

**COMPOSITE PAVEMENT DESIGN**

Current ADT = 14000 T = 7.5% CL II Roadway  
 Proposed ADT = 14000 T = 7.5% Design Year = : 2006  
 $ADT = \frac{14000+14000}{2} = 14000; P = 0.5, S = 0.5, M = 0.5$

FROM FIGURE 37-5B:

$TF = DP \frac{(0.073PV + 53290SU + 237000)}{1,000,000}$

WHERE:

DP = 20; SU = (14000 x 0.07) = 980; MU = 0 (5 ton weight restriction)  
 PV = 5420-108-0 = 5312

$TF = 20 \frac{(0.073+13020) + (53290 \times 980) + (237070 \times 0)}{1,000,000}$

$TF = 20 \frac{950.46 + 52224.20 + 0}{1,000,000} = 10.63$

FROM FIGURE 37-5D:

BASIC SLAB THICKNESS	8.250 IN.
ADJUSTMENT FOR POOR SUBGRADE	-0.250 IN.
SLAB THICKNESS ADJUSTED FOR SUPPORT CONDITIONS	8.00 IN.
ADJUSTMENT FOR TIED CURB AND GUTTER	-0.375 IN.
ADJUSTMENT FOR OVERLOADS	0.000 IN.
FINAL SLAB THICKNESS	7.625 IN.

EXISTING PAVEMENT  
 EXISTING ASPHALT = 3.5"  
 EXISTING CONCRETE BASE 9.0"

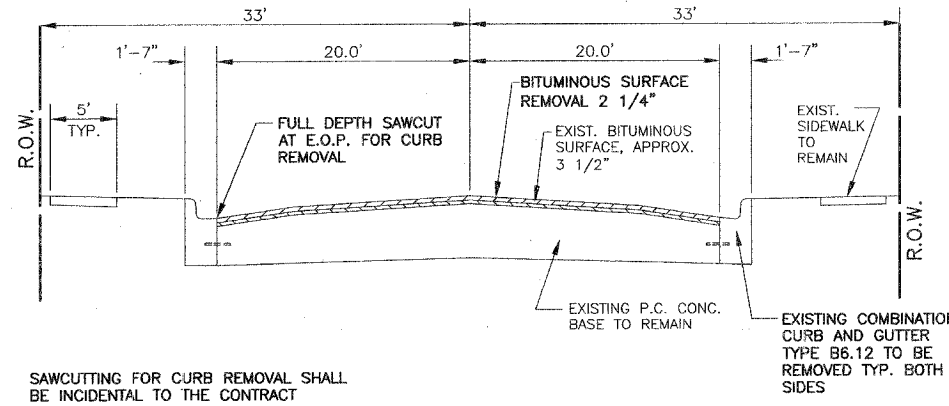
RECOMMEND 2 1/4" BIT SURFACE REMOVAL AND 3/4" LEVELING BINDER & 1 1/2" SURFACE REPLACEMENT

**BITUMINOUS MIXTURE REQUIREMENT**

ITEM	AC TYPE	VOIDS	RAP %
BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIXTURE "D", N70	PG 64-22	4% @ 70 GYR	10
POLYMERIZED LEVELING BINDER (MACHINE METHOD), SUPERPAVE, IL-4.75, N50	SBS/SBR PG 76-28	2.5% @ 50 GYR	0
BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX C, N50	PG 64-22	4% @ 50 GYR	15

THE UNIT WEIGHT USED TO CALCULATE ALL BITUMINOUS SURFACE MIXTURES IS 112 LBS/SQ YD/IN

**TYPICAL CROSS SECTION (16th STREET) EXISTING**



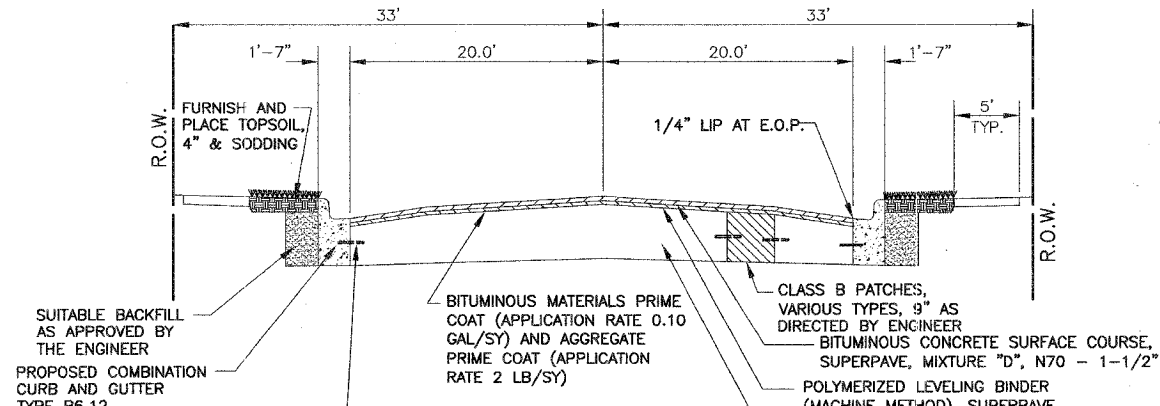
SAWCUTTING FOR CURB REMOVAL SHALL BE INCIDENTAL TO THE CONTRACT

STA. 0+19 TO STA. 28+80  
 STA. 30+80 TO STA. 52+59  
 STA. 54+59 TO STA. 68+47

**TYPICAL CROSS SECTION (16th STREET) PROPOSED**

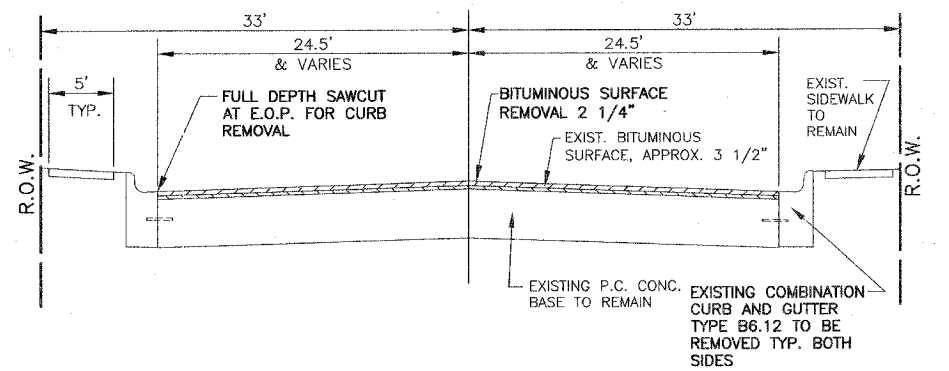
FAU RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1447	03-00159-00-RS	COOK	24	4
F. H. A. REG.	ILLINOIS	PROJECT STPM-8003(581)		

CONTRACT NO. 83835



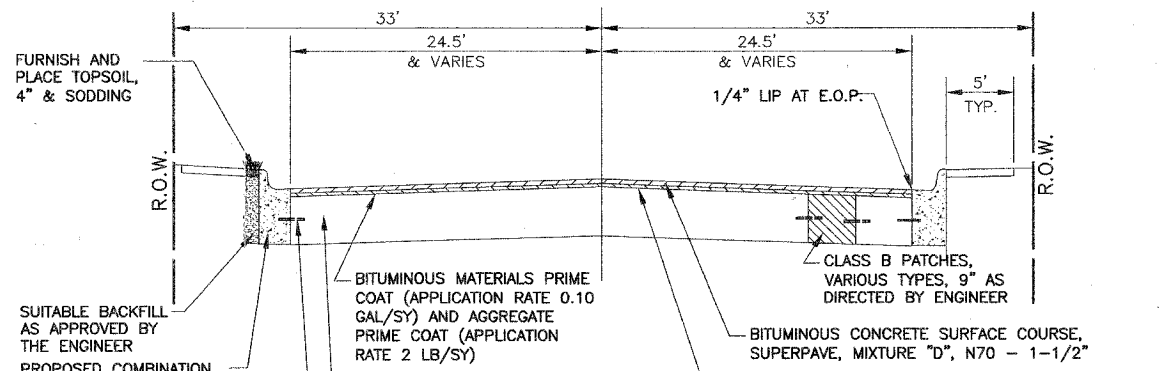
SUITABLE BACKFILL AS APPROVED BY THE ENGINEER  
 PROPOSED COMBINATION CURB AND GUTTER TYPE B6.12  
 PROPOSED 3/4" EPOXY COATED TIE BARS 18" LONG INSTALLED ON 30" CENTERS GROUTED IN PLACE (TYPICAL)

STA. 0+19 TO STA. 28+80  
 STA. 30+80 TO STA. 52+59  
 STA. 54+59 TO STA. 68+47



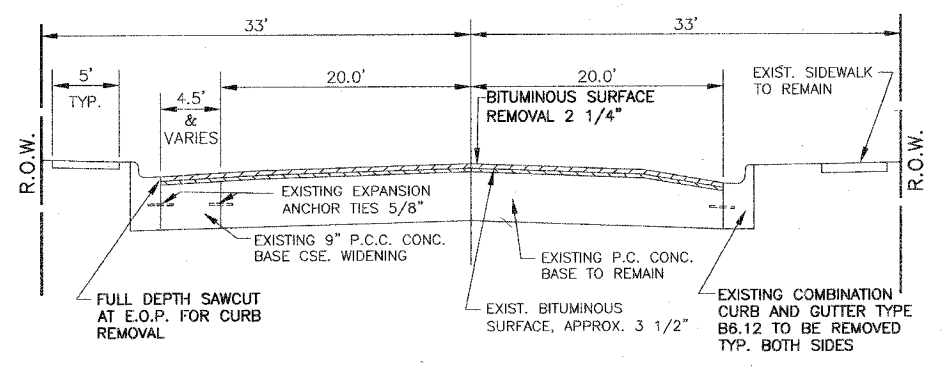
SAWCUTTING FOR CURB REMOVAL SHALL BE INCIDENTAL TO THE CONTRACT

STA. 28+80 TO STA. 30+80



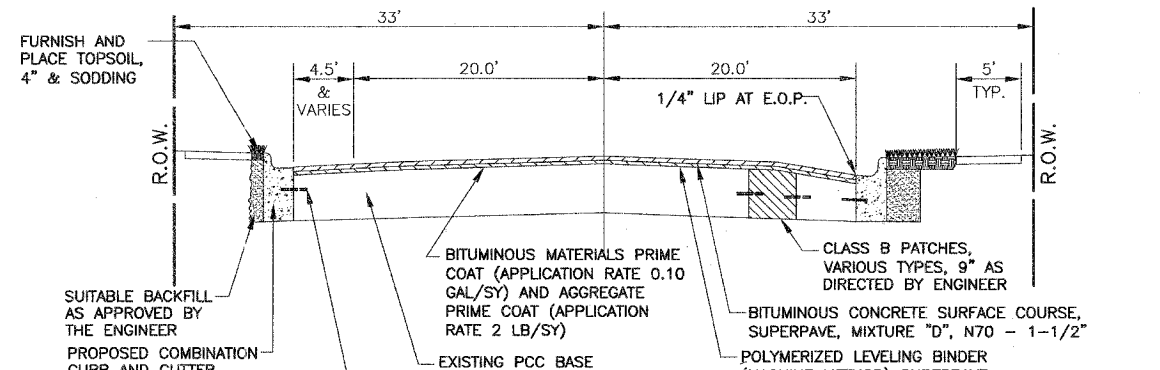
SUITABLE BACKFILL AS APPROVED BY THE ENGINEER  
 PROPOSED COMBINATION CURB AND GUTTER TYPE B6.12  
 PROPOSED 3/4" EPOXY COATED TIE BARS 18" LONG INSTALLED ON 30" CENTERS GROUTED IN PLACE (TYPICAL)

STA. 28+80 TO STA. 30+80



SAWCUTTING FOR CURB REMOVAL SHALL BE INCIDENTAL TO THE CONTRACT

STA. 52+59 TO STA. 54+59



SUITABLE BACKFILL AS APPROVED BY THE ENGINEER  
 PROPOSED COMBINATION CURB AND GUTTER TYPE B6.12  
 PROPOSED 3/4" EPOXY COATED TIE BARS 18" LONG INSTALLED ON 30" CENTERS GROUTED IN PLACE (TYPICAL)

STA. 52+59 TO STA. 54+59

**Frank Novotny & Associates, Inc.**  
 Civil Engineers/Municipal Consultants  
 825 Midway Drive • Willowbrook, IL • 60527 • Telephone: (630) 887-8640 • Fax: (630) 887-0132  
 Illinois Professional Design Firm No. 184-000928

PROJECT  
**CITY OF BERWYN, ILLINOIS**  
**16TH STREET RESURFACING**  
**SECTION NO. 03-000159-00-RS**

**REVISIONS**

NO.	BY	DATE	DESCRIPTION
1	THK	11/30/05	PER IDOT DIST. 1 B.L.R. COMMENTS
2	THK	12/14/05	PER IDOT DIST. 1 B.L.R. COMMENTS
3	THK	12/16/05	PER IDOT DIST. 1 B.L.R. COMMENTS

**COMPOSITE PAV'T DESIGN**  
**BIT. MIXTURE REQUIREMENT**  
**TYPICAL CROSS SECTION**

PROJECT NO. 02260	SCALE NONE	SHEET 4
DRAWN/DESIGNED JEP-RAW/THK	DATE OCT., 2005	OF 24
CHECKED/APPROVED JEF	FIELD BOOK NO. FILE	SHEETS

M:\Berwyn\2002\02260 - 16th St - L.A.P.P\02260\_SHE\_04\_TYPICAL CROSS SECTIONS.dwg 12/20/2005 10:35:19 AM