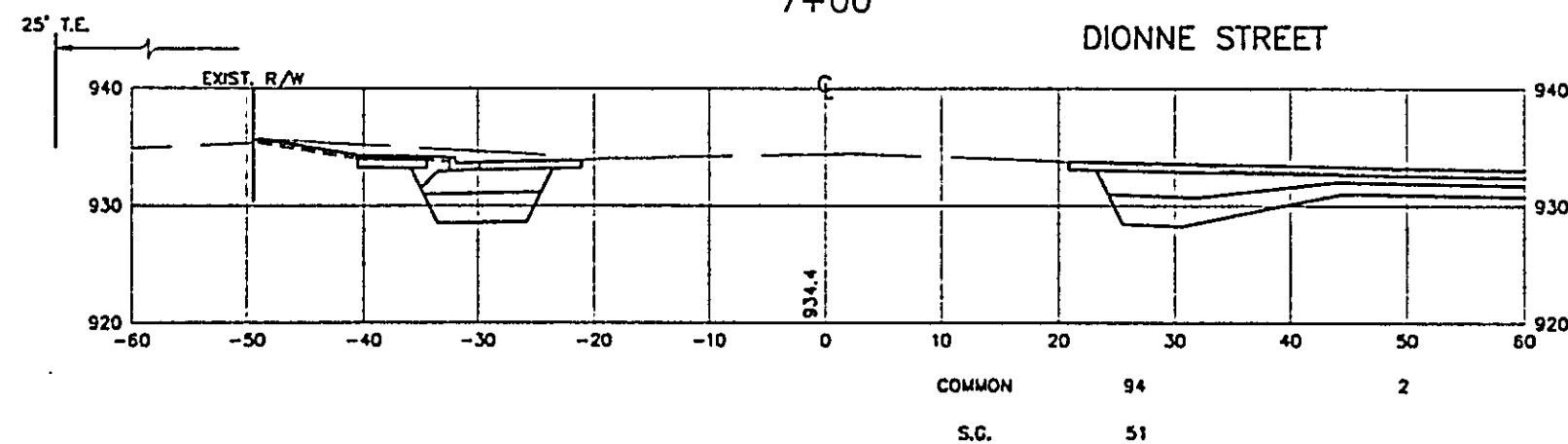


7+50

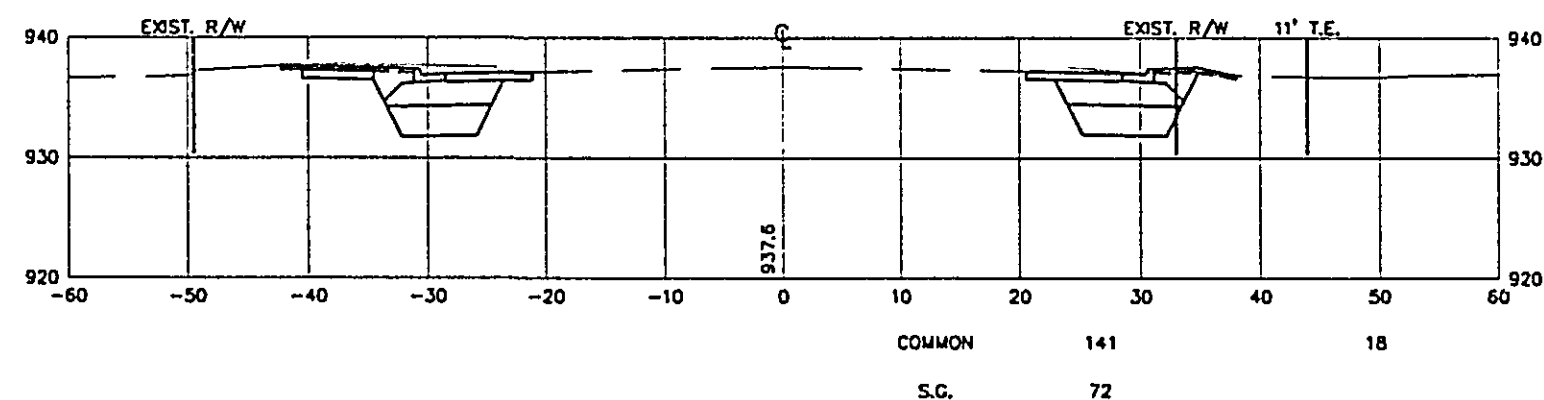


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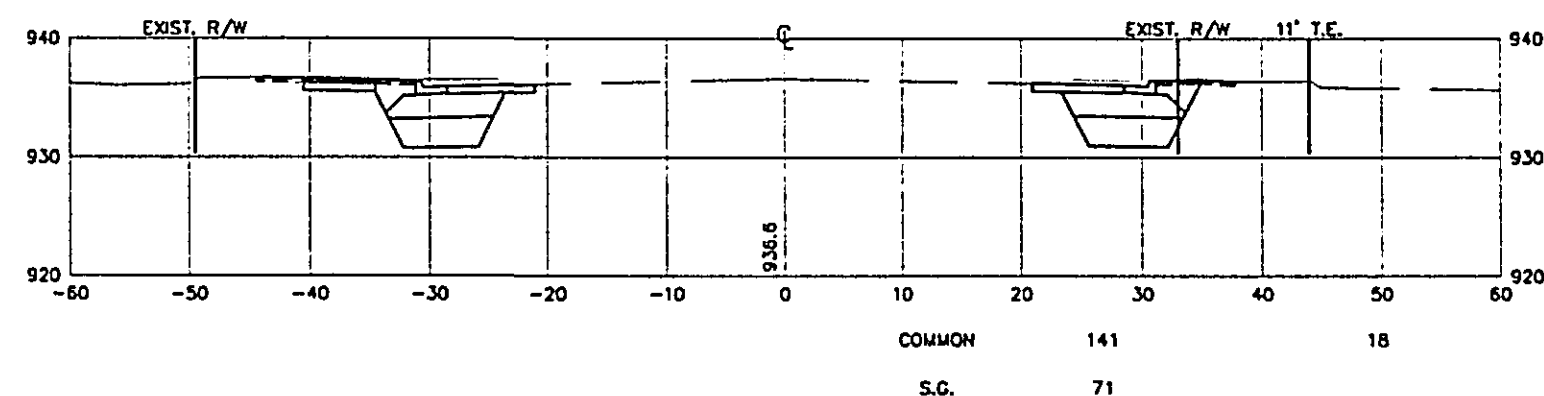
DIONNE STREET



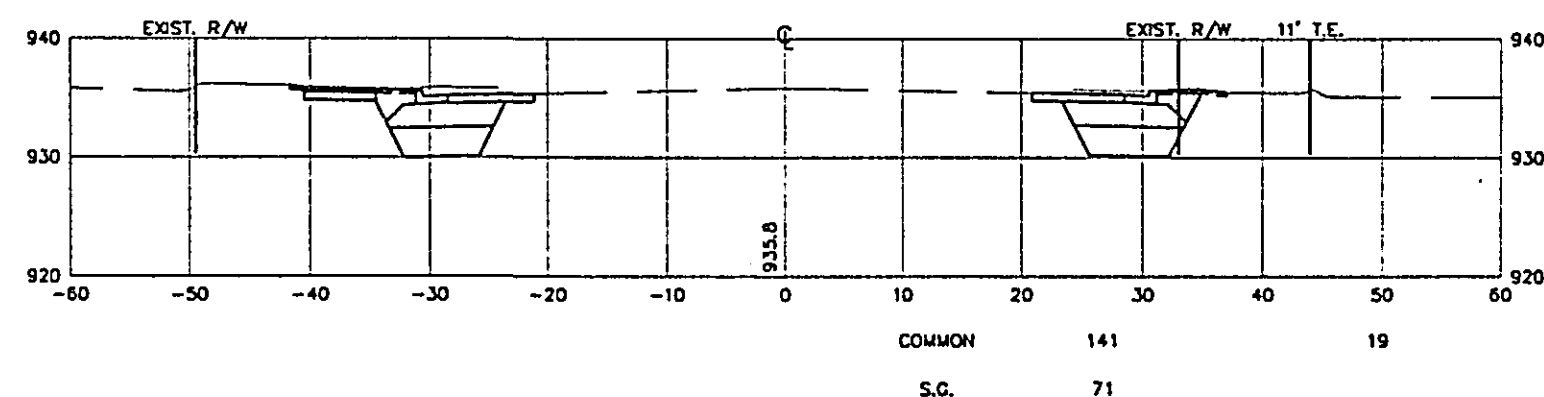
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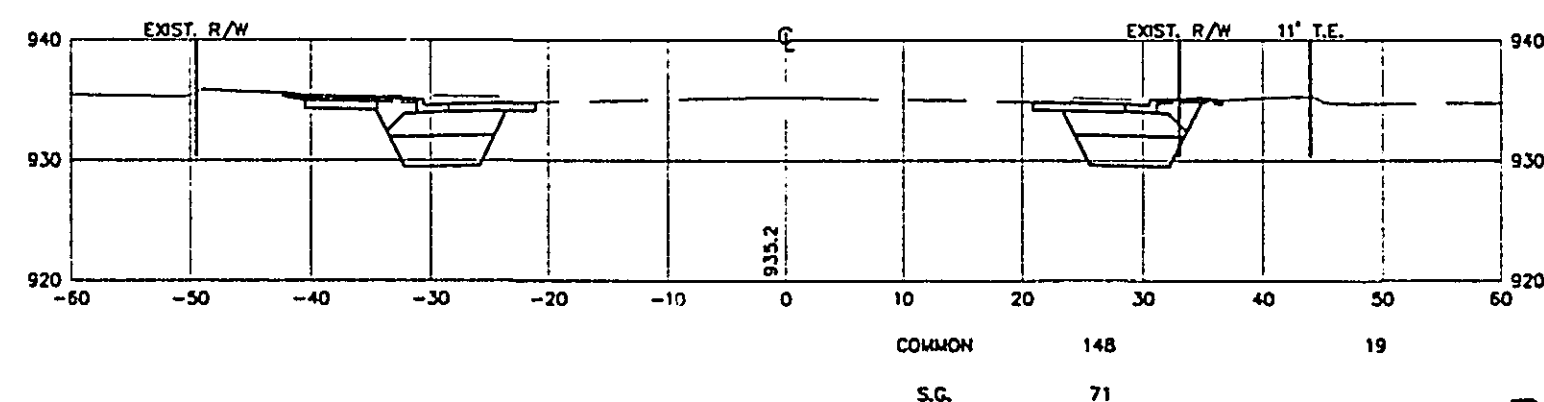
10+00



9+50



9+00



28-155

CROSS SECTIONS
STA. 7+00 TO STA. 10+50

EXCAVATION
CU. YD

EMBANKMENT
CU. YD

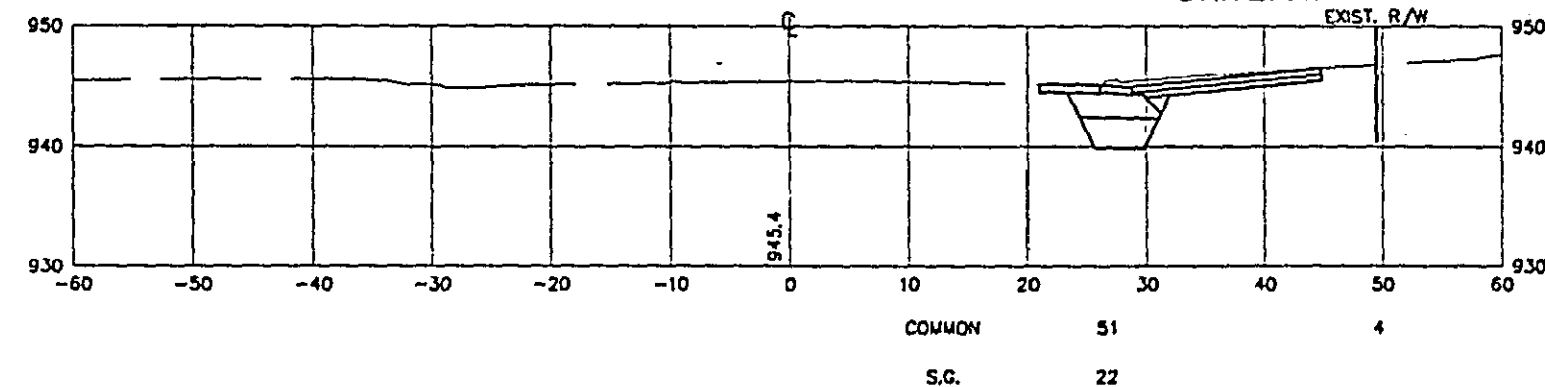
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EMBANKMENT
CU. YD

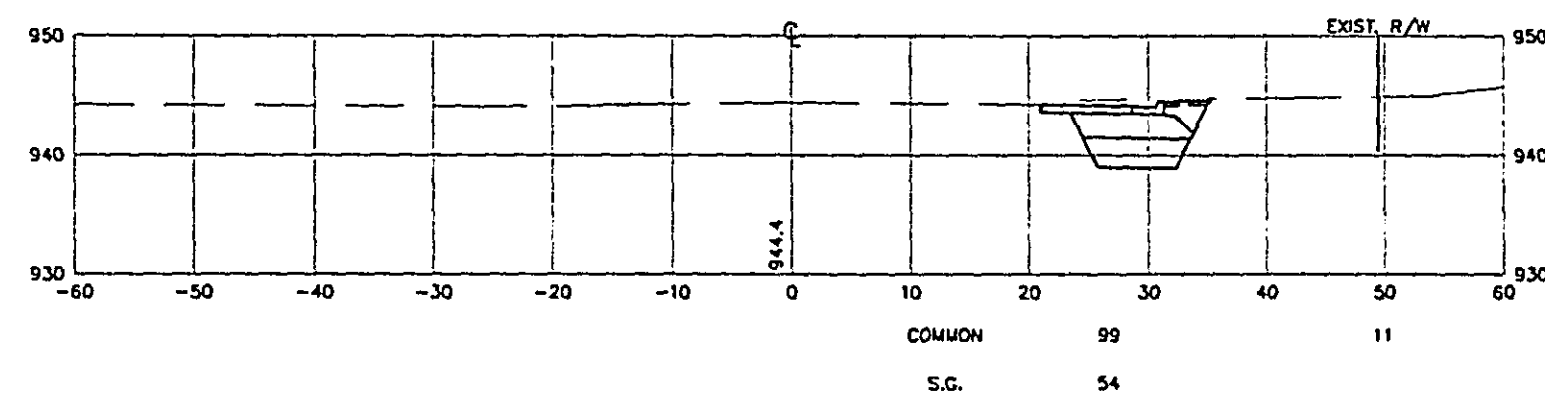
GARDEN AVENUE

13+36

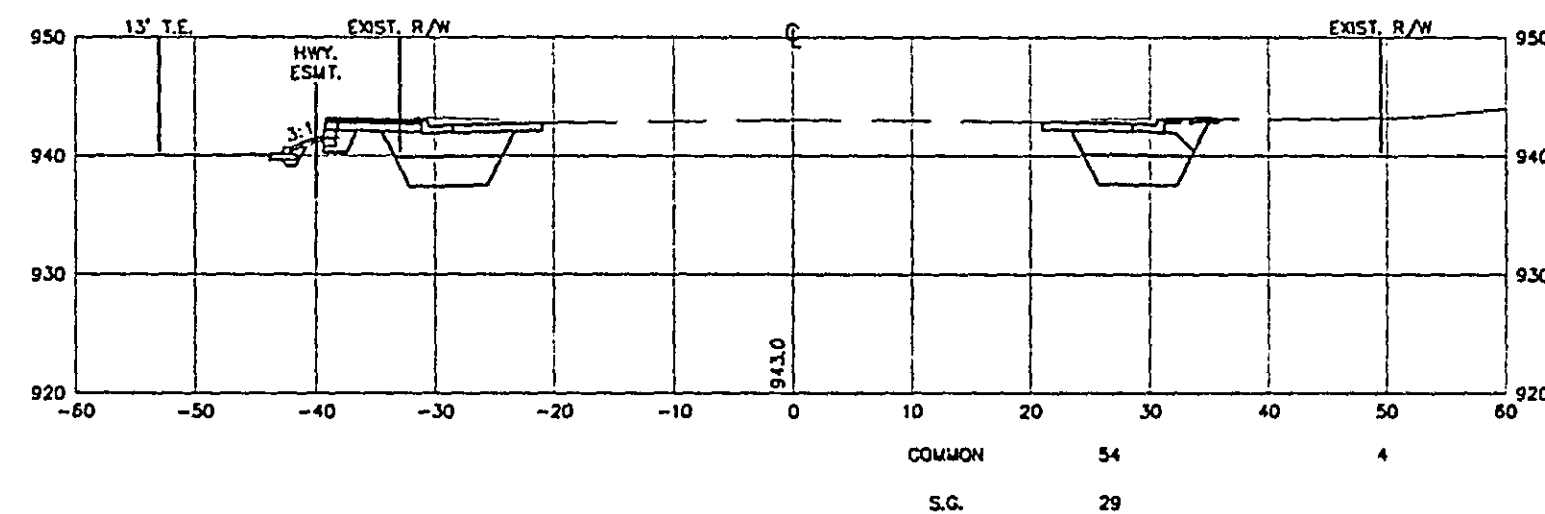
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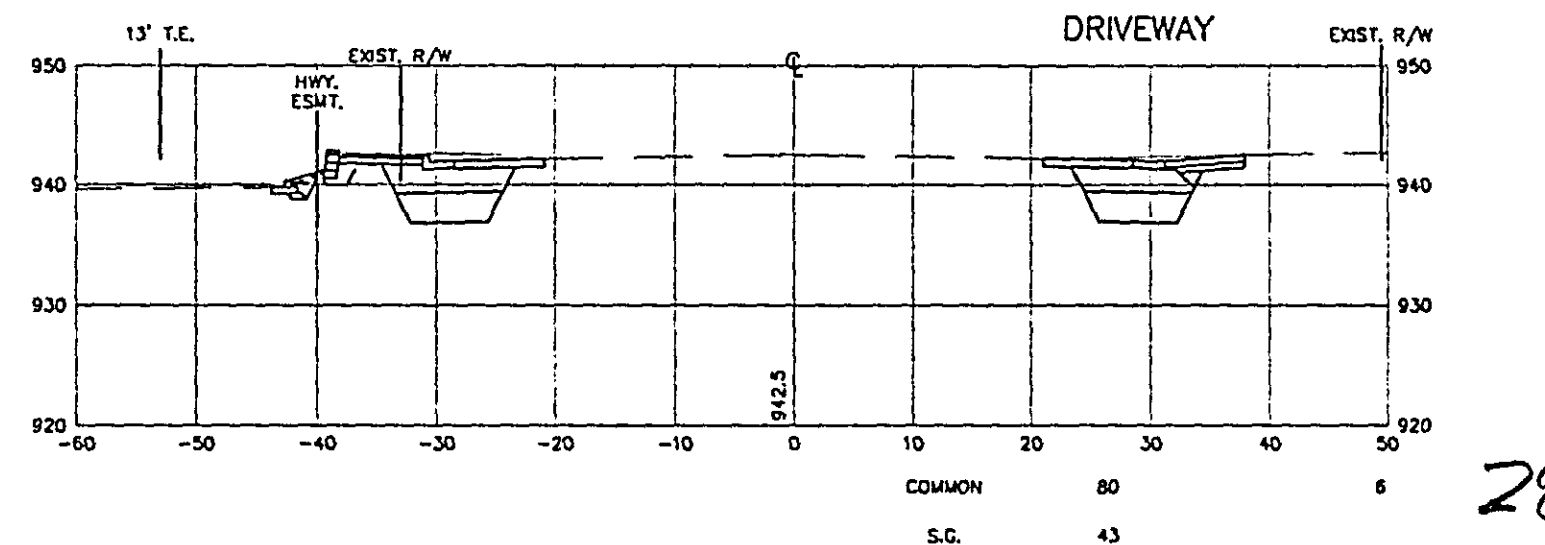
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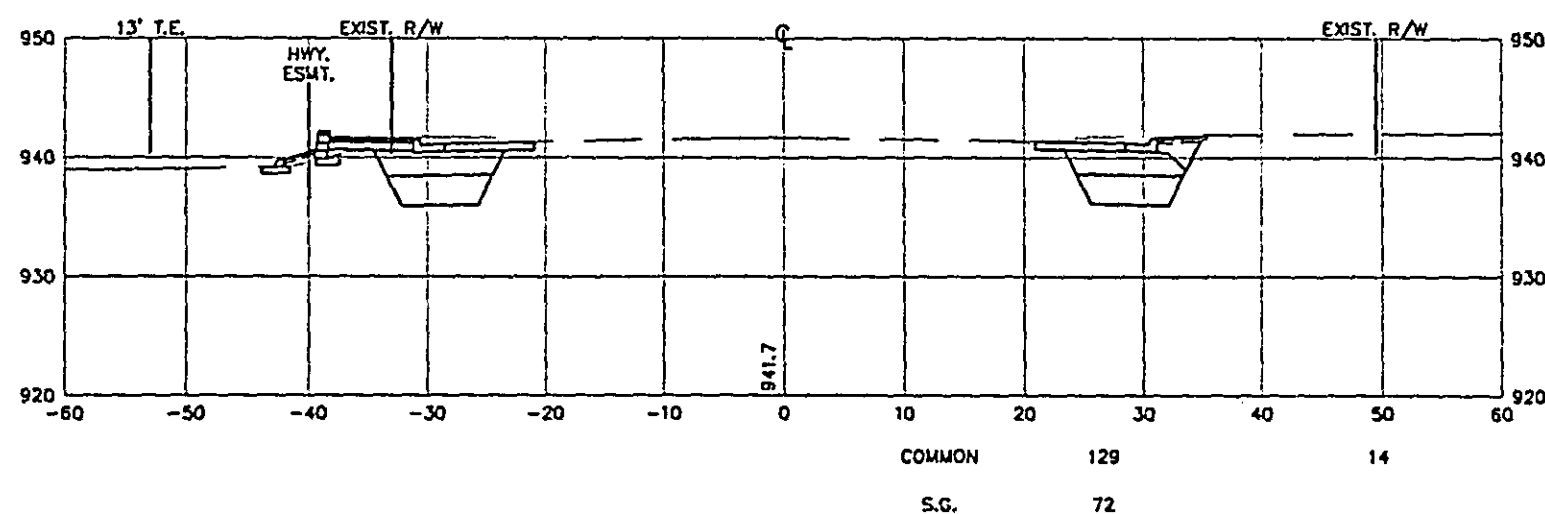
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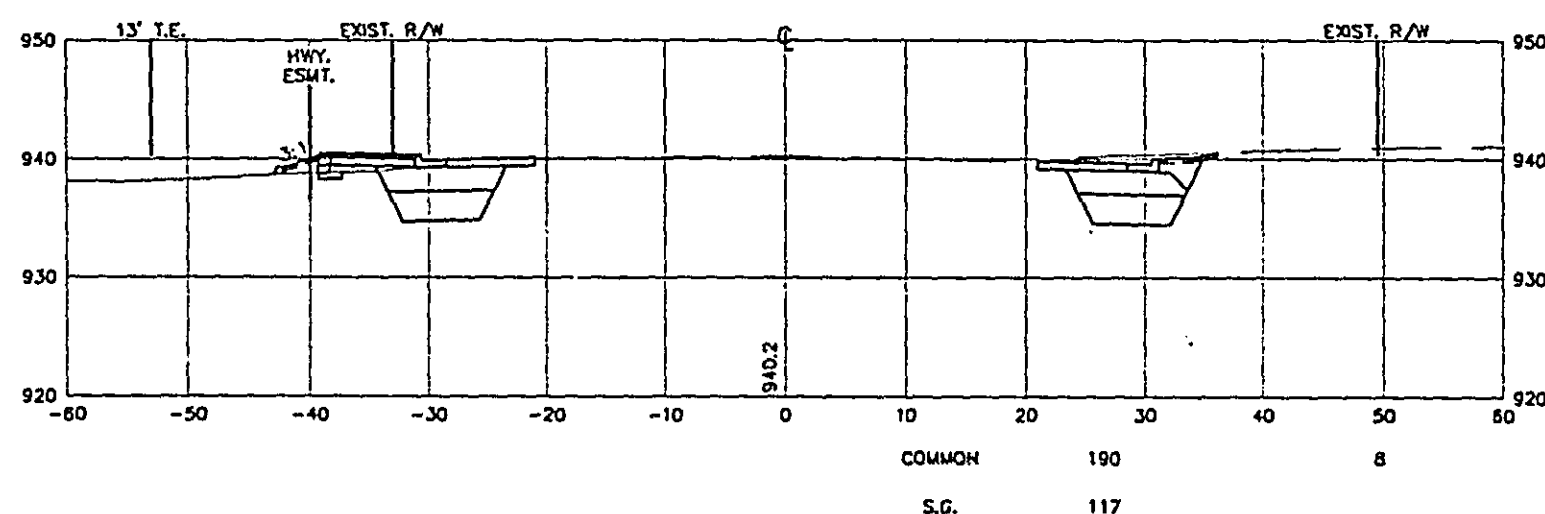
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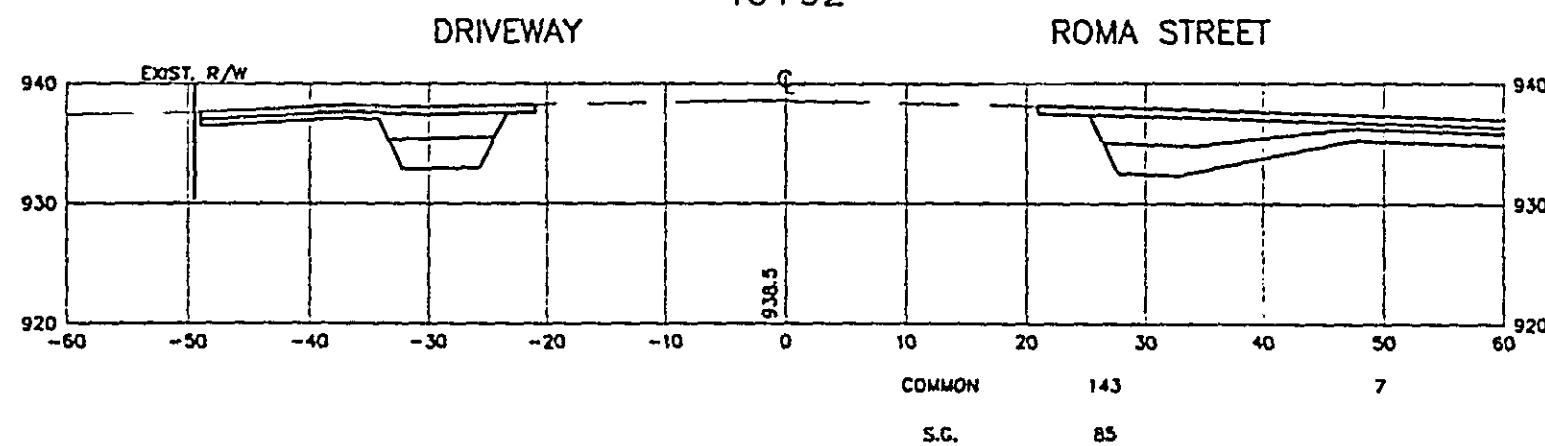
12+00



11+50



10+92



CROSS SECTIONS

STA. 10+92 TO STA. 13+36

28-155

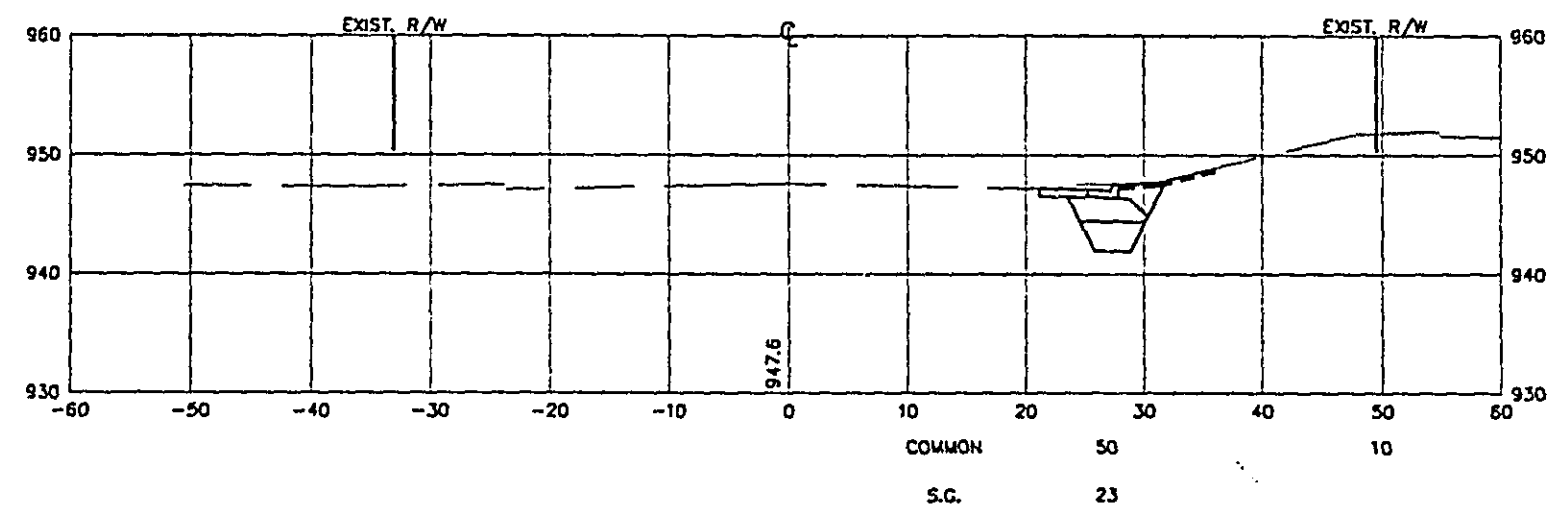
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EMBANKMENT
CU. YD

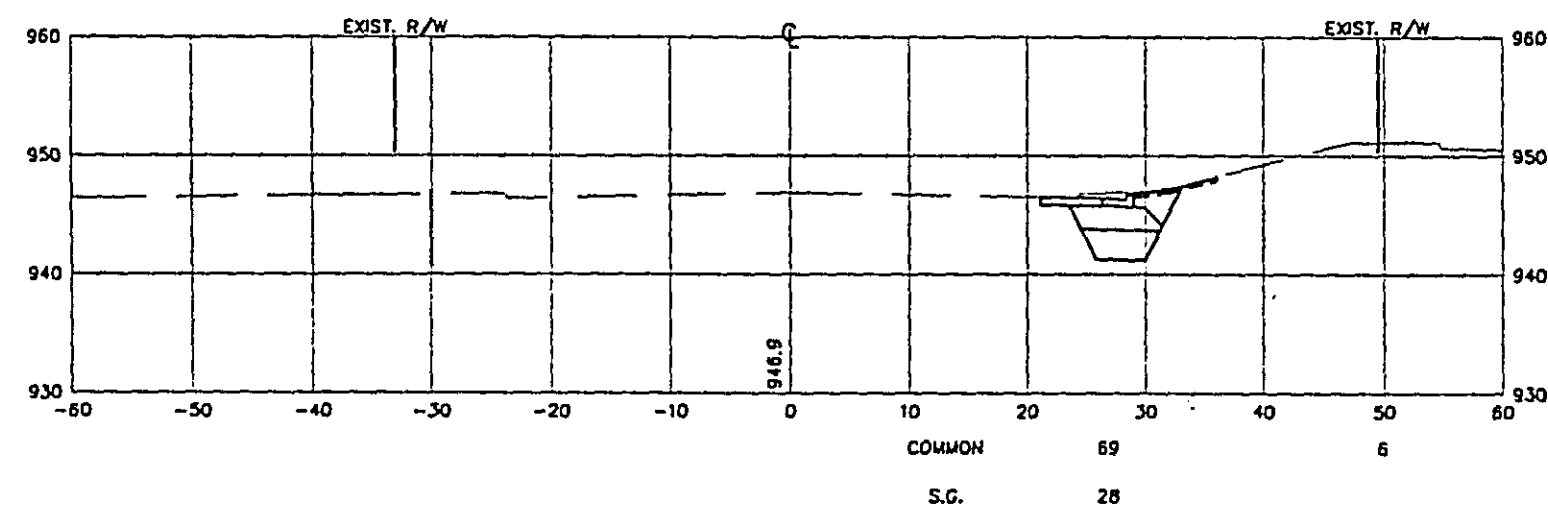
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EMBANKMENT
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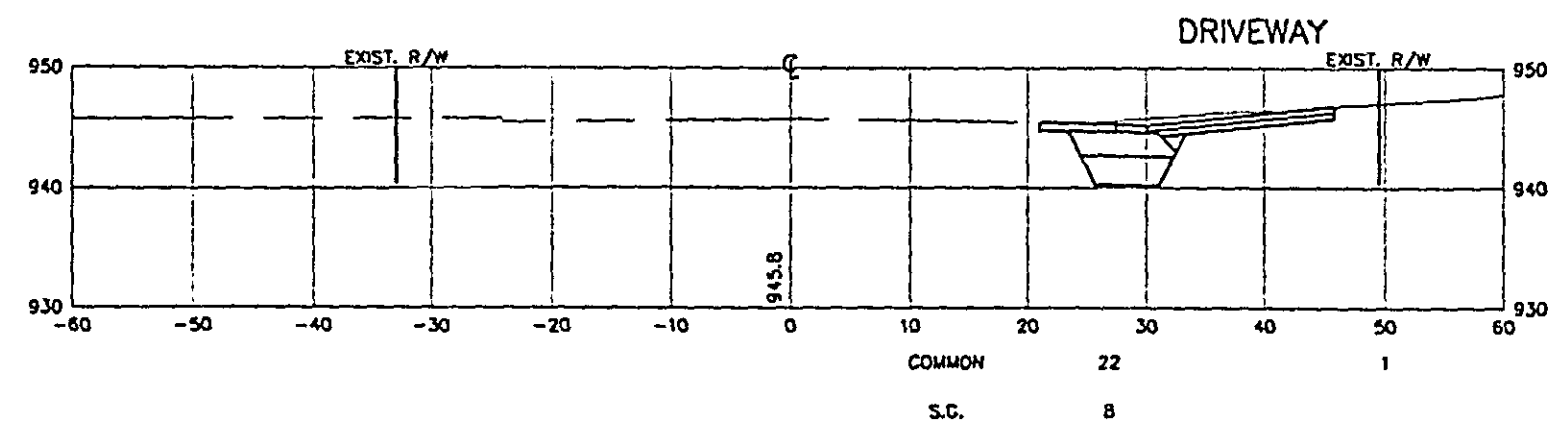
14+50



14+00

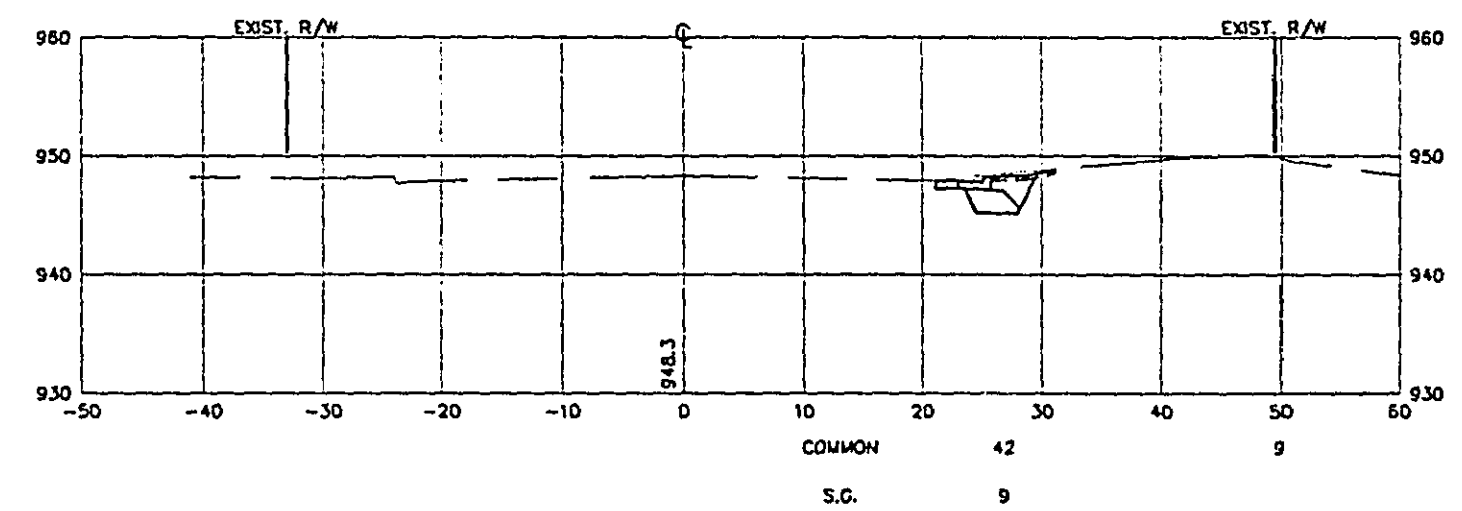


13+50

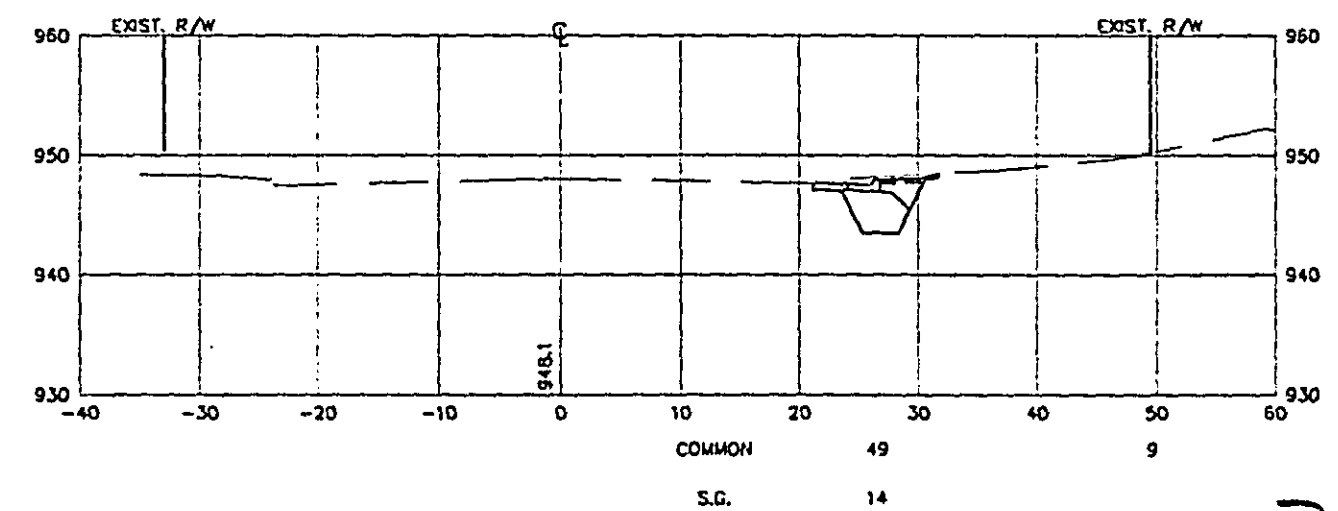


15+50

COMMON 15
S.G. 4



15+00



28-155

CROSS SECTIONS
STA. 13+50 TO STA. 15+50

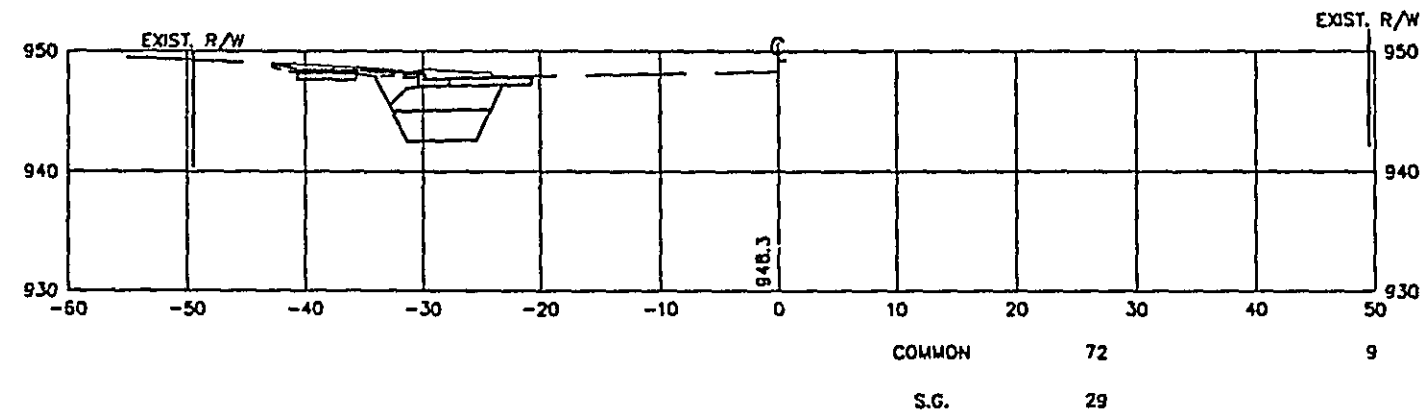
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EMBANKMENT
CU. YD

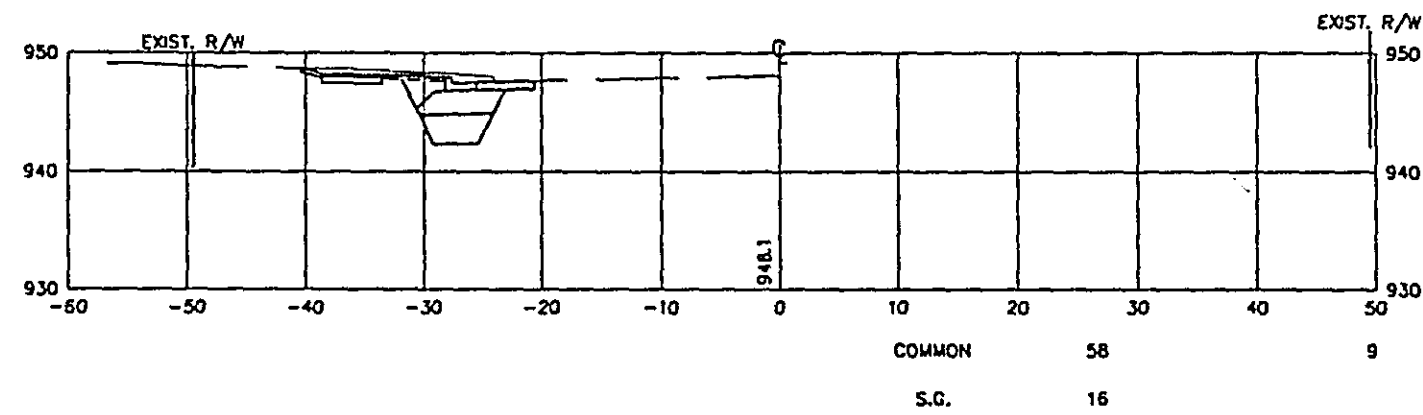
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EMBANKMENT
CU. YD

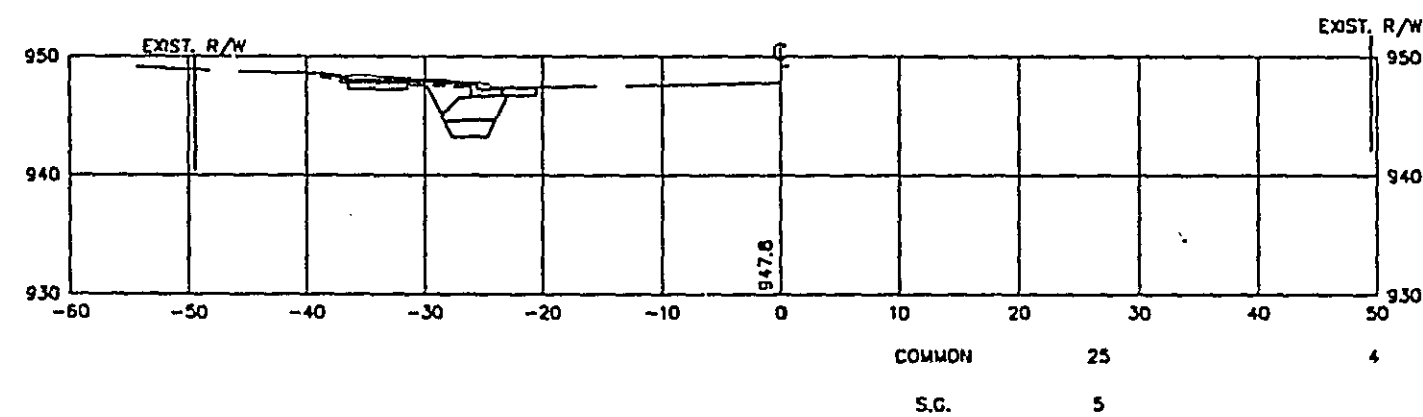
51+00



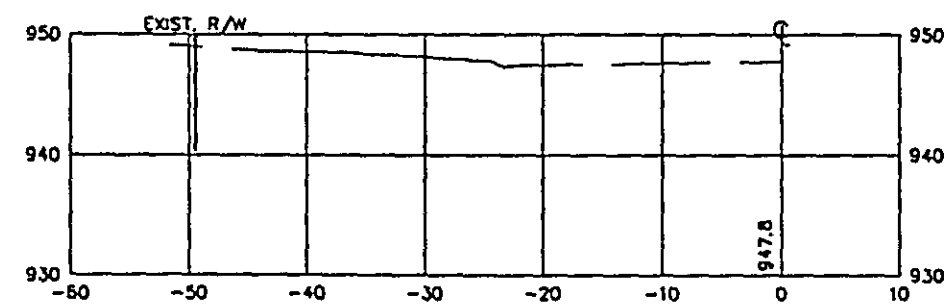
50+50



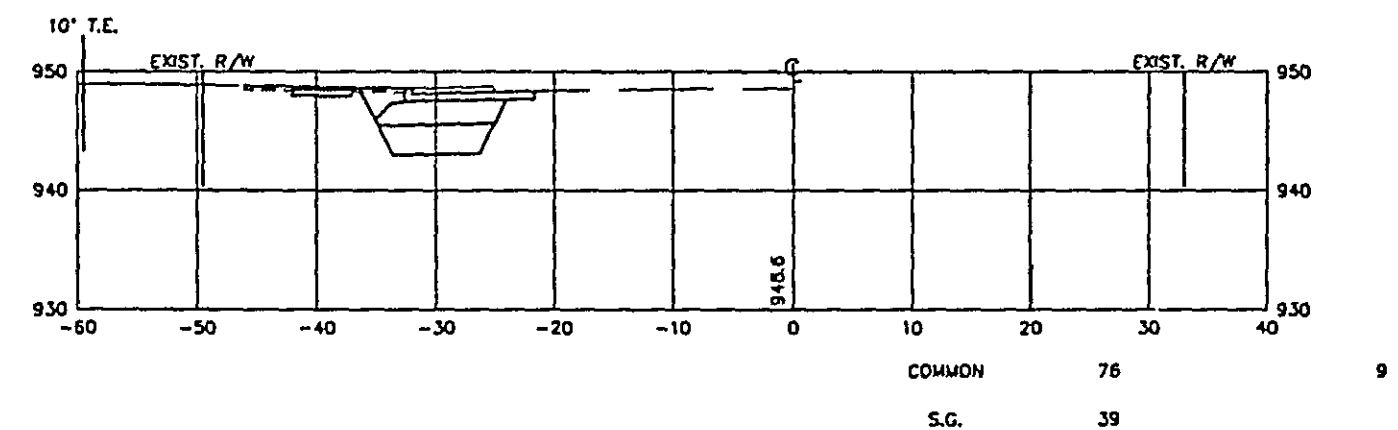
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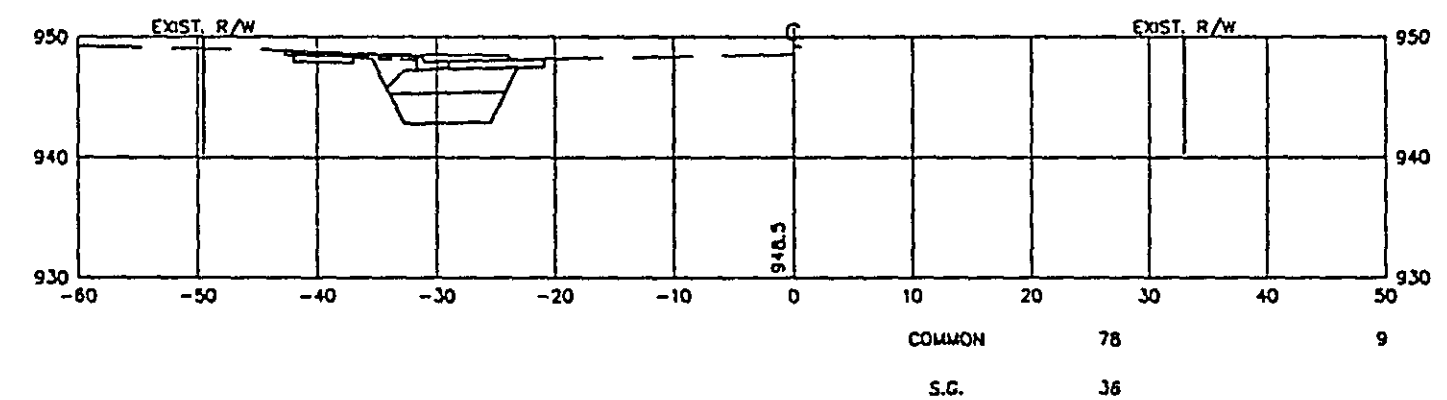
49+50



52+00



51+50



28-155

CROSS SECTIONS
STA. 49+50 TO STA. 52+50

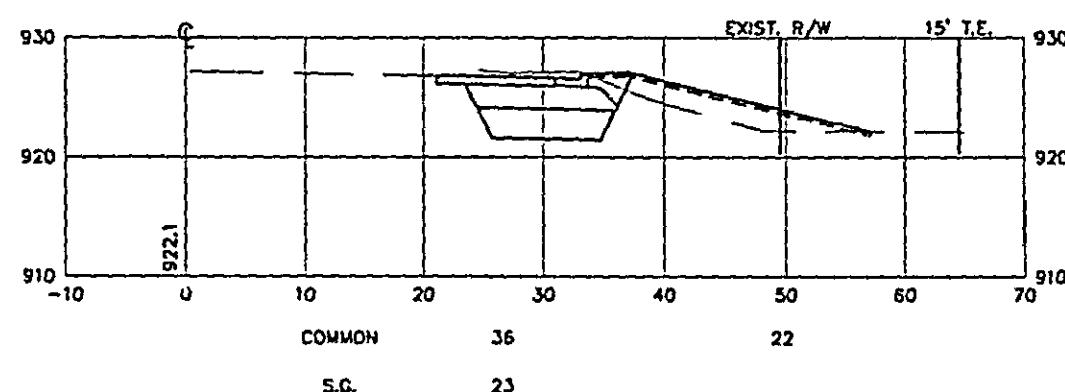
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CU. YD

EMBANKMENT
CU. YD

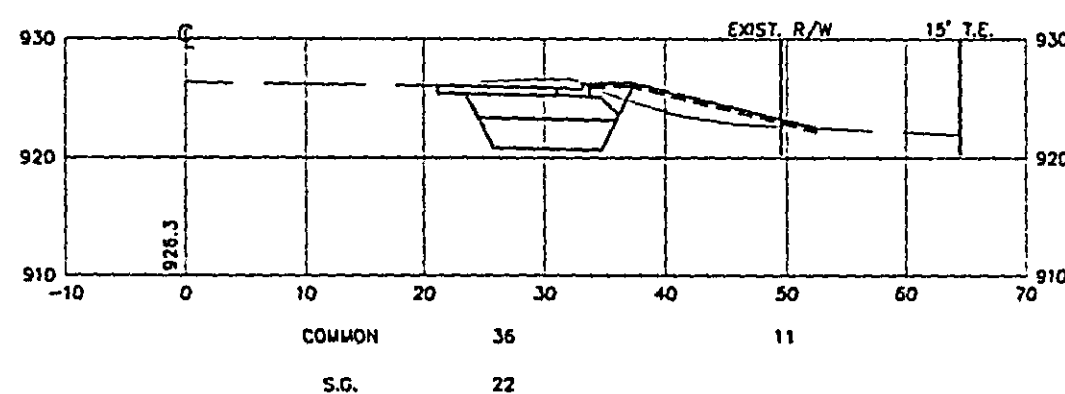
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EMBANKMENT
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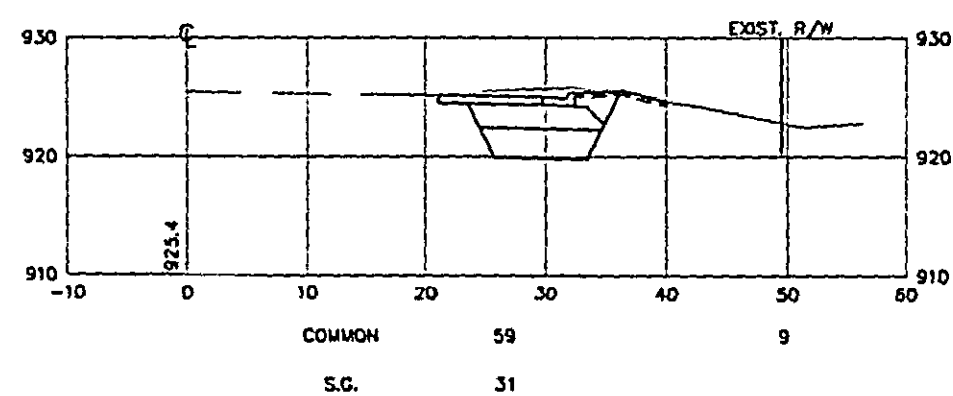
77+50



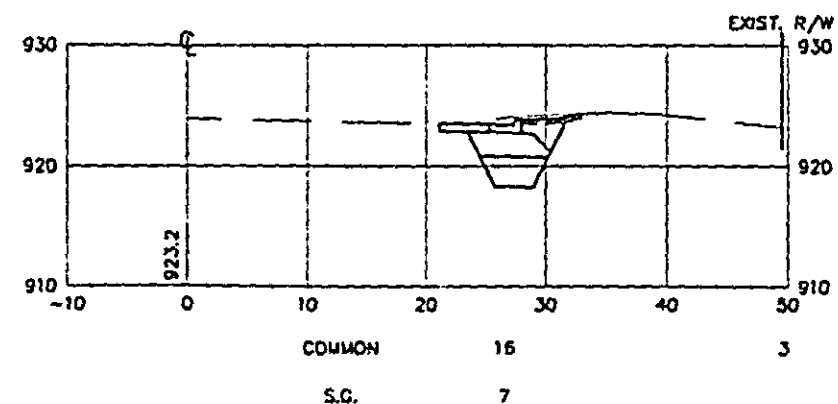
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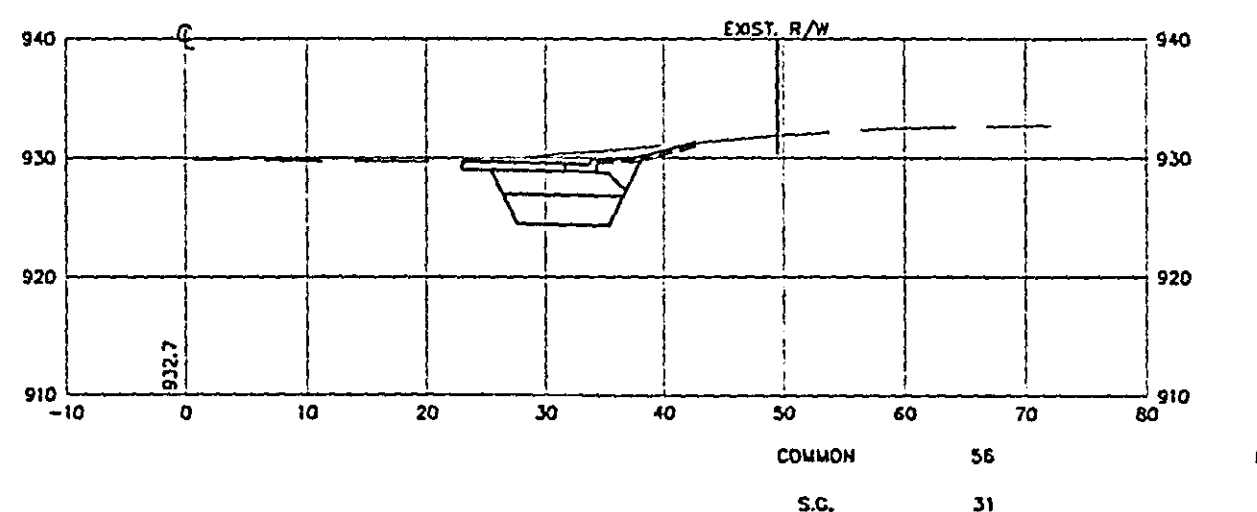
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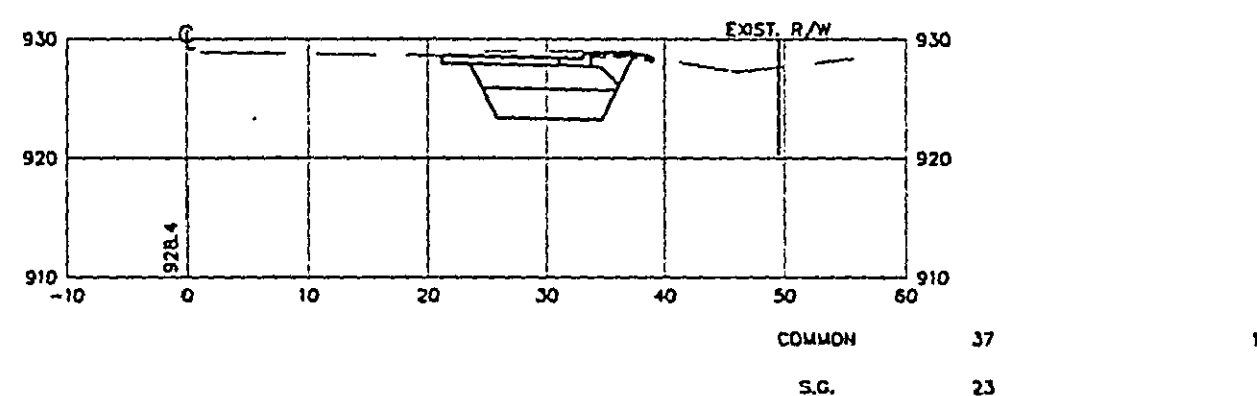
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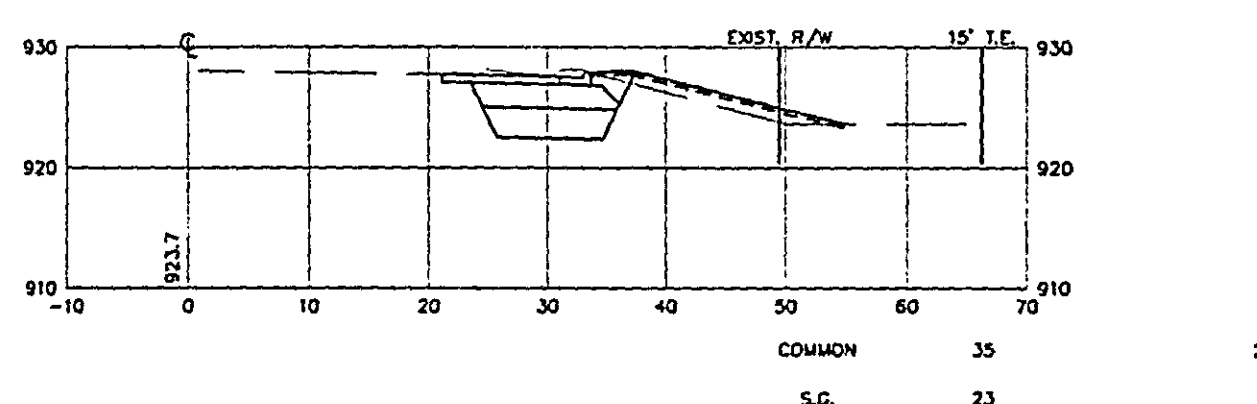
78+35



78+00



77+75



28-155

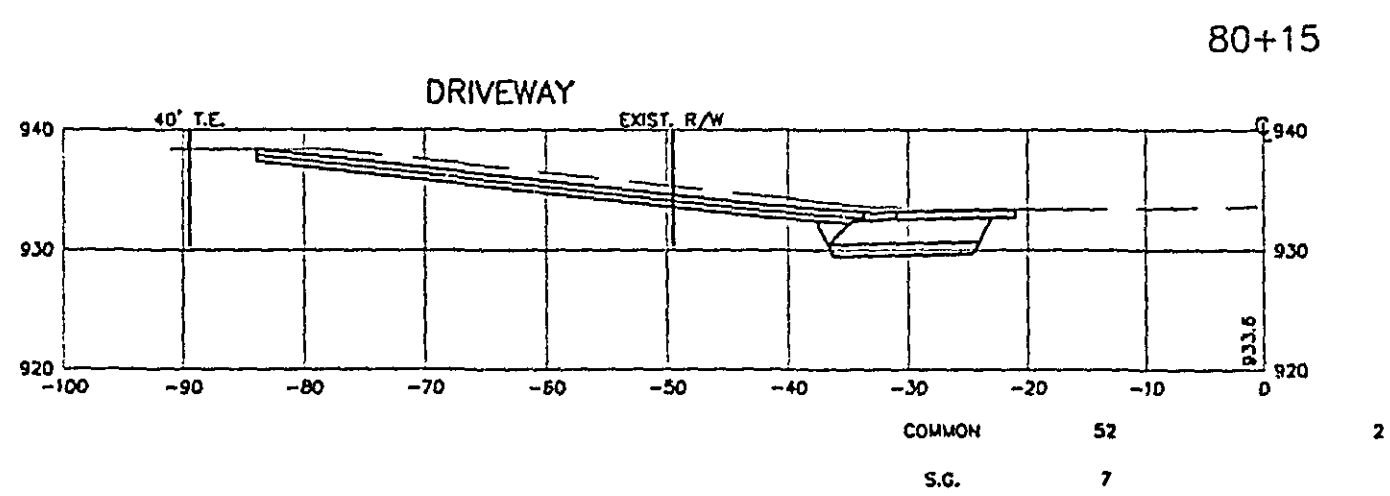
CROSS SECTIONS
STA. 76+50 TO STA. 78+35

EXCAVATION
CU. YD

EMBANKMENT
CU. YD

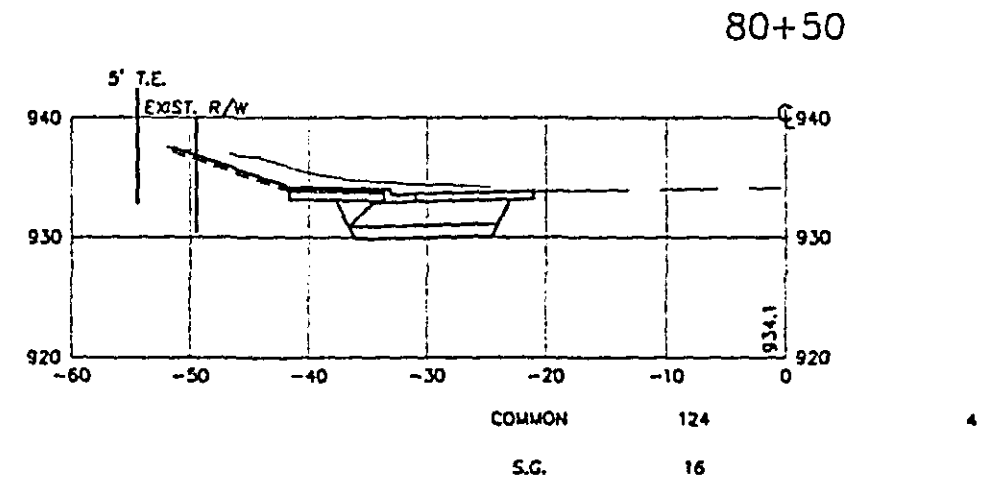
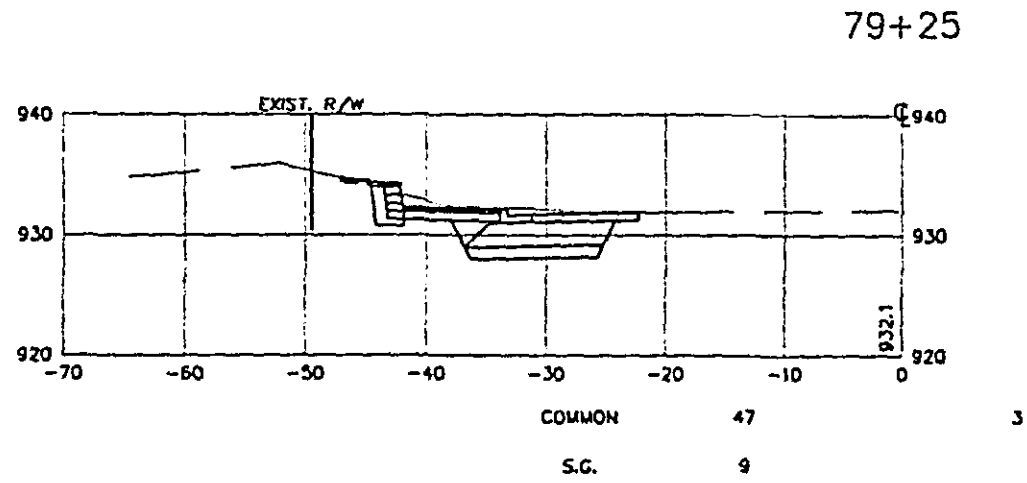
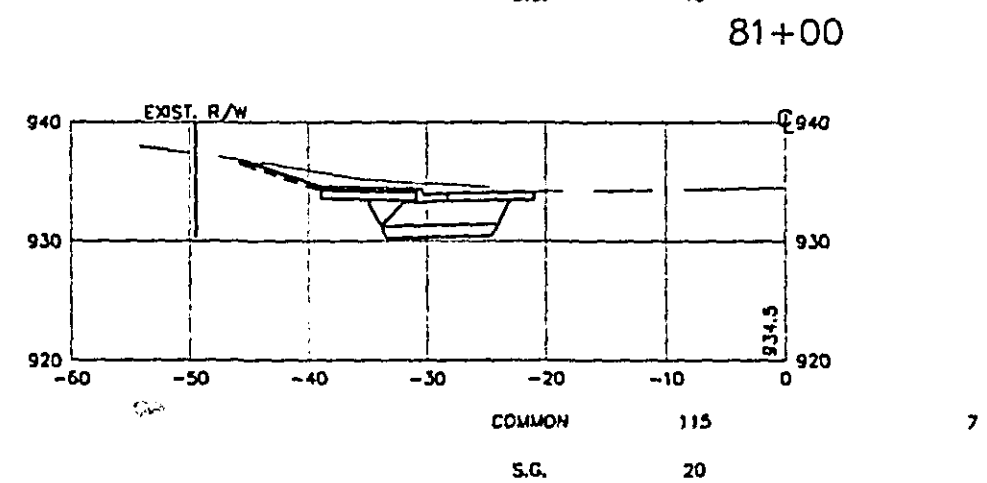
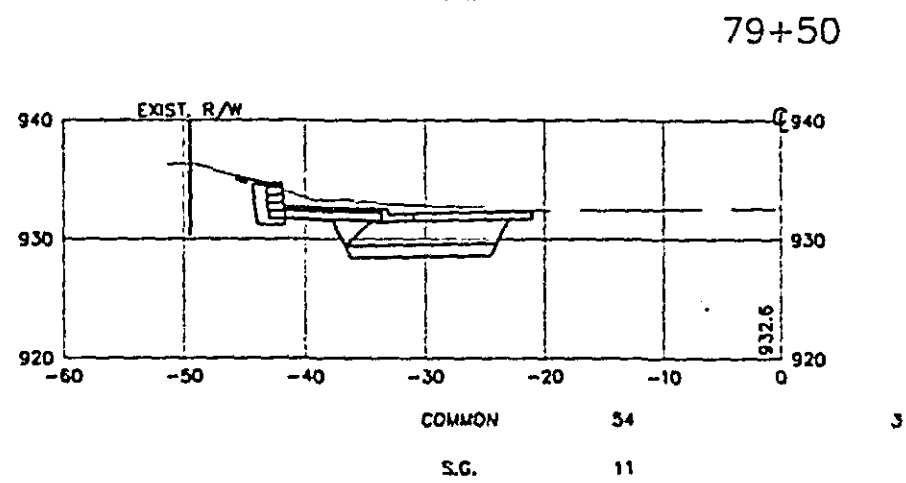
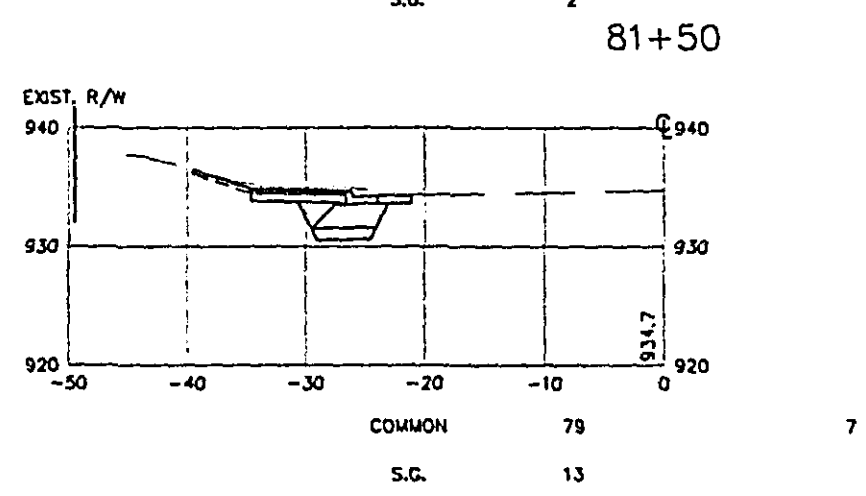
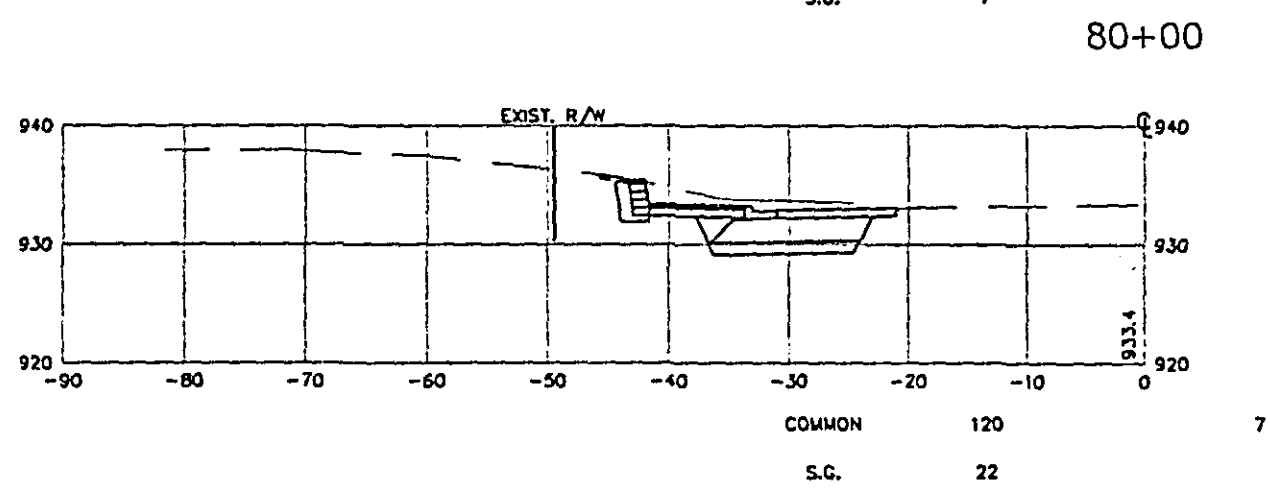
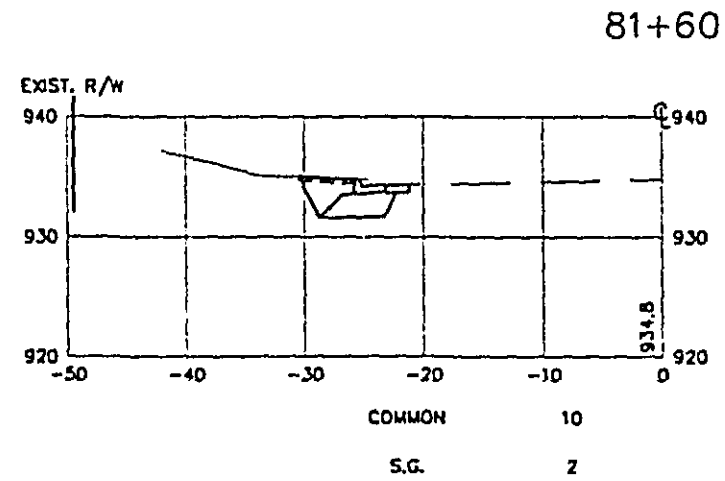
EXCAVATION
CU. YD

EMBANKMENT
CU. YD



COMMON 4

S.G. 1



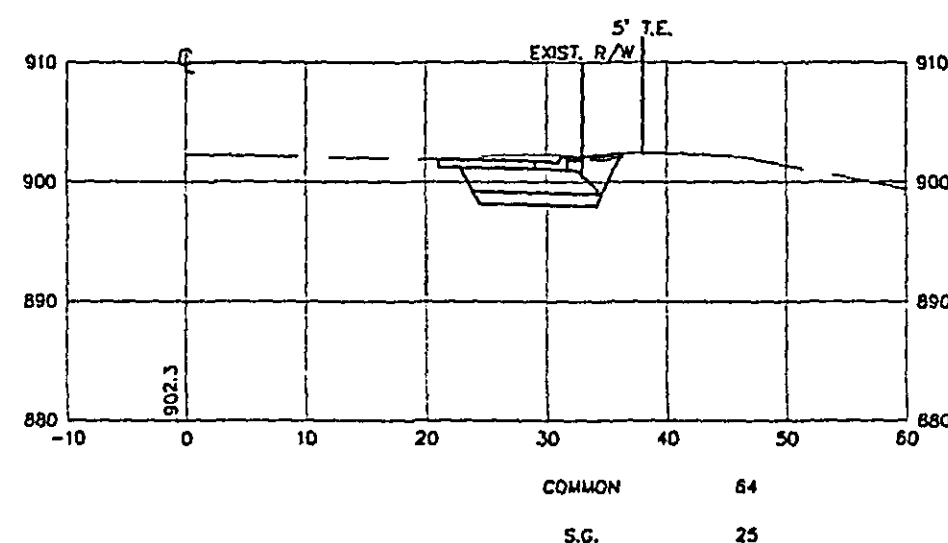
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CU. YD

EMBANKMENT
CU. YD

EXCAVATION
CU. YD

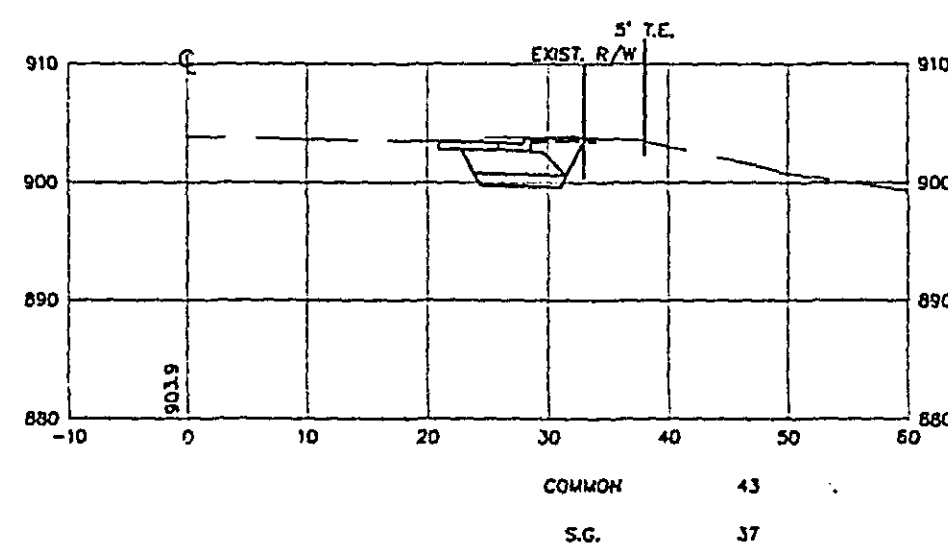
EMBANKMENT
CU. YD

92+50



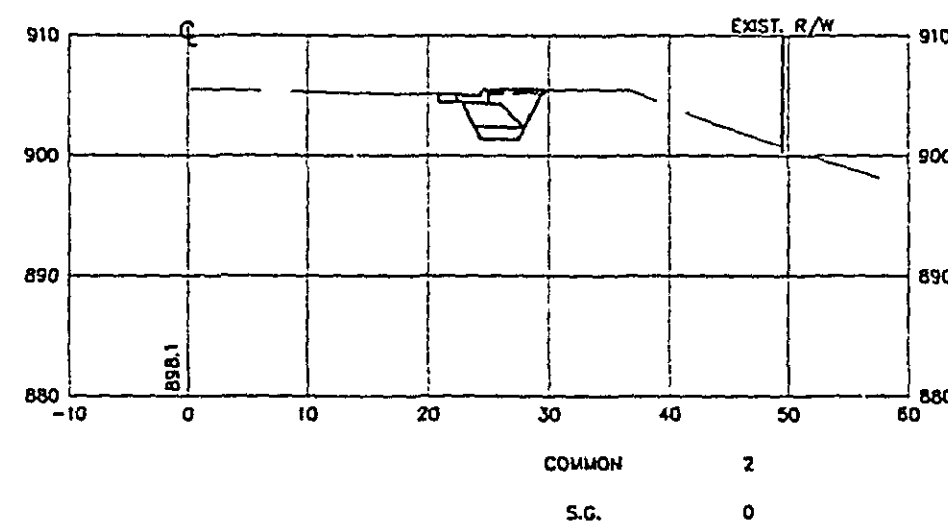
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92+00



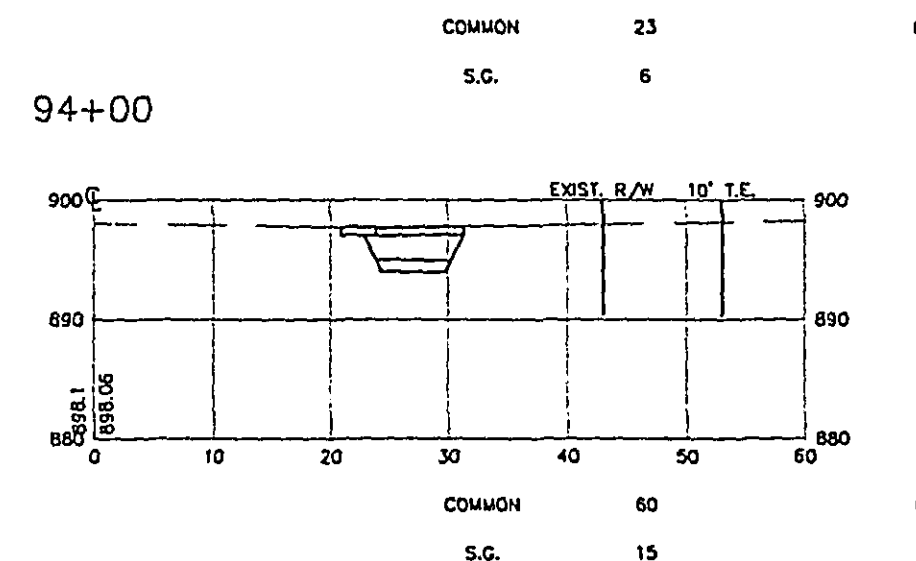
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91+50



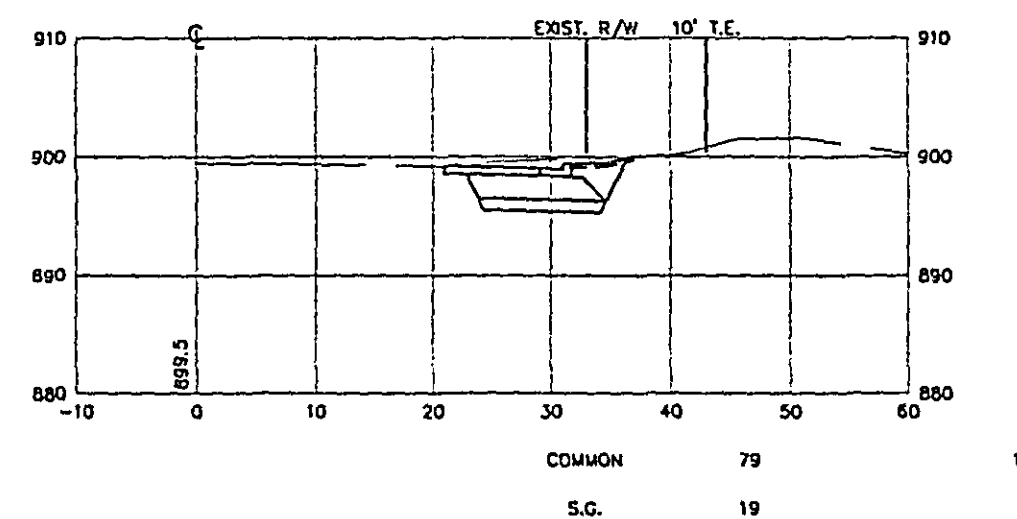
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94+00



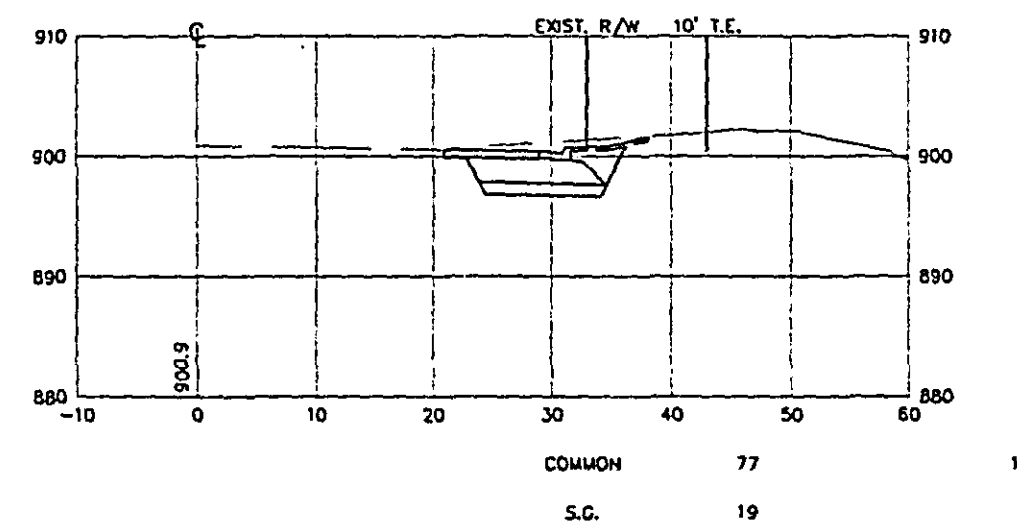
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93+50



13

93+00



13

28-155

CROSS SECTIONS
STA. 91+50 TO STA. 93+50

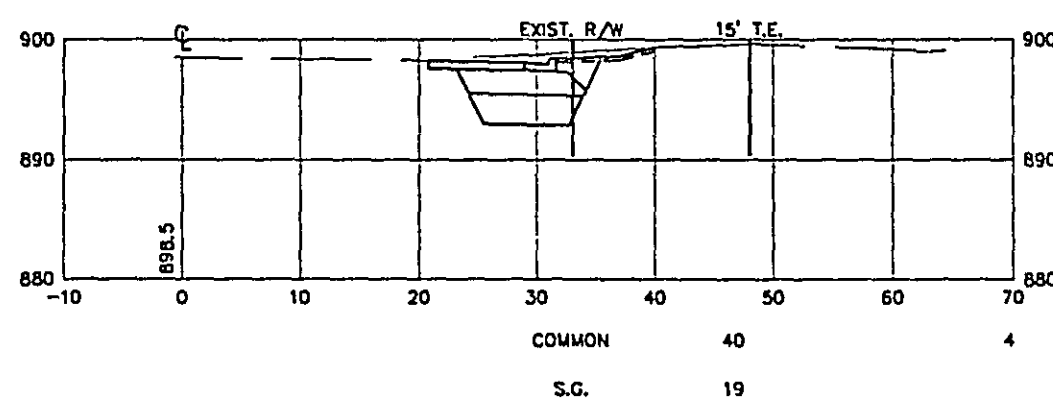
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CU. YD

EMBANKMENT
CU. YD

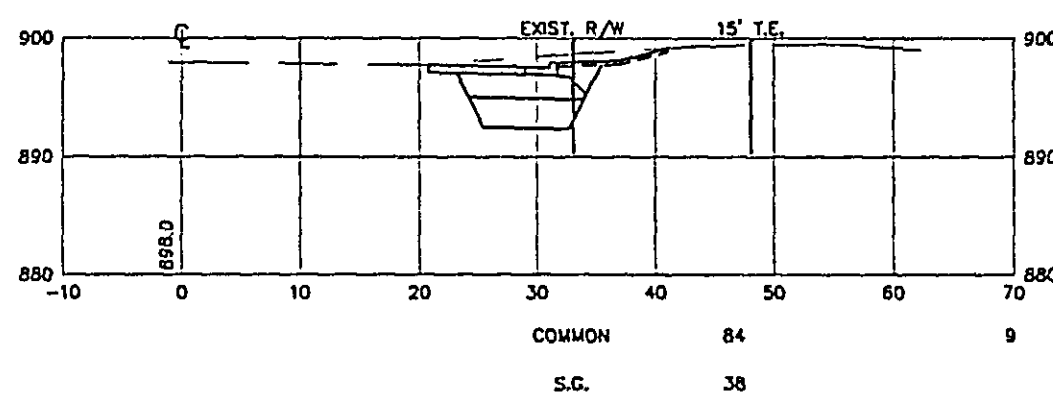
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CU. YD

EMBANKMENT
CU. YD

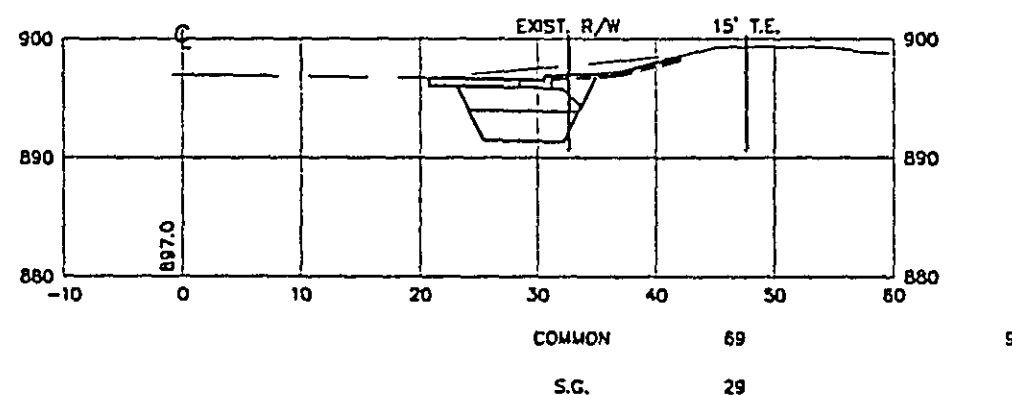
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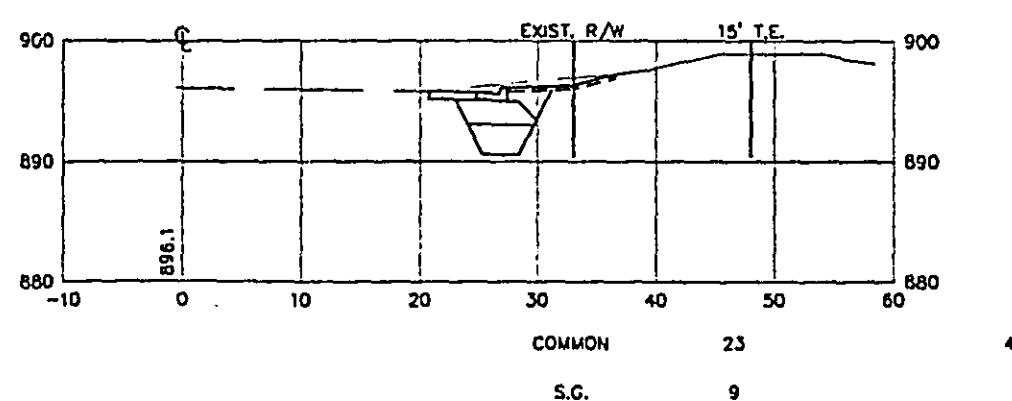
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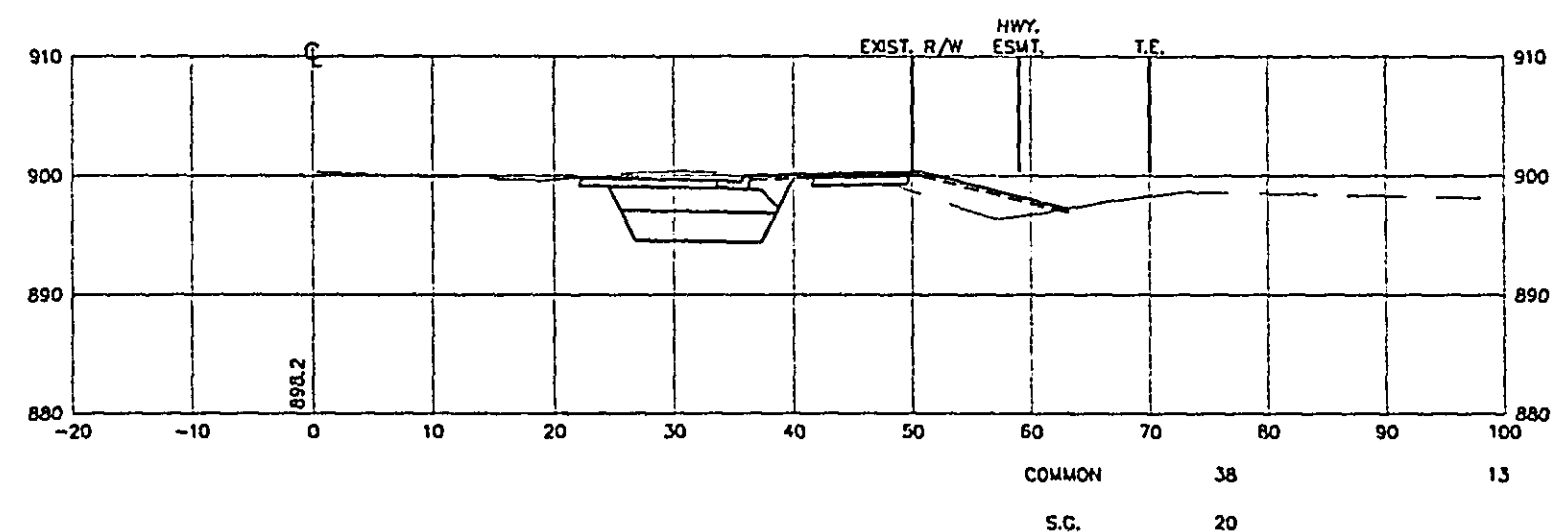
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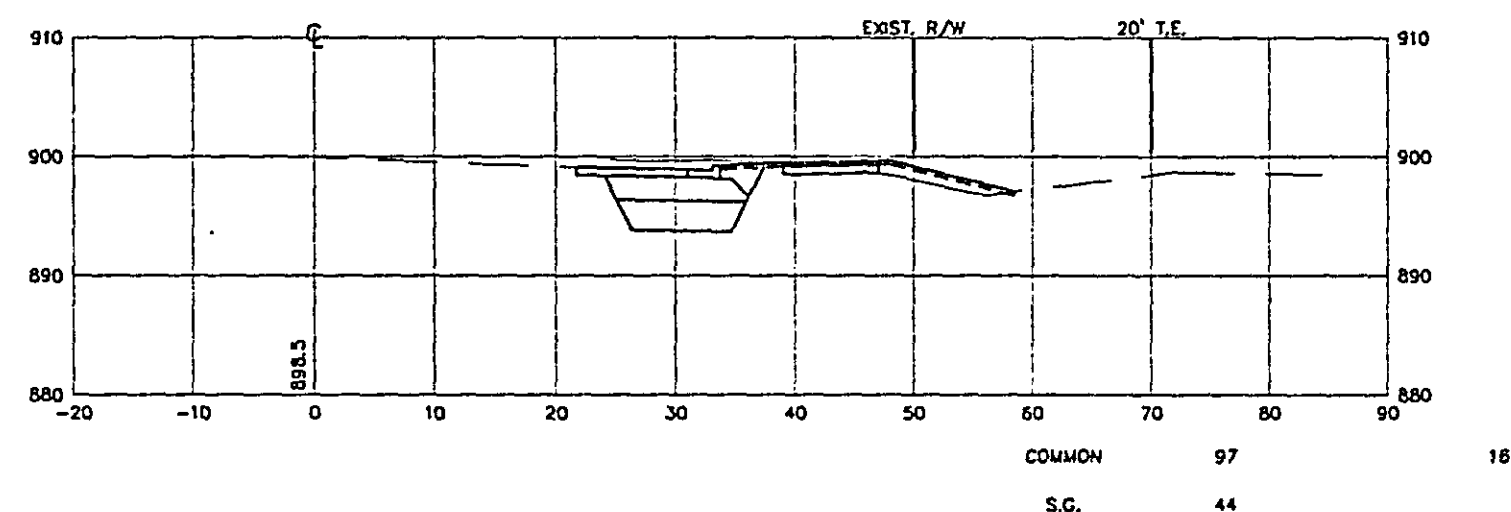
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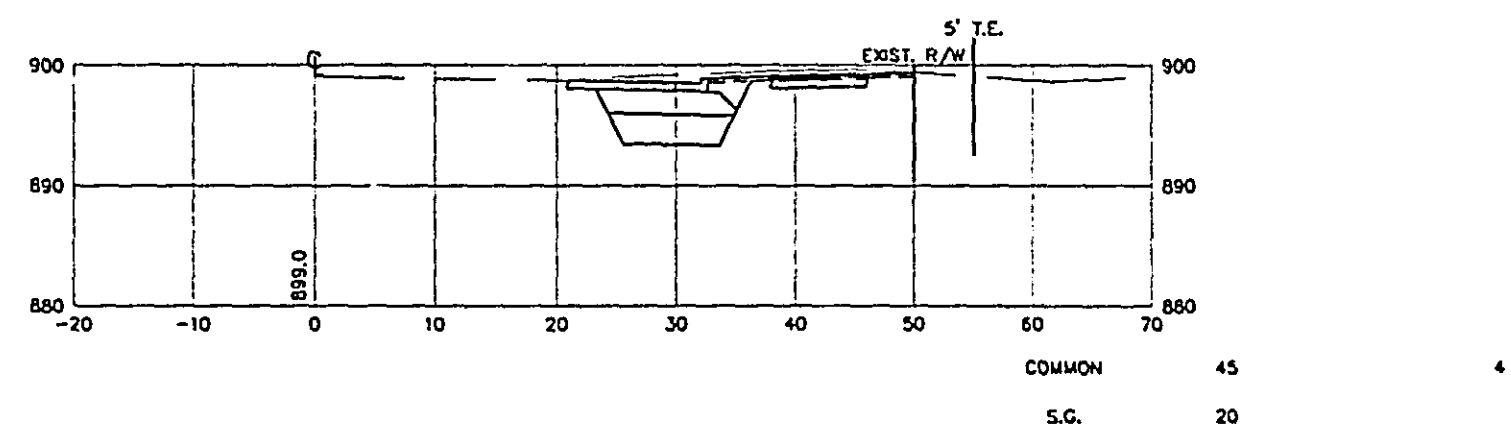
102+70



102+50



102+00

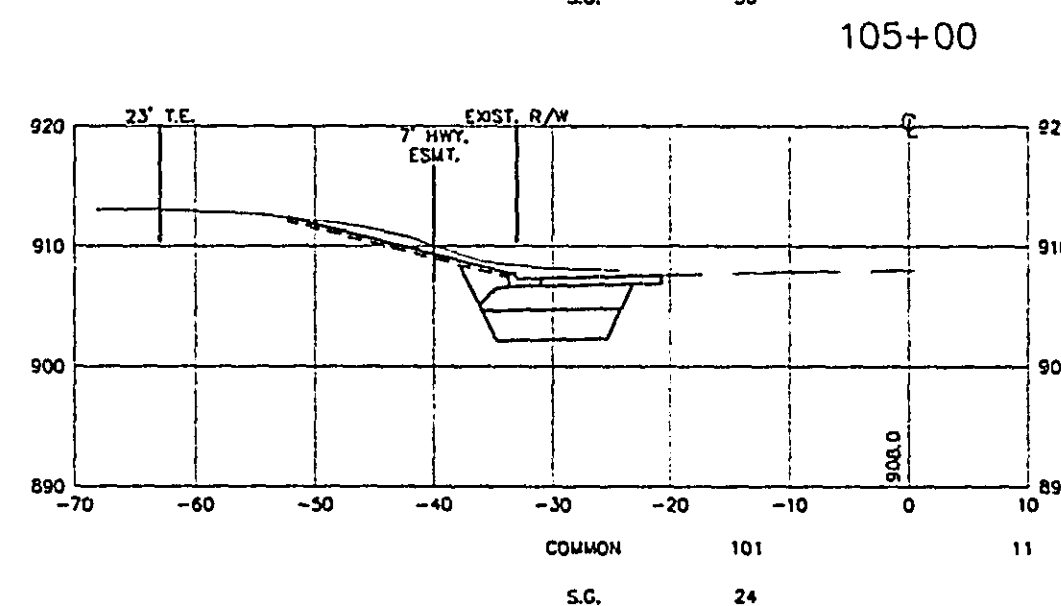
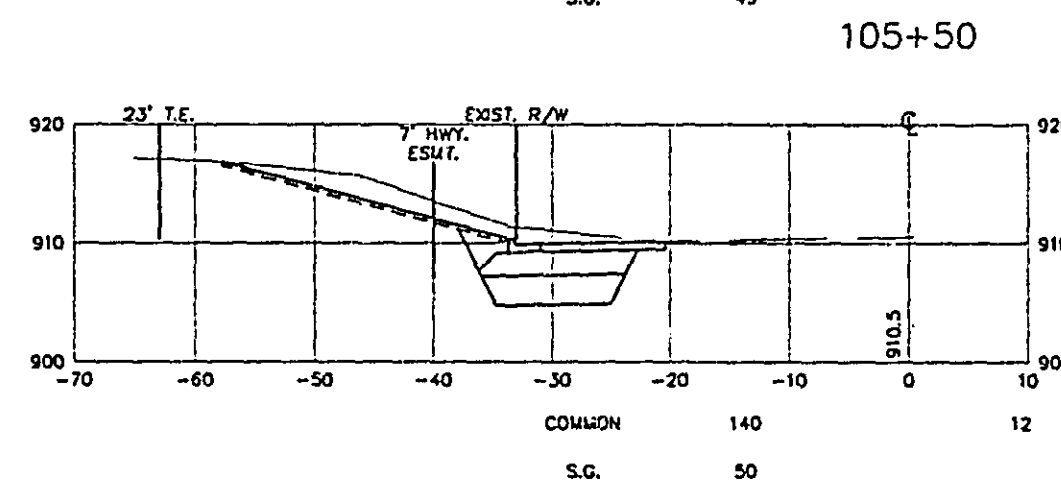
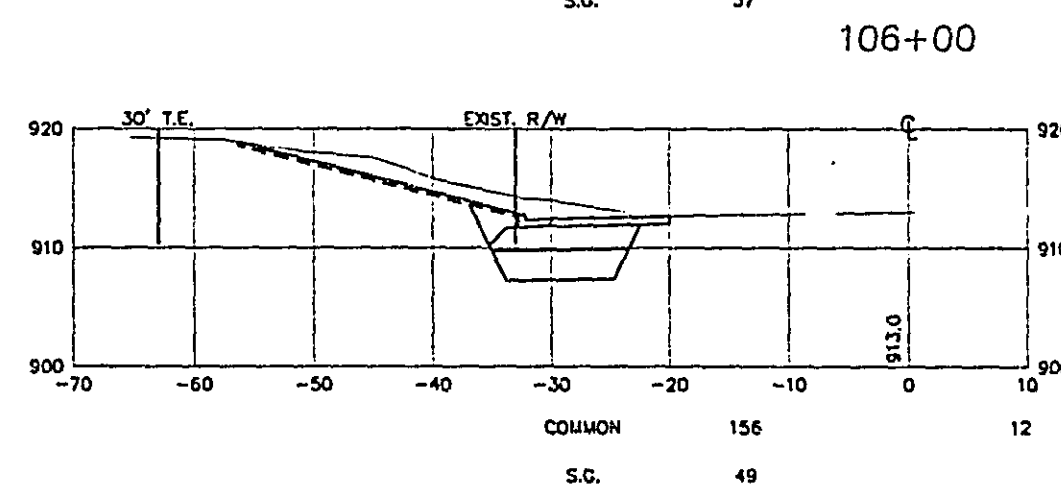
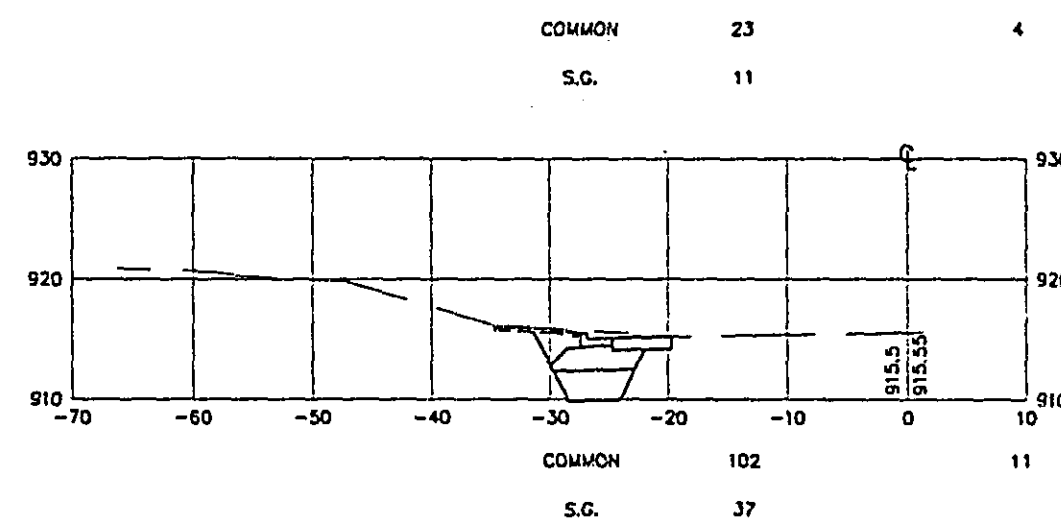
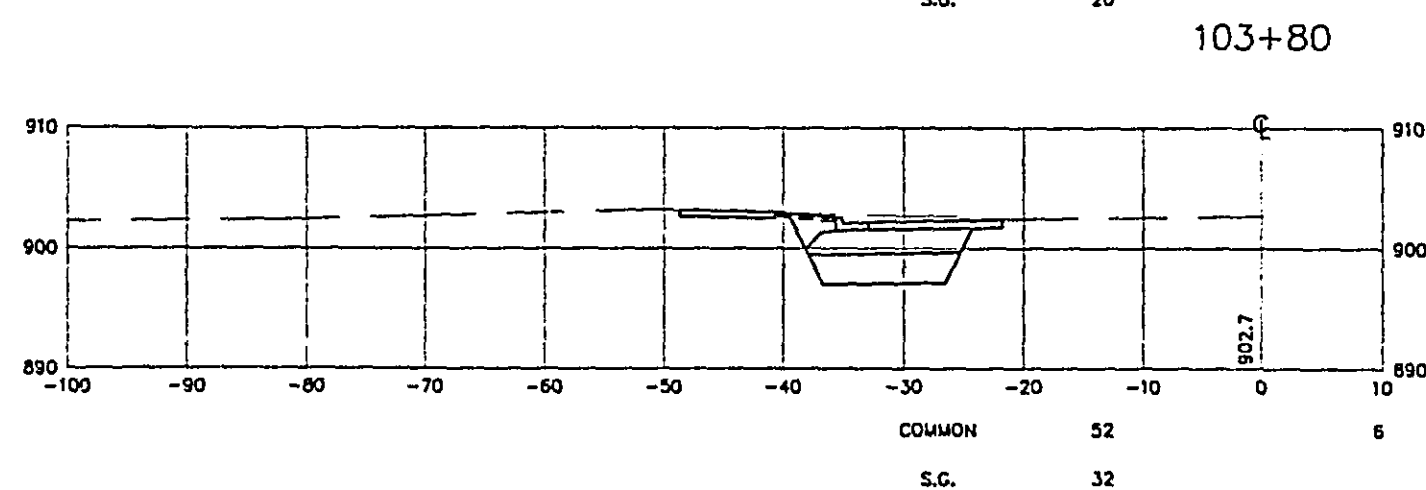
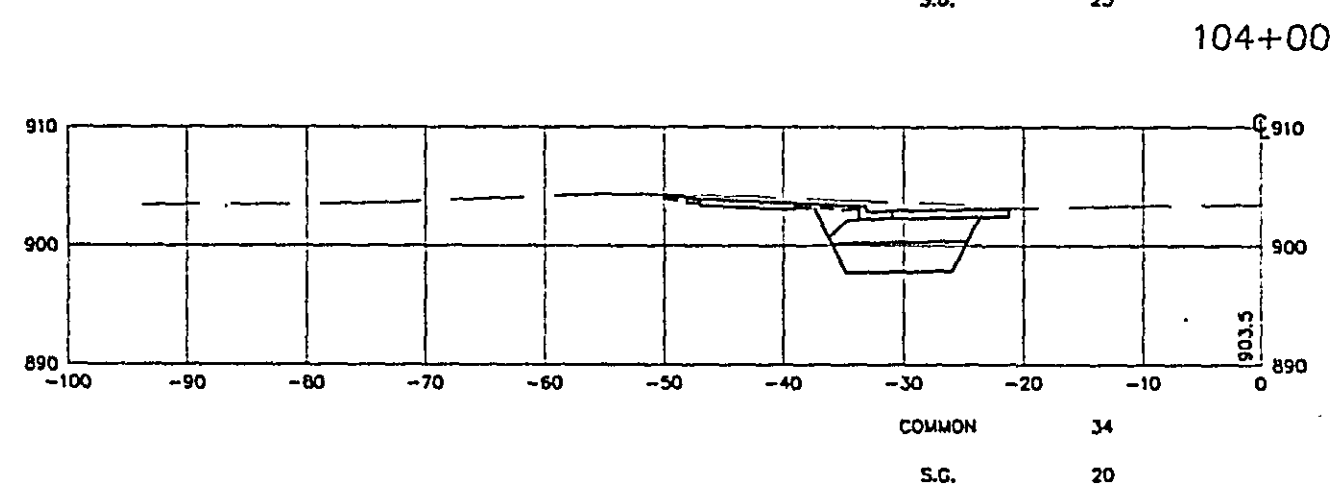
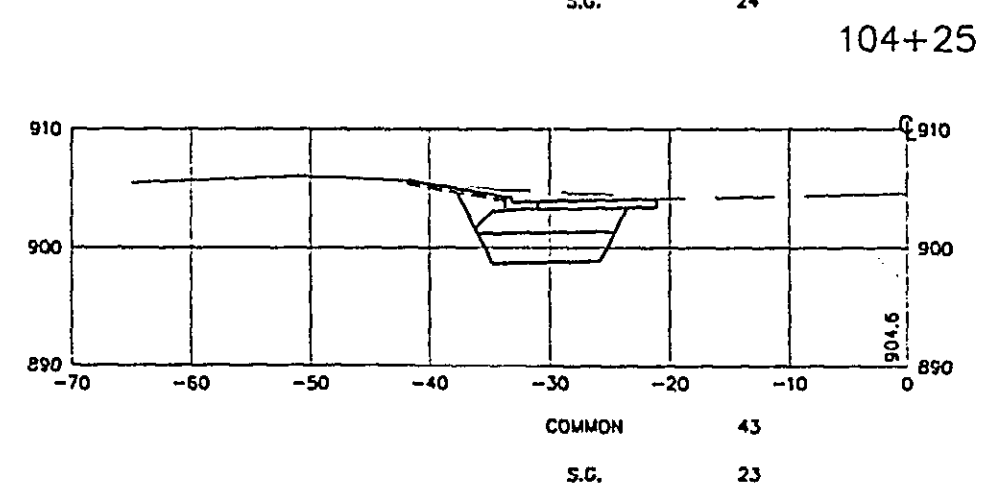
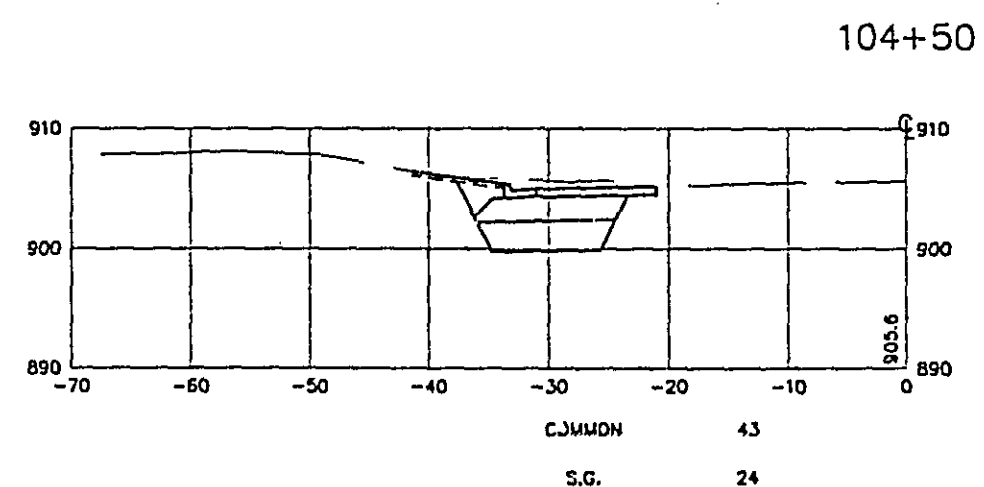


CROSS SECTIONS
STA. 100+50 TO STA. 102+70

28-155

EXCAVATION EMBANKMENT
CU. YD CU. YD

106+50
EXCAVATION EMBANKMENT
CU. YD CU. YD



CROSS SECTIONS
STA. 103+80 TO STA. 106+00

S.P. 62-651-34, S.P. 160-020-10

Sheet No. 76 of 77 Sheets

28-155

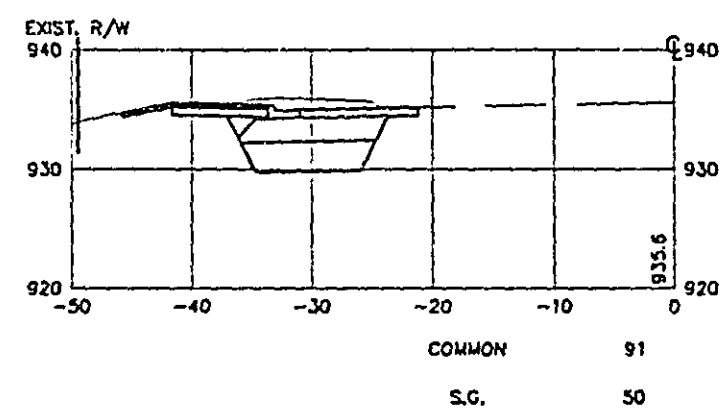
EXCAVATION
CU. YD

EMBANKMENT
CU. YD

EXCAVATION
CU. YD

EMBANKMENT
CU. YD

113+50



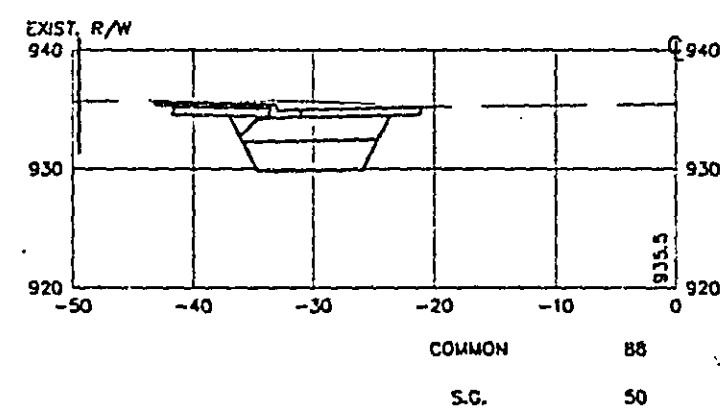
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COMMON 17

S.G. 6

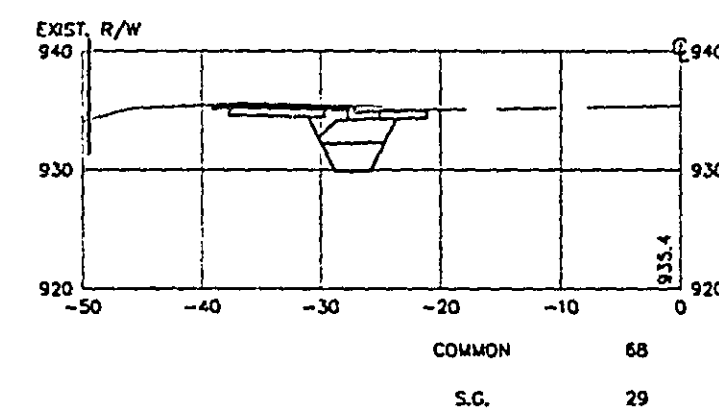
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113+00



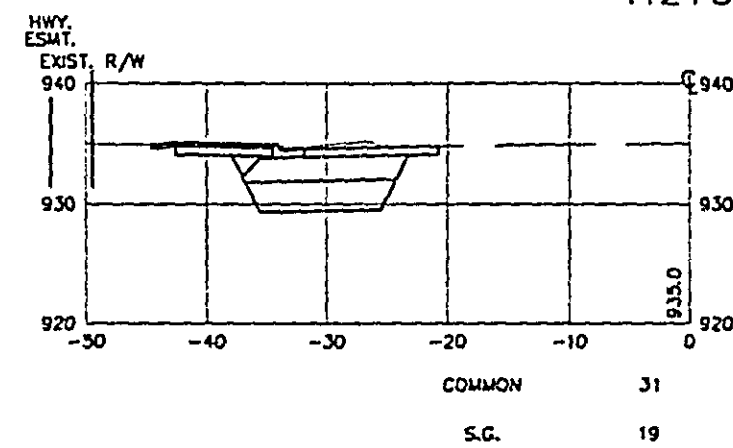
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114+50



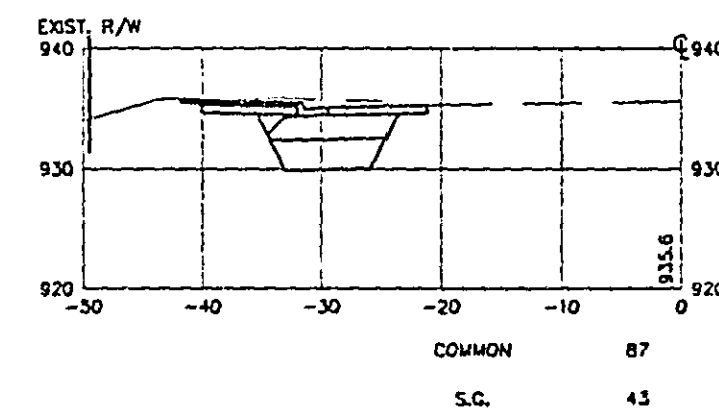
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112+50



2

114+00



4

CROSS SECTIONS
STA. 112+50 TO STA. 114+50

28-155