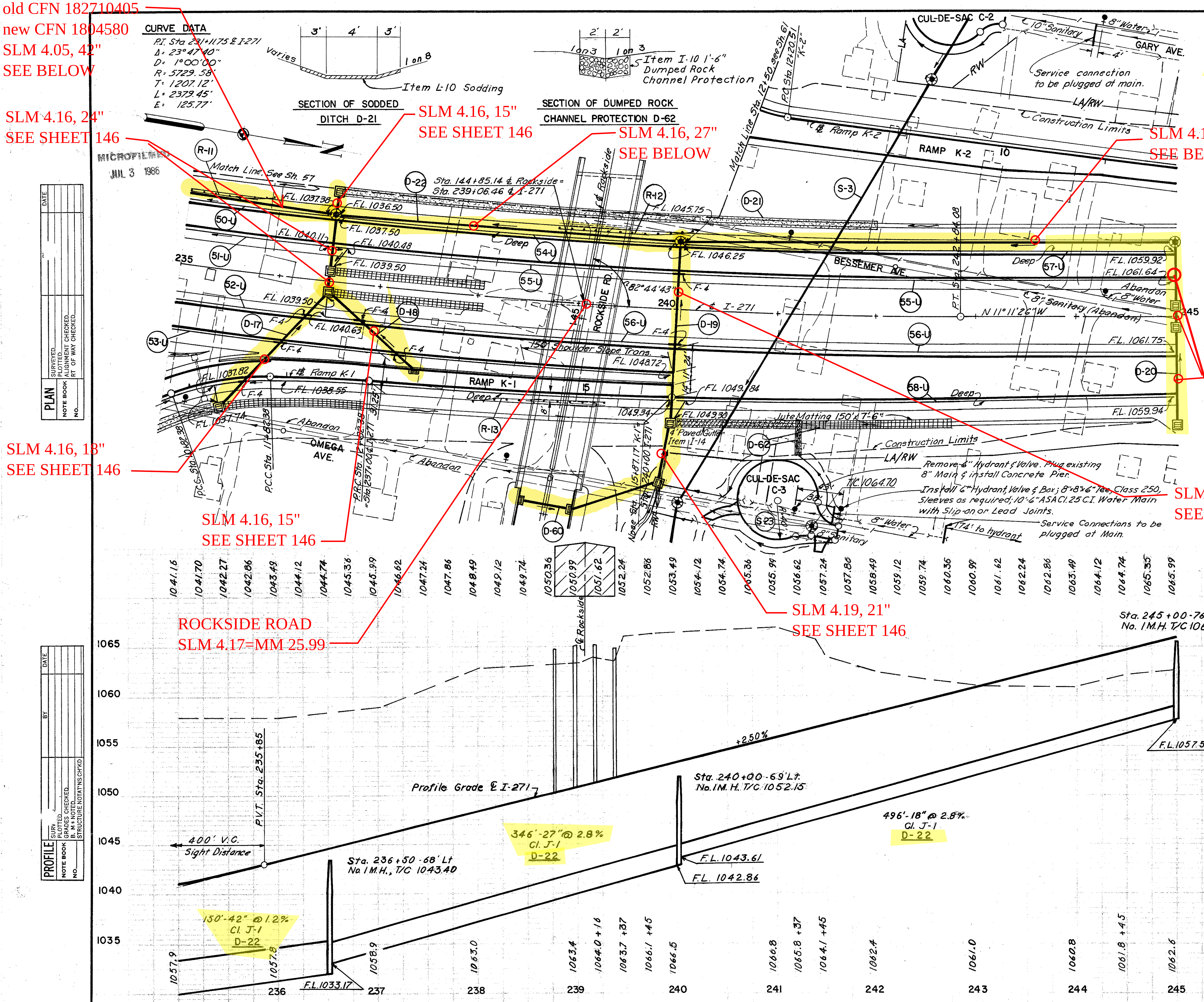

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY CLEVELAND NEW YORK

Note:
See sheet 61 for Water line Relocation detail and quantities.
For storm sewer profile D-20 see sheet 146
For Sanitary Sewer Profile see sheet 152 & 153
For Details and Quantities at Cul-De-Sac. See Sheet 65.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	~~I-IG-80-4(3)181~~	

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CUYAHOGA COUNTY
CUY 14-13.28

PROPOSED STRUCTURE CUY-I-271-0417

TYPE: Continuous welded girder with reinforced concrete deck and substructure
SPANS: 52'-0", 80'-0", 104'-0, 68'-0"
ROADWAY: 54'-0" curb/curb with two 4'-2" sidewalk and 2'-0" raised medians
LOAD FREQUENCY: CF 2000 (57)
SKEW: 7°15'-17"
WEARING SURFACE: 1" Monolithic concrete
APPROACH SLABS: AS-1-54 (25' long)
ALIGNMENT: Tangent

℄ I-271, T & H, 51.74' – N & V in W side of 18" Elm Tree; 31.98' – N & V in W side of 10" Elm Tree; 46.83' – N & V in SW side of 14" Elm Tree

REFERENCE POINT
P.T. Sta. 242+84.08

BENCH MARK 110-B
Lag bolt & washer in NW root of 20" Poplar 40' E of Omega Rd. & 10' S of house #5491, 280' Rt. of Sta. 241+35
Elev. 1066.03

ESTIMATED QUANTITIES—WATERWORK

Item	Description	Unit	Quantity
Special	Service Connections, Plugged at Main	Each	3
Special	Remove 6" Hydrant & Valve, Plug existing 8" Main & Install Concrete Pier	Each	1
Special	6" Fire Hydrant & Valve, Complete with Fittings.	Each	1

GUARD RAIL

Ref No.	Station From	Station To	Side	I-15 Steel Beam Type (Deep) Lin. Ft.
R-11	235+00	235+87	Lt.	87.5
R-12	238+77	240+14	Lt	137.5
R-13	13+87	15+24	Rt.	137.5
	Total			362.5

SANITARY SEWERS

Ref No.	Station From	Station To	Side	I-1	I-1 Class J-1 M6.8(b) 10" Lin. Ft.	I-1 Class J-4 M6.8(a) w/ encase 10" Lin. Ft.	I-8 Std. No.2 M.H. w drop Each	I-8 Std. No.2 M.H. w/o drop Each	Manhole Adjusted to Grade
S-3	240+10	242+54	R & L		450	131	1	1	
S-23	241+37		Rt.						1
	Total				450	131	1	1	1

UNDERDRAINS

Ref. No.	Station From	Station To	Side	I-1 CL. F-4 6" Lin. Ft.	I-1 Class I-3 Shallow 6" Lin. Ft.	I-1 Class I-3 Deep 6" Lin. Ft.	I-5 Class I-3 6"x6"x6" Y Each	I-5 Class I-3 6"-90° Bend Each
50-U	235+00	236+45	Lt.			145		
51-U	235+00	236+45	Lt.		145			
52-U	235+00	236+45	Rt.	10	135			
53-U	235+00	240+00	Rt.	20	480			
54-U	236+50	240+00	Lt.	10		340		
55-U	236+50	245+00	Lt	20	857		1	
56-U	236+50	243+00	Rt.	30	845			1
57-U	240+00	245+00	Lt.	10		490		1
58-U	240+00	245+00	Rt.	10		513	1	
	Total			110	2462	1488	2	2

DRAINAGE

Ref. No.	Profile Sheet No. Ref.	Station From	Station To	Side	I-1 Class E-1 15" Lin. Ft.	I-1 Class J-1 15" Lin. Ft.	I-1 Class E-1 18" Lin. Ft.	I-1 Class J-1 18" Lin. Ft.	I-1 Class F-4 21" Lin. Ft.	I-1 Class E-1 M6.6(b) M6.8(b) 24" Lin. Ft.	I-1 Class J-1 24" Lin. Ft.	I-1 Class J-1 27" Lin. Ft.	I-1 Class J-1 42" Lin. Ft.	I-8 Std. No.2.2A C.B. Each	I-8 Std. No.5 C.B. ★ Each	I-8 Std. No.6 C.B. Each	I-8 Std. No.8 C.B. Each	I-8 Std. No.1 M.H. Each	L-10 Sodding Sq. Yds.	L-120 Jute Matting Sq. Yds.	I-10 Dumped Rock Channel Protection Cu. Yds.	I-14 4' Paved Gutter Lin. Ft.
D-17	146	236+50		L & R	24			157		22	57				2		2			375		
D-18	146	236+50	237+40	Rt.		115										1						
D-19	146	239+90	240+00	L & R					62		182			1	1				40			120
D-20	146	245+00		L & R			22	162							1		2			375		
D-21		236+50	242+00	Lt.															611			
D-22		235+00	245+00	Lt.				496				346	150					3				
D-62		241+25		Rt.																125	6.8	
					24	115	22	815	62	22	239	346	150	1	4	1	4	3	651	875	6.8	120

★ See note on sh. 17

Excavation	84,073	Cu. Yds.
Embankment	2649	Cu. Yds.
Embankment + 18%	3126	Cu. Yds.

STA. 235+00 TO STA. 245+00