

DESIGN DESIGNATION

A.D.T. 1980 24200
 A.D.T. 2000 95500
 D.H.V. 3200
 D 65/35
 T 4% 6PDHV
 V 65 M.P.H.

MISSOURI HIGHWAY AND TRANSPORTATION COMMISSION

PLANS FOR PROPOSED STATE HIGHWAY

FEDERAL AID PROJECT
 JACKSON COUNTY



COUNTY JACKSON
 ROUTE 24
 PROJECT HES-PMS-24-1 (26)

JOB NO. 4-X-24-351
 FINAL PLANS

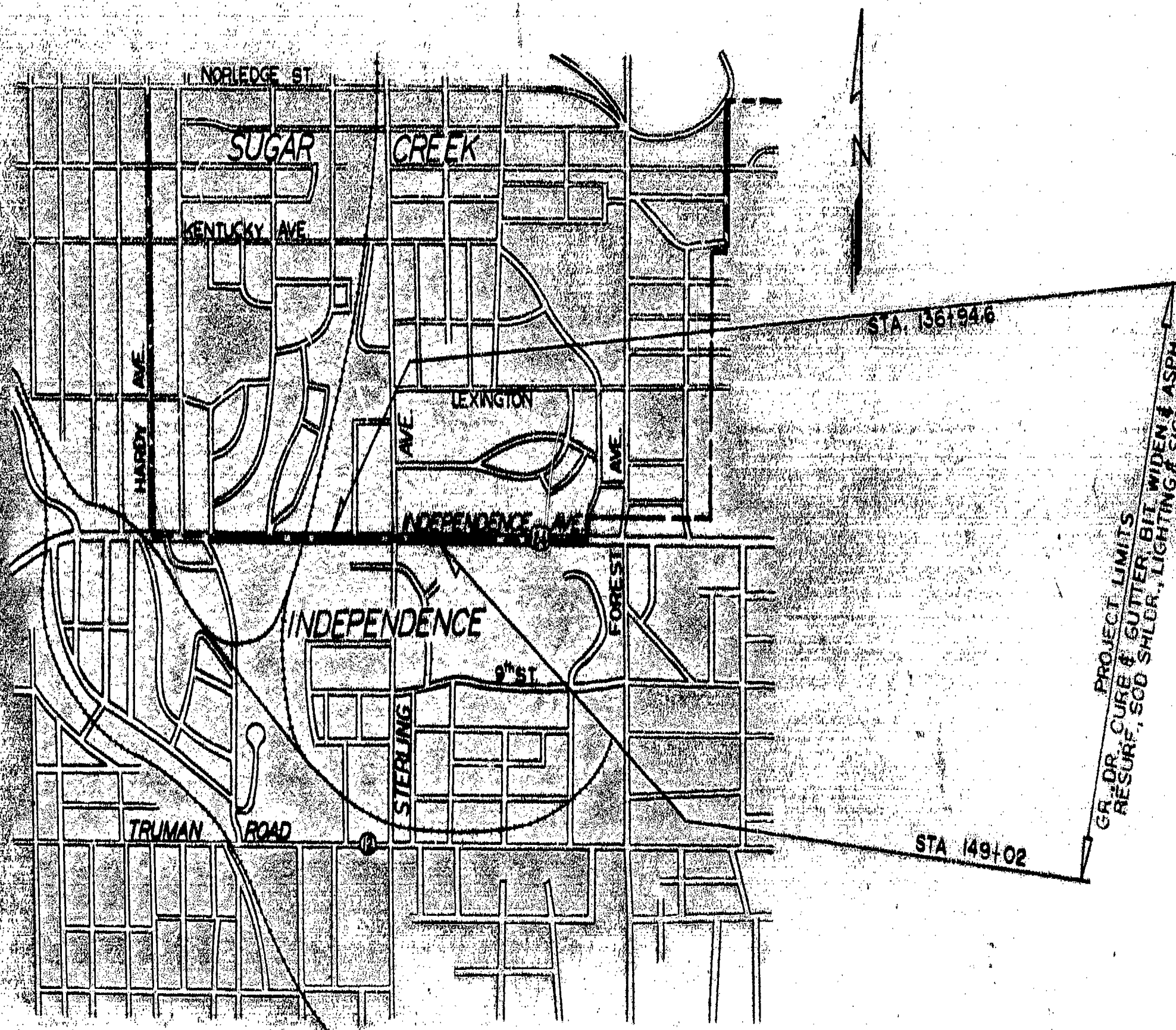
INDEX OF SHEETS

DESCRIPTION	SHEET NO.
TITLE SHEET	1
TYPICAL SECTIONS (2 SHEETS)	2
SUMMARY (1 SHEET)	2A
SUMMARY (5 SHEETS)	2B
PLAN PROFILE	2-7
REFERENCE POINTS	
SPECIAL SHEETS	8-13
LIGHTING	14
SIGNALS	15-18
SIGNING	
CULVERT SECTIONS	19
BRIDGE DRAWINGS	
STANDARD PLANS INDEX	20
CROSS SECTIONS	1-13
COMPUTER DATA	

CONVENTIONAL SIGNS
(USED IN PLANS)

BUILDINGS AND STRUCTURES	
GUARD RAIL	
CONCRETE RIGHT-OF-WAY MARKER	
STEEL RIGHT-OF-WAY MARKER	
FENCE	
CHAIN LINK	
WOVEN WIRE	
GATE	
UTILITIES	
TELEPHONE	
POWER	
GAS	
WATER	

NOTE: DASHED OR OPEN SYMBOL INDICATES EXISTING FEATURE



SCALE OF MILES

LENGTH OF PROJECT

END OF PROJECT	STA. 149 + 02
BEGINNING OF PROJECT	STA. 136 + 94.6
APPARENT LENGTH	1207.4 FEET
EQUATIONS AND EXCEPTIONS	NONE
TOTAL CORRECTIONS	0.00 FEET
NET LENGTH OF PROJECT	1207.4 FEET
STATE LENGTH	0.224 MILES
FEDERAL LENGTH	0.224 MILES

MISSOURI HIGHWAY AND
TRANSPORTATION COMMISSION

SUBMITTED

CHIEF ENGINEER

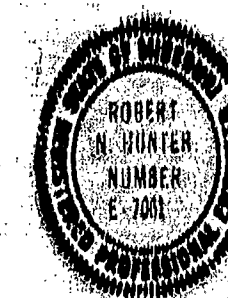
DATE

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED

DIVISION ENGINEER

DATE

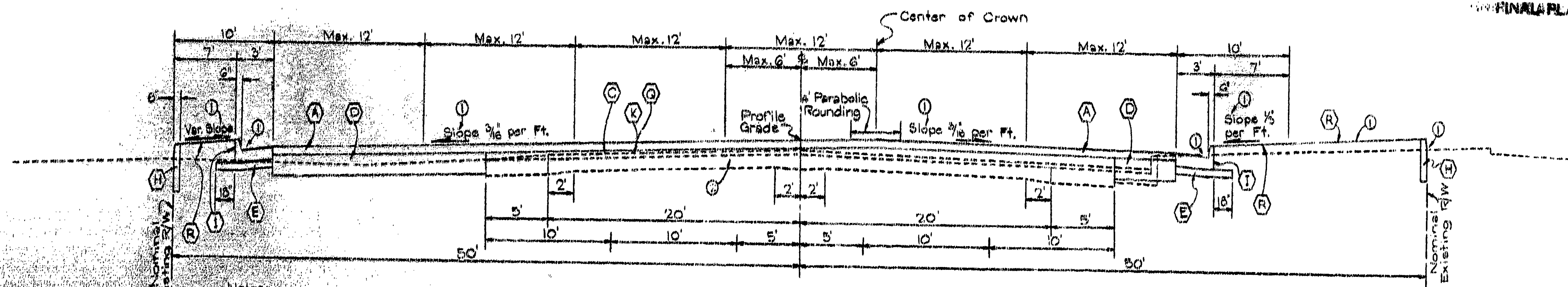


Prepared by: R. J. Kennedy DATE: 11-8-83
 Resident Engineer
 Checked by: DATE:
 District Office
 Checked by: DATE:
 Main Office

334
58

NO. 7	STATE MO.	JOB NO. 4-X-24-351	SHEET NO. 2
NO. 4	COUNTY JACKSON	PROJ. HCS NO. PMS-24-1(26)	DATE 24

FINAL PLANS



TYPICAL SECTION
Rte. 24 (Independence Ave.)
Sta. 143+83.5 to Sta. 149+02

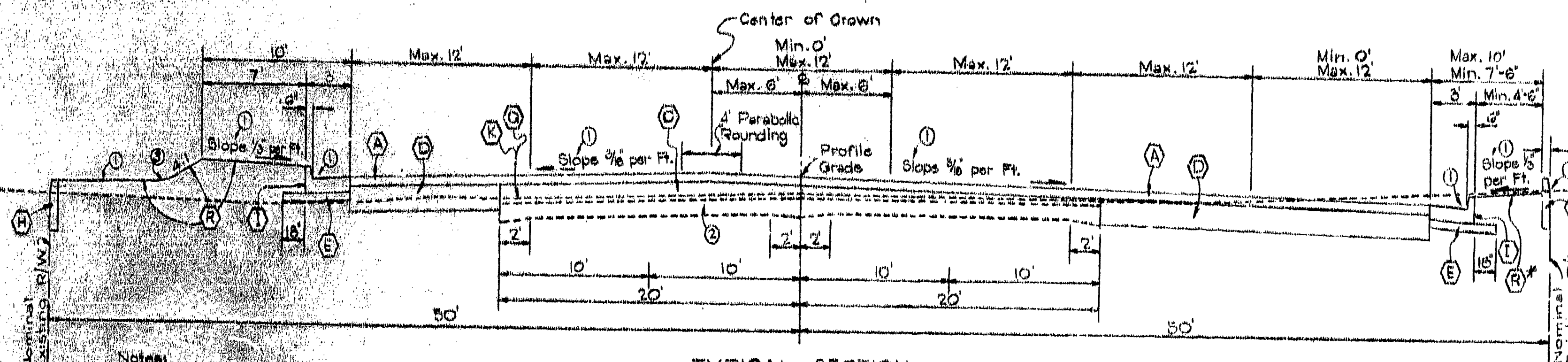
- Notes:
- ① - Nominal, Adjust to Drain.
 - ② - Existing: 3" Asphaltic Concrete on 4"-7" Reinforced R.C.C. Pavt. & Earth Base.

LEGEND

- (A) - 1 1/2" Special Asphaltic Concrete Pavement (Surface)
SEE SPECIAL PROVISIONS FOR CONTRACTOR'S OPTION.
- (C) - 1/2" Minimum Type C Asphaltic Concrete Pavement (Leaving)
- (D) - 12" Plant Mix Bituminous Base Course (Base)
- (E) - 4" Type 1 or 2 Aggregate Base Course (Base)

- (H) - Concrete Curb (6 in Height & under) Type S
- (I) - Curb & Gutter - Type B
- (K) - Tack Coat

- (Q) - Sanding Tack
- (R) - Sodding



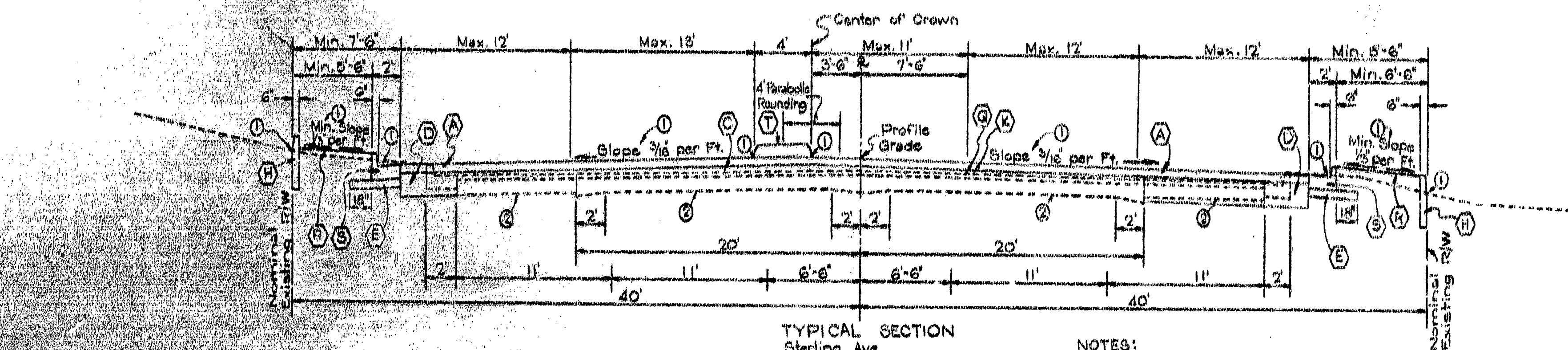
TYPICAL SECTION
Rte. 24 (Independence Ave.)
Sta. 136+94.6 to Sta. 143+83.5

- Notes:
- ① - Nominal, Adjust to Drain.
 - ② - Existing: 3" Asphaltic Concrete on 4"-7" Reinforced R.C.C. Pavt. & Earth Base.
 - ③ - Rounding

* (A) & (E) from Sta. 141+09 to Sta. 141+65

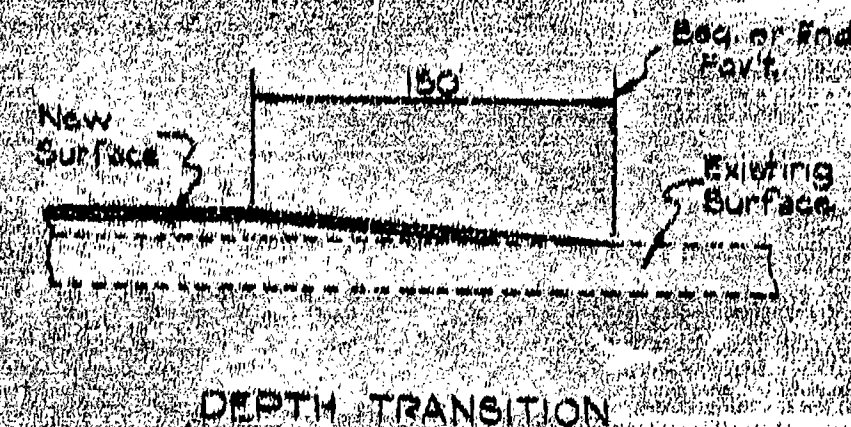
PROJECT NO.	STATE	JOB NO.	DATE
7	MO.	4-X-24-351	2
NO. 1	NO. 2	NO. 3	NO. 4
4	JACKSON	24	24

FINAL PLANS

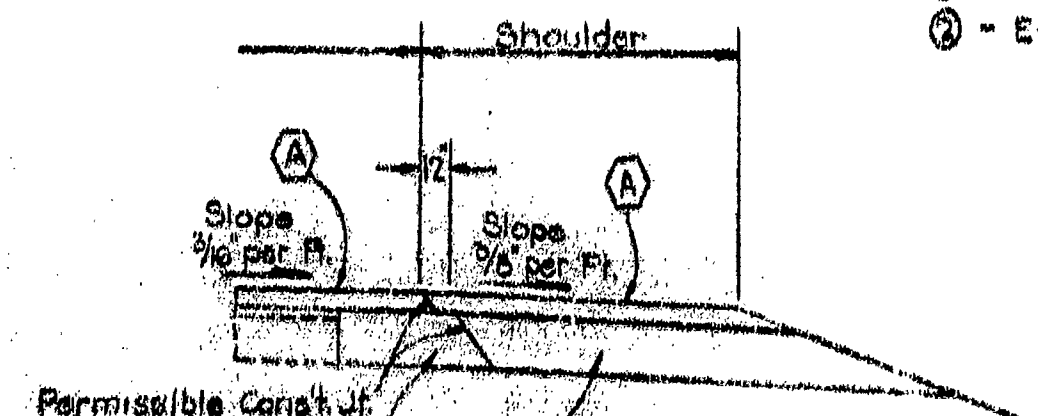


TYPICAL SECTION
Sterling Ave.

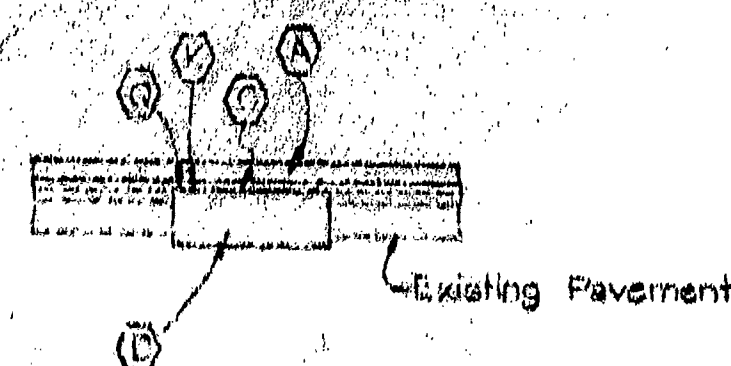
- NOTES:
- ① - Nominal, Adjust to Drain.
 - ② - Existing: 1" Asphaltic Concrete on 6" Non-Reinforced R.C.C. Pav't & Earth Base.



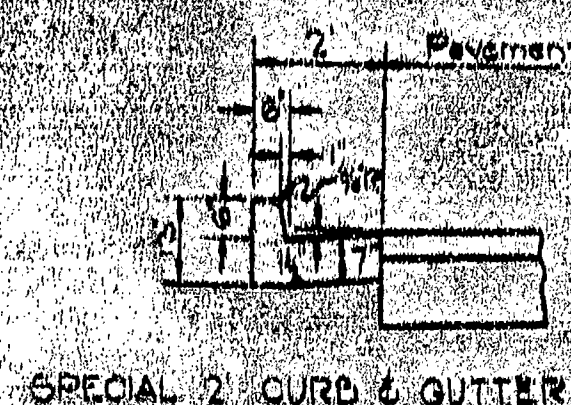
DEPTH TRANSITION



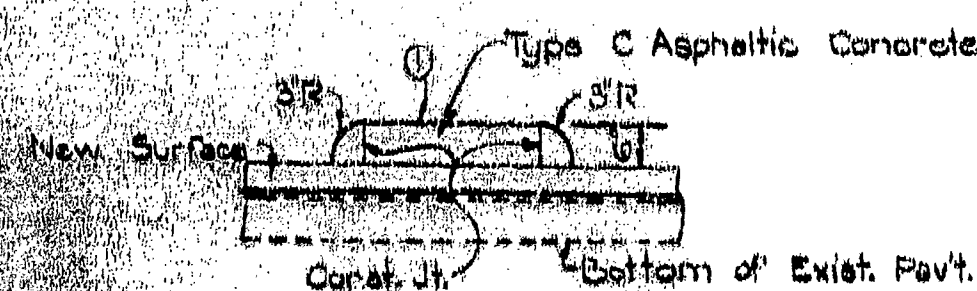
TYPICAL SHOULDER WITHOUT
CURB & GUTTER



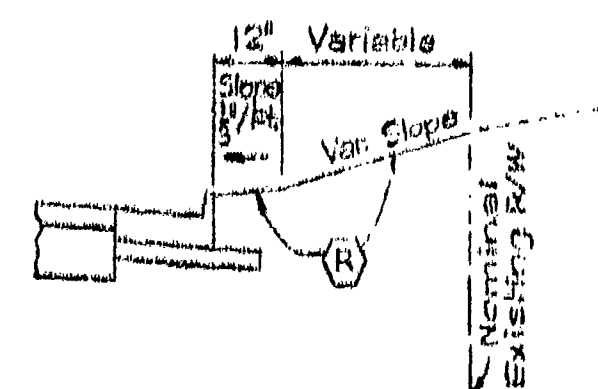
SECTION WHERE EXISTING
PAVEMENT IS REMOVED



SPECIAL 2' CURB & GUTTER



ISLANDS



TYPICAL SHOULDER
AROUND INTERSECTION RETURNS

- LEGEND:
- (A) - 1 1/2" Special Asphaltic Concrete Pavement (Surface) SEE SPECIAL PROVISIONS & CONTRACTOR'S OPTION.
 - (C) - 1/2" Minimum Type C Asphaltic Concrete Pavement (Leveling)
 - (D) - 12" Plant Mix Bituminous Base Course (Base)
 - (E) - 4" Type 1 or 2 Aggregate Base Course (Base)

- (H) - Concrete Curb (6 in. Height & under) Type S
- (K) - Tack Coat

- (Q) - Sanding Tack
- (R) - Seeding
- (S) - Special 2' Curb & Gutter
- (T) - 6" Asphaltic Concrete Island

MISSOURI HIGHWAY AND TRANSPORTATION COMMISSION

SUMMARY OF QUANTITIES

FINAL PLANS

FED. ROAD DIST. NO.	STATE	JOB NO.	SHEET NO.
7	MO.	PROJECT NO. HES-PMS-24-1(26)	2A
DIST. NO.	COUNTY	ROUTE	SEC.
4	JACKSON	24	

ITEM	DESCRIPTION	UNIT	QUANTITY	ITEM	DESCRIPTION	UNIT	QUANTITY	ITEM	DESCRIPTION	UNIT	QUANTITY
202-20.10	REMOVAL OF IMPROVEMENTS	LUMP SUM	1	620-10.00	INLAID RIGHT ARROW	EACH	4		CONTINGENT ITEMS		
203-10.00	CLASS A EXCAVATION	CU YD	1,608	620-20.00	INLAID STOP LINE (24 IN. WIDE)	LIN FT	148	501.01	CONCRETE SIDEWALK 4 IN.	SQ. YD.	179.9
203-60.00	COMPACTING EMBANKMENT	CU YD	578	622-10.00	TEMPORARY PAVEMENT MARKING	MILE	.6	501.02	CLASS B CONCRETE MISCELLANEOUS	CU. YD.	7.1
203-70.00	COMPACTING IN CUT	CU YD	1365	726-13.15	18 IN. CLASS III REINFORCED CONCRETE PIPE CULVERT	LIN FT	35	501.03	MODIFY 7 IN. APPROACH	F. A.	2034.86
206-30.00	CLASS 3 EXCAVATION	CU YD	29	731-10.22	PRECAST CONCRETE ODP INLET 2 FT X 2 FT	FT	8	501.04	ADDITIONAL DROP INLET	F. A.	4890.68
301-10.11	ASPHALT CEMENT (BITUMINOUS BASE) 60-70 OR AC-20	TON	89.7	803-10.00	SODDING	SQ YD	3,442	501.05	REVISED ISLAND	F. A.	227.56
301-20.00	MINERAL AGGREGATE (BITUMINOUS BASE)	TON	1,860		HIGHWAY LIGHTING			501.06	ASPHALT DENS. SAMPLES	Ea.	2.0
304-00.43	TYPE 1 OR TYPE 2 AGGREGATE FOR BASE (4 IN. THICK)	SQ YD	894								
403-10.11	ASPHALT CEMENT (ASPHALTIC CONCRETE) 60-70 OR AC-20	TON	340	901-10.64	TYPE AT-45 LIGHTING POLE, DESIGN 3	EACH	3				
403-80.00	MINERAL AGGREGATE (ASPHALTIC CONCRETE) (TYPE C MIX)	TON	692	901-11.15	15 FT BRACKET ARM	EACH	3				
403-90.94	ALT. A, PORPHYRY MIX ASPHALT CEMENT (ASPH. CONC.) 60-70 OR AC-20 (SEE SPEC. PROVI)	TON	0	901-13.10	250 WATT HIGH PRESSURE SODIUM LUMINAIRE	EACH	3				
403-90.98	ALT. A, PORPHYRY MIX MINERAL AGGR. (ASPH. CONC.) (SEE SPECIAL PROVISION)	TON	0	901-22.18	120-240 VOLT POLE MOUNTED CONTROL STATION, DMG 901.18	EACH	1				
403-90.96	ALT. B, LIMESTONE-PORPHYRY MIX ASPHALT CEMENT (ASPH. CONC.) 60-70 OR AC-20 (SEE SPEC. PROVI)	TON	0	901-23.30	30 FT. SERVICE POLE CLASS 4	EACH	1				
403-90.97	ALT. B, LIMESTONE-PORPHYRY MIX MINERAL AGGR. (ASPH. CONC.) (SEE SPECIAL PROVISION)	TON	0	901-42.00	CONDUIT, 2 IN. RIGID STEEL, PUSHED	LIN FT	180				
403-90.98	ALT. C, STEEL SLAG MIX ASPHALT CEMENT (ASPH. CONC.) 60-70 OR AC-20 (SEE SPEC. PROVI)	TON	50	901-50.20	TRENCHING TYPE II	LIN FT	185				
403-90.99	ALT. C, STEEL SLAG MIX MINERAL AGGR. (ASPH. CONC.) (SEE SPECIAL PROVISION)	TON	894	901-71.10	CABLE, 10 AWG 1 CONDUCTOR, POLE AND BRACKET	LIN FT	360				
407-10.05	TACK COAT	GALLON	580	901-74.07	1 IN. CABLE-CONDUIT 2 CONDUCTORS AND 1 BARE NEUTRAL, 8 AWG	LIN FT	430				
407-20.00	SANDING TACK	CU YD	0	901-82.45	POLE FOUNDATION (45-FOOT MOUNTING HEIGHT)	EACH	3				
601-10.00	FIELD LABORATORIES	LUMP SUM	1		TRAFFIC SIGNALS						
604-20.20	ADJUSTING BASIN OR INLET	EACH	1	902-05.13	SIGNAL HEAD, TYPE 38	EACH	12				
608-50.07	PAVED APPROACH, 7 IN.	SQ YD	412.3	902-32.36	POST, TYPE C-2, 36A	EACH	4				
608-50.08	PAVED APPROACH, 8 IN.	SQ YD	781.6	902-41.81	CONTROLLER ASSEMBLY HOUSING, 8 PHASE, STANDARD TIMING	EACH	1				
609-10.10	CONCRETE CURB (6 IN. HEIGHT AND UNDER) TYPE S	LIN FT	331	902-49.40	DETECTOR, INDUCTION LOOP VEHICLE	EACH	12				
609-10.52	CURB AND GUTTER TYPE B	LIN FT	1,122	902-51.01	CONDUIT, 1 1/4 INCH, IN TRENCH	LIN. FT.	124				
609-60.00	DITCH LINER	SQ YD	0	902-51.02	CONDUIT, 1 1/2 INCH, IN TRENCH	LIN. FT.	38				
609-99.43	CONCRETE GUTTER-TYPE A MODIFIED	LIN. FT.	22	902-51.03	CONDUIT, 3 INCH, IN TRENCH	LIN. FT.	94				
609-99.53	CURB AND GUTTER-TYPE B (SPECIAL 2 FT.)	LIN. FT.	743	902-51.04	CONDUIT, 4 INCH, IN TRENCH	LIN. FT.	31				
614-10.10	GRATES AND BEARING PLATES	POUND	760	902-82.08	CABLE, 8 AWG 1 CONDUCTOR, POWER	LIN FT	330				
616-10.05	CONSTRUCTION SIGNS	SQ FT	266	902-83.02	CABLE, 12 AWG 2 CONDUCTOR	LIN FT	1,730				
616-10.20	DRUMS	EACH	13	902-83.07	CABLE, 12 AWG 7 CONDUCTOR	LIN FT	1,650				
616-10.35	TYPE I BARRICADE	EACH	30	902-85.00	CABLE, INDUCTION LOOP VEHICLE DETECTOR	LIN FT	4,160				
616-10.47	TYPE III OBJECT MARKER	EACH	8	902-86.00	PULL BOX, TYPE 1	EACH	5				
618-10.00	MOBILIZATION	LUMP SUM	1	902-91.00	BASE, CONCRETE	CU YD	11.1				
620-01.04	4 IN. INLAID WHITE MARKER	LIN. FT.	2,639	902-94.00	TEMPORARY TRAFFIC SIGNALS	LUMP SUM	1				
620-01.08	8 IN. INLAID WHITE MARKER	LIN. FT.	0								
620-02.04	4 IN. INLAID YELLOW MARKER	LIN. FT.	4684								
620-02.24	24 IN. INLAID YELLOW MARKER	LIN. FT.	129								
620-05.00	INLAID LEFT ARROW	EACH	7								

PROJECT ACCEPTED 10/6/83. PREPARED BY Ray Kennedy 11/9/83 CHECKED IN DISTRICT OFFICE BY Theodore W. Barker 12/15/83

CHECKED IN CENTRAL OFFICE BY Mark J. Luster 2-15-84

507 337

MISSOURI STATE HIGHWAY COMMISSION

SHEET 1 OF 3

FINAL PLANS

JOB NO. 4-X-24-351

FED. ROAD DIVISION	STATE	PROJECT	SHEET NO.
5	MO.	HES- PMS- 24-1 (26)	2-B
DIST. NO.	COUNTY		ROUTE
4	JACKSON		24

SUMMARY OF QUANTITIES

PAVED APPROACHES										CONCRETE CURB & GUTTER (TYPE B)										6" ASPHALT ISLAND & MEDIAN CURB													
Sheet	Rte	Sta	Loc	Type	Width	Length	Radius	Mon.	8' Conc	Remarks	Sheet	Rte	Sta	Loc	Type	Width	Length	Radius	Mon.	8' Conc	Remarks	Sheet	Rte	Sta	Loc	Type	Width	Length	Radius	Mon.	8' Conc	Remarks	
4	24	137+29	Lt	RE	18	30	5	64.0			4	24	136+98	137+01	Lt	23.0							3	24	143+02	141+92	Rt						Island
4	24	137+96	Lt	RE	12	26	5	32.2			4	24	137+70	137+93	Rt	75.0							3	24	143+00	143+50	Lt						"
4	24	138+26	Lt	RE	30	24.5	5	85.2			4	24	137+53	137+85	Lt	38.0							3	24	143+00	143+50	Lt						"
4	24	138+63	Rt	RE	30	23.5	1/2	83.5		See C.O. #4, Book 4, P. 42 for F.M.	4	24	138+15	138+43	Rt	22.0							3	24	144+09	144+37	Rt						"
4	24	139+09	Rt	RE	12	21	1/2	31.8		See C.O. #4, Book 4, P. 43 for F.M.	4	24	138+46	139+33	Lt	106.0							3	24	144+09	144+37	Rt						"
4	24	139+23	Lt	Street	30	20	15				4	24	139+23	139+53	Rt	67.0							3	24	144+09	144+37	Lt						"
3	24	140+57	Rt	RE	12	13	1/2	26.9		See C.O. #4, Book 4, P. 44 for F.M.	4	24	139+23	140+26	Rt	63.0							3	24	144+09	144+37	Lt						"
3	24	140+99	Rt	RE	20	9	5	21.3			4	24	140+35	140+70	Lt	81.0							3	24	144+09	144+37	Lt						"
3	24	141+03	Lt	RE	12	20	1/2	26.8			3	24	140+98	140+94	Rt	16.0							3	24	144+09	144+37	Lt						"
3	24	141+42	Lt	RE	12	20	1/2	26.8			3	24	141+10	141+32	Lt	20.0							3	24	144+09	144+37	Lt						"
3	24	141+83	Rt	Street	35	8	5				3	24	141+52	141+85	Lt	6.0							3	24	144+09	144+37	Lt						"
3	24	141+87	Lt	C.E.	45	20	5				3	24	142+05	142+14	Rt	10.0							3	24	144+09	144+37	Lt						"
3	24	142+39	Rt	C.E.	40	8	5				3	24	142+05	142+25	Lt	13							3	24	144+09	144+37	Lt						"
3	24	142+50	Lt	C.E.	35	20	5				3	24	142+05	142+25	Lt	13							3	24	144+09	144+37	Lt						"
3	24	143+13	Rt	C.E.	35	20	5				3	24	142+05	142+25	Lt	13							3	24	144+09	144+37	Lt						"
3	24	143+93	Lt	C.E.	40	8	5				3	24	142+05	142+25	Lt	13							3	24	144+09	144+37	Lt						"
3	24	146+55	Lt	C.E.	50	8	5				3	24	142+05	142+25	Lt	13							3	24	144+09	144+37	Lt						"
3	24	147+09	Rt	C.E.	30	20	5				3	24	142+05	142+25	Lt	13							3	24	144+09	144+37	Lt						"
5	24	12+06	Lt	C.E.	47	8	5				3	24	142+05	142+25	Lt	13							3	24	144+09	144+37	Lt						"
5	24	11+34	Rt	C.E.	25	11	5				3	24	142+05	142+25	Lt	13							3	24	144+09	144+37	Lt						"
5	24	12+71	Rt	C.E.	25	8	5				3	24	142+05	142+25	Lt	13							3	24	144+09	144+37	Lt						"
3	24	13+31	Lt	C.E.	50	8	5				3	24	142+05	142+25	Lt	13							3	24	144+09	144+37	Lt						"
3	24	13+44	Rt	C.E.	40	8	5				3	24	142+05	142+25	Lt	13							3	24	144+09	144+37	Lt						"
Total ~ 412.3 781.0										Total ~ 1722.0 723.0										Total ~ 1799													
* Bit as per plan & Modified by Force Account as per C.O. #6										* See Bk #4, P. 30-31 for F.M.										* See Bk #4, P. 32 for F.M.													
INLAND MARKER										SODDING										CLASS B CONCRETE, (MISC.)													
Sta.	To Sta.	Rte.	Loc.	Type	Width	Length	Radius	Mon.	8' Conc	Remarks	Sheet	Rte	Sta	Loc	Type	Width	Length	Radius	Mon.	8' Conc	Remarks	Sheet	Rte	Sta	Loc	Type	Width	Length	Radius	Mon.	8' Conc	Remarks	
136+84.6	141+03	Rte 24	204	1872	35						4	24	Rt.	136+98	140+55	548.0							4	24	136+98	Lt.	65°	4	4.5' Width, 3' Bottom, 6" Bars				
141+03	143+44	"	542.25	482							4	24	Lt.	137+413	140+55	552.0							4	24	137+70	Rt.	45°	18	4.5' Width, 3' Bottom, 6" Bars				
141+09	142+96	"	186								3	24	Rt.	140+55	16+22.3	130.0							3	24	138+90	Rt.	0.4	13					
142+35	143+23	"									3	24	Lt.	140+55	13+00	572.0							3	24	139+92	Rt.	0.2	13					
144+24	146+55	"	519.76	462							3	24	Lt.	140+55	16+22.3	130.0							3	24	141+38	Rt.	3.8	13					
144+24	144+70	"	328								3	24	Lt.	140+55	13+00	572.0							3	24	141+55	Rt.	0.8	13					
144+24	147+52	"	928								3	24	Lt.	140+55	13+00	572.0							3	24	141+55	Rt.	0.8	13					
144+24	147+52	"	928								3	24	Lt.	140+55	13+00	572.0							3	24	141+55	Rt.	0.8	13					
144+24	147+52	"	928								3	24	Lt.	140+55	13+00	572.0							3	24	141+55	Rt.	0.8	13					
144+24	147+52	"	928								3	24	Lt.	140+55	13+00	572.0							3	24	141+55	Rt.	0.8	13					
144+24	147+52	"	928								3	24	Lt.	140+55	13+00	572.0							3	24	141+55	Rt.	0.8	13					
144+24	147+52	"	928								3	24	Lt.	140+55	13+00	572.0							3	24	141+55	Rt.	0.8	13					
144+24	147+52	"	928								3	24	Lt.	140+55	13+00	572.0							3	24	141+55	Rt.	0.8	13					
144+24	147+52	"	928								3	24	Lt.	140+55	13+00	572.0							3	24	141+55	Rt.	0.8	13					
144+24	147+52	"	928								3	24	Lt.	140+55	13+00	572.0							3	24	141+55	Rt.	0.8	13					
144+24	147+52	"	928								3	24	Lt.	140+55	13+00	572.0							3	24	141+55	Rt.	0.8	13					
144+24	147+52	"	928								3	24	Lt.	140+55	13+00	572.0							3	24	141+55	Rt.	0.8	13					
144+24	147+52	"	928								3	24	Lt.	140+55	13+00	572.0							3	24	141+55	Rt.	0.8	13					
144+24	147+52	"	928								3	24	Lt.	140+55	13+00	572.0							3	24	141+55	Rt.	0.8	13					
144+24	147+52	"	928								3	24	Lt.	140+55	13+00	572.0							3	24	141+55	Rt.	0.8	13					
144+24	147+52	"	928								3	24	Lt.	140+55	13+00	572.0							3	24	141+55	Rt.	0.8	13					
144+24	147+52	"	928								3	24	Lt.	140+55	13+00	572.0							3	24	141+55	Rt.	0.8	13					
144+24	147+52	"	928								3	24	Lt.	140+55	13+00	572.0							3	24	141+55	Rt.	0.8	13					
144+24	147+52	"	928								3	24	Lt.	140+55	13+00	572.0							3	24	141+55	Rt.	0.8	13					
144+24	147+52	"	928								3	24	Lt.	140+55	13+00	572.0							3	24	141+55	Rt.	0.8	13					
144+24	147+52	"	928								3	24	Lt.	140+55	13+00	572.0							3	24	141+55	Rt.	0.8	13					
144+24	147+52	"	928								3	24	Lt.	140+55	13+00	572.0							3	24	141+55	Rt.	0.8	13					
144+24	147+52	"	928								3	24	Lt.	140+55	13+00	572.0							3	24	141+55	Rt.	0.8	13					
144+24	147+52	"	928								3	24	Lt.	140+55	13+00	572.0							3	24	141+55	Rt.	0.8	13					
144+24	147+52	"	928								3	24	Lt.	140+55	13+00	572.0							3	24	141+55	Rt.	0.8	13					
144+24	147+52	"	928								3	24	Lt.	140+55	13+00	572.0							3	24	141+55	Rt.	0.8	13					
144+24	147+52	"	928								3	24	Lt.	140+55	13+00	572.0							3	24	141+55	Rt.	0.8	13					
144+24	147+52	"	928								3	24	Lt.	140+55	13+00	572.0							3	24	141+55	Rt.	0.8	13					
144+24	147+52	"	928								3	24	Lt.	140+55	13+00	572.0							3	24	141+55	Rt.	0.8	13					
144+24	147+52	"	928								3	24	Lt.	140																			

MISSOURI STATE HIGHWAY COMMISSION

SUMMARY OF QUANTITIES

FINAL PLANS

SHEET 2 OF 3

FED. ROAD DIVISION	STATE	PROJECT	SHEET NO.
5	MO.	WES-24-1(26)	2 B
DIST. NO.	COUNTY	ROUTE	
4	JACKSON	24	
JOB NO. 1 X-24-351			

LIGHTING POLE, BRACKET ARM, LUMINAIRE, POLE AND BRACKET
CABLE, AND POLE FOUNDATION

Sheet No.	Pole No.	Route	Sta.	Loc.	Pole Type Design	Arm 15 Ft.	Luminaire Type	Cable 10 AWG	Found. 1 Cond. 48" MH
					Each	Each	Each	Lin. Ft.	Each
14	1	Sterling	14+10	49' Rt.	1	1	1	120	1
14	2	24	144+73	55' Lt.	1	1	1	120	1
14	3	24	142+95	57' Rt.	0	0	0	0	See CO. #2
14	4	Sterling	15+87	48' Lt.	1	1	1	120	1
TOTALS					3	3	3	360	3

CONTROL STATION

Sheet No.	Route	Sta.	Loc.	Station 130+21	Service Pole
					Each
14	Sterling Ave.	13+80	38' Rt.	1	1
TOTALS					1

1 IN. CABLE-CONDUIT, 2 CONDUCTORS, BAWG AND
TRENCHING TYPE II

Sheet No.	Circuit No.	Ctr. to Cable Conduit	Cable Trenching Lin. Ft.	Conduit Lin. Ft.	Trenching Lin. Ft.
14	1	365	410	185	
14	2	0	0	0	See CO. #2
		+5%	20		
TOTALS		430	185	185	See O.R. #18 for Trenching

RIGID STEEL CONDUIT, PUSHED

Sheet No.	Route	Sta.	Loc.	2' Lin. Ft.	Remarks
14	24	144+70	E	87	Rt. L
14	Sterling	14+21	E	93	Rt. L
14	Sterling	15+89	E	0	See CO. #2
TOTALS					180

589 339

SUMMARY OF QUANTITIES

SIGN	SIZE (INCHES)	AREA (SQ. FT.)	QUANTITY	TOTAL AREA (SQ. FT.)	QUANTITY RELOCATED	TOTAL RELOCATED AREA (SQ. FT.)	SIGN LEGEND
WARNING SIGNS							
W1-1L	30x30	6.25					TURN (SYMBOL LEFT ARROW)
W1-1R	30x30	6.25					TURN (SYMBOL RIGHT ARROW)
W1-2L	30x30	6.25					CURVE (SYMBOL LEFT ARROW)
W1-2R	30x30	6.25					CURVE (SYMBOL RIGHT ARROW)
W1-3L	30x30	6.25					REVERSE TURN (SYMBOL LEFT ARROW)
W1-3R	30x30	6.25					REVERSE TURN (SYMBOL RIGHT ARROW)
W1-4L	30x30	6.25					REVERSE CURVE (SYMBOL LEFT ARROW)
W1-4R	30x30	6.25					REVERSE CURVE (SYMBOL RIGHT ARROW)
W1-6	42x24	8.0					HORIZONTAL ARROW (SYMBOL)
W3-1	36x36	9.0					STOP AHEAD
W3-2	36x36	9.0					YIELD AHEAD
W3-3	24x36	9.0					SIGNAL AHEAD (SYMBOL)
W3-3X	24x18	3.0					SIGNAL AHEAD (PLAQUE)
W3-4	36x36	9.0					BE PREPARED TO STOP
W4-2L	36x36	9.0	2	18.0			PAVEMENT WIDTH TRANSITION (SYMBOL LEFT)
W4-2R	36x36	9.0	3	27.0			PAVEMENT WIDTH TRANSITION (SYMBOL RIGHT)
W5-1	36x36	9.0					ROAD NARROWS
W5-2	36x36	9.0					ONE LANE BRIDGE
W6-1	36x36	9.0					DIVIDED HIGHWAY (SYMBOL)
W6-1X	24x18	3.0					DIVIDED HIGHWAY (PLAQUE)
W6-2	36x36	9.0					DIVIDED HIGHWAY ENDS (SYMBOL)
W6-2X	24x18	3.0					DIVIDED HIGHWAY ENDS (PLAQUE)
W6-3	48x48	16.0					TWO WAY TRAFFIC (SYMBOL)
W6-3X	24x18	3.0					TWO WAY TRAFFIC (PLAQUE)
W7-1	30x30	6.25					HILL (SYMBOL)
W7-1X	24x18	3.0					HILL (PLAQUE)
W8-1	30x30	6.25					BUMP
W8-2	30x30	6.25					DIP
W8-3	30x30	6.25					PAVEMENT ENDS
W8-3a	30x30	6.25					PAVEMENT ENDS (SYMBOL)
W8-4	30x30	6.25					SOFT SHOULDER
W8-5	30x30	6.25					SLIPPERY WHEN WET (SYMBOL)
W8-5X	24x18	3.0					SLIPPERY WHEN WET (PLAQUE)
W8-6	30x30	6.25					TRUCK CROSSING
W8-7	30x30	6.25					LOOSE GRAVEL
W8-9	30x30	6.25					LOW SHOULDER
W9-1L	36x36	9.0					LEFT LANE ENDS
W9-1R	36x36	9.0					RIGHT LANE ENDS
W9-2L	36x36	9.0					LANE ENDS MERGE LEFT
W9-2R	36x36	9.0					LANE ENDS MERGE RIGHT
W10-1	36 DIA.	7.07					RAILROAD CROSSING
W12-1	24x24	4.0					DOUBLE DOWN ARROW (SYMBOL)
W12-2	36x36	9.0					LOW CLEARANCE (SYMBOL)
W12-2X	24x18	3.0					LOW CLEARANCE (PLAQUE)
W12-3a	VAR. x 24						OVERHEAD LOW CLEARANCE (FEET)
W12-3b	VAR. x 24						OVERHEAD LOW CLEARANCE (INCHES)
W13-1	18x18	2.25					ADVISORY SPEED PLATE
W13-1a	24x24	4.0					ADVISORY SPEED PLATE
W20-1	48x48	16.0	3	48.0			ROAD CONSTRUCTION 1500 FT.
W20-1a	48x48	16.0					ROAD CONSTRUCTION 500 FT.
W20-1c	48x48	16.0					ROAD CONSTRUCTION AHEAD
W20-2	48x48	16.0					DETOUR 1500 FT.
W20-2a	48x48	16.0					DETOUR 1000 FT.
W20-3	48x48	16.0					ROAD CLOSED 1000 FT.
W20-3a	48x48	16.0					ROAD CLOSED 500 FT.
W20-3c	48x48	16.0					ROAD CLOSED AHEAD
W20-4	48x48	16.0					ONE LANE ROAD AHEAD
W20-5	48x48	16.0	5	80.0			RIGHT (LEFT) LANE CLOSED AHEAD
W20-7	36x36	9.0					FLAGMAN 500 FT.
W20-7a	36x36	9.0					FLAGMAN 1000 FT.
W20-7b	36x36	9.0					FLAGMAN 1500 FT.
W20-7c	36x36	9.0					FLAGMAN AHEAD
W20-7d	36x36	9.0					FLAGMAN AHEAD (SYMBOL)
W20-9	36x36	9.0	4	36.0			OPEN TRENCH
W21-1	30x30	6.25					FRESH OIL
W21-5	36x36	9.0	3	27.0			SHOULDER WORK AHEAD
W21-7	36x36	9.0					SAND BLASTING
W22-1	48x48	16.0					BLASTING ZONE 1000 FT.
W22-2	42x36	10.5					TURN OFF 2-WAY RADIO
W22-3	42x36	10.5					END BLASTING ZONE
W23-1	24x6	1.0					1000 FT. - 1500 FT. (BACK TO BACK DISTANCE PLAQUE)

SIGN	SIZE (INCHES)	AREA (SQ. FT.)	QUANTITY	TOTAL AREA (SQ. FT.)	QUANTITY RELOCATED	TOTAL RELOCATED AREA (SQ. FT.)	SIGN LEGEND
W25-2a	24x6	1.0					200 FT. - 500 FT. (BACK TO BACK DISTANCE PLAQUE)
W25-3	21x9	1.31					LEFT (PLAQUE - Used with W20-5)
</							

JOB NO.	4-X-24-351	SHEET NO.	
7	NO	PROJECT NO.	HE-24-1 (26)
4	JACKSON	24	

FINAL PLANS
SHEET 3 OF 3

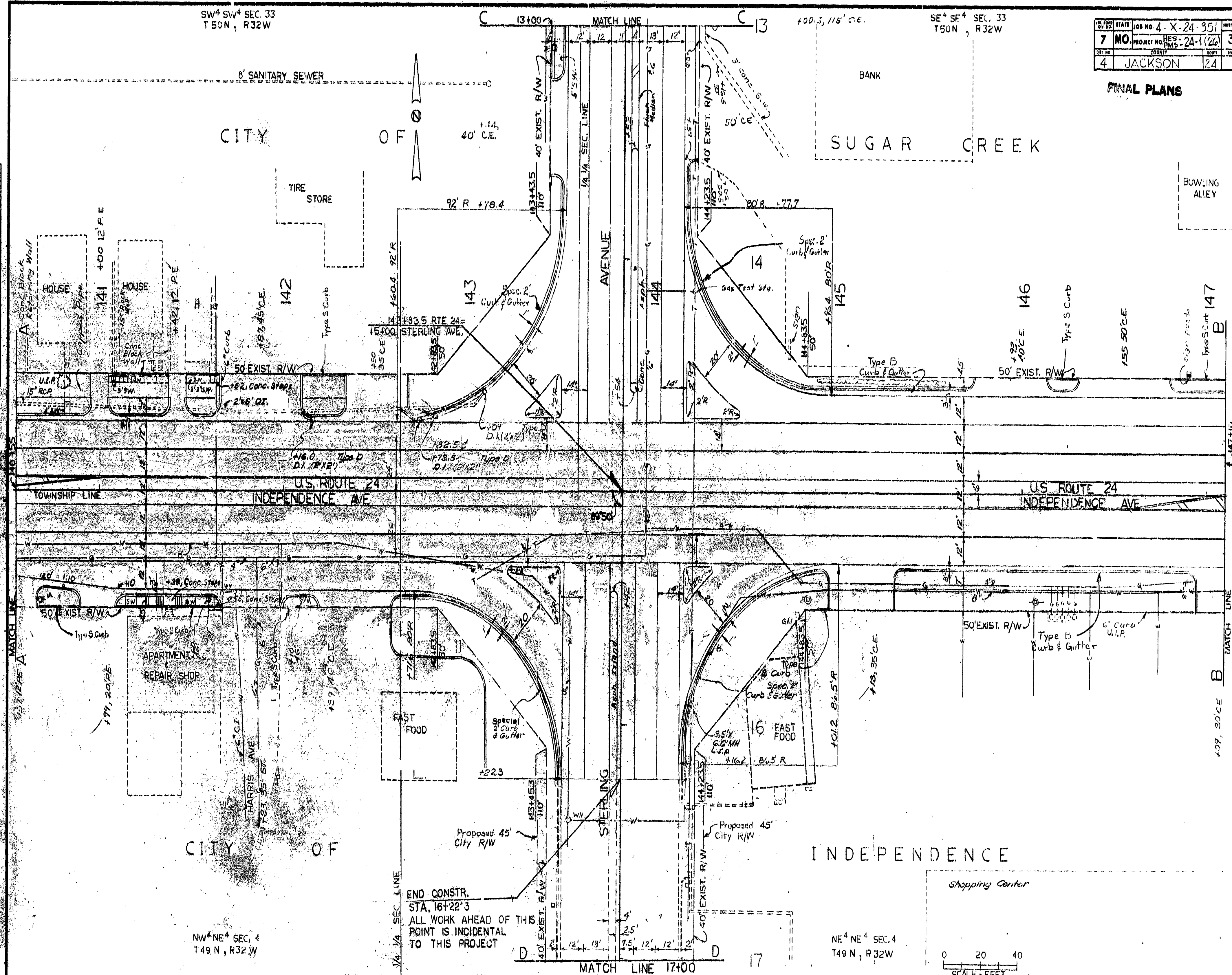
ITEM NUMBER	SIZE (INCHES)	TOTAL QUANTITY	DESCRIPTION
616-10.20	36x18	13	DRUM
616-10.35	One Rail	30	TYPE I BARRICADE
	8x24		
61 - 0.36	Two Rails		TYPE II BARRICADE
	8x24		
61 - 0.37	Three Rails		TYPE III BARRICADE
	8x48		
61 - 0.40	36x72		FLASHING OR SEQUENTIAL ARROW PANEL
61 - 0.45	18x18		TYPE I OBJECT MARKER
61 - 0.46	6x12		TYPE II OBJECT MARKER
616-10.47	8x24	8	TYPE III OBJECT MARKER
61 - 0.50	8x8		FLASHING ELECTRIC LIGHT
61 - 0.51			WARNING LIGHT TYPE A
61 - 0.52			WARNING LIGHT TYPE B
61 - 0.53			WARNING LIGHT TYPE C

510 340

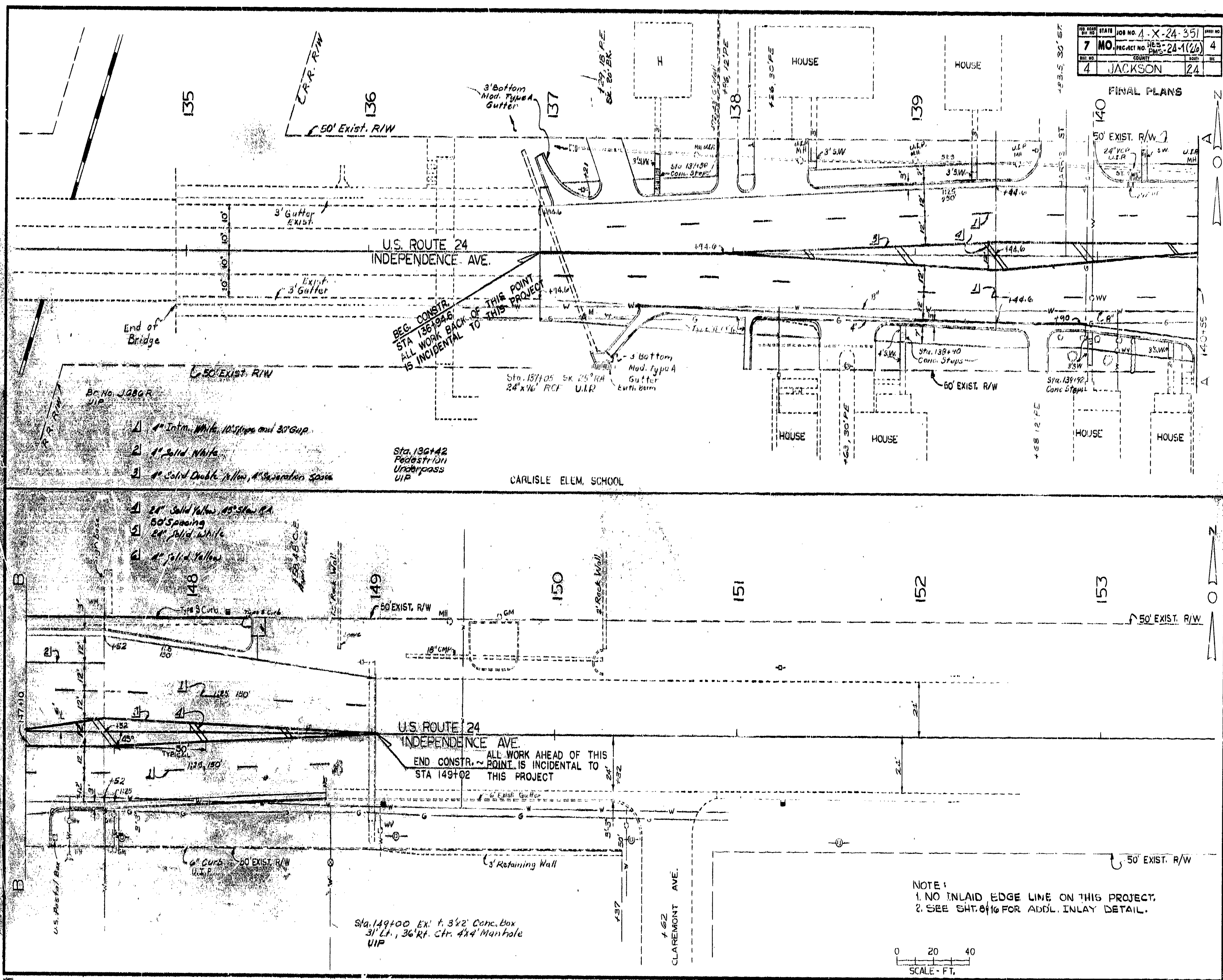
SE⁴ SE⁴ SEC. 33
T50N , R32W

10. BOARD DIV. NO.	STATE	JOB NO. 4 - X - 24 - 351	SHEET
7	MO.	PROJECT NO. HES - 24 - 1 (26) PMS	3
SHEET NO	COUNTY	ROUTE	31
4	JACKSON	24	

FINAL PLANS



518 3x2



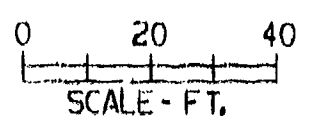
JOB NO.	STATE	JOB NO.	4	X-24-351	DATE	NO.
7	MO.	PROJ. NO.	4	HES-24-1(26)		
4	JACKSON	24				

FINAL PLANS

BEG. CONSTR. STA 136+00 ALL WORK BACK OF THIS POINT IS INCIDENTAL TO THIS PROJECT

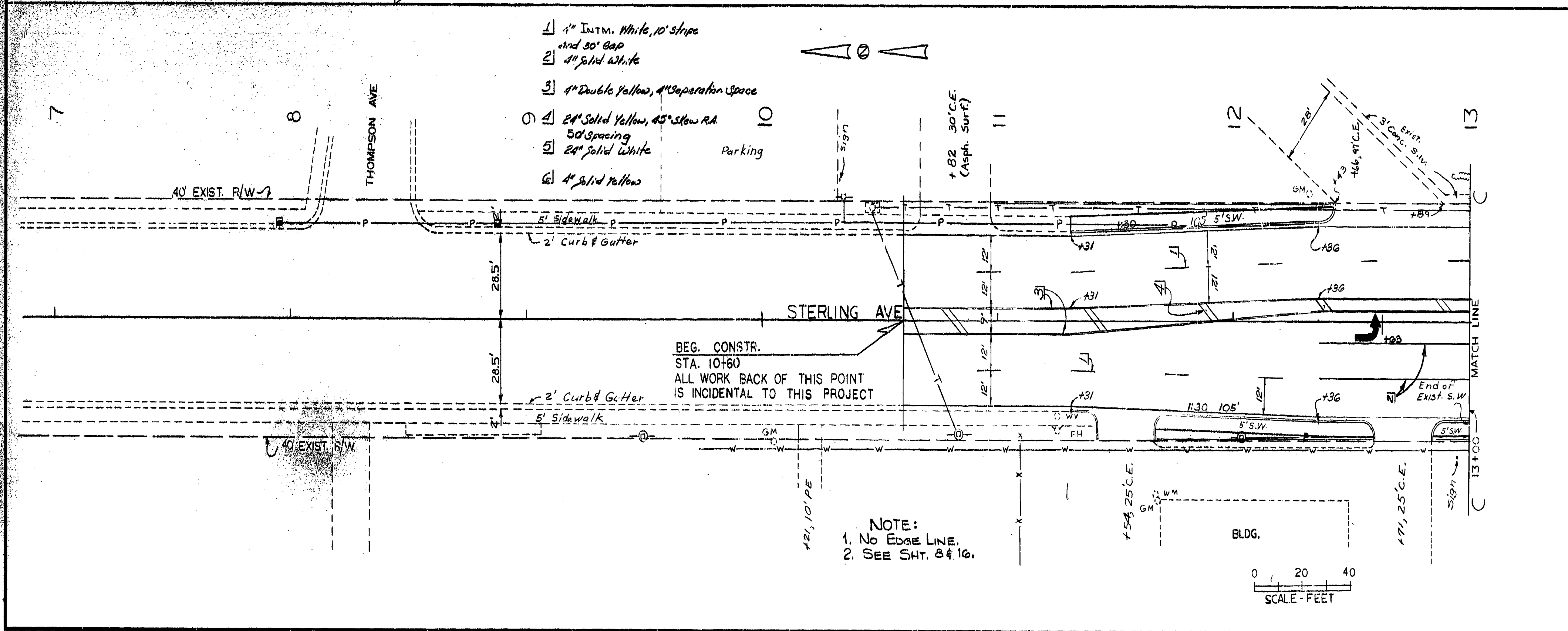
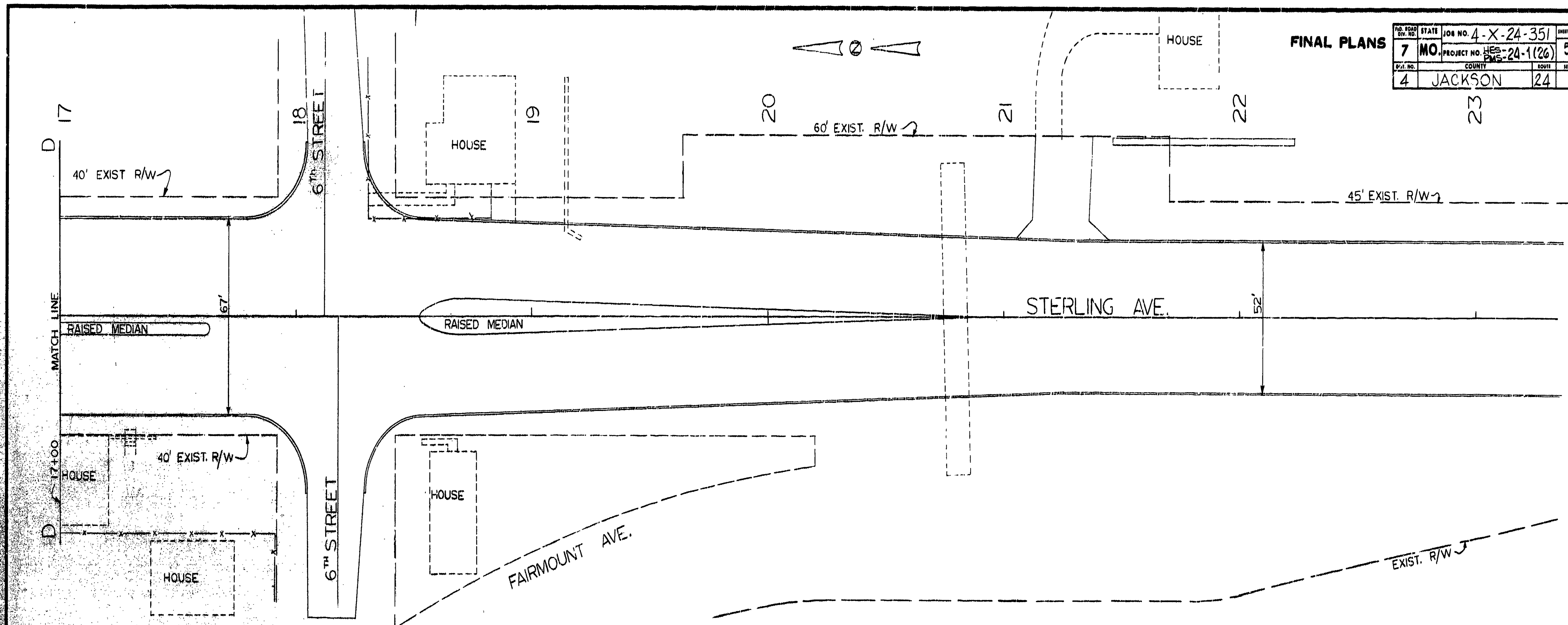
END CONSTR. POINT IS INCIDENTAL TO STA 149+02 THIS PROJECT

NOTE:
1. NO INLAIN EDGE LINE ON THIS PROJECT.
2. SEE SHT. 8416 FOR ADDL. INLAY DETAIL.

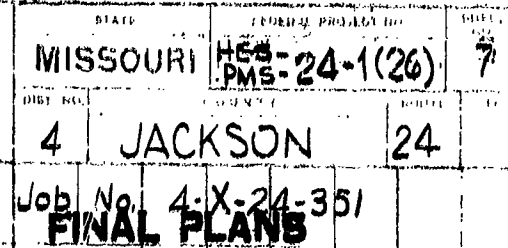


FINAL PLANS

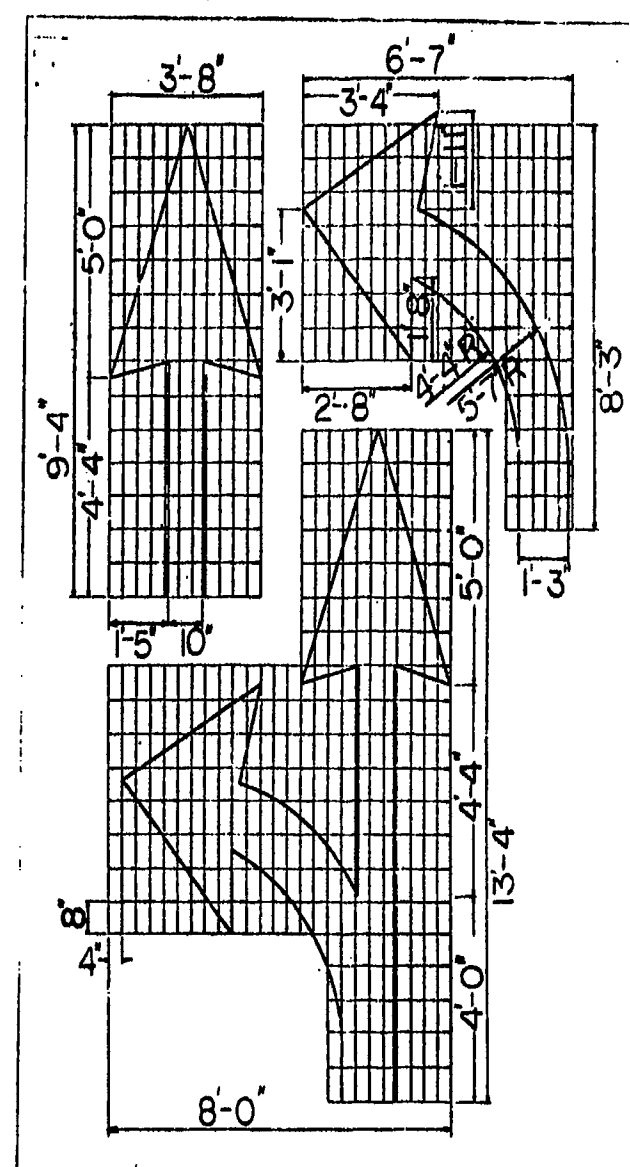
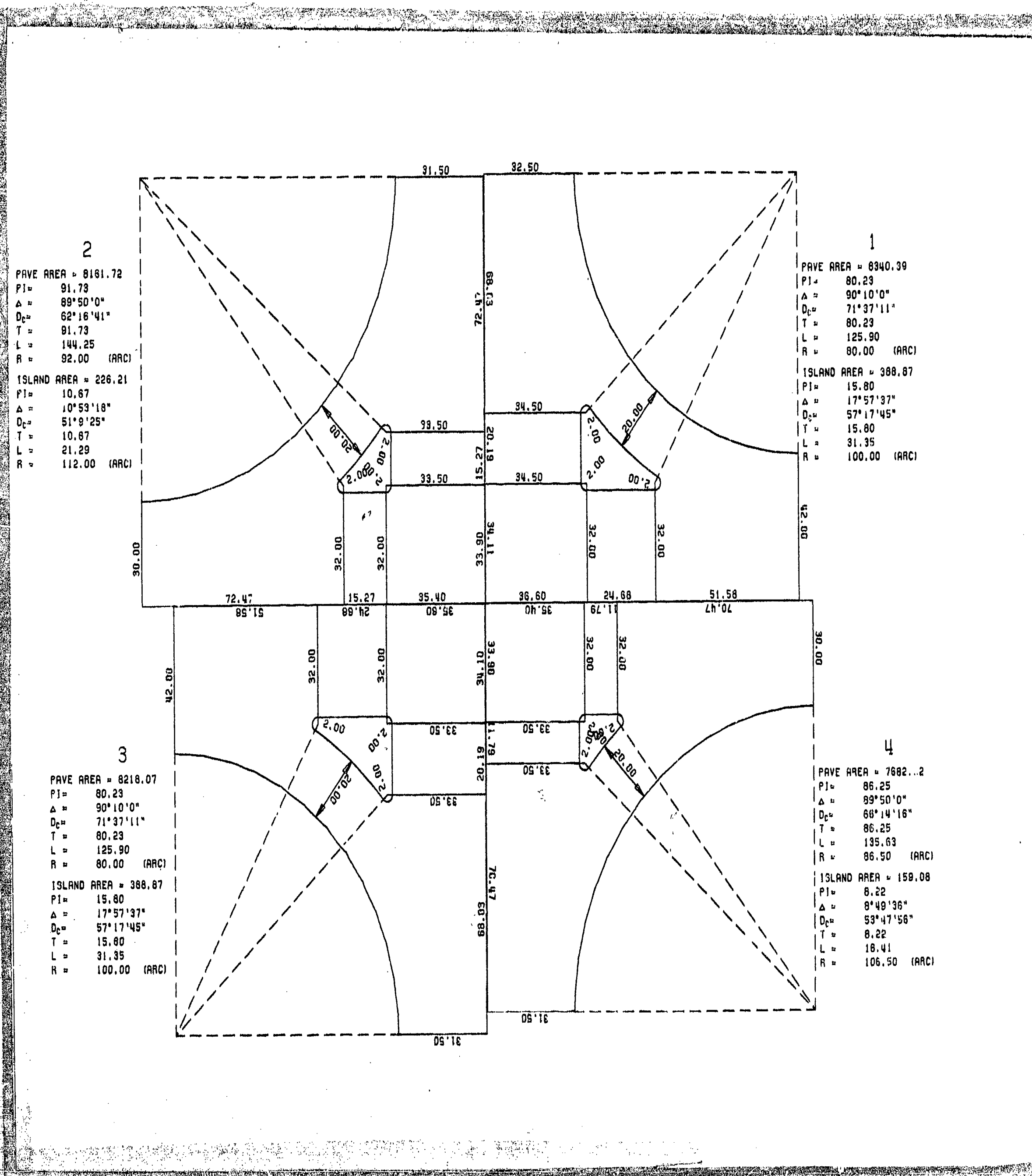
JOB NO.	STATE	4-X-24-351	SHEET NO.
7 MO.	PROJECT NO.	24-1(26)	5
4 JACKSON	COUNTY	ROUTE	SEC.
		24	



343
512



FINAL PLANS

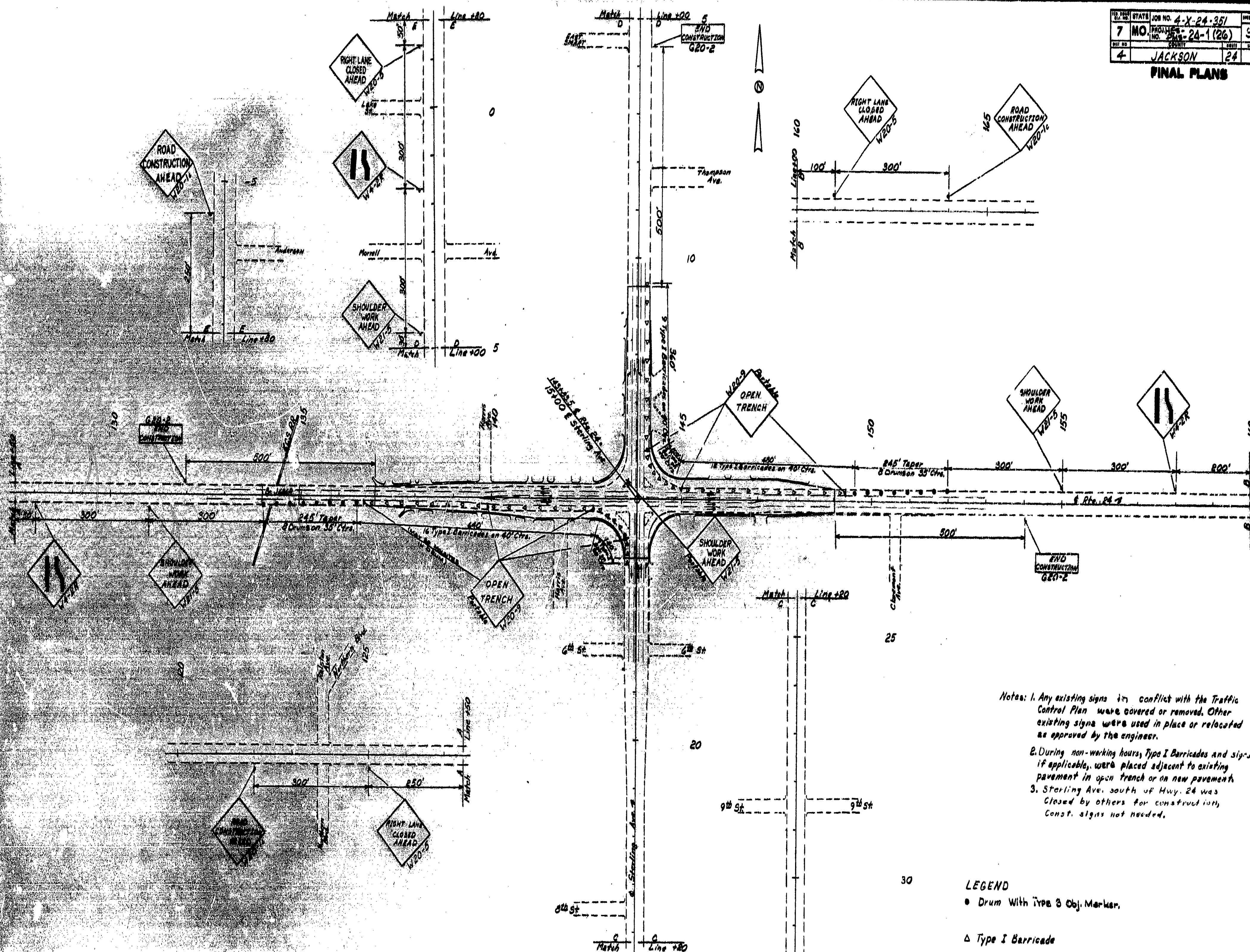


DETAILS OF INLAID ARROWS

INTERSECTION DATA

FILE NO. 614-100	STATE	JOB NO. 4-X-24-351	DATE
7	MO.	PROBATION NO. 24-1(26)	5
FILE NO	COUNTY	CITY	CL
4	JACKSON	24	

FINAL PLANS



Notes: 1. Any existing signs in conflict with the Traffic Control Plan were covered or removed. Other existing signs were used in place or relocated as approved by the engineer.

2. During non-working hours, Type I Barricades and sig., if applicable, were placed adjacent to existing pavement in open trench or on new pavement.

3. Sterling Ave. south of Hwy. 24 was closed by others for construction, Const. signs not needed.

LEGEND

- Drum With Type 3 Obj. Marker.

- ### Δ Type I Barricade

TRAFFIC CONTROL PLAN
PHASE I

NO. 7	STATE MO.	JOB NO. 4-X-24-951	SHEET NO. 10
7	MO.	PROJECT NO. 24-1(26)	10
4	JACKSON	24	

FINAL PLANS

- Notes: 1. Any existing signs in conflict with the Traffic Control Plan were covered or removed. Other existing signs were used in place or relocated as approved by the engineer.
2. During non-working hours, Type I Barricades and signs if applicable, were placed adjacent to the existing pavement in open trench or on new pavement. Advance warning signs not applicable were covered or removed.
3. Starling Ave. south of Hwy. 24 was closed to through traffic during construction, no const. signs were needed in this area. Road closed by others.

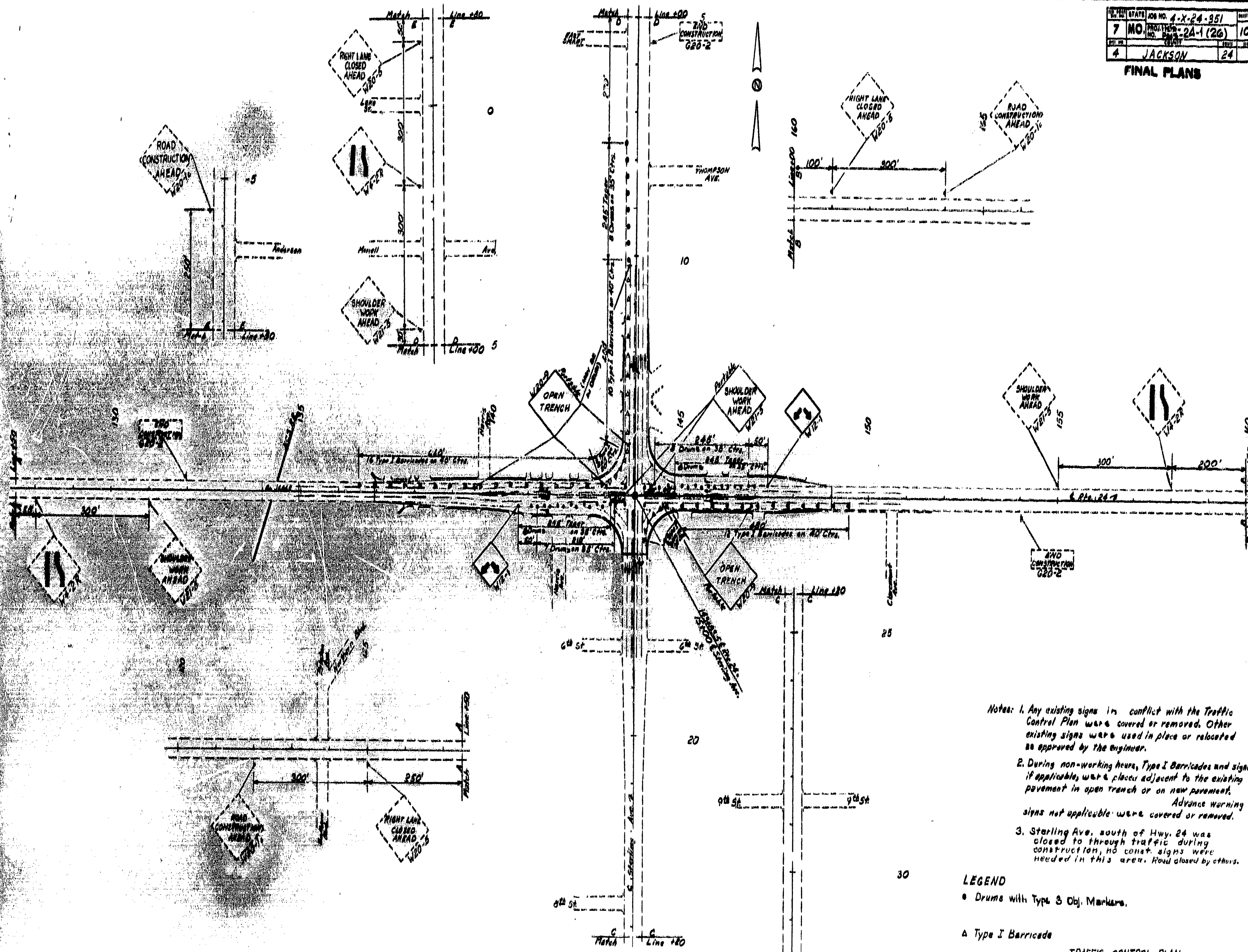
LEGEND

• Drums with Type 3 Obj. Markers.

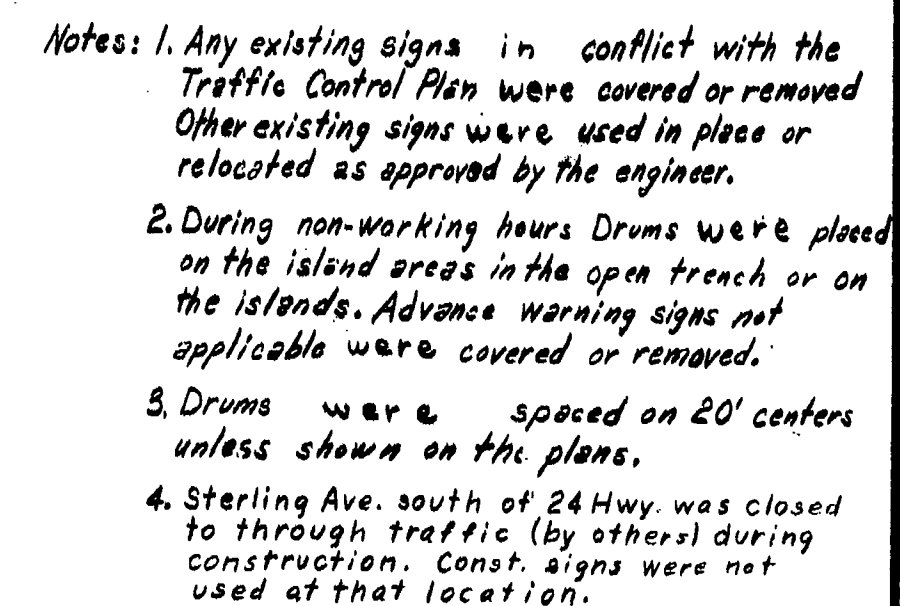
△ Type I Barricade

TRAFFIC CONTROL PLAN
PHASE II

Sheet 3 of 6



FINAL PLANS



- Drums with Type 3 Obj. Markers.

TRAFFIC CONTROL PLAN
PHASE III
Sheet 4 of 6

FD-1000	STATE	JOB NO.	4-X-24-951	SHEET NO.	
7	MO	PROJECT NO.	24-1(24)	12	
OUT. NO.		COUNTY	JACKSON	ROUTE	24

FINAL PLANS

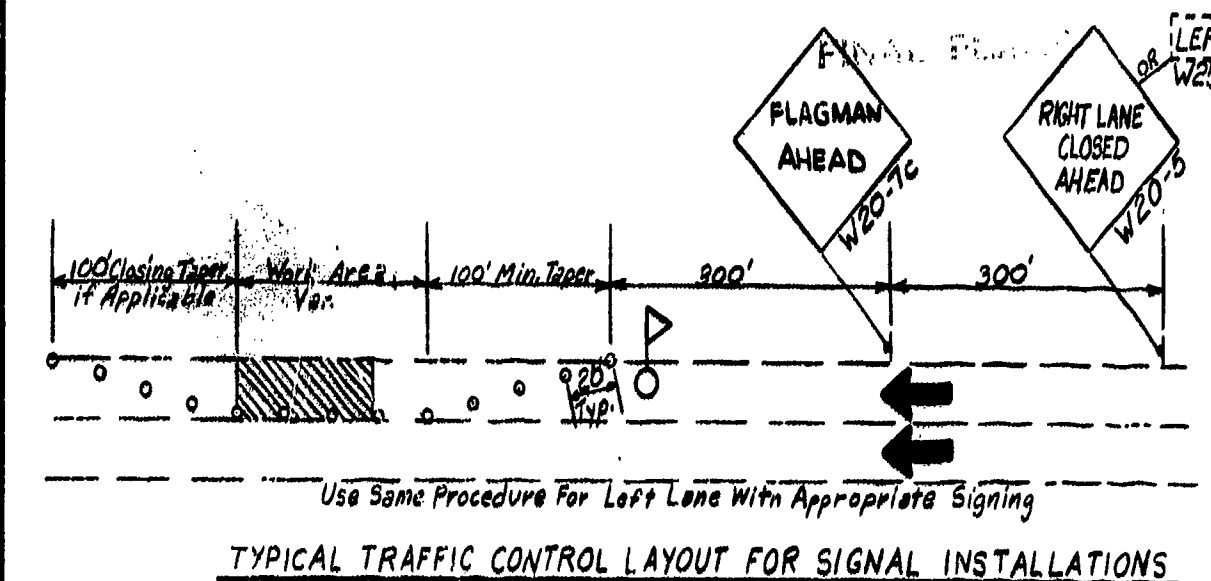
- Notes: 1. Any existing signs in conflict with the Traffic Control Plan were covered or removed. Other existing signs were used in place or relocated as approved by the engineer.
2. During non-working hours Drums were placed on the island area in the open trench or on the islands. Advance warning signs not applicable were covered or removed.
3. Drums were spaced on 20' centers unless shown on the plans.
4. Sterling Ave. south of 24 Hwy. was closed to through traffic (by others) during const. Const. signing was not required at this loc.

LEGEND
• Drums

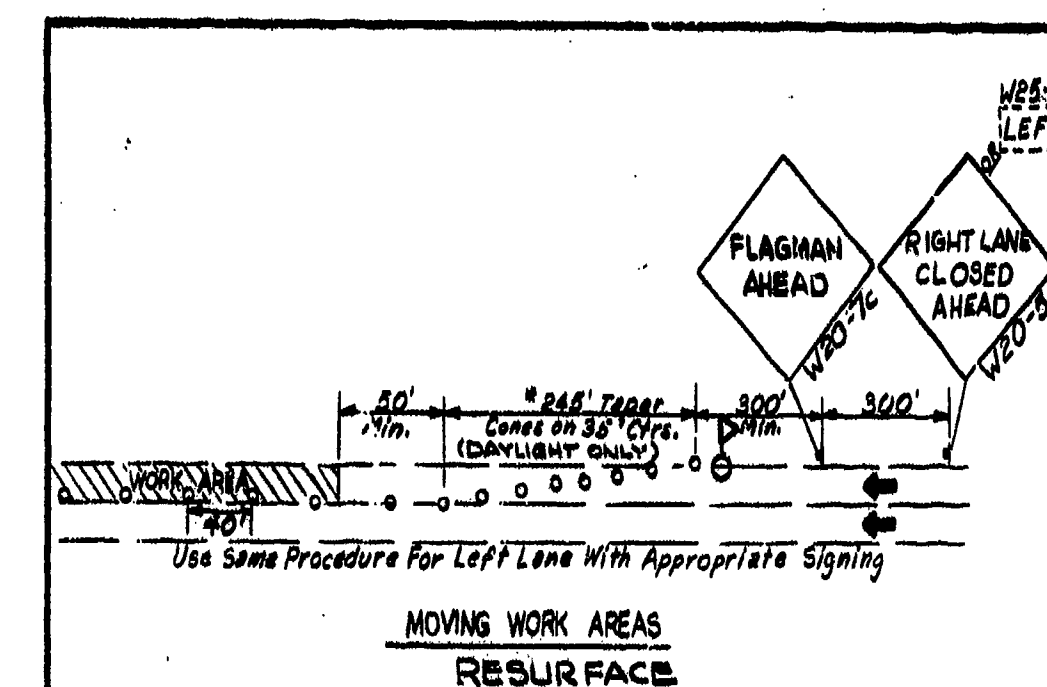
TRAFFIC CONTROL PLAN
PHASE IV
Sheet 5 of 6

FINAL PLANS

PROJ. NO.	STATE	JOB NO.	4-X-24-951	SHEET NO.	
7	MO.	PROJ. NO.	24-1 (26)	13	
DIST. NO.	COUNTY	CITY	JACKSON	24	



- Notes:
1. Any existing signs in conflict with the Traffic Control Plan were covered or removed. Other existing signs were used in place or relocated as approved by the engineer.
 2. During non-working hours the Drums were placed on the median area in the open trench or on the median. Advance warning signs not applicable were covered or removed.
 3. Sterling Ave. south of 24 Hwy. was closed to through traffic by others. No const. signing was needed in this area.

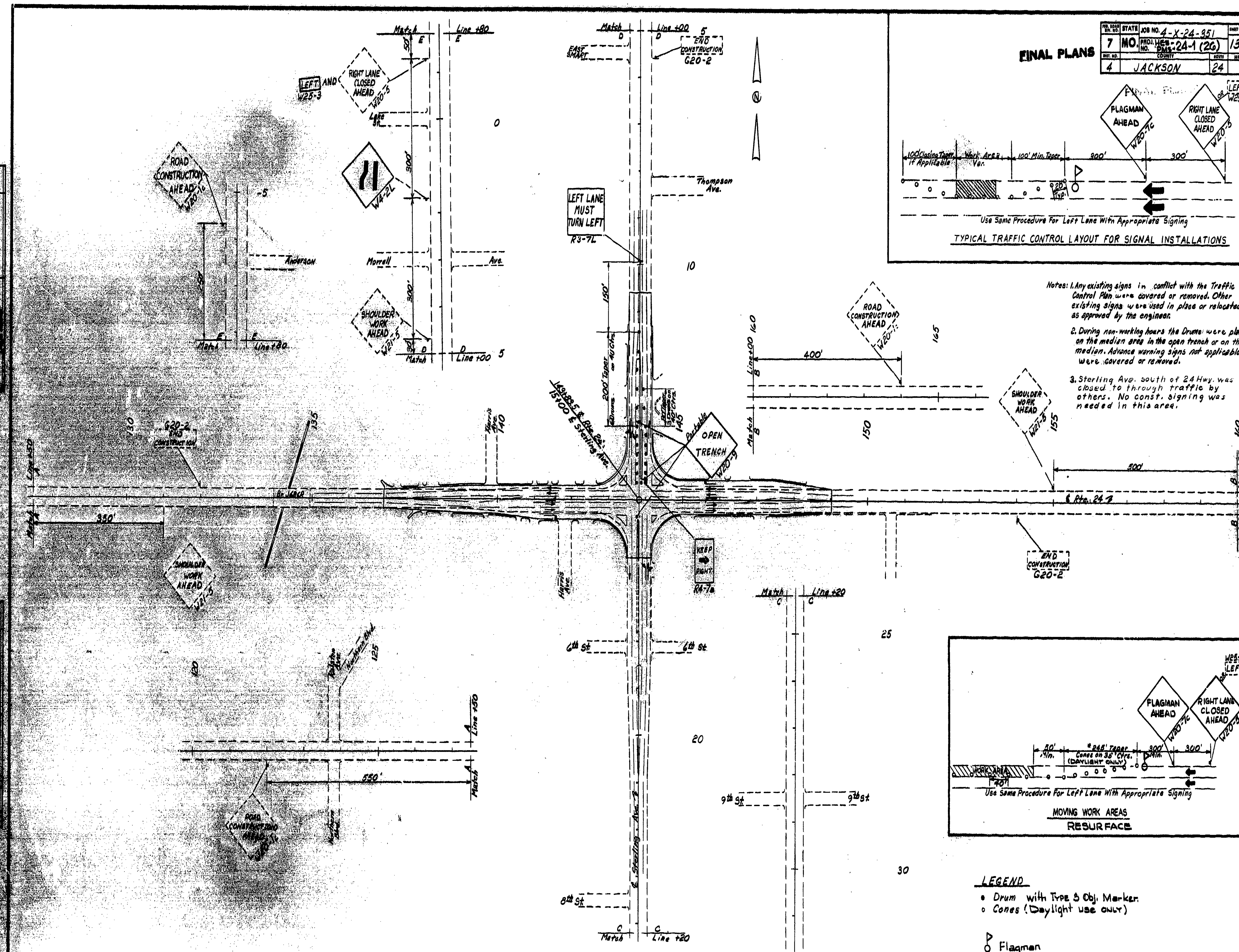


LEGEND

- Drum with Type 3 Obj. Marker
- Cones (Daylight use only)

◊ Flagman

TRAFFIC CONTROL PLAN
PHASE V
Sheet 6 of 6



SW 1/4 SEC. 33
T 50N, R 32W

SE 1/4 SEC. 33
T 50N, R 32W

STATE	JOB NO.	4-X-24-351	SHEET NO.	14
7	NO.	24-1(26)		
4	JACKSON	24		

FINAL PLANS

SUGAR CREEK

BOWLING ALLEY

U.S. ROUTE 24
INDEPENDENCE AVE

U.S. ROUTE 24

INDEPENDENCE

HIGHWAY LIGHTING

0 20 40
SCALE - FEET

- 2 — 240V. Multiple Circuit in Cable-Conduit with circuit number
- Rigid Steel Conduit, in Trench
- 250 W. High Pressure Sodium Luminaire, 45' Mounting Height, Type AT
- Pole Mounted Control Station

NW 1/4 SEC. 4
T 49N, R 32W

NE 1/4 SEC. 4
T 49N, R 32W

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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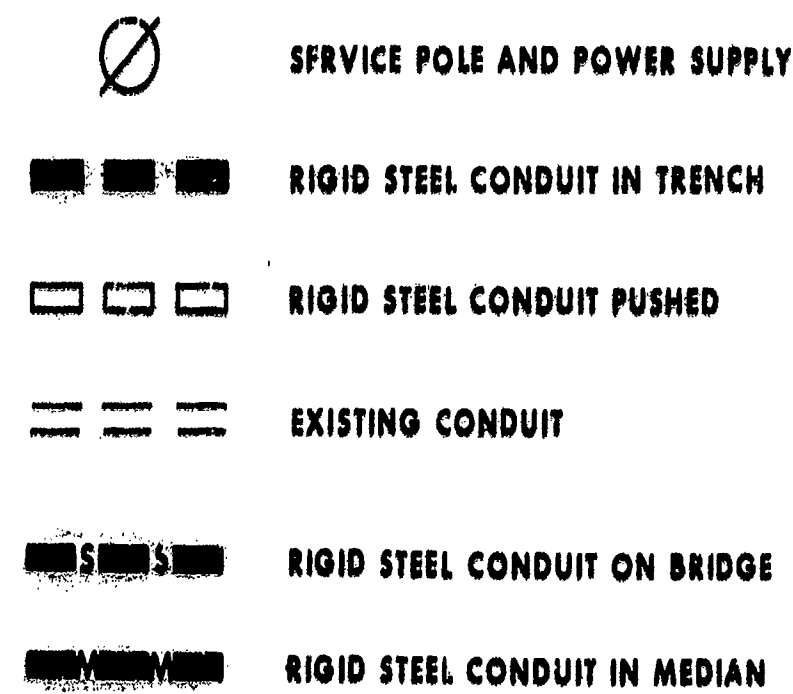
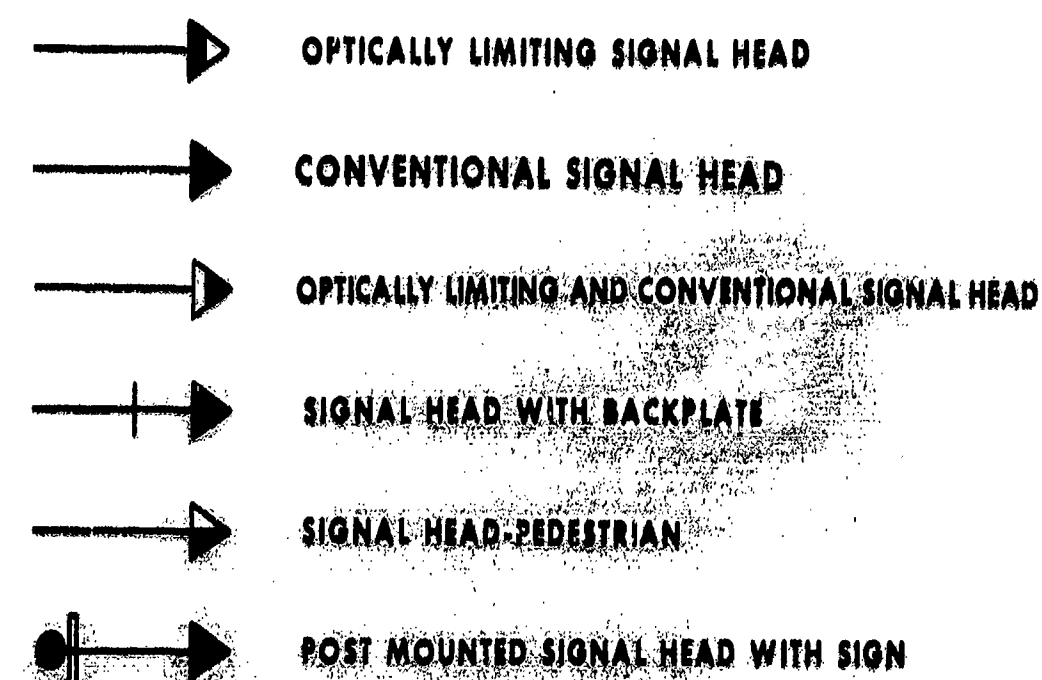
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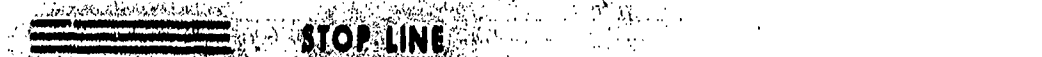
TRAFFIC SIGNAL SYMBOLS

FINAL PLANS

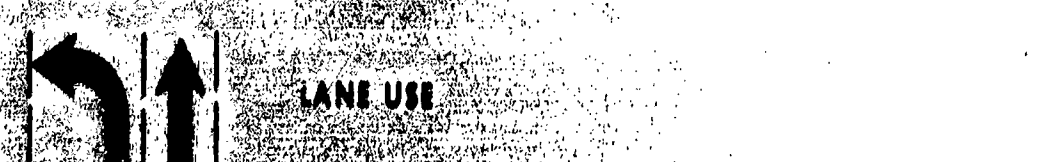
JOB NO.	4-K-24-351	SHEET NO.	15
PROJECT NO.	HE-24-1 (26)	COUNTY	JACKSON
DIST. NO.	4	ROUTE	24



W WALK INDICATION
DW DON'T WALK INDICATION
FDW FLASHING DON'T WALK INDICATION



3" SIZE OF CONDUIT



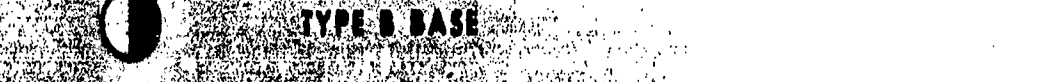
3-2c #12 NUMBER & SIZE OF CABLE



7 SIGNAL FACE NUMBER



7 POST NUMBER



7 DETECTOR NUMBER



7 PULL BOX NUMBER



R RED LENS (CIRCULAR)



FR FLASHING RED (CIRCULAR)



Y YELLOW LENS (CIRCULAR)



FY FLASHING YELLOW (CIRCULAR)



YL YELLOW LEFT ARROW LENS



YRt YELLOW RIGHT ARROW LENS



G GREEN LENS (CIRCULAR)



S GREEN STRAIGHT ARROW LENS



L GREEN LEFT ARROW LENS



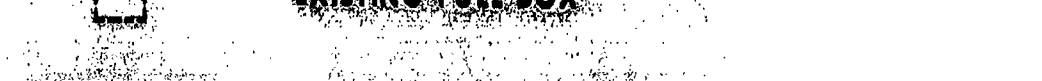
Rt GREEN RIGHT ARROW LENS



DL DOWN LIGHT



R 12 INCH LENS



G TUNNEL VISOR

Y TUNNEL VISOR WITH EXTERNAL LOUVER

COMMISSION FURNISHED SIGNS

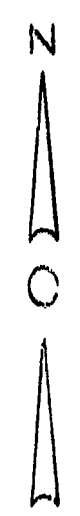
SIGN NUMBER	
1	R10-10L - LEFT TURN SIGNAL (24 x 30)
2	R10-10R - RIGHT TURN SIGNAL (24 x 30)
3	R3-5L - LEFT ARROW (SYMBOL)-ONLY (30 x 36)
4	R3-5R - RIGHT ARROW (SYMBOL)-ONLY (30 x 36)
5	R3-5S - STRAIGHT ARROW (SYMBOL)-ONLY (30 x 36)
6	R3-6L - LEFT ARROW-STRAIGHT ARROW (SYMBOL) (30 x 36)
7	R3-6R - RIGHT ARROW-STRAIGHT ARROW (SYMBOL) (30 x 36)
8	R3-2 - NO LEFT TURN (SYMBOL) (24 x 24)
9	R3-2x - NO LEFT TURN (PLAQUE) (24 x 18)
10	R3-1 - NO RIGHT TURN (SYMBOL) (24 x 24)
11	R3-1x - NO RIGHT TURN (PLAQUE) (24 x 18)
12	R3-3a - NO TURNS (24 x 24)

SW 1/4 SEC. 33
T50N, R32W

SE 1/4 SEC. 33
T50N, R32W

STATE	JOB NO.	4 X 24-351	DATE	
7 MO.	PROJ. RES.	24-1(26)	16	
4	JACKSON	24		

FINAL PLANS



BOWLING ALLEY

SUGAR CREEK

CITY OF

CITY OF

INDEPENDENCE

NE 1/4 SEC. 4
T49N, R32W

NW 1/4 SEC. 4
T49N, R32W

- 1 4" Intermittent White, 10' stripe and 30' gap.
- 2 4" Solid White
- 3 4" Solid Double Yellow, 4' separation space
- 4 24" Solid Yellow, 45° skew R.A. 50' spacing
- 5 24" Solid White
- 6 4" Solid Yellow
- 7 4" Double Yellow, 12' separation.
- 8 6" White

TRAFFIC SIGNAL INSTALLATION
ROUTE U.S. 24 (INDEPENDENCE AVE.)
WITH
STERLING AVENUE
IN
INDEPENDENCE AND SUGAR CREEK

Shopping Center



Traffic Signals at Forest Ave. 2640'

PEAK HOUR
1980-104
2000-150

FAST FOOD

FAST FOOD

APARTMENT
REPAIR SHOP

TIRE STORE

BANK

Proposed 45' City R/W

Proposed 45' City R/W

Posted Speed Limit
Route 24 - 35 m.p.h.
Sterling Ave. - 25 m.p.h.
Existing Signals - 3-phase actuated



526 354

FINAL PLANS

POWER SUPPLY									
LOCATION			POWER SUPPLY ASSEMBLY		CIRCUIT BREAKER TRIP RATING		SERVICE POLE		
APPROACH	STATION	OFFSET	DRAWING 902.10	DRAWING 901.18	CONTROLLER		SERVICE POLE	CONTRACT FURNISH	UTILITY COMPANY
					DOWNLIGHT AND LUMINAIRE	CONT. & SIGNAL LAMPS	BOTH BREAKERS		
Sterling	13+80	38' R		✓	15 Amps	30 Amps	40 Amps Cl.		
					Amps	Amps	40 Amps Cl.		

NO.	SAVED	SUMMER	PLOTTED	NO.
	NOTE BOOK	TEMPERATURE		
		AREAS		
		AREAS CHECKED		

NO.	ROOM	DATE	TIME
	SURVEY		
	PLANTED		
	TEMPERATURE		
	AREAS		
	AREAS CHECKED		

JOB NO. 4-X-24-351		SHEET NO.
PROJECT NO. HES-24-1(26)		16B
DIST. NO. 4	COUNTY JACKSON	ROUTE SEC. 24

Sheet 2 of 2

TRAFFIC SIGNALS

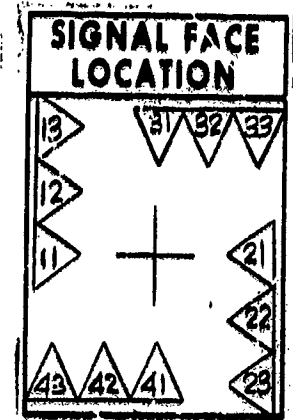
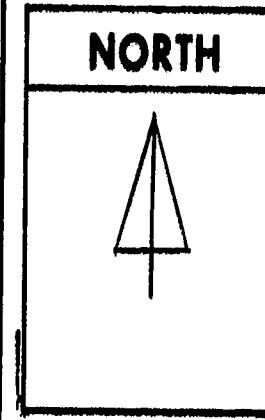
FINAL PLANS

CONDUIT																		CABLE														
FROM	TO	CTR TO CTR DISTANCE	TRENCH							MEDIAN		PUSHED					ALUM	REMARKS	FROM	TO	CTR TO CTR DISTANCE	POWER		CONTROL						DETECTOR		REMARKS
			1 1/4	1 1/2	2	2 1/2	3	3 1/2	4	1 1/4		2	2 1/2	3	3 1/2	4						4	1c #8		2c #12	3c #12	5c #12	7c #12	12c #12		1c #14	
0	X	68	78														Incl. 2-9x3" Conduits, Ea. Containing 4-2c 4-6-20 Cables	0	X	68	309											
X	5	7					18										U.I.P. 3"x75'	X	1	46						220						
5	1	106					29											X	2	204						502						
1	3	12		14														X	3	125						384						
1	13	18	18															X	4	129						402						
5	4	33							31									X	1	113			384									
4	1	6	8															X	2	123			429									
2	4	83					24										U.I.P. 3"x57'	X	3	198			609									
																		X	4	40			165									
2	2	22	13	13														1	11	52								372		6'x30' Loop		
	3																	1	12	40								348		6'x30' Loop		
2	3	75					23										U.I.P. 3"x50'	1	13	27								322		6'x30' Loop		
3	2	6	8															2	21	43								354		6'x30' Loop		
3	3	6	6															2	22	33								334		6'x30' Loop		
	3																	2	23	20								308		6'x30' Loop		
2	4	6	8															3	31	37								342		6'x30' Loop		
4	1	9	9															3	32	24								316		6'x30' Loop		
	4																	4	33	13								294		6'x30' Loop		
																		4	41	40								348		6'x30' Loop		
																		4	42	28								324		6'x30' Loop		
																		4	43	16								300		6'x30' Loop		
																		SUB-TOTALS		309		1647			1574			3962				
																		EXTRA FOR CUTTING, ETC.		21		83			76			198				
TOTALS																		TOTALS		330		1730			1650			4160				

586 356

SEE 356

FINAL PLANS

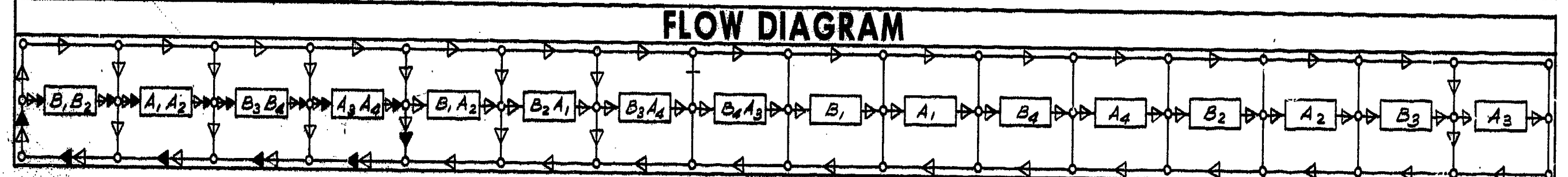


TRAFFIC PHASING AND COLOR SEQUENCE

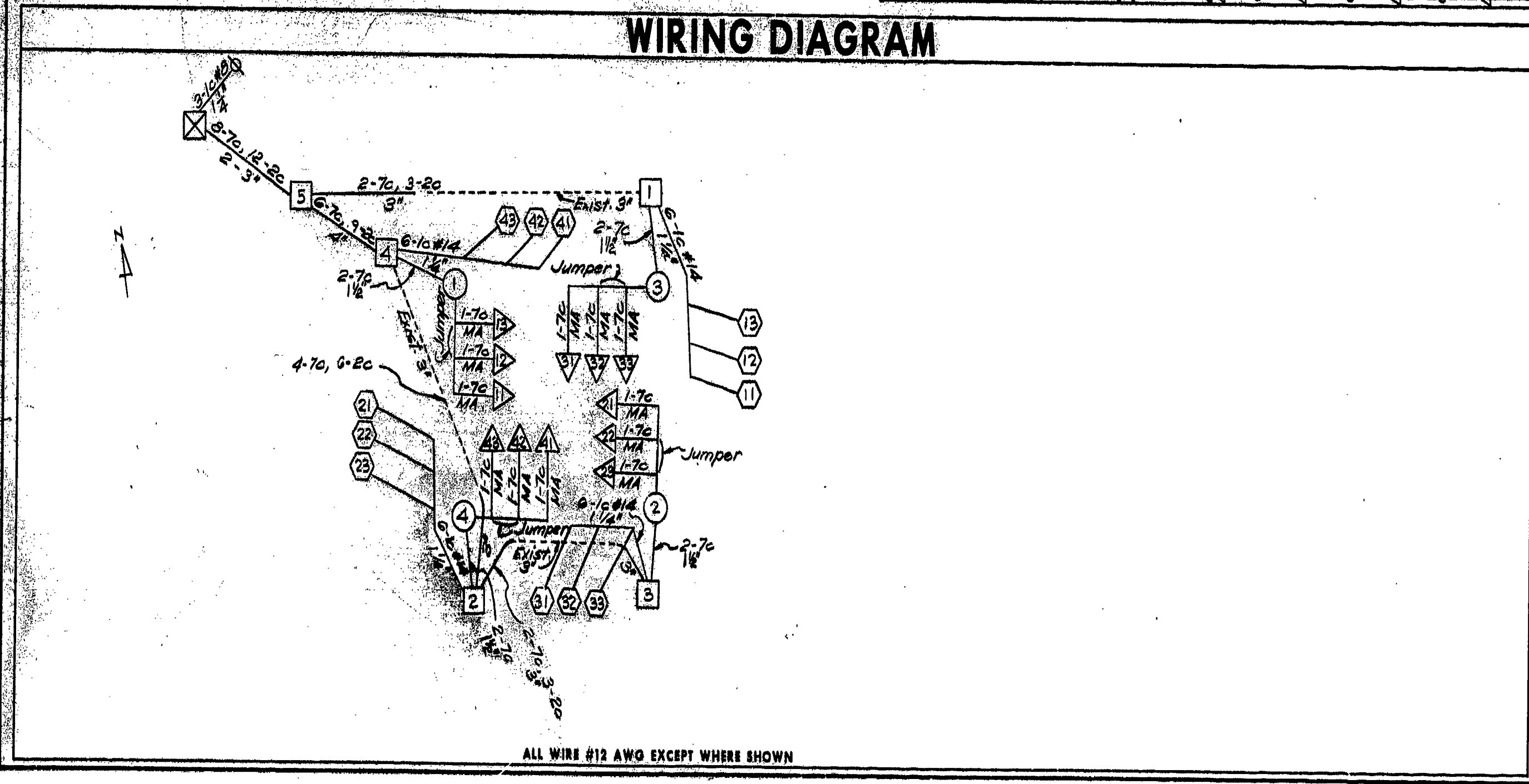
APPROACH	PHASE	FACE NUMBER	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	FACE NUMBER
EAST Rte. 24	B1	21	L	L	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	22
Independence Ave.	A1	23	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	24
WEST Rte. 24	B2	11	R	R	R	L	L	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	12
Independence Ave.	A1	13	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	14
SOUTH Sterling Ave.	B3	41	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	42
Sterling Ave.	A1	43	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	44
NORTH Sterling Ave.	B4	31	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	32
Sterling Ave.	A2	33	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	34

(1) NOT A-TIMED INTERVAL (TIME=0/4)
 ALL NON-CONFLICTING PHASES SHALL COMBINE AND TIME CONCURRENTLY, IF CALLED.
 Timing to be determined by the Engineer at signal turn on.
 → Denotes sequence that prevails if constant demand exists and equal timing is set on all phases.
 → Denotes secondary sequence per right of way demand.

FLOW DIAGRAM



WIRING DIAGRAM



LEGEND

- ACTUATED VEHICULAR MOVEMENT
- NON-ACTUATED VEHICULAR MOVEMENT
- PARTIALLY RESTRICTED VEHICULAR MOVEMENT
- ACTUATED PEDESTRIAN MOVEMENT
- NON-ACTUATED PEDESTRIAN MOVEMENT
- ⊖ DETECTOR DISCONNECTED
- ⊕ DETECTOR SWITCHED (FUNCTION NO. 1)
- R/W-RIGHT OF WAY INTERVAL
- ⊖ TRAFFIC PHASE
- R-RED
- Y-YELLOW
- G-CIRCULAR GREEN
- S-GREEN STRAIGHT AHEAD ARROW
- YL-YELLOW LEFT ARROW
- L-GREEN LEFT ARROW
- YRT-YELLOW RIGHT ARROW
- RT-GREEN RIGHT ARROW
- W-WALK
- DW-DON'T WALK
- FDW-FLASHING DON'T WALK

SUGGESTED TIMING

Ø	INITIAL PORTION			UNIT EXTENSION	REDUCTION			CLEARANCE
	MINIMUM GREEN	VARIABLE	NUMBER OF ACTUATIONS		TIME WAITING	MINIMUM EXTENSION	MAXIMUM GREEN	
A1								
A2								
A3								
A4								
B1								
B2								
B3								
B4								

FLASHING OPERATIONS

ALL APPROACHES	FR
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CONTROLLER TYPE

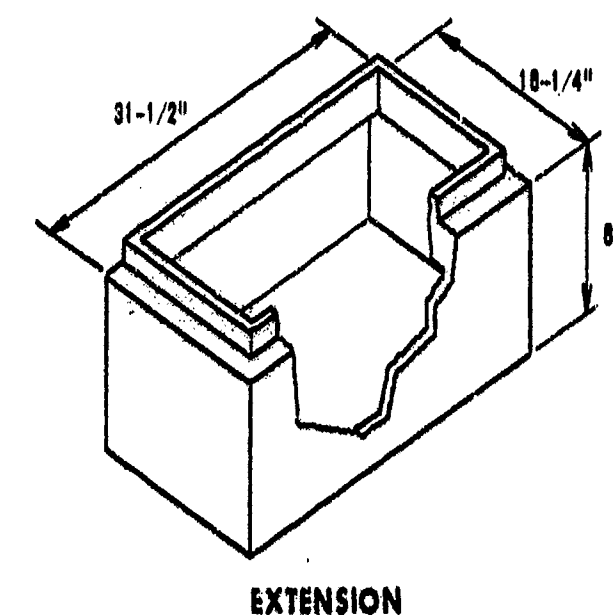
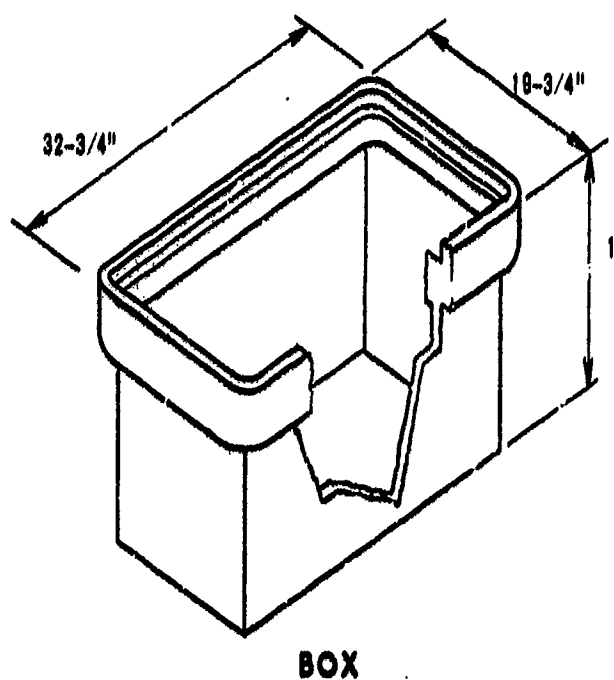
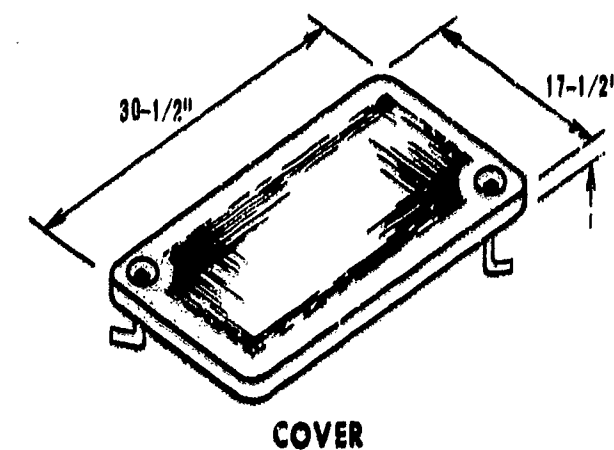
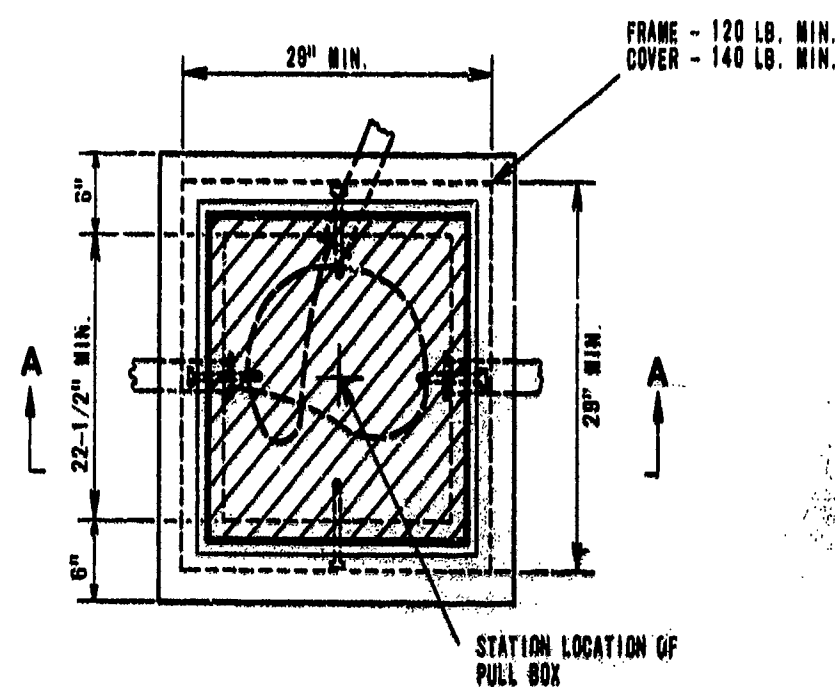
8 Ø

TRAFFIC SIGNAL CONTROL OPERATION

Route US 24 (Independence Ave.)
 INTERSECTION OF
 Sterling Ave.
 WITH
 In Independence & Sugar Creek

DATE	
BY	
CHECKED	
DESIGNED	
APPROVED	
FINAL	

DATE	
BY	
CHECKED	
DESIGNED	
APPROVED	
FINAL	

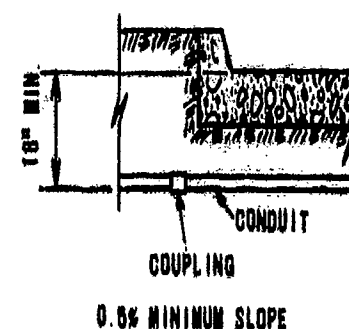
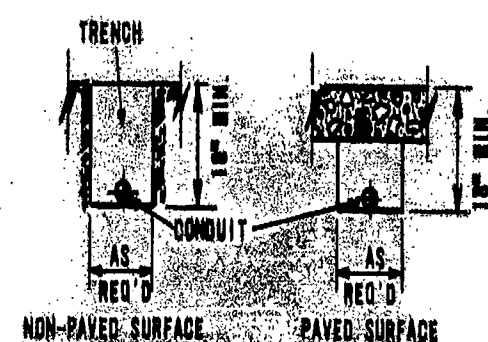
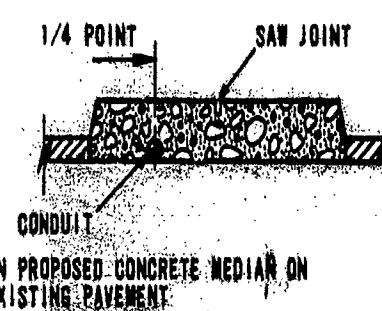
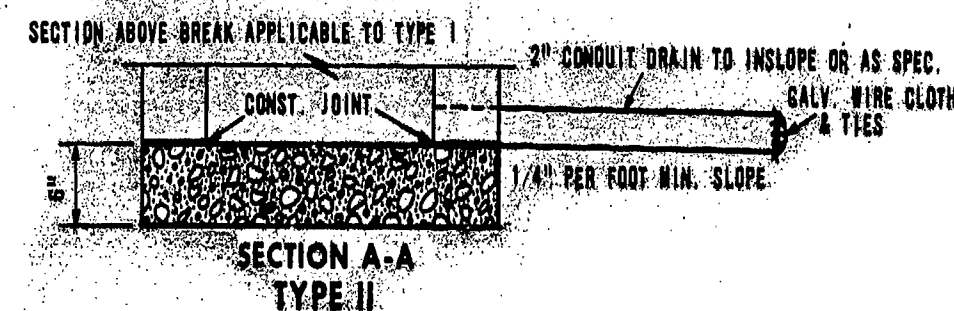
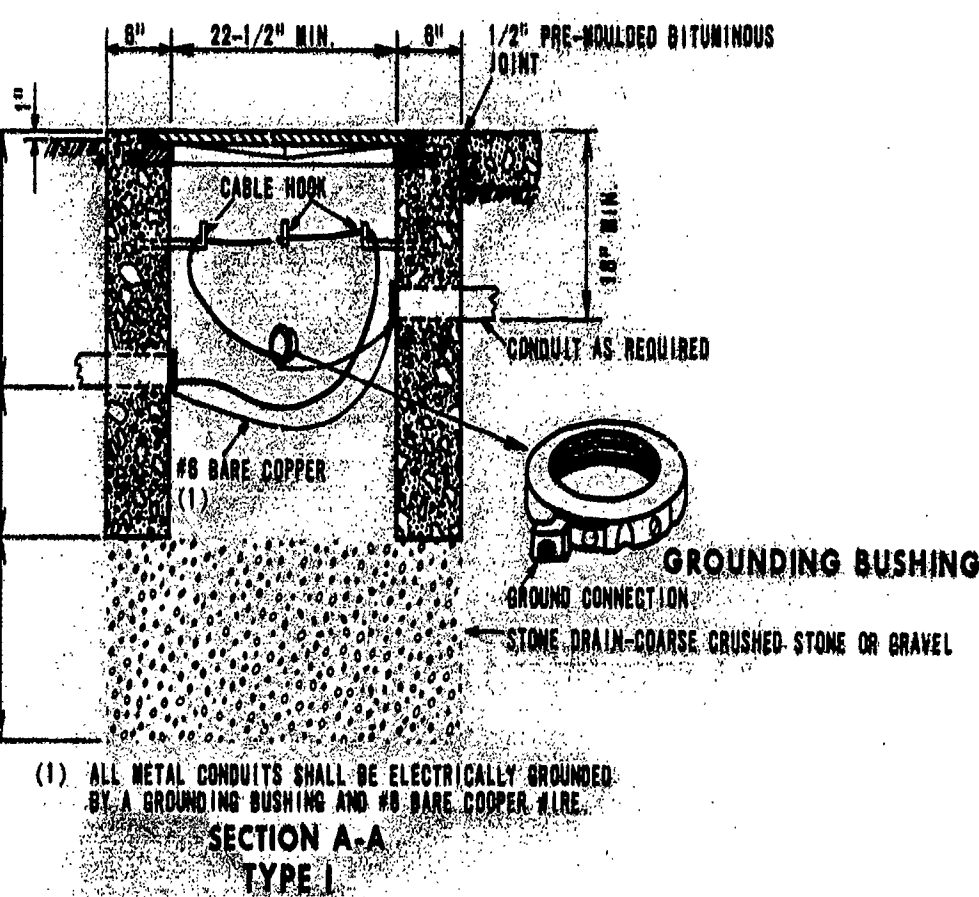


NOTE: INSTALLATION OF PLASTIC MORTAR PULL BOX SHALL BE IDENTICAL TO TYPE I OR TYPE II SHOWN FOR CONCRETE PULL BOX. ALL DIMENSIONS SHOWN ARE NOMINAL. COVER SHALL BE A MINIMUM OF 20,000 LB. LOADING.

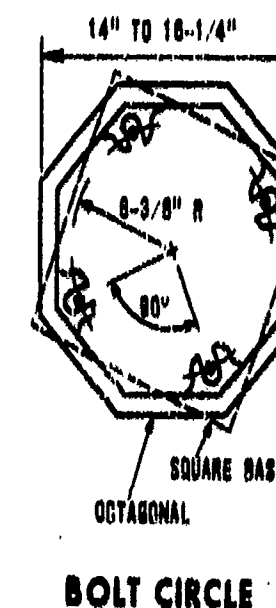
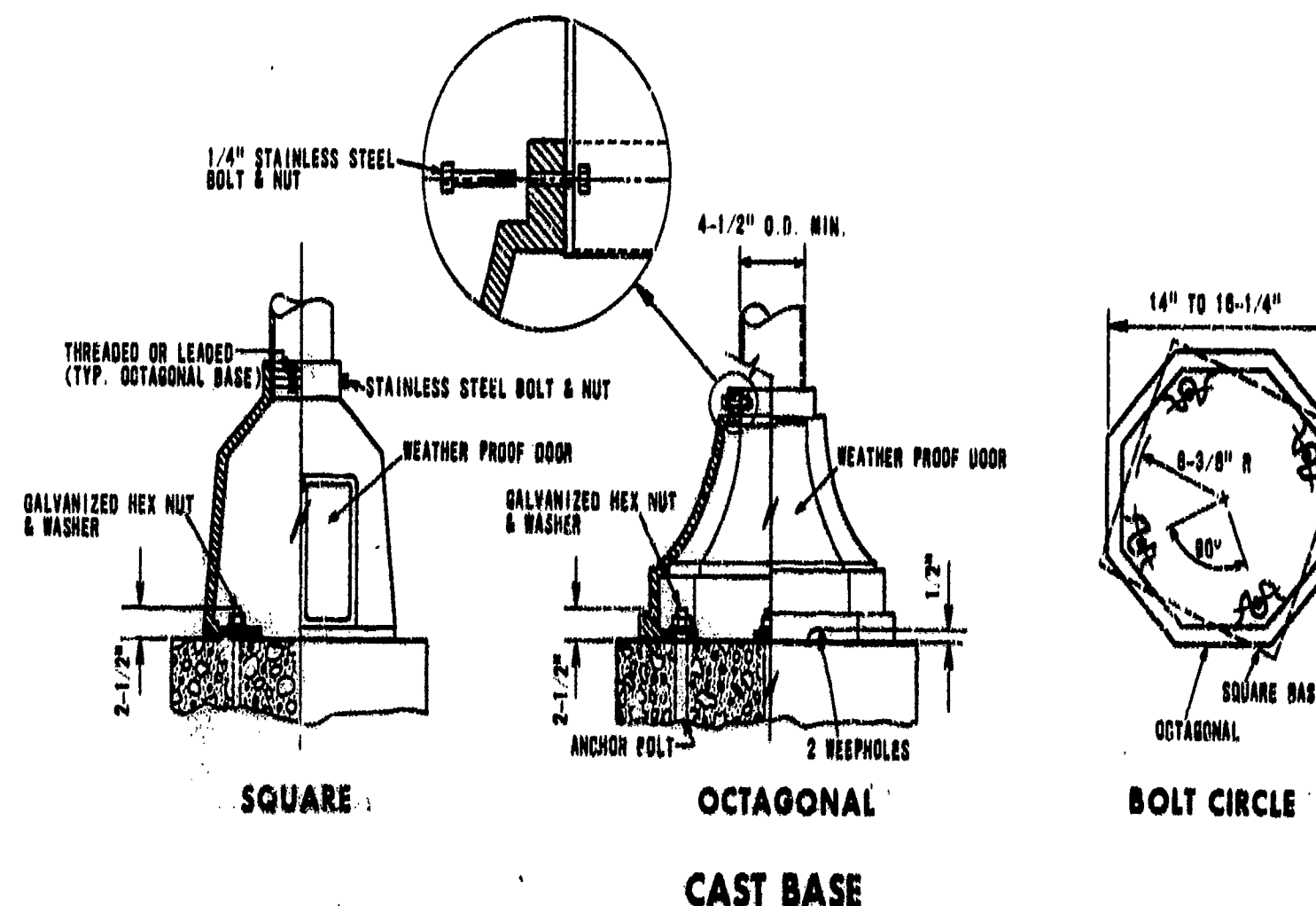
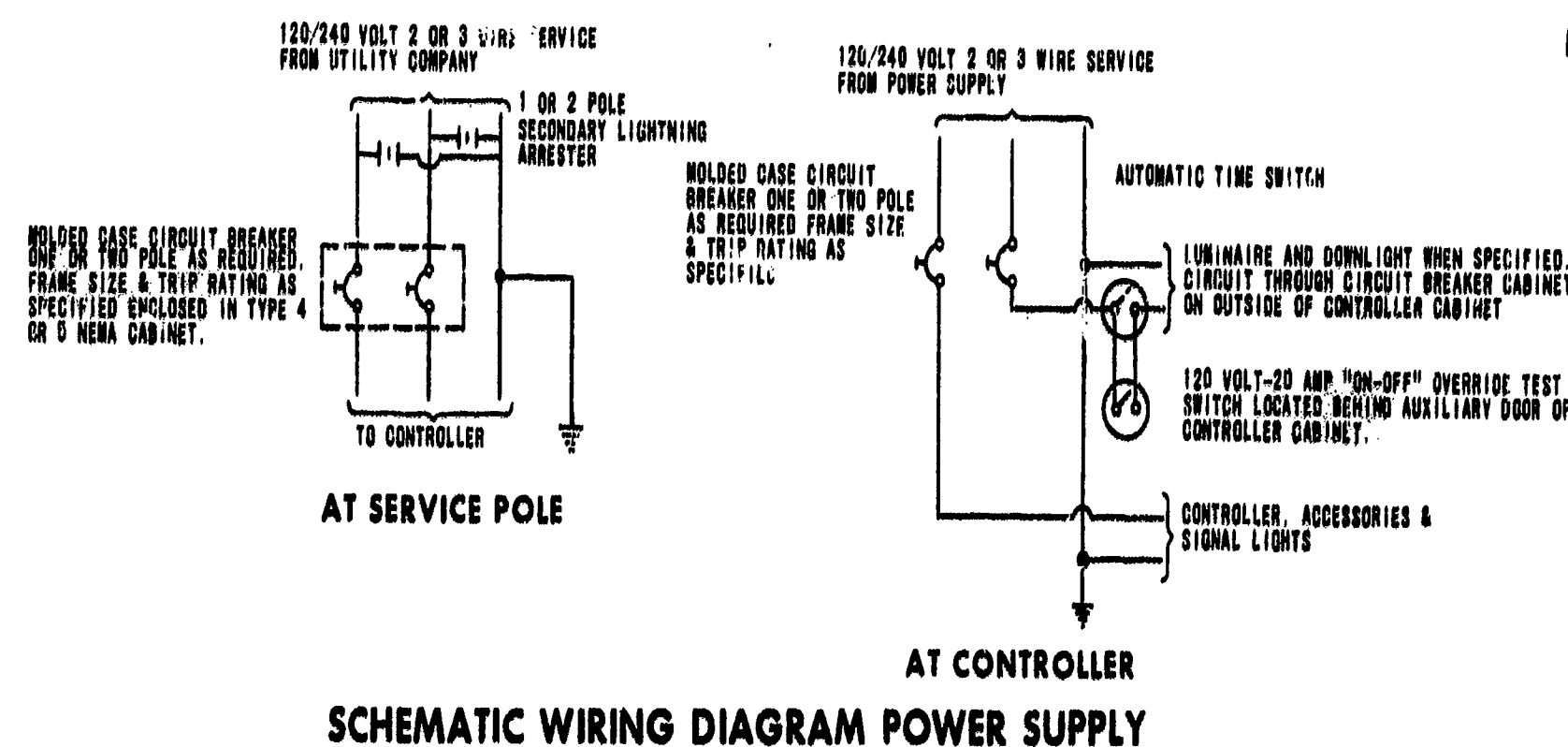
CONCRETE

PULL BOXES

PREFORMED PLASTIC MORTAR

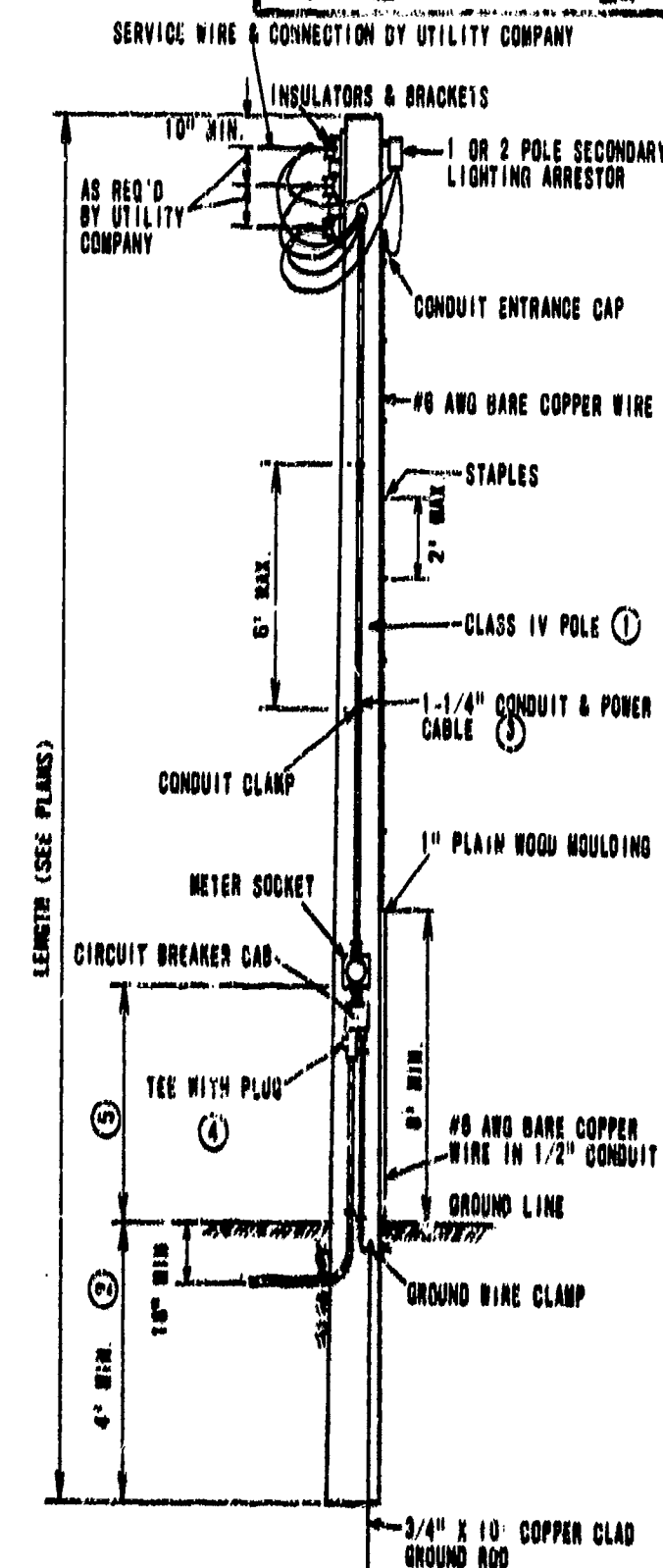


CONDUIT LOCATIONS



FINAL PLANS

5 HES-24-1(26) 18
4 JACKSON 24



- SERVICE POLE SHALL BE GUYED WHEN SPAN OF SERVICE WIRE EXCEEDS 80 FEET.
- INCREASE 1 FOOT FOR EACH 5 FEET IN LENGTH ABOVE 20 FEET.
- WHEN POWER SUPPLY ASSEMBLY IS ON A UTILITY COMPANY POLE ONLY RIGID STEEL CONDUIT AND GIL SERVICE ENTRANCE CABLES AT METER BOX WITH LENGTH SUFFICIENT TO REACH UTILITY COMPANY SECONDARY AND FORM DRIP LOOP.
- TO BE CONNECTED TO CIRCUIT BREAKER CABINET.
- AS REQUIRED OR RECOMMENDED BY LOCAL UTILITY COMPANY.

POWER SUPPLY ASSEMBLY

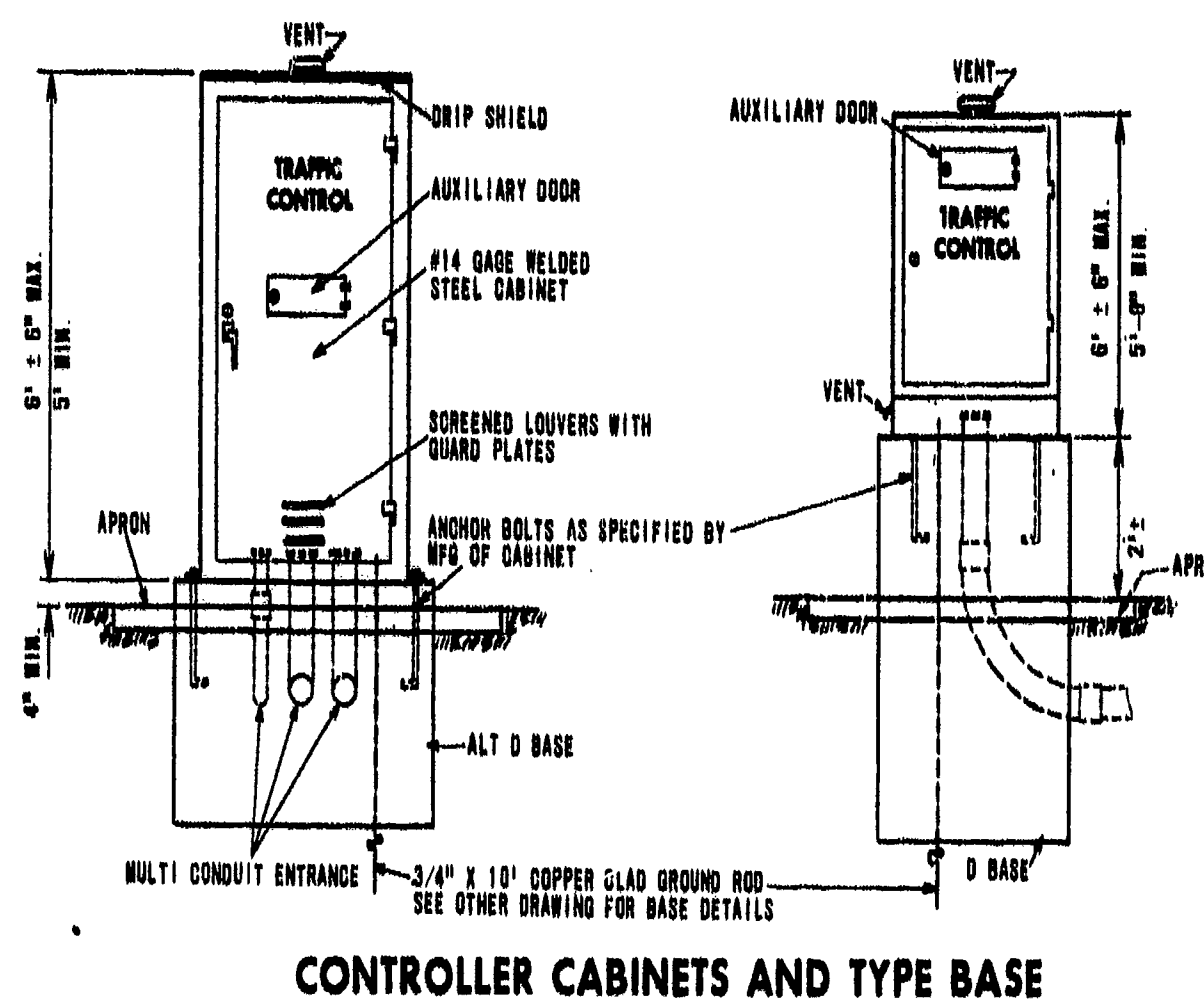
CONVERSION FACTORS (U.S. EQUIVALENTS)			
1/8 in.	3.175 mm	M.P.H.	1.609344 km/h
1 in.	25.4 mm	1 Cu. ft.	0.0283168 m³
1 ft.	0.3048 m	1 Cu. yd.	0.764555 m³
1 yd.	0.9144 m	1 Cu. ft./ft.	0.0283168 m³/m
1 sq. in.	6.4516 cm²	1 Cu. yd./ft.	0.764555 m³/m
1 sq. ft.	0.09290304 m²	1 lb. (mass)	0.453592 kg
1 sq. yd.	0.836127 m²	1 lb./ft. (mass)	1.48816 kg/m
p.s.i. (force)	6.894757 kPa	Ton (mass)	0.907185 Mg
p.s.i. (mass)	703.069 kg/m²	*Exact	

MISSOURI HIGHWAY AND TRANSPORTATION COMMISSION

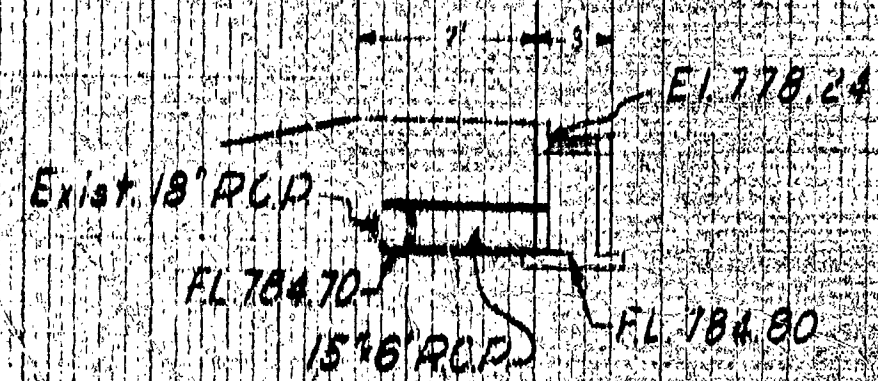
TRAFFIC SIGNALS
PULL BOXES-CONTROLLERS
CONDUIT LOCATION
POWER SUPPLY

REVISED:

DRAWING
902.10C
SHEET 1 of 1



CONTROLLER CABINETS AND TYPE BASE



140+17.5 ~ 32' Lt.
 2'x2' Type D Drop Inlet, D=2'0" x 2'0"
 15'x6" CI III R.C.P.
 CI 3 Exc = 7.5 Cu Yds.
 Note: Work Malls Done On F.A. See CO#1



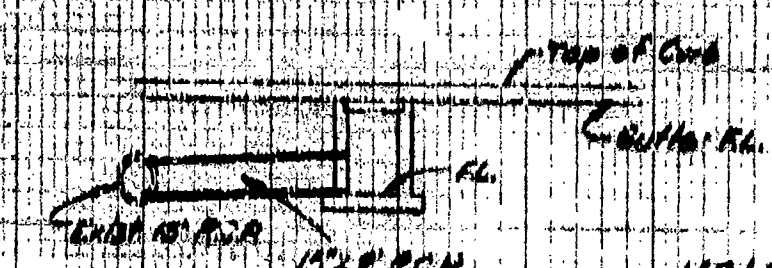
142+82.5 ~ 32' Lt.
 2'x2' Type D Drop Inlet, D=2'0" x 2'0"
 15'x6" CI III R.C.P.
 CI 3 Exc = 7.5 Cu Yds.



142+73.5 ~ 30' Lt.
 2'x2' Type D Drop Inlet, D=2'0" x 2'0"
 15'x6" CI III R.C.P.
 CI 3 Exc = 7 Cu Yds.



143+09 ~ 42' Lt.
 2'x2' Type D Drop Inlet, D=2'0" x 2'0"
 15'x6" CI III R.C.P.
 CI 3 Exc = 7 Cu Yds.



142+16 ~ 30' Lt.
 2'x2' Type D Drop Inlet, D=2'0" x 2'0"
 15'x6" CI III R.C.P.
 CI 3 Exc = 7 Cu Yds.

CUT COMPACTION

Order Record Number	Loc.	Station	Length	Average Width	Depth	Cu. Ft.	Cu. Yd.
2	Rte. 24	137+15 Lt.	70	7.9	1.5	829.5	27.30
		138+15 Lt.					
		138+45 Lt.	105	12.2	1.5	1921.5	71.2
		137+50 Lt.					
		140+10 Lt.	80	10.2	1.5	1224.0	45.3
		140+90 Lt.					
		145+35 Rt.	159	9.5	1.5	2265.75	83.9
		146+94 Rt.					
	Sterling	11+71 Rt.	65	5.55	1.5	541.25	20.0
		12+36 Rt.	19	6.5	1.5	185.25	6.9
		12+55 Rt.					
	S.E. Radius						
	Sterling	15+22.5 Lt.	133.0	13.3	1.0	1779.54	65.9
	Rte. 24	144+91 Rt.					

Order Record Number	Loc.	Station	Length	Average Width	Depth	Cu. Ft.	Cu. Yd.
9	Rte. 24	136+94 Rt.	115	9.0	1.5	1957.5	72.5
		138+39 Rt.					
		138+95 Rt.	70	12.0	1.5	1260.0	46.7
		139+65 Rt.					
		139+80 Rt.	50	10.5	1.5	787.5	29.2
		140+30 Rt.					
		140+75 Rt.	82	15.5	1.5	1906.5	70.6
		141+57 Rt.					
		142+70 Rt.	133	14.0	1.5	2793.0	103.4
	Sterling	16+22 Rt.					

TOTAL 13647 Cu. Yd.
PAY 13650 Cu. Yd.

4	Sterling	13+69 Rt.	208	15.37	1.5	4775.44	177.6
	Rte. 24	142+148 Lt.					
5	Rte. 24	145+00 Lt.	125	11.5	1.5	4031.25	147.3
		146+25 Lt.					
		146+85 Lt.	67	21.5	1.5	2160.75	80.0
		147+32 Lt.					
		147+52 Lt.	68	17.5	1.5	1785.0	66.1
		148+20 Lt.					
7	Sterling	13+77 Lt.	137	19.31	1.0	2645.47	98.0
	Rte. 24	145+00 Lt.					
8	Sterling	11+31 Lt.	105	5.5	1.5	866.25	32.1
		12+26 Lt.	141	7.5	1.5	1586.25	58.8
		13+77 Lt.					
	Rte. 24	147+29 Rt.	23	9.5	1.5	327.75	12.1
		147+52 Rt.	123	6.5	1.5	1199.25	44.4
		148+75 Rt.					

360

MISSOURI HIGHWAY AND TRANSPORTATION COMMISSION STANDARD PLANS

SP-2
MAY 1982

✓ NO.	DESCRIPTION
✓ 203.002	EXCAVATION & EMBANKMENT
203.020	UNDERGRADING
203.10A	TABULATED EARTHWORK & SECTION DATA
203.20A	SUPERELEVATION SPIRALS & WIDENING (UNDIVIDED)
203.21A	SUPERELEVATION SPIRALS & WIDENING (DIVIDED)
203.30A	ENTRANCES & APPROACHES (LESS THAN 400' ADT)
203.31B	ENTRANCES & APPROACHES (GREATER THAN 400' ADT - NO SAFETY ZONE)
203.32D	ENTRANCES & APPROACHES (GREATER THAN 400' ADT - SAFETY ZONE)
203.38A	MAILBOX TURNOUTS
203.40D	TYPICAL DETAILS-RAMPS FOR INTERCHANGES (NO SAFETY ZONE)
203.41D	TYPICAL DETAILS-RAMPS FOR INTERCHANGES (SAFETY ZONE)
203.50J	TYPICAL CROSS-OVERS (DIVIDED HIGHWAYS)
204.00C	EMBANKMENT CONTROL MEASURING DEVICES
602.00G	CONCRETE PAVEMENT APPURTENANCES
602.10C	DOWEL SUPPORTING UNITS
603.00H	CONCRETE APPROACH SLABS TO BRIDGES (ALSO INCLUDE 602.00)
602.00A	RIGHT-OF-WAY & DRAIN MARKERS
604.05	PIPE CULVERT HEADWALLS - TYPE S
606.10A	HEADWALL WITH ENERGY DISSIPATOR - 18"
606.11A	HEADWALL WITH ENERGY DISSIPATOR - 24"
606.12A	HEADWALL WITH ENERGY DISSIPATOR - 30"
606.13A	HEADWALL WITH ENERGY DISSIPATOR - 36"
606.14A	HEADWALL WITH ENERGY DISSIPATOR - 42"
606.15A	HEADWALL WITH ENERGY DISSIPATOR - 48"
604.20A	DROP INLET - TYPE B
604.21A	DROP INLET - TYPE C
604.22A	DROP INLET - TYPE D
604.23A	DROP INLET - TYPE E
604.24A	DROP INLET - TYPE EE
604.25A	DROP INLET - TYPE F
604.26B	DROP INLET - TYPE G
604.27B	DROP INLET - TYPE H (3 SHEETS)
604.28C	DROP INLET - TYPE T (ALSO INCLUDE 614.30)
604.29B	DROP INLET - TYPE X
604.30E	CONCRETE MANHOLES (ALSO INCLUDE 614.30)
604.40D	PIPE COLLARS
606.10A	CLAYS & UNDERDRAINS
606.00P	GUARD RAIL (2 SHEETS)
606.20P	BRIDGE ANCHOR SECTION (BRUSH CURB) (ALSO INCLUDE 606.00)
606.21D	BRIDGE ANCHOR SECTION - CURB TYPE (ALSO INCLUDE 606.00)
606.22C	BRIDGE ANCHOR SECTION (SAFETY BARRIER CURB) (INCLUDE 606.00)
606.30C	TERMINAL ANCHOR SECTION (ALSO INCLUDE 606.00)
606.40A	GUARD CABLE
607.10N	CHAIN LINK FENCE
607.11B	CHAIN LINK FENCE FOR RETAINING WALLS
607.30E	WOVEN WIRE FENCE (ALSO INCLUDE 607.10)

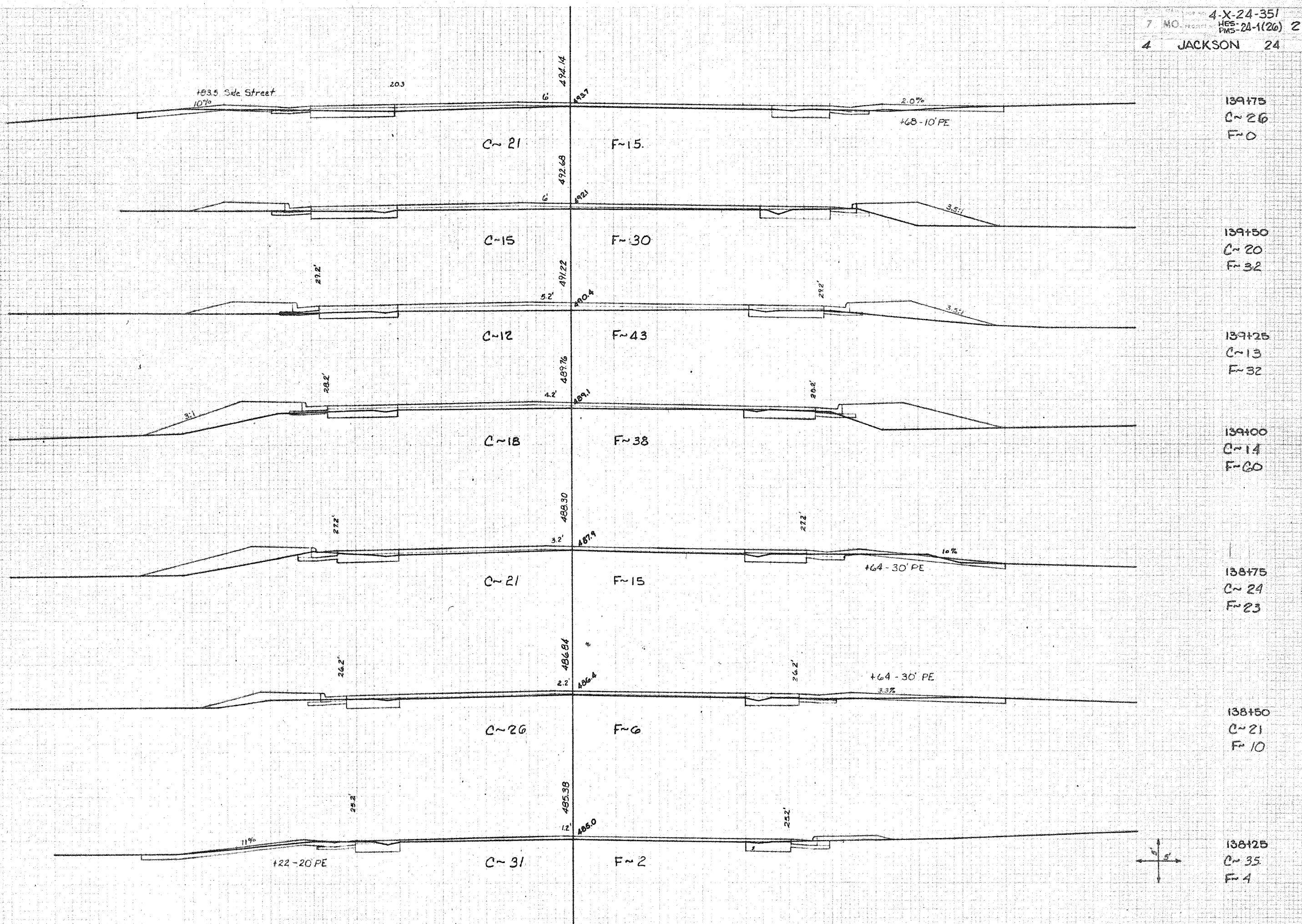
✓ NO.	DESCRIPTION
✓ 608.00B	PAVED APPROACHES
608.10E	CONCRETE SIDEWALK & WHEELCHAIR RAMPS
608.20B	CONCRETE STEPS
✓ 608.00G	CONCRETE CURB - CURB & GUTTER - GUTTER
608.16A	PAVED DITCHES
608.40D	DR. IN BASIN, SHLDR. PAVING & FILL SLOPE AT BR. ENDS
✓ 608.60A	DITCH LINER
608.70C	ROCK LINING FOR CULVERT OUTLETS
610.20D	BRICK MANHOLES (ALSO INCLUDE 614.30)
611.00K	CONCRETE SLOPE PROTECTION
612.10K	BARRICADES AND FLASHER SIGNS
✓ 614.10B	CURB INLETS, GRATES & BEARING PLATES
✓ 614.30C	MANHOLE FRAMES & COVERS
616.00A	OFFICE FOR ENGINEER
✓ 616.10A	TRAFFIC CONTROL DEVICES (2 SHEETS) (ALSO INCLUDE 613.01)
617.00P	CONCRETE MEDIAN BARRIER (3 SHEETS)
702.01E	18" CONCRETE PILES (APPROVED TYPES) (2 SHEETS)
702.02B	CAST-IN-PLACE CONCRETE PILES (APPROVED TYPES)
703.16D	CONCRETE BOX CULVERTS, H16 LOADING (3 SHEETS) (INCL. 706.36)
703.16C	CONCRETE BOX CULVERTS, H16 LOADING (3 SHEETS) (FLARED WINGS) (INCL. 706.36)
703.20D	CONCRETE BOX CULVERTS, H20 LOADING (3 SHEETS) (INCL. 706.36)
703.21C	CONCRETE BOX CULVERTS, H20 LOADING (3 SHEETS) (FLARED WINGS) (INCL. 706.36)
703.24D	CONCRETE BOX CULVERTS, SKEW DATA (703.16, 703.20, 703.30) (INCL. 706.36)
703.26C	CONCRETE BOX CULVERTS, SKEW DATA (703.16 & 703.21) (3 SHEETS) (FLARED WINGS) (INCL. 706.36)
703.30C	CONCRETE BOX CULVERTS, 4' SPANS & LBS. ALL LOADING (INCL. 706.36)
703.36B	CONCRETE BOX CULVERTS, CUTTING DETAILS (STRAIGHT WINGS) (INCL. 706.36)
703.36A	CONCRETE BOX CULVERTS, CUTTING DETAILS (FLARED WINGS) (INCL. 706.36)
703.60D	CONCRETE DOUBLE BOX STRUCTURE - SQUARE (INCL. 706.36)
703.61C	CONCRETE DOUBLE BOX STRUCTURE - SKEWED (INCL. 706.36)
703.62B	CONCRETE DOUBLE BOX STRUCTURE - CUT SECTIONS (INCL. 706.36)
703.63C	DOUBLE BOX STRUCTURE TOP SLAB REINF. H16 LOADING (6 SHEETS)
703.64C	DOUBLE BOX STRUCTURE TOP SLAB REINF. H20 OR H20 LOADING (6 SHEETS)
703.65A	CONCRETE DOUBLE BOX STRUCTURE (FLARED WINGS) SQUARE (INCL. 706.36)
703.66A	CONCRETE DOUBLE BOX STRUCTURE (FLARED WINGS) SKEWED (INCL. 706.36)
703.60C	CONCRETE BOX STRUCTURE - PIPE INLET
706.30D	REINFORCING BAR SUPPORTS
706.36C	BAR SUPPORTS FOR CONCRETE REINFORCEMENT
712.40B	STEEL DAMS FOR BRIDGES (6" CHANNEL)
712.41B	STEEL DAMS FOR BRIDGES (4" CHANNEL)
720.31B	METAL CURTAIN WALL AND METAL INLETS
✓ 720.30B	CULVERT INSTALLATION METHODS
✓ 731.00M	PRECAST MANHOLES (ALSO INCLUDE 614.30)
731.10E	PRECAST DROP INLETS (4 SHEETS) (ALSO INCLUDE 614.30 & 614.10)
722.00Q	FLARED END SECTION (2 SHEETS)
806.00B	EROSION CONTROL NETTING (INSTALLATION) TYPE I
806.02	STAPLE PLACEMENT FOR TYPE III NETTING

FED. ROAD DIVISION	PROJECT	SHEET NO.
7	MO. HES-PMS-24-1 (2G)	20
DIST. NO.	COUNTY	ROUTE
4	JACKSON	24

✓ NO.	DESCRIPTION
HIGHWAY LIGHTING	
901.00J	POLES & APPURTENANCES - 30' (3 SHEETS)
✓ 901.01N	POLES & APPURTENANCES - 40' (3 SHEETS)
✓ 901.08A	CONTROL PANEL CABINET DETAILS (2 SHEETS) (NOTE BELOW)
901.12A	POLE MOUNT, CONT. STA-SECONDARY SERV. 480 V MULTI. CIR. (NOT METERED)
901.16C	POLE MOUNT, CONT. STA-SEC. SERV. 120, 240, & 480 V MULTI. CIR.
901.16B	POLE MOUNT, CONT. STA-SEC. SERV. 480 V MULTI. CIR. (METERED)
✓ 901.16B	POLE MOUNT, CONT. STA-SEC. SERV. 120/240 V MULTI. CIR.
901.19B	POLE MOUNT, CONT. STA-SEC. SERV. 240 V MULTI. CIR. (NOT METERED)
901.20B	POLE MOUNT, CONT. STA-SEC. SERV. 120/240 V MULTI. CIR. (SIG. METERED)
901.22C	POLE MOUNT, CONT. STA-SEC. SERV. 120/240 V MULTI. CIR. (BOTH METERED)
901.22C	POLE MOUNT, CONT. STA-SEC. SERV. 240 V MULTI. CIR. (METERED)
901.24B	POLE MOUNT, CONT. STA-SEC. SERV. 480 V MULTI. CIR. (LT'S & SIGS BOTH METERED)
901.25B	BASE MOUNT, CONT. STA-SEC. SERV. 120-240 V MULTI. CIR.
NOTE: ALSO INCLUDE 901.06 WITH 901.12 THROUGH 901.25 EXCEPT 901.18	
TRAFFIC SIGNALS	
✓ 902.00K	SIGNAL HEADS, LENSES AND MOUNTING
902.10B	PULL BOXES, CONTROLLERS, COND. INSTAL. POWER SUPPLY
902.21	TELEPHONE INTERCONNECT
✓ 902.30B	CONCRETE BARS
✓ 902.40B	TUBULAR STEEL POST
✓ 902.60C	DETECTORS
✓ 902.60C	SPAN WIRE DETAILS
HIGHWAY SIGNING	
903.01C	ALPHABETS (2 SHEETS)
903.02R	HIGHWAY SIGNING (7 SHEETS)
903.03AC	SIGN MOUNTING DETAILS (6 SHEETS)
903.04C	WEIGH STATION SIGNING
903.06B	TUBULAR SPAN SUPPORT - ONE TUBE, TYPE S
903.06B	TUBULAR SPAN SUPPORT - TWO TUBE, TYPE S
903.07B	TUBULAR CANTILEVER SUPPORTS, TYPE C
903.08C	TUBULAR BUTTERFLY SUPPORTS, TYPE B
903.08C	LIGHTING SUPPORT BRACKET
903.10Q	SIGN TRUSSES - OVERHEAD ALUMINUM (8 SHEETS) (INCL. 903.03)
903.12K	SIGN TRUSSES - BUTTERFLY & CANTILEVER - STEEL (7 SHEETS) (INCL. 903.03)
903.60N	SIGN TRUSSES - OVERHEAD STEEL (7 SHEETS) (INCL. 903.03)

NOTES: Plans for this project were developed using Drawings from this index.

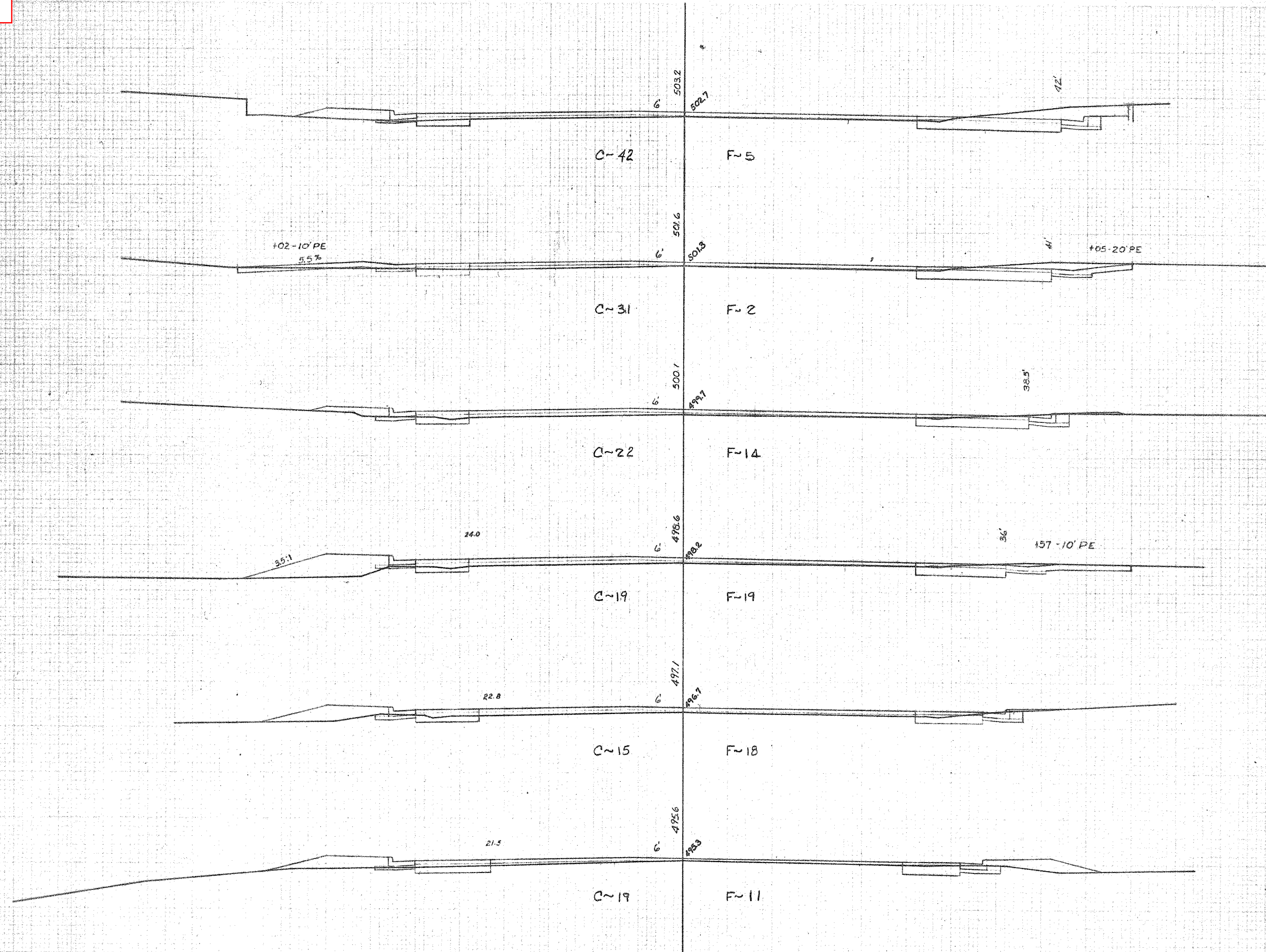
*Revised since December, 1981



4-X-24-351
7 MO. 24-1(26) 3
4 JACKSON 24

FINAL
SURVEY
DATE
BY
REVISIONS

ORIGINAL
DATE
BY
REVISIONS



141425
C-50
F-10

141400
C-41
F-0

140475
C-26
F-5

140450
C-22
F-26

140425
C-18
F-15

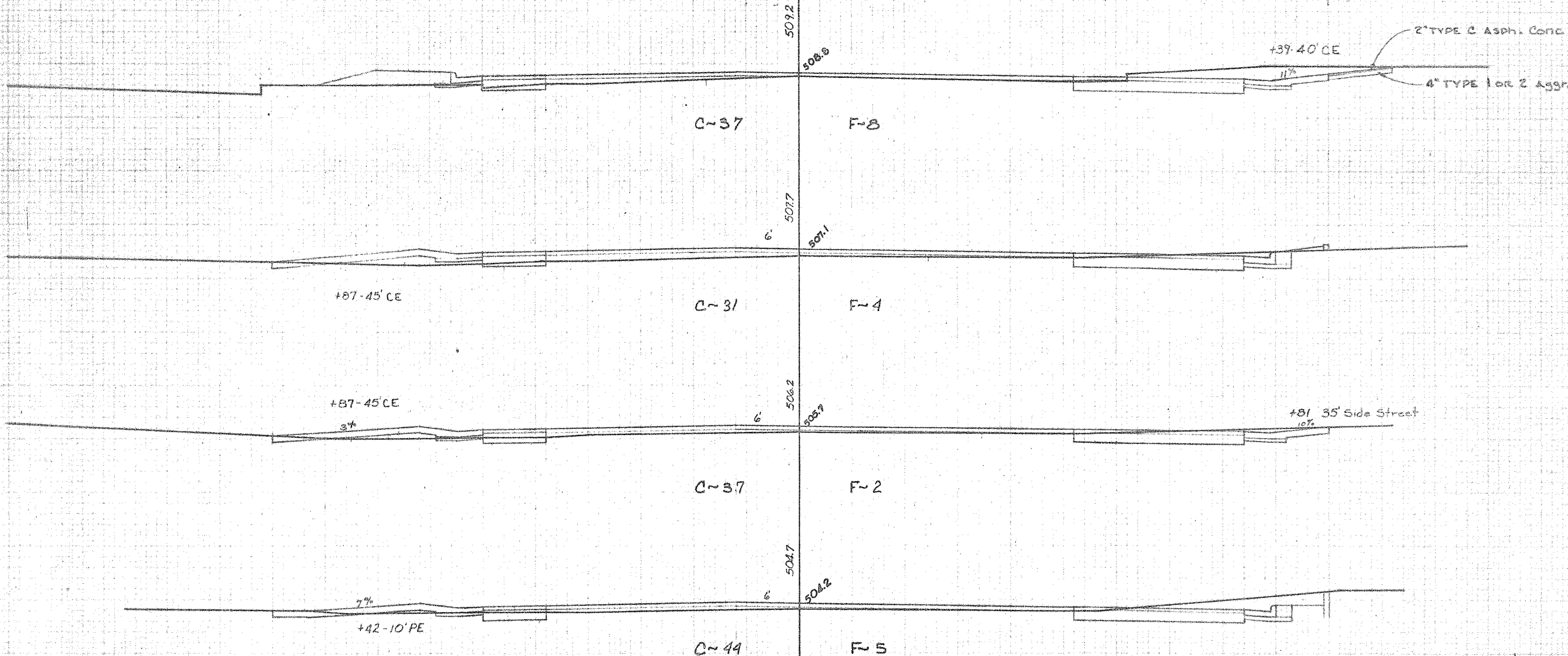
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4-X-24 351
HES-24-1(26) 4
7 MO
4 JACKSON 24

DATE	1971
PROJECT	
DESIGN	
BY	
CHECKED	
DATE	

DATE	
PROJECT	
DESIGN	
BY	
CHECKED	
DATE	



142+25
C~48
F~12

142+00
C~32
F~6

141+75
C~34
F~3

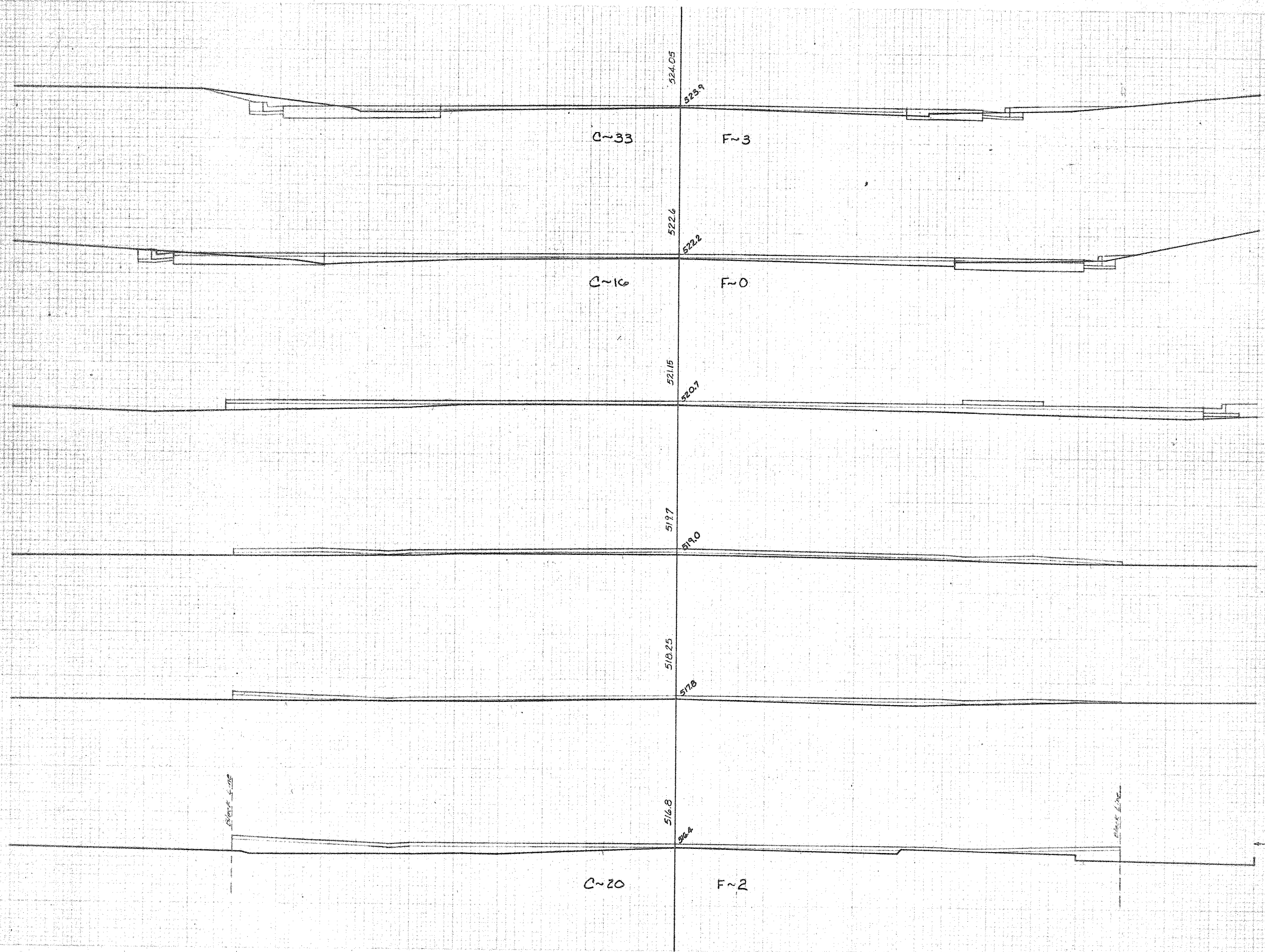
141+50
C~40
F~1



4-X-24-351
7 MO
4 JACKSON 24

FINAL	DATE	BY
DESIGNED	DATE	BY
CHECKED	DATE	BY
APPROVED	DATE	BY

DESIGNED	DATE	BY
CHECKED	DATE	BY
APPROVED	DATE	BY



144+75
C~37
F~5

144+50
C~35
F~1

144+25
C~0
F~0

144+00

143+75

143+50
C~0
F~0



4-X-24-351
7 MO. HES-24-1(26) 7
4 JACKSON 24

ORIGINAL
SURVEY
8-24-2006
BY
DATE
REVISIONS

ORIGINAL
SURVEY
8-24-2006
BY
DATE
REVISIONS



146+25
C~39
F~3

146+00
C~17
F~7

145+75
C~24
F~9

145+50
C~24
F~5

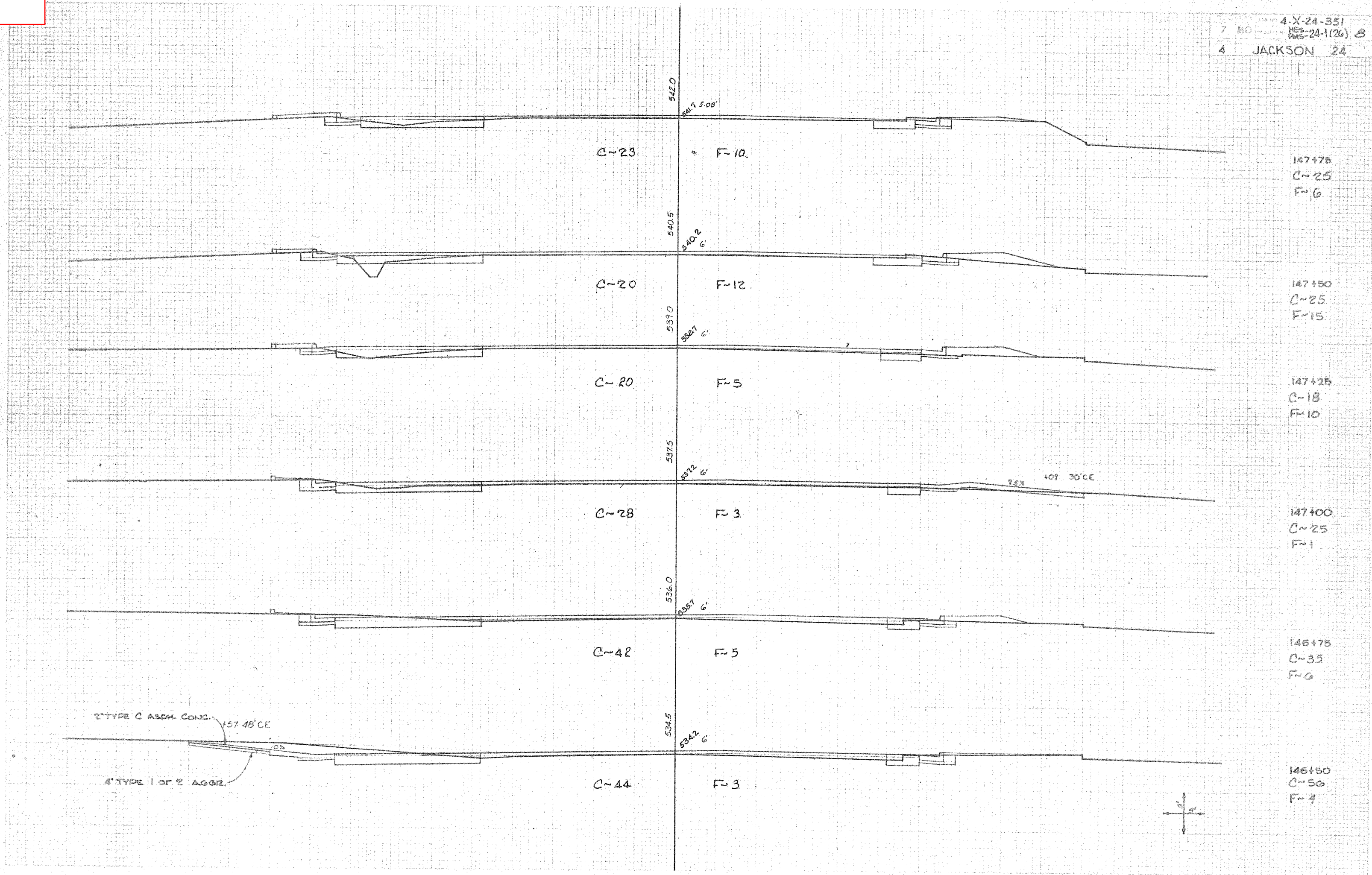
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C~35
F~0

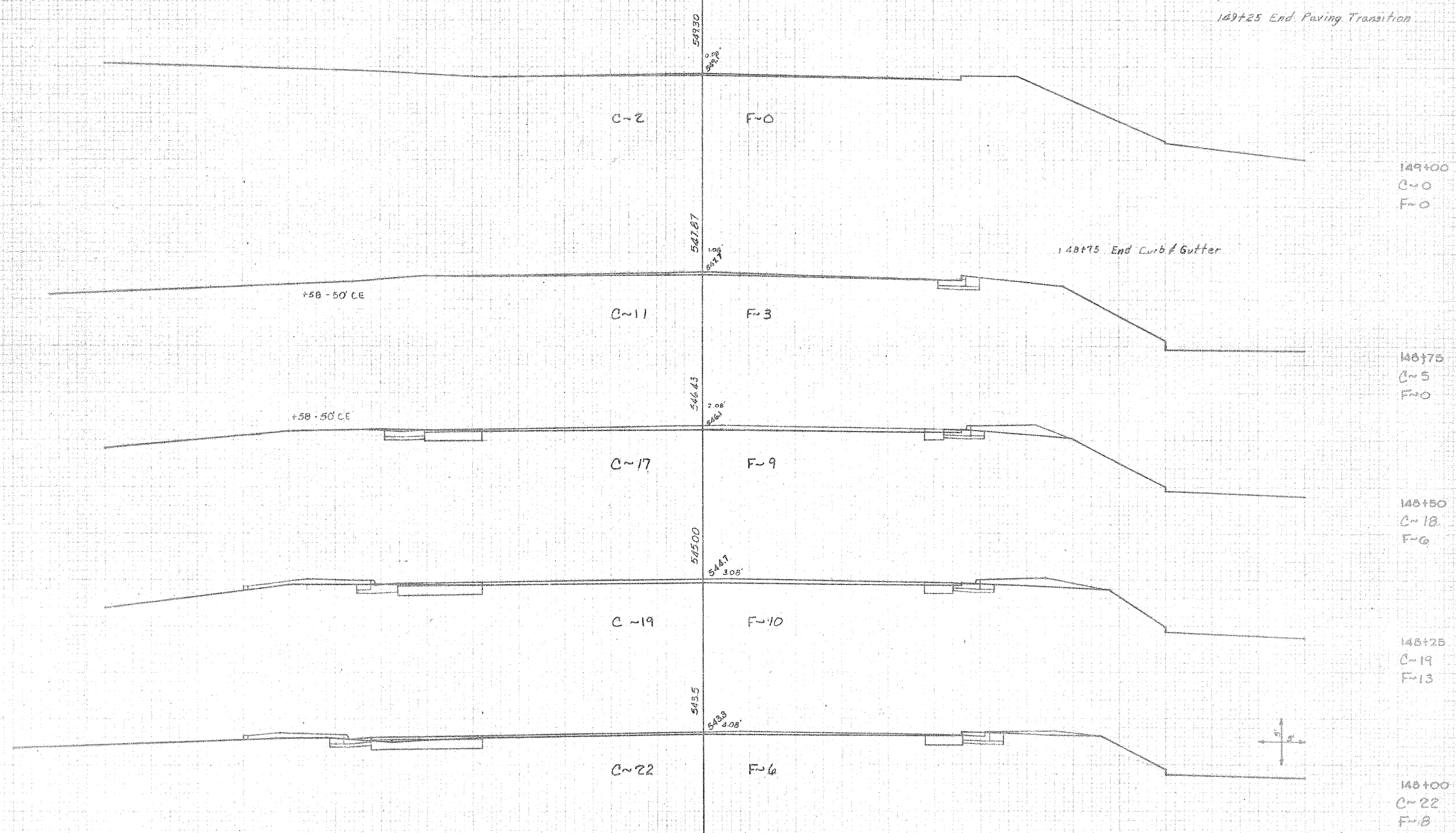
145+00
C~31
F~10

4-X-24-351
7 MO
4 JACKSON 24

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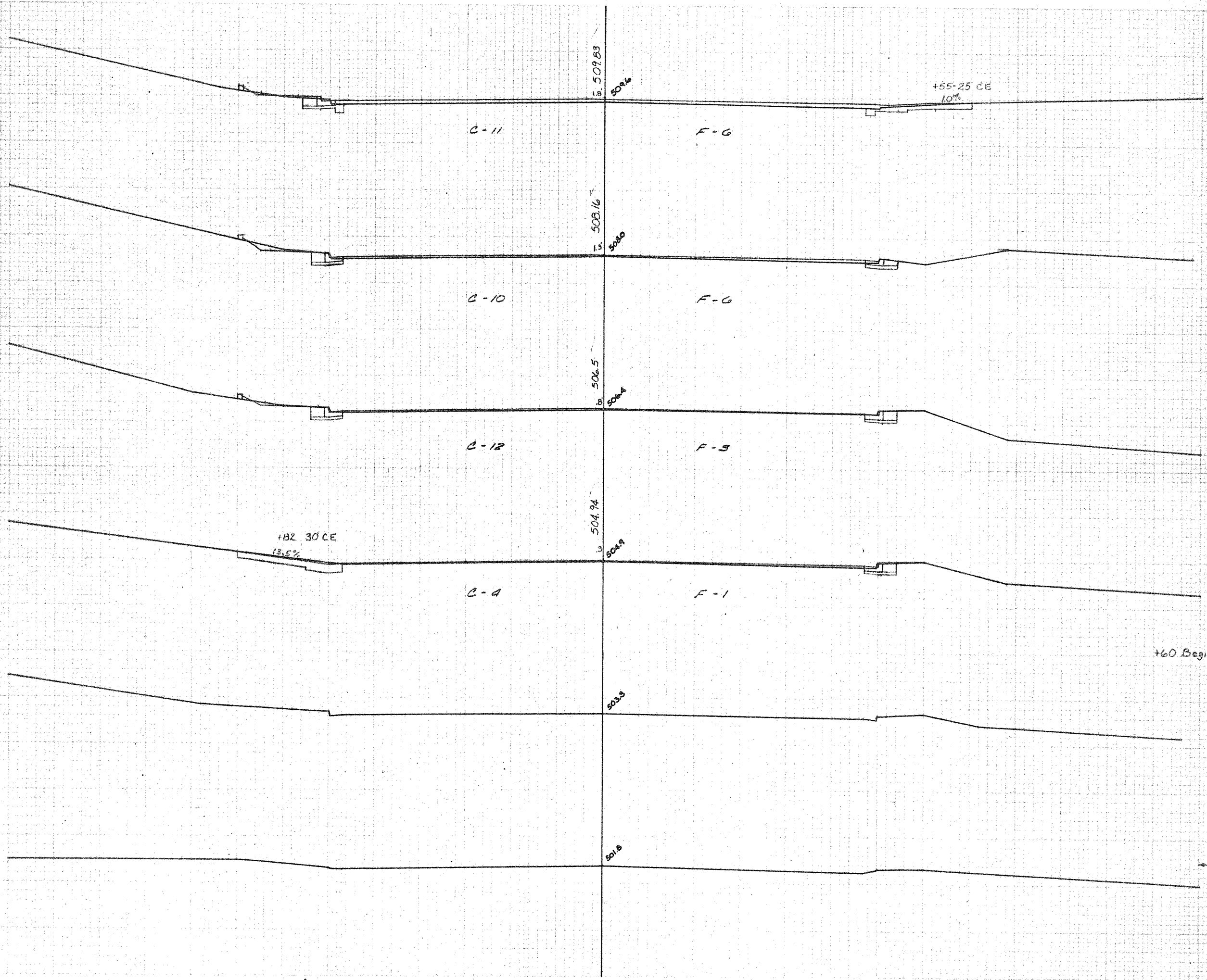
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CONTRACT
PLANS

4-X-24-351
7 MO. 10
4 JACKSON 24



11+50
C-13
F-3

11+25
C-11
F-10

11+00
C-10
F-4

10+75
C-15
F-2

10+60
C-0
F-0

10+50

10+25

+60 Begin Construction

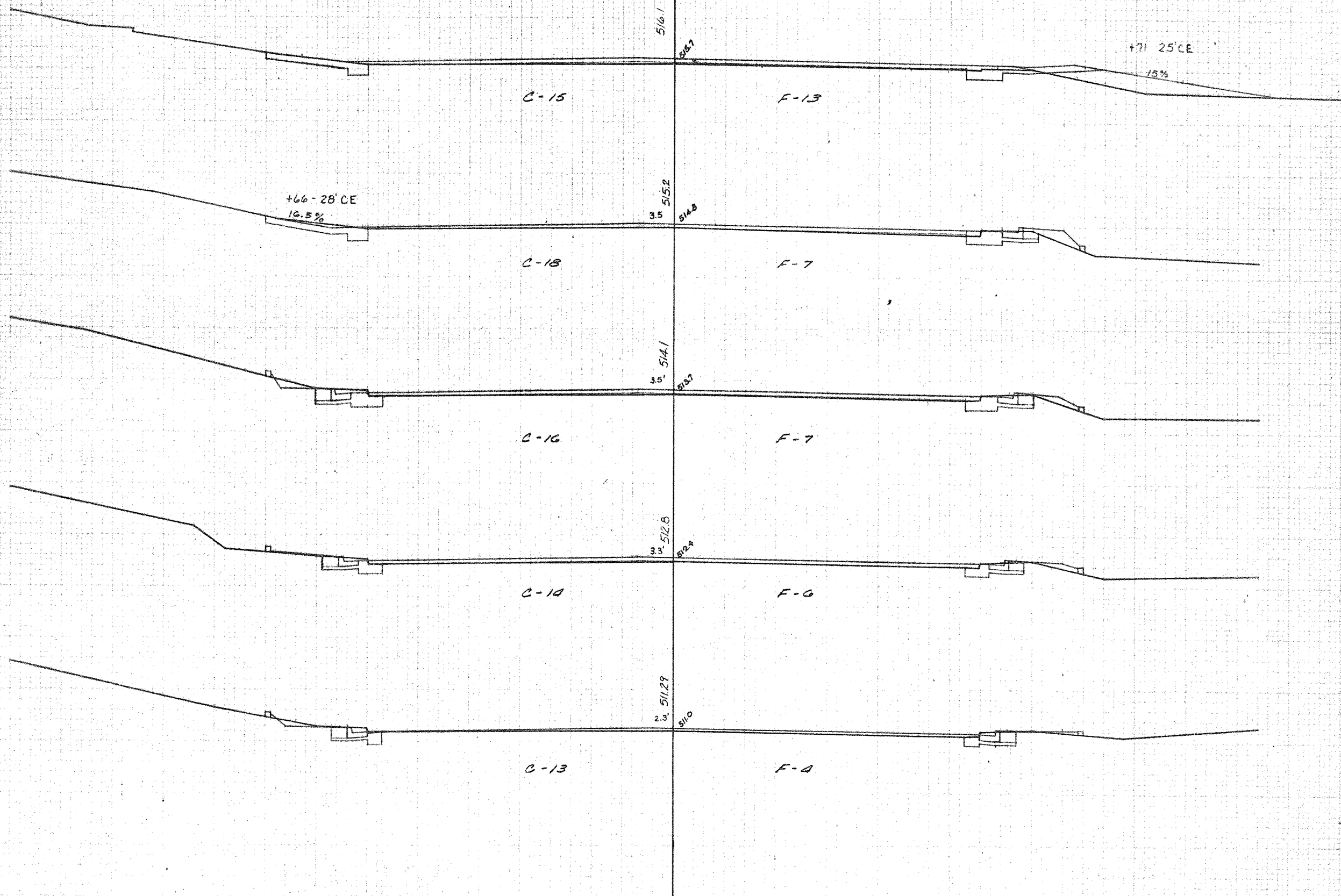


DATE	10/27/83
BY	WJ
CHECKED	WJ
APPROVED	WJ

DATE	10/27/83
BY	WJ
CHECKED	WJ
APPROVED	WJ

DESIGNED BY	DATE
DRAWN BY	DATE
CHECKED BY	DATE
APPROVED BY	DATE
IN CHARGE	DATE
PROJECT NO.	DATE
SCALE	DATE
REVISIONS	DATE

DESIGNED BY	DATE
DRAWN BY	DATE
CHECKED BY	DATE
APPROVED BY	DATE
IN CHARGE	DATE
PROJECT NO.	DATE
SCALE	DATE
REVISIONS	DATE



12+75
C-14
F-23

12+50
C-19
F-5

12+25
C-19
F-10

12+00
C-13
F-6

11+75
C-16
F-6

