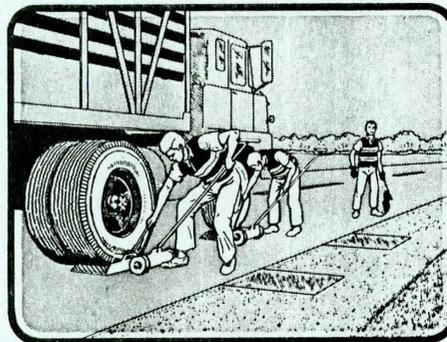
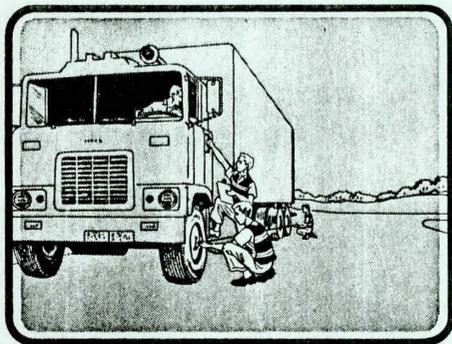


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TRUCK WEIGHT SURVEY

INSTRUCTIONS and SCHEDULES



IOWA DEPARTMENT
OF TRANSPORTATION

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TRUCK WEIGHT SURVEY

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VEHICLE MANAGEMENT
FOR STREETS & HIGHWAYS

DATE	ISSUED TO
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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:

<u>Weight Data</u>	<u>Count Data</u>
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:

<u>Weight Data</u>	<u>Count Data</u>
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

<u>Station Number</u>	<u>Route</u>	<u>Locations</u>
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

<u>Station</u> <u>Number</u>	<u>Route</u>	<u>Locations</u>
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 south-east of Waterloo
55E (Cedar Rapids)	U.S. 30 & 218	On U.S. 30 and 218 $\frac{1}{2}$ mile west of the Jct. of U.S. 30, 218 and Ia. 279 at the permanent pit scale location, $5\frac{1}{2}$ 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 Co. Rd. On Co. Rd. S-56, at the Jct. of Co. Rd.
(Plymouth) S-56 B-20 and Co. Rd. S-56, 2½ miles south
of Plymouth

42L Co. Rd. On Co. Rd. P-71, at the Jct. of Co. Rd.
(Vincent) P-71 P-71 and Co. Rd. D-18, 5 miles south of
Vincent

5. City Street, Federal Aid Urban-One Location

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

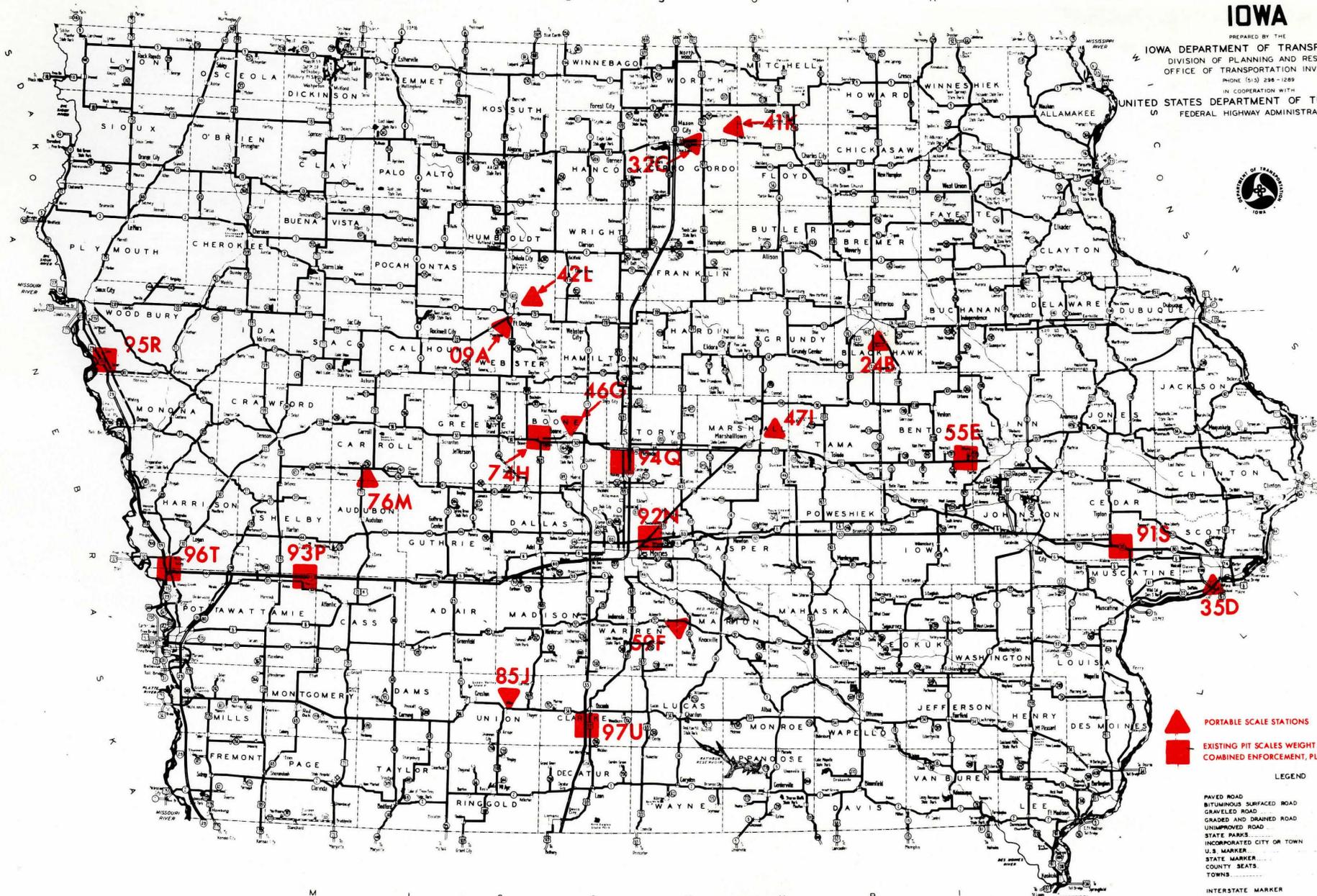
6. Local Street, Urban-One Location

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

TRUCK WEIGHT SURVEY STATION LOCATIONS

STATE OF
IOWA

PREPARED BY THE
IOWA DEPARTMENT OF TRANSPORTATION
DIVISION OF PLANNING AND RESEARCH
OFFICE OF TRANSPORTATION INVENTORY
PHONE (515) 281-1289
IN COOPERATION WITH
UNITED STATES DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION



-  PORTABLE SCALE STATIONS
-  EXISTING PIT SCALES WEIGHT STATION, COMBINED ENFORCEMENT, PLANNING AND RESEARCH

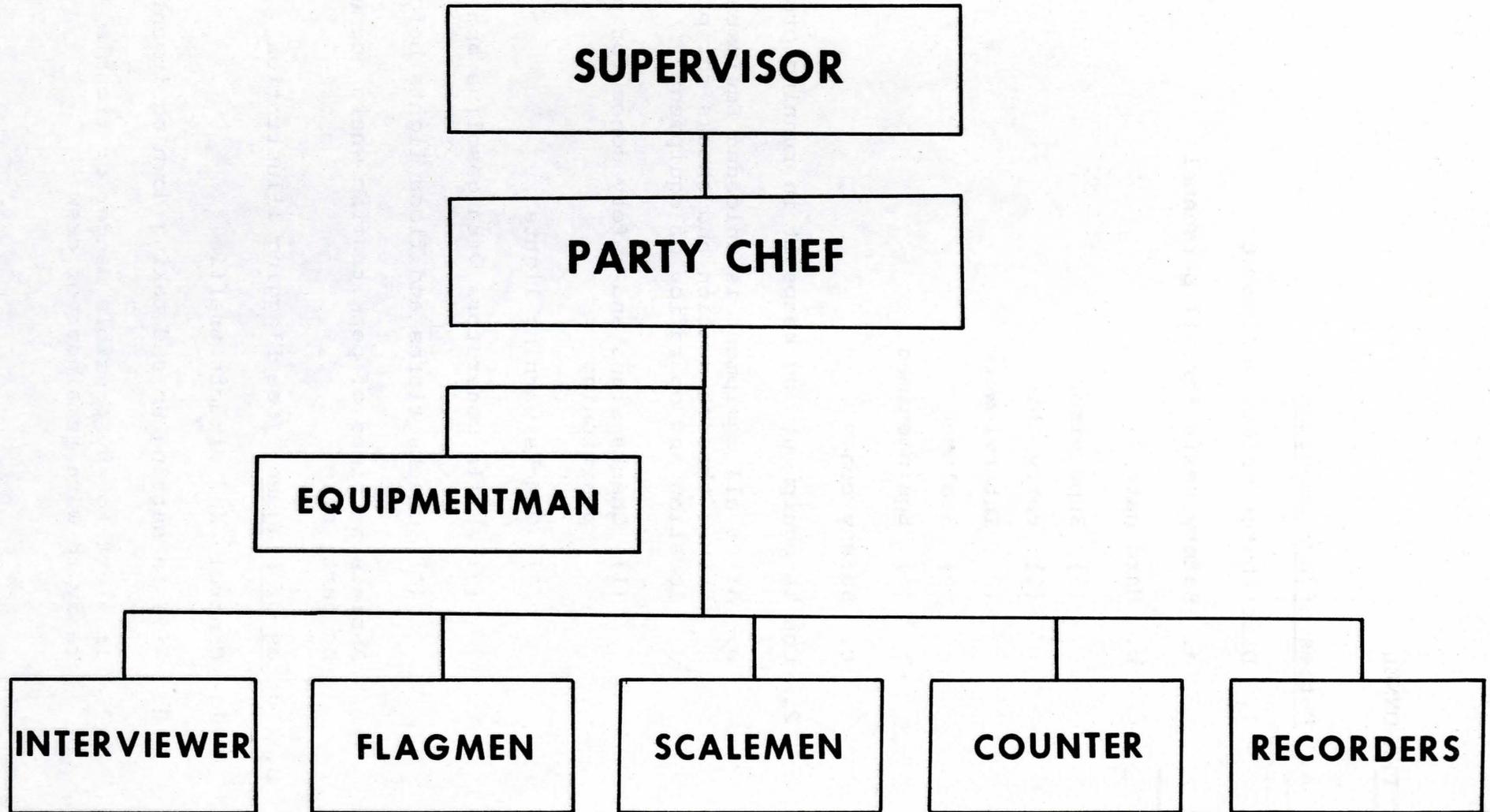
LEGEND

PAVED ROAD	
BITUMINOUS SURFACED ROAD	
GRAVELED ROAD	
GRADED AND DRAINED ROAD	
UNIMPROVED ROAD	
STATE PARKS	
INCORPORATED CITY OR TOWN	
U.S. MARKER	
STATE MARKER	
COUNTY SEATS	
TOWNS	
INTERSTATE MARKER	

ILLUSTRATION 1

PART I
PERSONNEL

TRUCK WEIGHT ORGANIZATION CHART



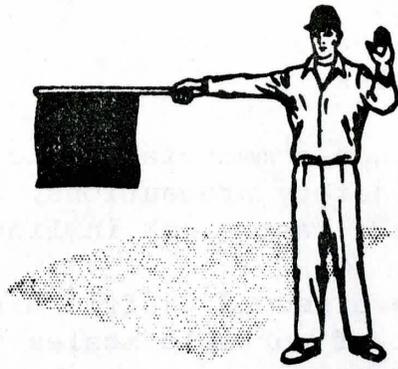
I. PERSONNEL

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)

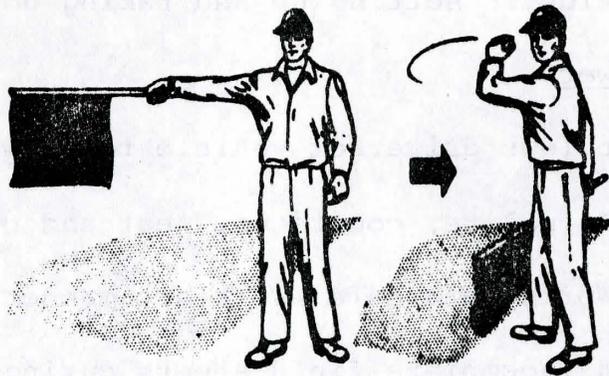
1. Controls and directs traffic
2. Aids in setting up and taking down equipment
3. Is alert to any possible danger or trouble and is ready to warn remainder of crew



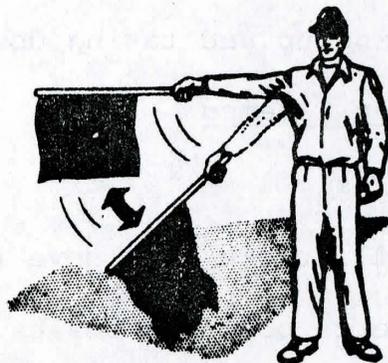
To stop
traffic



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 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 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:

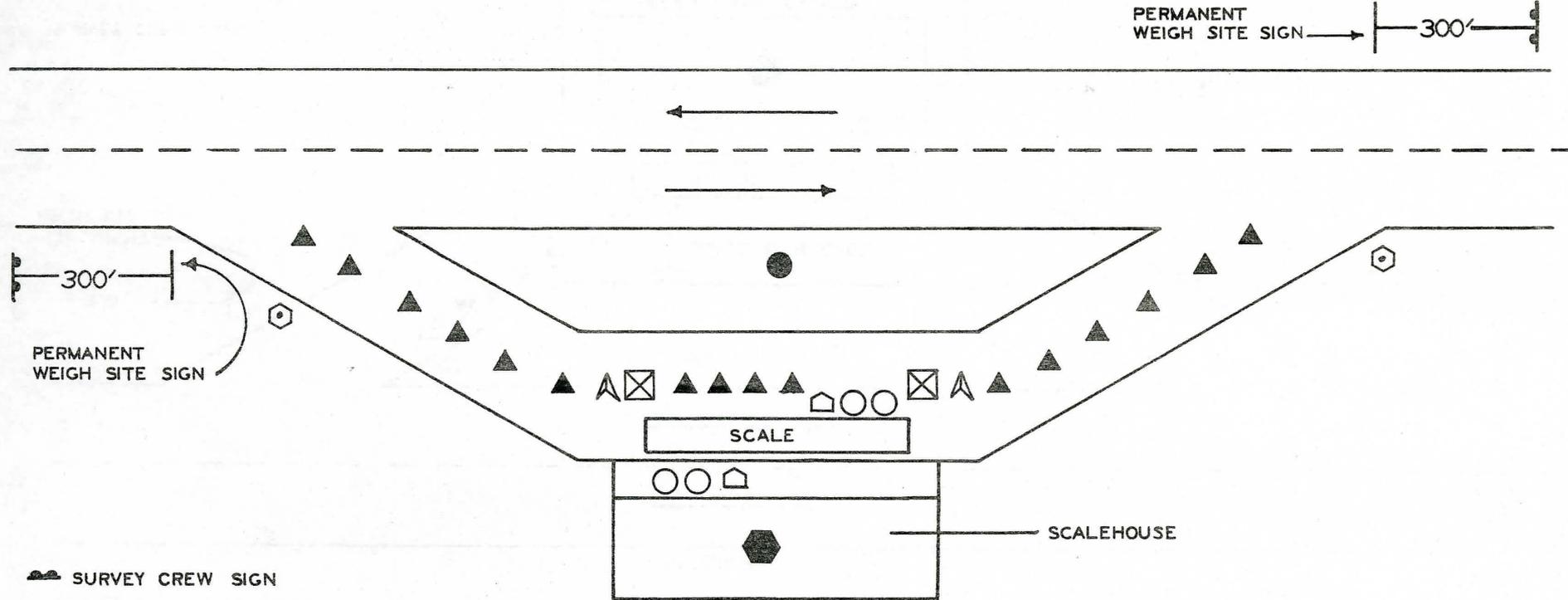
- A. At times when there are no vehicles in the station to be weighed the Interviewer, Scaleman or Tapeman, Traffic Directors, and Recorderman will be seated on chairs which are located on the shoulder edge of oncoming traffic or beside the permanent pit scale house. Please remain seated until a truck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

PERMANENT WEIGH SITE SIGN → | 300' ← |

IV-11



▲ SURVEY CREW SIGN

⊠ SIGN — PULL ON SCALE
ONE AXLE AT A TIME

▲ TRAFFIC CONES

● MICROPONE OPERATOR

○ TAPEMEN

◡ RECORDERMEN

▲ INTERVIEWER

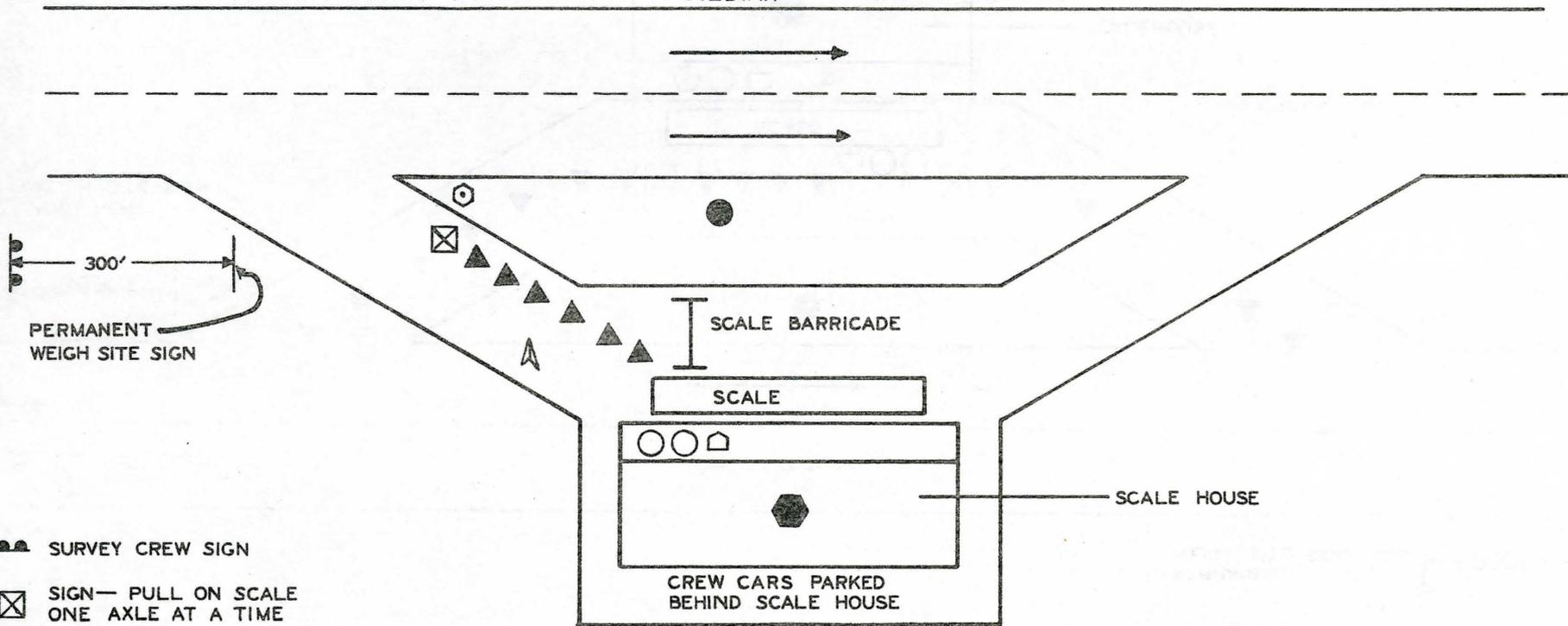
● COUNTER

◡ FLAGMEN

TRUCK WEIGH STATION PIT SCALE

DIVIDED HIGHWAY

MEDIAN



PERMANENT
WEIGH SITE SIGN

300'

SCALE BARRICADE

SCALE

SCALE HOUSE

CREW CARS PARKED
BEHIND SCALE HOUSE

▲ SURVEY CREW SIGN

⊠ SIGN— PULL ON SCALE
ONE AXLE AT A TIME

▲ TRAFFIC CONES

⬡ MICROPHONE OPERATOR

○ TAPEMEN

◻ RECORDERMAN

▲ INTERVIEWER

● COUNTER

⊙ FLAGMAN

PART V

RECORDER FORM



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

Highway System Column (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

12 46G
 08 47I
 07 41K & 42L

Highway System Column (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

Highway System Column (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.

<u>State</u>	<u>Code</u>	<u>State</u>	<u>Code</u>
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 tenth 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.

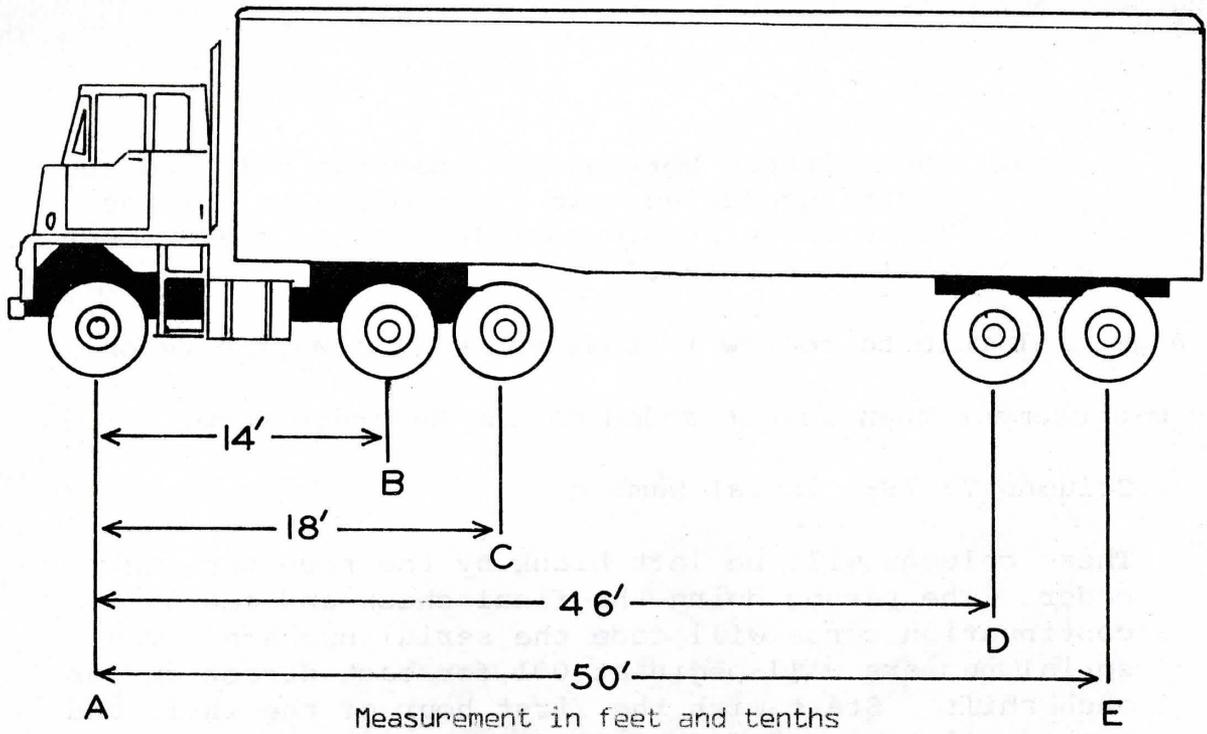
Column 80: Card Number

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

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						

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						

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	COMMON BODY CODES	FUEL 26	REGISTERED WEIGHT 29-31	STATE REG. 32	FUEL TYPE CODE	MODEL YEAR 33-34	CLASS OF OPERATION 35	Loaded or Empty	
										36-40	41
1			11 Panel 12 Pickup 13 Light Utility 14 Personnel, Cargo 15 Carryall/Minibus				1 Gasoline 2 Diesel 3 Propane 4 Turbine 8 Other 9 Not Determined			Empty 0 Loaded with a Product 1 Non-Commodity Movement 2	
2			21 Flat 22 Low Boy Trailer 23 Rack 24 Livestock Rack 25 Riggers/Oil Field 26 Lumber 27 Log or Pipe 28 Canopy				BASIS OF REGISTRATION Code Col. 32 with a (1) except for the following:				
3			31 Express 32 Open Top Box/Van 33 Grain 34 Dump 35 Hopper 41 Van 42 Refrigeration Van 43 Moving Van 51 Tank				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				
4			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				Class of Operation 1 Private 2 I.C.C. Permits 3 Other Hire 9 Not Determined (Canada, Mexico)				
5			79 Dwelling Body 88 Truck-Tractor 89 Empty Log Truck 91 Intercity Bus 92 Suburban Bus 93 City Transit Bus 94 School Bus								

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
<i>1</i>	<i>Buses</i>
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 passenger car type or smaller wheels are classified with the tow vehicle
- b. Heavy trailers with dual tires or heavy truck-type single tires 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".

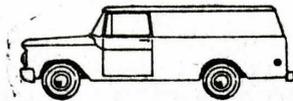
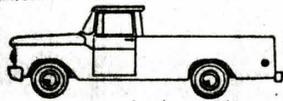
5. Fifth Digit (Column 22) State Axle

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

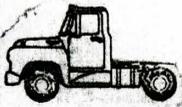
6. Sixth Digit (Column 23) State Axle

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

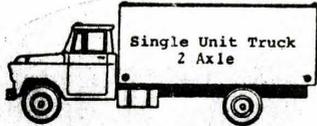
VEHICLE TYPE



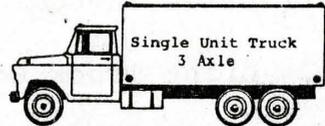
Pickup or Panel 4-Wheel Truck
 200000 = Less than 1 ton rated capacity
 210000 = 1 ton or more rated capacity



220000



220000

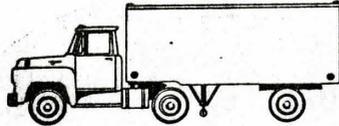


230000

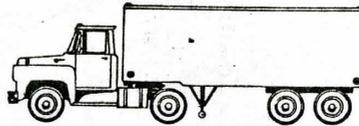


230000

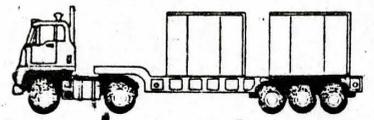
TRUCKTRACTOR - SEMITRAILER



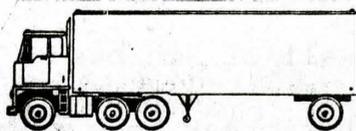
321000



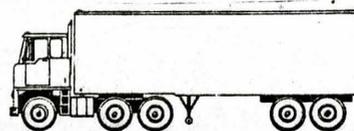
322000



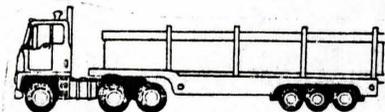
323000



331000

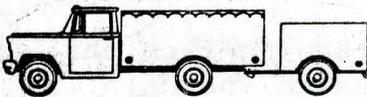


332000



333000

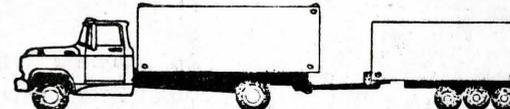
SINGLE UNIT TRUCK WITH TRAILER



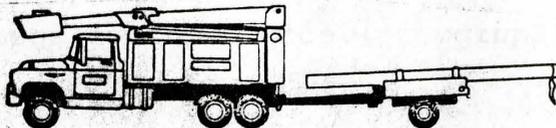
421000



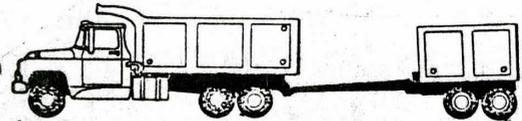
422000



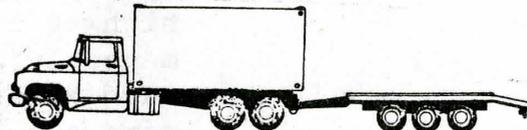
423000



431000

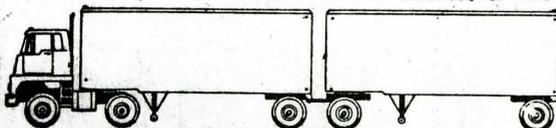


432000



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 loading 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 Recorder-man'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

Portable Scales

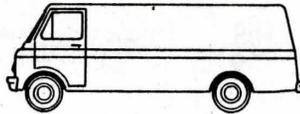
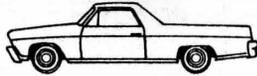
Vehicle Type

Vehicle Type

2000

Weigh 1

Weigh 1 & 2



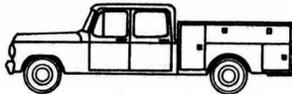
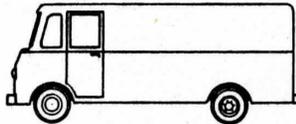
2000

Weigh 1 & 2

2100

Weigh 1

Weigh 1 & 2



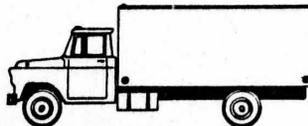
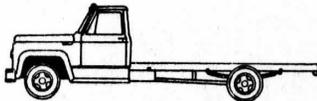
2100

Weigh 1 & 2

2200

Weigh 1

Weigh 1 & 2



2200

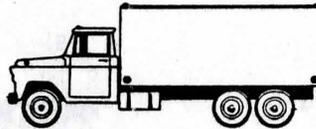
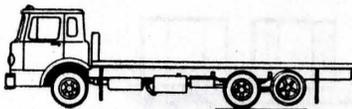
Weigh 1 & 2

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

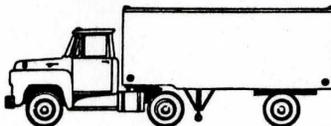
Weigh 3 & 4

3210

Weigh 1

Weigh 1 & 2

Weigh 3



3210

Weigh 1 & 2

Weigh 3

Pit Scales

Vehicle Type

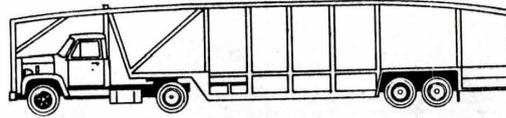
3220

Weigh 1

Weigh 1 & 2

Weigh 3 & 4

Weigh 4



3270

Weigh 1

Weigh 1 & 2

Weigh 3 & 4

Weigh 4

3230

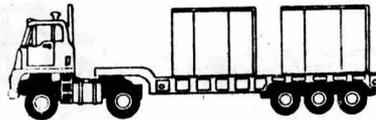
Weigh 1

Weigh 1 & 2

Weigh 3 & 4 & 5

Weigh 4 & 5

Weigh 5



3240

Weigh 1

Weigh 1 & 2

Weigh 3 & 4 & 5 & 6

Weigh 4 & 5 & 6

Weigh 5 & 6

Weigh 6

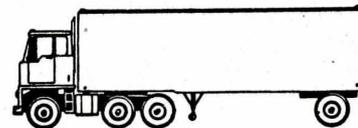
3310

Weigh 1

Weigh 1 & 2

Weigh 1 & 2 & 3

Weigh 4



Portable Scales

Vehicle Type

3220

Weigh 1 & 2

Weigh 3 & 4

3270

Weigh 1 & 2

Weigh 3 & 4

3230

Weigh 1 & 2

Weigh 3 & 4

Weigh 4 & 5

3240

Weigh 1 & 2

Weigh 3 & 4

Weigh 5 & 6

3310

Weigh 1

Weigh 2 & 3

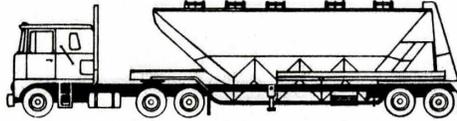
Weigh 4

Pit Scales

Vehicle Type

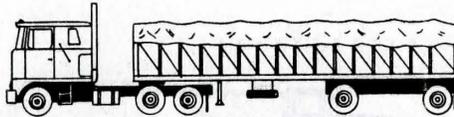
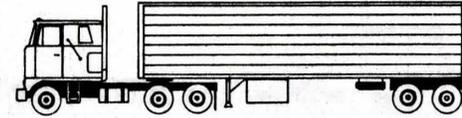
3320

- Weigh 1
- Weigh 1 & 2
- Weigh 1 & 2 & 3
- Weigh 4 & 5
- Weigh 5



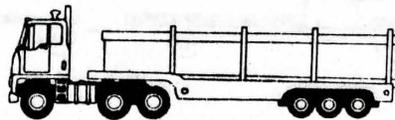
3370

- Weigh 1
- Weigh 1 & 2
- Weigh 1 & 2 & 3
- Weigh 4 & 5
- Weigh 5



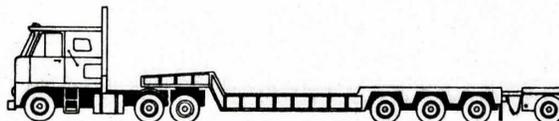
3330

- 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

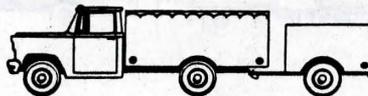


4210

Weigh 1

Weigh 1 & 2

Weigh 3



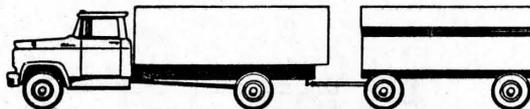
4220

Weigh 1

Weigh 1 & 2

Weigh 3 & 4

Weigh 4



4230

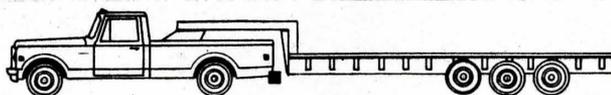
Weigh 1

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

Vehicle Type

4240

Weigh 1

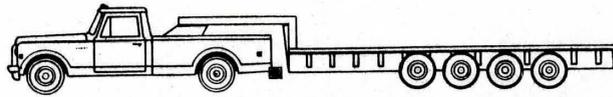
Weigh 1 & 2

Weigh 3 & 4 & 5 & 6

Weigh 4 & 5 & 6

Weigh 5 & 6

Weigh 6



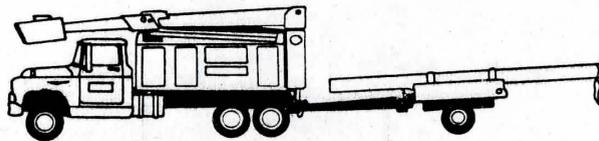
4310

Weigh 1

Weigh 1 & 2

Weigh 1 & 2 & 3

Weigh 4



4320

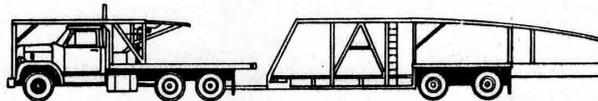
Weigh 1

Weigh 1 & 2

Weigh 1 & 2 & 3

Weigh 4 & 5

Weigh 5



4330

Weigh 1

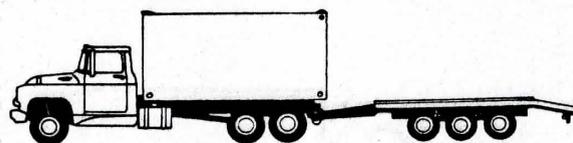
Weigh 1 & 2

Weigh 1 & 2 & 3

Weigh 4 & 5 & 6

Weigh 5 & 6

Weigh 6



Portable Scales

Vehicle Type

4240

Weigh 1 & 2

Weigh 3 & 4

Weigh 5 & 6

4310

Weigh 1

Weigh 2 & 3

Weigh 4

4320

Weigh 1

Weigh 2 & 3

Weigh 4 & 5

4330

Weigh 1

Weigh 2 & 3

Weigh 4 & 5

Weigh 5 & 6

Pit Scales

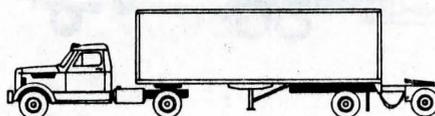
Vehicle Type

4340

- Weigh 1
- Weigh 1 & 2
- Weigh 1 & 2 & 3
- Weigh 4 & 5 & 6 & 7
- Weigh 5 & 6 & 7
- Weigh 6 & 7
- Weigh 7

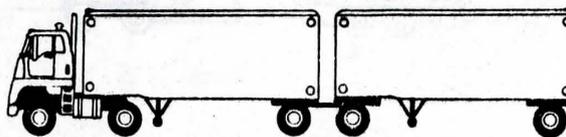
5211

- Weigh 1
- Weigh 1 & 2
- Weigh 3 & 4
- Weigh 4



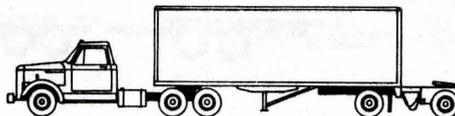
5212

- Weigh 1
- Weigh 1 & 2
- Weigh 3 & 4 & 5
- Weigh 4 & 5
- Weigh 5



5311

- Weigh 1
- Weigh 1 & 2
- Weigh 1 & 2 & 3
- Weigh 4 & 5
- Weigh 5



Portable Scales

Vehicle Type

4340

- Weigh 1
- Weigh 2 & 3
- Weigh 4 & 5
- Weigh 6 & 7

5211

- Weigh 1 & 2
- Weigh 3 & 4

5212

- Weigh 1 & 2
- Weigh 3 & 4
- Weigh 5

5311

- Weigh 1
- Weigh 2 & 3
- Weigh 4 & 5

Pit Scales

Portable Scales

Vehicle Type

Vehicle Type

5312

5312

Weigh 1

Weigh 1

Weigh 1 & 2

Weigh 2 & 3

Weigh 1 & 2 & 3

Weigh 4 & 5

Weigh 4 & 5

Weigh 6

Weigh 5 & 6

Weigh 6



6222

6222

Weigh 1

Weigh 1 & 2

Weigh 1 & 2

Weigh 3 & 4

Weigh 3 & 4

Weigh 5 & 6

Weigh 4

Weigh 5 & 6

Weigh 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
1	2	3	4	5	6	7	8	9
	0	1	2	3	4	5	6	7
	8	9	0	1	2	3	4	5
	6	7	8	9	0	1	2	3
	4	5	6	7	8	9	0	1
	2	3	4	5	6	7	8	9
	0	1	2	3	4	5	6	7

COUNTER Bill Davis
CODER _____

Circle Direction of Travel		North East	South West	North East	South West	North East	South West	
PASSENGER	Standard and Compact	135		Type 327000	Type 327000	Type 521100	Type 521100	
	Small	25		Type 323000	Type 323000	Type 521200	Type 521200	
	Motorcycles and Motor Scooter	3		Type 331000	Type 331000	Type 531100	Type 531100	
	Commercial Buses	2		Type 337000	Type 337000	Type 531200	Type 531200	
	School Buses			Type 333000	Type 333000	Type 533400	Type 533400	
	SINGLE UNIT	Pickup and Panel	50		Type 334000	Type 334000	Type 533400	Type 533400
		Heavy 4 Tire	17, 67, 50		Type 343000	Type 343000	Type 621100	Type 621100
		6-Tired Dual Rear Tires	20, 24, 4		Type 343000	Type 343000	Type 622100	Type 622100
		3 Axle	36		Type 421000	Type 421000	Type 622200	Type 622200
		2 Axle Tractor Trailer	6		Type 422000	Type 422000	Type 623200	Type 623200
2 Axle Tractor Trailer		15		Type 423000	Type 423000	Type 623200	Type 623200	
2 Axle Tractor Trailer		15		Type 424000	Type 424000	Type 623200	Type 623200	
3 Axle Tractor Trailer		80		Type 423000	Type 423000	Type 623200	Type 623200	
2 Axle Tractor Trailer		15		Type 431000	Type 431000	Type 623200	Type 623200	
2 Axle Tractor Trailer		15		Type 431000	Type 431000	Type 623200	Type 623200	
Type 220800	Type 220800	Type 432000	Type 432000	Type 623200	Type 623200	Type 623200		
Type 230800	Type 230800	Type 433000	Type 433000	Type 623200	Type 623200	Type 623200		
Type 240000	Type 240000	Type 434000	Type 434000	Type 623200	Type 623200	Type 623200		

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

<u>Date</u>	<u>Location</u>	<u>Station</u>	<u>Shift</u>
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

<u>Date</u>	<u>Location</u>	<u>Station</u>	<u>Shift</u>
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	Bakery Goods	20500
Acid .		Bananas	01232
Unspecified	28190	Barber	
Sulphuric	28193	Furniture	39900
Acetylene	28130	Supplies	28400
Air Compressors	35600	Barrel (Metal)	34910
Air Conditioners		Bathroom Fixtures	32600
Household	36300	Batteries (Wet or Dry)	36900
Commercial	35800	Beans (Soy)	01144
Alcohol (Non-Drinking)	28184	Bedding	
Aluminum Doors & Windows	34400	Cotton	22100
Aluminum Pipe, Sheets, etc..	33520	Wool	22300
Ammonia	28190	Man Made & Silk	22200
Ammunition		Beer	20821
Except Small Arms	19200	Bentonite	14511
Small Arms	19600	Bicycles	37500
Anti-Freeze	28180	Bleach	28120
Appliances (Small)	36300	Bleachers	25300
Aquarium Supplies	39900	Boats	37300
Asphalt	29116	Boat Trailers	37900
Asphalt Shingles	29520	Books	27300
Augers	35200	Bottles (empty)	32210
Auto Engines & Accessories	37140	Bottle Gas	29120
Baby Food, Canned		Boxes (Cardboard)	26500
Except Meat	20320		
Meat	20130		

Brass	33620	Cans (Empty)	34100
Bread	20500	Cantaloupe	01398
Bricks	32510	Canvas (Textile Products) . .	23900
Brooms & Brushes	39800	Cars (Passenger)	37111
Building Materials		Car Body Parts	37120
Millwork	24310	CO ₂ Carbon Dioxide	28130
Steel	34410	Cardboard	26400
Wooden Pre-Fab	24320	Carnival Equipment	35900
Bulk Feed (Livestock)	20421	Carpets & Rugs	22700
Burial Vaults		Carrots	01310
Steel	34900	Cast Iron	33120
Concrete	32710	Casting (Iron & Steel)	33200
Business Machines	35700	Caterpillar	35310
Butter	20210	Cattle	01411
By-Products		Cement Block	32710
Animal - Except Hides . . .	20140	Cement (Dry)	32411
Cabinet Work	24310	Cheese	20250
Cable		Chemicals (Unspecified)	28100
NonFerrous	33570	Cherries	01220
Steel	33150	Chickens	
Cake Mix	20450	Processed	20150
Calcium	28120	Live	01510
Camping Equipment	39490	China (Pottery Products)	32600
Camping Trailers	37900	Chopped Hay	01910
Campers - Pickup	41100	Cigarettes	21100
Candy	20700		
Canned Goods	20320		
Canned Meat (Dried, Smoked) .	20130		

Clay	14500	Crackers	20500
Clothes (Unspecified).	23800	Cranberries	01290
Men's or boys'	23100	Cranes or Hoists	35300
Women's or girls'	23300	Culverts	
Millinery goods	23500	Concrete	32710
Fur goods	23700	Steel	34400
Misc. fabricated textile.	23900	Curtains (Finished Textile).	23900
Coal		Cushions	23900
Anthracite - Hard	11100	Dairy Products	20200
Soft, Iowa, Bituminous,		Diesel Fuel	29117
Lignite	11200	Dirt	14919
Cobs	01910	Dishwashers	36300
Coffee	20950	Display Racks	73100
Combines	35200	Distilled Water	20860
Compressors	35600	Dog Food	
Compressed Gas	28130	Packaged	20421
Computers (Office Machines).	35700	Canned	20423
Concrete (Wet)	32710	Doors (Wood)	24310
Construction Equipment	35310	Drain Tile (Clay).	32590
Cookies	20500	Drugs	28300
Cooling Equipment	36320	Eggs	01520
Cool Whip	20900	Electric Appliances (Small).	36300
Cord & Twine	22980	Electric Poles (Wood).	24116
Corn	01132	Electric Service Truck	49100
Corn Meal	20410	Electric Supplies	36400
Corn Oil	20460	Electric Transmission Equip.	36100
Corn Syrup	20461		
Cosmetics	28400		

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

H₂O (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		Motor Vehicle Parts	37140
Not Determined	46112	Mules	01920
Logs (Posts)	24100	Musical Instruments (All). . .	39300
L T L (Misc. Freight).	41100	Nails	33150
Luggage	31600	Newspapers	27100
Lumber	24200	Nuts & Bolts	34500
Machine Parts	35900	Oats	01133
Magazines	27200	Office Machines	35700
Mail	41100	Oil	29117
Malt	20830	Oleo	20960
Marble (Granite)	32800	Onions	
Mattresses	25100	Green	01310
Meal (Animal By-Products). . .	20140	Dry	01318
Measuring & Control Instr.).	38200	Oranges	01210
Meat		Orange Concentrate	20340
Boxed	20120	Orange Juice (Canned).	20330
Swinging	20110	Organs & Pianos	39300
Melons (Not Watermelon). . . .	01398	Oxygen (Liquid).	28130
Metal, Barrels (Drums)	34910	Paint	28500
Milk (Cream & Powdered).	20260	Paint Equipment	35600
(Unprocessed)	01420	Pallets	
Milkers	35200	Metal	35370
Minerals		Wood - New	24900
Unspecified	14700	Wood - Used	42100
Salt	14715	Pancake Mix (Prepared	
Mirrors	32200	Flour Mixes).	20450
Molasses	20626	Paneling	24320
Motorcycles	37500		

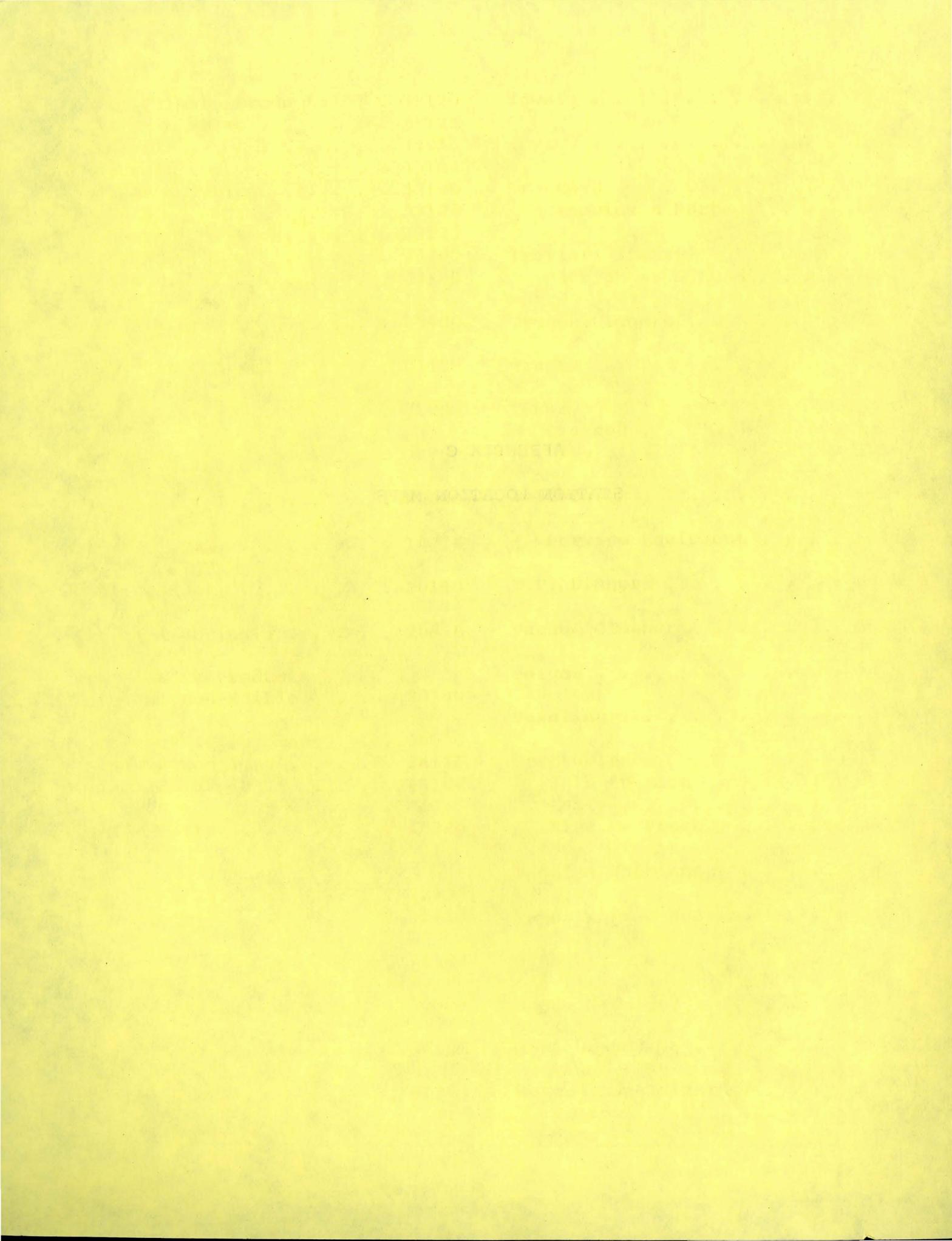
Paper	26200	Plants (Nursery Stock) . . .	01910
Bags	26430	Plaster	32750
Boxes	26500	Plaster Board	32700
Plates	26400	Plastic	28200
Parcel		Plastic Tubing	30700
Small Packaged Shipments.	47100	Plumbing Fixtures	34300
Parts (Auto)	37140	Plumbing Tools	34200
Peanut Butter.	20930	Plywood	24300
Peanuts (Raw).	01143	Pop	20860
Peas		Pop Corn	01150
Dry	01342	Pop Machine	39900
Fresh	01390	Popped Corn	20900
Peat Moss	01910	Potato Chips	20900
People		Potatoes	01195
Transit Bus - scheduled .	43310	Poultry	01510
Transit - Not Scheduled .	43320	Power Tubes	36700
Transit - Charter	43420	Pre-Fab Homes	
City Bus - Local Route .	43110	Homes	24320
City Bus - Local Charter.	43190	Steel Buildings	34410
City Bus - Not Scheduled.	43410	Prepared Foods	20900
School Bus	43510	Printed Matter (Misc.) . . .	27400
School Activities		Printing	
Private Bus	43620	Machines	35500
Truck-field crews and		Supplies	27900
recreational groups		Produce	01390
not with school	43630	Propane	29120
Phosphate	14714		
Pickles (Pickled Products) .	20350		
Picture Tubes	36700		
Pipe & Fittings			
Cast	33211		
Steel	33126		
Pizza			
Box Mix	20900		
Frozen	20370		

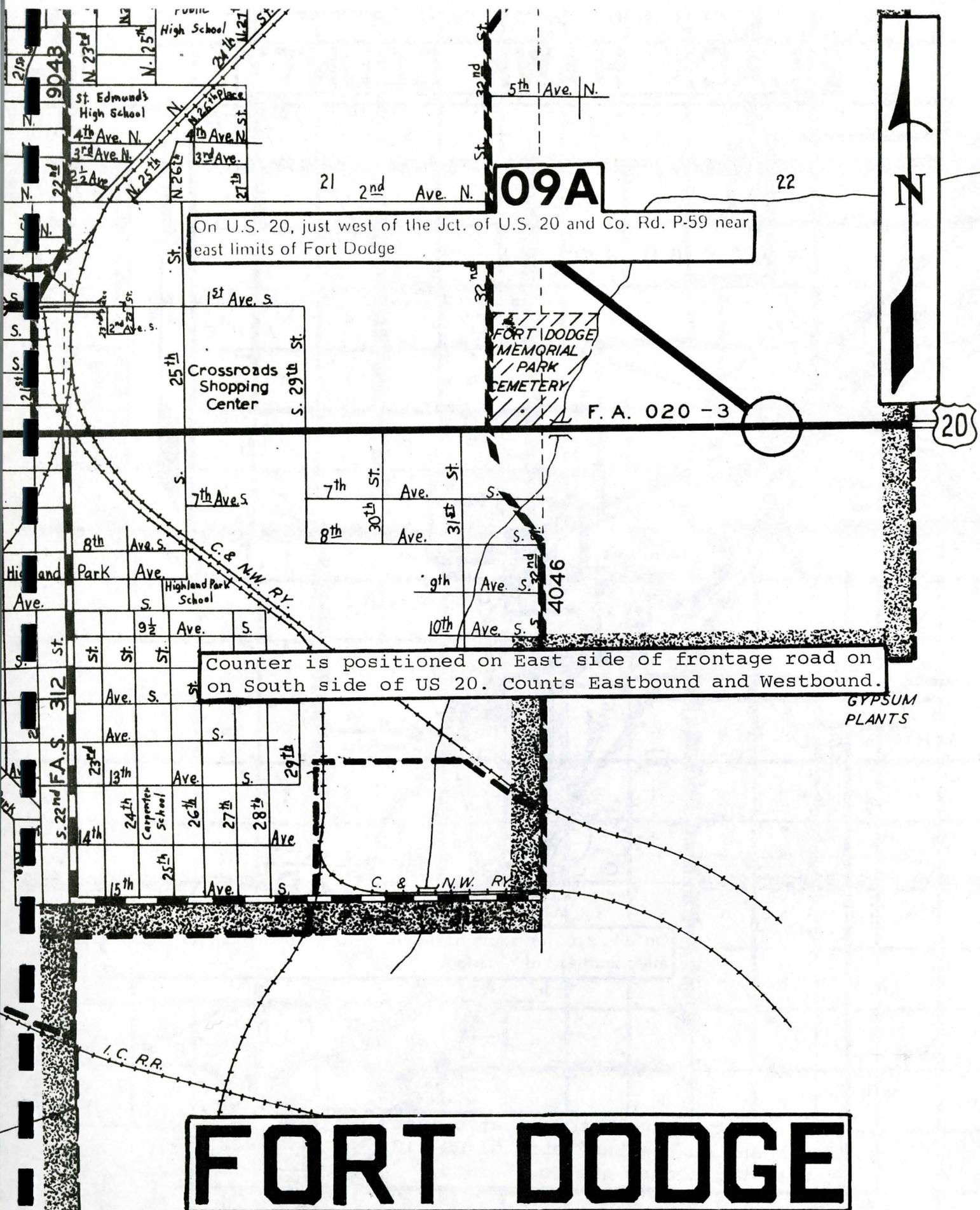
Radio & T.V.	36500	Sewer Pipe	
Rags	40220	Cast	33211
Railroad Tools (Large) . . .	35300	Clay	32590
(Hand)	34200	Concrete	32710
Refrigerators	36320	Sheep	01414
Resin	28200	Sheet Metal	33500
Rock (crushed)	14219	Sheet Rock	32750
Rock Salt	14715	Sheet Steel	33123
Roofing		Shoes (Not Rubber Footwear). .	31400
Wood	24290	Shortening (Cooking Oils). .	20960
Asphalt	29520	Siding	24310
Rubber		Signs	39900
Crude	08423	Snowmobiles	37119
Synthetic	28212	Soaps & Detergents	28400
Rubber Products (Misc.) . . .	30700	Sod	14919
Rugs or Carpets	22700	Soil	14919
Salad Dressing - Spreads . .	20350	Soil Pipe	32590
Salt	28991	Solvent	28500
Sand	14411	Sound Equipment	36600
Sawdust	24290	Soup	20320
Scaffolding	34400	Soybeans	01144
Screens & Screening	34400	Meal (Flour).	20923
Sea Food	20360	Oil	20921
Seed	01150	Sporting Goods	39490
Semi-Tractors	37116	Spices	20900
Semitrailer		Springs	34900
Carried as a load	42200	Starch (Corn).	20462
Sewing Machine Parts	36300		

Steel (Primary Products)	33120	Towels	23900
Axles & Beams	33125	Toys	39400
Barrels	34910	Tractors	35200
Bars	33124	Canopies & Parts	35200
Pipes & Tubing	33126	Trailers (Empty)	
Posts	33125	Carried as a Load	42200
Sheets	33123	Trench Diggers	35310
Tanks	34400	Trucks	37112
Wire	33150	Turkeys	
Store Fixtures	25400	Dressed	20150
Straw (Not Chopped)	01196	Live	01510
Strawberries	01290	Television	36500
Sytrofoam	30700	Parts	36700
Sugar	20620	Service Equipment	76200
Sulfate	14716	T.V. Dinners	20900
Swinging Meat	20110	Vacuum Cleaners	36300
Syrup (Flavoring)	20870	Valves	34940
Tankage & By-Products		Vaseline	28140
Animal Non-Edible	20140	Vegetables	
Telephones & Equipment	36600	Bulb or Root	01310
Poles (Wood)	24116	Leafy	01330
Service Truck	48100	Misc. - Fresh	01390
Textile Waste	40220	Vending Machines	39900
Tile		Veterinarian Equipment	35500
Clay	32590	Vinegar	20900
Concrete	32710	Wagon Beds	35200
Tin Cans	34100	Wall Board	26613
Tire Service Equipment	35600	Water (Non-Drinking)	14800
Tires	30100	Heater	36300
Tomatoes	01394	Pump	35600
Tools	34200		

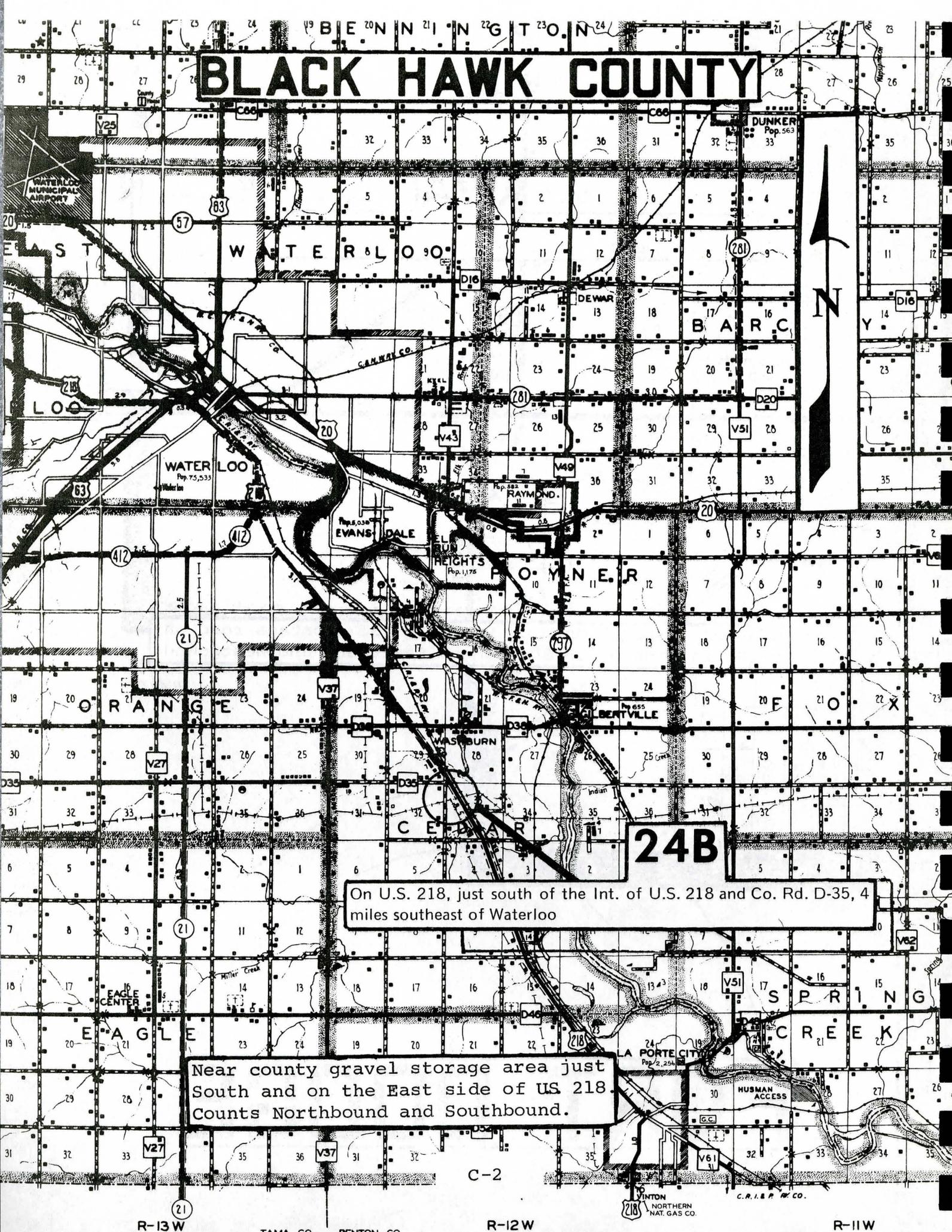
Watermelon	01392
Wax	28400
Weed Killer	28700
Weights	38200
Welder (Equipment)	36200
Wheat	01137
Whey	20250
Whiskey	20851
Windows (Wood)	24310
Wine	20840
Wire	33150
Wood	
Crates	24400
Logs	24111
Wool	22970
Yeast	20900

APPENDIX C
STATION LOCATION MAPS





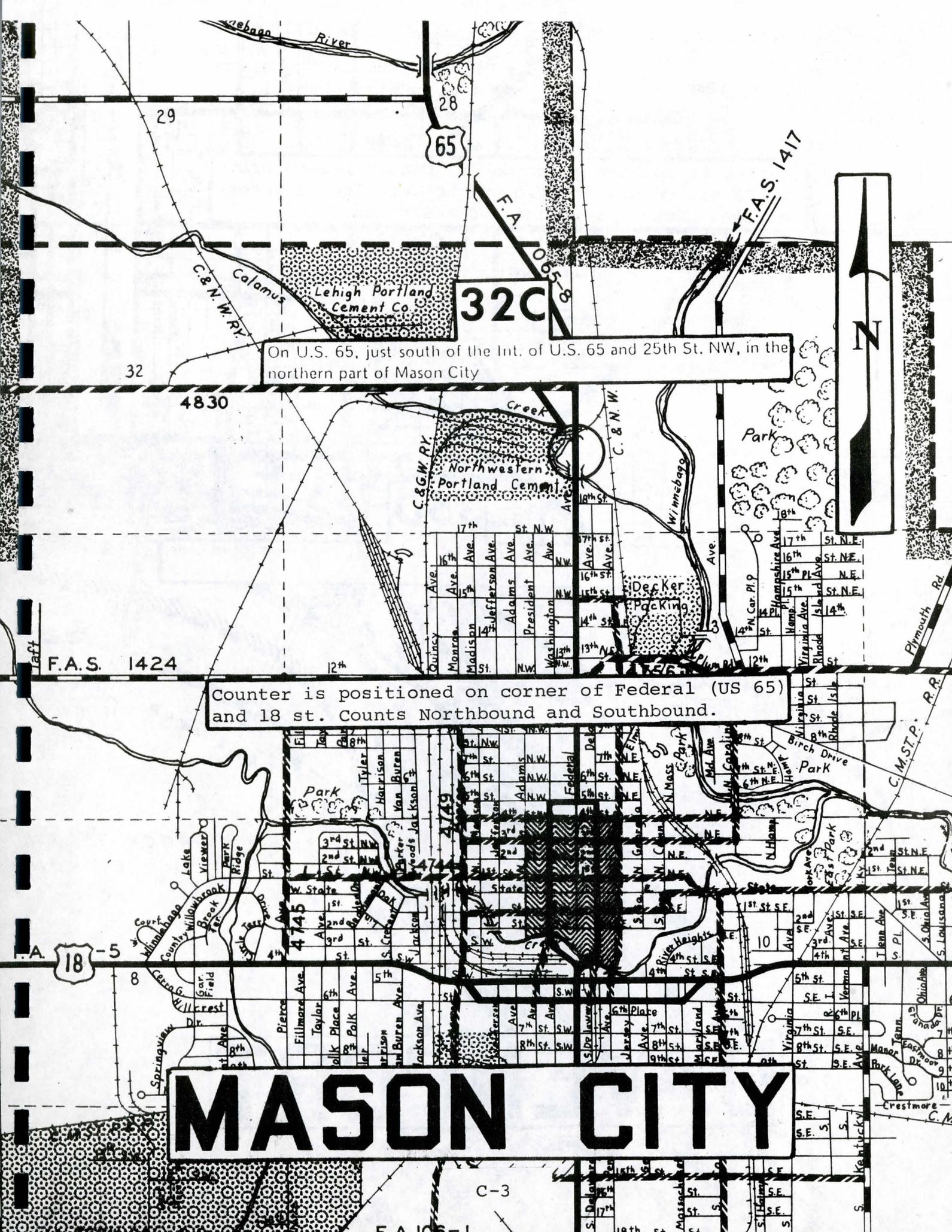
BLACK HAWK COUNTY



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.

24B



29

65

F.A.S. 1417

C. & N. W. Ry.
Calamus

Lehigh Portland Cement Co.

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

32

4830

C. & G. W. Ry.

Northwestern Portland Cement

Winnepago

Park



F.A.S. 1424

Counter is positioned on corner of Federal (US 65) and 18 st. Counts Northbound and Southbound.

MASON CITY

C-3

F.A. 106-1

18-5

4745

4749

18th St.

17th St.

16th St.

15th St.

14th St.

17th St. NW

16th St. NW

15th St. NW

14th St. NW

13th St. NW

12th St. NW

11th St. NW

10th St. NW

9th St. NW

8th St. NW

7th St. NW

6th St. NW

5th St. NW

4th St. NW

3rd St. NW

2nd St. NW

1st St. NW

18th St. SE

17th St. SE

16th St. SE

15th St. SE

14th St. SE

13th St. SE

12th St. SE

11th St. SE

10th St. SE

9th St. SE

8th St. SE

7th St. SE

6th St. SE

5th St. SE

4th St. SE

3rd St. SE

2nd St. SE

1st St. SE

18th St. SW

17th St. SW

16th St. SW

15th St. SW

14th St. SW

13th St. SW

12th St. SW

11th St. SW

10th St. SW

9th St. SW

8th St. SW

7th St. SW

6th St. SW

5th St. SW

4th St. SW

3rd St. SW

2nd St. SW

1st St. SW

18th St. NE

17th St. NE

16th St. NE

15th St. NE

14th St. NE

13th St. NE

12th St. NE

11th St. NE

10th St. NE

9th St. NE

8th St. NE

7th St. NE

6th St. NE

5th St. NE

4th St. NE

3rd St. NE

2nd St. NE

1st St. NE

18th St. E

17th St. E

16th St. E

15th St. E

14th St. E

13th St. E

12th St. E

11th St. E

10th St. E

9th St. E

8th St. E

7th St. E

6th St. E

5th St. E

4th St. E

3rd St. E

2nd St. E

1st St. E

18th St. S

17th St. S

16th St. S

15th St. S

14th St. S

13th St. S

12th St. S

11th St. S

10th St. S

9th St. S

8th St. S

7th St. S

6th St. S

5th St. S

4th St. S

3rd St. S

2nd St. S

1st St. S

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

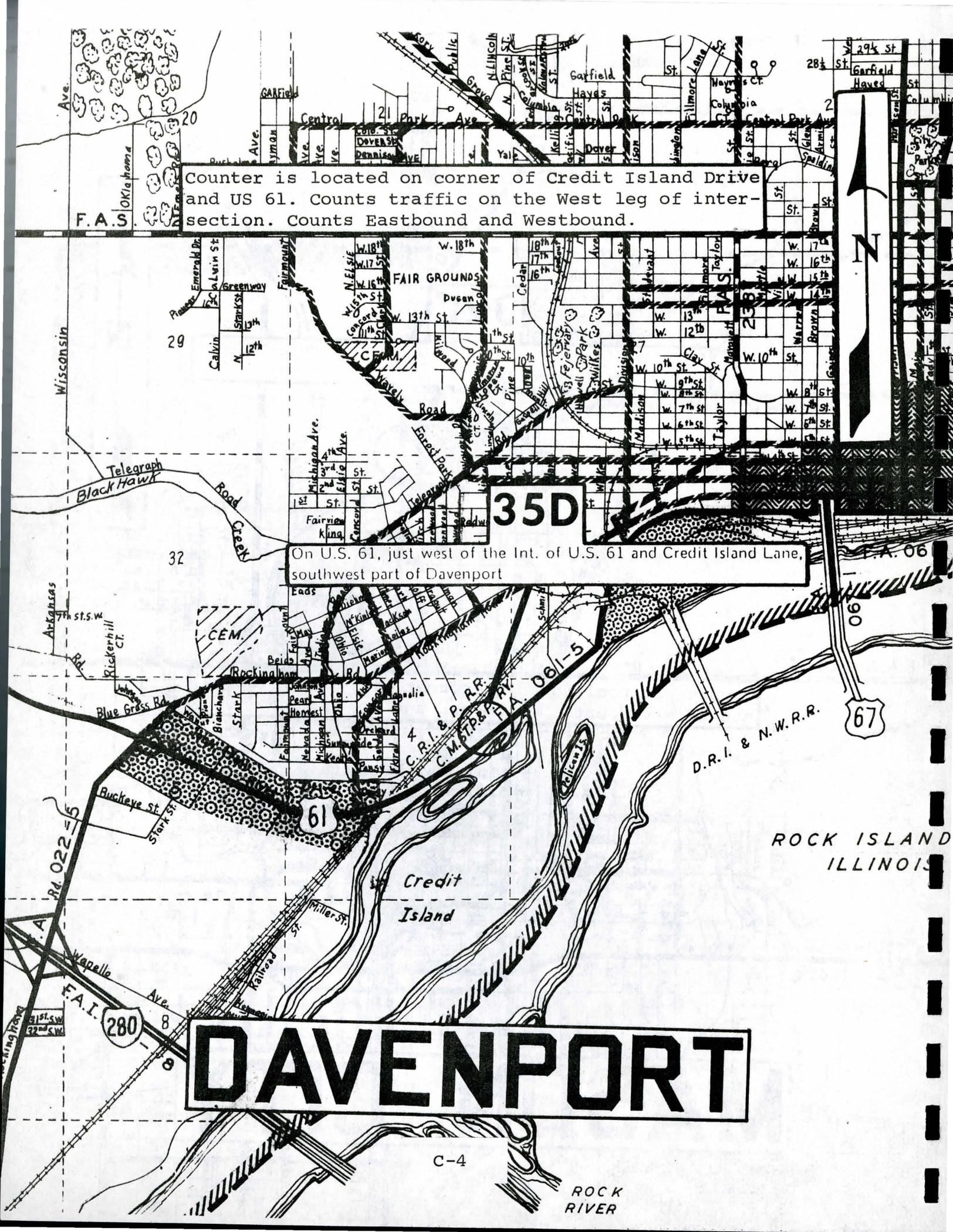
On U.S. 61, just west of the Int. of U.S. 61 and Credit Island Lane, southwest part of Davenport

DAVENPORT

C-4

ROCK RIVER

ROCK ISLAND ILLINOIS

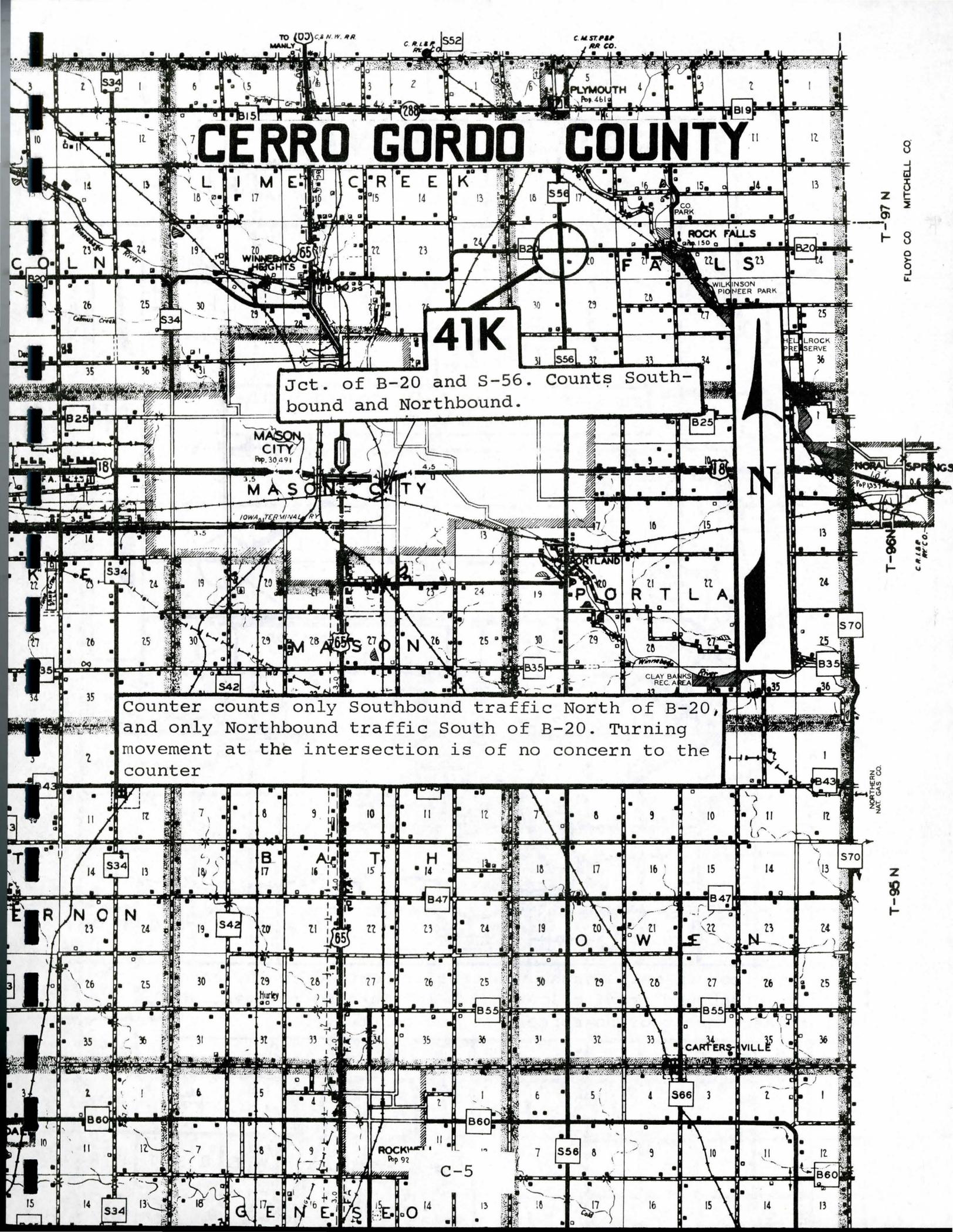


CERRO GORDO COUNTY

41K

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



T-97 N
FLOYD CO MITCHELL CO

T-86N
C.R.L.P. RR CO.

NORTHERN NAT. GAS CO.

T-85 N

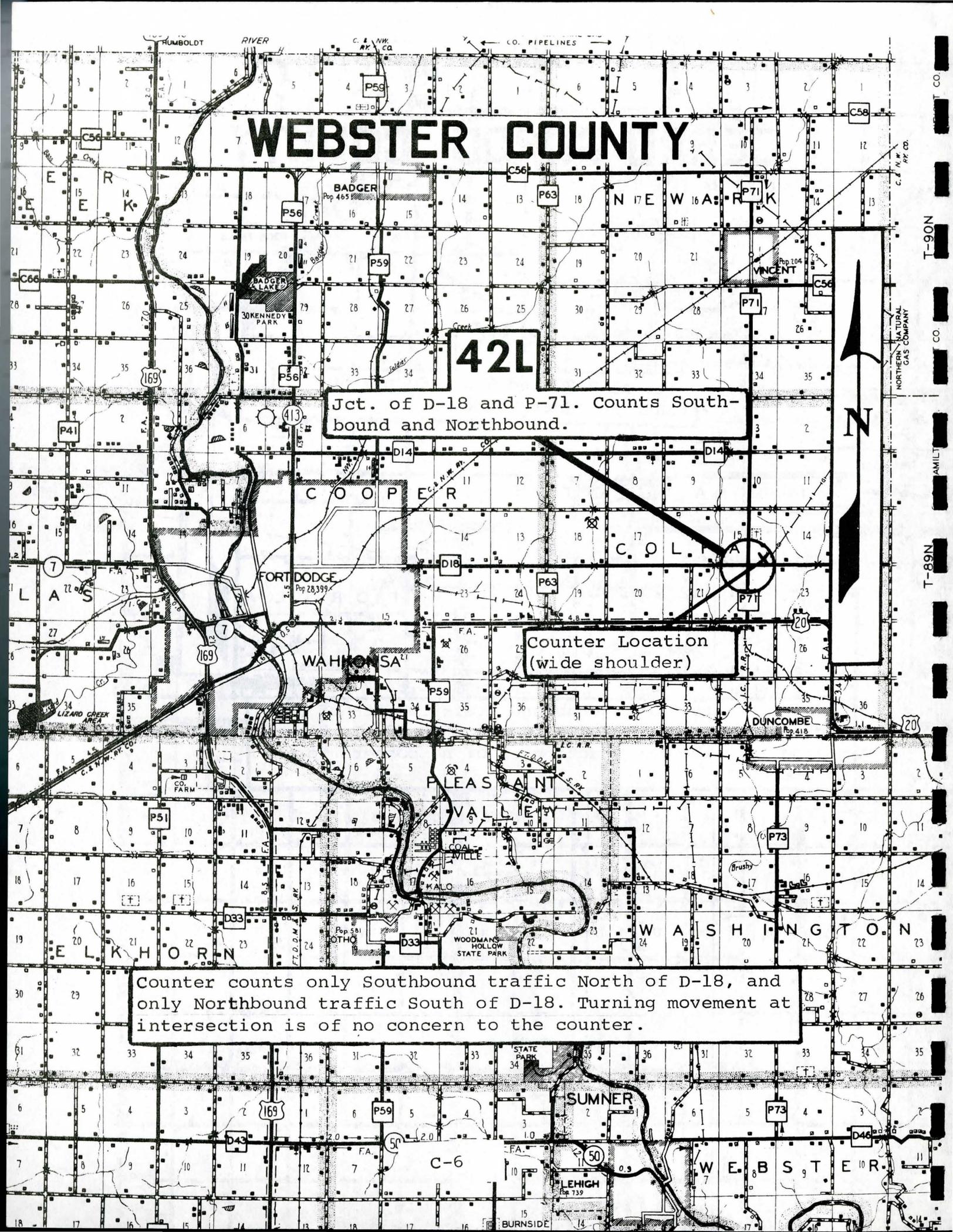
WEBSTER COUNTY

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.



T-90N
CO.
FAMILY
T-89N

Twenty fourth
Twenty third

Counter is positioned at abandon gas station on corner of Linn and 22 st. Counts traffic South of 22 st. only

Twentysecond F.A.S. 0

F.A.S. 440

Twenty first

Twentieth

Nineteenth

Eighteenth

Seventeenth

Sixteenth

Fifteenth

Fourteenth

Thirteenth

Twelfth

Eleventh

St.

Memorial Park

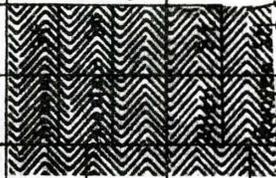
21

On Linn Street, south of the Int. of Linn St. and 22nd St., in the northeast part of Boone

46G



Boone County Fair Grounds



Nebraska
Harrison
Monona

Benton
Linn
Meridian
Cedar
Clinton
Factory
Champa

Tenth
Ninth
St.
St.
St.
St.
St.
St.

First
Second
Third
Crawford
Fifth
Sixth
Seventh
Eighth

E. Mamie Eisenhower Ave.

5004 St.

LINWOOD PARK
CEMETERY
Forest Ave.
Aldrich
Prairie
Woodland

Union

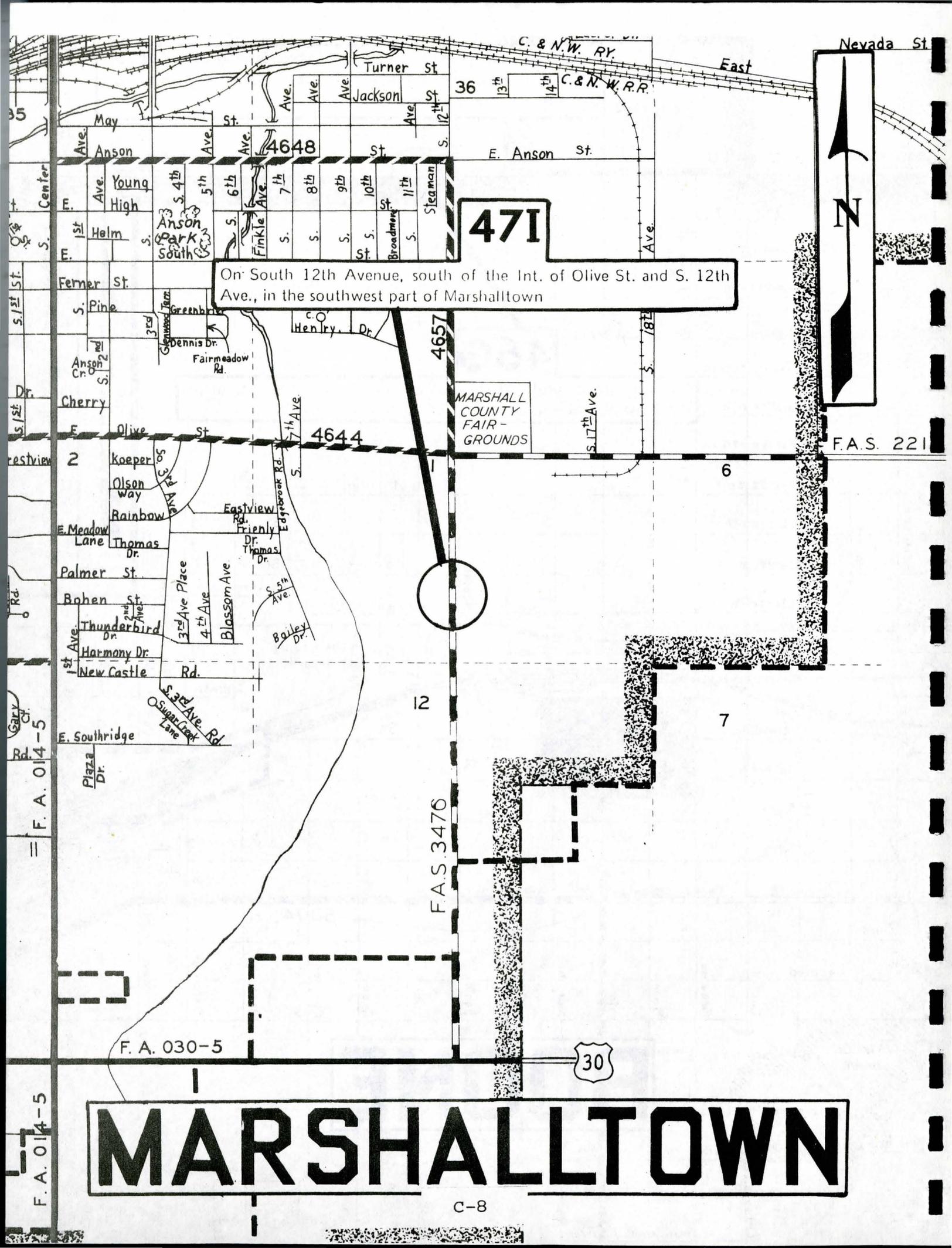
BOONE

C-7

Prairie Ave.

S.E. Linn
Len Lane
son St.

27



471

On South 12th Avenue, south of the Int. of Olive St. and S. 12th Ave., in the southwest part of Marshalltown

4657

MARSHALL COUNTY FAIR-GROUNDS

4644

F.A.S. 221

12

7

F.A.S. 3476

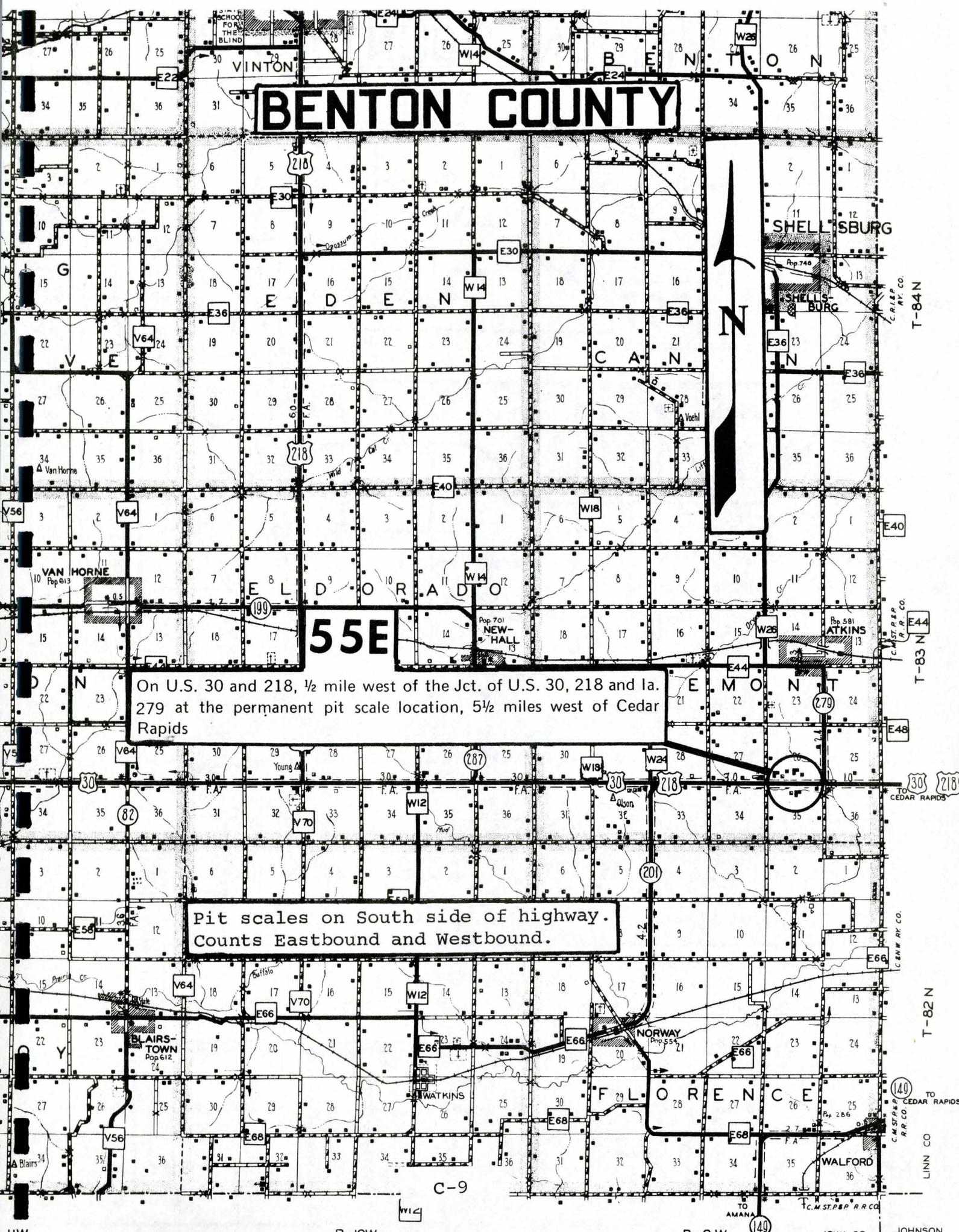
30

MARSHALLTOWN

F. A. 014-5

F. A. 030-5

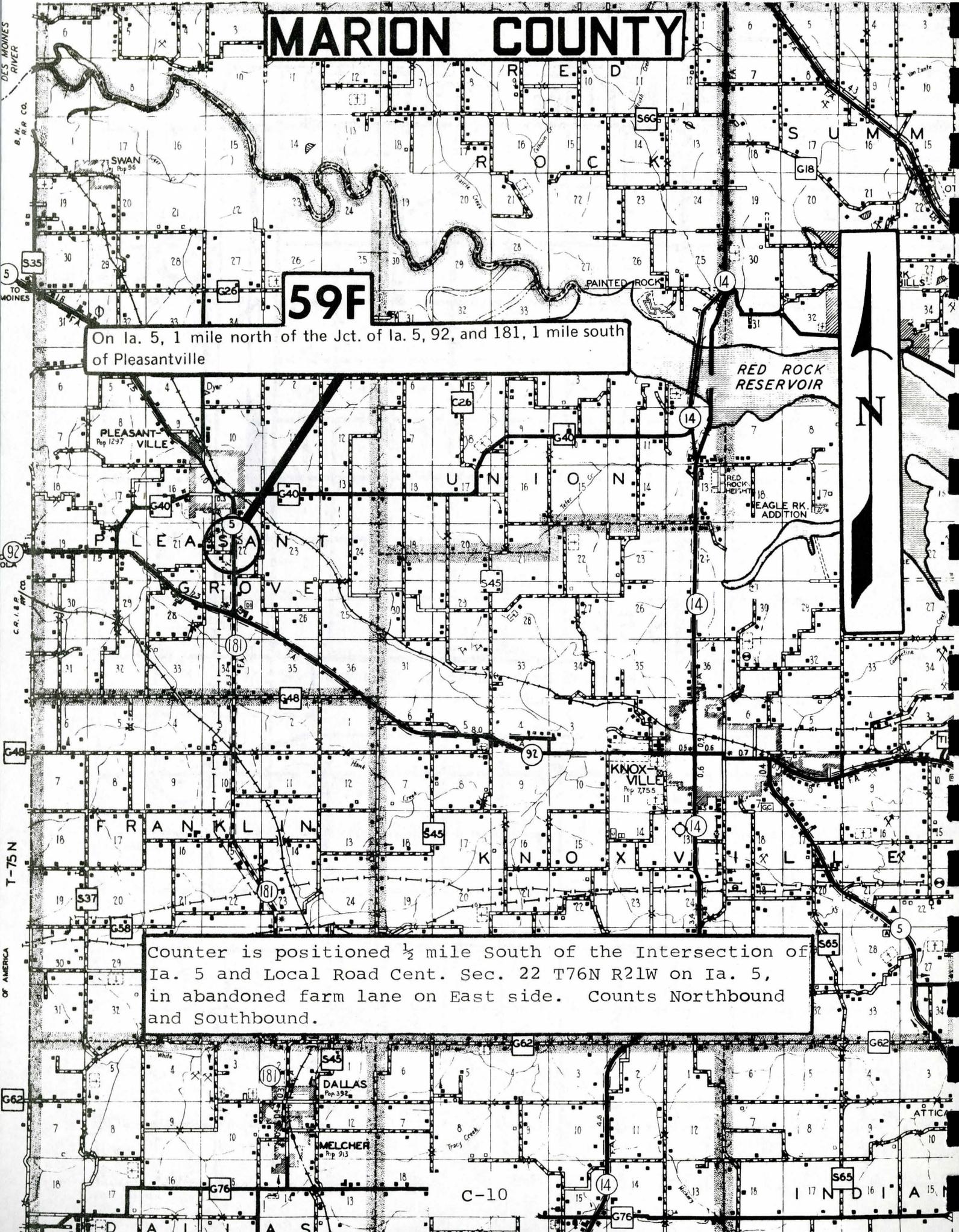
BENTON COUNTY



On U.S. 30 and 218, 1/2 mile west of the Jct. of U.S. 30, 218 and Ia. 279 at the permanent pit scale location, 5 1/2 miles west of Cedar Rapids

Pit scales on South side of highway. Counts Eastbound and Westbound.

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 $\frac{1}{2}$ 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.



DES MOINES RIVER
B. & N. R. CO.
TO MOINES
C. & I. R. CO.
T-75 N
OF AMERICA

SWAN
Pop. 96
PLEASANTVILLE
Pop. 1297
KNOXVILLE
Pop. 7755
DALLAS
Pop. 392
WELCHER
Pop. 913
ATTICA
INDIANA

RED ROCK RESERVOIR

RED ROCK HEIGHT
EAGLE RK ADDITION

DALLAS
Pop. 392

WELCHER
Pop. 913

ATTICA

INDIANA

C-10

G62

G48

92

5

S35

G26

14

G18

S66

R. E. D.

R. O. C. K.

S U M M

PLEASANTVILLE

U N I O N

KNOXVILLE

F R A N K L I N

K N O X V I L L E

D A L L A S

S65

14

181

181

14

92

14

14

5

14

14

07

10

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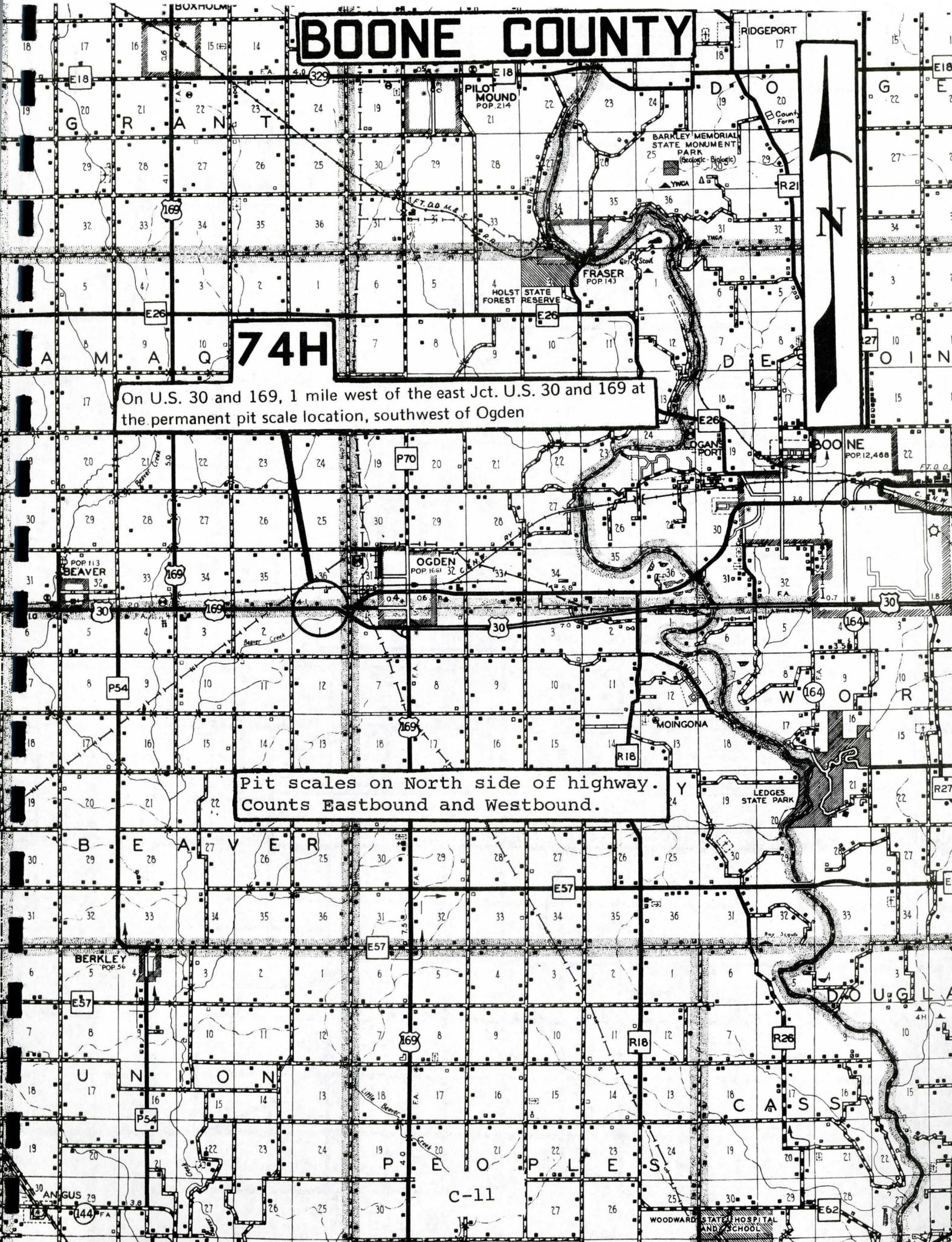
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9

BOONE COUNTY



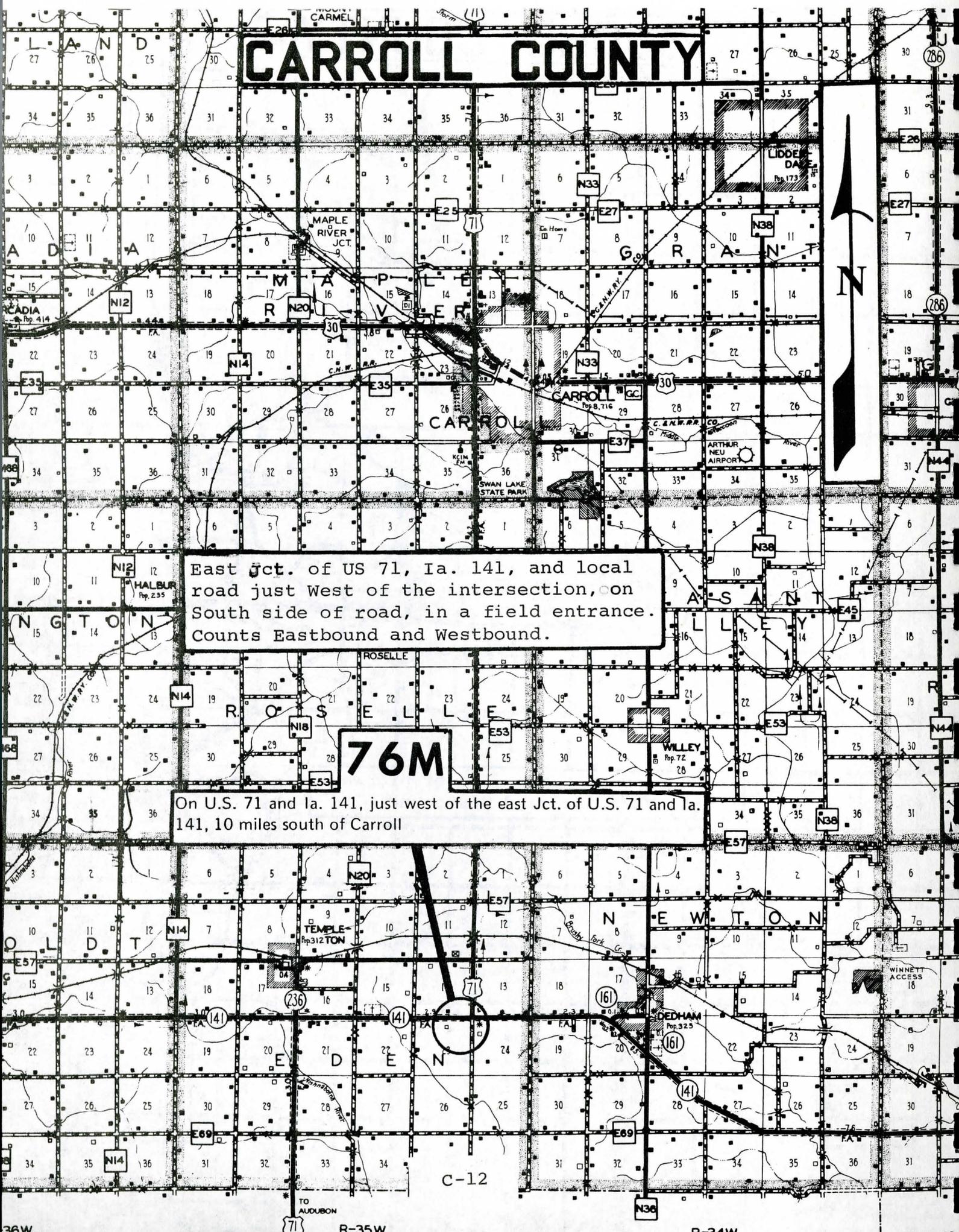
74H

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.

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

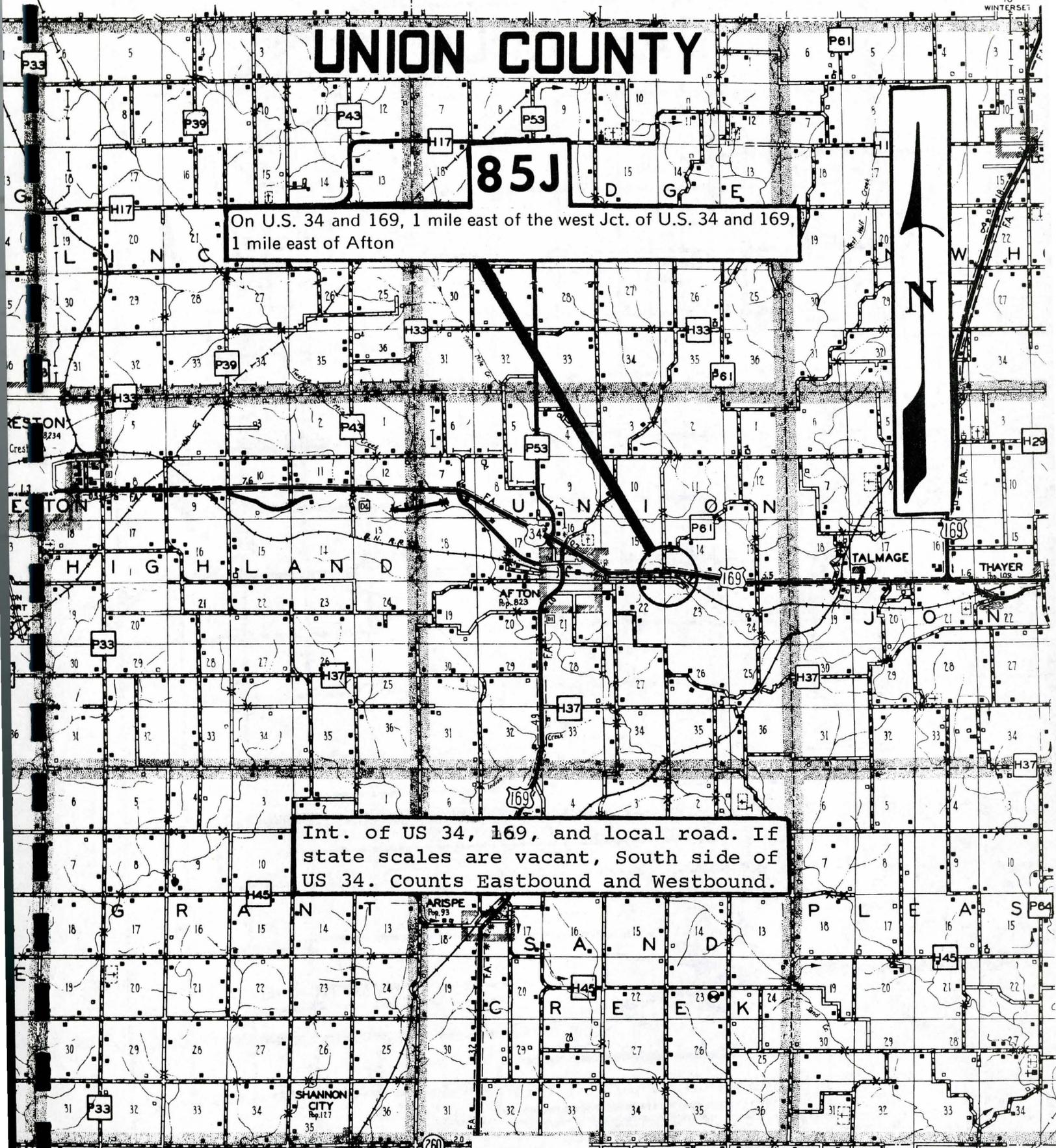
On U.S. 71 and Ia. 141, just west of the east Jct. of U.S. 71 and Ia. 141, 10 miles south of Carroll

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

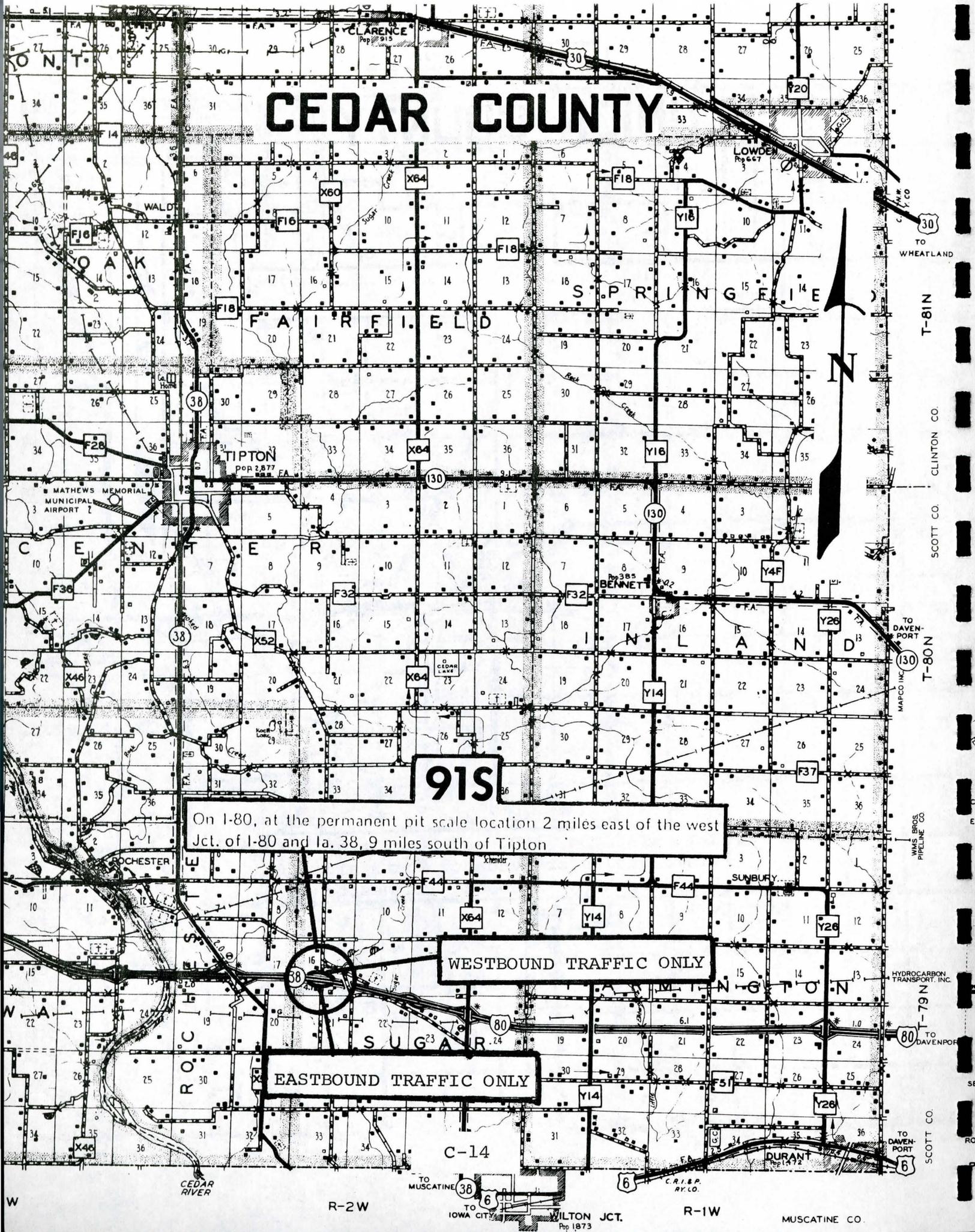
Int. of US 34, 169, and local road. If
state scales are vacant, South side of
US 34. Counts Eastbound and Westbound.



C.N.W. RR CO.
Pop Union Co. 117
Pop Ringgold Co. 10
Total 127

C-13

CEDAR COUNTY



R-40W

R-39W

R-38W

SHELBY CO

NORTHERN NATURAL GAS CO.

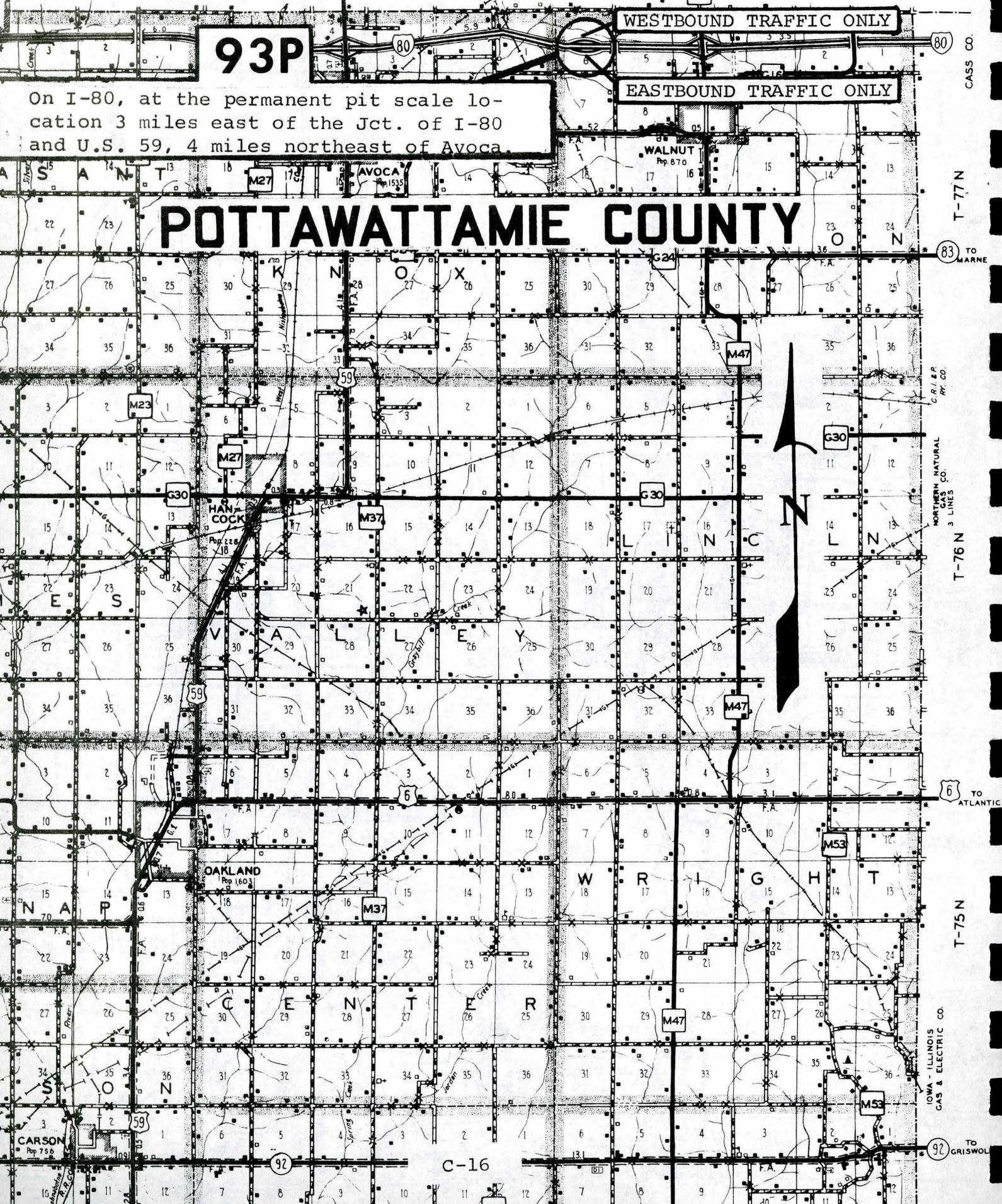
WESTBOUND TRAFFIC ONLY

EASTBOUND TRAFFIC ONLY

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.

POTTAWATTAMIE COUNTY



CASS CO

T-77N

83 TO MARNE

C.R.T.P.P. RY. CO.

NORTHERN NATURAL GAS CO. 3 LINES

T-76N

6 TO ATLANTIC

T-75N

IOWA - ILLINOIS GAS & ELECTRIC CO.

92 TO GRISWOLD

C-16

CARSON Pop 750

OAKLAND Pop 1,603

HANCOCK Pop 228

AVOCA Pop 1,535

WALNUT Pop 870

STORY COUNTY

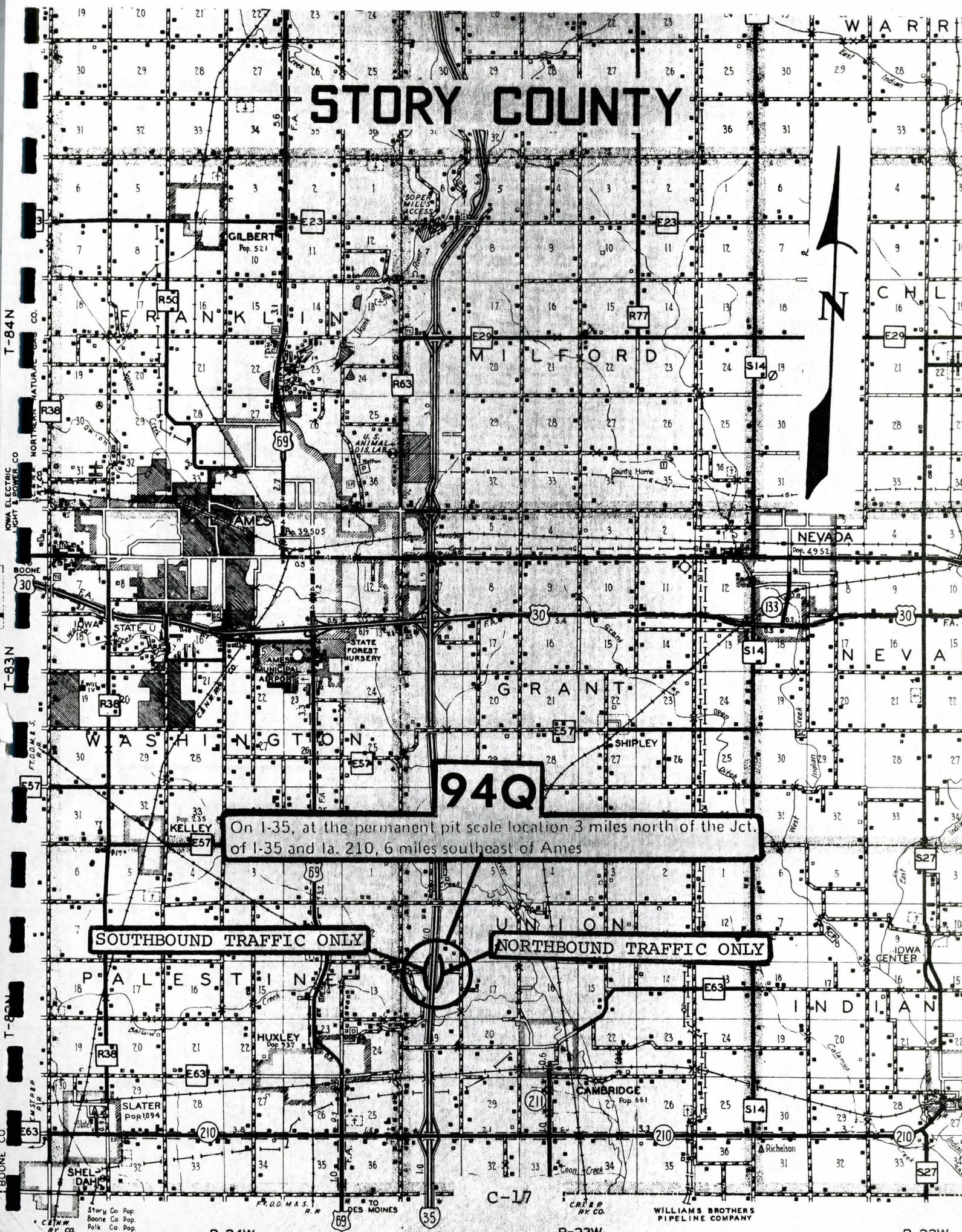


94Q

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



T-84N

T-83N

T-82N

T-81N

R-24W

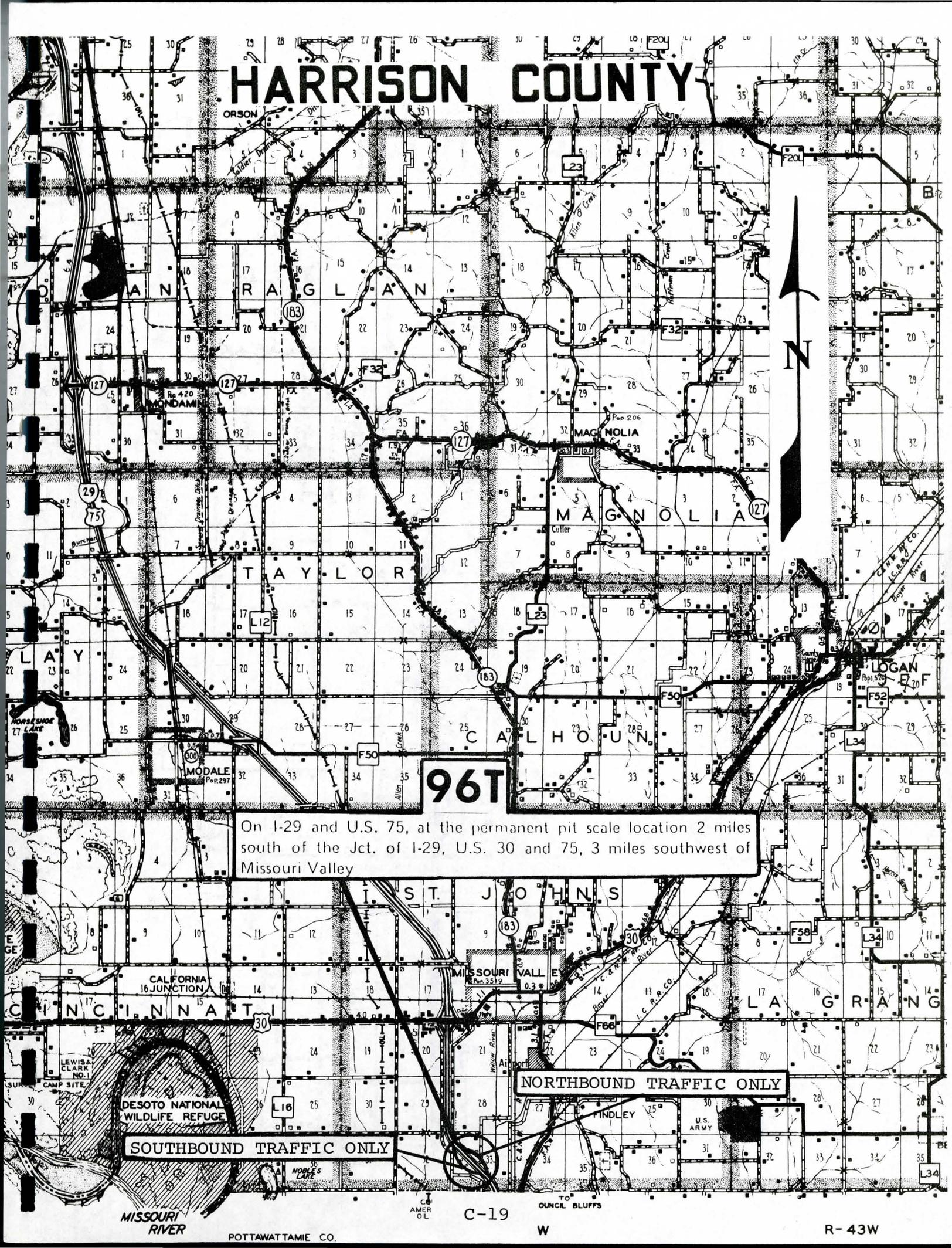
R-23W

R-22W

Story Co. Pop. 283
Boone Co. Pop.
Polk Co. Pop.
Total

WILLIAMS BROTHERS PIPELINE COMPANY

HARRISON COUNTY



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

96T

NORTHBOUND TRAFFIC ONLY

SOUTHBOUND TRAFFIC ONLY

MISSOURI RIVER

POTTAWATTAMIE CO.

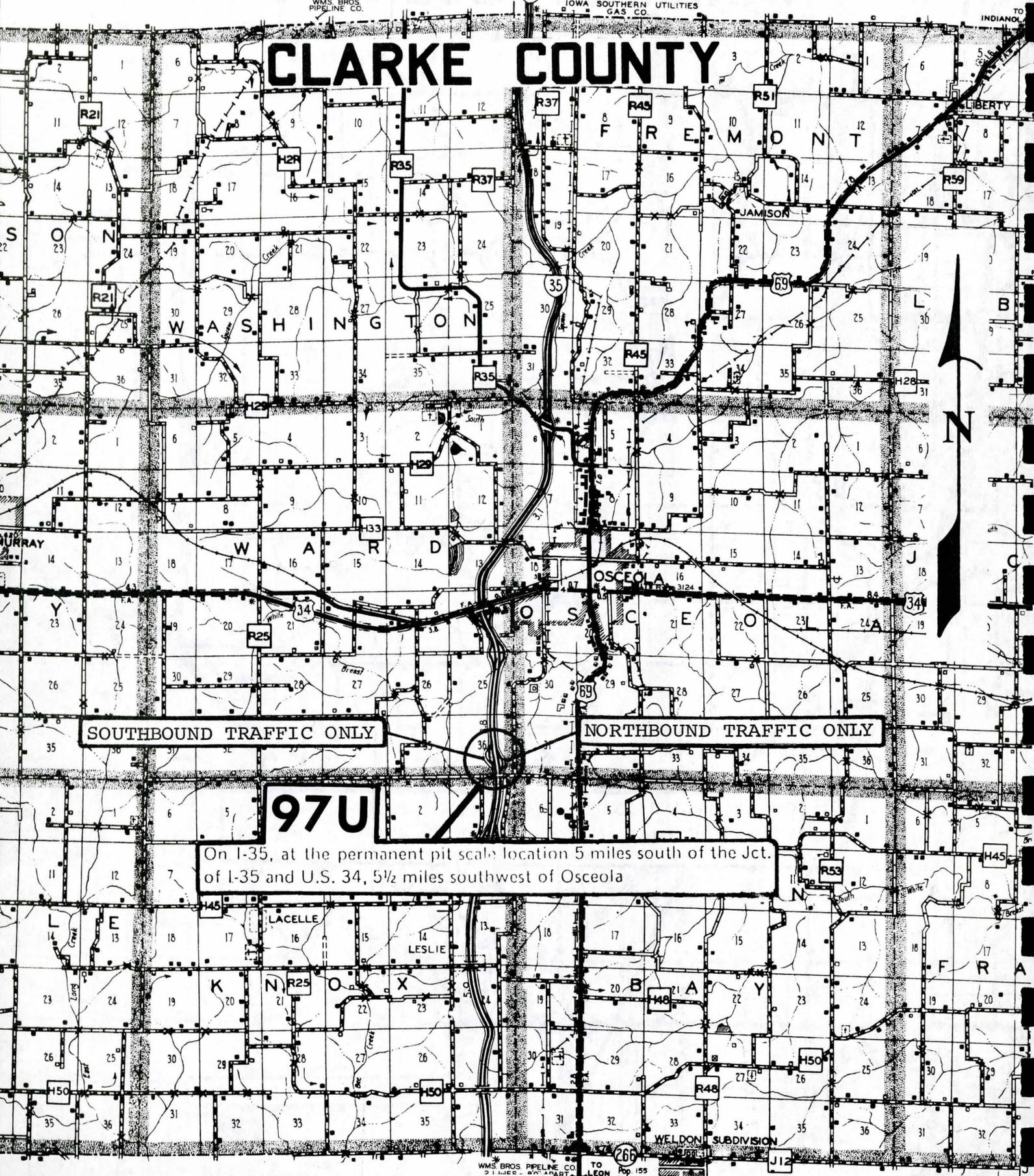
C-19

W

R-43W

R-26 W MADISON CO. WARREN CO. R-25 W

CLARKE COUNTY



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

R-26 W C-20 R-25 W

WMS BROS PIPELINE CO. TO LEON Pop 155 WELDON

266

WELDON SUBDIVISION

J12



APPENDIX D
CODING FORMS

AT RITE D

CLASSIFIED

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	COMMON BODY CODES			FUEL 26	REGISTERED WEIGHT 29-31	STATE REG. 32	FUEL TYPE CODE	MODEL YEAR 33-34	CLASS OPERATION 35	Loaded or Empty	
			11 Panel	12 Pickup	13 Light Utility							14 Personnel, Cargo	15 Carryall/Minibus
												COMMODITY	
												36-40	41
1			21 Flat										
			22 Low Boy Trailer										
			23 Rack										
2			24 Livestock Rack										
			25 Riggers/Oil Field										
			26 Lumber										
			27 Log or Pipe										
3			28 Canopy										
			31 Express										
			32 Open Top Box/Van										
			33 Grain										
4			34 Dump										
			35 Hopper										
			41 Van										
			42 Refrigeration Van										
5			43 Moving Van										
			51 Tank										
			52 Petroleum Tank										
			53 Bituminous Tank										
6			54 Bottler										
			61 Multi Delivery										
			62 Auto Transporter										
			63 Armored Car										
7			64 Boat Carrier										
			71 Concrete Mixer										
			72 Wrecker										
			73 Utilities										
8			74 Garbage, Refuse										
			75 Container										
			76 Equipment										
			77 Bare Chassis										
9			78 Shop Body										
			79 Dwelling Body										
			88 Truck-Tractor										
			89 Empty Log Truck										
10			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

COMMODITY
 36-40 41

**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	COMMON BODY CODES	FUEL 26	REGISTERED WEIGHT 29-31	STATE REG. 32	FUEL TYPE CODE	MODEL YEAR 33-34	CLASS OPERATION 35	Loaded or Empty	
										COMMODITY 36-40	
			11 Panel				1 Gasoline			Empty	0
			12 Pickup				2 Diesel			Loaded with a Product	1
			13 Light Utility				3 Propane			Non-Commodity Movement	2
			14 Personnel, Cargo				4 Turbine				
			15 Carryall/Minibus				8 Other				
			21 Flat				9 Not Determined				
1			22 Low Boy Trailer								
			23 Rack								
			24 Livestock Rack								
2			25 Riggers/Oil Field								
			26 Lumber								
			27 Log or Pipe								
			28 Canopy								
3			31 Express								
			32 Open Top Box/Van								
			33 Grain								
4			34 Dump								
			35 Hopper								
			41 Van								
			42 Refrigeration Van								
5			43 Moving Van								
			51 Tank								
			52 Petroleum Tank								
			53 Bituminous Tank								
6			54 Bottler								
			61 Multi Delivery								
			62 Auto Transporter								
			63 Armored Car								
7			64 Boat Carrier								
			71 Concrete Mixer								
			72 Wrecker								
			73 Utilities								
8			74 Garbage, Refuse								
			75 Container								
			76 Equipment								
			77 Bare Chassis								
9			78 Shop Body								
			79 Dwelling Body								
			88 Truck-Tractor								
			89 Empty Log Truck								
10			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)

OFFICE OF TRANSPORTATION INVENTORY

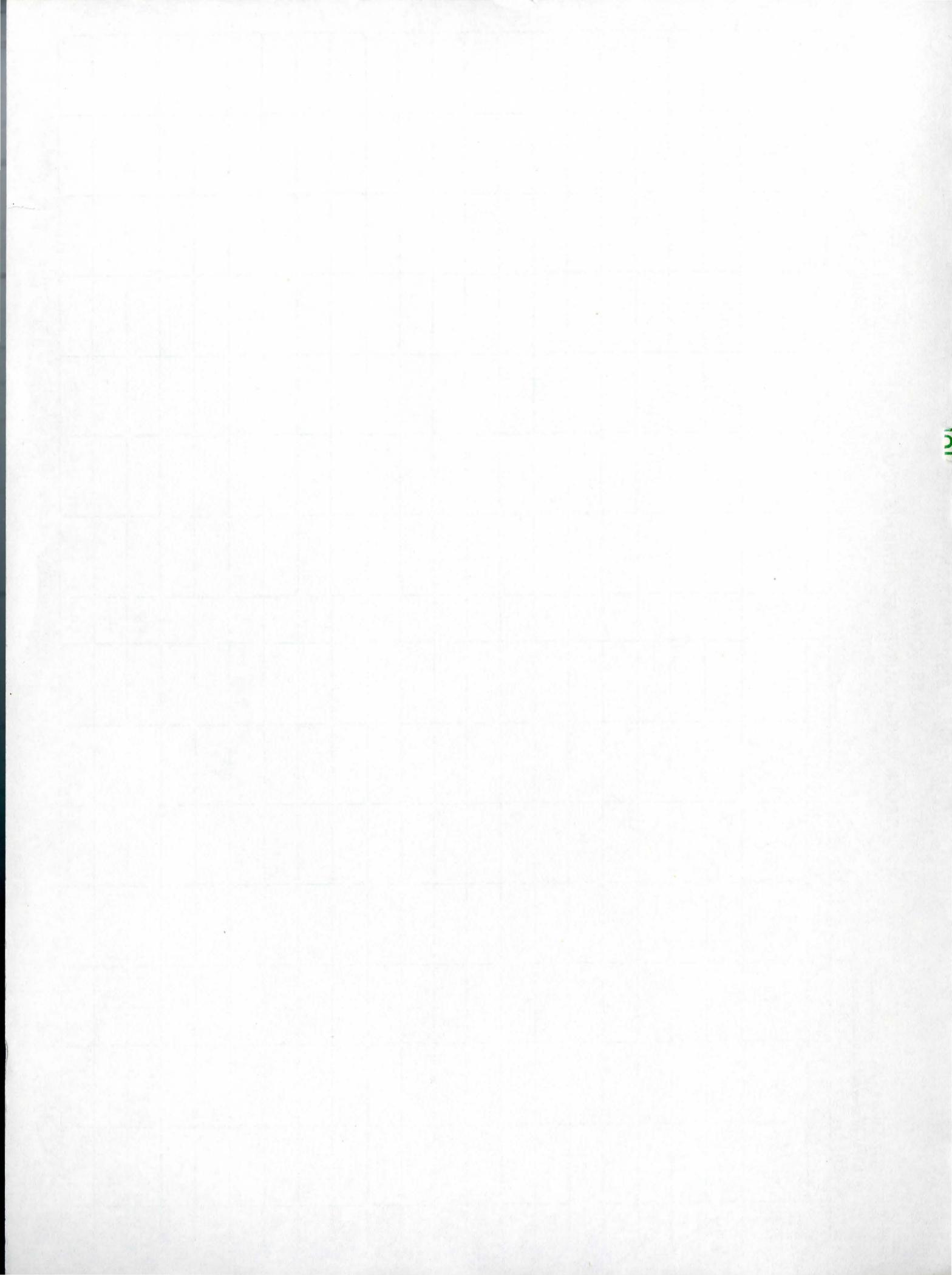
AMES, IOWA 50010

TRUCK WEIGHT SURVEY SCALEMAN'S FORM

DATE _____ HOUR _____
SHEET _____ OF _____
SCALEMAN _____

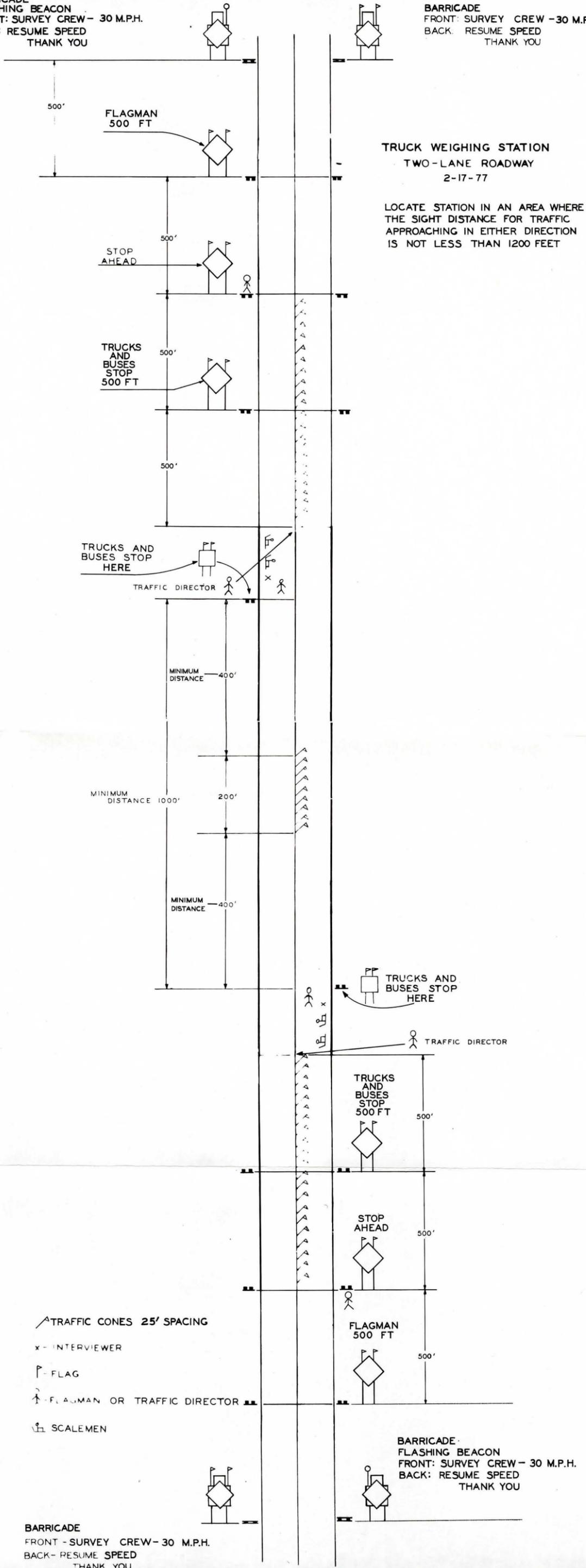
STATION NO. _____
DIR. TRAVEL _____

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							
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7								7							
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9								9							
10								10							
1								1							
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6								6							
7								7							
8								8							
9								9							
10								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



- ▲ TRAFFIC CONES 25' SPACING
- x - INTERVIEWER
- ▬ FLAG
- ↑ FLAGMAN OR TRAFFIC DIRECTOR
- ⊞ SCALEMEN

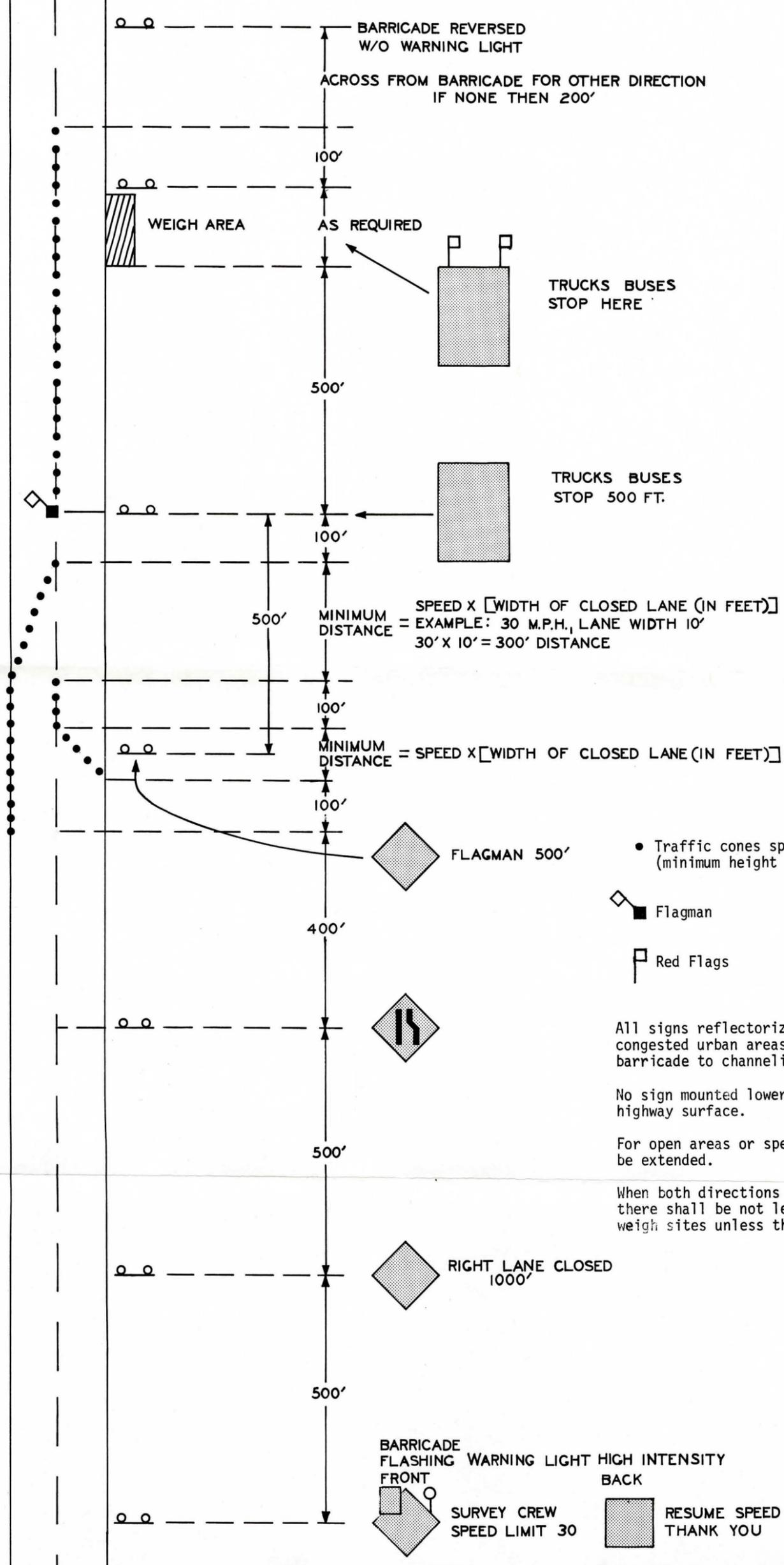
BARRICADE
FRONT - SURVEY CREW - 30 M.P.H.
BACK - RESUME SPEED
THANK YOU

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

5-11

TRUCK WEIGH STATION
SIGNING FOR 4 LANE
NON DIVIDED ROADWAY
OTHER DIRECTION (IF USED)
SIGNED IN SAME MANNER
MARCH 16, 1977

IV-10



• 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.

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

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

Iowa DOT Library

17-T68T1 2:T764 1977 1

Truck weight survey: instructions and sc



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