

US BUS. RTE.20
CORRIDOR ACCESS PLAN
ROCKFORD TO BELVIDERE
OCTOBER 1996

PREPARED BY THE
ILLINOIS DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
DISTRICT 2

PRESENTED TO RATS 10-23-97

PROPOSED ACCESS PLAN
US BUS. RTE. 20
FROM
LYFORD ROAD TO HIGH LINE STREET

The Illinois Department of Transportation has prepared the attached corridor access plan for FA 517 (US Business Route 20) from Lyford Road, Station 260+87 in the City of Rockford to High Line Street Station 211+00 in the City of Belvidere. The corridor extends from the east edge of Rockford to the west edge of Belvidere through Winnebago and Boone Counties.

The intent of the access plan is to develop orderly spacing of future intersections in conjunction with existing intersections along this route due to the evident potential for residential and commercial development throughout this corridor.

The need for the plan is to preserve the function of US Bus. Rte. 20 to move traffic through this corridor and provide safe and efficient ingress and egress to abutting development. The spacing will provide sufficient distance between intersections to develop auxiliary left and right turn lanes at the intersections that meet comfortable deceleration length and provide adequate spacing for future progression of traffic through the ultimate signalized intersections.

EXISTING CORRIDOR:

The existing corridor has predominately residential and commercial development from Lyford Road to Shaw Road. These developments include an existing quarry operation , Rockford area campus for Northern Illinois University , and some agricultural land. The existing section from Shaw Road to Belvidere is predominantly rural/agricultural with several residential subdivisions and some spot commercial developments.

The existing corridor was studied by the Illinois Department of Transportation in the mid 1980's. An approved Design Report was developed in 1986 (See FIGURE A)

The 1986 Design Report developed a corridor from Lyford Road in Rockford to High Line Street in Belvidere that provided for a five lane section. The five lane section is comprised of two 12 foot lanes westbound , a 14 foot flush median and two 12 foot lanes eastbound. The proposed design speed for the corridor is 45 mph (See FIGURE B).

Phase I of the 1986 Design Report which constructed the five lane section from Lyford Road to Shaw Road has been completed to date.

Phase II of the 1986 Design Report was to construct the five lane section from High Line Street in Belvidere westbound through Town Hall Road has not been completed at this time nor has Phase III of the project which was to complete the five lane section from Shaw Road to Town Hall Road.

EXISTING CORRIDOR (Cont.'d):

Currently the existing US Bus. Rte. 20 corridor is a two lane rural highway from Shaw Road to Belvidere.

NEED FOR ACCESS MANAGEMENT:

The 1986 Design Report did not address additional access points in conjunction with the current intersecting roadway systems. Access control of this corridor was not established therefore adoption of this access plan is imperative to preserve the integrity of traffic flow through this corridor. Without a plan in place development will access US Bus. Rte. 20 randomly with access points conflicting with traffic flow on US Bus. Rte. 20 resulting in substandard spacing for development of auxiliary turn lanes and signal spacing. The result will cause traffic flow on US Bus. Rte. 20 and traffic wishing to ingress and egress any proposed development to be impeded yielding long delays, congestion and greater potential for accidents.

The current spacing of existing roadways intersecting US Bus. Rte. 20 is as follows:

Lyford Road to University Drive	= 0.53 mile
University Drive to Shaw Road	= 0.82 mile
Shaw Road to Olson Road	= 0.75 mile
Olson Road to Distillery Road	= 0.51 mile
Distillery Road to Beaver Valley Road	= 0.50 mile
Beaver Valley Road to Anderson Drive	= 0.33 mile
Anderson Drive to Town Hall Road	= 0.68 mile
Town Hall Road to High Line Street	= 0.88 mile

These spacings are typical of a rural highway ;however, the Department recognizes the potential for continued development along this corridor and the change in nature from a rural agricultural area to an urbanized area with residential and commercial development. With this change in demographics the spacing of intersections greater than 3/4 mile often does not provide adequate access to an urbanized corridor with commercial and residential development, hence the need for an access plan.

PROPOSED ACCESS PLAN:

The proposed access plan provides access spacing between 1/4 mile and 1/2 mile for full intersections. This plan was developed maintaining the seven existing north/south roadway intersections between Lyford Road and High Line Street. The plan adds eight new full access points between Lyford Road and High Line Street. (See Figure C). The location of the new access points is dependent upon the proximity to existing roadways,geographical constraints such as stream locations and available sight distance for a 45 mph design speed.

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Following is a list of existing and proposed access points.

Existing Intersections

Lyford Road Sta. 260+87
University Drive Sta. 289+20
Shaw Road Sta. 17+40
Olson Road Sta. 57+02
Distillery Road Sta. 84+05
Beaver Valley Road Sta. 110+80
Anderson Drive Sta. 128+45
Town Hall Road Sta. 164+25
High Line Street Sta. 211+00

Proposed Intersections

Kerasotes Access Sta. 274+49
Northern Avenue Sta. 306+80
Quarry Access Sta. 6+51
Full Access Sta. 35+00
Full Access Sta. 97+25
Full Access Sta. 146+30
Full Access Sta. 178+75
Full Access Sta. 198+40

The proposed access plan tentatively shows one example right in/right out intersection at Station 48+20. The right in/right out type intersection as shown in FIGURE D would only be considered if an 18 foot or 22 foot wide raised concrete median were to be provided. As previously mentioned, the original 1986 Design Report was developed utilizing a 14 foot wide flush median. Depending upon the number and type of developments, a raised median may be investigated in the future prior to constructing the five lane section from Shaw Road to High Line Street. If a raised median were constructed, right in/ right out access points may be considered at 1/8 mile points as currently exists along US Bus. Rte. 20 (East State Street) in Rockford from Mulford Road to Lyford Road.

It must be stressed that right in./right out intersections will only be considered if a raised median is constructed. This type of intersection can easily be misused with a flush type median and operational problems can result.

The decision to construct a raised median will depend upon funding and right of way available at the time the project is included in the annual program.

FIGURE E and FIGURE F show conceptual full access intersection designs for this corridor.

DEVELOPMENTS PRIOR TO CONSTRUCTION OF THE FIVE LANE SECTION:

Once this access plan is adopted by the Department and the local metropolitan planning organizations, access to US Bus. Rte. 20 would be allowed at the proposed locations with the following stipulations.

- 1) Auxiliary left and right turn lanes would be constructed (See FIGURE G).
- 2)Intersection sight distance must be adequate at the new access location based upon

the current 55mph posted speed limit for the two lane roadway. NOTE: The access points shown are based upon the eventual 45 mph design speed and ultimate 45 mph posted speed.

- 3) A proposed site plan , projected traffic and a plat will be required for review by the Department prior to the issuance of a permit.
- 4) Based upon review of traffic ,access into a site will be based upon the need for auxiliary lanes on the access road itself. A minimum setback of 300 feet along both full access and right in/ right out intersections will be required prior to the first cross-road access connection to the stem north or south of US Bus. Rte. 20.
- 5)Full participation by the developer will be required for signalization of the intersection should warrants be met within 5 years of construction.
- 6) All intersections shall intersect US Bus. Rte. 20 at 90 Degrees wherever possible with no angle of intersection less than 75 Degrees.

SUMMARY:

The Department has prepared this access plan to ensure orderly and efficient flow of traffic operations along this corridor taking into account the rapid commercial and residential growth in both Winnebago and Boone Counties. The plan ,once adopted by IDOT and the Local agencies will provide guidance for developers and local planners to ensure that US Bus. Rte. 20 remains a safe and effective artery between Rockford and Belvidere providing for growth in Winnebago and Boone Counties.

Any correspondence should be directed to:

Mr. William D. Ost
District Engineer
Illinois Department of Transportation
Division of Highways -District 2
819 Depot Ave.
Dixon, Illinois 61021

LIST OF FIGURES

FIGURE A	LOCATION MAP
FIGURE B	TYPICAL SECTION
FIGURE C	ACCESS PLAN LAYOUT
FIGURE D	RIGHT IN/RIGHT OUT LAYOUT
FIGURE E	CONCEPTUAL INTERSECTION (FLUSH MEDIAN)
FIGURE F	CONCEPTUAL INTERSECTION (RAISED MEDIAN)
FIGURE G	INTERIM INTERSECTION
FIGURE H	EXISTING TRAFFIC DATA
FIGURE I	CURRENTLY PROPOSED MAJOR DEVELOPMENTS
FIGURE J	RIGHT OF WAY PLATS

LOCATION MAP

LOCATION OF CORRIDOR ACCESS PLAN

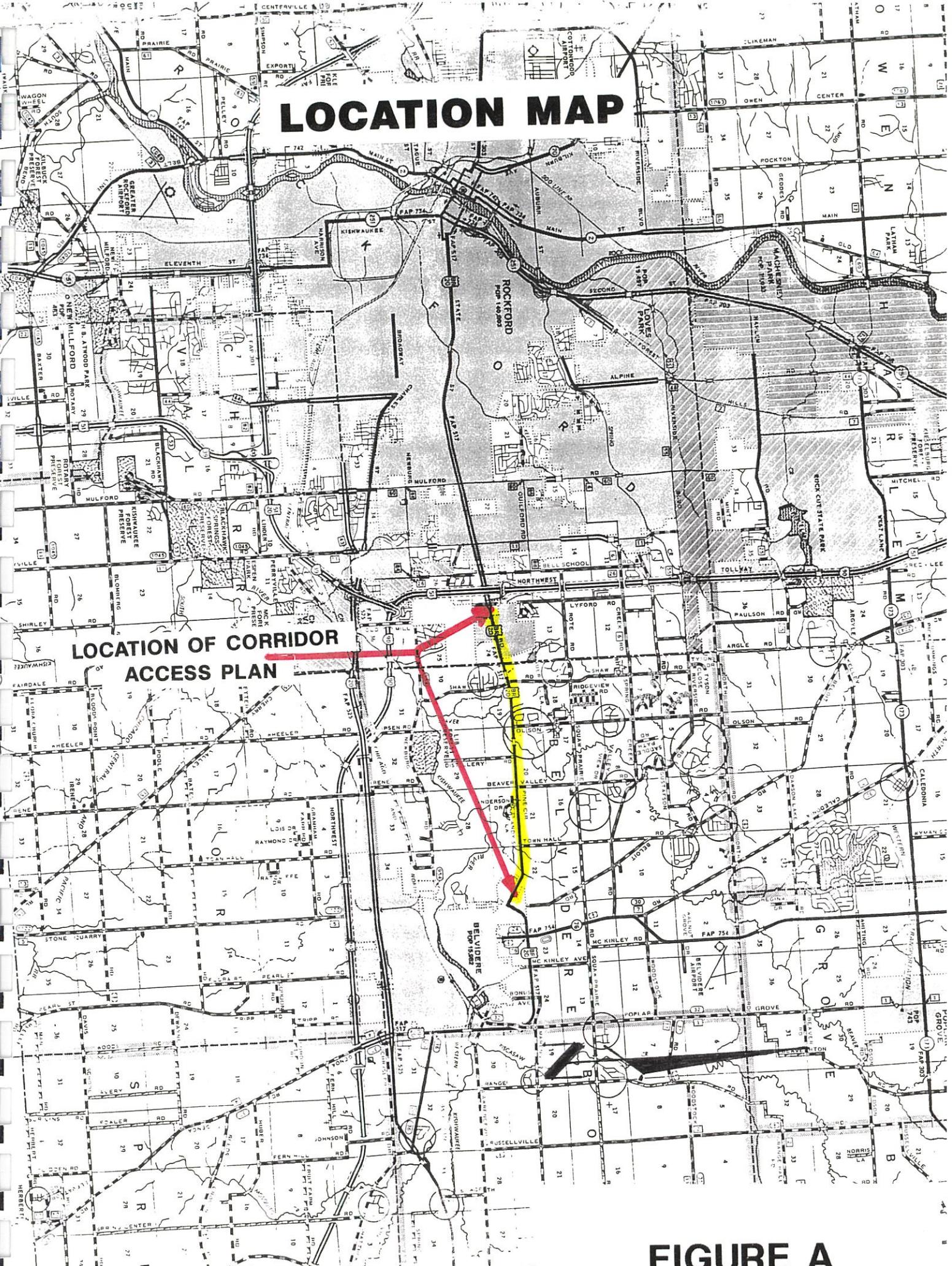
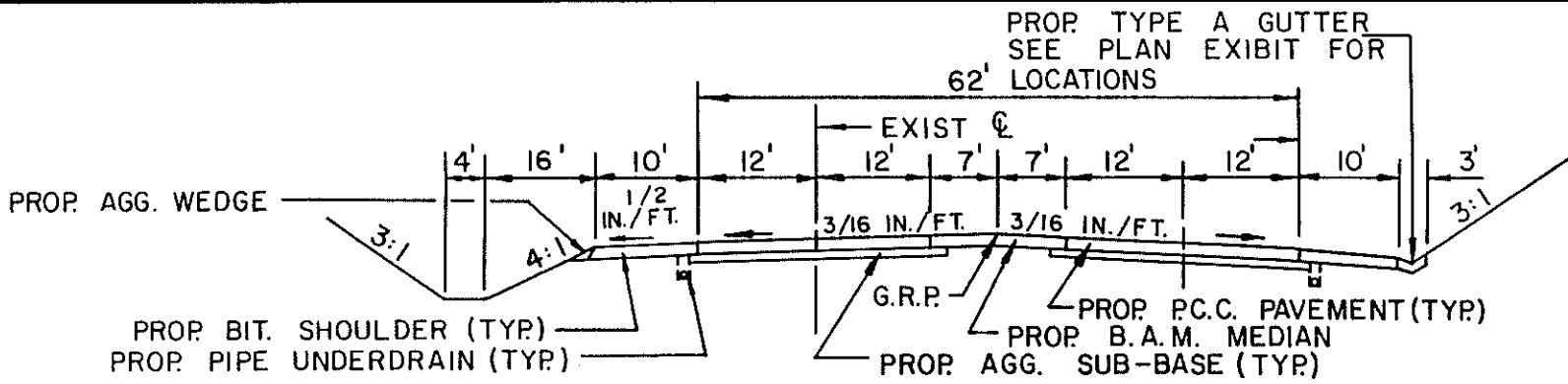
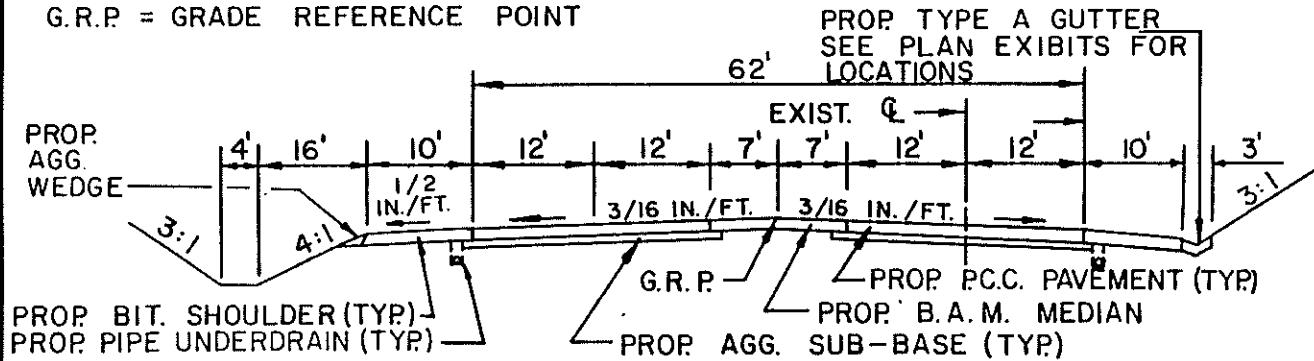


FIGURE A



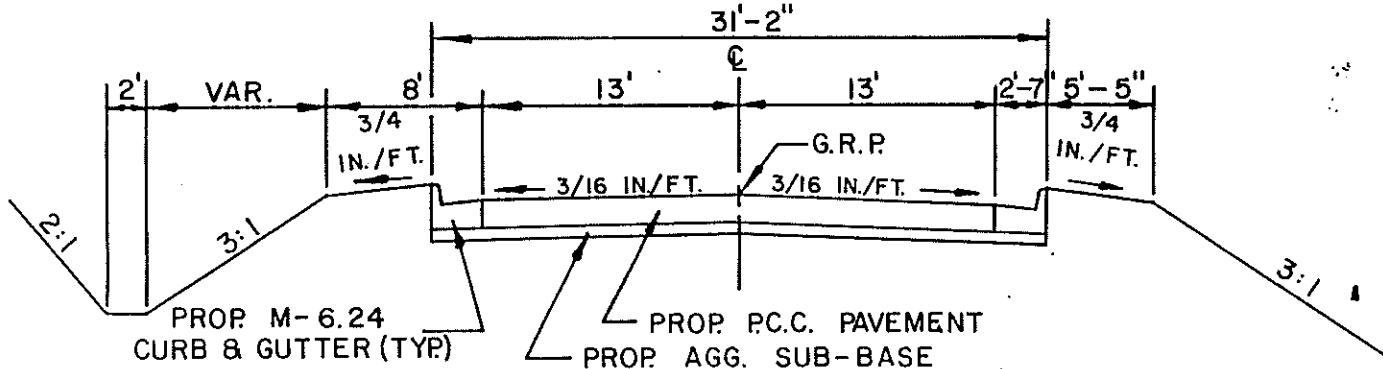
U.S. BUS. RTE. 20 LYFORD TO SHAW ROADS (PHASE I)

G.R.P. = GRADE REFERENCE POINT



- NOTES:
- 1) EXIST. PAVEMENT TO BE REMOVED.
 - 2) PAVEMENT THICKNESS TO BE DETERMINED DURING CONTRACT PLAN PREPARATION.
 - 3) PHASE II CONSTRUCTION IN BELVIDERE WILL USE M-6.24 CURB & GUTTER INSTEAD OF BIT. SHOULDER.

U.S. BUS. RTE. 20 EAST OF SHAW ROAD (PHASES II & III)



LYFORD ROAD

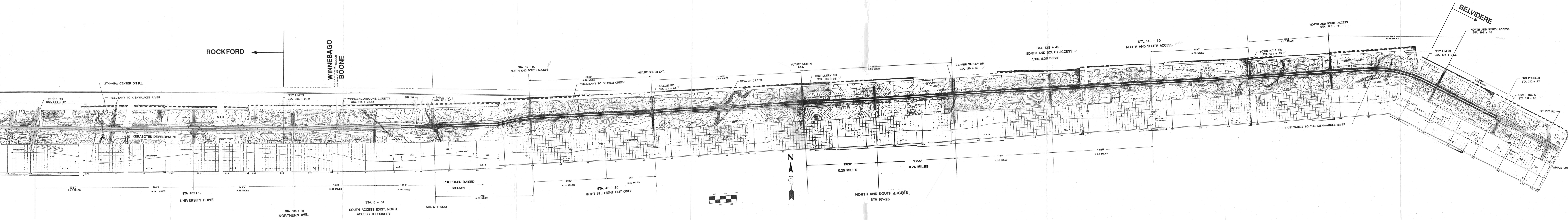


FIGURE C

ACCESS PLAN LAYOUT

RT IN/RT OUT

ACCOMMODATES A WB-55 DESIGN VEHICLE
WITH STRIPING TO ACCOMMODATE AN SU-30 VEHICLE
DESIGN MAY BE INCREASED DEPENDING UPON SITE PLAN

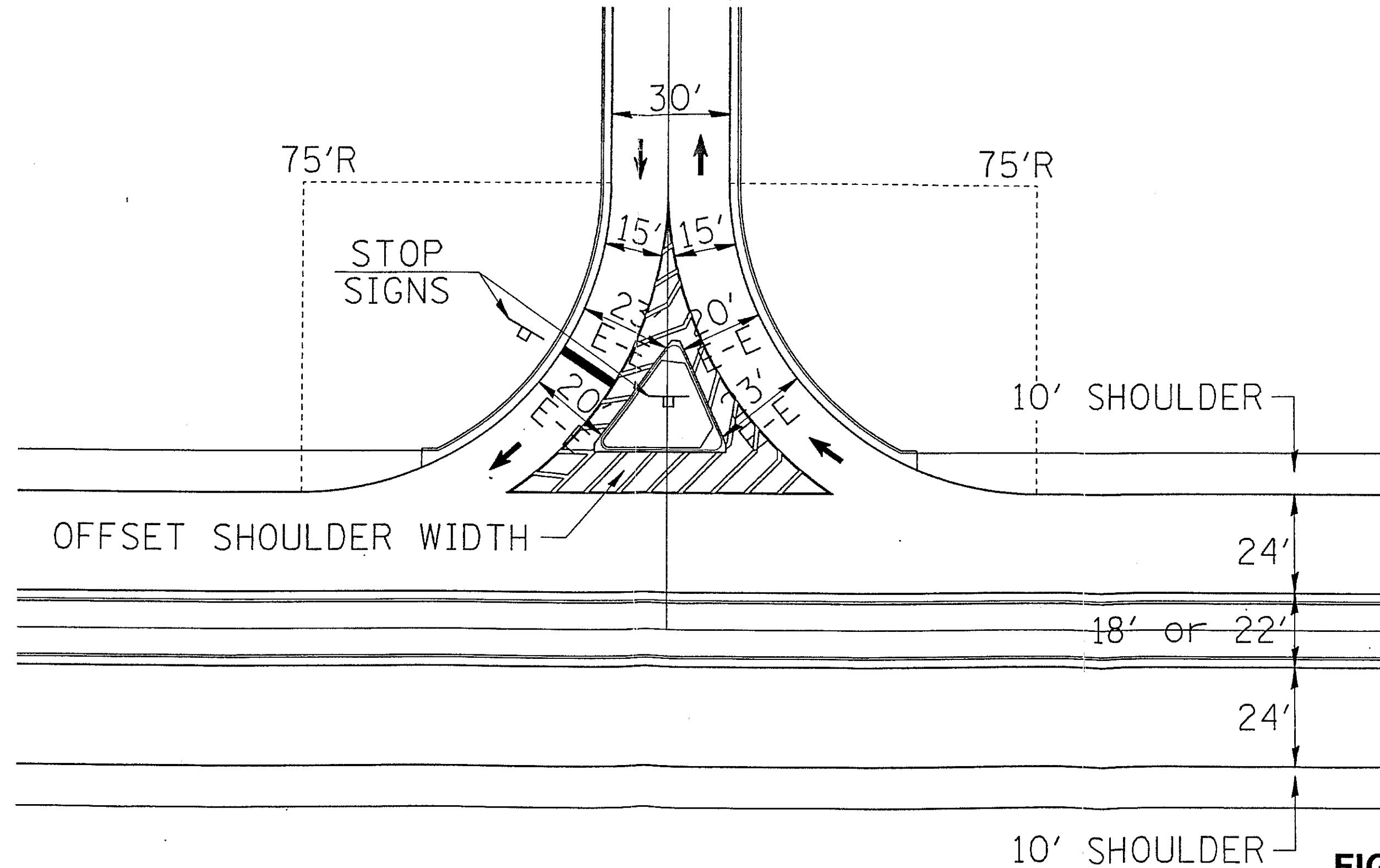


FIGURE D

CONCEPTUAL ULTIMATE INTERSECTION 14' FLUSH MEDIAN

- * 45 MPH DESIGN SPEED ON U.S. B.R. 20
- * TANGENT LENGTHS SHOWN ARE BASED UPON COMFORTABLE DECELERATION 45 MPH U.S.20, 30 MPH ACCESS RD.
- * TANGENT LENGTHS MAY BE INCREASED BASED UPON ULTIMATE TRAFFIC AND CORRESPONDING REQUIRED STORAGE.
- * NUMBER OF LANES ON ACCESS ROAD WILL DEPEND UPON PROJECTED DEVELOPMENT. MINIMUM WILL BE ONE LANE ENTERING, A LEFT AND THRU/RIGHT EXITING.
- * RADIUS RETURNS TO BE DESIGNED FOR A WB-65 VEHICLE.
- * SHOULD VOLUMES REQUIRE DOUBLE LEFT TURN LANES ON ACCESS ROAD, MEDIAN WILL BE 30' WIDE ON ACCESS ROAD.
- * SITE PLANS, TRAFFIC PROJECTIONS AND COMPLETE INTERSECTION DESIGN STUDY WILL BE COORDINATED WITH AND REQUIRED BY THE IL. DEPT. OF TRANSPORTATION.

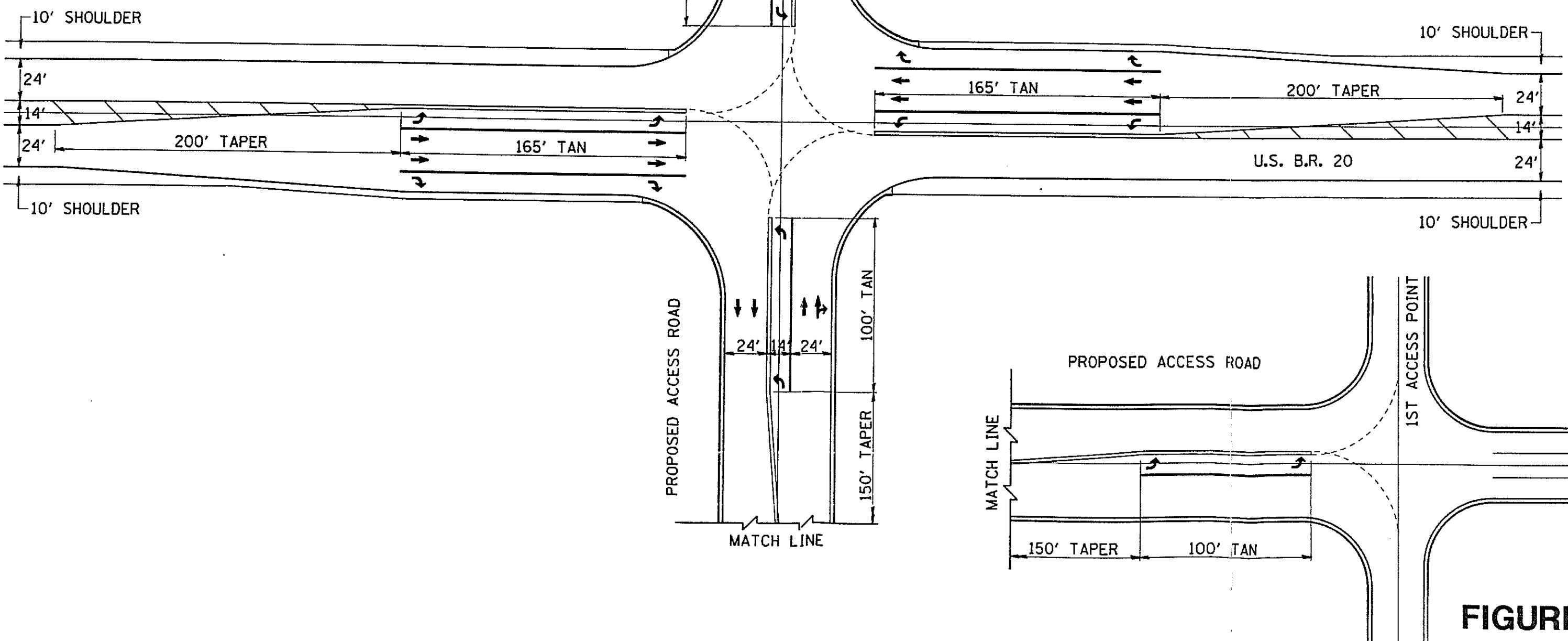
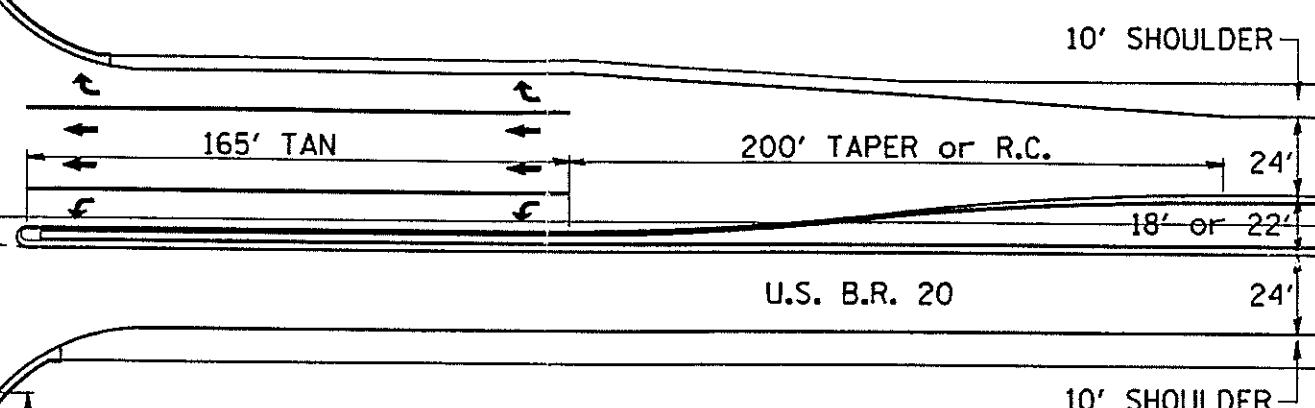
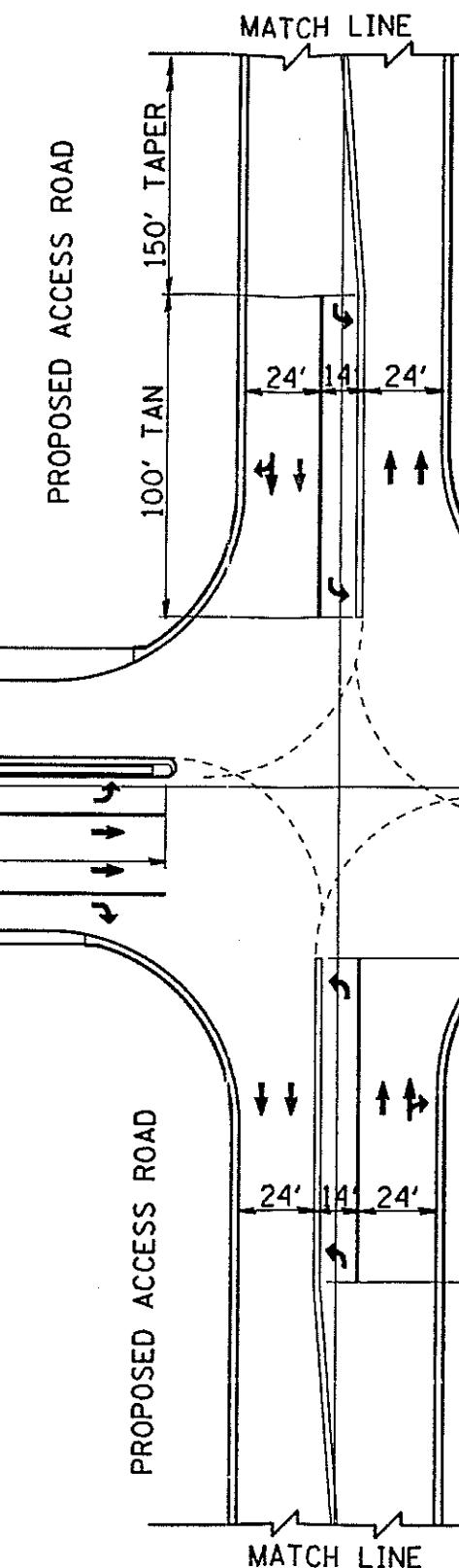
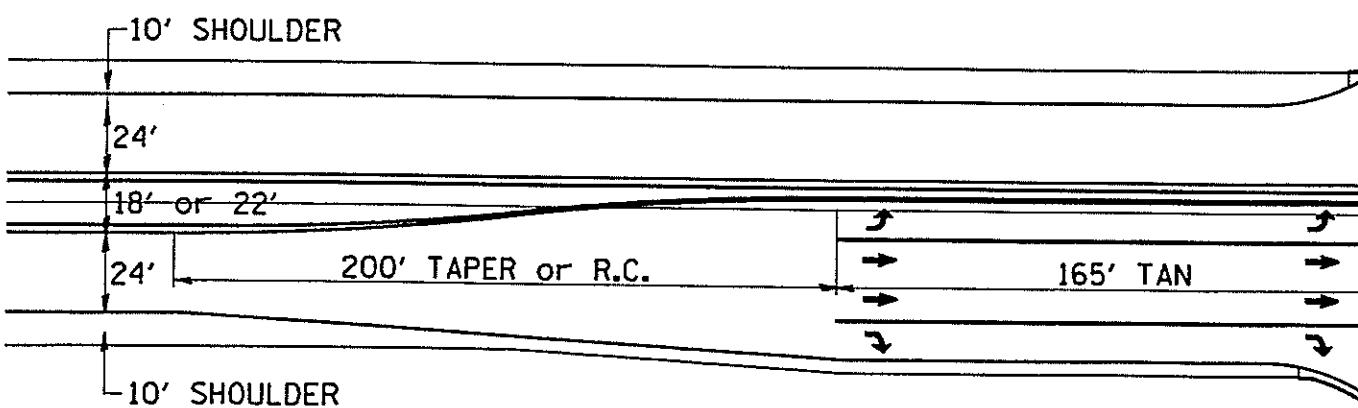


FIGURE E

**CONCEPTUAL ULTIMATE INTERSECTION
18' or 22' RAISED MEDIAN**

- * 45 MPH DESIGN SPEED ON U.S. B.R. 20
- * TANGENT LENGTHS SHOWN ARE BASED UPON COMFORTABLE DECELERATION 45 MPH U.S.20, 30 MPH ACCESS RD.
- * TANGENT LENGTHS MAY BE INCREASED BASED UPON ULTIMATE TRAFFIC AND CORRESPONDING REQUIRED STORAGE.
- * NUMBER OF LANES ON ACCESS ROAD WILL DEPEND UPON PROJECTED DEVELOPMENT. MINIMUM WILL BE ONE LANE ENTERING, A LEFT AND THRU/RIGHT EXITING.
- * RADIUS RETURNS TO BE DESIGNED FOR A WB-65 VEHICLE.
- * SHOULD VOLUMES REQUIRE DOUBLE LEFT TURN LANES ON ACCESS ROAD, MEDIAN WILL BE 30' WIDE ON ACCESS ROAD.
- * SITE PLANS, TRAFFIC PROJECTIONS AND COMPLETE INTERSECTION DESIGN STUDY WILL BE COORDINATED WITH AND REQUIRED BY THE IL. DEPT. OF TRANSPORTATION.



NOTE: HIGH VOLUME GENERATORS MAY REQUIRE MEDIAN WIDENING TO 30' TO PROVIDE FOR DUAL LEFT TURNS OFF U.S. BUS. RTE. 20

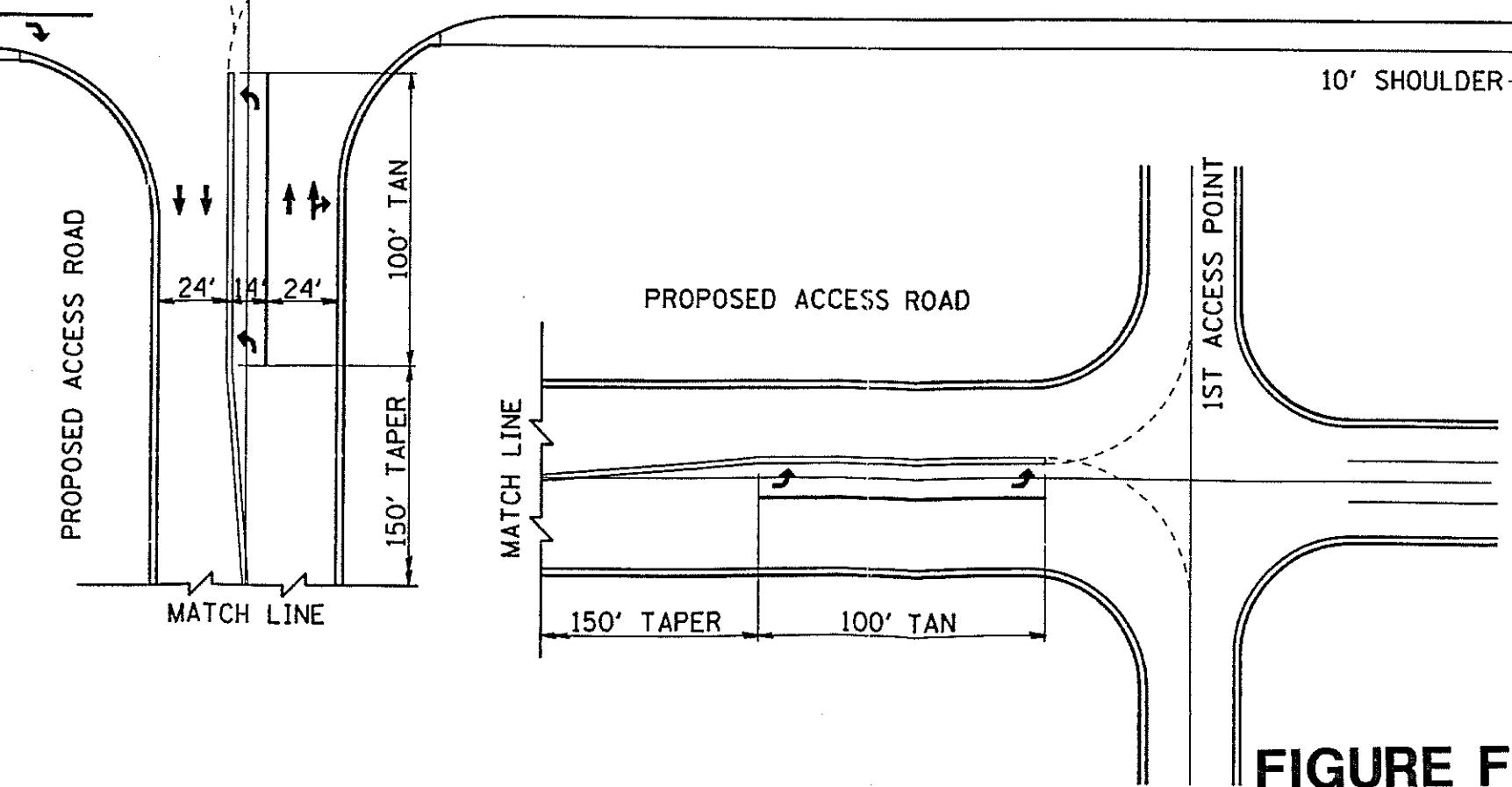
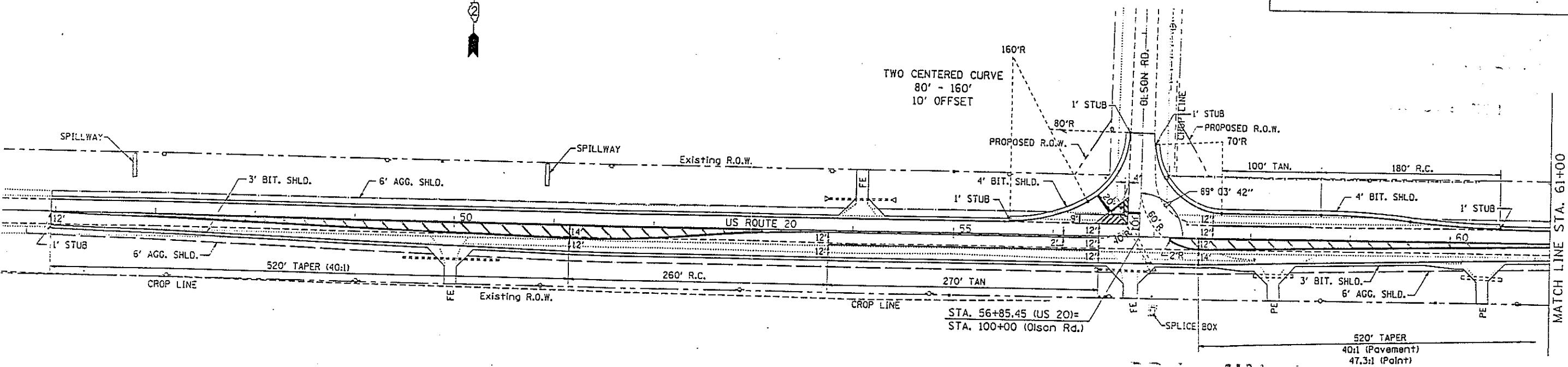
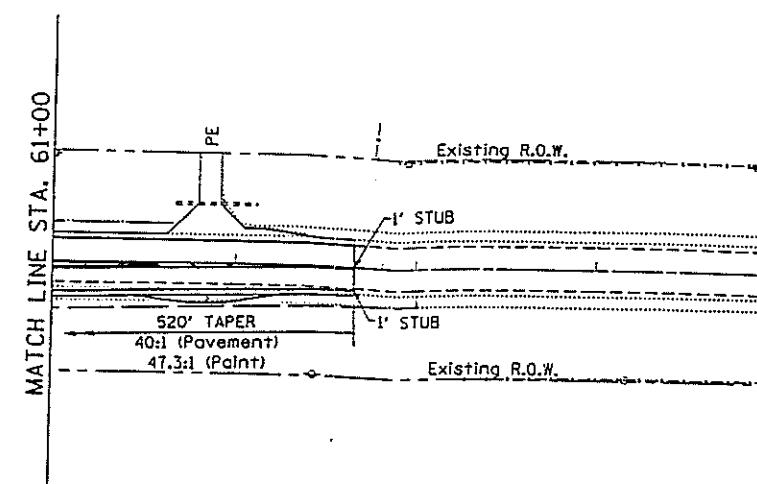


FIGURE F

CAPACITY DESIGN STUDY					
PHASE	AREA :	PEAK HOUR FACTOR :	INTERSECTION LEVEL	A.M.	P.M.
SEC. CYCLE	AVERAGE INTERSECTION DELAY	A.M.	OF SERVICE	A.M.	P.M.
APPROACH					
BUS STOP CONDITION					
PARKING MANEUVER/H.R.					
PEDESTRIANS					
ARRIVAL TYPE					
THROUGH LANE					
UTILIZATION FACTOR					
BASE SATURATION FLOW					
O-DISTANCE					
LANE GROUP					
LANE WIDTH					
GREEN TIME A.M.					
(SECONDS)					
GREEN TIME P.M.					
LANE GROUP A.M.					
DELAY (SECONDS)					
LEVEL OF SERVICE A.M.					
P.M.					
2010 30th MAX. HOUR TRAFFIC A.M.					
HOUR TRAFFIC P.M.					
1990 8th MAX. A.M.					
HOURLY TRAFFIC P.M.					

1990 8th MAX. A.M.

HOURLY TRAFFIC P.M.



MATCH LINE STA. 61+00

I.N.N.
S.J.N.
L-No.
Rev.No.

INTERSECTION DESIGN STUDY

US 20

WITH

OLSON RD.

SEC. NO. 105R-2 PROJ. NO. P92-053-92

JOB NO. COUNTY BOONE

SCALE 1" = 50' DATE 1-10-92

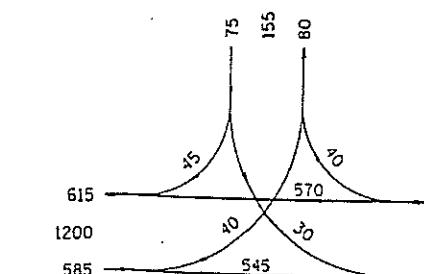
DESIGNED BY DISTRICT 2 Mike Posey

SATISFACTORY DISTRICT GEOMETRIC ENGINEER DATE

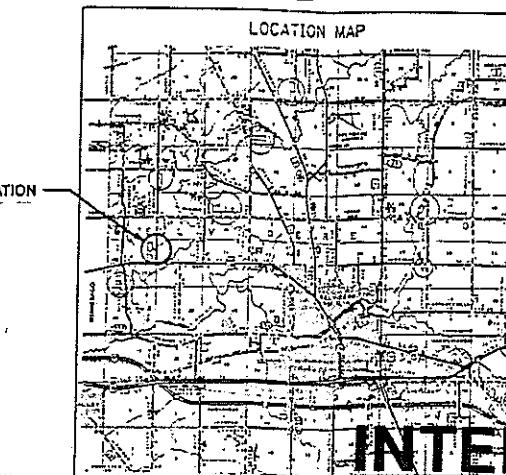
SATISFACTORY DISTRICT PLANNING ENGINEER DATE

SATISFACTORY DISTRICT TRAFFIC ENGINEER DATE

APPROVED DISTRICT SUPERVISOR DATE



PROJECT LOCATION



- ELEMENTS CONTROLLING DESIGN
1. DESIGN DESIGNATION : US 20 1200-RPA-55(W), US 20 1185-RPA-55(E), OLSON RD. 155-R-55(N)
 2. US 20 IS THE PREFERENCE ROUTE
 3. ANTICIPATED YEAR OF CONSTRUCTION IS 1993
 4. TRAFFIC CONTROL TO BE STOP SIGN ON OLSON RD.
 5. RETURNS ARE DESIGNED FOR WR-50 VEHICLES.

GENERAL NOTES

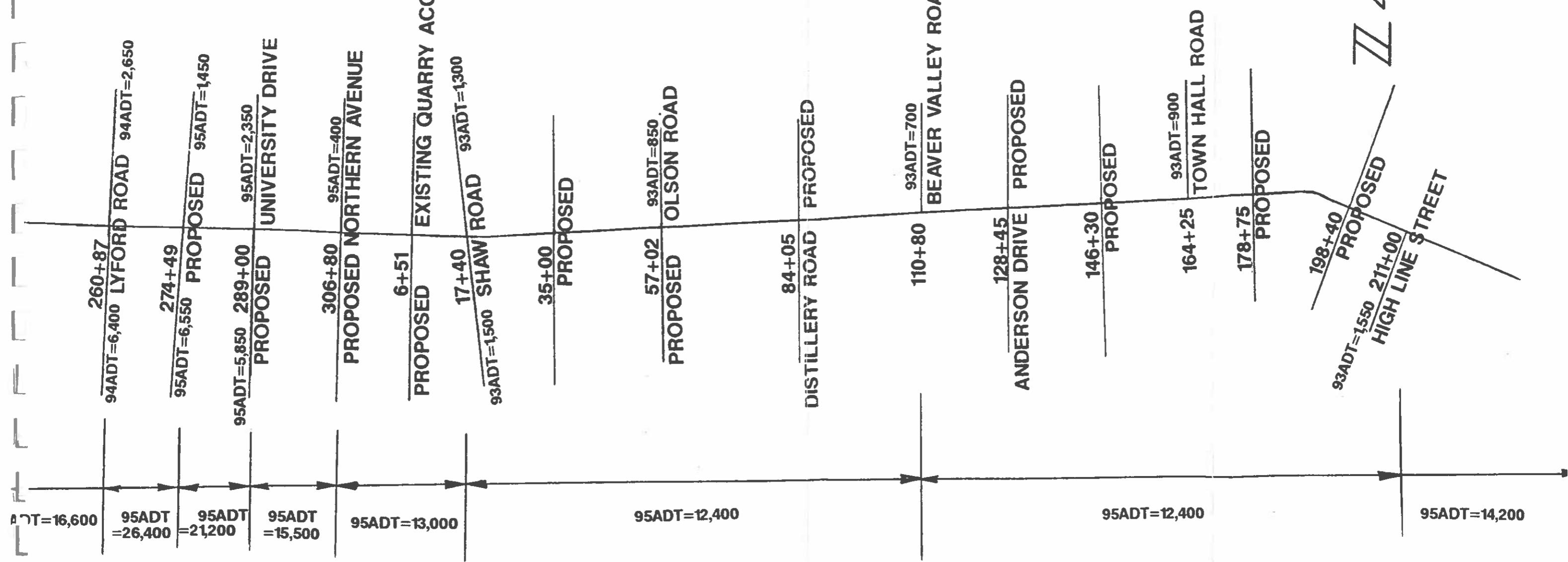
1. PROFILES NOT PROVIDED, SINCE APPROACH GRADES ARE TO REMAIN THE SAME
2. TYPE M4-06 CURB & CUTTER TO BE USED ON CORNER ISLAND
3. ALL DIMENSIONS ARE SHOWN E-E OF PAVEMENT UNLESS OTHERWISE SHOWN.
4. PAVEMENT MARKING TO BE APPLIED IN ACCORDANCE WITH THE M.U.T.C.D. AND THE BUREAU OF TRAFFIC.
5. SHOULDERS ADJACENT TO TURN LANES AND AROUND RETURNS ARE TO BE 4' BITUMINOUS.
6. SURROUNDING AREA RURAL IN NATURE.
7. CULVERTS TO BE EXTENDED OR REPLACED AS DETERMINED BY DESIGN.

MOVEMENT	YEAR 1993		PERCENT TRUCK TRAFFIC IN 30TH MAX. HOUR	ESTIMATED PERCENT INCREASE BY	YEAR 2013	
	A.M.	P.M.			A.M.	P.M.
AB	365	365			570	545
AD						
AC	30	25			2	40
BA	365	365			545	570
BC	20	25			30	40
BD						
CA	25	30			40	45
CB	25	20			40	30
CC						
CB						
CA						
TOTAL A	865	805			1200	1200
TOTAL B	795	795			1185	1185
TOTAL C	100	100			155	155

06-JUN-22 2000 00:00:00
741112154559240001400113
FILE-2053240001400113
FILE-2053240001400113

INTERIM INTERSECTION FIGURE G

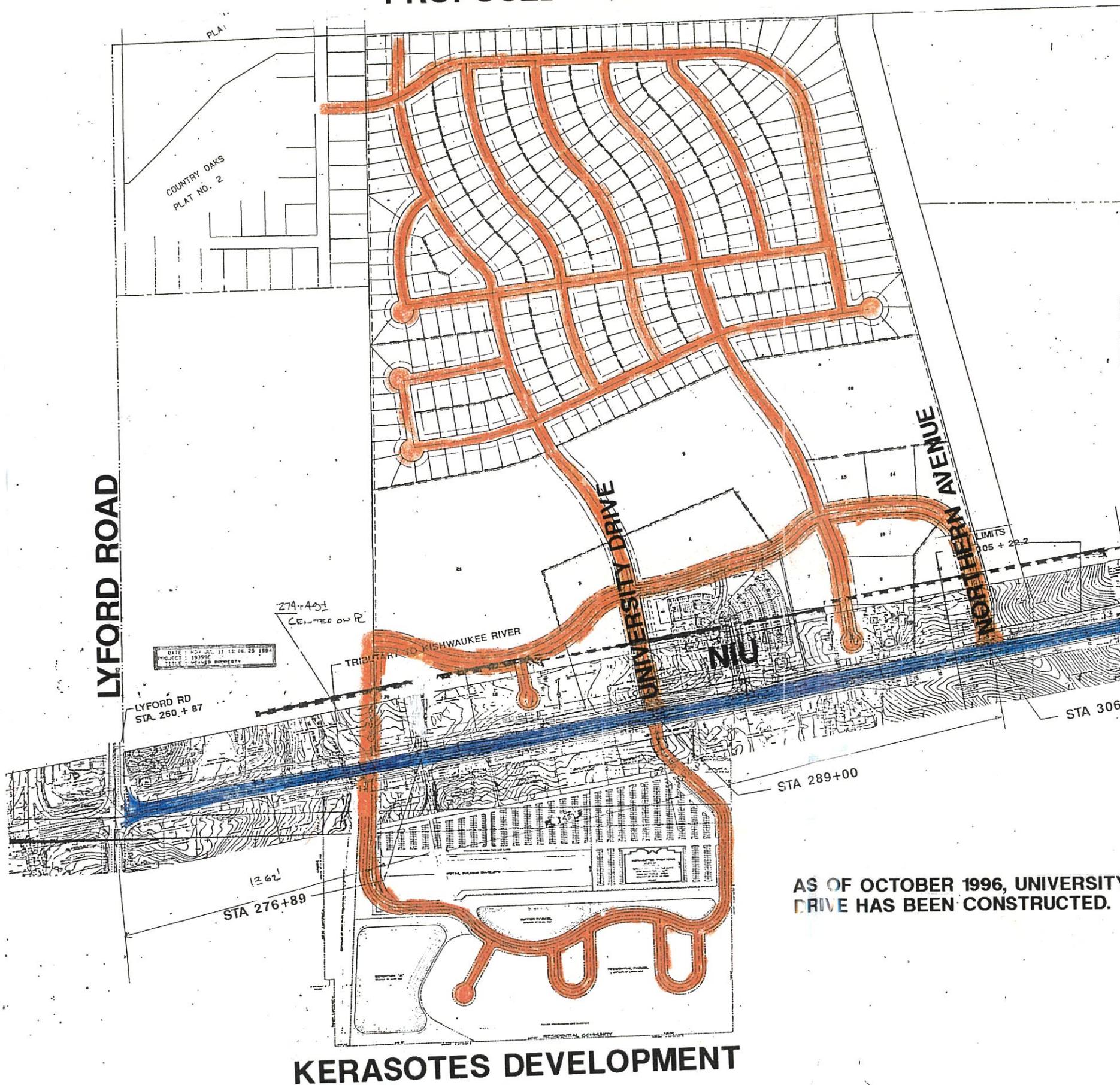
US 20 ACCESS LOCATIONS



**EXISTING
TRAFFIC DATA**

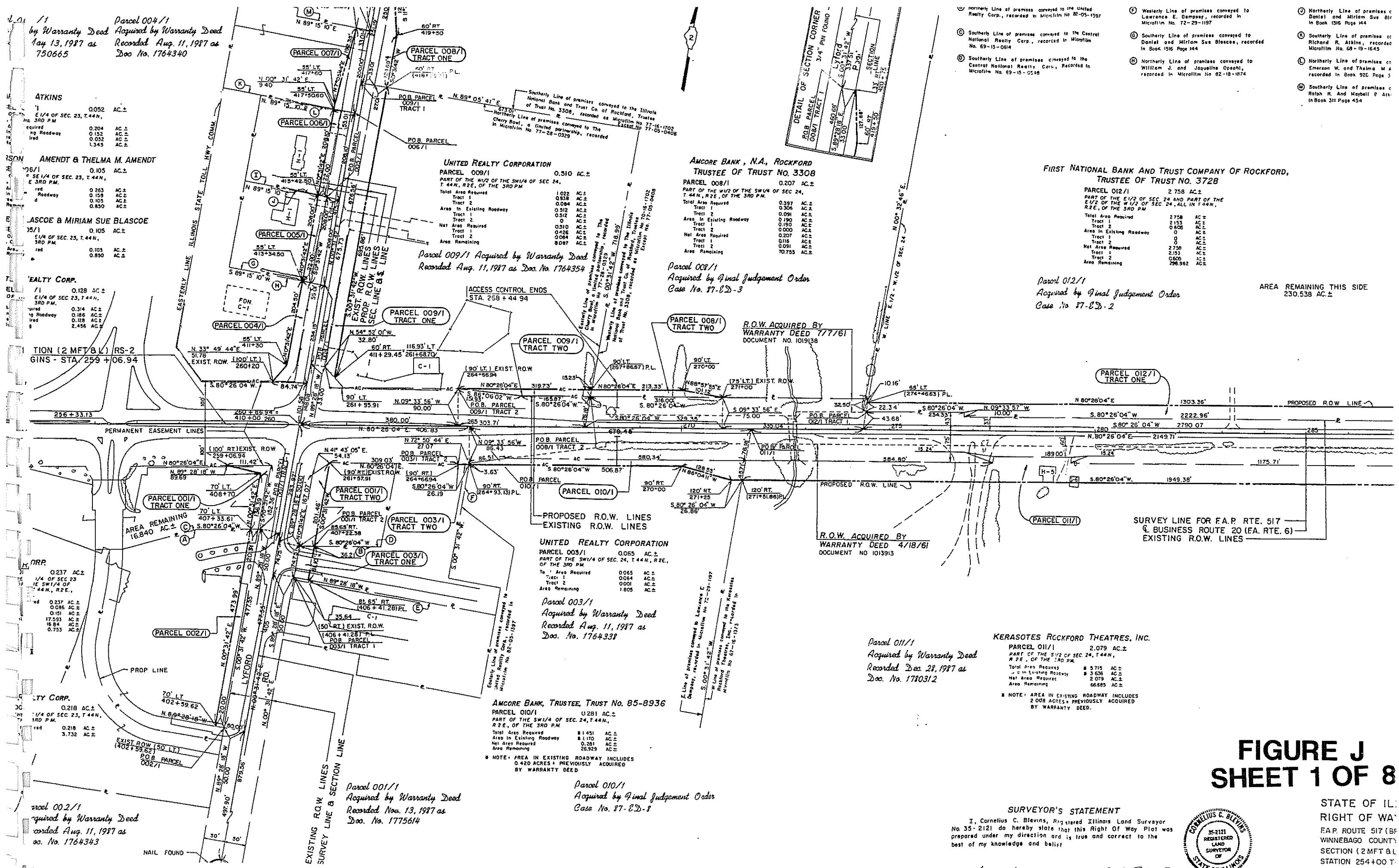
FIGURE H

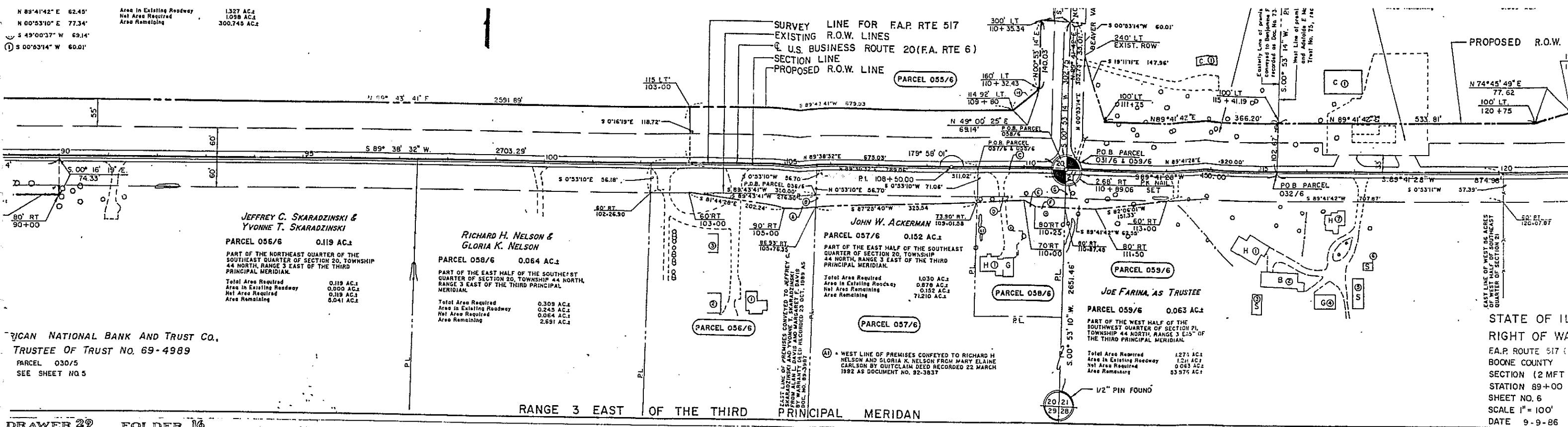
PROPOSED SUBDIVISION



**CURRENTLY PROPOSED
MAJOR DEVELOPMENTS**

FIGURE I





AMERICAN NATIONAL BANK AND TRUST CO.
TRUSTEE OF TRUST NO. 69-4989

PARCEL 030/5
SEE SHEET NO. 5

DRAWER 29 FOLDER 16

STATE OF IL
RIGHT OF WA
F.A.P. ROUTE 517 (B)
BOONE COUNTY
SECTION (2 MFT E)
STATION 89+00 T
SHEET NO. 6
SCALE 1" = 100'
DATE 9-9-86

REV. 12-9-86 REV. 2-
REV. II-3-93 REV. II-12-

JACK A. MOORE AND ADELAIDE F. MOORE
TRUSTEES OF MOORE TRUST NO. 75
PARCEL 032/6
SEE SHEET NO. 6

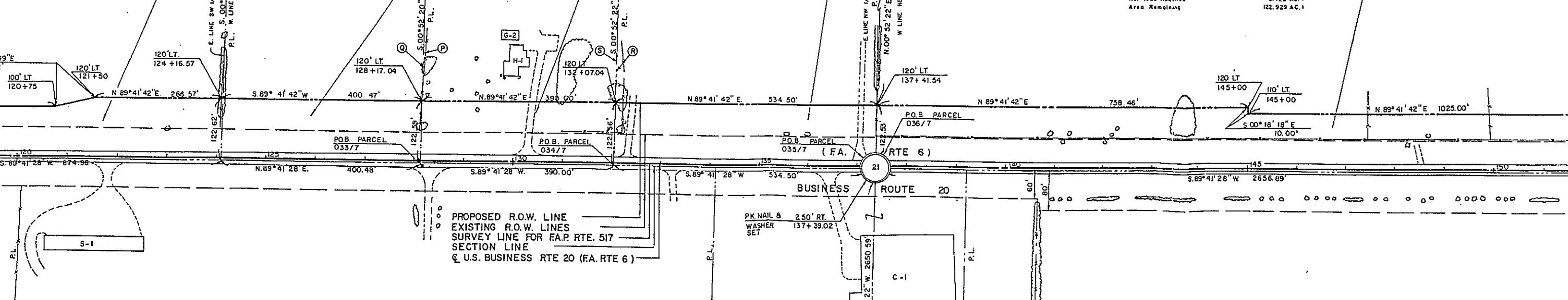
THE NATIONAL BANK AND TRUST
COMPANY OF SYCAMORE, TRUSTEE
OF TRUST NO. 14 2005.00
PARCEL 033/7
PART OF THE NW. 1/4 OF SEC. 21, T44N,
RSE OF THE 3RD PM.

JOSEPH M. FROST AND
SUSAN M. FROST
PARCEL 034/7
PART OF THE NW. 1/4 OF SEC. 21, T44N,
RSE OF THE 3RD PM.

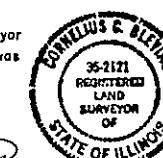
YOUNG T. HONG AND BETH MAE HONG
PARCEL 035/7
PART OF THE NW. 1/4 OF SEC. 21, T44N,
RSE OF THE 3RD PM.

DANA L. PETERSON, 1/4 INTEREST
FIRST NATIONAL BANK & TRUST CO. OF BELVIDERE,
TESTAMENTARY TRUSTEE, 3/4 INTEREST.

PARCEL 036/7
PART OF THE NW. 1/4 OF SEC. 21, T44N, RSE OF THE 3RD PM.
Total Area Required
Area In Existing Roadway
Net Area Required
Area Remaining



SURVEYOR'S STATEMENT
I, Cornelius C. Blevins, Registered Illinois Land Surveyor
No. 35-2121, do hereby state that this Right Of Way Plat was
prepared under my direction and is true and correct to the
best of my knowledge and belief.



Date September 9, 1986 Cornelius C. Blevins
R.I.L.S. No. 35-2121

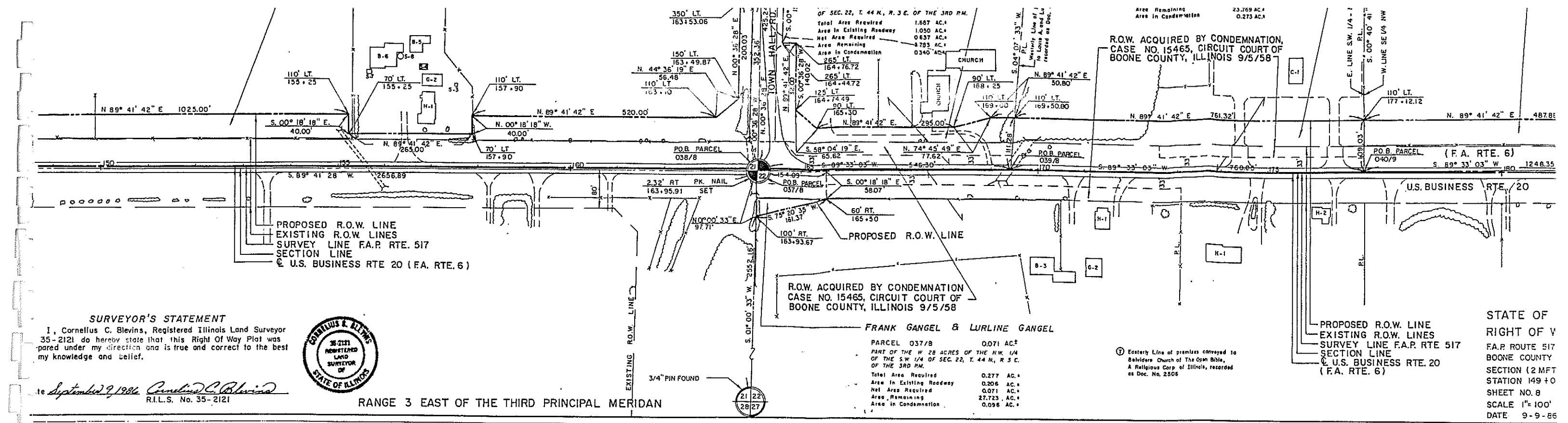
- ① West Line of premises conveyed to Joseph M. and Susan M. Frost, recorded as Doc. No. 81-128
- ② East Line of premises conveyed to The National Bank and Trust Co. of Sycamore, Trustees of Trust No. 14-2005, recorded as Doc. No. 77-1427
- ③ West Line of premises conveyed to Young T. and Beth Ma Hong, recorded as Doc. No. 81-1748

RANGE 3 EAST OF THE THIRD PRINCIPAL MERIDIAN

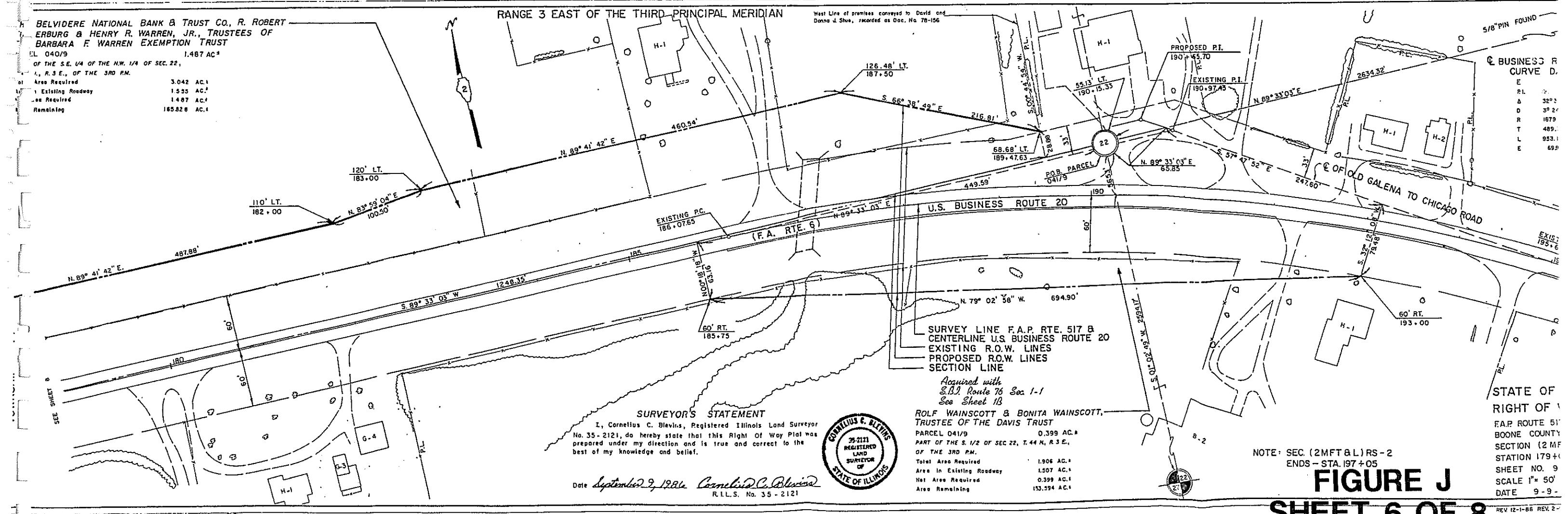
STATE OF IL!
RIGHT OF WA
F.A.P. ROUTE 517 (B)
BOONE COUNTY
SECTION (2 MFT E)
STATION 89+00 T
SHEET NO. 7
SCALE 1" = 100'
DATE 9-9-86

FIGURE J
SHEET 5 OF 8

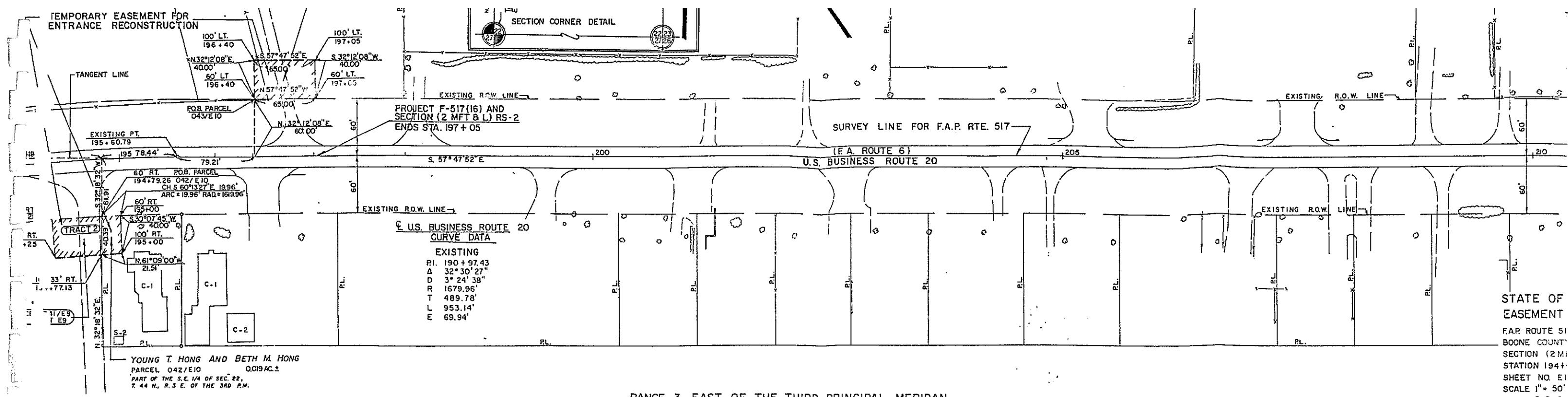
REV. 12-9-86 REV. 2-



DRAWER 29 FOLDER 16



DRAWER 29 FOLDER 16



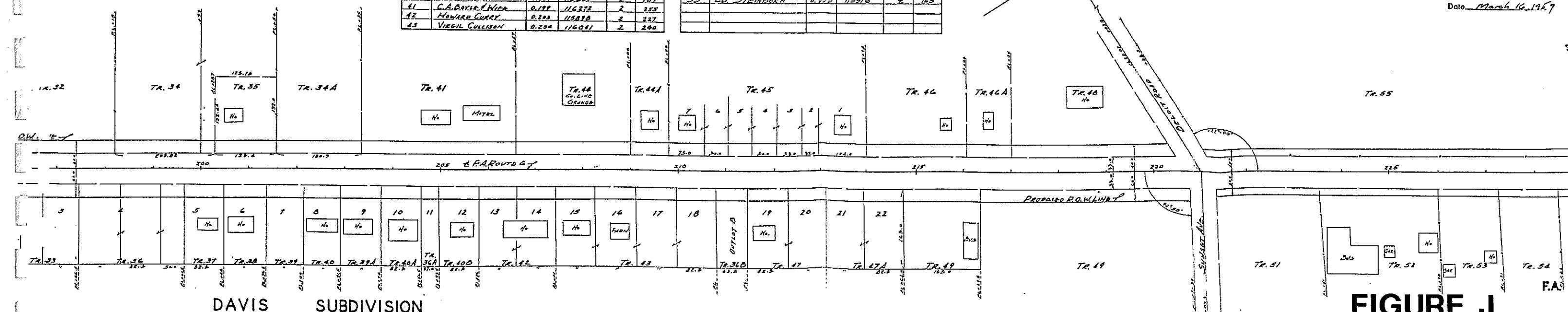
DRAWER 29 FOLDER 16

RANGE 3 EAST OF THE THIRD PRINCIPAL MERIDIAN

Tr. No.	OWNER	AREA	Doc. No.	Book	Pgs.
30	OSCAR J. HANSON	0.051	115891	2	175
32	EDWARD VAN PEEP	0.256	115773	2	280
33	JOSEPH FELURUS	0.102	115894	2	178
34	CAROLINAEHEALTH-ENISON	0.130			
34A	" "	0.112			
35	E.P. BRUNN	0.094	115596	2	180
36	H.V. DAVIS	0.183	116289	2	265
36A	" "	0.028	116689	2	268
36B	" "	0.037	116692	2	272
37	JAMES KAYGRINGA	0.051	115397	2	182
38	MARTIN HALSTADT	0.081	115399	2	186
39	FRANKLIN WARD	0.051	116391	2	237
39A	" "	0.081	116010	2	238
40	ELIJAH FRIEND	0.051	115601	2	185
40A	E.B. HART	0.051	115603	2	187
40B	DELL MORGAN	0.051	115604	2	189
41	C.A. DODD & WICK	0.199	116312	2	235
42	HOWARD CURRY	0.203	116090	2	237
43	VIRGIL CULLISON	0.204	116041	2	240
44	COUNTY LINE GRANGE	0.152	115314	2	161
44A	CLARENCE GRIM	0.056	115606	2	190
45	PERRY VONACHS	0.261	115700	2	219
46	R. BROCKMAN	0.126	115607	2	192
46A	W.D. MALLOTT	0.063	115608	2	194
47	E. JOHNSON	0.104	115609	2	196
47A	H.V. DAVIS	0.103	116611	2	197
48	LESTER CARLSON	0.203	115612	2	199
49	BELVIDERE SHIRT MILK	0.076	115311	2	186
50	H.V. DAVIS	0.272	116611	2	270
51	CHARLES G. OHLAR	0.086	115614	2	200
52	J. WOLF (WAG. SALAD)	0.286	116042	2	282
53	S. CAEPENTER	0.169	115315	2	163
54	KAREN SHANAHAN	0.079	115701	2	231
55	ED. STEINDORN	0.322	115710	2	165

This is to certify that the survey and
of survey as platted herein was surveyed
under my supervision.

William K. Schone
Illinois Land Surveyor
Registration No. 1555
Date March 16, 1987



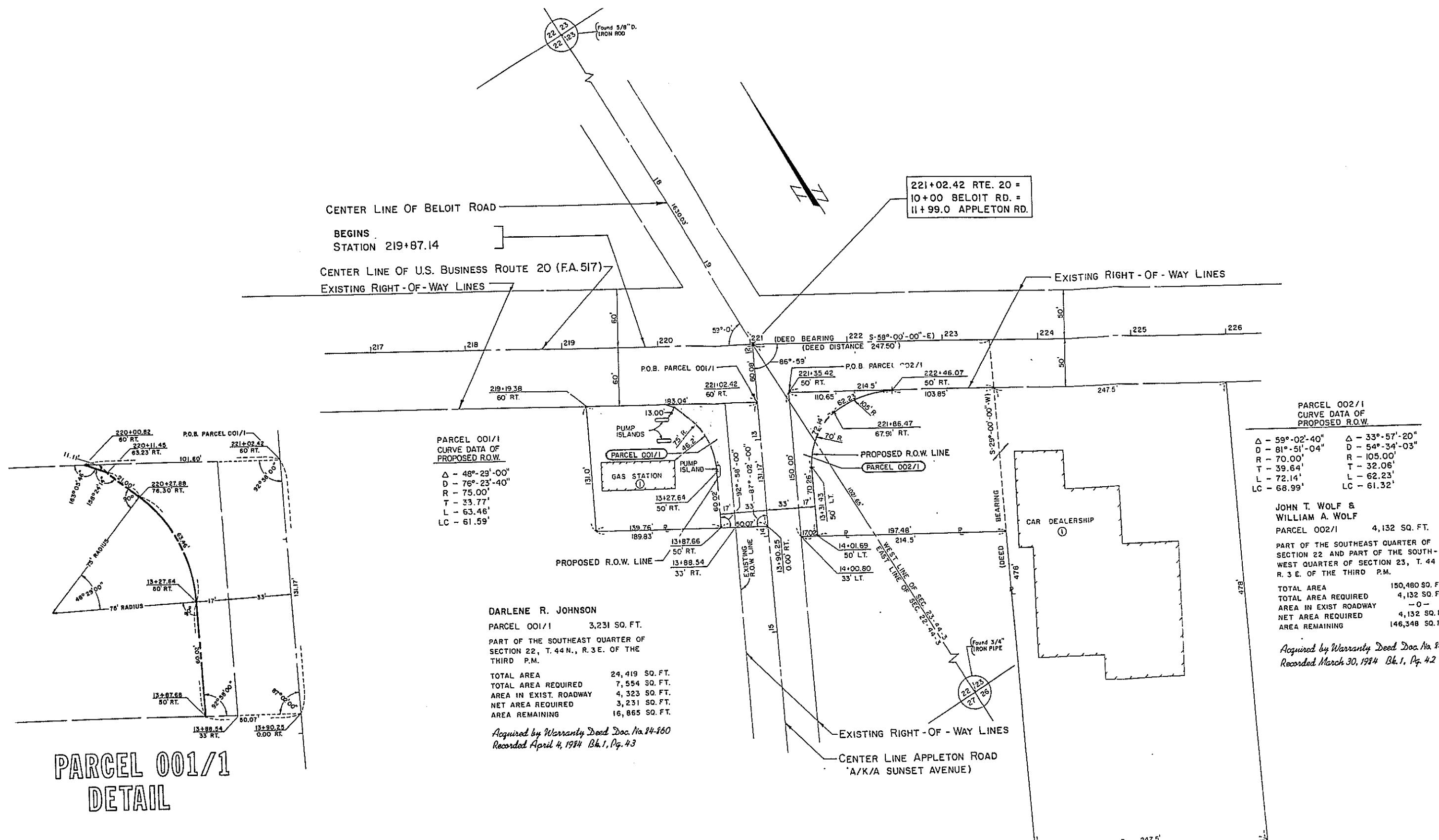


FIGURE J
SHEET 8 OF 8

STA
RIGH
F.A.
COUNT
SHEET
SCALE
DATE
Rev. 10
Rev. 15