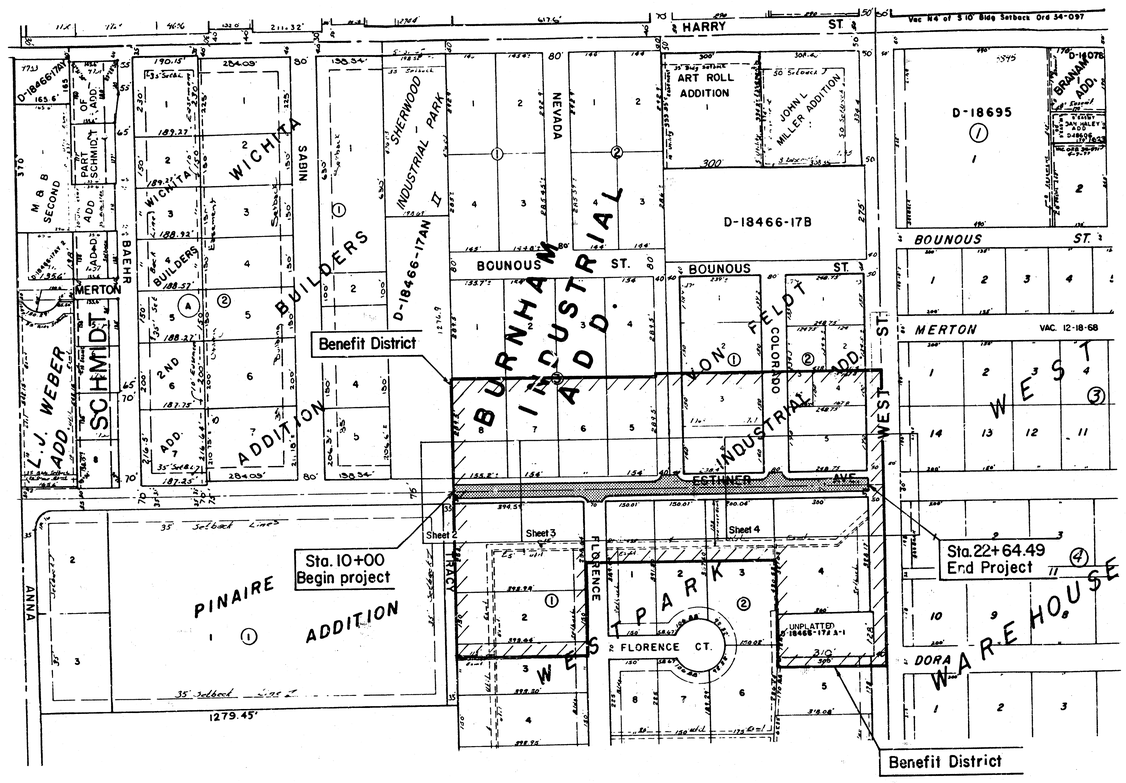
STREET IMPROVEMENTS FOR

ESTHNER AVENUE

WEST LINE OF WESTPARK ADDITION TO WEST LINE WEST STREET

CITY OF WICHITA, KANSAS

MICHAEL E. LINDEBAK —— CITY ENGINEER



Scale: 1"=200' ±

LEGEND

- Fire Hydrant
- Sign
- Telephone Pole
- Telephone & Power Pole
- Power Pole & Down Guy
- Water Line
- Water Meter
- Water Valve
- Gas Line
- Gas Meter
- Gas Valve
- Underground Telephone
- Underground Power
- Underground Tele. Conduit
- Sanitary Sewer
- Property or R.O.W. Line
- Fence
- Survey Base Line
- Light Pole
- Trees (Dia.)
- Bush or Ornamental Tree
- Shrubs or Hedge Row
- Culvert
- Curb or Comb. Curb & Gutter

INDEX TO DRAWINGS

SHEET NO.	TITLE
1	Title and Location Map
2 – 4	Typical Section & Street Improvement Plans
5	Joint Details
6	Standard Drive Ent. Full Height Curb
7	Type I-A Curb Inlet
8	Manhole Frame & Cover Detail
9 – 12	Cross Sections

PROJECT NO.

472-76-245-80806-000-000-001

Van Doren Hazard Stallings
architects engineers planners
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NOTE:
All methods and materials for this project shall conform to the Specifications of the City of Wichita. This project will be constructed under the supervision of the City Engineer.

1/12

GENERAL NOTES

1. Interurban traffic generated outside the project area is not to be carried through construction. Local business or apartment traffic generated within the project area is to be carried through construction.

2. Utility service lines, poles, ~~valve boxes,~~ meters and etcetera are to be adjusted as necessary by others prior to or during construction unless the plans specifically call for their adjustment by the Contractor. Existing utilities and their location, as shown on the plans, represent the best information obtainable for design. Location information has been obtained from the various utility companies and is either from company record drawings or company provided field locations. The plan locations shown are not guaranteed. Additional existing utilities may also be encountered. The Contractor will be required to work around existing utilities within the right-of-way which do not conflict with proposed construction.

3. A saw cut of at least one-half of the depth of existing surface courses or one-fourth the depth of the 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. 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.

4. 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.

5. The Contractor shall notify pipeline companies at least 24 hours in advance of any work being performed over and/or adjacent to pipelines.

6. Properties within the project limits which have underground sprinkler systems in public right-of-way which conflict with new construction have been notified to remove such improvements. Contractor will be required to remove such improvements should they not be removed by their owner at the time of construction of the project. The Contractor will be required to salvage all sprinkler heads and/or valves and give such material to their owner. Portions of underground sprinkler systems not in conflict with new construction shall be protected from damage and shall remain in place. All work in connection with underground sprinkler systems shall be considered as subsidiary to the contract pay items of work.

7. Widened gutter section of combined curb and gutter at intersections will not be paid for directly, and this cost shall be considered as subsidiary to the other contract pay items of work.

8. No more than 7 drives 20 feet in width, or equivalent combinations thereof, are to be constructed with this project.

9. 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.

10. All entrance and cross road pipe within the project limits shall be removed by the Contractor unless otherwise noted on the plans. Removal of such pipes shall conform to the applicable section of the Standard Specifications.

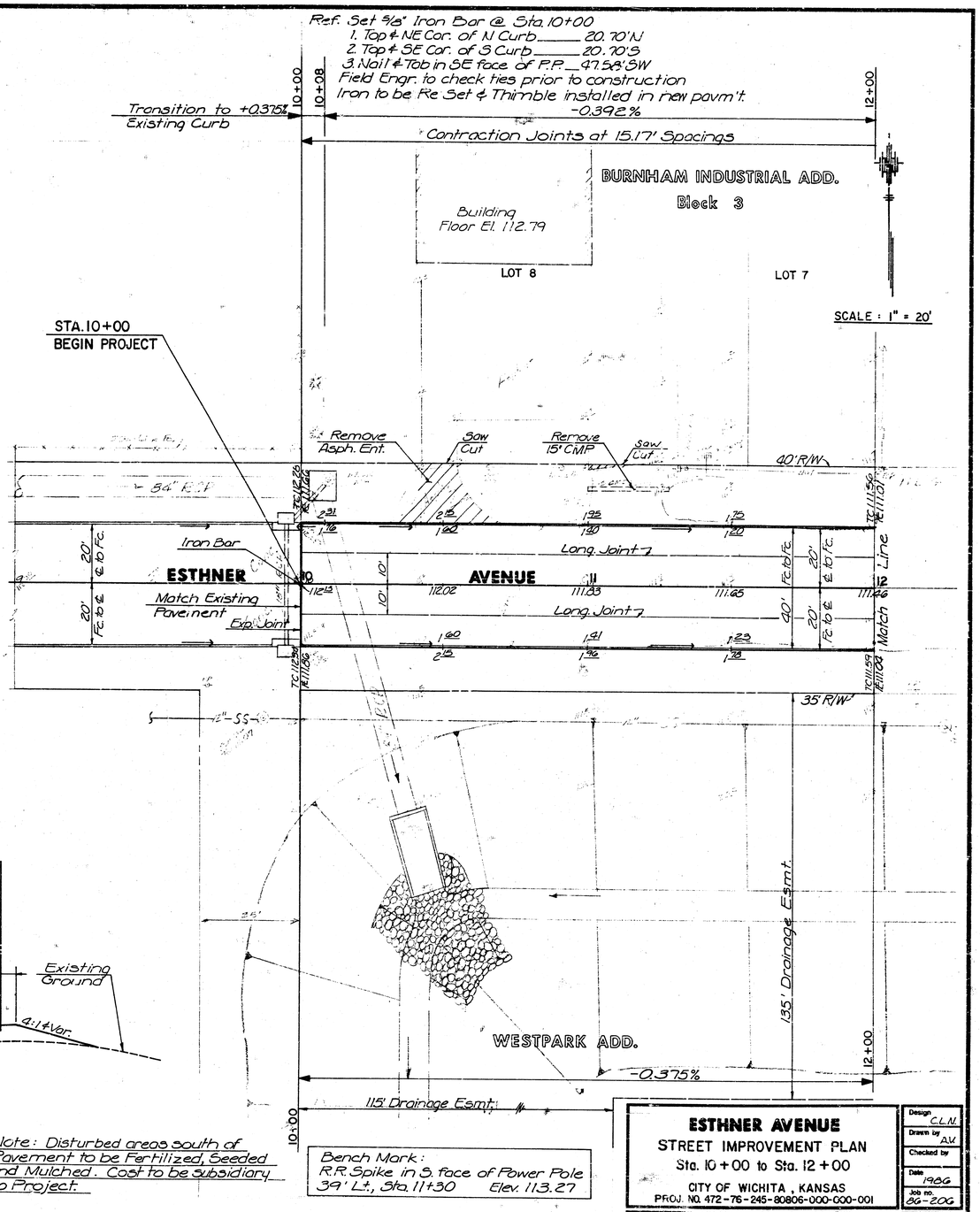
11. Contractor shall give property owners abutting this project, whose yards will be lower than the new finished grade elevations at the right-of-way line, an opportunity to utilize excess excavated material from the project to regrade their yards to drain to the new pavement. Contractor will be required to dump and spread the excess material as required by the specifications when requested by the property owner. The Contractor shall ascertain that a dirt order form has been properly executed by the property owner before any such excess material is delivered to such properties.

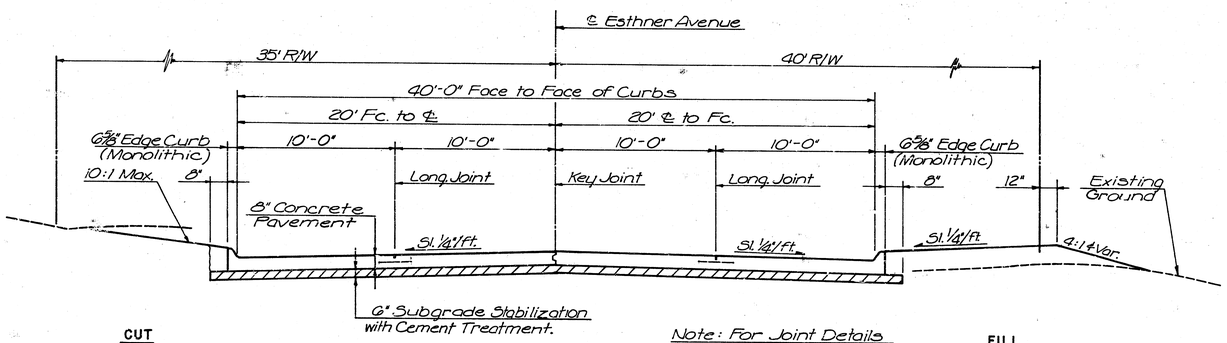
12. The Contractor will be permitted to bid only one of the alternate types of subgrade treatment. The type bid by the successful bidder will be the type of subgrade treatment used to construct the project.

13. 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 or a licensed professional engineer in accordance with state laws.

14. The Owner, the City Engineer and the Consulting Engineers are not assuming any duty to provide supervision of the Contractor's construction methods or processes.

Note:
Access to all businesses shall be maintained at all times. Cost to be subsidiary to other items of work.





CUT

Note: For Joint Details See Sheet No. 5

FILL

TYPICAL SECTION

Note: Disturbed areas south of Pavement to be Fertilized, Seeded and Mulched. Cost to be subsidiary to Project.

Bench Mark:
R.R. Spike in S. face of Power Pole
39' Lt., Sta. 11+30 Elev. 113.27

ESTHNER AVENUE
STREET IMPROVEMENT PLAN
Sta. 10+00 to Sta. 12+00
CITY OF WICHITA, KANSAS
PROJ. NO. 472-76-245-80806-000-000-001

Design	C.L.N.
Drawn by	A.V.
Checked by	
Date	1986
Job no.	86-206

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Sheet 2 of 12

22x36

Ref. Set 5/8" Iron Bar @ P.O.T. Sta. 14+29.81 = ℄ Florence St. 50+00
1. Nail & Tab in E face of P.P. _____ 40.47' NNE
2. ℄ & Top of Operating Nut on F.H. ___ 44.65' S5W
3. Nail & Tab in W face of P.P. _____ 47.00' S E

12+00 | 13+79.2 | 14+79.2 | 16+07.2 | 17+07.2 | 17+75 | 18+00

-0.392% | -0.375% | -0.60% Valley Gutter | -0.320% | +0.320% | -0.500%

Contraction Joints at 15.17' Spacings

Contraction Joints at 16.00' Spacings

Contraction Jts. at 16.63' Spacings

P.V.I. El. 110.29 No V.C.

P.V.I. El. 109.83 No V.C.

P.V.I. El. 110.29 No V.C.

Building Floor El. 112.34

Building Floor El. 112.0

BURNHAM INDUSTRIAL ADD.
Block 3

VON FELDT INDUSTRIAL ADD.
Block 1

WESTPARK ADD.

WESTPARK ADD.

LOT 7 | LOT 6 | LOT 5 | LOT 4

FLORENCE ST.

ESTHNER AVENUE

40' R/W | 35' R/W | 135' Drainage Easement

P.O.T. Sta. 14+29.81 ℄ Esthner Ave. = ℄ Sta. 50+00.00 Florence St. S.

P.O.T. Sta. 16+57.20 ℄ Esthner Ave. = ℄ Sta. 50+00.00 Florence St. N.

Regrade to match New Pavement. Cost of grading & Excavation is incidental to project.

Const. Temporary Asph. Inlet Hook-ups. Open Inlets as req'd

Exist. Inlet Top El. 109.80

Exist. Inlet Top El. 109.36

Exist. Inlet Top El. 109.44

6" Curb (Asph.) *

*Note: Cost of Asph. Curb incidental to Temp. Asph. Inlet Hook-ups.

Sta. 16+32, Exist. Inlet Const. Inlet Hook-up See Sheet No. 7

Saw cut and Remove Exist. Mat. and 24' LF Comb. Curb & Gutter. Const. New 17 LF Std. 2'-6" Comb. C & G. Const. 20 SY Asph. Conc. Pavement See Sheet No. 5

30' R. to Face of Curb

Long. Joint | Exp. Joint | Contr. Jts. | Contraction Jts.

Survey ℄

SCALE: 1" = 20'

INTERSECTION QUANTITIES

LOCATION: Esthner Ave. & Florence St. (North)

313.8 S.Y. 8" Concrete Pavement
50.3 L.F. Monolithic Curb
_____ C.Y. Excavation
_____ C.Y. Compacted Fill
_____ S.Y. Manipulation
_____ Tons Lime, Cement or Flyash

INTERSECTION QUANTITIES

LOCATION: Esthner Ave. & Florence St. (South)

245.1 S.Y. 8" Concrete Pavement
31.4 L.F. Monolithic Curb
_____ C.Y. Excavation
_____ C.Y. Compacted Fill
_____ S.Y. Manipulation
_____ Tons Lime, Cement or Flyash

Bench Mark:
Chiseled "□" on NW Cor. of Headwall of culvert on W side of Florence 100'S of Esthner Ave. Elev. 105.89

ESTHNER AVENUE
STREET IMPROVEMENT PLAN
Sta. 12+00 to Sta. 18+00
CITY OF WICHITA, KANSAS
PROJ. NO. 472-76-245-80806-000-000-001

Design C.L.N.
Drawn by R.V.
Checked by
Date 1976
Job no. 86-206

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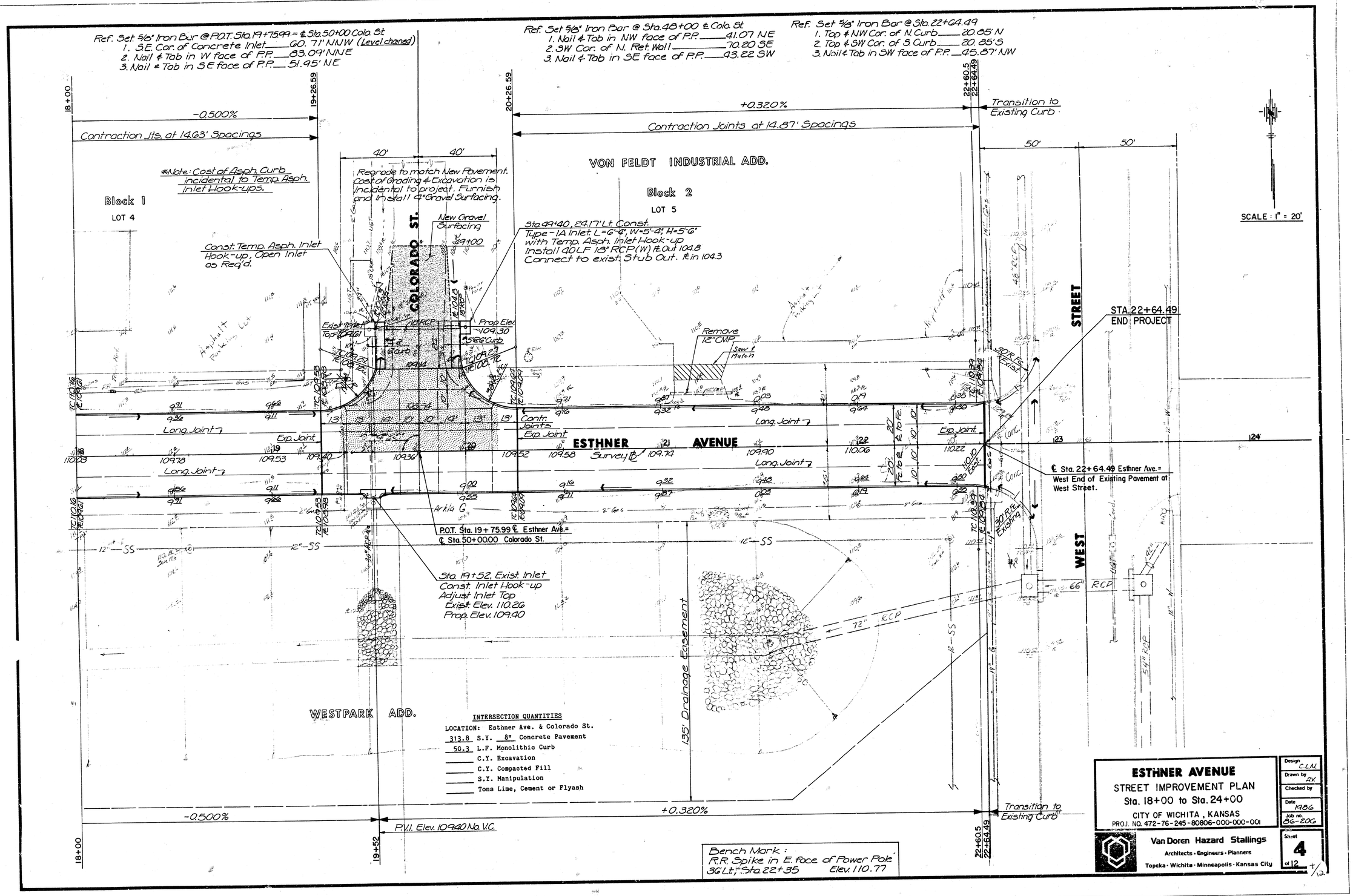

INTERSECTION QUANTITIES

LOCATION: Esthner Ave. & Colorado St.

313.8	S.Y. 8" Concrete Pavement
50.3	L.F. Monolithic Curb
___	C.Y. Excavation
___	C.Y. Compacted Fill
___	S.Y. Manipulation
___	Tons Lime, Cement or Flyash

ESTHNER AVENUE
STREET IMPROVEMENT PLAN
Sta. 18+00 to Sta. 24+00
CITY OF WICHITA, KANSAS
PROJ. NO. 472-76-245-80806-000-000-001

Design C.L.N.
Drawn by A.V.
Checked by
Date 1986
Job no. 86-206

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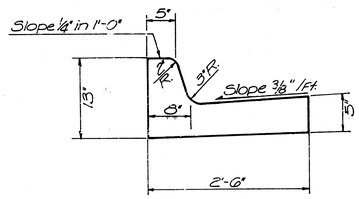
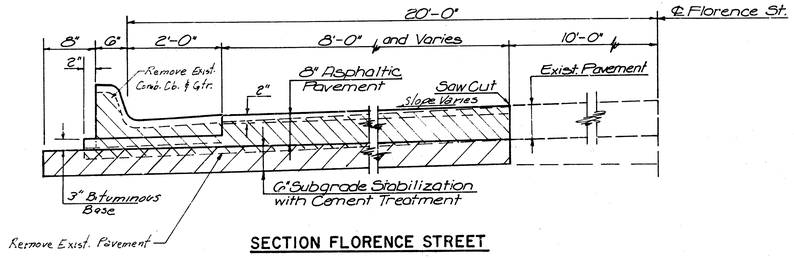
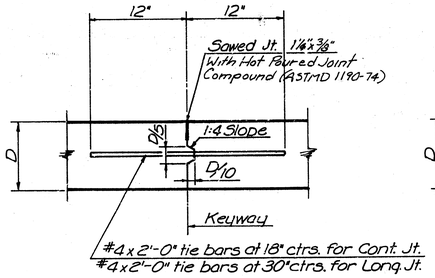


COMBINED CURB & GUTTER

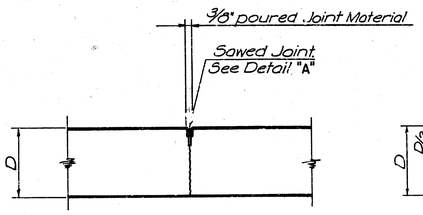


SECTION FLORENCE STREET



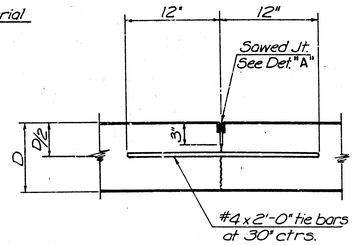
CONSTRUCTION JOINT

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. With the permission of the Engineer, a transverse Construction Joint may be substituted for a Contraction Joint at its planned location. Transverse Construction Joints shall be sawed and filled as specified for Contraction Joints.



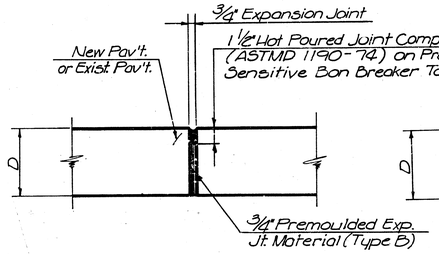
CONTRACTION JOINT

Note: Contraction Joints will be constructed at the planned location or as directed by the Engineer. No Transverse Construction Joint shall be placed within ten (10) feet of a Contraction Joint.



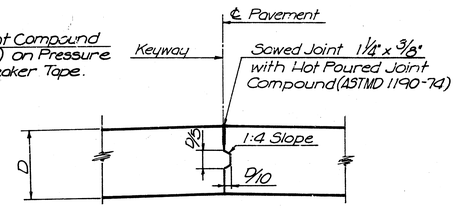
SAWED LONGITUDINAL JOINT

Note: The Contractor shall complete the sawing operations before uncontrolled cracking occurs, but not so early that sawing causes excessive spalling or aggregate displacement.

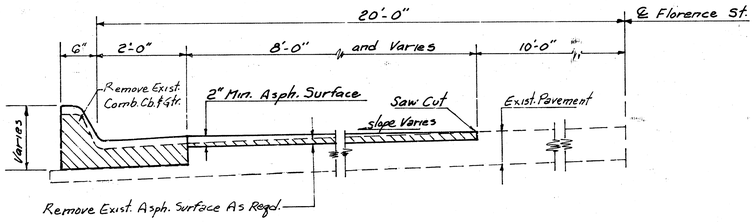


EXPANSION JOINT

Note: 3/4" Expansion Joint Material shall be full width and depth of New Pavement.

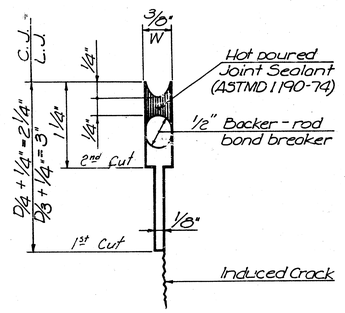


℄ LONGITUDINAL JOINT



ALTERNATE FLORENCE STREET SECTION

At Contractor's option, pavement surface may be raised by removing existing asph. surface as required in a manor acceptable to the Engineer and replacing with a new asph. surface lift with a min. thickness of 2". New comb. Curb & gutter to be placed on existing bituminous base with extra thickness subsidiary to project. Work to be paid for with same bid items required for complete removal and replacement as shown on "SECTION FLORENCE STREET."



TYPICAL JOINT DETAIL "A"

"D" Thickness = 8"

JOINT DETAILS

CITY OF WICHITA, KANSAS
PROJ. NO. 472-76-245-80806-000-000-001

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Design	
Drawn by	AV
Checked by	
Date	1986
Job no.	86-206
Sheet	5
of	12

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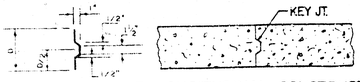
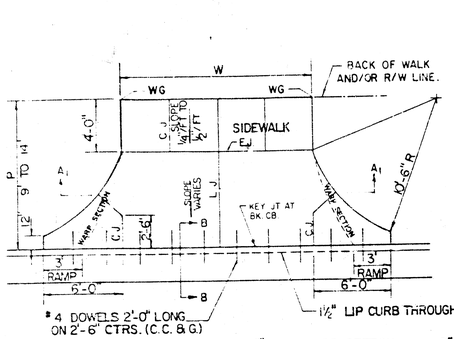
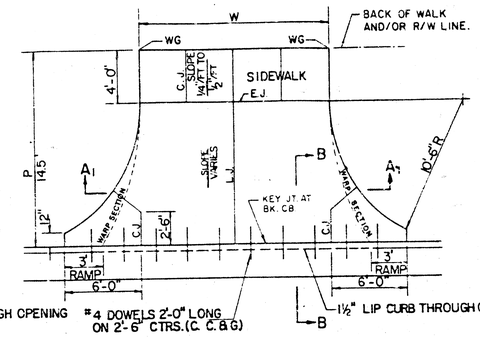
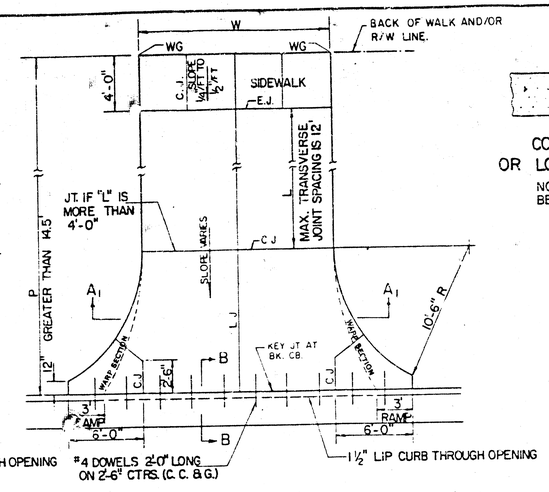
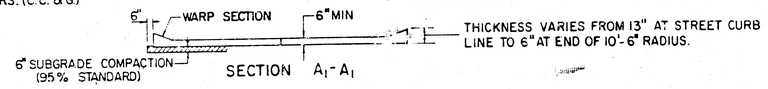


ALT. LONGITUDINAL CONSTRUCTION JOINT





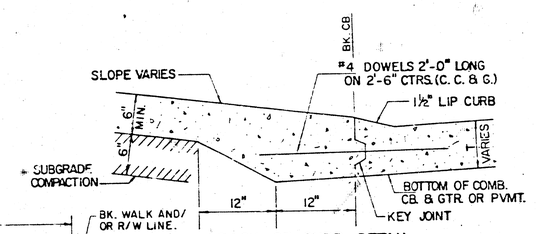




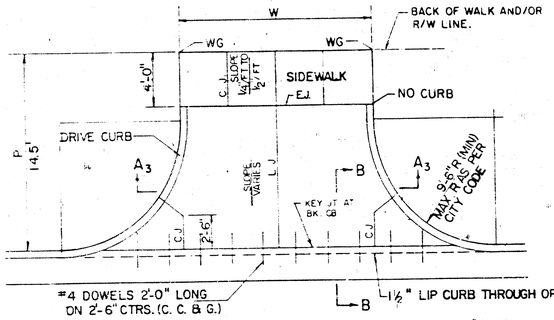
SECTION A_1-A_1

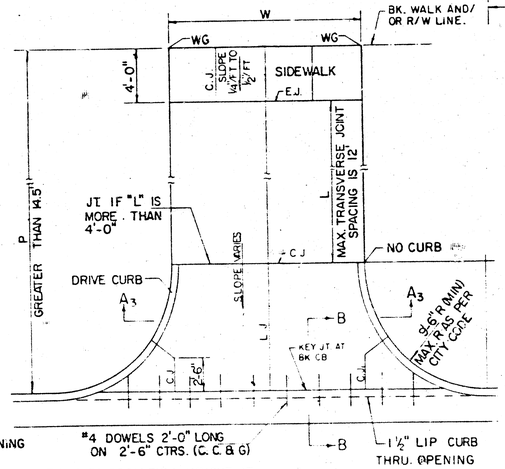
PARKING WIDTH "P"	9'	10'	11'	12'	13'	14.5'	20'	25'	30'	35'	40'	45'	50'
ABSOLUTE MAX. DIST. OF PT. "WG" ABOVE OR BELOW TOP OF FULL CURB	0.35'	0.35'	0.40'	0.45'	0.60'	0.80'	1.35'	1.85'	2.35'	2.85'	3.35'	3.85'	4.35'
OPTIMUM MAX. DIST. OF PT. "WG" ABOVE OR BELOW TOP OF FULL CURB	0.35'	0.35'	0.40'	0.45'	0.60'	0.70'	1.04'	1.30'	1.56'	1.82'	2.08'	2.34'	2.60'
OPTIMUM MIN. DIST. OF PT "WG" ABOVE TOP OF FULL CURB	0.19'	0.21'	0.23'	0.25'	0.27'	0.30'	0.42'	0.52'	0.62'	0.72'	0.82'	0.92'	1.02'
ABSOLUTE MIN. DIST. OF PT. "WG" ABOVE TOP OF FULL CURB	-.19'	-.16'	-.13'	-.10'	-.06'	0.00'	0.00'	0.15'	0.25'	0.35'	0.45'	0.55'	0.65'

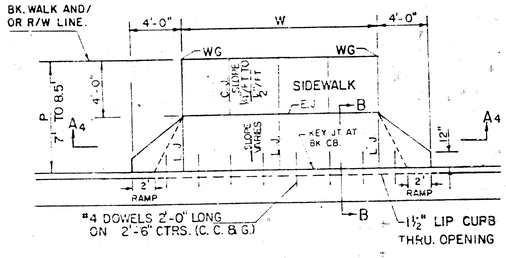
RADIUS RAMP DRIVES (P = 9.0' & GREATER)

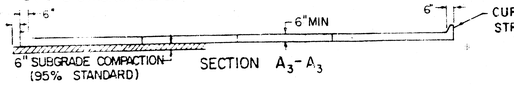


BACK OF CURB DETAIL
SECTION B - B (no scale)

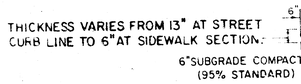








SECTION A_3-A_3



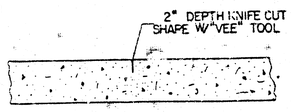
SECTION A_4-A_4

PARKING WIDTH "P"	14.5'	20'	25'	30'	35'	40'	45'	50'
ABSOLUTE MAX. DIST. OF PT. "WG" ABOVE TOP OF FULL CB.	0.80'	1.35'	1.85'	2.35'	2.85'	3.35'	3.85'	4.35'
OPTIMUM MAX. DIST. OF PT "WG" ABOVE TOP OF FULL CB.	0.70'	1.04'	1.30'	1.56'	1.82'	2.08'	2.34'	2.60'
OPTIMUM MIN. DIST. OF PT "WG" ABOVE TOP OF FULL CB.	0.30'	0.42'	0.52'	0.62'	0.72'	0.82'	0.92'	1.02'
ABSOLUTE MIN. DIST OF PT. "WG" ABOVE TOP OF FULL CB.	0.00'	0.00'	0.15'	0.25'	0.35'	0.45'	0.55'	0.65'

FULL RADIUS DRIVES (P = 14.5' & GREATER)

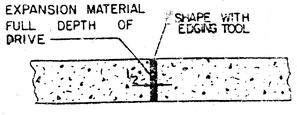
PARKING WIDTH "P"	7'	7.5'	8'	8.5'
ABSOLUTE MAX. DIST OF PT. "WG" ABOVE TOP OF FULL CB.	0.00'	0.10'	0.20'	0.30'
OPTIMUM MAX. DIST. OF PT. "WG" ABOVE TOP OF FULL CB.	0.00'	0.10'	0.20'	0.30'
OPTIMUM MIN. DIST OF PT. "WG" BELOW TOP OF FULL CB.	-.15'	-.16'	-.17'	-.17'
ABSOLUTE MAX. DIST OF PT. "WG" BELOW TOP OF FULL CB.	-.25'	-.20'	-.20'	-.20'

FULL RAMP DRIVE (P = 7.0' TO 8.5')

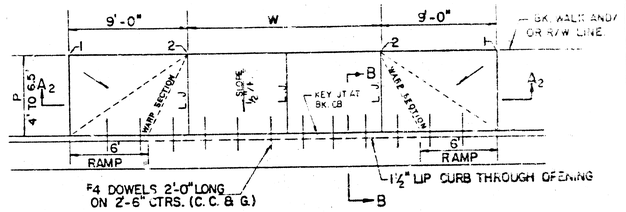


CONTRACTION JOINT (C.J.) OR LONGITUDINAL JOINT (L.J.)

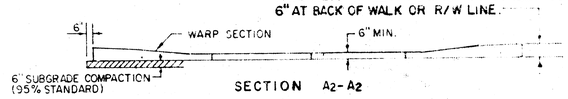
NO SAWN JOINTS WILL BE ALLOWED.



EXPANSION JOINT (E.J.)



THICKNESS VARIES FROM 13" AT STREET CURB LINE TO 6" AT BACK OF WALK OR R/W LINE.



SECTION A_2-A_2

PARKING WIDTH "P"	4'	4.5'	5'	5.5'	6'	6.5'
DIST. OF PT. "1" ABOVE TOP OF FULL CB.	0.08'	0.09'	0.10'	0.12'	0.13'	0.14
DIST. OF PT. "2" BELOW TOP OF FULL CB.	-.26'	-.24'	-.22'	-.20'	-.18'	-.16'

FULL RAMP DRIVE (P = 4.0' TO 6.5')

GENERAL NOTES

1. DRIVEWAY CONSTRUCTION DETAILED ON THIS SHEET IS FOR USE WITH FULL HEIGHT STREET CURBS AND IN AREAS WITHOUT FULL WALK CONSTRUCTION IN THE PARKING. SEE OTHER DETAIL SHEETS FOR DRIVEWAY CONSTRUCTION WITH ROLL CURB AND/OR FULL WALK.
2. ONE LONGITUDINAL JOINT SHALL BE CONSTRUCTED ALONG THE CENTERLINE OF DRIVES HAVING A "W" DIMENSION OF 24' OR LESS. TWO LONGITUDINAL JOINTS SHALL BE CONSTRUCTED WITH EQUAL SPACINGS NOT TO EXCEED 10' FOR DRIVES WITH A "W" DIMENSION GREATER THAN 24'.
3. DRIVEWAY WIDTH DENOTED AS "W" ON THE DETAIL DRAWINGS SHALL BE A MINIMUM OF 10' AND A MAXIMUM OF 30'. THE MAXIMUM OPENING FOR RADIUS TYPE DRIVES WITH CURBS THROUGH THE RADIUS SHALL NOT EXCEED 52' AT THE STREET CURB LINE.
4. CONTRACTION JOINT SPACING IN THE DRIVEWAY WALK SECTION SHALL BE A MINIMUM OF 3' AND A MAXIMUM OF 6' AND ARE TO BE EQUALLY SPACED WITHIN THIS RANGE. WALK SECTION SHALL BE CONSTRUCTED TO THE SAME THICKNESS AS THE DRIVEWAY.
5. DOWEL BARS SHALL BE OMITTED FROM THE KEYED CONSTRUCTION JOINT ALONG THE BACK OF THE STREET CURB LINE WHEN DRIVEWAYS ARE CONSTRUCTED IN CONJUNCTION WITH NEW CONCRETE PAVEMENT CONSTRUCTION.
6. ADDITIONAL THICKNESS OF DRIVE AS INDICATED IN THE DRAWINGS WILL NOT BE PAID FOR DIRECTLY AND THIS COST SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE DRIVEWAY CONSTRUCTION.
7. ONE HALF INCH EXPANSION JOINTS SHALL BE INSTALLED WHEREVER DRIVE CONSTRUCTION ABUTS SIDEWALK. ONE HALF INCH EXPANSION JOINTS SHALL ALSO BE INSTALLED ALONG THE PROPERTY LINE AND/OR BACK OF WALK LINE WHEN DRIVE CONSTRUCTION ALONG THIS LINE ABUTS CONCRETE PARKING LOTS OR CONCRETE DRIVE EXTENSION.
8. ALL DRIVEWAYS SHALL BE A MINIMUM OF 6" IN THICKNESS AND SHALL BE WITHOUT REINFORCEMENT. DRIVEWAYS MAY BE CONSTRUCTED THICKER THAN 6" AND THEY MAY BE REINFORCED WITH 6"x12" W4-W4 WELDED WIRE FABRIC WHEN PROPERLY AUTHORIZED BY THE PROPERTY OWNER WITH THE ENGINEER'S CONCURRENCE.
9. OPTIMUM DRIVEWAY ELEVATIONS SHOWN IN THE TABLES ARE TO BE USED WHENEVER POSSIBLE. ABSOLUTE MAXIMUM AND MINIMUM ELEVATIONS ARE TO BE USED ONLY WHEN THE VALUES WILL PERMIT NEW CONSTRUCTION TO MATCH EXISTING DRIVES OR PAVING. ALL VALUES SHOWN IN THE TABLES ARE BASED ON A FULL-CURB HEIGHT TERMINATING AT 6" ABOVE THE GUTTER FLOW LINE AND MUST BE ADJUSTED ACCORDINGLY FOR OTHER CURB HEIGHTS. VALUES SHOWN IN THE TABLES WITH MINUS SIGNS INDICATE ELEVATIONS BELOW TOP OF FULL HEIGHT CURB.

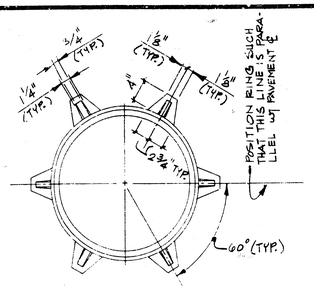
REVISED OCTOBER 1985

SCALE: 1" = 5'

STANDARD DRIVE ENTRANCES
FULL HEIGHT CURB
CITY OF WICHITA, KANSAS

Sheet 6 No. 12

PROJECT NUMBER
472-76-245-80806-000-000-001



1 CAST IRON INLET FRAME
(WEIGHT = 180#) 1" = 1'-0"

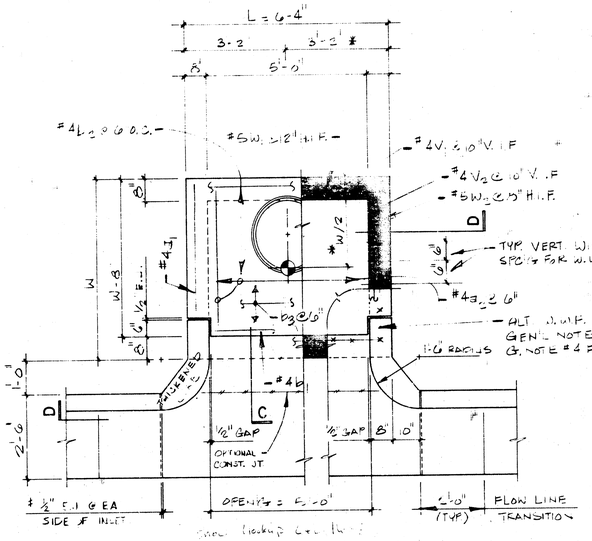
* NOTE: THIS POINT ⌖ LOCATES STATION AND OFFSET CALLED OUT ON PLAN AND PROFILE SHEETS 20 THRU 23.

REBAR LEGEND

F D	FOOTING DOWEL
C B	CORNER BAR
B	BOTTOM BAR
F	FOOTING BAR
H	HORIZONTAL
V	VERTICAL BAR
R	REINFORCING
T	TOP BAR
O F	OUTSIDE FACE
I F	INSIDE FACE
E F	EACH FACE
N F	NEAR FACE
F F	FAR FACE
E W	EACH WAY
U N O	UNLESS NOTED OTHERWISE

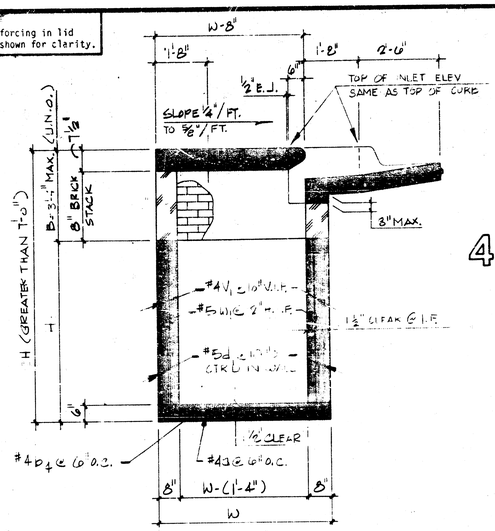
NOTE: 1/2" expansion joints as called for on this sheet shall be with 1/2" premolded expansion joint material as per City of Wichita specifications.

† NOTE: Where asphalt pavement occurs adjacent to inlet 1/2" expansion joint extends thru both curb and gutter.... curb only has expansion joint cut with concrete pavement.

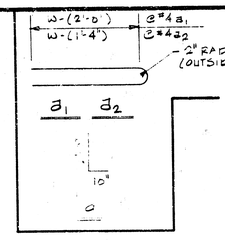


2 INLET PLAN W/ LID & WALL REINF.
1/2" = 1'-0"

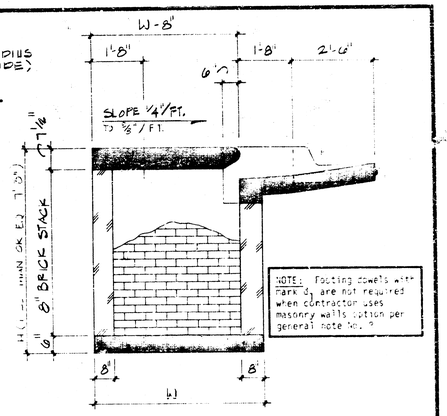
NOTE: Reinforcing in lid not shown for clarity.



A TYP. INLET SECT. W/ CONC. WALLS
1/2" = 1'-0"

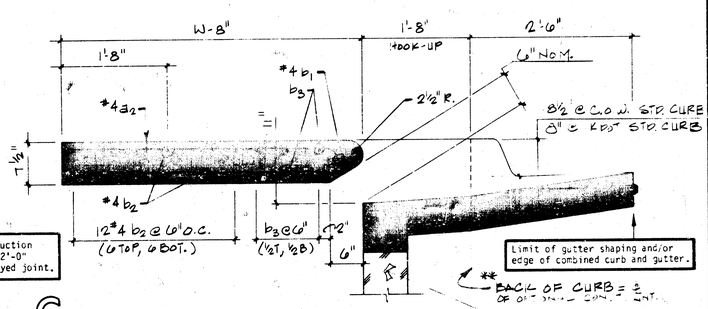


4 BAR BEND DIAGS



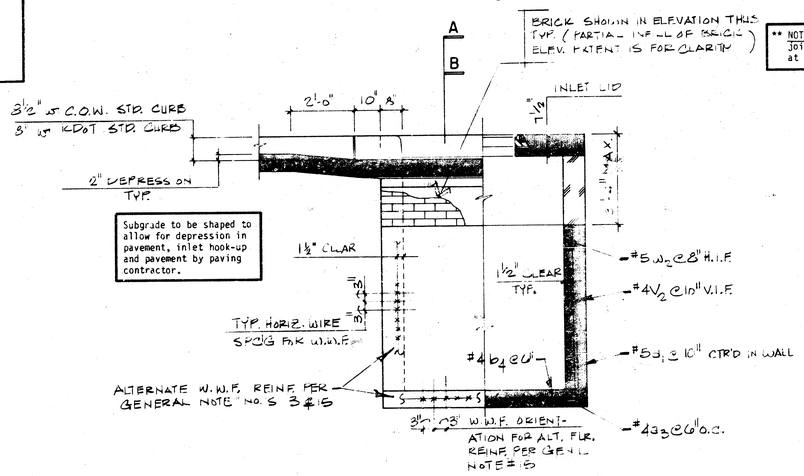
B TYP. INLET SECT. W/ EXT. MASONRY WALLS
(ALT. PER GEN'L NOTE # 8) 1/2" = 1'-0"

NOTE: Reinforcing of inlet lid and floor per details A, C and schedule below not shown for clarity.



C INLET LID REINF. & OPN'G GEOMETRY DTL.
1" = 1'-0"

** NOTE: Option keyed construction joint in pavement with #4x2'-0" at 32" O.C. centered on keyed joint.



D SECT. THRU INLET AND CURB & GUTTER CONSTRUCTION
(TYP. & ALT. W.W.F. END WALL REINF. SHOWN) 1/2" = 1'-0"

SLAB & FLOOR REINF.

MARK	SIZE	W = 5'-4" NO.	W = 5'-4" LENGTH	W = 6'-4" NO.	W = 6'-4" LENGTH	W = 7'-4" NO.	W = 7'-4" LENGTH	W = 8'-4" NO.	W = 8'-4" LENGTH	NO.	LENGTH
a1	# 4		2	7 - 2	2	9 - 2	2	11 - 2	2	13 - 2		
a2			11	8 - 6	11	10 - 6	11	12 - 6	11	14 - 6		
a3	④		13	4 - 10	13	5 - 10	13	5 - 10	13	7 - 10		
b1			1	4 - 8	1	4 - 8	1	4 - 8	1	4 - 8		
b2			12	6 - 0	12	6 - 0	12	6 - 0	12	6 - 0		
b3	varies		6 #6	6 - 0	8 #5	6 - 0	10 #4	6 - 0	12 #4	6 - 0		
b4	# 4 ④		11	5 - 10	13	5 - 10	15	5 - 10	17	5 - 10		
Wall Reinforcing												
v1	# 4 ⑥		28	①	28	①	28	①	28	①		
v2	# 4 ⑥		12	①	14	①	16	①	18	①		
w1	# 5 ④		②	3 - 0	②	6 - 0	②	6 - 0	②	6 - 0		
w2	# 5 ⑥		③	5 - 0	③	6 - 0	③	7 - 0	③	8 - 0		
d1	# 4		40	2 - 10	42	2 - 10	44	2 - 10	46	2 - 10		

① Height = H_1 -8" (make allowance for W.W.F. splices if H_1 -6" < 8'-2")
② Count = 2 (H_1 +1) .... round fractional counts up
③ Count = 2 ($3H_1$ /2) ....round fractional counts up
④ Wire alternate for floor reinforcement per general note No. 15
⑤ Wire alternate for wall reinforcement per general note No. 3

3 INLET REINFORCING SCHEDULE

GENERAL NOTES

1. Concrete shall be City of Wichita standard paving mix, proportioned and mixed per Pages 21 and 22 of City of Wichita's "Concrete Paving" specification.
2. * All reinforcing to meet ASTM A615-60,000, welded wire fabric shall meet ASTM A185.
3. Reinforcement of the inlet walls may, at the Contractor's option, be woven with wire fabric. Such welded wire fabric inlet wall reinforcing shall be ~~W1.5x6 -~~ W11 x W1 supplied in 16'-0" long x ~~8'-0"~~ wide flat sheets. (Approximately 232 lbs./100 sq.ft. or 2#/sf sheet).
4. Welded wire fabric splices shall be made with a minimum of 3 wire spacing lap (i.e. 18" horizontal, 9" vertical lap lengths).
5. Concrete protection for reinforcing 1-1/2" unless noted otherwise.
6. All concrete exposed edges shall be finished with an edging tool.
7. Floors of inlets shall be shaped with 8 sack sand mix concrete to increase hydraulic efficiency such that the inlet will be self-clearing between all inlet and/or outfall pipe(s).
8. The Contractor shall construct 8" brick masonry walls between the concrete inlet base and the top on this inlet when H=7'-0" or less and W=6'-4" or less.
9. Concrete inlet tops to be installed on thin mortar cushion to insure full support along walls.
10. See Sheet No. 7 for standard City of Wichita Manhole cover.
11. Reinforcing bars shall be field cut or bent to clear pipes and inlet frame.
12. H dimension on any inlet built in compliance with this detail sheet shall not exceed 13'-0". Where W=8'-4" H dimension shall not exceed 14'-0".
13. Contractor shall trim off all pipes, entering inlets at a skew, flush with the inside face of the inlet walls. Workmanship of such pipe cuts shall be accomplished in a manner that is satisfactory to the field engineer.
14. Reinforcement of the inlet floor may, at Contractor's option, be with woven wire fabric per general note No. 3 providing orientation of wire spacing is as shown in detail "D" of this sheet.
15. Inlet or outlet pipes aligned perpendicular (more or less) to the adjacent pavement centerline shall be centered on manhole openings.
16. Curb and gutter construction necessary to connect setback inlet to pavement will be paid for at the unit price bid for each inlet hookup.

TYPE IA CURB INLET

INLET OPENING: 6" x 5'-0"

Design	
Drawn by	
Checked by	
Date	1986
Job no	86-206

PROJ NO. 472-76-245-80806-000-000-001

Van Doren Hazard Stallings
Architects · Engineers · Planners
Topeka · Wichita · Minneapolis · Kansas City

Sheet 7 of 12

MANHOLE FRAME AND COVER DETAIL

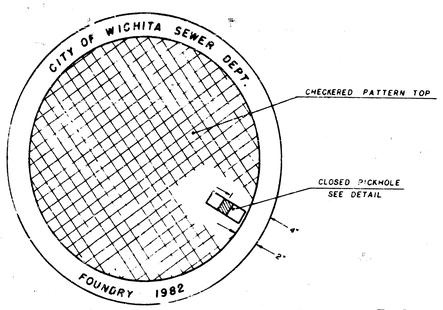
ADOPTED AS STANDARD DESIGN

BY

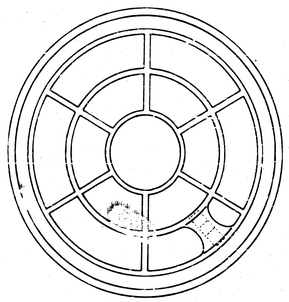
City of Wichita, Kansas

MANHOLE COVER

Weight: 180 Lbs.

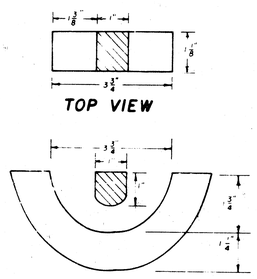


TOP VIEW



BOTTOM VIEW

PICKHOLE DETAIL

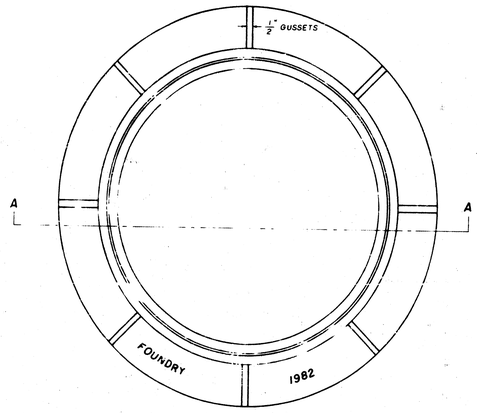


TOP VIEW

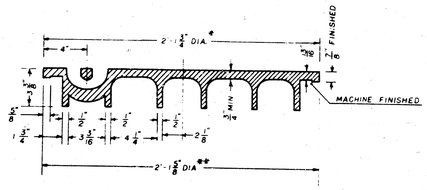
SECTION VIEW

MANHOLE FRAME

Weight: 240 Lbs.



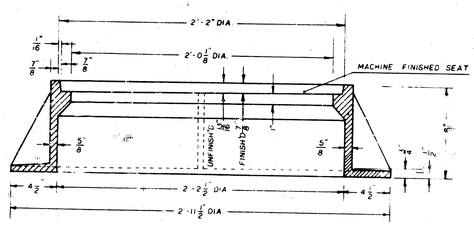
TOP VIEW



SECTION VIEW

* OUTSIDE DIA. TOP OF COVER

** OUTSIDE DIA. BOTTOM OF COVER



SECTION A-A

GENERAL NOTES

1. MANHOLE CASTINGS SHALL BE MANUFACTURED USING GOOD QUALITY GRAY IRON CONFORMING TO CLASS 30 OF A.S.T.M. DESIGNATION A-48. DIMENSIONS AND WEIGHTS SHOWN ON THE DETAILED DRAWINGS SHALL BE CONSIDERED AS MINIMUM REQUIREMENTS AND ANY DEVIATIONS FROM THE DIMENSIONS SHOWN MUST BE SPECIFICALLY APPROVED. THE FINISHED CASTINGS SHALL BE OF UNIFORM QUALITY, FREE FROM BLOWHOLES, POROSITY, HARD SPOTS, SHRINKAGE DISTORTIONS OR OTHER DEFECTS.

2. MANHOLE CASTINGS SHALL BE COATED WITH AN ASPHALT PAINT RESULTING IN A SMOOTH, TOUGH AND TENACIOUS COATING WHICH IS NOT BRITTLE OR TACKY.

3. MANHOLE CASTINGS SHALL BE MANUFACTURED SUCH THAT A COVER MANUFACTURED BY ANY ONE FOUNDRY WILL FIT INTERCHANGEABLY INTO A FRAME MANUFACTURED BY ANOTHER FOUNDRY AND STILL MEET ALLOWABLE CLEARANCES AND NON-ROCKING REQUIREMENTS. THIS WILL REQUIRE MANUFACTURING OF THE MATCHING FACES ON THE COVER AND THE FRAME TO CLOSE TOLERANCES.

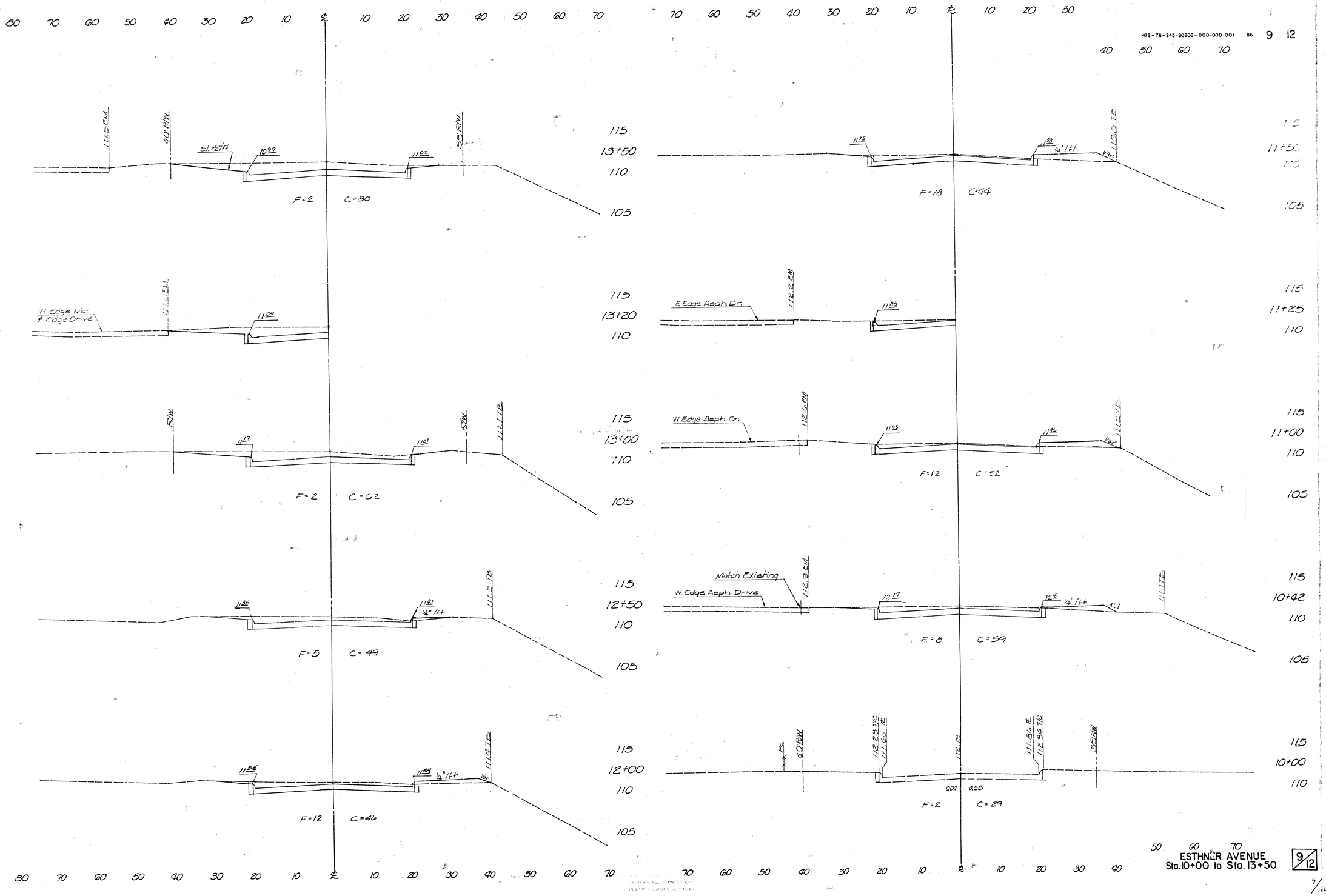
4. THE OUTSIDE CIRCUMFERENCE OF THE VERTICAL FACE OF THE COVER AND THE INSIDE CIRCUMFERENCE OF THE VERTICAL FACE IN THE FRAME RECESS SHALL BE MANUFACTURED TO TOLERANCES SUCH THAT THE CLEARANCE BETWEEN THE COVER AND FRAME WILL NOT EXCEED 1/8" AT ANY POINT AROUND THE CIRCUMFERENCE OF THE COVER. THE SEATING SURFACES BETWEEN THE COVER AND FRAME SHALL BE MACHINED SUCH THAT THESE SURFACES SHALL MAKE FULL CONTACT FOR THEIR FULL CIRCUMFERENCE TO PRECLUDE THE COVER FROM ROCKING IN THE FRAME.

5. THE MANHOLE FRAME AND COVER SHALL BE MARKED WITH LETTERING INDICATING THE NAME OF THE MANUFACTURER AND THE YEAR WHEN THE COVER OR FRAME WAS CAST. THE COVER SHALL BE FURTHER IDENTIFIED WITH REGARDS TO OWNERSHIP USING LETTERS AT LEAST 1" IN HEIGHT. THIS IDENTIFICATION SHALL BE "CITY OF WICHITA SEWER DEPARTMENT". THE WORD DEPARTMENT MAY BE ABBREVIATED. THE TEXTURE OF THE TOP SURFACE OF THE COVER SHALL BE MANUFACTURED IN A CHECKERED PATTERN DESIGN AS INDICATED ON THE DRAWINGS. SMOOTH BLOCKOUTS SHALL BE UTILIZED TO HIGHLIGHT THE LETTERING ON THE COVER SURFACE. THE TOTAL AREA OF SMOOTH SURFACE BLOCKOUT SHALL NOT EXCEED THE AREA AS INDICATED ON THE DRAWING. POSITIONING OF SMOOTH BLOCKOUTS AND LETTERING MAY VARY FROM THAT SHOWN ON THE DETAILED DRAWING.

JNL DEC. 1981

PROJ. NO. 472-76-245-80806-000-000-001

Sheet 8 of 12



ESTHNER AVENUE
Sta.10+00 to Sta. 13+50

9/12

9/12

70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70

115
18+00
110
105

R/W
10.16
10.16
10:1
F=2 C=116

115
17+50
110
105

10.21
10.21
F=2 C=115

115
17+25
110
105

10.15
10.15
10:1
F=4 C=110

115
17+00
110
105

R/W
10.00
10.05
F=2 C=128

115
16+57
110
105

R/W
11.07 TP
109.99
10:1
Florence St. (N)
F=2 C=200

70 60 50 40 30 20 10 ℄ 10 20 30

115
16+00
110
105

R/W
10.89
9.93
10:1
11.15 TP
R/W
F=2 C=160

115
15+50
110
105

10.19
10:1
10.09
11.13 TP
F=2 C=162

115
14+915
110
105

℄ Gravel Drive
12.0
10.42
10.30
10:1
11.69 TP
F=3 C=148

115
14+50
110

Gravel
10.38
Asphl
Ex. Surf.
Bk. of Curb (E.) Florence St. (S)
Asphl
F=8 C=120

115
13+95
110

E. Edge Mat
& Edge Drive
R/W
10.80
R/W
F=4 C=100

50 60 10 40

ESTHNER AVENUE
Sta. 13+95 to Sta. 18+00

10/12

TOPEKA BLUE PRINT CO.

70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70

110.2 EW

10 03

10 03 ½"/ft. 4:1

F=36 C=30

Raph Drive

EW

09 93 09 93 4:1

F=16 C=50

110.1 EW

09 87 09 87 ½"/ft. EW

F=30 C=44

EW

09 71 09 71

F=6 C=70

09 2_ 09 55 EW

F=4 C=135

70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70

40 50 60 70

115 21+50 110 105

109.61 Top 09 30 09 40 10 24 Existing

F=2 C=239

115 21+20 110

W Edge Mat Parking Lot 111.7 09 58 09 58

F=2 C=175

115 21+00 110 105

111.2 EW 09 66 09 66

F=2 C=173

115 20+50 110 105

EW 111.9 EW 09 91 09 91 EW

F=2 C=165

115 20+00 110 105

W Edge Mat Parking Lot 112.2 10 02 10 03 112.1 EL

F=2 C=153

115 19+52 110 105

115 19+16 110

115 19+00 110 105

115 18+50 110 105

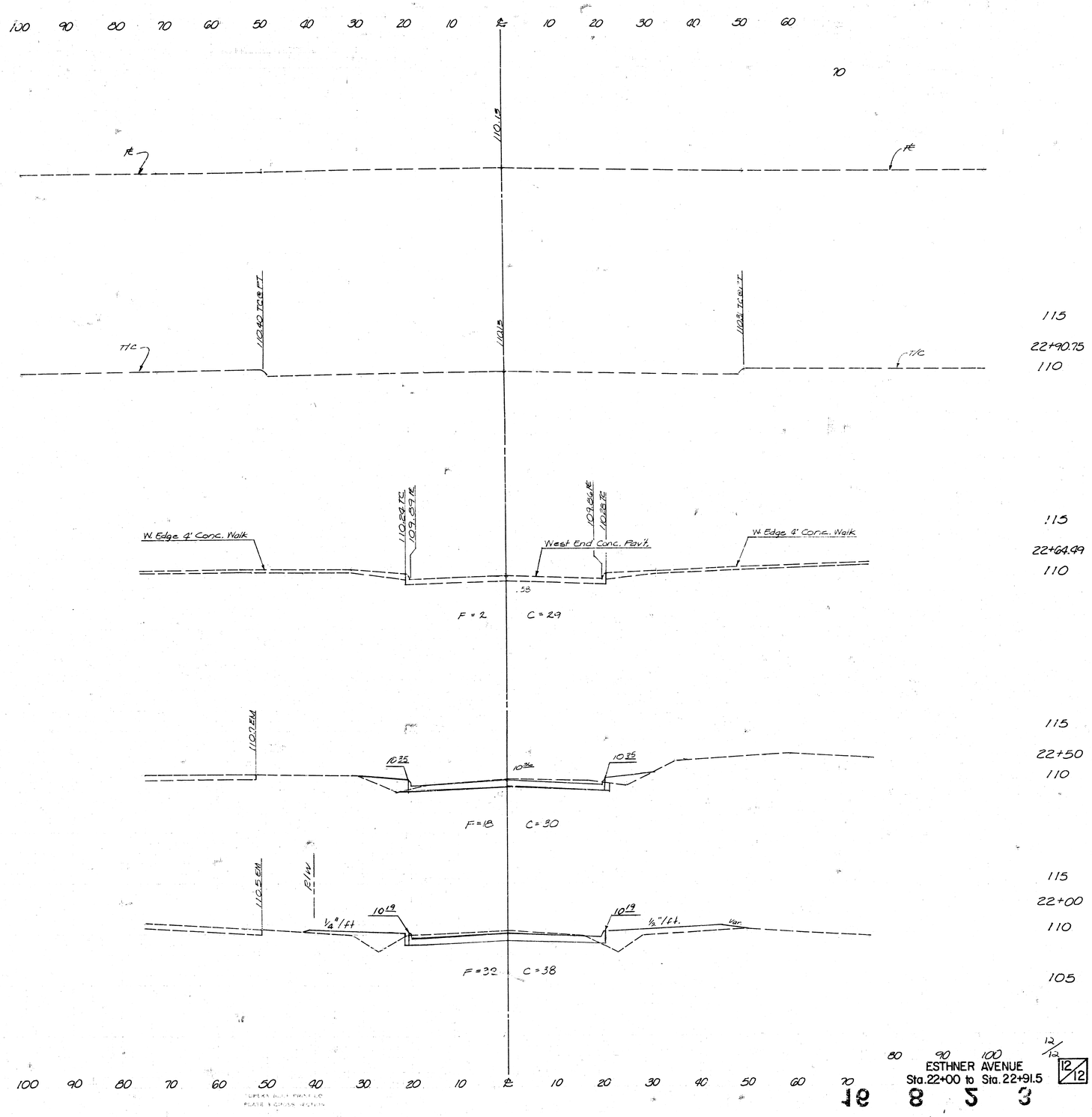
115 18+26 110

50 60 70

ESTHNER AVENUE
Sta.18+26 to Sta. 21+50

11/12

11/12



115
22+90.75
110

115
22+64.99
110

115
22+50
110

115
22+00
110

105

ESTHNER AVENUE
Sta. 22+00 to Sta. 22+91.5

12/12

12/12