

GENERAL NOTES:

- The Contractor shall comply with all applicable safety regulations. All construction shall be completed following current City Standard Specifications and Special Provisions.
- Contractor will be required to provide notice to utility companies a minimum of seventy-two (72) hours prior to any excavation, as follows:

Kansas One-Call 687-2470

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

AT&T 1-800-246-8464
 Black Hills Energy 1-800-694-8989
 City of Wichita Water & Sewer 1-316-219-8921
 City of Wichita Stormwater 1-316-268-4090
 City of Wichita Traffic 1-316-268-4034
 Cox Communications 1-888-249-3530
 Kansas Gas Service 1-888-482-4950
 Evergy 1-800-544-4857

- Utility service lines, poles, etc. 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.

- 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, in the opinion of the Engineer, that 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 will 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 of Engineers permitting regulations. Any material buried or stockpiled beyond approved construction limits will require additional archaeological investigations unless buried in a previously approved borrow location.

- 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 City Engineer's approval. Trees and shrubs which are not in direct conflict with proposed new construction shall be saved and protected from damage.

- The Contractor shall give all property owners and/or tenants of developed property abutting the construction of this project a minimum of ten (10) days notice prior to start of construction.

- 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.

- All elevations shown are NAVD88.

- 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 the 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.

- All traffic control devices in the work zone (including markings and signs) and their installation and maintenance shall comply with the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD). All traffic control devices in the traveled way or clear zone shall be crashworthy (NCHRP Report 350 or MASH compliant). http://safety.fhwa.dot.gov/roadway_dept/policy_guide/road_hardware/wzd

- All construction equipment, including vehicles, materials, and debris, shall be stored outside of the clear zone. Where this cannot be achieved the contractor shall place appropriate signs, object identifiers, and/or barricades in compliance with the MUTCD.

- Except when required for safety, traffic control shall not block any lanes or sidewalks when work is not being performed.

- Traffic lane blockages more than four hours may need permitting. Call 316-268-4501 to determine requirements and request permit.

- 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 slope up or down using permissible slopes to match the existing ground surface.

- All existing and proposed erosion control measures including silt fencing, erosion control mat, straw bales, inlet barriers, and const. entrance shall be maintained throughout construction by the contractor and until project is accepted by the City of Wichita. The on-site engineer shall complete weekly reports on the status of erosion control measures. The contractor shall be required to comply with maintenance and/or replacement of erosion control measures as determined by the on-site engineer until project is accepted by City of Wichita. Maintenance and/or replacement of erosion control measures to be paid by L.S. bid item "Maintain Existing BMPs".

- All excess excavation shall remain on-site and shall be spread or stockpiled at a location to be determined by developer.

- All areas disturbed during construction are to be seeded as follows:

Seed -- Rye grass; 5 lbs./1000 Sq. Ft.

All costs associated with seeding including mobilization, preparation of ground, seeding, fertilizing, mulching, etc. shall be included in the L.S. bid item "Seeding".

- Contractor shall grade up or down at 4:1 slope from edge of phase being graded to the existing ground.

- The developer for this project is 21 Management, LLC, Nicholas A. Cowgill, Manager. (316)684-0161 Nick.cowgill@neshomes.com

- Construction shall be coordinated between the storm sewer, sanitary sewer, and water improvements.

Benchmarks

BM #1: "□" on east side of Sandpiper in Res. "F", NRD Addition.
 Elev. = 1376.53 NAVD88

BM #2: "□" on top of curb, north of the NW corner of Lot 1, Block A, NRD Addition.
 Elev. = 1363.86 NAVD88

BM #3: "□" on SE corner of curb inlet, east side of Peppertree Cir., NRD Addition.
 Elev. = 1362.56 NAVD88

Project Earthwork Totals
 Excavation = 1,080 C.Y.
 Loose Fill = 1,001 C.Y.
 Compacted Fill = 105 C.Y.
 Borrow Exc. = 263 C.Y.

Total Project Length
 1,693 L.F. = 0.32 Miles

Benefit District 
 Proposed Streets 

STREET PAVING FOR PEPPERTREE to serve **NRD ADDITION - Ph. 2**

Peppertree St and Sandpiper St, from the east line of Lot 5, Block A, west and north to the north line of Lot 20, Block A; on Sandpiper Cir, from the southwest line of Sandpiper St, south to and including the cul-de-sac (Lots 11 through 15, Block A); and on Peppertree Cir, from the southwesterly line of Lot 66, Block A, northeasterly, and making a loop around Reserve "M",

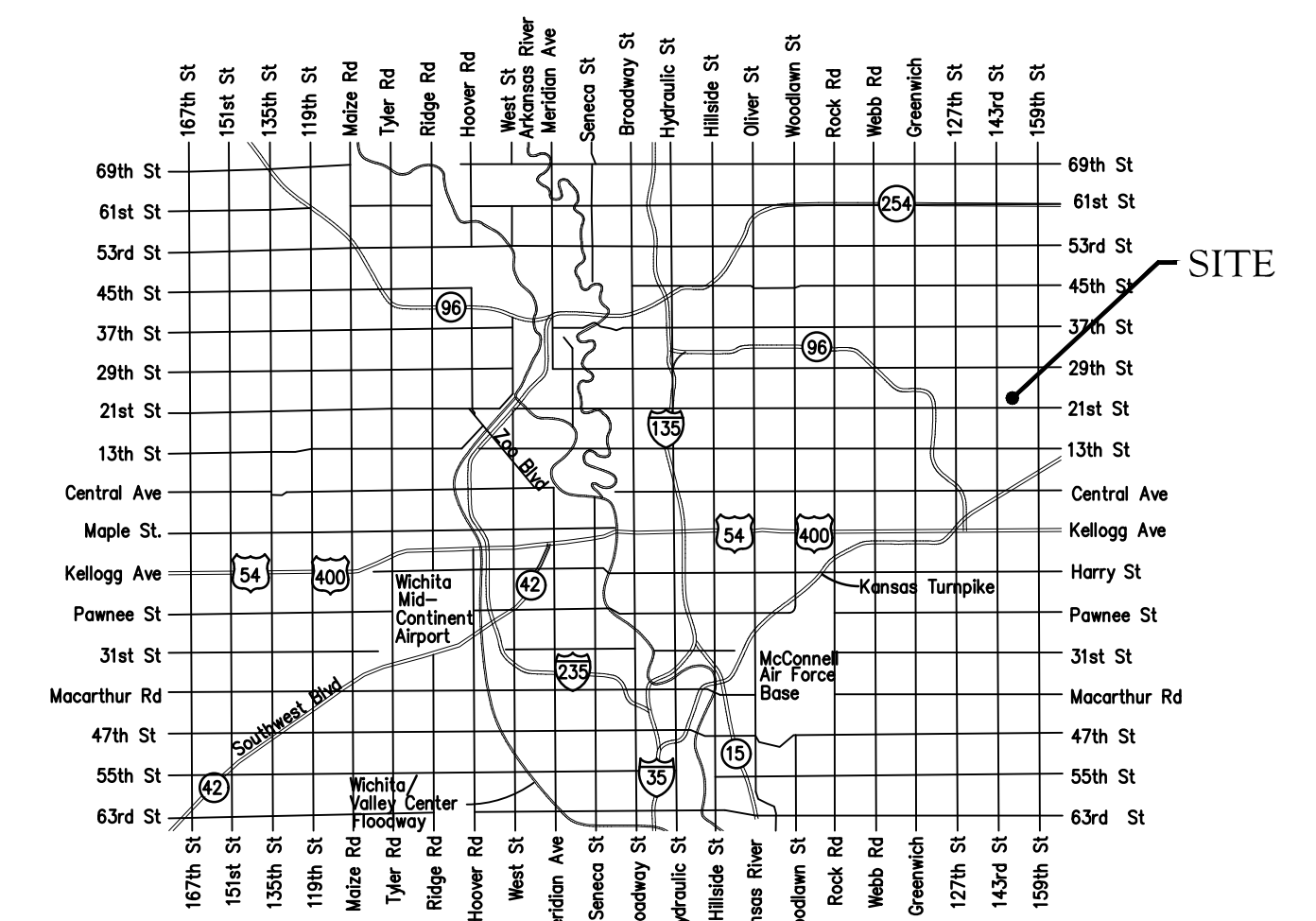
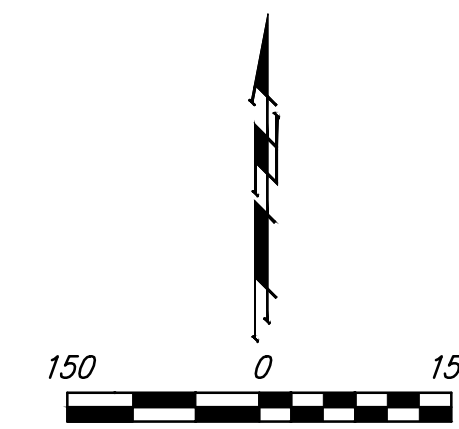
CITY OF WICHITA, KANSAS

Paul Gunzelman, P.E. City Engineer

Project Number 472-2020-085647

Org Code 47477424

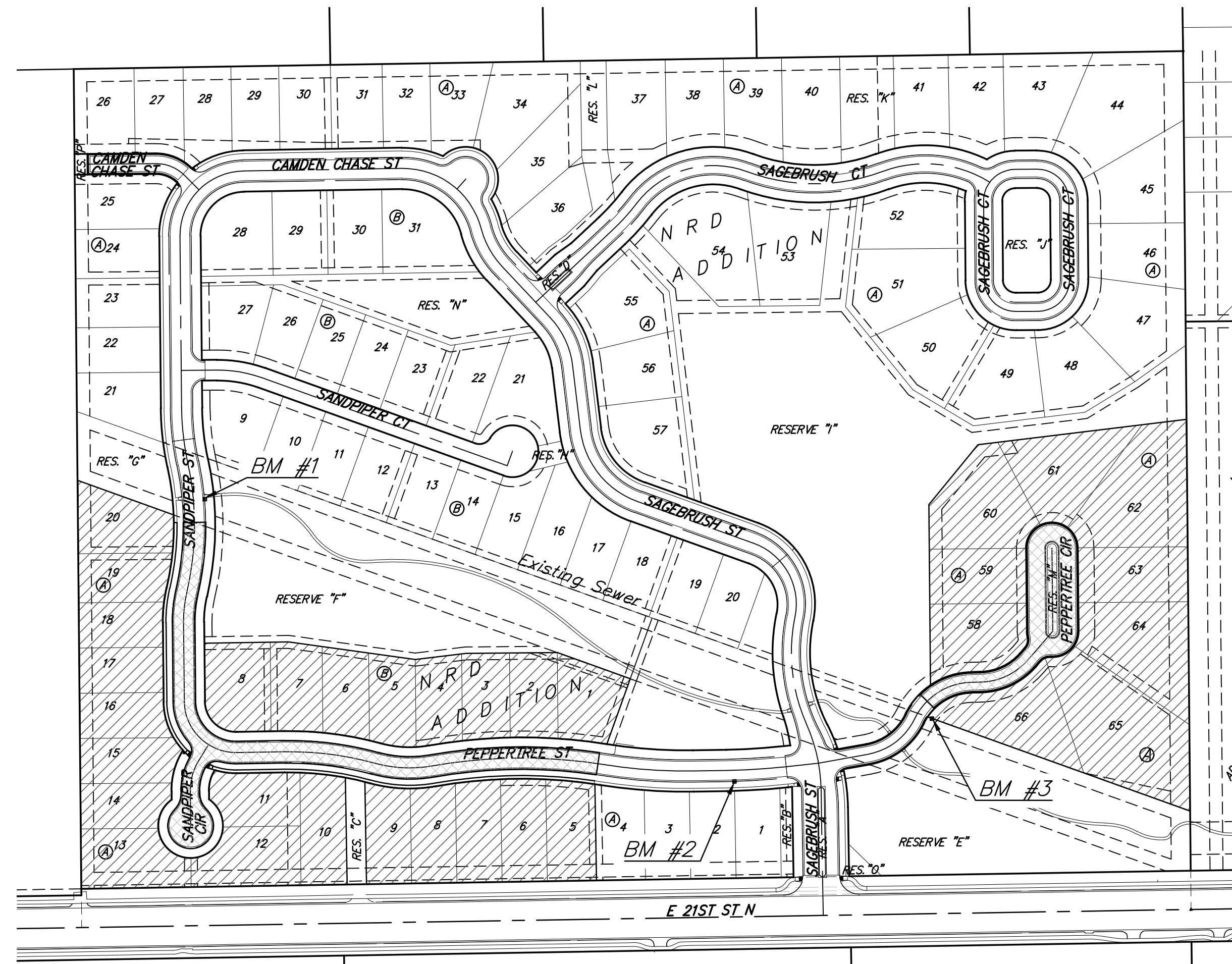
Munis Number E4128



Vicinity Map

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January 14, 2025

BAUGHMAN COMPANY
 315 Ellis St. Wichita, KS 67211 316-262-7271
BaughmanCo.com

BENCHMARKS:
 BM #1: "□" on east side of Sandpiper in Res. "F", NRD Addition. Elev. = 1376.53 NAVD88

BM #2: "□" on top of curb, north of the NW corner of Lot 1, Block A, NRD Addition. Elev. = 1363.86 NAVD88

BM #3: "□" on SE corner of curb inlet, east side of Peppertree Cir., NRD Addition. Elev. = 1362.56 NAVD88

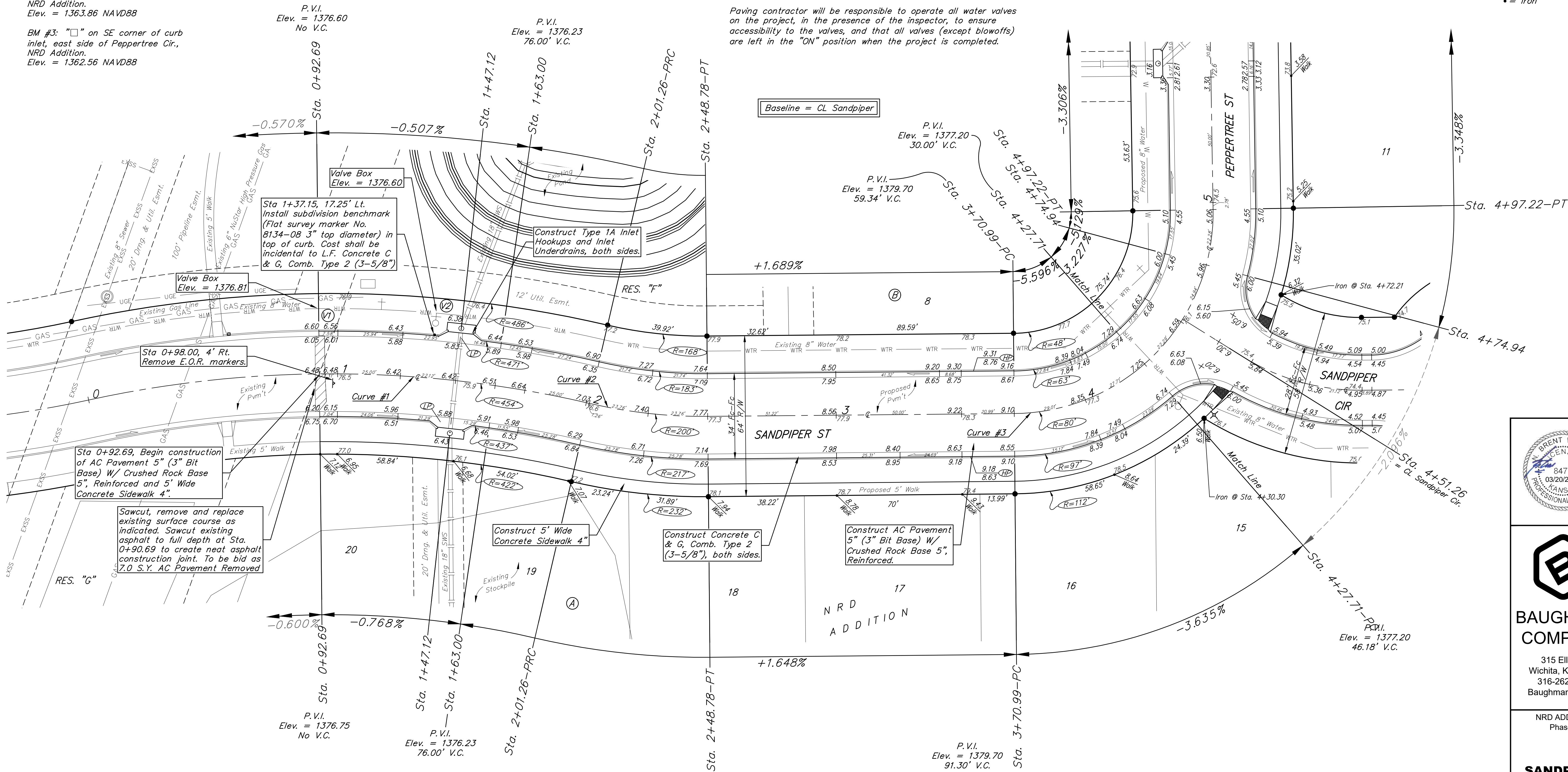
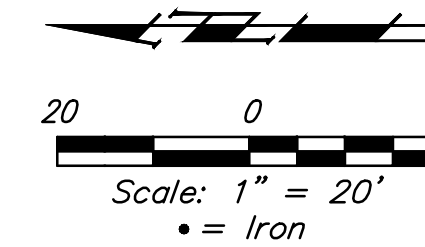
Subdivision Bench Marks

Street & Station	Location Description	Elevation
Sandpiper 1+37.15, 17.25' Lt.	Adjacent to Fire Hydrant and curb inlet on the east side of Sandpiper, ~140' north of the SW corner of Res. "F".	

WATER VALVE LOCATION TABLE

VALVE NUMBER	STREET	BASELINE STATION	OFFSET DISTANCE	OFFSET DIRECTION
V1	Sandpiper	0+92.69	26'	Lt.
V2	Sandpiper	1+37.15	26'	Lt.

Paving contractor will be responsible to operate all water valves on the project, in the presence of the inspector, to ensure accessibility to the valves, and that all valves (except blowoffs) are left in the "ON" position when the project is completed.

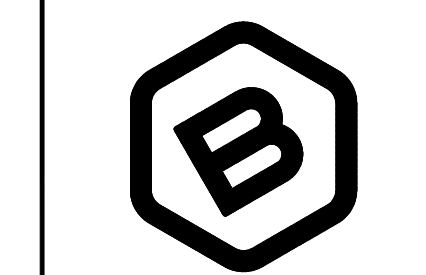
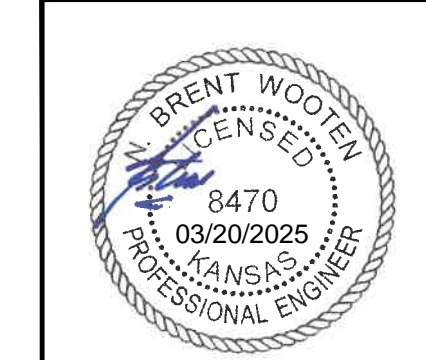


Curve #1					
Curve Data Based on Centerline					
Rad. = 454' Delta = 25°23'59" Tangent = 102.31'					
Arc = 201.26' L.C. = 199.62' Def./Ft. = 3.78611 Min.					
Face Chord Lengths					
Station	Arc	8' Left	8' Right	Defl.	Total Defl.
0+00.00	-	-	-	0°00'00"	0°00'00"
0+92.69	92.69'	97.63'	87.43'	5°50'56"	5°50'56"
1+00.00	7.31'	7.71'	6.91'	0°27'41"	6°18'37"
1+25.00	25.00'	26.37'	23.62'	1°34'39"	7°53'16"
1+50.00	25.00'	26.37'	23.62'	1°34'39"	9°27'55"
1+75.00	25.00'	26.37'	23.62'	1°34'39"	11°02'34"
2+00.00	25.00'	26.37'	23.62'	1°34'39"	12°37'13"
2+01.26	1.26'	1.33'	1.19'	0°04'46"	12°41'59"

Curve #2				
Curve Data Based on Centerline				
Rad. = 200' Delta = 13°36'52" Tangent = 23.87'				
Arc = 47.52' L.C. = 47.41' Def./Ft. = 8.59498 Min.				
Face Chord Lengths				
Station	Arc	8' Left	8' Right	Total Defl.
2+01.26	-	-	-	0°00'00"
2+25.00	23.74'	20.76'	26.69'	3°24'03"
2+48.78	23.78'	20.80'	26.74'	3°24'23"

Curve #3				
Curve Data Based on Centerline				
Rad. = 80' Delta = 90°24'16" Tangent = 80.57'				
Arc = 126.23' L.C. = 113.54' Def./Ft. = 21.48565 Min.				
Face Chord Lengths				
Station	Arc	8' Left	8' Right	Total Defl.
3+70.99	-	-	-	0°00'00"
3+75.00	4.01'	2.76'	5.26'	1°26'09"
4+00.00	25.00'	17.12'	32.68'	8°57'09"
4+25.00	25.00'	17.12'	32.68'	8°57'08"
4+27.71	2.71'	1.86'	3.56'	0°58'14"
4+50.00	22.29'	15.27'	29.16'	7°58'55"
4+74.94	24.94'	17.08'	32.60'	8°55'51"
4+97.22	22.28'	15.27'	29.15'	7°58'42"

NOTE: ROLL TYPE CURB & GUTTER (TYPE 2) TO BE CONSTRUCTED ON THE PAVEMENT SHOWN ON THIS SHEET. TOP OF CURB ELEVATIONS ARE GIVEN FOR FULL HEIGHT CURB (TYPE 4).



BAUGHMAN COMPANY
 315 Ellis St.
 Wichita, KS 67211
 316-262-7271
 BaughmanCo.com

NRD ADDITION
 Phase 2

SANDPIPER

STREET IMPROVEMENTS

PROJECT NUMBER:
 22-01-E-105

DESIGN: NBW DRAWN: TMS
 DATE: January 13, 2025

SHEET OF
2 27

File: E:\Projects\NRD Addition\19-04-P448\Engineering\Phase 2\STR 22-01-E105\Streets.dwg

BENCHMARKS:

BM #1: "□" on east side of Sandpiper in Res. "F", NRD Addition. Elev. = 1376.53 NAVD88

BM #2: "□" on top of curb, north of the NW corner of Lot 1, Block A, NRD Addition. Elev. = 1363.86 NAVD88

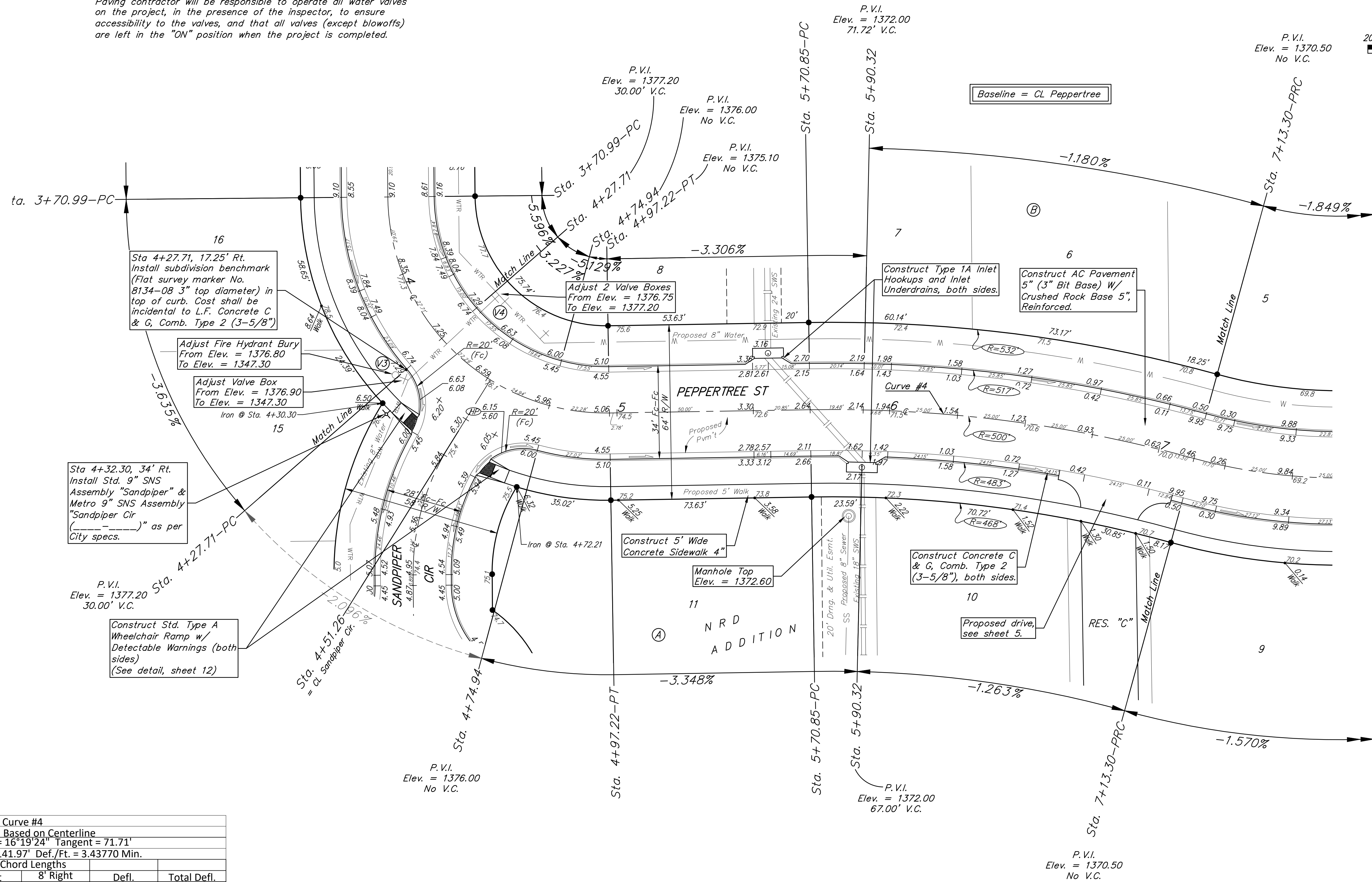
BM #3: "□" on SE corner of curb inlet, east side of Peppertree Cir., NRD Addition. Elev. = 1362.56 NAVD88

WATER VALVE LOCATION TABLE

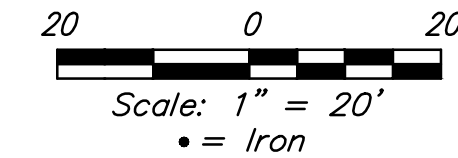
VALVE NUMBER	STREET	BASELINE STATION	OFFSET DISTANCE	OFFSET DIRECTION
V3	Sandpiper	4+27.75	19.40'	Rt.
V4	Sandpiper	4+29.56	26.27'	Lt.

Paving contractor will be responsible to operate all water valves on the project, in the presence of the inspector, to ensure accessibility to the valves, and that all valves (except blowoffs) are left in the "ON" position when the project is completed.

Street & Station	Location Description	Elevation
Sandpiper 4+27.71, 17.25' Rt.	Adjacent to Fire Hydrant at W. End of S.W. Curb Return of Sandpiper & Sandpiper Cir.	



P.V.I. Elev. = 1370.50 No V.C.



Curve #4					
Curve Data Based on Centerline					
Rad. = 500' Delta = 16°19'24" Tangent = 71.71'					
Arc = 142.45' L.C. = 141.97' Def./Ft. = 3.43770 Min.					
Face Chord Lengths					
Station	Arc	8' Left	8' Right	Defl.	Total Defl.
5+70.85	-	-	-	0°00'00"	0°00'00"
6+00.00	29.15'	30.60'	27.69'	1°40'13"	1°40'13"
6+25.00	25.00'	26.25'	23.75'	1°25'56"	3°06'09"
6+50.00	25.00'	26.25'	23.75'	1°25'57"	4°32'06"
6+75.00	25.00'	26.25'	23.75'	1°25'56"	5°58'02"
7+00.00	25.00'	26.25'	23.75'	1°25'57"	7°23'59"
7+13.30	13.30'	13.96'	12.63'	0°45'43"	8°09'42"

NOTE: ROLL TYPE CURB & GUTTER (TYPE 2) TO BE CONSTRUCTED ON THE PAVEMENT SHOWN ON THIS SHEET. TOP OF CURB ELEVATIONS ARE GIVEN FOR FULL HEIGHT CURB (TYPE 4).

BAUGHMAN COMPANY
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Wichita, KS 67211
316-262-7271
BaughmanCo.com

NRD ADDITION
Phase 2

PEPPERTREE

STREET IMPROVEMENTS

PROJECT NUMBER:
22-01-E105

DESIGN: NBW DRAWN: TMS
DATE: March 12, 2025

SHEET OF
3 27

BENCHMARKS:
 BM #1: "□" on east side of Sandpiper in Res. "F", NRD Addition. Elev. = 1376.53 NAVD88

BM #2: "□" on top of curb, north of the NW corner of Lot 1, Block A, NRD Addition. Elev. = 1363.86 NAVD88

BM #3: "□" on SE corner of curb inlet, east side of Peppertree Cir., NRD Addition. Elev. = 1362.56 NAVD88

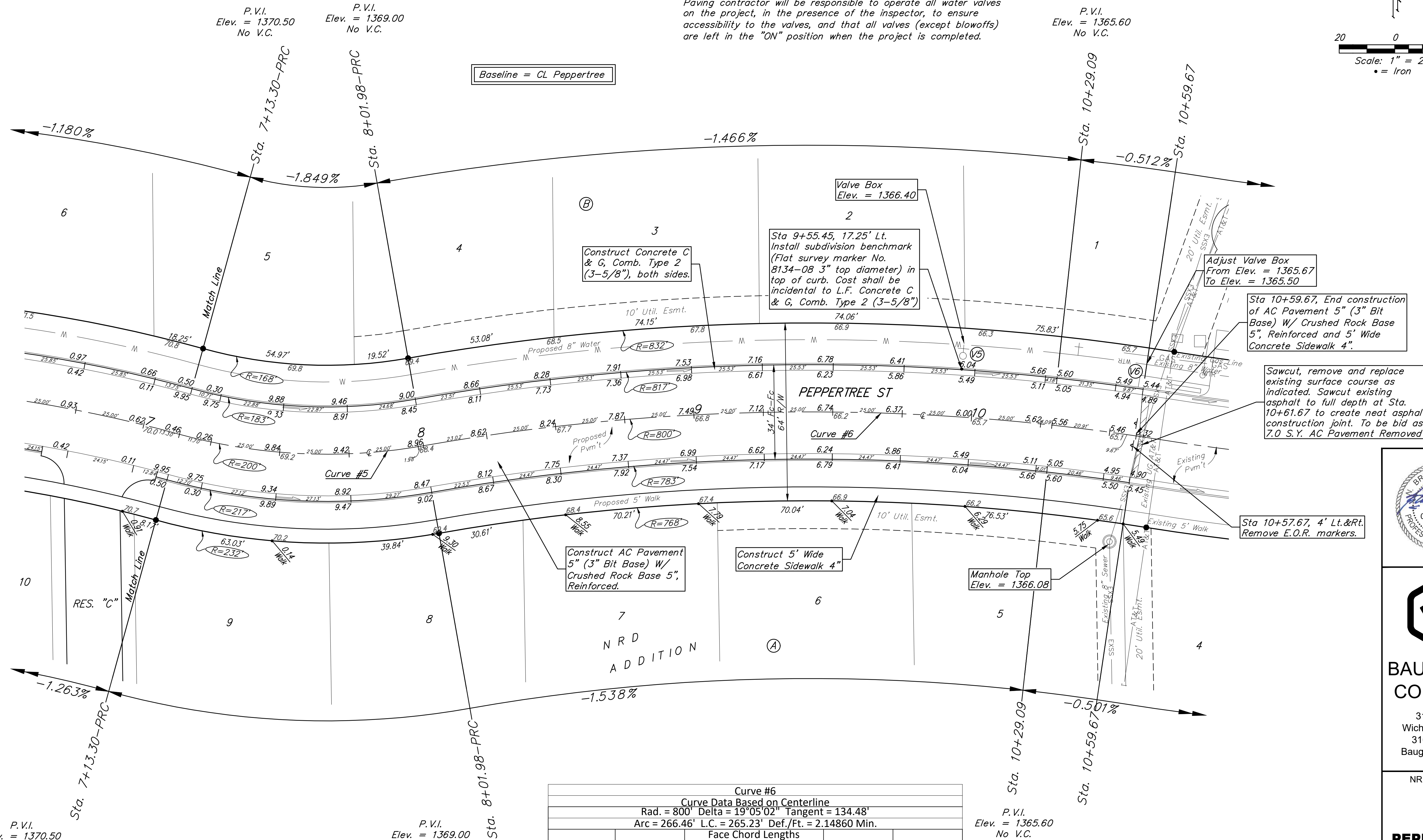
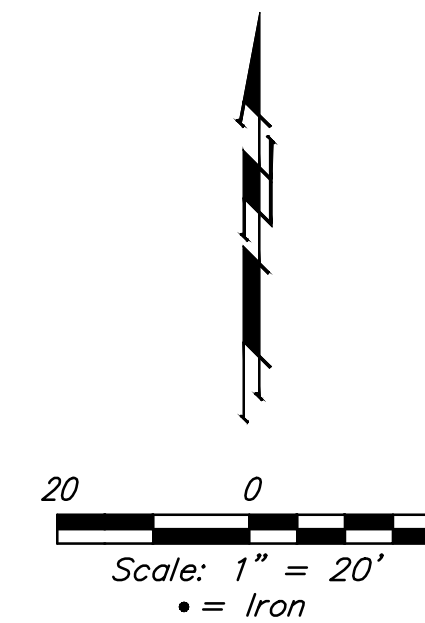
Subdivision Bench Marks		
Street & Station	Location Description	Elevation
Peppertree 9+55.45, 17.25' Lt.	Adjacent to Fire Hydrant near common front lot corner of Lots 1 and 2, Block B, NRD Addition.	

WATER VALVE LOCATION TABLE

VALVE NUMBER	STREET	BASELINE STATION	OFFSET DISTANCE	OFFSET DIRECTION
V5	Peppertree	9+55.45	26'	Lt.
V6	Peppertree	10+59.67	26'	Lt.

Paving contractor will be responsible to operate all water valves on the project, in the presence of the inspector, to ensure accessibility to the valves, and that all valves (except blowoffs) are left in the "ON" position when the project is completed.

P.V.I. Elev. = 1365.60
No V.C.



P.V.I. Elev. = 1370.50
No V.C.

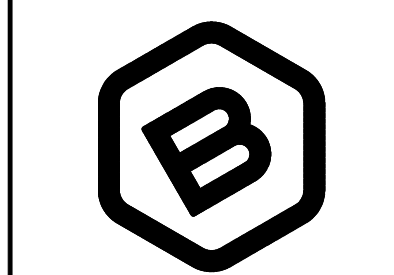
P.V.I. Elev. = 1369.00
No V.C.

P.V.I. Elev. = 1365.60
No V.C.

Curve #5					
Curve Data Based on Centerline					
Rad. = 200' Delta = 25°24'18" Tangent = 45.08'					
Arc = 88.68' L.C. = 87.96' Def./Ft. = 8.59438 Min.					
Station	Arc	8' Left	8' Right	Defl.	Total Defl.
7+13.30	-	-	-	0°00'00"	0°00'00"
7+25.00	11.70'	10.24'	13.16'	1°40'33"	1°40'33"
7+50.00	25.00'	21.86'	28.11'	3°34'52"	5°15'25"
7+75.00	25.00'	21.86'	28.11'	3°34'51"	8°50'16"
8+00.00	25.00'	21.86'	28.11'	3°34'52"	12°25'08"
8+01.98	1.98'	1.73'	2.23'	0°17'01"	12°42'09"

Curve #6					
Curve Data Based on Centerline					
Rad. = 800' Delta = 19°05'02" Tangent = 134.48'					
Arc = 266.46' L.C. = 265.23' Def./Ft. = 2.14860 Min.					
Station	Arc	8' Left	8' Right	Defl.	Total Defl.
8+01.98	-	-	-	0°00'00"	0°00'00"
8+25.00	23.02'	23.74'	22.30'	0°49'28"	0°49'28"
8+50.00	25.00'	25.78'	24.22'	0°53'43"	1°43'11"
8+75.00	25.00'	25.78'	24.22'	0°53'42"	2°36'53"
9+00.00	25.00'	25.78'	24.22'	0°53'43"	3°30'36"
9+25.00	25.00'	25.78'	24.22'	0°53'43"	4°24'19"
9+50.00	25.00'	25.78'	24.22'	0°53'43"	5°18'02"
9+75.00	25.00'	25.78'	24.22'	0°53'43"	6°11'45"
10+00.00	25.00'	25.78'	24.22'	0°53'43"	7°05'28"
10+25.00	25.00'	25.78'	24.22'	0°53'43"	7°59'11"
10+50.00	25.00'	25.78'	24.22'	0°53'43"	8°52'54"
10+59.67	9.67'	9.97'	9.37'	0°20'46"	9°13'40"
10+68.44	8.77'	9.04'	8.50'	0°18'51"	9°32'31"

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NRD ADDITION
Phase 2

PEPPERTREE

STREET IMPROVEMENTS

PROJECT NUMBER:
22-01-E105

DESIGN: NBW DRAWN: TMS

DATE: January 13, 2025

SHEET 4 OF 27

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BENCHMARKS:
 BM #1: "□" on east side of Sandpiper in Res. "F", NRD Addition. Elev. = 1376.53 NAVD88

BM #2: "□" on top of curb, north of the NW corner of Lot 1, Block A, NRD Addition. Elev. = 1363.86 NAVD88

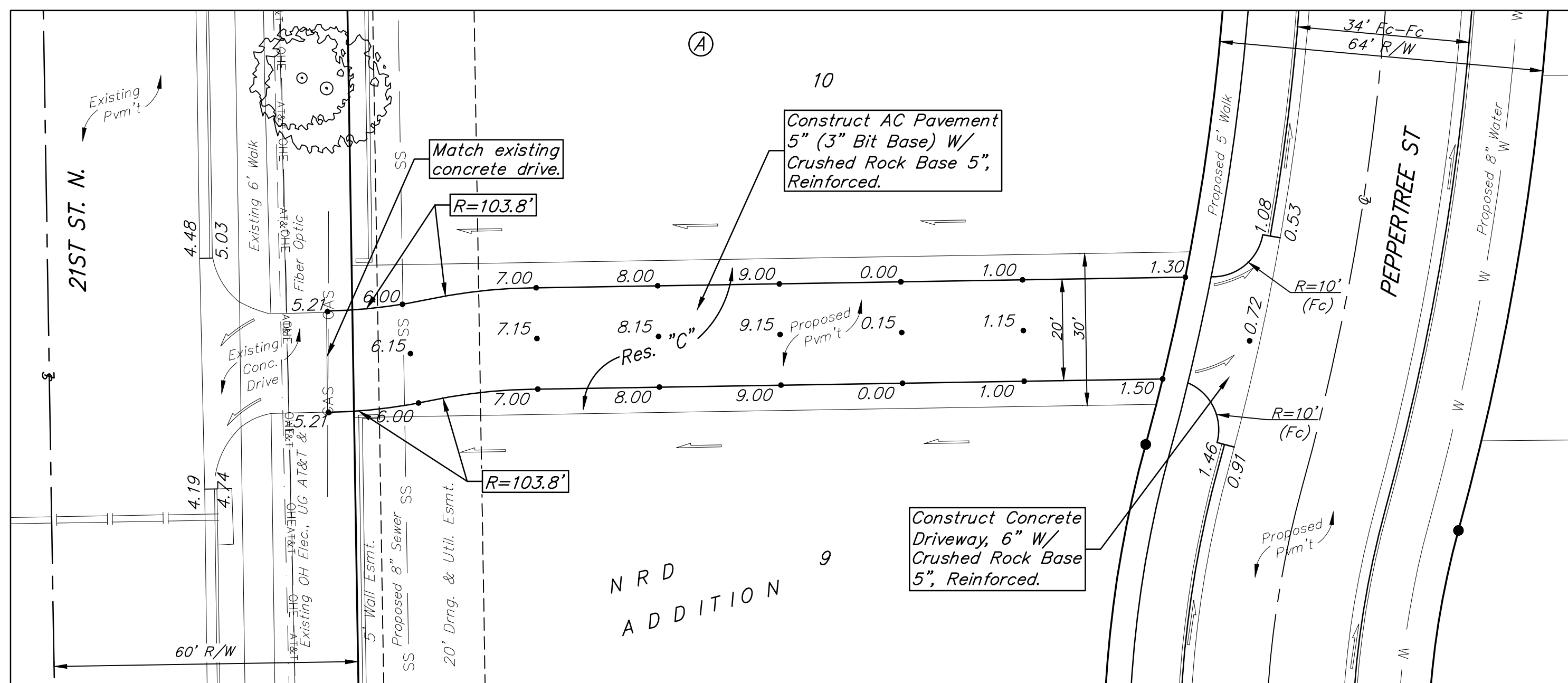
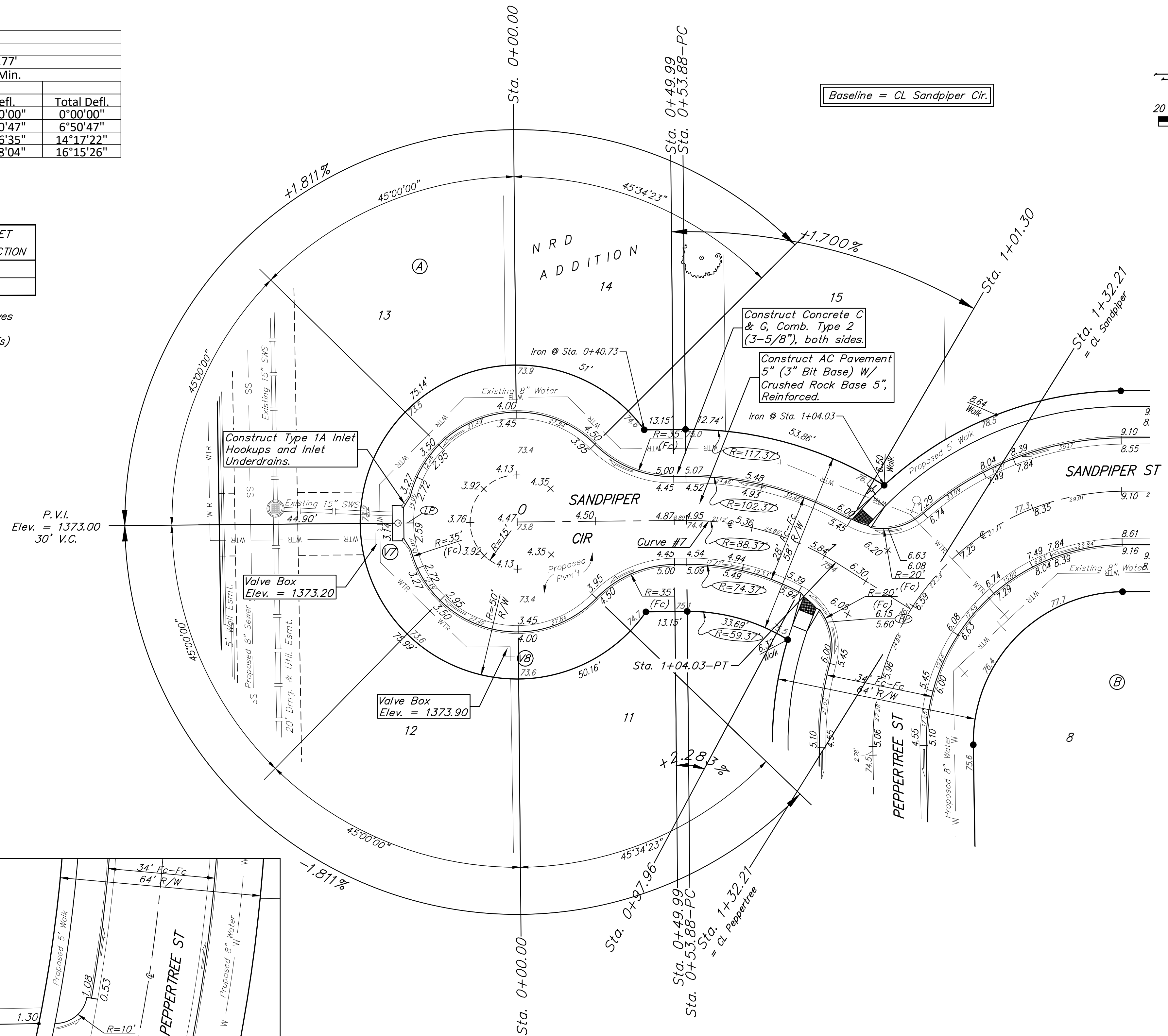
BM #3: "□" on SE corner of curb inlet, east side of Peppertree Cir., NRD Addition. Elev. = 1362.56 NAVD88

Curve #7					
Curve Data Based on Centerline					
Rad. = 88.37' Delta = 32°30'52" Tangent = 25.77'					
Arc = 50.15' L.C. = 49.48' Def./Ft. = 19.45032 Min.					
Face Chord Lengths					
Station	Arc	8' Left	8' Right	Defl.	Total Defl.
0+53.88	-	-	-	0°00'00"	0°00'00"
0+75.00	21.12'	26.31'	15.82'	6°50'47"	6°50'47"
0+97.96	22.96'	28.59'	17.20'	7°26'35"	14°17'22"
1+04.03	6.07'	7.58'	4.56'	1°58'04"	16°15'26"

WATER VALVE LOCATION TABLE

VALVE NUMBER	STREET	BASILINE STATION	OFFSET DISTANCE	OFFSET DIRECTION
V7	Sandpiper Cir.	0+43.73	5.00'	Rt.
VB	Sandpiper Cir.	0+02.63	39.73'	Rt.

Paving contractor will be responsible to operate all water valves on the project, in the presence of the inspector, to ensure accessibility to the valves, and that all valves (except blowoffs) are left in the "ON" position when the project is completed.



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BAUGHMAN COMPANY

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 Wichita, KS 67211
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NRD ADDITION
 Phase 2

SANDPIPER CIR.

STREET IMPROVEMENTS

PROJECT NUMBER:
 22-01-E-105

DESIGN: NBW DRAWN: TMS
 DATE: March 12, 2025

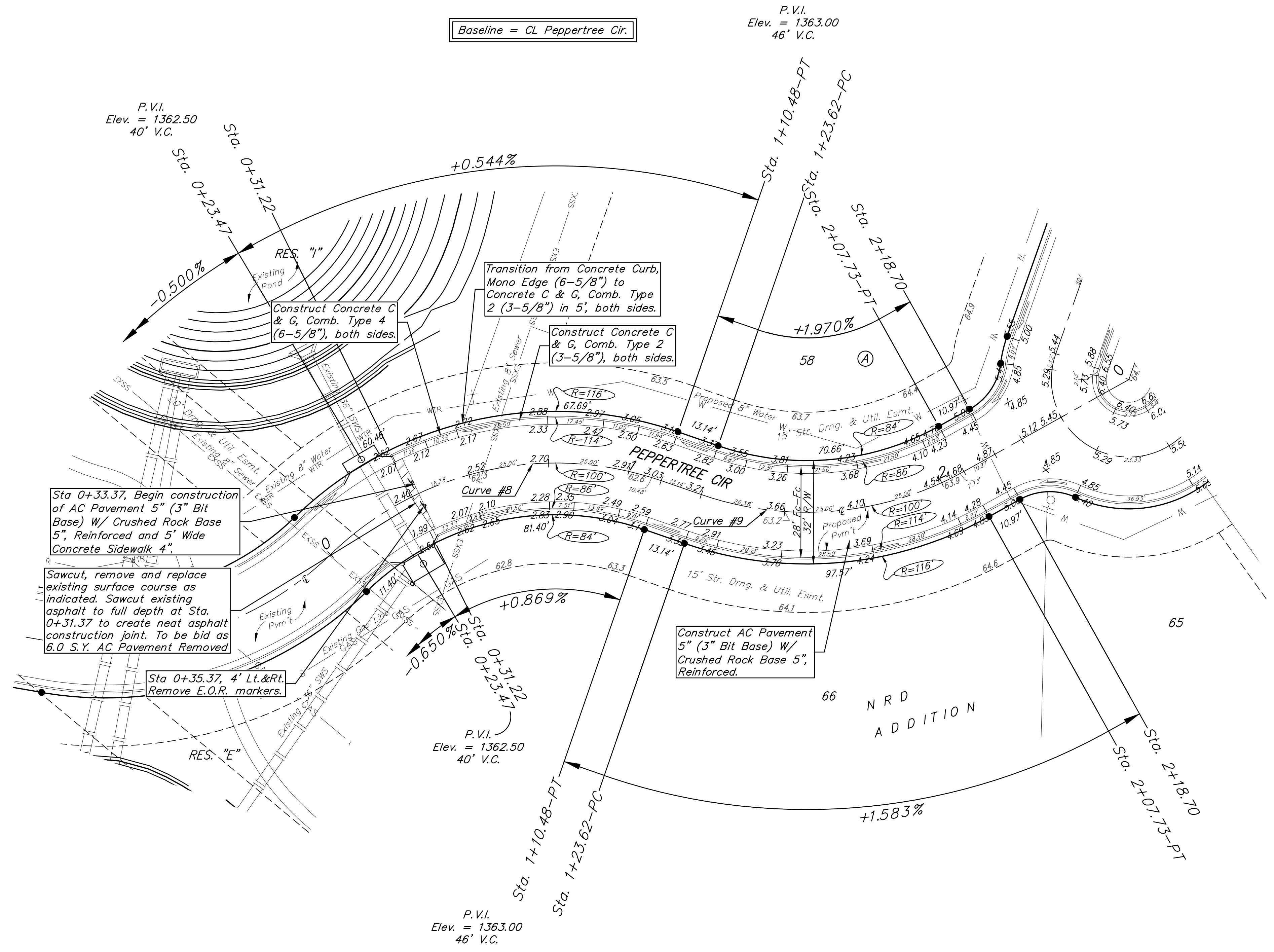
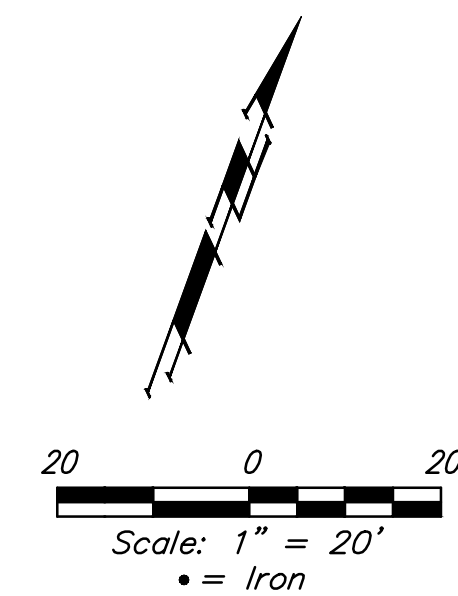
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5 27

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BM #2: "□" on top of curb, north of the NW corner of Lot 1, Block A, NRD Addition. Elev. = 1363.86 NAVD88

BM #3: "□" on SE corner of curb inlet, east side of Peppertree Cir., NRD Addition. Elev. = 1362.56 NAVD88



Curve #8					
Curve Data Based on Centerline					
Rad. = 100' Delta = 63°17'56" Tangent = 61.64'					
Arc = 110.48' L.C. = 104.94' Def./Ft. = 17.18833 Min.					
Face Chord Lengths					
Station	Arc	8' Left	8' Right	Defl.	Total Defl.
0+00.00	-	-	-	0°00'00"	0°00'00"
0+33.37	33.37'	40.52'	25.91'	9°33'34"	9°33'34"
0+50.00	16.63'	20.26'	12.96'	4°45'51"	14°19'25"
0+75.00	25.00'	30.42'	19.45'	7°09'42"	21°29'07"
1+00.00	25.00'	30.42'	19.45'	7°09'43"	28°38'50"
1+10.48	10.48'	12.78'	8.17'	3°00'08"	31°38'58"

Curve #9					
Curve Data Based on Centerline					
Rad. = 100' Delta = 48°11'35" Tangent = 44.72'					
Arc = 84.11' L.C. = 81.66' Def./Ft. = 17.18930 Min.					
Face Chord Lengths					
Station	Arc	8' Left	8' Right	Defl.	Total Defl.
1+23.62	-	-	-	0°00'00"	0°00'00"
1+50.00	26.38'	20.52'	32.09'	7°33'27"	7°33'27"
1+75.00	25.00'	19.45'	30.42'	7°09'44"	14°43'11"
2+00.00	25.00'	19.45'	30.42'	7°09'44"	21°52'55"
2+07.73	7.73'	6.03'	9.43'	2°12'52"	24°05'47"

NOTE: ROLL TYPE CURB & GUTTER (TYPE 2) TO BE CONSTRUCTED ON THE PAVEMENT SHOWN ON THIS SHEET. TOP OF CURB ELEVATIONS ARE GIVEN FOR FULL HEIGHT CURB (TYPE 4).



BAUGHMAN COMPANY

315 Ellis St.
Wichita, KS 67211
316-262-7271
BaughmanCo.com

NRD ADDITION
Phase 2

PEPPERTREE CIR.

STREET IMPROVEMENTS

PROJECT NUMBER:
22-01-E105

DESIGN: NBW DRAWN: TMS
DATE: January 24, 2025

SHEET **6** OF **27**

File: E:\Projects\NRD Addition\19-04-P448\Engineering\Phase 2\STR 22-01-E105\Streets.dwg

BENCHMARKS:
 BM #1: "□" on east side of Sandpiper in Res. "F", NRD Addition. Elev. = 1376.53 NAVD88

BM #2: "□" on top of curb, north of the NW corner of Lot 1, Block A, NRD Addition. Elev. = 1363.86 NAVD88

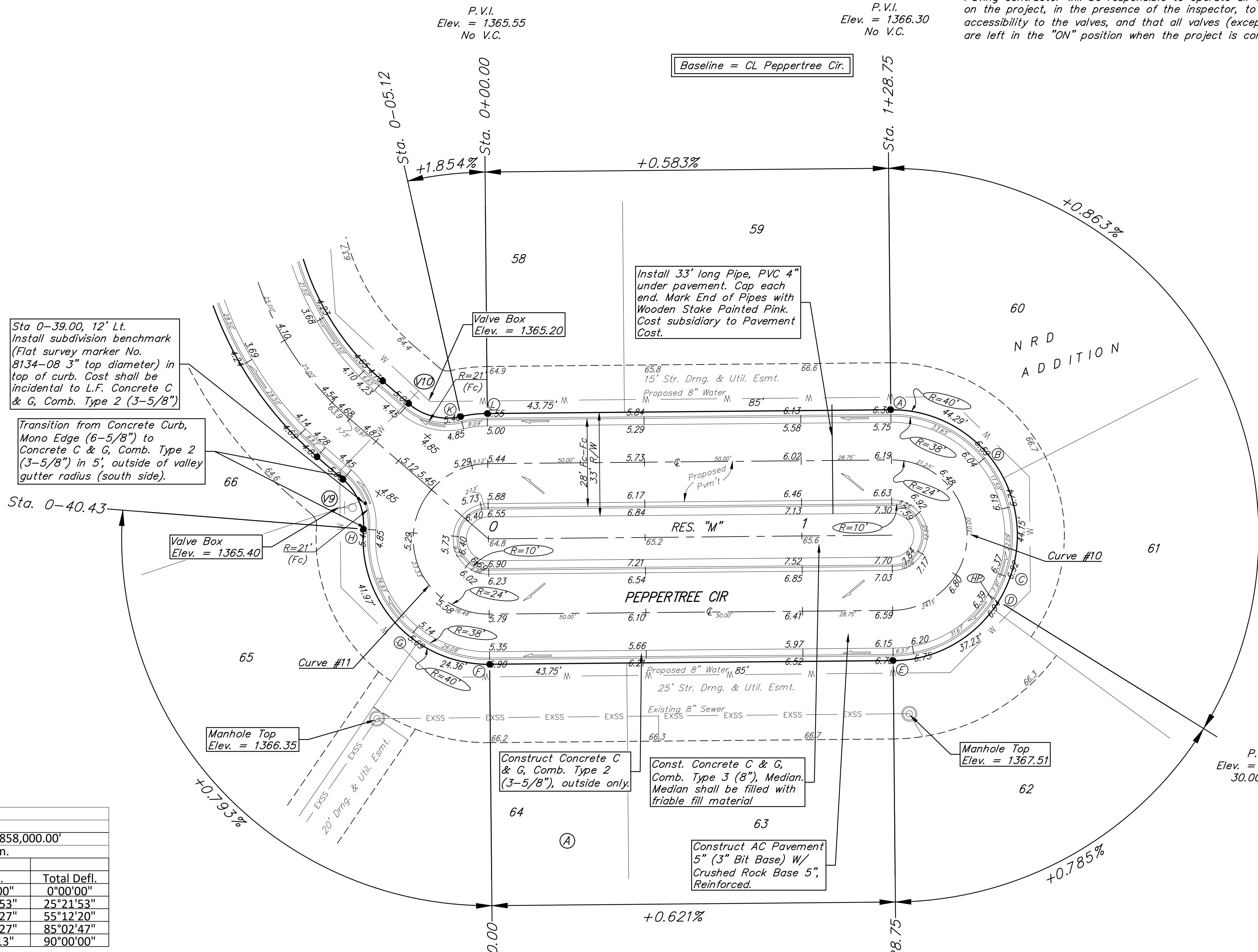
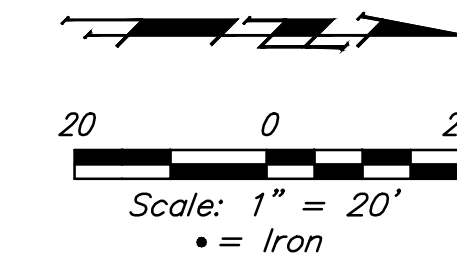
BM #3: "□" on SE corner of curb inlet, east side of Peppertree Cir., NRD Addition. Elev. = 1362.56 NAVD88

Subdivision Bench Marks		
Street & Station	Location Description	Elevation
Peppertree Cir. 0+39.00, 12' Lt.	Adjacent to Fire Hydrant at S. End of S.E. Curb Return of Peppertree Cir. & loop.	

WATER VALVE LOCATION TABLE

VALVE NUMBER	STREET	BASELINE STATION	OFFSET DISTANCE	OFFSET DIRECTION
V9	Peppertree Cir.	0+47.00	10.0'	Lt.
V10	Peppertree Cir.	0+18.00	44.0'	Lt.

Paving contractor will be responsible to operate all water valves on the project, in the presence of the inspector, to ensure accessibility to the valves, and that all valves (except blowoffs) are left in the "ON" position when the project is completed.



Sta 0+39.00, 12' Lt. Install subdivision benchmark (Flat survey marker No. 8134-08 3" top diameter) in top of curb. Cost shall be incidental to L.F. Concrete C & G, Comb. Type 2 (3-5/8")

Transition from Concrete Curb, Mono Edge (6-5/8") to Concrete C & G, Comb. Type 2 (3-5/8") in 5', outside of valley gutter radius (south side).

Install 33' long Pipe, PVC 4" under pavement. Cap each end. Mark End of Pipes with Wooden Stake Painted Pink. Cost subsidiary to Pavement Cost.

Construct Concrete C & G, Comb. Type 2 (3-5/8"), outside only.

Const. Concrete C & G, Comb. Type 3 (8"), Median. Median shall be filled with friable fill material.

Construct AC Pavement 5" (3" Bit Base) W/ Crushed Rock Base 5", Reinforced.

Curve #10					
Curve Data Based on Centerline					
Rad. = 24' Delta = 180°00'00" Tangent = 391,789,254,662,858,000.00'					
Arc = 75.40' L.C. = 48.00' Def./Ft. = 71.61804 Min.					
Face Chord Lengths					
Station	Arc	8' Left	8' Right	Defl.	Total Defl.
A	-	-	-	0°00'00"	0°00'00"
B	21.25'	39.41'	1.71'	25°21'53"	25°21'53"
C	25.00'	45.78'	1.99'	29°50'27"	55°12'20"
D	25.00'	45.78'	1.99'	29°50'27"	85°02'47"
E	4.15'	7.94'	0.35'	4°57'13"	90°00'00"

Curve #11					
Curve Data Based on Centerline					
Rad. = 24' Delta = 180°00'00" Tangent = 391,789,254,662,858,000.00'					
Arc = 75.40' L.C. = 48.00' Def./Ft. = 71.61804 Min.					
Face Chord Lengths					
Station	Arc	8' Left	8' Right	Defl.	Total Defl.
F	-	-	-	0°00'00"	0°00'00"
G	17.11'	32.10'	1.40'	20°25'23"	20°25'23"
H	22.69'	41.89'	1.82'	27°05'01"	47°30'24"
I	2.31'	4.43'	0.19'	2°45'26"	50°15'50"
J	25.00'	45.78'	1.99'	29°50'27"	80°06'17"
K	3.18'	6.09'	0.26'	3°47'45"	83°54'02"
L	5.11'	9.78'	0.43'	6°05'58"	90°00'00"

NOTE: ROLL TYPE CURB & GUTTER (TYPE 2) TO BE CONSTRUCTED ON THE PAVEMENT SHOWN ON THIS SHEET. TOP OF CURB ELEVATIONS ARE GIVEN FOR FULL HEIGHT CURB (TYPE 4).

BAUGHMAN COMPANY

315 Ellis St.
 Wichita, KS 67211
 316-262-7271
 BaughmanCo.com

NRD ADDITION
 Phase 2

PEPPERTREE CIR.

STREET IMPROVEMENTS

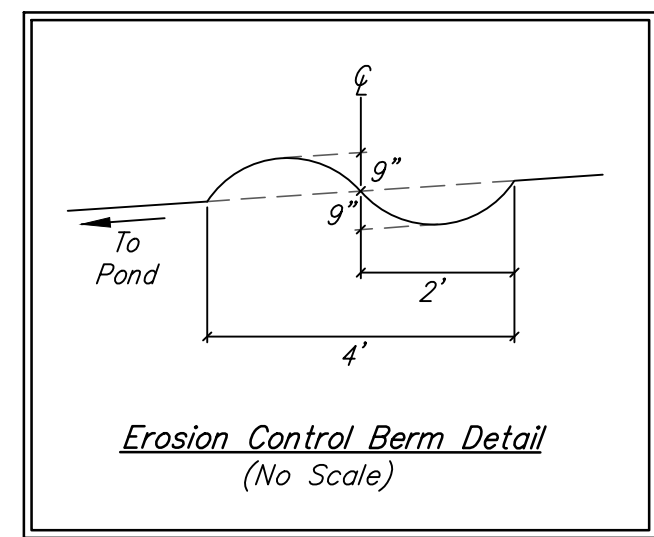
PROJECT NUMBER:
 22-01-E105

DESIGN: NBW DRAWN: TMS
 DATE: January 24, 2025

SHEET **7** OF **27**

File: E:\Projects\NRD Addition\19-04-P448\Engineering\Phase 2\STR 22-01-E105\Streets.dwg

When construction will occur within 50' of either side of NuStar gas pipeline, Contractor shall contact Kansas One-Call and NuStar a minimum of 72 hours prior to construction. Teresa Landry (316)322-0325.



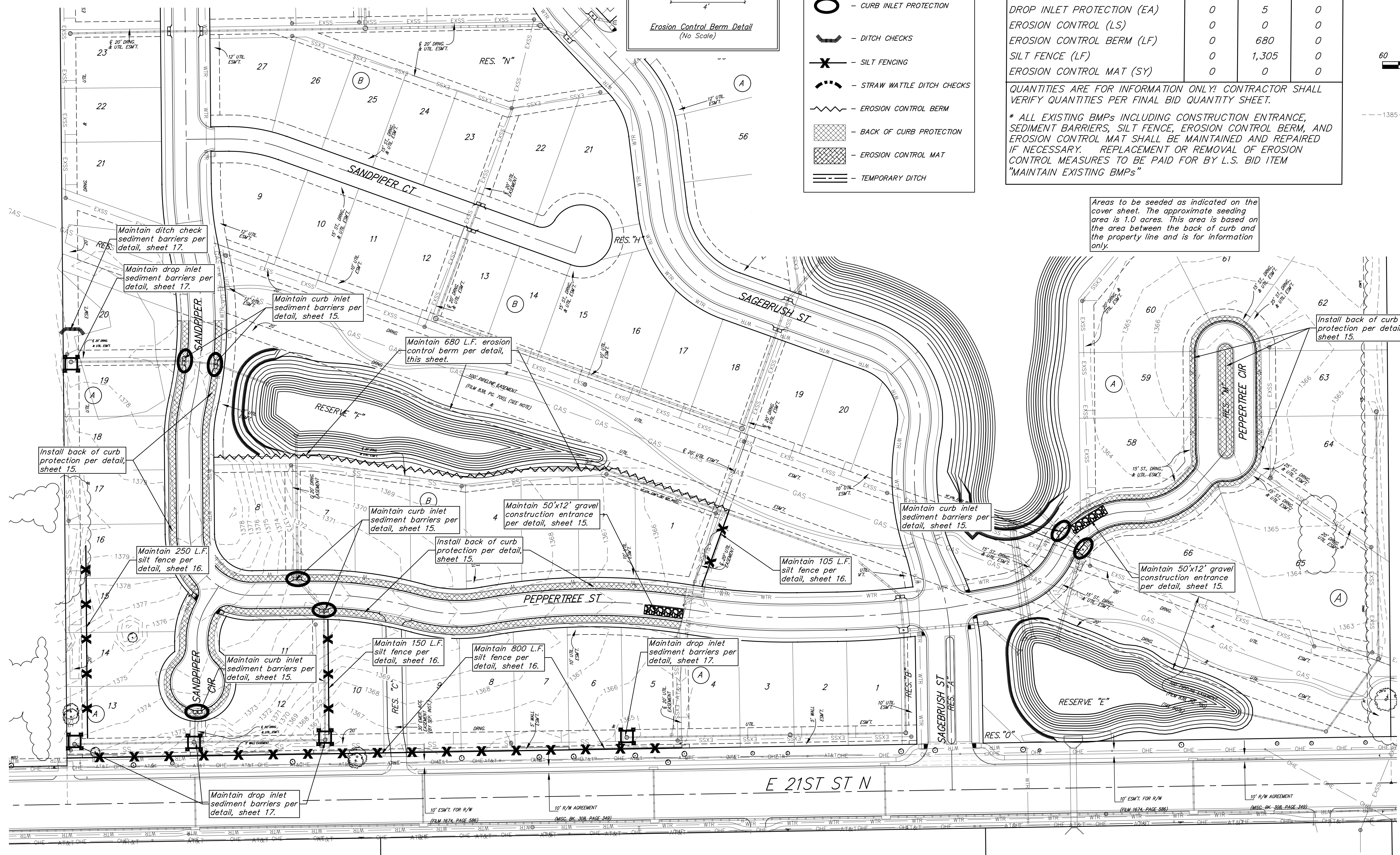
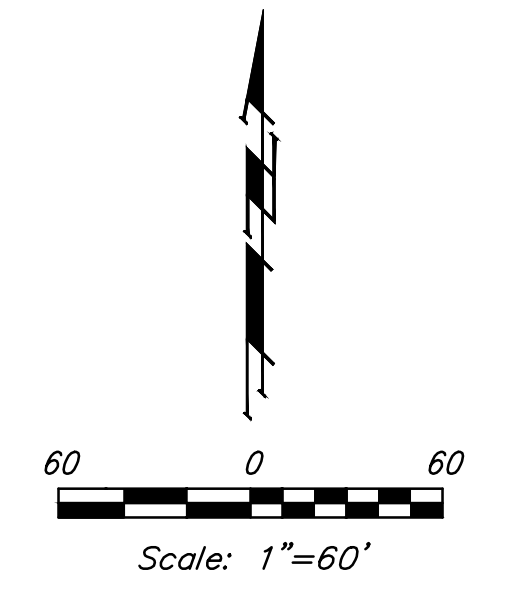
EROSION CONTROL PLAN LEGEND

- DROP INLET PROTECTION
- CURB INLET PROTECTION
- DITCH CHECKS
- SILT FENCING
- STRAW WATTLE DITCH CHECKS
- EROSION CONTROL BERM
- BACK OF CURB PROTECTION
- EROSION CONTROL MAT
- TEMPORARY DITCH

EROSION CONTROL MEASURE	INSTALL	MAINTAIN	REMOVE
BACK OF CURB PROTECTION (LF)	3,386	0	0
CONSTRUCTION ENTRANCE (EA)	0	2	0
CURB INLET BARRIER (EA)	0	7	0
DITCH CHECK (EA)	0	1	0
DROP INLET PROTECTION (EA)	0	5	0
EROSION CONTROL (LS)	0	0	0
EROSION CONTROL BERM (LF)	0	680	0
SILT FENCE (LF)	0	1,305	0
EROSION CONTROL MAT (SY)	0	0	0

QUANTITIES ARE FOR INFORMATION ONLY! CONTRACTOR SHALL VERIFY QUANTITIES PER FINAL BID QUANTITY SHEET.

* ALL EXISTING BMPs INCLUDING CONSTRUCTION ENTRANCE, SEDIMENT BARRIERS, SILT FENCE, EROSION CONTROL BERM, AND EROSION CONTROL MAT SHALL BE MAINTAINED AND REPAIRED IF NECESSARY. REPLACEMENT OR REMOVAL OF EROSION CONTROL MEASURES TO BE PAID FOR BY L.S. BID ITEM "MAINTAIN EXISTING BMPs"



Areas to be seeded as indicated on the cover sheet. The approximate seeding area is 1.0 acres. This area is based on the area between the back of curb and the property line and is for information only.

BRENT WOOLER
LICENSED PROFESSIONAL ENGINEER
8470
03/20/2025
KANSAS
PROFESSIONAL ENGINEER

B

BAUGHMAN COMPANY

315 Ellis St.
Wichita, KS 67211
316-262-7271
BaughmanCo.com

NRD ADDITION
Phase 2

EROSION CONTROL PLAN

STREET IMPROVEMENTS

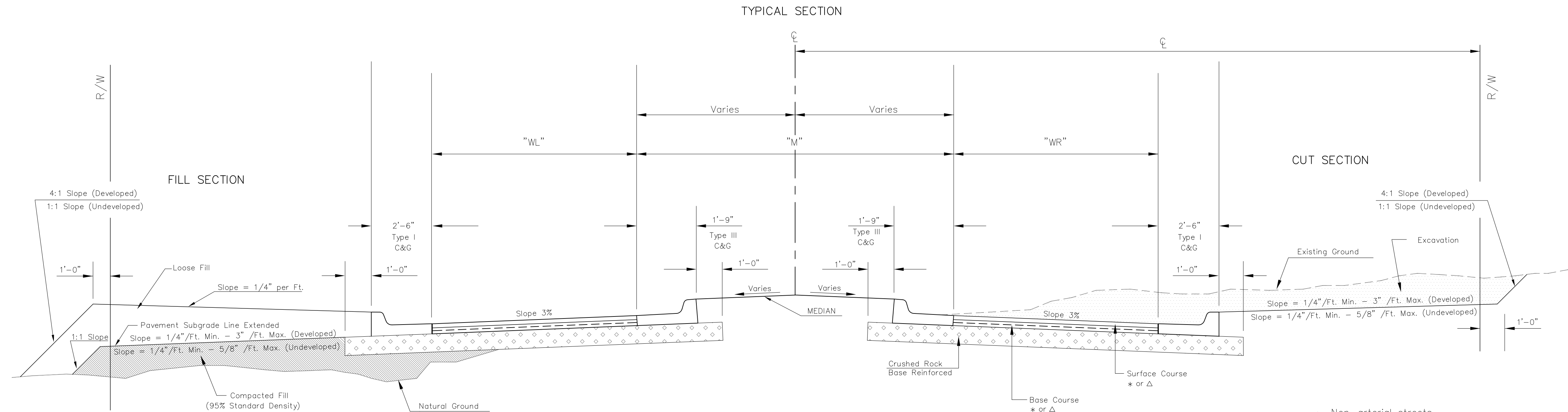
PROJECT NUMBER:
22-01-E105

DESIGN: NBW DRAWN: TMS

DATE: January 13, 2025

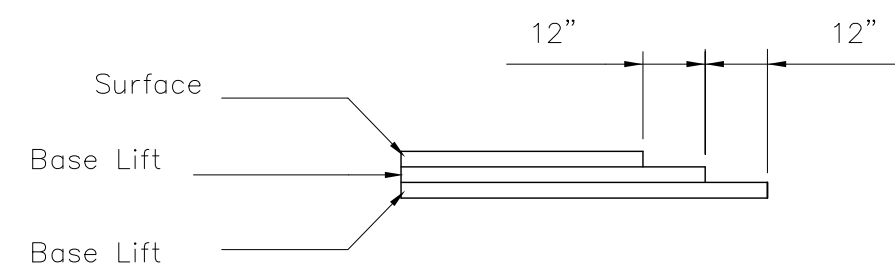
SHEET OF
8 27

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- * Non-arterial streets
BC-1, SC-1 AND PG 64-22
- Δ Arterial streets
BM-2 PG 64-22(Base) PG 70-28(Surface)

Base Course thicker than 4" shall be installed in two lifts



TRANSVERSE CONSTRUCTION JOINTS

Transverse construction joints shall be constructed in flexible base pavement at locations where pavement joins existing flexible base pavement as show by the detail. All costs associated with the construction of the transverse joint shall be included in the bid price for Square Yards of pavement.

GENERAL NOTES

Fabric base reinforcement shall be an approved grid. 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 to an approximate rate of 0.05 gallons per square yard between each lifts 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 of pavement.

STREET NAME	"WL"	"M"	"WR"	STATION	CENTER LINE	ROW DIMENSION	MEDIAN DESCRIPTION	SLOPE	ROCK THICKNESS	PAVEMENT THICKNESS	COMMENTS
Sandpiper	15'	-	15'	0+92.69		64'		3%	5"	5"	
Sandpiper Cir.	12'	-	12'	0+49.99		58'		3%	5"	5"	
Peppertree Cir.	12'	-	12'	0+33.37		58'		3%	5"	5"	

REVISED: OCTOBER 2015



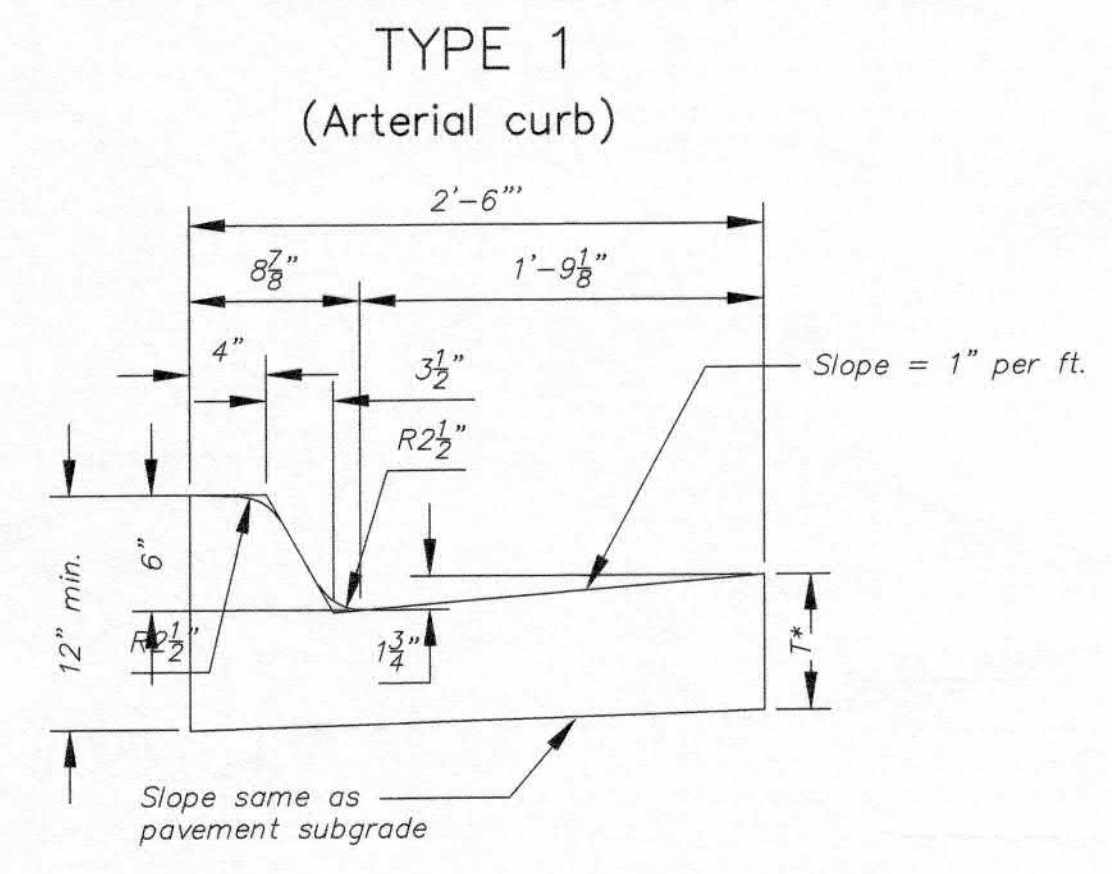
ASPHALT PAVING DETAIL

CITY ENGINEER
GARY JANZEN, P.E.

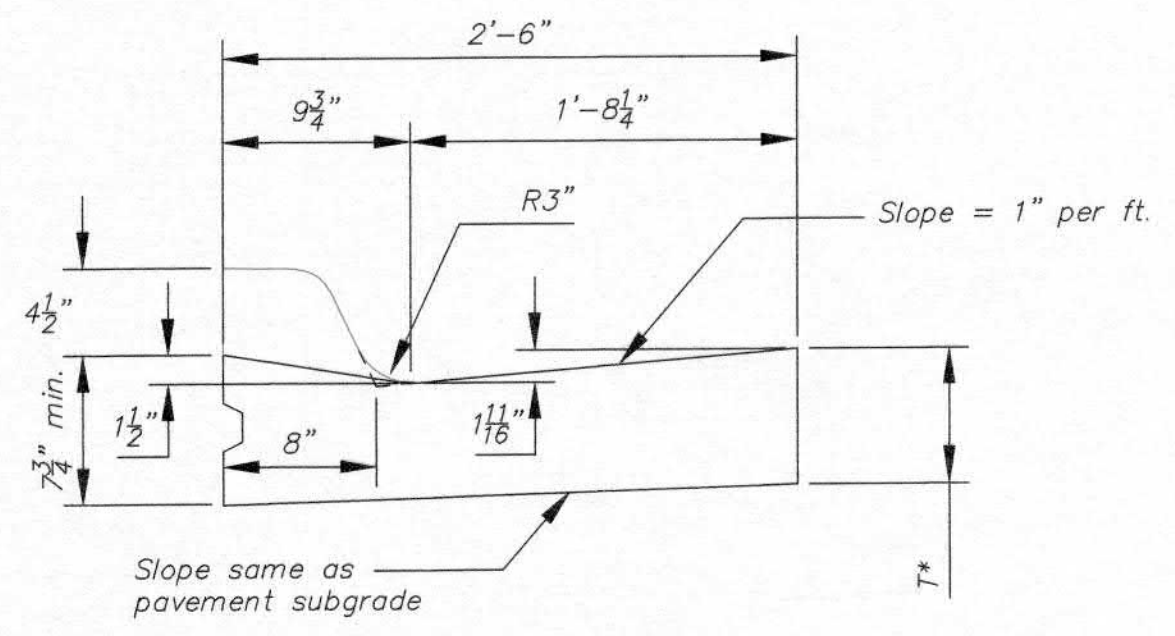
PROJECT NUMBER OCA NUMBER DATE

CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202-1620
(316) 268-4501

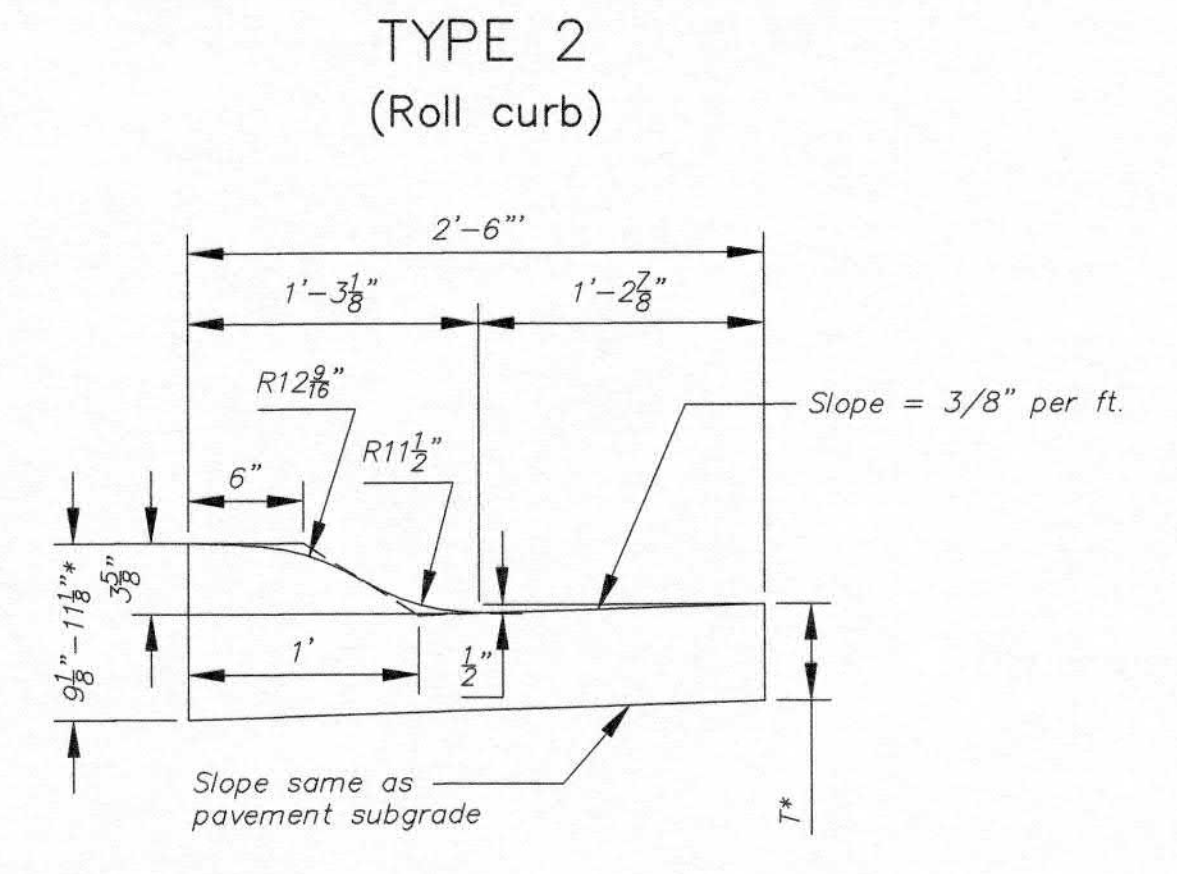
SHEET
9 of 27



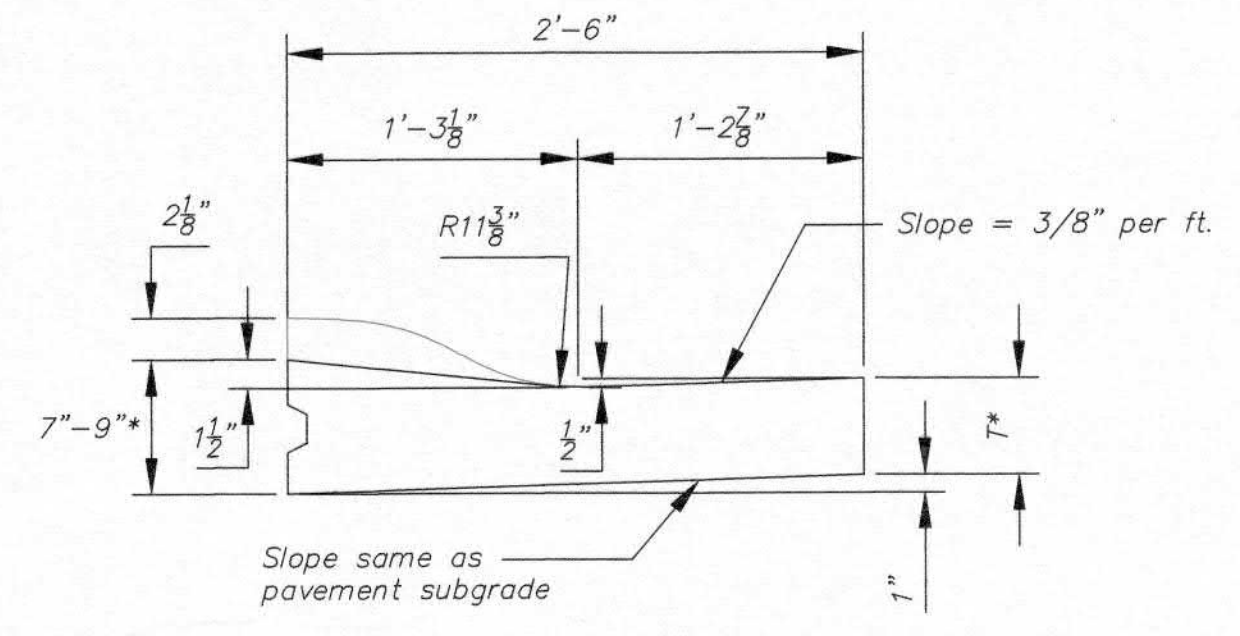
Combined Curb & Gutter (6")



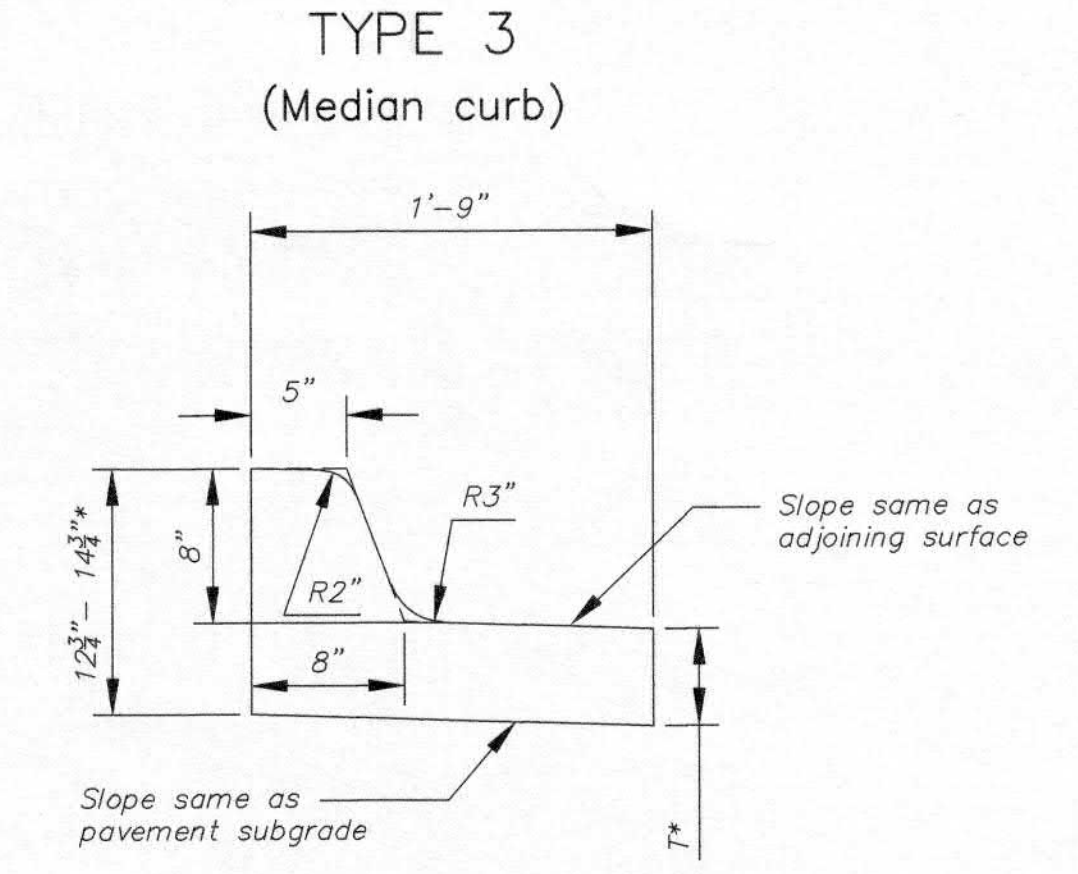
Combined Curb & Gutter (1 1/2")



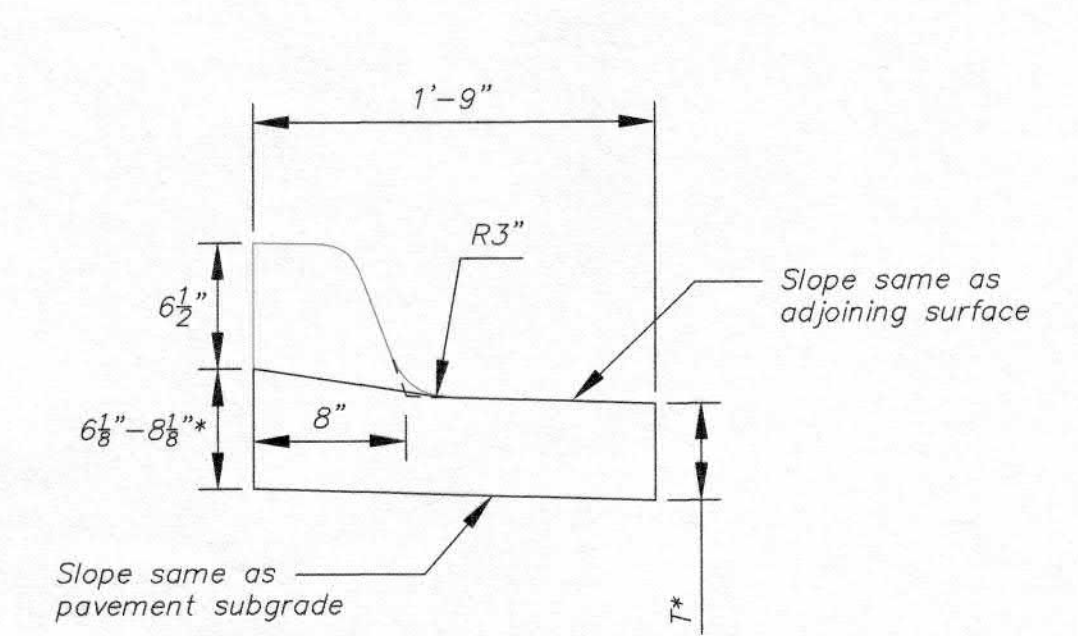
Combined Curb & Gutter (3 5/8")



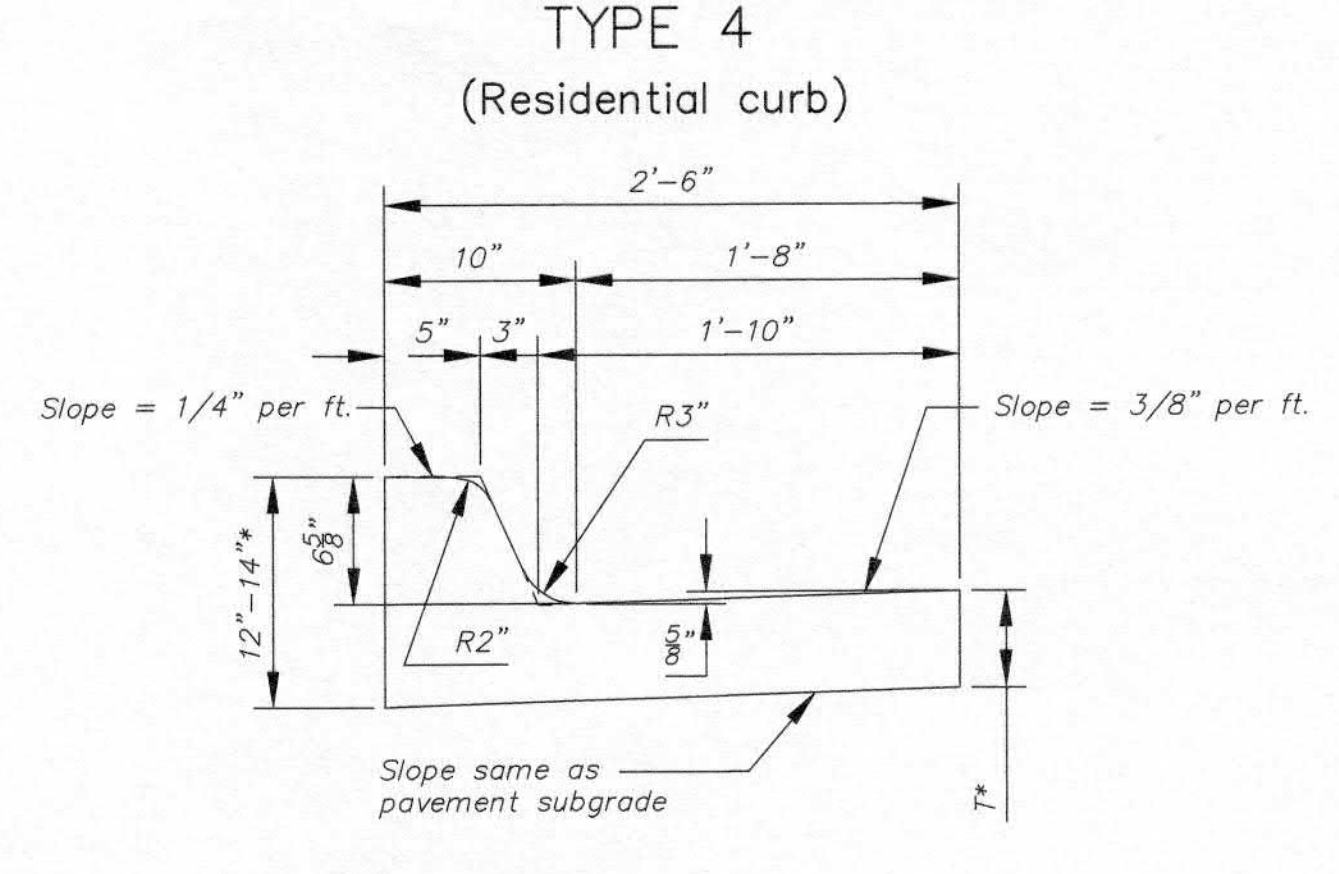
Combined Curb & Gutter (1 1/2")



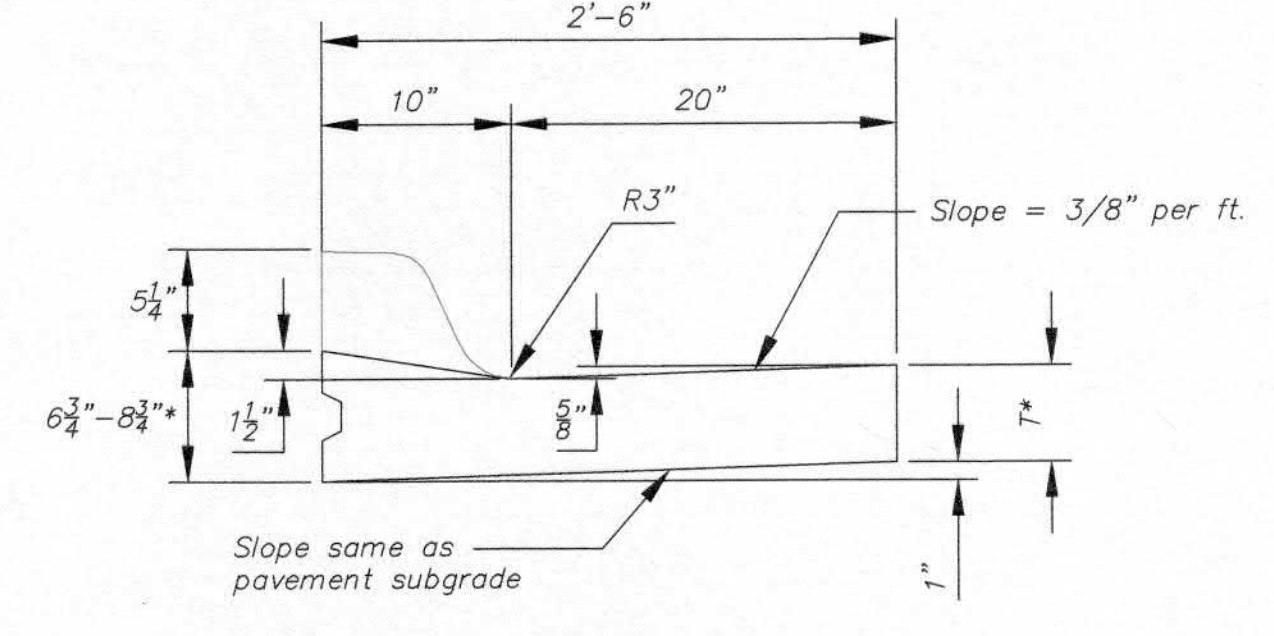
Combined Curb & Gutter (8")



Combined Curb & Gutter (1 1/2")



Combined Curb & Gutter (6 5/8")

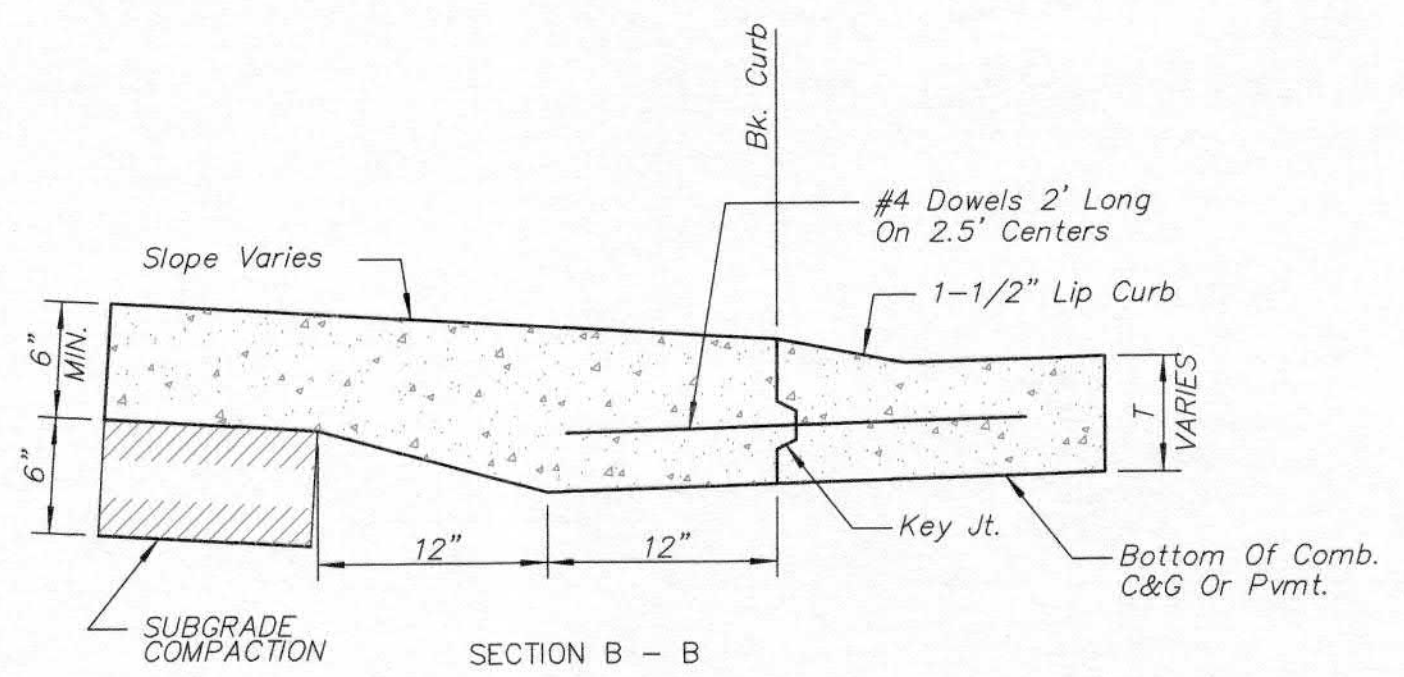


Combined Curb & Gutter (1 1/2")

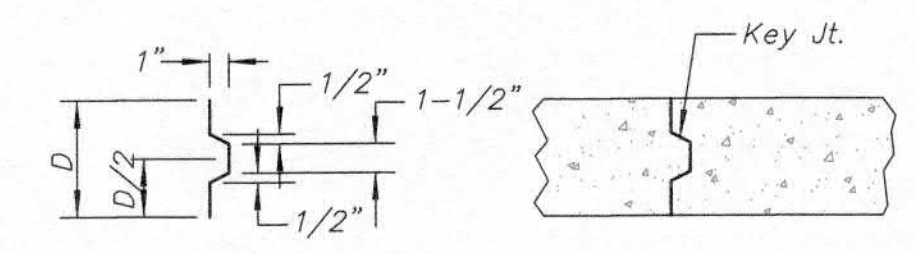
T* = Thickness of curb to adjust with pavement thickness

GENERAL NOTES

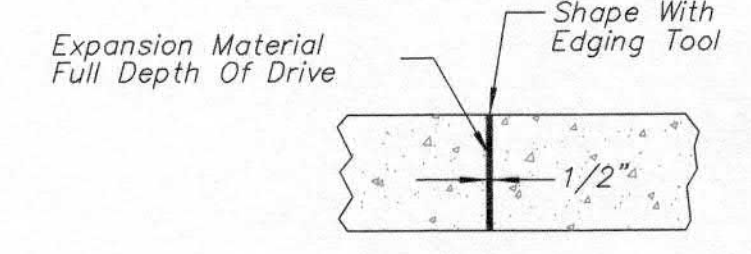
- Expansion (isolation) joints shall be constructed a maximum of 300' apart and at all PIs, PCs, cul-de-sac quadrants, and ends of returns.
- Contraction joints shall be constructed a minimum of 12' apart.
- Joint sealer shall be required at all joints on arterial and industrial streets and at intersections on residential streets.



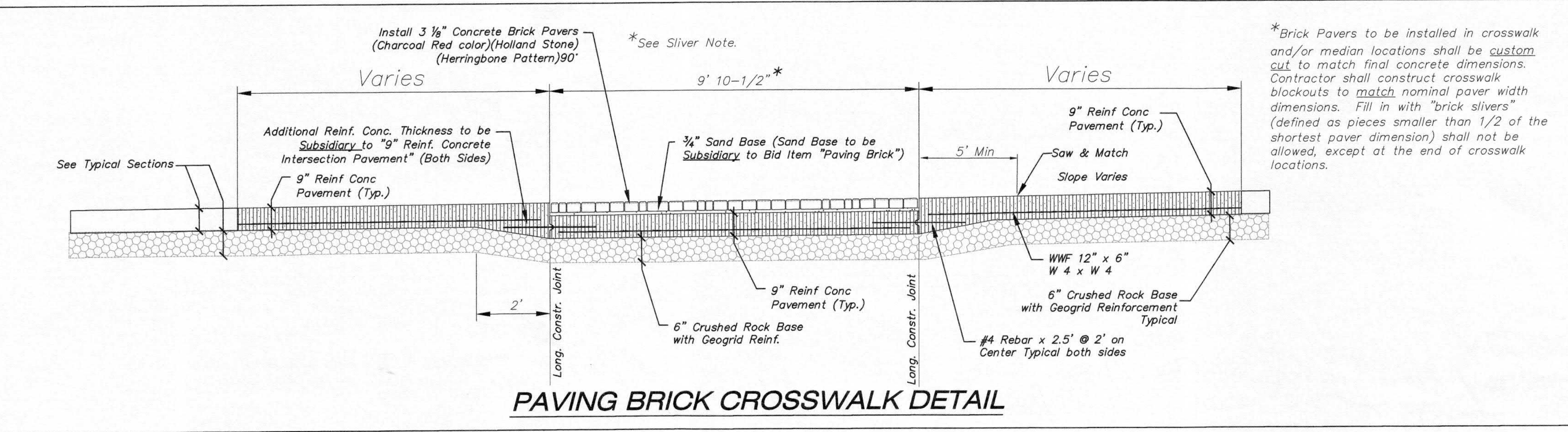
BACK OF CURB DETAIL



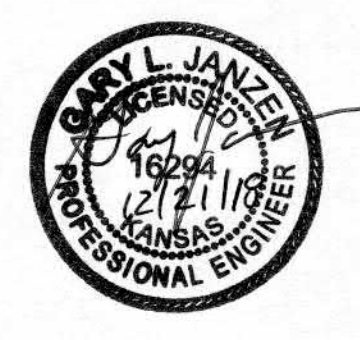
ALT. LONGITUDINAL CONSTRUCTION JOINT



EXPANSION JOINT (E.J.)



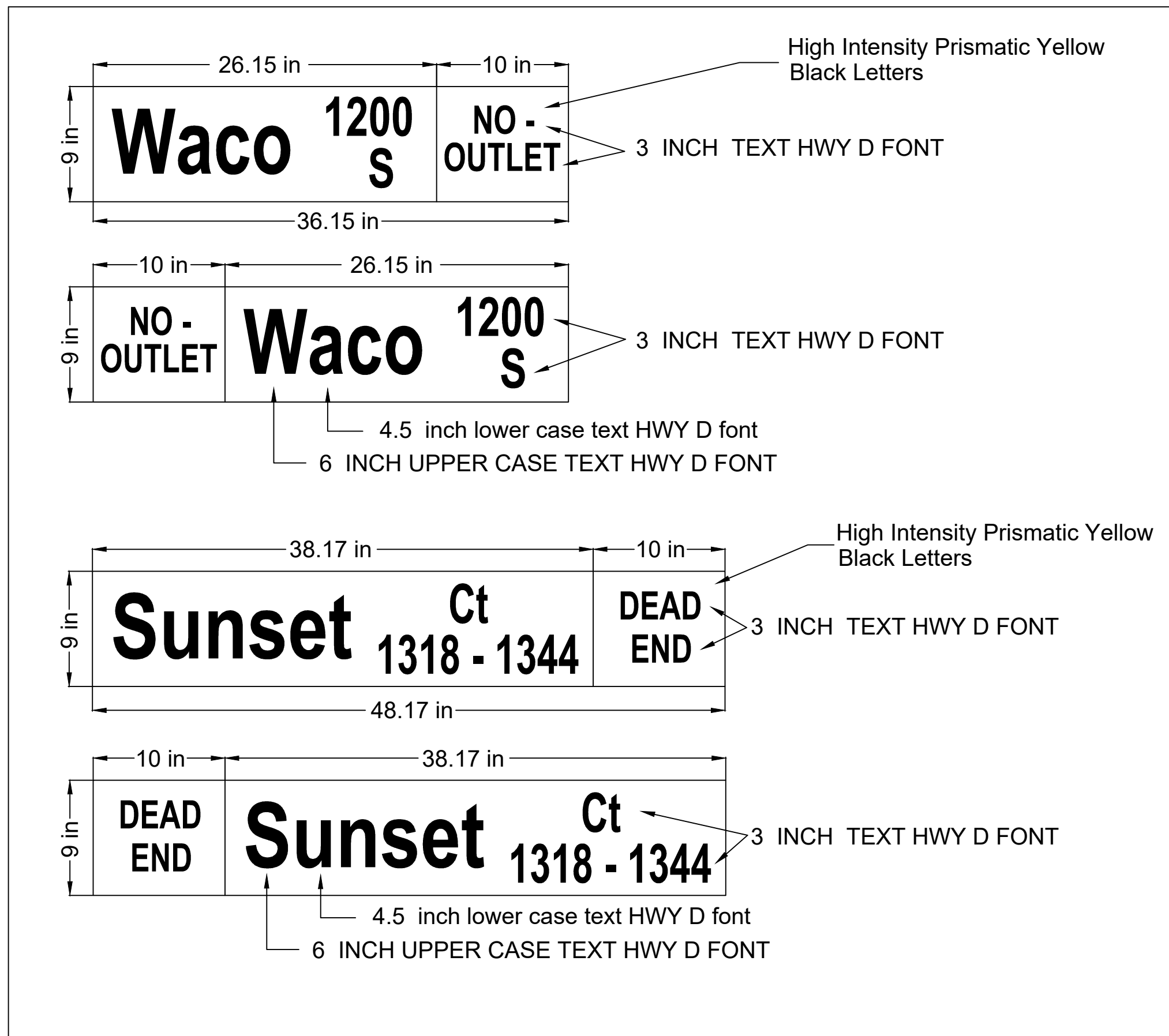
PAVING BRICK CROSSWALK DETAIL



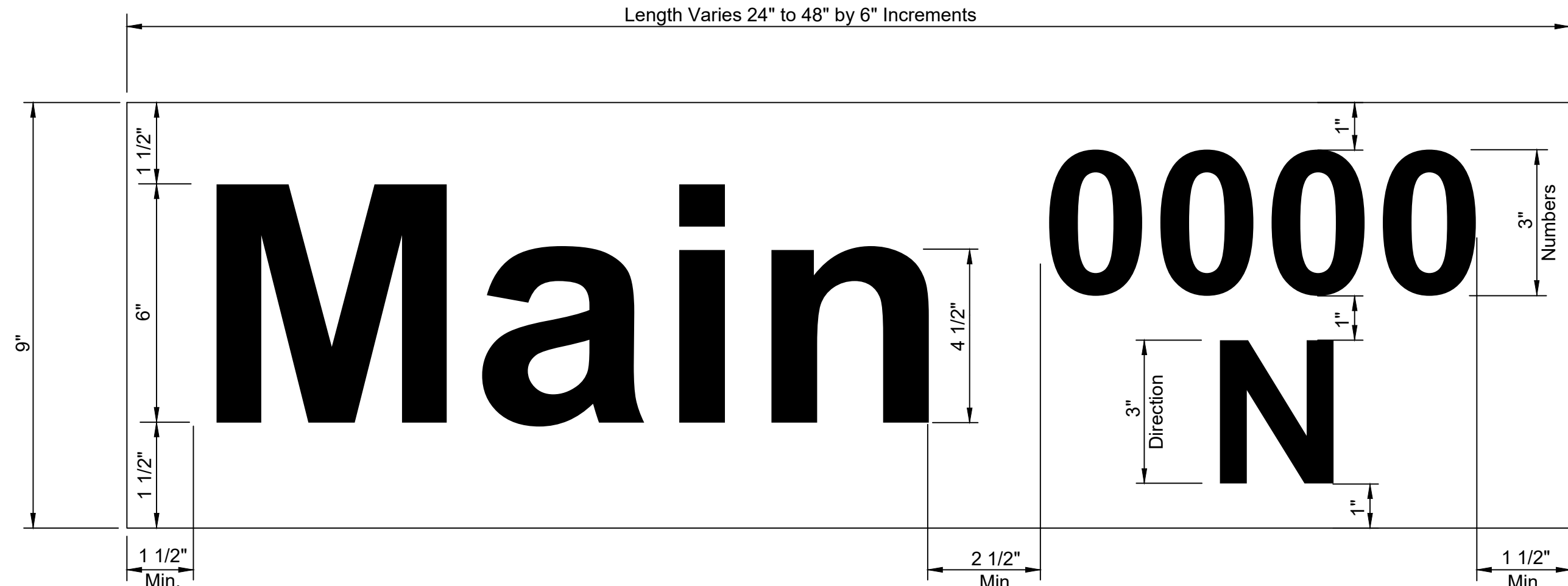
CITY OF WICHITA
PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

CURB & GUTTER & PAVING BRICK CROSSWALK DETAILS		
CITY ENGINEER GARY JANZEN, P.E.		
PROJECT NUMBER	OCA NUMBER	DATE
CITY ENGINEER'S OFFICE CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202-1620 (316) 268-4501		SHEET 10 of 27

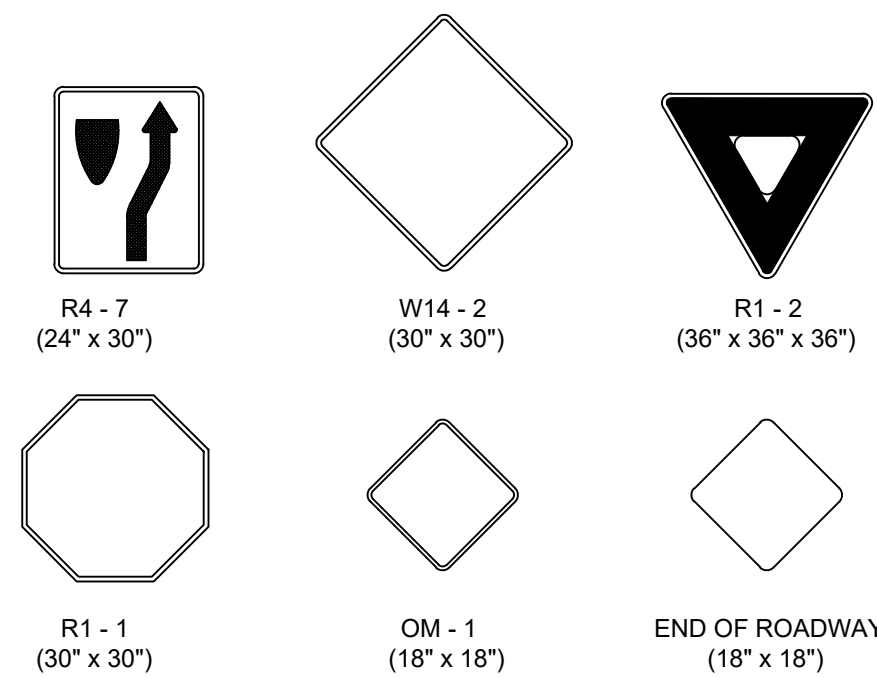
REVISED: OCTOBER 2015



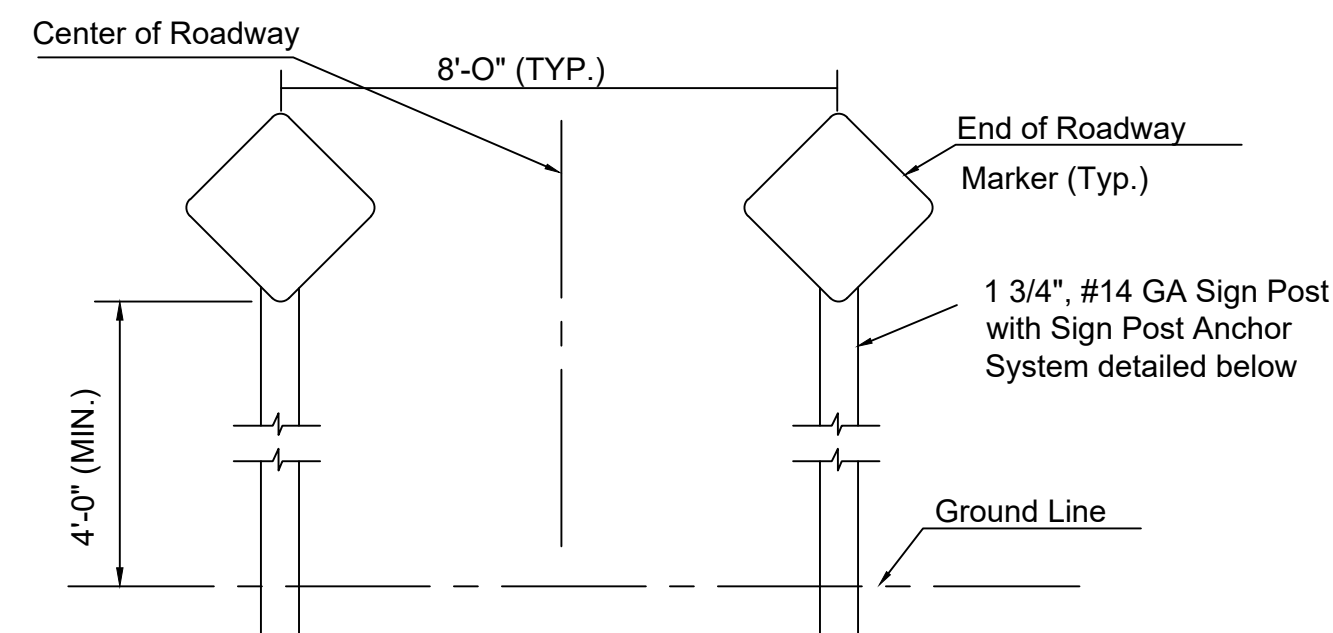
DETAIL A
9" STANDARD



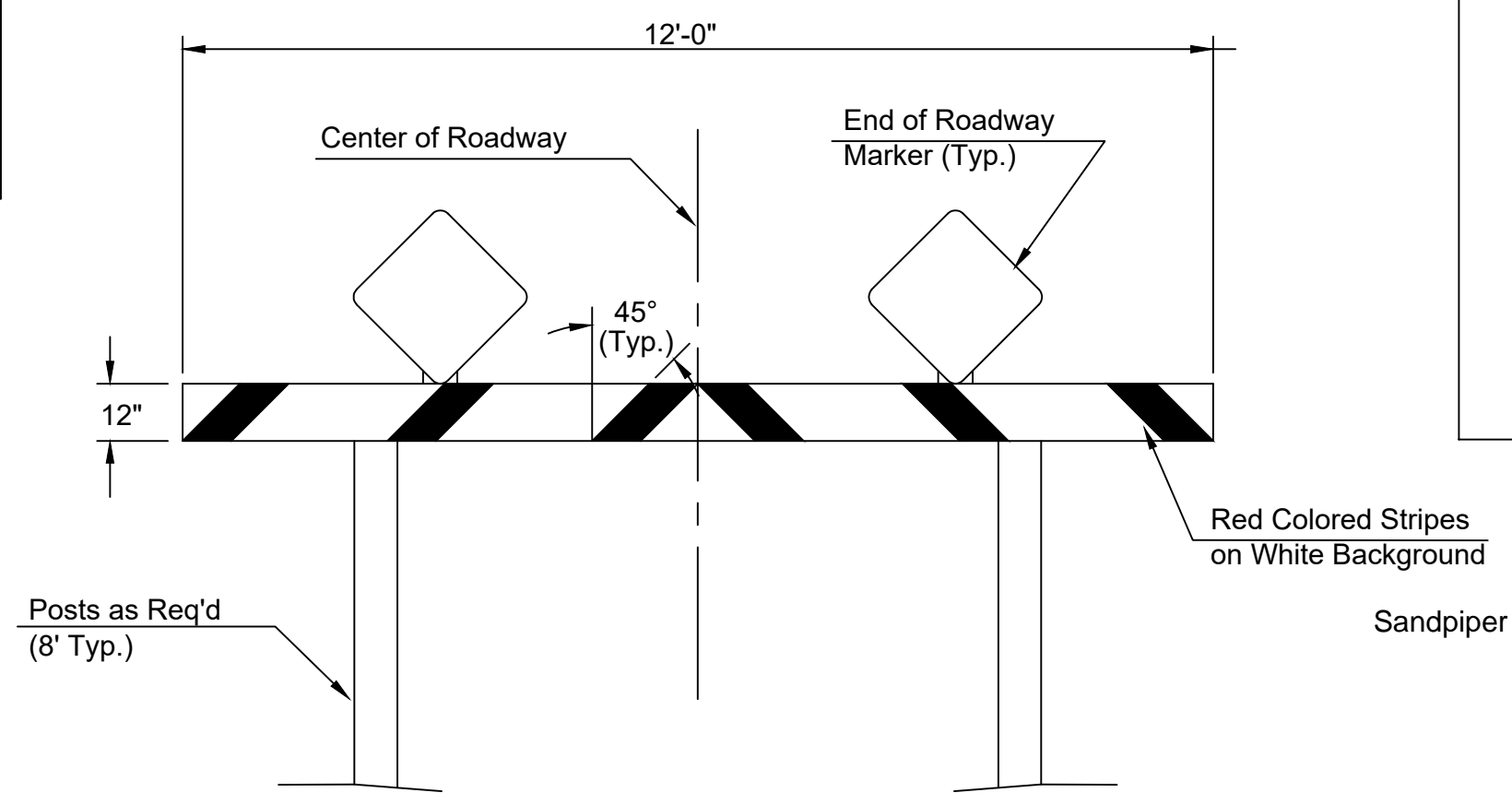
DETAIL B
9" METRO



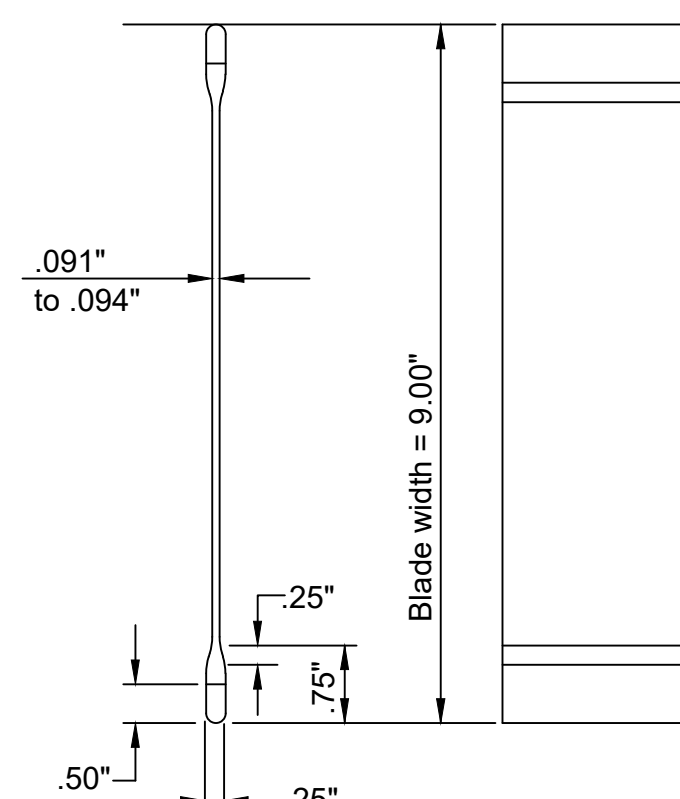
* IN NO CASE SHALL THE SPECIFICATIONS BE LESS THAN REQUIRED BY THE CURRENT MUTCD.



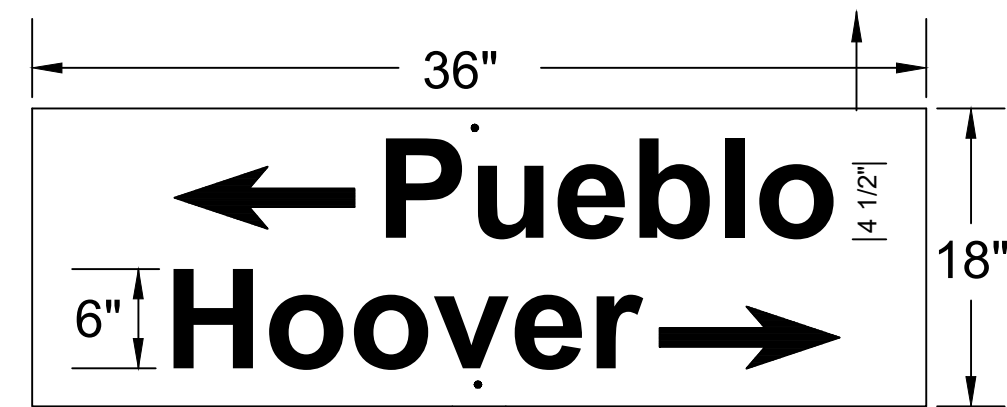
TYPICAL END OF ROADWAY SIGN MOUNTING INSTALLATION



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

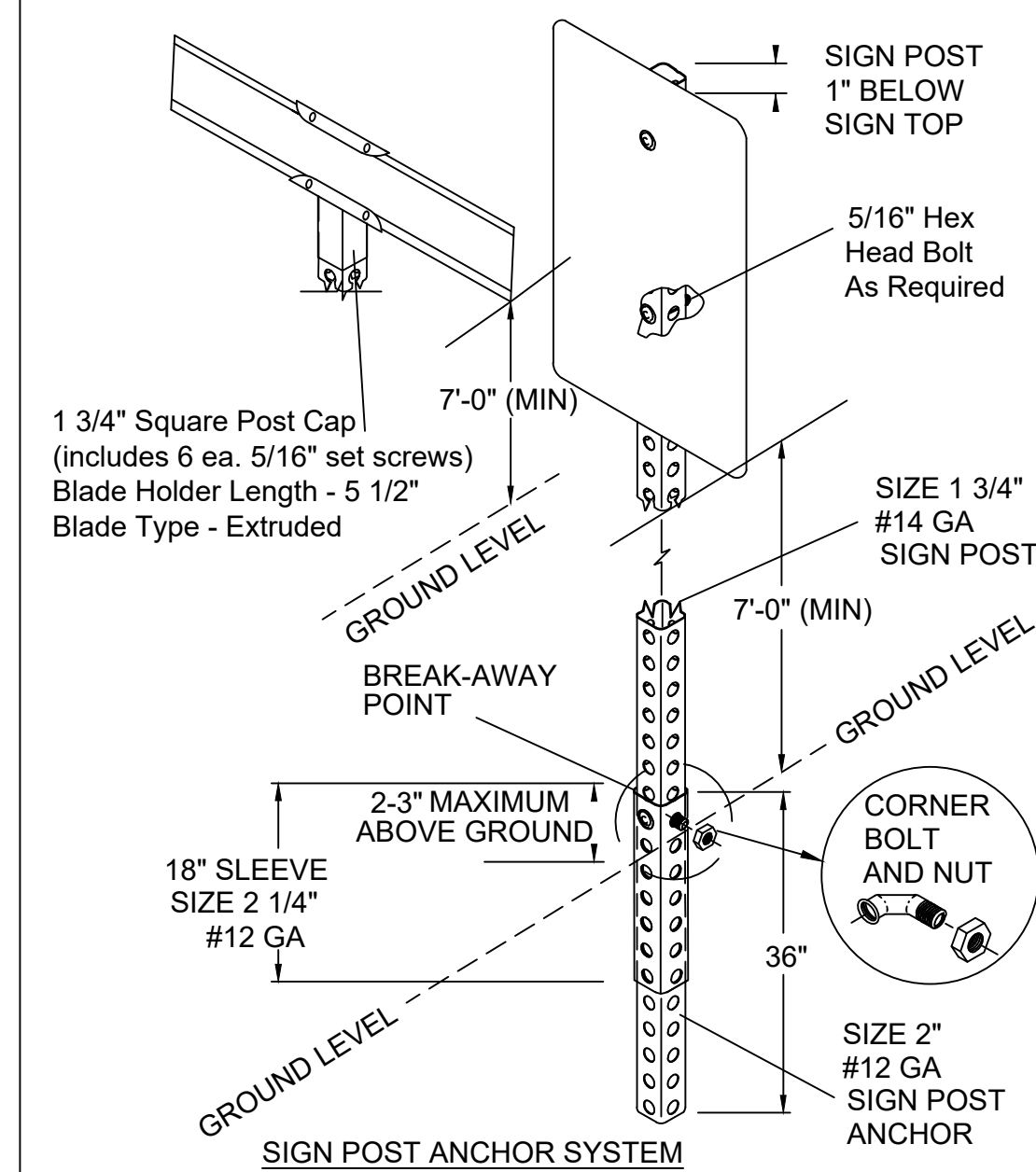


STREET NAME SIGN
BLADE DETAILS



FLAT PLATE STREET NAME SIGN

PERFORATED TUBE SIGN POST INSTALLATION



SIGN ASSEMBLY TABLE

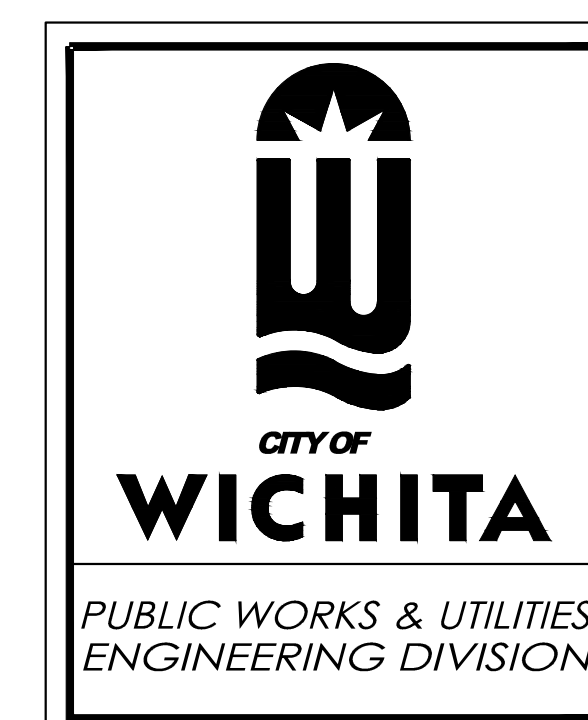
STATION	OFFSET	SIGN	QUANTITY*
4+32.30	34' Rt.	SNS	1
TOTAL			1

STREET NAME	NO. BLADES REQ'D	
	9" STD.	9" METRO
Sandpiper	1	
Sandpiper Cir (_____)*		1

*Contractor to contact Engineer for street numbers prior to ordering.

NOTE: REFERENCES BELOW TO "STANDARD SPECIFICATIONS" DENOTE "STANDARD SPECIFICATION FOR STATE ROAD AND BRIDGE CONSTRUCTION EDITION 2015" BY THE KANSAS DEPARTMENT OF TRANSPORTATION.

- FABRICATION AND INSTALLATION OF ALL SIGNS SHALL CONFORM TO THE LATEST EDITION OF THE MUTCD.
- POST ANCHORS: POSTS SHALL BE ANCHORED WITH A YIELDING BASE POST SUPPORT AS DETAILED.
- POSTS FOR TRAFFIC CONTROL SIGNS: POSTS SHALL BE GALVANIZED AND CONFORM TO THE REQUIREMENTS OF SUBSECTION 1620 OF THE STANDARD SPECIFICATIONS, EXCEPT THAT ALL POSTS SHALL WEIGH 3 LBS./FT. MINIMUM.
- POSTS FOR STREET NAME SIGNS (SNS): POSTS SHALL BE 9 FEET LONG, CONSTRUCTED FROM #14 GALVANIZED STEEL PIPE AND SHALL BE 1 3/4" SQUARE WEIGHING A MINIMUM OF 3 LBS./FT. POSTS SHALL BE POSITIONED SO THAT THE BOTTOM BLADE IS 7 FEET ABOVE GRADE.
- POSTS FOR END OF ROADWAY SIGN TO BE 8' LONG AND INSTALLED A MINIMUM OF 4' FROM ROADWAY TO BOTTOM OF SIGN.
- SIGN BLANKS FOR TRAFFIC CONTROL SIGNS: SIGN BLANKS SHALL BE FABRICATED FROM 0.080" ALUMINUM ALLOY 6063-T6 CONFORMING TO THE REQUIREMENTS OF SUBSECTION 1627 OF THE STANDARD SPECIFICATIONS.
- 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 CONICAL SET SCREWS. THE BLADES SHALL BE ORIENTED PARALLEL TO THE STREET.
- 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.
- FASTENERS: ALL STEEL FASTENERS FOR TRAFFIC CONTROL SIGNS SHALL BE GALVANIZED AND SHALL CONFORM TO THE REQUIREMENTS OF SUBSECTION 1614 OF THE STANDARD SPECIFICATIONS.
- REFLECTIVE SHEETING: REFLECTIVE SHEETING SHALL BE A MINIMUM OF HIGH INTENSITY PRISMATIC.
- PROCESS INK: ALL PROCESS INK SHALL CONFORM TO THE REQUIREMENTS OF SUBSECTION 2202 OF THE STANDARD SPECIFICATIONS.
- DETAILS - SNS: THE REFLECTIVE SHEETING FOR THE 9" STANDARD SIZE SNS IS TO BE THE HIGHWAY GREEN BACKGROUND WITH SILVER-WHITE #2 COPY WITH 6" UPPER CASE AND 4 1/2" LOWER CASE PRIMARY COPY AND SUFFIX COPY. BOTH SERIES "C". FACES TO TRIM TO A 8 1/2". (SEE DETAIL A.) THE REFLECTIVE SHEETING FOR THE 9" METRO SIZE SNS IS TO BE THE HIGHWAY GREEN BACKGROUND WITH SILVERWHITE #2 COPY WITH 6" UPPER CASE AND 4 1/2" LOWER CASE PRIMARY COPY AND SUFFIX COPY, BOTH 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 BLOCK NUMBERS DISPLAYED BENEATH THE STREET NAME. IF BLOCK NUMBERS ARE NOT SHOWN ON THE PLANS THE CONTRACTOR SHALL CONTACT THE TRAFFIC ENGINEER AT 268-4501 PRIOR TO MANUFACTURING THE SIGN. 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.
- 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.



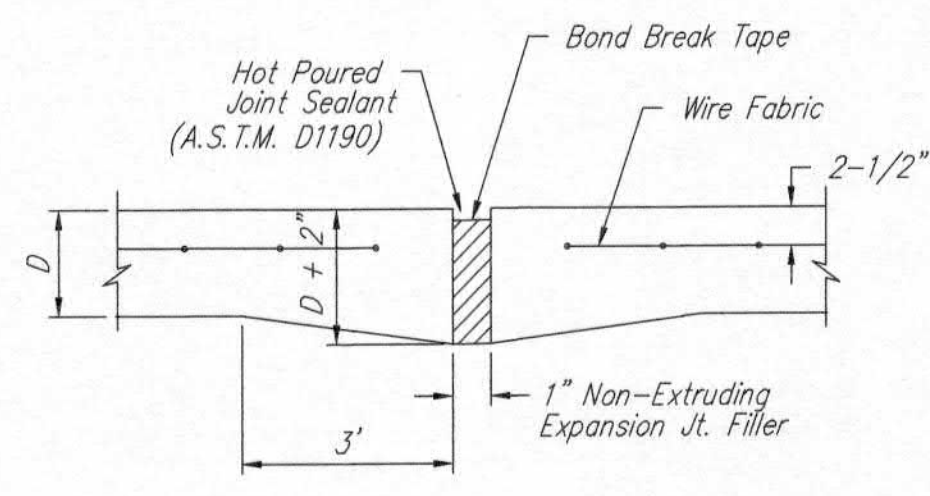
SIGN DETAILS

TRAFFIC ENGINEER APP'D 01/27/22
MIKE ARMOUR, P.E.

PROJECT NUMBER	ORG NUMBER	DATE

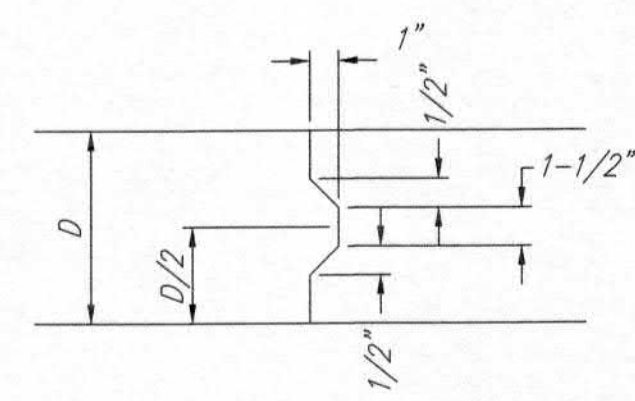
CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202-1620
(316) 268-4501

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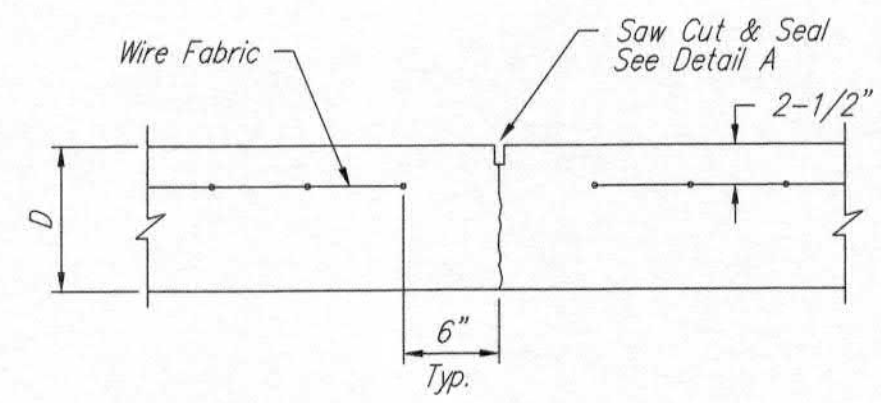


EXPANSION JOINT

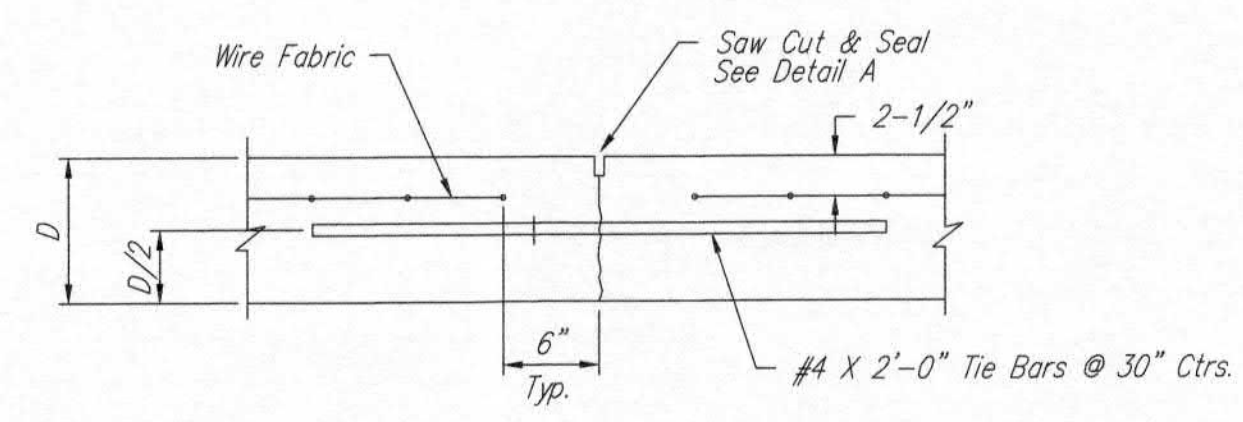
NOTE: Extra Thickness to be Subsidiary to Price of Square Yards Pavement



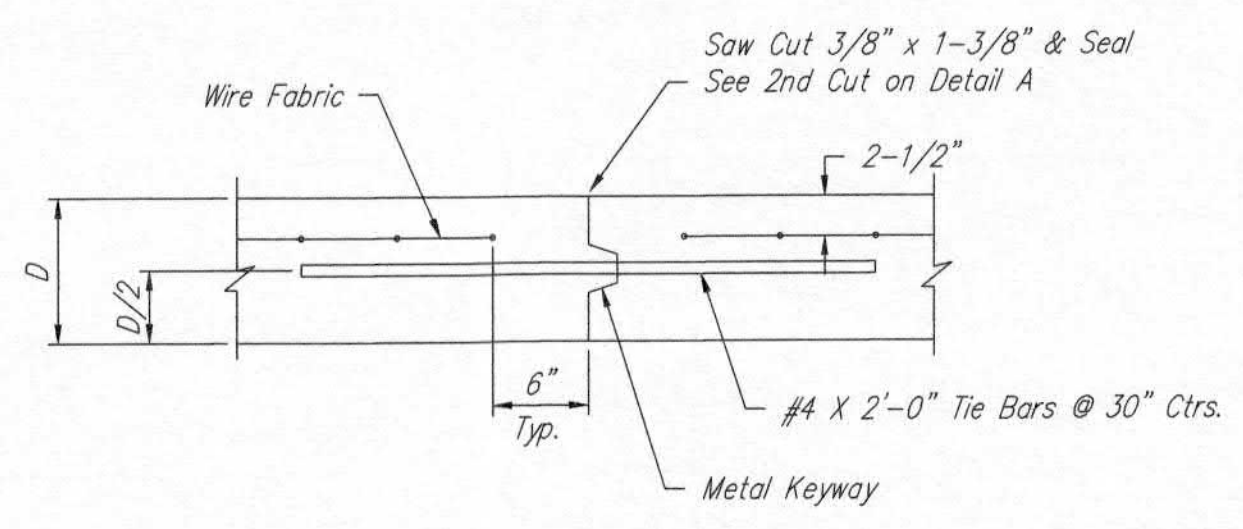
KEYWAY DETAIL



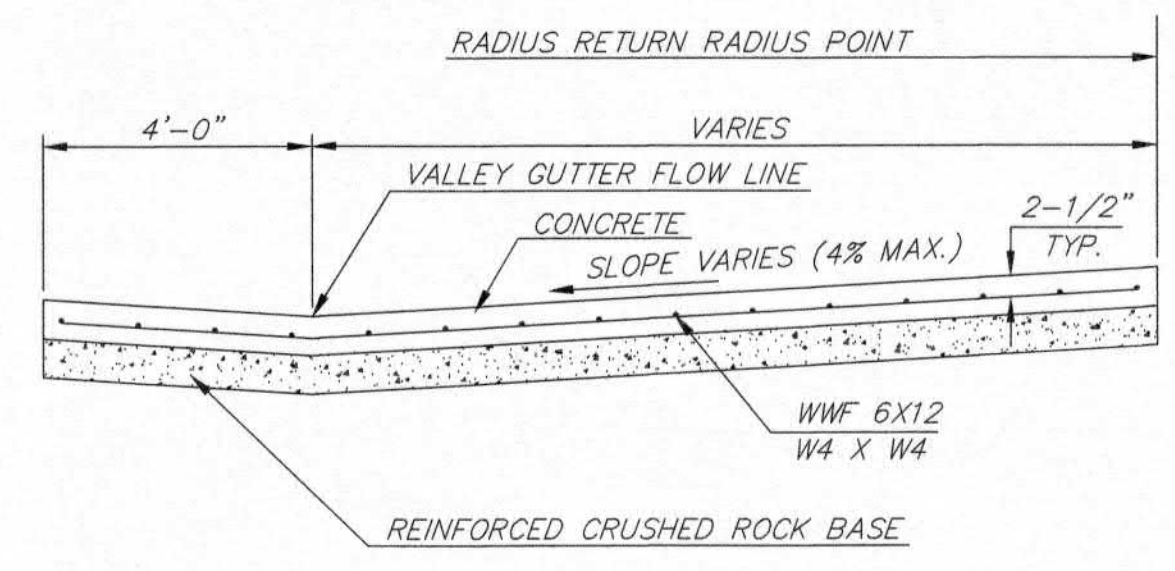
CONTRACTION JOINT DETAIL (C.J.)



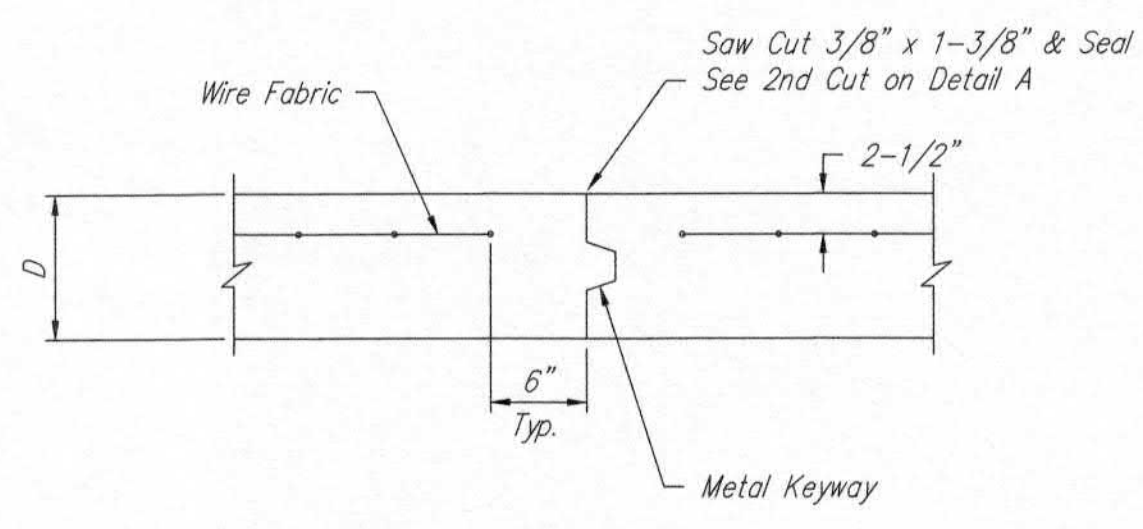
LONGITUDINAL JOINT DETAIL (L.J.)



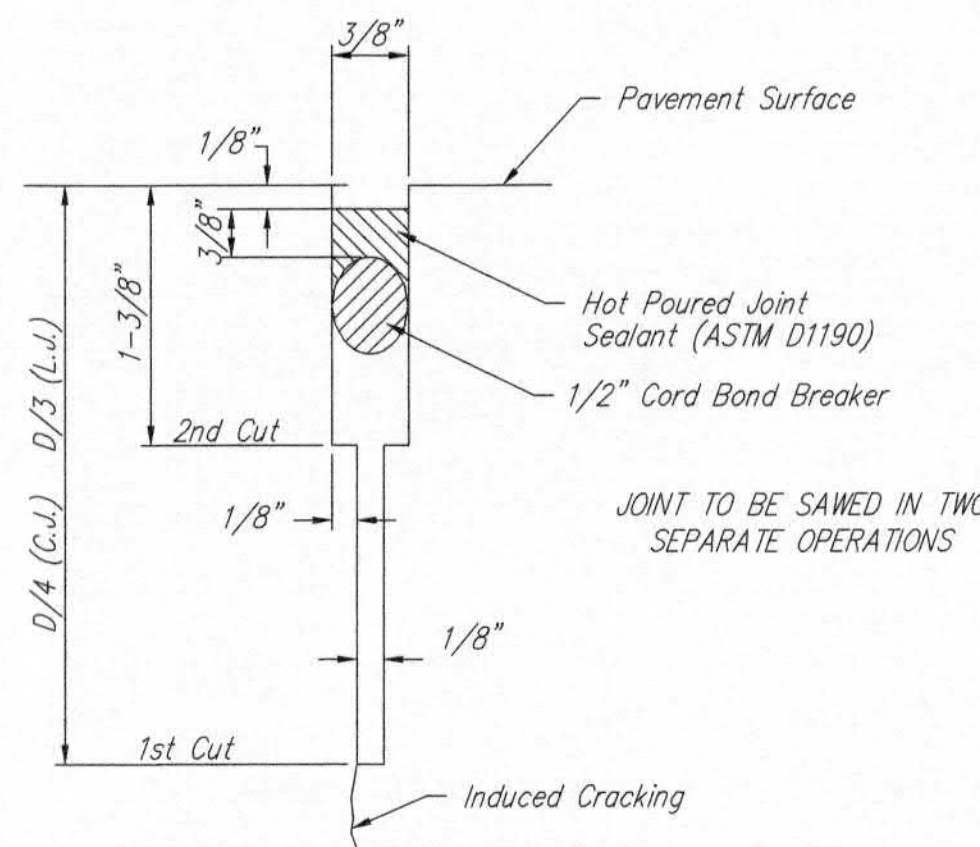
OPTIONAL LONGITUDINAL JOINT DETAIL (L.J.)



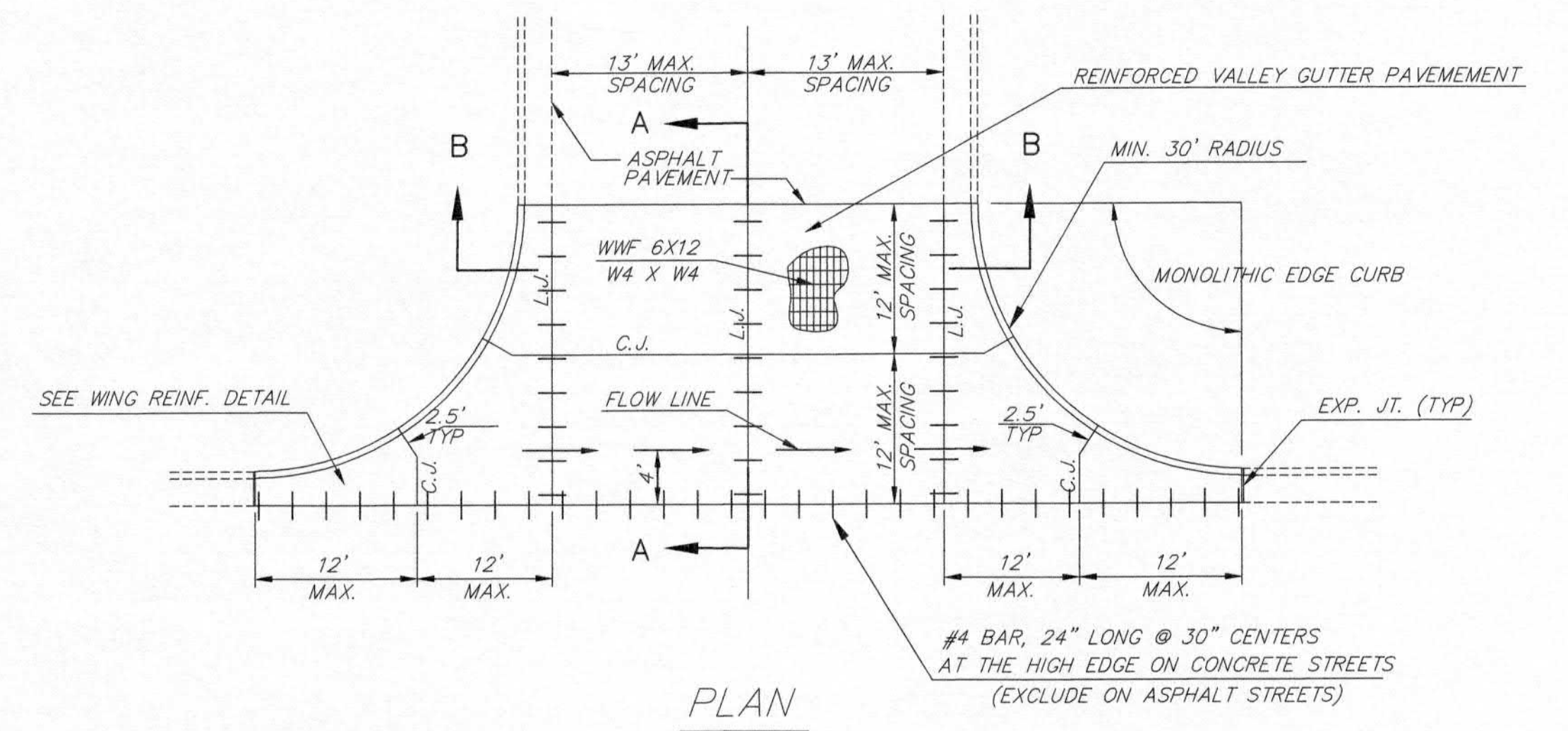
SECTION A-A



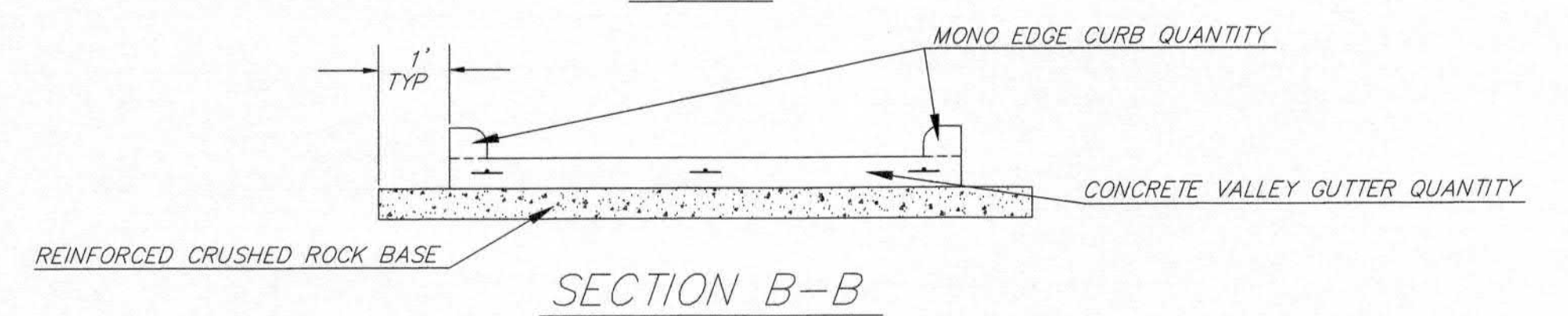
OPTIONAL CONTRACTION JOINT



SAW JOINT DETAIL (DETAIL A)

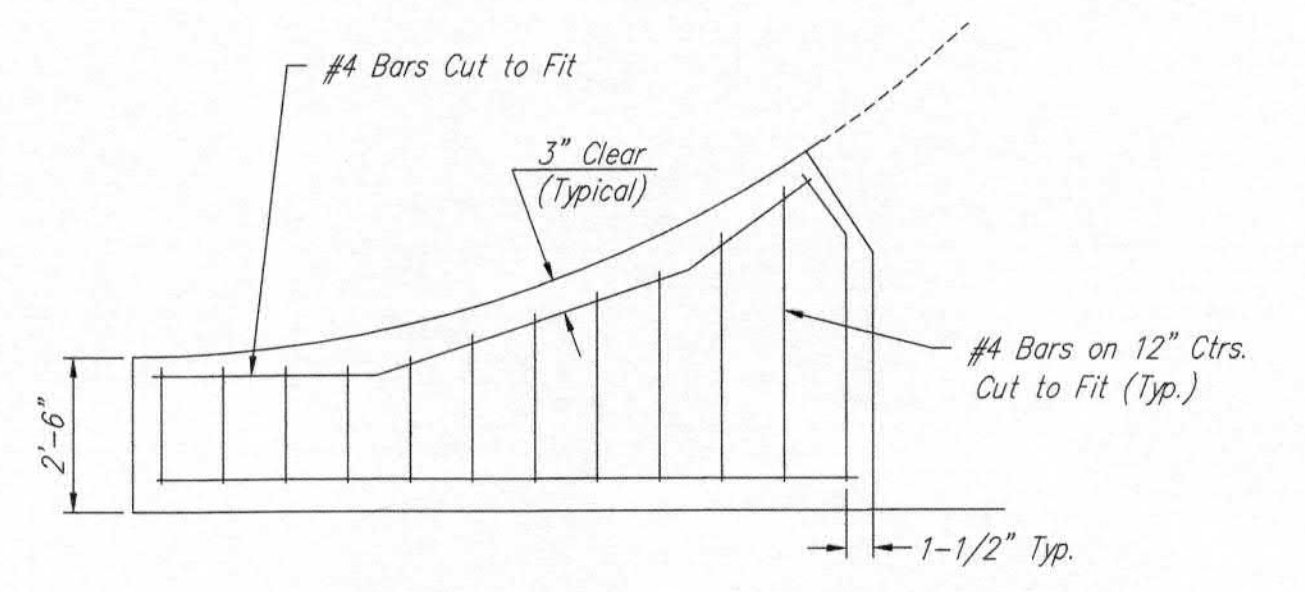


PLAN

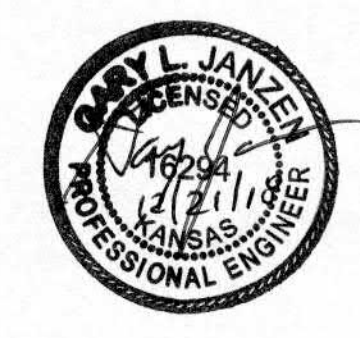


SECTION B-B

REINFORCED VALLEY GUTTER DETAIL

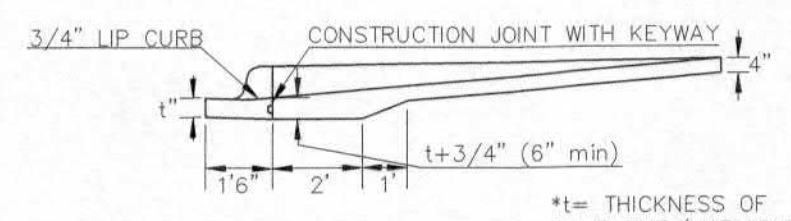
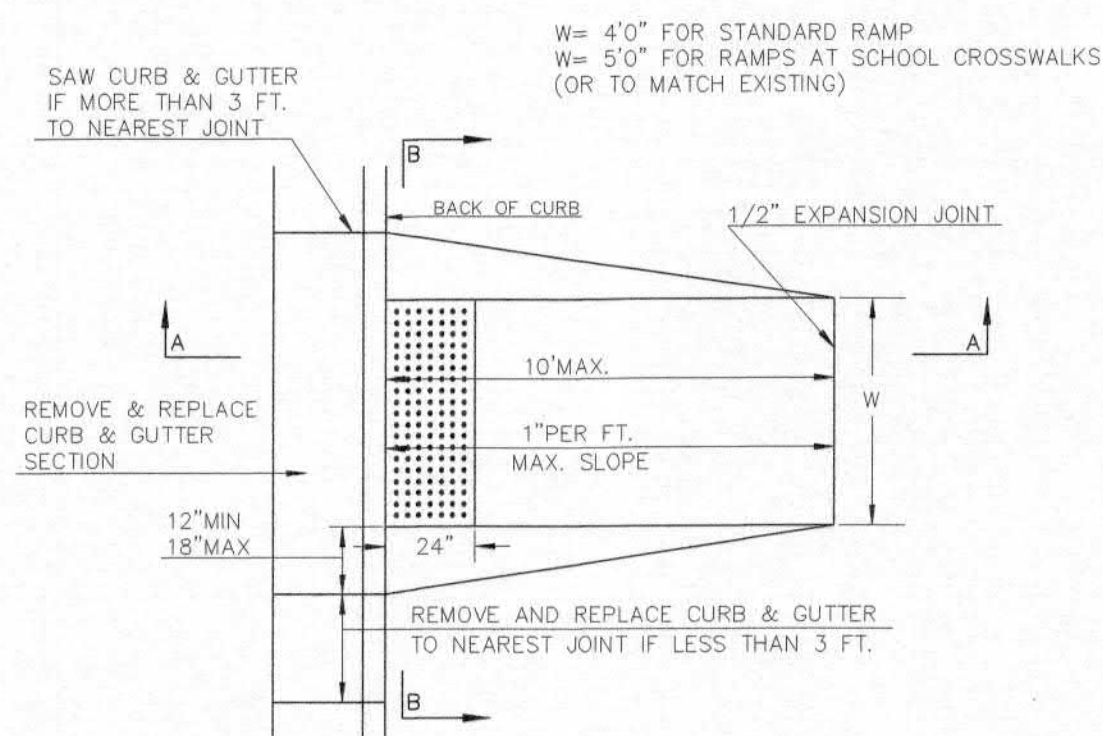


WING REINFORCING DETAIL

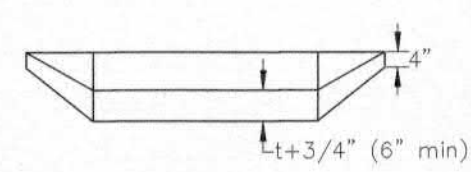


REVISION MAY 2017		SECTION B-B, ROCK EXTENDED ONE FOOT BEYOND PAVEMENT	
VALLEY GUTTER DETAILS			
CITY ENGINEER GARY JANZEN, P.E.			
PROJECT NUMBER	OCA NUMBER	DATE	
CITY ENGINEER'S OFFICE CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202-1620 (316) 268-4501		SHEET 12 of 21	

STANDARD WHEELCHAIR RAMP CONSTRUCTION DETAIL FOR STREETS WITH COMBINED CURB & GUTTER (TYPE A)



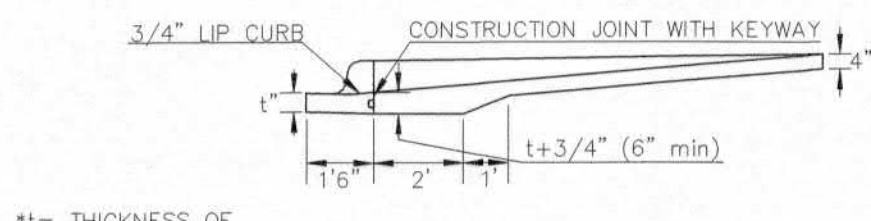
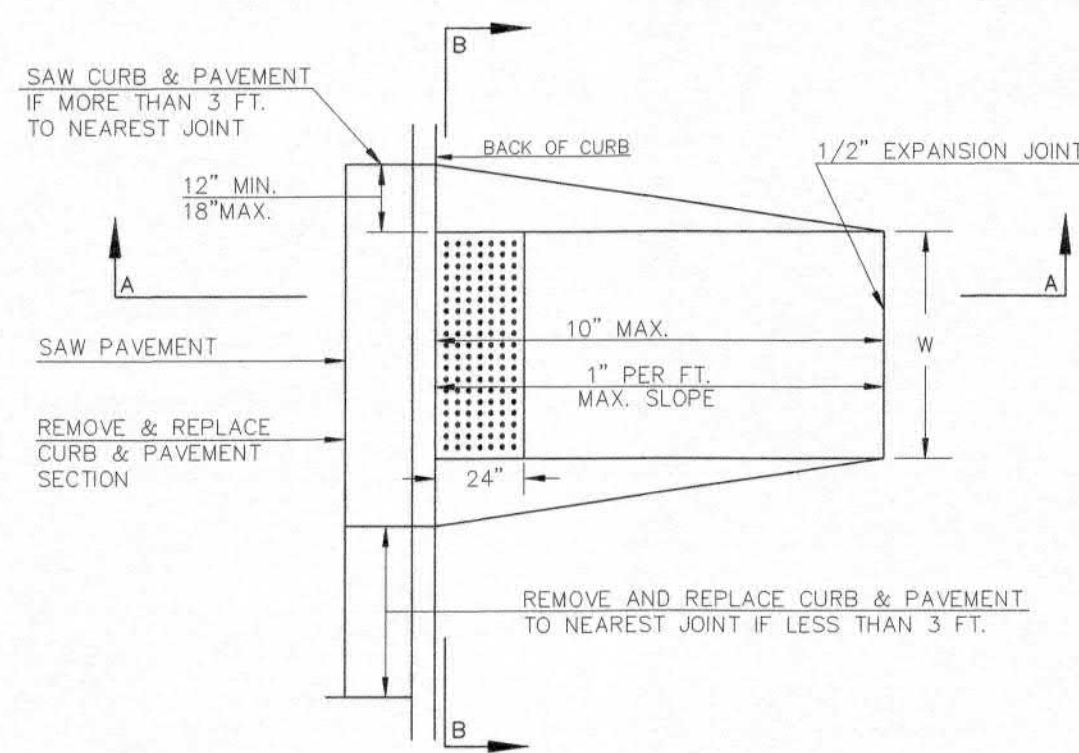
SECTION A-A



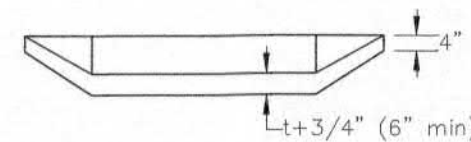
SECTION B-B

STANDARD WHEELCHAIR RAMP CONSTRUCTION DETAIL FOR CONCRETE STREETS WITH MONOLITHIC CURB (TYPE A)

W= 4'0" FOR STANDARD RAMP
W= 5'0" FOR RAMPS AT SCHOOL CROSSWALKS (OR TO MATCH EXISTING)

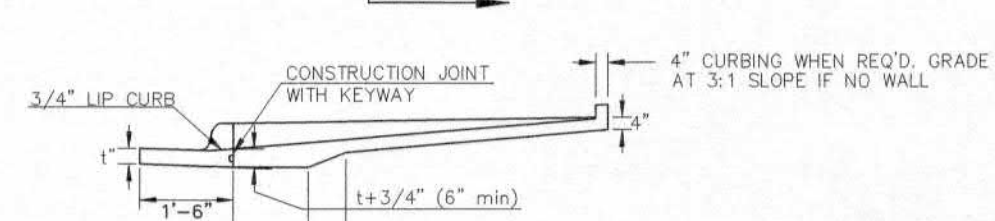
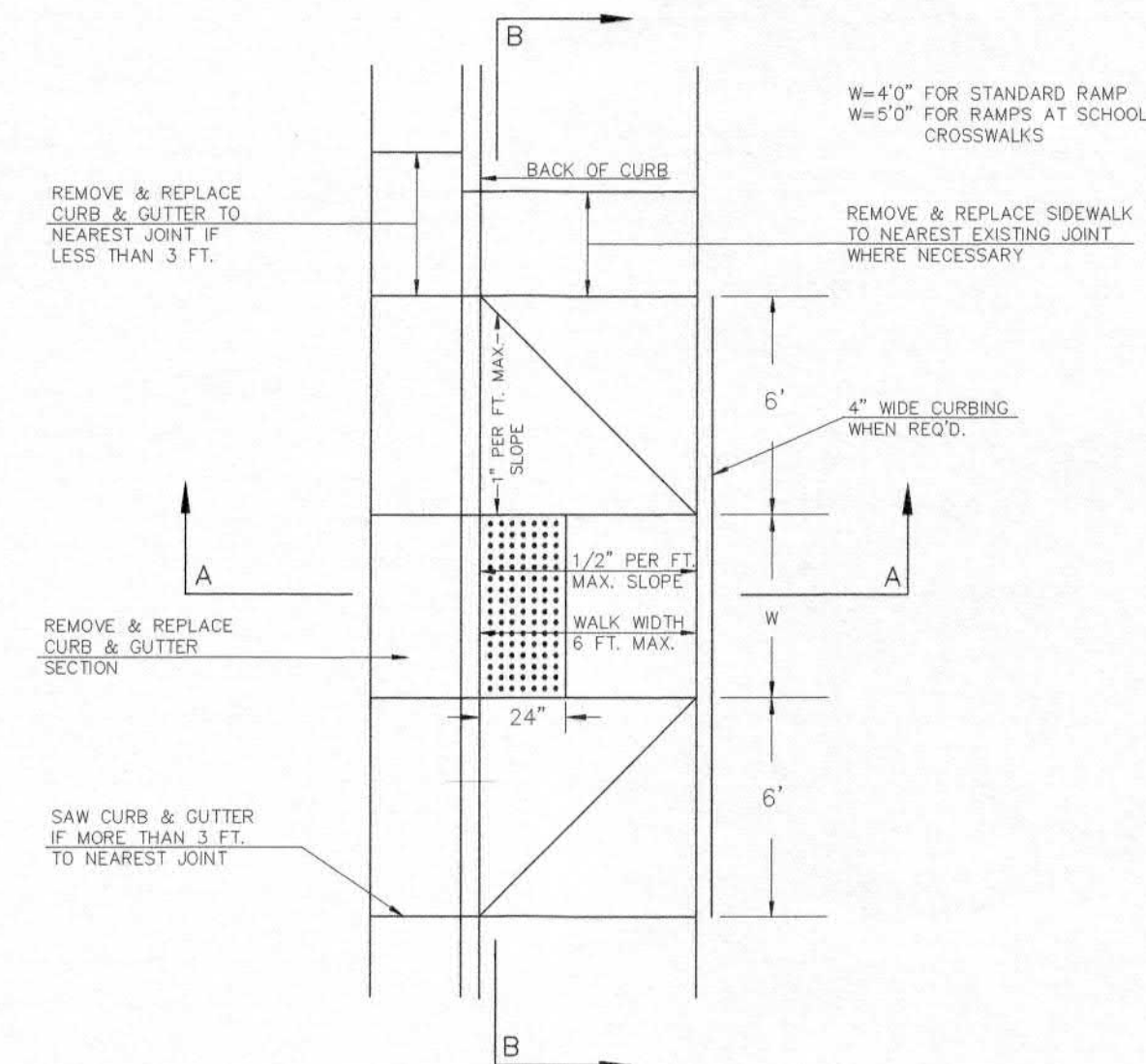


SECTION A-A

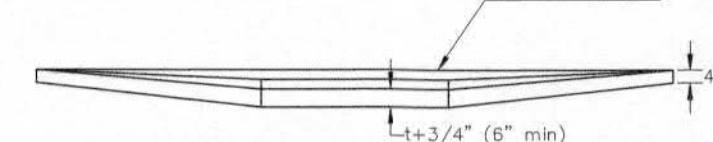


SECTION B-B

STANDARD WHEELCHAIR RAMP CONSTRUCTION DETAIL FOR STREETS WITH COMBINED CURB & GUTTER AND FULL WALK (TYPE B)

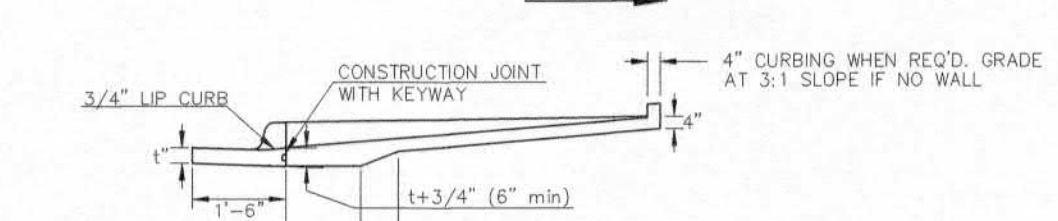
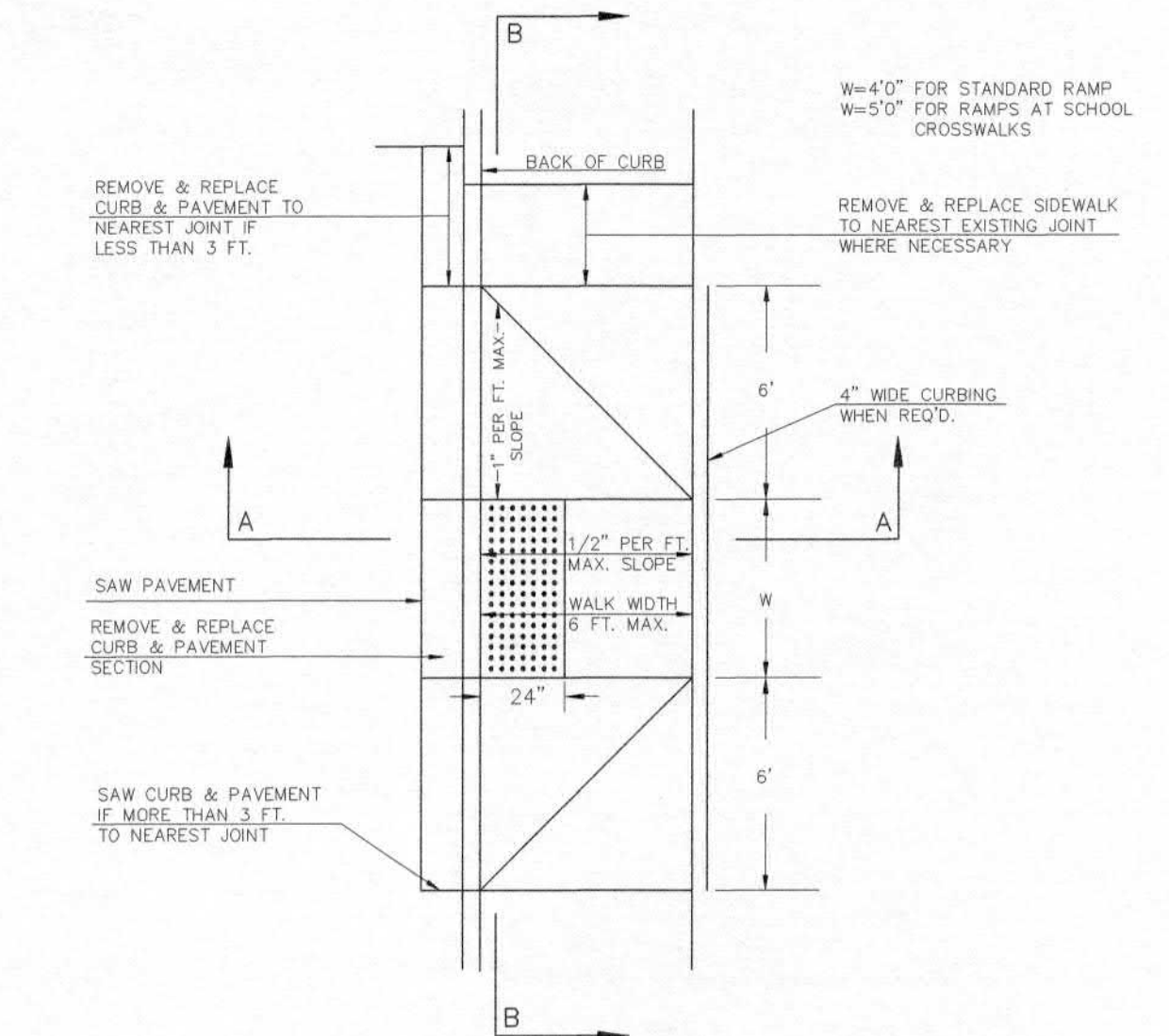


SECTION A-A



SECTION B-B

STANDARD WHEELCHAIR RAMP CONSTRUCTION DETAIL FOR STREETS WITH MONOLITHIC CURB AND FULL WALK (TYPE B)

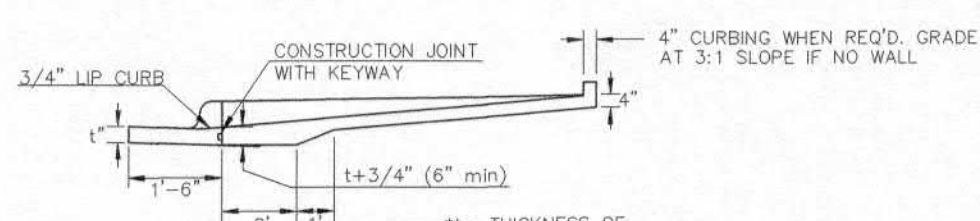
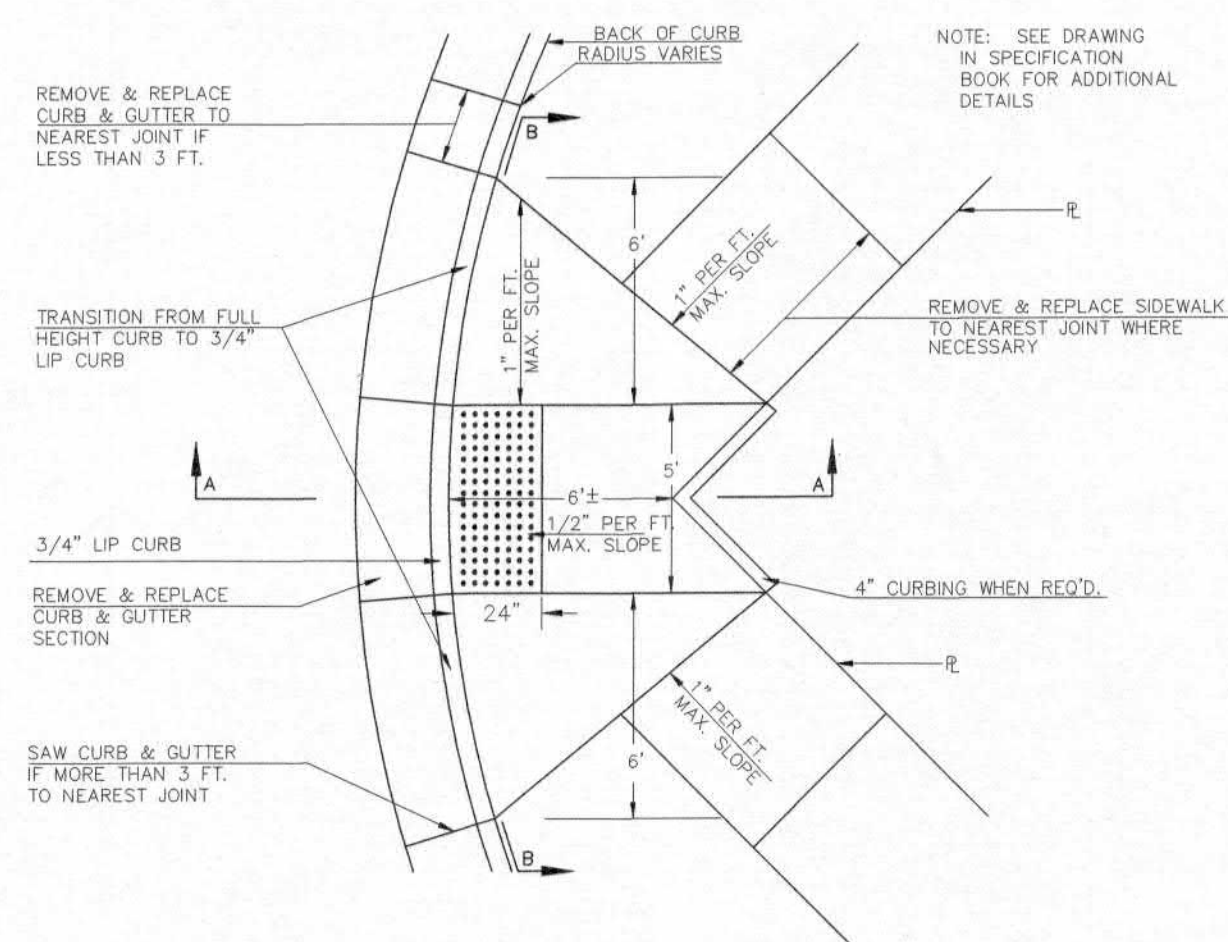


SECTION A-A

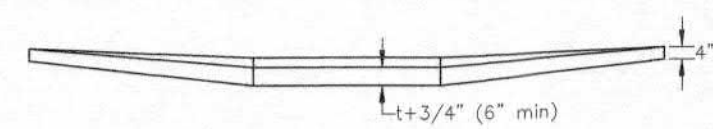


SECTION B-B

STANDARD WHEELCHAIR RAMP CONSTRUCTION DETAIL FOR STREET WITH COMBINED CURB AND GUTTER ON RADIUS WITH 6'± FROM BACK OF CURB TO PROPERTY CORNER (TYPE C)

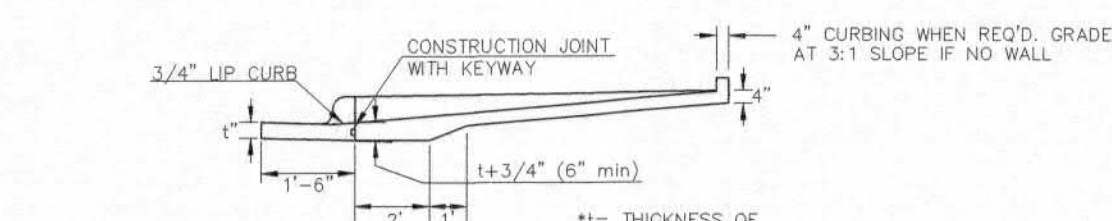
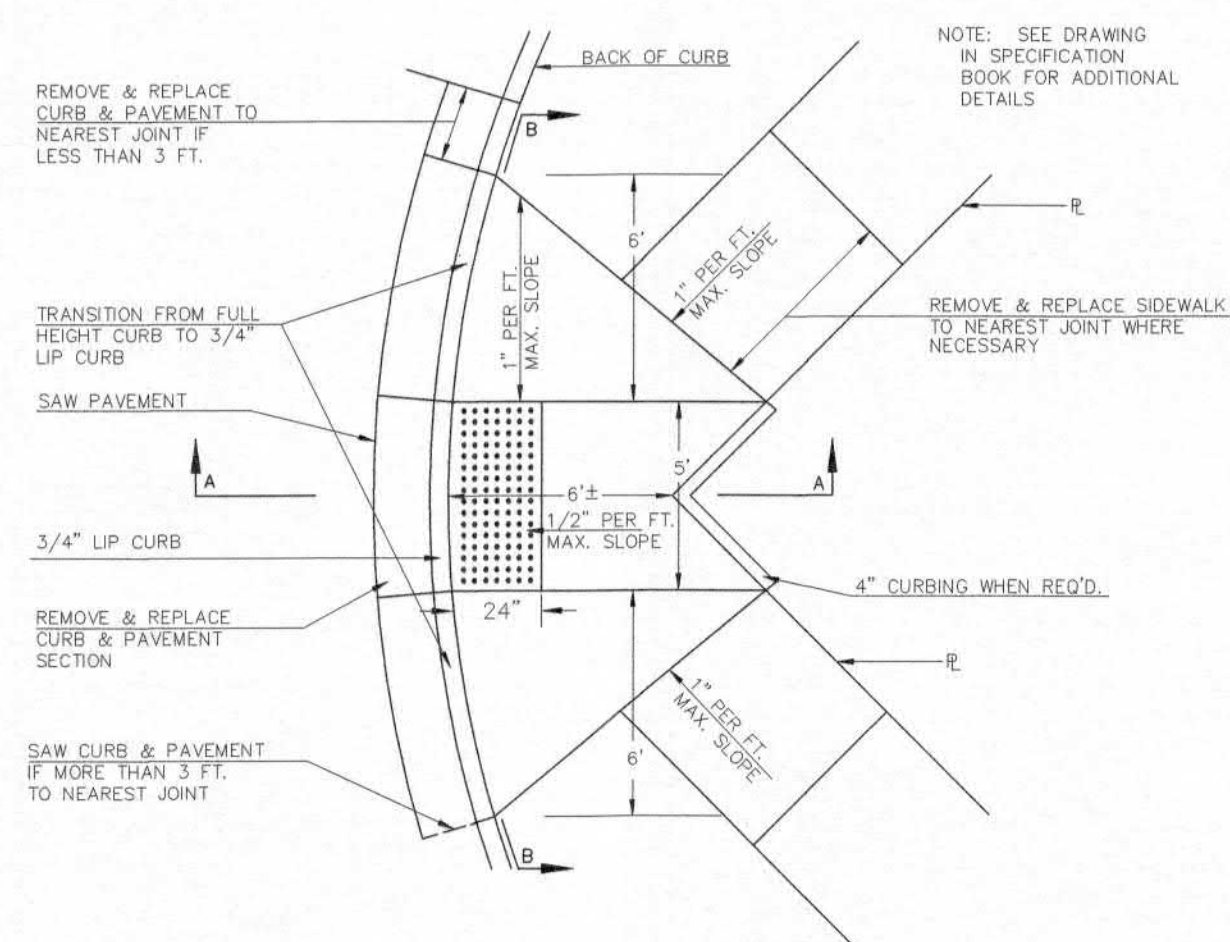


SECTION A-A

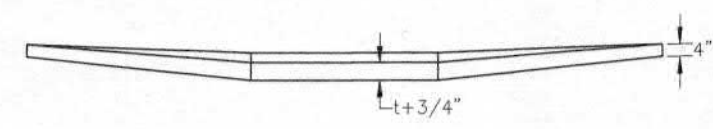


SECTION B-B

STANDARD WHEELCHAIR RAMP CONSTRUCTION DETAIL FOR STREET WITH MONOLITHIC CURB ON RADIUS WITH 6'± FROM BACK OF CURB TO PROPERTY CORNER (TYPE C)

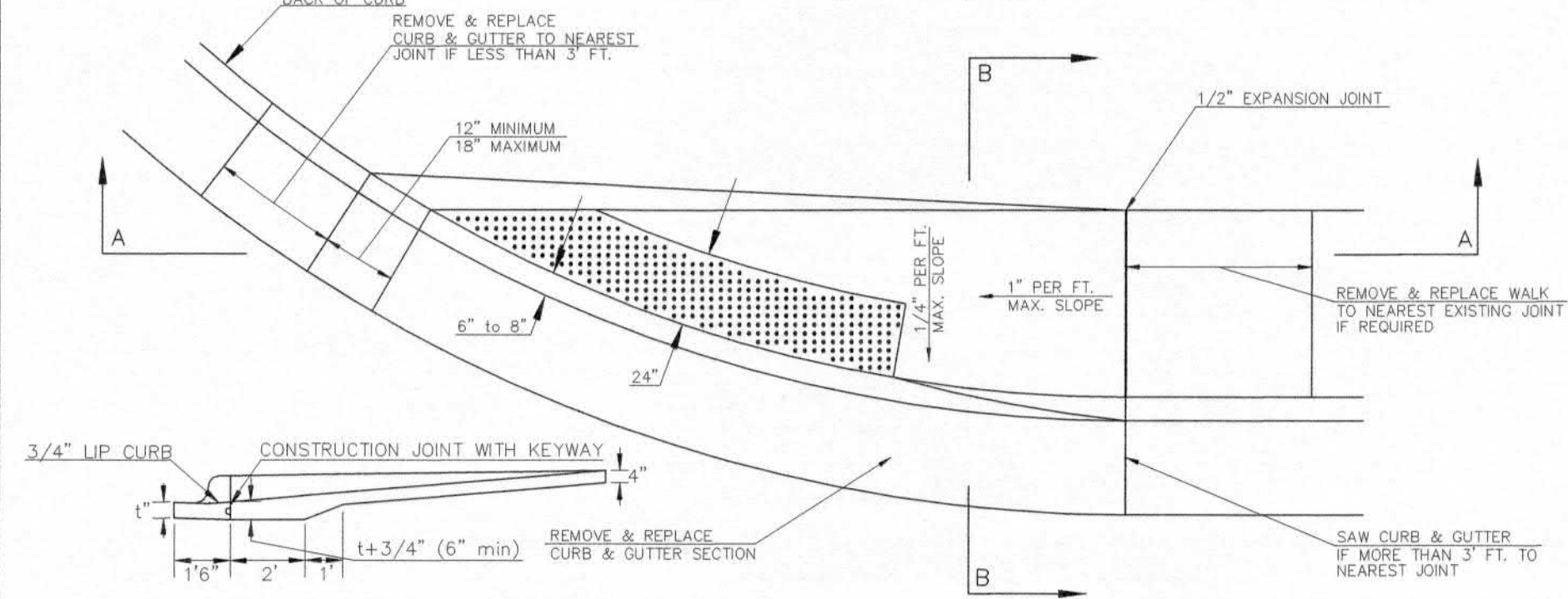


SECTION A-A



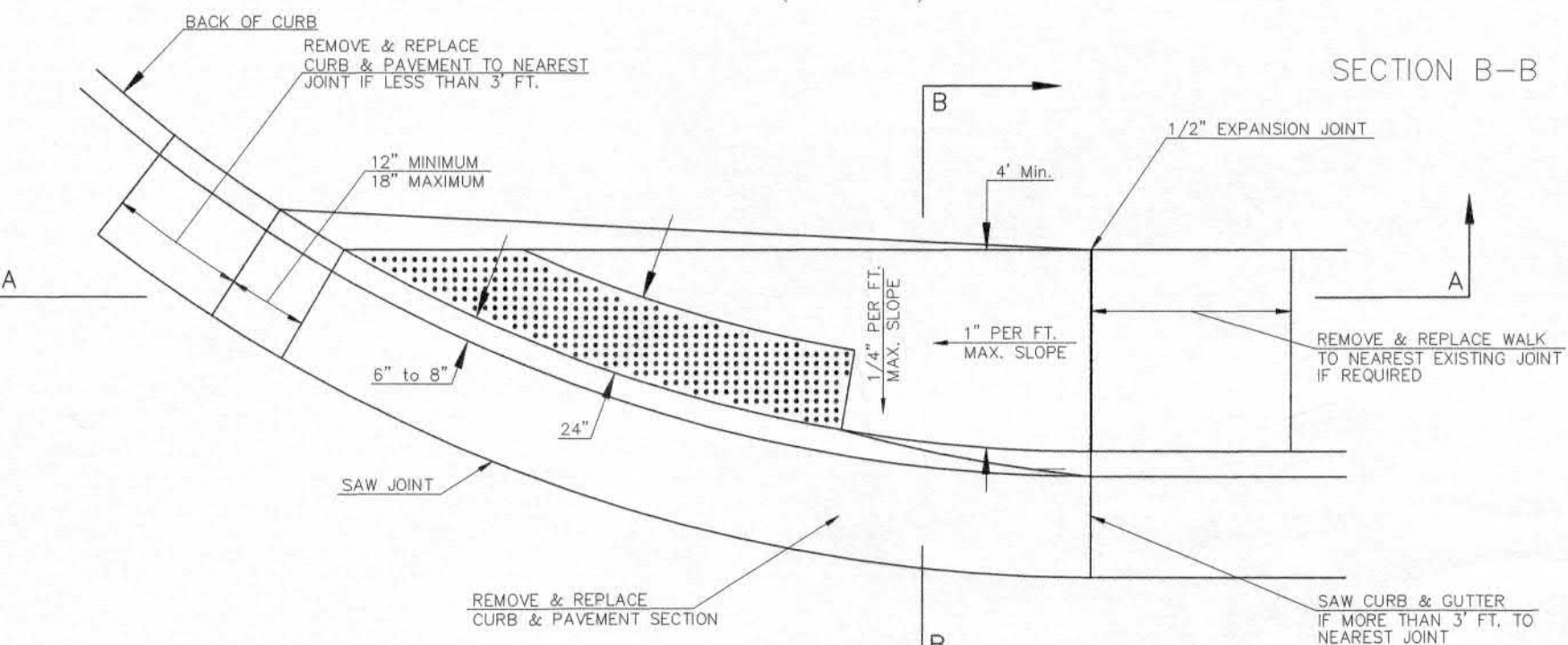
SECTION B-B

STANDARD WHEELCHAIR RAMP CONSTRUCTION DETAIL FOR STREETS WITH COMBINED CURB & GUTTER WITH ONE FULL SIDEWALK (TYPE D)

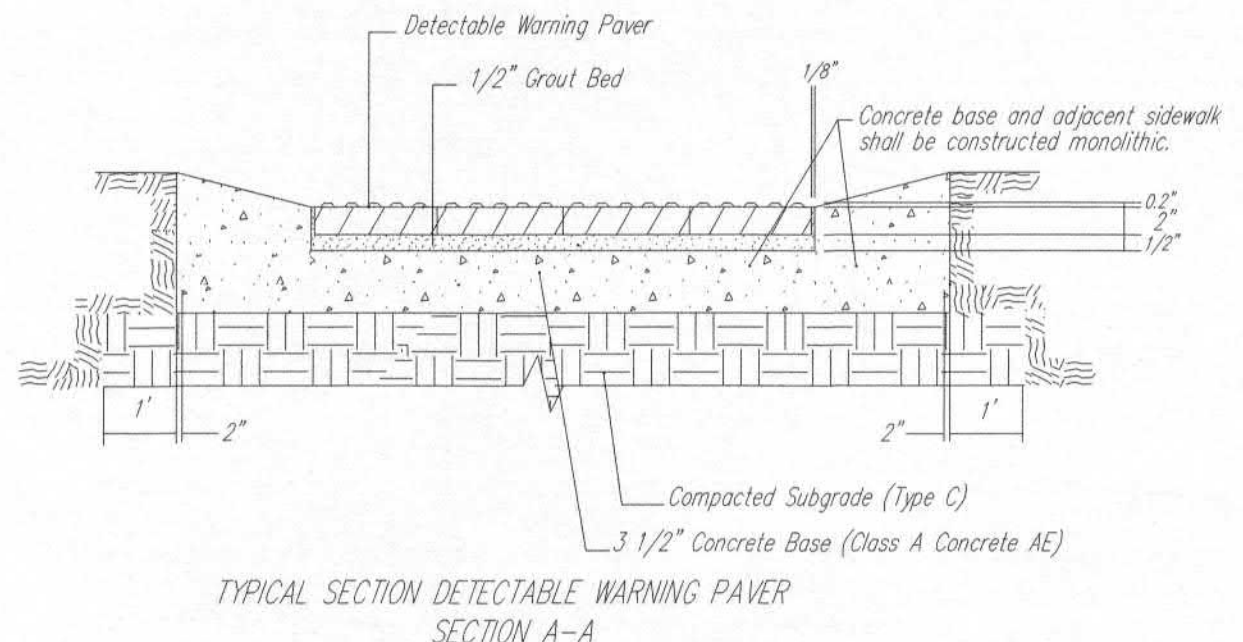


SECTION A-A

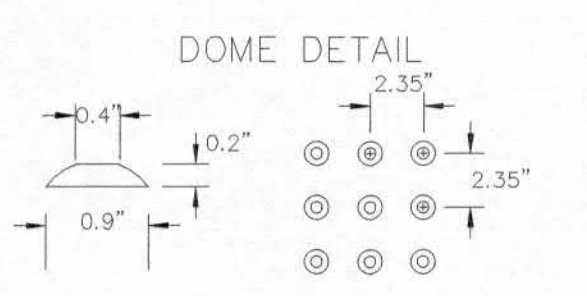
STANDARD WHEELCHAIR RAMP CONSTRUCTION DETAIL FOR STREETS WITH MONOLITHIC CURB WITH ONE FULL SIDEWALK (TYPE D)



SECTION B-B

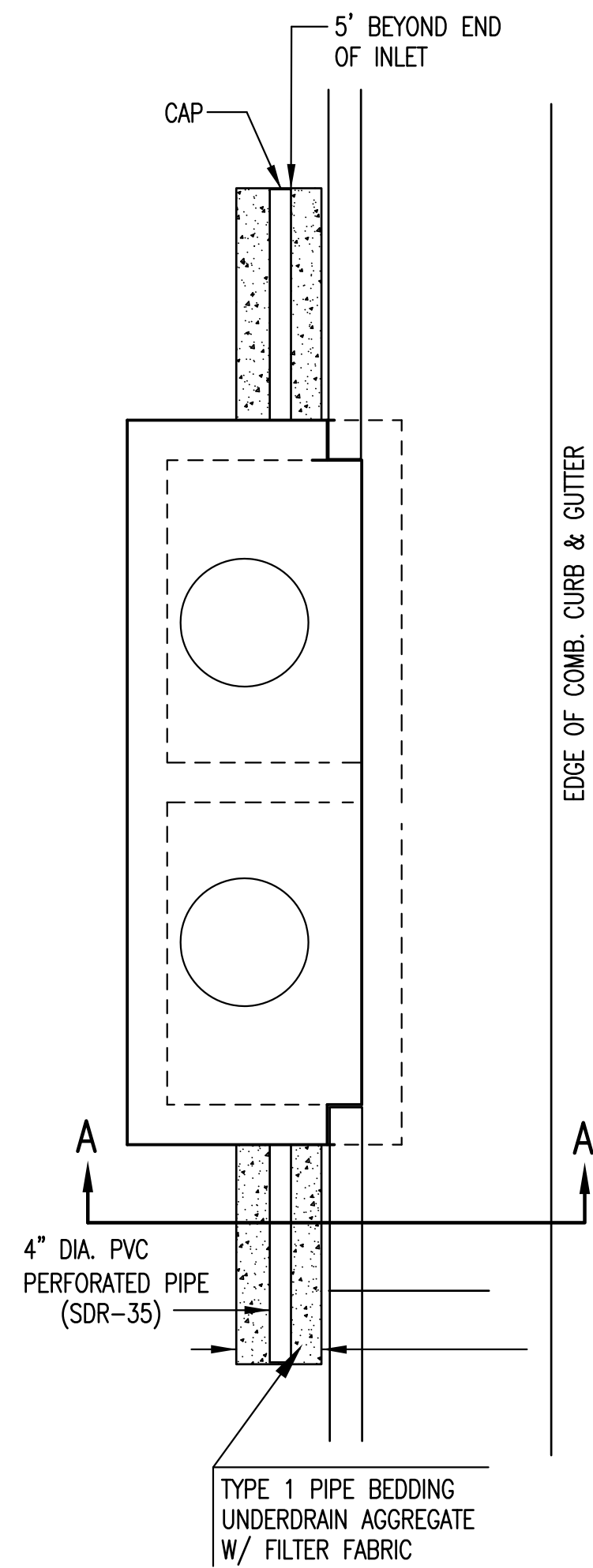


NOTE: HANOVER DETECTABLE WARNING PAVERS (OR AN APPROVED ALTERNATE) SHALL BE USED IN ALL WHEELCHAIR RAMPS. THE 11 3/4" RED 15' PAVER SHALL BE USED IN ALL APPLICATIONS.
HANOVER ARCHITECTURAL PRODUCTS
240 BENDER ROAD
HANOVER, PA 17331
1-717-637-0500
www.hanoverpavers.com

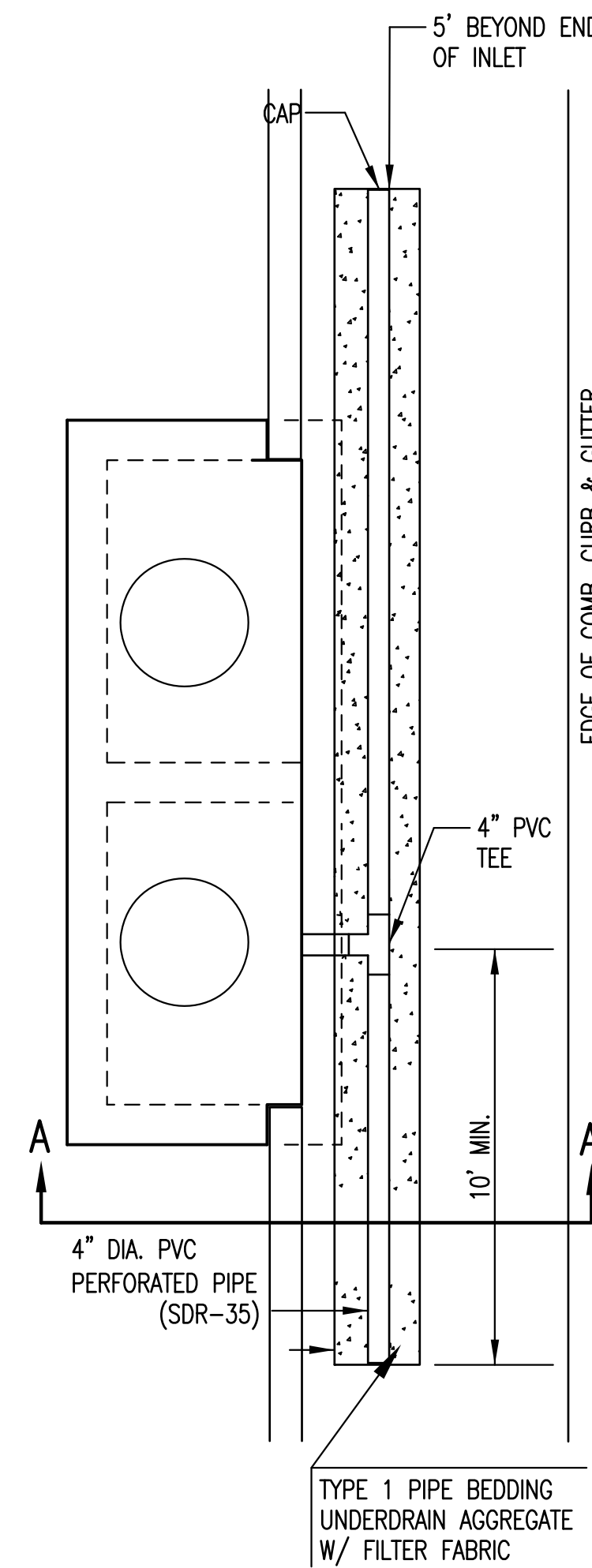


WHEELCHAIR RAMP DETAILS WITH DETECTABLE WARNING		
CITY ENGINEER GARY JANZEN, P.E.		
PROJECT NUMBER	OCA NUMBER	DATE
		08/2013
CITY ENGINEER'S OFFICE CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202-1620 (316) 268-4501		SHEET 13 of 27

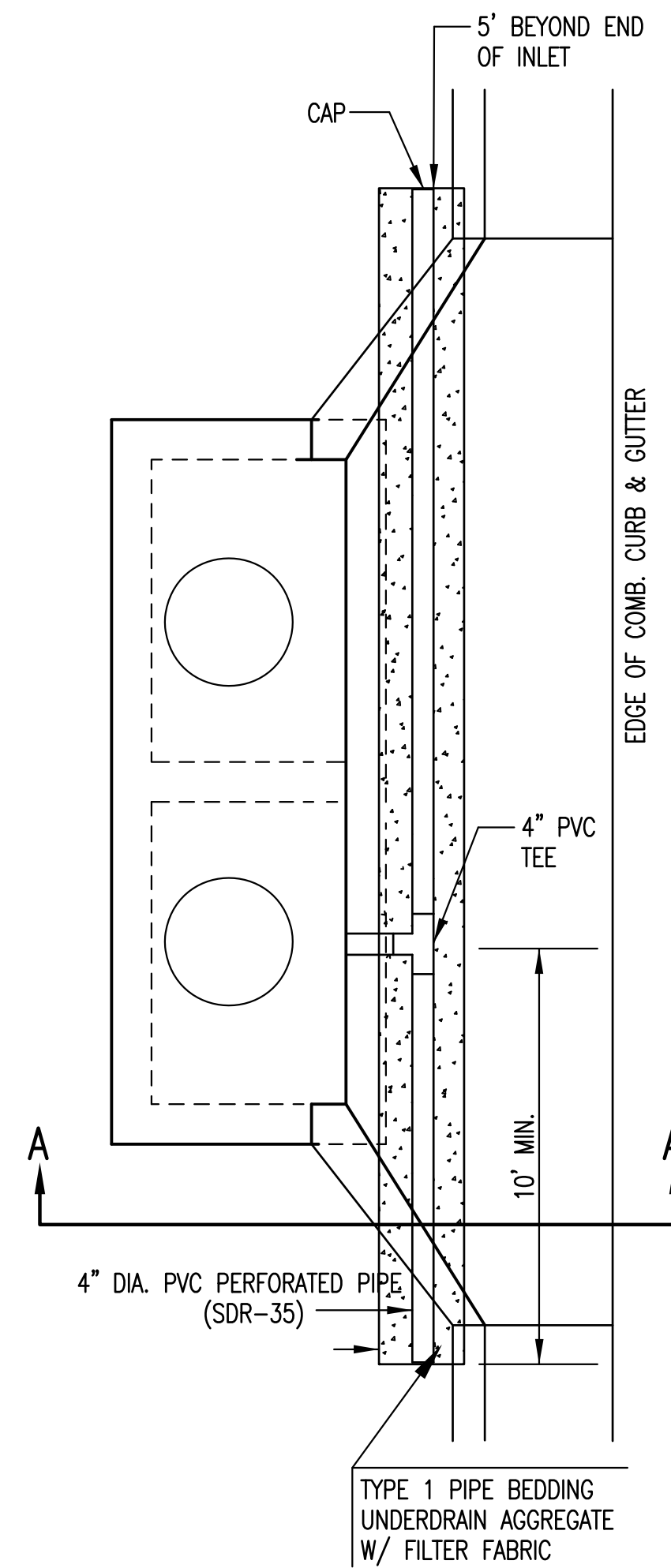
PAVEMENT UNDERDRAIN SHALL BE INSTALLED ON ALL CURB INLETS.



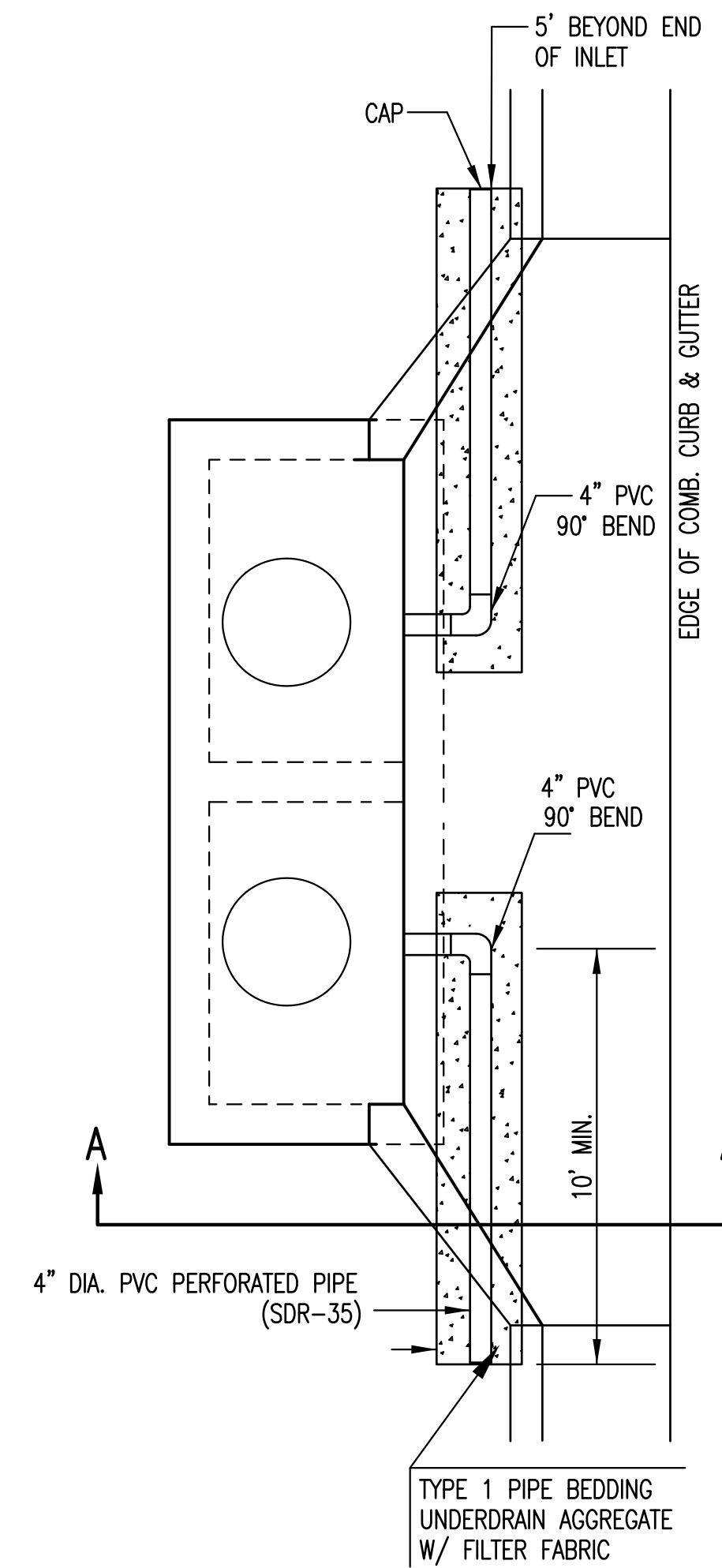
**TYPE 1
OPTION 1**



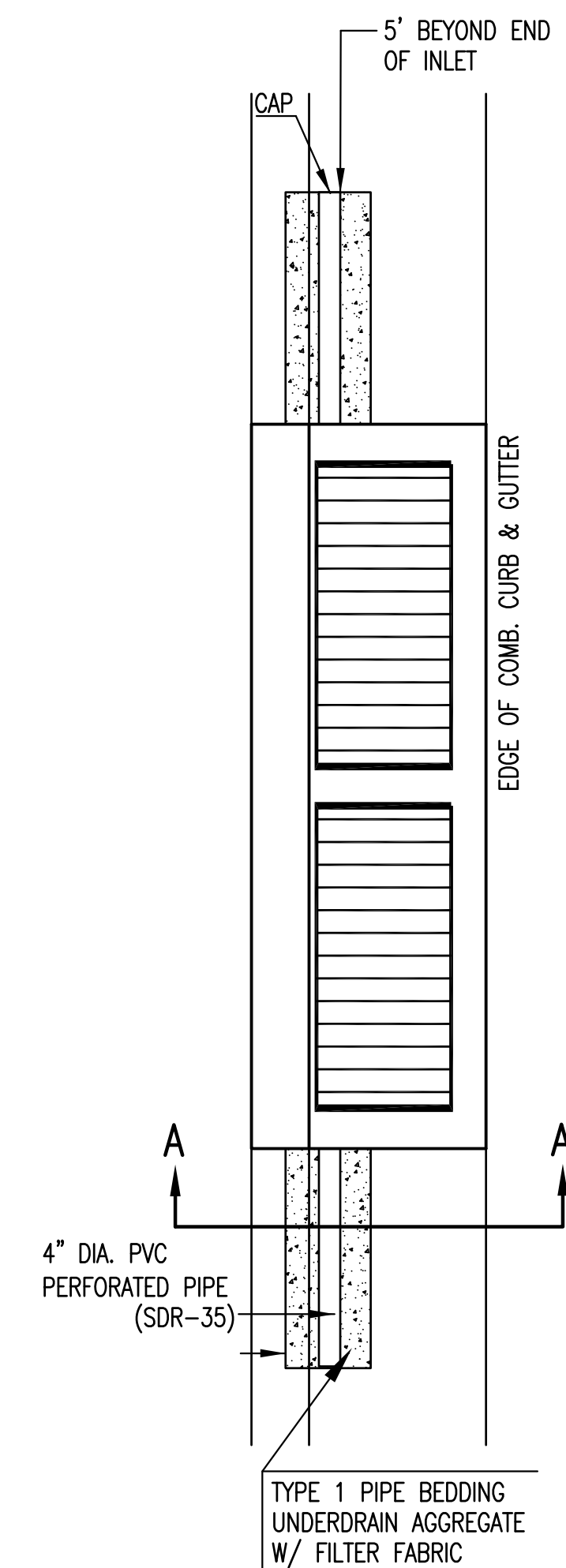
**TYPE 1
OPTION 2**



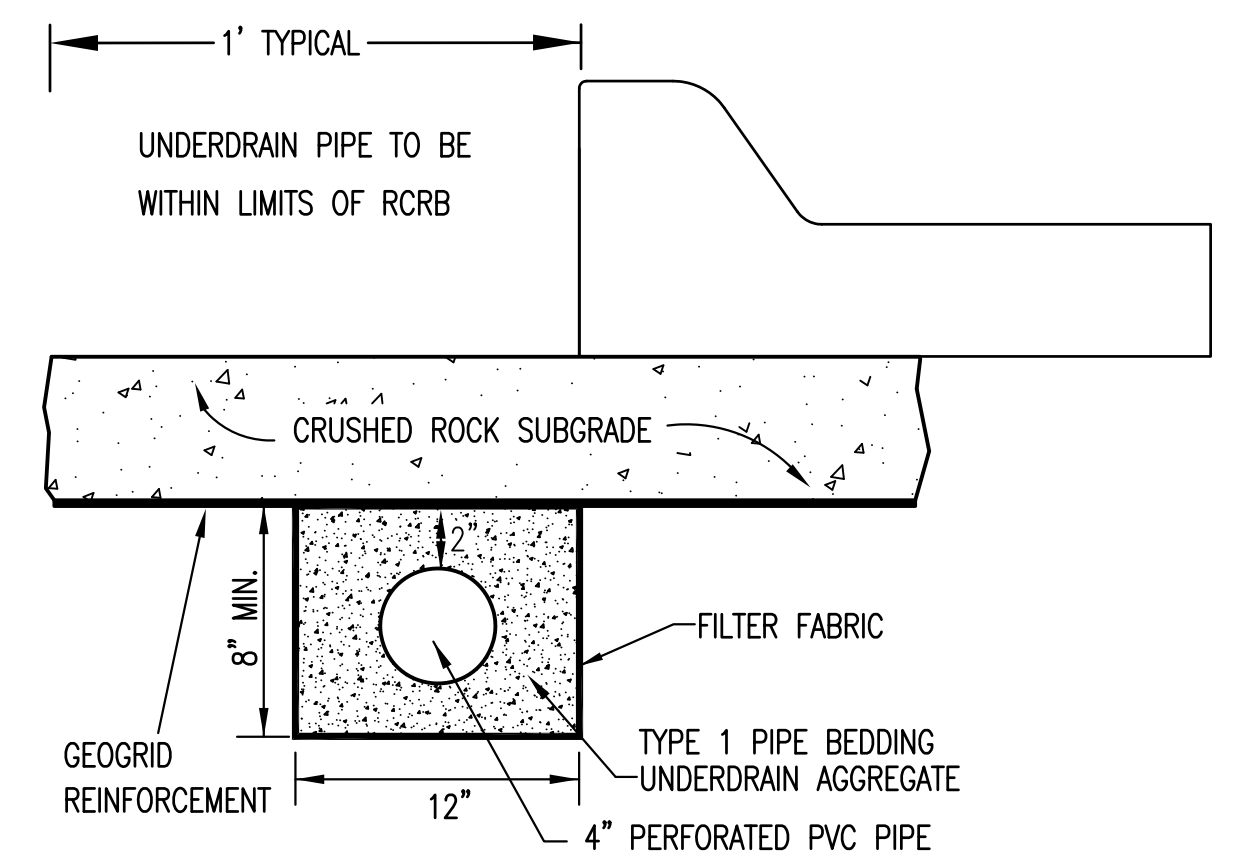
**TYPE 1-A INLET
OPTION 1**



**TYPE 1-A INLET
OPTION 2**



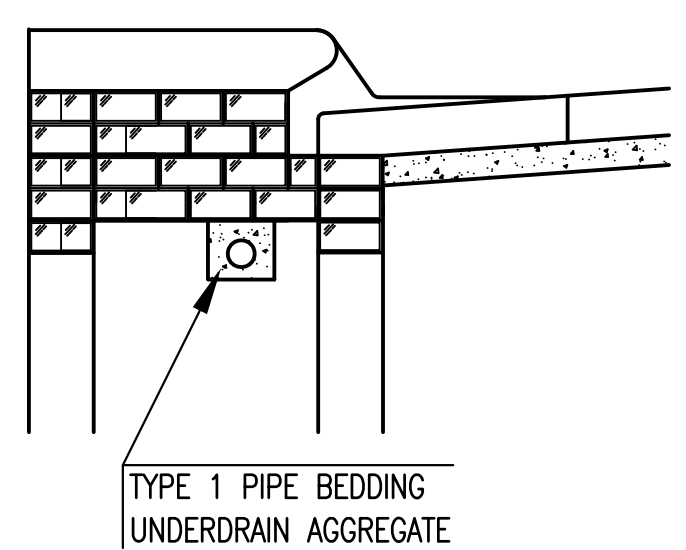
TYPE 2



SECTION A-A (TYPICAL)

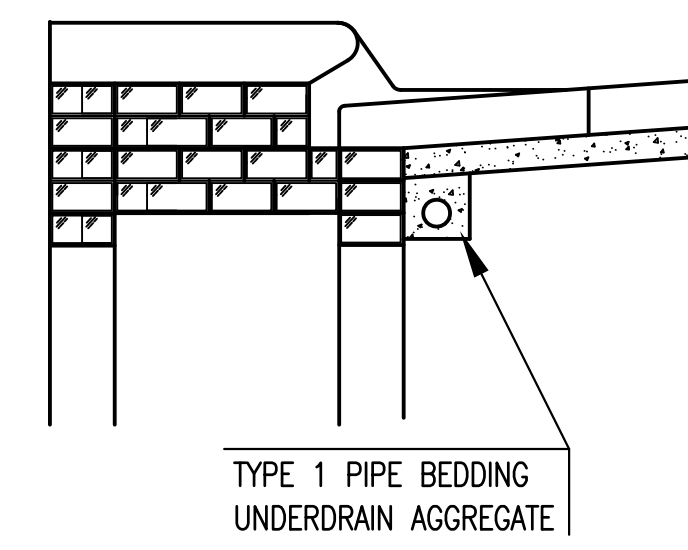
GENERAL NOTES

- PAVEMENT CONTRACTOR WILL BE REQUIRED TO INSTALL SDR 35, 4" PERFORATED DRAIN PIPE AND TEE AS INDICATED IN THE DETAILS.
- WHEN SWS CONSTRUCTED BY SEPARATE PROJECT, SWS CONTRACTOR SHALL INSTALL SDR 35, 4" DRAIN PIPE STUB ONLY THROUGH WALLS OF CURB INLETS AND CAP TO ALLOW FUTURE CONNECTION OF TEE AND ADDITIONAL DRAIN PIPE BY OTHERS.
- UNDERDRAIN PIPE SHALL BE PAID AS A MEASURED QUANTITY BY THE LINEAL FOOT.

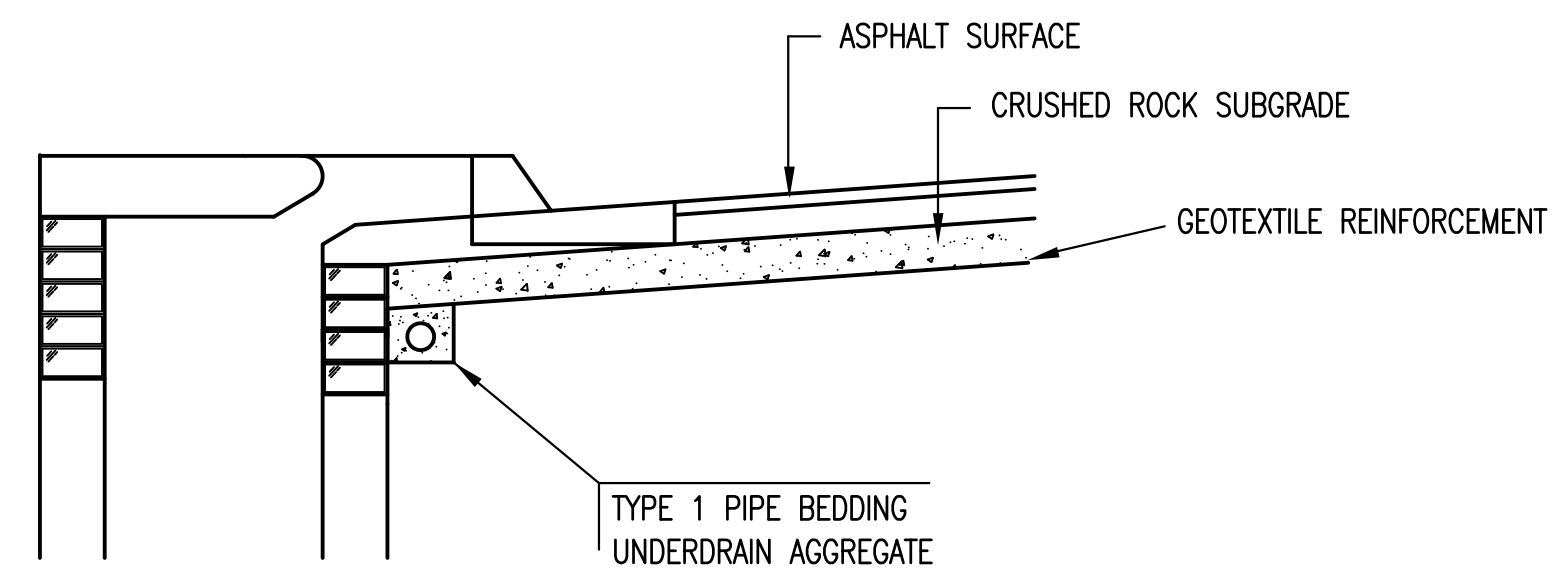


(MIN. 16 PERFORATIONS PER LIN. FT. @ 1/4" DIA.)
PERFORATIONS TO BE ON BOTTOM HALF

SECTION A-A



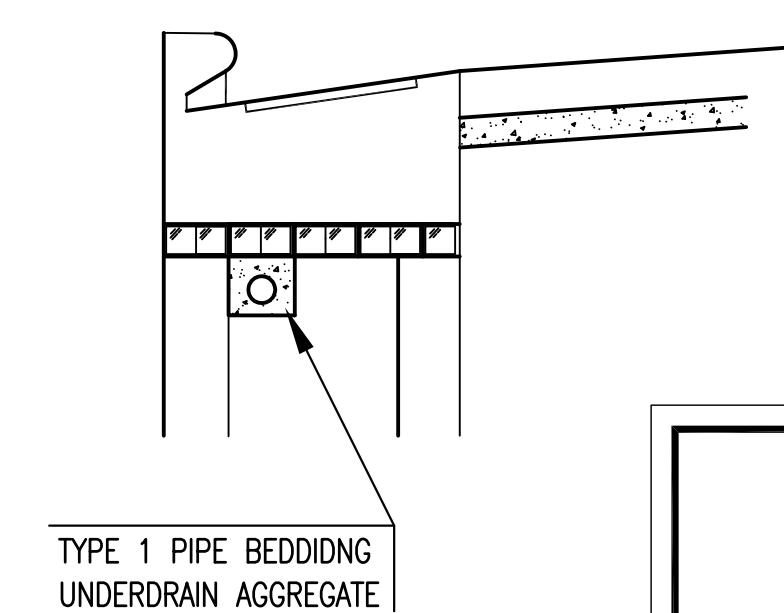
TYPE 1 PIPE BEDDING
UNDERDRAIN AGGREGATE



SECTION A-A

PAVEMENT UNDERDRAIN DETAIL

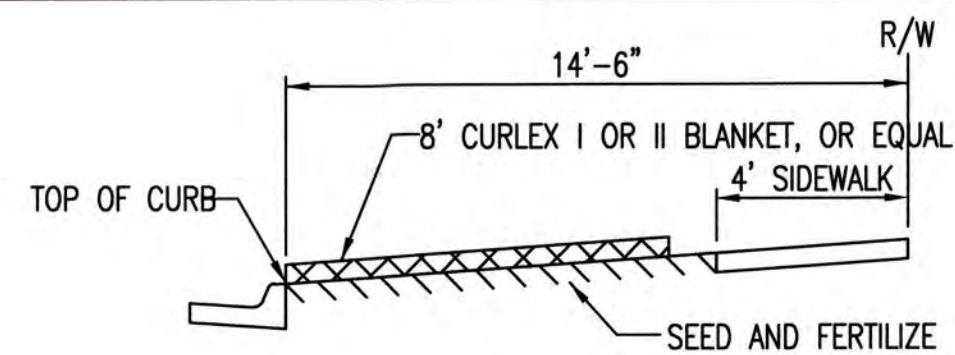
BID ITEM TO BE PROVIDED PER 4" PERFORATED UNDERDRAIN PIPE.



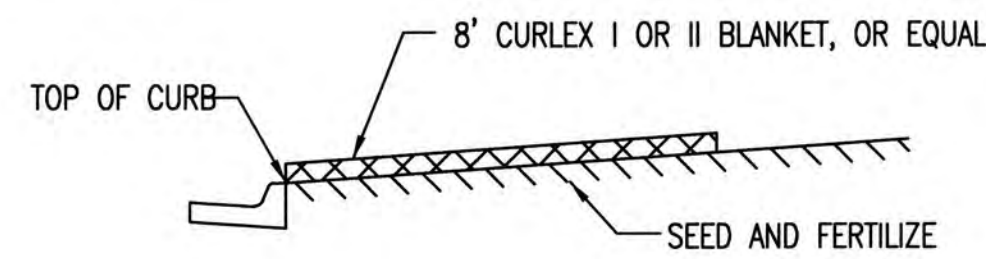
SECTION A-A

CITY OF WICHITA
PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

CURB INLET PAVEMENT UNDERDRAIN DETAIL		
CITY ENGINEER GARY JANZEN, P.E.		
PROJECT NUMBER	OCA NUMBER	DATE 10/2012
CITY ENGINEER'S OFFICE CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202-1620 (316) 268-4501		SHEET 14 of 27

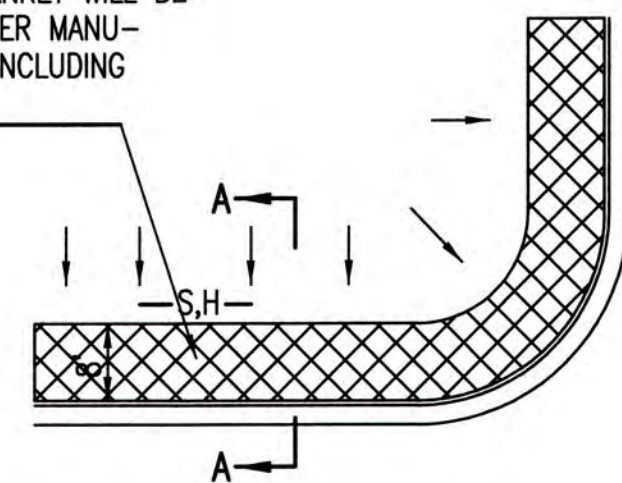


SECTION B-B

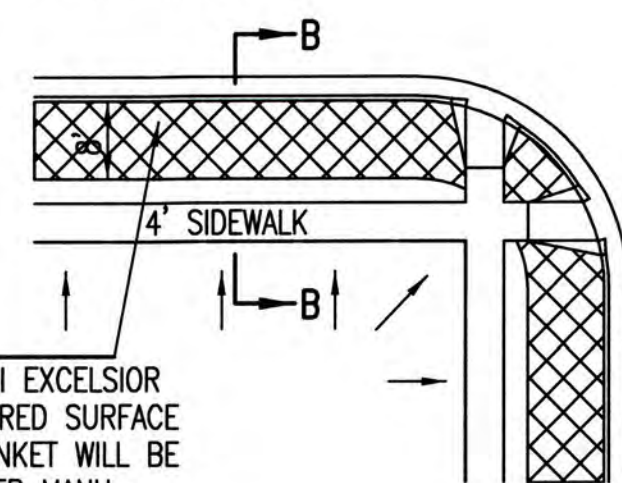


SECTION A-A

INSTALL 8" WIDE CURLEX I OR II EXCELSIOR BLANKET, OR EQUAL, ON PREPARED SURFACE BACK OF CURB. EDGE OF BLANKET WILL BE AT BACK OF CURB. INSTALL PER MANUFACTURERS RECOMMENDATION, INCLUDING STAPLES. (SEE DETAIL)



SOUTH STREET

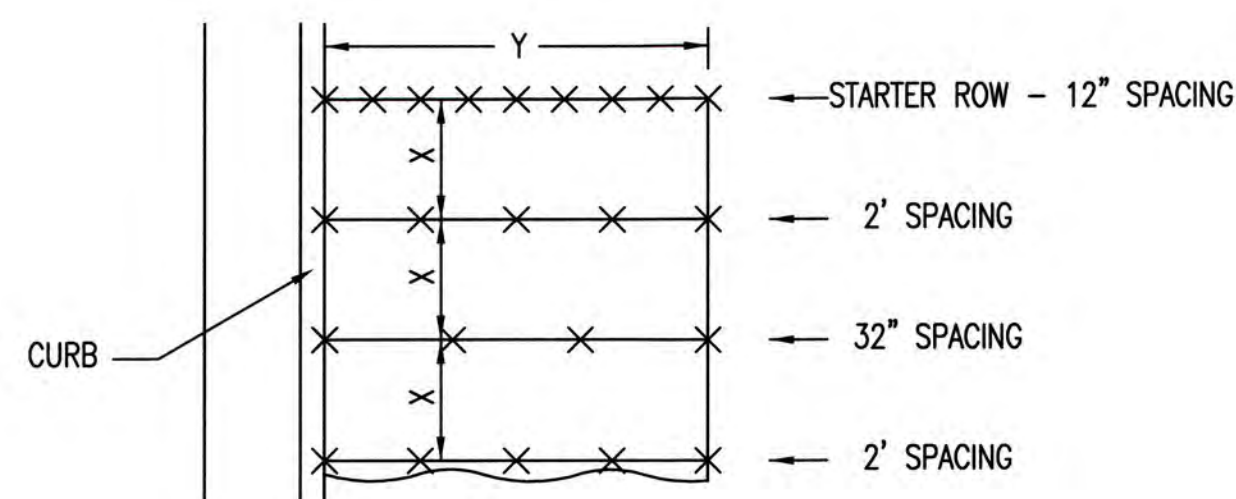


INSTALL 8" WIDE CURLEX I OR II EXCELSIOR BLANKET, OR EQUAL, ON PREPARED SURFACE BACK OF CURB. EDGE OF BLANKET WILL BE AT BACK OF CURB. INSTALL PER MANUFACTURERS RECOMMENDATION, INCLUDING STAPLES. (SEE DETAIL)

GENERAL NOTES

- EXCELSIOR MAT TO BE INSTALLED WHEN SOD IS NOT SPECIFIED ON PROJECT.
- EXCELSIOR BLANKET TO BE INSTALLED OVER SEED AND FERTILIZER, AS SPECIFIED IN THE PROJECT SPECIFICATIONS.
- AFTER INSTALLATION OF EXCELSIOR BLANKET, AT LOCATIONS WHERE CONCENTRATED FLOW CARRIES SEDIMENT OVER THE CURB AND INTO THE GUTTER, SUPPLEMENTAL EROSION CONTROL DEVICES WILL BE INSTALLED BY THE CONTRACTOR AS NEEDED, TO FIX THE PROBLEM.

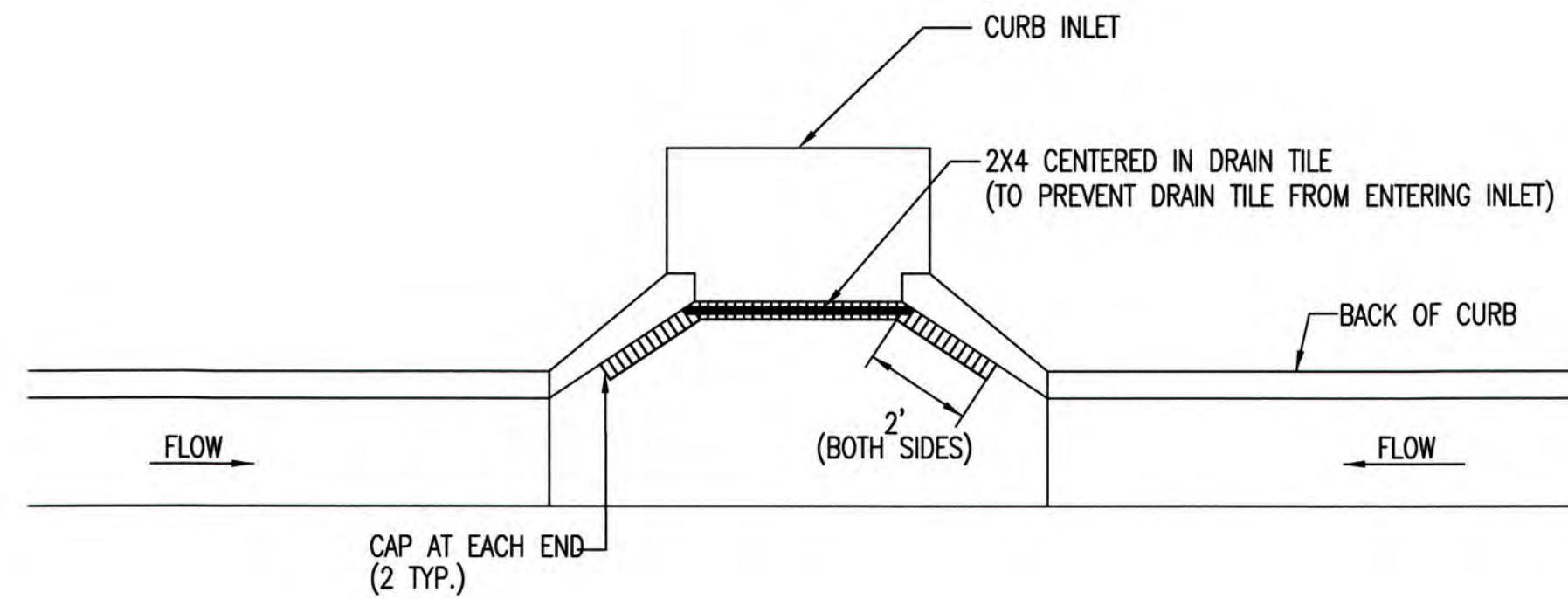
BACK OF CURB PROTECTION DETAIL



STAPLE PATTERN

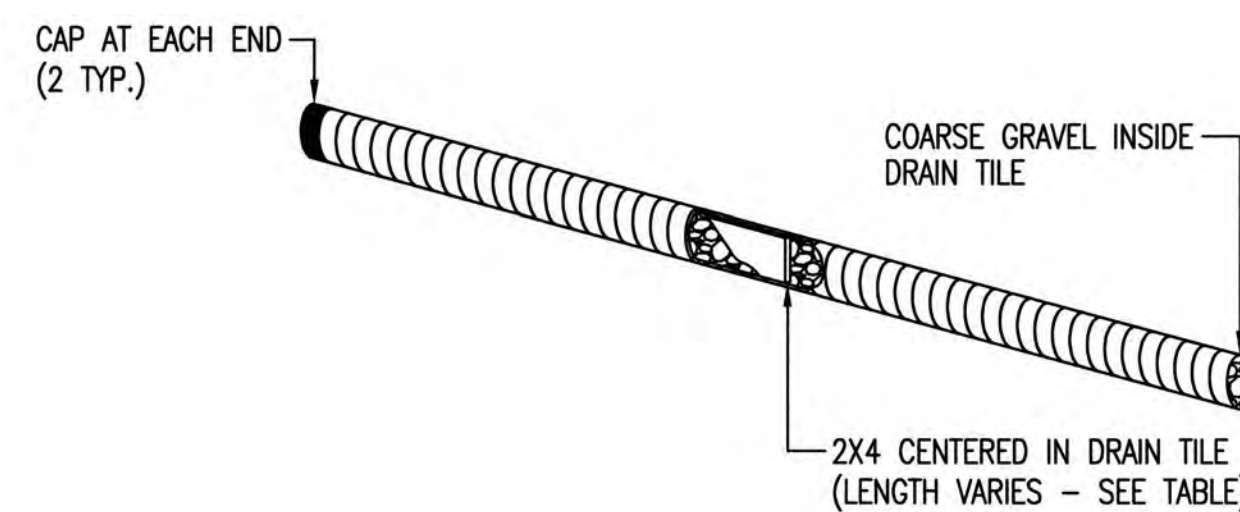
NOTES: USE 6" SEAM OVERLAP
(X & Y = RECOMMENDED BY MANUFACTURE)

DETAILS FOR APPROVED EROSION CONTROL MAT



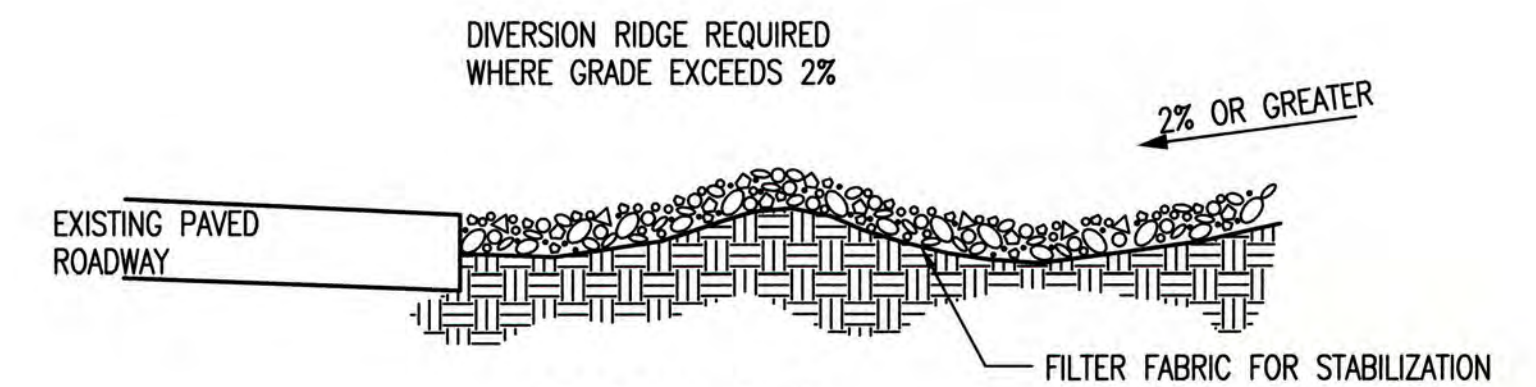
NOTE: PLACE 4" PERFORATED PVC PIPE, FILLED WITH 1/2"-1" DIA. GRAVEL, IN FRONT OF CURB INLET AS SHOWN.

2X4 LENGTH	INLET TYPE	INLET OPENING
5'-6"	1-A	5'-0"
10'-6"	1-A	10'-0"
15'-6"	1-A	15'-0"

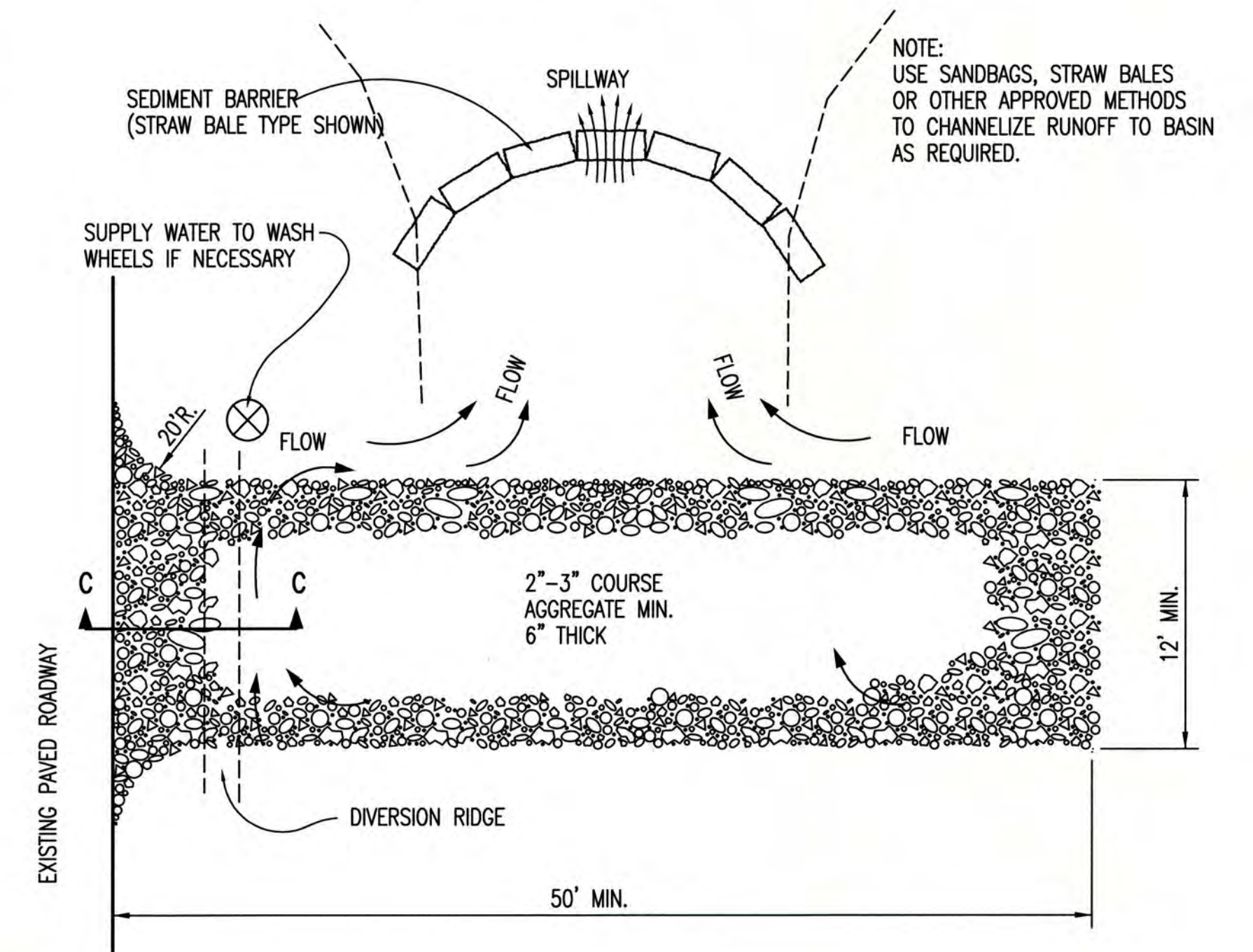


CURB INLET PROTECTION

4" PERFORATED PIPE W/ GRAVEL



SECTION C-C



STABILIZED CONSTRUCTION ENTRANCE

GENERAL NOTES

- THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
- WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
- WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN, AS SHOWN ABOVE.
- DRIVE ENTRANCES ONTO RESIDENTIAL LOTS WILL NOT BE REQUIRED TO HAVE THE SEDIMENT BARRIER SHOWN, BUT WHEEL WASHING MAY BE REQUIRED IF STABILIZED ENTRANCE IS NOT SUFFICIENT TO KEEP MUD FROM BEING TRACKED ONTO ADJACENT STREET. ENTRANCE SHALL EXTEND FROM BACK OF CURB TO DWELLING.

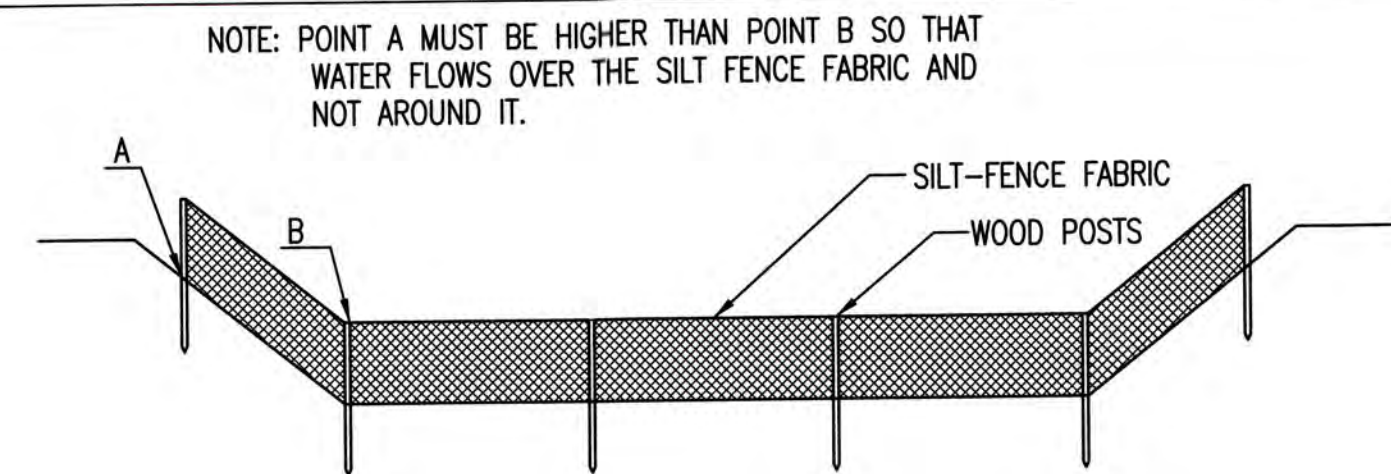
REVISION DATE: MAY 2013



05/30/13

BACK OF CURB PROTECTION, CURB INLET PROTECTION AND CONSTRUCTION ENTRANCE

CITY ENGINEER GARY JANZEN, P.E.		
PROJECT NUMBER	OCA NUMBER	DATE 5/2013
CITY ENGINEER'S OFFICE CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202-1620 (316) 268-4501		SHEET 15 of 27



ELEVATION
SILT FENCE DITCH CHECKS
(STREAM PROTECTION)

MATERIAL SPECIFICATION:

SILT FENCE FABRIC SHOULD CONFORM TO THE AASHTO M288 96 SILT FENCE SPECIFICATION. THE POSTS USED TO SUPPORT THE SILT FENCE FABRIC SHOULD BE A HARDWOOD MATERIAL WITH THE FOLLOWING MINIMUM DIMENSIONS: 2" SQUARE (NOMINAL) BY 4' LONG. SILT FENCE FABRIC SHOULD BE ATTACHED TO THE WOODEN POSTS WITH STAPLES, WIRE, ZIP TIES, OR NAILS.

PLACEMENT:

PLACE SILT FENCE IN DITCHES WHERE IT IS UNLIKELY THAT IT WILL BE OVERTOPPED. WATER SHOULD FLOW THROUGH A SILT FENCE DITCH CHECK, NOT OVER IT. SILT FENCE DITCH CHECKS OFTEN FAIL WHEN OVERTOPPED. SILT FENCE DITCH CHECKS SHOULD BE PLACED PERPENDICULAR TO THE FLOWLINE OF THE DITCH. THE SILT FENCE SHOULD EXTEND FAR ENOUGH SO THAT THE GROUND LEVEL AT THE ENDS OF THE FENCE IS HIGHER THAN THE TOP OF THE LOW POINT OF THE FENCE. THIS PREVENTS WATER FROM FLOWING AROUND THE CHECK. SILT FENCE DITCH CHECKS SHOULD NOT BE PLACED IN DITCHES WHERE HIGH FLOWS ARE EXPECTED. ROCK CHECKS SHOULD BE USED INSTEAD. SILT FENCE SHOULD BE PLACED IN DITCHES WITH SLOPES OF 6% OR LESS. FOR SLOPES STEEPER THAN 6%, ROCK CHECKS SHOULD BE USED.

THE FOLLOWING TABLE PROVIDES CHECK SPACING FOR A GIVEN DITCH GRADE:

DITCH CHECK DITCH GRADE (%)	SPACING CHECK SPACING (FEET)
0.5	200
1.0	200
2.0	100
3.0	65
4.0	50
5.0	40
6.0	30

PROPER INSTALLATION METHOD:

EXCAVATE A TRENCH PERPENDICULAR TO THE DITCH FLOWLINE THAT IS AT LEAST 12" DEEP BY 6" WIDE. EXTEND THE TRENCH IN A STRAIGHT LINE ALONG THE ENTIRE LENGTH OF THE PROPOSED DITCH CHECK. PLACE THE SOIL ON THE UPSTREAM SIDE OF THE TRENCH FOR LATER USE. ROLL OUT A CONTINUOUS LENGTH OF SILT FENCE FABRIC ON THE DOWNSLOPE SIDE OF THE TRENCH. PLACE THE EDGE OF THE FABRIC IN THE TRENCH STARTING AT THE TOP UPSLOPE EDGE OF THE TRENCH. LINE TWO SIDES OF THE TRENCH WITH THE FABRIC AS SHOWN ON DETAIL. BACKFILL OVER THE FABRIC IN THE TRENCH WITH THE EXCAVATED SOIL AND COMPACT. AFTER FILLING THE TRENCH, APPROXIMATELY 24" TO 36" OF SILT FENCE FABRIC SHOULD REMAIN EXPOSED. LAY THE EXPOSED SILT FENCE ON THE UPSLOPE SIDE OF THE TRENCH TO CLEAR AN AREA FOR DRIVING IN THE POSTS. JUST DOWNSLOPE OF THE TRENCH, DRIVE POSTS INTO THE GROUND TO A DEPTH OF AT LEAST 24". PLACE POSTS NO MORE THAN 4' APART. ATTACH THE SILT FENCE TO THE ANCHORED POST WITH STAPLES, WIRE, ZIP TIES, OR NAILS.

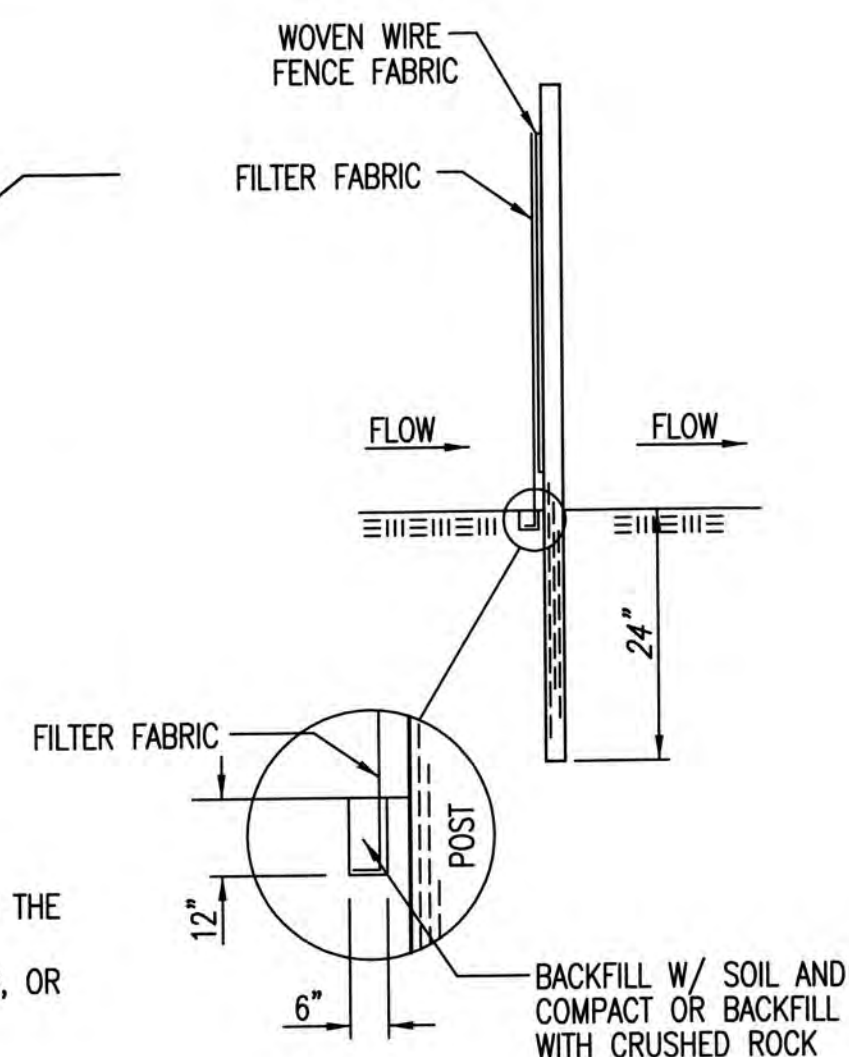
LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

WATER SHOULD FLOW THROUGH A SILT FENCE DITCH CHECK—NOT OVER IT. PLACE SILT FENCE IN DITCHES WHERE IT IS UNLIKELY THAT IT WILL BE OVERTOPPED. SILT FENCE INSTALLATIONS QUICKLY DETERIORATE WHEN WATER OVERTOPS THEM. DO NOT PLACE SILT FENCE POSTS ON THE UPSLOPE SIDE OF THE SILT FENCE FABRIC. IN THIS CONFIGURATION, THE FORCE OF THE WATER IS NOT RESTRICTED BY THE POSTS, BUT ONLY BY THE STAPLES (WIRE, ZIP TIES, NAILS, ETC.). THE SILT FENCE WILL RIP AND FAIL. DO NOT PLACE A SILT FENCE DITCH CHECK DIRECTLY IN FRONT OF A CULVERT OUTLET. IT WILL NOT STAND UP TO THE CONCENTRATED FLOW. DO NOT PLACE SILT FENCE DITCH CHECKS IN DITCHES THAT WILL LIKELY EXPERIENCE HIGH FLOWS. THEY WILL NOT STAND UP TO CONCENTRATED FLOW. FOLLOW PRESCRIBED DITCH CHECK SPACING GUIDELINES. IF SPACING GUIDELINES ARE EXCEEDED, EROSION WILL OCCUR BETWEEN THE DITCH CHECKS. DO NOT ALLOW WATER TO FLOW AROUND THE DITCH CHECK. MAKE SURE THAT THE DITCH CHECK IS LONG ENOUGH SO THAT THE GROUND LEVEL AT THE ENDS OF THE FENCE IS HIGHER THAN THE LOW POINT ON THE TOP OF THE FENCE. DO NOT PLACE SILT FENCE DITCH CHECKS IN CHANNELS WITH SHALLOW SOILS UNDERLAIN BY ROCK. IF THE CHECK IS NOT ANCHORED SUFFICIENTLY, IT WILL WASH OUT.

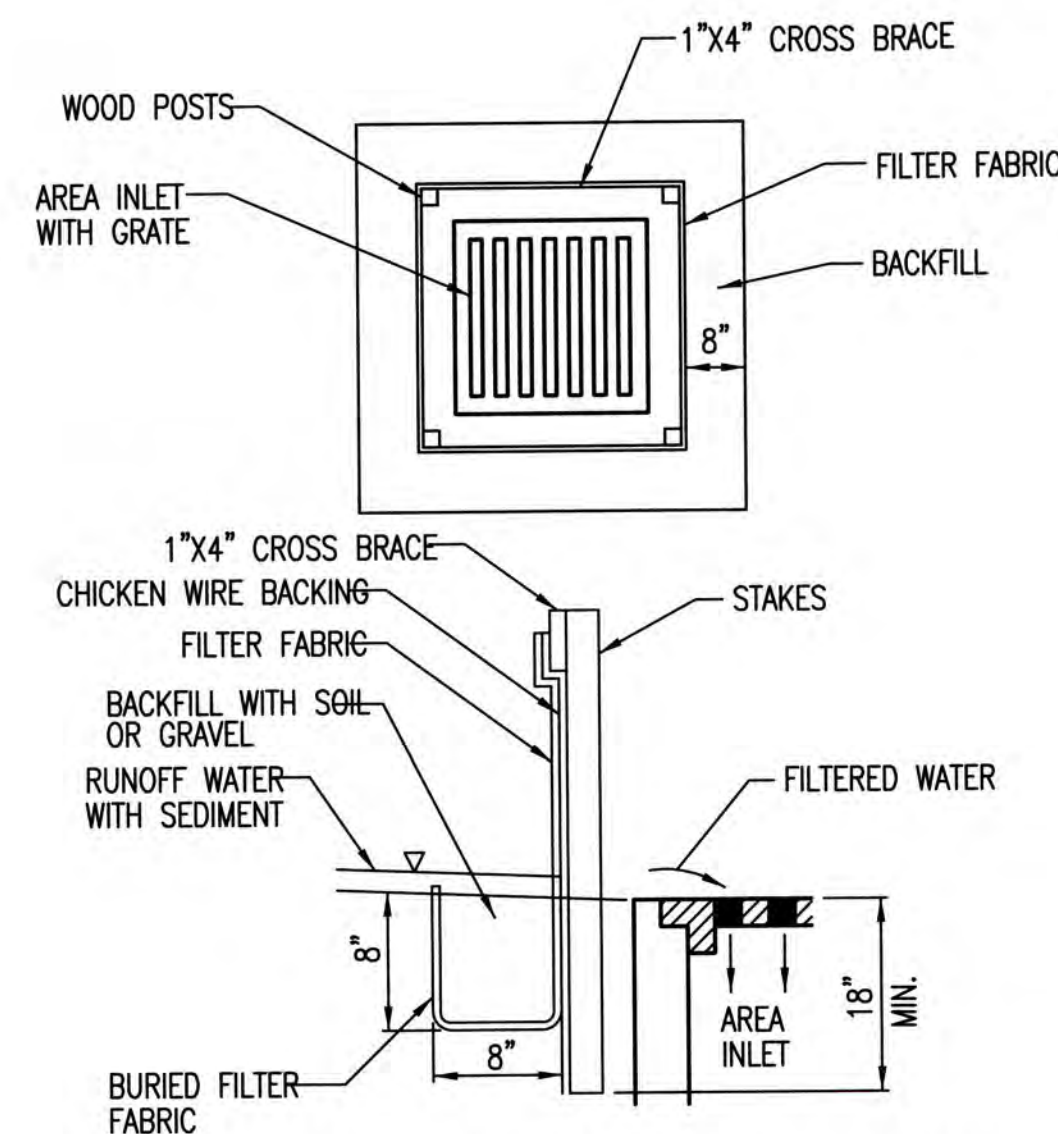
INSPECTION AND MAINTENANCE:

SILT FENCE DITCH CHECKS SHOULD BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 1/2" OR MORE. THE FOLLOWING IS A LIST OF QUESTIONS THAT SHOULD BE ADDRESSED DURING EACH INSPECTION:

- DOES WATER FLOW AROUND THE DITCH CHECK?
- DOES WATER FLOW UNDER THE DITCH CHECK?
- DOES THE SILT FENCE SAG EXCESSIVELY?
- HAS THE SILT FENCE TORN OR BECOME DETACHED FROM THE POSTS?
- DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE DITCH CHECK?



ANCHOR TRENCH DETAIL



SILT FENCE BARRIERS FOR AREA INLETS
(INLET PROTECTION)

MATERIAL SPECIFICATION:

SILT FENCE FABRIC SHOULD CONFORM TO THE AASHTO M288 96 SILT FENCE SPECIFICATION. THE WIRE OR POLYMERIC MESH BACKING USED TO HELP SUPPORT THE SILT FENCE FABRIC SHOULD CONFORM TO THE AASHTO M288 96 SILT FENCE SPECIFICATION. THE POSTS USED TO SUPPORT THE SILT FENCE FABRIC SHOULD BE A HARDWOOD MATERIAL WITH THE FOLLOWING MINIMUM DIMENSIONS: 2" SQUARE (NOMINAL) BY 4' LONG. THE MATERIAL USED TO FRAME THE TOPS OF THE POSTS SHOULD BE 1" BY 4" BOARDS. SILT FENCE FABRIC AND SUPPORT BACKING SHOULD BE ATTACHED TO THE WOODEN POSTS AND FRAME WITH STAPLES, WIRE, ZIP TIES, OR NAILS.

PLACEMENT:

PLACE A SILT FENCE DROP INLET BARRIER IN A LOCATION WHERE IT IS UNLIKELY TO BE OVERTOPPED. WATER SHOULD FLOW THROUGH SILT FENCE, NOT OVER IT. SILT FENCE BARRIERS FOR AREA INLETS OFTEN FAIL WHEN REPEATEDLY OVERTOPPED. WHEN USED AS A BARRIER FOR AREA INLETS, SILT FENCE FABRIC AND POSTS MUST BE SUPPORTED AT THE TOP BY A WOODEN FRAME. WHEN A SILT FENCE BARRIER FOR AREA INLETS IS LOCATED NEAR AN INLET THAT HAS STEEP APPROACH SLOPES, THE STORAGE CAPACITY BEHIND THE BARRIER IS DRASTICALLY REDUCED. TIMELY REMOVAL OF SEDIMENT MUST OCCUR FOR A BARRIER TO OPERATE PROPERLY IN THIS LOCATION.

PROPER INSTALLATION METHOD:

EXCAVATE A TRENCH AROUND THE PERIMETER OF THE AREA INLET THAT IS AT LEAST 8" DEEP BY 8" WIDE. DRIVE POSTS TO A DEPTH OF AT LEAST 18" AROUND THE PERIMETER OF THE AREA INLET. THE DISTANCE BETWEEN POSTS SHOULD BE 4' OR LESS. IF THE DISTANCE BETWEEN TWO ADJACENT CORNER POSTS IS MORE THAN 4', ADD ANOTHER POST(S) BETWEEN THEM. CONNECT THE TOPS OF ALL THE POSTS WITH A WOODEN FRAME MADE OF 1" BY 4" BOARDS. USE NAILS OR SCREWS FOR FASTENING. ATTACH THE WIRE OR POLYMERIC-MESH BACKING TO THE OUTSIDE OF THE POST/FRAME STRUCTURE WITH STAPLES, WIRE, ZIP TIES, OR NAILS. ROLL OUT A CONTINUOUS LENGTH OF SILT FENCE FABRIC LONG ENOUGH TO WRAP AROUND THE PERIMETER OF THE AREA INLET. ADD MORE LENGTH FOR OVERLAPPING THE FABRIC JOINT. PLACE THE EDGE OF THE FABRIC IN THE TRENCH, STARTING AT THE OUTSIDE EDGE OF THE TRENCH. LINE ALL THREE SIDES OF THE TRENCH WITH THE FABRIC. BACKFILL OVER THE FABRIC IN THE TRENCH WITH THE EXCAVATED SOIL AND COMPACT. AFTER FILLING THE TRENCH, APPROXIMATELY 24" TO 36" OF SILT FENCE FABRIC SHOULD REMAIN EXPOSED. ATTACH THE SILT FENCE TO THE OUTSIDE OF THE POST/FRAME STRUCTURE WITH STAPLES, WIRE, ZIP TIES, OR NAILS. THE JOINT SHOULD BE OVERLAPPED TO THE NEXT POST.

NOTE: WHEN A SILT FENCE BARRIER FOR AREA INLET IS PLACED IN A SHALLOW MEDIAN DITCH, MAKE SURE THAT THE TOP OF THE BARRIER IS NOT HIGHER THAN THE PAVED ROAD. IN THIS CONFIGURATION, WATER MAY SPREAD ONTO THE ROADWAY CAUSING A HAZARDOUS CONDITION.

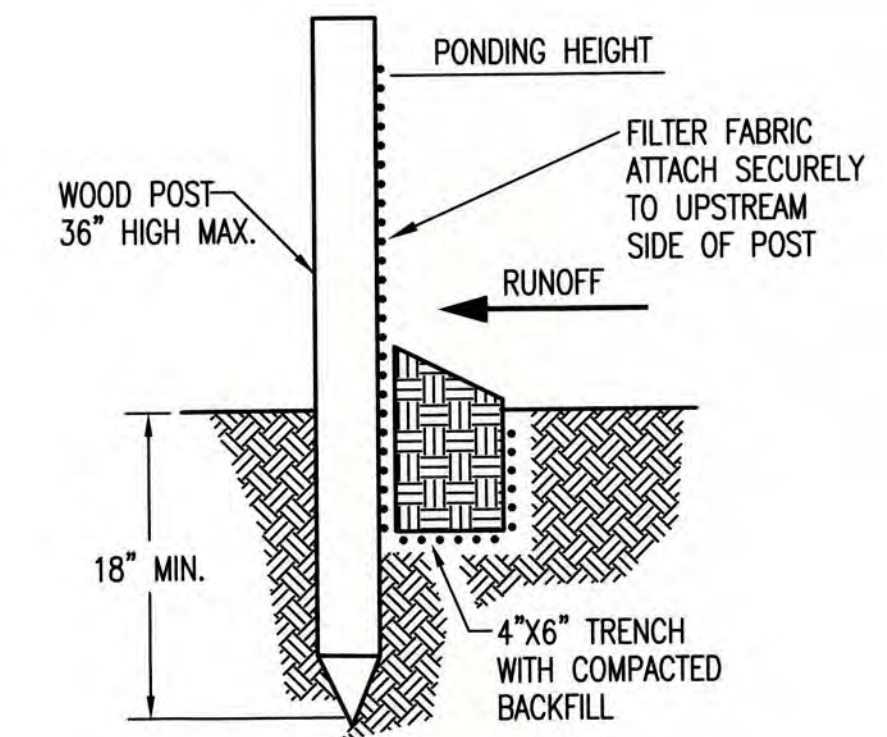
LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

WATER SHOULD FLOW THROUGH A SILT FENCE BARRIER FOR AREA INLET—NOT OVER IT. PLACE A SILT FENCE BARRIER FOR AREA INLET IN A LOCATION WHERE IT IS UNLIKELY TO BE OVERTOPPED. SILT FENCE BARRIER FOR AREA INLETS OFTEN FAIL WHEN REPEATEDLY OVERTOPPED. DO NOT PLACE POSTS ON THE OUTSIDE OF THE SILT FENCE BARRIER FOR AREA INLET. IN THIS CONFIGURATION, THE FORCE OF THE WATER IS NOT RESTRICTED BY THE POSTS, BUT ONLY BY THE STAPLES (WIRE, ZIP TIES, NAILS, ETC.). THE SILT FENCE WILL RIP AND FAIL. DO NOT INSTALL SILT FENCE BARRIER FOR AREA INLETS WITHOUT FRAMING THE TOP OF THE POSTS. THE CORNER POSTS AROUND AREA INLETS ARE STRESSED IN TWO DIRECTIONS WHEREAS A NORMAL SILT FENCE IS ONLY STRESSED IN ONE DIRECTION. THIS ADDED STRESS REQUIRES MORE SUPPORT.

INSPECTION AND MAINTENANCE:

SILT FENCE BARRIER FOR AREA INLETS SHOULD BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 1/2" OR MORE. THE FOLLOWING IS A LIST OF QUESTIONS THAT SHOULD BE ADDRESSED DURING EACH INSPECTION:

- DOES WATER FLOW UNDER THE SILT FENCE?
- DOES THE SILT FENCE SAG EXCESSIVELY?
- HAS THE SILT FENCE TORN OR BECOME DETACHED FROM THE POSTS?
- DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE AREA INLET BARRIER?



SILT FENCE BARRIERS

MATERIAL SPECIFICATION:

SILT FENCE FABRIC SHOULD CONFORM TO THE AASHTO M288 96 SILT FENCE SPECIFICATION. THE POSTS USED TO SUPPORT THE SILT FENCE FABRIC SHOULD BE A HARDWOOD MATERIAL WITH THE FOLLOWING MINIMUM DIMENSIONS: 2" SQUARE (NOMINAL) BY 4' LONG. SILT FENCE FABRIC SHOULD BE ATTACHED TO THE WOODEN POSTS WITH STAPLES, WIRE, ZIP TIES, OR NAILS.

PLACEMENT:

A SLOPE BARRIER SHOULD BE USED AT THE TOE OF A SLOPE WHEN A DITCH DOES NOT EXIST. THE SLOPE BARRIER SHOULD BE PLACED ON NEARLY LEVEL GROUND 5' TO 10' AWAY FROM THE TOE OF A SLOPE. THE BARRIER IS PLACED AWAY FROM THE TOE OF THE SLOPE TO PROVIDE ADEQUATE STORAGE FOR SETTLING OUT SEDIMENT. WHEN PRACTICABLE, SILT FENCE SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW. SILT FENCE SLOPE BARRIERS CAN ALSO BE PLACED ALONG RIGHT-OF-WAY FENCE LINES TO KEEP SEDIMENT FROM CROSSING ONTO ADJACENT PROPERTY. WHEN PLACED IN THIS MANNER, THE SLOPE BARRIER WILL NOT LIKELY FOLLOW CONTOURS.

PROPER INSTALLATION METHOD:

EXCAVATE A TRENCH THE LENGTH OF THE PLANNED SLOPE BARRIER THAT IS 6" DEEP BY 4" WIDE. MAKE SURE THAT THE TRENCH IS EXCAVATED ALONG A SINGLE CONTOUR. WHEN PRACTICABLE, SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW. PLACE THE SOIL ON THE UPSLOPE SIDE OF THE TRENCH FOR LATER USE. ROLL OUT A CONTINUOUS LENGTH OF SILT FENCE FABRIC ON THE DOWNSLOPE SIDE OF THE TRENCH. PLACE THE EDGE OF THE FABRIC IN THE TRENCH STARTING AT THE TOP UPSLOPE EDGE. LINE ALL THREE SIDES OF THE TRENCH WITH THE FABRIC. BACKFILL OVER THE FABRIC IN THE TRENCH WITH THE EXCAVATED SOIL AND COMPACT. AFTER FILLING THE TRENCH, APPROXIMATELY 24" TO 36" OF SILT-FENCE FABRIC SHOULD REMAIN EXPOSED. LAY THE EXPOSED SILT FENCE UPSLOPE OF THE TRENCH TO CLEAR AN AREA FOR DRIVING IN THE POSTS. JUST DOWNSLOPE OF THE TRENCH, DRIVE POSTS INTO THE GROUND TO A DEPTH OF AT LEAST 18". PLACE POSTS NO MORE THAN 4' APART. ATTACH THE SILT FENCE TO THE ANCHORED POST WITH STAPLES, WIRE, ZIP TIES, OR NAILS.

LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

WHEN PRACTICABLE, DO NOT PLACE SILT FENCE SLOPE BARRIERS ACROSS CONTOURS. SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW. WHEN THE FLOW CONCENTRATES, IT OVERTOPS THE BARRIER AND THE SILT FENCE SLOPE BARRIER QUICKLY DETERIORATES. DO NOT PLACE SILT-FENCE POSTS ON THE UPSLOPE SIDE OF THE SILT FENCE FABRIC. IN THIS CONFIGURATION, THE FORCE OF THE WATER IS NOT RESTRICTED BY THE POSTS, BUT ONLY BY THE STAPLES (WIRE, ZIP TIES, NAILS, ETC.). THE SILT FENCE WILL RIP AND FAIL. DO NOT PLACE SILT FENCE BARRIERS IN AREAS WITH SHALLOW SOILS UNDERLAIN BY ROCK. IF THE BARRIER IS NOT SUFFICIENTLY ANCHORED, IT WILL WASH OUT. SILT FENCE SLOPE BARRIERS MUST BE DUG INTO THE GROUND—SILT FENCE AT GROUND LEVEL DOES NOT WORK BECAUSE WATER WILL FLOW UNDERNEATH.

INSPECTION AND MAINTENANCE:

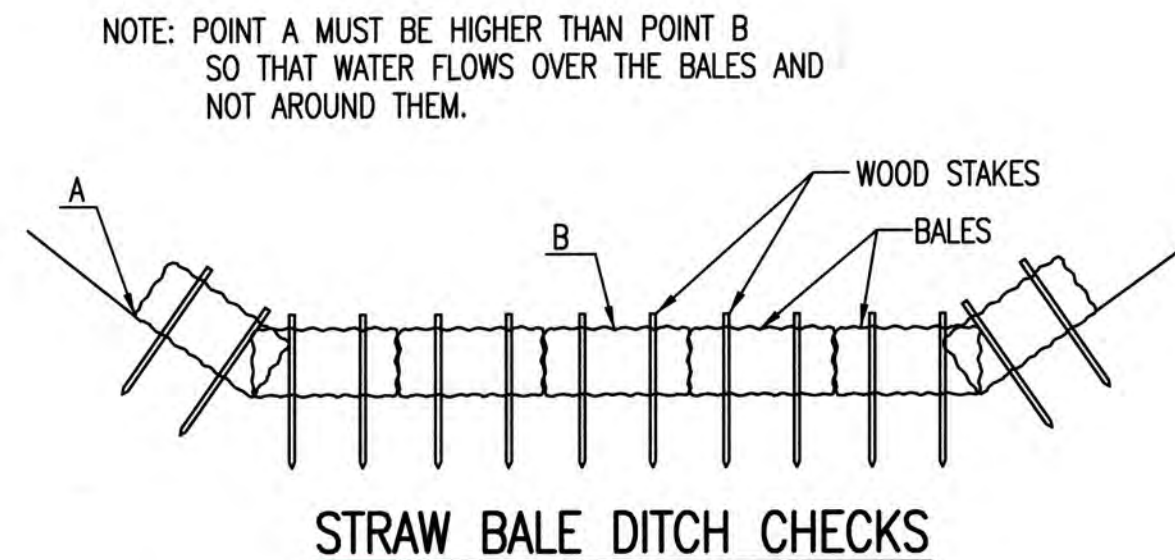
SILT FENCE SLOPE BARRIERS SHOULD BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 1/2" OR MORE. THE FOLLOWING IS A LIST OF QUESTIONS THAT SHOULD BE ADDRESSED DURING EACH INSPECTION:

- ARE THERE ANY POINTS ALONG THE SLOPE BARRIER WHERE WATER IS CONCENTRATING?
- DOES WATER FLOW UNDER THE SLOPE BARRIER?
- DO THE SILT FENCES SAG EXCESSIVELY?
- HAS THE SILT FENCE TORN OR BECOME DETACHED FROM THE POSTS?
- DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE SLOPE BARRIER?

REVISION DATE: MAY 2013



SILT FENCE DITCH CHECK AND BARRIER DETAILS		
CITY ENGINEER GARY JANZEN, P.E.		
PROJECT NUMBER	OCA NUMBER	DATE 5/2013
CITY ENGINEER'S OFFICE CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202-1620 (316) 268-4501		SHEET 16 of 27



MATERIAL SPECIFICATION:

BALE DITCH CHECKS MAY BE CONSTRUCTED OF WHEAT STRAW, OAT STRAW, PRAIRIE HAY, OR BROMEGRASS HAY THAT IS FREE OF WEEDS DECLARED NOXIOUS BY THE KANSAS STATE BOARD OF AGRICULTURE. THE STAKES USED TO ANCHOR THE BALES SHOULD BE A HARDWOOD MATERIAL WITH THE FOLLOWING MINIMUM DIMENSIONS: 2" SQUARE (NOMINAL) BY 4' LONG. OPTIONAL: THE DOWNSTREAM SCOUR APRON SHOULD BE CONSTRUCTED OF A DOUBLE-NETTED STRAW EROSION-CONTROL BLANKET AT LEAST 6' WIDE. OPTIONAL: THE METAL LANDSCAPE STAPLES USED TO ANCHOR THE EROSION-CONTROL BLANKET SHOULD BE AT LEAST 8" LONG.

PLACEMENT:

BALE DITCH CHECKS SHOULD BE PLACED PERPENDICULAR TO THE FLOWLINE OF THE DITCH. THE DITCH CHECK SHOULD EXTEND FAR ENOUGH SO THAT THE GROUND LEVEL AT THE ENDS OF THE CHECK IS HIGHER THAN THE TOP OF THE LOWEST CENTER BALE. THIS PREVENTS WATER FROM FLOWING AROUND THE CHECK. STRAW BALE DITCH CHECKS SHOULD NOT BE PLACED IN DITCHES WHERE HIGH FLOWS ARE EXPECTED. ROCK CHECKS SHOULD BE USED INSTEAD. BALES SHOULD BE PLACED IN DITCHES WITH SLOPES OF 6% OR LESS. FOR SLOPES STEEPER THAN 6%, ROCK CHECKS SHOULD BE USED. THE FOLLOWING TABLE PROVIDES CHECK SPACING FOR A GIVEN DITCH GRADE:

DITCH GRADE (%)	CHECK SPACING (FEET)
0.5	200
1.0	200
2.0	100
3.0	65
4.0	50
5.0	40
6.0	30

PROPER INSTALLATION METHOD:

EXCAVATE A TRENCH PERPENDICULAR TO THE DITCH FLOWLINE THAT IS 4" DEEP AND A BALE'S WIDTH WIDE. EXTEND THE TRENCH IN A STRAIGHT LINE ALONG THE ENTIRE LENGTH OF THE PROPOSED DITCH CHECK. PLACE THE SOIL ON THE UPSTREAM SIDE OF THE TRENCH-IT WILL BE USED LATER. OPTIONAL: ON THE DOWNSTREAM SIDE OF THE TRENCH, ROLL OUT A LENGTH OF EROSION-CONTROL BLANKET (SCOUR APRON) EQUAL TO THE LENGTH OF THE TRENCH. PLACE THE UPSTREAM EDGE OF THE EROSION-CONTROL BLANKET ALONG THE BOTTOM UPSTREAM EDGE OF THE TRENCH. THE EROSION CONTROL BLANKET SHOULD BE ANCHORED IN THE TRENCH WITH ONE ROW OF 8" LANDSCAPE STAPLES PLACED ON 18" CENTERS. THE REMAINDER OF THE EROSION-CONTROL BLANKET (THE PORTION THAT IS NOT LYING IN THE TRENCH) WILL SERVE AS THE DOWNSTREAM SCOUR APRON. THIS SECTION OF THE BLANKET SHOULD BE ANCHORED TO THE GROUND WITH 8" LANDSCAPE STAPLES PLACED AROUND THE PERIMETER OF THE BLANKET ON 18" CENTERS. THE REMAINDER OF THE BLANKET SHOULD BE ANCHORED USING TWO EVENLY SPACED ROWS OF 8" LANDSCAPE STAPLES ON 18" CENTERS PLACED PERPENDICULAR TO THE FLOWLINE OF THE DITCH. PLACE THE BALES IN THE TRENCH, MAKING SURE THAT THEY ARE BUTTED TIGHTLY. TWO STAKES SHOULD BE DRIVEN THROUGH EACH BALE ALONG THE CENTERLINE OF THE DITCH CHECK, APPROXIMATELY 6" TO 8" IN FROM THE BALE ENDS. STAKES SHOULD BE DRIVEN AT LEAST 12" INTO THE GROUND. ONCE ALL THE BALES HAVE BEEN INSTALLED AND ANCHORED, PLACE THE EXCAVATED SOIL AGAINST THE UPSTREAM SIDE OF THE CHECK AND COMPACT IT. THE COMPACTED SOIL SHOULD BE NO MORE THAN 3" TO 4" DEEP AND EXTEND UPSTREAM NO MORE THAN 24".

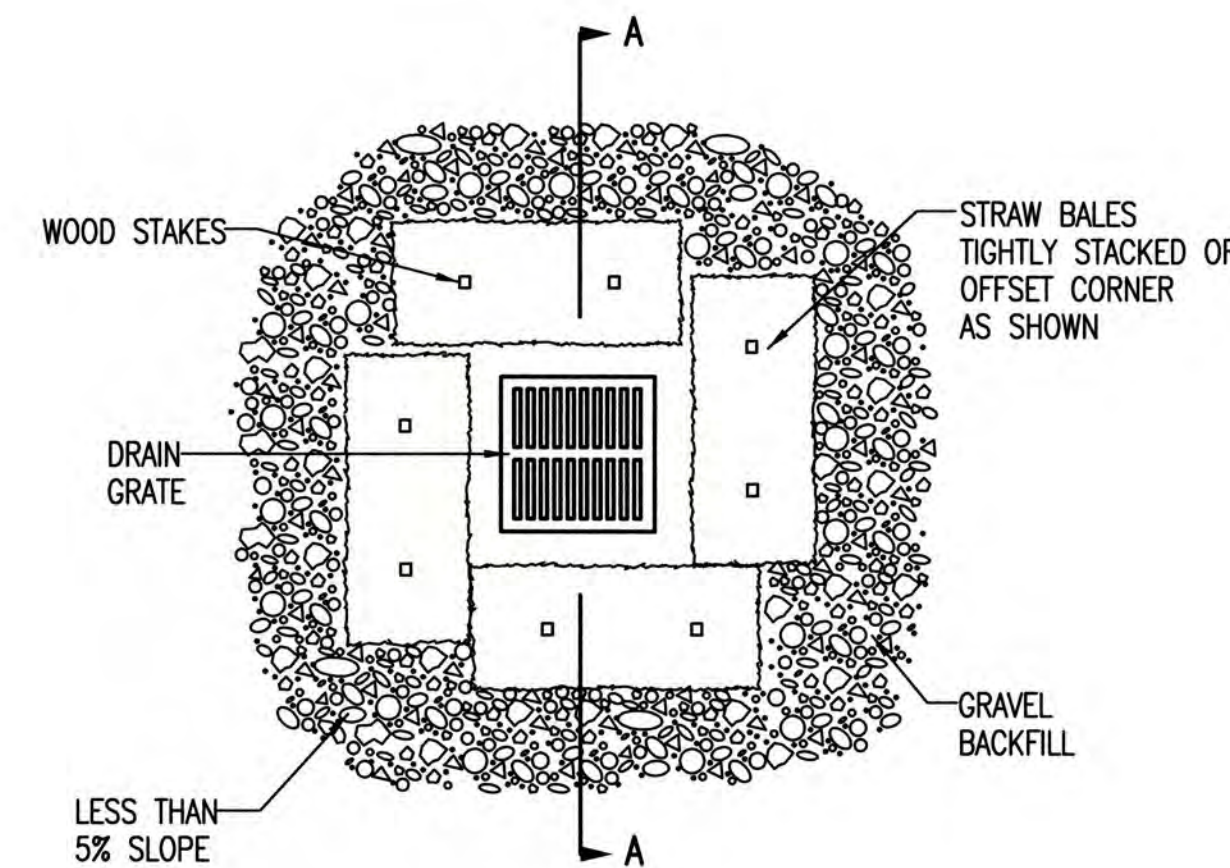
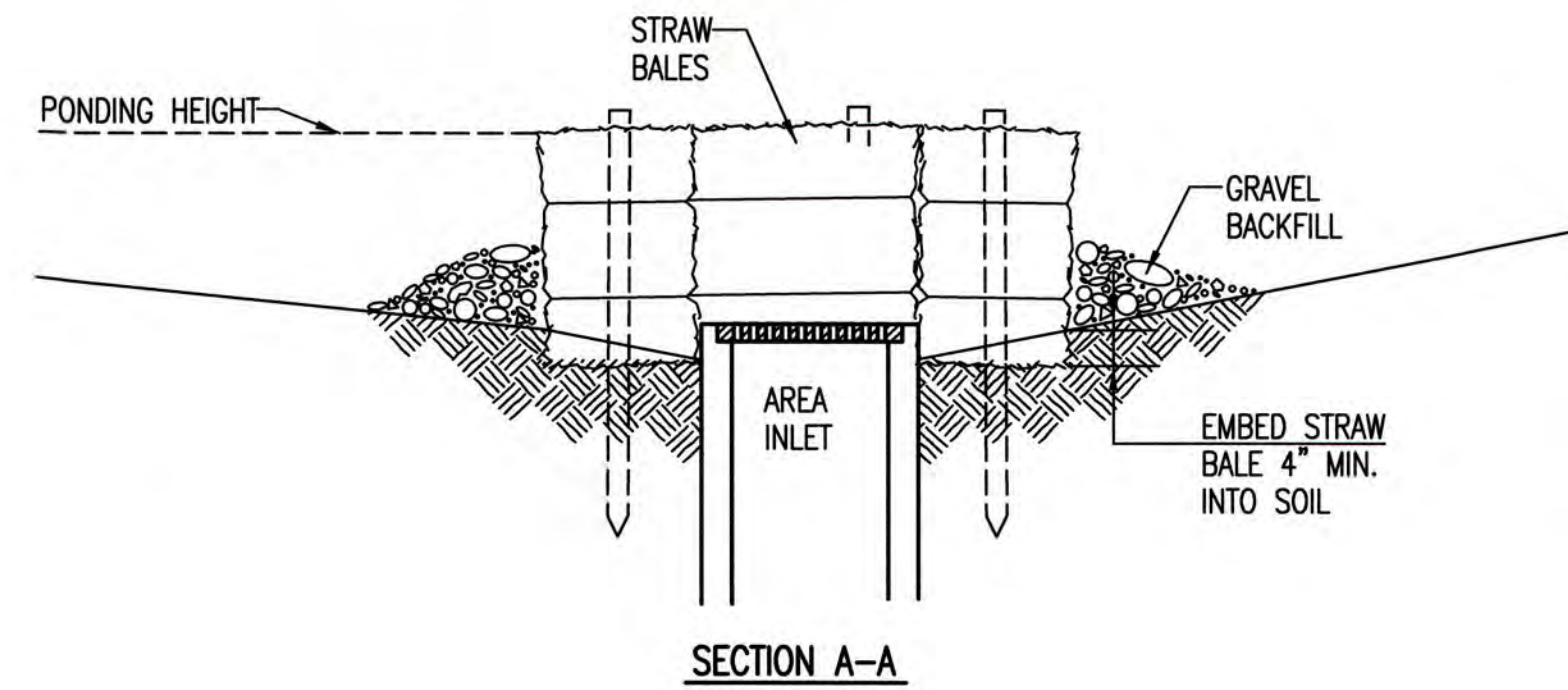
LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

DO NOT PLACE A BALE DITCH CHECK DIRECTLY IN FRONT OF A CULVERT OUTLET. IT WILL NOT STAND UP TO THE CONCENTRATED FLOW. DO NOT PLACE BALE DITCH CHECKS IN DITCHES THAT WILL LIKELY EXPERIENCE HIGH FLOWS. THEY WILL NOT STAND UP TO CONCENTRATED FLOW. FOLLOW PRESCRIBED DITCH-CHECK SPACING GUIDELINES. IF SPACING GUIDELINES ARE EXCEEDED, EROSION WILL OCCUR BETWEEN THE DITCH CHECKS. DO NOT ALLOW WATER TO FLOW AROUND THE DITCH CHECK. MAKE SURE THAT THE DITCH CHECK IS LONG ENOUGH SO THAT THE GROUND LEVEL AT THE ENDS OF THE CHECK IS HIGHER THAN THE TOP OF THE LOWEST CENTER BALE. DO NOT PLACE BALE DITCH CHECKS IN CHANNELS WITH SHALLOW SOILS UNDERLAIN BY ROCK. IF THE CHECK IS NOT ANCHORED SUFFICIENTLY, IT WILL WASH OUT. BALE DITCH CHECKS MUST BE DUG INTO THE GROUND. BALES AT GROUND LEVEL DO NOT WORK BECAUSE THEY ALLOW WATER TO FLOW UNDER THE CHECK.

INSPECTION AND MAINTENANCE:

BALE DITCH CHECKS SHOULD BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 1/2" OR MORE. THE FOLLOWING IS A LIST OF QUESTIONS THAT SHOULD BE ADDRESSED DURING EACH INSPECTION:

- DOES WATER FLOW AROUND THE DITCH CHECK?
- DOES WATER FLOW UNDER THE DITCH CHECK?
- DOES WATER FLOW THROUGH SPACES BETWEEN ABUTTING BALES?
- ARE ANY BALES AND/OR SCOUR APRONS (OPTIONAL) DISLODGED?
- ARE BALES DECOMPOSING DUE TO AGE AND/OR WATER DAMAGE?
- DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE DITCH CHECK?



STRAW BALE BARRIERS FOR AREA INLETS (INLET PROTECTION)

MATERIAL SPECIFICATION:

BALE AREA INLET BARRIERS SHOULD BE CONSTRUCTED OF WHEAT STRAW, OAT STRAW, PRAIRIE HAY, OR BROMEGRASS HAY THAT IS FREE OF WEEDS DECLARED NOXIOUS BY THE KANSAS STATE BOARD OF AGRICULTURE. THE STAKES USED TO ANCHOR THE BALES SHOULD BE A HARDWOOD MATERIAL WITH THE FOLLOWING MINIMUM DIMENSIONS: 2" SQUARE (NOMINAL) BY 4' LONG. TWINE SHOULD BE USED TO BIND BALES. THE USE OF WIRE BINDING IS PROHIBITED BECAUSE IT DOES NOT BIODEGRADE READILY.

PLACEMENT:

BALE AREA INLET BARRIERS SHOULD BE PLACED DIRECTLY AROUND THE PERIMETER OF A DROP INLET. WHEN A BALE AREA INLET BARRIER IS LOCATED NEAR AN INLET THAT HAS STEEP APPROACH SLOPES, THE STORAGE CAPACITY BEHIND THE BARRIER IS DRASTICALLY REDUCED. TIMELY REMOVAL OF SEDIMENT MUST OCCUR FOR A BARRIER TO OPERATE PROPERLY IN THIS LOCATION.

PROPER INSTALLATION METHOD:

EXCAVATE A TRENCH AROUND THE PERIMETER OF THE AREA INLET THAT IS AT LEAST 4" DEEP BY A BALE'S WIDTH WIDE. PLACE THE BALES IN THE TRENCH, MAKING SURE THAT THEY ARE BUTTED TIGHTLY. SOME BALES MAY NEED TO BE SHORTENED TO FIT INTO THE TRENCH AROUND THE AREA INLET. TWO STAKES SHOULD BE DRIVEN THROUGH EACH BALE, APPROXIMATELY 6" TO 8" IN FROM THE BALE ENDS. STAKES SHOULD BE DRIVEN AT LEAST 12" INTO THE GROUND. ONCE ALL THE BALES HAVE BEEN INSTALLED AND ANCHORED, PLACE THE EXCAVATED SOIL AGAINST THE RECEIVING SIDE OF THE BARRIER AND COMPACT IT. THE COMPACTED SOIL SHOULD BE NO MORE THAN 3" TO 4" DEEP. NOTE: WHEN A BALE AREA INLET BARRIER IS PLACED IN A SHALLOW MEDIAN DITCH, MAKE SURE THAT THE TOP OF THE BARRIER IS NOT HIGHER THAN THE PAVED ROAD. IN THIS CONFIGURATION, WATER MAY SPREAD ONTO THE ROADWAY CAUSING A HAZARDOUS CONDITION.

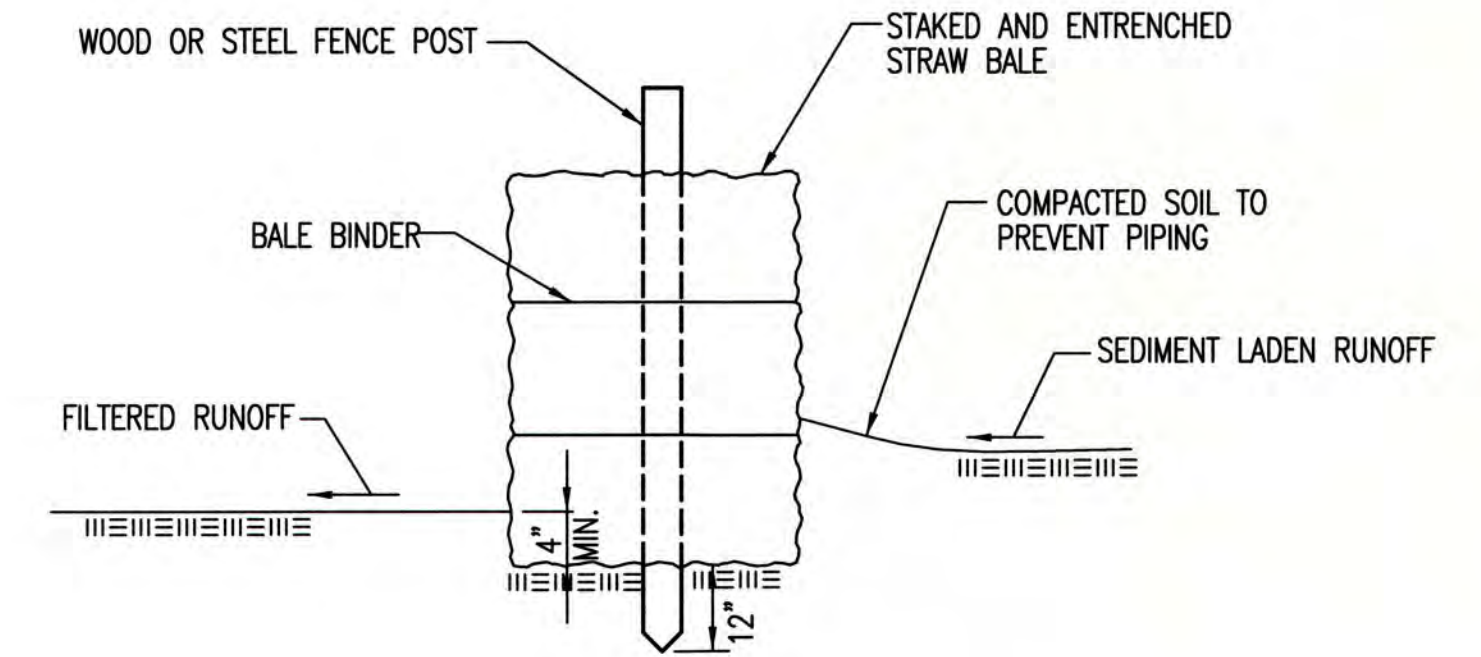
LIST OF COMMON PLACEMENT INSTALLATION MISTAKES TO AVOID:

BALES SHOULD BE PLACED DIRECTLY AGAINST THE PERIMETER OF THE AREA INLET. THIS ALLOWS OVERTOPPING WATER TO FLOW DIRECTLY INTO THE INLET INSTEAD OF ONTO NEARBY SOIL CAUSING SCOUR. BALE AREA INLET BARRIERS MUST BE DUG INTO THE GROUND. BALES AT GROUND LEVEL DO NOT WORK BECAUSE THEY ALLOW WATER TO FLOW UNDER THE BARRIER.

INSPECTION AND MAINTENANCE:

BALE AREA INLET BARRIERS SHOULD BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 1/2" OR MORE. THE FOLLOWING IS A LIST OF QUESTIONS THAT SHOULD BE ADDRESSED DURING EACH INSPECTION:

- DOES WATER FLOW UNDER THE AREA INLET BARRIER?
- DOES WATER FLOW THROUGH SPACES BETWEEN ABUTTING BALES?
- ARE ANY BALES DISLODGED?
- ARE BALES DECOMPOSING DUE TO AGE AND/OR WATER DAMAGE?
- DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE AREA INLET BARRIER?



STRAW BALE BARRIERS

MATERIAL SPECIFICATION:

BALE SLOPE BARRIERS MAY BE CONSTRUCTED OF WHEAT STRAW, OAT STRAW, PRAIRIE HAY, OR BROMEGRASS HAY THAT IS FREE OF WEEDS DECLARED NOXIOUS BY THE KANSAS STATE BOARD OF AGRICULTURE. THE STAKES USED TO ANCHOR THE BALES SHOULD BE A HARDWOOD MATERIAL WITH THE FOLLOWING MINIMUM DIMENSIONS: 2" SQUARE (NOMINAL) BY 4' LONG. TWINE SHOULD BE USED TO BIND BALES. THE USE OF WIRE BINDING IS PROHIBITED BECAUSE IT DOES NOT BIODEGRADE READILY.

PLACEMENT:

A SLOPE BARRIER SHOULD BE USED AT THE TOE OF A SLOPE WHEN A DITCH DOES NOT EXIST. THE SLOPE BARRIER SHOULD BE PLACED ON NEARLY LEVEL GROUND 5' TO 10' AWAY FROM THE TOE OF A SLOPE. THE BARRIER IS PLACED AWAY FROM THE TOE OF THE SLOPE TO PROVIDE ADEQUATE STORAGE FOR SETTLING OUT SEDIMENT. WHEN PRACTICABLE, BALE SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW. BALE SLOPE BARRIERS CAN ALSO BE PLACED ALONG RIGHT-OF-WAY FENCE LINES TO KEEP SEDIMENT FROM CROSSING ONTO ADJACENT PROPERTY. WHEN PLACED IN THIS MANNER, THE SLOPE BARRIER WILL NOT LIKELY FOLLOW CONTOURS.

PROPER INSTALLATION METHOD:

EXCAVATE A TRENCH THE LENGTH OF THE PLANNED SLOPE BARRIER THAT IS 4" DEEP AND A BALE'S WIDTH WIDE. MAKE SURE THAT THE TRENCH IS EXCAVATED ALONG A SINGLE CONTOUR. WHEN PRACTICABLE, SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW. PLACE THE SOIL ON THE UPSLOPE SIDE OF THE TRENCH FOR LATER USE. PLACE THE BALES IN THE TRENCH, MAKING SURE THAT THEY ARE BUTTED TIGHTLY. TWO STAKES SHOULD BE DRIVEN THROUGH EACH BALE ALONG THE CENTERLINE OF THE DITCH CHECK, APPROXIMATELY 6" TO 8" IN FROM THE BALE ENDS. STAKES SHOULD BE DRIVEN AT LEAST 12" INTO THE GROUND. ONCE ALL THE BALES HAVE BEEN INSTALLED AND ANCHORED, PLACE THE EXCAVATED SOIL AGAINST THE UPSLOPE SIDE OF THE CHECK AND COMPACT IT. THE COMPACTED SOIL SHOULD BE NO MORE THAN 3" TO 4" DEEP.

LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

WHEN PRACTICAL, DO NOT PLACE BALE SLOPE BARRIERS ACROSS CONTOURS. SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW. CONCENTRATED FLOW OVER A SLOPE BARRIER CREATES A SCOUR HOLE ON THE DOWNSLOPE SIDE OF THE BARRIER. THE SCOUR HOLE EVENTUALLY UNDERMINES THE BALES AND THE BARRIER FAILS. DO NOT PLACE BALE SLOPE BARRIERS IN AREAS WITH SHALLOW SOILS UNDERLAIN BY ROCK. IF THE BARRIER IS NOT ANCHORED SUFFICIENTLY, IT WILL WASH OUT. BALE SLOPE BARRIERS MUST BE DUG INTO THE GROUND. BALES AT GROUND LEVEL DO NOT WORK BECAUSE THEY ALLOW WATER TO FLOW UNDER THE BARRIER.

INSPECTION AND MAINTENANCE:

BALE SLOPE BARRIERS SHOULD BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 1/2" OR MORE. THE FOLLOWING IS A LIST OF QUESTIONS THAT SHOULD BE ADDRESSED DURING EACH INSPECTION:

- ARE THERE ANY POINTS ALONG THE SLOPE BARRIER WHERE WATER IS CONCENTRATING?
- DOES WATER FLOW UNDER THE SLOPE BARRIER?
- DOES WATER FLOW THROUGH SPACES BETWEEN ABUTTING BALES?
- ARE ANY BALES DISLODGED?
- ARE BALES DECOMPOSING DUE TO AGE AND/OR WATER DAMAGE?
- DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE SLOPE BARRIER?

REVISION DATE: MAY 2013



STRAW BALE DITCH CHECK AND BARRIER DETAILS

CITY ENGINEER
GARY JANZEN, P.E.

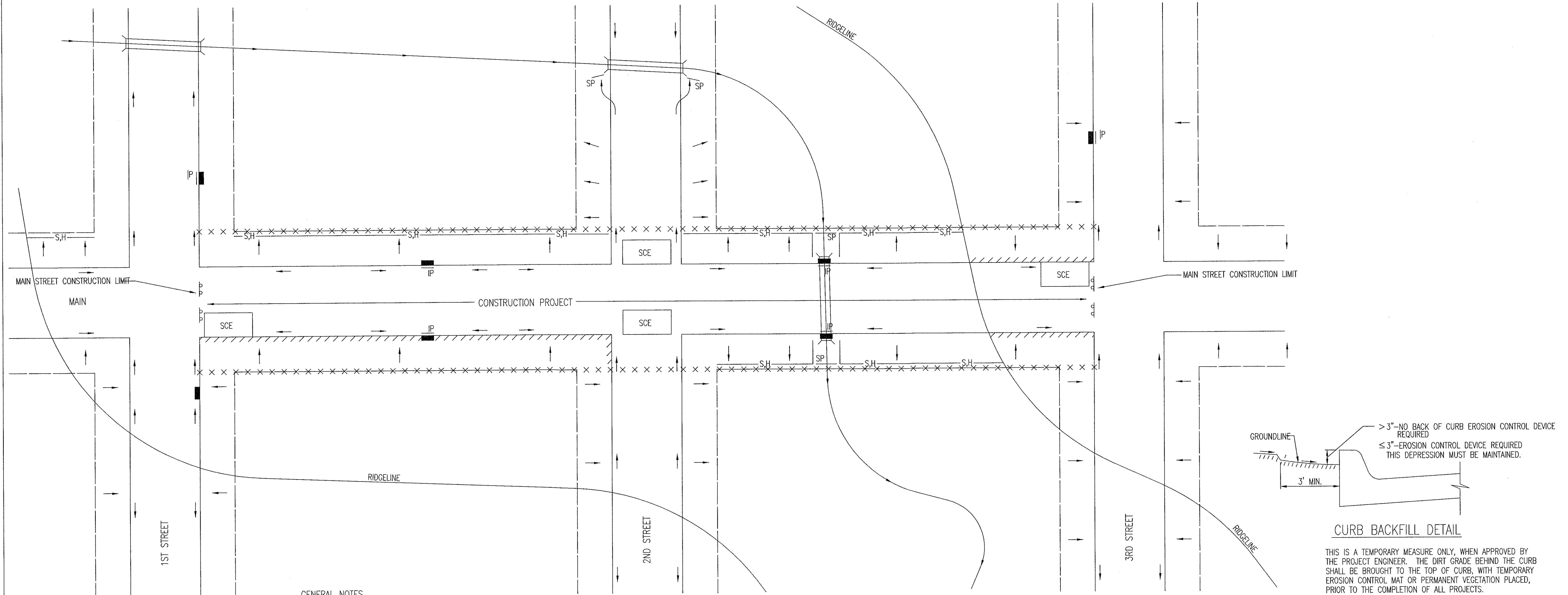
PROJECT NUMBER	OCA NUMBER	DATE
		5/2013

CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202-1620
(316) 268-4501

SHEET
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GENERAL NOTES

- THIS SHEET IS INTENDED TO PROVIDE GUIDELINES AS TO WHAT TYPES OF EROSION CONTROL DEVICES WILL BE INSTALLED DURING THE CONSTRUCTION PROCESS. CONTRACTORS ARE EXPECTED TO BID PROJECTS ACCORDINGLY.
- EROSION CONTROL DEVICES MUST BE MAINTAINED BY THE CONTRACTOR THROUGHOUT THE CONSTRUCTION PROCESS AND UNTIL THE DISTURBED EARTH IS RESTABILIZED.
- IF THE PROJECT WILL DISTURB 1 ACRE OR MORE, A FEDERAL/STATE NPDES STORMWATER PERMIT IS REQUIRED. A DETAILED STORMWATER POLLUTION PREVENTION PLAN, IS REQUIRED. THE EROSION CONTROL DEVICES SHOWN ON THIS SHEET ARE CONSIDERED TO BE THE MINIMUM TO BE SHOWN IN THE POLLUTION PREVENTION PLAN.
- FOR PROJECTS DISTURBING LESS THAN 1 ACRE, CONTRACTORS ARE ENCOURAGED TO PREPARE STORMWATER POLLUTION PREVENTION PLANS PRIOR TO CONSTRUCTION. EROSION CONTROL DEVICES MUST BE USED ON ALL PROJECTS.
- FAILURE TO USE AND MAINTAIN EROSION CONTROL DEVICES IS A VIOLATION OF SECTION 16.32 OF THE CITY CODE AND WILL SUBJECT THE CONTRACTOR TO THE PENALTIES PROVIDED FOR THEREIN.
- THE APPLICATION OF EROSION CONTROL DEVICES SHOWN ON THIS SHEET IS FOR SITUATIONS NORMALLY ENCOUNTERED. FROM TIME TO TIME, SITUATIONS WILL ARISE THAT MAY REQUIRE A DIFFERENT DEVICE OTHER THAN THOSE SHOWN. EROSION CONTROL DEVICES, OTHER THAN THOSE SHOWN, MAY BE UTILIZED AS LONG AS THEY ARE EFFECTIVE AND MAINTAINED.




GENERAL NOTES

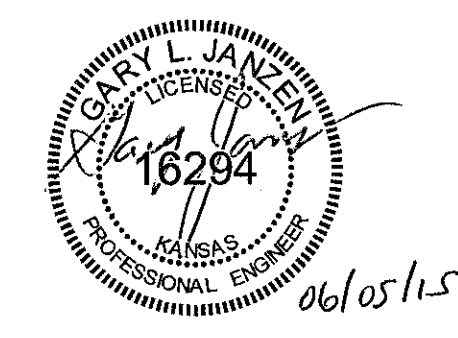
- THE INTENT OF ALL EROSION CONTROL DEVICES IS TO KEEP ALL SEDIMENT CONFINED TO THE CONSTRUCTION SITE, AND OUT OF ALL UNDERGROUND PIPES, DITCHES, LAKES, AND OTHER DRAINAGE FACILITIES, AND OFF OF STREETS.
- THE POINT OF COMPLIANCE IS GENERALLY THE RIGHT-OF-WAY LINES WITHIN THE LIMITS OF CONSTRUCTION.
- EROSION CONTROL DEVICES WILL BE REQUIRED AT ALL POINTS ALONG THE PROJECT WHERE DISTURBED EARTH CAN DRAIN ONTO PRIVATE PROPERTY.
- INLET PROTECTION DEVICES WILL BE REQUIRED WHEREVER WATER CAN DRAIN OFF THE PROJECT SITE INTO AN INLET, INCLUDING ANY SIDE STREET INLETS.
- EROSION CONTROL DEVICES SHALL BE INSTALLED AT CREEK CROSSINGS SO AS TO PREVENT SEDIMENT FROM ENTERING THEREIN.
- STABILIZED CONSTRUCTION ENTRANCES SHALL BE PROVIDED, AS NEEDED, TO PREVENT MUD FROM TRACKING ONTO STREETS NOT UNDER CONSTRUCTION AND ON STREETS WITHIN THE PROJECT LIMITS IF TRAFFIC IS BEING MAINTAINED THROUGH THE PROJECT.
- ANY MUD TRACKED ONTO STREETS MUST BE REMOVED AT THE END OF EACH WORK DAY.
- THE CONTRACTOR WILL BE REQUIRED TO PLACE EROSION CONTROL DEVICES BACK OF CURB, WHENEVER WATER CAN DRAIN OVER CURB, TO KEEP ERODED SOIL OUT OF THE GUTTERLINES, IN ACCORDANCE WITH THE FOLLOWING:
 - THE DEVICE REQUIRED WILL BE APPROVED EROSION CONTROL MAT LISTED ON THE CITY'S APPROVED MATERIAL LIST. SAID BLANKET SHALL BE PLACED OVER THE APPROPRIATE SEED AND FERTILIZER, AS SPECIFIED IN THE PROJECT SPECIFICATIONS. (SEE SOIL EROSION BMPs - BACK OF CURB SEDIMENT BARRIER DETAILS)
 - THIS DEVICE SHALL BE INSTALLED IMMEDIATELY WHENEVER THE CURB IS BACKFILLED TO WITHIN 3" OF THE TOP OF CURB. (SEE CURB BACKFILL DETAIL) OTHER BMP'S MAY BE REQUIRED AT LOCATIONS WHERE CONCENTRATED FLOW CARRIES SEDIMENT OVER THE CURB.
 - ADDITIONALLY, OTHER EROSION CONTROL DEVICES (HAY BALES, SILT FENCE, ETC.) WILL BE INSTALLED AT LOCATIONS OF CONCENTRATED FLOW RESULTING IN SEDIMENT OVERRUNNING THE MAT.
 - SHOULD THE PROJECT PLANS SPECIFY THAT THE RIGHT-OF-WAY IS TO BE SODDED, THE EXCELSIOR MAT WILL NOT BE REQUIRED SO LONG AS THE SOD IS PLACED WITHIN 48 HOURS AFTER CURB BACKFILL REACHES A HEIGHT OF 3" OR LESS FROM TOP OF CURB. (SEE CURB BACKFILL DETAIL)

LEGEND

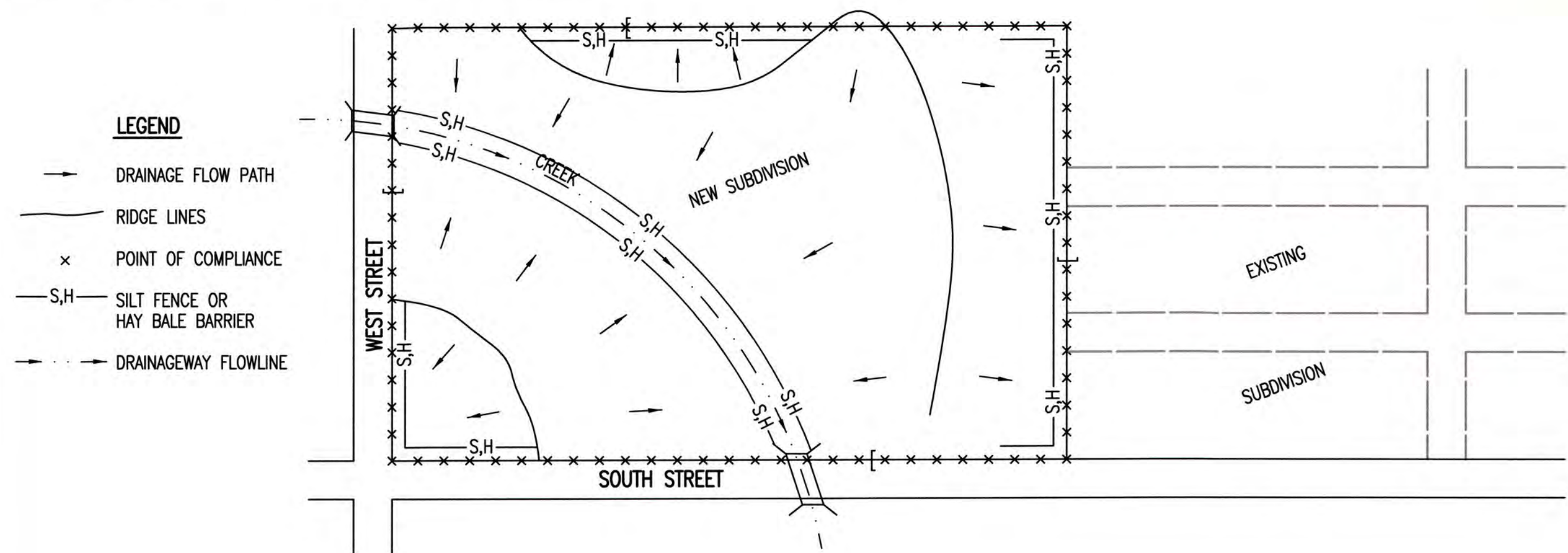
- R-O-W LIMITS
- DRAINAGE FLOW PATH
- × × × × R/W LIMIT WITHIN CONSTRUCTION LIMIT
- STORM WATER INLETS
- IP INLET PROTECTION
- S,H— SILT FENCE OR HAY BALE BARRIER
- SP STREAM PROTECTION
- SCE STABILIZED CONSTRUCTION ENTRANCE
- //// BACK OF CURB PROTECTION

REVISION: JUNE 2015

 CITY OF WICHITA PUBLIC WORKS & UTILITIES ENGINEERING DIVISION			STREET IMPROVEMENT PROJECTS		
CITY ENGINEER GARY JANZEN, P.E.					
PROJECT NUMBER	OCA NUMBER	DATE			
		11/2015			
CITY ENGINEER'S OFFICE					SHEET
CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202-1620 (316) 268-4501					18 of 27

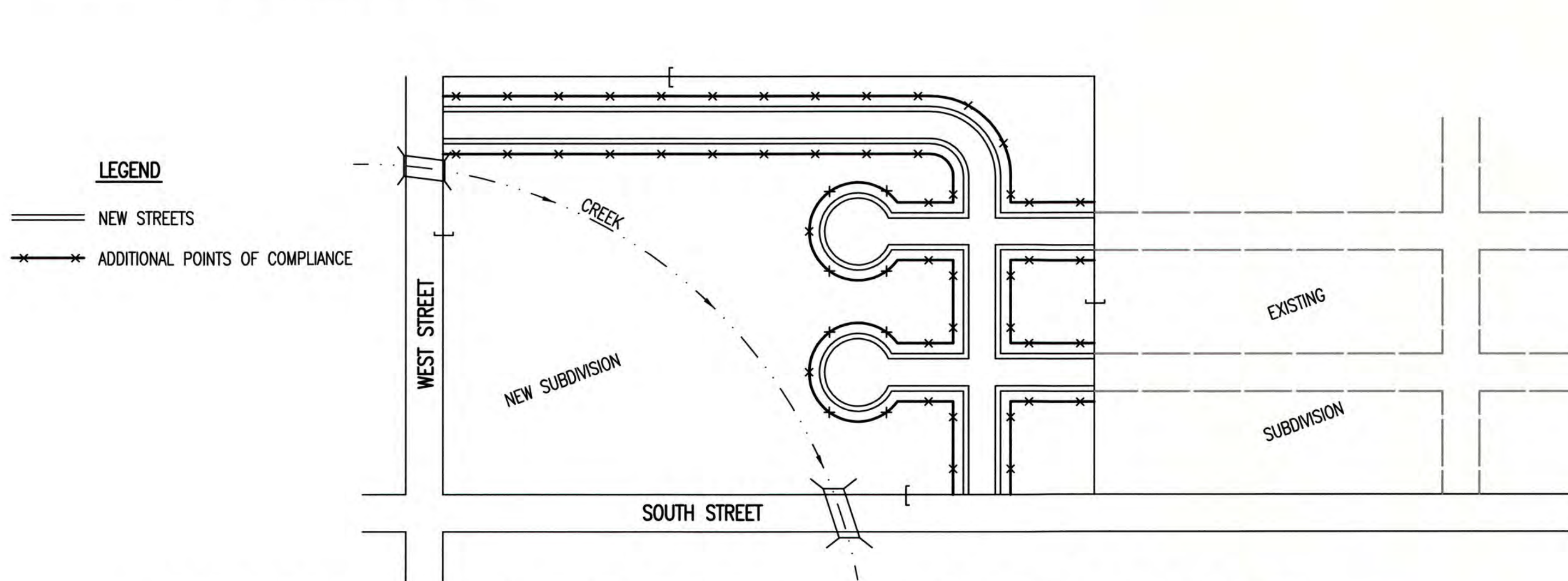


PHASE 1 – INITIAL EARTHWORK AND UTILITIES (EXCEPT STORM SEWER)



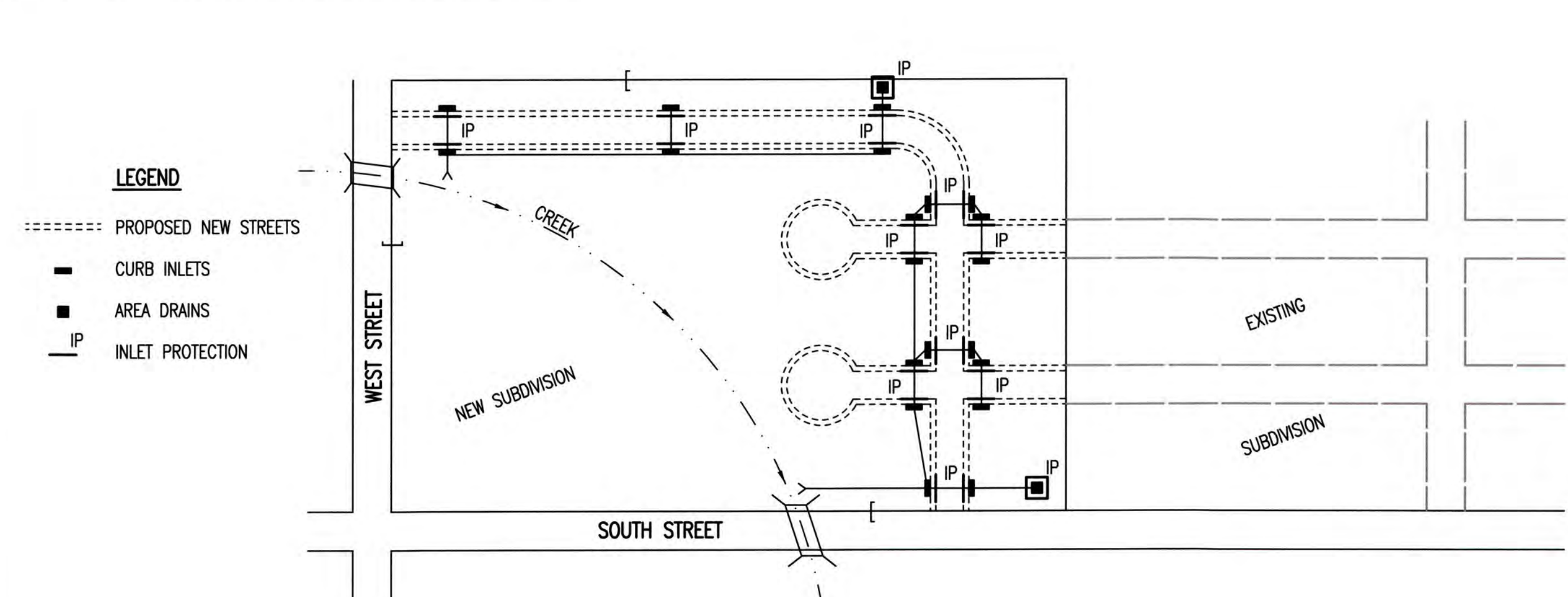
- LEGEND**
- DRAINAGE FLOW PATH
 - RIDGE LINES
 - x POINT OF COMPLIANCE
 - S.H. SILT FENCE OR HAY BALE BARRIER
 - DRAINAGEWAY FLOWLINE
1. DURING THIS PHASE OF SUBDIVISION CONSTRUCTION, THE POINTS OF COMPLIANCE ARE THE PERIMETER BOUNDARIES AND ANY DRAINAGE WAYS OR STORM SEWERS DRAINING THROUGH OR FROM THE SITE. SHOULD LAKES BE CONSTRUCTED WITHIN THE SUBDIVISION THAT WILL DISCHARGE DURING STORMS, THEY ARE ALSO A POINT OF COMPLIANCE.
 2. HAY BALES OR SILT FENCE MUST BE CONSTRUCTED ALONG THE PROPERTY LINE WHERE ON SITE WATER CAN DRAIN OFF THE PROPERTY. THESE EROSION CONTROL DEVICES WILL ALSO BE INSTALLED ALONG ANY DRAINAGE DITCH OR LAKE THAT CAN DISCHARGE.
 3. SHOULD SILT OR SEDIMENT ENTER THE DITCHES OR STREETS ON THE ADJACENT BOUNDARY STREETS, APPROPRIATE EROSION CONTROL DEVICES WILL BE PLACED WITHIN THE SUBDIVISION TO PREVENT THIS.
 4. ANY MUD TRACKED ONTO ADJACENT STREETS WILL BE REMOVED WITHIN 48 HOURS OR BY FRIDAY AT 6:00 PM, WHICHEVER IS EARLIER.
 5. CONTRACTORS WORKING WITHIN THE SITE WILL NOT BE REQUIRED TO USE INDIVIDUAL EROSION CONTROL DEVICES AS LONG AS THOSE SPECIFIED ABOVE ARE IN PLACE AND EFFECTIVE. CONTRACTORS WORKING ON THE BOUNDARY LINE STREETS OR ON ADJACENT PROPERTIES TO EXTEND UTILITIES ARE EXPECTED TO USE EROSION CONTROL DEVICES AT THEIR WORK LOCATIONS, AS NEEDED.
 6. UTILIZE STABILIZED CONSTRUCTION ENTRANCE AT ENTRANCE AND EXIT ONTO ANY EXISTING PUBLIC STREETS.
 7. IF THE INITIAL EARTH WORK AND UTILITIES ARE DONE AS PART OF A PUBLIC IMPROVEMENT PROJECT, THESE EROSION CONTROL DEVICES WILL BE INSTALLED BY THE CONTRACTOR AS SPECIFIED IN THE INDIVIDUAL PROJECT CONTRACTS. THE CONTRACTOR WILL MAINTAIN THE DEVICES UNTIL COMPLETION OF THE CONTRACT, AT WHICH TIME THE DEVELOPER WILL ASSUME MAINTENANCE RESPONSIBILITIES. IF THESE CONTRACTS ARE NOT PUBLIC IMPROVEMENT PROJECTS, THE DEVELOPER WILL BE RESPONSIBLE FOR INSTALLING AND MAINTAINING THESE DEVICES.
 8. WITHIN 14 DAYS OF COMPLETION OF EARTHWORK ACTIVITIES IN ANY GIVEN AREA, THAT AREA SHALL BE TEMPORARILY OR PERMANENTLY SEEDED AND MULCHED.

PHASE 3 – STREET CONSTRUCTION



- LEGEND**
- NEW STREETS
 - x-x-x-x ADDITIONAL POINTS OF COMPLIANCE
1. DURING THIS PHASE OF SUBDIVISION CONSTRUCTION, NEW STREETS ARE INSTALLED. ALL EROSION CONTROL DEVICES INSTALLED DURING PHASE 1 AND 2 MUST STILL BE MAINTAINED. THE POINT OF COMPLIANCE NOW SHIFTS TO THE BACK OF CURB ALONG EACH STREET.
 2. CURB OPENING INLET PROTECTION:
 - A. SUMP AREAS – INLET PROTECTION SHALL BE PROVIDED WHEN STREET SUBGRADE WORK IS COMPLETED.
 - B. NON-SUMP LOCATIONS – PROVIDE INLET PROTECTION AS SOON AS BASE COURSE ASPHALT IS INSTALLED, BEFORE THE SURFACE COURSE LIFT.
 3. EROSION CONTROL DEVICES WILL BE REQUIRED BACK OF CURB WHEREVER WATER CAN FLOW OVER THE CURB AND THE CURB HAS BEEN BACKFILLED TO WITHIN 3" OR LESS OF THE TOP OF CURB (SEE CURB BACKFILL DETAIL). FOR CURBS NOT YET ENTIRELY BACKFILLED (3" OR MORE BELOW TOP OF CURB), ADDITIONAL DEVICES WILL BE REQUIRED AT POINTS WHERE WATER BREAKS OVER CURB WHICH COULD RESULT IN THE PLACEMENT OF SEDIMENT IN THE GUTTER.
 4. SEE DETAIL SHEET FOR BACK OF CURB PROTECTION.
 5. THE BACK OF CURB PROTECTION SPECIFIED ON THIS PLAN MAY HAVE TO BE SUPPLEMENTED WITH HAY BALE OR SILT FENCE EROSION CONTROL DEVICES AT LOCATIONS WHERE CONCENTRATED FLOW RESULTS IN SEDIMENT BEING CARRIED OVER THE EXCELSIOR MATS.
 6. THE STREET CONTRACTOR WILL BE RESPONSIBLE FOR INSTALLING BACK OF CURB EROSION CONTROL DEVICES.
 7. THE INDIVIDUAL LOT OWNERS WILL BE RESPONSIBLE FOR MAINTAINING THE BACK OF CURB EROSION CONTROL DEVICES IN FRONT OF THEIR LOTS UNTIL SUCH TIME AS ADJACENT DISTURBED EARTH IS STABILIZED WITH GRASS OR SOD.

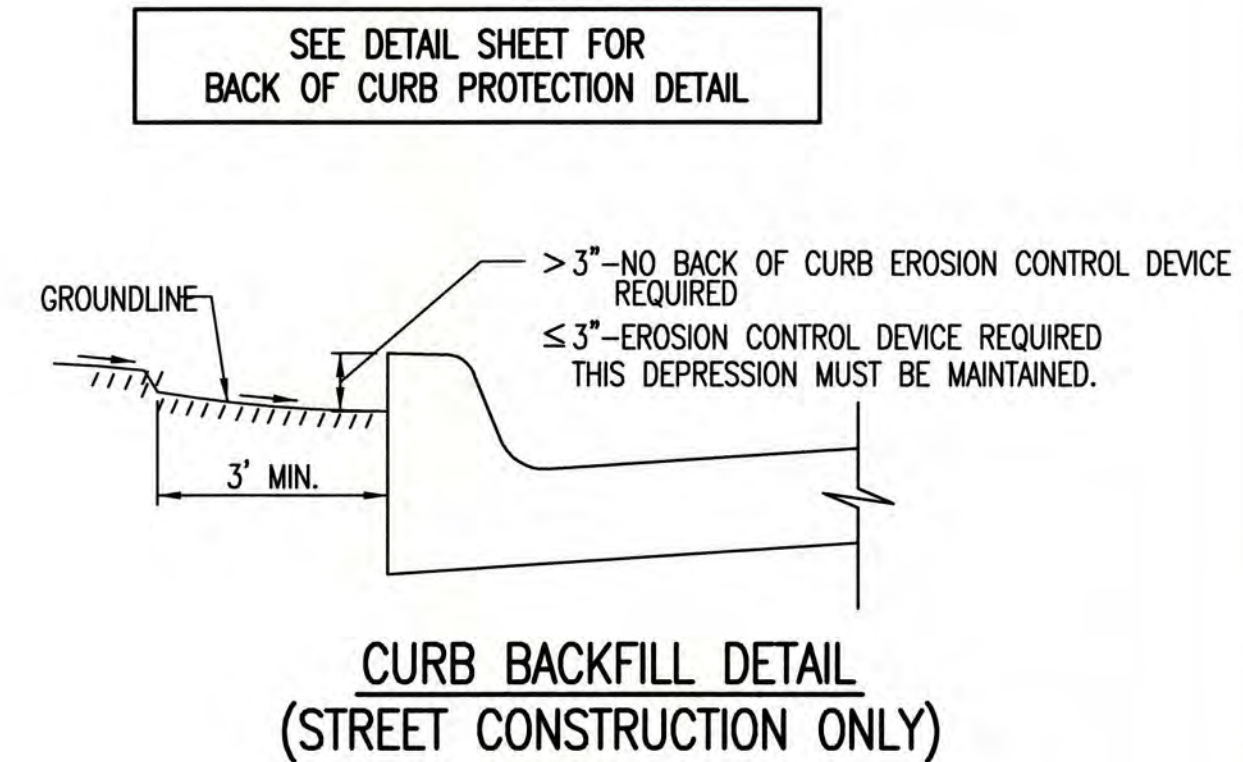
PHASE 2 – INSTALLATION OF STORM SEWER



- LEGEND**
- PROPOSED NEW STREETS
 - CURB INLETS
 - AREA DRAINS
 - IP INLET PROTECTION
1. DURING THIS PHASE OF SUBDIVISION DEVELOPMENT, ALL EROSION CONTROL DEVICES REQUIRED IN PHASE 1 SHALL REMAIN IN PLACE AND BE MAINTAINED.
 2. AS NEW STORM SEWERS, WITH INLETS, ARE INSTALLED, THE STORM SEWERS MUST NOW BE PROTECTED SO ALL NEW INLETS BECOME POINTS OF COMPLIANCE.
 3. AREA DRAINS – AS SOON AS WATER CAN FLOW INTO THESE DRAINS, HAY BALE OR SILT FENCE PROTECTION WILL BE INSTALLED AROUND THEM.
 4. CURB OPENING INLETS – AS SOON AS WATER CAN FLOW INTO THESE DRAINS, INLET PROTECTION DEVICES MUST BE INSTALLED. IF WATER CANNOT FLOW INTO CURB INLETS UNTIL STREET CONSTRUCTION IS COMPLETE, THEN STREET CONTRACTOR WILL INSTALL INLET PROTECTION. SEE PHASE 3 – STREET CONSTRUCTION.
 5. THE STORM SEWER CONTRACTOR WILL BE RESPONSIBLE FOR INSTALLING THESE DEVICES.
 6. THE SUBDIVISION DEVELOPER WILL MAINTAIN THESE EROSION CONTROL DEVICES ONCE INSTALLED.
 7. ALL DISTURBED GROUND WILL BE FINAL GRADED AND TEMPORARILY OR PERMANENTLY SEEDED WITHIN 14 DAYS IF COMPLETION OF WORK IN ANY GIVEN PART OF THE SUBDIVISION.
 8. ONCE ALL DISTURBED GROUND DRAINING TO AN INLET HAS BEEN RESTABILIZED WITH GRASS OR SOD, THE SUBDIVISION DEVELOPER WILL BE RESPONSIBLE FOR PERMANENTLY REMOVING THE INLET PROTECTION.

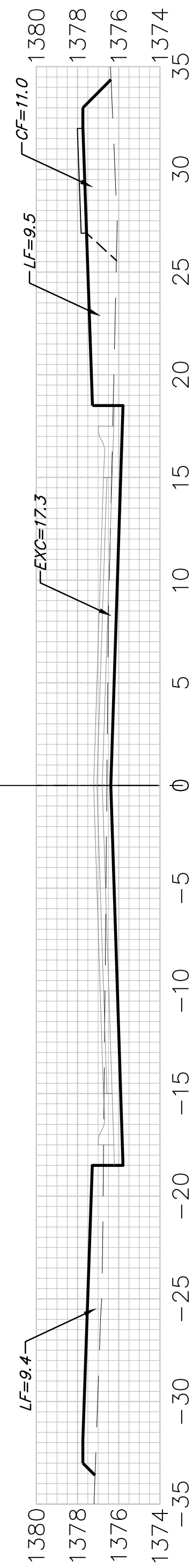
GENERAL NOTES

1. THE INTENT OF ALL EROSION CONTROL DEVICES IS TO PREVENT ERODED SOIL FROM ENTERING DITCHES, STORM SEWERS, LAKES, STREETS OR ANY OTHER OTHER DRAINAGE FEATURE.
2. THIS SHEET IS INTENDED TO PROVIDE GUIDELINES AS TO WHAT TYPE OF EROSION CONTROL DEVICES WILL BE INSTALLED DURING THE CONSTRUCTION PROCESS. CONTRACTORS ARE EXPECTED TO BID PROJECTS ACCORDINGLY.
3. EROSION CONTROL DEVICES SHALL BE MAINTAINED DURING THE CONSTRUCTION PROCESS TO REMAIN EFFECTIVE. MAINTENANCE SHALL BE AS INDICATED ON SOIL EROSION BMP'S DETAIL SHEETS.
4. PERSONS DESTROYING EROSION CONTROL DEVICES SHALL BE RESPONSIBLE FOR IMMEDIATELY REPAIRING THEM OR INSTALLING SUITABLE REPLACEMENT DEVICES.
5. THE DEVELOPMENT OF ANY SUBDIVISION THAT DISTURBS 1 ACRE OR MORE WILL REQUIRE A FEDERAL/STATE NPDES STORMWATER PERMIT. THE PREPARATION OF A STORMWATER POLLUTION PREVENTION PLAN IS REQUIRED. EROSION CONTROL DEVICES ARE REQUIRED. THE DETAILS SHOWN ON THIS SHEET ARE THE MINIMUM STANDARDS TO BE SHOWN ON POLLUTION PREVENTION PLANS.
6. FOR SUBDIVISIONS SMALLER THAN 1 ACRE, SOIL EROSION DEVICES ARE REQUIRED. ALSO, DEVELOPERS AND CONTRACTORS ARE ENCOURAGED TO DEVELOP POLLUTION PREVENTION PLANS FOR EACH PROJECT PRIOR TO CONSTRUCTION.
7. FAILURE TO USE AND MAINTAIN SOIL EROSION DEVICES IS A VIOLATION OF SECTION 16.32 OF THE CITY CODE AND WILL SUBJECT THE SUBDIVISION DEVELOPER AND CONTRACTORS TO THE PENALTIES PROVIDED THEREIN.
8. THE APPLICATION OF EROSION CONTROL DEVICES SHOWN ON THIS SHEET IS FOR SITUATIONS NORMALLY ENCOUNTERED. FROM TIME TO TIME, SITUATIONS WILL ARISE THAT MAY REQUIRE DEVICES OTHER THAN THAT SHOWN. EROSION CONTROL DEVICES, OTHER THAN THOSE SHOWN, MAY BE UTILIZED SO LONG AS THEY ARE EFFECTIVE AND MAINTAINED.
9. A STABILIZED EARTH SURFACE IS DEFINED AS ONE THAT IS HARD SURFACED WITH CONCRETE, ASPHALT, OR THE LIKE, OR ONE ON WHICH 70% OF THE GRASS HAS GERMINATED ON THE ENTIRE SURFACE.

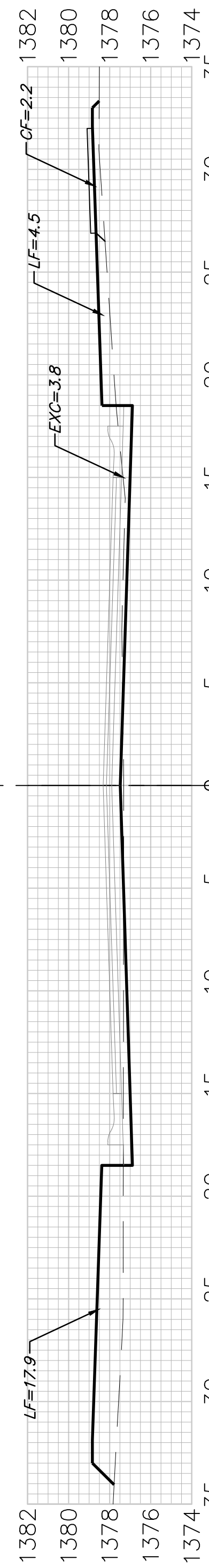


CITY OF WICHITA		
PUBLIC WORKS & UTILITIES ENGINEERING DIVISION		
SUBDIVISION DEVELOPMENT PROCESS		
CITY ENGINEER GARY JANZEN, P.E.		
PROJECT NUMBER	OCA NUMBER	DATE
		5/2013
CITY ENGINEER'S OFFICE CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202-1620 (316) 268-4501		SHEET 19 of 27

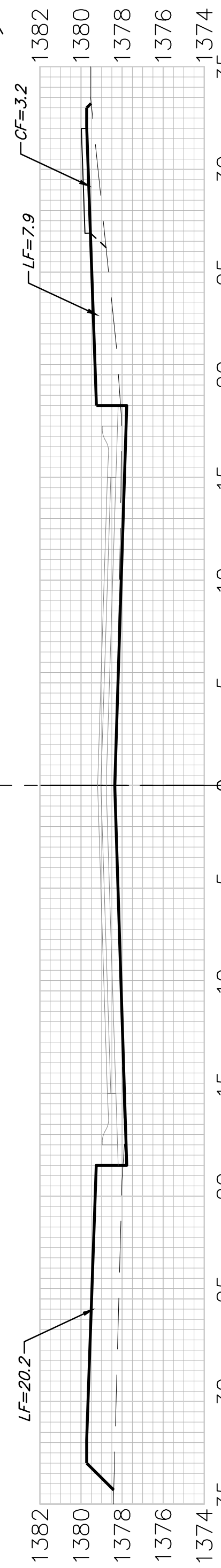
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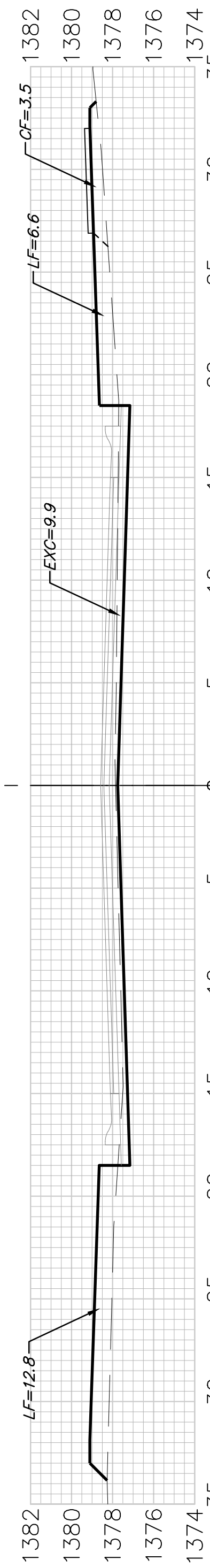
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CF = 6.8



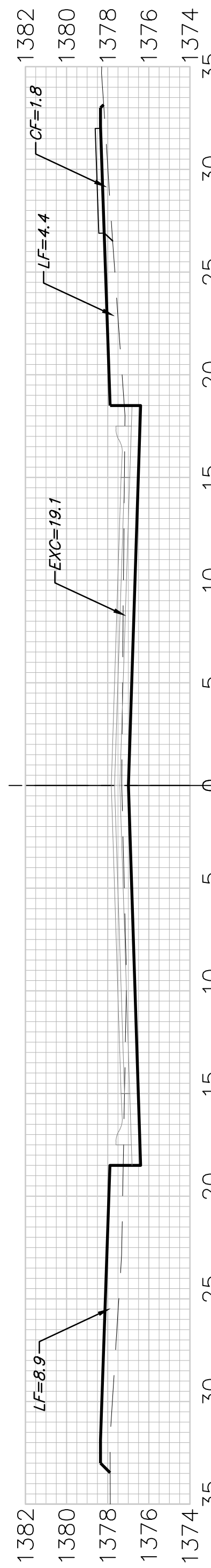
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CF = 5.0



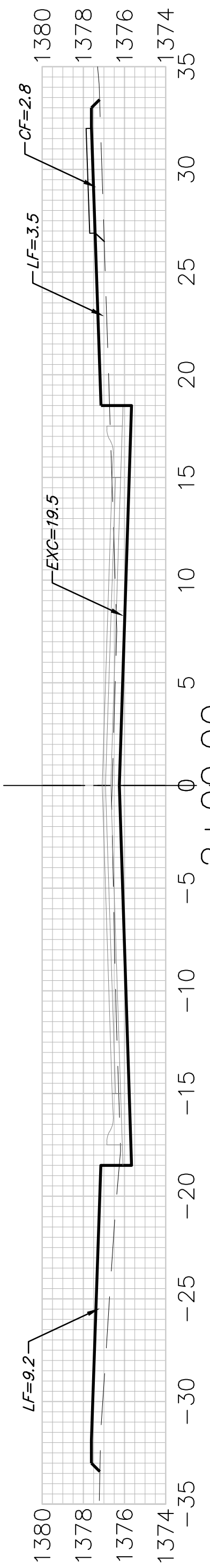
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CF = 6.2



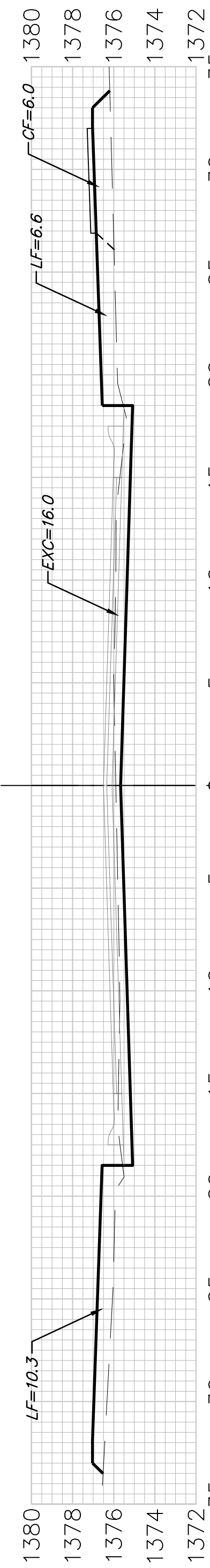
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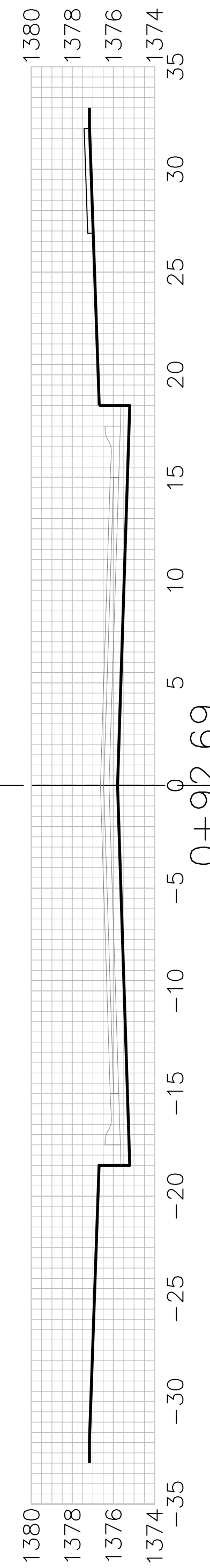
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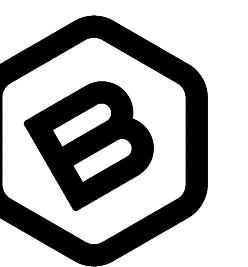
EXC = 32.9
LF = 27.4
CF = 8.1



EXC = 17.0
LF = 17.9
CF = 6.4



Sheet Totals
Excavation = 158.9 C.Y.
Loose Fill = 223.5 C.Y.
Compacted Fill = 46.5 C.Y.



**BAUGHMAN
COMPANY**

315 Ellis St.
Wichita, KS 67211
316-262-7271
BaughmanCo.com

NRD ADDITION
Phase 2

**CROSS
SECTIONS**

STREET
IMPROVEMENTS

PROJECT NUMBER:
22-01-E105

DESIGN: NBW DRAWN: TMS

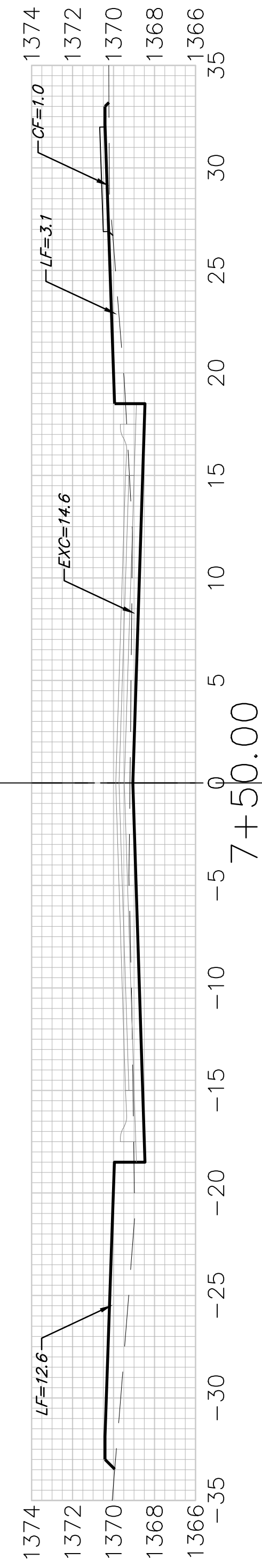
DATE: January 24, 2025

SHEET **20** OF **27**

SANDPIPER
C

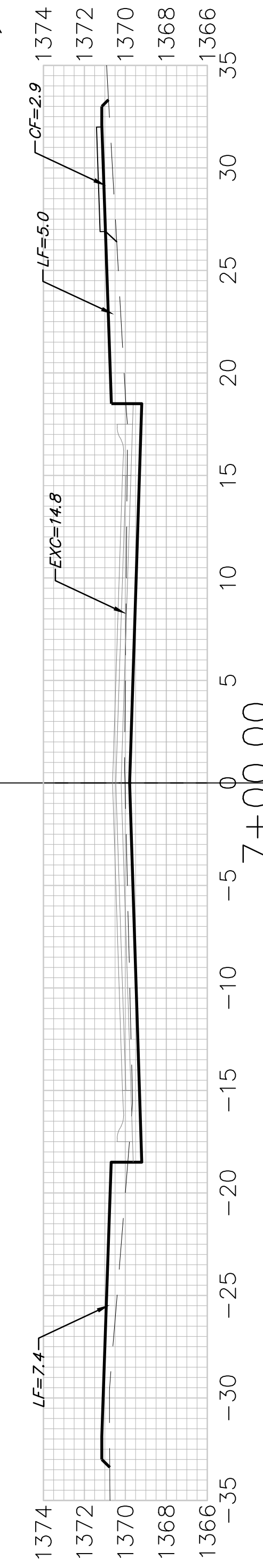
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50.00'



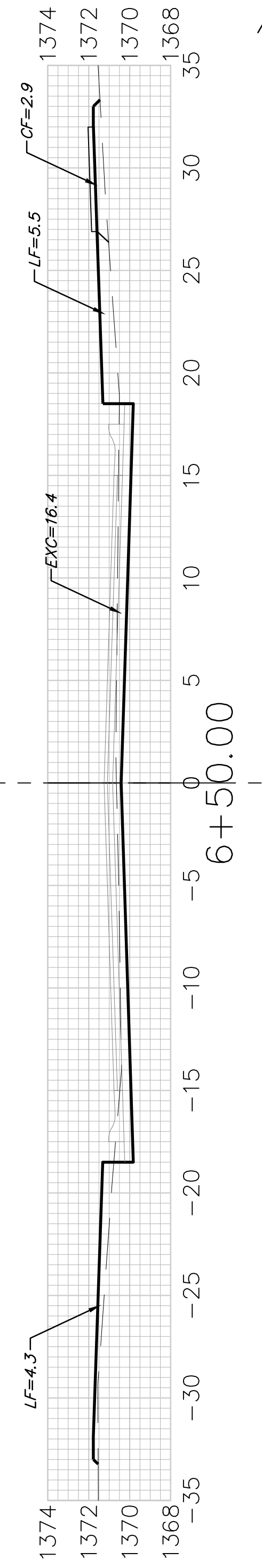
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CF = 3.6

50.00'



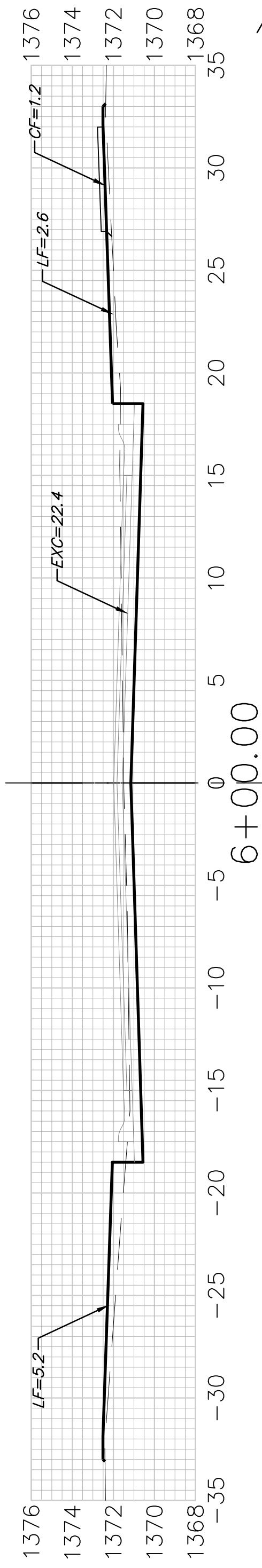
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50.00'



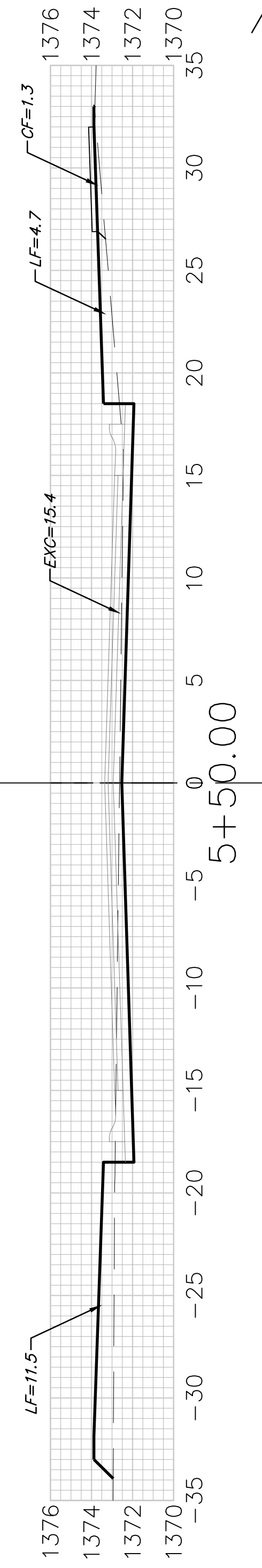
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50.00'



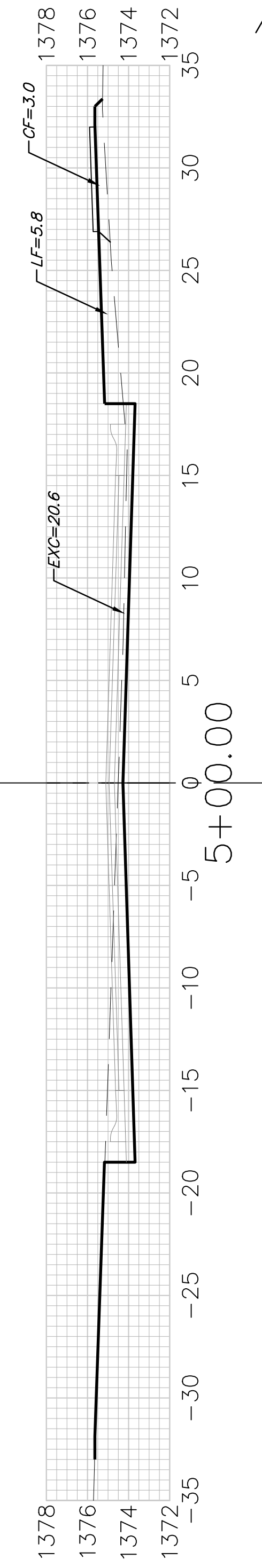
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CF = 2.3

50.00'



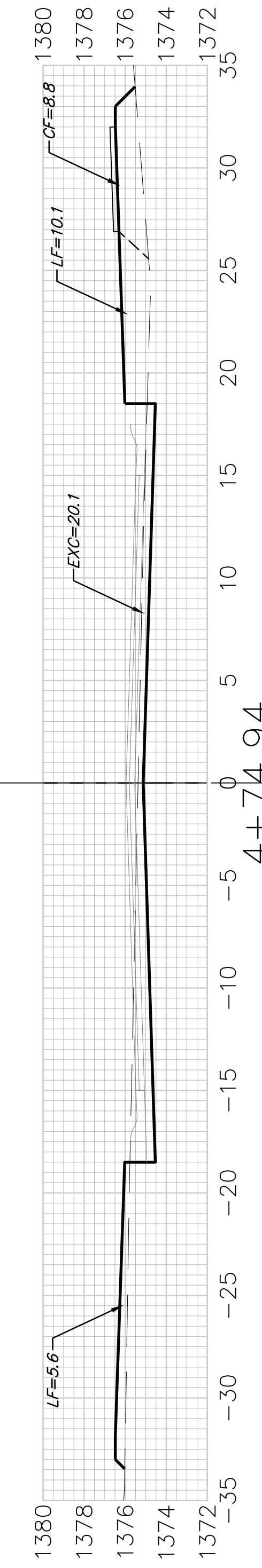
EXC = 33.3
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CF = 4.0

50.00'



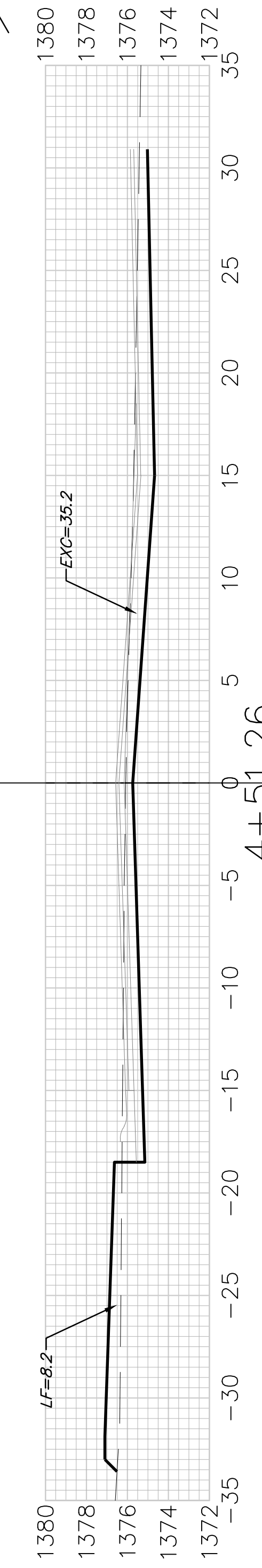
EXC = 18.8
LF = 10.0
CF = 5.5

25.06'



EXC = 24.3
LF = 10.5
CF = 3.9

23.66'



Sheet Totals
Excavation = 230.7 C.Y.
Loose Fill = 151.7 C.Y.
Compacted Fill = 30.9 C.Y.

BAUGHMAN COMPANY
315 Ellis St.
Wichita, KS 67211
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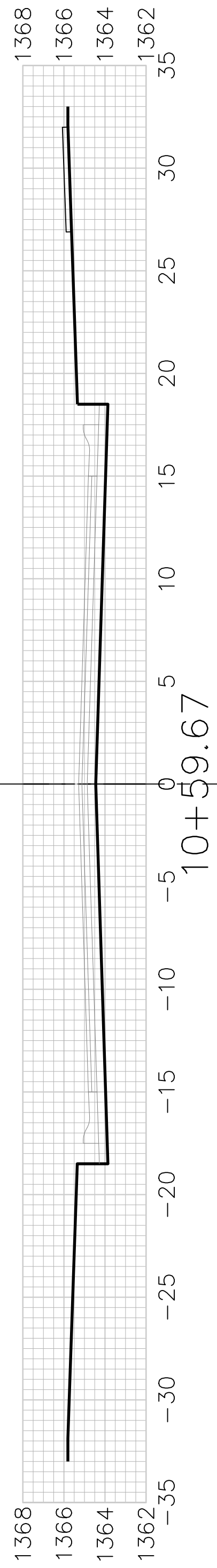
NRD ADDITION
Phase 2

CROSS SECTIONS

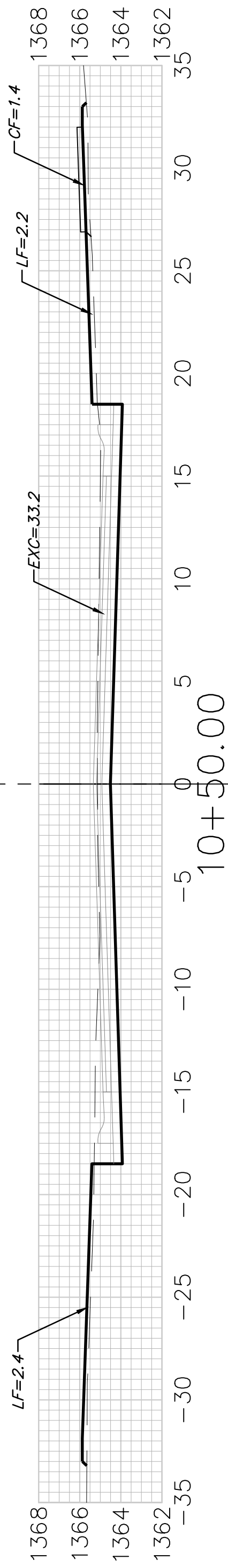
STREET IMPROVEMENTS
PROJECT NUMBER:
22-01-E105
DESIGN: NBW DRAWN: TMS
DATE: January 24, 2025

SHEET **21** OF **27**

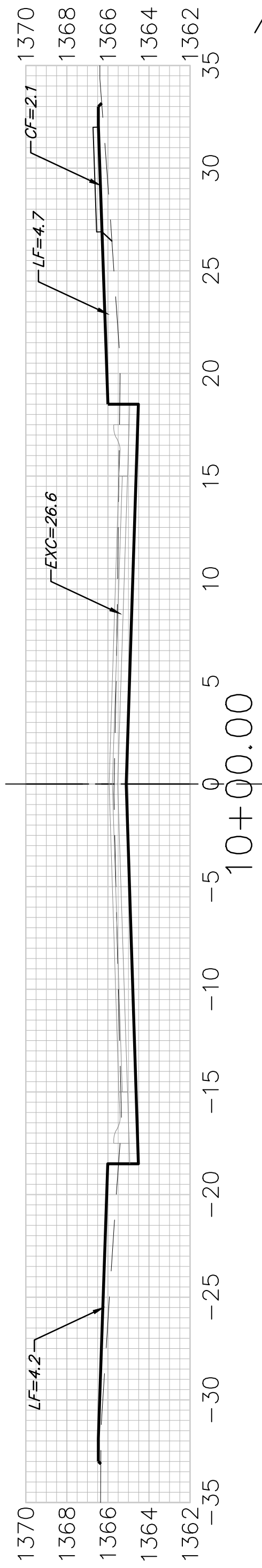
PEPPER TREE



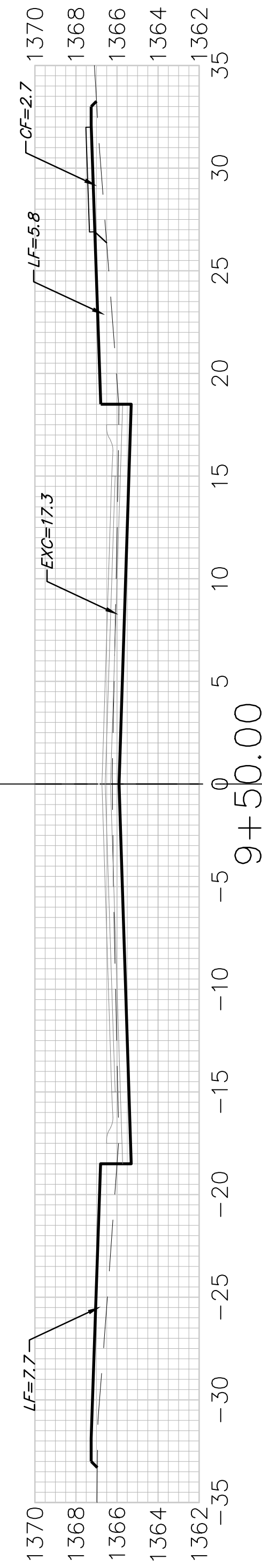
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CF = 1.5



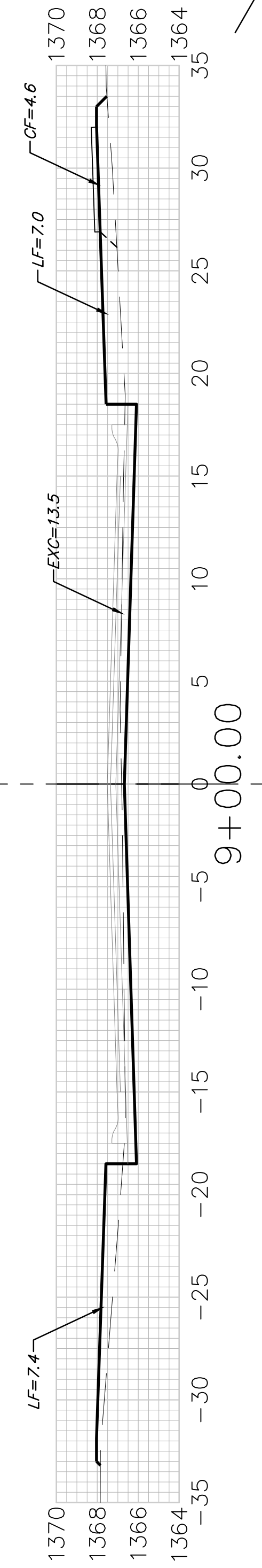
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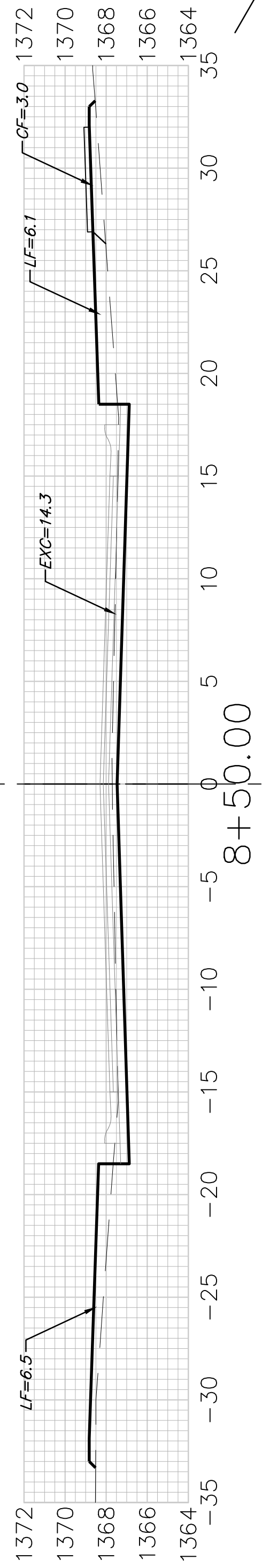
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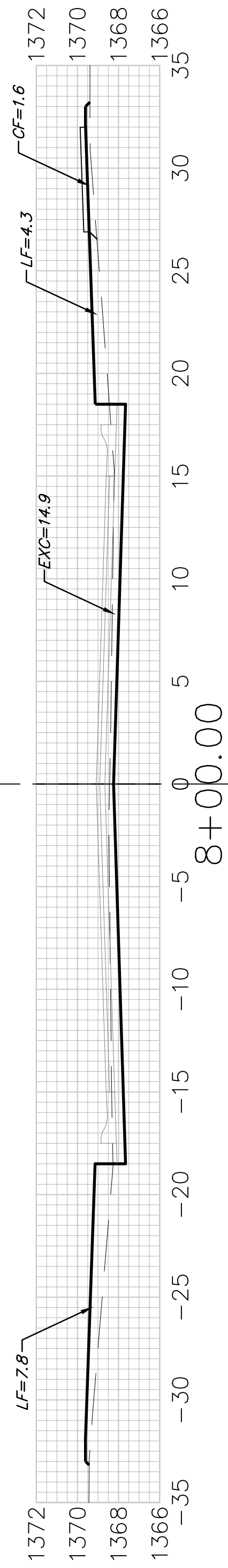
EXC = 28.5
LF = 25.8
CF = 6.8



EXC = 25.7
LF = 25.0
CF = 7.0



EXC = 27.0
LF = 22.9
CF = 4.3



Sheet Totals
Excavation = 213.9 C.Y.
Loose Fill = 112.0 C.Y.
Compacted Fill = 27.2 C.Y.

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Wichita, KS 67211
316-262-7271
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NRD ADDITION
Phase 2

CROSS SECTIONS

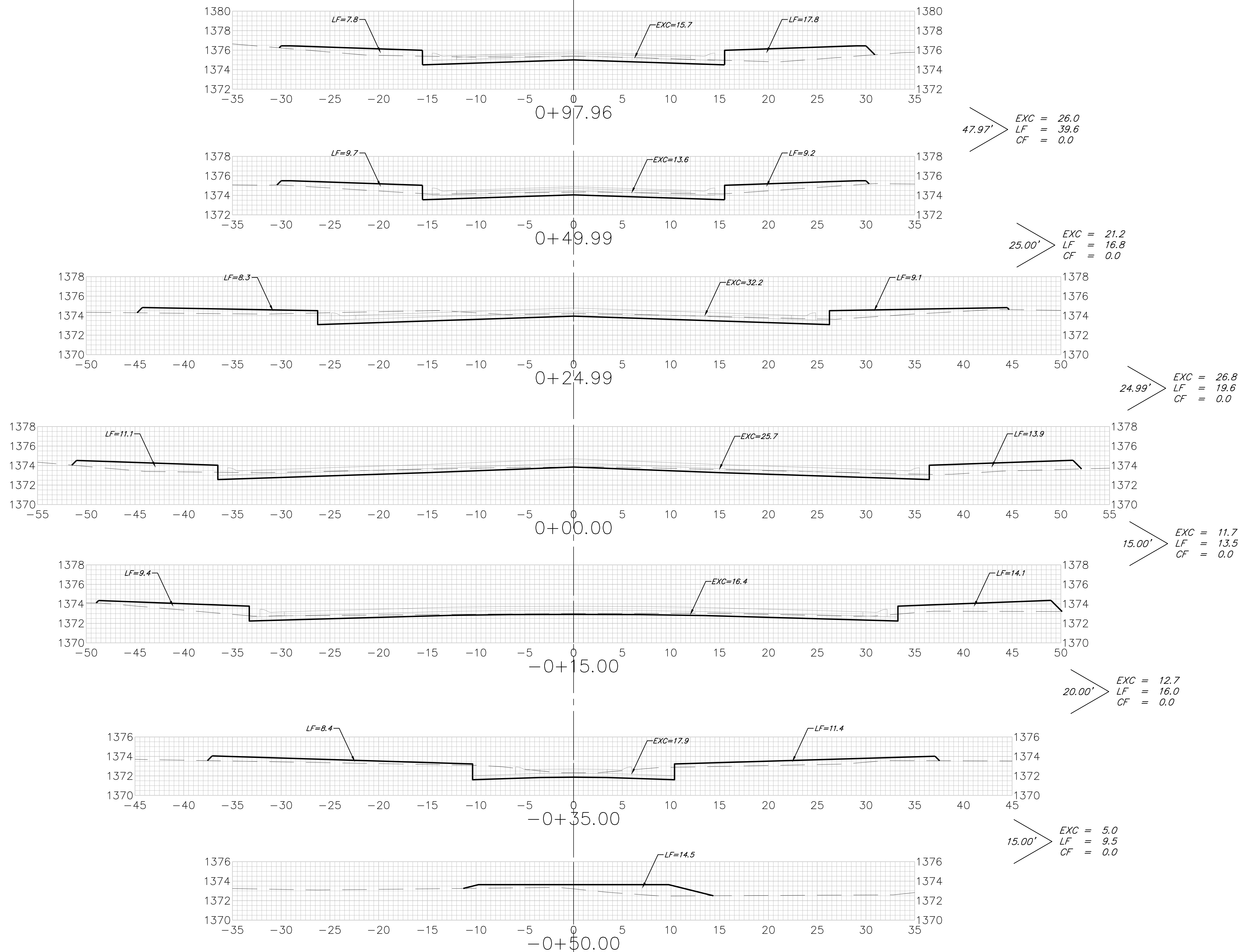
STREET IMPROVEMENTS

PROJECT NUMBER:
22-01-E105

DESIGN: NBW DRAWN: TMS
DATE: January 24, 2025

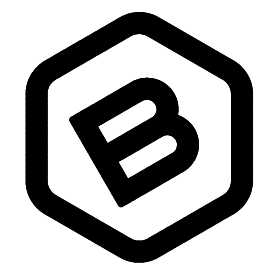
SHEET **22** OF **27**

PEPPER TREE



SANDPIPER CIR.
 CL

Sheet Totals
 Excavation = 103.4 C.Y.
 Loose Fill = 115.0 C.Y.
 Compacted Fill = 0.0 C.Y.



BAUGHMAN COMPANY
 315 Ellis St.
 Wichita, KS 67211
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NRD ADDITION
 Phase 2

CROSS SECTIONS

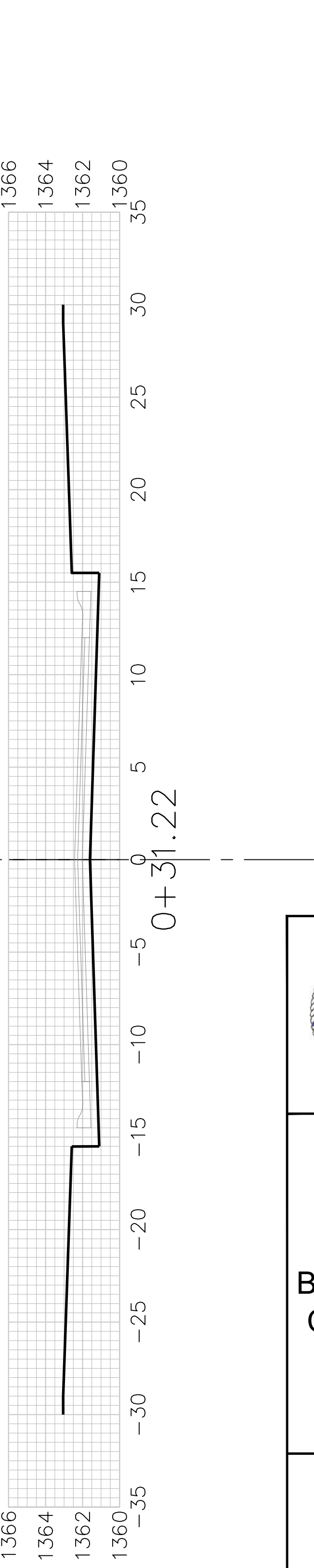
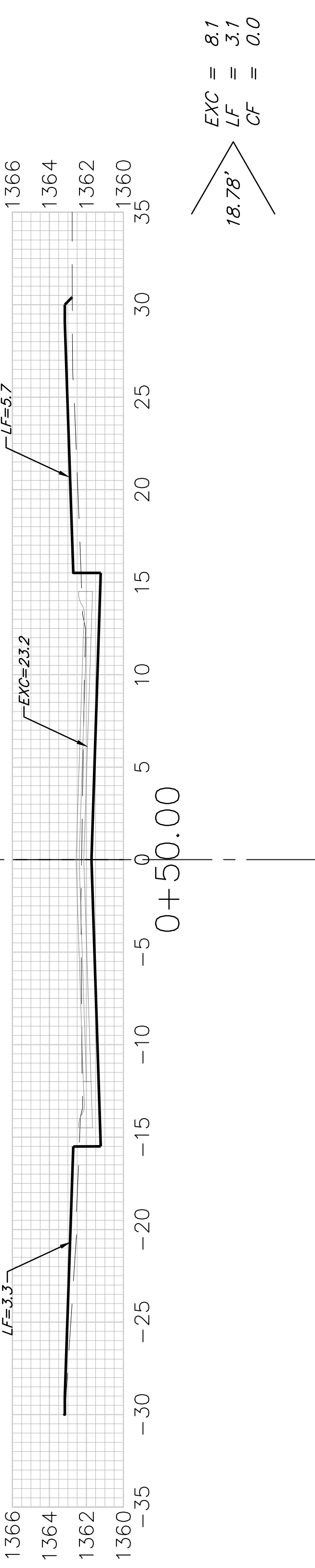
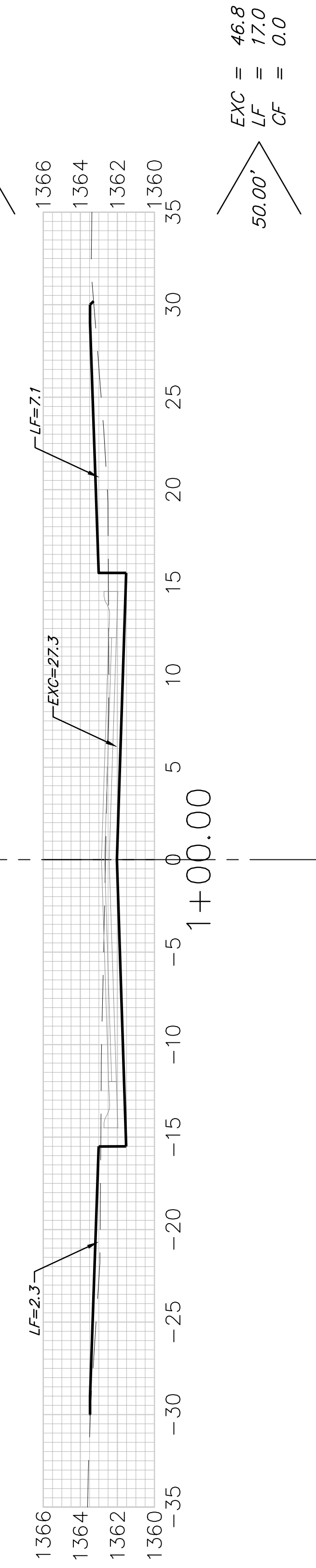
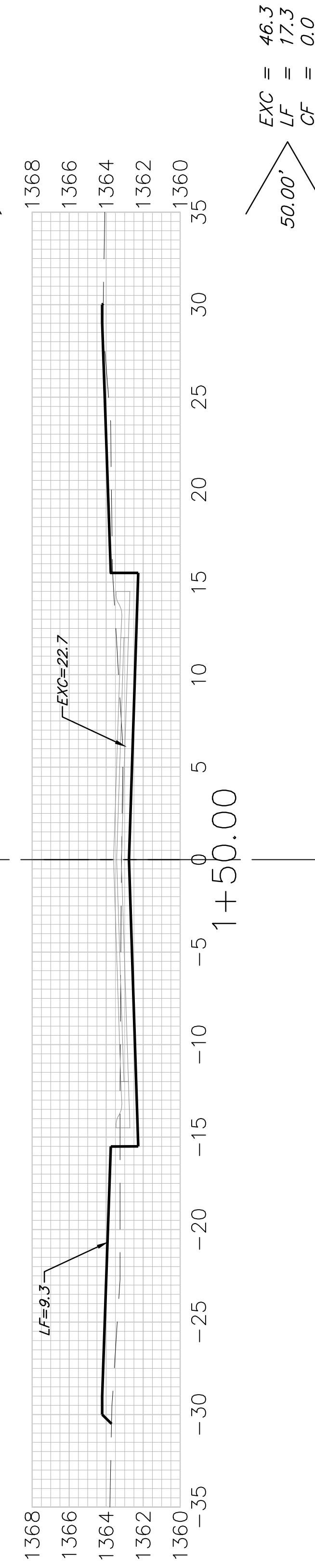
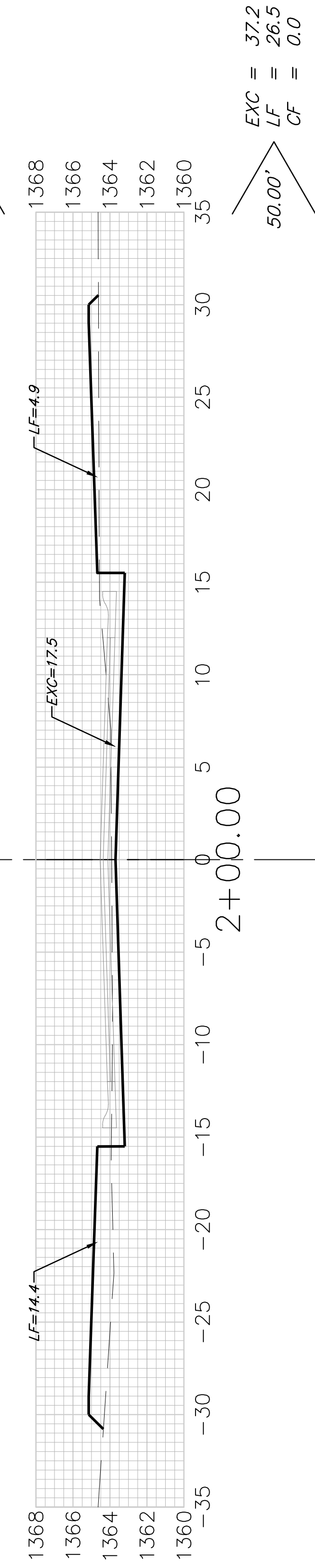
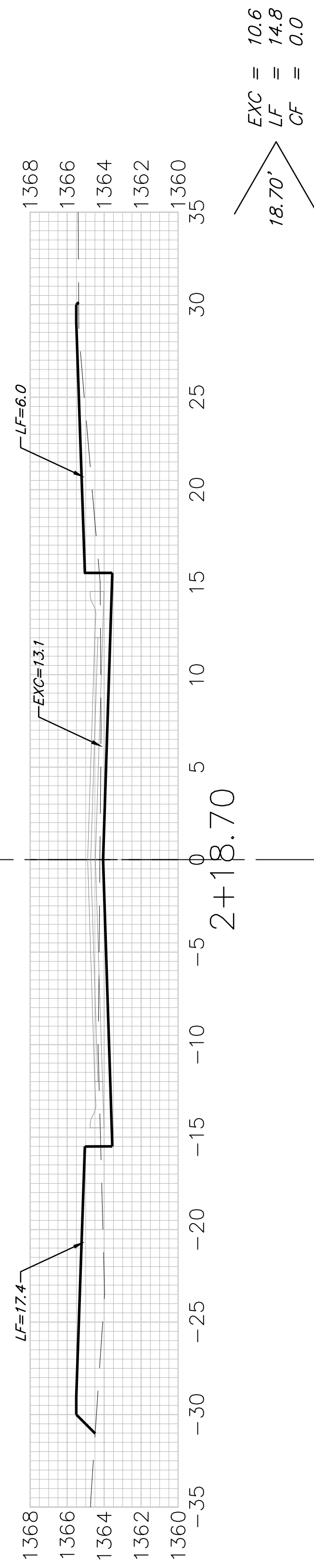
STREET IMPROVEMENTS

PROJECT NUMBER:
 22-01-E105

DESIGN: NBW DRAWN: TMS
 DATE: January 24, 2025

SHEET **23** OF **27**

File: E:\Projects\NRD Addition_19-04-P448\Engineering\Phase 2\STR 22-01-E 105\Streets.dwg



Sheet Totals
 Excavation = 149.0 C. Y.
 Loose Fill = 78.7 C. Y.
 Compacted Fill = 0.0 C. Y.

PEPPER TREE CIR. ϕ

BAUGHMAN COMPANY
 315 Ellis St.
 Wichita, KS 67211
 316-262-7271
 BaughmanCo.com

NRD ADDITION
 Phase 2

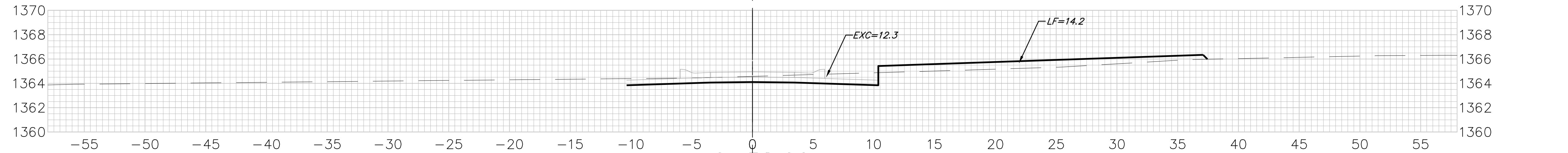
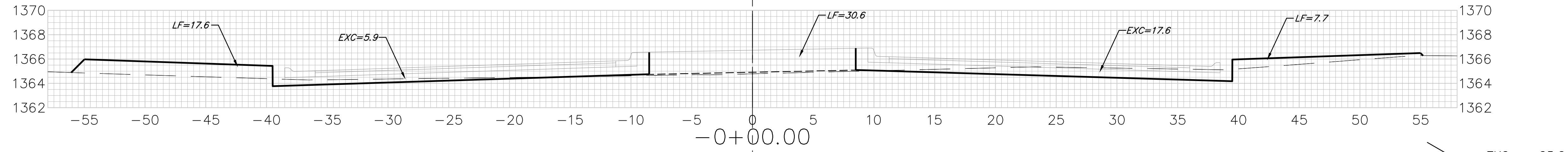
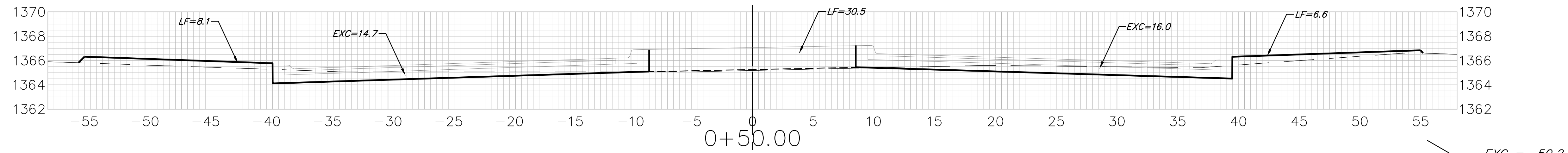
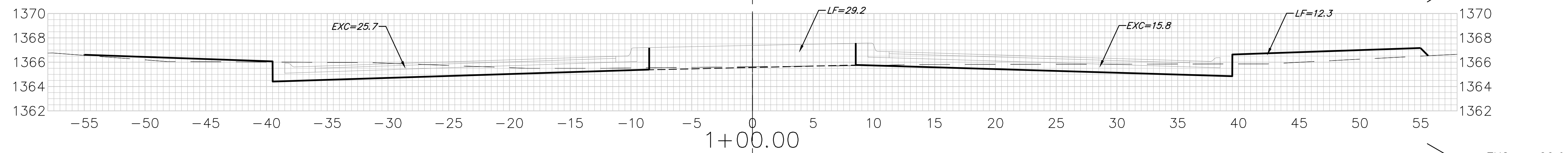
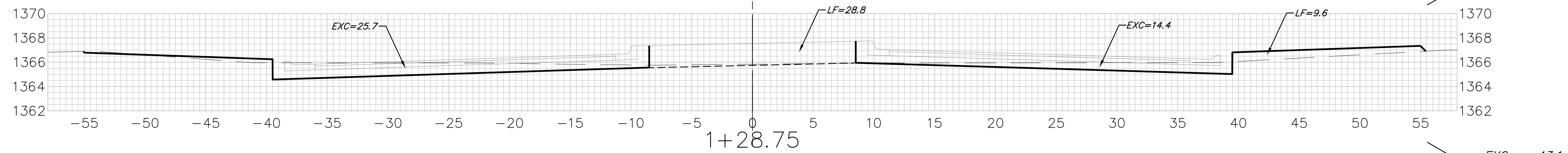
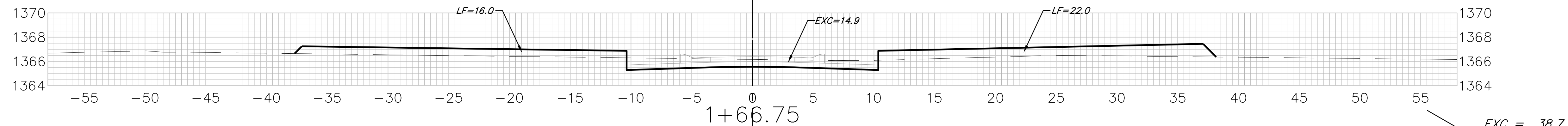
CROSS SECTIONS

STREET IMPROVEMENTS

PROJECT NUMBER:
 22-01-E105

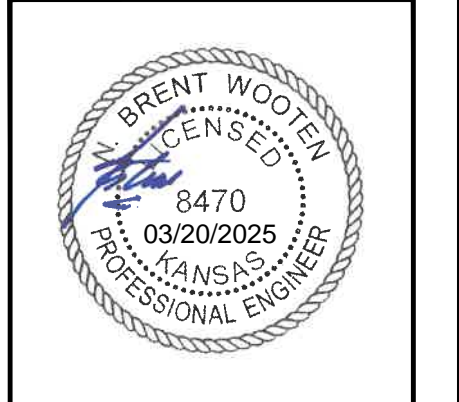
DESIGN: NBW DRAWN: TMS
 DATE: January 24, 2025

SHEET **24** OF **27**



PEPPER TREE CIR.
C

Sheet Totals
Excavation = 224.1 C.Y.
Loose Fill = 319.6 C.Y.
Compacted Fill = 0.0 C.Y.



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NRD ADDITION
Phase 2

CROSS SECTIONS

STREET IMPROVEMENTS

PROJECT NUMBER:
22-01-E105

DESIGN: NBW DRAWN: TMS
DATE: January 24, 2025

SHEET 25 OF 27

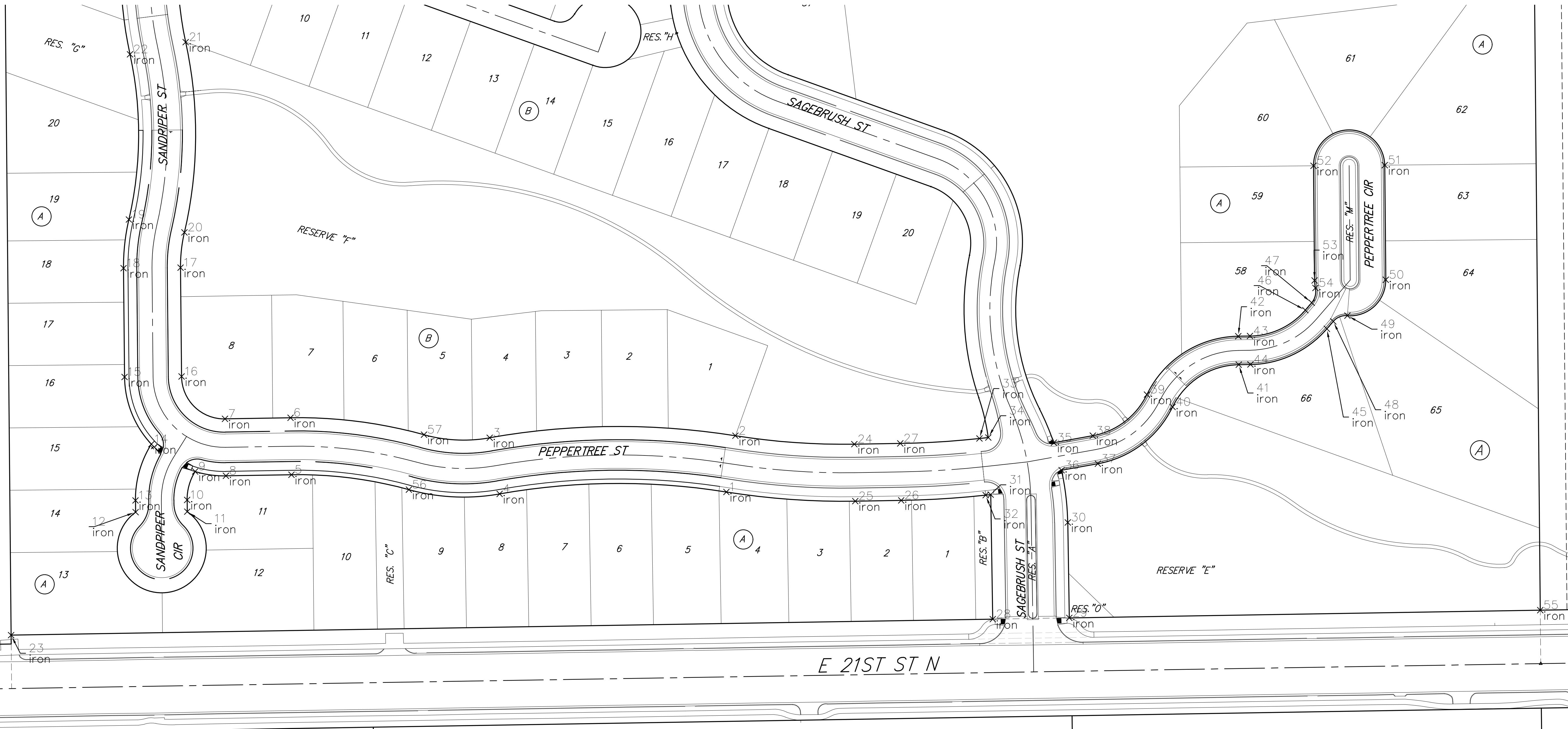
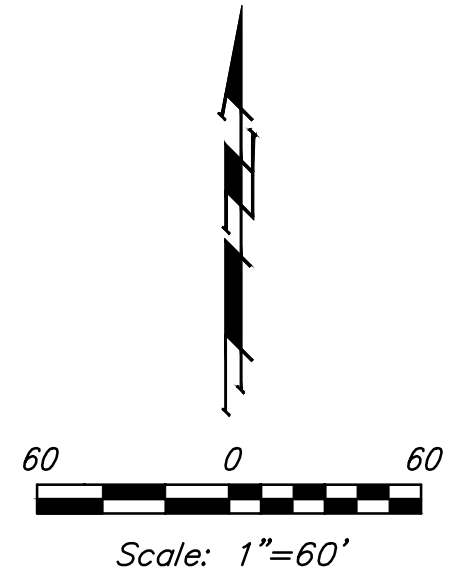
File: E:\Projects\NRD Addition_19-04-P448\Engineering\Phase 2\STR 22-01-E105\Streets.dwg

IRONS

Point Table			
Point #	Northing	Easting	Raw Description
1	1700028.25	1698348.58	iron
2	1700091.45	1698358.67	iron
3	1700089.17	1698082.84	iron
4	1700026.14	1698093.97	iron
5	1700047.64	1697860.22	iron
6	1700111.63	1697859.18	iron
7	1700110.43	1697785.57	iron
8	1700046.44	1697786.61	iron
9	1700051.31	1697752.08	iron
10	1700019.31	1697743.07	iron
11	1700006.16	1697743.19	iron
12	1700005.62	1697685.19	iron
13	1700018.77	1697685.07	iron
14	1700082.03	1697702.88	iron
15	1700157.39	1697672.79	iron
16	1700157.98	1697736.78	iron
17	1700280.18	1697735.65	iron
18	1700279.59	1697671.66	iron
19	1700334.26	1697677.67	iron

Point Table			
Point #	Northing	Easting	Raw Description
20	1700319.77	1697740.01	iron
21	1700533.45	1697741.44	iron
22	1700519.80	1697678.91	iron
23	1699867.49	1697545.42	iron
24	1700081.95	1698492.23	iron
25	1700017.96	1698493.28	iron
26	1700018.81	1698544.87	iron
27	1700082.80	1698543.83	iron
28	1699885.47	1698647.65	iron
29	1699886.87	1698733.64	iron
30	1699994.00	1698731.89	iron
31	1700025.34	1698645.37	iron
32	1700024.72	1698639.67	iron
33	1700088.35	1698632.74	iron
34	1700089.43	1698642.67	iron
35	1700083.63	1698716.25	iron
36	1700052.69	1698724.95	iron
37	1700060.02	1698765.67	iron
38	1700091.51	1698760.00	iron

Point Table			
Point #	Northing	Easting	Raw Description
39	1700137.67	1698820.76	iron
40	1700123.76	1698849.58	iron
41	1700171.23	1698923.85	iron
42	1700203.23	1698923.33	iron
43	1700203.44	1698936.47	iron
44	1700171.45	1698937.00	iron
45	1700211.52	1699022.82	iron
46	1700232.46	1698998.62	iron
47	1700240.76	1699005.80	iron
48	1700219.82	1699030.00	iron
49	1700226.32	1699045.85	iron
50	1700266.57	1699088.98	iron
51	1700395.31	1699087.79	iron
52	1700394.57	1699007.79	iron
53	1700265.83	1699008.98	iron
54	1700257.38	1699009.96	iron
55	1699895.49	1699262.42	iron
56	1700030.92	1697992.05	iron
57	1700092.63	1698009.03	iron







**BAUGHMAN
COMPANY**

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NRD ADDITION
Phase 2

**COORDINATE
SHEET**

STREET
IMPROVEMENTS

PROJECT NUMBER:
22-01-E105

DESIGN: DRAWN:
DATE: October 10, 2024

SHEET OF
26 27

File: E:\Projects\NRD Addition_19-04-P448\Engineering\Phase 2\STR_22-01-E105\Streets.dwg

