

CAPACITY DESIGN STUDY				
2 PHASE	AREA NON CBD	PEAK HOUR FACTOR	0.95	
60 SEC CYCLE	AVERAGE INTERSECTION DELAY	A.M. 6.8 SEC	INTERSECTION LEVEL	
SIGNAL TYPE ACTUATED	PROGRAM USED HCMCINEMA 5.05	P.M. 9.1 SEC	OF SERVICE	
APPROACH	A (SOUTH BOUND)	B (WEST BOUND)	C (NORTH BOUND)	D (EAST BOUND)
BUS STOP CONDITION	-	-	-	-
PARKING MANUEVER/HR.	NONE	-	-	-
PEDESTRIANS	NONE	-	-	-
ARRIVAL TYPE	3	3	3	3
LANE UTILIZATION FACTOR	1.0	0.95	1.0	0.95
BASE SATURATION FLOW	1900	1900	1900	1900
D - DISTANCE	79	168	57	216
LANE GROUP	LTR	LTR	LTR	LTR
LANE WIDTHS	12	2@10	11	2@10
GREEN TIME (SECONDS)	A.M. 14.0	38.0	14.0	38.0
	P.M. 14.0	38.0	14.0	38.0
G/C RATIO	A.M. 0.233	0.633	0.233	0.633
	P.M. 0.233	0.633	0.233	0.633
LANE GROUP DELAY (SECONDS)	A.M. 18.4	6.7	17.9	5.1
	P.M. 19.3	5.4	18.8	9.4
V/C RATIO	A.M. 0.147	0.572	0.058	0.313
	P.M. 0.296	0.379	0.208	0.751
LEVEL OF SERVICE	A.M. B	A	B	A
	P.M. B	A	B	A
2025 30TH MAX HOUR TRAFFIC	A.M. 63	1075	25	582
	P.M. 121	700	88	1384
2005 8TH MAX HOURLY TRAFFIC	A.M. 29	492	11	266
	P.M. 56	321	40	634

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 7989	*	SANGAMON	7	3
STA.		TO	STA.	
		ILLINOIS	PROJECT	

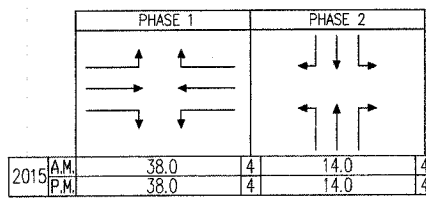
\* 04-00441-00-TL 98419

**ELEMENTS CONTROLLING DESIGN**

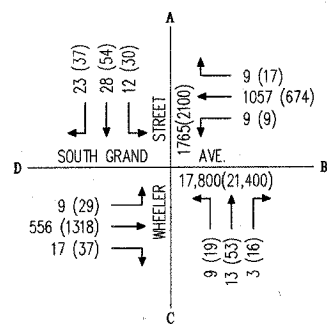
- DESIGN DESIGNATION FAU RTE 7989 (SOUTH GRAND AVE.) MINOR ARTERIAL 17,800(21,400) 30MPH WITH WHEELER AVE URBAN COLLECTOR 1765(2100) 30MPH
- FAU RTE 7989 (SOUTH GRAND AVE.) IS THE PREFERENCE ROUTE
- ANTICIPATED YEAR OF CONSTRUCTION 2005
- TRAFFIC CONTROL TO BE SIGNALS INSTALLED UNDER WARRANT #3
- THIS INTERSECTION LISTED AS A "HIGH ACCIDENT LOCATION" IN 2002
- THE INTERSECTION IS LOCATED IN A RESIDENTIAL AREA. THE EXISTING RADIUS ACCOMMODATE AN SJU 30 DESIGN VEHICLE. THERE ARE SCHOOL BUS MOVEMENTS FROM THE NORTH AND SOUTH LEGS TO THE WEST LEG. THE INTERSECTION ACCOMMODATES THESE MOVEMENTS WITHOUT ENCROACHMENTS.

**GENERAL NOTES**

- PROFILES ARE NOT PROVIDED, SINCE APPROACH GRADES ARE LESS THAN 1%
- TYPE B-6.18 CURB AND GUTTER TO BE USED ON OUTER EDGES OF PAVEMENT
- TYPE NA CURB AND GUTTER TO BE USED ON CHANNEL ISLAND
- ALL DIMENSIONS ARE SHOWN E-F OF PAVEMENT UNLESS OTHERWISE NOTED
- NEW HANDICAPPED RAMES TO BE INSTALLED TO A.D.A. GUIDELINES

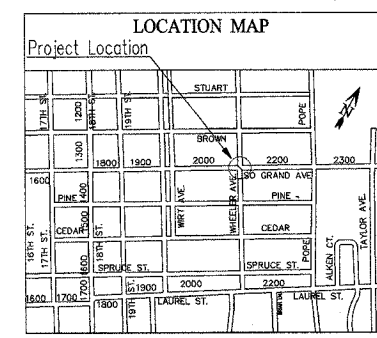
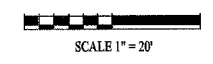
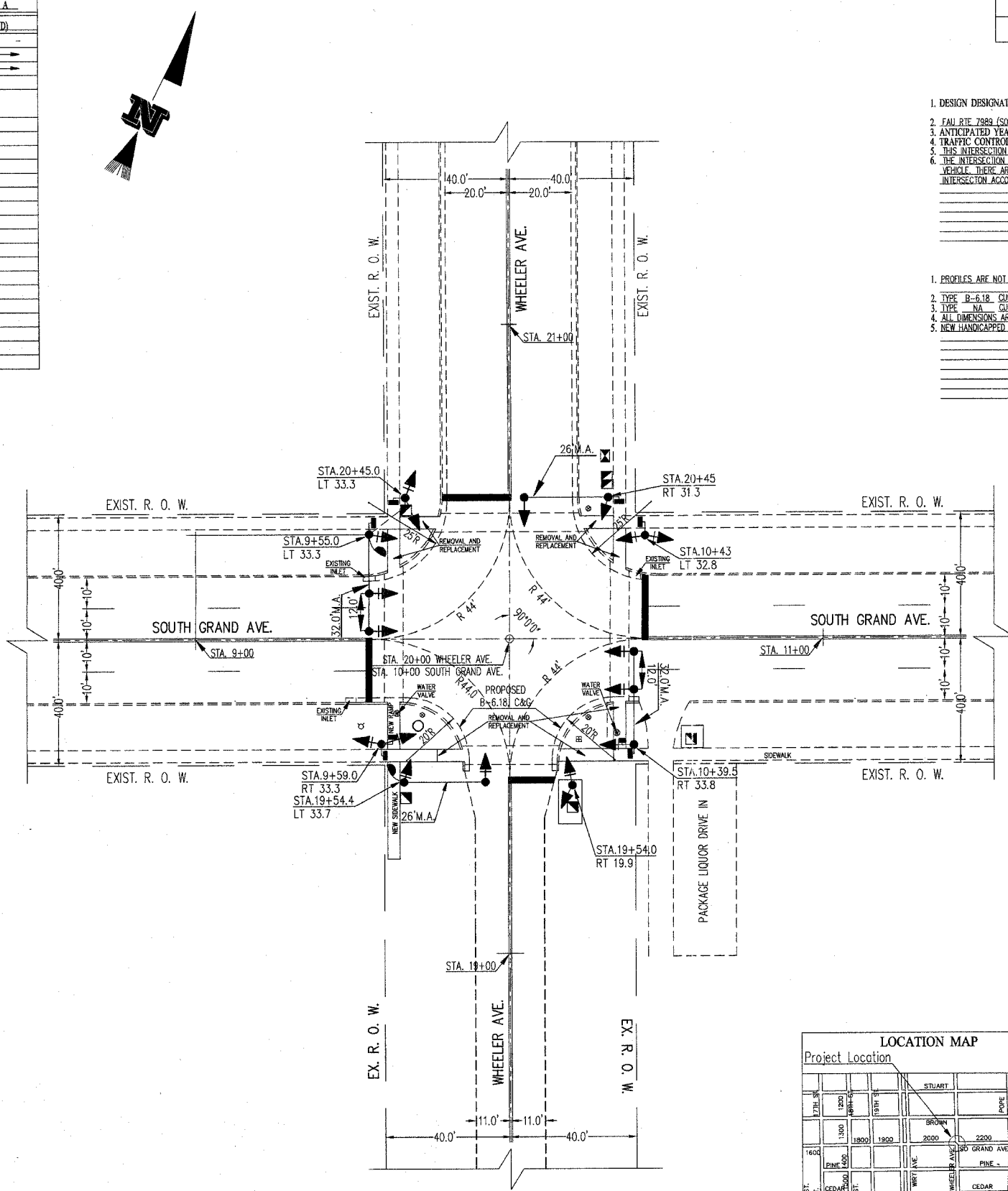


PHASING DIAGRAM



2025 DHV AM. (PM.) ADT'S 2005 (2025)

MOVEMENT	YEAR 2005 30TH MAXIMUM HOUR TRAFFIC		PERCENT TRUCK TRAFFIC MAX HOUR	ESTIMATED PERCENT INCREASE BY	YEAR 2015 30TH MAXIMUM HOUR TRAFFIC		ESTIMATED PERCENT INCREASE BY	YEAR 2025 30TH MAXIMUM HOUR TRAFFIC	
	A.M.	P.M.			A.M.	P.M.		A.M.	P.M.
A B	10	25	2		11	28		12	30
A D	19	31	2		21	34		23	37
A C	23	45	2		25	50		28	54
B A	7	14	2		8	15		9	17
B C	7	7	2		8	8		9	9
B D	881	562	2		969	618		1057	674
C D	2	13	2		2	14		3	16
C A	11	44	2		12	48		13	53
C B	7	16	2		8	18		9	19
D C	7	24	2		8	26		9	29
D B	463	1098	2		509	1208		556	1318
D A	14	31	2		15	34		17	37
TOTAL A	84	190			92	209		101	228
TOTAL B	1375	1722			1513	1894		1650	2066
TOTAL C	58	149			64	164		70	179
TOTAL D	1385	1757			1524	1933		1662	2108



**INTERSECTION DESIGN STUDY**

FAU ROUTE 7989 (SOUTH GRAND AVE.) WITH ROUTE (WHEELER AVE.)

SEC. NO. 04-00441-00-TL PROJ. NO. \_\_\_\_\_  
 SCALE 1:20 COUNTY SANGAMON  
 SN: \_\_\_\_\_ REV. NO. \_\_\_\_\_

DESIGNED BY J.FRY DATE 05-16-05

SATISFACTORY \_\_\_\_\_ CITY ENGINEER DATE \_\_\_\_\_  
 SATISFACTORY \_\_\_\_\_ CIVIL ENGINEER DATE \_\_\_\_\_  
 SATISFACTORY \_\_\_\_\_ TRAFFIC ENGINEER DATE \_\_\_\_\_  
 SATISFACTORY \_\_\_\_\_ TRAFFIC PROGRAM DEVELOPMENT ENGINEER DATE \_\_\_\_\_  
 SATISFACTORY \_\_\_\_\_ TRAFFIC OPERATIONS ENGINEER DATE \_\_\_\_\_  
 APPROVED \_\_\_\_\_ PROJECT ENGINEER DATE \_\_\_\_\_

\* DEN SPEC \*  
 \*\* DATE TIME \*  
 \*\*\* REF. \*\*\*