STREET IMPROVEMENTS

To Serve

CUSTER AVENUE

From the N.L. of 16TH ST N to the S.L. of 17TH ST N
and From the N.L. of 17TH ST N to the S.L. of 18TH ST N

Project Number

472 76 245 82451 000 000 001

CITY OF WICHITA, KANSAS

Michael E. Lindebak City Engineer

Index Code
762435

General Notes

1. Contractor will be required to provide notice to utility companies a minimum of twenty-four (24) hours prior to any excavation, as follows:

   Kansas One-Call 687-2470

   The Contractor must notify the following in the event of an emergency:

Cablevision	262-4270
or	263-2061
K P L. Gas Service Company	263-7511
Kansas Gas & Electric Company	264-1141
Arkla Gas Company	942-8350
or	263-8161
Southwestern Bell Telephone Company	1-571-2611
City of Wichita Water Department	268-4906
City of Wichita Sewer Maintenance	268-4071)

2. The Contractor shall give all property owners and/or tenants of developed property abutting the project limits a minimum of ten (10) days advance notice prior to start of construction. The Contractor shall make appropriate arrangements for the reestablishing of mailboxes temporarily and/or permanently for this project. The cost is considered as incidental to site restoration.

3. Utility service lines, poles, valve boxes, meters, and etcetera 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.

4. A saw cut of at least one-half 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. Sawed joint to facilitate removal within three (3) feet of existing joints will not be permitted and for such instances the limits of removal shall extend 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.

5. This project includes provisions for the construction of concrete driveways. Proper driveway request forms will be required to be obtained from all adjacent property owners by the contractor.

5. 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.

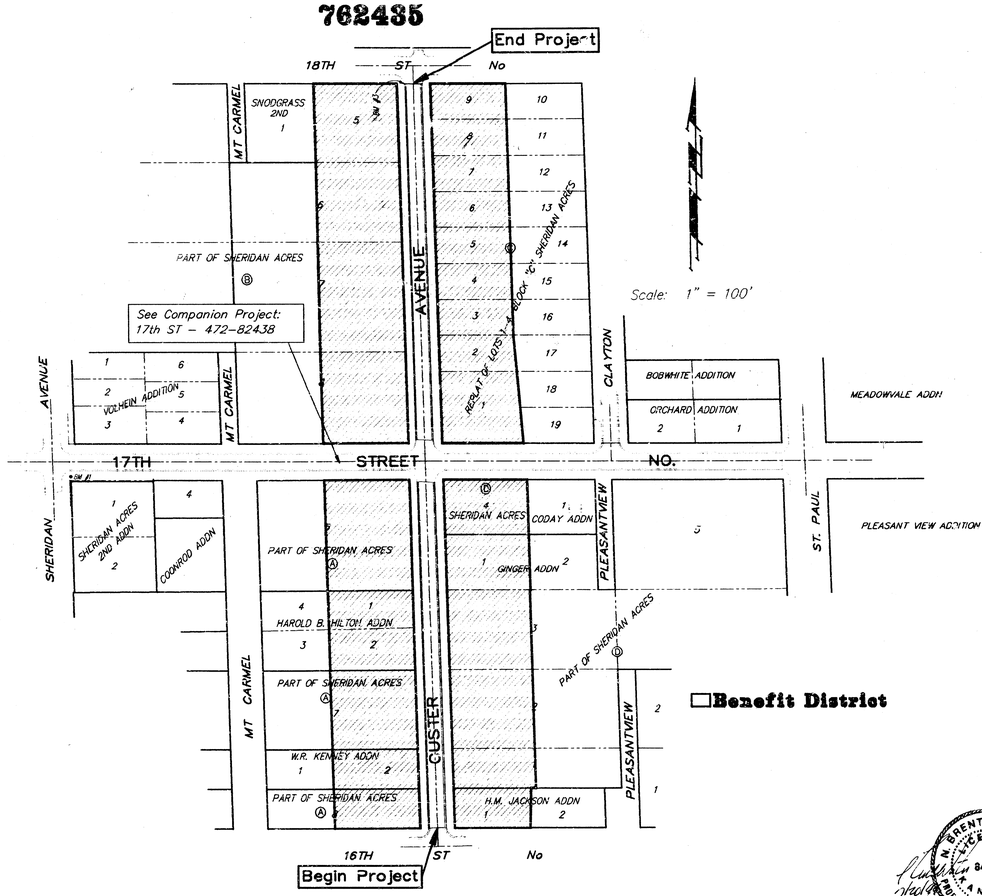
7. The Contractor shall be responsible for preserving property irons. The Contractor will be required to re-establish any property irons which are damaged or destroyed by his construction operations. Such irons shall be re-established by a licensed land surveyor in accordance with state laws.

8. This project includes a certain amount of roll type curb construction. Roll Curbs shall be depressed through all driveway openings when such drives are constructed as a part of the project.

9. Properties within the project limits may have underground sprinkler systems in public right-of-way which conflict with new construction. 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.

10. Site restoration shall include, but not be limited to regrading all disturbed areas, seeding and mulching per City specs, temporary and/or permanent relocation of mailboxes, tree trimming, and/or any other items of work necessary to leave the property in a good clean manner.

11. The right-of-way Clearing bid item shall include, but not be limited to the following items: drainage pipes, retaining walls, asphalt or concrete driveways, gravel drives, trees, hedgerows, shrubs, bushes, underground sprinkler systems, etc. as necessary.



Benefit District

Benchmarks

1. City Disc S.E. Cor. Sheridan & 17th Street No.. 32'E and 23.5'S of CL Intersection. Elevation = 125.15 CD
2. RR Spike in NE face of PPole on SW Cor. of 17th St & Custer. Elevation = 124.07 CD
3. "□" cut S end of SW curb return at 18th St and Custer. Elevation = 122.31 CD
4. "□" cut 5' E of W end of SW curb return at 17th St and St Paul. Elevation = 123.89 CD

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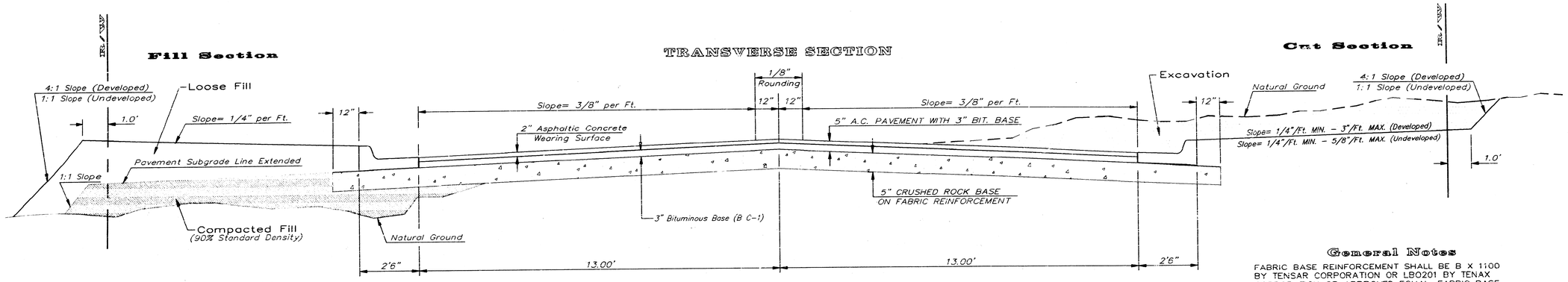
JUL94

BAUGHMAN COMPANY P.A.
ENGINEERING & SURVEYING
316/262-7271 • 315 ELLIS • WICHITA, KANSAS 67211

TYPICAL 31' B-B PAVEMENT DETAILS

TRANSVERSE SECTION



General Notes

FABRIC BASE REINFORCEMENT SHALL BE B X 1100 BY TENSAR CORPORATION OR LBO201 BY TENAX CORPORATION OR APPROVED EQUAL. FABRIC BASE REINFORCEMENT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

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.

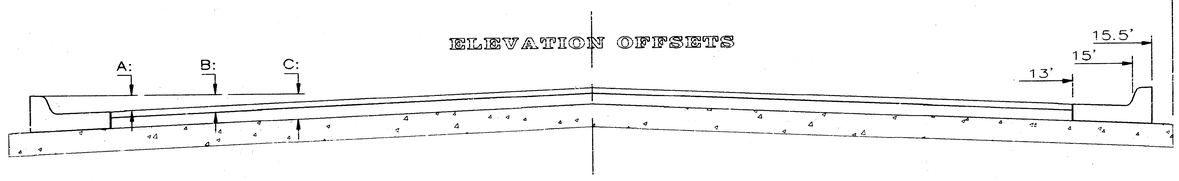
THE ASPHALTIC CONCRETE PAVEMENT BETWEEN THE COMBINED CURB AND GUTTER SHALL BE PAID AS SQUARE YARDS OF 5" ASPHALTIC CONCRETE (3" BITUMINOUS BASE.)

CRUSHED ROCK GRADATION REQUIREMENTS
PERCENT OF AGGREGATE RETAINED

2-1/2"	0
3/4"	60
#4	80
#40	80 - 94
#200	90 - 98

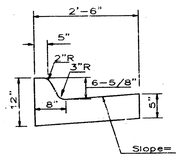
ROCK QUALITY SHALL CONFORM TO THE REQUIREMENTS SPECIFIED BE THE KDOT 1990 EDITION STANDARD SPECIFICATION SUBSECTION 1102 FOR DURABILITY CLASS I.

ELEVATION OFFSETS

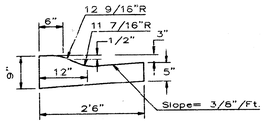


DISTANCE FROM CENTERLINE (LT. & RT.)

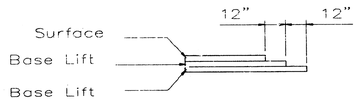
	0'	2'	4'	6'	7.5'	10'	12'	13'	15'	15.5'	16.5'
A: Top of Curbs to Top of Surface Lift	0.10	0.14	0.21	0.27	0.32	0.39	0.46	0.49	–	–	–
B: Top of Curbs to Top of Upper Base Lift	0.27	0.31	0.37	0.44	0.48	0.56	0.62	0.65	–	–	–
C: Top of Curbs to Top of C.R. Subgrade	0.52	0.56	0.62	0.69	0.73	0.81	0.87	0.90	0.97	0.98	1.01



COMBINED CURB & GUTTER

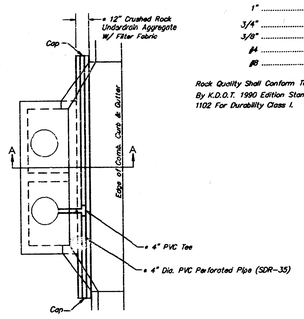


COMBINED ROLL TYPE CURB & GUTTER



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).



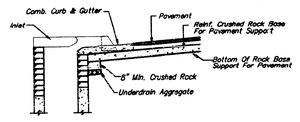
PLAN

* UNDERDRAIN AGGREGATE
Percent of Aggregate Retained

1"	0
3/4"	0 to 10
3/8"	45 to 80
#4	90 to 100
#8	95 to 100

Rock Quality Shall Conform To The Requirements Specified By K.D.O.T. 1990 Edition Standard Specification Subsection 1102 For Durability Class I.

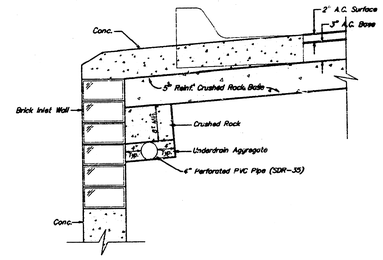
NOTE: Place 4" PVC Perforated Pipe at all drainage sump locations.
Coat of Underdrain System to be Incidental to the Reinforced Crushed Rock Subgrade.
Inlet Type May Vary From That Shown.



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

SECTION A-A

PAVEMENT UNDERDRAIN DETAIL
NOT TO SCALE



TRENCH DRAIN DETAIL FOR RES. STREETS
NOT TO SCALE

5 INCH Residential Asphaltic Concrete
Pavement with Crushed Rock Base on Fabric Reinforcement
City of Wichita, Kansas

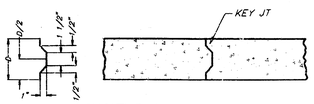
BAUGHMAN COMPANY P.A.
ENGINEERING & SURVEYING
316/262-7271 • 315 ELLIS • WICHITA, KANSAS 67211

REV.

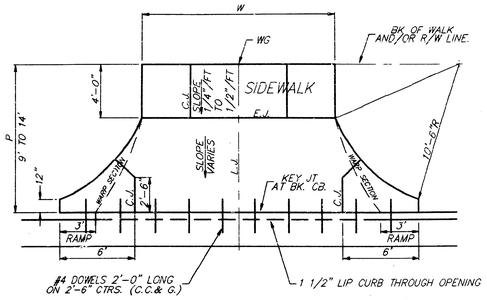
PROJECT NUMBER
472-76-245-82451-000-000-001

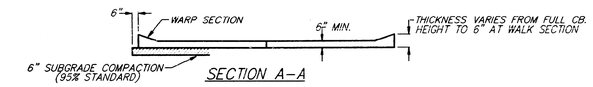
SHEET 2 OF 9

DESIGN	DRAWN	APPROVED	DATE	SCALE



ALT. LONGITUDINAL CONSTRUCTION JOINT

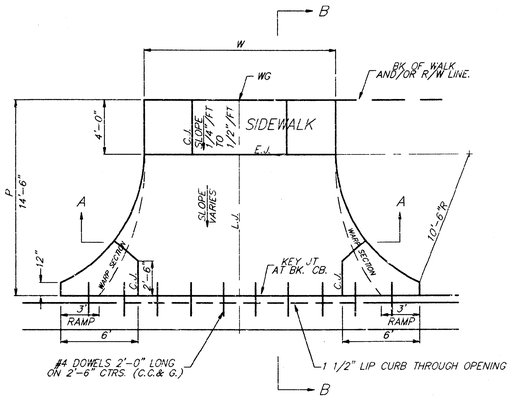


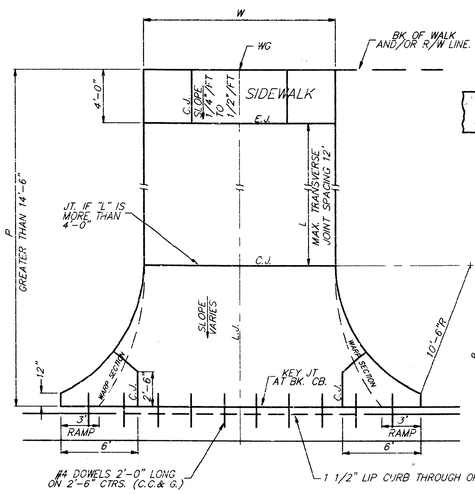


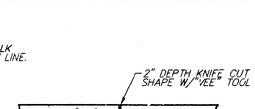
SECTION A-A

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 OR BELOW 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 OR BELOW 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)

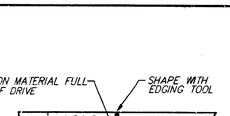




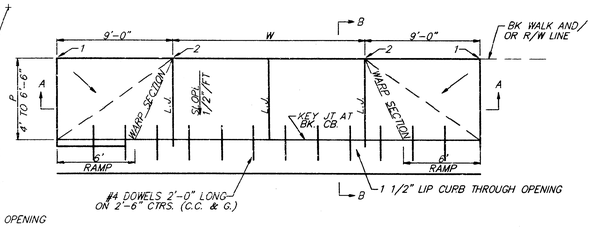


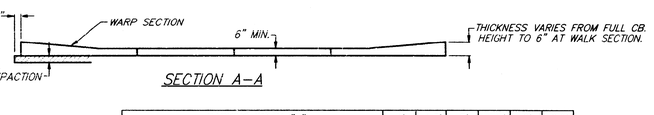
CONTRACTION JOINT (C.J.) OR LONGITUDINAL JOINT (L.J.)

NO SAWN JOINTS WILL BE ALLOWED



EXPANSION JOINT (E.J.)

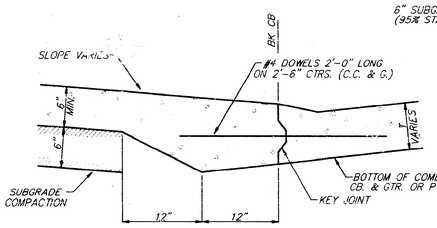




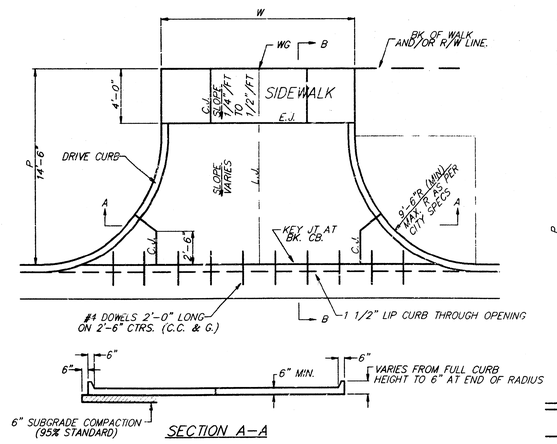
SECTION A-A

PARKING WIDTH "P"	4'	4.5'	5'	5.5'	6'	6.5'
DIST. OF PT "1" ABOVE TOP OF FULL CURB	0.08'	0.09'	0.10'	0.12'	0.13'	0.14'
DIST. OF PT "2" BELOW TOP OF FULL CURB	-.26'	-.24'	0.22'	0.20'	-.18'	-.16'

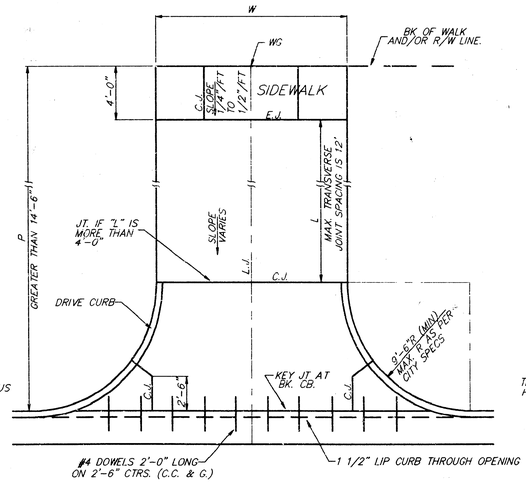
FULL RAMP DRIVE (P = 4.0' TO 6.5')

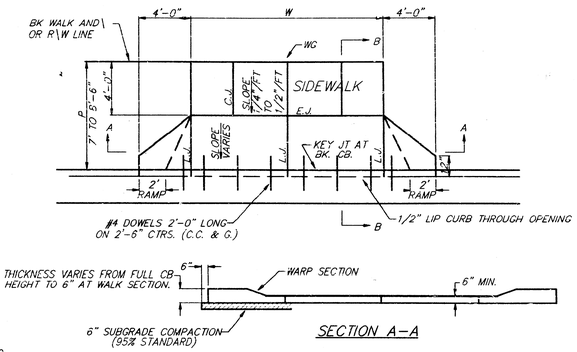


BACK OF CURB DETAIL
SECTION B-B (NO SCALE)



SECTION A-A





SECTION A-A

PARKING WIDTH "P"	14.5'	20'	25'	30'	35'	40'	45'	50'
ABSOLUTE MAX. DIST. OF PT. "WG" ABOVE TOP OF FULL CURB	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 CURB	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	0.30'	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	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 CURB	0.00'	0.10'	0.20'	0.30'
OPTIMUM MAX. DIST. OF PT. "WG" ABOVE TOP OF FULL CURB	0.00'	0.10'	0.20'	0.30'
OPTIMUM MIN. DIST. OF PT. "WG" ABOVE TOP OF FULL CURB	0.15'	0.16'	0.17'	0.17'
ABSOLUTE MAX. DIST. OF PT. "WG" BELOW TOP OF FULL CURB	-.25'	-.20'	-.20'	-.20'

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

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. CONSTRUCTION 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 ENGINEERS CONCURRENCE.
9. OPTIMUM DRIVEWAY ELEVATIONS SHOWN IN THE TABLES ARE TO BE USED WHEREVER POSSIBLE. ABSOLUTE MAXIMUM AND MINIMUM ELEVATIONS ARE TO BE USED ONLY WHEN THESE VALUES WILL PERMIT NEW CONSTRUCTION TO MATCH EXISTING DRIVES OR PARKING LOTS. VALUES SHOWN IN THE TABLES ARE BASED ON A FULL CURB HEIGHT ELEVATION OF 0.55' 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.

TYPICAL DRIVE ENTRANCES

FULL HEIGHT CURB

SCALE: 1" - 5'

City of Wichita, Kansas

Project Number

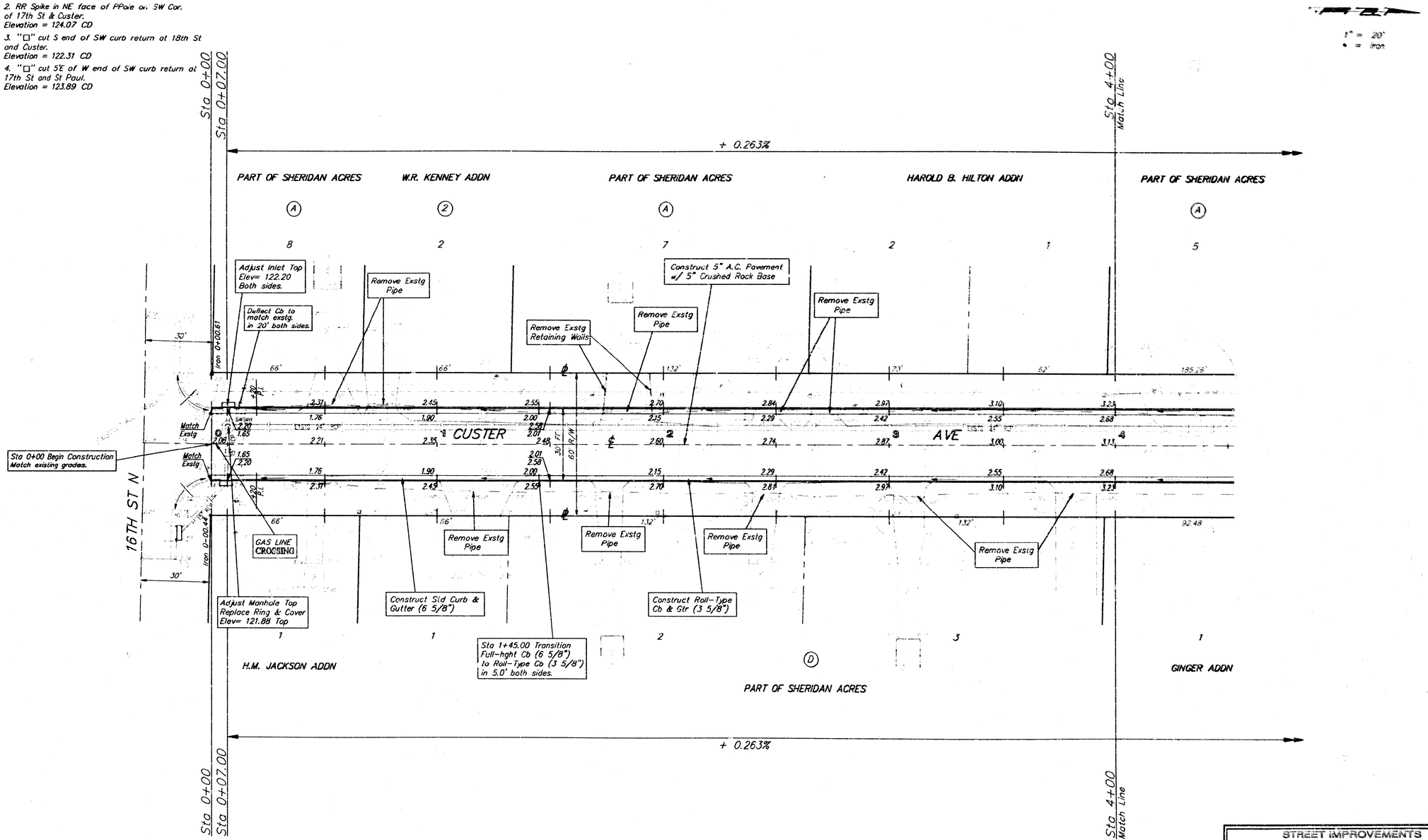
472 76 245 82451 000 000 001

3

9

BENCHMARKS

1. City Disc S.E. Cor. Sheridan & 17th Street No.. 32'E and 23.5'S of CL Intersection. Elevation = 125.15 CD
2. RR Spike in NE face of PPole on SW Cor. of 17th St & Custer. Elevation = 124.07 CD
3. "□" cut S end of SW curb return at 18th St and Custer. Elevation = 122.31 CD
4. "□" cut 5'E of W end of SW curb return at 17th St and St Paul. Elevation = 123.89 CD



STREET IMPROVEMENTS
CUSTER AVE.
Sta 0+00 to Sta 4+00

BAUGHMAN COMPANY P.A.
ENGINEERING & SURVEYING

PROJECT NUMBER	SHEET
472 76 245 82451 000 003 001	4 of 9

DESIGN	DRAWN	APPROVED	DATE	SCALE
NBW			JUL94	NOTED

CUSTER17.STE04 94-06-E755

BENCHMARKS

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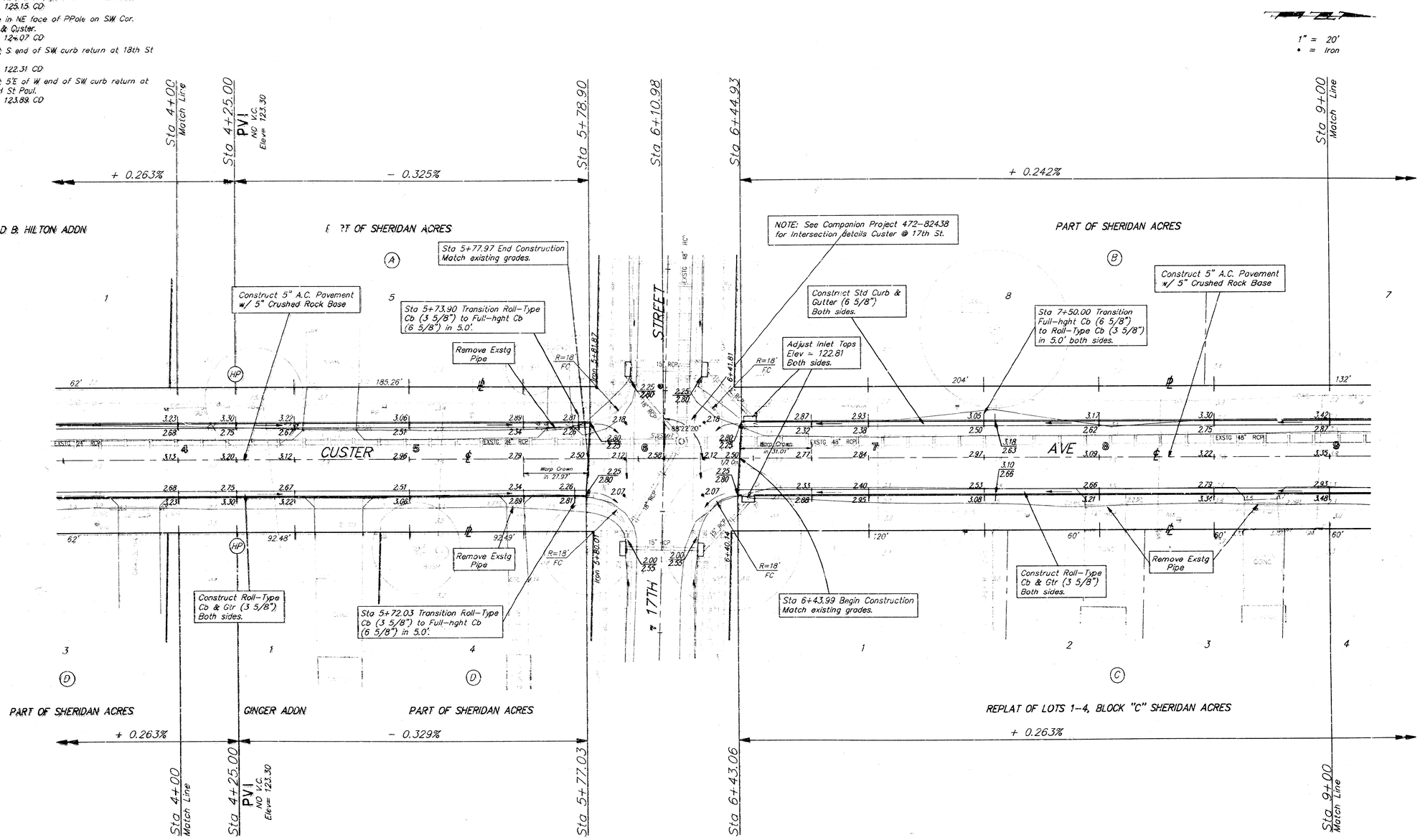


STREET IMPROVEMENTS
CUSTER AVE.
STA 4+00 to STA 9+00

BAUGHMAN COMPANY, P. A.
ENGINEERING & SURVEYING
316-262-7271 • 315 ELLIS • WICHITA, KANSAS 67211

PROJECT NUMBER	SHEET
472 76 245 82451 000 000 001	5 OF 9

DESIGN	DRAWN	APPROVED	DATE	SCALE
NBW	[signature]		JUL94	NOTED

CUSTERTY\STR05 94-05-E755

BENCHMARKS

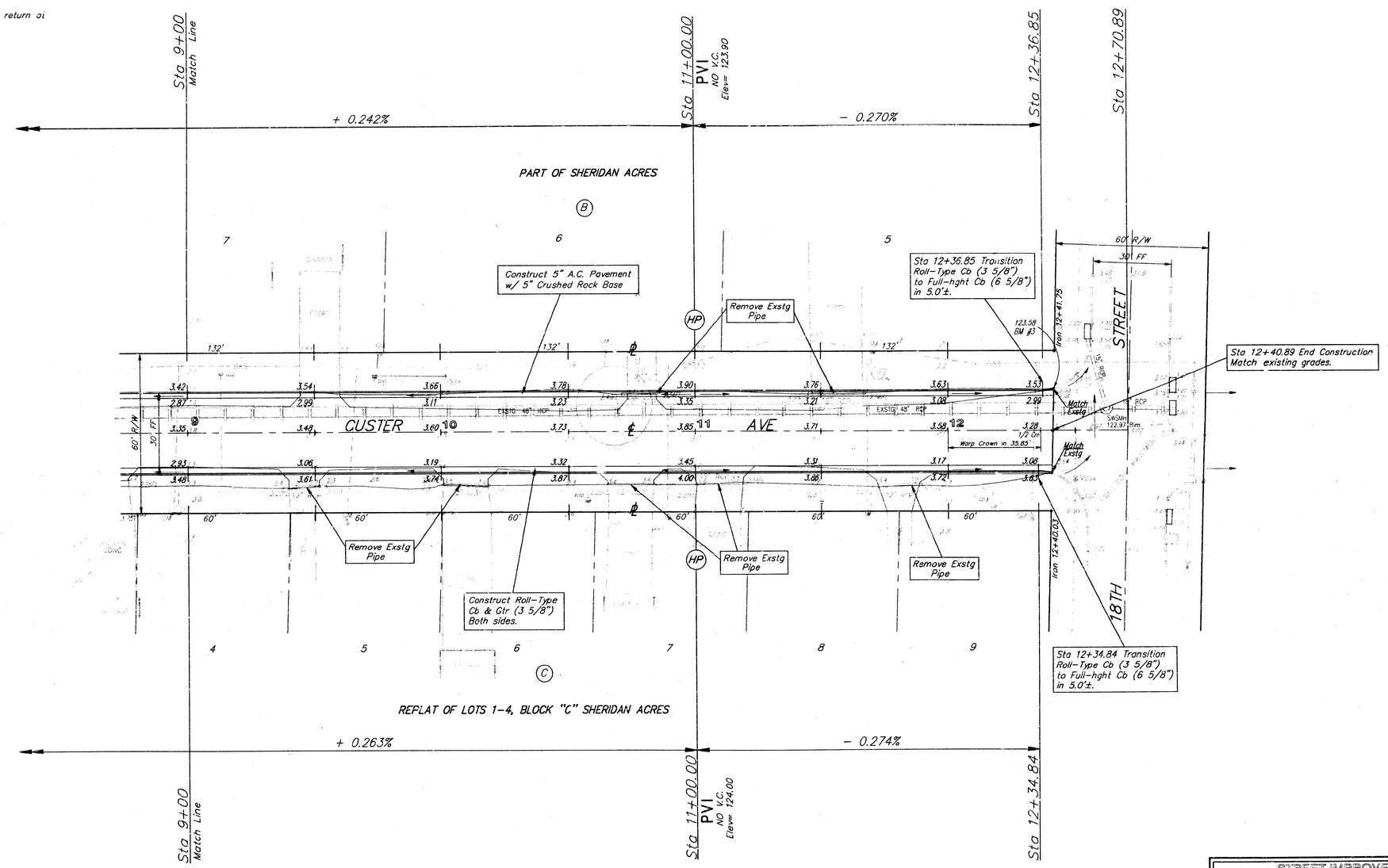
1. City Disc S.E. Cor. Sheridan & 17th Street No.. 32'E and 23.5'S of CL Intersection.
Elevation = 125.15 CD

2. RR Spike in NE face of PPole on SW Cor. of 17th St & Custer.
Elevation = 124.07 CD

3. "□" cut S end of SW curb return at 18th St and Custer.
Elevation = 122.31 CD

4. "□" cut 5'E of W end of SW curb return at 17th St and St Paul.
Elevation = 123.89 CD

1" = 20'
• = Iron



STREET IMPROVEMENTS
CUSTER AVE.
STA 9+00 to STA 12+40.89

BAUGHMAN COMPANY, P. A.
ENGINEERING & SURVEYING
316-262-7271 • 315 ELLIS • WICHITA, KANSAS 67211

PROJECT NUMBER				SHEET
472 78 245 82451 000 000 001				6 of 9
DESIGN NDW	DRAWN JJ	APPROVED	DATE JUL94	SCALE NOTED

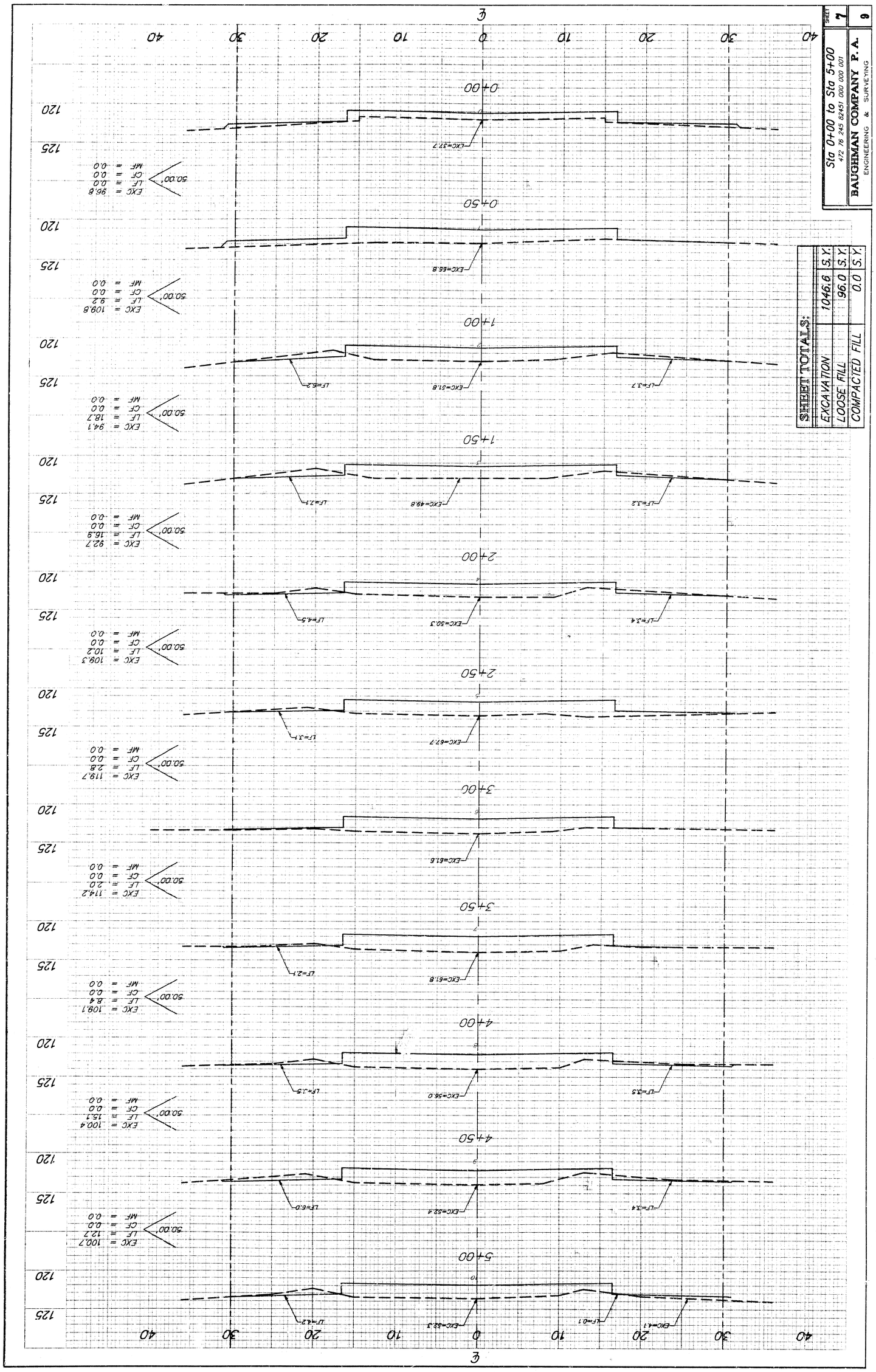
CUSTER1.STM06 94-05-1755

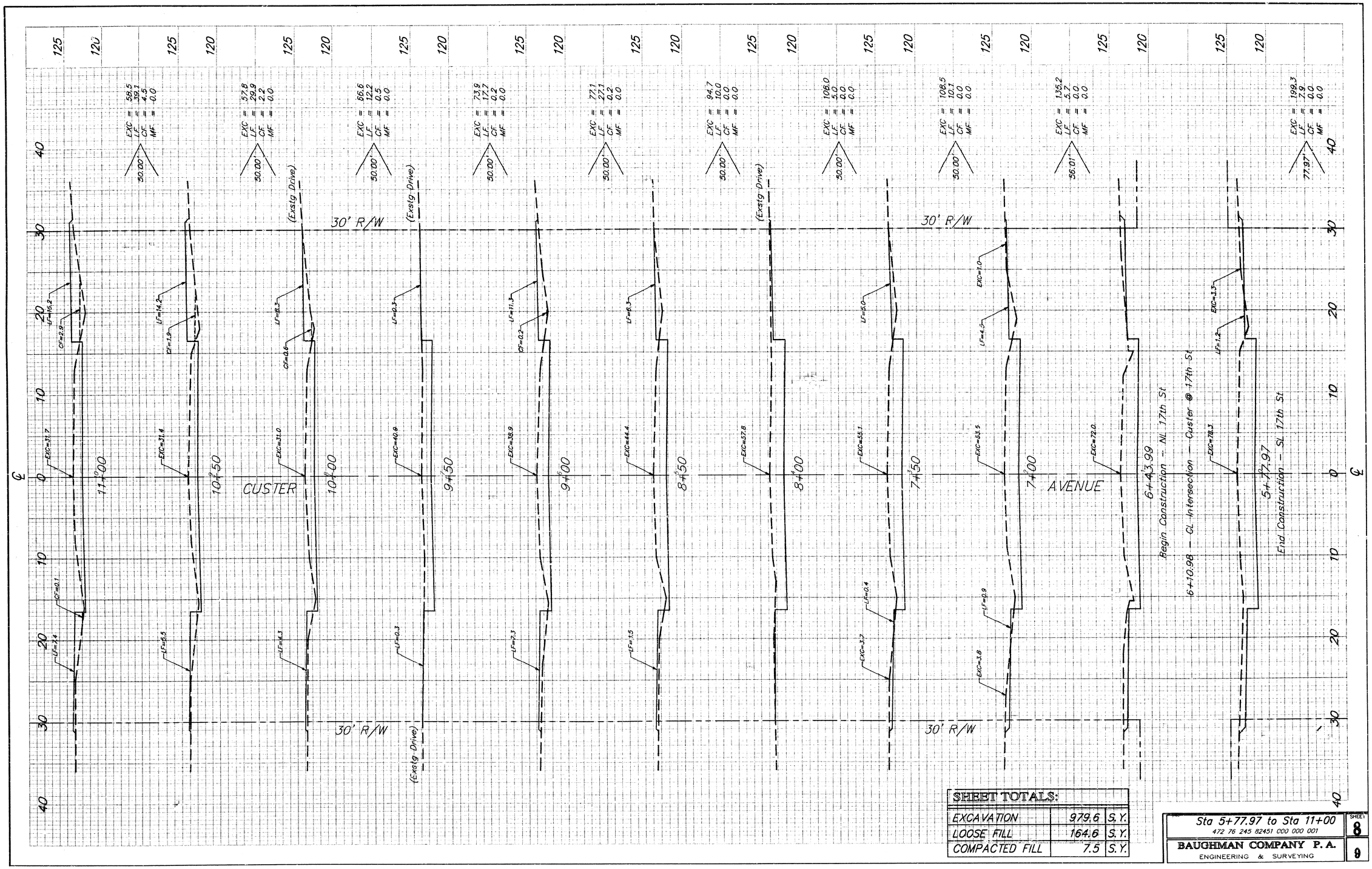
SHEET	
7	9

Sta 0+00 to Sta 5+00
472 76 245 82451 000 000 001

BAUGHMAN COMPANY P.A.
ENGINEERING & SURVEYING

SHEET TOTALS:		
EXCAVATION	1046.6	S.Y.
LOOSE FILL	96.0	S.Y.
COMPACTED FILL	0.0	S.Y.





SHEET TOTALS:		
EXCAVATION	979.6	S.Y.
LOOSE FILL	164.6	S.Y.
COMPACTED FILL	7.5	S.Y.

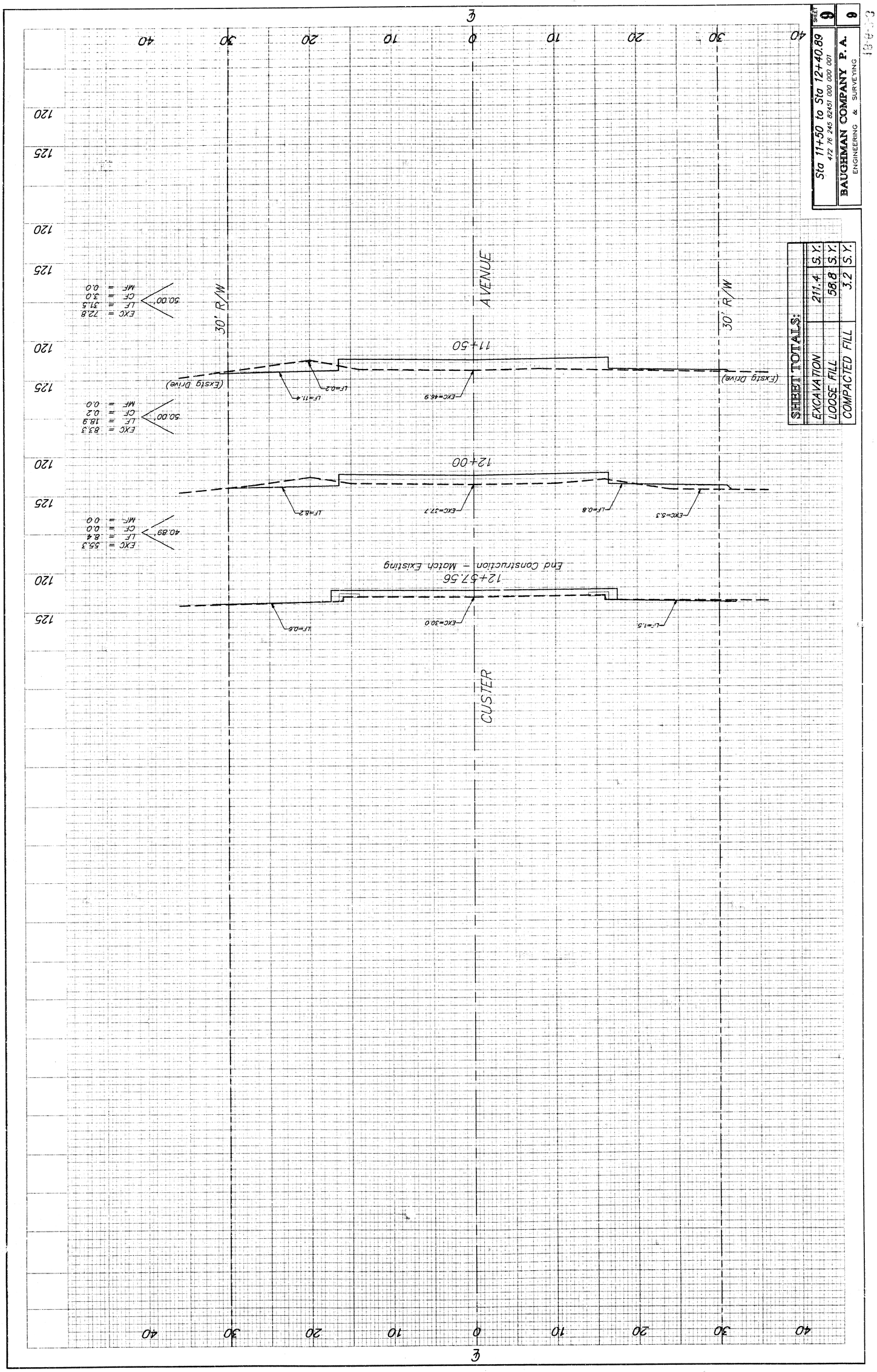
Sta 5+77.97 to Sta 11+00

472 76 245 82451 000 000 001

SHEET 8 of 9

BAUGHMAN COMPANY P.A.

ENGINEERING & SURVEYING


Sta 11+50 to Sta 12+40.89
472 76 245 82451 000 000 001
SHEET 9
BAUGHMAN COMPANY P.A.
ENGINEERING & SURVEYING
SHEET TOTALS:
EXCAVATION 211.4 S.Y.
LOOSE FILL 58.8 S.Y.
COMPACTED FILL 3.2 S.Y.
CUSTER AVENUE
30' R/W
30' R/W
11+50
12+00
12+57.56
End Construction - Match Existing
(Exstg Drive)
(Exstg Drive)
EXC = 72.8
LF = 31.5
CF = 3.0
MF = 0.0
50.00'
EXC = 83.3
LF = 18.9
CF = 0.2
MF = 0.0
50.00'
EXC = 55.3
LF = 8.4
CF = 0.0
MF = 0.0
40.89'
LF=11.4
LF=0.2
EXC=46.9
LF=8.2
EXC=27.7
LF=0.8
EXC=5.3
LF=0.6
EXC=30.0
LF=1.5
120
125
ℓ
0
10
20
30
40