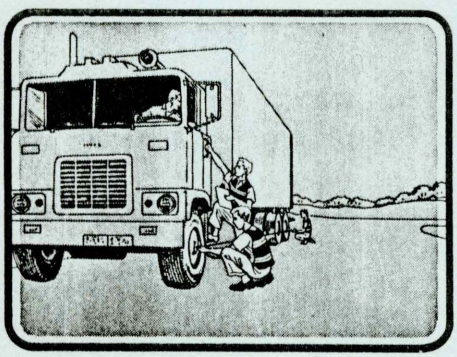
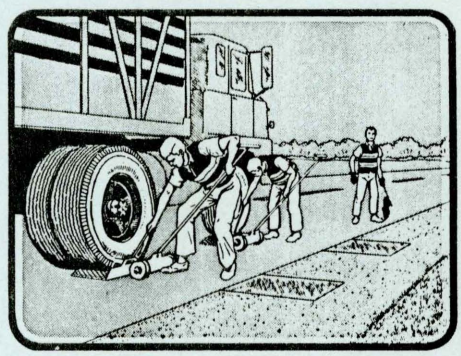
TRUCK WEIGHT SURVEY

INSTRUCTIONS
and
SCHEDULES





IOWA DEPARTMENT
OF TRANSPORTATION

TRUCK WEIGHT SURVEY

INSTRUCTIONS

and

SCHEDULES

Prepared By
Iowa Department of Transportation
Division of Planning and Research
Office of Transportation Inventory
in Cooperation With
United States Department of Transportation
Federal Highway Administration

Tele: 515-296-1289

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INTRODUCTION

INTRODUCTION

The Truck Weight Survey is conducted by the Office of Transportation Inventory, Division of Planning and Research of the Iowa Department of Transportation, in cooperation with the Federal Highway Administration.

This survey is conducted biennially during June, July, and August, and provides information with regard to trends of gross weight, axle loading, axle spacing, dimensions, and commodities carried by commercial vehicles using the highways in Iowa.

The schedule is prepared so that each station is operated during comparable periods for the preceding years. Manual counts are made every year with the weighing operations conducted during odd numbered years.

Field operations will be conducted at the twenty (20) locations shown on the map in Illustration 1. Seven (7) of these stations are located on rural interstate highways; seven (7) on rural primary highways; two (2) on urban primary highways; two (2) on rural secondary roads; and two (2) on city streets. The weigh and count classification operations will be conducted three (3) times during the survey period at each of the seven (7) interstate locations according to the following time table:

Weight Data	Count Data
6:00 a.m. to 1:00 p.m.	5:00 a.m. to 1:00 p.m.
2:00 p.m. to 9:00 p.m.	1:00 p.m. to 9:00 p.m.
10:00 p.m. to 5:00 a.m.	9:00 p.m. to 5:00 a.m.

One (1) rural primary location, Station 55E, will be operated in the same manner as the interstate locations. The remaining six rural primary locations, two (2) urban locations and both city street locations will be operated two (2) times during the survey period. Weight data and vehicle classification count data will be collected according to the following time table:

Weight Data	Count Data
6:00 a.m. to 1:00 p.m.	5:00 a.m. to 1:00 p.m.
2:00 p.m. to 9:00 p.m.	1:00 p.m. to 9:00 p.m.
	9:00 p.m. to 5:00 a.m.

Weighing operations will not be conducted at these stations during the 10:00 p.m. to 5:00 a.m. shift due to low volumes of traffic, however, vehicle classification counts will be conducted during the 9:00 p.m. to 5:00 a.m. shift. For years when weighing operations are not conducted, manual counts will be made for the hours 12:00 a.m. to 8:00 a.m., 8:00 a.m. to 4:00 p.m. and 4:00 p.m. to 12:00 a.m.

The procedures outlined in this manual represent time tested weighing procedures. These procedures have been developed for your safety and that of the motoring public.

The following is a list of the Truck Weight Station Locations, by highway systems, then by numerical order:

1. Interstate Rural-Seven Locations

Station Number	Route	Locations
91S (Tipton)	I-80	On I-80, at the permanent pit scale location 2 miles east of the west Jct. of I-80 and Ia. 38, 9 miles south of Tipton
92N (Des Moines)	I-80	On I-80, at the permanent pit scale location just west of the Jct. of I-80 and U.S. 65, northeast of Des Moines
93P (Avoca)	I-80	On I-80, at the permanent pit scale location 3 miles east of the Jct. of I-80 and U.S. 59, 4 miles northeast of Avoca.
94Q (Ames)	I-35	On I-35, at the permanent pit scale location 3 miles north of the Jct. of I-35 and Ia. 210, 6 miles southeast of Ames
95R (Salix)	I-29	On I-29, at the permanent pit scale location 5 miles north of the Jct. of I-29 and Ia. 141, 1½ miles south of Salix
96T (Missouri Valley)	I-29	On I-29 and U.S. 75, at the permanent pit scale location 2 miles south of the Jct. of I-29, U.S. 30 and 75 3 miles southwest of Missouri Valley
97U (Osceola)	I-35	On I-35, at the permanent pit scale location 5 miles south of the Jct. of I-35 and U.S. 34, 5½ miles southwest of Osceola

2. Primary Rural-Seven Locations

Station Number	Route	Locations
09A (Ft. Dodge)	U.S. 20	On U.S. 20, just west of the Jct. of U.S. 20 and Co. Rd. P-59 near east limits of Fort Dodge
24B (Waterloo)	U.S. 218	On U.S. 218, just south of the Int. of U.S. 218 and Co. Rd. D-35, 4 miles southeast of Waterloo
55E (Cedar Rapids)	U.S. 30 & 218	On U.S. 30 and 218 ½ mile west of the Jct. of U.S. 30, 218 and Ia. 279 at the permanent pit scale location, 5½ miles west of Cedar Rapids
59F (Pleasantville)	Ia. 5	On Ia. 5, 1 mile north of the Jct. of Ia. 5, 92, and 181, 1 mile south of Pleasantville
74H (Ogden)	U.S. 30 & 169	On U.S. 30 and 169, 1 mile west of the east Jct. U.S. 30 and 169 at the permanent pit scale location, southwest of Ogden
76M (Carroll)	U.S. 71 & Ia. 141	On U.S. 71 and Ia. 141, just west of the east Jct. of U.S. 71 and Ia. 141, 10 miles south of Carroll
85J (Afton)	U.S. 34	On U.S. 34 and 169, 1 mile east of the west Jct. of U.S. 34 and 169, 1 mile east of Afton

3. Primary Urban-Two Locations

32C (Mason City)	U.S. 65	On U.S. 65, just south of the Int. of U.S. 65 and 25th St. NW, in the northern part of Mason City
35D (Davenport)	U.S. 61	On U.S. 61, just west of the Int. of U.S. 61 and Credit Island Lane, southwest part of Davenport

4. Secondary Rural-Two Locations

Station Number	Route	
41K (Plymouth)	Co. Rd. S-56	On Co. Rd. S-56, at the Jct. of Co. Rd. B-20 and Co. Rd. S-56, 2½ miles south of Plymouth
42L (Vincent)	Co. Rd. P-71	On Co. Rd. P-71, at the Jct. of Co. Rd. P-71 and Co. Rd. D-18, 5 miles south of Vincent

5. City Street, Federal Aid Urban-One Location

47I (Marshall-town)	S.12th Ave.	On South 12th Avenue south of the Int. of Olive St. and S. 12th Ave., in the southwest part of Marshalltown

6. Local Street, Urban-One Location

46G (Boone)	Linn St.	On Linn Street, south of the Int. of Linn St. and 22nd St., in the north-east part of Boone

TRUCK WEIGHT SURVEY STATION LOCATIONS

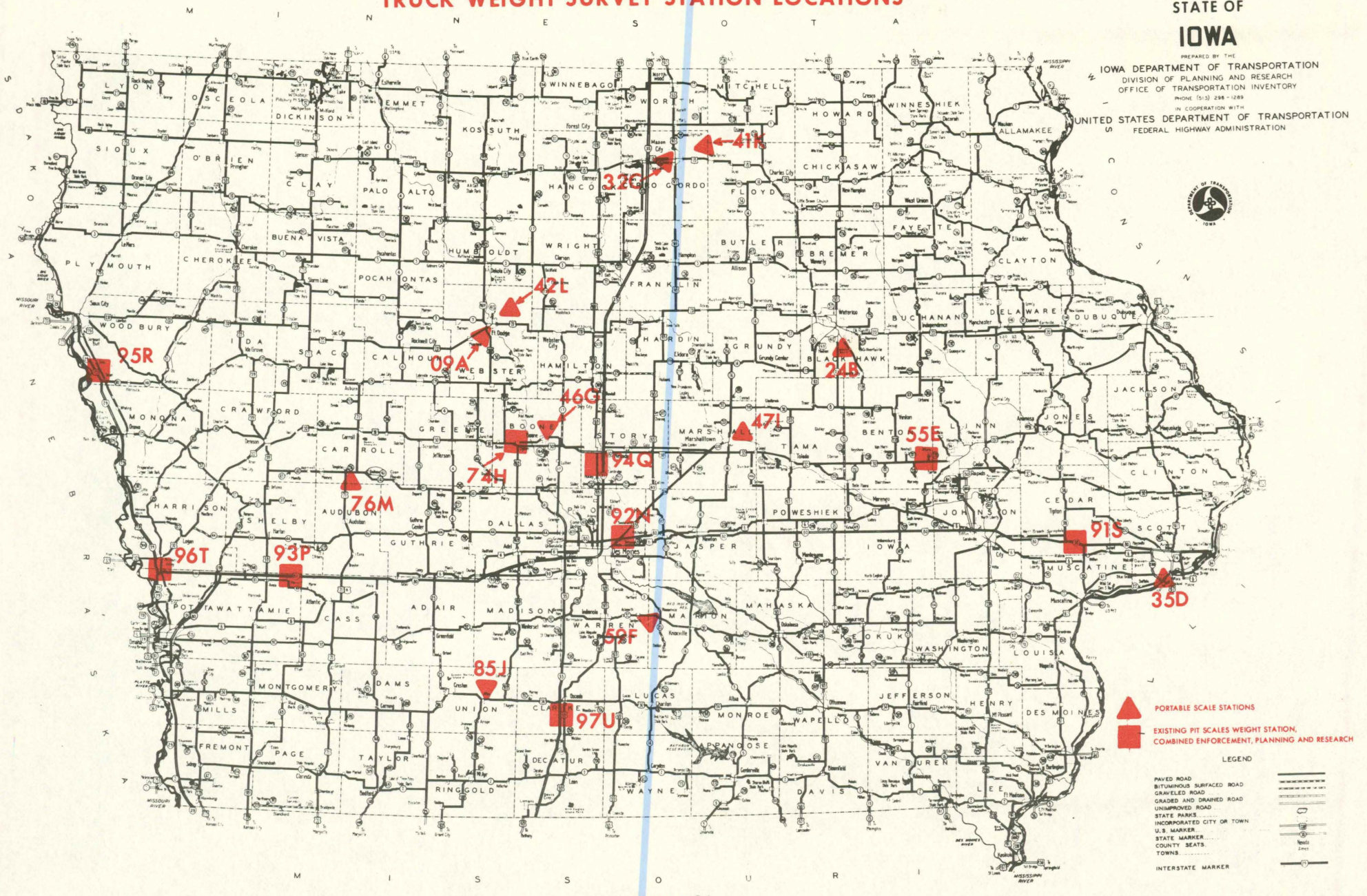
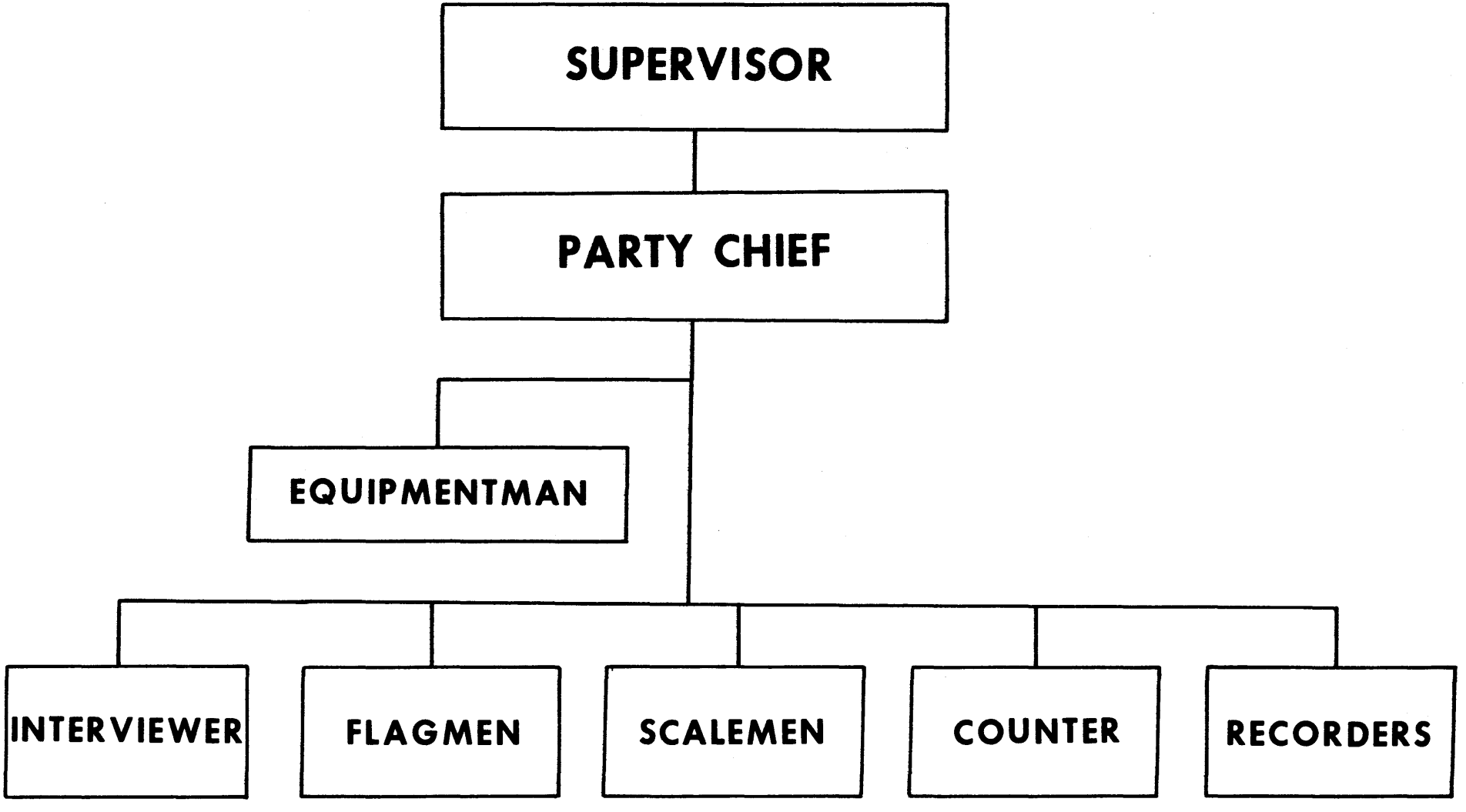


ILLUSTRATION 1

PART I

PERSONNEL

TRUCK WEIGHT ORGANIZATION CHART



I. PERSONNEL

A. Duties of Equipmentman

1. Distributes safety equipment

   a. Safety vests for all personnel

   b. Hard hats

      (1) Supervisor

      (2) Party Chief

      (3) Interviewers

      (4) Scalemen

      (5) Equipmentman

   c. Safety cones

2. Checks equipment and keeps it in running order

   a. After all equipment is unloaded Equipmentman drives through station and checks for proper location and operation of equipment

      (1) Checks signs and safety cones for proper positioning

      (2) Checks warning lights

      (3) Fills generators with gasoline and oil

      (4) Checks flares and flood lights before dark

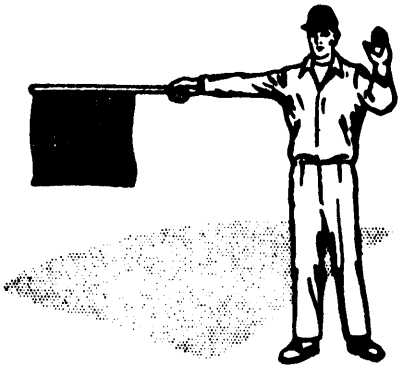
3. Assists at times of peak traffic where deemed necessary by party chief

B. Duties of Flagmen (See Flagging Illustration)

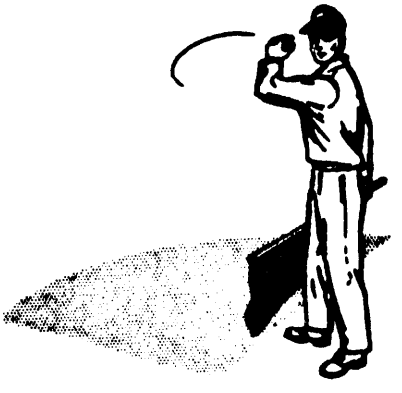
1. Controls and directs traffic

2. Aids in setting up and taking down equipment

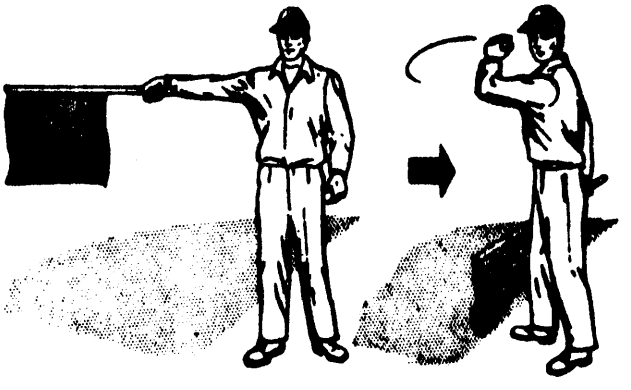
3. Is alert to any possible danger or trouble and is ready to warn remainder of crew



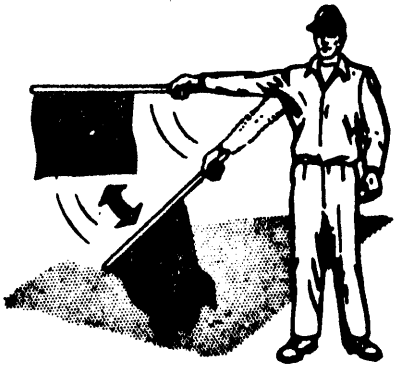
To stop traffic



Traffic proceed



To slow traffic



To alert traffic

C. Traffic Directors

1. Portable Scales

a. Directs non-commercial vehicles around the station, and for safety precautions, always positions himself behind the last truck in line

b. At times a second traffic director will be positioned in front of portable scales to direct trucks on and off scales

c. Aids in setting up and taking down stations

2. Pit Scales

a. Helps measure trucks

b. Codes incomplete field sheets during slack periods of operation

c. Serves as microphone operator, taking weights and moving trucks through station

d. Aids in setting up and taking down station

D. Interviewer

1. Interviews driver of vehicle to be weighed

a. Is polite, courteous, neat and clean

b. Works in a safe and alert manner

2. Codes incomplete field sheets during slack periods of operation

3. Aids in setting up and taking down station

E. Duties of Scalemen/Tapemen

1. Portable Scales

a. Weighs all trucks that move through portable station

(1) Inserts portable scales under each axle

(2) Gives weights to Recorderman

b. Measures distance from center hub of steering axle to center hub of each succeeding axle

c. Aids in setting up and taking down station

2. Pit Scales

a. Measures distance between axles

b. Gives measurements to Recorderman

c. Aids in setting up and taking down station

F. Recorderman

1. Portable Scales & Pit Scales

a. Records weights and measurements in appropriate columns on Recorder Form. (It is important that recording is done in a complete, accurate and legible manner)

b. Codes incomplete field sheets during slack periods of operation

c. Aids in setting up and taking down station

G. Microphone Operator

1. Using microphone in scale house, controls movement and weighing of trucks

2. Reads and records weights on Pit Scale Form

3. Give weights to Recorderman

4. Aids in setting up and taking down station

H. Manual Traffic Counter

Takes a position that is safely away from traveled portion of road, but where he can clearly see and record all traffic data

PART II

SAFETY EQUIPMENT

II. SAFETY EQUIPMENT

The purpose of this section is to explain in detail all safety devices and procedures required while setting up, operating, and taking down a truck weight survey station. It must be recognized that any time people are on the traveled portion of the road, there is some hazard involved. Every safety precaution possible must be taken, not only to protect the employees of the Highway Commission, but also to protect the motoring public. At all times during the operation every person working at the station must be alert and attentive to the job they are assigned. No horseplay or pranks will be tolerated! This type of conduct is obnoxious when observed by the public and diverts attention away from safety and your assigned job. Each individual at the truck weighing station will wear or use the following safety equipment:

A. Party Chief

1. Safety vest
2. Hard hat

B. Interviewer

1. Safety vest
2. Hard hat

C. Flagman or Traffic Director

1. Safety vest
2. Illuminous flag (15" x 15" on 24" dowel)
3. Flashlight with illuminated red wand

D. Scaleman

1. Safety vest

2. Hard hat

E. Equipmentman

1. Safety vest

2. Hard hat

F. Manual Traffic Counter

1. Safety vest

PART III

STATION SET UP PROCEDURES

III. STATION SET UP PROCEDURES

The purpose of this section is to explain in detail the procedures used while setting up and taking down equipment of a truck weight station.

A. Portable Scale Locations

1. Survey Crew Vehicles

   a. Park cars in convenient location off traveled portion of road before setting up station

   b. Survey crew cars will not be allowed to drive through station during setting up or taking down operations

2. Setting up barricades for station

   a. Shoulder barricades and flashing lights are the first signing to be set up at both ends of station

      (1) Barricades and flashing lights will be transported in a pickup

   b. Additional equipment and signing will be set out after barricades and lights are up and operating

      (1) All other signs and equipment are transported in equipment van

3. Setting out equipment for station

   a. Barricade pickup follows equipment van

      (1) Flagman will be located at rear of barricade pickup

      (2) Barricade pickup and equipment van flashing warning lights will be turned on

   b. Equipment will be placed on right hand shoulder of road starting with shoulder barricade and working toward barricade at opposite end

c. Never carry equipment across traffic lanes to opposite shoulder

d. Turn barricade pickup and equipment van around and return through station laying out equipment on right hand side of opposite shoulder

e. Park barricade pickup and equipment van in a convenient location off traveled portion of road

4. Setting up station

a. Work from shoulder barricades toward center of station, setting signs and placing cones on center line

b. Work as teams while placing signs and safety cones per direction of travel

(1) First team erects signs between shoulder barricades and grader blades

(2) Second team positions grader blades and remaining signs to center of station

c. Last signs to be erected will be "Trucks and Buses - Stop Here"

5. Taking down station

a. Using teams, start with "Truck and Buses - Stop Here" signs and work towards shoulder barricades

b. Shoulder barricades are to remain up until all other equipment has been picked up

6. Picking up equipment

a. Barricade pickup follows equipment van

(1) Flagman will be located at rear of barricade pickup

(2) Barricade pickup and equipment van flashing warning lights will be turned on

b. Begin with first sign behind shoulder barricade at one end of station and progress toward barricade at opposite end

c. Never carry equipment across traffic lanes to opposite shoulder

d. Turn barricade pickup and equipment van around and return through station picking up all equipment on opposite shoulder

e. After equipment is loaded on van a check must be made to insure that all equipment is properly secured

f. These procedures will be used at all two (2) and four (4) lane portable scale weigh locations

B. Pit Scale Locations (Primary Highway or Interstate)

1. Permanent advance warning signs indicating that scale is open will be utilized

2. Supplement with one (1) "Survey Crew" sign (Erected 300 feet ahead of permanent warning signs)

a. Mount two (2) flags on each side of "Survey Crew" sign

b. Position "Survey Crew" sign on right hand shoulder of oncoming traffic

c. Remove "30 M.P.H." portion of sign

d. Place safety cones and equipment at scale house as shown on pages IV-11 and IV-12.

PART IV

STATION TYPES

IV. STATION TYPES

The weighing schedule includes four (4) different types of station locations at which all trucks will be stopped, weighed, measured, and the driver interviewed. Passenger buses will be interviewed & weighed. Extreme caution must be taken to control and direct traffic into and through the weighing area with the traffic directions and flagmen assisting in this endeavor.

A. Two Lane Highway

The first type of station, located on a two (2) lane highway, will be set up and signed as shown in the diagram on page IV-9.

1. Flagmen

   a. Will be positioned between "Flagmen Signs" and "Stop Ahead Signs" to control and direct oncoming traffic

   b. Will be located on shoulder facing oncoming traffic. Must be alert at all times.

2. Traffic Director (Located in front of scales)

   a. Directs trucks on and off portable weigh scales

   b. Detains trucks when non-commercial vehicles are being routed around vehicles to be weighed

3. Traffic Director (Behind last truck)

   a. Will be located at rear of last truck to be weighed

   b. When traffic director located at portable weigh scales has first truck stopped and there are no oncoming vehicles traffic director behind last truck directs non-commercial vehicles into left lane routing them past weighing operation

4. Interviewer

a. Interviews driver of trucks waiting to be weighed

5. Scalemen/Tapemen

a. Head Scaleman/Tapeman

(1) Trucks with three (3) or more axles

(a) Place portable scale under right side steering axle. Reads vehicle weight, from scale, gives weight to Recorderman. Always weigh tandem axles simultaneously.

(b) Places end of tape measure on center hub of steering axle while Rear Scaleman measures all axles

(2) Trucks with two (2) axles

(a) Places portable scales under front and rear axle and weigh axles simultaneously

b. Rear Scaleman/Tapeman

(1) Measures axle spacings from steering axle back to center hub of each succeeding axle (In feet and tenths of feet)

(2) After all measurements have been obtained scales are placed under remaining axles by both scalemen

6. Recorderman

a. Records weights and measurements, obtained by scalemen, in appropriate columns on Recorder Form

7. Manual Traffic Counter

a. One (1) traffic counter will be used to count traffic for both directions of travel through station

B. Four Lane Highway

The second type of station, located on a four (4) lane

undivided highway, would be set up and signed as shown in the diagram on page IV-10.

1. Traffic Director (Located in front of scales)

   a. Directs trucks on and off portable weigh scales

2. Traffic Director (Rear)

   a. Directs non-commercial traffic into left hand lane of travel

3. Interviewer

   a. Interviews drivers of trucks waiting to be weighed

4. Scalemen/Tapemen

   a. Head Scaleman/Tapeman

      (1) Trucks with three (3) or more axles

         (a) Place portable scale under right side steering axle. Reads vehicle weight from scale, gives weight to Recorder-man. Always weigh tandem axles simul-taneously.

         (b) Places end of tape measure on center hub of steering axle while Rear Scale-man measures all axles

      (2) Trucks with two (2) axles

         (a) Places portable scales under front and rear axle and weigh axle simultaneously

   b. Rear Scaleman/Tapeman

      (1) Measures axle spacings from steering axle back to center hub of each succeeding axle (In feet and tenths of feet)

      (2) After measurements have been obtained scales are placed under remaining axles by both scalemen

5. Recorderman

a. Records weights and measurements, obtained by scalemen, in appropriate columns on Recorder Form

6. Manual Traffic Counter

a. One (1) traffic counter will be used to count traffic for both directions of travel through station

C. Two Lane Pit Scale

The third type of station, located at a permanently installed pit scale on a two (2) lane paved primary highway, will be set up and signed as shown in the diagram on page IV-11.

1. Flagmen

a. Located at pit scale entrance for each direction of traffic

b. Flag vehicles past station when vehicle waiting area is filled. Never allow vehicles to park on road shoulder while waiting to be weighed

c. Never flag vehicles into scale from highway

d. Never assist vehicles back onto highway after they are weighed

2. Interviewer

a. Interviews driver of trucks waiting to be weighed

b. Detains truck at this point until time for it to be weighed

3. Head Tapeman

On two (2) lane pit scale operations, only one truck representing one direction of traffic can be weighed

at a time. It therefore is necessary to alternate the weighing operations. For example, if weighing east-west traffic, and both directions of traffic have trucks waiting to be weighed, alternate first an eastbound truck through the weighing operations, then a westbound truck. To expedite operations, the Head Tapeman from the direction of traffic not being weighed will act as traffic director for the direction of traffic being weighed.

a. Head Tapeman (Acting as traffic director)

(1) Directs truck driver to stop power unit with only steering axle on scale

(2) Directs driver over the scale so each remaining axle of power unit is weighed separately

(3) Directs driver to place trailer axles on scale

(4) Directs driver so each trailer axle is weighed separately as unit is driven off scale

b. Head Tapeman (For direction of traffic being weighed)

(1) Places end of tape on center hub of steering axle while Rear Tapeman measures succeeding axles

4. Rear Tapeman

a. Measures axle spacings from steering axle back to center hub of each succeeding axle (In feet and tenths of feet)

b. Gives measurements, per direction of travel, to Recorderman

5. Microphone Operator

   a. Reads and records individual axle weights of vehicle being directed across scales (Pit Scale Form)

   b. Using microphone gives weights, per direction of travel, to Recorderman

6. Recorderman

   a. Records weights and measurements, per direction of travel, in appropriate columns on Recorder Form

   b. During peak traffic periods preference is given to recording axle measurements. Weight data can be recorded later from Pit Scale Form

7. Manual Traffic Counter

   a. One (1) traffic counter will be used to count traffic for both directions of travel through station

D. Four Lane Divided - Pit Scales

The fourth and final type of station, located on a four (4) lane divided interstate highway system with permanently installed pit scales for each direction of travel, will be set up and signed as shown in the diagram on page IV-12.

1. Flagmen

   a. Located at pit scale entrance for each direction of traffic

   b. Flag vehicles past station when vehicle waiting area is filled. Never allow vehicles to park on road shoulder while waiting to be weighed

2. Interviewer

   a. Interviews drivers of trucks waiting to be weighed

3. Head Tapeman

   a. Places end of tape measure on center hub of steering axle while Rear Tapeman measures all axles

4. Rear Tapeman

   a. Measures axle spacings from steering axle back to center hub of each succeeding axle (In feet and tenths of feet)

   b. Gives measurements to Recorderman

5. Microphone Operator

   a. Directs vehicles onto scales and through weighing operation

      (1) Directs truck driver to stop power unit with only steering axle on the scale

      (2) Directs driver over the scale so each remaining axle of power unit is weighed

      (3) Directs driver to place trailer axles on scale

      (4) Directs driver so each trailer axle is weighed separately as unit is driven off scale

6. Recorderman

   a. Records weights and measurements in appropriate columns on Recorder Form

   b. During peak traffic periods preference is given to recording axle measurements. Weight data can be recorded later from Pit Scale Form

7. Manual Traffic Counter

   a. One traffic counter will be used at each scale house to record traffic in one direction of travel only

The following general rules should be applied to all types of station locations:

A. At times when there are no vehicles in the station to be weighed the Interviewer, Scaleman or Tapeman, Traffic Directors, and Recorderman will be seated on chairs which are located on the shoulder edge of oncoming traffic or beside the permanent pit scale house. Please remain seated until a truck approaches the weighing area.

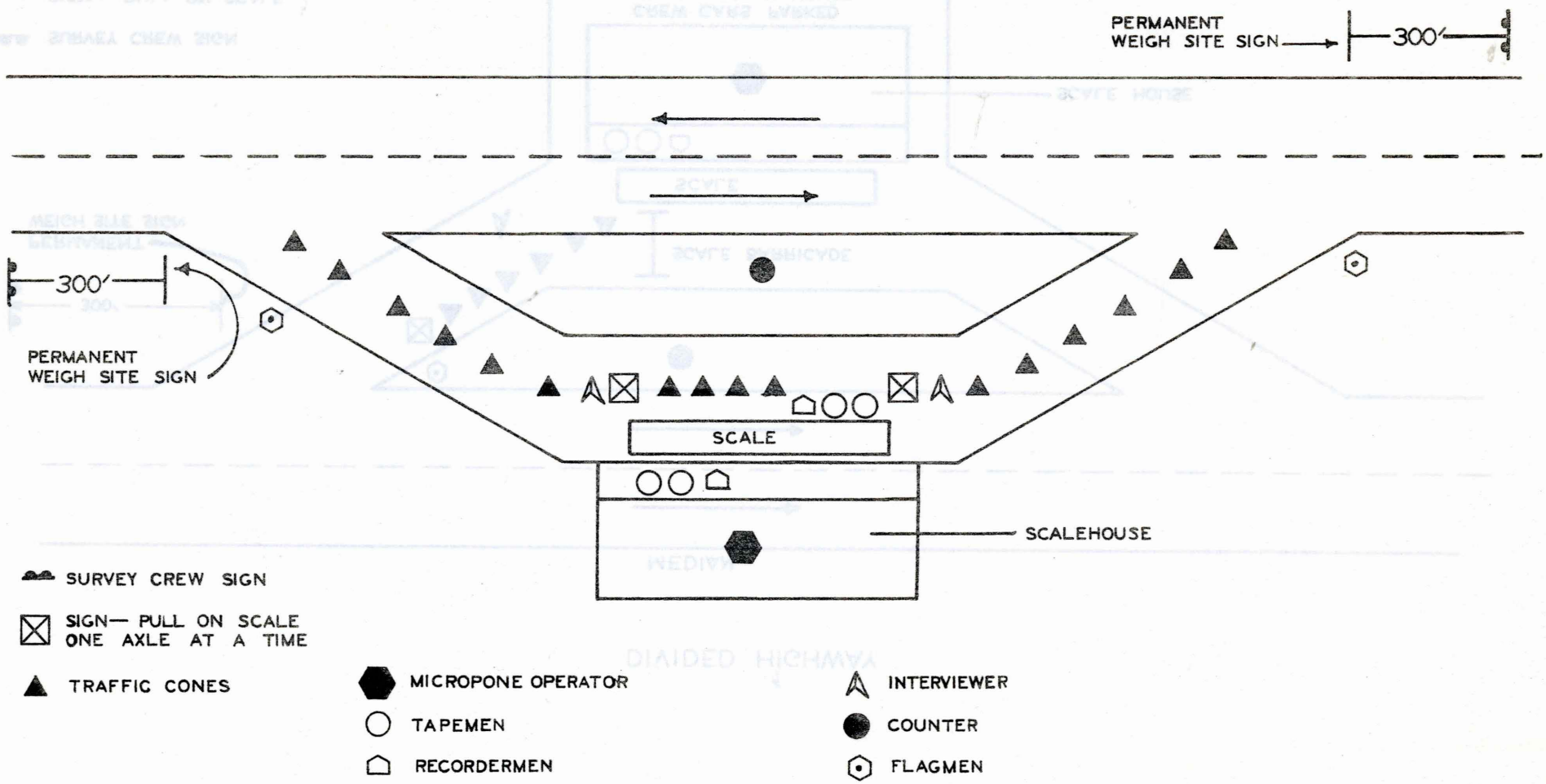
B. All personnel will work within the weighing area while the station is being operated.

C. During slack weighing periods all personnel will work on completing the coding of the field sheets.

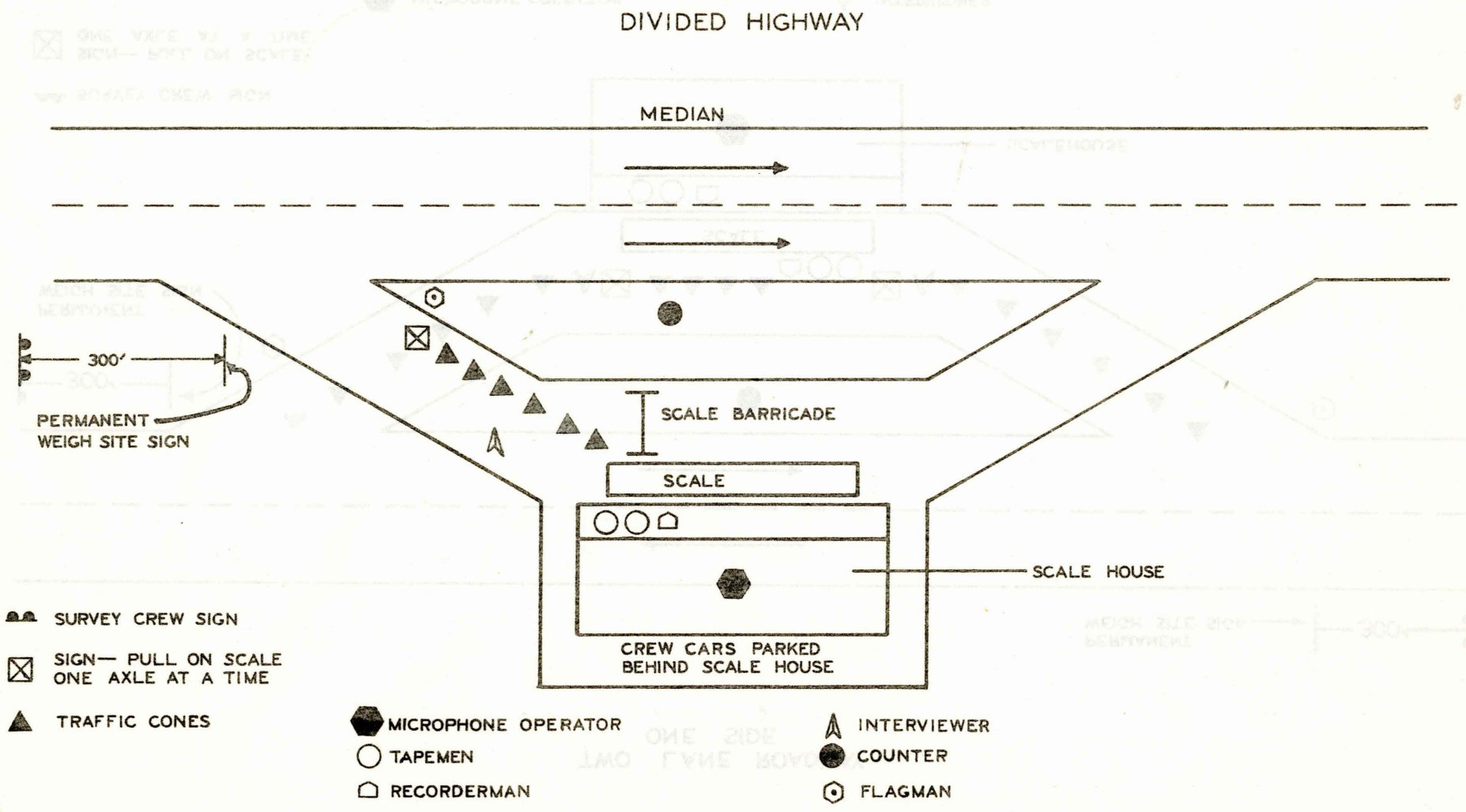
D. If, at any time, the vehicles waiting to be weighed should become lined up out to the entrance of the weighing area, and by direction of Party Chief or Supervisor, the scale operation will be closed to allow other trucks to move on until the operation can be continued safely.

TRUCK WEIGH STATION
PIT SCALE

TWO LANE ROADWAY
ONE SIDE



TRUCK WEIGH STATION
PIT SCALE



PART V

RECORDER FORM

V. RECORDER FORM

The recorder form is shown below and will be completed as indicated in this section.

IOWA DEPARTMENT OF TRANSPORTATION
OFFICE OF TRANSPORTATION INVENTORY
AMES, IOWA 50010
TRUCK WEIGHT SURVEY RECORDER FORM

SHEET ___ OF ___
RECORDER _____
WEIGHTS BY _____
CODED BY _____

TYPE	STATE	HWY. SYS.	STA. NO.	DO.T.	YEAR	MON.	DATE	HOUR
7	–	9						
–	2 3	4	5 6 7 8	9	10 11	12 13	14 15	16 17

CONTROL NO	VEH TYPE: GEN TYP AX	VEH TYPE: REG AX	VEH TYPE: TRL AX	VEH TYPE: STATE	VEH TYPE: AXLE	BODY TYPE	FUEL TYPE	GROSS REG WGT. GROUP	REG WEIGHT	BASIS REG	MODEL YEAR	CLASS OP	COMMODITY	E OR L	TOTAL WEIGHT	AXLE WEIGHTS: AXLE A	AXLE WEIGHTS: AXLE B	AXLE WEIGHTS: AXLE C	AXLE WEIGHTS: AXLE D	AXLE WEIGHTS: AXLE E	AXLE MEASUREMENTS: AXLE A-B	AXLE MEASUREMENTS: AXLE B-C	AXLE MEASUREMENTS: AXLE C-D	AXLE MEASUREMENTS: AXLE D-E	TOTAL WHEEL BASE	SERIAL NO.	CARD NO.
	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
1																											
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4																											
5																											
6																											
7																											
8																											
9																											
10																											

Commodity	Code
Ammonia	28190
Asphalt Shingles	29520
Green Beans	01390
Beer	20821
Bottles (Empty)	32210
Burial Vaults	34500
Cars	37111
Caterpillar	35310
Cattle	01411
Cement (Dry)	32411
CO_2 (Carbon Dioxide)	28130
Concrete (wet Mix)	32710
Eggs	01520
Feed (Bulk)	20421
Freight (General)	41100
Furniture	25000
Gravel	14412
Hay	01191
Hogs	01413
Horses	01920
Household Goods	41100
Insulation	32300
LTL	41100
Lumber	24000
Meat (Boxed)	20120
Meat (Swing)	20110
Milk Process	20260
Motorcycles	37500
Oats	01133
Pallets Wood	42100
Parcel	47100
Plywood	24300
Pop	20860
Potatoes	01195
Potato Chips	20900
Poultry	01510
PreFabHomes	24320
PreFab Steel Bldg	34470
RR Tools	34200
Refrigerator	36320
Roofing	29520
Soybean	01144
SoybeanMeal	20923
Steel (Axles & Beams)	33125
Steel (Pipes & Tubing)	33126
Steel (Rods & Bars)	33124
Steel Sheets	33123
Tools	34200
Tractors	35200

Column 1: Card Code (1) is precoded.

Column 2-3: State Code

This code will be pre-coded on the forms.
Iowa's code is 19.

Column 4-5: Highway System

CODE ACCORDING TO THE FOLLOWING DATA

Column 6-8: Station Number

Column	Highway System (4-5)	Station Number (6-8)	Route	Location
	03	09A (Ft. Dodge)	U.S. 20	On U.S. 20 just west of the Jct. of U.S. 20 and Co. Rd. P59 east of the east city limits of Ft. Dodge
	03	24B (Waterloo)	U.S. 218	On U.S. 218 just south of the Int. of U.S. 218 and Co. Rd. D35, 4 miles southeast of Waterloo
	04	32C (Mason City)	U.S. 65	On U.S. 65 just south of the Int. of U.S. 65 and 25th St. NW in the north part of Mason City
	04	35D (Davenport)	U.S. 61	On U.S. 61 just west of the Int. of U.S. 61 and Credit Island Lane, southwest part of Davenport
	03	55E (Cedar Rapids)	U.S. 30 & 218	On U.S. 30 and 218, ½ mile west of the Jct. of U.S. 30, 218 and Ia. 270 at the permanent pit scale location, 5½ miles west of Cedar Rapids
	03	59F (Pleasantville)	Ia. 5	On Ia. 5, 1 mile north of the west Jct. of Ia. 5, 92 and 181 south of Pleasantville

08 47I

07 41K & 42L

Column	Highway System (4-5)	Station Number (6-8)	Route	Location
	03	74H (Ogden)	U.S. 30 & 169	On U.S. 30 and 169, 1 mile west of the east Jct. of U.S. 30 and 169 at the permanent pit scale location west of Ogden
	03	76M (Carroll)	U.S. 71 & Ia. 141	On U.S. 71 and Ia. 141 just west of the east Jct. of U.S. 71 and Ia. 141, 10 miles south of Carroll
	03	85J (Afton)	U.S. 34	On U.S. 34 and 169, 1 mile east of the west Jct. of U.S. 34 and 169 east of Afton
	01	91S (Tipton)	I-80	On I-80, at the permanent pit scale location 2 miles east of the west Jct. of I-80 and Ia. 38, 9 miles south of Tipton
	01	92N (Des Moines)	I-80	On I-80, at the permanent pit scale location just west of the Jct. of I-80 and U.S. 65, northeast of Des Moines
	01	93P (Avoca)	I-80	On I-80, at the permanent pit scale location 3 miles east of the Jct. of I-80 and U.S. 59
	01	94Q (Ames)	I-35	On I-35, at the permanent pit scale location 3 miles north of the Jct. of I-35 and Ia. 210
	01	95R (Salix)	I-29	On I-29, at the permanent pit scale location 4 miles south of Salix Interchange

Column	Highway System (4-5)	Station Number (6-8)	Route	Location
	01	96T (Mo. Valley)	I-29	On I-29 and U.S. 275, at the permanent pit scale location 2 miles south of the Jct. of I-29, U.S. 30 and 75
	01	97U (Osceola)	I-35	On I-35, 5 miles south of U.S. 34 and I-35 Interchange

Column 9: Direction of Travel

Direction of Travel	Code
Northbound	1
Eastbound	3
Southbound	5
Westbound	7

Column 10-11: Year of Survey

Code 75 for 1975

Column 12-13: Month

Month	Code	Month	Code
January	01	July	07
February	02	August	08
March	03	September	09
April	04	October	10
May	05	November	11
June	06	December	12

Columns 14-15: Day of the Month

Code the day of the month using a 2 digit code (01-31)

Columns 16-17: Hour

12:00 AM - 1:00 AM - 00	12:00 PM - 1:00 PM - 12
1:00 AM - 2:00 AM - 01	1:00 PM - 2:00 PM - 13
2:00 AM - 3:00 AM - 02	2:00 PM - 3:00 PM - 14
3:00 AM - 4:00 AM - 03	3:00 PM - 4:00 PM - 15
4:00 AM - 5:00 AM - 04	4:00 PM - 5:00 PM - 16
5:00 AM - 6:00 AM - 05	5:00 PM - 6:00 PM - 17
6:00 AM - 7:00 AM - 06	6:00 PM - 7:00 PM - 18
7:00 AM - 8:00 AM - 07	7:00 PM - 8:00 PM - 19
8:00 AM - 9:00 AM - 08	8:00 PM - 9:00 PM - 20
9:00 AM - 10:00 AM - 09	9:00 PM - 10:00 PM - 21
10:00 AM - 11:00 AM - 10	10:00 PM - 11:00 PM - 22
11:00 AM - 12:00 PM - 11	11:00 PM - 12:00 PM - 23

Columns 18-41

a. These columns will be left blank by the recorder during station operations. They will then be coded from the Interviewer's Form.

b. Columns 18-23: Vehicle Type

Code the vehicle type as shown on the Interviewer's Form for that control number. Check to insure that the number of axle weights and measurements agree with that vehicle type; correct as necessary.

c. Columns 24-25: Body Type

Code as shown on the Interviewer's Form unless Body Type conflicts with Vehicle Type or Commodities; correct as necessary.

d. Column 26: Fuel Type

Code as shown on Interviewer's Form. If blank, code 9.

e. Columns 27-28: Gross Registered Weight Group

Leave blank; will be coded by computer.

f. Columns 29-31: Registered Weight

Enter from Interviewer's Form prefix with zeros when necessary. Check against Vehicle Type to insure that the registered weight is reasonable.

g. Column 32: Basis of Registration

The interviewer will have placed a check mark ( ) in this column for Iowa vehicles. For all other states, he will have entered the abbreviation of the state name. For states listed in the following table code as shown, for all others, including Iowa, code 1. If left blank or has Canada or Mexico, code 9.

State	Code	State	Code
Alaska	3	Montana	2
Arizona	3	Neveda	3
California	3	New Mexico	5
Colorado	3	Ohio	3
District of Columbia	3	Oregon	2
Florida	3	Pennsylvania	2
Hawaii	3	South Dakota	5
Louisiana	6	Texas	2
Maryland	5	Wyoming	3
Michigan	3		

h. Columns 33-34: Model Year

Code as shown by the interviewer; if no entry, leave blank.

i. Column 35: Class of Operation

Code as shown on the Interview form if 1, 2, or 3; for all other entries or blank, code 9.

j. Columns 36-40: Commodity

The interviewer will have entered the name of the commodity carried by the truck. The left side of the recorder form has codes for some of the most common commodities; if not listed here, see Appendix B for the Commodity Codes. Do not guess.

k. Column 41: Empty or Loaded

Code 0 if truck is empty. Code 1 if truck is loaded. If a commodity is listed the truck must be coded as loaded. Code 2 if truck is carrying a non-commodity load such as mounted equipment or if the truck is a utility truck.

Two systems of weighing trucks are used by Truck Weigh Survey crews. One System uses manually placed portable scales which will give individual readings for each axle weighed. The other system of weighing is by pit scales in which each axle of a unit is pulled on one at a time, the weight is recorded, then the complete trailer unit is pulled on and weighed and as each axle is removed from the scale that weight is recorded. Note differences in weights of the two systems as shown on page V-10.

Columns 42-76 will be coded by the Recorderman as follows:

A. Columns 42-60: Weights

1. The weights are always taken to the nearest 100 lbs. and coded that way.

Example - Scale Weight	Code
12,500 lbs.	125
9,700 lbs.	097

2. Columns without axle weight will be left blank.

3. Columns 42-45: Total Weight

   a. These columns will be left blank by field personnel when recording vehicles with 5 axles or less.

   b. The weight of the sixth axle on six axle vehicles is recorded in columns 42-45. This weight will be circled.

4. Columns 46-48: Axle A

   a. These three columns must be coded with the steering axle weight

5. Columns 49-51: Axle B

   a. The second axle weight of the vehicle

6. Columns 52-54: Axle C

   a. The third axle weight of the vehicle

7. Columns 55-57: Axle D

   a. The fourth axle weight of the vehicle

8. Columns 58-60: Axle E

   a. The fifth axle weight of the vehicle

B. Columns 61-76: Measurements

1. Measurements are taken to the nearest tneth of a foot from the center hub of the steering axle to center hub of each succeeding axle.

2. Columns 61-63: Axle A-B

   a. The actual distance between the steering axle and the first succeeding axle

3. Columns 64-66: Axle B-C

   a. The distance between the steering axle and second succeeding axle

4. Columns 67-69: Axle C-D

   a. The distance between the steering axle and third succeeding axle

5. Columns 70-72: Axle D-F

   a. The distance between the steering axle and the fourth succeeding axle

6. Columns 73-76: Total Wheel Base

   a. These columns will be left blank by field personnel when recording vehicles with 5 axles or less

b. The distance between the steering axle and the sixth succeeding axle is recorded in columns 73-76 for six axle vehicles. This measurement will be circled.

A general rule to follow is that you will always have one less measurement than weight coded on the Recorder Form.

Columns 77-79: Serial Number

These columns will be left blank by the recorder and coder. The person doing the final check and coding of continuation cards will code the serial numbers. The serial numbers will begin at 001 for each direction for each shift. Start with the first hour of the shift and number all trucks coded consecutively. Record these numbers by direction and hour on Control Card 10 for P131010.

Column 80: Card Number

This column will be left blank by the recorder. The coder will code a zero for trucks with five axles or less (no continuation card used) and a one if the truck has six or more axles (a continuation card will be used).

Continuation Cards

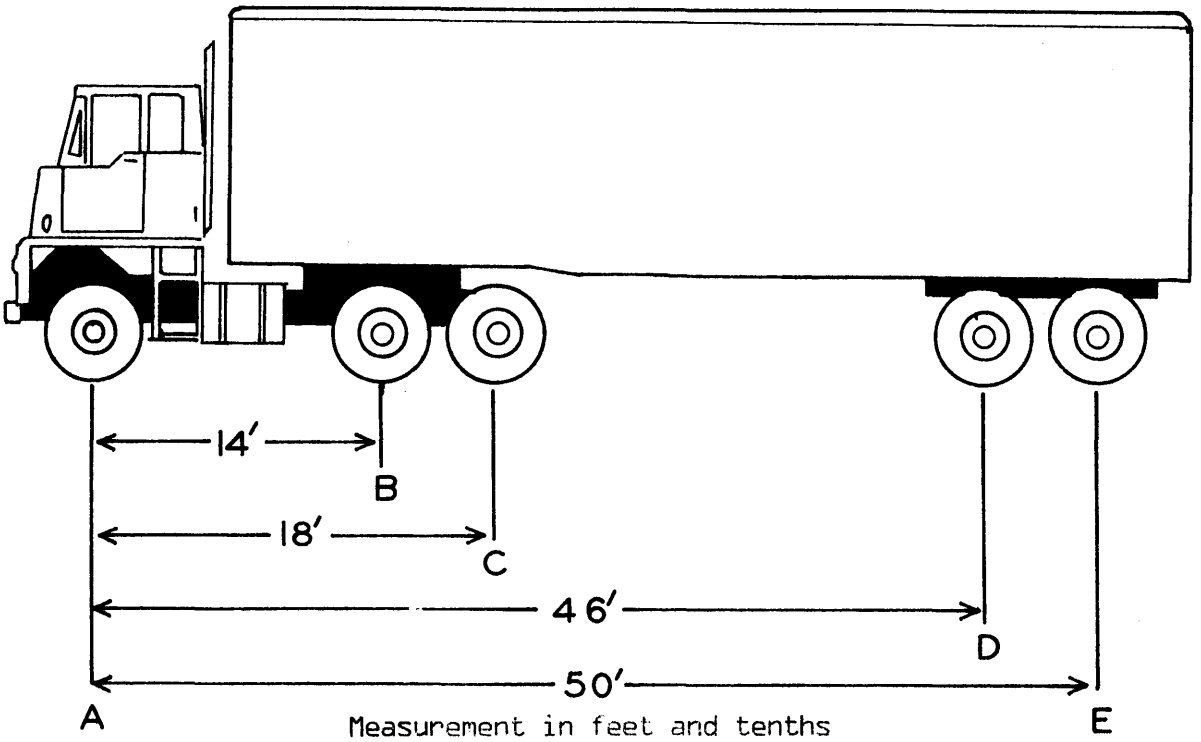
These will be coded in the office for all trucks that have six or more axles. They will be coded in the following manner:

a. Columns 1 through 28 and columns 77-79 will be coded the same as the first card.

b. Column 80 will be coded 9

c. The sixth axle weight will be coded in columns 29-31 (axle F). Additional axle weights will be coded in the following fields

d. The distance to the sixth axle will be coded in columns 53-55 (Axle E-F). Additional axle measurements will be coded in the following fields.



Measurement in feet and tenths

Weights in 100 lb. units

057 port. scales
114 pit scales

080 port. scales
274 pit scales

078 port. scales
430 pit scales

050 port. scales
194 pit scales

047 port. scales
094 pit scales

PORTABLE SCALES

TOTAL WEIGHT	AXLE WEIGHTS				
	AXLE A	AXLE B	AXLE C	AXLE D	AXLE E
42 43 44 45	46 47 48	49 50 51	52 53 54	55 56 57	58 59 60
	057	080	078	050	047

PIT SCALES

TOTAL WEIGHT	AXLE WEIGHTS				
	AXLE A	AXLE B	AXLE C	AXLE D	AXLE E
42 43 44 45	46 47 48	49 50 51	52 53 54	55 56 57	58 59 60
	114	274	430	194	094

AXLE MEASUREMENTS				TOTAL WHEEL BASE
AXLE A–B	AXLE B–C	AXLE C–D	AXLE D–E	
61 62 63	64 65 66	67 68 69	70 71 72	73 74 75 76
140	180	460	500	

PART VI

INTERVIEW FORM

VI. SURVEY INTERVIEW FORM

All traffic passing the designated station will be counted and classified. All trucks and truck combinations, and buses, will be interviewed, weighed and measured.

The Interview Form contains data for columns 18 through 41 for the Recorder Form. This data is gathered by the Interviewer and later transferred to the Recorder Form.

IOWA DEPARTMENT OF TRANSPORTATION
OFFICE OF TRANSPORTATION INVENTORY
AMES, IOWA 50010
TRUCK WEIGHT SURVEY INTERVIEW FORM

STATION NO. _____
DIR. OF TRAVEL _____

DATE _____ HOUR _____
SHEET _____ OF _____
INTERVIEWER _____

CONTROL NUMBER	VEHICLE TYPE 18-23	BODY TYPE 24-25	FUEL 26	REGISTERED WEIGHT 29-31	STATE REG. 32	MODEL YEAR 33-34	CLASS OPERATION 35	COMMODITY 36-40	Loaded or Empty 41
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									

COMMON BODY CODES
11 Panel
12 Pickup
13 Light Utility
14 Personnel, Cargo
15 Carryall/Minibus
21 Flat
22 Low Boy Trailer
23 Rack
24 Livestock Rack
25 Riggers/Oil Field
26 Lumber
27 Log or Pipe
28 Canopy
31 Express
32 Open Top Box/Van
33 Grain
34 Dump
35 Hopper
41 Van
42 Refrigeration Van
43 Moving Van
51 Tank
52 Petroleum Tank
53 Bituminous Tank
54 Bottler
61 Multi Delivery
62 Auto Transporter
63 Armored Car
64 Boat Carrier
71 Concrete Mixer
72 Wrecker
73 Utilities
74 Garbage, Refuse
75 Container
76 Equipment
77 Bare Chassis
78 Shop Body
79 Dwelling Body
88 Truck-Tractor
89 Empty Log Truck
91 Intercity Bus
92 Suburban Bus
93 City Transit Bus
94 School Bus

FUEL TYPE CODE
1 Gasoline
2 Diesel
3 Propane
4 Turbine
8 Other
9 Not Determined

BASIS OF REGISTRATION
Code Col. 32 with a (1) except for the following:

Code	State
3	Alaska
3	Arizona
3	California
3	Colorado
3	Florida
3	Hawaii
6	Louisiana
5	Maryland
3	Michigan
2	Montana
3	Nevada
5	New Mexico
3	Ohio
2	Oregon
2	Pennsylvania
5	South Dakota
2	Texas
3	Wyoming
3	District of Columbia
9	Canada, Mexico

Class of Operation
1 Private
2 I.C.C. Permits
3 Other Hire
9 Not Determined (Canada, Mexico)

Loaded or Empty
Empty 0
Loaded with a Product 1
Non-Commodity Movement 2

A. Complete the heading with the appropriate entries as indicated on the form.

B. Vehicle Type (Columns 18-23)

A six digit code is used to describe and classify the truck. Each digit has a specific meaning within its place.

1. First Digit (Column 18) Denotes the Vehicle Type

Code	Description
1	Buses
2	All single unit trucks without full trailers - including pickup or panel
3	Truck-Tractor, Semi-Trailer
4	Single unit truck and one full trailer
5	Truck-Tractor, Semi-Trailer, and a full trailer
6	Single unit truck and two (2) full trailers
7	Truck-Tractor, Semi-Trailer, and two (2) full trailers
8	Single unit truck and three (3) full trailers

2. Second Digit (Column 19) Denotes number of axles on the power unit (except the "20, 21 series").

20 - Pickups or panels - less than 1 ton rated capacity

21 - Pickups or Panels - equivalent to 1 ton or more rated capacity. Includes all four wheel drive vehicles and multi-stop or standup delivery trucks.

3. Third Digit (Column 20)

a. Denotes number of axles on first trailer following power unit

b. For single unit trucks, pickups, and panels, the third digit denotes the registration modifier as follows:

Code	Description
0	State of registration not recorded
3	In-state non-government owned
4	In-state government owned
5	Out-of-state non-government owned
6	Out-of-state government owned
7	Federal Government owned

c. For vehicles with spread tandems the third digit will be coded 7, 8, or 9 as shown below. Identification of spread tandems on a trailer is based on the normal spacing of four (4) feet between axles of a tandem. Spread tandems are vehicles with axle spacings observed to be about double the normal spacing (a distance of 8 feet or more)

7 - Two-axle trailer with one spread tandem
8 - Three-axle trailer with one spread tandem
9 - Four-axle trailer with one spread tandem

4. Fourth Digit (Column 21) Light Trailer Modifier

a. All light trailers having <u>passenger car type or smaller wheels</u> are classified with the tow vehicle

b. Heavy trailers with <u>dual tires or heavy truck-type single tires</u> should be classified in the appropriate truck combination category

c. Trailer modifiers are classified with the 20, 21, 22, 23 series Single Unit Trucks

Code	Description
0	No Trailer
1	Camp Trailer (Canvas or Collapsible)
2	Travel or Mobile Home Trailer
3	Cargo or Livestock Trailer
4	Boat Trailer
5	Towed Equipment
*6	Towed Auto
*7	Towed Truck
*8	"Slantback" (Tractor(s) or single unit truck(s) with front axles on unit ahead - any or all types trailed vehicles)

* Always coded as light trailer modifiers

d. The fourth digit indicates the number of axles on the second trailer in "5" or "6" series of vehicles

e. The fourth digit in the "3" or "4" series will always be coded "0".

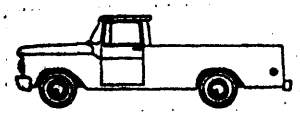
5. Fifth Digit (Column 22) State Axle

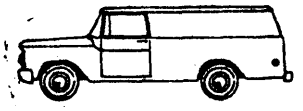
a. The fifth digit will always be coded "0".

6. Sixth Digit (Column 23) State Axle

a. The sixth digit will always be coded "0".

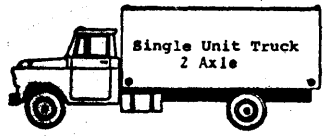
VEHICLE TYPE



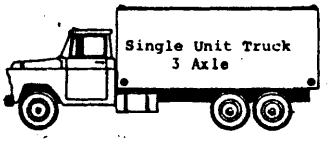


Pickup or Panel 4-Wheel Truck
200000 = Less than 1 ton rated capacity
210000 = 1 ton or more rated capacity

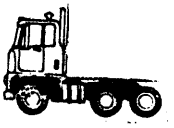
220000



220000



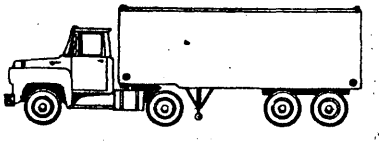
230000



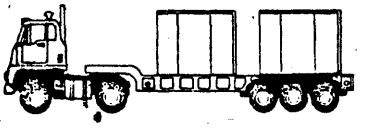
230000

TRUCKTRACTOR - SEMITRAILER

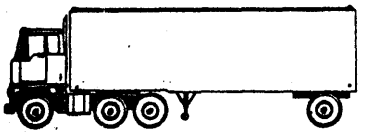
321000



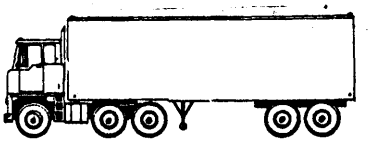
322000



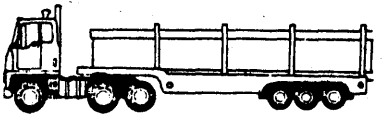
323000



331000

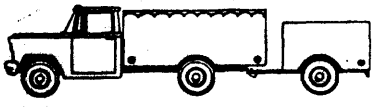


332000

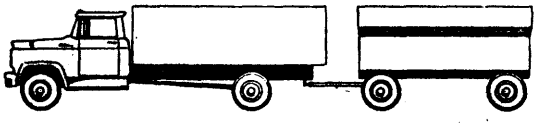


333000

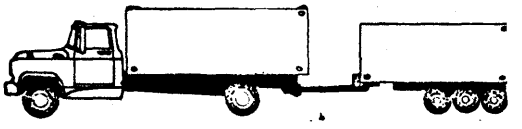
SINGLE UNIT TRUCK WITH TRAILER



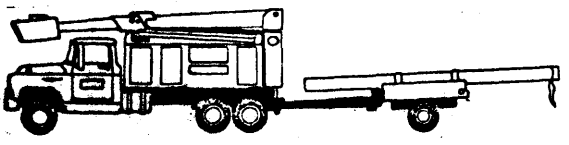
421000



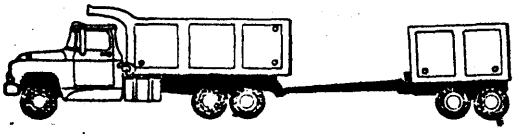
422000



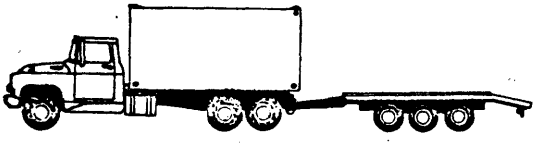
423000



431000

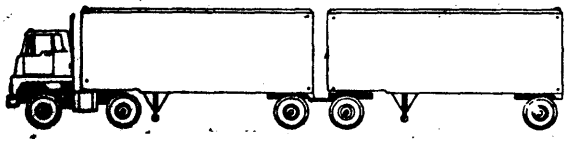


432000

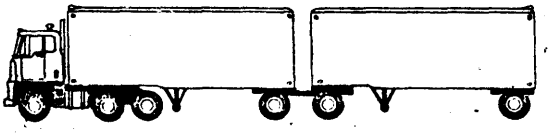


433000

TRUCKTRACTOR - SEMITRAILER WITH TRAILER (DOUBLE BOTTOM)



521200



531200

C. Body Types (Columns 24 & 25)

The number system will be used by the field personnel at all times in coding body types.

1. Light Truck Body Types

Code	Type
11	Panel
12	Pickup
13	Light Utility
14	Personnel and Cargo
15	Carry-all or Minibus

It is possible to encounter other body types on light trucks and the correct code should be used:

Example: 61 Multi-stop or standup delivery

2. General Trucks and Semi-Trailer Body Types

There are 39 body types in this area ranging from the "20" through the "90" series of numbers to indicate a specific body type

a. Use of the "76" (Equipment) code requires special coding

Example: 76 Equipment - Truck mounted or self-propelled designed for highway travel carrying permanently mounted equipment, such as truck-mounted cranes, compressors, welding units, and drilling rigs

Following is the complete list, by body types, to be used in classifying the vehicles.

Light Truck

Code	Description
11	Panel - A fully enclosed body of limited capacity which includes driver's compartment
12	Pickup - A small open box or express body
13	Light Utility - A body designed to carry readily accessible tools, equipment, and supplies in integrally constructed compartments, with or without other cargo spaces
14	Personnel and Cargo - A body with large integral enclosed passenger compartment and a separate open box or express body
15	Carryall or Minibus - An enclosed utility body with side windows and one or more removable seats designed for transporting either passengers, light cargo or both. (Station wagons are considered to be passenger cars and are not included in this category.)

General Truck and Semi-Trailer Bodies

21	Platform, Flat, or Stake - A body having a floor without sides or roof, with or without readily removable stakes which may be tied together with chains, slats, or panels.
22	Low-Boy Trailer - A truck trailer with a platform body constructed to provide a low loading height and designed for the transportation of extremely heavy or bulky property.
23	Rack - A body with fixed slatted sides and headboard.

Code	Description
24	Livestock Rack - A rack body with or without roof designed primarily for transportation of livestock.
25	Riggers or Oil Field - A platform body of heavy construction equipped with a rear end roller or bullnose adapted for laoding by winch or crane mounted on the vehicle and designed primarily for rigging, construction or work in oil fields.
26	Lumber - A platform body usually with transverse rollers designed primarily for the transportation of sawed lumber.
27	Log or Pipe - A body comprised of sill, bolsters, with or without headboard, with provision for uprights, and designed primarily for the transportation of logs, pipes, poles, or other loads which may be boomed. (Use body type codes 21 or 23 for trucks hauling pulpwood).
28	Canopy - An express body with fixed or removable uprights and roof which may be integral or separate from cab.
31	Express - An open box body with or without flareboards.
32	Open Top Box or Van - A body with high closed sides and ends and a movable top which usually is a tarpaulin cover.
33	Grain - A low-side open box primarily designed to transport dry fluid commodities in bulk
34	Dump - A low-side open box body designed primarily to transport dry fluid commodities in bulk which can be tilted or otherwise manipulated to discharge its load by gravity.
35	Hopper - A body which is capable of discharging its load by gravity or mechanical power through means other than tilting and usually loaded from the top.

Code	Description
41	Van - A fully enclosed body designed primarily for the transportation of packaged commodities.
42	Refrigerated Van - A van body designed primarily for the transportation of commodities or the vending of food, beverages, or confections at controlled temperatures. It may be provided with equipment for refrigeration or heating.
43	Furniture or Moving Van - A van body designed primarily for transportation of furniture or household goods. Customarily, when truck-mounted, it includes an integral driver's compartment.
51	Tank - A body designed for bulk liquid commodities other than petroleum.
52	Petroleum Tank - A body designed for transportation of petroleum products.
53	Bituminous Material Distributor - A tank body provided with means for distributing hot bituminous material under pressure, usually equipped with means for heating the material.
54	Bottler - A body designed primarily for the transportation of cased bottled beverages on open or closed shelves, A-frames or pallets.
61	Multi-stop or Standup Delivery - A fully enclosed body with driver's compartment integral and designed for easy access.
62	Automobile Transporter - A body designed primarily for the transportation of other vehicles.
63	Armored Car (Not Military) - An enclosed cargo body with integral driver's compartment so constructed as to protect cargo and crew from overt attack.
64	Boat Carrier - A body designed to transport two (2) or more boats.

Code	Description
71	Concrete Mixer or Agitator - A body designed and equipped to mix or agitate concrete
72	Wrecker - A body designed primarily for transportation of equipment for salvaging disabled vehicles and equipped with means for hoisting and towing such vehicles.
73	Utilities - A body designed primarily for the transportation of tools, equipment, and supplies for construction, maintenance, and repair purposes.
74	Garbage and Refuse - A dump body designed primarily for the collection of garbage and refuse. It is frequently equipped within the body.
75	Container - A body designed to transport bundled, stacked, or palletized commodities or special containers, with special lifting, locking, or loading devices.
76	Equipment - Any truck mounted or other self-propelled wheeled equipment designed for highway travel, such as truck-mounted cranes, well drills, compressors, etc.
77	Bare Chassis - A cargo type vehicle with no provision for carrying load. This code should be used also for the body type when one truck, without a body, is transporting a second without a body, where the front wheels of the second rest on the first.
78	Shop - A body constructed for use as a shop, laboratory, office, or for a similar purpose with tools, equipment, or supplied to be used, operated, or dispensed from inside the body. Insulated bodies designed for vending hot or cold foods, beverages, or confections should be coded 42, insulated van body.
79	Dwelling Body - A body, other than shop body, designed for use as an abode with bunk(s), including house body and camper body.

Code	Description
88	Truck-Tractor without Semi-Trailer or Trailer - Any vehicle constructed primarily to pull a semi-trailer, full trailer, pole trailer, house trailer, or equipment.
89	Empty log truck - carrying pole trailer.
91	Intercity Bus - A body constructed with reclining seats and large separate cargo compartment for transporting persons on journeys of long duration.
92	Suburban Bus - A body constructed with fixed or reclining seats, overhead passenger luggage space, provision for standing passengers, with or without quick opening separate entrance and exit doors.
93	City Transit Bus - A body constructed with fixed seats, provision for a high proportion of standing passengers, with quick opening entrance and exit doors.
94	School Bus - A light bus body constructed for the transportation of students.

The Fuel Type (Column 26), Registered Weight (Columns 29-31) and State of Registration (Column 32) is information the Interviewer should be able to code by visually reading the truck license or truck door and interviewing the driver.

D. Fuel Type (Column 26)

1. Classify fuel type by interviewing driver

Code	Description
1	Gasoline
2	Diesel
3	Propane

Code	Description
4	Turbine
8	Other
9	Not Determined

E. Registered Weight (Columns 29-31) Coded in thousands of pounds

Code	Pounds
072	72,000
006	6,000

1. Information can be obtained from:

   a. Truck License Plate - Double the tonnage sticker value to get thousand pound code as shown in the following example

Code	Sticker
072	36T
006	3T

   b. Door of Truck or Side of Trailer

Code	Marked
072	GRW 72,000

F. State of Registration (Column 32, Interviewer)

Basis of Registration (Column 32, Recorder)

This information must be gathered according to the vehicle's home base state. Abbreviations of the state may be used, except for Iowa home based trucks which will be designated by (✓) in the space provided on the sheet.

When transferring the information from the Interviewer's Form to the Recorderman's Form the titles differ but the Column 32 information is the same. Written information will be changed to the following number code system:

Code all but the following states with a "1":

Code	State
3	Alaska
3	Arizona
3	California
3	Colorado
3	Florida
3	Hawaii
6	Louisiana
5	Maryland
3	Michigan
2	Montana
3	Nevada
5	New Mexico
3	Ohio
2	Oregon
2	Pennsylvania
5	South Dakota
2	Texas
3	Wyoming
3	District of Columbia
9	Canada and Mexico

The Model Year (Columns 33-34), Class of Operation (Column 35), Commodity (Columns 36-40), and Loaded or Empty (Column 41) is information the interviewer will have to obtain from the driver of the vehicle to complete filling out the above columns.

G. Model Year (Columns 33-34)

1. The actual model year of the vehicle

Code	Model Year
74	1974

H. Class of Operation (Column 35)

Code	Description
1	Privately operated vehicles in general service. The load carried is the property of the owner of the vehicle
2	For hire operation under certification of the Interstate Commerce Commission; such vehicles bear a plate displaying the "MC" number of permit or certificate.
3	Other for hire operation, all vehicles not bearing ICC identification carrying cargo not property of the owner of the vehicle.
9	Class of operation not determined or does not apply. This code may be used for vehicles from Canada or Mexico

I. Commodity (Columns 36-40)

1. The Interviewer gathers commodity information in the written form of one or two words on his form.

   a. Gather precise information on the commodity, not general

      Example: Wrong - Meat

      Correct - Swinging meat or boxed meat

b. Commodity code for equipment body type comes from the 35000 or 36000 series of the commodities listing:

Coded Example:

Body Type (Columns 24-25)	Commodity (Columns 36-40)
76 - Equipment	35310 - Welding Unit

c. When the commodity is transferred to the Recorderman's form from the Interviewer's form the written commodity will be changed to a numerical code by using the commodity code manual

d. Trucks that are empty will be coded with all "0's" in the code boxes

J. Loaded or Empty (Column 41)

The loaded or empty must match the commodity columns exactly. A vehicle with a commodity code in the commodity column therefore must be coded as a loaded vehicle.

1.

Code	Description
0	Empty
1	Loaded
2	Non-commodity movement (utility or mounted equipment)

2. Code "2" is used for vehicles which are empty but could not be considered as transporting a commodity.

Examples: Utility trucks such as gas, telephone and power companies, and plumbing, heating and electrical contractors.

During slack weighing periods the information from the Interviewer's form will be transferred completely and

accurately onto the Recorderman's form.

Double check to insure that the vehicle type matches the weights and measurements for the vehicle types.

PART VII

SCALEMAN'S FORM

VII. SCALEMAN'S FORM

A. Introduction - This form will be used only at the pit scale stations. The form has room for forty trucks in groups of ten. Each group corresponds with one recorder form. See Illustration VII-1 for a sample of the form.

B. Headings - In the upper left hand corner enter the station number and the direction of travel the weights will be for. In the upper right hand corner enter the date the hour the sheet numbers for the hour and your name.

C. Axle Weights - Enter the axle weights for each vehicle. The first axle or steering axle will be under Axle A the second axle under Axle B and so on. There are sufficient columns for seven axles; if a vehicle has more than seven axles start over again under Axle A and circle. See Appendix A for the order that axles are to be weighed for various vehicle types.

Use the top group of ten on the left side first then the bottom group of ten, then the two right hand groups of ten, the top one first. The first sheet of the Scaleman's Form will then correspond to the first four sheets of the Recorder Form.

IOWA DEPARTMENT OF TRANSPORTATION
OFFICE OF TRANSPORTATION INVENTORY
AMES, IOWA 50010
TRUCK WEIGHT SURVEY SCALEMAN'S FORM

STATION NO._____
DIR. TRAVEL_____

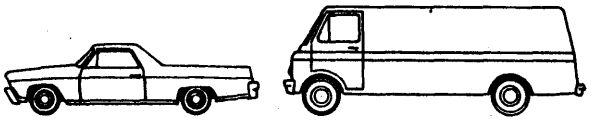
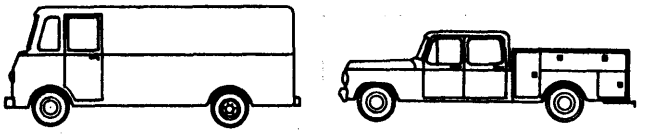
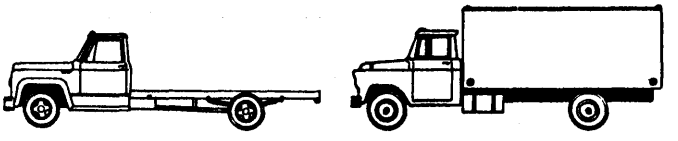
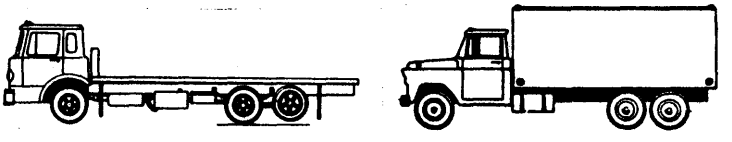
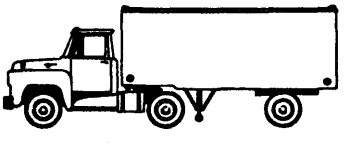
DATE_____ HOUR_____
SHEET_____ OF_____
SCALEMAN_____

CONTROL NUMBER	Axle Weights in Hundreds of Pounds							CONTROL NUMBER	Axle Weights in Hundreds of Pounds						
	Axle A	Axle B	Axle C	Axle D	Axle E	Axle F	Axle G		Axle A	Axle B	Axle C	Axle D	Axle E	Axle F	Axle G
1								1							
2								2							
3								3							
4								4							
5								5							
6								6							
7								7							
8								8							
9								9							
10								10							
1								1							
2								2							
3								3							
4								4							
5								5							
6								6							
7								7							
8								8							
9								9							
10								10							

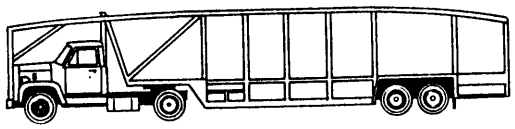
PART VIII

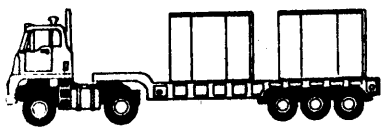
METHODS OF WEIGHING

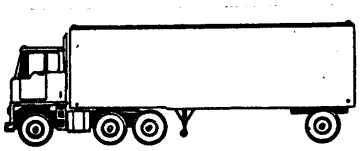
Order of Weighing Vehicles by Axles on Pit or Portable Scales

Pit Scales Vehicle Type		Portable Scales Vehicle Type
2000 Weigh 1 Weigh 1 & 2		2000 Weigh 1 & 2
2100 Weigh 1 Weigh 1 & 2		2100 Weigh 1 & 2
2200 Weigh 1 Weigh 1 & 2		2200 Weigh 1 & 2
2300 Weigh 1 Weigh 1 & 2 Weigh 1 & 2 & 3		2300 Weigh 1 Weigh 2 & 3
2400 Weigh 1 Weigh 1 & 2 Weigh 1 & 2 & 3 Weigh 1 & 2 & 3 & 4		2400 Weigh 1 Weigh 2 & 3 Weigh 3 & 4
3210 Weigh 1 Weigh 1 & 2 Weigh 3		3210 Weigh 1 & 2 Weigh 3

Pit Scales	Portable Scales
Vehicle Type	Vehicle Type
3220	3220
Weigh 1	Weigh 1 & 2
Weigh 1 & 2	Weigh 3 & 4
Weigh 3 & 4	
Weigh 4	
3270	3270
Weigh 1	Weigh 1 & 2
Weigh 1 & 2	Weigh 3 & 4
Weigh 3 & 4	
Weigh 4	
3230	3230
Weigh 1	Weigh 1 & 2
Weigh 1 & 2	Weigh 3 & 4
Weigh 3 & 4 & 5	Weigh 4 & 5
Weigh 4 & 5	
Weigh 5	
3240	3240
Weigh 1	Weigh 1 & 2
Weigh 1 & 2	Weigh 3 & 4
Weigh 3 & 4 & 5 & 6	Weigh 5 & 6
Weigh 4 & 5 & 6	
Weigh 5 & 6	
Weigh 6	
3310	3310
Weigh 1	Weigh 1
Weigh 1 & 2	Weigh 2 & 3
Weigh 1 & 2 & 3	Weigh 4
Weigh 4	







Pit Scales

Vehicle Type

3320

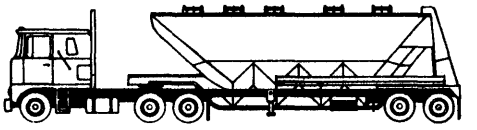
Weigh 1

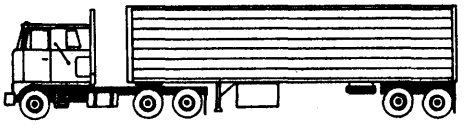
Weigh 1 & 2

Weigh 1 & 2 & 3

Weigh 4 & 5

Weigh 5





3370

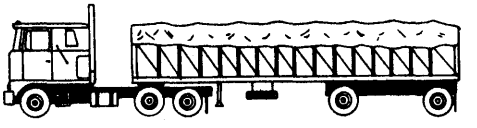
Weigh 1

Weigh 1 & 2

Weigh 1 & 2 & 3

Weigh 4 & 5

Weigh 5



3330

Weigh 1

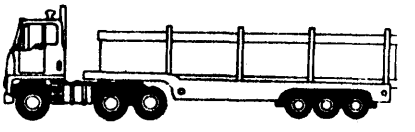
Weigh 1 & 2

Weigh 1 & 2 & 3

Weigh 4 & 5 & 6

Weigh 5 & 6

Weigh 6



3340

Weigh 1

Weigh 1 & 2

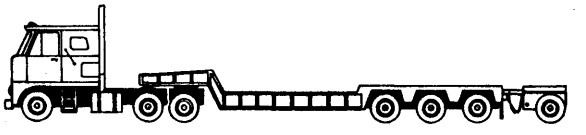
Weigh 1 & 2 & 3

Weigh 4 & 5 & 6 & 7

Weigh 5 & 6 & 7

Weigh 6 & 7

Weigh 7



Portable Scales

Vehicle Type

3320

Weigh 1

Weigh 2 & 3

Weigh 4 & 5

3370

Weigh 1

Weigh 2 & 3

Weigh 4 & 5

3330

Weigh 1

Weigh 2 & 3

Weigh 4 & 5

Weigh 5 & 6

3340

Weigh 1

Weigh 2 & 3

Weigh 4 & 5

Weigh 6 & 7

Pit Scales

Vehicle Type

3430

Weigh 1

Weigh 1 & 2

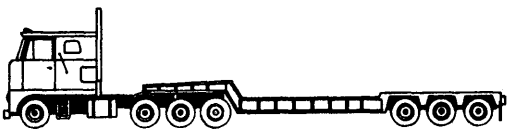
Weigh 1 & 2 & 3

Weigh 1 & 2 & 3 & 4

Weigh 5 & 6 & 7

Weigh 6 & 7

Weigh 7

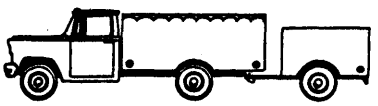


4210

Weigh 1

Weigh 1 & 2

Weigh 3



4220

Weigh 1

Weigh 1 & 2

Weigh 3 & 4

Weigh 4

4230

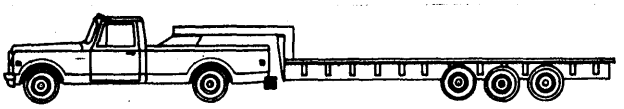
Weigh 1

Weigh 1 & 2

Weigh 3 & 4 & 5

Weigh 4 & 5

Weigh 5



Portable Scales

Vehicle Type

3430

Weigh 1 & 2

Weigh 3 & 4

Weigh 5 & 6

Weigh 6 & 7

4210

Weigh 1 & 2

Weigh 3

4220

Weigh 1 & 2

Weigh 3 & 4

4230

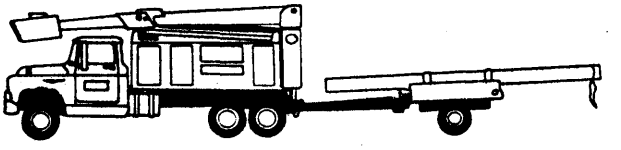
Weigh 1 & 2

Weigh 3 & 4

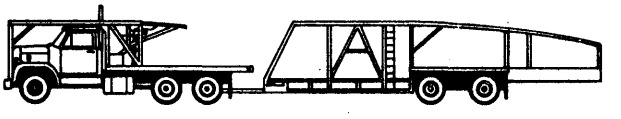
Weigh 4 & 5

Pit Scales	Portable Scales
Vehicle Type	Vehicle Type
4240	4240
Weigh 1	Weigh 1 & 2
Weigh 1 & 2	Weigh 3 & 4
Weigh 3 & 4 & 5 & 6	Weigh 5 & 6
Weigh 4 & 5 & 6	
Weigh 5 & 6	
Weigh 6	

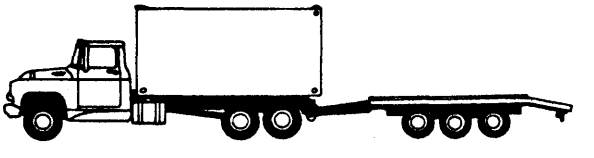
4310	4310
Weigh 1	Weigh 1
Weigh 1 & 2	Weigh 2 & 3
Weigh 1 & 2 & 3	Weigh 4
Weigh 4	



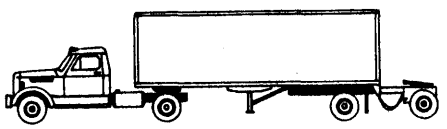
4320	4320
Weigh 1	Weigh 1
Weigh 1 & 2	Weigh 2 & 3
Weigh 1 & 2 & 3	Weigh 4 & 5
Weigh 4 & 5	
Weigh 5	

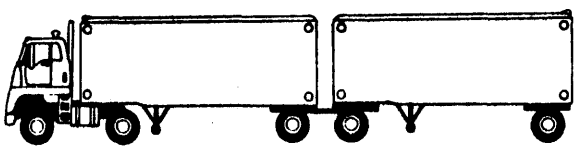


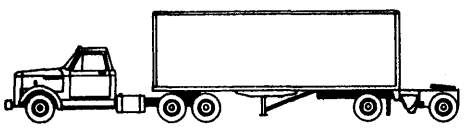
4330	4330
Weigh 1	Weigh 1
Weigh 1 & 2	Weigh 2 & 3
Weigh 1 & 2 & 3	Weigh 4 & 5
Weigh 4 & 5 & 6	Weigh 5 & 6
Weigh 5 & 6	
Weigh 6	



Pit Scales	Portable Scales
Vehicle Type	Vehicle Type
4340	4340
Weigh 1	Weigh 1
Weigh 1 & 2	Weigh 2 & 3
Weigh 1 & 2 & 3	Weigh 4 & 5
Weigh 4 & 5 & 6 & 7	Weigh 6 & 7
Weigh 5 & 6 & 7	
Weigh 6 & 7	
Weigh 7	
5211	5211
Weigh 1	Weigh 1 & 2
Weigh 1 & 2	Weigh 3 & 4
Weigh 3 & 4	
Weigh 4	
5212	5212
Weigh 1	Weigh 1 & 2
Weigh 1 & 2	Weigh 3 & 4
Weigh 3 & 4 & 5	Weigh 5
Weigh 4 & 5	
Weigh 5	
5311	5311
Weigh 1	Weigh 1
Weigh 1 & 2	Weigh 2 & 3
Weigh 1 & 2 & 3	Weigh 4 & 5
Weigh 4 & 5	
Weigh 5	







Pit Scales

Vehicle Type

5312

Weigh 1

Weigh 1 & 2

Weigh 1 & 2 & 3

Weigh 4 & 5

Weigh 5 & 6

Weigh 6

6222

Weigh 1

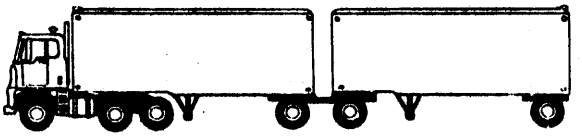
Weigh 1 & 2

Weigh 3 & 4

Weigh 4

Weigh 5 & 6

Weigh 6



Portable Scales

Vehicle Type

5312

Weigh 1

Weigh 2 & 3

Weigh 4 & 5

Weigh 6

6222

Weigh 1 & 2

Weigh 3 & 4

Weigh 5 & 6

PART IX

COUNT FORM

IX. VEHICLE CLASSIFICATION COUNTS (COUNT FORM)

These instructions are designed to acquaint personnel assigned to conduct vehicle classification counts with the various types of vehicles on Iowa highways. These instructions pertain to commercial vehicles and to passenger vehicles.

IOWA DEPARTMENT OF TRANSPORTATION
OFFICE OF TRANSPORTATION INVENTORY
AMES, IOWA 50010
TRUCK WEIGHT SURVEY COUNT FORM

TYPE	STATE	HWY. SYS.	STA. NO.		DOT	YEAR	MON.	DATE	HOUR
7	1 8	0	192	N		77	06	14	14
1	2 3	4	5 6	7	8 9	10 11	12 13	14 15	16 17

COUNTER Bill Davis
CODER

Circle Direction of Travel			North 1 East 3	South 5 West 7	North 1 East 3	South 5 West 7	North 1 East 3	South 5 West 7
PASSENGER CARS	Standard and Compact	18 19 20 21 22	(135)		Type 327000	Type 327000	Type 521100	Type 521100
							(8)	
	Small	23 24 25 26 27	(25)		Type 323000	Type 323000	Type 521200	Type 521200
					Type 331000	Type 331000	Type 531100	Type 531100
Motorcycles and Motor Scooter		38 39 40	/// (3)		Type 337000	Type 337000	Type 531200	Type 531200
Commercial Buses		41 42 43 44	// (2)		(2)		(12)	
					Type 333000	Type 333000	Type 533400	Type 533400
School Buses		45 46 47					/ (1)	
SINGLE UNIT TRUCK	200000 Pickup and Panel	48 49 50 51	(50)		Type 334000	Type 334000	Type 621100	Type 621100
							// (2)	
	210000 Heavy 4 Tire	52 53 54 55	~~////~~ ~~////~~ // P.U. (17) (67) (50)	P.U.	Type 343000	Type 343000	Type 622100	Type 622100
					/ (1)			
	220000 6-Tired Dual Rear Tires	56 57 58 59	(20) (24) P.U. //// (4)	P.U.	Type 421000 P.U. ~~////~~ // (7) (55) P.U. (18)	Type 421000 P.U.	Type 622200	Type 622200
	230000 3 Axle	60 61 62	(36)		Type 422000 P.U. // (2) (14) P.U. (12)	Type 422000 P.U.	Type 623200	Type 623200
SEMITRAILER COMBINATION	321000 2 Axle Tractor 1 Axle Trailer	63 64 65	(6)		Type 423000 P.U.	Type 423000 P.U.	Type 211079	Type 211079
	322000 2 Axle Tractor 2 Axle Trailer	66 67 68 69	(15)		Type 424000 P.U.	Type 424000 P.U.	Type 221079 (18)	Type 221079
	332000 3 Axle Tractor 2 Axle Trailer	70 71 72 73	(80)		Type 431000 /// (3)	Type 431000	Type 231079 (8)	Type 231079
			Type 220800 /// (3)	Type 220800	Type 432000 (10)	Type 432000	5 Axle S. A. Truck / (1)	
			Type 230800 ~~////~~ / (6)	Type 230800	Type 433000	Type 433000		
			Type 240000 / (1)	Type 240000	Type 434000	Type 434000		

Complete the heading in the same manner as the Recorder Form.

The actual count portion of the form is divided into three sections. The far left hand side is set up by vehicle classification for the most common vehicle types.

The second and third sections of the form are arranged by vehicle type, and then by number of axles on the vehicle in order to make it easier for the counter to keep track of the different vehicle types.

The counter is to circle the direction of travel they are counting in each section of the count form that he uses.

Left hand side of count form

A. The passenger vehicles will be categorized into four different classes:

1. Standard and compact cars (in-state and out-of-state)

2. Small cars (in-state and out-of-state)

3. Motorcycles or motor scooters

4. Buses

Below is a list to help determine the correct classification of passenger cars.

1. Standard and compact cars - In-State (Columns 18-22)
Out-of-State (Columns 28-32)

Pontiac Grandville	Cougar
Ventura	Cobra
Firebird	Lincoln Continental
Buick Riviera	Caliente
Grandsport	Imperial
Skylark	Dodge Monaco
Chevrolet Caprice	Challenger
Monte Carlo	Coronet

Camaro	Plymouth Fury
Olds Toronado	Road Runner
Cutlass	Duster
Ford LTD	Mercedes Benz
Country Squire	Ambassador
Torino	Matador
Thunderbird	Javelin
Mustang	Marlin
Mercury Marquis	AMX

2. Small Cars: In-State (Columns 23-27)
   Out-of-State (Columns 33-37)

BMW	Suburu	Renault
Toyota	Fiat	Datsun
VW	Opel	Austin
Vega	Pinto	Omega

3. Motorcycles and Motor Scooters (Columns 38-40)

   Motorcycle and motor scooter travel has considerable seasonal variation. This type of classification data is of particular value and should be noted carefully.

4. Commercial Buses (Columns 41-44)

5. School Buses (Columns 45-57)

   Some buses are reconstructed to carry a commodity such as tools, office equipment, or camping gear. These are to be classified as a truck, depending on the wheel arrangement. (See B-2 or B-3 below)

B. The single unit truck will be categorized into four different classes:

1. Pickup and Panel - 200000 (Columns 48-51)

   2 axle light truck, single rear wheels and tires, light bodies of less than 1 ton rated capacity (does not include multi-stop or standup delivery trucks).

2. 4 Tire Truck - 210000 (Columns 52-55)

   2 axle truck or bus without dual rear tires, having a rated capacity of 1 ton or greater, including multi-stop or standup delivery trucks and all four wheel drive vehicles. Separate the pickups from the other trucks as indicated on the form.

3. 6 Tire Truck - 220000 (Columns 56-59)

2 axle truck or bus with dual rear tires, separate the pickups from the other trucks as indicated on the form

4. 3 Axle Truck - 23000 (Columns 60-62)

C. The truck-tractor semitrailer (with a 5th wheel hookup) constitutes the largest percentage of truck categories. The following three types are recorded on the left hand side of the form and the less common on the right hand side.

1. 3 axle truck-tractor semitrailer - 321000 (Columns 63-65)

2 axle tractor, 1 axle semitrailer

2. 4 axle truck-tractor semitrailer - 322000 (Columns 70-73)

2 axle tractor, 2 axle semitrailer

3. 5 axle truck-tractor semitrailer - 332000 (Columns 70-73)

3 axle tractor, 2 axle semitrailer

Center section of count form

This is located on the count form in which the vehicle and then the number of axles are listed in numerical order by vehicle type.

A. Truck-tractor semitrailer (with a 5th wheel hookup)

1. 4 axle truck-tractor semitrailer with spread tandem trailer axles

2 axle tractor, 2 axle semitrailer - 327000 with spread tandem axles

2. 5 axle truck-tractor semitrailer - 323000

2 axle tractor, 3 axle semitrailer

3. 4 axle truck-trailer semitrailer - 331000

3 axle tractor, 1 axle semitrailer

4. 5 axle truck-tractor semitrailer - 337000

   3 axle tractor, 2 axle semitrailer with spread tandem axles

5. 6 axle truck-tractor semitrailer - 333000

   3 axle tractor, 3 axle semitrailer

6. 7 axle truck-tractor semitrailer - 334000

   3 axle tractor, 4 axle semitrailer

7. 7 axle truck-tractor semitrailer - 343000

   4 axle tractor, 3 axle semitrailer

B. Single unit truck pulling a trailer (5th wheel, ball or hook coupling), separate the pickups from the other trucks as indicated on the form

1. 3 axle single unit truck-trailer - 421000

   2 axle single unit truck, 1 axle trailer

2. 4 axle single unit truck-trailer - 422000

   2 axle single unit truck 2 axle trailer

3. 5 axle single unit truck-trailer - 423000

   2 axle single unit truck, 3 axle trailer

4. 6 axle single unit truck-trailer - 424000

   2 axle single unit truck, 4 axle trailer

5. 4 axle single unit truck-trailer - 431000

   3 axle single unit truck, 1 axle trailer

Right hand side of count form

This is a continuation of the classification of vehicles and number of axles per vehicle, listed in numerical order by vehicle type.

A. Single Unit truck pulling a trailer (5th wheel, ball or hook coupling)

1. 5 axle single unit truck-trailer - 432000

   3 axle single unit truck, 2 axle trailer

2. 6 axle single unit truck-trailer - 433000

   3 axle single unit truck, 3 axle trailer

3. 7 axle single unit truck-trailer - 434000

   3 axle single unit truck - 4 axle trailer

B. Truck-tractor semitrailer with trailer (Double Bottom)

1. 4 axle truck-trailer semitrailer with trailer - 521100

   2 axle tractor, 1 axle semitrailer, 1 axle dolly

2. 5 axle truck-tractor semitrailer with trailer - 521200

   2 axle truck-tractor, 1 axle semitrailer, 2 axle full trailer

3. 5 axle truck-tractor semitrailer with trailer - 531100

   3 axle truck-tractor, 1 axle semitrailer, 1 axle dolly

4. 6 axle truck-tractor semitrailer with trailer

   3 axle truck-tractor, 1 axle semitrailer, 2 axle full trailer

C. Recreational vehicles are defined as permanently mounted motorized campers with four or six tires.

This category is counted out separately from the single unit truck category. These vehicles are never weighed by us.

1. 4 or 6 tired recreational vehicles - 201179

   Example: Winnebago Campers

There are four blank code boxes reserved for any vehicle classifications that weren't previously discussed or covered.

APPENDIX A

SUMMER SCHEDULE

TRUCK WEIGHT SCHEDULE
1977

Date	Location	Station	Shift
May 31 Tues.		Training	
June 1 Wed.	Carroll	76M	6-1
June 2 Thur.	Ogden	74H	6-1
June 3 Fri.	Boone	46G	6-1
June 6 Mon.	Salix	95R	6-1
June 7 Tues.	Missouri Valley	96T	6-1
June 8 Wed.	Avoca	93P	6-1
June 9 Thur.	Afton	85J	6-1
June 10 Fri.	Osceola	97U	6-1
June 13 Mon.	Vincent	42L	6-1
June 14 Tues.	Ft. Dodge	09A	6-1
June 15 Wed.	Plymouth	41K	6-1
June 16 Thur.	Mason City	32C	6-1
June 20 Mon.	Marshalltown	47I	6-1
June 21 Tues.	Waterloo	24B	6-1
June 22 Wed.	Cedar Rapids	55E	6-1
June 23 Thur.	Tipton	91S	6-1
June 24 Fri.	Davenport	35D	6-1
June 26-27 Sun-Mon.	Salix	95R	10-5
June 27-28 Mon-Tues.	Missouri Valley	96T	10-5
June 28-29 Tues-Wed.	Avoca	93P	10-5
June 29-30 Wed-Thur.	Osceola	97U	10-5
June 30-July 1 Thur-Fri.	Ames	94Q	10-5
July 4		Holiday	
July 5-6 Tues-Wed.	Tipton	91S	10-5
July 6-7 Wed-Thur.	Cedar Rapids	55E	10-5
July 7-8 Thur-Fri.	Des Moines	92N	10-5
July 11 Mon.	Vincent	42L	2-9
July 12 Tues.	Ft. Dodge	09A	2-9
July 13 Wed.	Plymouth	41K	2-9
July 14 Thur.	Mason City	32C	2-9
July 19 Tues.	Davenport	35D	2-9
July 20 Wed.	Tipton	91S	2-9
July 21 Thur.	Cedar Rapids	55E	2-9
July 22 Fri.	Waterloo	24B	2-9

Date	Location	Station	Shift
July 25 Mon.	Salix	95R	2-9
July 26 Tues.	Missouri Valley	96T	2-9
July 27 Wed.	Avoca	93P	2-9
July 28 Thur.	Carroll	76M	2-9
Aug. 1 Mon.	Afton	85J	2-9
Aug. 2 Tues.	Osceola	97U	2-9
Aug. 3 Wed.	Pleasantville	59F	2-9
Aug. 4 Thur.	Des Moines	92N	2-9
Aug. 5 Fri.	Ames	94Q	2-9
Aug. 8 Mon.	Pleasantville	59F	6-1
Aug. 9 Tues.	Des Moines	92N	6-1
Aug. 10 Wed.	Ames	94Q	6-1
Aug. 11 Thur.	Marshalltown	47I	2-9
Aug. 12 Fri.	Ogden	74H	2-9
Aug. 15 Mon.	Boone	46G	2-9

Vehicle Classification Counts

_____	Carroll	76M	9-5
_____	Boone	46G	9-5
_____	Ogden	74H	9-5
_____	Afton	85J	9-5
_____	Pleasantville	59F	9-5
_____	Davenport	35D	9-5
_____	Waterloo	24B	9-5
_____	Marshalltown	47I	9-5
_____	Vincent	42L	9-5
_____	Fort Dodge	09A	9-5
_____	Plymouth	41K	9-5
_____	Mason City	32C	9-5

APPENDIX B

COMMODITY CODES

IOWA TRUCK WEIGHT SURVEY

COMMODITY

COMMON CODE LISTING

Auto 37111

Acid .
- Unspecified 28190
- Sulphuric 28193

Acetylene 28130

Air Compressors 35600

Air Conditioners
- Household 36300
- Commercial 35800

Alcohol (Non-Drinking) . . . 28184

Aluminum Doors & Windows . . 34400

Aluminum Pipe, Sheets, etc.. 33520

Ammonia 28190

Ammunition
- Except Small Arms 19200
- Small Arms 19600

Anti-Freeze 28180

Appliances (Small) 36300

Aquarium Supplies 39900

Asphalt 29116

Asphalt Shingles 29520

Augers 35200

Auto Engines & Accessories . 37140

Baby Food, Canned
- Except Meat 20320
- Meat 20130

Bakery Goods 20500

Bananas 01232

Barber
- Furniture 39900
- Supplies 28400

Barrel (Metal) 34910

Bathroom Fixtures 32600

Batteries (Wet or Dry) . . . 36900

Beans (Soy) 01144

Bedding
- Cotton 22100
- Wool 22300
- Man Made & Silk 22200

Beer 20821

Bentonite 14511

Bicycles 37500

Bleach 28120

Bleachers 25300

Boats 37300

Boat Trailers 37900

Books 27300

Bottles (empty) 32210

Bottle Gas 29120

Boxes (Cardboard) 26500

Brass 33620

Bread 20500

Bricks 32510

Brooms & Brushes 39800

Building Materials
- Millwork 24310
- Steel 34410
- Wooden Pre-Fab 24320

Bulk Feed (Livestock) . . . 20421

Burial Vaults
- Steel 34900
- Concrete 32710

Business Machines 35700

Butter 20210

By-Products
- Animal - Except Hides . . 20140

Cabinet Work 24310

Cable
- NonFerrous 33570
- Steel 33150

Cake Mix 20450

Calcium 28120

Camping Equipment 39490

Camping Trailers 37900

Campers - Pickup 41100

Candy 20700

Canned Goods 20320

Canned Meat (Dried, Smoked). 20130

Cans (Empty) 34100

Cantaloupe 01398

Canvas (Textile Products). . 23900

Cars (Passenger) 37111

Car Body Parts 37120

CO_2 Carbon Dioxide 28130

Cardboard 26400

Carnival Equipment 35900

Carpets & Rugs 22700

Carrots 01310

Cast Iron 33120

Casting (Iron & Steel) . . . 33200

Caterpillar 35310

Cattle 01411

Cement Block 32710

Cement (Dry) 32411

Cheese 20250

Chemicals (Unspecified). . . 28100

Cherries 01220

Chickens
- Processed 20150
- Live 01510

China (Pottery Products) . . 32600

Chopped Hay 01910

Cigarettes 21100

Clay 14500

Clothes (Unspecified). . . . 23800
- Men's or boys' 23100
- Women's or girls' 23300
- Millinery goods 23500
- Fur goods 23700
- Misc. fabricated textile. 23900

Coal
- Anthracite - Hard 11100
- Soft, Iowa, Bituminous, Lignite 11200

Cobs 01910

Coffee 20950

Combines 35200

Compressors 35600

Compressed Gas 28130

Computers (Office Machines). 35700

Concrete (Wet) 32710

Construction Equipment . . . 35310

Cookies 20500

Cooling Equipment 36320

Cool Whip 20900

Cord & Twine 22980

Corn 01132

Corn Meal 20410

Corn Oil 20460

Corn Syrup 20461

Cosmetics 28400

Crackers 20500

Cranberries 01290

Cranes or Hoists 35300

Culverts
- Concrete 32710
- Steel 34400

Curtains (Finished Textile). 23900

Cushions 23900

Dairy Products 20200

Diesel Fuel 29117

Dirt 14919

Dishwashers 36300

Display Racks 73100

Distilled Water 20860

Dog Food
- Packaged 20421
- Canned 20423

Doors (Wood) 24310

Drain Tile (Clay). 32590

Drugs 28300

Eggs 01520

Electric Appliances (Small). 36300

Electric Poles (Wood). . . . 24116

Electric Service Truck . . . 49100

Electric Supplies 36400

Electric Transmission Equip. 36100

Electrical Equipment
Industrial 36200
Electrical Components . . . 36700
Equipment (Engines & Turb.). 35100
Explosives 28920
Farm Equipment 35200
Feathers 01500
Feed (Prepared Bulk) 20421
Feed Bins (Metal). 34400
Feeders (Livestock). 35200
Fencing (Wire) 34800
Fertilizer 28710
Fiber Board 26610
Fiber Glass 28200
Fire Equipment Vehicles . . 37113
Fire Extinguishing
Equipment & Chemicals . . 39900
Fish (Unpackaged)
Fresh or Frozen 09120
Fish (Packaged)
Fresh or Frozen 20360
Floor Tile 32530
Flour (Meals). 20410
Flowers (Nursery Stock). . . 01910
Fork Lifts 35370
Forms (Metal Products) . . . 34400
Freight (General). 41100
French Fries 20370
Frozen Foods
Fruits & Vegetables . . . 20370
Juice 20370
Meat 20120
Fruit (Citrus) 01210
Fuel Oil 29117
Furnaces 34330
Furniture
Household & Office . . . 25100
Garbage 40290
Gas Service Truck 49200
Gaskets 32900
Gasoline 29111
Gates (Wooden Products). . . 24900
Generators
Electric 36200
Gas 35100
Glass (Flat) 32100
Glue 28900
Golf Carts 37500
Grain 01139
Gravel
Aggregate & Ballast . . . 14412
Sand 14400
Grease 29115
Green Beans 01390

Grinders
- Household Appliance . . . 36300
- Industrial 35500

Groceries (Unspecified) . . . 20000

Guns 19500

Gutter Materials 34400

Gypsum 14911

Hay 01191

Heating Equipment 34330

Hides 20141

Hogs 01413

Horses 01920

Honey 20900

Household Goods 41100

Housewares (Electric) 36300

H_2O (Drinking Water) 20860

IBM Equipment 35700

Ice 20970

Ice Cream (Frozen Deserts) . 20240

Industrial Gas 28130

Insulation 32900

Iron Ore 10100

Iron Products 33120

Iron - Scrap 40211

Jelly 20330

Joint Compound
- Gypsum Products 32750

Junk (Cars & Iron) 40211

Kitchen Equipment 36300

Ladders
- Metal 34400
- Wood 24900

Lard 20130

Lath 24900

Lath Plaster 32750

Laundry 72100

Laundry Equipment 36330

Lawn Mowers 35900

Lead Weights 33500

Leather Products (General) . 31100

Lettuce 01335

Light Bulbs 36900

Light Fixtures 36400

Lime 32740

Limestone (Agricultural) . . 14211

Limestone 14200

Linen 23900

Linoleum 39800

Liquid Sugar 20620

Liquified Gas 29120

Liquors 20851

Loaded Commodity
Not Determined 46112

Logs (Posts) 24100

L T L (Misc. Freight). . . . 41100

Luggage 31600

Lumber 24200

Machine Parts 35900

Magazines 27200

Mail 41100

Malt 20830

Marble (Granite) 32800

Mattresses 25100

Meal (Animal By-Products). . 20140

Measuring & Control Instr.). 38200

Meat
Boxed 20120
Swinging 20110

Melons (Not Watermelon). . . 01398

Metal, Barrels (Drums) . . . 34910

Milk (Cream & Powdered). . . 20260
(Unprocessed) 01420
Milkers 35200

Minerals
Unspecified 14700
Salt 14715

Mirrors 32200

Molasses 20626

Motorcycles 37500

Motor Vehicle Parts 37140

Mules 01920

Musical Instruments (All). . 39300

Nails 33150

Newspapers 27100

Nuts & Bolts 34500

Oats 01133

Office Machines 35700

Oil 29117

Oleo 20960

Onions
Green 01310
Dry 01318

Oranges 01210

Orange Concentrate 20340

Orange Juice (Canned). . . . 20330

Organs & Pianos 39300

Oxygen (Liquid). 28130

Paint 28500

Paint Equipment 35600

Pallets
Metal 35370
Wood - New 24900
Wood - Used 42100

Pancake Mix (Prepared
Flour Mixes). 20450

Paneling 24320

Paper 26200
Bags 26430
Boxes 26500
Plates 26400

Parcel
Small Packaged Shipments. 47100

Parts (Auto) 37140

Peanut Butter. 20930

Peanuts (Raw). 01143

Peas
Dry 01342
Fresh 01390

Peat Moss 01910

People
Transit Bus - scheduled . 43310
Transit - Not Scheduled . 43320
Transit - Charter 43420
City Bus - Local Route . 43110
City Bus - Local Charter. 43190
City Bus - Not Scheduled. 43410
School Bus 43510
School Activities
Private Bus 43620
Truck-field crews and recreational groups not with school . . . 43630

Phosphate 14714

Pickles (Pickled Products) . 20350

Picture Tubes 36700

Pipe & Fittings
Cast 33211
Steel 33126

Pizza
Box Mix 20900
Frozen 20370

Plants (Nursery Stock) . . . 01910

Plaster 32750

Plaster Board 32700

Plastic 28200

Plastic Tubing 30700

Plumbing Fixtures 34300

Plumbing Tools 34200

Plywood 24300

Pop 20860

Pop Corn 01150

Pop Machine 39900

Popped Corn 20900

Potato Chips 20900

Potatoes 01195

Poultry 01510

Power Tubes 36700

Pre-Fab Homes
Homes 24320
Steel Buildings 34410

Prepared Foods 20900

Printed Matter (Misc.) . . . 27400

Printing
Machines 35500
Supplies 27900

Produce 01390

Propane 29120

Radio & T.V. 36500

Rags 40220

Railroad Tools (Large) . . . 35300
(Hand) 34200

Refrigerators 36320

Resin 28200

Rock (crushed) 14219

Rock Salt 14715

Roofing
Wood 24290
Asphalt 29520

Rubber
Crude 08423
Synthetic 28212

Rubber Products (Misc.) . . . 30700

Rugs or Carpets 22700

Salad Dressing - Spreads . . 20350

Salt 28991

Sand 14411

Sawdust 24290

Scaffolding 34400

Screens & Screening 34400

Sea Food 20360

Seed 01150

Semi-Tractors 37116

Semitrailer
Carried as a load 42200

Sewing Machine Parts 36300

Sewer Pipe
Cast 33211
Clay 32590
Concrete 32710

Sheep 01414

Sheet Metal 33500

Sheet Rock 32750

Sheet Steel 33123

Shoes (Not Rubber Footwear). 31400

Shortening (Cooking Oils). . 20960

Siding 24310

Signs 39900

Snowmobiles 37119

Soaps & Detergents 28400

Sod 14919

Soil 14919

Soil Pipe 32590

Solvent 28500

Sound Equipment 36600

Soup 20320

Soybeans 01144
Meal (Flour) 20923
Oil 20921

Sporting Goods 39490

Spices 20900

Springs 34900

Starch (Corn) 20462

Steel (Primary Products) . . 33120
- Axles & Beams 33125
- Barrels 34910
- Bars 33124
- Pipes & Tubing 33126
- Posts 33125
- Sheets 33123
- Tanks 34400
- Wire 33150

Store Fixtures 25400

Straw (Not Chopped) 01196

Strawberries 01290

Sytrofoam 30700

Sugar 20620

Sulfate 14716

Swinging Meat 20110

Syrup (Flavoring) 20870

Tankage & By-Products
- Animal Non-Edible 20140

Telephones & Equipment . . . 36600
- Poles (Wood) 24116
- Service Truck 48100

Textile Waste 40220

Tile
- Clay 32590
- Concrete 32710

Tin Cans 34100

Tire Service Equipment . . . 35600

Tires 30100

Tomatoes 01394

Tools 34200

Towels 23900

Toys 39400

Tractors 35200
- Canopies & Parts 35200

Trailers (Empty)
- Carried as a Load 42200

Trench Diggers 35310

Trucks 37112

Turkeys
- Dressed 20150
- Live 01510

Television 36500
- Parts 36700
- Service Equipment 76200

T.V. Dinners 20900

Vacuum Cleaners 36300

Valves 34940

Vaseline 28140

Vegetables
- Bulb or Root 01310
- Leafy 01330
- Misc. - Fresh 01390

Vending Machines 39900

Veterinarian Equipment . . . 35500

Vinegar 20900

Wagon Beds 35200

Wall Board 26613

Water (Non-Drinking) 14800
- Heater 36300
- Pump 35600

Watermelon 01392

Wax 28400

Weed Killer 28700

Weights 38200

Welder (Equipment) 36200

Wheat 01137

Whey 20250

Whiskey 20851

Windows (Wood) 24310

Wine 20840

Wire 33150

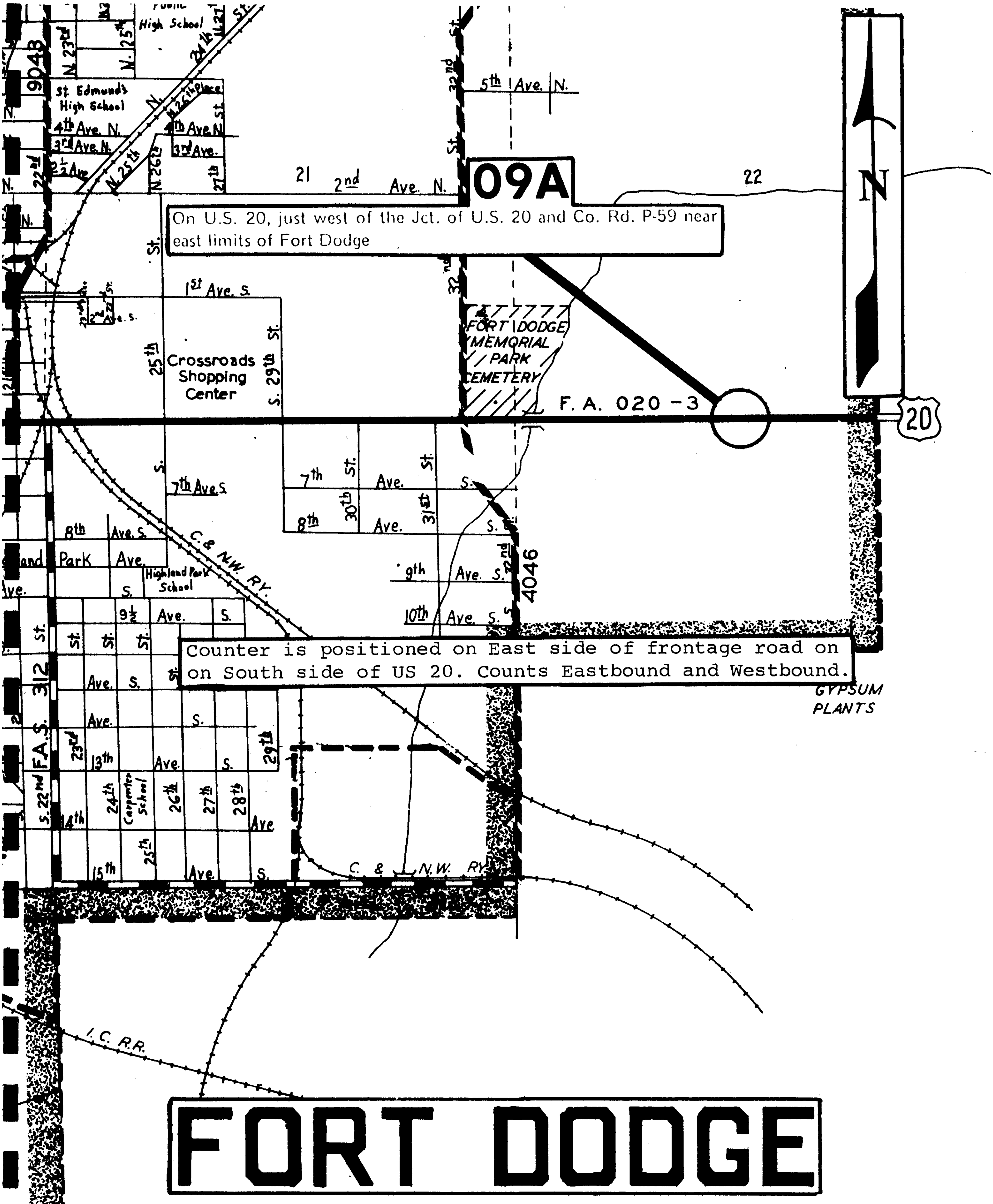
Wood
Crates 24400
Logs 24111

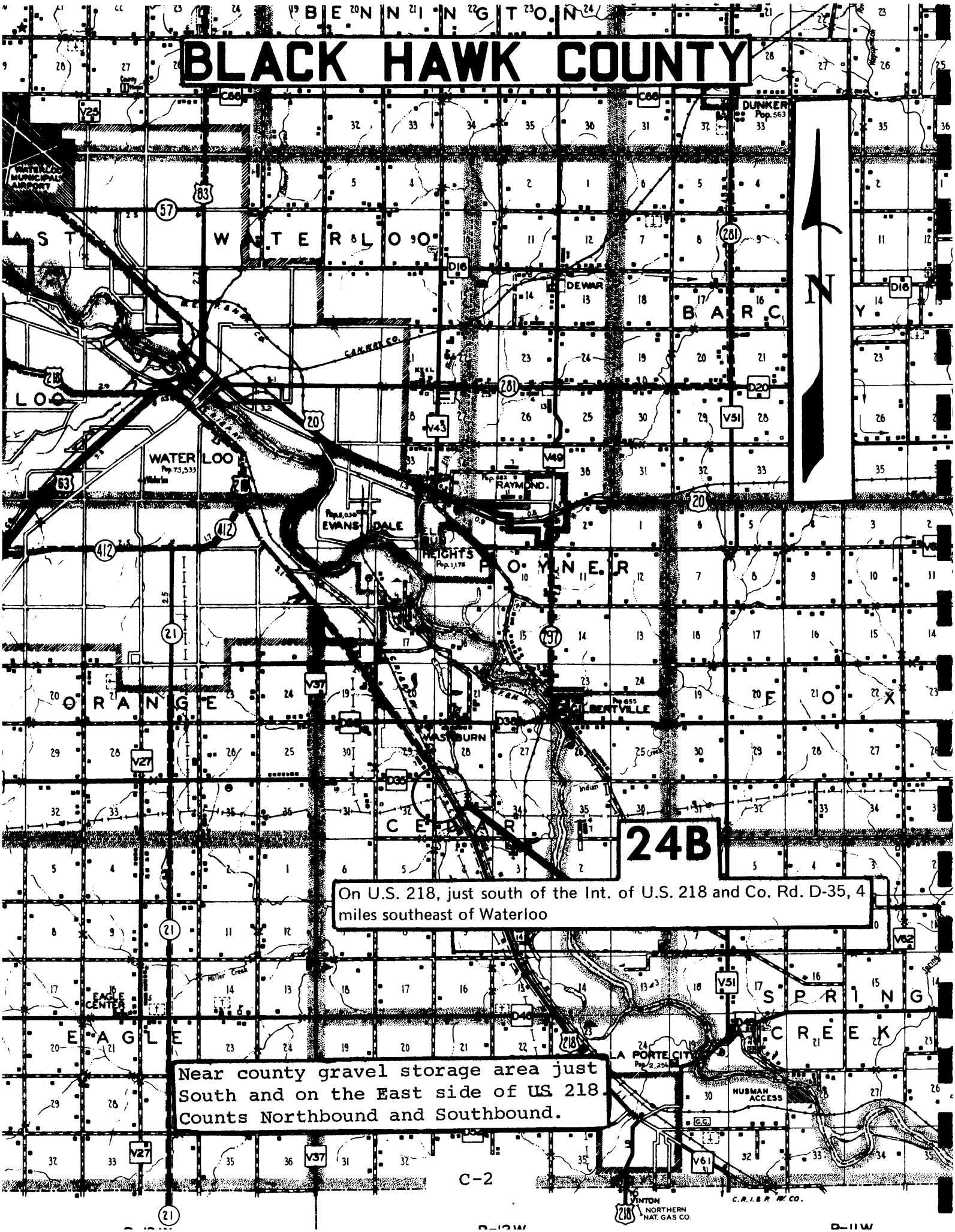
Wool 22970

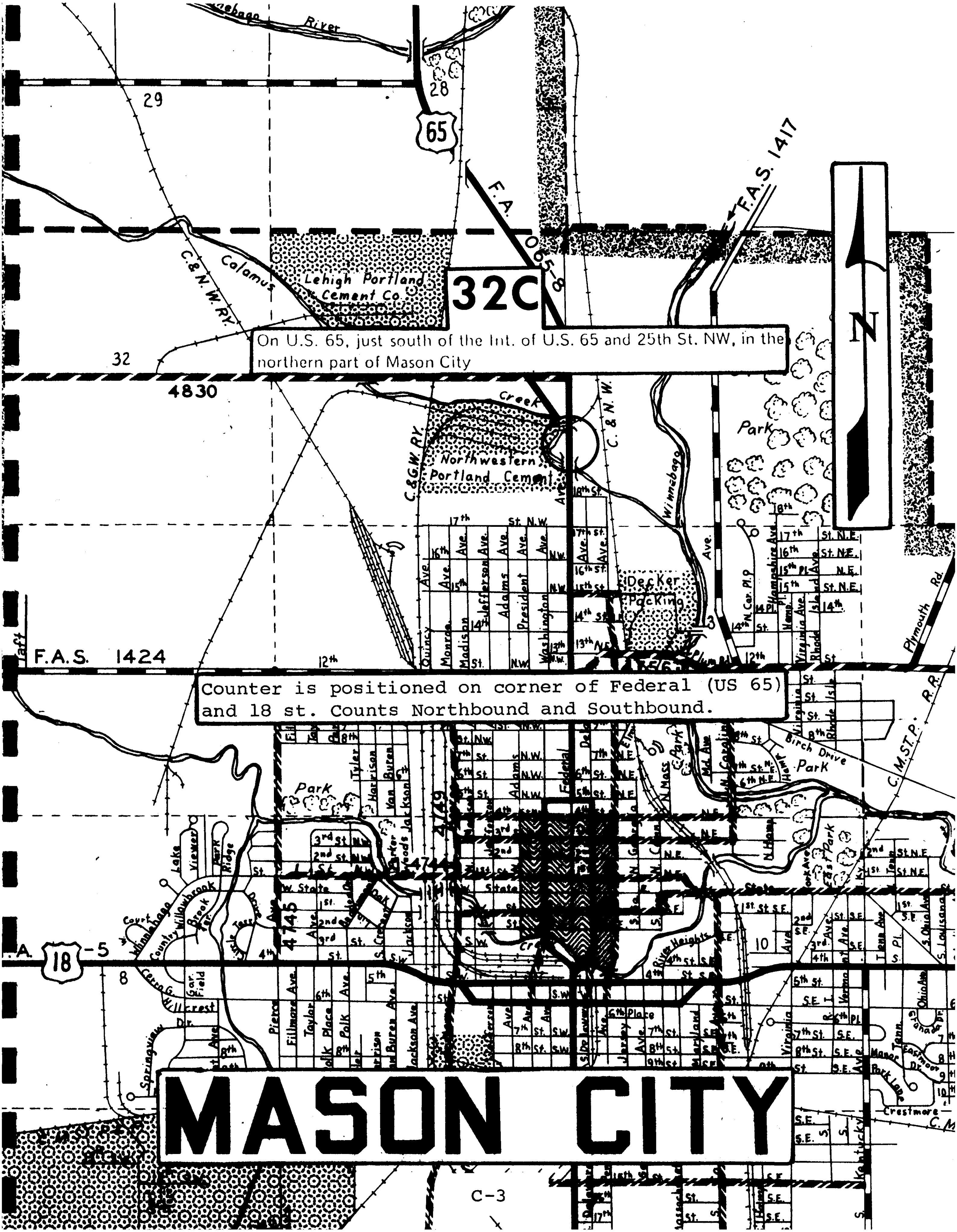
Yeast 20900

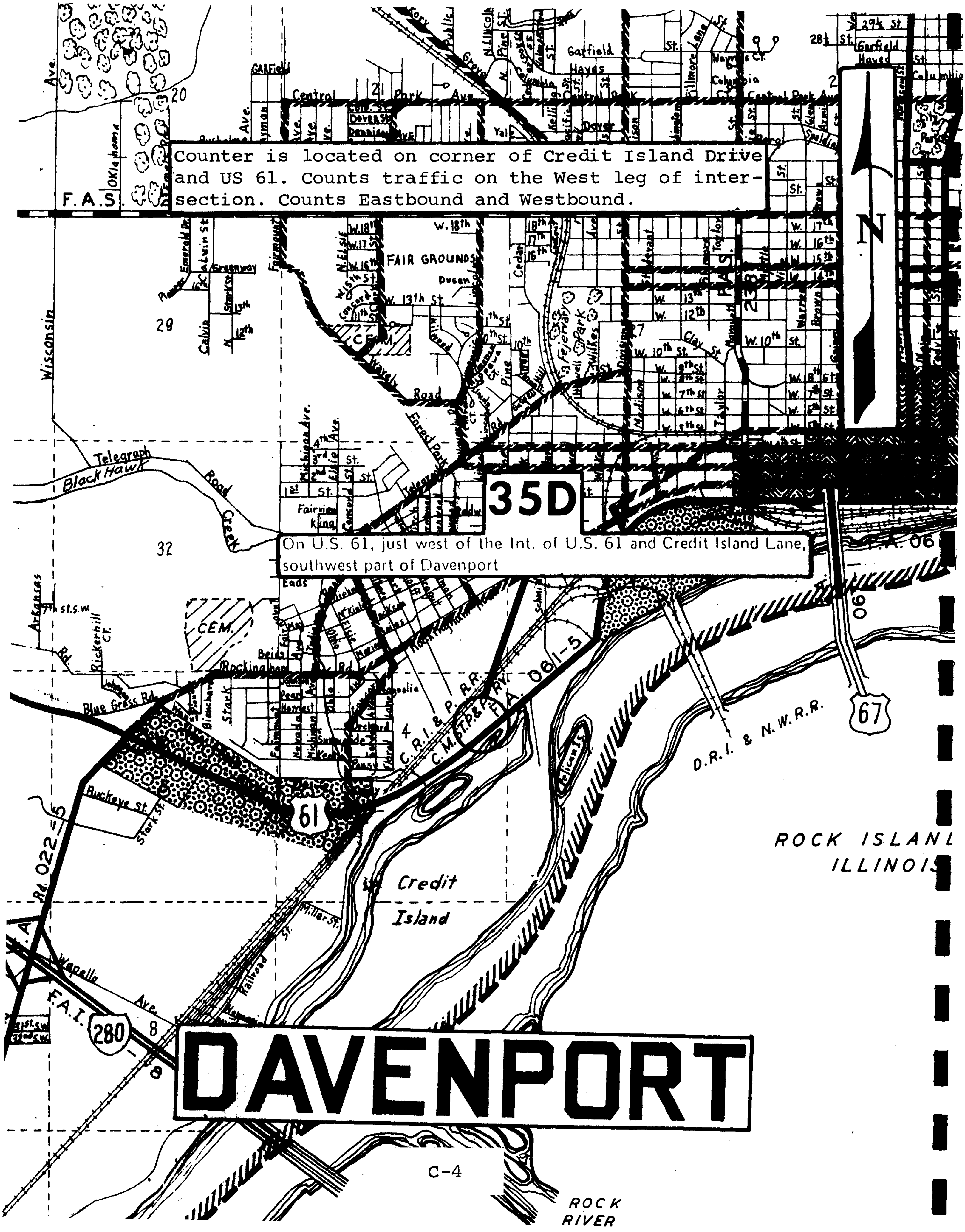
APPENDIX C

STATION LOCATION MAPS

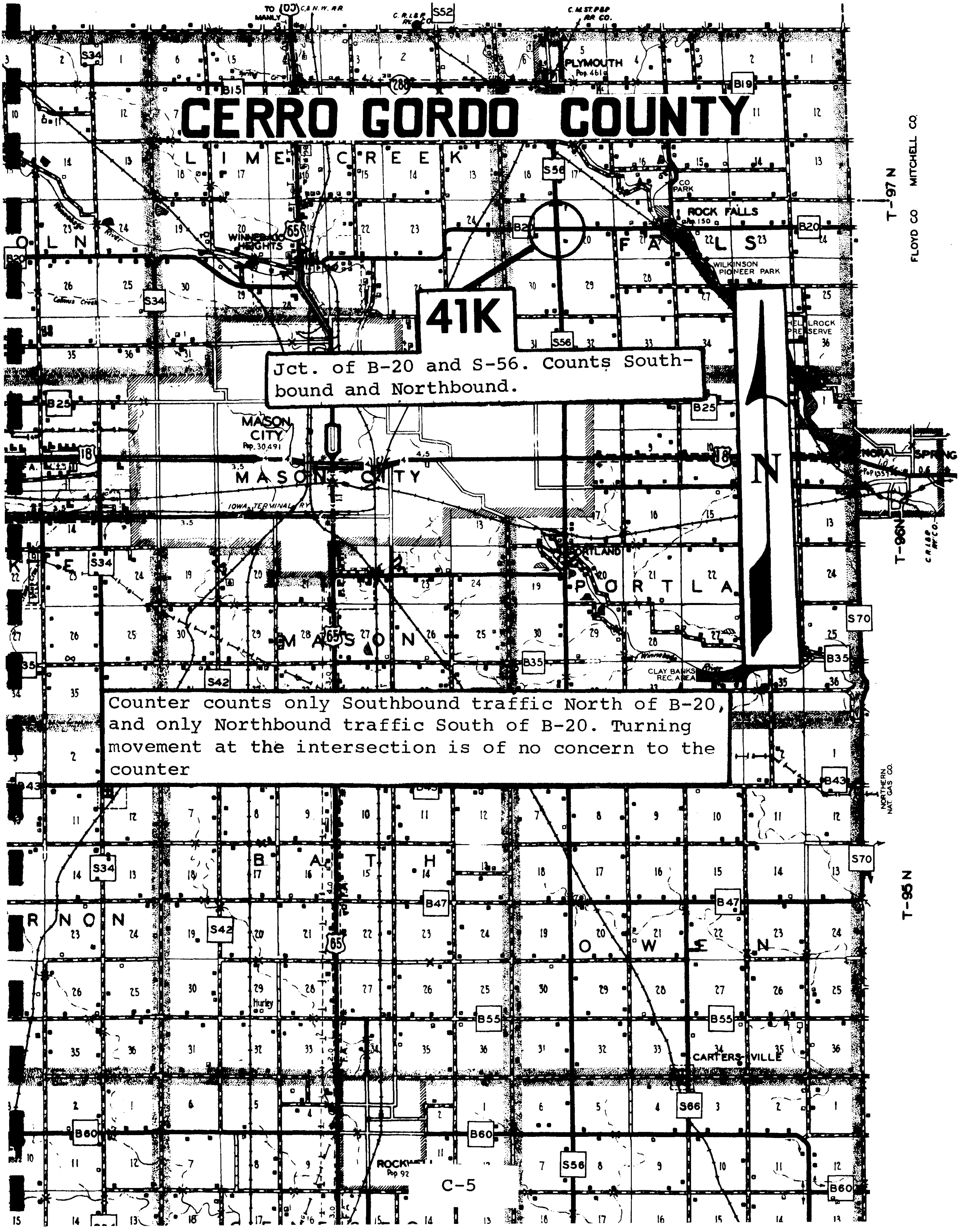

09A
On U.S. 20, just west of the Jct. of U.S. 20 and Co. Rd. P-59 near east limits of Fort Dodge
Counter is positioned on East side of frontage road on on South side of US 20. Counts Eastbound and Westbound.
F. A. 020 -3
20
N
21
22
2nd Ave. N.
5th Ave. N.
32nd St.
High School
St. Edmond's High School
4th Ave. N.
3rd Ave. N.
1st Ave. S.
Crossroads Shopping Center
25th St.
S. 29th St.
FORT DODGE MEMORIAL PARK CEMETERY
7th Ave. S.
8th Ave. S.
30th St.
31st St.
9th Ave. S.
10th Ave. S.
4046
C. & N.W. RY.
Highland Park School
Park Ave.
9½ Ave. S.
GYPSUM PLANTS
F.A.S. 312
S. 22nd
13th Ave.
14th Ave
15th Ave. S.
Carpenter School
C. & N.W. RY.
I. C. R.R.
9048
FORT DODGE


BLACK HAWK COUNTY
BENNINGTON
WATERLOO MUNICIPAL AIRPORT
WATERLOO
Pop. 75,533
EVANSDALE
Pop. 5,030
RAYMOND
Pop. 682
DUNKER
Pop. 563
DEWAR
BARCLAY
ORANGE
POYNER
HEIGHTS
Pop. 1,178
GILBERTVILLE
Pop. 655
WASHBURN
CEDAR
FOX
EAGLE
EAGLE CENTER
SPRING CREEK
LA PORTE CITY
Pop. 2,254
HUSMAN ACCESS
VINTON
NORTHERN NAT. GAS CO.
C.R.I.&P. RY. CO.
CANAL CO.
Miller Creek
Indian
24B
On U.S. 218, just south of the Int. of U.S. 218 and Co. Rd. D-35, 4 miles southeast of Waterloo
Near county gravel storage area just South and on the East side of US 218. Counts Northbound and Southbound.
C-2


32C
On U.S. 65, just south of the Int. of U.S. 65 and 25th St. NW, in the northern part of Mason City
Counter is positioned on corner of Federal (US 65) and 18 st. Counts Northbound and Southbound.
MASON CITY
N
Winnebago River
65
29
28
32
4830
F.A.S. 1424
F.A.S. 1417
F.A. 065-8
Lehigh Portland Cement Co.
Northwestern Portland Cement
Decker Packing
Calamus
C.&N.W.RY.
C.&G.W.RY.
C.&N.W.
C.M.St.P. R.R.
Creek
Park
Birch Drive
East Park
18
-5
8
10
4745
4749
Federal
Plymouth Rd.
Country Club
Willowbrook
Hillcrest
Springview Dr.
Crestmore
Park Lane

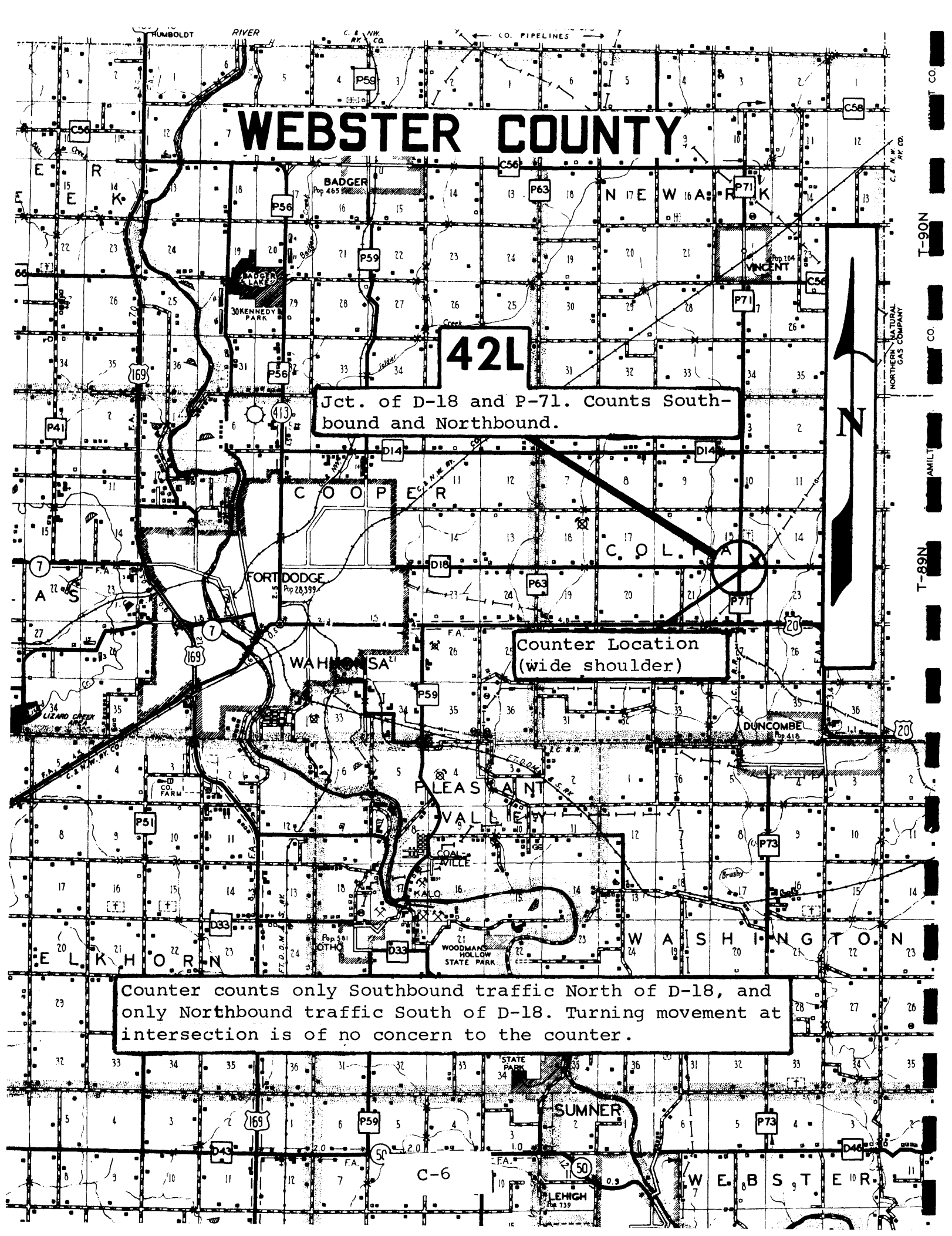


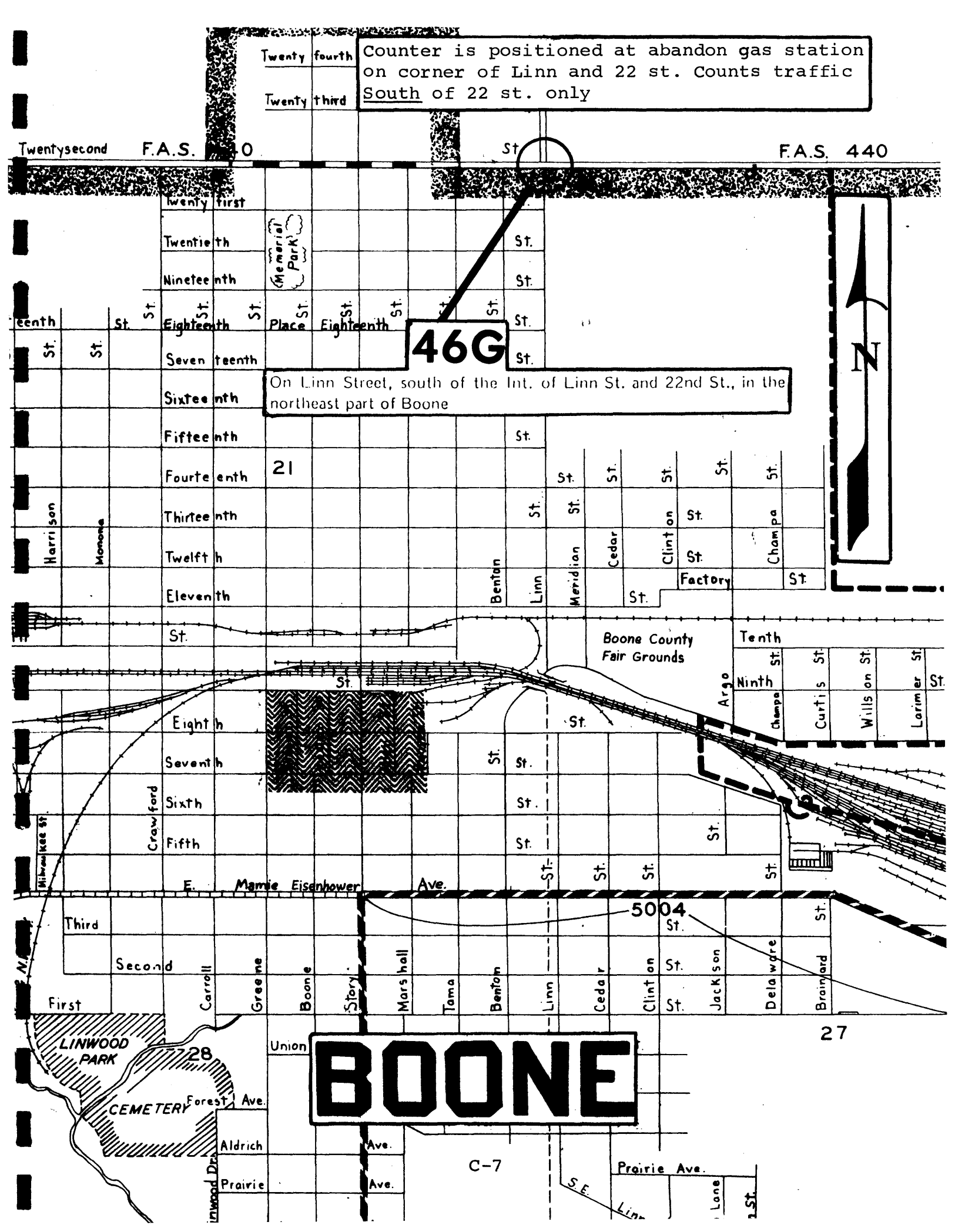
Counter is located on corner of Credit Island Drive and US 61. Counts traffic on the West leg of intersection. Counts Eastbound and Westbound.
35D
On U.S. 61, just west of the Int. of U.S. 61 and Credit Island Lane, southwest part of Davenport
DAVENPORT
Credit Island
ROCK ISLAN
ILLINOI
ROCK RIVER
F.A.S.
F.A. 061-5
F.A.I. 280
61
67
C.R.I. & P. R.R.
C.M.ST.P.&P. RY.
D.R.I. & N.W.R.R.
FAIR GROUNDS
CEM.
Telegraph Road
Black Hawk Creek
Rockingham Rd
Blue Grass Rd
Wisconsin
Central Park Ave
N

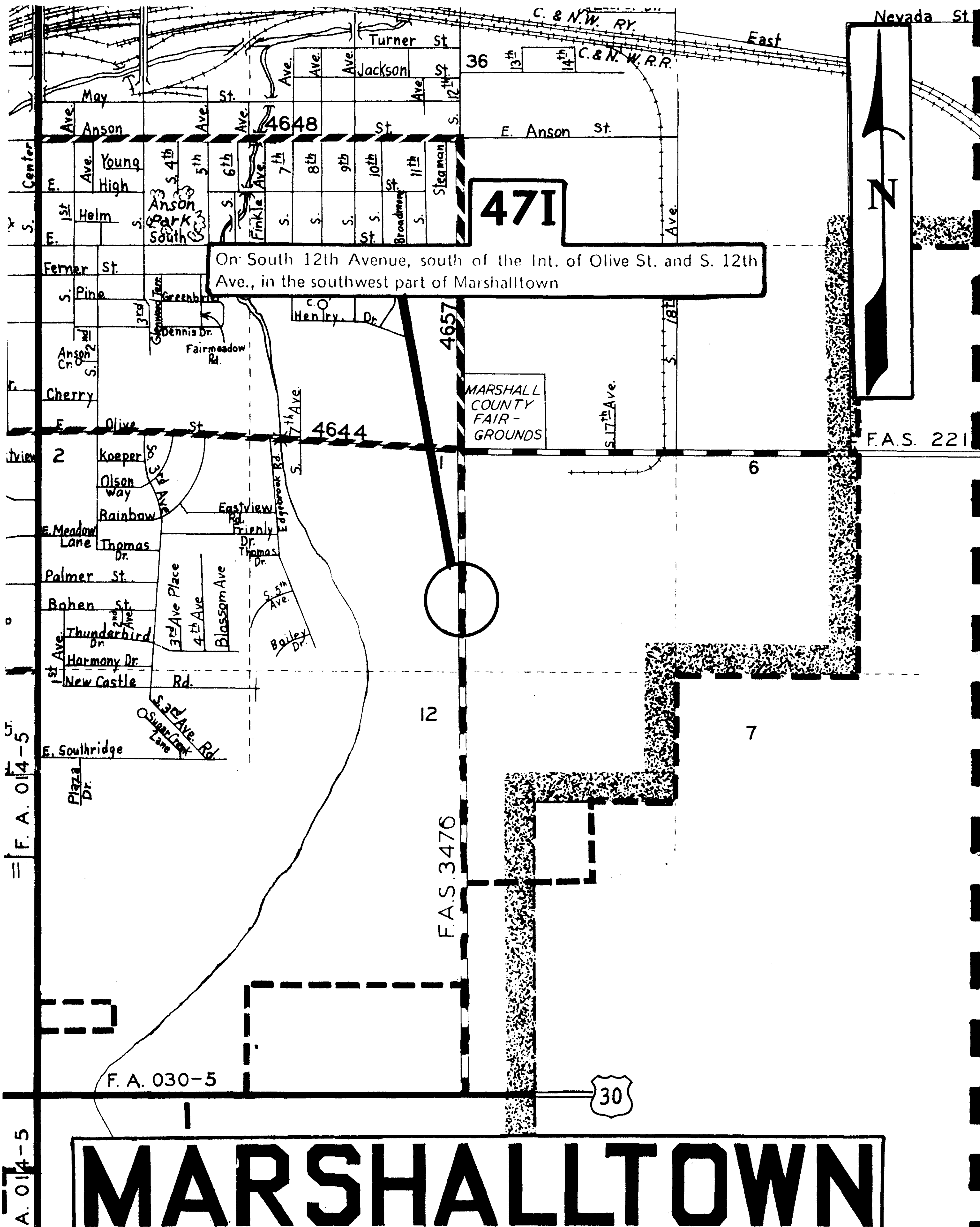


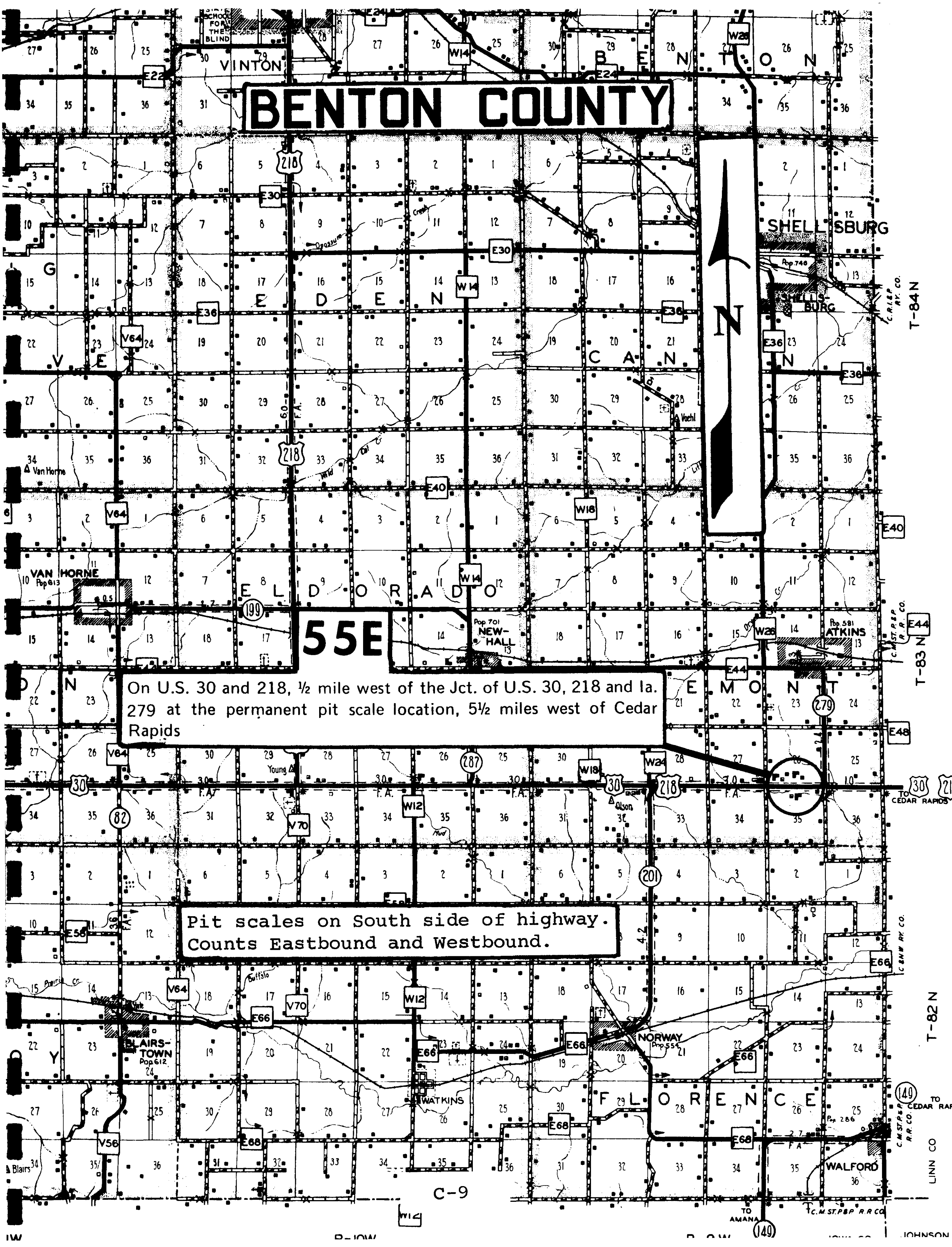
Jct. of B-20 and S-56. Counts Southbound and Northbound.

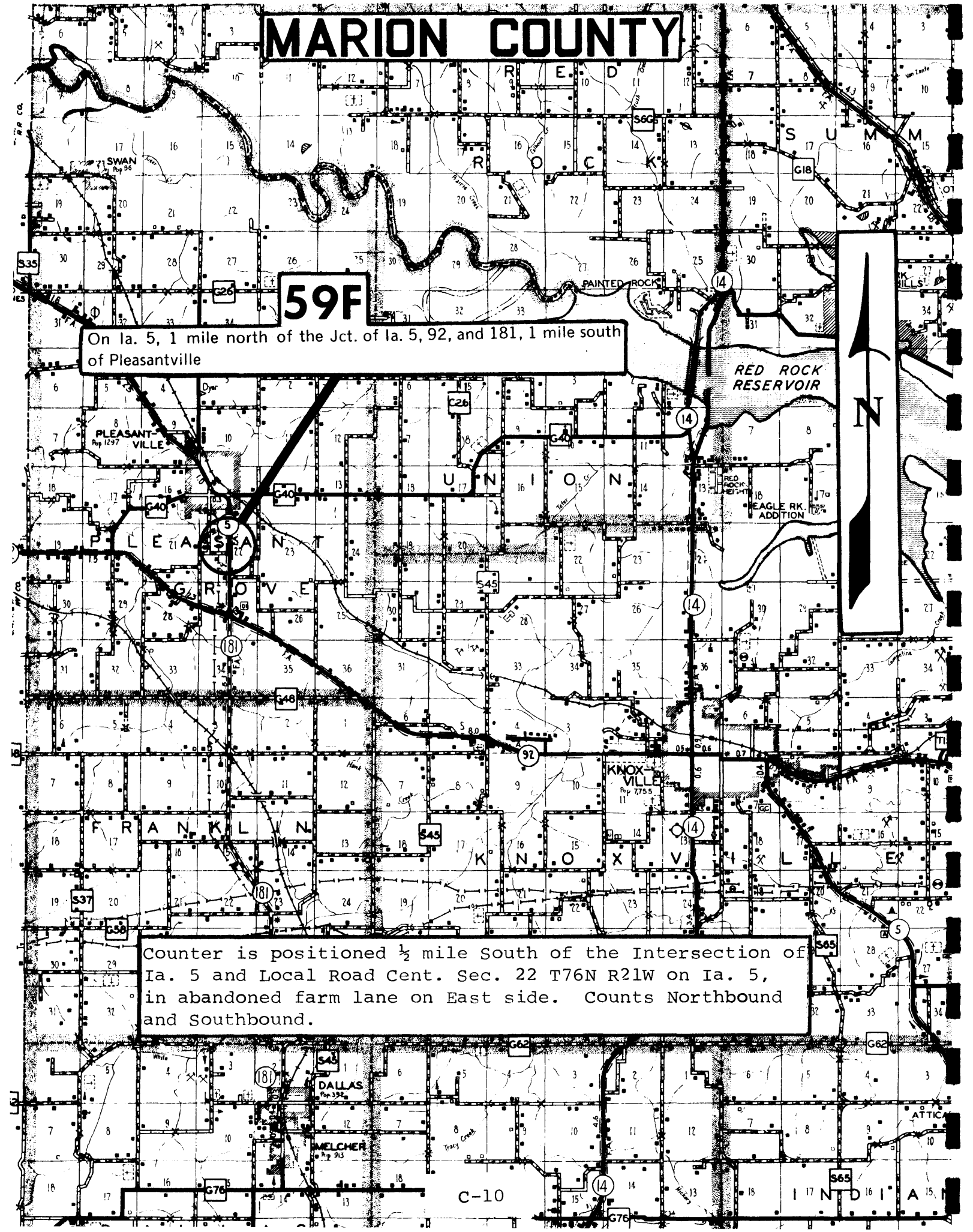
Counter counts only Southbound traffic North of B-20, and only Northbound traffic South of B-20. Turning movement at the intersection is of no concern to the counter

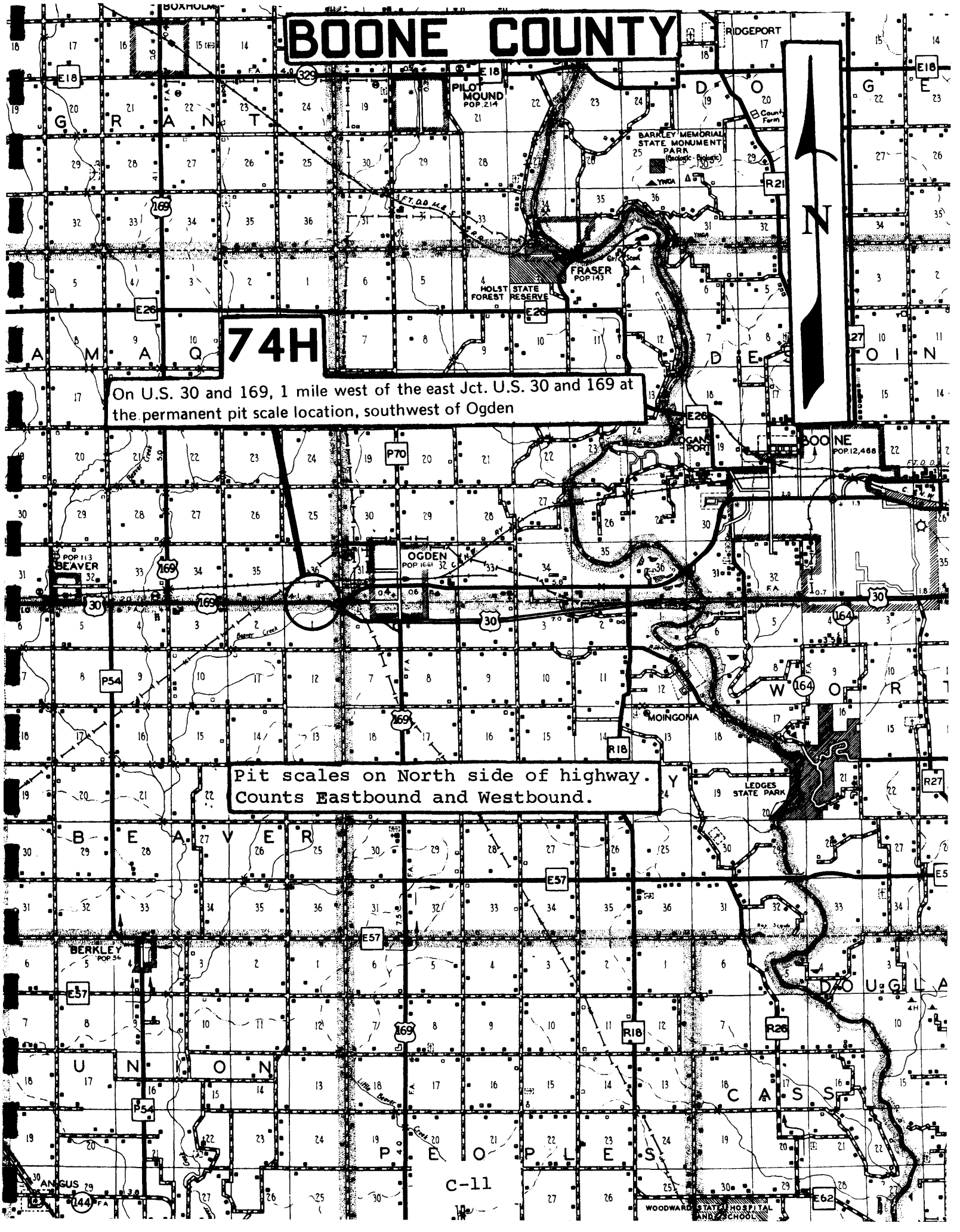

WEBSTER COUNTY
42L
Jct. of D-18 and P-71. Counts Southbound and Northbound.
Counter Location (wide shoulder)
Counter counts only Southbound traffic North of D-18, and only Northbound traffic South of D-18. Turning movement at intersection is of no concern to the counter.
C-6
BADGER Pop 465
FORT DODGE Pop 28,399
DUNCOMBE Pop 418
VINCENT Pop 204
COOPER
COLFAX
PLEASANT VALLEY
WASHINGTON
ELKHORN
WEBSTER
SUMNER
LEHIGH Pop 739
OTHO Pop 581
KALO
COALVILLE
WOODMAN HOLLOW STATE PARK
KENNEDY PARK
BADGER LAKE
LIZARD CREEK
HUMBOLDT
RIVER
T-90N
T-89N
N

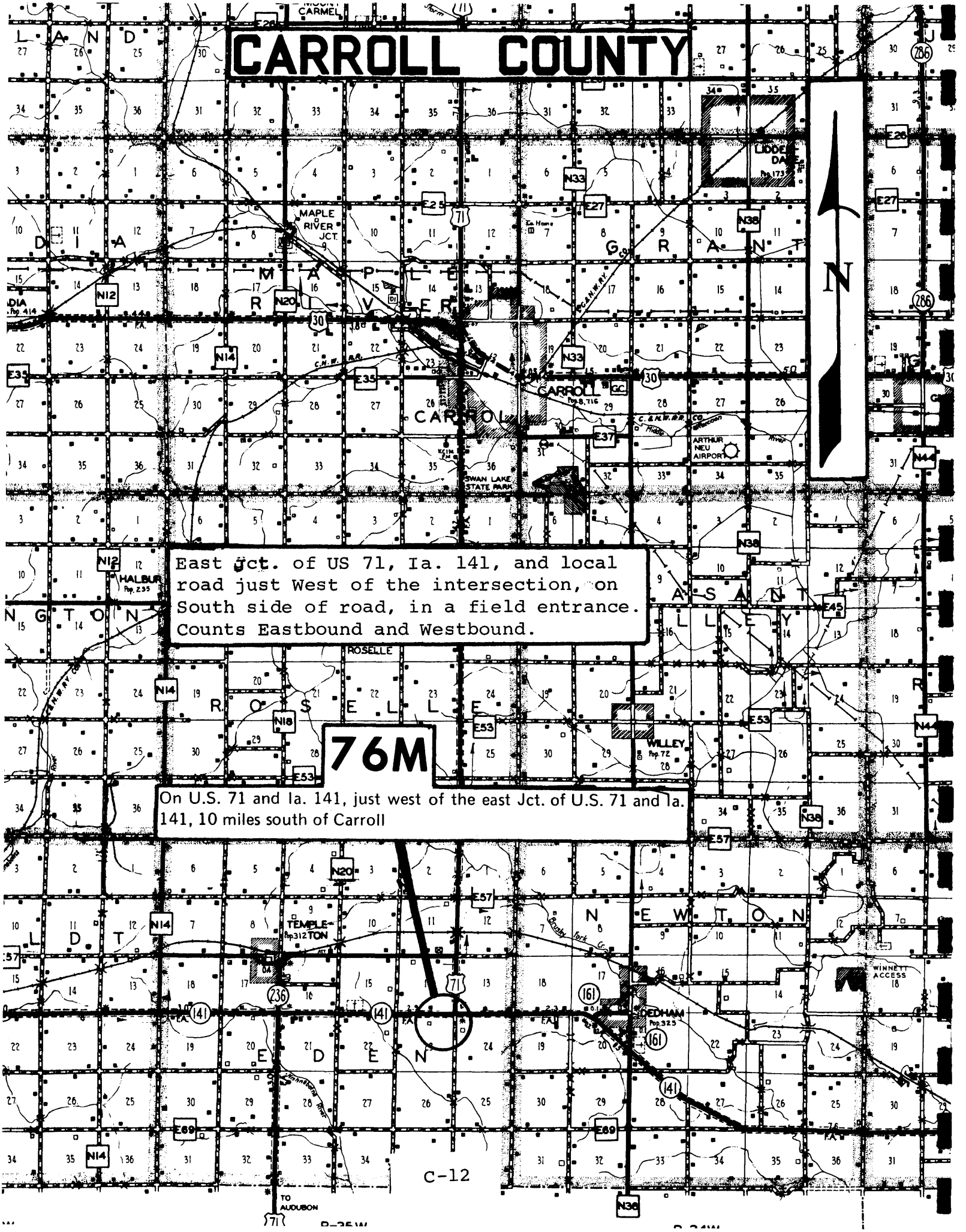

Counter is positioned at abandon gas station on corner of Linn and 22 st. Counts traffic South of 22 st. only
F.A.S. 440
F.A.S. 440
46G
On Linn Street, south of the Int. of Linn St. and 22nd St., in the northeast part of Boone
N
Twenty fourth
Twenty third
Twentysecond
Twenty first
Twentieth
Nineteenth
Eighteenth
Seventeenth
Sixteenth
Fifteenth
Fourteenth
Thirteenth
Twelfth
Eleventh
Tenth
Ninth
Eighth
Seventh
Sixth
Fifth
Third
Second
First
Memorial Park
Place
Harrison
Monona
Benton
Linn
Meridian
Cedar
Clinton
Champa
Factory
Boone County Fair Grounds
Argo
Curtis
Wilson
Larimer
Crawford
Milwaukee St
E. Mamie Eisenhower Ave.
5004
Carroll
Greene
Boone
Story
Marshall
Tama
Benton
Linn
Cedar
Clinton
Jackson
Delaware
Brainard
21
27
28
LINWOOD PARK
CEMETERY
Forest Ave.
Aldrich
Prairie
Union
BOONE
Prairie Ave.
Lane
C-7

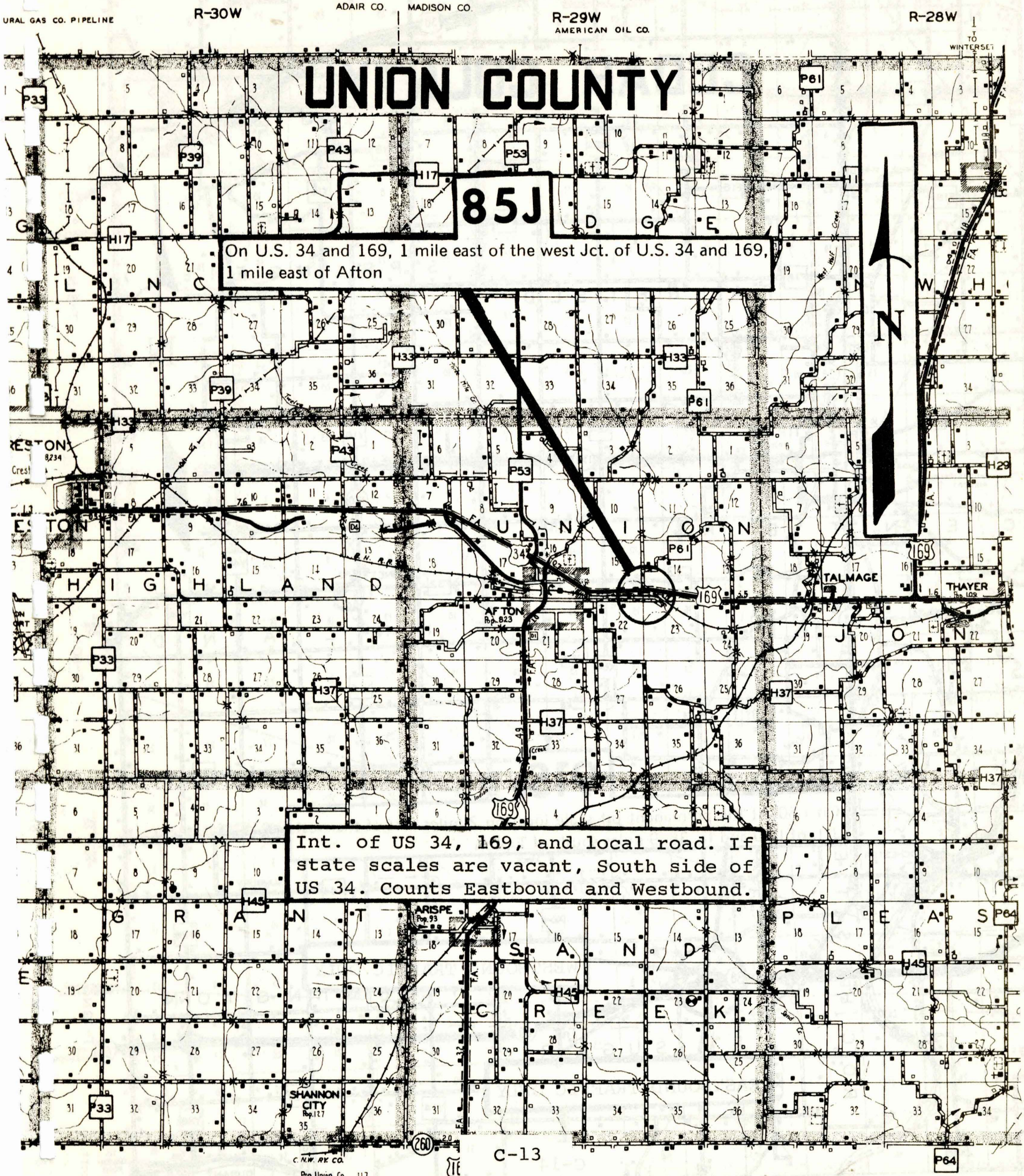

471
On South 12th Avenue, south of the Int. of Olive St. and S. 12th Ave., in the southwest part of Marshalltown
MARSHALLTOWN
C. & N.W. RY.
C. & N. W. R.R.
Nevada St.
East
Turner St.
Jackson St.
May St.
Anson St.
E. Anson St.
4648
4657
4644
F.A.S. 3476
F.A.S. 221
F.A. 030-5
F.A. 014-5
30
36
2
6
1
12
7
S. Center
Young
High
Helm
Anson Park South
Ferner St.
S. Pine
Greenbrier
Dennis Dr.
Fairmeadow Rd.
Anson Cr.
Cherry
E. Olive St.
Koeper
Olson Way
Rainbow
E. Meadow Lane
Thomas Dr.
Palmer St.
Bohen St.
Thunderbird Dr.
Harmony Dr.
New Castle Rd.
E. Southridge
Plaza Dr.
Sugar Creek Lane
S. 3rd Ave. Rd.
Eastview Rd.
Friendly Dr.
Edgebrook Rd.
Blossom Ave
Bailey Dr.
Finkle Ave.
Broadmoor
Stegman
Henry Dr.
MARSHALL COUNTY FAIR-GROUNDS
S. 17th Ave.
S. 18th Ave.
N

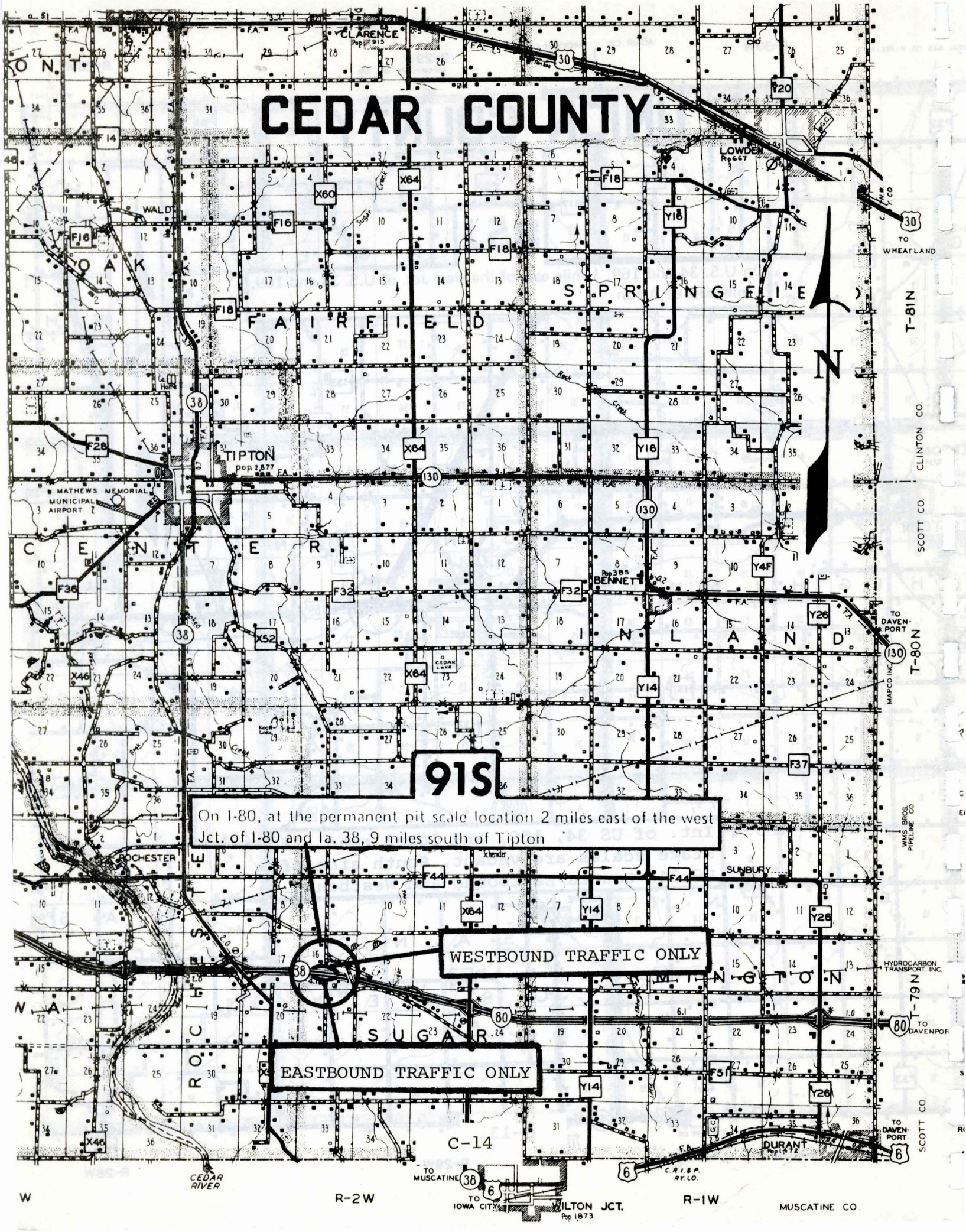

BENTON COUNTY
55E
On U.S. 30 and 218, ½ mile west of the Jct. of U.S. 30, 218 and Ia. 279 at the permanent pit scale location, 5½ miles west of Cedar Rapids
Pit scales on South side of highway.
Counts Eastbound and Westbound.
VINTON
STATE SCHOOL FOR THE BLIND
SHELLSBURG
EDEN
CANTON
ELDORADO
FREMONT
FLORENCE
VAN HORNE
NEWHALL
ATKINS
BLAIRSTOWN
NORWAY
WATKINS
WALFORD
TO CEDAR RAPIDS
TO AMANA
T-84N
T-83N
T-82N
LINN CO
JOHNSON

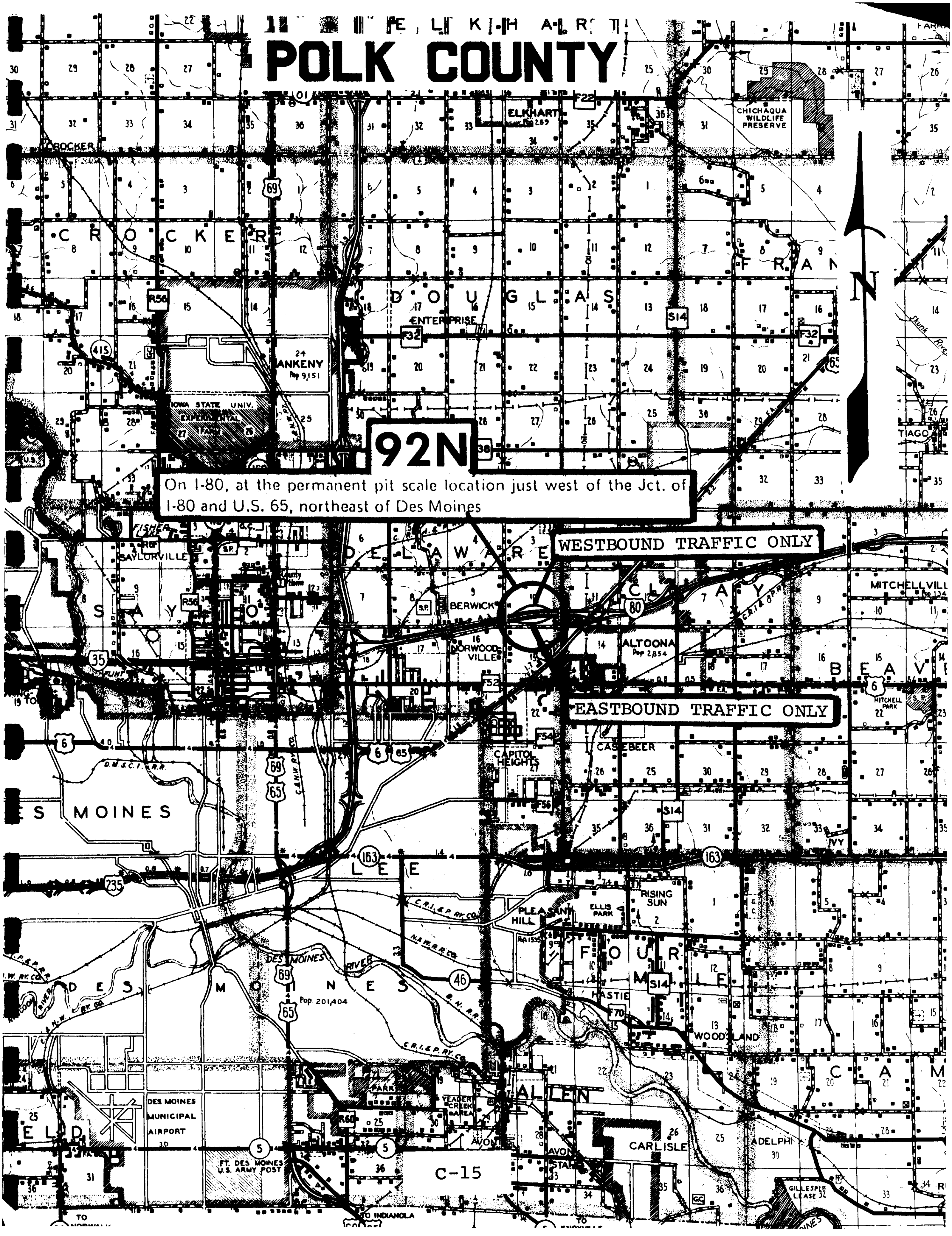

MARION COUNTY
59F
On Ia. 5, 1 mile north of the Jct. of Ia. 5, 92, and 181, 1 mile south of Pleasantville
Counter is positioned ½ mile South of the Intersection of Ia. 5 and Local Road Cent. Sec. 22 T76N R21W on Ia. 5, in abandoned farm lane on East side. Counts Northbound and Southbound.
RED ROCK RESERVOIR
PAINTED ROCK
PLEASANTVILLE Pop 1297
KNOXVILLE Pop 7,755
DALLAS Pop 332
MELCHER Pop 913
ATTICA
EAGLE RK. ADDITION
RED ROCK HEIGHTS
SWAN Pop 96
PLEASANT GROVE
FRANKLIN
UNION
KNOXVILLE
INDIAN
N

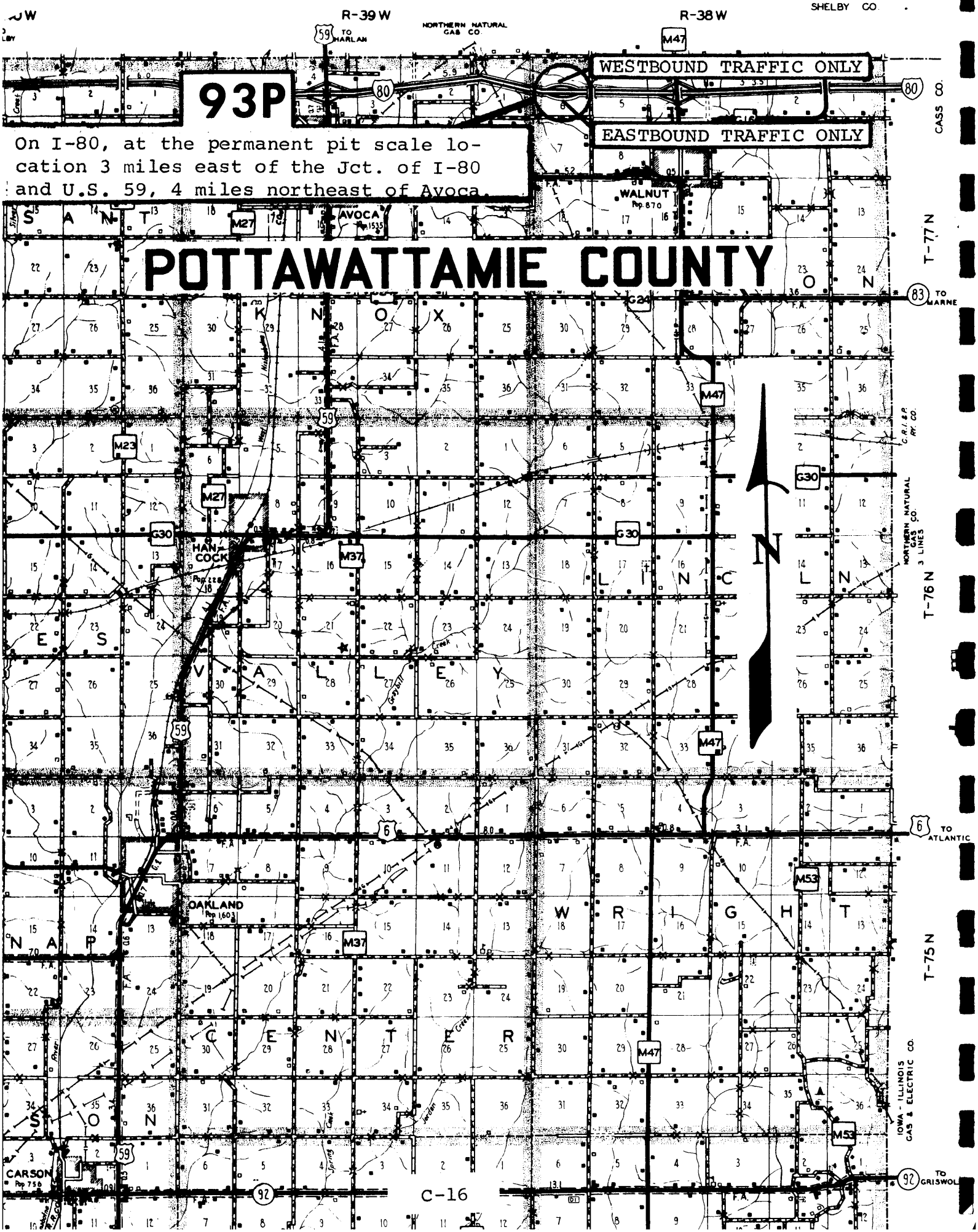

BOONE COUNTY
74H
On U.S. 30 and 169, 1 mile west of the east Jct. U.S. 30 and 169 at the permanent pit scale location, southwest of Ogden
Pit scales on North side of highway.
Counts Eastbound and Westbound.
N
PILOT MOUND POP. 214
FRASER POP. 143
HOLST STATE FOREST RESERVE
BARKLEY MEMORIAL STATE MONUMENT PARK
OGDEN POP. 1661
BOONE POP. 12,466
BEAVER POP. 113
BERKLEY POP. 36
MOINGONA
LEDGES STATE PARK
WOODWARD STATE HOSPITAL AND SCHOOL
GRANT
AMAQUA
BEAVER
UNION
DODGE
DES MOINES
WORTH
DOUGLAS
CASS
PEOPLES
C-11

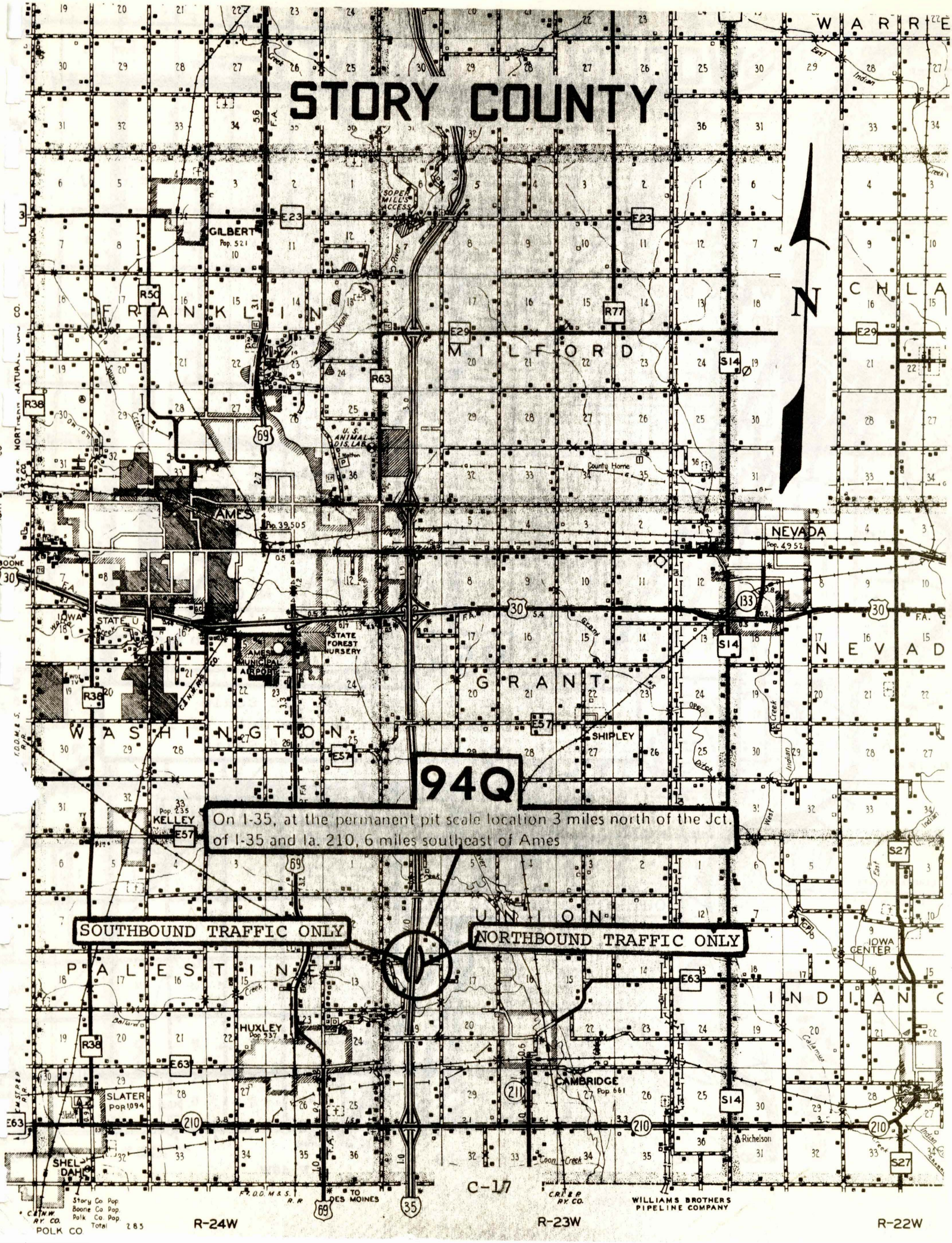

CARROLL COUNTY
East jct. of US 71, Ia. 141, and local road just West of the intersection, on South side of road, in a field entrance. Counts Eastbound and Westbound.
76M
On U.S. 71 and Ia. 141, just west of the east Jct. of U.S. 71 and Ia. 141, 10 miles south of Carroll
CARROLL
MAPLE RIVER JCT.
ROSELLE
HALBUR
WILLEY
TEMPLE-TON
DEDHAM
ARTHUR NEU AIRPORT
SWAN LAKE STATE PARK
TO AUDUBON
N

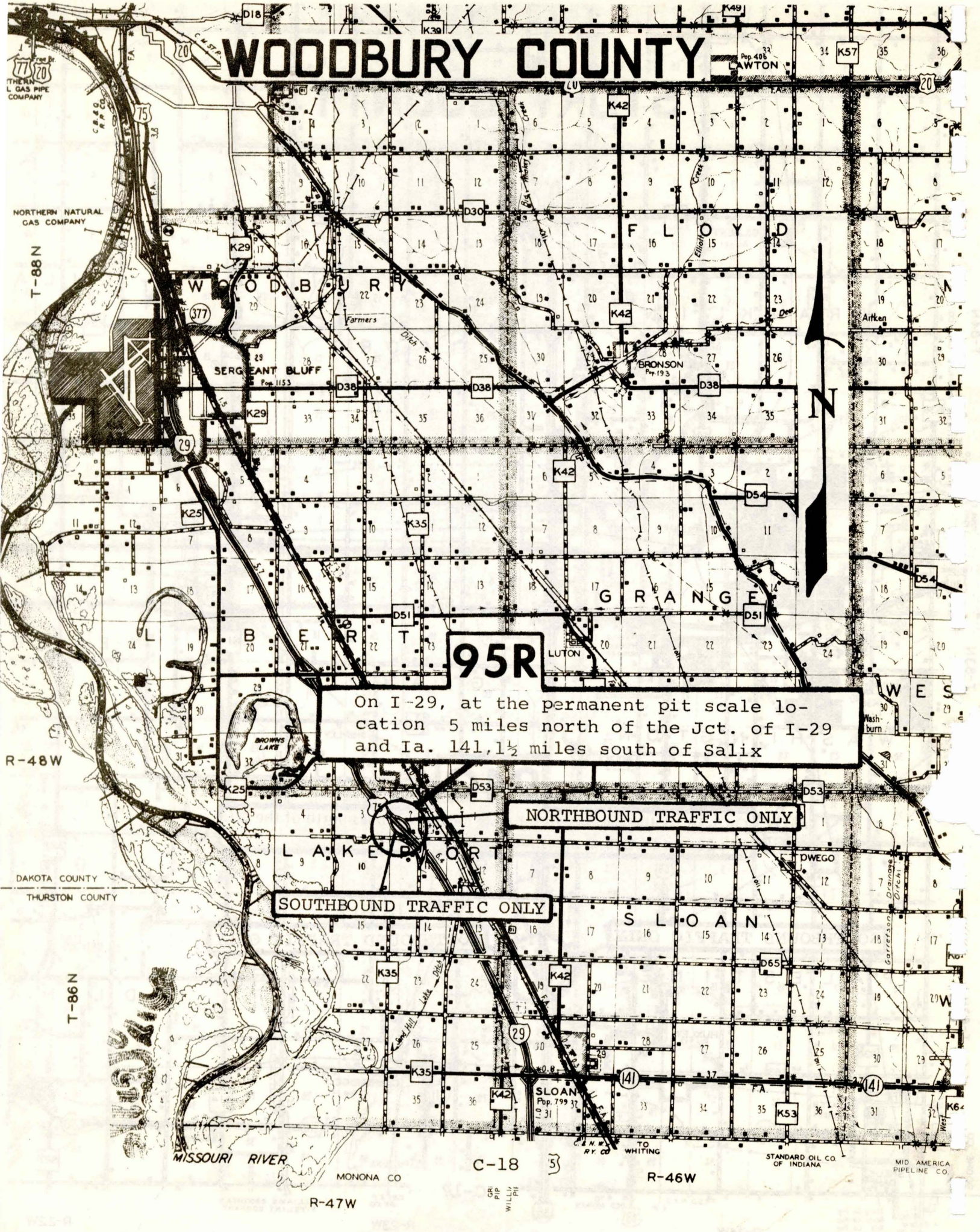

URAL GAS CO. PIPELINE
R-30W
ADAIR CO.
MADISON CO.
R-29W
AMERICAN OIL CO.
R-28W
TO WINTERSET
UNION COUNTY
85J
On U.S. 34 and 169, 1 mile east of the west Jct. of U.S. 34 and 169, 1 mile east of Afton
Int. of US 34, 169, and local road. If state scales are vacant, South side of US 34. Counts Eastbound and Westbound.
LUCAS
UNION
HIGHLAND
GRANT
PLEASANT
CREEK
AFTON
Pop. 823
TALMAGE
THAYER
Pop. 102
ARISPE
Pop. 93
SHANNON CITY
Pop. 127
C.N.W. RY CO.
Pop Union Co 117
Pop Ringgold Co. 10
Total 127
P33
P39
P43
P53
P61
P64
H17
H29
H33
H37
H45
169
260
C-13

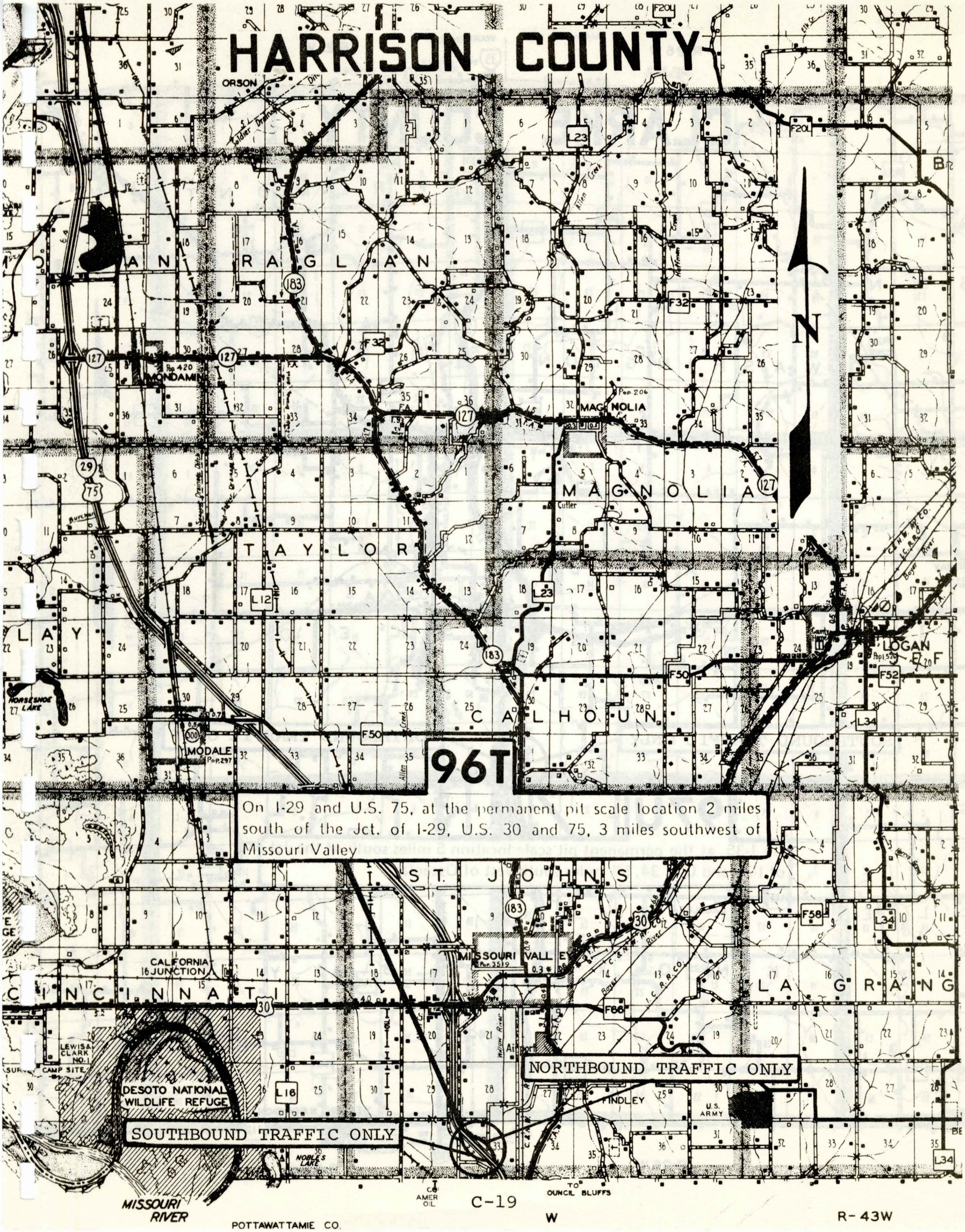

CEDAR COUNTY
CLARENCE
Pop 915
LOWDEN
Pop 667
WALCOTT
TIPTON
Pop 2,877
MATHEWS MEMORIAL MUNICIPAL AIRPORT
BENNETT
Pop 385
SUNBURY
ROCHESTER
DURANT
Pop 1,472
WILTON JCT.
Pop 1873
TO WHEATLAND
TO DAVENPORT
TO MUSCATINE
TO IOWA CITY
CEDAR RIVER
CLINTON CO.
SCOTT CO.
MUSCATINE CO.
T-81N
T-80N
T-79N
R-2W
R-1W
91S
On I-80, at the permanent pit scale location 2 miles east of the west Jct. of I-80 and Ia. 38, 9 miles south of Tipton
WESTBOUND TRAFFIC ONLY
EASTBOUND TRAFFIC ONLY
C-14

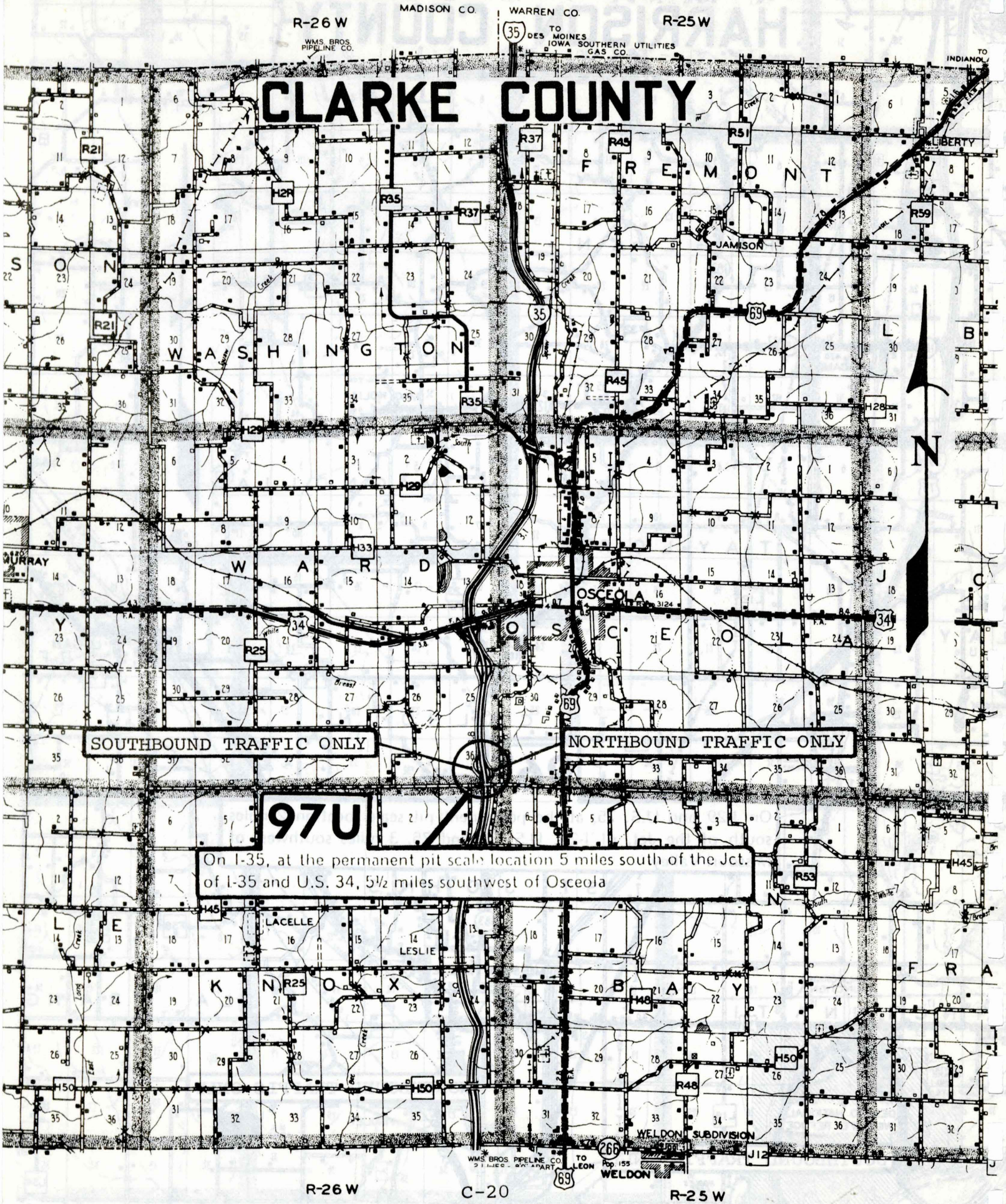

POLK COUNTY
ELKHART
92N
On I-80, at the permanent pit scale location just west of the Jct. of I-80 and U.S. 65, northeast of Des Moines
WESTBOUND TRAFFIC ONLY
EASTBOUND TRAFFIC ONLY
CROCKER
DOUGLAS
ANKENY
ENTERPRISE
IOWA STATE UNIV. EXPERIMENTAL FARM
CHICHAQUA WILDLIFE PRESERVE
DELAWARE
SAYLORVILLE
BERWICK
NORWOODVILLE
ALTOONA
CLAY
MITCHELLVILLE
CAPITOL HEIGHTS
CASEBEER
DES MOINES
LEE
PLEASANT HILL
RISING SUN
ELLIS PARK
FOUR MILE
HASTIE
WOODLAND
ALLEN
CARLISLE
ADELPHI
AVON
DES MOINES MUNICIPAL AIRPORT
FT. DES MOINES U.S. ARMY POST
TO INDIANOLA
TO NORWALK
GILLESPIE LEASE
IVY
TIAGO


93P
On I-80, at the permanent pit scale location 3 miles east of the Jct. of I-80 and U.S. 59, 4 miles northeast of Avoca.
WESTBOUND TRAFFIC ONLY
EASTBOUND TRAFFIC ONLY
POTTAWATTAMIE COUNTY
R-39 W
R-38 W
SHELBY CO.
CASS CO.
T-77 N
T-76 N
T-75 N
NORTHERN NATURAL GAS CO.
AVOCA
WALNUT
HANCOCK
OAKLAND
CARSON
C-16


STORY COUNTY
94Q
On I-35, at the permanent pit scale location 3 miles north of the Jct. of I-35 and Ia. 210, 6 miles southeast of Ames
SOUTHBOUND TRAFFIC ONLY
NORTHBOUND TRAFFIC ONLY
GILBERT Pop. 521
AMES Pop. 39,505
NEVADA Pop. 4952
KELLEY Pop. 235
HUXLEY Pop. 537
SLATER Pop. 1094
CAMBRIDGE Pop. 661
SHIPLEY
IOWA CENTER
FRANKLIN
MILFORD
GRANT
WASHINGTON
PALESTINE
UNION
INDIAN
NEVADA
STATE FOREST NURSERY
AMES MUNICIPAL AIRPORT
U.S. ANIMAL DIS. LAB
County Home
SOPER MILLS ACCESS
IOWA STATE U
Richelson
WILLIAMS BROTHERS PIPELINE COMPANY
TO DES MOINES
Story Co. Pop.
Boone Co. Pop.
Polk Co. Pop.
Total 285
POLK CO
BOONE CO
T-84N
T-83N
R-24W
R-23W
R-22W
C-17


WOODBURY COUNTY
95R
On I-29, at the permanent pit scale location 5 miles north of the Jct. of I-29 and Ia. 141, 1½ miles south of Salix
NORTHBOUND TRAFFIC ONLY
SOUTHBOUND TRAFFIC ONLY
LAWTON
BRONSON
SERGEANT BLUFF
LUTON
SLOAN
DAKOTA COUNTY
THURSTON COUNTY
MISSOURI RIVER
MONONA CO
NORTHERN NATURAL GAS COMPANY
STANDARD OIL CO. OF INDIANA
MID AMERICA PIPELINE CO.
TO WHITING
T-88 N
T-86 N
R-48W
R-47W
R-46W
C-18


HARRISON COUNTY
ORSON
MONDAMIN
Pop. 420
MAGNOLIA
Pop. 206
RAGLAN
TAYLOR
MAGNOLIA
CALHOUN
ST. JOHNS
CINCINNATI
LA GRANGE
LOGAN
MODALE
Pop. 297
MISSOURI VALLEY
CALIFORNIA JUNCTION
FINDLEY
Cutler
HORSESHOE LAKE
DESOTO NATIONAL WILDLIFE REFUGE
LEWIS & CLARK NO. 1 CAMP SITE
NOBLES LAKE
U.S. ARMY
Airport
N
96T
On I-29 and U.S. 75, at the permanent pit scale location 2 miles south of the Jct. of I-29, U.S. 30 and 75, 3 miles southwest of Missouri Valley
NORTHBOUND TRAFFIC ONLY
SOUTHBOUND TRAFFIC ONLY
TO COUNCIL BLUFFS
MISSOURI RIVER
POTTAWATTAMIE CO.
W
R-43W


CLARKE COUNTY
MADISON CO.
WARREN CO.
R-26 W
R-25 W
WMS. BROS. PIPELINE CO.
DES MOINES IOWA SOUTHERN UTILITIES GAS CO.
TO INDIANOLA
LIBERTY
FREMONT
WASHINGTON
JAMISON
OSCEOLA
MURRAY
LACELLE
LESLIE
WELDON
WELDON SUBDIVISION
TO LEON
Pop 155
SOUTHBOUND TRAFFIC ONLY
NORTHBOUND TRAFFIC ONLY
97U
On I-35, at the permanent pit scale location 5 miles south of the Jct. of I-35 and U.S. 34, 5½ miles southwest of Osceola
N
R-26 W
C-20
R-25 W

APPENDIX D

CODING FORMS

IOWA DEPARTMENT OF TRANSPORTATION
OFFICE OF TRANSPORTATION INVENTORY
AMES, IOWA 50010
TRUCK WEIGHT SURVEY INTERVIEW FORM

STATION NO. _____
DIR. OF TRAVEL _____

DATE _____ HOUR _____
SHEET _____ OF _____
INTERVIEWER _____

CONTROL NUMBER	VEHICLE TYPE 18-23	BODY TYPE 24-25	FUEL 26	REGISTERED WEIGHT 29-31	STATE REG. 32	MODEL YEAR 33-34	CLASS OPERATION 35	COMMODITY 36-40	Loaded or Empty 41
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									

COMMON BODY CODES
11 Panel
12 Pickup
13 Light Utility
14 Personnel, Cargo
15 Carryall/Minibus
21 Flat
22 Low Boy Trailer
23 Rack
24 Livestock Rack
25 Riggers/Oil Field
26 Lumber
27 Log or Pipe
28 Canopy
31 Express
32 Open Top Box/Van
33 Grain
34 Dump
35 Hopper
41 Van
42 Refrigeration Van
43 Moving Van
51 Tank
52 Petroleum Tank
53 Bituminous Tank
54 Bottler
61 Multi Delivery
62 Auto Transporter
63 Armored Car
64 Boat Carrier
71 Concrete Mixer
72 Wrecker
73 Utilities
74 Garbage, Refuse
75 Container
76 Equipment
77 Bare Chassis
78 Shop Body
79 Dwelling Body
88 Truck-Tractor
89 Empty Log Truck
91 Intercity Bus
92 Suburban Bus
93 City Transit Bus
94 School Bus

FUEL TYPE CODE
1 Gasoline
2 Diesel
3 Propane
4 Turbine
8 Other
9 Not Determined

BASIS OF REGISTRATION
Code Col. 32 with a (1) except for the following:

Code	State
3	Alaska
3	Arizona
3	California
3	Colorado
3	Florida
3	Hawaii
6	Louisiana
5	Maryland
3	Michigan
2	Montana
3	Nevada
5	New Mexico
3	Ohio
2	Oregon
2	Pennsylvania
5	South Dakota
2	Texas
3	Wyoming
3	District of Columbia
9	Canada, Mexico

Class of Operation
1 Private
2 I.C.C. Permits
3 Other Hire
9 Not Determined (Canada, Mexico)

Loaded or Empty
Empty 0
Loaded with a Product 1
Non-Commodity Movement 2

IOWA DEPARTMENT OF TRANSPORTATION
OFFICE OF TRANSPORTATION INVENTORY
AMES, IOWA 50010
TRUCK WEIGHT SURVEY INTERVIEW FORM

STATION NO. _____
DIR. OF TRAVEL _____

DATE _____ HOUR _____
SHEET _____ OF _____
INTERVIEWER _____

CONTROL NUMBER	VEHICLE TYPE 18-23	BODY TYPE 24-25	FUEL 26	REGISTERED WEIGHT 29-31	STATE REG. 32	MODEL YEAR 33-34	CLASS OPERATION 35	COMMODITY 36-40	Loaded or Empty 41
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									

COMMON BODY CODES
11 Panel
12 Pickup
13 Light Utility
14 Personnel, Cargo
15 Carryall/Minibus
21 Flat
22 Low Boy Trailer
23 Rack
24 Livestock Rack
25 Riggers/Oil Field
26 Lumber
27 Log or Pipe
28 Canopy
31 Express
32 Open Top Box/Van
33 Grain
34 Dump
35 Hopper
41 Van
42 Refrigeration Van
43 Moving Van
51 Tank
52 Petroleum Tank
53 Bituminous Tank
54 Bottler
61 Multi Delivery
62 Auto Transporter
63 Armored Car
64 Boat Carrier
71 Concrete Mixer
72 Wrecker
73 Utilities
74 Garbage, Refuse
75 Container
76 Equipment
77 Bare Chassis
78 Shop Body
79 Dwelling Body
88 Truck-Tractor
89 Empty Log Truck
91 Intercity Bus
92 Suburban Bus
93 City Transit Bus
94 S 1 B

FUEL TYPE CODE
1 Gasoline
2 Diesel
3 Propane
4 Turbine
8 Other
9 Not Determined

BASIS OF REGISTRATION
Code Col. 32 with a (1) except for the following:

Code	State
3	Alaska
3	Arizona
3	California
3	Colorado
3	Florida
3	Hawaii
6	Louisiana
5	Maryland
3	Michigan
2	Montana
3	Nevada
5	New Mexico
3	Ohio
2	Oregon
2	Pennsylvania
5	South Dakota
2	Texas
3	Wyoming
3	District of Columbia
9	Canada, Mexico

Class of Operation
1 Private
2 I.C.C. Permits
3 Other Hire
9 Not Determined (Canada, Mexico)

Loaded or Empty
Empty 0
Loaded with a Product 1
Non-Commodity Movement 2

IOWA DEPARTMENT OF TRANSPORTATION
OFFICE OF TRANSPORTATION INVENTORY
AMES, IOWA 50010
TRUCK WEIGHT SURVEY INTERVIEW FORM

STATION NO. _____
DIR. OF TRAVEL _____

DATE _____ HOUR _____
SHEET _____ OF _____
INTERVIEWER _____

CONTROL NUMBER	VEHICLE TYPE 18-23	BODY TYPE 24-25	FUEL 26	REGISTERED WEIGHT 29-31	STATE REG. 32	MODEL YEAR 33-34	CLASS OPERATION 35	COMMODITY 36-40	41
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									

COMMON BODY CODES

11 Panel
12 Pickup
13 Light Utility
14 Personnel, Cargo
15 Carryall/Minibus
21 Flat
22 Low Boy Trailer
23 Rack
24 Livestock Rack
25 Riggers/Oil Field
26 Lumber
27 Log or Pipe
28 Canopy
31 Express
32 Open Top Box/Van
33 Grain
34 Dump
35 Hopper
41 Van
42 Refrigeration Van
43 Moving Van
51 Tank
52 Petroleum Tank
53 Bituminous Tank
54 Bottler
61 Multi Delivery
62 Auto Transporter
63 Armored Car
64 Boat Carrier
71 Concrete Mixer
72 Wrecker
73 Utilities
74 Garbage, Refuse
75 Container
76 Equipment
77 Bare Chassis
78 Shop Body
79 Dwelling Body
88 Truck-Tractor
89 Empty Log Truck
91 Intercity Bus
92 Suburban Bus
93 City Transit Bus
94 School Bus

FUEL TYPE CODE

1 Gasoline
2 Diesel
3 Propane
4 Turbine
8 Other
9 Not Determined

BASIS OF REGISTRATION

Code Col. 32 with a (1) except for the following:

Code	State
3	Alaska
3	Arizona
3	California
3	Colorado
3	Florida
3	Hawaii
6	Louisiana
5	Maryland
3	Michigan
2	Montana
3	Nevada
5	New Mexico
3	Ohio
2	Oregon
2	Pennsylvania
5	South Dakota
2	Texas
3	Wyoming
3	District of Columbia
9	Canada, Mexico

Class of Operation

1 Private
2 I.C.C. Permits
3 Other Hire
9 Not Determined (Canada, Mexico)

Loaded or Empty

Empty 0
Loaded with a Product 1
Non-Commodity Movement 2

IOWA DEPARTMENT OF TRANSPORTATION

OFFICE OF TRANSPORTATION INVENTORY

AMES, IOWA 50010

TRUCK WEIGHT SURVEY SCALEMAN'S FORM

STATION NO. _____
DIR. TRAVEL _____

DATE _____ HOUR _____
SHEET _____ OF _____
SCALEMAN _____

CONTROL NUMBER	Axle Weights in Hundreds of Pounds							CONTROL NUMBER	Axle Weights in Hundreds of Pounds						
	Axle A	Axle B	Axle C	Axle D	Axle E	Axle F	Axle G		Axle A	Axle B	Axle C	Axle D	Axle E	Axle F	Axle G
1								1							
2								2							
3								3							
4								4							
5								5							
6								6							
7								7							
8								8							
9								9							
10								10							
1								1							
2								2							
3								3							
4								4							
5								5							
6								6							
7								7							
8								8							
9								9							
10								10							

IOWA DEPARTMENT OF TRANSPORTATION
OFFICE OF TRANSPORTATION INVENTORY
AMES, IOWA 50010
TRUCK WEIGHT SURVEY COUNT FORM

TYPE	STATE	HWY. SYS.	STA. NO.			D.O.T.	YEAR	MON.	DATE		HOUR	
7	1	9										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17

COUNTER _____
CODER _____

Circle Direction of Travel			North 1 East 3		South 5 West 7		North 1 East 3	South 5 West 7	North 1 East 3	South 5 West 7
PASSENGER CARS	Standard and Compact	18					Type 327000	Type 327000	Type 521100	Type 521100
		19								
		20								
		21					Type 323000	Type 323000	Type 521200	Type 521200
		22								
	Small	23								
		24					Type 331000	Type 331000	Type 531100	Type 531100
		25								
		26								
		27					Type 337000	Type 337000	Type 531200	Type 531200
Motorcycles and Motor Scooter		38								
		39								
		40					Type 333000	Type 333000	Type 533400	Type 533400
Commercial Buses		41								
		42								
		43					Type 334000	Type 334000	Type 621100	Type 621100
		44								
School Buses		45								
		46					Type 343000	Type 343000	Type 622100	Type 622100
		47								
SINGLE UNIT TRUCK	200000 Pickup and Panel	48					Type 421000	Type 421000	Type 622200	Type 622200
		49					P.U.	P.U.		
		50								
		51					Type 422000	Type 422000	Type 623200	Type 623200
	210000 Heavy 4 Tire	52		P.U.		P.U.	P.U.	P.U.		
		53								
		54					Type 423000	Type 423000	Type 211079	Type 211079
		55					P.U.	P.U.		
	220000 6-Tired Dual Rear Tires	56		P.U.		P.U.				
		57					Type 424000	Type 424000	Type 221079	Type 221079
		58					P.U.	P.U.		
		59								
	230000 3 Axle	60					Type 431000	Type 431000	Type 231079	Type 231079
		61								
		62								
SEMITRAILER COMBINATION	321000 2 Axle Tractor 1 Axle Trailer	63					Type 432000	Type 432000		
		64								
		65								
	322000 2 Axle Tractor 2 Axle Trailer	66					Type 433000	Type 433000		
		67								
		68								
		69								
	332000 3 Axle Tractor 2 Axle Trailer	70					Type 434000	Type 434000		
		71								
		72								
		73								
			Type 220800		Type 220800					
			Type 230800		Type 230800					
			Type 240000		Type 240000					

IOWA DEPARTMENT OF TRANSPORTATION
OFFICE OF TRANSPORTATION INVENTORY
AMES, IOWA 50010
TRUCK WEIGHT SURVEY COUNT FORM

TYPE	STATE	HWY. SYS.	STA. NO.				D.O.T.	YEAR		MON.		DATE		HOUR	
7	1	9													
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17

COUNTER _____
CODER _____

Circle Direction of Travel			North 1 East 3		South 5 West 7	
PASSENGER CARS	Standard and Compact	18				
		19				
		20				
		21				
		22				
	Small	23				
		24				
		25				
		26				
		27				
Motorcycles and Motor Scooter		38				
		39				
		40				
Commercial Buses		41				
		42				
		43				
		44				
School Buses		45				
		46				
		47				
SINGLE UNIT TRUCK	200000 Pickup and Panel	48				
		49				
		50				
		51				
	210000 Heavy 4 Tire	52		P.U.		P.U.
		53				
		54				
		55				
	220000 6-Tired Dual Rear Tires	56		P.U.		P.U.
		57				
		58				
		59				
	230000 3 Axle	60				
		61				
		62				
SEMITRAILER COMBINATION	321000 2 Axle Tractor 1 Axle Trailer	63				
		64				
		65				
	322000 2 Axle Tractor 2 Axle Trailer	66				
		67				
		68				
		69				
	332000 3 Axle Tractor 2 Axle Trailer	70				
		71				
		72				
		73				

North 1 East 3	South 5 West 7	North 1 East 3	South 5 West 7
Type 327000	Type 327000	Type 521100	Type 521100
Type 323000	Type 323000	Type 521200	Type 521200
Type 331000	Type 331000	Type 531100	Type 531100
Type 337000	Type 337000	Type 531200	Type 531200
Type 333000	Type 333000	Type 533400	Type 533400
Type 334000	Type 334000	Type 621100	Type 621100
Type 343000	Type 343000	Type 622100	Type 622100
Type 421000 P.U.	Type 421000 P.U.	Type 622200	Type 622200
Type 422000 P.U.	Type 422000 P.U.	Type 623200	Type 623200
Type 423000 P.U.	Type 423000 P.U.	Type 211079	Type 211079
Type 424000 P.U.	Type 424000 P.U.	Type 221079	Type 221079
Type 431000	Type 431000	Type 231079	Type 231079
Type 432000	Type 432000		
Type 433000	Type 433000		
Type 434000	Type 434000		

Type 220800	Type 220800	
Type 230800	Type 230800	
Type 240000	Type 240000	

Commodity	Code
Amonia	28190
Asphalt Shingles	29520
Green Beans	01390
Beer	20821
Bottles (Empty)	32210
Burial Vaults	34900
Cars	37111
Caterpillar	35310
Cattle	01411
Cement (Dry)	32411
CO_2 (Carbon Dioxide)	28130
Concrete (wet Mix)	32710
Eggs	01520
Feed (Bulk)	20421
Freight (General)	41100
Furniture	25000
Gravel	14412
Hay	01191
Hogs	01413
Horses	01920
Household Goods	41100
Insulation	32900
LTL	41100
Lumber	24000
Meat (Boxed)	20120
Meat (Swing)	20110
Milk Process	20260
Motorcycles	37500
Oats	01133
Pallets Wood	42100
Parcel	47100
Plywood	24300
Pop	20860
Potatoes	01195
Potato Chips	20900
Poultry	01510
PreFabHomes	24320
PreFab Steel Bldg	34410
RR Tools	34200
Refrigerator	36320
Roofing	29520
Soybean	01144
SoybeanMeal	20923
Steel (Axles & Beams)	33125
Steel (Pipes & Tubing)	33126
Steel (Rods & Bars)	33124
Steel Sheets	33123
Tools	34200
Tractors	35200

TYPE	STATE	HWY. SYS.	STA. NO.	D.O.T.	YEAR	MON.	DATE	HOUR
7	- 9							
1	2 3	4 5	6 7 8	9	10 11	12 13	14 15	16 17

IOWA DEPARTMENT OF TRANSPORTATION
OFFICE OF TRANSPORTATION INVENTORY
AMES, IOWA 50010
TRUCK WEIGHT SURVEY RECORDER FORM

SHEET ___ OF ___

RECORDER _____

WEIGHTS BY _____

CODED BY _____

CONTROL NO.	VEH TYPE: GEN	VEH TYPE: TYP AX	VEH TYPE: REG AX	VEH TYPE: TRL AX	VEH TYPE: STATE AXLE	BODY TYPE	FUEL TYPE	GROSS REG WGT. GROUP	REG WEIGHT	BASIS REG	MODEL YEAR	CLASS OP	COMMODITY	E OR L	TOTAL WEIGHT	AXLE WEIGHTS: AXLE A	AXLE WEIGHTS: AXLE B	AXLE WEIGHTS: AXLE C	AXLE WEIGHTS: AXLE D	AXLE WEIGHTS: AXLE E	AXLE MEASUREMENTS: AXLE A-B	AXLE MEASUREMENTS: AXLE B-C	AXLE MEASUREMENTS: AXLE C-D	AXLE MEASUREMENTS: AXLE D-E	TOTAL WHEEL BASE	SERIAL NO.	CARD NO.
	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
1																											
2																											
3																											
4																											
5																											
6																											
7																											
8																											
9																											
10																											

IOWA DEPARTMENT OF TRANSPORTATION
OFFICE OF TRANSPORTATION INVENTORY
AMES, IOWA 50010
TRUCK WEIGHT SURVEY RECORDER FORM

SHEET ___ OF ___
RECORDER _____

WEIGHTS BY _____
CODED BY _____

Commodity	Code
Amonia	28190
Asphalt Shingles	29520
Green Beans	01390
Beer	20821
Bottles (Empty)	32210
Burial Vaults	34900
Cars	37111
Caterpillar	35310
Cattle	01411
Cement (Dry)	32411
CO_2 (Carbon Dioxide)	28130
Concrete (wet Mix)	32710
Eggs	01520
Feed (Bulk)	20421
Freight (General)	41100
Furniture	25000
Gravel	14412
Hay	01191
Hogs	01413
Horses	01920
Household Goods	41100
Insulation	32900
LTL	41100
Lumber	24000
Meat (Boxed)	20120
Meat (Swing)	20110
Milk Process	20260
Motorcycles	37500
Oats	01133
Pallets Wood	42100
Parcel	47100
Plywood	24300
Pop	20860
Potatoes	01195
Potato Chips	20900
Poultry	01510
PreFabHomes	24320
PreFab Steel Bldg	34410
RR Tools	34200
Refrigerator	36320
Roofing	29520
Soybean	01144
SoybeanMeal	20923
Steel (Axles & Beams)	33125
Steel (Pipes & Tubing)	33126
Steel (Rods & Bars)	33124
Steel Sheets	33123
Tools	34200
Tractors	35200

	TYPE	STATE	HWY. SYS.	STA. NO.	D.O.T.	YEAR	MON.	DATE	HOUR
	7	1	9						
	1	2	3	4 5	6 7 8	9	10 11	12 13	14 15	16 17

CONTROL NO	VEH TYPE: GEN	TYP AX	REG AX	TRL AX	STATE AXLE	BODY TYPE	FUEL TYPE	GROSS REG WGT. GROUP	REG WEIGHT	BASIS REG	MODEL YEAR	CLASS OP	COMMODITY	E OR L	TOTAL WEIGHT	AXLE WEIGHTS: AXLE A	AXLE B	AXLE C	AXLE D	AXLE E	AXLE MEASUREMENTS: AXLE A-B	AXLE B-C	AXLE C-D	AXLE D-E	TOTAL WHEEL BASE	SERIAL NO.	CARD NO.
	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
1																												
2																												
3																												
4																												
5																												
6																												
7																												
8																												
9																												
10																												

BARRICADE
FLASHING BEACON
FRONT: SURVEY CREW – 30 M.P.H.
BACK: RESUME SPEED
THANK YOU

BARRICADE
FRONT: SURVEY CREW – 30 M.P.H.
BACK. RESUME SPEED
THANK YOU

500'

FLAGMAN
500 FT

500'

STOP
AHEAD

500'

TRUCKS
AND
BUSES
STOP
500 FT

500'

TRUCKS AND
BUSES STOP
HERE

TRAFFIC DIRECTOR

MINIMUM
DISTANCE — 400'

MINIMUM
DISTANCE 1000'

200'

MINIMUM
DISTANCE — 400'

TRUCKS AND
BUSES STOP
HERE

TRAFFIC DIRECTOR

TRUCKS
AND
BUSES
STOP
500 FT

500'

STOP
AHEAD

500'

FLAGMAN
500 FT

500'

TRAFFIC CONES 25' SPACING

x - INTERVIEWER

- FLAG

- FLAGMAN OR TRAFFIC DIRECTOR

SCALEMEN

BARRICADE
FLASHING BEACON
FRONT: SURVEY CREW – 30 M.P.H.
BACK: RESUME SPEED
THANK YOU

BARRICADE
FRONT - SURVEY CREW – 30 M.P.H.
BACK- RESUME SPEED
THANK YOU

TRUCK WEIGHING STATION

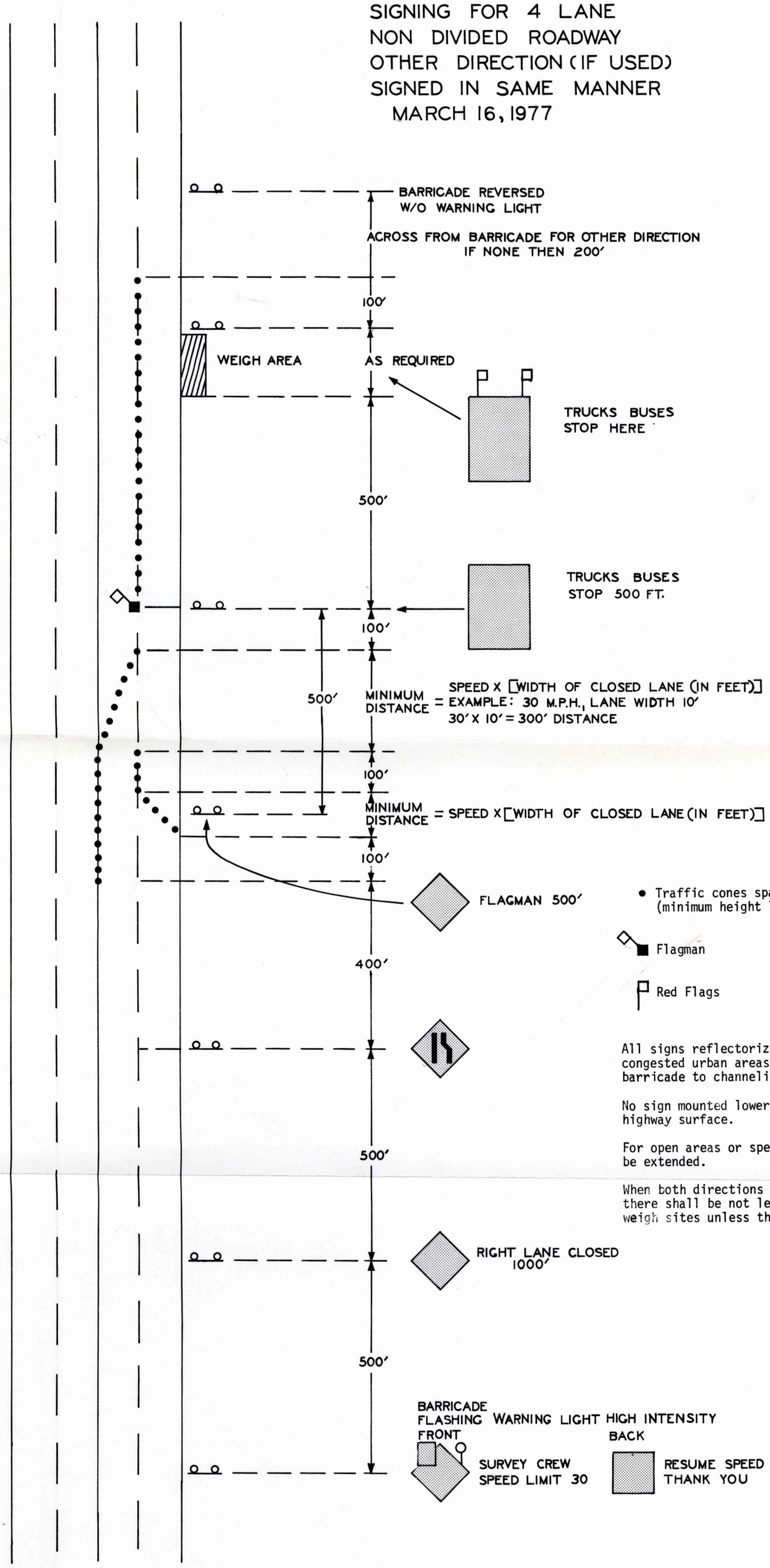
TWO-LANE ROADWAY

2-17-77

LOCATE STATION IN AN AREA WHERE THE SIGHT DISTANCE FOR TRAFFIC APPROACHING IN EITHER DIRECTION IS NOT LESS THAN 1200 FEET

TRUCK WEIGH STATION SIGNING FOR 4 LANE NON DIVIDED ROADWAY OTHER DIRECTION (IF USED) SIGNED IN SAME MANNER

MARCH 16, 1977



- Traffic cones spaced at 25' intervals (minimum height 18")

Flagman

Red Flags

All signs reflectorized for night operations. For congested urban areas signing distances from barricade to channelization could be reduced.

No sign mounted lower than 12" from level of highway surface.

For open areas or special locations, signing may be extended.

When both directions are operated at the same time, there shall be not less than 300 feet between weigh sites unless there is a median.