STREET IMPROVEMENTS
EMPORIA CIRCLE
FROM THE N.L. 46TH STREET SOUTH TO AND INCLUDING CUL DE SAC
PROJECT NUMBER 472-82901 INDEX CODE 764506

GENERAL NOTES

Utility service lines, poles, valve boxes, meters, and et cetera are to be adjusted as necessary by others prior to construction unless the plans specifically call for their adjustment by the Contractor or unless the plans specifically identify a utility to be adjusted by its owner during construction. Existing utilities and their location, as shown on the plans, represent the best information obtainable for design. The Contractor will be required to work around existing utilities within the right-of-way which do not conflict with proposed construction.

A saw cut of at least one-half the depth of existing surface courses or one-fourth the depth of existing total pavement thickness shall be provided at locations where proposed construction abuts an existing surface course or pavement for which partial removal of that surface or pavement is required, except when such saw cuts are within three (3) feet of an existing joint the limits of removal shall be extended to the existing joint. Such saw cuts will not be paid for directly and this cost shall be considered as subsidiary to the removal of the surface or pavement.

Rubble from the removal of miscellaneous structures and excess excavation which is to be wasted shall be disposed of on sites to be provided by the Contractor. These sites shall be approved by the Engineer as to suitability, appearance and site location. Locations that, in the opinion of the Engineer, will leave an unsightly appearance will not be approved.

All disposal sites must be approved by the Kansas Department of Health and Environment. Material either stockpiled or disposed of in a flood plain would require a Kansas State Board of Agriculture permit. Any material dumped in waters of the United States or wetlands is subject to U.S. Corps permitting regulations. Any material buried or stockpiled beyond approved of Engineers construction limits would require additional archeological investigations unless buried in a previously approved borrow location.

This project does not include any provisions for construction of driveways.

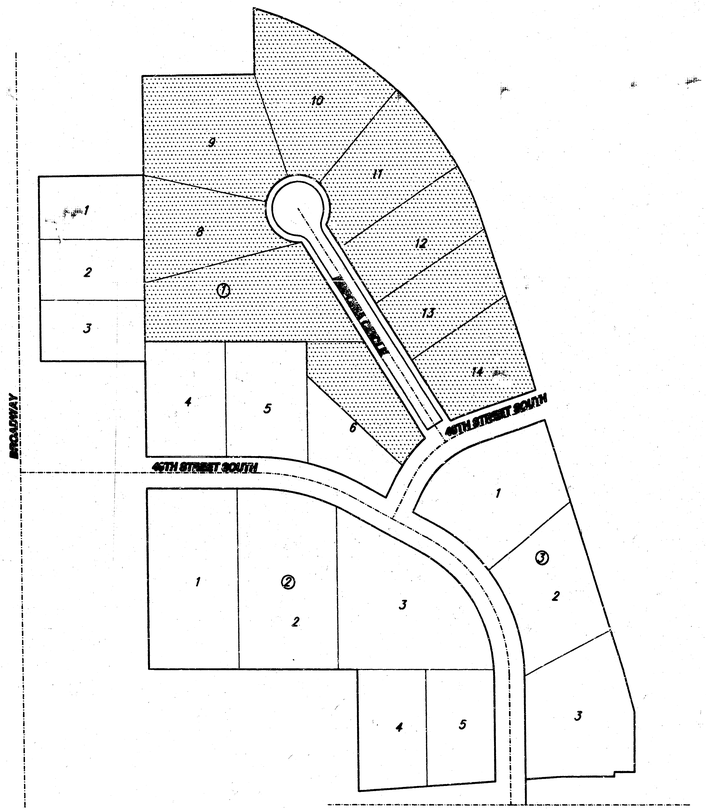
Trees and shrubs in public right-of-way which are in direct conflict with proposed new construction shall be removed by the Contractor with the Engineer's approval. Trees and shrubs which are not in direct conflict with proposed new construction shall be saved and protected from damage.

Limits of earthwork shall match existing ground elevations at the right-of-way line unless otherwise noted on the plans with a new finished grade elevation. When a new finished grade elevation is shown, the earthwork shall extend one foot beyond the right-of-way line and then sloped up or down using permissible slopes to match the existing ground surface.

The Contractor shall be responsible for preserving property irons. The Contractor will be required to re-establish any property irons which are damaged or destroyed by his construction operations. Such irons shall be re-established by a licensed land surveyor in accordance with state laws.

The Contractor shall adjust Water Valve Boxes and Fire Hydrants as directed by the Engineer at the price bid for said adjustments. The Water Department shall field locate water valves one time during construction when requested by the Contractor. It shall be the Contractor's responsibility to preserve such field locations during the construction process. Water valves, water valve boxes or fire hydrants damaged during construction shall be repaired by the Contractor at his own expense.

The Contractor shall provide temporary seeding of all disturbed right-of-way per City of Wichita standard specifications.



IMPROVEMENT DISTRICT

BENCH MARKS

R.R. SPIKE ON SOUTH FACE OF PP LOCATED ON THE WEST SIDE OF BROADWAY AT THE CENTERLINE OF 46TH STREET EXTENDED. ELEVATION = 88.30

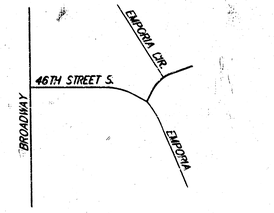
SQUARE CUT IN TOP OF CURB AT THE NORTHWEST CORNER OF 46TH STREET SOUTH AND EMPORIA CIRCLE. ELEVATION = 85.27

INDEX OF SHEETS

1	TITLE SHEET
2	41' ASPHALT PAVEMENT DETAIL
3	41' CONCRETE PAVEMENT DETAIL (ALTERNATE)
4	JOINT PLAN FOR CONCRETE ALTERNATE
5-6	EMPORIA CIRCLE
7	STREET SIGN DETAIL SHEET
8-9	EARTHWORK CROSS SECTIONS

SRB

SCALE: 1" = 150'



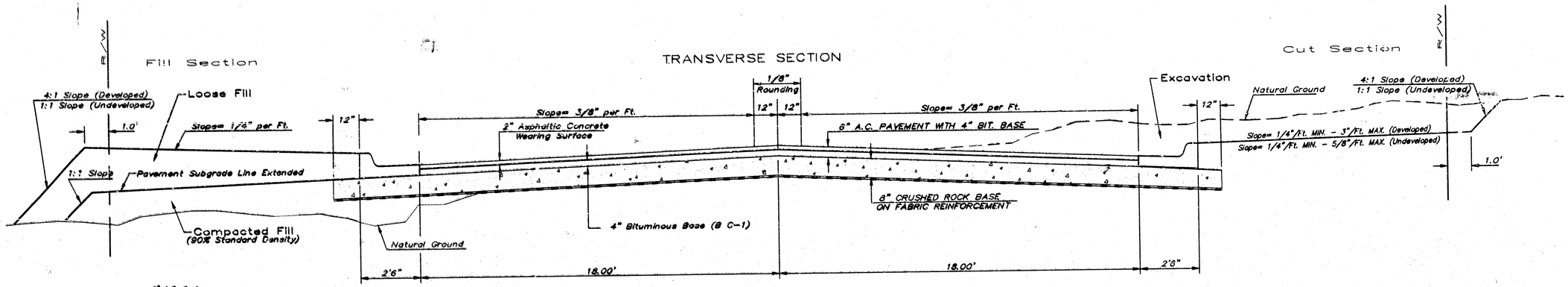
VICINITY MAP

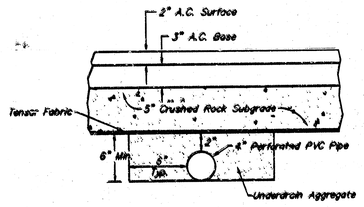
CHRISTOPHER MICHAEL WOHLFORD
LICENSED
17651
9-11-97
KANSAS
PROFESSIONAL ENGINEER

MICHAEL E. LINDEBAK - CITY ENGINEER
CITY OF WICHITA, KANSAS

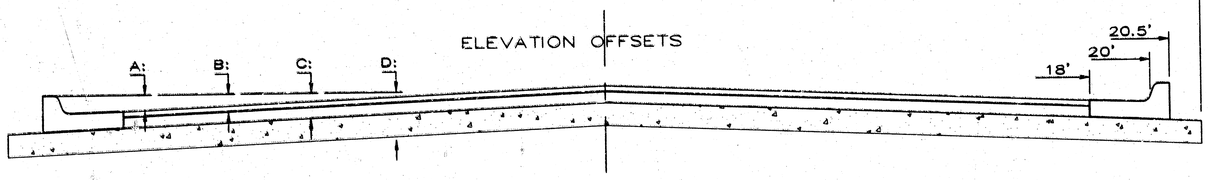
SRB 924 NORTH MAIN WICHITA KANSAS 67203 316-264-8008 FAX 264-4621
SAVOY, RUGGLES & BOHM, P.A.
ENGINEERING & SURVEYING

TYPICAL 41' B–B PAVEMENT DETAILS





SECTION A–A



General Notes

FABRIC BASE REINFORCEMENT SHALL BE B X 1100 GEOGRID AS MANUFACTURED BY TENSAR CORPORATION OR APPROVED EQUAL. FABRIC BASE REINFORCEMENT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. CRUSHED ROCK SHALL BE UNIFORMLY GRADED FROM 1-1/2" MAXIMUM SIZE TO NOT MORE THAN 10% PASSING A NO. 200 SIEVE. ROCK QUALITY SHALL BE THE SAME AS SPECIFIED FOR COARSE AGGREGATE FOR CONCRETE MIXES.

ROCK BASE IS TO BE COMPACTED AND SMOOTHED WITH A STEEL FACED ROLLER PRIOR TO PLACEMENT OF ASPHALT. TACK COAT WILL NOT BE APPLIED TO ROCK BASE.

A TACK COAT OF EMULSIFIED ASPHALT (SC-1H OR CSS-1H) SHALL BE APPLIED AT AN APPROXIMATE RATE OF 0.05 GALLONS PER SQUARE YARD BETWEEN EACH LIFT OF ASPHALTIC MATERIAL.

BITUMINOUS BASE AND ASPHALTIC CONCRETE WEARING SURFACE SHALL BE PLACED WITH A LAYDOWN MACHINE HAVING AUTOMATIC CONTROLS FOR LINE AND GRADE.

CONSTRUCTION JOINTS IN EACH LIFT SHALL BE STAGGERED A MINIMUM DISTANCE OF ONE (1) FOOT FROM JOINTS IN PRECEDING LIFTS AND PLACED SO THAT A JOINT WILL BE CONSTRUCTED ON THE CENTERLINE OF THE TOP LIFT.

THE ASPHALTIC CONCRETE PAVEMENT BETWEEN THE COMBINED CURB AND GUTTER SHALL BE PAID AS SQUARE YARDS OF 6" ASPHALTIC CONCRETE (4" BITUMINOUS BASE.)

CRUSHED ROCK GRADATION REQUIREMENTS
Percent of Aggregate Retained

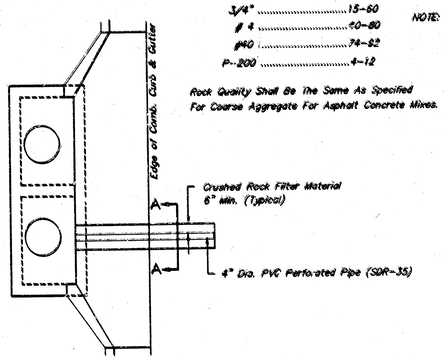
1 1/2"	0
3/4"	15-60
# 4	70-90
#40	74-92
#200	4-12

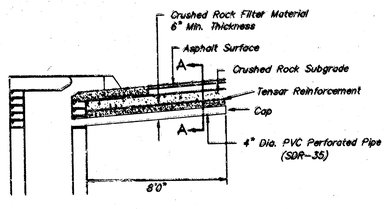
Rock Quality Shall Be The Same As Specified For Coarse Aggregate For Asphalt Concrete Mixes.

NOTE: *Place 4" PVC Perforated Pipe at all drainage sump locations.*

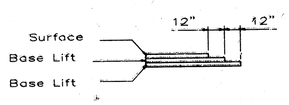
Cost of Underdrain System to be Incidental to the Reinforced Crushed Rock Subgrade.

DISTANCE FROM CENTERLINE (LT. & RT.)	0'	2'	4'	6'	8'	10'	12'	14'	16'	18'	20'	20.5'	21.5'
A: Top of Curbs to Top of Surface Lift	-.05	-0.01	0.05	0.11	0.18	0.24	0.30	0.36	0.43	0.49	–	–	–
B: Top of Curbs to Top of Upper Base Lift	0.11	0.16	0.22	0.28	0.34	0.40	0.47	0.53	0.59	0.65	–	–	–
C: Top of Curbs to Top of C. R. Subgrade	0.43	0.48	0.55	0.61	0.67	0.73	0.80	0.86	0.92	0.98	1.05	1.06	1.07



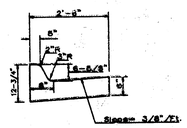


(Min. 16 Perforations Per Lin. Ft. Ø 1/4" Dia.)
Perforations To Be on Bottom Half



TRANSVERSE CONSTRUCTION JOINTS

Transverse construction joints shall be constructed in flexible base pavements at locations where pavement joins existing flexible base pavement as shown by the detail. All costs associated with the construction of the transverse joint shall be included in the bid price for Square Yards 5" ASPHALTIC CONCRETE (3" BITUMINOUS BASE).



COMBINED CURB & GUTTER

PAVEMENT UNDERDRAIN DETAIL

NOTE: PAVEMENT UNDERDRAINS TO BE INSTALLED INTO ALL SUMP INLETS WHEN THIS ASPHALT PAVEMENT SECTION WITH CRUSHED ROCK BASE IS USED. COST SUBSIDIARY TO THE BID ITEM FOR 9" A.C. PAVEMENT (4" BIT. BASE).

THE CITY OF WICHITA

CITY ENGINEER'S OFFICE
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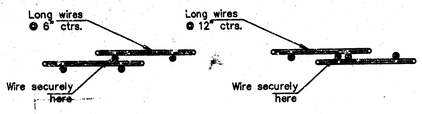
41' PAVEMENT
6" ASPHALTIC CONCRETE
W/ CRUSHED ROCK BASE

M. E. LINDEBAK P.E. - CITY ENGINEER

PROJECT NUMBER: 472-80759
INDEX CODE:
DATE: MAR 96
SHEET 2 OF 9

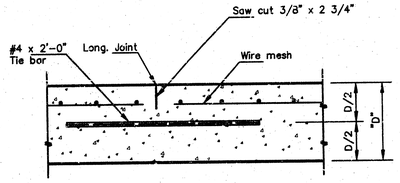


DETAIL OF LAP FOR WIRE MESH

NOTE: The lap shall extend beyond the first transverse wire of each sheet.

The sheets shall be wired securely at the edges and at intervals not to exceed 2'–6" for the full width of the sheet. Approx. weight of wire mesh = 44 ibs. per 100 sq. ft.

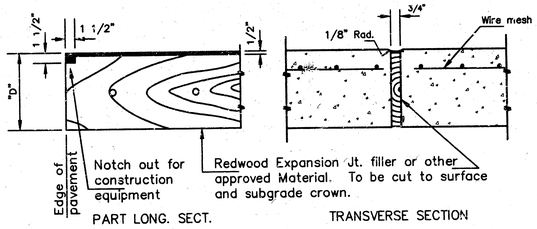
Other methods for fastening the sheets of wire mesh at the laps may be used with the approval of the Engineer.



LONGITUDINAL JOINT DETAIL

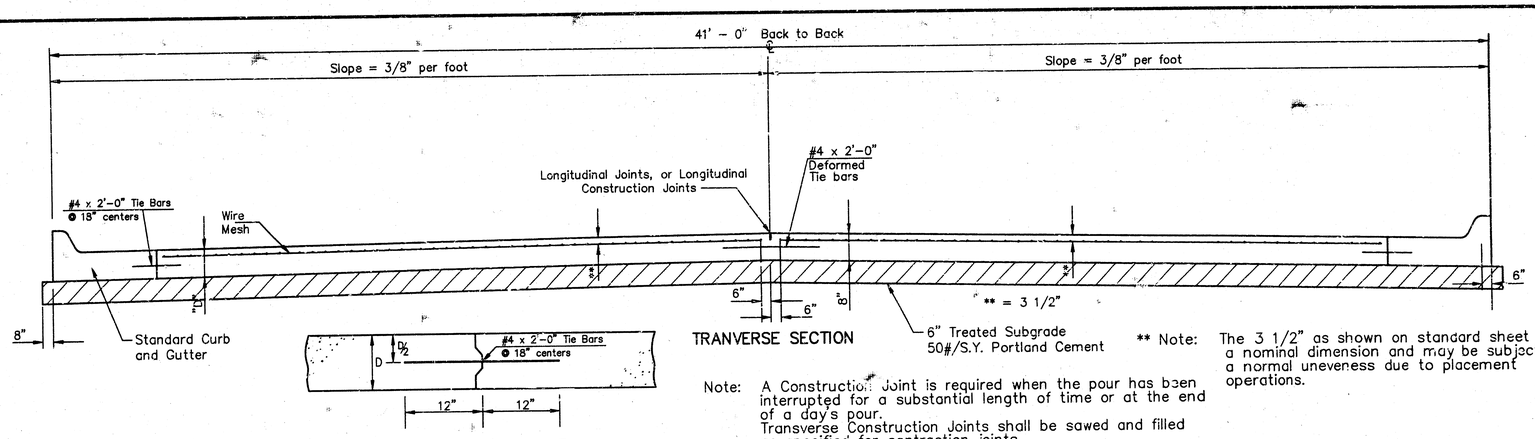
TRANSVERSE SECTION

NOTE: Longitudinal joint formed by sawing 2 3/4" deep and 3/8" wide and filled as specified in standard specifications.



EXPANSION JOINT DETAIL

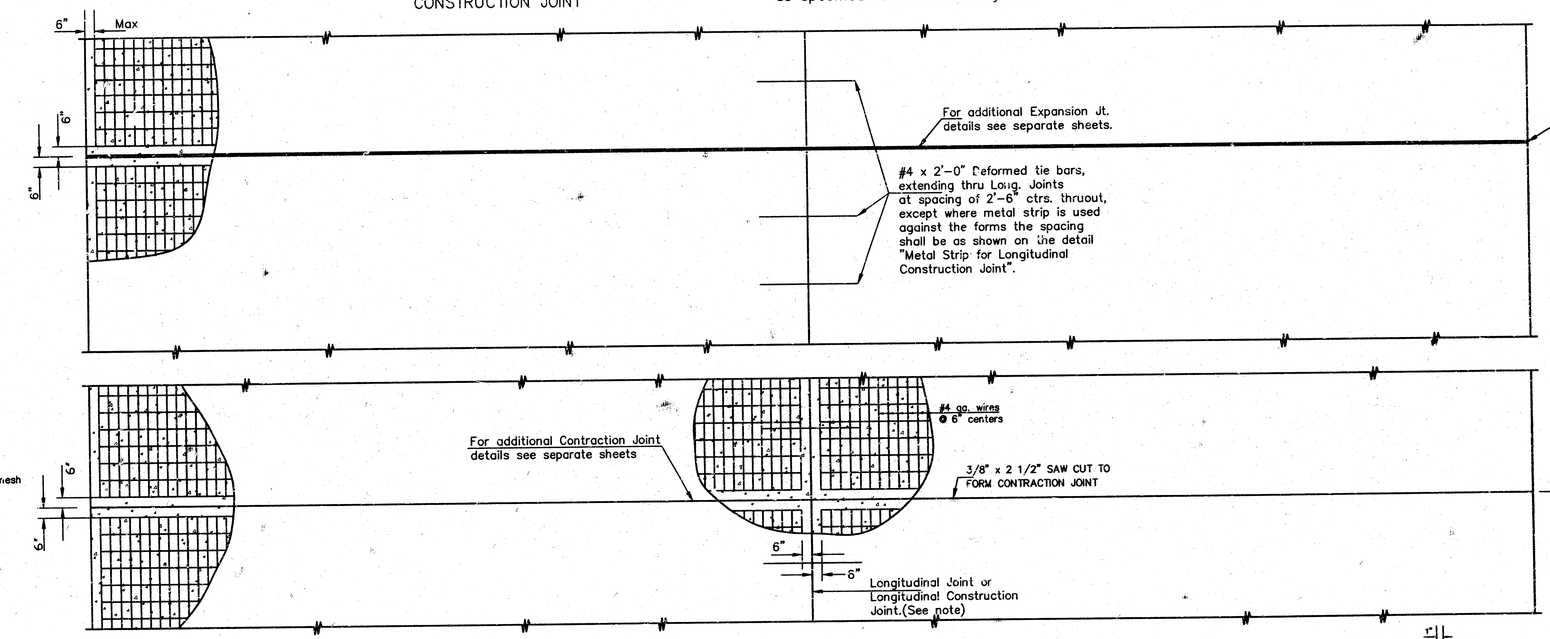
NOTE: EXPANSION JOINT MATERIALMUST BE SECURELY HELD IN PLACE BY USING METAL STAKES, METAL PINS, OR BY OTHER APPROVED METHODS SO THAT WHEN THE PAVEMENT IS COMPLETED THE EXPANSION MATERIAL WILL BE PERPENDICULAR TO THE SURFACE OT THE COMPLETED PAVEMENT. CONCRETE SHALL BE HAND PLACED ON EACH SIDE OF THE EXPANSION JOINT MATERIAL IN A MANNER THAT WILL PRECLUDE DISPLACEMENT OF THE EXPANSION JOINT MATERIAL.



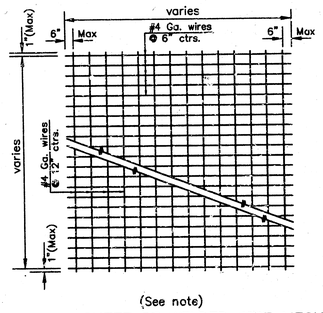
CONSTRUCTION JOINT

Note: A Construction Joint is required when the pour has been interrupted for a substantial length of time or at the end of a day's pour.
Transverse Construction Joints shall be sawed and filled as specified for contraction joints.

** Note: The 3 1/2" as shown on standard sheet is a nominal dimension and may be subject to a normal uneveness due to placement operations.

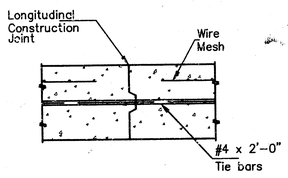


PLAN



(See note)

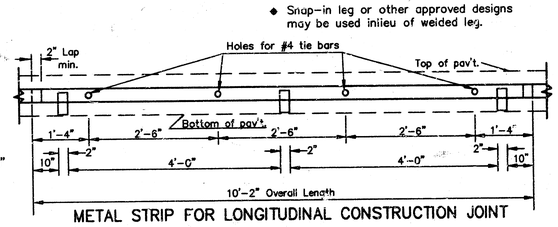
TYPICAL SHEET OF WELDED WIRE MESH



LONGITUDINAL CONSTRUCTION JOINT DETAIL

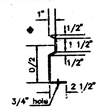
TRANSVERSE SECTION

◆ Snap–in leg or other approved designs may be used inlieu of welded leg.



METAL STRIP FOR LONGITUDINAL CONSTRUCTION JOINT

TO BE USED ONLY AGAINST FORMS. SHALL NOT EXTEND THROUGH CONTRACTION OR EXPANSION JOINTS.
OTHER TYPES OF CONSTRUCTION SHALL BE PERMITTED WITH THE APPROVAL OF THE ENGINEER.



SECTION OF RECESSED FORM LEG

THE CITY OF WICHITA

CITY ENGINEER'S OFFICE
CITY HALL – SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202
(316) 268-4501
(316) 268-4114 FAX

CONCRETE (ALTERNATE) PAVEMENT DETAILS

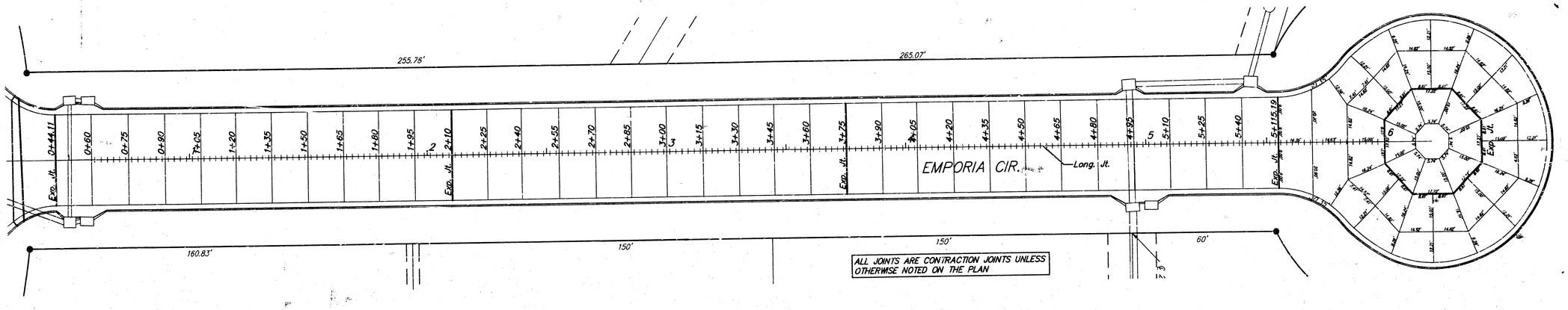
M. E. LINDEBAK P.E. – CITY ENGINEER

PROJECT NUMBER	INDEX CODE
472–80759	
DATE MAR 96	SHEET 3 OF 9

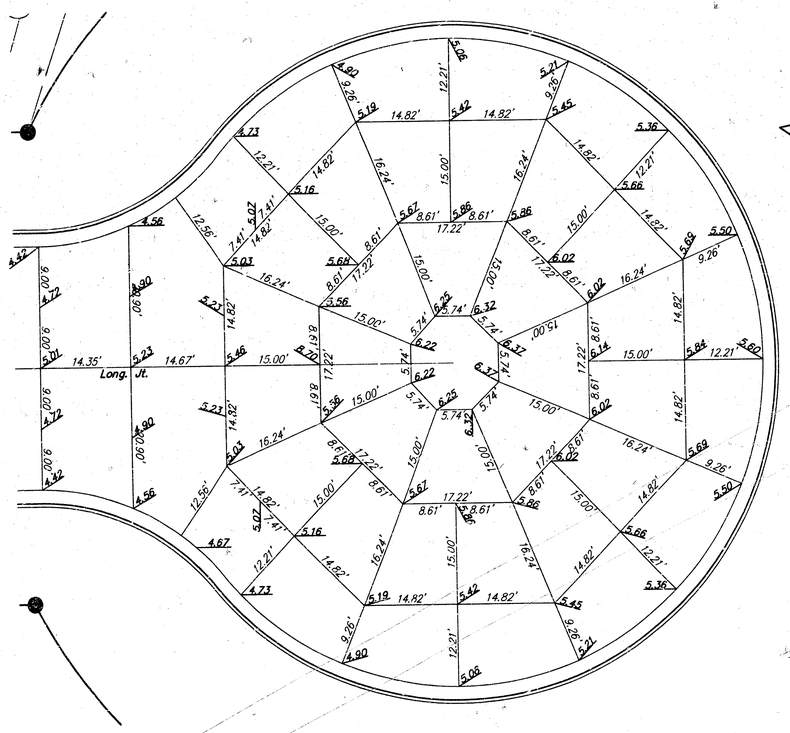
SRB

SCALE: 1" = 20'

JOINT PLAN FOR CONCRETE PAVEMENT ALTERNATE.



ALL JOINTS ARE CONTRACTION JOINTS UNLESS OTHERWISE NOTED ON THE PLAN



SRB

SCALE: 1" = 10'

DETAIL OF CUL-DE-SAC

CONCRETE PAVEMENT JOINT PLAN (ALTERNATE)
EMPORIA CIRCLE
WICHITA, KANSAS

SRB
924 NORTH MAIN
WICHITA KANSAS 67203
http://www.feist.com/~srb
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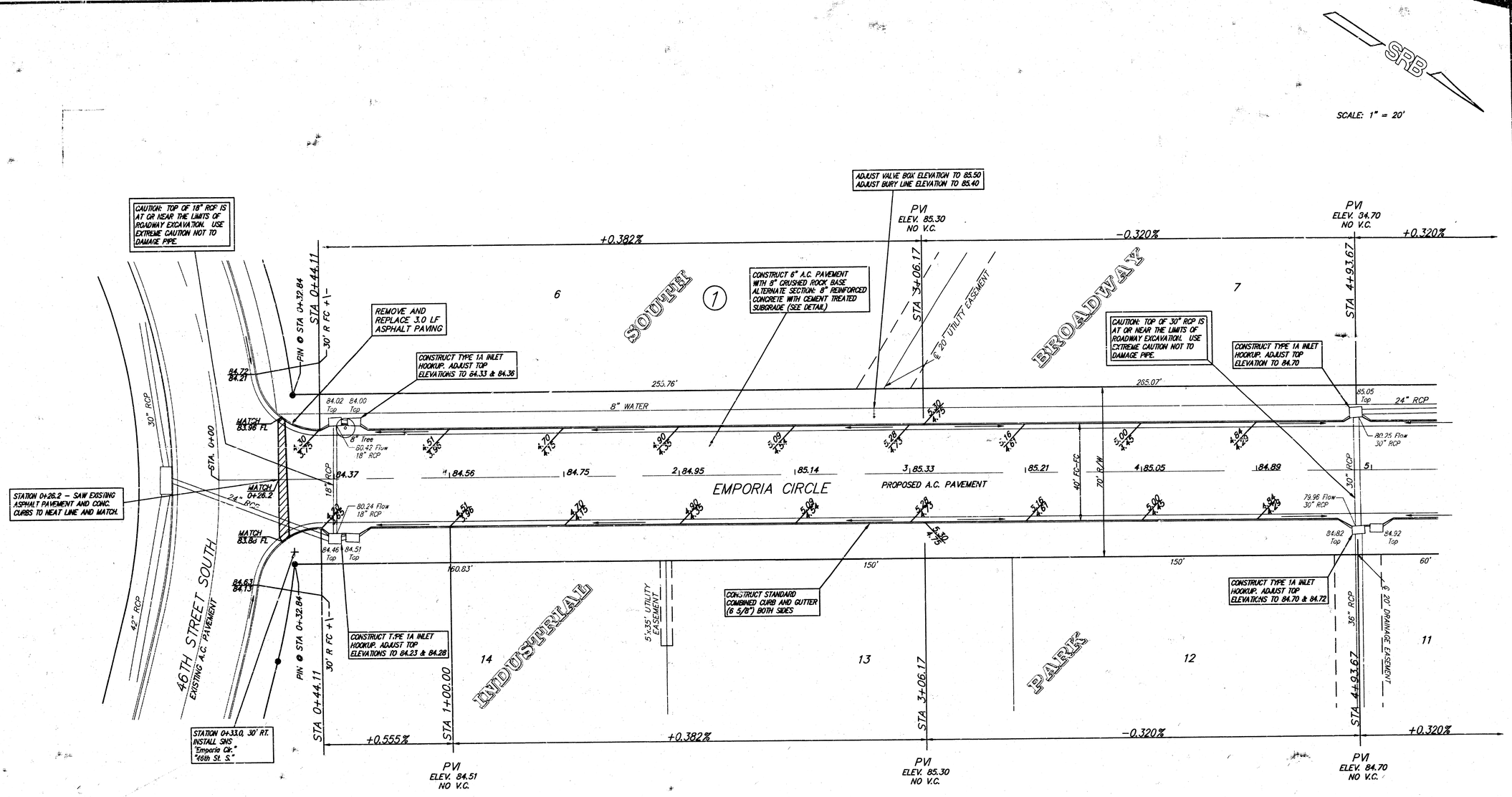
SAVOY, RUGGLES & BOHM, P. A.
ENGINEERING & SURVEYING

PROJECT NUMBER 472-80759

DESIGN	DRAWN	UTILITY	REVIEW	DATE	REVISED
AML	AML			9-5-97	

SHEET 4 OF 9



PAVING IMPROVEMENTS
EMPORIA CIRCLE
WICHITA, KANSAS

SRB 924 NORTH MAIN WICHITA, KANSAS 67203 http://www.feist.com/~srb
316-264-8008 FAX 264-4621 E-mail: srb@feist.com

SAVOY, RUGGLES & BOHM, P. A.
ENGINEERING & SURVEYING

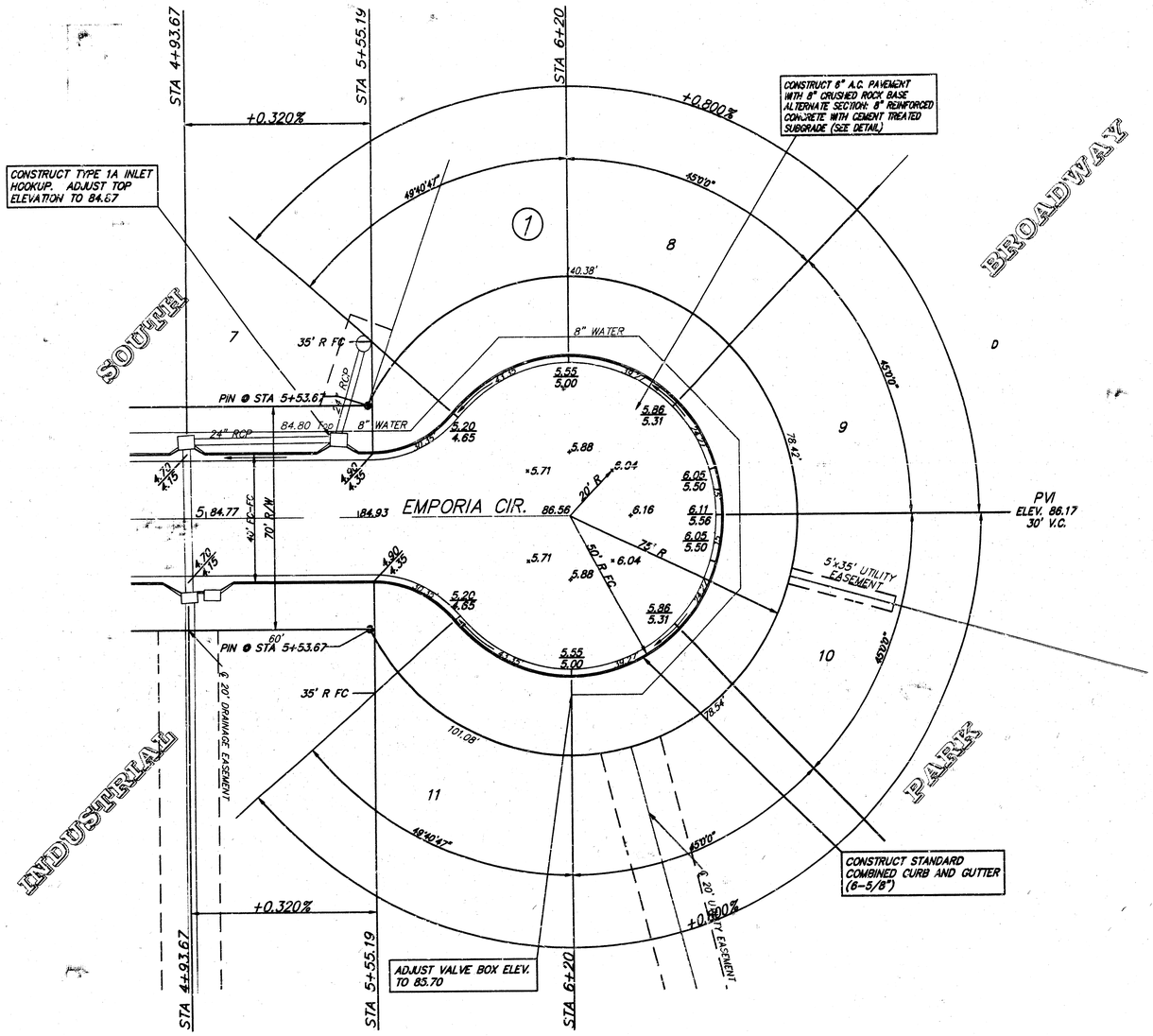
PROJECT NUMBER 472-80759

DESIGN	DRAWN	UTILITY	REVIEW	DATE	REVISED
AML	AML		CMB	Sept. 10, 1997	

DWG FILE R0A0001

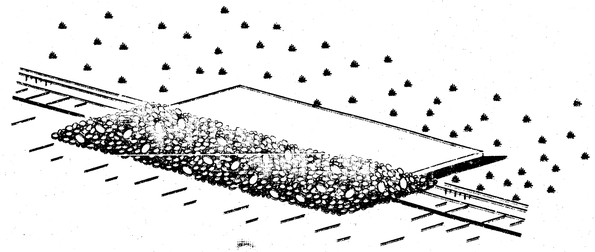
SRB JOB 6737

SHEET 5 OF 9

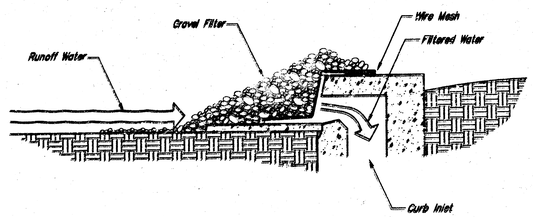


SRB

SCALE: 1" = 20'



NOTE: SEDIMENT BARRIER AS SHOWN IN THIS DETAIL TO BE INSTALLED ON EACH CURB INLET UPON COMPLETION OF PROJECT. BID AS INLET SEDIMENT BARRIERS (PER EACH)



GRAVEL CURB INLET SEDIMENT BARRIER

PAVING IMPROVEMENTS
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WICHITA, KANSAS

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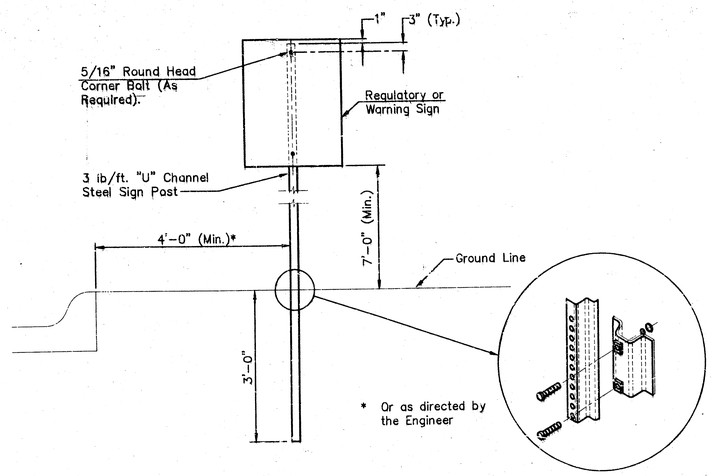
E-mail: srb@ksix.com
SAVOY, RUGGLES & BOHM, P.A.
ENGINEERING & SURVEYING

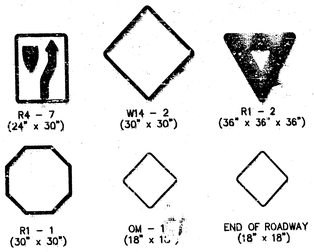
PROJECT NUMBER 472-80759

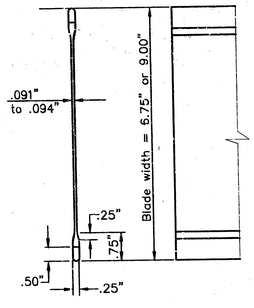
DESIGN	DRAWN	UTILITY	REVIEWED	DATE	REVISED
AHL	AHL		CMB	Sept. 10, 1997	

SHEET NO. 6
SHEETS 9

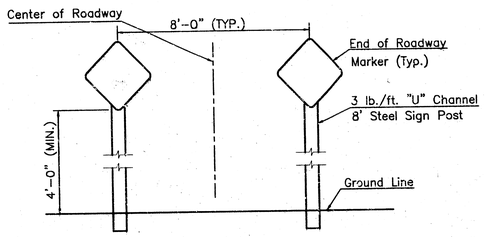


TYPICAL TRAFFIC CONTROL SIGN MOUNTING INSTALLATION
CURB AND GUTTER SECTION

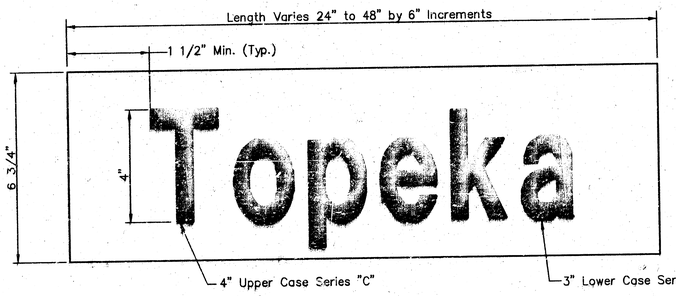




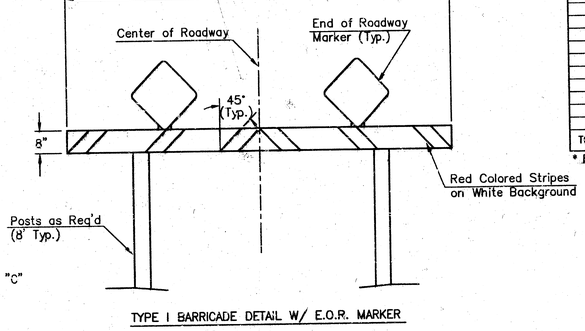
STREET NAME SIGN
BLADE DETAILS



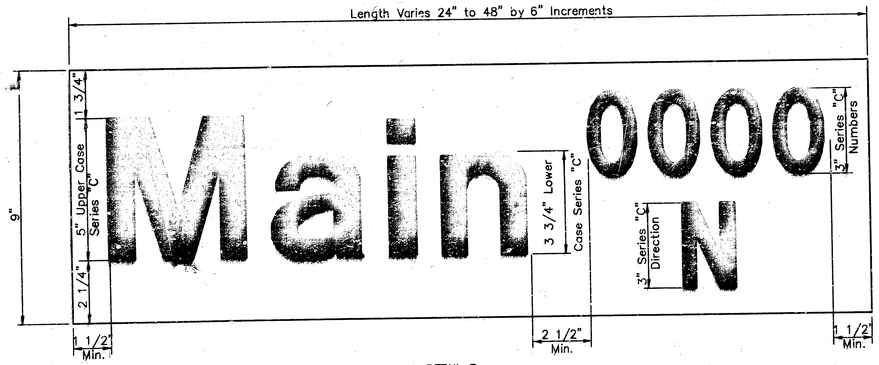
TYPICAL END OF ROADWAY SIGN MOUNTING INSTALLATION



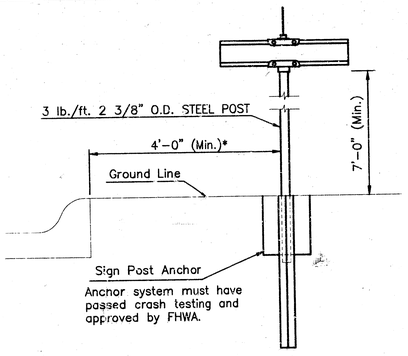
DETAIL A
6 3/4" STANDARD



TYPE I BARRICADE DETAIL W/ E.O.R. MARKER



DETAIL B
9" METRO



TYPICAL STREET NAME SIGN MOUNTING INSTALLATION
CURB AND GUTTER SECTION

SIGN ASSEMBLY TABLE

STATION	OFFSET	SIGN	QUANTITY*
0+33.0	30' Rt.	SNS	2
TOTAL			

* FOR INFORMATION ONLY

STREET NAME	NO. BLADES REQ'D	
	6 3/4" STD.	9" METRO
Emporia Cir.		1
46th St. S.		1

NOTE: REFERENCES BELOW TO "STANDARD SPECIFICATIONS" DENOTE "STANDARD SPECIFICATION FOR STATE ROAD AND BRIDGE CONSTRUCTION, EDITION 1990" BY THE KANSAS DEPARTMENT OF TRANSPORTATION.

1. POST ANCHORS: POSTS SHALL BE ANCHORED WITH A YIELDING BASE POST SUPPORT AS DETAILED.
2. POSTS FOR TRAFFIC CONTROL SIGNS: POSTS SHALL CONFORM TO THE REQUIREMENTS OF SUBSECTION 1620 OF THE STANDARD SPECIFICATIONS EXCEPT THAT ALL POSTS SHALL WEIGH 3 LBS./FOOT MINIMUM.
3. POSTS FOR STREET NAME SIGNS (SNS): POSTS SHALL BE 9 FEET LONG, CONSTRUCTED FROM 2 3/8" O.D. GALVANIZED STEEL PIPE WEIGHING A MINIMUM OF 3 LBS./FOOT. POSTS SHALL BE POSITIONED SO THAT THE BOTTOM BLADE IS 7 FEET ABOVE GRADE.
4. POSTS FOR END OF ROADWAY SIGN TO BE 8' LONG AND INSTALLED A MINIMUM OF 4' FROM ROADWAY TO BOTTOM OF SIGN.
5. SIGN BLANKS FOR TRAFFIC CONTROL SIGNS: SIGN BLANKS SHALL BE FABRICATED FROM 0.080" ALUMINUM ALLOY 6063-T6 CONFORMING TO THE REQUIREMENTS OF SUBSECTION 1626 OF THE STANDARD SPECIFICATIONS.
6. SIGN BLADES FOR STREET NAME SIGNS: EXTRUDED ALUMINUM BLADES SHALL BE ALUMINUM ALLOY CONFORMING TO 6063-T6 OR 5052-H38 (ASTM SPECIFICATION B221, LATEST ISSUE). BLADES SHALL HAVE AN ALODINE OR PHOSPHATE ETCHED FINISH. BLADES SHALL HAVE SQUARE CORNERS AND NO HOLES.

   MINIMUM BLADE LENGTH SHALL BE 24". MAXIMUM BLADE LENGTH SHALL BE 48". LENGTH VARIES BY INCREMENTS OF 6".

   BLADES BEARING THE STREET NAMES SHALL BE FIRMLY ATTACHED TO THE MOUNTING BRACKETS USING ALLEN-TYPE SET SCREWS. THE BLADES SHALL BE ORIENTED PARALLEL TO THE STREET.
7. MOUNTING BRACKETS FOR SIGNS: DIE-CAST ALUMINUM BRACKETS SHALL BE ALUMINUM ALLOY 360 HAVING A TENSILE STRENGTH OF 44,000 PSI. THE BRACKETS SHALL BE SMOOTHLY FINISHED FREE OF PITS, BURRS, AND FLAWS. EACH BRACKET SHALL BE TAPPED AND DRILLED FOR 5/16" ZINC-PLATED ALLEN-TYPE SET SCREWS HAVING SELF-LOCKING SAW-TOOTH ENDS.
8. FASTENERS: ALL STEEL FASTENERS FOR TRAFFIC CONTROL SIGNS SHALL BE GALVANIZED AND SHALL CONFORM TO THE REQUIREMENTS OF SUBSECTION 1614 OF THE STANDARD SPECIFICATIONS.
9. REFLECTIVE SHEETING: REFLECTIVE SHEETING SHALL BE TYPE II - HIGH PERFORMANCE CLASS HA IN ACCORDANCE WITH SUBSECTION 2201 OF THE STANDARD SPECIFICATIONS.
10. PROCESS INK: ALL PROCESS INK SHALL CONFORM TO THE REQUIREMENTS OF SUBSECTION 2202 OF THE STANDARD SPECIFICATIONS.
11. DETAILS: REGULATORY AND WARNING SIGNS SHALL CONFORM TO THE DETAILS IN "STANDARD HIGHWAY SIGNS", FHWA, 1979.
12. DETAILS -- SNS: THE REFLECTIVE SHEETING FOR THE 6 3/4" STANDARD SIZE SNS IS TO BE THE HIGHWAY GREEN BACKGOUND WITH SILVER-WHITE #2 COPY WITH 4" UPPER CASE AND 3" LOWER CASE PRIMARY COPY AND SUFFIX COPY. BOTH SERIES "C". WHERE SUFFIX LETTERS ARE USED ON NUMBERED STREETS AS RD, TH, ETC., THEY SHALL BE 1 1/2" LOWER CASE SERIES "C" LETTERS. FACES TO TRIM TO A 6 1/4". (SEE DETAIL A.)

    THE REFLECTIVE SHEETING FOR THE 9" METRO SIZE SNS IS TO BE THE HIGHWAY GREEN BACKGROUND WITH SILVER-WHITE #2 COPY WITH 5" UPPER CASE AND 3 3/4" LOWER CASE PRIMARY COPY AND SUFFIX COPY, BOTH SERIES "C". WHERE SUFFIX LETTERS ARE USED ON NUMBERED STREETS, SUCH AS RD, TH, ETC., THEY SHALL BE 3" LOWER CASE SERIES "C". THE CARDINAL DIRECTION CENTERED DIRECTLY BELOW THE BLOCK NUMBER SHALL BE AN UPPER CASE, 3" SERIES "C" LETTER. FACES TO TRIM TO A 8 1/2" WIDTH. (SEE DETAIL B.)

    FOR CUL-DE-SAC STREETS, A 9" METRO SIZE BLADE SHALL BE USED WITH THE HOUSE NUMBERS DISPLAYED BENEATH THE STREET NAME. LETTERING TO BE THE SAME AS FOR THE 6 3/4" SIZE BLADE, EXCEPT THAT THE HOUSE NUMBER INFORMATION SHALL BE 3" SERIES "C".

    SHOP DRAWINGS OF LAYOUT FOR SNS SHALL BE SUBMITTED TO THE TRAFFIC ENGINEERING DIVISION OF THE CITY OF WICHITA FOR APPROVAL PRIOR TO FABRICATION. THE FINISHED SIGNS AS SUPPLIED SHALL BE OF GOOD APPEARANCE; FREE FROM RAGGED EDGES, CRACKS, SCALES OR BLISTERS AND SHALL BE CLEAN-CUT. SIGNS SHALL BE PACKED IN SUCH MANNER AS TO PREVENT DAMAGE OR DEFACEMENT DURING SHIPMENT OR STORAGE.
13. PERMANENT TRAFFIC CONTROL AND SNS: PERMANENT TRAFFIC CONTROL AND SNS SHALL BE MEASURED AND PAID FOR AT THE LUMP SUM PRICE FOR SIGNING. THE PAYMENT AS SET FORTH ABOVE SHALL BE CONSIDERED FULL COMPENSATION FOR ALL EXCAVATION, BACKFILLING, POSTS, ANCHORS, FASTENERS, MATERIALS, LABOR, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THIS WORK.

THE CITY OF WICHITA
CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202
(316) 268-4581
(316) 268-4114 FAX

SIGNING DETAILS

M. E. LINDEBAK P.E. - CITY ENGINEER

PROJECT NUMBER	INDEX CODE
472-80759	

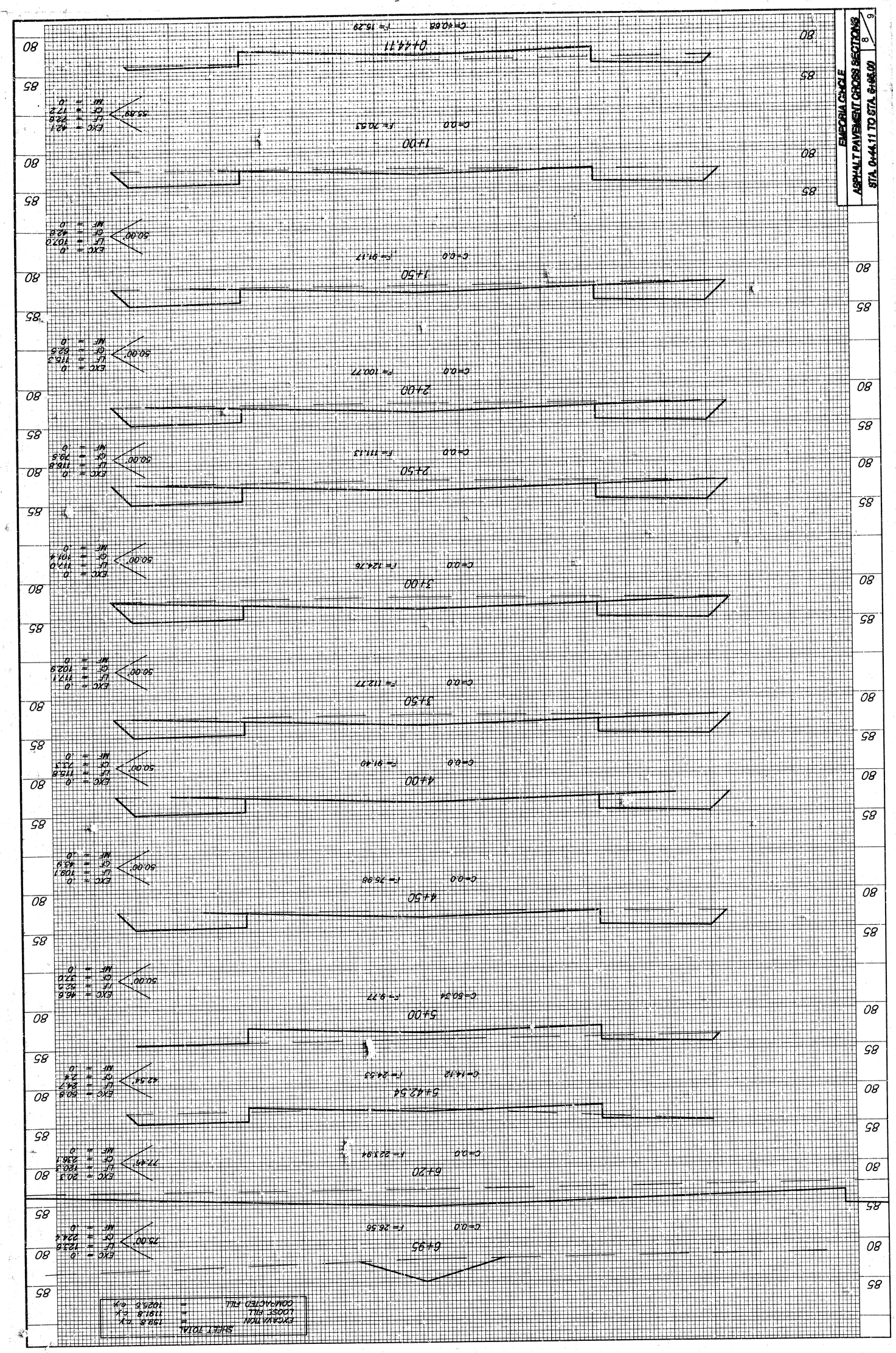
DATE: SEP 97 | SHEET 7 OF 9

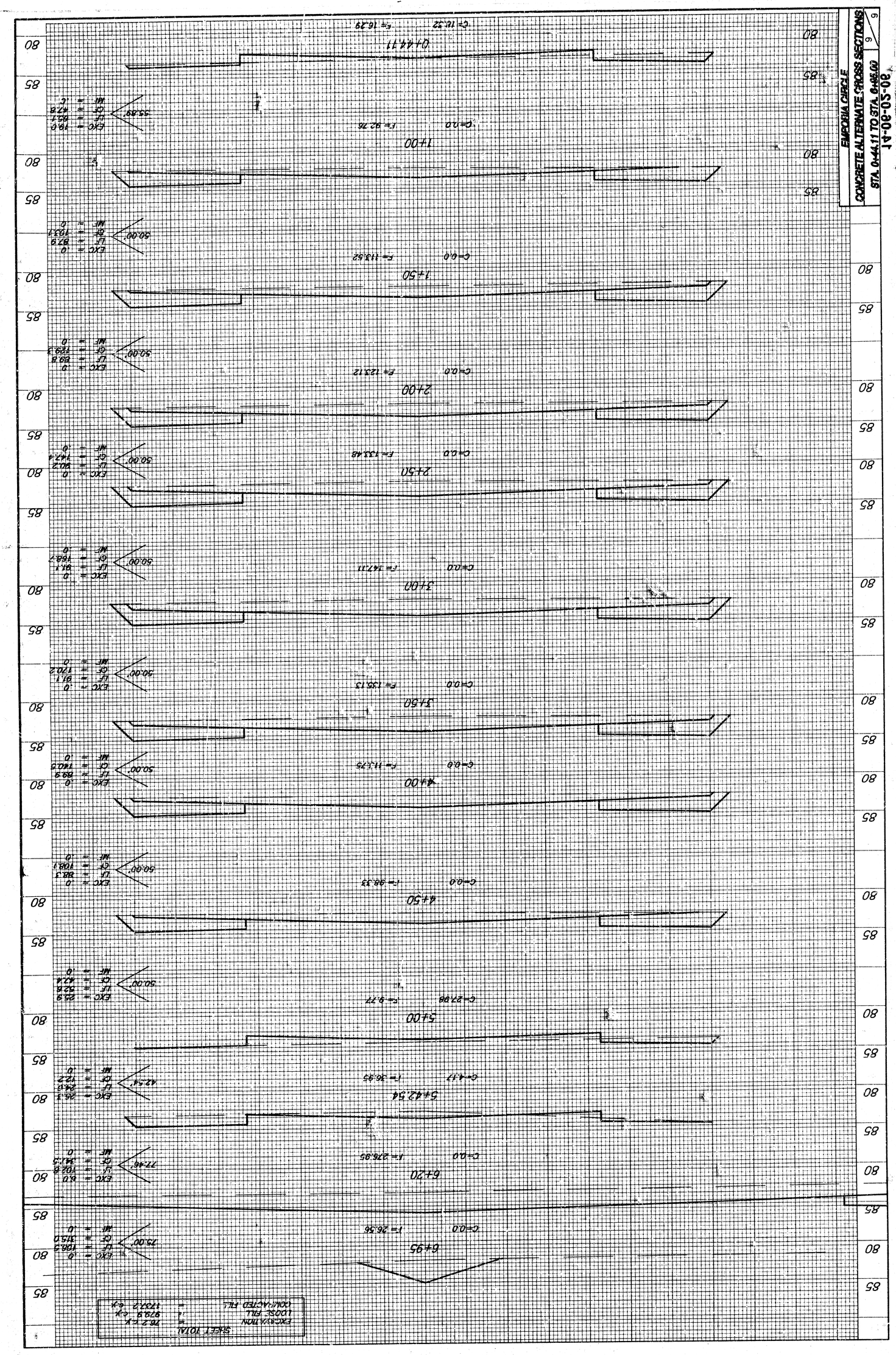
EMPORIA CIVICLE

ASPHALT PAVEMENT CROSS SECTIONS

STA. 0+44.11 TO STA. 6+65.00

6/8




EMPORIA CIRCLE
CONCRETE ALTERNATE CROSS SECTIONS
STA. 0+44.11 TO STA. 6+95.00
9/9
0+44.11
1+00
1+50
2+00
2+50
3+00
3+50
4+00
4+50
5+00
5+42.54
6+20
6+95
SHEET TOTAL
EXCAVATION = 76.2 c.y.
LOOSE FILL = 979.9 c.y.
COMPACTED FILL = 1737.2 c.y.