PLOTTED: Friday, February 20, 2026 @ 01:16PM

STREET IMPROVEMENTS FOR

135TH STREET WEST

FROM CENTRAL AVE TO 13TH STREET

WICHITA, KS
SEDGWICK COUNTY, KANSAS
PAUL GUNZELMAN - CITY ENGINEER

C.O.W. PROJECT NO. 472-2021-085756
ORIG. CODE 40106822
MUNIS NUMBER E2027

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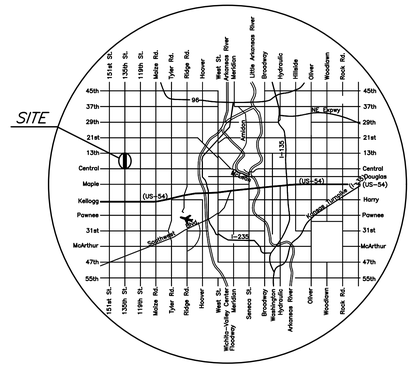
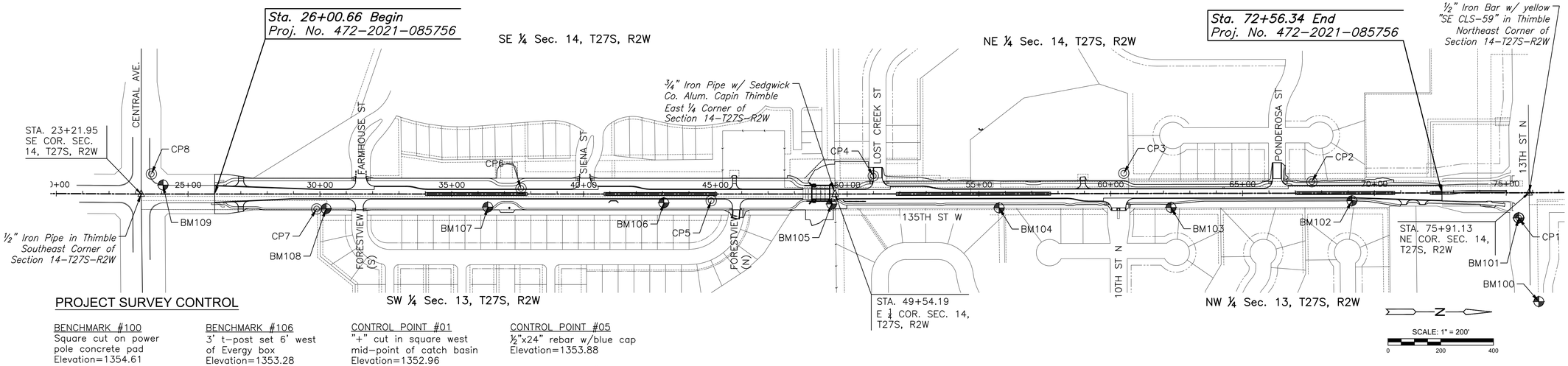


LOCATION MAP



PROJECT SURVEY CONTROL

BENCHMARK #100
Square cut on power pole concrete pad
Elevation=1354.61

BENCHMARK #101
Square cut on south mid-point of curb inlet
Elevation=1353.01

BENCHMARK #102
Square cut on west side of concrete base of 4'ø PP
Elevation=1353.95

BENCHMARK #103
3' t-post set 2' west of concrete wall
Elevation=1357.54

BENCHMARK #104
3' t-post set 2' west of concrete wall
Elevation=1356.47

BENCHMARK #105
City of Wichita, brass disk found
Elevation=1347.58

BENCHMARK #106
3' t-post set 6' west of Evergy box
Elevation=1353.28

BENCHMARK #107
3' t-post set in E/W fence line 15' east of corner fence post
Elevation=1350.26

BENCHMARK #108
3' t-post set in E/W fence line 15' east of corner fence post
Elevation=1353.69

BENCHMARK #109
City of Wichita, brass disk found in top of guard rail in SW corner of bridge over North Fork Calfskin Creek
Elevation=1350.41

CONTROL POINT #01
"+" cut in square west mid-point of catch basin
Elevation=1352.96

CONTROL POINT #02
½"x24" rebar w/blue cap
Elevation=1356.44

CONTROL POINT #03
½"x24" rebar w/blue cap
Elevation=1361.84

CONTROL POINT #04
Mag nail w/washer
Elevation=1351.59

CONTROL POINT #05
½"x24" rebar w/blue cap
Elevation=1353.88

CONTROL POINT #06
½"x24" rebar w/blue cap
Elevation=1350.01

CONTROL POINT #07
½"x24" rebar w/blue cap
Elevation=1353.48

CONTROL POINT #08
Mag nail w/washer
Elevation=1349.18

DATUM:
The Horizontal Datum is based on the Kansas Coordinate System of 1983, NAD83(2011), South Zone, US Survey Foot Grid to ground. Coordinates shown have been modified to the ground using a combined adjustment factor of 1.0001200144. State Plane coordinates can be calculated by multiplying the shown values by 0.99988. GPS Scale Point N: 0.00 E: 0.00

All elevations shown are based on the NAVD 88 vertical datum, Geoid18.

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STREET IMPROVEMENTS FOR
135TH STREET WEST
FROM CENTRAL AVE TO 13TH STREET

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TITLE SHEET

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	1"=200'

DESIGNED	DRAWN	CHECKED
JRA	RAM	JRA

NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

SHEET NO.
1 OF 156

J:\PROJECTS\2022\2201010447_COW_135TH STREET FROM CENTRAL TO 13TH STREET\00 220447 CAD\SHTS\01 GENERAL\TITLESHEET\S\220447-05-5001.DWG

PLOTTED: Friday, February 20, 2026 @ 01:16PM

GENERAL NOTES

Unless shown or stated otherwise on these drawings, materials, and construction shall be in accordance with City of Wichita Standard Specifications and special provisions. References within these plans to KDOT Concrete Grades may be ignored.

Contractor will be required to provide a minimum advance notice of seventy–two (72) hours to utility companies prior to starting any excavation as follows:

Kansas One–call	1–800–344–7233
or local Wichita	687–2470

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

AT&T (telephone)	1–800–870–8390
Cox Communications (cable)	262–0661
Evergy (electric)	383–8600
Kansas Gas Service (gas)	1–888–482–4950
City of Wichita Water & Sewer Maint.	262–6000
Black Hills (gas)	1–800–694–8989
Sedgwick County Electric Cooperative	524–3131

The Contractor shall be responsible for preserving existing property irons shown on plans. The Contractor will be required to reestablish any shown property irons which are damaged or destroyed by his construction operations. Such irons shall be reestablished at the Contractor's expense by a licensed land surveyor in accordance with state laws.

Construction staking shall be performed by the City of Wichita Public Works Department. All staking performed by the City of Wichita will be done at no cost to the contractor. The contractor shall coordinate the survey staking with the City of Wichita Public Works Department and give the surveyor 24 hours notice when stakes are required.

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

The contractor shall adjust water valve boxes as directed by the engineer at the price bid for said adjustments. The water department shall field locate water valves one time during construction when requested by the contractor. It shall be the contractors responsibility to preserve such field locations during the construction process. Water valves or water valve boxes damaged during construction shall be repaired by the contractor at his own expense.

All stationing, radii, pavement widths, offset distances, etc... are measured to the back of the curb and gutter and along the project baseline unless otherwise noted on the plans. Spot elevations on plan sheets are at Back of Full–Height Curb and Gutter flow line. Spot elevations on Intersection Details are as noted. Cross–section elevations are existing surface and top of proposed surface at the project baseline.

Rubble from the removal of miscellaneous structures and excess excavation which is to be wasted shall be disposed of on sites to be provided by the contractor. These sites shall be approved by the Engineer as to suitability, appearance and site location. Locations that, in the opinion of the Engineer, will leave an unsightly appearance will not be approved. All disposal sites must be approved by the Kansas Department of Health and Environment. Material either stockpiled or disposed of in a flood plain would require a Kansas State Board of Agriculture permit. Any material dumped in waters of the United States or wetlands is subject to U.S. Corps of Engineers permitting regulations. Any material buried or stockpiled beyond approved construction limits would require additional archeological investigations unless buried in a previously approved borrow location. Millings from the "Mill and Overlay" operation shall become the property of the contractor and disposed of on sites provided by the contractor. These sites shall be approved by the Engineer as to suitability, appearance and site location.

A saw cut of at least one–half the depth of the Existing Surface courses or one–fourth the depth of the existing total pavement thickness shall be provided at locations where proposed construction abuts an Existing Surface or Pavement for which partial removal of that surface or pavement is required. Saw 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.

See sheet 4 for section corner ties.

Existing utility fixtures within areas receiving a surface grade change will require vertical adjustment to conform to the final surface elevation. Fixture adjustments will be performed by the utility owner. Contractor shall coordinate adjustments directly with the utility companies.

Contractor shall remove and deliver to 1801 S. McLean all regulatory signs, street name signs, and other items designated as noted in the plans. Removed fire hydrants shall be delivered to 1825 S. McLean. Removed sanitary sewer appurtenances shall be delivered to 715 W Harry. Contractor shall be responsible for the installation of new signs. All associated costs to transport the salvaged material will be Subsidiary to the bid item "Transportation of Salvaged Materials".

Unless otherwise shown on the plans, all asphaltic concrete pavement placed on this project shall utilize a BM–2 mix design with PG 64–22 asphalt cement for the base and PG 70–28 for surface. The contractor may substitute an alternate grade of asphalt that complies with or exceeds the upper and lower grade designations for the grade specified. Such substitutions require advanced approval by the Engineer and any additional cost will be the responsibility of the contractor. All temporary asphalt pavement on the project shall be 6" asphalt meeting the specifications for City of Wichita BC–1 mix.

A tack coat of emulsified Asphalt (SC–1H or CSS–1H) shall be applied at an approximate rate of 0.05 gal. per square yard between each lift of Bituminous Material.

Crushed Rock Base is to be compacted and smoothed with a steel faced roller prior to placement of pavement. Tack coat will not be applied to Rock Base.

Inlet Hook–ups shall be constructed as indicated on the inlet detail drawings and shall be Bid as "Inlet Hookup". No distinction will be made between Hook–ups based on the size and type of inlet.

All private property, signs, fences, and landscaping features in conflict with the new construction will be relocated by others prior to construction. Upon the start of construction, all items that remain within the construction limits shall be removed and disposed of by the contractor unless otherwise noted. Removals are paid for as "Removal of Existing Structures" unless specifically noted to be paid for under a separate bid item.

All areas disturbed by construction that are adjacent to developed properties shall be restored with sod to match existing turf type. Restoration of disturbed areas shall include, but not be limited to, top soil preparation and sodding. All Sodding work shall be in accordance with City Standard Specifications and the City Administrative Regulation No. AR6.5, which governs cleanup and restoration or replacement following construction. The "Recapitulation of Quantities" shows the estimated Square Yards of Sodding, with a bid item for the same. When the weather/season prevents the installation of Sod, the Contractor shall be responsible for installing Erosion Control Blanket (Curlex I, or approved equal) at the Back of Curb (8' wide minimum) and on ground slopes 3:1 or steeper. All costs for Erosion Mat installation shall be Subsidiary to "Site Restoration".

The contractor shall reseed all undeveloped areas disturbed by construction with a mixture of Ryegrass (applied at a rate of 200 lbs. per acre) and Buffalo grass, depending on the soil conditions (applied per Standard Specifications). Pure nitrogen fertilizer shall also be applied at a rate of 1.5 lbs. per thousand square feet. The seed shall be watered with a deep soaking every two (2) weeks during dry periods until a mature stand of grass is obtained. The "Recapitulation of Quantities" shows the estimated square yards of disturbed area to be seeded, with a bid item for the same. The permanent seeding may be omitted only if sodding is required. The contractor shall be responsible for installing Erosion Control Blanket (Curlex I, or approved equal) at the back of curb, to and including the limits of all seeded areas. All costs for this work shall be Subsidiary to "seeding".

See the Roadside Improvement Plans for delineation of seeding areas.

Select Soil (Topsoil) shall be placed at a minimum depth of 6 inches or as specified on the drawings. The finished grade indicates the surface elevation after the prescribed select soil (topsoil) thickness has been placed. Where offsite select soil is needed, it shall be fertile natural topsoil, typical of the locality, obtained from well drained areas. Stockpiled topsoil may be used. It shall be without admixture of subsoil or slag and shall be free of stones, lumps, sticks, plants, or their roots, toxic substances or other extraneous matter that may be harmful to plant growth or would interfere with future maintenance. Topsoil ph range shall be 5.5 to 7.0. Topsoil shall be approved by the Project Engineer prior to placement.

All gravel or other similar debris larger that ½ inch in diameter shall be raked up and removed during final grade preparation.

New storm sewer installed under proposed pavements shall be protected from construction traffic during construction operations.

Proposed curbs matching existing curbs shall be altered to match the shape and dimensions of the existing curb. Positive drainage shall be maintained through such transitions. Transitions between proposed curbs and approach slabs shall be made to prevent sumps in gutters.

Pavement cross–slope transitions will be required where proposed pavement matches existing pavement. Transitions shall be made over an adequate length to prevent sumps from being created in gutters.

All backfill for storm sewer trenches shall be in accordance with the City of Wichita's standard specifications. Backfill for storm sewer under existing or proposed pavement, including lines running parallel and adjacent to the back of curb, shall be jetted and vibrated sand. The sand fill shall be brought up uniformly to an elevation two feet below the bottom of the existing or proposed pavement (12 inches above the top of pipe shall be the minimum). Cost for this backfill shall be paid on a linear foot basis as "Fill, Sand (Flushed & Vibrated)". See the Special Provisions and Storm Sewer plan and profile sheets.

Prior to Installation, Contractor shall verify whether Manholes are shallow or standard. No Adjustment in price will be made for changes from the Bid.

Storm Sewer and structure removals are noted in the paving plans. All storm sewer and structure removals shall be Subsidiary to "Pipe Removed", "Inlet Removed" and "MH Removed". A summary of storm sewer removals is provided for information only on each paving plan sheet. Existing storm sewer inlets and pipes noted to be removed within the paved roadway and not being replaced within the same trench shall be back filled with flushed and vibrated sand to the subgrade line work and shall be paid for as "Fill, Sand (Flushed & Vibrated)".

All connections between existing Storm Sewer and Storm Sewer Structures and proposed Storm Sewer and Storm Sewer Structures shall be Subsidiary to the cost of installation of the new Storm Sewer and/or Structure. Contractor shall verify the exact location of existing storm sewers and structures prior to construction.

Epoxy coated reinforcing steel shall be used in the culvert deck approach slabs and bridge rails. Black reinforcing steel shall be used in box culverts, except for the surface grade deck. Welded wire fabric is not required to be epoxy coated. See the various structural details for additional information.

"Mailbox Remove and Reset" will consist of temporarily relocating the mailbox as required to maintain mail service during construction and permanently reinstalling the mailbox at an Engineer–approved location after construction. In no instance shall mail service be disrupted.

PROJECT SURVEY CONTROL:

The Horizontal Datum is based on the Kansas Coordinate System of 1983, NAD83(2011), South Zone, US Survey Foot Grid to ground. Coordinates shown have been modified to the ground using a combined adjustment factor of 1.0001200144. State Plane coordinates can be calculated by multiplying the shown values by 0.99988. GPS Scale Point N: 0.00 E: 0.00

All elevations shown are based on the NAVD 88 vertical datum, Geoid18.

The following equations can be used for conversion:
Ground Coordinates to State Plane Coordinates = Ground x 1/CAF
State Plane Coordinates to Ground Coordinates = State Plane x CAF

The Vertical Datum used is NAVD88.

Contractor shall limit the extent of storm sewer trench open overnight and weekends to less than 50 feet.

Contractor shall provide positive drainage away from all manhole covers.

The contractor shall protect from damage and support existing utilities through construction as approved by the utility owner and the engineer at the contractor's expense.

Work required for the bid item "MH Adjusted" shall include adjusting the elevation of the manhole ring and lid to match the final plan grade in accordance with the City's standard specifications. Manholes (and valve cans) belonging to private utility companies to be adjusted will be included under this bid item. No adjustment in bid price will be made for manhole adjustments regardless of manhole type, size or ownership.

Work required for the bid item "MH Adjusted w/ New Ring & Cover" shall include providing a new City–standard ring and lid in addition to adjusting the elevation of the manhole ring and lid to match the final plan grade in accordance with the City's standard specifications.

Trees to be removed are marked ⊗ or are noted on the plan. Tree removal shall be paid for as "Tree Removal, Large" or "Tree Removal, Small". Removal of brush, shrubs and other vegetative debris shall be Subsidiary to "Site Clearing"..

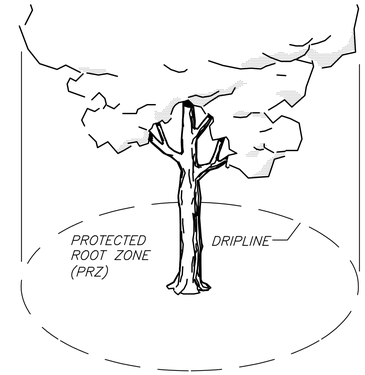
TREE PRESERVATION:
Existing trees noted to be saved are an important asset to this project. Preserve each tree noted as directed in these plans & notes.

Before any type of construction begins within the improvement area the contractor shall install protection fence around all tree masses & individual trees that are not noted for removal. Tree protection shall be Subsidiary to project. See detail, this sheet.

Equipment and construction materials shall remain out of and away from tree driplines so as to not compact the root zone or damage the tree. Chemical spill damage shall be prevented by filling gas tanks, cleaning tools & repairing equipment well outside tree protected root zones. Concrete mortar shall be mixed on a thick plastic tarp. Mixing trucks shall be rinsed out off site. Where it occurs that a construction route or a proposed improvement occurs within a trees (prz) it may be necessary dependent upon the type of construction and equipment used, to install a root protection bridge (i.e. 24" layer of wood mulch) or approved equivalent, this may be determined in the field at the direction of the landscape architect.

Any tree that must have branches removed shall be trimmed with sharp instrument/tool that is intended for such operations. Consult landscape architect prior to trimming. Knocking branches off with a back hoe or other similar machine is not acceptable! Refer to tree trimming detail on this sheet for trimming procedure.

Where root cutting is necessary on trees which are to remain, the roots shall be vertically cut with a sharp instrument or trencher prior to excavating soil around to roots.

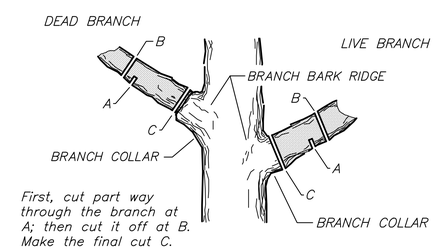


Where excavation for new construction is required within tree protection zones, hand clear and excavate to minimize damage to root systems. Use narrow–tine spading forks, comb soil to expose roots, and cleanly cut roots as close to excavtion as possible.

1. Cover exposed roots with burlap and water regularly.
2. Temporarily support and protect roots from damage until they are permanently redirected and covered with soil.
3. Backfill with soil as soon as possible.

TEMPORARY TREE PROTECTION DETAIL

NOT TO SCALE



TREE TRIMMING DETAIL

NOT TO SCALE

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135TH STREET WEST

STREET IMPROVEMENTS FOR
FROM CENTRAL AVE TO 13TH STREET

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GENERAL NOTES

PROJECT NO.	472-2021-085756		
DATE	9/26/2025		
SCALE	NONE		
DESIGNED	DRAWN	CHECKED	
SLF	RAM	JRA	

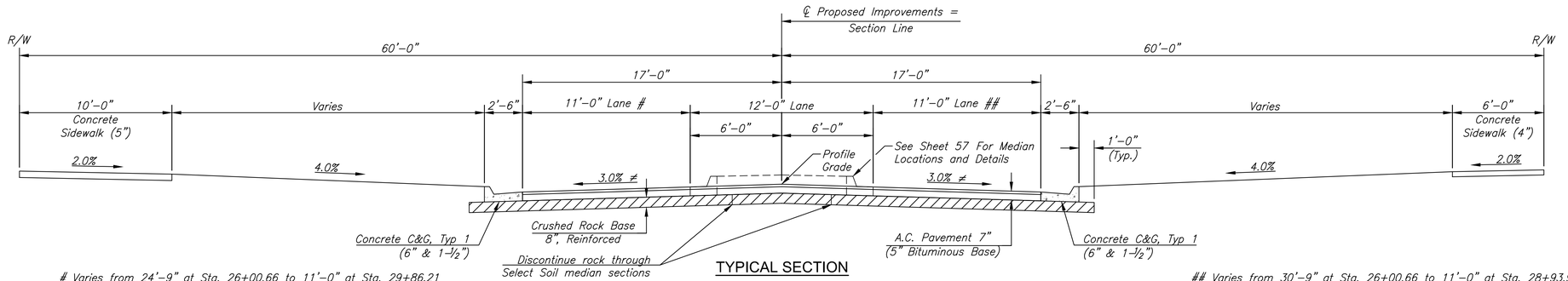
NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

SHEET NO.

2 OF 156

J:\PROJECTS\0022\220101\0447_COV_135TH STREET FROM CENTRAL TO 13TH STREET\00 220447 CAD\SHTS\01 GENERAL\TITLESHEETS\220447-05-5003.DWG

PLOTTED: Friday, February 20, 2026 @ 01:16PM

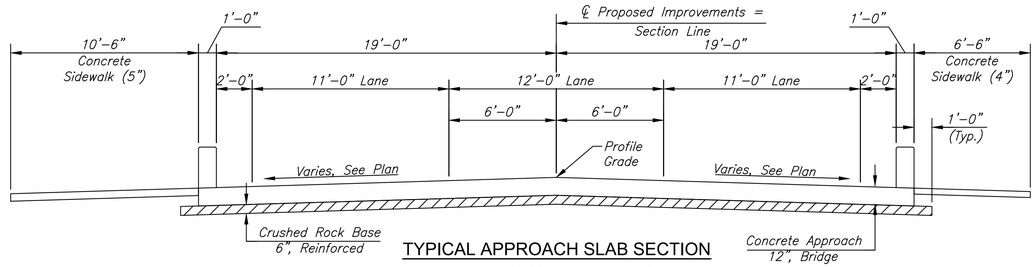


TYPICAL SECTION

\# Varies from 24'–9" at Sta. 26+00.66 to 11'–0" at Sta. 29+86.21
≠ Varies from 1.92% at Sta. 26+00.66 to 3.0% at Sta. 26+50.00
Varies from 3.0% at Sta. 48+00.00 to 2.0% at Sta. 48+31.94
Varies from 2.0% at Sta. 49+67.44 to 3.0% at Sta. 50+00.00

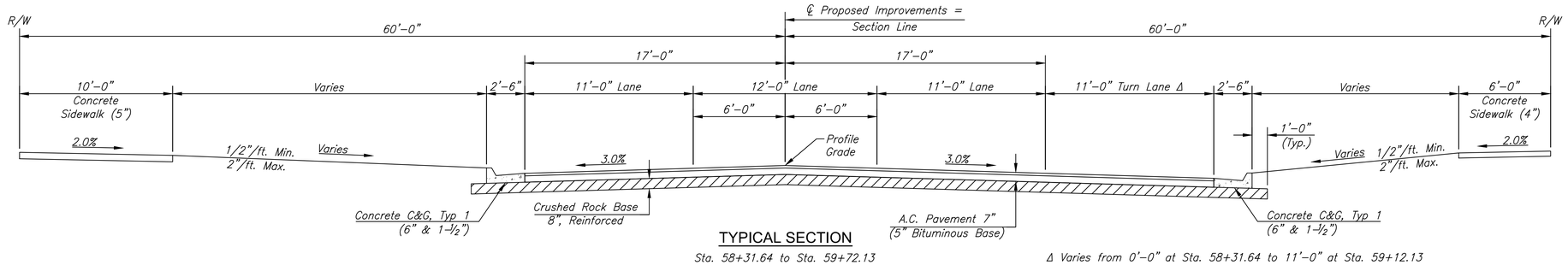
Sta. 26+00.66 to Sta. 32+06.26
Sta. 34+06.26 to Sta. 40+55.50
Sta. 42+55.50 to Sta. 48+32.57
Sta. 49+66.82 to Sta. 51+63.73
Sta. 53+63.73 to Sta. 58+31.64
Sta. 59+72.13 to Sta. 66+73.20

Varies from 30'–9" at Sta. 26+00.66 to 11'–0" at Sta. 28+93.92
≠≠ Varies from 1.91% at Sta. 26+00.66 to 3.0% at Sta. 26+50.00
Varies from 3.0% at Sta. 48+00.00 to 2.0% at Sta. 48+31.94
Varies from 2.0% at Sta. 49+67.44 to 3.0% at Sta. 50+00.00



TYPICAL APPROACH SLAB SECTION

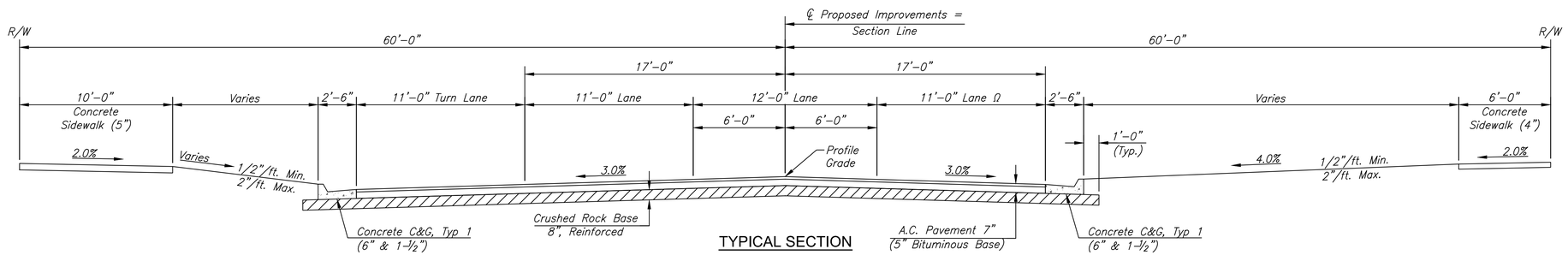
Sta. 48+32.57 to Sta. 48+65.82
Sta. 49+33.57 to Sta. 49+66.82



TYPICAL SECTION

Sta. 58+31.64 to Sta. 59+72.13

Δ Varies from 0'–0" at Sta. 58+31.64 to 11'–0" at Sta. 59+12.13



TYPICAL SECTION

ΔΔ Varies from 11'–0" at Sta. 33+25.76 to 0'–0" at Sta. 34+06.26
Varies from 11'–0" at Sta. 41+75.01 to 0'–0" at Sta. 42+55.50
Varies from 11'–0" at Sta. 52+83.24 to 0'–0" at Sta. 53+63.73

Sta. 32+06.26 to Sta. 34+06.26
Sta. 40+55.50 to Sta. 42+55.50
Sta. 51+63.73 to Sta. 53+63.73
Sta. 66+73.20 to Sta. 72+56.34

Ω Varies from 11'–0" at Sta. 66+22.91 to 22'–0" at Sta. 72+56.34

J:\PROJECTS\0222\20101\0447_COV_135TH STREET FROM CENTRAL TO 13TH STREET\00 220447 CAD\SHTS\05 CIVIL\PAV\220447-05-S010.DWG

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STREET IMPROVEMENTS FOR

135TH STREET WEST

FROM CENTRAL AVE TO 13TH STREET

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TYPICAL SECTIONS

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	NTS

DESIGNED	DRAWN	CHECKED
JRA	RAM	JRA

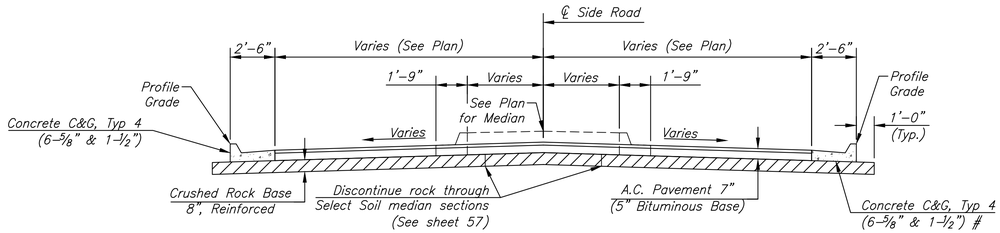
NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

SHEET NO.

3 OF 156

Sh. No. 3

PLOTTED: Friday, February 20, 2026 @ 01:18PM

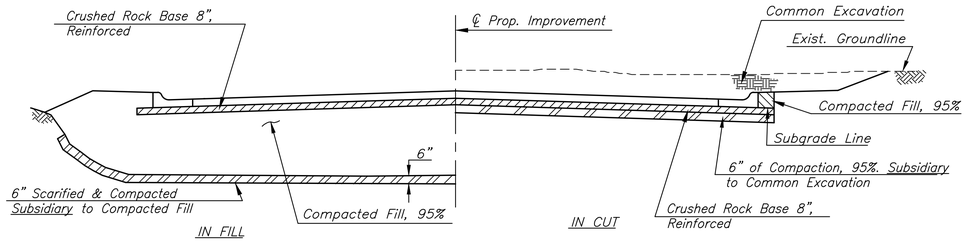


TYPICAL SECTION - SIDE ROAD

Forestview (N) – Sta. 45+79.30
Lost Creek St – Sta. 51+16.23
10th St N – Sta. 60+28.65 (Median)
Ponderosa St – Sta. 66+30.70

 # Concrete C&G, Type 2 (3–5/8" & 1–1/2") on Forestview (N).

SIDE ROAD WIDTHS				
STREET NAME	WIDTH (LT.)	WIDTH (RT.)	MEDIAN WIDTH (LT.)	MEDIAN WIDTH (RT.)
FORESTVIEW (S)	14'–6"	14'–6"		
FARMHOUSE ST	20'–6"	20'–6"		
SIENA ST	20'–6"	20'–6"		
FORESTVIEW (N)	14'–6"	14'–6"		
LOST CREEK ST	17'–6"	17'–6"		
10TH ST N	27'–7"	27'–8"	4'–7"	2'–5"
PONDEROSA ST	17'–6"	17'–6"		



FOUNDATION TREATMENT AND COMPACTION OF EARTHWORK

SECTION CORNER INFORMATION

SE CORNER SEC. 14, T27S, R2W
STA. 23+21.95
Found ½" Pipe in Thimble

1: "+" cut found in top curb near W end of Sidewalk	*72.51' N59°57'09"W*
2: A City of Wichita Brass Disk in top of Guardrail at SW/Cor Bridge	*89.45' N23°24'44"W*
3: "+" cut found in SW/cor of Traffic Control MH	*81.75' N62°52'00"E*
4: "+" cut found in top curb near Mid–point of SE Curb return	*66.76' S45°27'16"E*
5: "+" cut found in top curb near Mid–point of SW Curb return	*68.17' S42°54'27"W*
6: MAG nail w/ "MKEC" washer in NE cor of Traffic Control MH	*84.98' N64°26'24"W*
7: N=1687873.780000, E=1602240.130000	

E ¼ CORNER SEC. 14, T27S, R2W
STA. 49+54.19
Found ¾" Iron Pipe w/ Sedgwick County Aluminum Cap

1: 3 nails found in the South face of PP	*52.04' N85°27'57"W*
2: Top Center nut of Fire Hydrant	*36.81' N68°54'03"E*
3: City of Wichita Brass Disk	*39.87' S71°50'32"E*
4: PK Nail found in the Top East end of North CMP Storm Pipe(36"x57")	*51.95' S21°44'04"E*
5: "V" cut found in the Top West end of North CMP Storm Pipe(36"x57")	*51.93' S19°02'56"W*
6: N=1690505.580000, E=1602191.640000	

NE CORNER SEC. 14, T27S, R2W
STA. 75+87.11
Found ½" Iron bar w/ yellow "SE CLS–59" cap in thimble

1: "+" cut found in SE Corner of traffic control MH	*74.52' N55°02'10"W*
2: "+" cut found in SW Corner of traffic control MH	*80.96' N47°38'29"E*
3: "+" cut found in NW Corner of traffic control MH	*78.72' S41°53'29"E*
4: "+" cut found in NE Corner of traffic control MH	*76.35' S49°38'29"W*
5: N=1693137.950000, E=1602138.170000	

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STREET IMPROVEMENTS FOR

135TH STREET WEST

FROM CENTRAL AVE TO 13TH STREET

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TYPICAL SECTIONS

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	NTS

DESIGNED	DRAWN	CHECKED
JRA	RAM	JRA

NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

SHEET NO.

4 OF 156

J:\PROJECTS\0222021\010447_COW_135TH STREET FROM CENTRAL TO 13TH STREET\00 220447 CAD\SHTS\05 CIVIL\PAV\220447-05-5010.DWG

PLOTTED: Friday, February 20, 2026 @ 01:17PM

PI STA. 23+21.95
Found ½" Pipe in Thimble
1. "+" cut found in top curb near W end of Sidewalk 72.51' N59°57'09"W
2. "+" cut found in SW/cor of Traffic Control MH 81.75' N62°52'00"E
3. "+" cut found in top curb near Mid-point of SE Curb return 66.76' S45°27'16"E
4. "+" cut found in top curb near Mid-point of SW Curb return 68.17' S42°54'27"W
5. N=1687873.78, E=1602240.13

N

SCALE: 1"=20'
0 20 40

Sta. 26+00.66 Begin
Proj. No. 472-2021-085756

PVI STA. 26+45.00
ELEV.=1350.36
50' VC

OWNER PERFECTION SIGNATURE PROPERTIES LLC
Pin #00252150
443 N MAIZE RD

CENTRAL AVE

+96.98 R/W
100' ℄

+21.97 R/W
75' ℄

75' R/W

Const. Limits

+46.97 R/W
75' ℄

Const. Limits
60' R/W

10' Sidewalk

+46.96 R/W
60' ℄

BM#109

PI +21.95

135TH ST W

50' KGE ESMT.
DOC.# FLM-PG: 29356257

PERMANENT DRNG. ESMT.
DOC.# FLM-PG: 29325197

33.25' RT. BEGIN TAPER

LINE 2

LINE 1

6' Sidewalk

EX. 24" WTR.

19.50' RT. END TAPER

+22.45 R/W
75' ℄

+12.52 R/W
85' ℄

75' R/W

Const. Limits

+47.45 R/W
75' ℄

+47.36 R/W
60' ℄

60' R/W

Const. Limits

Sta. 23+21.95, 0.0' Rt.
SE Cor. Sec. 14, T27S, R2W

-0.30% (BASED ON ℄)

+0.45% (BASED ON ℄)

26+00.66 | 26+20 PVC | 26+39.85 | 26+45.00 | 26+70 PVT | 26+99.74 | 27+50.00 | 28+00.00 | 28+50.00 | 28+93.97 | 29+00.00

OWNER BRIDGER ON CENTRAL LP
Pin #00252140
S1/2 W1/2 SW1/4 SEC 13-27-2W
DOC.#/FLM-PG: 28872849

DO NOT EXCAVATE AROUND ELECTRIC TRANSMISSION POLE NO. 208.

DO NOT EXCAVATE AROUND ELECTRIC TRANSMISSION POLE NO. 209.

NOTE: SEE SPECIAL GRADING PLAN (SH. NO. 14)

REMOVAL OF EXISTING PIPES AND STRUCTURES			
STATION	SIDE	ITEM	REMARKS
25+43.7' TO 26+32.5'	51.5' LT. TO 49.6' LT.	88.8' OF 18" RCP	
26+32.5'	49.6' LT.	DROP INLET	
26+34.8'	48.0' RT.	DROP INLET	
26+80.9' TO 27+18.6'	42.9' RT. TO 42.8' RT.	37.7' OF 24" RCP	
26+81.5' TO 27+18.9'	42.8' LT. TO 38.9' LT.	37.6' OF 24" RCP	

BM#109 CITY OF WICHITA BRASS DISK FOUND IN TOP OF GUARD RAIL IN SW CORNER OF BRIDGE OVER NORTH FORK CALFSKIN CREEK.
STA. 24+04.67, 34.0' LT. ELEV.=1350.41 (NAVD 88)

LEGEND
- PAVEMENT REMOVAL
- CONSTRUCT WHEELCHAIR RAMP W/ DETECTABLE WARNING (SEE SH. NO. 56)
- TREE REMOVAL
- RIPRAP (SEE SH. NO. 98)
- PIPE REMOVAL
- EXISTING TOP OF BANK
- EXISTING FENCE
- EXISTING CHANNELIZED FLOW

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STREET IMPROVEMENTS FOR

135TH STREET WEST

FROM CENTRAL AVE TO 13TH STREET

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135TH ST. - PLAN
STA. 26+00.65 TO
STA. 29+00

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	1"=20'

DESIGNED	DRAWN	CHECKED
DMU	RAM	JRA

NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

SHEET NO.
5 OF 156

Sh. No. 5

J:\PROJECTS\2022\2201010447_COW_135TH STREET FROM CENTRAL TO 13TH STREET\00 220447 CAD\SHTS\05 CIVIL\PAV\220447-05-5100.DWG

PLOTTED: Friday, February 20, 2026 @ 01:17PM

STA. 30+17.1 TO STA. 30+81.8 CLEAR AND GRUB APPROXIMATELY 0.05 ACRES OF TREES AND BRUSH WITHIN THE CONSTRUCTION LIMITS. PAID FOR AS "SITE CLEARING".

STA. 31+55.76 CONST. "CONCRETE PAVEMENT (VG) 8" (REINF.)" LT. SEE SH. NO. 48

STA. 32+56.1 TO STA. 33+11.0 CLEAR AND GRUB APPROXIMATELY 0.05 ACRES OF TREES AND BRUSH WITHIN THE CONSTRUCTION LIMITS. PAID FOR AS "SITE CLEARING".

SCALE: 1"=20'
0 20 40

PVI STA. 29+10.00
ELEV.=1351.55
NO VC

OWNER PERFECTION SIGNATURE PROPERTIES LLC
Pin #00252150
443 N MAIZE RD
RESERVE "D"
JACOBS FARM 2ND ADD.

PVI STA. 31+50.00
ELEV.=1352.99
60' VC

OWNER PERFECTION SIGNATURE PROPERTIES LLC
Pin #00252150
443 N MAIZE RD
RESERVE "C"
JACOBS FARM 2ND ADD.

EX. 8" WATER FROM DESIGN PLANS

8" WATER IS FROM DESIGN PLANS

29+00.00 29+10.00 29+50.00 29+86.21 30+50.00 31+05.26 31+20 PVC 31+50.00 31+55.76 31+80 PVT 32+06.26 32+50.00 33+00.00 33+25.76 33+50.00 34+06.26 34+50.00

+0.45% (BASED ON ℄)
+0.60% (BASED ON ℄)
−0.60% (BASED ON ℄)

Const. Limits
60' R/W
10' Sidewalk
6' Sidewalk
10' UTIL. ESMT.
35' R/W
+20.83 R/W
+90.83 R/W
60' ℄
HP
FARMHOUSE ST
19.50' LT.
END TAPER
30.50' LT.
R150.00'
(+66.01)
25.00' LT.
LINE 2
℄ Prop. Impr.= Section Line
135TH ST W
PERMANENT DRNG. ESMT. DOC.# FLM-PG: 29325197
56' KGE ESMT. DOC.# FLM-PG: 29856251
50' KGE ESMT. DOC.# FLM-PG: 29356251
EX. 24" WTR.
BM#108
19.50' RT.
29' R/W
+20.76 R/W
+78.76 R/W
29.00'
FORESTVIEW (S)

52.75 52.83 53.20 53.46 53.84 53.84 53.41 53.96 53.95 53.17 53.12 53.05 52.87 52.64
51.25 51.31 51.59 51.85 52.23 52.56 51.66 52.16 51.90 51.40 51.60 51.10 51.44 51.36 50.94 50.86 51.29 51.03
50.75 50.81 51.09 51.35 51.73 52.06 52.15 52.24 52.24 52.15 51.99 50.79 50.53
1.50 1.55 1.79 2.01 2.39 2.72 2.81 2.90 2.90 2.81 2.72 2.65 2.39 2.09 1.93 1.79 1.69 1.98 1.72
50.84 50.89 51.13 51.35 51.73 52.06 52.15 52.24 52.24 52.15 52.06 51.99 51.73 51.43 51.27 51.13 1.31 1.05
51.34 51.39 51.63 51.85 52.23 52.56 52.56 52.49 52.23 51.93 51.77 51.63 50.79 50.53

52.88 52.95 53.25 53.44 53.68 53.78 53.42 53.40 53.69 53.67 53.61 53.41 53.30 53.15 52.78 52.41

29+00.00 29+10.00 29+50.00 29+86.09 30+50.00 31+05.26 31+20 PVC 31+49.76 31+50.00 31+80 PVT 31+94.26 32+06.26 32+50.00 33+00.00 33+25.76 33+50.00 34+06.26 34+50.00

PVI STA. 29+10.00
ELEV.=1351.55
NO VC

OWNER BRIDGER ON CENTRAL LP
Pin #00252140
S1/2 W1/2 SW1/4 SEC 13−27−2W
DOC.#/FLM−PG: 28872849

GRADE AROUND ELECTRIC TRANSMISSION POLE NO. 210. SEE SH. NO. 17

PVI STA. 31+50.00
ELEV.=1352.99
60' VC

GRADE AROUND ELECTRIC TRANSFORMER. SEE SH. NO. 18

GRADE AROUND ELECTRIC DISTRIBUTION POLE. SEE SH. NO. 17

OWNER BRIDGER ON CENTRAL LP
Pin #00579756
S1/2 N1/2 W1/2 SW1/4 SEC 13−27−2W
DOC.#/FLM−PG: 29852913

GRADE AROUND ELECTRIC TRANSMISSION POLE NO. 211. SEE SH. NO. 17

STA. 31+49.76 CONST. "CONCRETE PAVEMENT (VG) 8" (REINF.)" RT. SEE SH. NO. 48

BM#108 "3' T−POST" SET IN EAST/WEST FENCE LINE 15' EAST OF CORNER FENCE POST.
STA. 30+22.97, 55.5' RT. ELEV.=1353.69 (NAVD 88)

REMOVAL OF EXISTING PIPES AND STRUCTURES			
STATION	SIDE	ITEM	REMARKS
30+15.1' TO 30+55.6'	17.6' RT. TO 16.2' RT.	40.6' OF 18" RCP	

MEDIAN POINTS				
POINT NO.	STATION	OFFSET	TOP CURB ELEVATION	FLOWLINE ELEVATION
1	34+00.26	6.00' Rt.	1351.43	1351.35
2	34+00.26	6.00' Lt.	1351.43	1351.35
3	34+06.26	6.00' Lt.	1351.98	1351.31
4	34+06.26	6.00' Rt.	1351.98	1351.31

LEGEND

- PAVEMENT REMOVAL
- CONSTRUCT WHEELCHAIR RAMP W/ DETECTABLE WARNING (SEE SH. NO. 56)
- TREE REMOVAL
- RIPRAP (SEE SH. NO. 98)
- PIPE REMOVAL
- EXISTING TOP OF BANK
- EXISTING FENCE
- EXISTING CHANNELIZED FLOW

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135TH STREET WEST

STREET IMPROVEMENTS FOR
FROM CENTRAL AVE TO 13TH STREET

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135TH ST. - PLAN
STA. 29+00 TO
STA. 34+50

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	1"=20'

DESIGNED	DRAWN	CHECKED
DMU	RAM	JRA

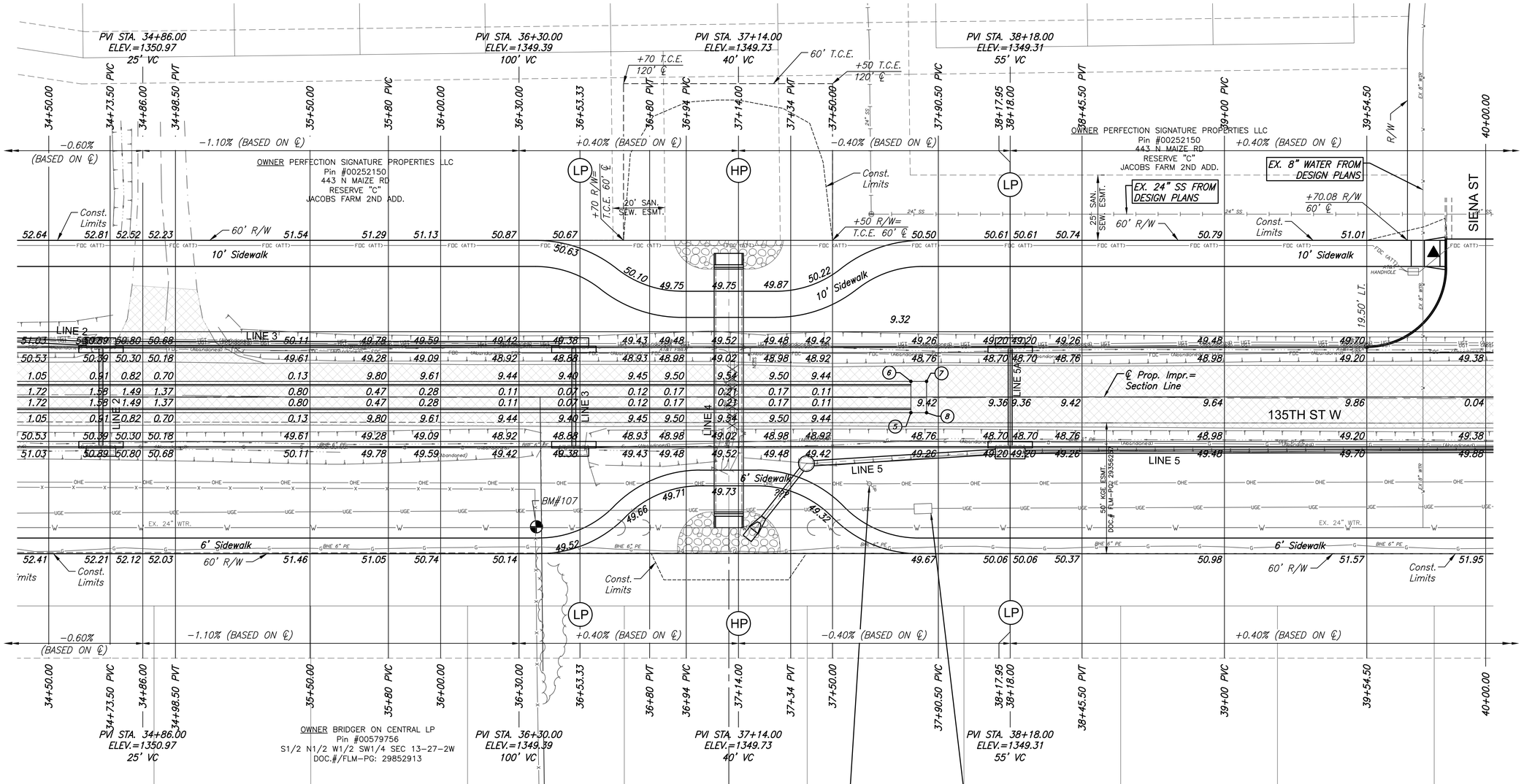
NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

SHEET NO.
6 OF 156

Sh. No. 6

J:\PROJECTS\2022\2201910447_COW_135TH STREET FROM CENTRAL TO 13TH STREET\00 220447 CAD\SHTS\05 CIVIL\PAV\220447-05-5100.DWG

PLOTTED: Friday, February 20, 2026 @ 01:17PM



NOTE: SEE SPECIAL GRADING PLAN (SH. NO. 15)

REMOVAL OF EXISTING PIPES AND STRUCTURES			
STATION	SIDE	ITEM	REMARKS
37+11.7'	15.4' LT. TO 13.2' RT.	28.7' OF 18" X 34" CMP	

BM#107 "3' T-POST" SET IN EAST/WEST FENCE LINE 15' EAST OF CORNER FENCE POST.
STA. 36+36.68, 49.7' RT. ELEV.=1350.26 (NAVD 88)

MEDIAN POINTS				
POINT NO.	STATION	OFFSET	TOP CURB ELEVATION	FLOWLINE ELEVATION
5	37+80.00	6.00' Rt.	1349.99	1349.32
6	37+80.00	6.00' Lt.	1349.99	1349.32
7	37+86.00	6.00' Lt.	1349.38	1349.30
8	37+86.00	6.00' Rt.	1349.38	1349.30

LEGEND

- PAVEMENT REMOVAL
- CONSTRUCT WHEELCHAIR RAMP W/ DETECTABLE WARNING (SEE SH. NO. 56)
- TREE REMOVAL
- RIPRAP (SEE SH. NO. 98)
- PIPE REMOVAL
- EXISTING TOP OF BANK
- EXISTING FENCE
- EXISTING CHANNELIZED FLOW

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135TH STREET WEST

STREET IMPROVEMENTS FOR
FROM CENTRAL AVE TO 13TH STREET

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135TH ST. - PLAN
STA. 34+50 TO
STA. 40+00

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	1"=20'

DESIGNED	DRAWN	CHECKED
DMU	RAM	JRA

NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

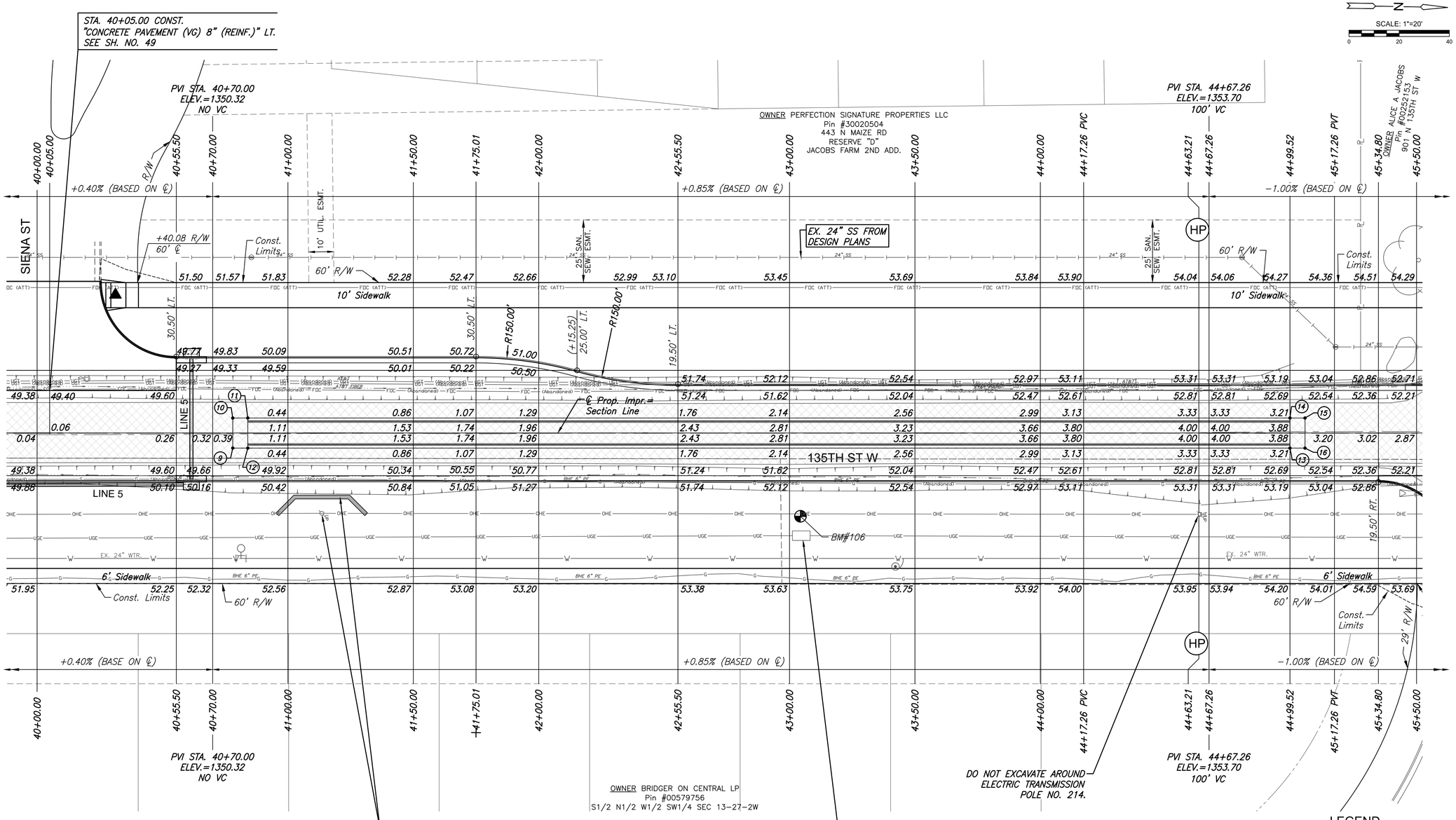
SHEET NO.
7 OF 156

Sh. No. 7

J:\PROJECTS\2022\2021010447_COV_135TH STREET FROM CENTRAL TO 13TH STREET\100 220447 CAD\SHTS\05 CIVIL\PAV\220447-05-5100.DWG

PLOTTED: Friday, February 20, 2026 @ 01:17PM

J:\PROJECTS\2022\2291\10447_COW_135TH STREET FROM CENTRAL TO 13TH STREET\00 220447 CAD\SHTS\05 CIVIL\PAV\220447-05-5100.DWG



UTILITY ADJUSTMENT TABLE				
STATION	OFFSET	EXIST. ELEV.	PROP. ELEV.	REMARKS
40+79.31	50.00' RT.	1352.4	1352.04	WATER VALVE
40+81.31	46.00' RT.	1352.42	1351.82	FH
40+81.31	48.86' RT.	1352.4	1351.99	WATER VALVE
40+83.31	50.00' RT.	1352.4	1352.09	WATER VALVE
43+45.31	50.00' RT.	1353.75	1353.51	AIR RELEASE

BM#106 "3' T-POST" SET 6' WEST OF EVERGY BOX.
STA. 43+04.32, 33.2' RT. ELEV.=1353.28 (NAVD 88)

MEDIAN POINTS				
POINT NO.	STATION	OFFSET	TOP CURB ELEVATION	FLOWLINE ELEVATION
9	40+78.00	6.00' Rt.	1350.33	1350.25
10	40+78.00	6.00' Lt.	1350.33	1350.25
11	40+84.00	6.00' Lt.	1350.97	1350.30
12	40+84.00	6.00' Rt.	1350.97	1350.30
13	44+99.52	6.00' Rt.	1353.88	1353.21
14	44+99.52	6.00' Lt.	1353.88	1353.21
15	45+05.52	6.00' Lt.	1353.24	1353.16
16	45+05.52	6.00' Rt.	1353.24	1353.16

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STREET IMPROVEMENTS FOR

135TH STREET WEST

FROM CENTRAL AVE TO 13TH STREET

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135TH ST. - PLAN
STA. 40+00 TO
STA. 45+50

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	1"=20'

DESIGNED	DRAWN	CHECKED
DMU	RAM	JRA

NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

SHEET NO.

8 OF 156

Sh. No. 8

PLOTTED: Friday, February 20, 2026 @ 01:17PM

J:\PROJECTS\2022\220101\10447_COW_135TH STREET FROM CENTRAL TO I-135TH STREET\00 220447 CAD\SHTS\05 CIVIL\PAV\220447-05-5100.DWG

PI STA. 49+54.19
Found ¾" Iron Pipe w/ Sedgwick County Aluminum Cap

1. 3 nails found in the South face of PP	52.04'	N85°27'57"W
2. Top Center nut of Fire Hydrant	36.81'	N68°54'03"E
3. City of Wichita Brass Disk	39.87'	S71°50'32"E
4. PK Nail found in the Top East end of North CMP Storm Pipe(36"x57")	51.95'	S21°44'04"E
5. N=1690505.58, E=1602191.64		

STA. 48+32.57 TO STA. 48+65.82 LT.
CONST. 433 S.F. OF "CONCRETE SIDEWALK 12" (REINF.)"
SEE SH. NO. 55

STA. 48+40.36 TO STA. 49+59.09 LT.
CONST. 113.00 L.F. OF "HANDRAIL, BICYCLE"
SEE SH. NO. 84

STA. 48+67.19 TO STA. 49+32.19 LT.
CONST. 65.00 L.F. OF "HANDRAIL, BICYCLE (SPECIAL)"
SEE SH. NO. 84

STA. 49+33.57 TO STA. 49+66.81 LT.
CONST. 432 S.F. OF "CONCRETE SIDEWALK 12" (REINF.)"
SEE SH. NO. 55

N
SCALE: 1"=20'
0 20 40

OWNER ALICE A JACOBS
Pin #00252153
901 N 135TH ST W

OWNER PERFECTION SIGNATURE PROPERTIES LLC
Pin #30020504
443 N MAIZE RD

OWNER KELSEY INVESTMENTS INC
Pin #00523660
RESERVE C COPPER GATE ESTATES ADD.

PVI STA. 48+25.00
ELEV.=1350.12
70' VC

PVI STA. 49+75.00
ELEV.=1350.12
70' VC

STA. 49+54.19, 0.0' Rt.
E ¼ Cor. Sec. 14, T27S, R2W

45+50.00 | 46+00.00 | 46+23.80 | 46+50.00 | 47+00.00 | 47+50.00 | 47+90 PVC | 48+25.00 | 48+32.57 | 48+60 PVT | 48+99.69 | 49+40 PVC | 49+66.82 | 49+75.00 | 50+10 PVT | 50+50.00 | 50+68.73 | 51+00.00

+54.64 T.C.E. 90' ℄ | +89.64 T.C.E. 90' ℄ | +90 R/W= T.C.E. 60' ℄ | +54.69 R/W= T.C.E. 60' ℄ | +72.52 14.0' ENT.

−1.00% (BASED ON ℄) | +0.00% (BASED ON ℄) | +1.00% (BASED ON ℄)

20' UTIL. ESMT. | Const. Limits | Prop. Drng. Res. | Const. Limits | +53.48 R/W 60' ℄ | +53.60 R/W 50' ℄ | +84.15 R/W 50' ℄ | 32' R/W

60' R/W | 50' R/W | 10' Sidewalk | 13' Sidewalk | 7' Sidewalk | 6' Sidewalk

EX. 24" SS FROM DESIGN PLANS | BICYCLE HANDRAIL | PEDESTRIAN HANDRAIL | BM#105

℄ Prop. Impr.= Section Line

LINE 6 | LINE 6A | LINE 7 | LINE 7A

135TH ST W

EX. 24" WTR. | 50' KGE ESMT. DOC.# FLM-PG. 29356257 | 19.50' RT. | 19.50' LT.

54.29 | 54.75 | 55.05 | 55.11 | 55.09 | 54.30 | 53.23 | 51.80 | 49.86 | 49.84 | 49.50 | 49.84 | 49.79 | 50.05 | 50.97 | 51.18

52.71 | 52.48 | 52.21 | 51.97 | 51.71 | 51.47 | 51.21 | 50.71 | 50.31 | 50.05 | 50.10 | 49.74 | 49.60 | 50.10 | 50.05 | 50.31 | 50.71 | 50.90

52.21 | 51.98 | 51.71 | 51.47 | 51.21 | 50.71 | 49.81 | 49.55 | 49.60 | 49.74 | 49.60 | 49.55 | 49.81 | 50.21 | 50.40 | 50.71

2.64 | 2.87 | 2.58 | 2.37 | 2.13 | 1.87 | 1.37 | 0.87 | 0.47 | 0.21 | 0.17 | 0.12 | 0.12 | 0.12 | 0.17 | 0.21 | 0.47 | 0.87 | 1.06 | 1.37

52.21 | 51.92 | 51.71 | 51.47 | 51.21 | 50.71 | 50.21 | 49.81 | 49.55 | 49.60 | 49.74 | 49.60 | 49.55 | 49.81 | 50.21 | 50.40 | 50.71

51.97 | 51.71 | 50.71 | 50.21 | 49.81 | 49.55 | 49.60 | 50.10 | 50.05 | 50.31 | 50.71 | 50.90 | 51.21

49.64 | 49.93 | 49.54 | 49.93 | 49.58 | 49.95 | 51.08 | 51.35 | 51.74

53.69 | 53.41 | 54.35 | 54.07 | 52.93 | 51.45 | 49.84

14.50' | 14.50'

29' R/W | +50.30 R/W 60' ℄ | +08.30 R/W 60' ℄ | 60' R/W | 60' R/W | +54.97 R/W 60' ℄ | +54.90 R/W 55' ℄ | 55' R/W | 5' WALL ESMT. | 20' DRNG. & UTIL. ESMT. | 28.00' RT. | (+70.00) | (+65.00) 23.60' RT.

Const. Limits | PROP. SWALE PROFILE −2.31%

LP

45+50.00 | FORESTVIEW (N) | 45+79.30 | 46+00.00 | 29' R/W | 46+23.80 | 46+50.00 | 47+00.00 | 47+50.00 | 47+90 PVC | 48+25.00 | 48+32.57 | 48+60 PVT | 48+99.69 | 49+40 PVC | 49+66.82 | 49+75.00 | PVI 1349.18 | 50+10 PVT | 50+50.00 | 50+68.73 | PVI 1351.14 | 51+00.00

OWNER BRIDGER ON CENTRAL LP
Pin #00579763
N1/2 N1/2 W1/2 SW1/4 SEC 13-27-2W
DOC.#/FLM-PG: 28872841

DO NOT EXCAVATE AROUND ELECTRIC TRANSMISSION POLE NO. 215.

PVI STA. 48+25.00
ELEV.=1350.12
70' VC

PVI STA. 49+75.00
ELEV.=1350.12
70' VC

OWNER DOWNING, LINDSEY R & ROGER C
Pin #00544878
LOT 20, BLK. A
LIBERTY PARK 3RD ADD.

STA. 45+79.30 CONST.
"CONCRETE PAVEMENT (VG) 8" (REINF.)" RT.
SEE SH. NO. 49

STA. 48+47.57 TO STA. 48+65.82 RT.
CONST. 163 S.F. OF "CONCRETE SIDEWALK 12" (REINF.)"
SEE SH. NO. 55

Sta. 48+99.69 Const.
Structure No. 430400876787286
(COW #286)
4-16'x5'x60' RCBB
38'-0" Roadway

STA. 48+48.36 TO STA. 49+51.02 RT.
CONST. 97.00 L.F. OF "HANDRAIL, PEDESTRIAN"
SEE SH. NO. 83

STA. 49+33.57 TO STA. 49+56.82 RT.
CONST. 163 S.F. OF "CONCRETE SIDEWALK 12" (REINF.)"
SEE SH. NO. 55

STA. 49+85.00 DRAIN SWALE INTO BLOCKOUT IN INLET.
SEE DETAIL ON SH. NO. 70.

STA. 49+85.00 TO STA. 50+70.00
CONSTRUCT SWALE RT.

BM#105 CITY OF WICHITA BRASS DISK FOUND.
STA. 49+41.07, 37.7' RT. ELEV.=1347.58 (NAVD 88)

LEGEND
- PAVEMENT REMOVAL
- CONSTRUCT WHEELCHAIR RAMP W/ DETECTABLE WARNING (SEE SH. NO. 56)
- TREE REMOVAL
- RIPRAP (SEE SH. NO. 98)
- PIPE REMOVAL
- EXISTING TOP OF BANK
- EXISTING FENCE
- EXISTING CHANNELIZED FLOW

REMOVAL OF EXISTING PIPES AND STRUCTURES

STATION	SIDE	ITEM	REMARKS
45+79.3	24.0' RT.	72.0' OF18" RCP W/END SECTIONS	
48+98.8'	18.1' LT. TO 18.9' RT.	37.0' OF 36" X 57" CMP	
49+05.6'	18.2' LT. 18.7' RT.	36.9' OF 36" X 57" CMP	

UTILITY ADJUSTMENT TABLE

STATION	OFFSET	EXIST. ELEV.	PROP. ELEV.	REMARKS
47+77.69	34.32' LT.	1351.99	1351.66	SSMH
49+71.78	21.81' LT.	1348.25	1350.08	SSMH
49+66.75	34.60' RT.	1348.02	1349.45	FH
49+66.96	35.49' RT.	1347.97	1349.44	WATER VALVE

MKEC
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135TH STREET WEST

STREET IMPROVEMENTS FOR
FROM CENTRAL AVE TO 13TH STREET

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135TH ST. - PLAN
STA. 45+50 TO
STA. 51+00

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	1"=20'

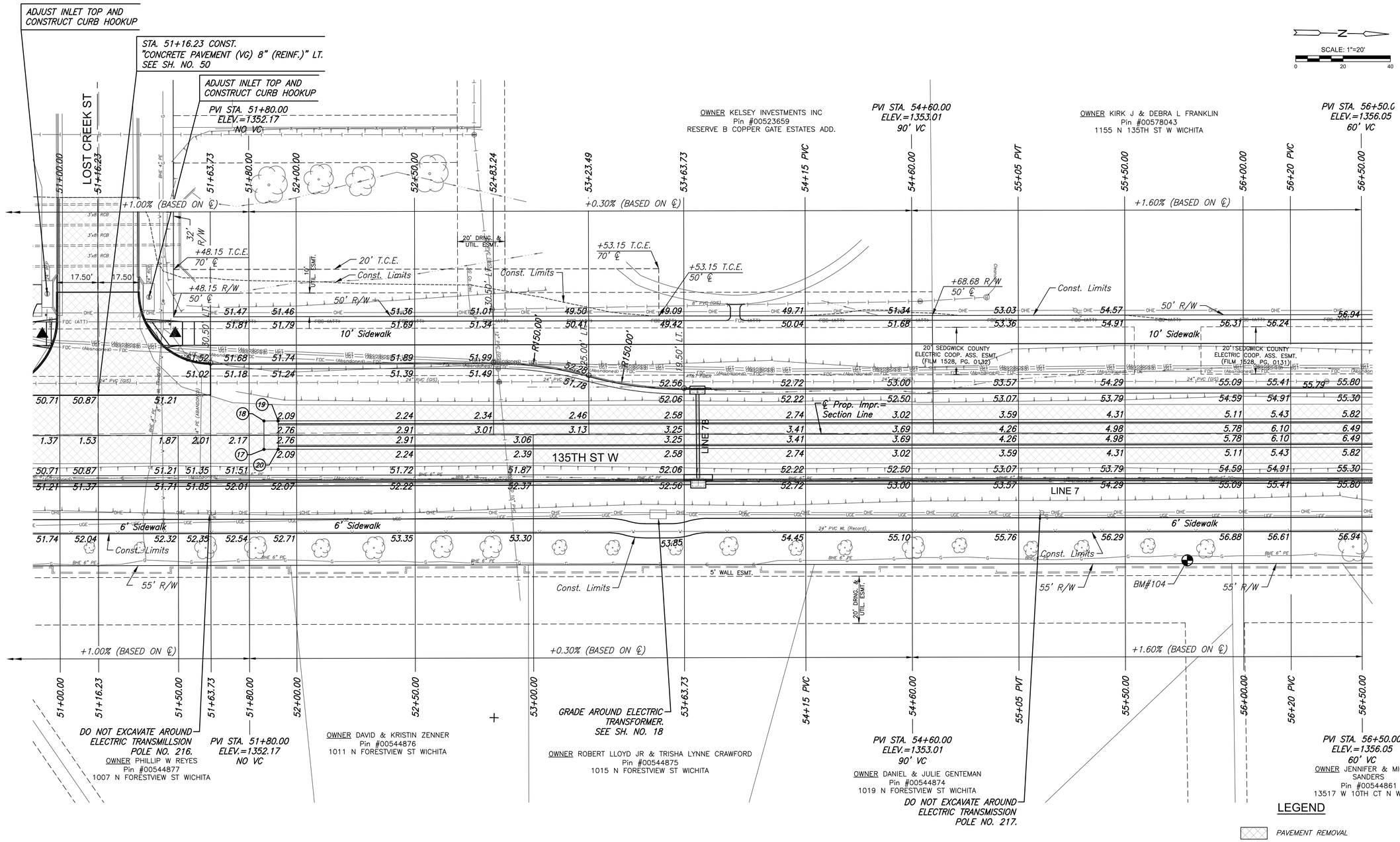
DESIGNED	DRAWN	CHECKED
DMU	RAM	JRA

NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

SHEET NO.
9 OF 156

Sh. No. 9

PLOTTED: Friday, February 20, 2026 @ 01:17PM



UTILITY ADJUSTMENT TABLE				
STATION	OFFSET	EXIST. ELEV.	PROP. ELEV.	REMARKS
50+94.77	59.85' LT.	1351.51	1356.98	SWS INLET
51+37.81	58.40' LT.	1351.46	1356.76	SWS INLET
51+43.73	36.27' RT.	1352.06	1352.21	WATER VALVE
52+82.74	52.90' LT.	1349.38	1350.45	SSMH
52+85.21	27.89' LT.	1349.31	1351.50	SSMH (CLEANOUT)
52+85.64	22.31' LT.	1350.40	1351.82	SSMH
56+35.19	21.86' LT.	1357.64	1355.19	SSMH

NOTE: SEE SPECIAL GRADING PLAN (SH. NO. 16)

BM#104 "3' T-POST" SET 2' WEST OF CONCRETE WALL.
STA. 55+76.20, 53.6' RT. ELEV.=1356.47 (NAVD 88)

MEDIAN POINTS				
POINT NO.	STATION	OFFSET	TOP CURB ELEVATION	FLOWLINE ELEVATION
17	51+86.23	6.00' Rt.	1352.13	1352.05
18	51+86.23	6.00' Lt.	1352.13	1352.05
19	51+92.23	6.00' Lt.	1352.74	1352.07
20	51+92.23	6.00' Rt.	1352.74	1352.07

LEGEND

- PAVEMENT REMOVAL
- CONSTRUCT WHEELCHAIR RAMP W/ DETECTABLE WARNING (SEE SH. NO. 56)
- TREE REMOVAL
- RIPRAP (SEE SH. NO. 98)
- PIPE REMOVAL
- EXISTING TOP OF BANK
- EXISTING FENCE
- EXISTING CHANNELIZED FLOW

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STREET IMPROVEMENTS FOR

135TH STREET WEST

FROM CENTRAL AVE TO 13TH STREET

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135TH ST. - PLAN
STA. 51+00 TO
STA. 56+50

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	1"=20'

DESIGNED	DRAWN	CHECKED
DMU	RAM	JRA

NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

SHEET NO.

10 OF 156

Sh. No. 10

J:\PROJECTS\2022\2261010447_COW_135TH STREET FROM CENTRAL TO 13TH ST\REET\00 220447 CADD\SHTS\05 CIVIL\PAVI\220447-05-5100.DWG

PLOTTED: Friday, February 20, 2026 @ 01:17PM

SCALE: 1"=20'
0 20 40

PVI STA. 56+50.00
ELEV.=1356.05
60' VC

PVI STA. 57+40.00
ELEV.=1356.41
40' VC

OWNER KIRK J & DEBRA L FRANKLIN
Pin #00578043
1155 N 135TH ST W WICHITA

PVI STA. 59+30.00
ELEV.=1358.31
80' VC

PVI STA. 61+25.00
ELEV.=1356.95
70' VC

PVI STA. 62+00.00
ELEV.=1357.17
40' VC

OWNER MUGGLE PROPERTIES LLC
Pin #00523577
13625 W PONDEROSA CT WICHITA

56+50.00 | 56+80 PVT | 57+20 PVC | 57+40.00 | 57+60 PVT | 57+71.88 | 58+00.00 | 58+31.64 | 58+50.00 | 58+71.89 | 59+12.13 | 59+30.00 | 59+37.06 | 59+70 PVT | 60+00.00 | 60+29.71 | 60+50.00 | 60+90 PVC | 61+25.00 | 61+39.00 | 61+60 PVT | 61+80 PVC | 61+95.00 | 62+00.00

+0.40% (BASED ON ℄) | +1.00% (BASED ON ℄) | −0.70% (BASED ON ℄) | +0.30% (BASED ON ℄)

+74.82 T.C.E. 73' ℄ | +13.92 T.C.E. 73' ℄ | HP | LP | HP

+74.82 R/W= T.C.E. 50' ℄ | +13.92 R/W= T.C.E. 50' ℄ | +66.68 R/W 50' ℄ | 50' R/W | 20' UTIL. ESMT. | 5' WALL ESMT.

Const. Limits | 10' Sidewalk | 20' SEDGWICK COUNTY ELECTRIC COOP. ASS. ESMT. (FILM 1528, PG. 0131)

56.94 57.15 57.62 58.03 58.13 58.22 58.44 58.81 58.86 57.73 59.11 58.90 58.55 58.50 58.26 58.20 58.36 58.44 58.11 57.89 57.77 57.74 57.73 57.75 57.74

55.80 56.01 56.17 56.28 56.45 56.57 56.85 57.17 57.35 57.57 57.80 57.92 57.98 57.99 57.87 57.66 57.45 57.53 57.31 57.03 56.87 56.86 56.89 56.95 56.97 56.97

55.30 55.51 55.67 55.78 55.95 56.07 56.35 56.67 56.85 57.07 57.30 57.42 57.48 57.49 57.37 57.16 56.95 56.81 56.53 56.37 56.36 56.39 56.45 56.47 56.47

5.82 6.03 6.19 6.30 6.47

6.49 6.70 6.86 6.97 7.14

℄ Prop. Impr.= Section Line 7.96

6.49 6.70 6.86 6.97 7.14 6.73 7.01 7.33 7.51 7.73 7.91 8.14 8.15 8.03 7.82 7.61 7.47 7.19 7.03 7.02 7.05 7.11 7.13 7.13

5.82 6.03 6.19 6.30 6.47

135TH ST W

LINE 7 | LINE 8

22 | 23 | 21 | 24

24" PVC (GS) | 24" PVC W. (Record) | 8" PE | 8" PVC (GS)

6' Sidewalk | Const. Limits

55' R/W | 50' R/W

WALL ESMT. | 20' DRNG. & UTIL. ESMT.

R150.00' | 19.50' RT. | 25.00' RT. | 30.50' RT. | (+72.13) | (+87.38)

Const. Limits | 4.56' | 2.44' | 27.58' | 27.66' | 8" PVC (GS)

+87.63 R/W 55' ℄ | +71.72 R/W 55' ℄

+87.63 R/W 118' ℄ | +71.72 R/W 118' ℄

56.94 57.23 57.06 57.30 57.38 57.41 57.50 57.50 57.62 57.14 57.69 58.00 57.92 57.94 58.12 57.82 57.91 57.71 57.69 57.63 57.65 57.76 57.77

56+50.00 | 56+80 PVT | 57+20 PVC | 57+40.00 | 57+60 PVT | 57+71.88 | 58+00.00 | 58+31.64 | 58+50.00 | 58+71.89 PRC | 58+90.00 PVC | 59+12.13 | 59+30.00 | 59+37.06 | 59+70 PVT | R/W | 60+29.74 | 10TH ST N | R/W | 60+90 PVC | 61+25.00 | 61+39.00 | 61+60 PVT | 61+80 PVC | 61+95.00 | 62+00.00

+0.40% (BASED ON ℄) | +1.00% (BASED ON ℄) | −0.70% (BASED ON ℄) | +0.30% (BASED ON ℄)

HP | LP | HP

PVI STA. 56+50.00
ELEV.=1356.05
60' VC
OWNER JENNIFER & MICHAEL SANDERS
Pin #00544861
13517 W 10TH CT N WICHITA

PVI STA. 57+40.00
ELEV.=1356.41
40' VC
OWNER HUNTER & KATELYNN LEDGERWOOD
Pin #00544860
13521 W 10TH CT N WICHITA

OWNER JARED F & CRYSTAL G JOHNSON
Pin #00544859
13525 W 10TH CT N WICHITA

PVI STA. 59+30.00
ELEV.=1358.31
80' VC
OWNER BRAD W & DALENDA S HOY
Pin #00544853
13529 W 10TH CT N WICHITA

PVI STA. 61+25.00
ELEV.=1356.95
70' VC
OWNER LUIS RUBEN MELGOZA PALOMINO & MARTHA LUCIA REYES VALENZUELA
Pin #00534327
13526 W 10TH CT N WICHITA

PVI STA. 62+00.00
ELEV.=1357.17
40' VC
OWNER UNKNOWN
Pin #00534326
13522 W 10TH CT N WICHITA

GRADE AROUND ELECTRIC TRANSFORMER. SEE SH. NO. 18

DO NOT EXCAVATE AROUND ELECTRIC TRANSMISSION POLE NO. 218.

STA. 60+29.71 CONST. "CONCRETE PAVEMENT (VC) 8" (REINF.)" RT. SEE SH. NO. 50

DO NOT EXCAVATE AROUND ELECTRIC TRANSMISSION POLE NO. 219.

LEGEND

- PAVEMENT REMOVAL
- CONSTRUCT WHEELCHAIR RAMP W/ DETECTABLE WARNING (SEE SH. NO. 56)
- TREE REMOVAL
- RIPRAP (SEE SH. NO. 98)
- PIPE REMOVAL
- EXISTING TOP OF BANK
- EXISTING FENCE
- EXISTING CHANNELIZED FLOW

UTILITY ADJUSTMENT TABLE

STATION	OFFSET	EXIST. ELEV.	PROP. ELEV.	REMARKS
59+57.46	39.87' RT.	1357.73	1357.88	WATER VALVE
5+59.36	37.58' RT.	1357.86	1357.84	WATER VALVE
59+59.68	35.79' RT.	1357.77	1357.80	FH
60+37.58	22.56' LT.	1358.28	1357.93	SSMH

MEDIAN POINTS

POINT NO.	STATION	OFFSET	TOP CURB ELEVATION	FLOWLINE ELEVATION
21	57+65.88	6.00' Rt.	1357.20	1357.53
22	57+65.88	6.00' Lt.	1357.20	1357.53
23	57+71.88	6.00' Lt.	1356.67	1356.59
24	57+71.88	6.00' Rt.	1356.67	1356.59

J:\PROJECTS\2022\2201010447_COW_135TH STREET FROM CENTRAL TO 13TH STREET\00 292447 CAD\SHTS\05 CIVIL\PAV\220447-05-5100.DWG

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STREET IMPROVEMENTS FOR

135TH STREET WEST

FROM CENTRAL AVE TO 13TH STREET

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135TH ST. - PLAN
STA. 56+50 TO
STA. 62+00

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	1"=20'

DESIGNED	DRAWN	CHECKED
DMU	RAM	JRA

NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

SHEET NO.
11 OF 156

Sh. No. 11

PLOTTED: Friday, February 20, 2026 @ 01:17PM

J:\PROJECTS\2022\2201010447_COW_135TH STREET FROM CENTRAL TO 13TH STREET\00 220447 CAD\SHTS\05 CIVIL\PAV\220447-05-5100.DWG

STA. 66+30.70 CONST.
"CONCRETE PAVEMENT (VG) 8" (REINF.)" LT.
SEE SH. NO. 51

SCALE: 1"=20'
0 20 40

PVI STA. 62+00.00
ELEV.=1357.17
40' VC

OWNER GERALD H & DIANNA L SCHMITT
Pin #00523578
13621 W PONDEROSA CT WICHITA

OWNER ANTONIO & SONIA HOLGUIN
Pin #00523579
13617 W PONDEROSA CT WICHITA

PVI STA. 63+25.00
ELEV.=1356.55
60' VC

OWNER BRENT W BROWN
Pin #00523580
13613 W PONDEROSA CT WICHITA

PVI STA. 64+00.00
ELEV.=1356.77
40' VC

OWNER ANDREW DODD
Pin #00523581
13609 W PONDEROSA CT WICHITA

OWNER RICHARD D & TRISHIA COOPER
Pin #00523582
13605 W PONDEROSA CT WICHITA

OWNER RICHARD M STOWE
Pin #00523584
13601 W PONDEROSA CT WICHITA

PONDEROSA ST.

OWNER AARON M COLLARD
Pin #00523621
13602 W PONDEROSA CT WICHITA

OWNER P
1360

62+00.00 | 62+20 PVT | 62+50.00 | 62+95 PVC | 63+25.00 | 63+32.50 | 63+55 PVT | 63+80 PVC | 63+97.14 | 64+00.00 | 64+20 PVT | 64+50.00 | 65+00.00 | 65+50.00 | 65+83.20 | 66+30.70 | 66+73.20 | 67+00.00 | 67+50.00

−0.50% (BASED ON ℄) | +0.30% (BASE ON ℄) | −0.40% (BASED ON ℄)

LP | HP

50' R/W
Const. Limits
20' SEDGWICK COUNTY ELECTRIC COOP. ASS. ESMT. (FILM 1528, PG. 0131)
5' WALL ESMT.
8" PVC (GS)
20' UTIL. ESMT.
10' Sidewalk
LINE 8C
LINE 8
LINE 8E
℄ Prop. Impr.= Section Line
135TH ST W
+98.70 R/W 50' ℄
17.50' 17.50'
32' R/W
+62.70 R/W= T.C.E. 75' ℄
+72.70 T.C.E. 75' ℄
+62.70 R/W 50' ℄
+72.70 T.C.E. 50' ℄
50' R/W
6' Sidewalk
55' R/W
BM#103
24" PVC W. (Record)
20' DRNG. & UTIL. ESMT.
BHE 6" PE
(Abandoned)

SEE SH. 51 & 154 FOR GRADING INFORMATION NORTH OF SIDEWALK

PVI STA. 62+00.00
ELEV.=1357.17
40' VC

DO NOT EXCAVATE AROUND ELECTRIC TRANSMISSION POLE NO. 219.

OWNER UNKNOWN
Pin #00534326
13522 W 10TH CT N
WICHITA

PVI STA. 63+25.00
ELEV.=1356.55
60' VC

OWNER DERRICK & JESSICA LEGRANDE
Pin #00534325
13518 W 10TH CT N WICHITA

PVI STA. 64+00.00
ELEV.=1356.77
40' VC

OWNER LISA R HUFF
Pin #00534314
1213 N FORESTVIEW CT WICHITA

OWNER NATHAN & MARIEL LAZELL HARLIN
Pin #00534313
1217 N FORESTVIEW CT WICHITA

DO NOT EXCAVATE AROUND ELECTRIC TRANSMISSION POLE NO. 220.

STA. 65+83.93 TO STA. 66+12.93 CONST.
29.1 L.F. OF PROTECTION CURB.
SEE SH. NO. 55

STA. 66+50.08 TO STA. 67+50.00 CONST.
116.5 L.F. OF PROTECTION CURB.
SEE SH. NO. 55

OWNER MICHAEL W & JULIE G JACKSON
Pin #00534312
1221 N FORESTVIEW CT WICHITA

REMOVAL OF EXISTING PIPES AND STRUCTURES			
STATION	SIDE	ITEM	REMARKS
65+95.35' TO 66+67.44'	25.7' LT.TO 25.0' LT.	72.1' OF 18" RCP	

UTILITY ADJUSTMENT TABLE				
STATION	OFFSET	EXIST. ELEV.	PROP. ELEV.	REMARKS
64+27.86	22.97' LT.	1356.75	1357.04	SSMH
67+32.39	22.95' LT.	1356.75	1354.75	SSMH

BM#103 "3' T-POST" SET 2' WEST OF CONCRETE WALL.
STA. 62+28.20, 53.7' RT. ELEV.=1357.54 (NAVD 88)

MEDIAN POINTS				
POINT NO.	STATION	OFFSET	TOP CURB ELEVATION	FLOWLINE ELEVATION
25	67+00.84	6.00' Rt.	1355.51	1355.43
26	67+00.84	6.00' Lt.	1355.51	1355.43
27	67+06.84	6.00' Lt.	1356.07	1355.40
28	67+06.84	6.00' Rt.	1356.07	1355.40

LEGEND

- PAVEMENT REMOVAL
- CONSTRUCT WHEELCHAIR RAMP W/ DETECTABLE WARNING (SEE SH. NO. 56)
- TREE REMOVAL
- RIPRAP (SEE SH. NO. 98)
- PIPE REMOVAL
- EXISTING TOP OF BANK
- EXISTING FENCE
- EXISTING CHANNELIZED FLOW

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135TH STREET WEST

STREET IMPROVEMENTS FOR
FROM CENTRAL AVE TO 13TH STREET

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135TH ST. - PLAN
STA. 62+00 TO
STA. 67+50

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	1"=20'

DESIGNED	DRAWN	CHECKED
DMU	RAM	JRA

NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

SHEET NO.
12 OF 156

Sh. No. 12

PLOTTED: Friday, February 20, 2026 @ 01:17PM

J:\PROJECTS\2022\220101\0447_COW_135TH STREET FROM CENTRAL TO 13TH STREET\00 220447 CAD\SHTS\05 CIVIL\PAV\220447-05-5100.DWG

STA. 67+50.00 TO STA. 70+10.86 CONST.
260.9 L.F. OF PROTECTION CURB.
SEE SH. NO. 55

PI STA. 75+87.11
Found ½" Iron bar w/ yellow "SE CLS-59" cap in thimble
1. "+" cut found in SE Corner of traffic control MH — 74.52' N55°02'10"W
2. "+" cut found in SW Corner of traffic control MH — 80.96' N47°38'29"E
3. "+" cut found in NW Corner of traffic control MH — 78.72' S41°53'29"E
4. "+" cut found in NE Corner of traffic control MH — 76.35' S49°38'29"W
5. N=1693137.95, E=1602138.17

N

SCALE: 1"=20'
0 20 40

OWNER PROGRESSIVE OPPORTUNITIES LLC
Pin #00523620
13606 W PONDEROSA CT WICHITA

OWNER SHARON M & EDWARD H ZENNER
Pin #00523619
13610 W PONDEROSA CT WICHITA

OWNER RICHARD A & CYNTHIA S NIEDENS
Pin #00540069
LOT 1 BLOCK A COPPER GATE 2ND ADD.

OWNER RICHARD A & CYNTHIA S NIEDENS
Pin #00540070
LOT 2 BLOCK A COPPER GATE 2ND ADD.

PVI STA. 70+42.00
ELEV.=1354.20
70' VC

PVI STA. 72+12.00
ELEV.=1355.22
NO VC

67+50.00 | 68+00.00 | 68+50.00 | 69+00.00 | 69+22.86 | 69+50.00 | 70+07 PVC | 70+35.01 | 70+42.00 | 70+77 PVT | 71+00.00 | 71+50.00 | 72+00.00 | 72+12.00 | 72+20.00 | 72+50.00 | 72+56.34

-0.40% (BASED ON ℄) | +0.60% (BASED ON ℄) | +0.30% (BASED ON ℄) | +0.06% (BASE ON TOP CURB)

LP | HP

+64.60 R/W 60' ℄ | +64.67 R/W 50' ℄ | +36.57 R/W 60' ℄ | +56.29 R/W 50' ℄ | +56.34 R/W 55' ℄ | +37.59 R/W 50' ℄

50' R/W | 55' R/W | 60' R/W

20' UTIL. ESMT. | 20' DRNG. & UTIL. ESMT. | 5' WALL ESMT. | 20' SEDGWICK COUNTY ELECTRIC COOP. ASS. ESMT. (FILM 1528, PG. 0131)

Const. Limits | 30.50' LT. | 49.50' RT. | 30.73' RT.

10' Sidewalk | 6' Sidewalk | Exist. 10' Sidewalk | Exist. 6' Sidewalk

135TH ST W

LINE 8 | LINE 8A

℄ Prop. Impr.= Section Line

BM#102

+12.05 18' ENT. | +82.03 20' ENT.

8" PVC (GR) | 24" PVC (GR) | 24" PVC (Record) | 24" PVC (GR) | 24" PVC (GR)

DO NOT EXCAVATE AROUND ELECTRIC TRANSMISSION POLE NO. 221.

OWNER BRITT ELLERY & ELIZABETH ANNE NEELY
Pin #00534302
1261 N FORESTVIEW CT WICHITA

OWNER JOSHUA CRAIG & COURTNEY LYNN RITCHIE
Pin #00534301
1265 N FORESTVIEW CT WICHITA

OWNER SEDG COUNTY ELEC COOP ASSOC INC
Pin #00253267
LOT 1 BLOCK A ST MARKS SUB ADDITION

OWNER EVERGY KANSAS SOUTH INC
Pin #00253254
LOT 1 BLOCK A COWSKIN SUB. ADDITION UTILITY ROLL

Sta. 72+56.34 End
Proj. No. 472-2021-085756

REMOVAL OF EXISTING PIPES AND STRUCTURES			
STATION	SIDE	ITEM	REMARKS
70+60.2' TO 70+78.9'	31.3' LT. TO 28.0' LT.	19.0' OF 15" RCP	
70+71.1'	26.6' RT.	DROP INLET	
70+71.1' TO 70+79.4'	26.6' RT. TO 25.7' RT.	7.2' OF 18" RCP	
70+84.5'	28.0' LT.	CURB INLET	
70+84.5' TO 70+85.0'	26.3' LT. TO 24.1' RT.	50.4' OF 15" RCP	
70+85.0'	25.8' RT.	CURB INLET	
70+90.7' TO 74+30.1'	25.8' RT. TO 37.8' RT.	339.7' OF 18" RCP	
74+35.7'	37.942' RT.	CURB INLET	
74+41.4' TO 74+92.6'	38.0' RT. TO 45.8' RT.	51.7' OF 18" RCP	

UTILITY ADJUSTMENT TABLE				
STATION	OFFSET	EXIST. ELEV.	PROP. ELEV.	REMARKS
69+40.62	22.19' LT.	1355.73	1354.75	SSMH
70+56.18	34.24' RT.	1354.57	1354.37	WATER VALVE
70+56.42	33.28' RT.	1354.48	1354.34	FH

MEDIAN POINTS				
POINT NO.	STATION	OFFSET	TOP CURB ELEVATION	FLOWLINE ELEVATION
29	70+71.00	6.00' Rt.	1354.91	1354.24
30	70+71.00	6.00' Lt.	1354.91	1354.24
31	70+77.00	6.00' Lt.	1354.35	1354.27
32	70+77.00	6.00' Rt.	1354.35	1354.27
33	72+12.09	6.00' Rt.	1355.15	1355.08
34	72+12.09	6.00' Lt.	1355.15	1355.08
35	72+18.09	6.00' Lt.	1355.67	1355.10
36	72+18.09	6.00' Rt.	1355.67	1355.10

BM#100 SQUARE CUT ON POWER POLE CONCRETE PAD.
STA. 76+20.93, 413.3' RT. ELEV.=1354.61 (NAVD 88)

BM#101 SQUARE CUT ON SOUTH MID-POINT OF CURB INLET.
STA. 75+46.80, 95.5' RT. ELEV.=1353.01 (NAVD 88)

BM#102 SQUARE CUT ON WEST SIDE OF CONCRETE BASE OF 4'ø PP.
STA. 69+14.65, 29.4' RT. ELEV.=1356.95 (NAVD 88)

LEGEND

- PAVEMENT REMOVAL
- CONSTRUCT WHEELCHAIR RAMP W/ DETECTABLE WARNING (SEE SH. NO. 56)
- TREE REMOVAL
- RIPRAP (SEE SH. NO. 98)
- PIPE REMOVAL
- EXISTING TOP OF BANK
- EXISTING FENCE
- EXISTING CHANNELIZED FLOW

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STREET IMPROVEMENTS FOR

135TH STREET WEST

FROM CENTRAL AVE TO 13TH STREET

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135TH ST. - PLAN
STA. 67+50 TO
STA. 72+56.34

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	1"=20'

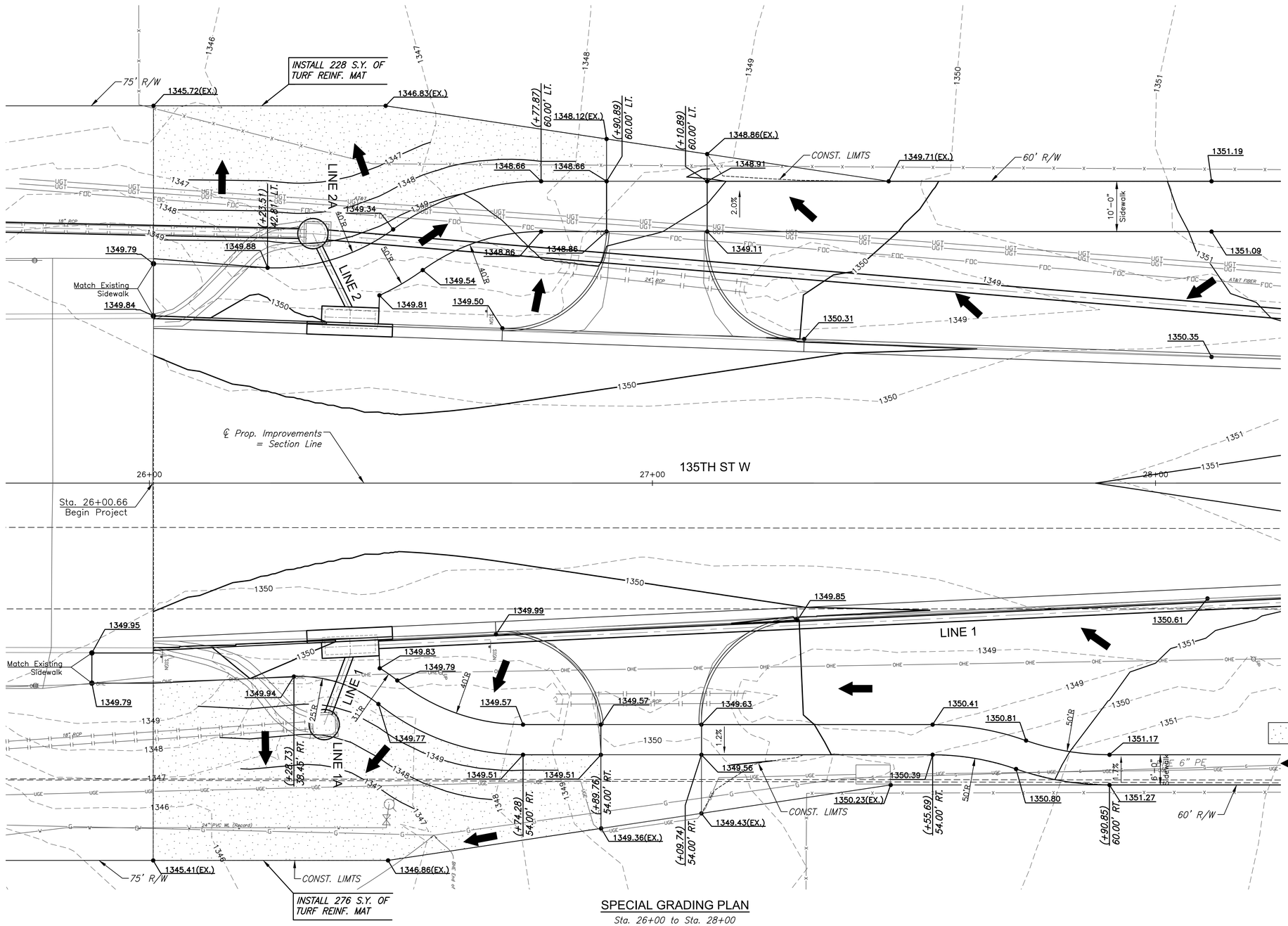
DESIGNED	DRAWN	CHECKED
DMU	RAM	JRA

NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

SHEET NO.
13 OF 156

Sh. No. 13

PLOTTED: Friday, February 20, 2026 @ 01:17PM



SPECIAL GRADING PLAN
Sta. 26+00 to Sta. 28+00

J:\PROJECTS\2022\220101\10447_COV_135TH STREET FROM CENTRAL TO 13TH STREET\00 220447 CAD\SHTS\05 CIVIL\GRD\220447-05-0275.DWG

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STREET IMPROVEMENTS FOR

135TH STREET WEST

FROM CENTRAL AVE TO 13TH STREET

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SPECIAL GRADING PLAN - STA. 26+00 TO STA. 28+00

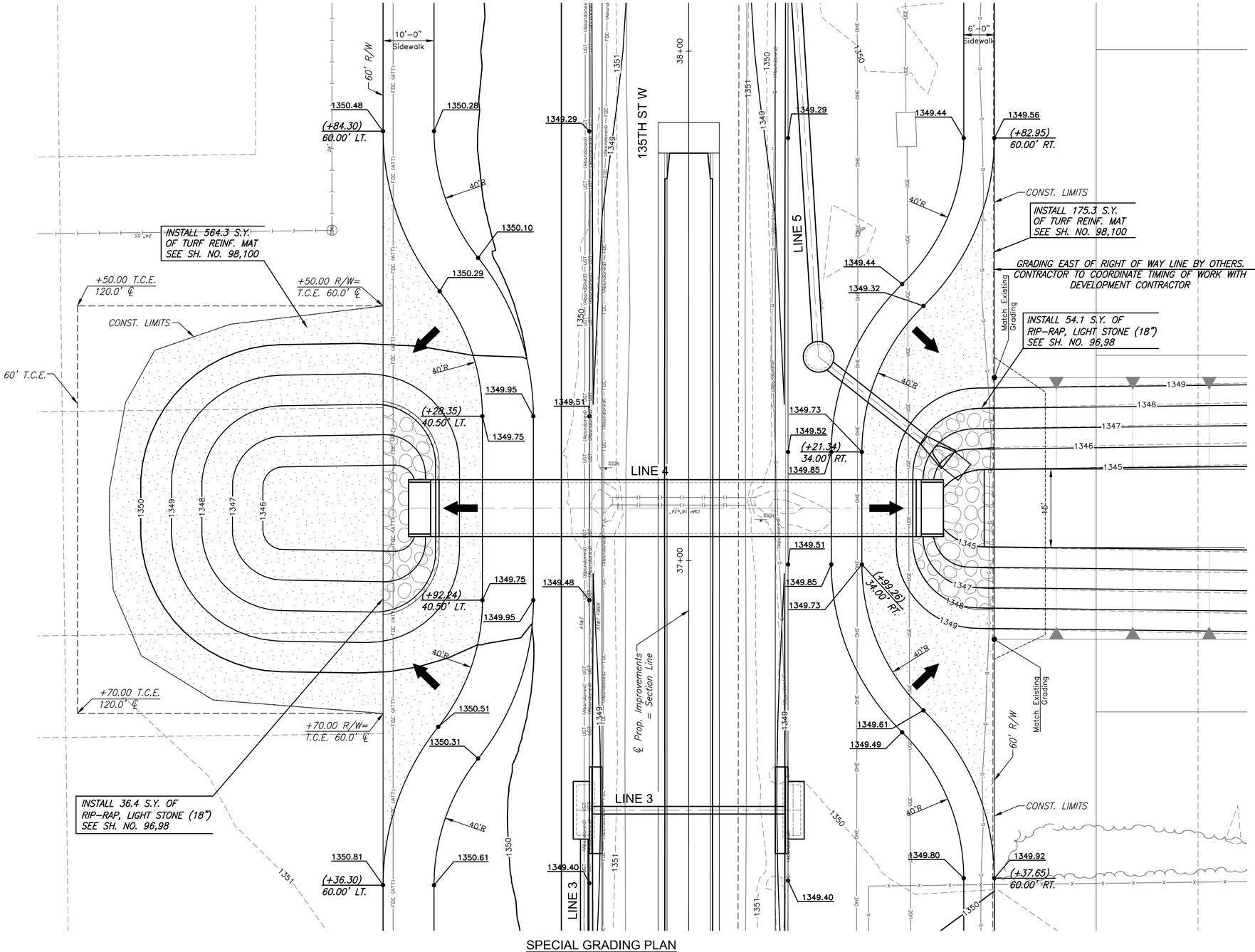
PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	1"=10'

DESIGNED	DRAWN	CHECKED
DMU	RAM	JRA

NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

SHEET NO.
14 OF 156

PLOTTED: Friday, February 20, 2026 @ 01:17PM



SPECIAL GRADING PLAN

Sta. 36+35 to Sta. 37+85

J:\PROJECTS\2022\2291910447_COW_135TH STREET FROM CENTRAL TO 13TH STREET\00 229447 CAD\SHTS\05 CIVIL\GRD\229044705-5275.DWG

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STREET IMPROVEMENTS FOR

135TH STREET WEST

FROM CENTRAL AVE TO 13TH STREET

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SPECIAL GRADING PLAN - STA. 36+35 TO STA. 37+85

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	1"=10'

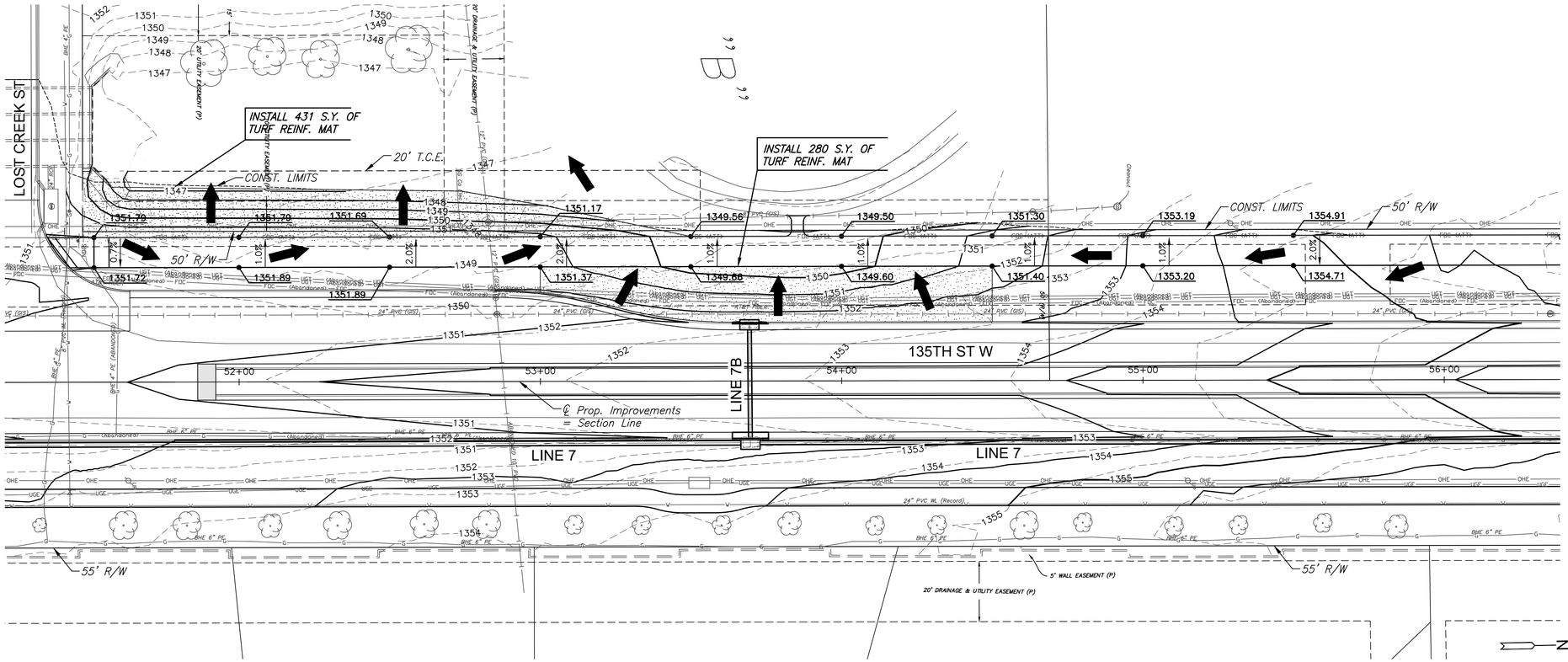
DESIGNED	DRAWN	CHECKED
DMU	RAM	JRA

NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

SHEET NO.

15 OF 156

PLOTTED: Friday, February 20, 2026 @ 01:17PM



SPECIAL GRADING PLAN
Sta. 51+50 to Sta. 55+50

SCALE: 1"=20'
0 20 40

LEGEND

– TURF REINFORCEMENT MAT

– SURFACE FLOW DIRECTION

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STREET IMPROVEMENTS FOR

135TH STREET WEST

FROM CENTRAL AVE TO 13TH STREET

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SPECIAL GRADING PLAN - STA. 51+50 TO STA. 55+50

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	1"=20'

DESIGNED	DRAWN	CHECKED
DMU	RAM	JRA

NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

SHEET NO.
16 OF 156

J:\PROJECTS\2022\2201010447_COW_135TH STREET FROM CENTRAL TO 13TH STREET\00 220447 CAD\SHTS\VS CIVIL\GRD\220447-05-5275.DWG

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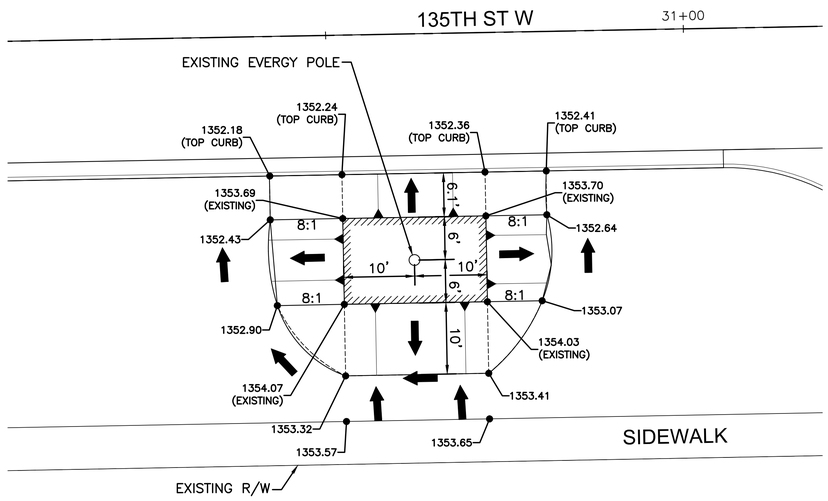
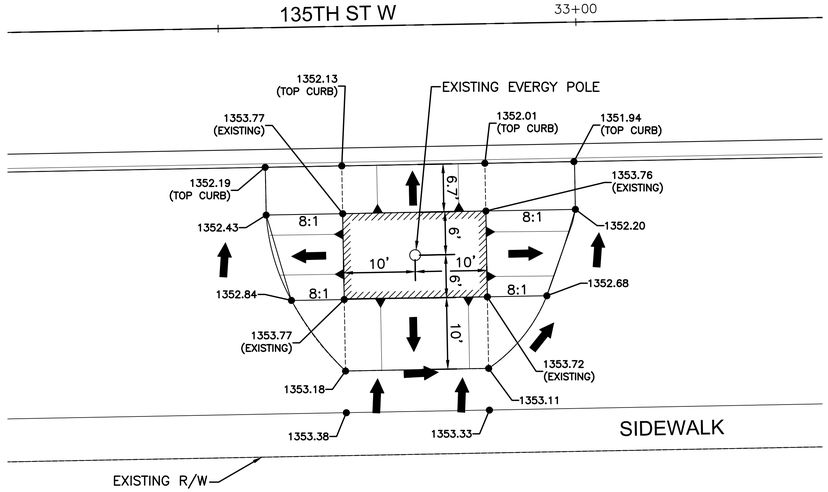
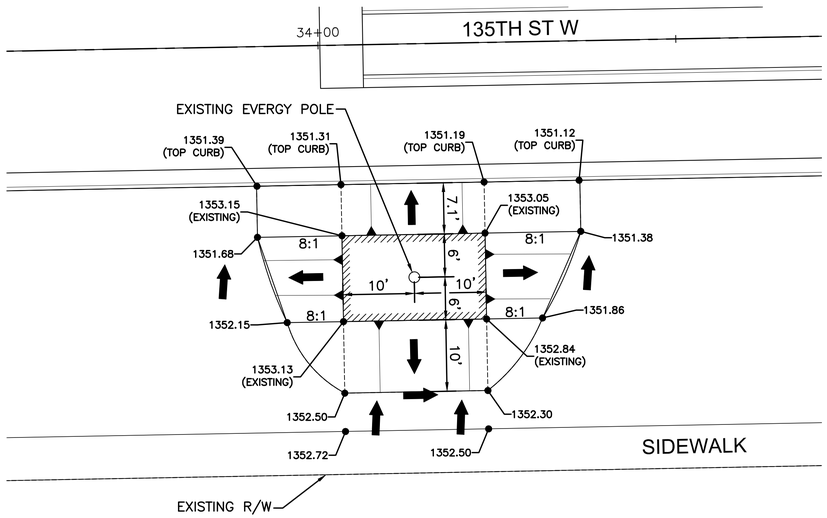


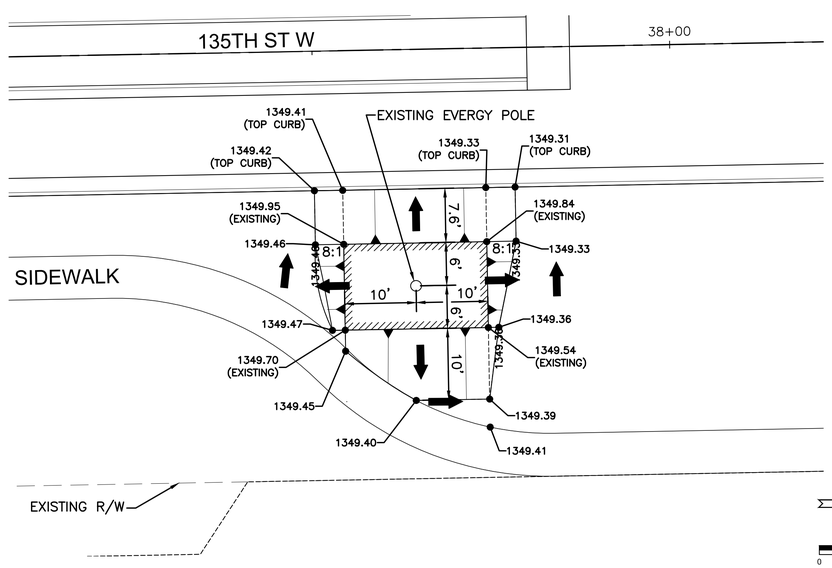
EVERGY POLE NO. 210 AT STA. 30+61.92



EVERGY POLE AT STA. 32+76.93



EVERGY POLE NO. 211 AT STA. 34+12.85



EVERGY POLE NO. 212 AT STA. 37+63.94

LEGEND

– UNDISTURBED GROUND

– SURFACE FLOW DIRECTION

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STREET IMPROVEMENTS FOR

135TH STREET WEST

FROM CENTRAL AVE TO 13TH STREET

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SPECIAL GRADING PLAN - EVERGY APPURTENANCES

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	1"=10'

DESIGNED	DRAWN	CHECKED
JRA	LNP	JRA

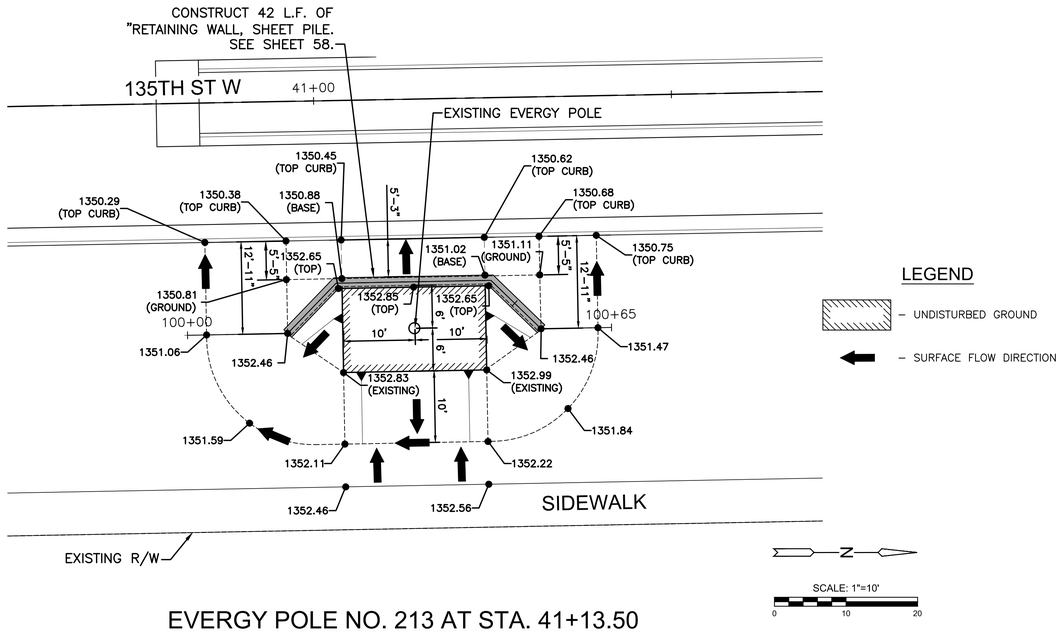
NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

SHEET NO.

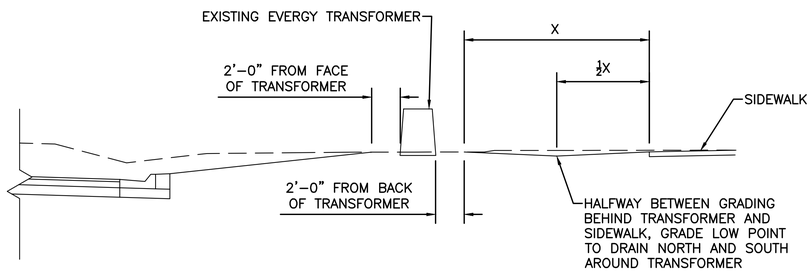
17 OF 156

J:\PROJECTS\022220\10\10447_COW_135TH STREET FROM CENTRAL TO 13TH STREET\00 220447 CAD\SHTS\05 CIVIL\GRD\220447-05-EVERGY POLE DETAIL.DWG

PLOTTED: Friday, February 20, 2026 @ 01:18PM



EVERGY POLE NO. 213 AT STA. 41+13.50



NOTE: NO GRADING TO OCCUR WITHIN 2' OF TRANSFORMER.
NORTH AND SOUTH OF TRANSFORMER, TRANSITION BETWEEN
EXISTING GROUND AND PROPOSED GRADING PER CROSS SECTIONS.

GRADING GROUND TRANSFORMERS. AS SHOWN IS SUBSIDIARY TO
PROJECT EARTHWORK BID ITEMS

STANDARD GRADING SECTION AROUND EVERGY TRANSFORMERS

TRANSFORMER LOCATIONS

32+55.7, 43.4' RT.
37+84.6, 40.9' RT.
43+04.7, 39.0' RT.
53+52.7, 31.9' RT.
58+46.4, 33.9' RT.

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STREET IMPROVEMENTS FOR

135TH STREET WEST

FROM CENTRAL AVE TO 13TH STREET

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SPECIAL GRADING PLAN - EVERGY APPURTENANCES

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	1"=10'

DESIGNED	DRAWN	CHECKED
JRA	LNP	JRA

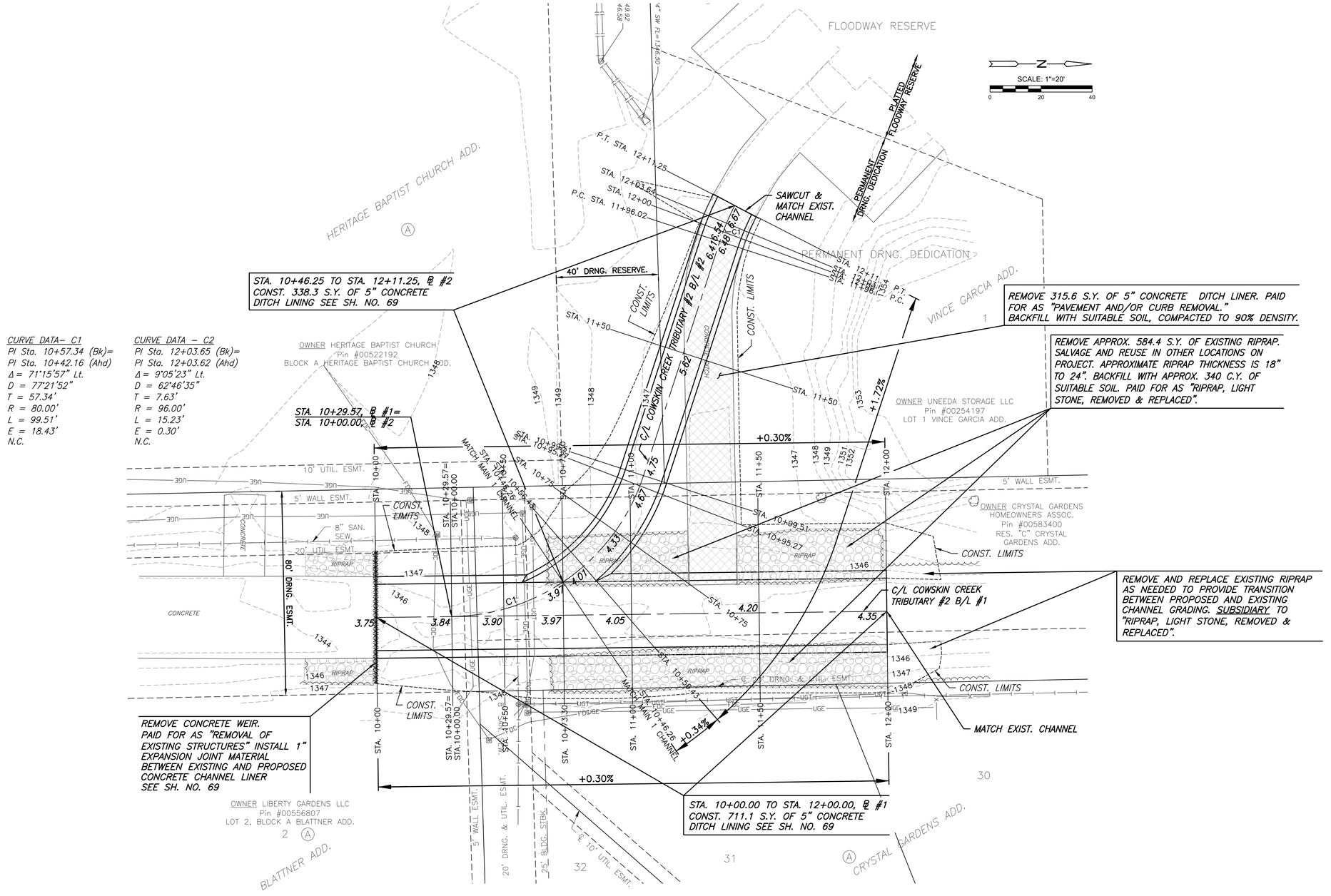
NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

SHEET NO.

18 OF 156

J:\PROJECTS\0222\20161\0447_COV_135TH STREET FROM CENTRAL TO 13TH STREET\00 220447 CAD\SHTS\05 CIVIL\GRD\220447-05-EVERGY POLE DETAIL.DWG

PLOTTED: Friday, February 20, 2026 @ 01:18PM



CURVE DATA– C1
PI Sta. 10+57.34 (Bk)=
PI Sta. 10+42.16 (Ahd)
Δ = 71°15'57" Lt.
D = 77°21'52"
T = 57.34'
R = 80.00'
L = 99.51'
E = 18.43'
N.C.

CURVE DATA – C2
PI Sta. 12+03.65 (Bk)=
PI Sta. 12+03.62 (Ahd)
Δ = 9°05'23" Lt.
D = 62°46'35"
T = 7.63'
R = 96.00'
L = 15.23'
E = 0.30'
N.C.

SPECIAL GRADING PLAN - CONCRETE DITCH

NOTE: EARTHWORK ASSOCIATED WITH THE WORK OUTLINED ON THIS SHEET WILL BE PAID FOR AS EXCAVATION" AND "FILL, COMPACTED (90% DENSITY)."

GRADE BACKFILL TO DRAIN TOWARDS CONCRETE DITCHES.

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STREET IMPROVEMENTS FOR

135TH STREET WEST

FROM CENTRAL AVE TO 13TH STREET

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SPECIAL GRADING PLAN-COWSKIN CREEK TRIBUTARY NO. 2

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	1"=20'

DESIGNED	DRAWN	CHECKED
DMU	RAM	JRA

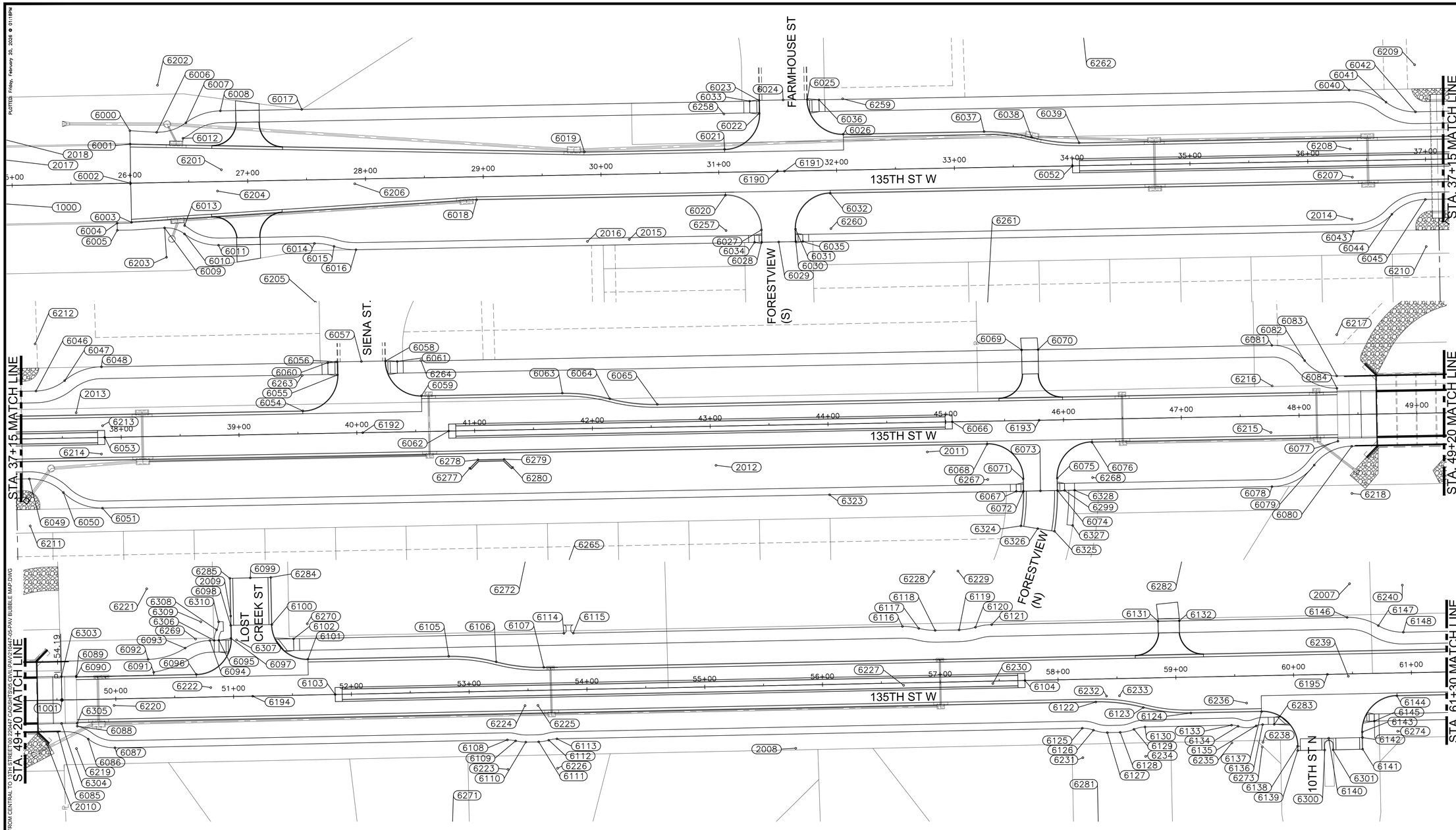
NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

SHEET NO.
19 OF 156

Sh. No. 19

J:\PROJECTS\2022\2291910447_COW_135TH STREET FROM CENTRAL TO 13TH STREET\100 229447 CAD\SHTS\05 CIVIL\GRD\229447-05-5276.DWG

PLOTTED: Friday, February 20, 2026 @ 01:18PM



LEGEND

PI–Point of Intersection
PC–Point of Curve
PCC–Point on Compound Curve
PRC–Pont on Reverse Curve
RP–Radius Curve
BC–Back of Curb
EP–Edge of Pavement
PT–Point on Tangent
CL–Centerline
BL–Baseline
PE–Pavement Edge
DL–Ditch Lining
SPRW–Sheet Pile Retaining Wall

SCALE: 1"=40'
0 40 80

J:\PROJECTS\2022\22\01\0447_COW_135TH STREET FROM CENTRAL TO 13TH STREET\0 22\447 CAD\SHTS\05 CIVIL\PAV\21\0447-05-PAV BUBBLE MAP.DWG

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135TH STREET WEST

STREET IMPROVEMENTS FOR
FROM CENTRAL AVE TO 13TH STREET

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PAVING BUBBLE MAP

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	1"=40'

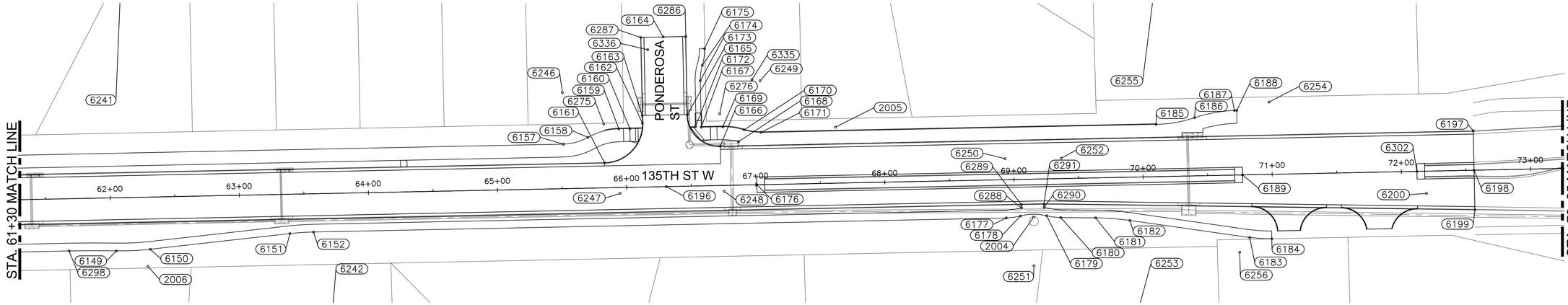
DESIGNED	DRAWN	CHECKED
JRA	RAM	JRA

NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

SHEET NO.
20 OF 156

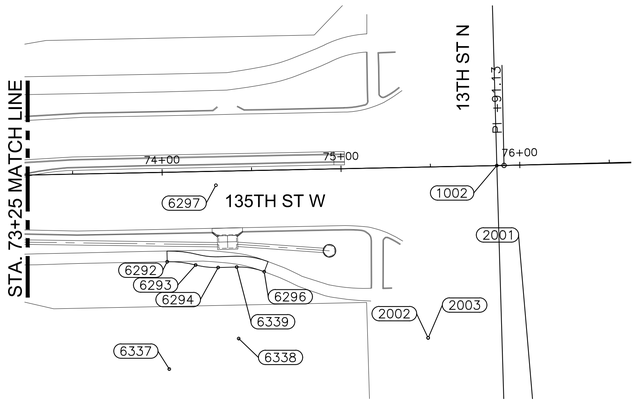
Sh. No. 20

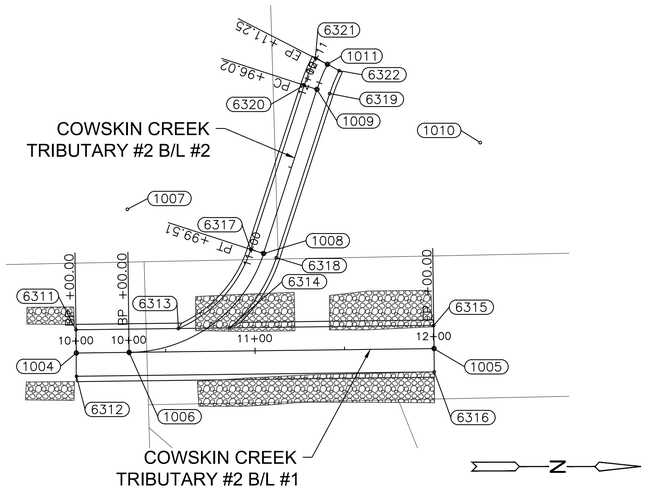
PLOTTED: Friday, February 20, 2026 @ 01:18PM



BASELINE POINTS				
POINT #	STATION	NORTHING	EASTING	DESC.
1000	23+21.95	1687873.781	1602240.127	BL
1001	49+54.19	1690505.579	1602191.640	BL PI
1002	75+87.11	1693137.952	1602138.174	BL
1004	10+00.00	1693550.433	1602650.189	BL#1
1005	12+00.00	1693750.418	1602647.752	BL#1
1006	10+00.00	1693580.004	1602649.828	BL#2 PC
1007	10+00.00	1693579.029	1602569.834	BL#2 RP
1008	10+99.51	1693655.098	1602594.604	BL#2 PT
1009	11+96.02	1693684.981	1602502.830	BL#2 PC
1010	11+96.02	1693776.264	1602532.553	BL#2 RP
1011	12+11.25	1693690.823	1602488.782	BL#2 PT

BENCHMARK/CONTROL POINTS						
POINT #	STATION	OFFSET/SIDE	ELEV.	NORTHING	EASTING	DESC.
2001	76+20.92	413.28, RT.	1354.61	1693182.001	1602550.510	BM100
2002	75+46.80	95.51, RT.	1353.01	1693099.588	1602234.487	BM101
2003	75+46.80	95.51, RT.	1352.96	1693099.588	1602234.487	CP1
2004	69+14.65	29.43, RT.	1353.95	1692466.224	1602181.255	BM102
2005	67+62.68	43.45, LT.	1356.44	1692312.807	1602111.476	CP2
2006	62+28.20	53.69, RT.	1357.54	1691780.414	1602219.447	BM103
2007	60+49.06	76.61, LT.	1361.84	1691598.667	1602092.810	CP3
2008	55+76.20	53.60, RT.	1356.47	1691128.540	1602232.597	BM104
2009	50+98.91	68.44, LT.	1351.59	1690648.876	1602120.277	CP4
2010	49+41.07	37.65, RT.	1347.58	1690493.154	1602229.525	BM105
2011	44+83.91	25.17, RT.	1353.88	1690035.835	1602225.466	CP5
2012	43+04.32	33.23, RT.	1353.28	1689856.425	1602236.832	BM106
2013	37+62.09	21.40, LT.	1350.01	1689313.285	1602192.205	CP6
2014	36+36.68	49.69, RT.	1350.26	1689189.199	1602265.591	BM107
2015	30+22.97	55.50, RT.	1353.69	1688575.701	1602282.705	BM108
2016	29+87.39	56.55, RT.	1353.48	1688540.150	1602284.411	CP7
2017	24+04.67	34.02, LT.	1350.41	1687955.864	1602204.585	BM109
2018	23+60.02	75.98, LT.	1349.18	1687910.447	1602163.461	CP8





PROJECT SURVEY CONTROL

BENCHMARK #100
Square cut on power pole concrete pad
Elevation=1354.61

BENCHMARK #101
Square cut on south mid-point of curb inlet
Elevation=1353.01

BENCHMARK #102
Square cut on west side of concrete base of 4'ø PP
Elevation=1353.95

BENCHMARK #103
3' t-post set 2' west of concrete wall
Elevation=1357.54

BENCHMARK #104
3' t-post set 2' west of concrete wall
Elevation=1356.47

BENCHMARK #105
City of Wichita, brass disk found
Elevation=1347.58

BENCHMARK #106
3' t-post set 6' west of Evergy box
Elevation=1353.28

BENCHMARK #107
3' t-post set in E/W fence line 15' east of corner fence post
Elevation=1350.26

BENCHMARK #108
3' t-post set in E/W fence line 15' east of corner fence post
Elevation=1353.69

BENCHMARK #109
City of Wichita, brass disk found in top of guard rail in SW corner of bridge over North Fork Calfskin Creek
Elevation=1350.41

CONTROL POINT #01
"+" cut in square west mid-point of catch basin
Elevation=1352.96

CONTROL POINT #02
½"x24" rebar w/blue cap
Elevation=1356.44

CONTROL POINT #03
½"x24" rebar w/blue cap
Elevation=1361.84

CONTROL POINT #04
Mag nail w/washer
Elevation=1351.59

CONTROL POINT #05
½"x24" rebar w/blue cap
Elevation=1353.88

CONTROL POINT #06
½"x24" rebar w/blue cap
Elevation=1350.01

CONTROL POINT #07
½"x24" rebar w/blue cap
Elevation=1353.48

CONTROL POINT #08
Mag nail w/washer
Elevation=1349.18

DATUM:
The Horizontal Datum is based on the Kansas Coordinate System of 1983, NAD83(2011), South Zone, US Survey Foot Grid to ground. Coordinates shown have been modified to the ground using a combined adjustment factor of 1.0001200144. State Plane coordinates can be calculated by multiplying the shown values by 0.99988.
GPS Scale Point N: 0.00 E: 0.00

All elevations shown are based on the NAVD 88 vertical datum, Geoid18.

SCALE: 1"=40'
0 40 80

LEGEND

PI–Point of Intersection
PC–Point of Curve
PCC–Point on Compound Curve
PRC–Pont on Reverse Curve
RP–Radius Curve
BC–Back of Curb
EP–Edge of Pavement
PT–Point on Tangent
CL–Centerline
BL–Baseline
PE–Pavement Edge
DL–Ditch Lining
SPRW–Sheet Pile Retaining Wall

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STREET IMPROVEMENTS FOR

135TH STREET WEST

FROM CENTRAL AVE TO 13TH STREET

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PAVING BUBBLE MAP

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	1"=40'

DESIGNED	DRAWN	CHECKED
JRA	RAM	JRA

NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

J:\PROJECTS\2022\2201010447_COW_135TH STREET FROM CENTRAL TO 13TH STREET\00 220447 CAD\SHTS\05 CIVIL\PAV\210447-05-PAV BUBBLE MAP.DWG

PLOTTED: Friday, February 20, 2026 @ 01:18PM

J:\PROJECTS\2022\220101047_COV_135TH STREET FROM CENTRAL TO 13TH STREET\00 220447 CAD\SHTS\05 CIVIL\PAV\210447-05-PAV BUBBLE MAP.DWG

PAVING POINTS

POINT #	STATION/OFFSET	NORTHING	EASTING	DESC.
6000	26+00.83/44.62' LT.	1688151.792	1602190.376	SW
6001	26+00.79/33.25' LT.	1688151.964	1602201.749	BC
6002	26+00.65/0.08' RT.	1688152.440	1602235.076	CL
6003	26+00.75/33.25' RT.	1688153.142	1602268.234	BC
6004	25+88.58/33.76' RT.	1688140.987	1602268.966	SW
6005	25+88.58/39.76' RT.	1688141.094	1602274.965	SW
6006	26+23.51/42.81' LT.	1688174.499	1602191.770	SW PC
6007	26+48.46/50.44' LT.	1688199.309	1602183.686	SW PRC
6008	26+77.87/60.00' LT.	1688228.539	1602173.581	SW PT
6009	26+28.73/38.45' RT.	1688181.221	1602272.920	SW PC
6010	26+45.53/43.91' RT.	1688198.114	1602278.067	SW PRC
6011	26+74.28/54.00' RT.	1688227.046	1602287.627	SW PT
6012	26+45.73/37.31' LT.	1688196.821	1602196.854	SW
6013	26+45.80/36.81' RT.	1688198.253	1602270.964	SW
6014	27+55.69/54.00' RT.	1688308.446	1602286.128	SW PC
6015	27+72.28/56.83' RT.	1688325.079	1602288.652	SW PRC
6016	27+90.85/60.00' RT.	1688343.708	1602291.479	SW PT
6017	27+46.96/60.00' LT.	1688297.615	1602172.308	SW
6018	28+93.97/19.50' RT.	1688446.067	1602249.086	BC
6019	29+86.26/19.50' LT.	1688537.618	1602208.393	BC
6020	31+05.26/19.50' RT.	1688657.313	1602245.195	BC PC
6021	31+05.26/19.50' LT.	1688656.594	1602206.201	BC PC
6022	31+35.26/49.50' LT.	1688686.037	1602175.653	BC PT
6023	31+35.26/60.50' LT.	1688685.834	1602164.656	BC
6024	31+55.76/60.50' LT.	1688706.330	1602164.278	CL
6025	31+76.26/60.50' LT.	1688726.827	1602163.901	BC PC
6026	32+06.26/30.50' LT.	1688757.375	1602193.343	BC PT
6027	31+35.26/49.50' RT.	1688687.860	1602274.637	BC PT
6028	31+35.26/60.00' RT.	1688688.054	1602285.135	BC
6029	31+49.76/60.00' RT.	1688702.551	1602284.868	CL
6030	31+64.26/60.00' RT.	1688717.048	1602284.601	BC
6031	31+64.26/49.50' RT.	1688716.855	1602274.103	BC PC
6032	31+94.26/19.50' RT.	1688746.297	1602243.555	BC PT
6033	31+27.26/60.00' LT.	1688677.844	1602165.303	SW
6034	31+29.26/60.00' RT.	1688682.055	1602285.246	SW
6035	31+70.26/60.00' RT.	1688723.048	1602284.490	SW
6036	31+86.15/60.00' LT.	1688736.732	1602164.219	SW
6037	33+25.76/30.50' LT.	1688876.862	1602191.141	BC PC
6038	33+66.01/25.00' LT.	1688917.203	1602195.899	BC PRC
6039	34+06.26/19.50' LT.	1688957.543	1602200.657	BC PT
6040	36+36.30/60.00' LT.	1689186.801	1602155.926	SW PC
6041	36+67.38/49.17' LT.	1689218.075	1602166.185	SW PRC
6042	36+92.24/40.50' LT.	1689243.094	1602174.392	SW PT
6043	36+37.65/60.00' RT.	1689190.361	1602275.881	SW PC
6044	36+70.60/46.09' RT.	1689223.054	1602261.369	SW PRC
6045	36+99.26/34.00' RT.	1689251.483	1602248.750	SW PT
6046	37+28.35/40.50' LT.	1689279.200	1602173.727	SW PC
6047	37+52.87/48.89' LT.	1689303.559	1602164.888	SW PRC
6048	37+84.30/60.00' LT.	1689334.776	1602153.200	SP PT
6049	37+21.34/34.00' RT.	1689273.556	1602248.344	SW PC
6050	37+49.99/46.09' RT.	1689302.430	1602259.907	SW PRC
6051	37+82.95/60.00' RT.	1689335.636	1602273.204	SW PT
6052	34+00.26/0.00'	1688951.903	1602220.264	MEDIAN
6053	37+86.00/0.00'	1689337.582	1602213.158	MEDIAN
6054	39+54.50/19.50' LT.	1689505.695	1602190.558	BC PC
6055	39+84.50/49.50' LT.	1689535.137	1602160.010	BC PT

PAVING POINTS

POINT #	STATION/OFFSET	NORTHING	EASTING	DESC.
6056	39+84.50/60.50' LT.	1689534.934	1602149.013	BC
6057	40+05.00/60.50' LT.	1689555.431	1602148.635	CL
6058	40+25.50/60.50' LT.	1689575.927	1602148.257	BC PC
6059	40+55.50/30.50' LT.	1689606.475	1602177.699	BC PT
6060	39+76.50/60.00' LT.	1689526.945	1602149.659	SW
6061	40+35.40/60.00' LT.	1689585.832	1602148.575	SW
6062	40+78.00/0.00'	1689629.533	1602207.780	MEDIAN
6063	41+75.01/30.50' LT.	1689725.962	1602175.498	BC PC
6064	42+15.25/25.00' LT.	1689766.303	1602180.256	BC PRC
6065	42+55.50/19.50' LT.	1689806.644	1602185.013	BC PT
6066	45+05.52/0.00'	1690056.983	1602199.904	MEDIAN
6067	45+58.80/60.00' RT.	1690111.352	1602258.913	SW
6068	45+34.80/19.50' RT.	1690086.610	1602218.862	BC PC
6069	45+65.52/60.00' LT.	1690115.867	1602138.809	SW
6070	45+79.52/60.00' LT.	1690129.865	1602138.552	SW
6071	45+64.80/49.50' RT.	1690117.157	1602248.304	BC PT
6072	45+64.80/60.00' RT.	1690117.351	1602258.802	BC
6073	45+79.30/60.00' RT.	1690131.849	1602258.535	CL
6074	45+93.80/60.00' RT.	1690146.346	1602258.268	BC
6075	45+93.80/49.50' RT.	1690146.153	1602247.769	BC PC
6076	46+23.80/19.50' RT.	1690175.595	1602217.223	BC PT
6077	48+32.57/22.50' RT.	1690384.385	1602216.376	SW
6078	47+75.86/60.00' RT.	1690328.384	1602254.915	SW PC
6079	48+12.09/42.35' RT.	1690364.279	1602236.599	SW PRC
6080	48+44.22/27.00' RT.	1690396.117	1602220.661	SW PT
6081	47+77.97/60.00' LT.	1690328.279	1602134.896	SW PC
6082	48+05.59/46.50' LT.	1690356.143	1602147.888	SW PRC
6083	48+32.57/33.00' LT.	1690383.363	1602160.886	SW PT
6084	48+32.57/22.50' LT.	1690383.556	1602171.384	SW
6085	49+50.22/27.00' RT.	1690502.101	1602218.708	SW PC
6086	49+75.91/33.59' RT.	1690527.974	1602224.780	SW PRC
6087	49+98.43/41.50' RT.	1690550.647	1602232.233	SW PT
6088	49+66.81/22.50' RT.	1690518.649	1602213.876	SW
6089	49+66.81/20.00' LT.	1690517.789	1602171.388	SW
6090	49+66.81/19.50' LT.	1690517.799	1602171.888	SW
6091	50+32.61/22.00' LT.	1690583.529	1602168.052	SW
6092	50+28.12/33.00' LT.	1690578.820	1602157.145	SW PC
6093	50+59.73/42.00' LT.	1690610.238	1602147.505	SP PRC
6094	50+80.80/48.00' LT.	1690631.183	1602141.079	SW PT
6095	50+88.48/48.00' LT.	1690638.864	1602140.923	SW
6096	50+68.73/19.50' LT.	1690619.699	1602169.818	BC PC
6097	50+98.73/49.50' LT.	1690649.084	1602139.215	BC PT
6098	50+98.73/60.50' LT.	1690648.861	1602128.217	BC
6099	51+16.23/100.50' LT.	1690665.545	1602087.870	CL
6100	51+33.73/60.50' LT.	1690683.853	1602127.506	BC PC
6101	51+63.73/30.50' LT.	1690714.456	1602156.891	BC PT
6102	51+51.89/48.00' LT.	1690702.261	1602139.635	SW
6103	51+86.23/0.00'	1690737.571	1602186.928	MEDIAN
6104	57+71.88/0.00'	1691323.099	1602175.035	MEDIAN
6105	52+83.24/30.50' LT.	1690833.939	1602154.464	BC PC
6106	53+23.49/25.00' LT.	1690874.289	1602159.146	BC PRC
6107	53+63.73/19.50' LT.	1690914.638	1602163.827	BC PT
6108	53+31.60/41.50' RT.	1690883.749	1602225.467	SW PC
6109	53+38.56/42.49' RT.	1690890.725	1602226.314	SW PRC
6110	53+47.19/43.71' RT.	1690899.376	1602227.363	SW PT
6111	53+58.12/43.71' RT.	1690910.311	1602227.141	SW PC

PAVING POINTS

POINT #	STATION/OFFSET	NORTHING	EASTING	DESC.
6112	53+66.75/42.49' RT.	1690918.912	1602225.741	SW PRC
6113	53+73.71/41.50' RT.	1690925.849	1602224.612	SW PT
6114	53+81.40/48.00' LT.	1690931.717	1602134.975	SW
6115	53+89.40/48.00' LT.	1690939.715	1602134.812	SW
6116	56+68.86/48.00' LT.	1691219.118	1602129.137	SW PC
6117	56+82.71/46.04' LT.	1691233.008	1602130.813	SW PRC
6118	56+96.56/44.09' LT.	1691246.897	1602132.488	SW PT
6119	57+16.89/44.09' LT.	1691267.225	1602132.075	SW PC
6120	57+30.75/46.04' LT.	1691281.035	1602129.837	SW PRC
6121	57+44.60/48.00' LT.	1691294.845	1602127.599	SW PT
6122	58+31.64/19.50' RT.	1691383.242	1602193.318	BC PC
6123	58+71.89/25.00' RT.	1691423.591	1602197.999	BC PRC
6124	59+12.13/30.50' RT.	1691463.941	1602202.681	BC PT
6125	58+19.72/41.50' RT.	1691371.772	1602215.555	SW PC
6126	58+29.18/43.36' RT.	1691381.260	1602217.219	SW PRC
6127	58+40.90/45.66' RT.	1691393.026	1602219.281	SW PT
6128	58+51.83/45.66' RT.	1691403.961	1602219.059	SW PC
6129	58+63.56/43.36' RT.	1691415.633	1602216.521	SW PRC
6130	58+73.01/41.50' RT.	1691425.045	1602214.473	SW PT
6131	58+85.84/48.00' LT.	1691436.062	1602124.731	SW
6132	59+03.92/48.00' LT.	1691454.136	1602124.364	SW
6133	59+46.48/41.50' RT.	1691498.501	1602212.981	SW PC
6134	59+51.97/42.54' RT.	1691504.013	1602213.911	SW PRC
6135	59+67.35/42.54' RT.	1691519.388	1602213.599	SW PRC
6136	59+72.84/41.50' RT.	1691524.858	1602212.446	SW PT
6137	59+72.13/30.50' RT.	1691523.929	1602201.462	BC PC
6138	60+02.13/60.49' RT.	1691554.531	1602230.834	BC PT
6139	60+02.14/64.21' RT.	1691554.608	1602234.552	BC
6140	60+28.70/54.25' RT.	1691580.960	1602224.059	CL
6141	60+57.38/64.21' RT.	1691609.840	1602233.430	BC
6142	60+57.38/54.25' RT.	1691609.638	1602223.476	BC
6143	60+57.38/49.50' RT.	1691609.541	1602218.727	BC PC
6144	60+87.38/19.50' RT.	1691638.926	1602188.124	BC PT
6145	60+67.71/40.50' RT.	1691619.685	1602209.520	SW
6146	60+46.42/48.00' LT.	1691596.604	1602121.470	SW PC
6147	60+72.76/40.50' LT.	1691623.090	1602128.434	SW PRC
6148	60+93.83/34.50' LT.	1691644.279	1602134.005	SW PT
6149	62+03.97/41.17' RT.	1691755.929	1602207.422	SW PRC
6150	62+30.34/40.44' RT.	1691782.283	1602206.161	SW PT
6151	63+38.58/30.50' RT.	1691890.302	1602194.026	SW PRC
6152	63+56.87/29.67' RT.	1691908.570	1602192.816	SW PT
6157	65+51.76/34.50' LT.	1692102.114	1602124.706	SW PC
6158	65+70.92/39.39' LT.	1692121.174	1602119.429	SW PRC
6159	65+94.88/45.50' LT.	1692144.998	1602112.832	SW PT
6160	66+03.45/45.50' LT.	1692153.573	1602112.658	SW
6161	65+83.20/19.50' LT.	1692133.857	1602139.064	BC PC
6162	66+13.20/49.50' LT.	1692163.242	1602108.461	BC PT
6163	66+13.20/55.50' LT.	1692163.120	1602102.462	BC
6164	66+30.70/116.00' LT.	1692179.387	1602041.619	CL
6165	66+48.20/55.50' LT.	1692198.112	1602101.751	BC PC
6166	66+73.20/30.50' LT.	1692223.615	1602126.239	BC PT
6167	66+58.70/45.50' LT.	1692208.813	1602111.536	SW
6168	66+87.37/33.67' LT.	1692237.714	1602122.785	SW
6169	66+75.40/45.50' LT.	1692225.506	1602111.197	SW PC
6170	66+91.83/42.72' LT.	1692241.992	1602113.641	SW PRC
6171	67+04.98/40.50' LT.	1692255.181	1602115.595	SW PT

PAVING POINTS

POINT #	STATION/OFFSET	NORTHING	EASTING	DESC.
6172	66+54.20/46.00' LT.	1692204.304	1602111.128	SW
6173	66+58.70/81.50' LT.	1692208.082	1602075.544	SW PC
6174	66+60.50/93.36' LT.	1692209.641	1602063.646	SW PRC
6175	66+62.48/106.30' LT.	1692211.357	1602050.669	SW PT
6176	67+00.84/0.00'	1692251.867	1602156.171	MEDIAN
6177	68+93.47/29.67' RT.	1692445.053	1602181.920	SW PC
6178	69+04.50/28.32' RT.	1692456.057	1602180.353	SW PRC
6179	69+24.70/28.59' RT.	1692476.260	1602180.208	SW PRC
6180	69+35.58/30.22' RT.	1692487.172	1602181.615	SW PT
6181	69+62.57/30.99' RT.	1692514.168	1602181.840	SW PRC
6182	69+89.05/33.52' RT.	1692540.697	1602183.830	SW PT
6183	70+81.57/48.62' RT.	1692633.501	1602197.046	SW PC
6184	70+98.64/50.00' RT.	1692650.597	1602198.083	SW PT
6185	70+10.86/40.50' LT.	1692561.001	1602109.384	SW PC
6186	70+40.73/45.07' LT.	1692590.773	1602104.213	SW PRC
6187	70+71.76/50.07' LT.	1692621.694	1602098.576	SW PT
6188	70+73.65/50.10' LT.	1692623.578	1602098.507	SW
6189	70+77.00/0.00'	1692627.947	1602148.533	MEDIAN
6190	31+49.76/0.00'	1688701.446	1602224.878	CL
6191	31+55.76/0.00'	1688707.445	1602224.768	CL
6192	40+05.00/0.00'	1689556.545	1602209.124	CL
6193	45+79.30/0.00'	1690130.743	1602198.546	CL
6194	51+16.23/0.00'	1690667.585	1602188.349	CL
6195	60+28.70/0.00'	1691579.858	1602169.820	CL
6196	66+30.70/0.00'	1692181.743	1602157.595	CL
6197	72+56.34/30.52' LT.	1692806.626	1602114.378	BC
6198	72+56.34/0.11' RT.	1692807.247	1602144.996	CL
6199	72+56.34/30.73' RT.	1692807.869	1602175.615	BC
6200	72+19.18/17.23' RT.	1692770.446	1602162.872	RP
6201	26+77.87/10.00' LT.	1688229.460	1602223.572	RP
6202	26+24.93/82.78' LT.	1688175.189	1602151.776	RP
6203	26+29.90/63.42' RT.	1688182.851	1602297.867	RP
6204	26+74.28/8.00' RT.	1688226.199	1602241.635	RP
6205	27+55.69/104.00' RT.	1688309.367	1602336.119	RP
6206	27+90.85/4.00' RT.	1688342.676	1602235.489	RP
6207	36+37.65/14.00' RT.	1689189.514	1602229.889	RP
6208	36+36.30/10.00' LT.	1689187.722	1602205.918	RP
6209	36+92.24/80.50' LT.	1689242.358	1602134.399	RP
6210	36+99.26/74.00' RT.	1689252.220	1602288.744	RP
6211	37+21.34/74.00' RT.	1689274.293	1602288.337	RP
6212	37+28.35/80.54' LT.	1689278.455	1602133.692	RP
6213	37+84.30/10.00' LT.	1689335.697	1602203.191	RP
6214	37+82.95/14.00' RT.	1689334.789	1602227.212	RP
6215	47+75.86/14.00' RT.	1690327.537	1602208.922	RP
6216	47+77.58/25.50' LT.	1690328.526	1602169.398	RP
6217	48+33.21/67.99' LT.	1690383.363	1602125.886	RP
6218	48+43.61/67.02' RT.	1690396.244	1602260.684	RP
6219	49+65.72/41.43' RT.	1690517.942	1602232.829	RP
6220	49+98.43/5.50' RT.	1690549.916	1602196.240	RP
6221	50+28.12/93.00' LT.	1690577.602	1602097.158	RP
6222	50+80.80/8.00' LT.	1690631.995	1602181.070	RP
6223	53+31.60/66.50' RT.	1690884.257	1602250.462	RP
6224	53+47.19/12.71' RT.	1690898.747	1602196.369	RP
6225	53+58.12/12.71' RT.	1690909.682	1602196.147	RP
6226	53+73.71/66.50' RT.	1690926.356	1602249.607	RP
6227	56+68.86/2.00' RT.	1691220.134	1602179.127	RP

LEGEND

PI–Point of Intersection
PC–Point of Curve
PCC–Point on Compound Curve
PRC–Pont on Reverse Curve
RP–Radius Curve
BC–Back of Curb
EP–Edge of Pavement
PT–Point on Tangent
CL–Centerline
BL–Baseline
PE–Pavement Edge
DL–Ditch Lining
SPRW–Sheet Pile Retaining Wall

MKEC
Wichita, KS • 316-684-9600

STREET IMPROVEMENTS FOR

135TH STREET WEST

FROM CENTRAL AVE TO 13TH STREET

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PAVING BUBBLE MAP

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	NA

DESIGNED	DRAWN	CHECKED
JRA	RAM	JRA

NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

SHEET NO.
22 OF 156

PLOTTED: Friday, February 20, 2026 @ 01:18PM

J:\PROJECTS\2022\2021010447_COW_135TH STREET FROM CENTRAL TO 13TH STREET\00 220447 CAD\SHTS\05 CIVIL\PAV\210447-05-PAV BUBBLE MAP.DWG

PAVING POINTS

POINT #	STATION/OFFSET	NORTHING	EASTING	DESC.
6228	56+96.56/94.09' LT.	1691245.882	1602082.499	RP
6229	57+16.89/94.09' LT.	1691266.210	1602082.086	RP
6230	57+44.60/2.00' RT.	1691295.860	1602177.589	RP
6231	58+19.72/66.50' RT.	1691372.280	1602240.550	RP
6232	58+40.90/14.66' RT.	1691392.396	1602188.288	RP
6233	58+51.83/14.66' RT.	1691403.331	1602188.066	RP
6234	58+73.01/66.50' RT.	1691425.553	1602239.468	RP
6235	59+46.48/56.50' RT.	1691498.806	1602227.978	RP
6236	59+59.66/23.00' RT.	1691511.304	1602194.217	RP
6237	59+67.35/42.54' RT.	1691519.388	1602213.599	RP
6238	59+72.84/56.50' RT.	1691525.163	1602227.443	RP
6239	60+46.42/2.00' RT.	1691597.620	1602171.460	RP
6240	60+93.83/74.50' LT.	1691643.467	1602094.013	RP
6241	62+11.50/164.69' LT.	1691759.284	1602001.449	RP
6242	63+56.87/229.67' RT.	1691912.631	1602392.775	RP
6246	65+51.76/74.50' LT.	1692101.302	1602084.714	RP
6247	65+94.88/4.50' RT.	1692146.013	1602162.822	RP
6248	66+75.40/4.50' RT.	1692226.521	1602161.187	RP
6249	67+04.98/80.50' LT.	1692254.369	1602075.604	RP
6250	68+93.47/16.33' LT.	1692444.119	1602135.930	RP
6251	69+14.09/67.16' RT.	1692466.438	1602218.983	RP
6252	69+36.90/15.76' LT.	1692487.556	1602135.616	RP
6253	69+56.84/230.91' RT.	1692512.501	1602381.833	RP
6254	70+98.64/56.00' LT.	1692648.445	1602092.105	RP
6255	70+10.86/140.50' LT.	1692558.970	1602009.405	RP
6256	70+73.59/59.91' RT.	1692625.756	1602208.501	RP
6257	31+05.26/49.50' RT.	1688657.865	1602275.189	RP
6258	31+05.26/49.50' LT.	1688656.042	1602176.206	RP
6259	32+06.26/60.50' LT.	1688756.822	1602163.348	RP
6260	31+94.26/49.50' RT.	1688746.850	1602273.550	RP
6261	33+25.76/119.50' RT.	1688879.625	1602341.116	RP
6262	34+06.26/169.50' LT.	1688954.780	1602050.682	RP
6263	39+54.50/49.50' LT.	1689505.142	1602160.563	RP
6264	40+55.50/60.50' LT.	1689605.922	1602147.704	RP
6265	41+75.01/119.50' RT.	1689728.725	1602325.472	RP
6266	42+55.50/169.50' LT.	1689803.880	1602035.039	RP
6267	45+34.80/49.50' RT.	1690087.163	1602248.857	RP
6268	46+23.80/49.50' RT.	1690176.147	1602247.217	RP
6269	50+68.73/49.50' LT.	1690619.090	1602139.824	RP
6270	51+63.73/60.50' LT.	1690713.847	1602126.897	RP
6271	52+83.24/119.50' RT.	1690836.985	1602304.433	RP
6272	53+63.73/169.50' LT.	1690911.592	1602013.858	RP
6273	59+72.13/60.50' RT.	1691524.538	1602231.456	RP
6274	60+87.38/49.50' RT.	1691639.535	1602218.118	RP
6275	65+83.31/49.45' LT.	1692133.355	1602109.116	RP
6276	66+73.20/55.50' LT.	1692223.107	1602101.244	RP
6277	40+95.25/31.89' RT.	1689647.372	1602239.344	SPRW
6278	41+02.37/24.77' RT.	1689654.354	1602232.101	SPRW
6279	41+24.62/24.78' RT.	1689676.602	1602231.692	SPRW
6280	41+31.73/31.89' RT.	1689683.846	1602238.674	SPRW
6281	58+31.64/169.50' RT.	1691386.288	1602343.287	RP
6282	59+12.13/119.50' LT.	1691460.895	1602052.712	RP
6283	59+82.72/41.50' RT.	1691534.733	1602212.245	SW
6284	51+33.69/100.50' LT.	1690682.996	1602087.516	BC
6285	50+98.78/100.50' LT.	1690648.093	1602088.224	BC
6286	66+48.20/116.00' LT.	1692196.884	1602041.264	BC

PAVING POINTS

POINT #	STATION/OFFSET	NORTHING	EASTING	DESC.
6287	66+13.20/116.00' LT.	1692161.891	1602041.975	BC
6288	69+05.32/22.00' RT.	1692456.752	1602174.014	SW
6289	69+05.32/19.50' RT.	1692456.701	1602171.515	SW BC
6290	69+22.86/22.00' RT.	1692474.289	1602173.658	SW
6291	69+22.86/19.50' RT.	1692474.239	1602171.158	SW BC
6292	74+01.83/49.99' RT.	1692953.725	1602191.914	SW PC
6293	74+17.70/52.14' RT.	1692969.639	1602193.746	SW PRC
6294	74+30.24/53.79' RT.	1692982.205	1602195.142	SW PRC
6296	74+55.94/56.66' RT.	1693007.963	1602197.483	SW
6297	74+29.92/7.80' RT.	1692980.952	1602149.159	RP
6298	61+67.38/40.50' RT.	1691719.338	1602207.496	SW PC
6299	45+99.80/60.00' RT.	1690152.345	1602258.158	SW
6300	60+25.15/64.21' RT.	1691577.618	1602234.085	BC
6301	60+32.15/64.21' RT.	1691584.618	1602233.942	BC
6302	72+12.09/0.00'	1692763.006	1602145.789	MEDIAN
6303	49+54.21/20.00' LT.	1690505.192	1602171.644	BC
6304	49+53.59/20.00' RT.	1690505.341	1602211.648	BC
6305	49+66.82/20.00' RT.	1690518.603	1602211.379	BC
6306	50+84.48/48.00' LT.	1690634.864	1602141.004	SW
6307	51+03.48/48.00' LT.	1690653.861	1602140.618	SW RP
6308	50+86.73/56.97' LT.	1690636.933	1602131.990	SW
6309	50+73.51/64.05' LT.	1690623.569	1602125.178	SW RP
6310	50+88.51/63.75' LT.	1690638.569	1602125.177	SW
6311	10+00.00/13.00' LT.	1693550.274	1602637.190	DL
6312	10+00.00/13.00' RT.	1693550.591	1602663.188	DL
6313	10+57.27/13.00' LT.	1693607.543	1602636.492	DL
6314	10+85.85/13.00' LT.	1693636.120	1602636.144	DL
6315	12+00.00/13.00' LT.	1693750.259	1602634.753	DL
6316	12+00.00/13.00' RT.	1693750.576	1602660.751	DL
6317	10+99.51/7.50' LT.	1693647.967	1602592.281	DL
6318	10+99.51/7.50' RT.	1693662.230	1602596.926	DL
6319	11+96.02/7.50' RT.	1693692.113	1602505.152	DL
6320	11+96.02/7.50' LT.	1693677.850	1602500.507	DL
6321	12+11.25/7.50' LT.	1693684.144	1602485.360	DL
6322	12+11.09/7.46' RT.	1693697.397	1602492.323	DL
6323	44+00.30/60.00' RT.	1689952.879	1602261.835	RP
6324	45+62.15/89.41' RT.	1690115.244	1602288.254	BC
6325	45+90.68/94.59' RT.	1690143.867	1602292.911	BC
6326	45+76.41/92.00' RT.	1690129.556	1602290.583	CL
6327	46+06.14/89.90' RT.	1690159.235	1602287.932	SW
6328	46+08.30/60.00' RT.	1690160.844	1602258.001	SW
6335	66+98.70/81.50' LT.	1692248.074	1602074.731	RP
6336	66+18.48/106.41' LT.	1692167.364	1602051.453	RP
6337	74+01.77/109.99' RT.	1692954.882	1602251.903	RP
6338	74+40.90/93.72' RT.	1692993.676	1602234.845	RP
6339	74+40.62/53.72' RT.	1692992.587	1602194.859	SW PT

LEGEND

PI–Point of Intersection
PC–Point of Curve
PCC–Point on Compound Curve
PRC–Pont on Reverse Curve
RP–Radius Curve
BC–Back of Curb
EP–Edge of Pavement
PT–Point on Tangent
CL–Centerline
BL–Baseline
PE–Pavement Edge
DL–Ditch Lining
SPRW–Sheet Pile Retaining Wall

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STREET IMPROVEMENTS FOR

135TH STREET WEST

FROM CENTRAL AVE TO 13TH STREET

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PAVING BUBBLE MAP

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	NA

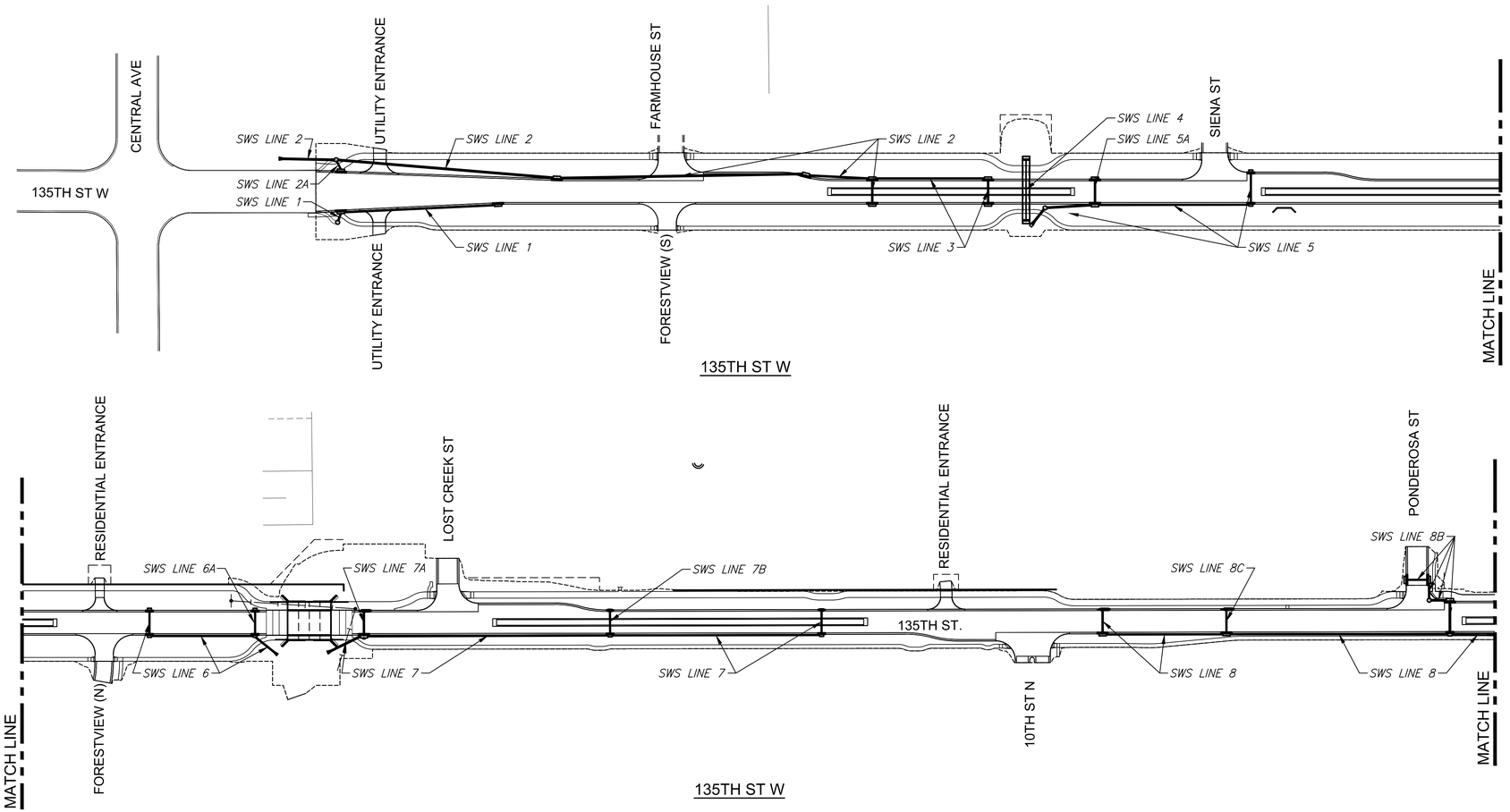
DESIGNED	DRAWN	CHECKED
JRA	RAM	JRA

NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

SHEET NO.

23 OF 156

PLOTTED: Friday, February 20, 2026 @ 01:18PM



SCALE: 1" = 100'

0 100 200

COWSKIN TRIBUTARY NO. 2
CHANNEL IMPROVEMENTS

STORM SEWER INFORMATION TABLE	
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1	26
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2A	26
3	29
4	30
5	30, 31
5A	31
6	32
6A	32
7	34, 35
7A	33
7B	33
8	35–38
8A	39
8B	39
8C	38
TRIBUTARY NO. 2	19

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STREET IMPROVEMENTS FOR

135TH STREET WEST

FROM CENTRAL AVE TO 13TH STREET

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STORM SEWER KEY MAP

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	NTS

DESIGNED	DRAWN	CHECKED
JRA	RAM	JRA

NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

SHEET NO.

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Sh. No. 24

J:\PROJECTS\2022\220101\10447_COW_135TH STREET FROM CENTRAL TO 13TH STREET\00 220447 CAD\SHTS\05 CIVIL\SWS\220447-05-5915.DWG

PLOTTED: Friday, February 20, 2026 @ 01:18PM

SUMMARY OF QUANTITIES - STORM SEWER PIPE AND STRUCTURES*

LINE NO.	PIPES							INLETS								MANHOLES			
	Pipe, SWS 15" RCP (LF)	Pipe, SWS 18" RCP (LF)	Pipe, SWS 24" RCP (LF)	Pipe, SWS 30" RCP (LF)	Pipe, SWS, RCBC (10' x 3') (LF)	Pipe End Sections † (EA)	Sand Backfill, Flushed and Vibrated (LF)	Inlet, Curb (Type 1) (L=5' W=3') (EA)	Inlet, Curb (Type 1) (L=10' W=3') (EA)	Inlet, Curb (Type 1) (L=5' W=4') (EA)	Inlet, Curb (Type 1) (L=10' W=4') (EA)	Inlet, Curb (Type 1) (L=10' W=7') (EA)	Inlet, Curb (Type 1) (L=15' W=3') (EA)	Inlet, Curb (Type 1A) (L=10' W=7') (EA)	Inlet, Curb (Type 2) (L=6' 2 1/2") W=3' 4 3/8") (EA)	MH, Standard SWS (5') (EA)	Pipe, SWS, PVC 4", Perforated (LF)	Inlet Hook-up (EA)	Remarks
1		262.3					237.4		2							1	40.0	2	
2	41.0	98.9	809.0			1	845.6		2		2					1	80.0	4	
2A	18.3								1								20.0	1	
3	41.0	181.0					207.2		2								40.0	2	
4					105.0	2	105.0												
5	295.5		110.6			1	283.0	2			1					1	60.0	3	
5A	41.5						37.0		1								20.0	1	
6	41.0	210.3				1	196.0	3									60.0	3	
6A	41.0						37.0	1									20.0	1	
7	369.5	384.7	57.6			1	736.1	2			1				1		80.0	4	
7A		46.0					35.5								2		20.0	2	
7B	39.2						35.5								1		20.0	1	
8		588.1		811.5			1342.6		2	1		1		1	2		120.0	7	
8A	57.8						51.8						1				20.0	1	
8B	37.0	32.0	85.4				114.4		2		1					1	60.0	3	
8C	45.5						35.5								2		20.0	2	
LOST CREEK ST Δ																		1	Adjusted Inlet
LOST CREEK ST Δ																		1	Adjusted Inlet
TOTALS	1068.3	1803.3	1062.6	811.5	105.0	6	4299.6	8	12	1	5	1	1	1	8	4	680.0	39	

* ALL PIPE CONDUIT IS MEASURED PER LINEAR FEET AND STRUCTURES ARE MEASURED PER EACH.

† END SECTIONS FOR STORM SEWER PIPE AND BOX CUVERTS ARE SUBSIDIARY TO THE COST OF THE STORM SEWER PIPE OR BOX CULVERTS.

Δ INLETS LOCATED STA. 50+94.8, 59.9' LT. AND 51+37.8, 58.4' LT. SEE SH. NO. 10.

SUMMARY OF QUANTITIES - PIPE REMOVAL BACKFILL

STATION	SIDE	SAND BACKFILL, FLUSHED AND VIBRATED (LF)
70+60.2' TO 70+78.9'	31.3' LT. TO 28.0' LT.	19.0
70+71.1' TO 70+79.4'	26.6' RT. TO 25.7' RT.	7.2
70+84.5' TO 70+85.0'	26.3' LT. TO 24.1' RT.	50.4
70+85.03' TO 74+30.10'	25.778' RT TO 37.762' RT.	339.7
74+37.08' TO 74+91.37'	37.321' LT. TO -37.485' LT.	54.3
74+41.43' TO 74+92.58'	38.009' RT. TO 45.755' RT.	51.7
74+91.37' TO 74+92.58'	45.755' RT. TO 37.485' LT.	83.2
	TOTAL	605.5

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STREET IMPROVEMENTS FOR

135TH STREET WEST

FROM CENTRAL AVE TO 13TH STREET

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STORM SEWER SCHEDULE OF QUANTITIES

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	NONE

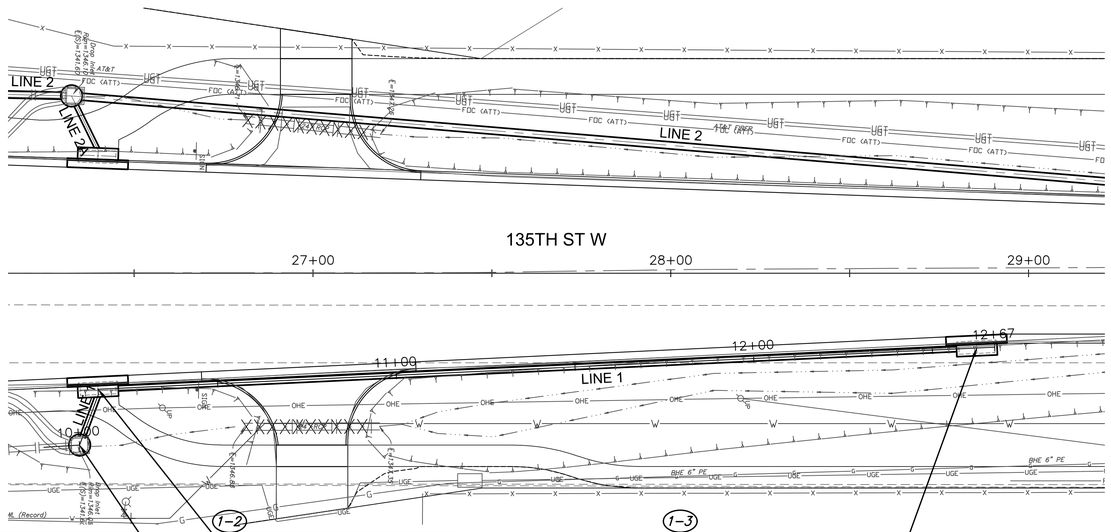
DESIGNED	DRAWN	CHECKED
JRA	LNP	JRA

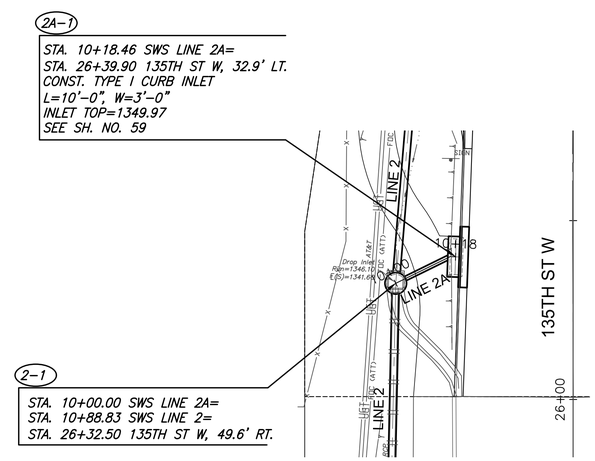
NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

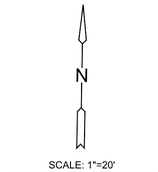
SHEET NO.

25 OF 156

PLOTTED: Friday, February 20, 2026 @ 01:40PM



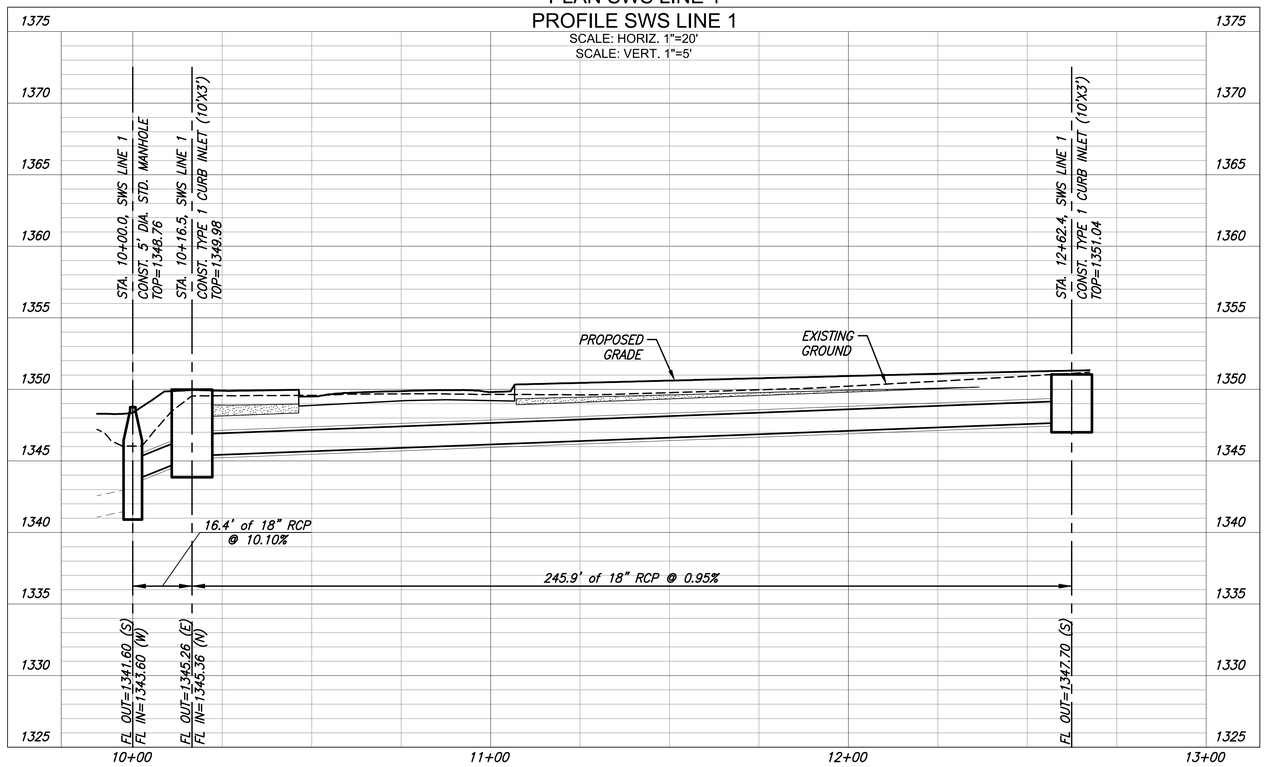




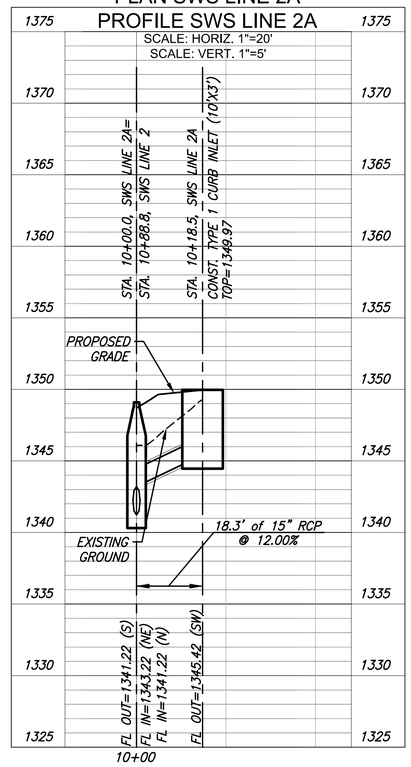
TEMPORARY ASPHALT PAVEMENT (6")(UTILITY PATCH)

SAND BACKFILL, FLUSHED AND VIBRATED

PLAN SWS LINE 1



PLAN SWS LINE 2A



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STREET IMPROVEMENTS FOR 135TH STREET WEST

FROM CENTRAL AVE TO 13TH STREET

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STORM SEWER PLAN & PROFILE LINE 1,2A

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	1"=20'

DESIGNED	DRAWN	CHECKED
DMU	RAM	JRA

NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

SHEET NO.

26 OF 156

J:\PROJECTS\0222\20\10447_COV_135TH STREET FROM CENTRAL TO 13TH STREET\00 220447 CAD\SHTS\05 CIVIL\SWS\220447-05-0200.DWG

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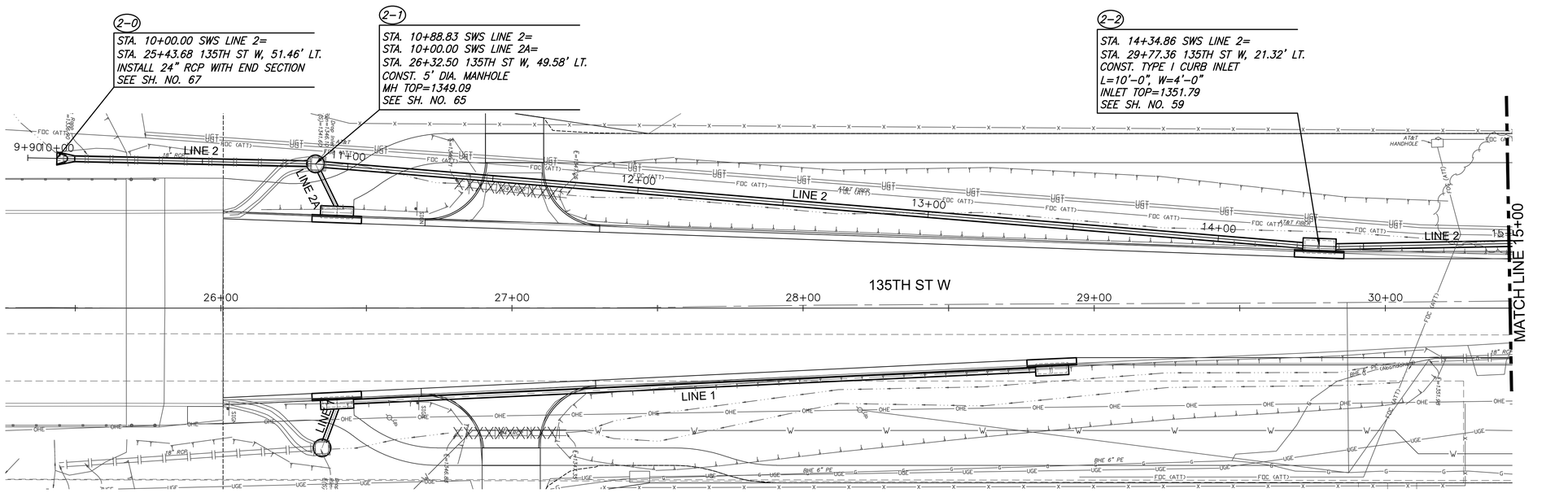
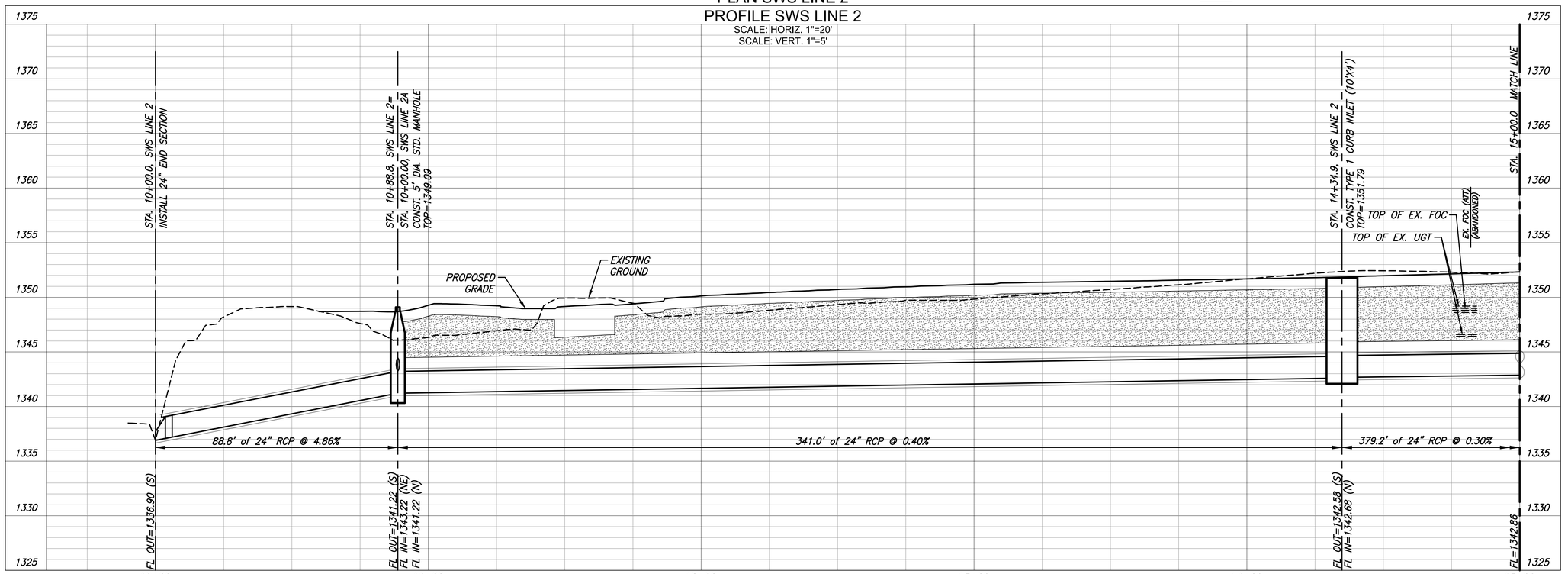


PLAN SWS LINE 2

PROFILE SWS LINE 2

SCALE: HORIZ. 1"=20'
SCALE: VERT. 1"=5'



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STREET IMPROVEMENTS FOR

135TH STREET WEST

FROM CENTRAL AVE TO 13TH STREET

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STORM SEWER PLAN & PROFILE LINE 2

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	1"=20'

DESIGNED	DRAWN	CHECKED
DMU	RAM	JRA

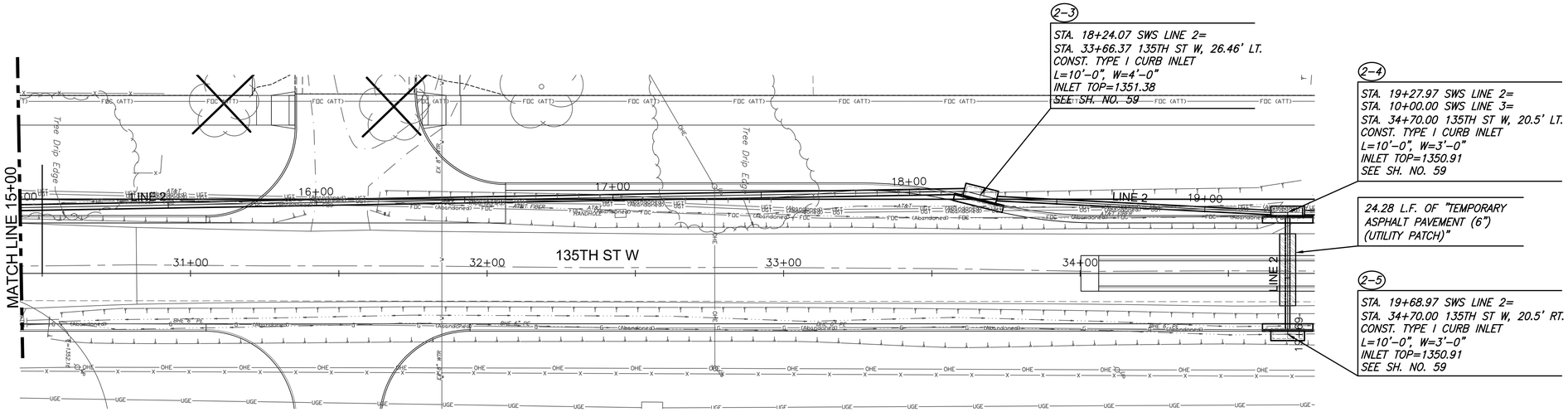
NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

SHEET NO.

27 OF 156

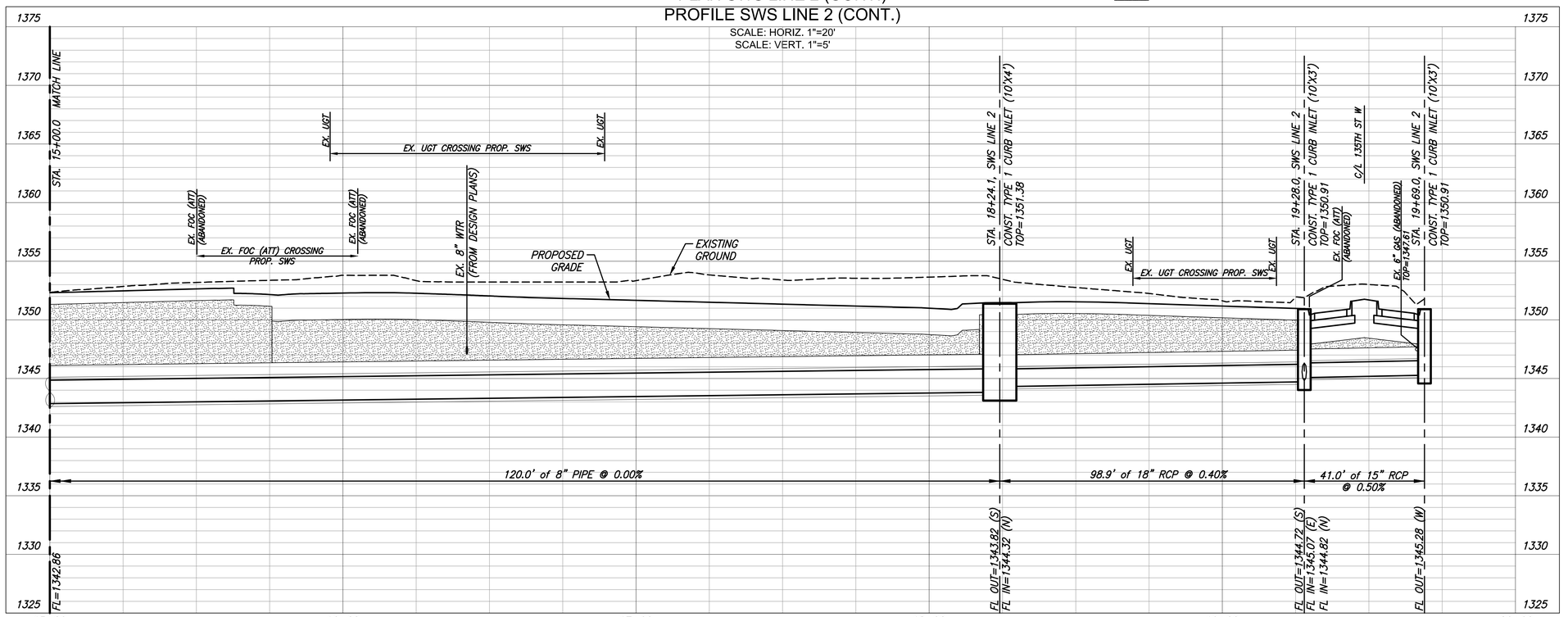
Sh. No. 27

PLOTTED: Friday, February 20, 2026 @ 01:40PM



PLAN SWS LINE 2 (CONT.)
PROFILE SWS LINE 2 (CONT.)

SCALE: HORIZ. 1"=20'
SCALE: VERT. 1"=5'



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STREET IMPROVEMENTS FOR

135TH STREET WEST

FROM CENTRAL AVE TO 13TH STREET

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STORM SEWER PLAN & PROFILE LINE 2

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	
DESIGNED DRAWN CHECKED	

NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

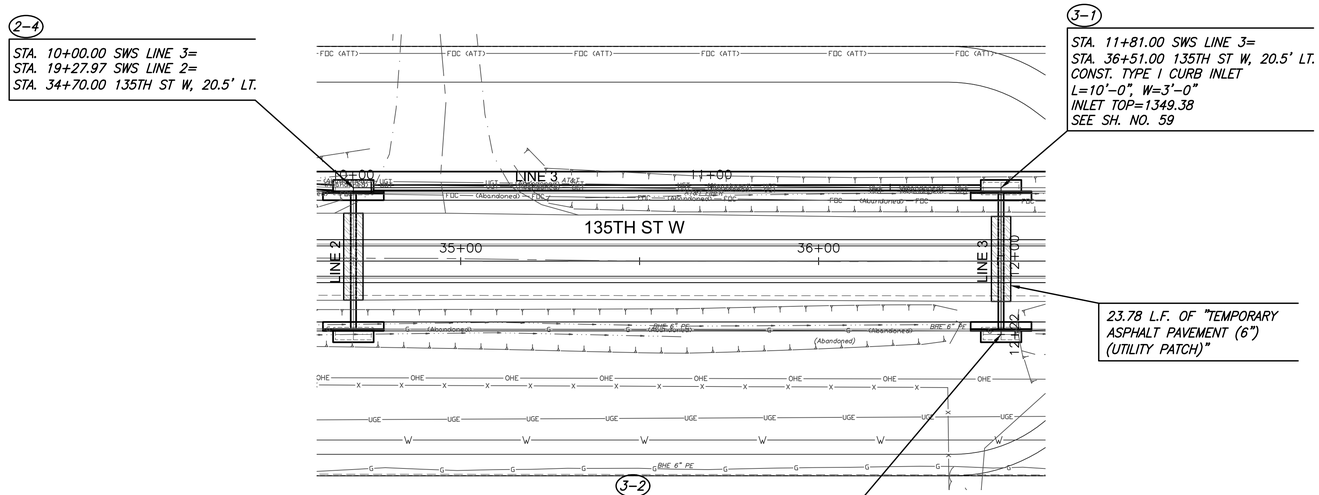
SHEET NO.

28 OF 156

Sh. No. 28

J:\PROJECTS\2022\2201010447_COW_135TH STREET FROM CENTRAL TO 13TH STREET\00 220447 CAD\SHTS\05 CIVIL\SWS\220447-05-0200.DWG

PLOTTED: Friday, February 20, 2026 @ 01:40PM



SCALE: 1"=20'

0 20 40

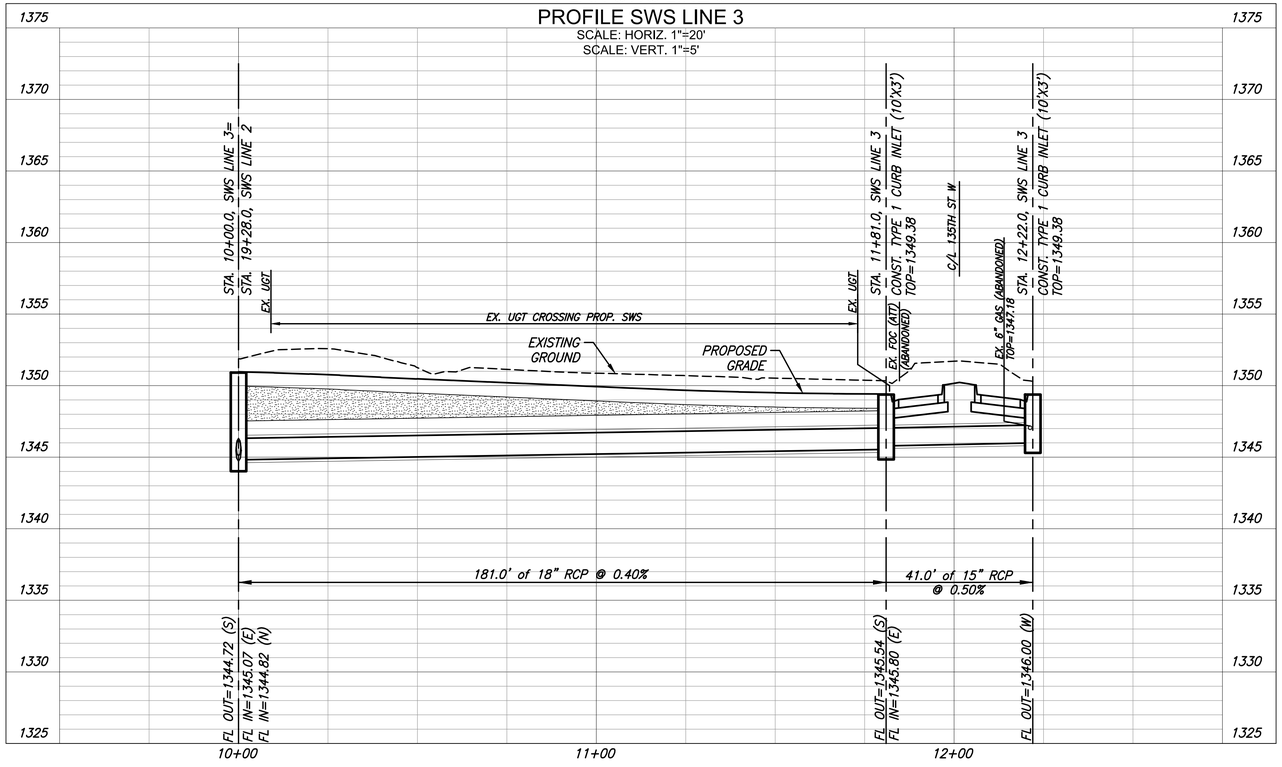
TEMPORARY ASPHALT PAVEMENT (6")(UTILITY PATCH)

SAND BACKFILL, FLUSHED AND VIBRATED

PLAN SWS LINE 3

PROFILE SWS LINE 3

SCALE: HORIZ. 1"=20'
SCALE: VERT. 1"=5'



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STREET IMPROVEMENTS FOR

135TH STREET WEST

FROM CENTRAL AVE TO 13TH STREET

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STORM SEWER PLAN & PROFILE LINE 3

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	1"=20'

DESIGNED	DRAWN	CHECKED
DMU	RAM	JRA

NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

SHEET NO.

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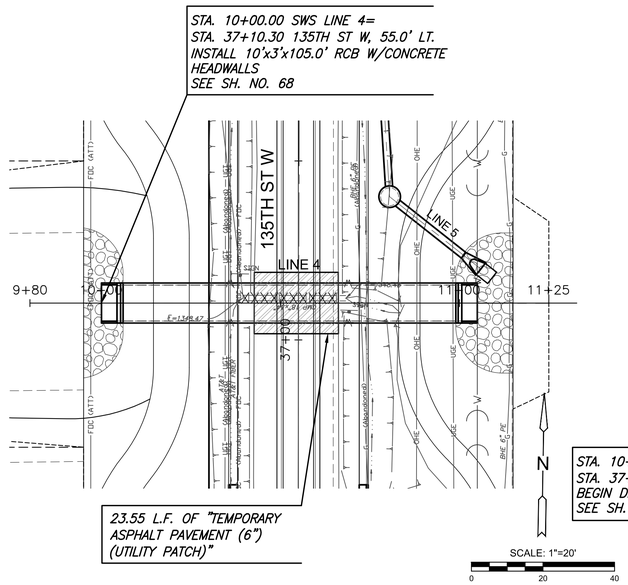
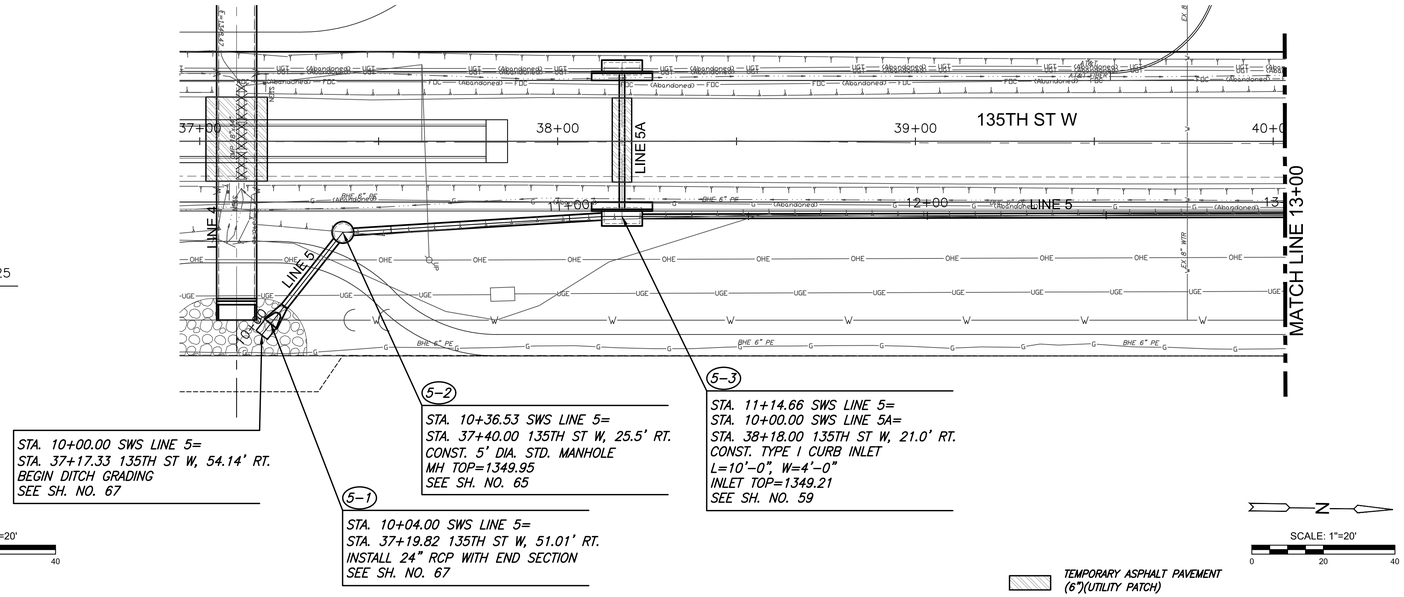
J:\PROJECTS\2022\2201910447_COW_135TH STREET FROM CENTRAL TO 13TH STREET\00 220447 CAD\SHTS\05 CIVIL\SWS\220447-05-S200.DWG

PLOTTED: Friday, February 20, 2026 @ 01:40PM

J:\PROJECTS\2022\2201010447_COV_135TH STREET FROM CENTRAL TO 13TH STREET\00 220447 CAD\SHTS\05 CIVIL\SWS\220447-05-S200.DWG

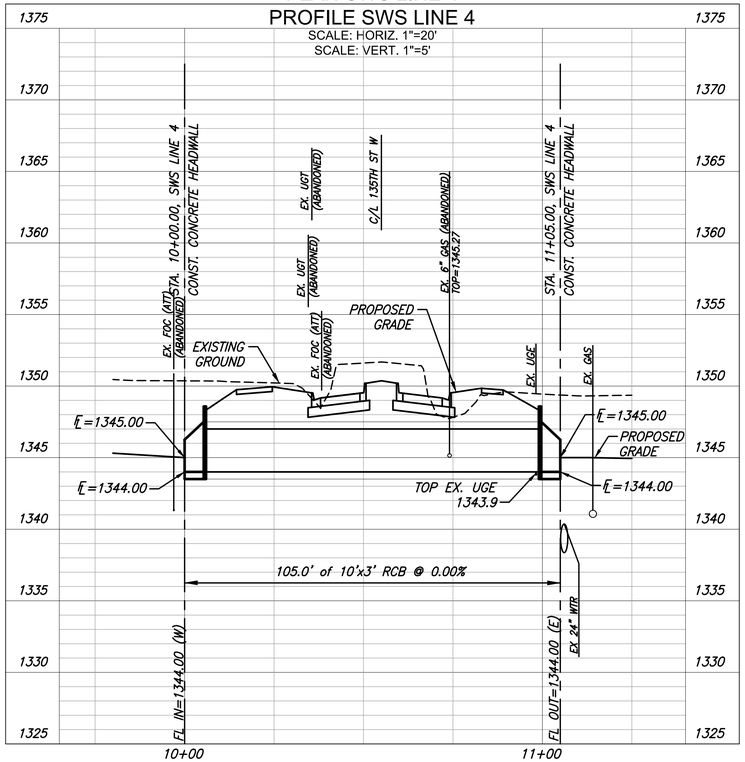




PLAN SWS LINE 4

PROFILE SWS LINE 4

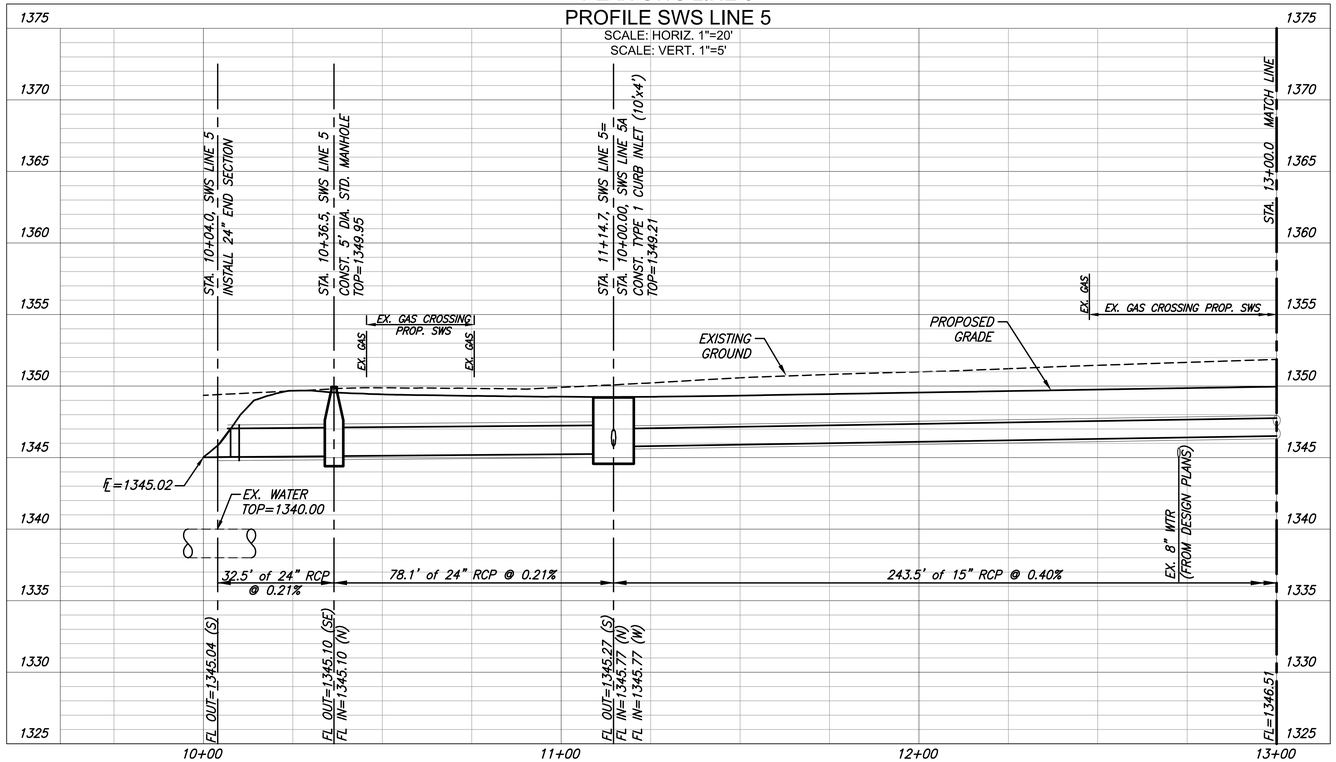
SCALE: HORIZ. 1"=20'
SCALE: VERT. 1"=5'



PLAN SWS LINE 5

PROFILE SWS LINE 5

SCALE: HORIZ. 1"=20'
SCALE: VERT. 1"=5'



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STREET IMPROVEMENTS FOR

135TH STREET WEST

FROM CENTRAL AVE TO 13TH STREET

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STORM SEWER PLAN & PROFILE LINE 4,5

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	1"=20'

DESIGNED	DRAWN	CHECKED
DMU	RAM	JRA

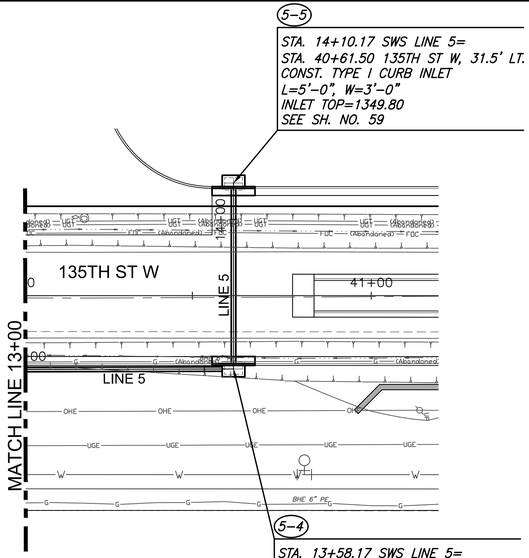
NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

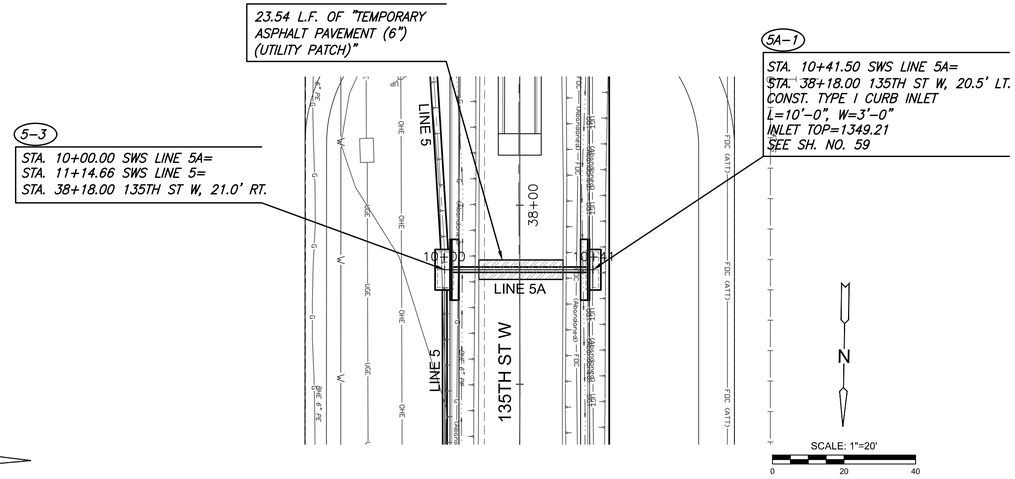
SHEET NO.

30 OF 156

Sh. No. 30

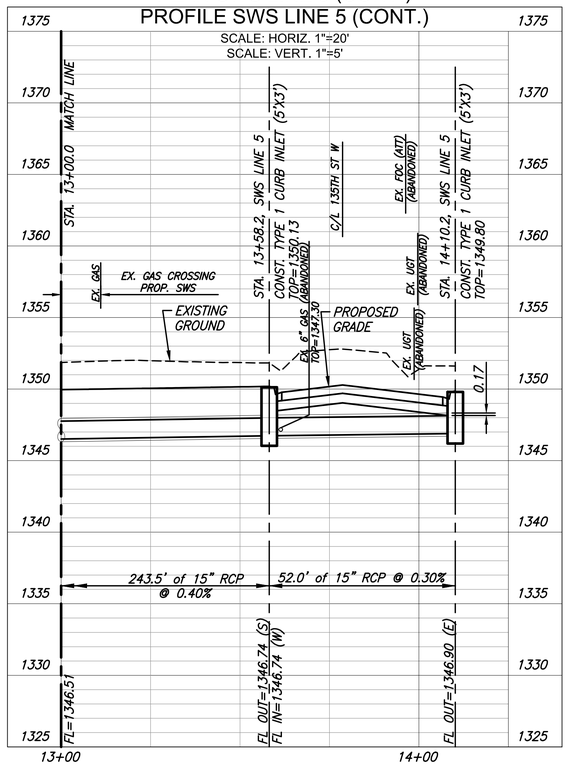
PLOTTED: Friday, February 20, 2026 @ 01:40PM





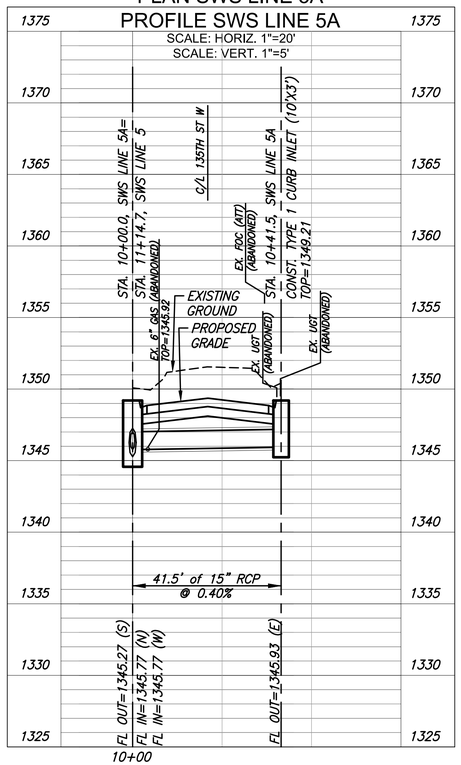
PLAN SWS LINE 5 (CONT.)

PROFILE SWS LINE 5 (CONT.)



PLAN SWS LINE 5A

PROFILE SWS LINE 5A



J:\PROJECTS\2022\2201010447_COW_135TH STREET FROM CENTRAL TO 13TH STREET\00 220447 CAD\SHTS\WS CIVIL\SWS\220447-05-5200.DWG

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STREET IMPROVEMENTS FOR

135TH STREET WEST

FROM CENTRAL AVE TO 13TH STREET

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STORM SEWER PLAN & PROFILE LINE 5,5A

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	1"=20'

DESIGNED	DRAWN	CHECKED
DMU	RAM	JRA

NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

SHEET NO.

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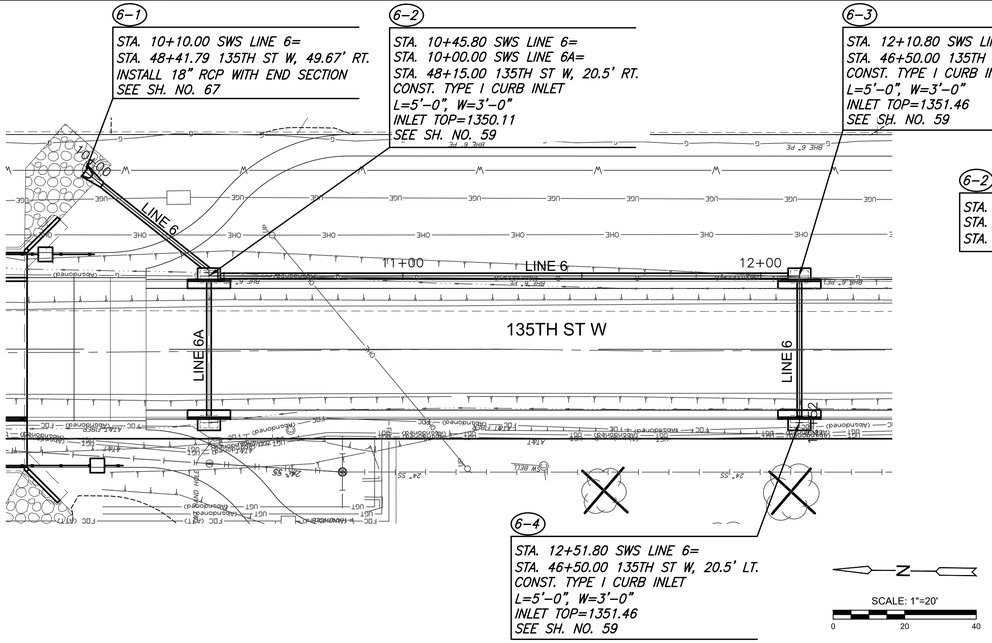
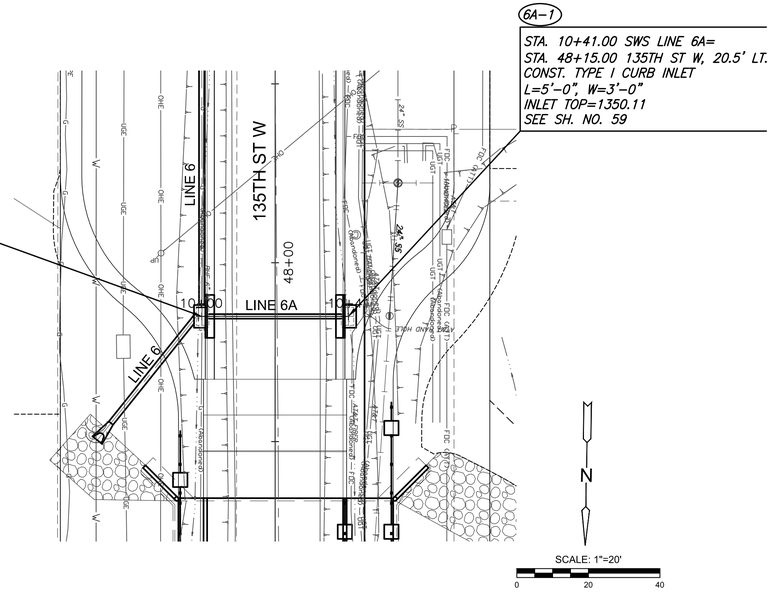
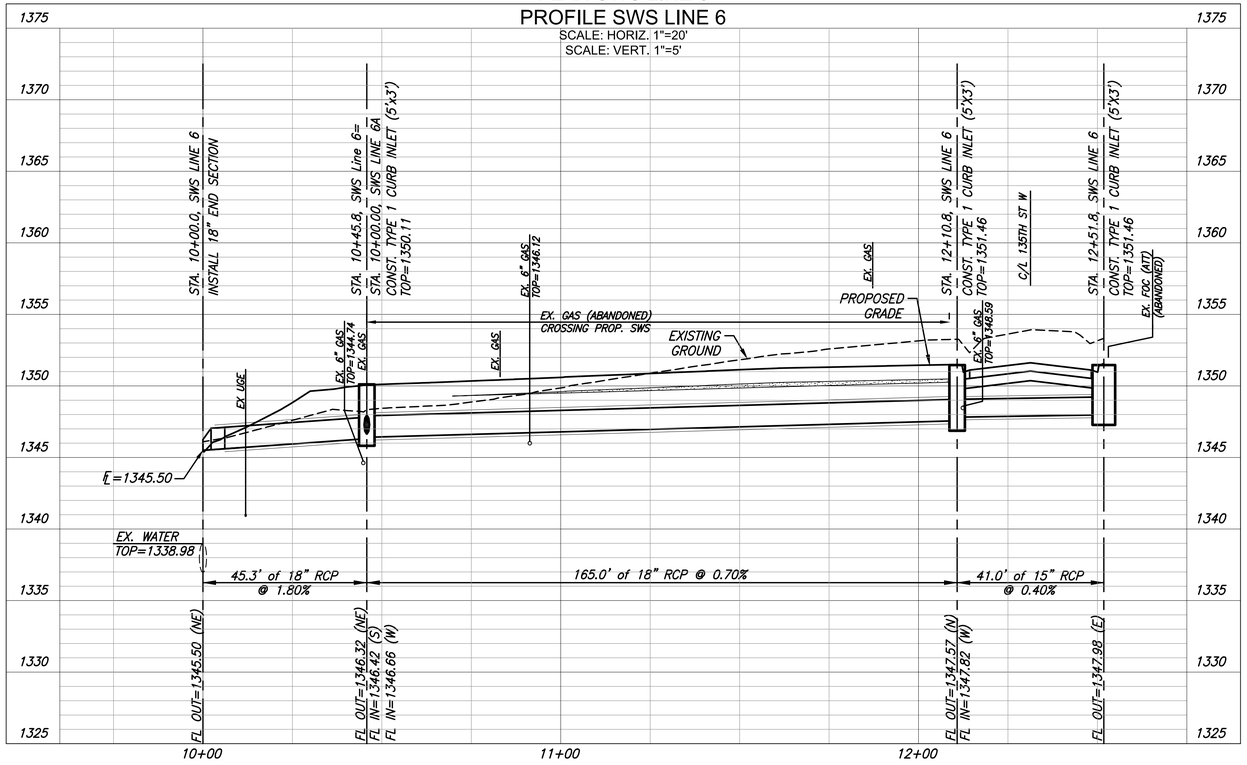
Sh. No. 31

PLOTTED: Friday, February 20, 2026 @ 01:40PM

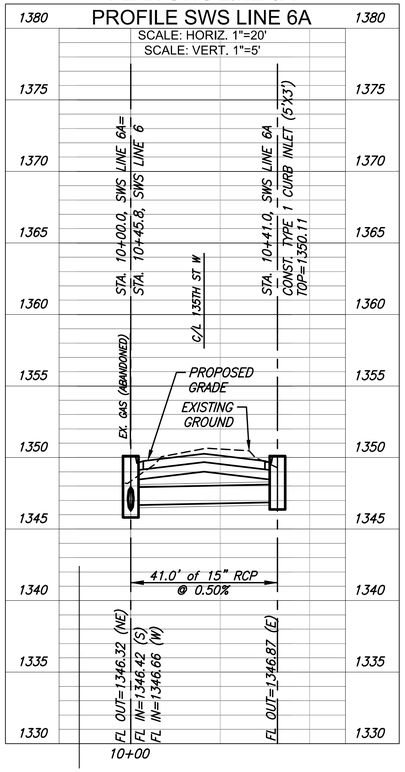




PLAN SWS LINE 6



PLAN SWS LINE 6A



STREET IMPROVEMENTS FOR 135TH STREET WEST

FROM CENTRAL AVE TO 13TH STREET

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STORM SEWER PLAN & PROFILE LINE 6,6A

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	1"=20'

DESIGNED	DRAWN	CHECKED
DMU	RAM	JRA

NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

SHEET NO.

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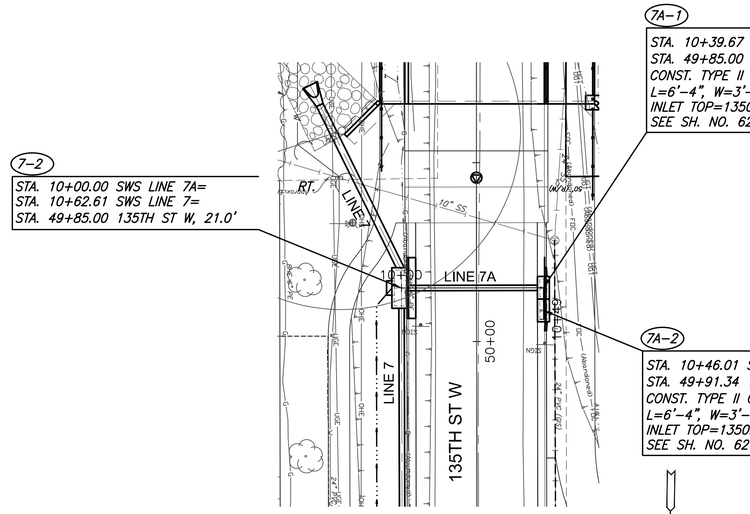
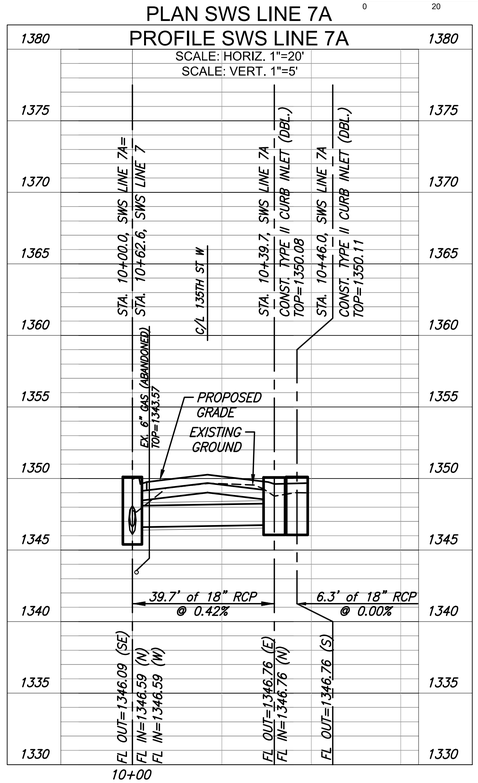
Sh. No. 32

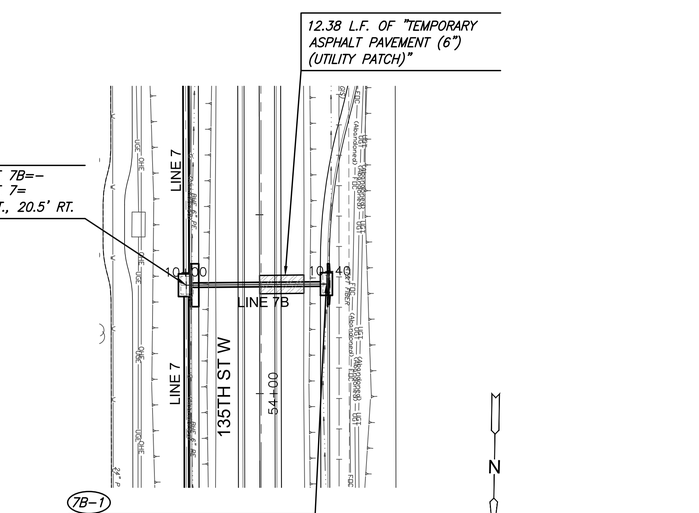
J:\PROJECTS\2022\2201610447_COV_135TH STREET FROM CENTRAL TO 13TH STREET\00 220447 CAD\SHTS\05 CIVIL\SWS\220447-05-0200.DWG

PLOTTED: Friday, February 20, 2026 @ 01:40PM

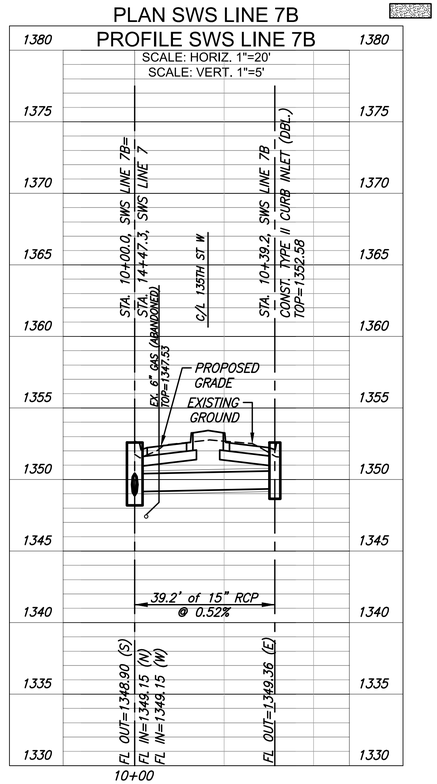


PLAN SWS LINE 7A





PLAN SWS LINE 7B



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STREET IMPROVEMENTS FOR

135TH STREET WEST

FROM CENTRAL AVE TO 13TH STREET

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STORM SEWER PLAN & PROFILE LINE 7A, 7B

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	1"=20'

DESIGNED	DRAWN	CHECKED
DMU	RAM	JRA

NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

SHEET NO.

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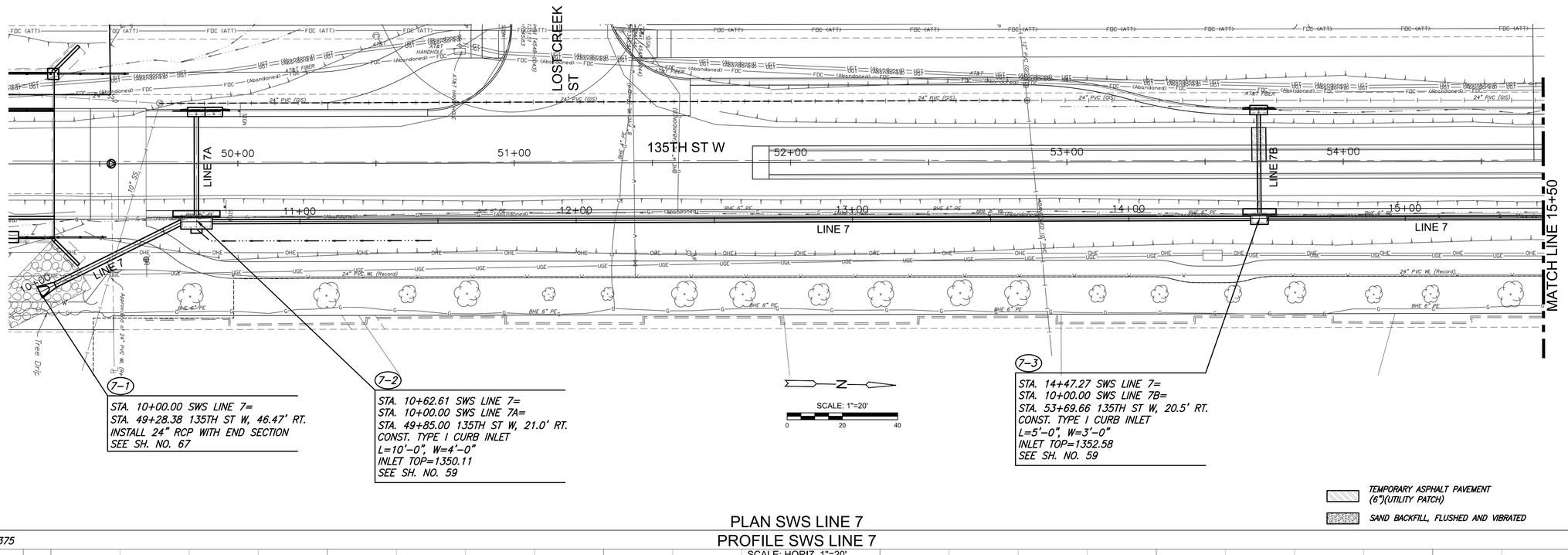
J:\PROJECTS\0222\20101\0447_COW_135TH STREET FROM CENTRAL TO 13TH STREET\00 220447 CAD\SHTS\05 CIVIL\SWS\220447-05-S200.DWG

PLOTTED: Friday, February 20, 2026 @ 01:40PM



7-1

STA. 10+00.00 SWS LINE 7=
STA. 49+28.38 135TH ST W, 46.47' RT.
INSTALL 24" RCP WITH END SECTION
SEE SH. NO. 67

7-2

STA. 10+62.61 SWS LINE 7=
STA. 10+00.00 SWS LINE 7A=
STA. 49+85.00 135TH ST W, 21.0' RT.
CONST. TYPE I CURB INLET
L=10'-0", W=4'-0"
INLET TOP=1350.11
SEE SH. NO. 59

7-3

STA. 14+47.27 SWS LINE 7=
STA. 10+00.00 SWS LINE 7B=
STA. 53+69.66 135TH ST W, 20.5' RT.
CONST. TYPE I CURB INLET
L=5'-0", W=3'-0"
INLET TOP=1352.58
SEE SH. NO. 59

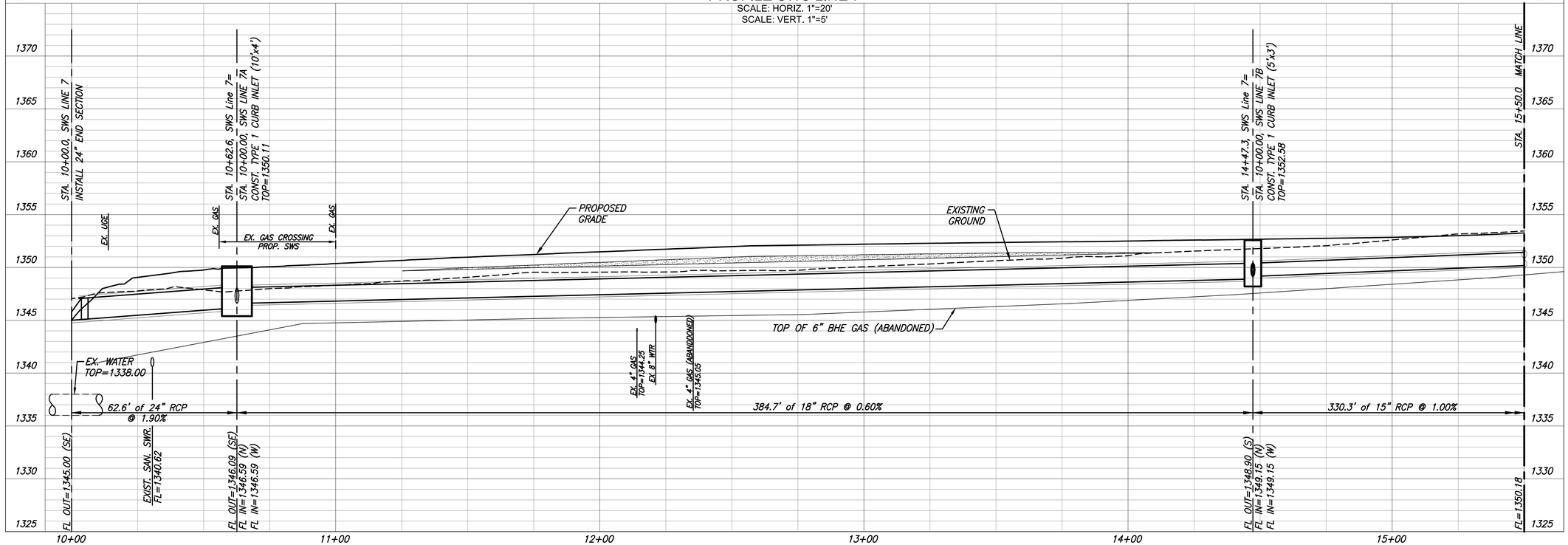
TEMPORARY ASPHALT PAVEMENT (6")(UTILITY PATCH)

SAND BACKFILL, FLUSHED AND VIBRATED

PLAN SWS LINE 7

PROFILE SWS LINE 7

SCALE: HORIZ. 1"=20'
SCALE: VERT. 1"=5'



J:\PROJECTS\0222\20161\0447_COV_135TH STREET FROM CENTRAL TO 13TH STREET\00 220447 CAD\SHTS\05 CIVIL\SWS\220447-05-0200.DWG

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STREET IMPROVEMENTS FOR

135TH STREET WEST

FROM CENTRAL AVE TO 13TH STREET

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STORM SEWER PLAN & PROFILE LINE 7

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	1"=20'

DESIGNED	DRAWN	CHECKED
DMU	RAM	JRA

NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

SHEET NO.

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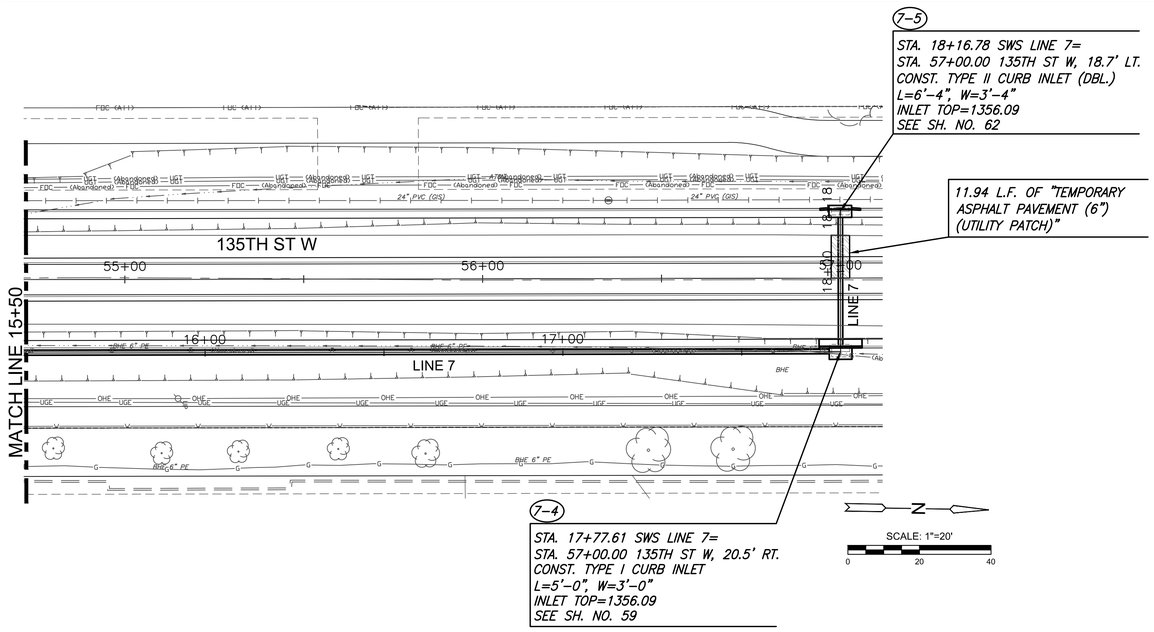
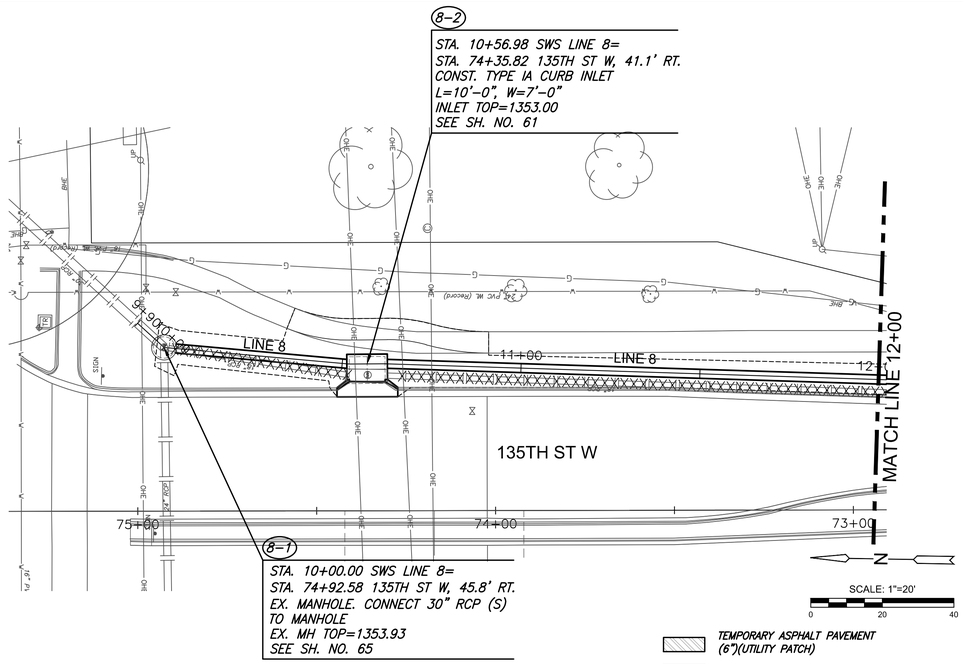
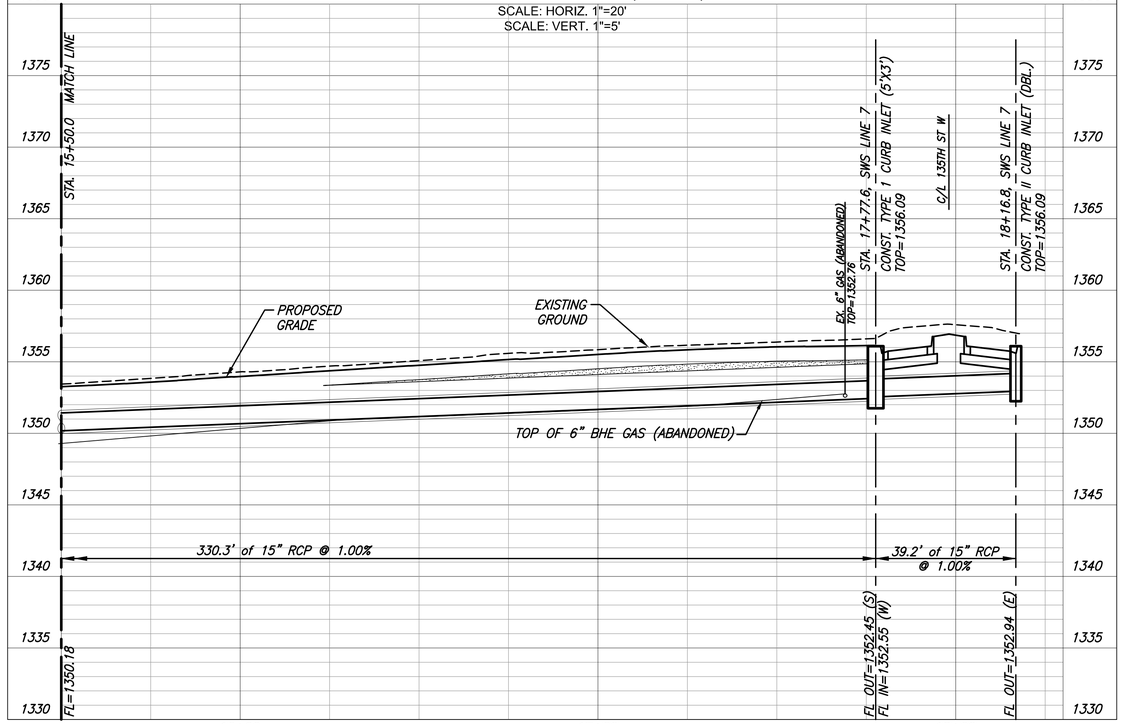
Sh. No. 34

PLOTTED: Friday, February 20, 2026 @ 01:40PM

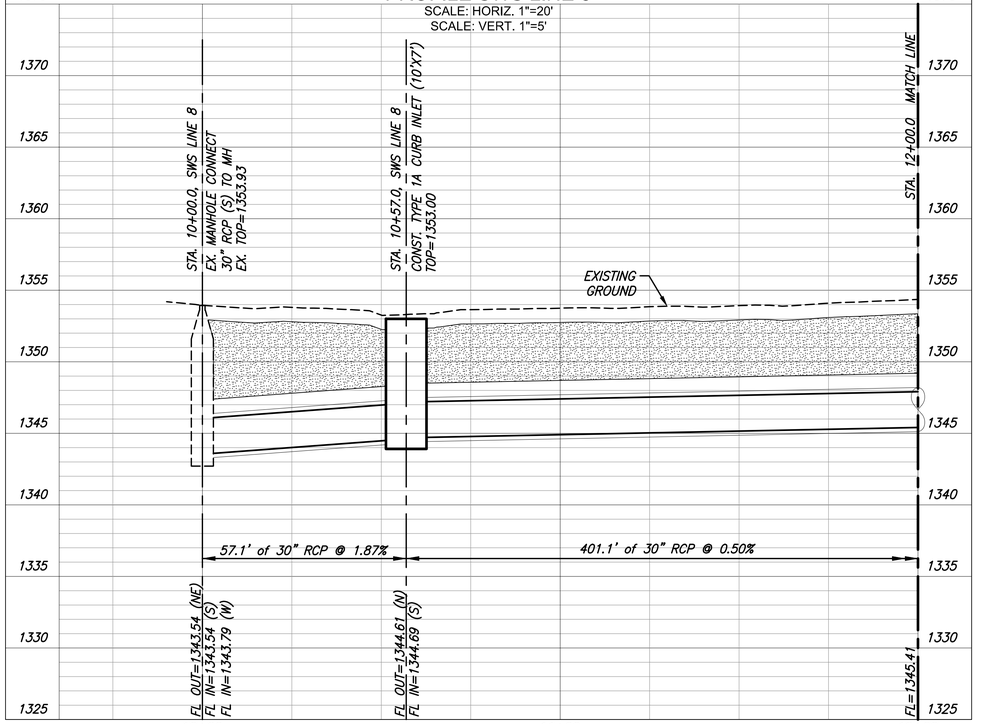




PLAN SWS LINE 7 (CONT.)
PROFILE SWS LINE 7 (CONT.)



PLAN SWS LINE 8
PROFILE SWS LINE 8



J:\PROJECTS\2022\2201010447_COV_135TH STREET FROM CENTRAL TO 13TH STREET\100 220447 CAD\SHTS\05 CIVIL\SWS\220447-05-5200.DWG

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STREET IMPROVEMENTS FOR

135TH STREET WEST

FROM CENTRAL AVE TO 13TH STREET

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STORM SEWER PLAN & PROFILE LINE 7,8

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	1"=20'

DESIGNED	DRAWN	CHECKED
DMU	RAM	JRA

NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

SHEET NO.

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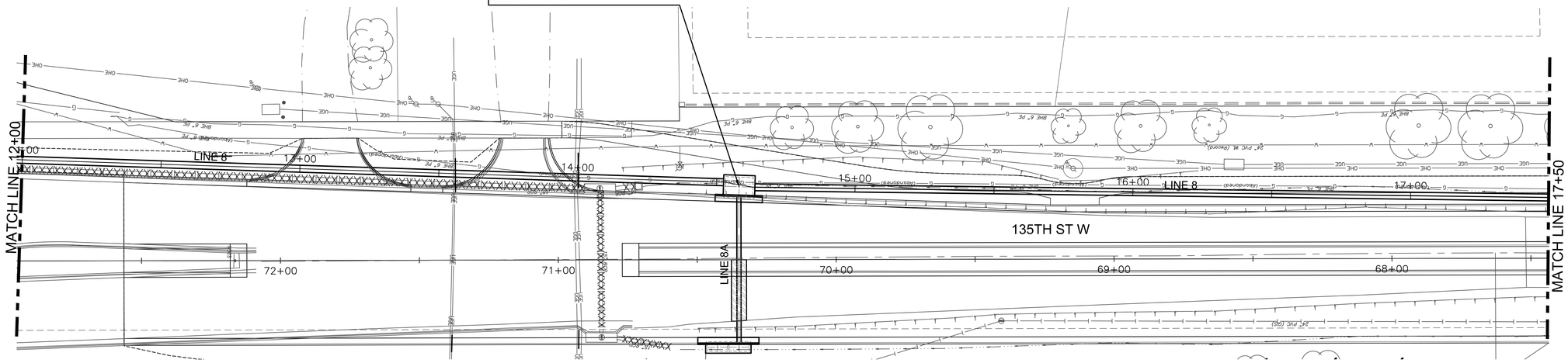
Sh. No. 35

PLOTTED: Friday, February 20, 2026 @ 01:40PM

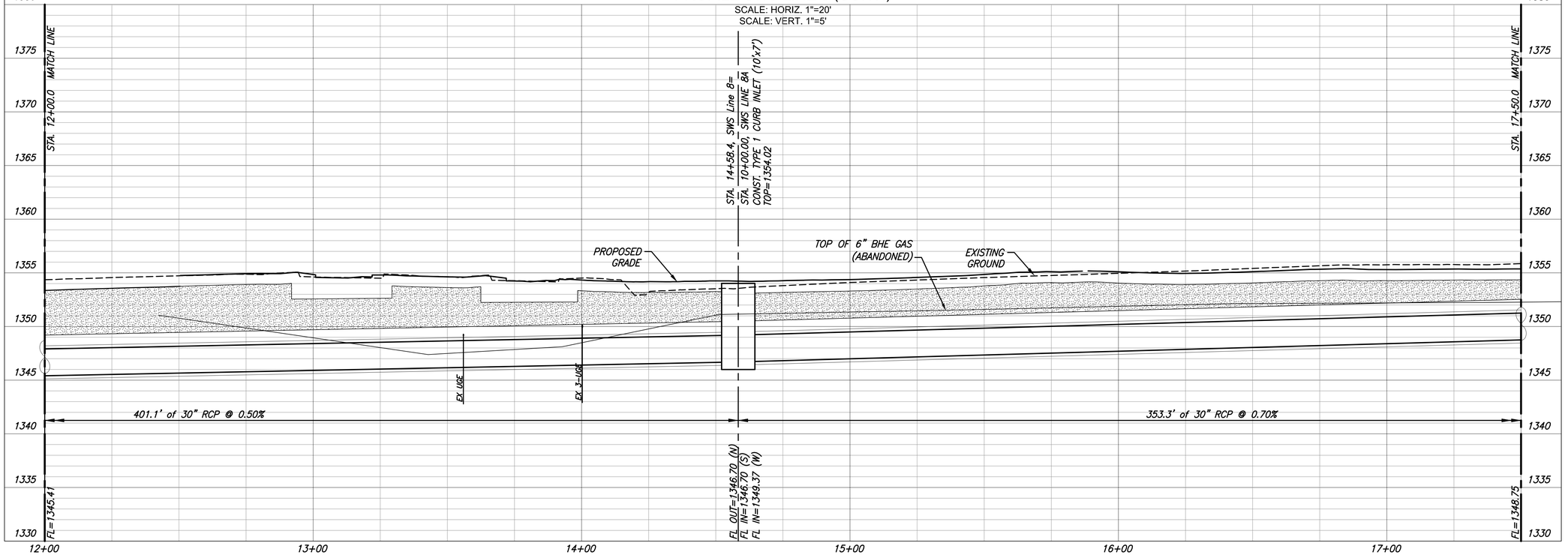
8-3

STA. 14+58.35 SWS LINE 8=
STA. 10+00.00 SWS LINE 8A=
STA. 70+34.88 135TH ST W, 26.3' RT.
CONST. TYPE 1 CURB INLET
L=10'-0", W=7'-0"
INLET TOP=1354.18
SEE SH. NO. 59



PLAN SWS LINE 8 (CONT.)
PROFILE SWS LINE 8 (CONT.)

SCALE: HORIZ. 1"=20'
SCALE: VERT. 1"=5'



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STREET IMPROVEMENTS FOR

135TH STREET WEST

FROM CENTRAL AVE TO 13TH STREET

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STORM SEWER PLAN & PROFILE LINE 8

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	1"=20'

DESIGNED	DRAWN	CHECKED
DMU	RAM	JRA

NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

SHEET NO.

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Sh. No. 36

J:\PROJECTS\2022\2201010447_COV_135TH STREET FROM CENTRAL TO 13TH STREET\00 220447 CAD\SHTS\05 CIVIL\SWS\220447-05-S200.DWG

PLOTTED: Friday, February 20, 2026 @ 01:40PM

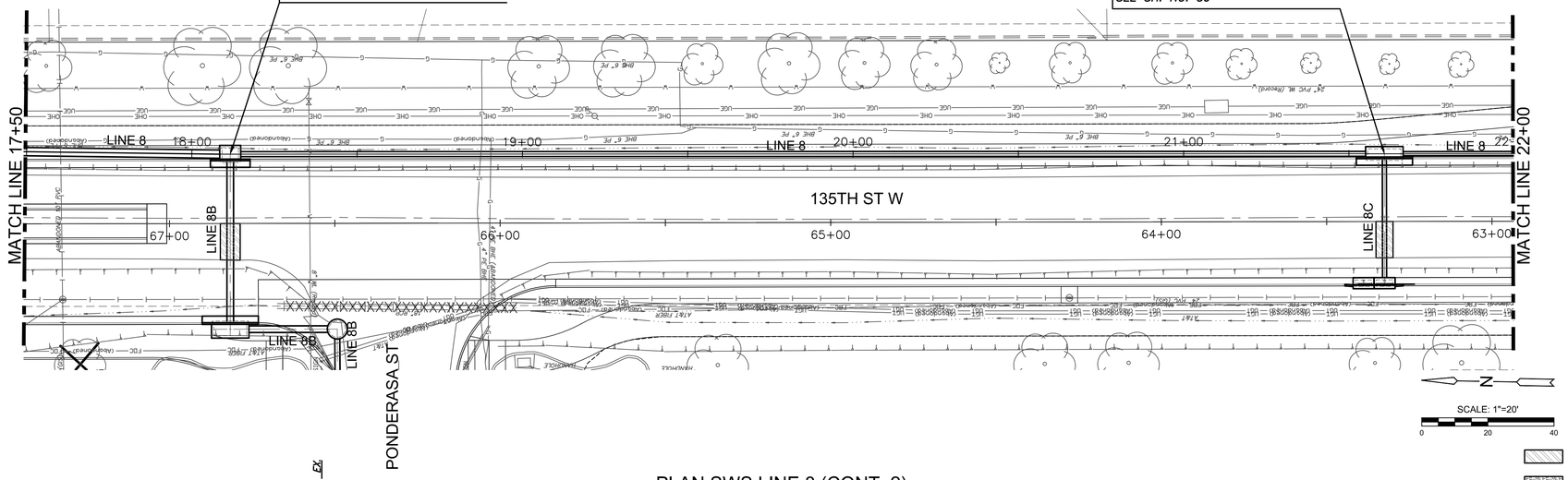
J:\PROJECTS\2022\2201010447_COV_135TH STREET FROM CENTRAL TO 13TH STREET\100 220447 CAD\SHTS\05 CIVIL\SWS\220447-05-S200.DWG

8-4

STA. 18+11.61 SWS LINE 8=
STA. 10+00.00 SWS LINE 8B=
STA. 66+81.61 135TH ST W, 21.0' RT.
CONST. TYPE I CURB INLET
L=5'-0", W=4'-0"
INLET TOP=1355.50
SEE SH. NO. 59

8-5

STA. 21+60.72 SWS LINE 8=
STA. 10+00.00 SWS LINE 8C=
STA. 63+32.50 135TH ST W, 20.5' RT.
CONST. TYPE I CURB INLET
L=10'-0", W=3'-0"
INLET TOP=1356.44
SEE SH. NO. 59

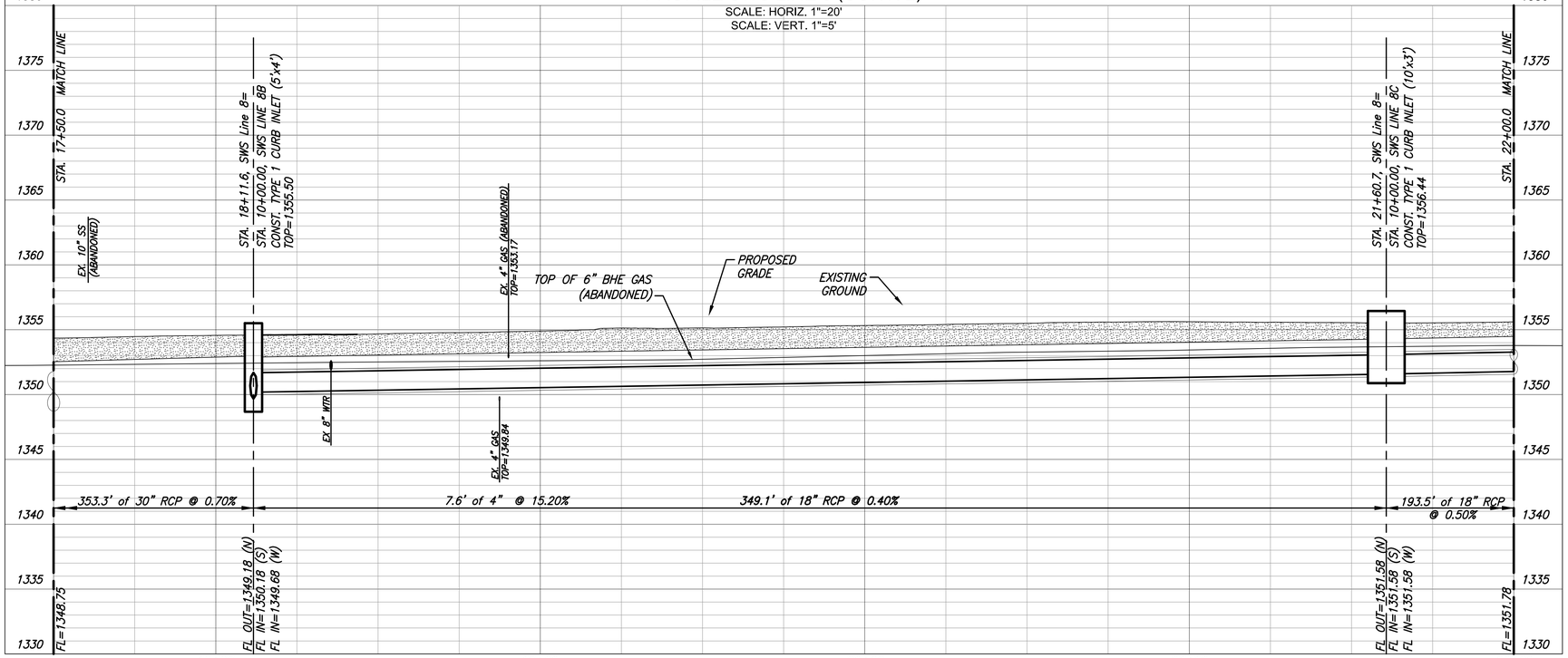


TEMPORARY ASPHALT PAVEMENT (6")(INCL. 5" CRB)(UTILITY PATCH)

SAND BACKFILL, FLUSHED AND VIBRATED

PLAN SWS LINE 8 (CONT. 2)
PROFILE SWS LINE 8 (CONT. 2)

SCALE: HORIZ. 1"=20'
SCALE: VERT. 1"=5'



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STREET IMPROVEMENTS FOR

135TH STREET WEST

FROM CENTRAL AVE TO 13TH STREET

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STORM SEWER PLAN & PROFILE LINE 8

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	1"=20'

DESIGNED	DRAWN	CHECKED
DMU	RAM	JRA

NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

SHEET NO.

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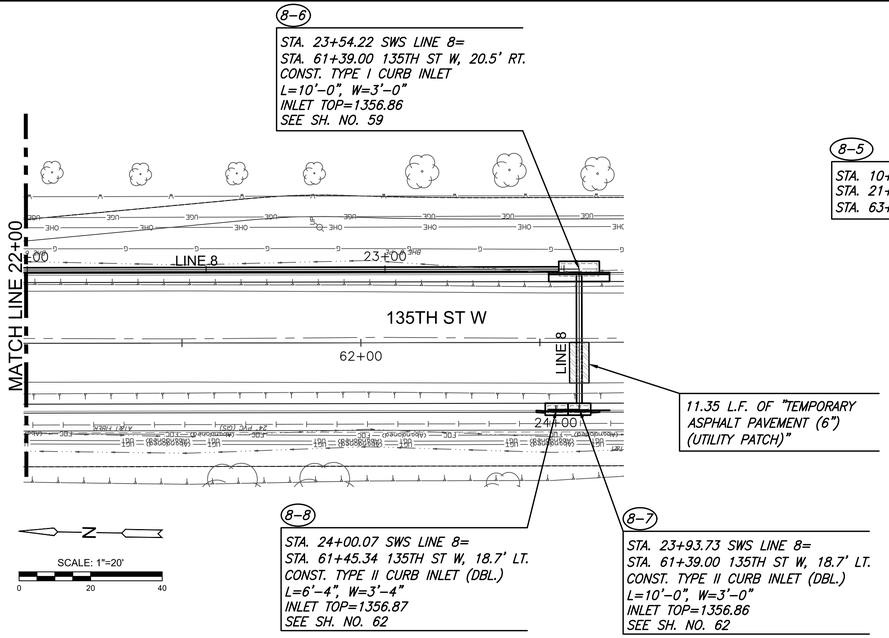
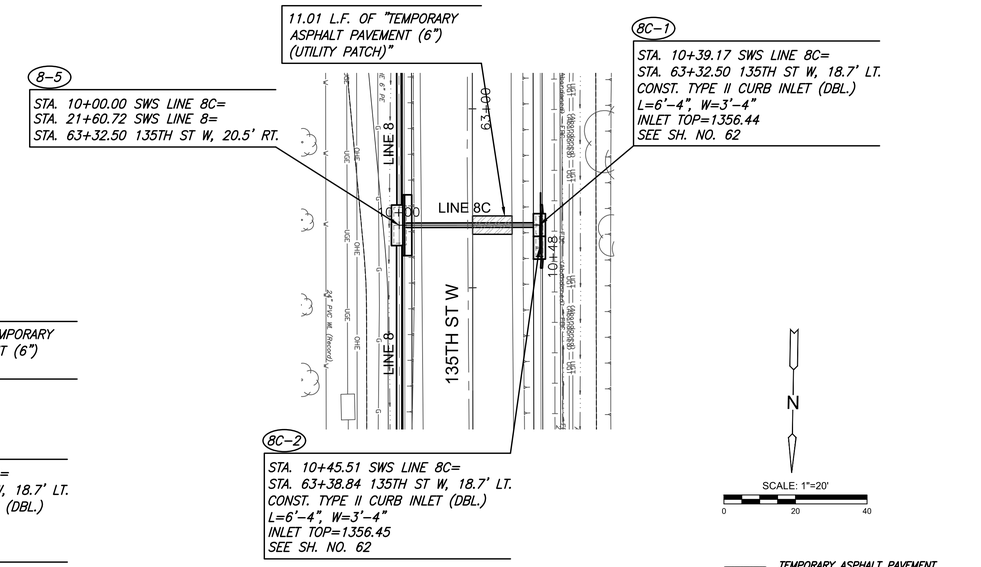
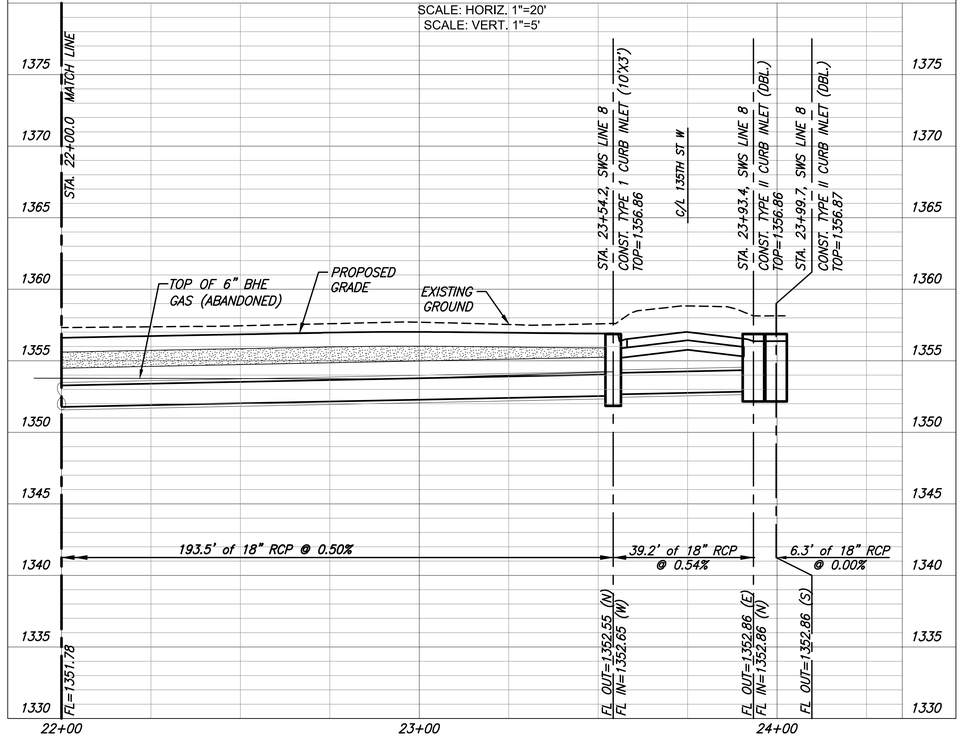
Sh. No. 37

PLOTTED: Friday, February 20, 2026 @ 01:40PM

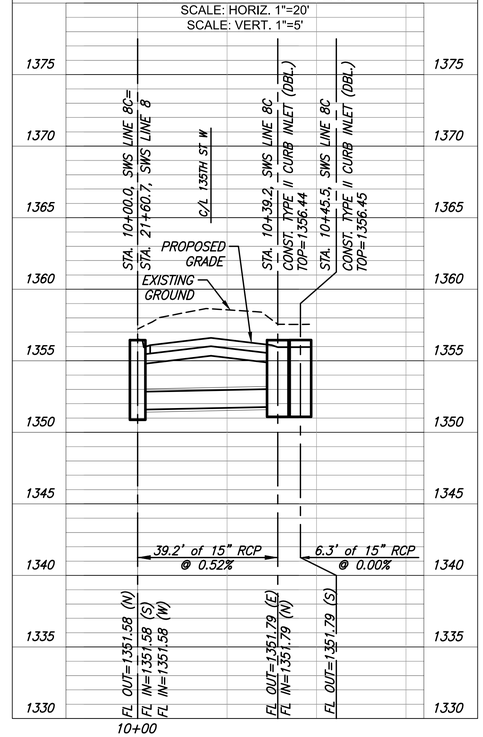




PLAN SWS LINE 8 (CONT. 3)



PLAN SWS LINE 8C



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STREET IMPROVEMENTS FOR

135TH STREET WEST

FROM CENTRAL AVE TO 13TH STREET

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STORM SEWER PLAN & PROFILE LINE 8,8C

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	1"=20'

DESIGNED	DRAWN	CHECKED
DMU	RAM	JRA

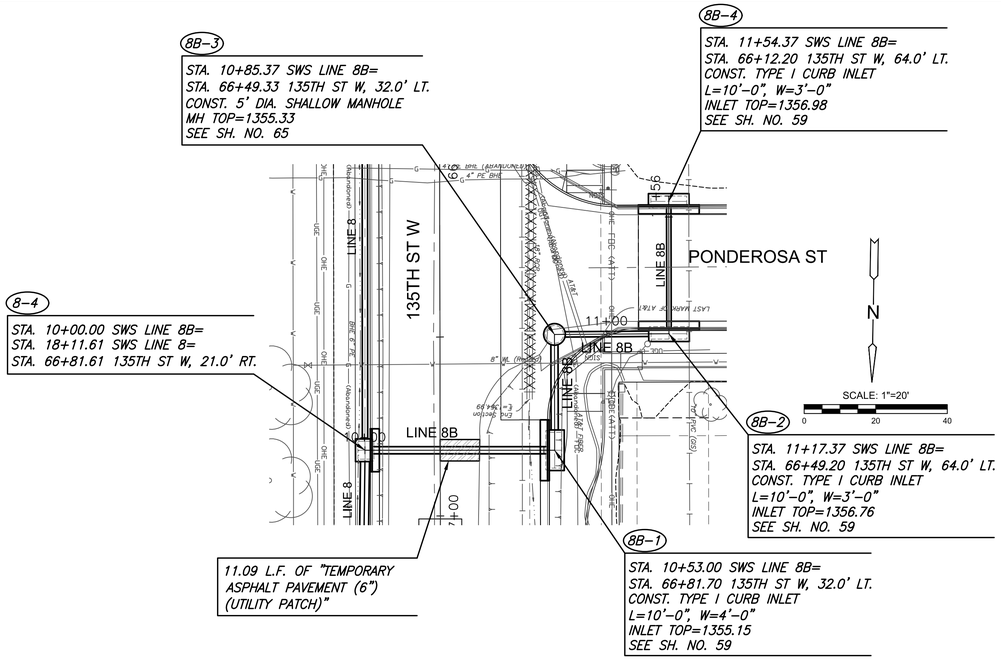
NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

SHEET NO.

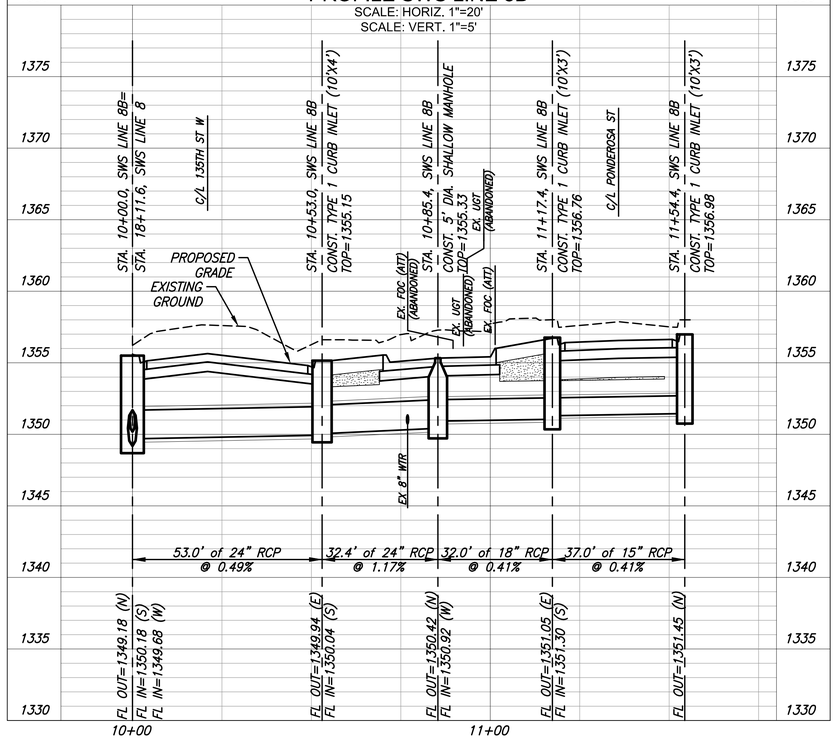
38 OF 156

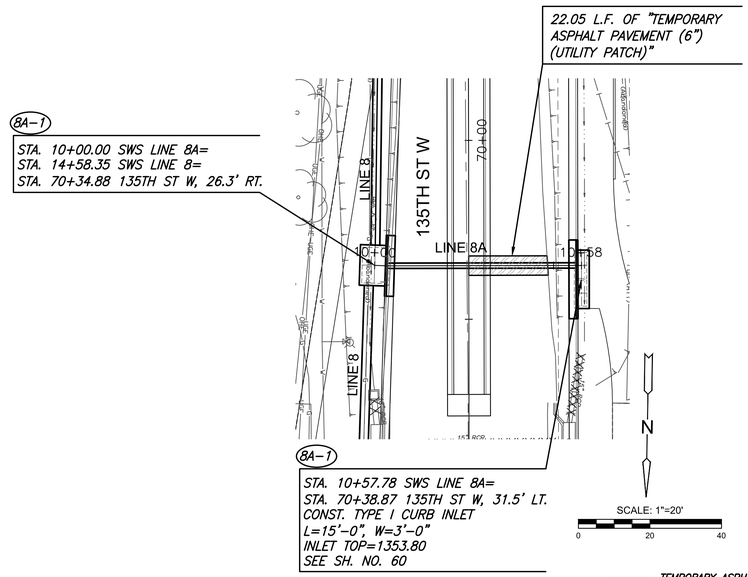
J:\PROJECTS\2022\220101047_COV_135TH STREET FROM CENTRAL TO 13TH STREET\100 220447 CAD\SHTS\05 CIVIL\SWS\220447-05-S200.DWG

PLOTTED: Friday, February 20, 2026 @ 01:40PM

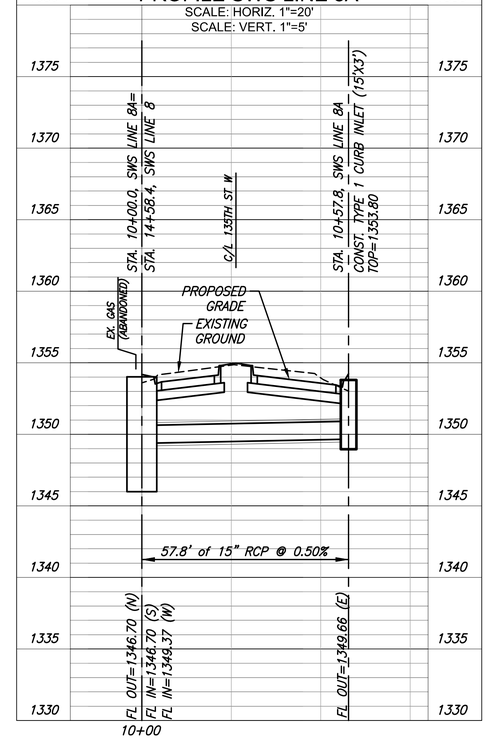


PLAN SWS LINE 8B





PLAN SWS LINE 8A



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STREET IMPROVEMENTS FOR

135TH STREET WEST

FROM CENTRAL AVE TO 13TH STREET

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STORM SEWER PLAN & PROFILE LINE 8B,8A

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	1"=20'

DESIGNED	DRAWN	CHECKED
DMU	RAM	JRA

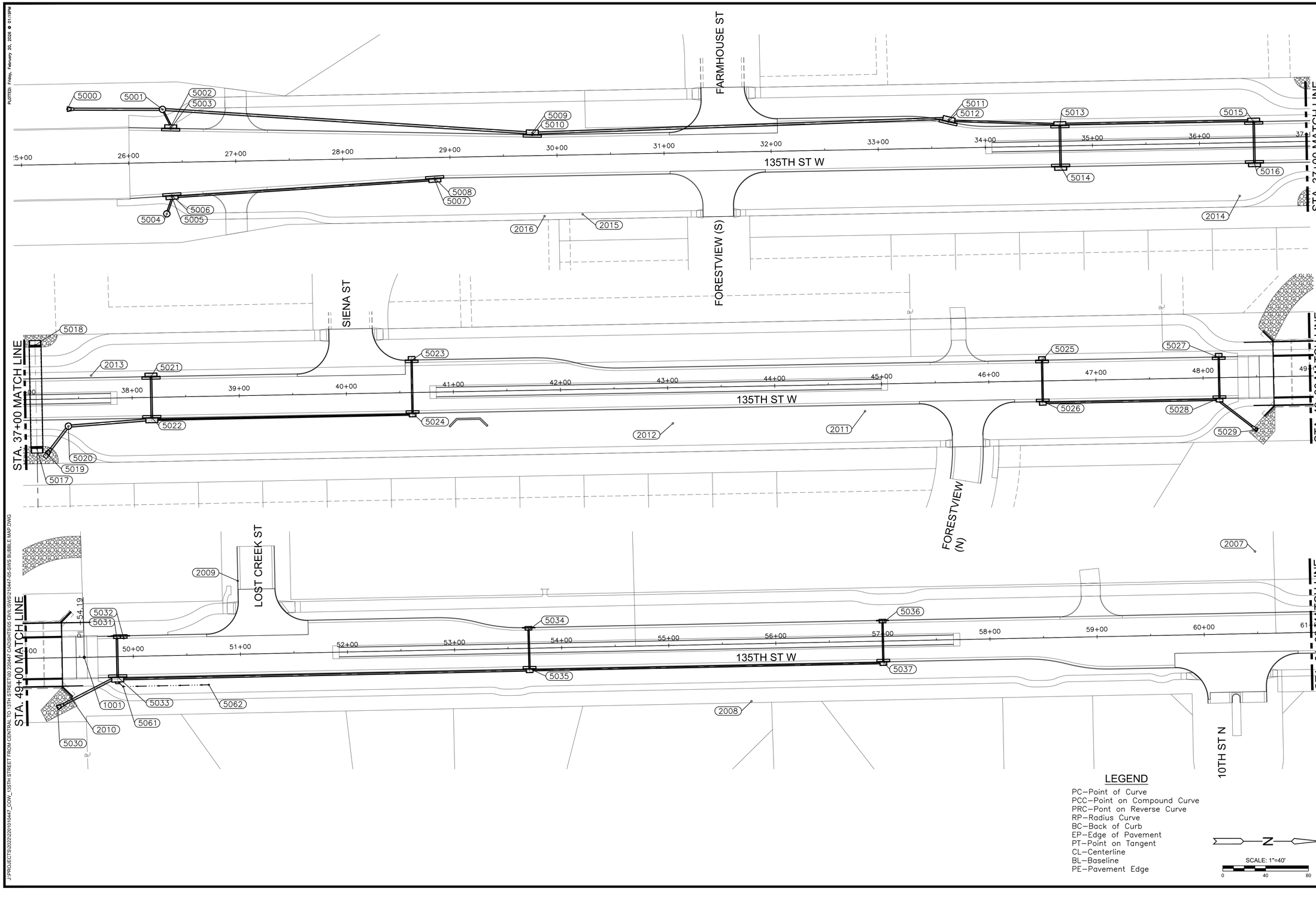
NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

SHEET NO.

39 OF 156

J:\PROJECTS\2022\2201010447_COV_135TH STREET FROM CENTRAL TO 13TH STREET\100 220447 CAD\SHTS\05 CIVIL\SWS\220447-05-S200.DWG

PLOTTED: Friday, February 20, 2026 @ 01:19PM



LEGEND

PC—Point of Curve
PCC—Point on Compound Curve
PRC—Pont on Reverse Curve
RP—Radius Curve
BC—Back of Curb
EP—Edge of Pavement
PT—Point on Tangent
CL—Centerline
BL—Baseline
PE—Pavement Edge

N

SCALE: 1"=40'
0 40 80

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STREET IMPROVEMENTS FOR

135TH STREET WEST

FROM CENTRAL AVE TO 13TH STREET

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STORM SEWER BUBBLE MAP

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	1"=40'

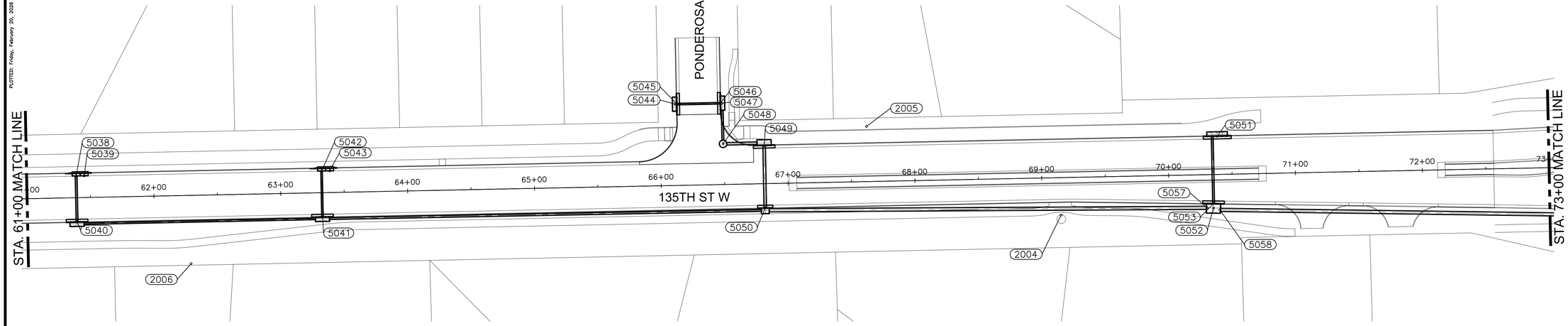
DESIGNED	DRAWN	CHECKED
JRA	RAM	JRA

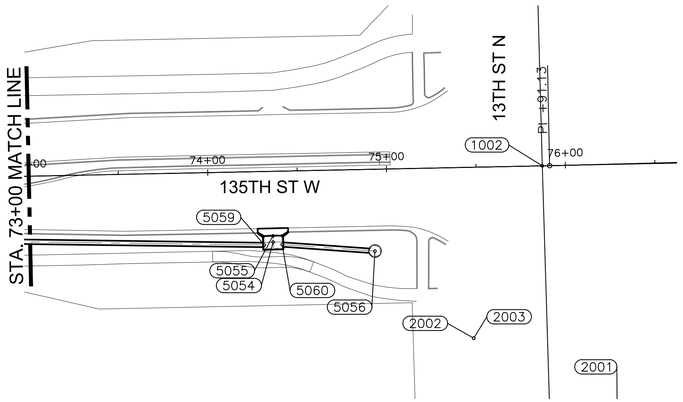
NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

SHEET NO.
40 OF 156

J:\PROJECTS\2022\22\01\01047_COW_ 135TH STREET FROM CENTRAL TO 13TH STREET\00 22\047 CAD\SHTS\WS CIVIL\SWS\21047-05-SWS BUBBLE MAP.DWG

PLOTTED: Friday, February 20, 2026 @ 01:19PM





BASELINE POINTS				
POINT #	STATION	NORTHING	EASTING	DESC.
1000	23+21.95	1687873.781	1602240.127	BL
1001	49+54.19	1690505.579	1602191.640	BL PI
1002	75+87.11	1693137.952	1602138.174	BL
1004	10+00.00	1693550.433	1602650.189	BL#1
1005	12+00.00	1693750.418	1602647.752	BL#1
1006	10+00.00	1693580.004	1602649.828	BL#2 PC
1007	10+00.00	1693579.029	1602569.834	BL#2 RP
1008	10+99.51	1693655.098	1602594.604	BL#2 PT
1009	11+96.02	1693684.981	1602502.830	BL#2 PC
1010	11+96.02	1693776.264	1602532.553	BL#2 RP
1011	12+11.25	1693690.823	1602488.782	BL#2 PT

BENCHMARK/CONTROL POINTS						
POINT #	STATION	OFFSET/SIDE	ELEV.	NORTHING	EASTING	DESC.
2001	76+20.92	413.28, RT.	1354.61	1693182.001	1602550.510	BM100
2002	75+46.80	95.51, RT.	1353.01	1693099.588	1602234.487	BM101
2003	75+46.80	95.51, RT.	1352.96	1693099.588	1602234.487	CP1
2004	69+14.65	29.43, RT.	1353.95	1692466.224	1602181.255	BM102
2005	67+62.68	43.45, LT.	1356.44	1692312.807	1602111.476	CP2
2006	62+28.20	53.69, RT.	1357.54	1691780.414	1602219.447	BM103
2007	60+49.06	76.61, LT.	1361.84	1691598.667	1602092.810	CP3
2008	55+76.20	53.60, RT.	1356.47	1691128.540	1602232.597	BM104
2009	50+98.91	68.44, LT.	1351.59	1690648.876	1602120.277	CP4
2010	49+41.07	37.65, RT.	1347.58	1690493.154	1602229.525	BM105
2011	44+83.91	25.17, RT.	1353.88	1690035.835	1602225.466	CP5
2012	43+04.32	33.23, RT.	1353.28	1689856.425	1602236.832	BM106
2013	37+62.09	21.40, LT.	1350.01	1689313.285	1602192.205	CP6
2014	36+36.68	49.69, RT.	1350.26	1689189.199	1602265.591	BM107
2015	30+22.97	55.50, RT.	1353.69	1688575.701	1602282.705	BM108
2016	29+87.39	56.55, RT.	1353.48	1688540.150	1602284.411	CP7
2017	24+04.67	34.02, LT.	1350.41	1687955.864	1602204.585	BM109
2018	23+60.02	75.98, LT.	1349.18	1687910.447	1602163.461	CP8

N

SCALE: 1"=40'

0 40 80

LEGEND

PC—Point of Curve
PCC—Point on Compound Curve
PRC—Pont on Reverse Curve
RP—Radius Curve
BC—Back of Curb
EP—Edge of Pavement
PT—Point on Tangent
CL—Centerline
BL—Baseline
PE—Pavement Edge

DATUM:
The Horizontal Datum is based on the Kansas Coordinate System of 1983, NAD83(2011), South Zone, US Survey Foot Grid to ground. Coordinates shown have been modified to the ground using a combined adjustment factor of 1.0001200144. State Plane coordinates can be calculated by multiplying the shown values by 0.99988.
GPS Scale Point N: 0.00 E: 0.00

All elevations shown are based on the NAVD 88 vertical datum, Geoid18.

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STREET IMPROVEMENTS FOR

135TH STREET WEST

FROM CENTRAL AVE TO 13TH STREET

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STORM SEWER BUBBLE MAP

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	1"=40'

DESIGNED	DRAWN	CHECKED
JRA	RAM	JRA

NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

SHEET NO.

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J:\PROJECTS\0222021\010447_COW_135TH STREET FROM CENTRAL TO 13TH STREET\00 220447 CAD\SHTS\05 CIVIL\SWS\210447-05-SWS BUBBLE MAP.DWG

PLOTTED: Friday, February 20, 2026 @ 01:19PM

SWS POINTS					
POINT #	STATION	OFFSET/SIDE	NORTHING	EASTING	DESC.
5000	25+43.68	51.46, LT.	1688094.530	1602184.595	END SECTION
5001	26+32.50	49.58, LT.	1688183.361	1602184.837	5' DIA MH
5002	26+39.90	32.85, LT.	1688191.075	1602201.423	TYPE 1 INLET
5003	26+39.85	31.35, LT.	1688191.049	1602202.922	TYPE 1 INLET
5004	26+34.75	48.01, RT.	1688187.415	1602282.368	5' DIA MH
5005	26+39.92	32.41, RT.	1688192.294	1602266.677	TYPE 2 INLET
5006	26+39.85	30.91, RT.	1688192.196	1602265.180	TYPE 1 INLET
5007	28+85.53	20.90, RT.	1688437.651	1602250.639	TYPE 1 INLET
5008	28+85.46	19.40, RT.	1688437.553	1602249.142	TYPE 1 INLET
5009	29+77.36	21.32, LT.	1688528.685	1602206.739	TYPE 1 INLET
5010	29+77.29	19.32, LT.	1688528.652	1602208.739	TYPE 1 INLET
5011	33+66.37	26.46, LT.	1688917.537	1602194.437	TYPE 1 INLET
5012	33+65.89	24.51, LT.	1688917.091	1602196.386	TYPE 1 INLET
5013	34+70.00	19.00, LT.	1689021.286	1602199.982	TYPE 1 INLET
5014	34+70.00	19.00, RT.	1689021.986	1602237.976	TYPE 1 INLET
5015	36+51.00	19.00, LT.	1689202.255	1602196.648	TYPE 1 INLET
5016	36+51.00	19.00, RT.	1689202.955	1602234.642	TYPE 1 INLET
5017	37+10.30	45.67, RT.	1689262.735	1602260.215	10'X3' RCB HEADWALL
5018	37+10.30	50.67, LT.	1689260.960	1602163.891	10'X3' RCB HEADWALL
5019	37+19.82	51.01, RT.	1689272.349	1602265.375	END SECTION
5020	37+40.00	25.50, RT.	1689292.060	1602239.501	5' DIA MH
5021	38+18.00	19.00, LT.	1689369.227	1602193.572	TYPE 1 INLET
5022	38+18.00	19.00, RT.	1689369.927	1602231.566	TYPE 1 INLET
5023	40+61.50	30.00, LT.	1689612.487	1602178.089	TYPE 1 INLET
5024	40+61.50	19.00, RT.	1689613.390	1602227.080	TYPE 1 INLET
5025	46+50.00	19.00, LT.	1690201.086	1602178.246	TYPE 1 INLET
5026	46+50.00	19.00, RT.	1690201.786	1602216.240	TYPE 1 INLET
5027	48+15.00	19.00, LT.	1690366.058	1602175.207	TYPE 1 INLET
5028	48+15.00	19.03, RT.	1690366.758	1602213.232	TYPE 1 INLET
5029	48+49.60	49.67, RT.	1690401.916	1602243.224	END SECTION
5030	49+28.38	46.47, RT.	1690480.629	1602238.576	END SECTION
5031	49+85.00	17.00, LT.	1690536.033	1602174.018	DBL. TYPE 2 INLET
5032	49+91.34	17.00, LT.	1690542.371	1602173.889	DBL. TYPE 2 INLET
5033	49+85.00	19.00, RT.	1690536.764	1602210.010	TYPE 1 INLET
5034	53+69.40	17.00, LT.	1690920.354	1602166.212	TYPE 2 INLET

SWS POINTS					
POINT #	STATION	OFFSET/SIDE	NORTHING	EASTING	DESC.
5035	53+69.66	19.00, RT.	1690921.346	1602202.199	TYPE 1 INLET
5036	57+00.00	17.00, LT.	1691250.885	1602159.498	TYPE 2 INLET
5037	57+00.00	19.00, RT.	1691251.616	1602195.491	TYPE 1 INLET
5038	61+39.00	17.00, LT.	1691689.795	1602150.584	DBL. TYPE 2 INLET
5039	61+45.34	17.00, LT.	1691696.133	1602150.455	DBL. TYPE 2 INLET
5040	61+39.00	19.00, RT.	1691690.526	1602186.576	TYPE 1 INLET
5041	63+32.50	19.00, RT.	1691883.986	1602182.647	TYPE 1 INLET
5042	63+32.50	17.00, LT.	1691883.255	1602146.654	DBL. TYPE 2 INLET
5043	63+38.84	17.00, LT.	1691889.594	1602146.526	DBL. TYPE 2 INLET
5044	66+12.20	64.00, LT.	1692161.947	1602093.984	TYPE 1 INLET
5045	66+13.70	64.00, LT.	1692163.447	1602093.954	TYPE 1 INLET
5046	66+47.70	64.00, LT.	1692197.440	1602093.263	TYPE 1 INLET
5047	66+49.20	64.00, LT.	1692198.940	1602093.233	TYPE 1 INLET
5048	66+49.33	32.00, LT.	1692199.720	1602125.224	5' DIA MH
5049	66+81.70	30.00, LT.	1692232.123	1602126.566	TYPE 1 INLET
5050	66+81.61	19.00, RT.	1692233.026	1602175.558	TYPE 1 INLET
5051	70+38.87	30.00, LT.	1692589.220	1602119.313	DBL. TYPE 2 INLET
5052	70+34.88	26.27, RT.	1692586.371	1602175.657	TYPE 1 INLET
5053	70+35.00	22.78, RT.	1692586.418	1602172.157	TYPE 1 INLET
5054	74+35.81	39.59, RT.	1692987.483	1602180.827	TYPE 1A INLET
5055	74+35.78	36.09, RT.	1692987.388	1602177.328	TYPE 1A INLET
5056	74+92.58	45.76, RT.	1693044.373	1602185.839	EX. MH
5057	70+29.89	26.11, RT.	1692581.371	1602175.590	PIPE END
5058	70+39.83	27.90, RT.	1692591.351	1602177.182	PIPE END
5059	74+30.82	41.08, RT.	1692982.525	1602182.421	PIPE END
5060	74+40.82	41.01, RT.	1692992.521	1602182.148	PIPE END
5061	49+90.00	28.00, RT.	1690541.945	1602218.907	SWALE
5062	50+70.00	28.00, RT.	1690621.929	1602217.282	SWALE

J:\PROJECTS\2022\220110\10447_COW_135TH STREET FROM CENTRAL TO 13TH STREET\00 220447 CAD\SHTS\05 CIVIL\SWS\220447-05-SWS BUBBLE MAP.DWG

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STREET IMPROVEMENTS FOR

135TH STREET WEST

FROM CENTRAL AVE TO 13TH STREET

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STORM SEWER BUBBLE MAP

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	NA

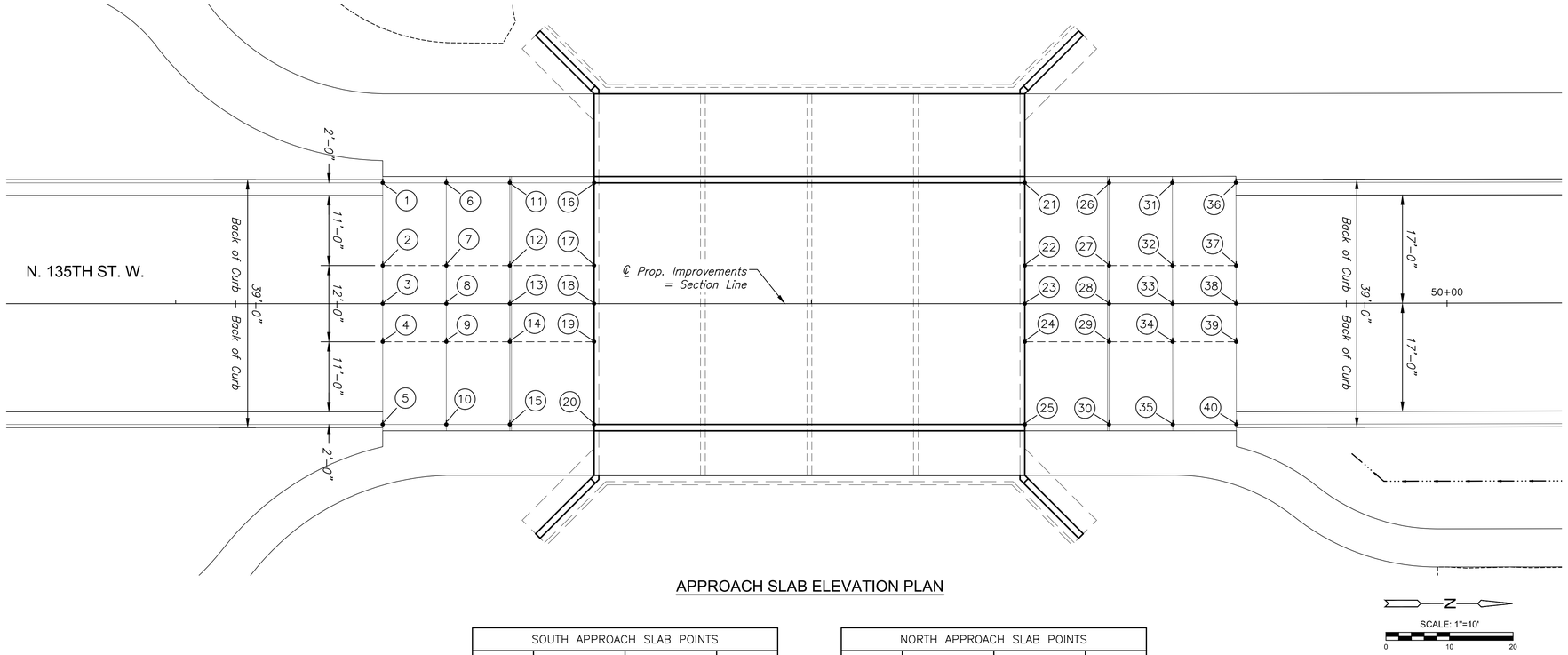
DESIGNED	DRAWN	CHECKED
JRA	RAM	JRA

NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

SHEET NO.

42 OF 156

PLOTTED: Friday, February 20, 2026 @ 01:18PM



APPROACH SLAB ELEVATION PLAN

SOUTH APPROACH SLAB POINTS			
Point #	Northing	Easting	Elevation
1	1690383.62	1602174.88	1349.60
2	1690383.86	1602187.88	1349.99
3	1690383.97	1602193.88	1350.17
4	1690384.08	1602199.88	1349.99
5	1690384.32	1602212.88	1349.60
6	1690393.62	1602174.70	1349.63
7	1690393.86	1602187.70	1349.98
8	1690393.97	1602193.70	1350.14
9	1690394.08	1602199.70	1349.98
10	1690394.32	1602212.69	1349.63
11	1690403.62	1602174.52	1349.67
12	1690403.86	1602187.51	1349.99
13	1690403.97	1602193.51	1350.13
14	1690404.08	1602199.51	1349.99
15	1690404.32	1602212.51	1349.67
16	1690416.86	1602174.27	1349.74
17	1690417.10	1602187.27	1350.00
18	1690417.21	1602193.27	1350.12
19	1690417.33	1602199.27	1350.00
20	1690417.56	1602212.26	1349.74

NORTH APPROACH SLAB POINTS			
Point #	Northing	Easting	Elevation
21	1690484.60	1602173.02	1349.74
22	1690484.84	1602186.02	1350.00
23	1690484.95	1602192.02	1350.12
24	1690485.06	1602198.02	1350.00
25	1690485.30	1602211.02	1349.74
26	1690497.85	1602172.78	1349.67
27	1690498.09	1602185.78	1349.99
28	1690498.20	1602191.78	1350.13
29	1690498.31	1602197.77	1349.99
30	1690498.55	1602210.77	1349.67
31	1690507.81	1602172.59	1349.63
32	1690508.08	1602185.59	1349.98
33	1690508.20	1602191.59	1350.14
34	1690508.32	1602197.59	1349.98
35	1690508.59	1602210.58	1349.63
36	1690517.81	1602172.39	1349.60
37	1690518.07	1602185.41	1349.99
38	1690518.20	1602191.38	1350.17
39	1690518.32	1602197.41	1349.99
40	1690518.58	1602210.38	1349.60

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STREET IMPROVEMENTS FOR

135TH STREET WEST

FROM CENTRAL AVE TO 13TH STREET

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APPROACH SLAB GRADING PLAN

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	1"=10'

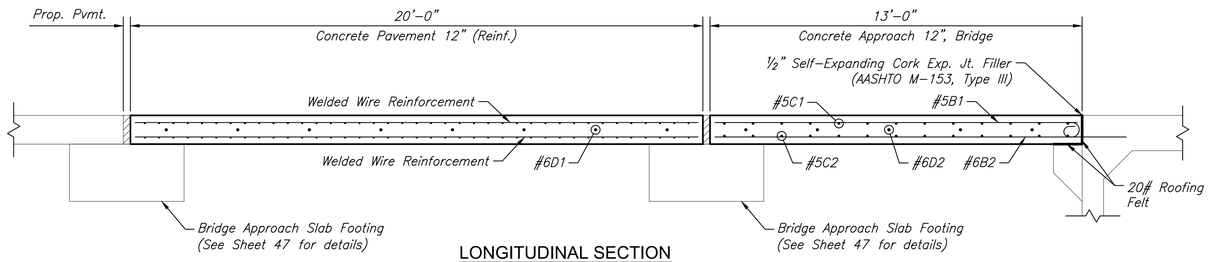
DESIGNED	DRAWN	CHECKED
JRA	RAM	JRA

NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

SHEET NO.

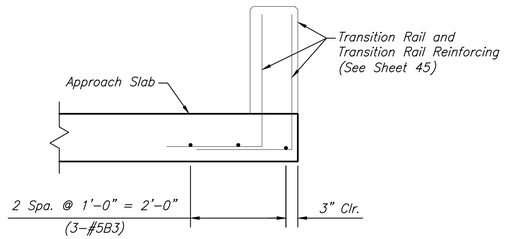
43 OF 156

PLOTTED: Friday, February 20, 2026 @ 01:19PM



LONGITUDINAL SECTION

(Shown parallel to ℄ Prop. Improv.)



SECTION A

FOR INFORMATION ONLY

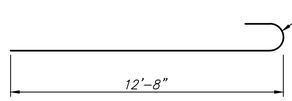
SUMMARY OF QUANTITIES
(Both Approach Slabs Included)

Concrete (Grade 4.0)	294 S.Y.
Reinforcing Steel (Gr. 60, Epoxy-Coated)	7,050 Lbs.

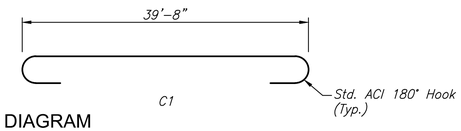
FOR INFORMATION ONLY

BILL OF REINFORCING STEEL
(Both Approach Slabs Included)

Straight Bars					Bent Bars				
Mark	Size	No.	Length	Remarks	Mark	Size	No.	Length	Remarks
C2	#5	26	39'-8"		C1	#5	26	40'-10"	
B1	#5	80	12'-8"		B2	#6	158	13'-4"	
D1	#6	62	3'-0"						
D2	#6	20	4'-0"						
B3	#5	24	9'-8"						



B2



C1

BAR BENDING DIAGRAM

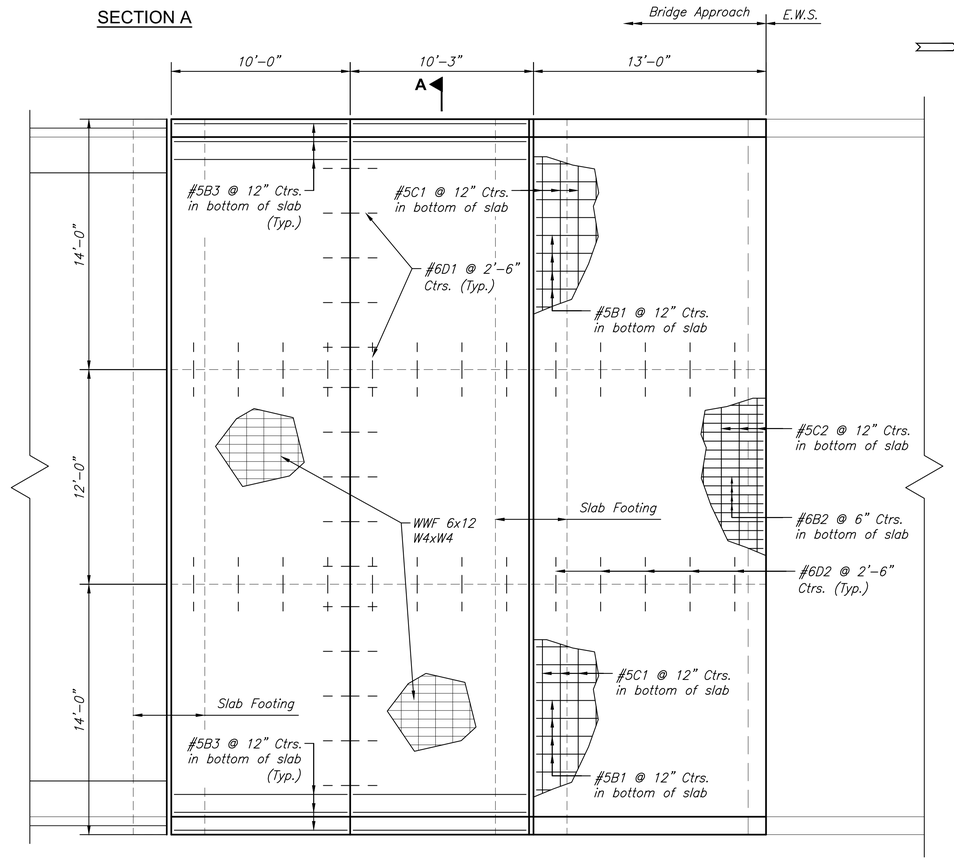
All dimensions are out to out of bars

GENERAL NOTES

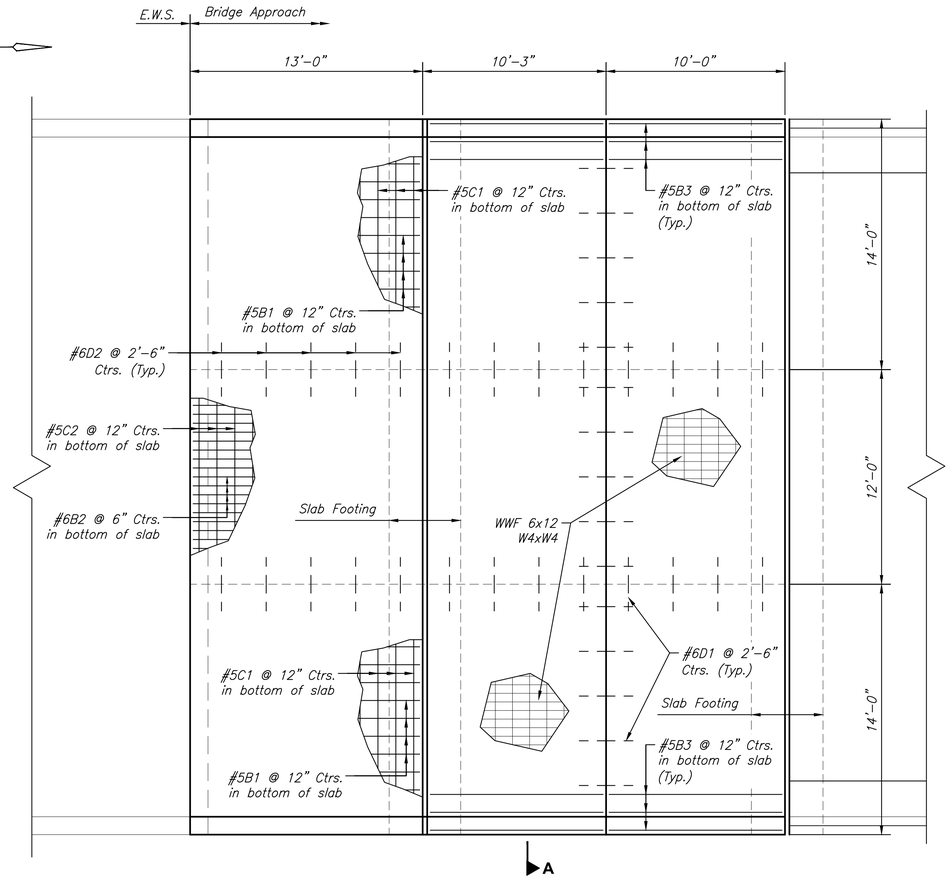
UNIT STRESSES:

Concrete $f'c = 4$ ksi
Reinforcing Steel (Epoxy-Coated) $f_y = 60$ ksi

1. *Special Concrete Bridge Approach shall be paid for as sq. yds of "Concrete Approach 12", Bridge" and includes all work and materials required to construct the approach slab as shown on this sheet.*
2. *Formed joints shall be edged with 1/4" radius tool for length of joint.*
3. *Clearance from the face of concrete for all reinforcing steel, unless noted, shall be 2".*
4. *All casting to existing concrete, if cast previously, shall be brush blasted and power washed prior to casting concrete.*
5. *All reinforcing steel shall be epoxy coated. All epoxy coating damaged or removed through cutting shall be replaced as required by Specifications. WWF does not require epoxy-coating.*
6. *Standard reinforcing bar hooks in accordance with the latest ACI specifications shall be used throughout.*
7. *All work and materials required for installation of expansion joints shall be subsidiary to the bid item "Concrete Approach 12", Bridge".*
8. *Cork Exp. Jt. and 20# Roofing Felt at each bridge E.W.S. shall be subsidiary to "Concrete Approach 12", Bridge".*



SOUTH APPROACH SLAB



NORTH APPROACH SLAB

MKEC
Wichita, KS • 316-684-9600

STREET IMPROVEMENTS FOR

135TH STREET WEST

FROM CENTRAL AVE TO 13TH STREET

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APPROACH SLAB DETAILS

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	NTS

DESIGNED	DRAWN	CHECKED
JRA	RAM	JRA

NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

SHEET NO.

44 OF 156

J:\PROJECTS\2022\220161\10447_COW_135TH STREET FROM CENTRAL TO 13TH STREET\00 220447 CAD\SHTS\05 CIVIL\PAV\220447-05-5161.DWG

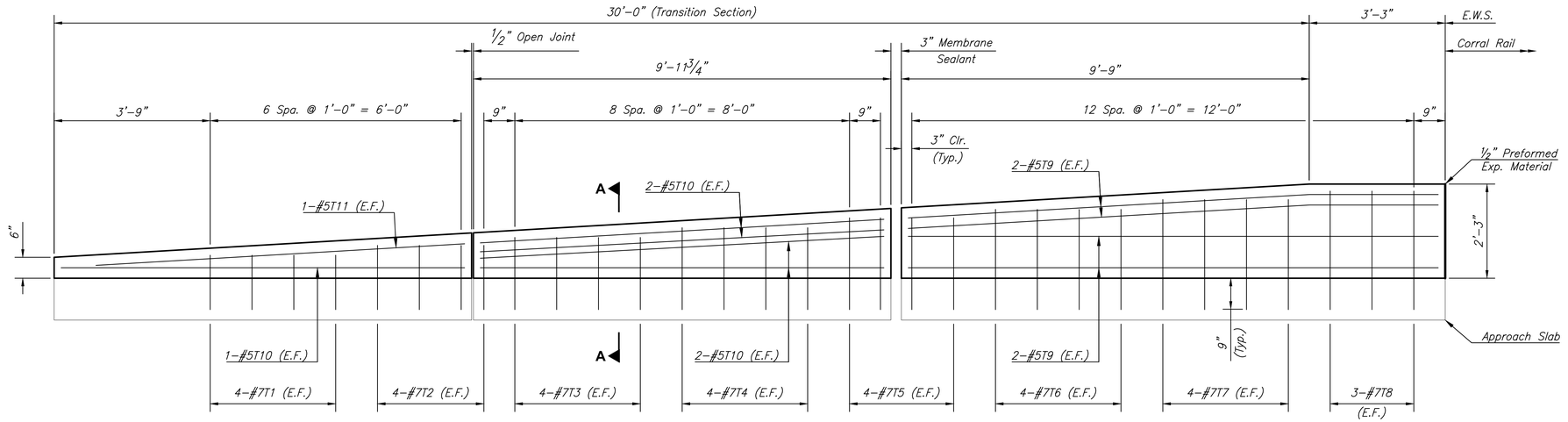
PLOTTED: Friday, February 20, 2026 @ 01:19PM

GENERAL NOTES

UNIT STRESSES:

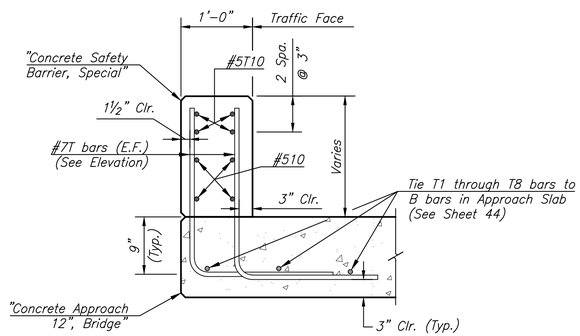
Concrete	$f'c = 4$ *ksi*
Reinforcing Steel (Epoxy–Coated)	$f_y = 60$ *ksi*

1. *The Transition Rail shall be constructed such that the Traffic Face of the Rail is 19'–0" from the CL Proposed Improvements*
2. *Quantities shown on this sheet are provided for information only.*
3. *All materials, labor, and equipment required for the construction of Transition Rail shall be considered subsidiary to the bid item "Concrete Safety Barrier, Special".*

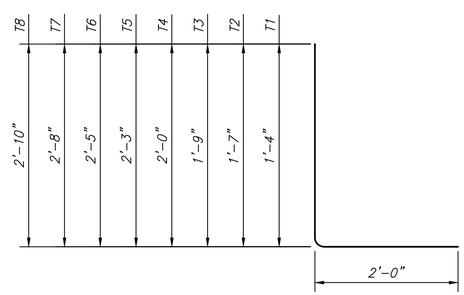


APPROACH SLAB TRANSITION RAIL ELEVATION

(Along Traffic Face, South and North Approach Slabs)



SECTION A-A



#7T Bars Bending Diagram

FOR INFORMATION ONLY

SUMMARY OF QUANTITIES
(All Four Concrete Safety Barrier Transitions Included)

Concrete (Grade 4.0)	*7.2 C.Y.*
Reinforcing Steel (Gr. 60), Epoxy–Coated)	*2,970 Lbs.*

FOR INFORMATION ONLY

BILL OF REINFORCING STEEL
(All Four Concrete Safety Barrier Transitions Included)

Straight Bars					*Bent Bars*				
Mark	*Size*	*No.*	*Length*	*Remarks*	*Mark*	*Size*	*No.*	*Length*	*Remarks*
T9	*#5*	*32*	*12'–8"*		*T1*	*#7*	*32*	*3'–4"*	
T10	*#5*	*40*	*9'–8"*		*T2*	*#7*	*32*	*3'–7"*	
T11	*#5*	*8*	*8'–10"*		*T3*	*#7*	*32*	*3'–9"*	
					T4	*#7*	*32*	*4'–0"*	
					T5	*#7*	*32*	*4'–3"*	
					T6	*#7*	*32*	*4'–5"*	
					T7	*#7*	*32*	*4'–8"*	
					T8	*#7*	*24*	*4'–10"*	

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STREET IMPROVEMENTS FOR

135TH STREET WEST

FROM CENTRAL AVE TO 13TH STREET

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CONCRETE SAFETY BARRIER TRANSITIONS

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	NTS

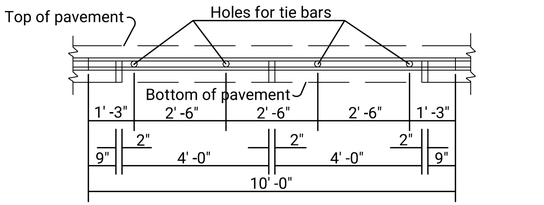
DESIGNED	DRAWN	CHECKED
JRA	RAM	JRA

NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

SHEET NO.

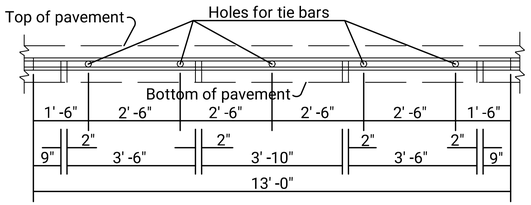
45 OF 156

J:\PROJECTS\2022\2201010447_COV_135TH STREET FROM CENTRAL TO 13TH STREET\100 220447 CAD\SHTS\05 CIVIL\PAV\220447-05-5162.DWG



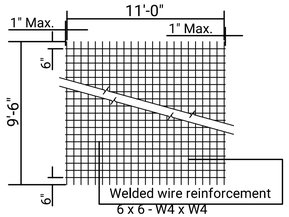
To be used only against forms. Shall not extend through contraction joints.

METAL STRIP FOR
LONGITUDINAL CONSTRUCTION JOINT (10'-0")



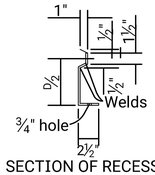
To be used only against forms. Shall not extend through contraction joints.

METAL STRIP FOR
LONGITUDINAL CONSTRUCTION JOINT (13'-0")



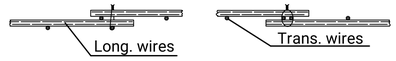
TYPICAL SHEET OF WELDED WIRE REINFORCEMENT
FOR SPECIAL BRIDGE APPROACH PAVEMENT

Note: Epoxy coated #3 bars longitudinally @ 12" ctrs. & #3 bars transversely @ 18" ctrs. may be substituted for each layer of epoxy coated welded wire reinforcement.



SECTION OF RECESSED
FORM LEG

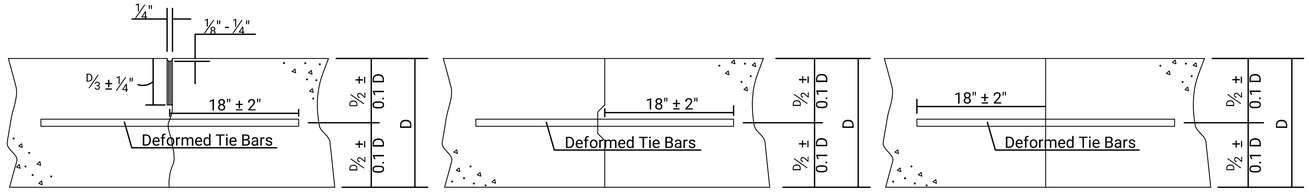
Snap-in leg or other approved designs may be used in lieu of welded leg.



DETAIL OF LAP FOR WELDED WIRE REINFORCEMENT

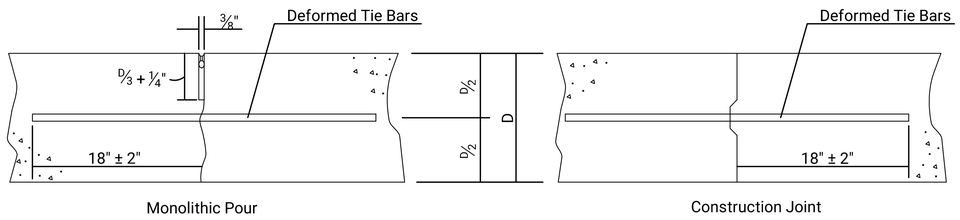
The lap shall extend beyond the first transverse or bag wire of each sheet.

The sheet shall be wired securely at the edges and at intervals not to exceed 2'-6" for the full width of the sheet. Approximate weight of welded wire reinforcement = 58 lbs. per 100 sq. ft. Other methods for fastening the sheets of welded wire reinforcement at the laps may be used with the approval of the Engineer.



LONGITUDINAL JOINTS

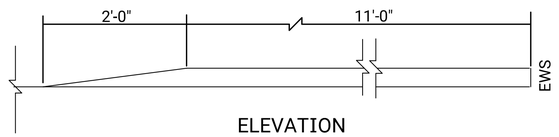
Note: For longitudinal construction joints the contractor has the option of using either the keyed or butt type. Place deformed tie bars mid-depth of the shoulder.



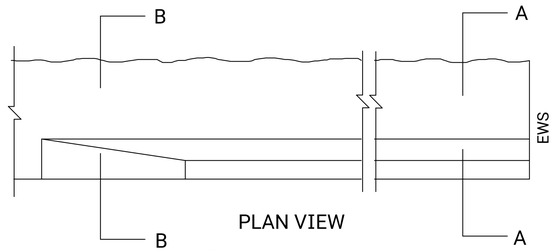
TRANSVERSE JOINTS

Note: A construction joint is required when the concrete placement has been interrupted for a substantial length of time or at the end of a day's placement.

No 4" Curb transition when adjacent to Flume Inlet.



ELEVATION



PLAN VIEW

4" EDGE CURB DETAIL

GENERAL NOTES

All work shall be done in conformity with the Standard Specifications applicable to the project.

The cost of all bars and joint material shown on this sheet is to be included in the bid price for Concrete Pavement.

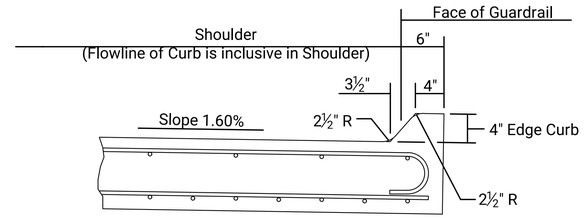
At each planned transverse joint location, a 4 to 6 inch wide strip of the pavement surface shall be protected from the texturing operation to provide a transverse textureless surface centered over the joint sawcut.

All sawed joints on this project shall be filled with sealant in accordance with Standard Specifications.

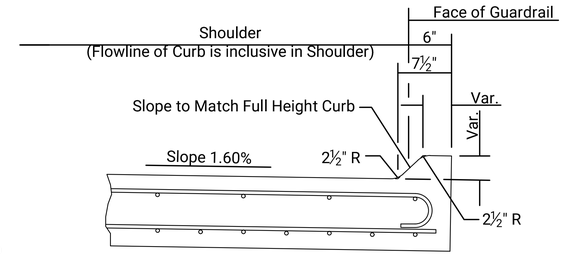
The 4 inch edge curb shall be constructed integral with the approach slab shoulder.

All materials and work required for this construction shall be subsidiary to the concrete approach slab.

Tie bars shall be evenly spaced along the length of the slab and no tie bars shall be within 12" of contraction joint.



SECTION A-A



SECTION B-B

NO.	DATE	REVISIONS	BY	APP'D
13	05-17-13	Revised_Note_Longitudinal_Joints	S.W.K.	J.O.B.
12	05-14-09	Pres._Relief_Jt._to_RD712/tie_bar_lab.	S.W.K.	J.O.B.
11	10-23-08	Revised_Sec._A-A_and_Sec._B-B	S.W.K.	J.O.B.

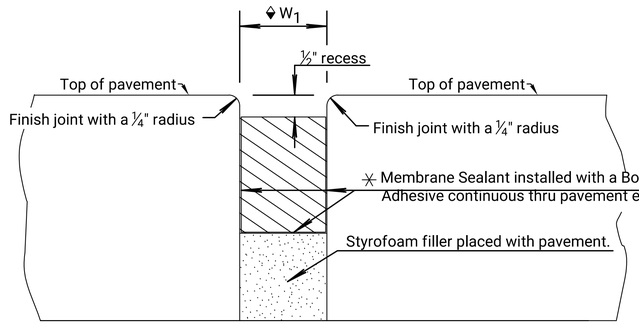
KANSAS DEPARTMENT OF TRANSPORTATION

MISCELLANEOUS DETAILS FOR CONCRETE BRIDGE APPROACH PAVEMENT

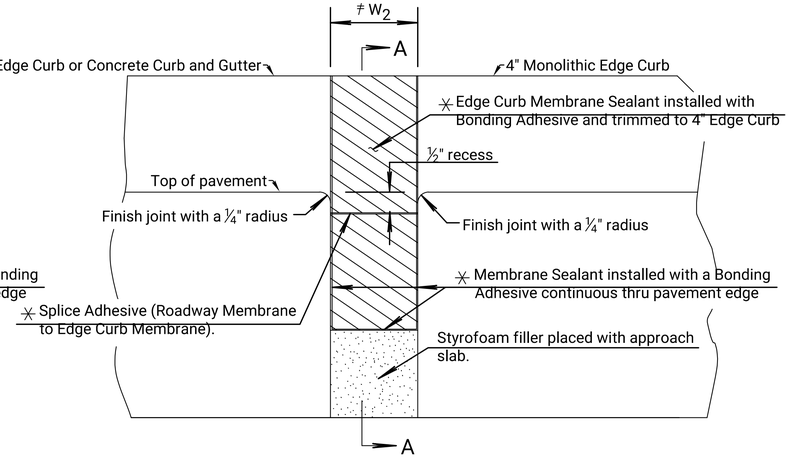
RD711

FHWA_APPROVAL	10-23-13	APP'D.	James_O._Brewer
DESIGNED	DETAILED	QUANTITIES	TRACED
DESIGN CK.	DETAIL CK.	QUAN.CK.	TRACE CK.

J:\Projects\2022\220101047_COW_135th Street from Central to 13th Street\00 220447 CAD\SHTS\05 Civil\Std\Road\RD-711.dwg



ELEVATION PRESSURE RELIEF JT.



ELEVATION EXPANSION JT.

GENERAL NOTES

EXPANSION/PRESSURE RELIEF JOINTS

See Concrete Bridge Approach Pavement standard drawings for location of expansion and pressure relief joints.

Form the joint opening prior to placement of the pavement approach. Remove the material used to form the joint after the pavement approach has been in place for a minimum of 6 days.

Clean and construct the joint only after the concrete in the approach slab has cured for a minimum of 7 days.

Thoroughly clean the joint by sandblasting and by high pressure air blast to remove all laitance and contaminants from the joint. When any joint is shaped by saw cutting in lieu of forming, blast the joint with water prior to sandblasting and air cleaning.

Accomplish sandblasting in two passes to clean each face of the joint (one pass for each face). Hold the nozzle 1 to 2 inches from the joint face at an angle to the joint face.

Remove any contaminants such as oil, curing compound, etc. by sandblasting to the satisfaction of the Engineer. Solvents, wire brushing, or grinding are not permitted.

Air blast the joint just prior to installing the Membrane Sealant. Equip the air compressor used to clean the joint with trap devices capable of providing moisture-free and oil-free air at a recommended pressure of 90 psi. Spot check the joint to verify any residual dust or dirt has been removed. The Engineer is required to inspect the joint immediately prior to installing the joint material.

⚹ See KDOT Standard Specifications for Membrane Sealant, Bonding Adhesive and Splice Adhesive. The width of the membrane sealant is 4 inches (nominal).

Do not allow traffic on the joint for a minimum of 3 hours unless otherwise directed by the Engineer.

Use splice materials and methods recommended by the Manufacturer.

All work and materials for the preparation, construction, and installation of the joint will be subsidiary to the concrete approach pavement.

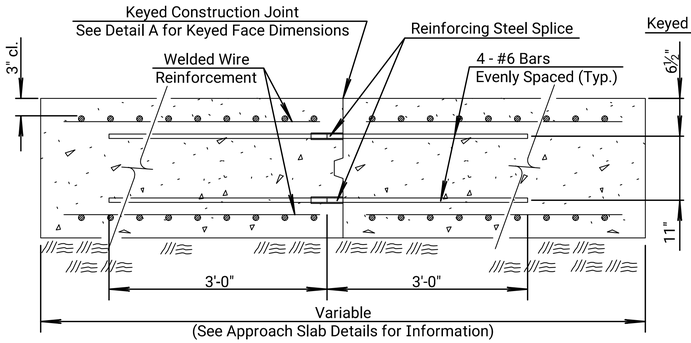
BRIDGE APPROACH SLAB FOOTING

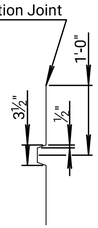
Pay for the Bridge Approach Slab Footing at the unit price bid per cubic yard for "Bridge Approach Slab Footing". This price will be full compensation for furnishing all materials and labor including Concrete Grade 4.0 (AE) Pavement, Reinforcing Steel (Gr. 60) (Epoxy Coated), excavation, Type "A" Compaction and materials used to prevent bonding of concrete. The Contractor may use Concrete Grade 4.0 (AE) or the mix used in the concrete pavement for the slab footing.

◆ PRESSURE RELIEF JOINT WIDTH DETAILS (W_1)							
ᵞ Temperature (F°)	40°	50°	60°	70°	80°	90°	100°
Formed Concrete Opening Size	4.0"	3¾"	3½"	3¼"	3.0"	2¾"	2½"

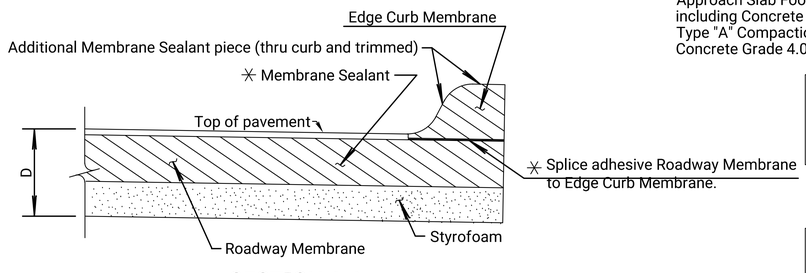
ᵞ Average Ambient Temperature over previous 24 hours.

≠ EXPANSION JOINT WIDTH DETAILS (W_2)
See bridge construction layout sheet for details.





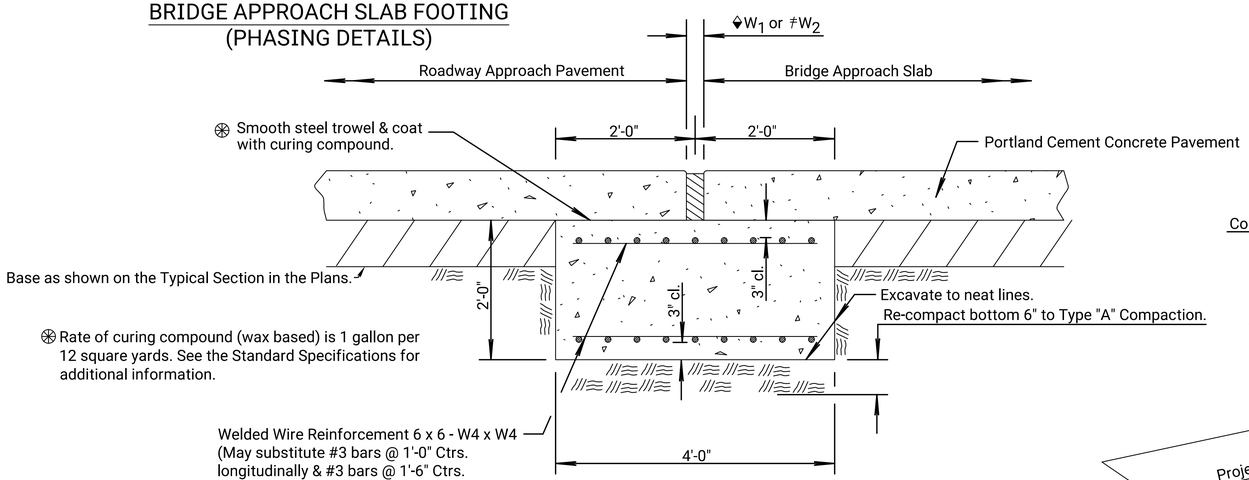
DETAIL A



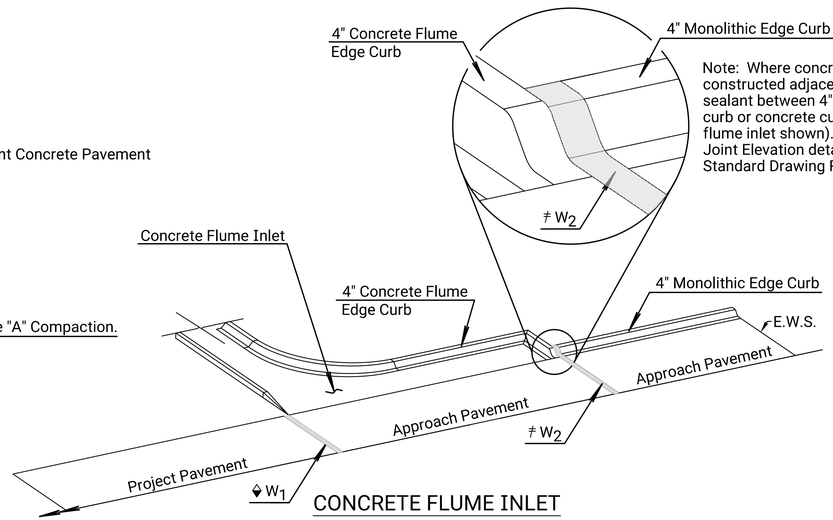
SECTION A-A

(See Std. Drawing RD711 for details of 4" Edge Curb.)

BRIDGE APPROACH SLAB FOOTING
(PHASING DETAILS)



BRIDGE APPROACH SLAB FOOTING



CONCRETE FLUME INLET

(Membrane Sealant Placed Through Edge Curb Detail)

Note: Where concrete flume inlets or concrete curb and gutter are constructed adjacent to bridge approach slab pavement place membrane sealant between 4" monolithic edge curb and 4" concrete flume inlet edge curb or concrete curb and gutter as shown on this sheet (concrete flume inlet shown). See approach slab Standard Drawings, Expansion Joint Elevation detail this sheet, Standard Drawing RD628, and Standard Drawing RD635 for additional details.

LEGEND

Membrane Sealant

NO.	DATE	REVISIONS	BY	APP'D
10	01-22-16	Add_Det._Keyed_Joint_&_Flume_Inlet	T.T.R.	S.W.K.
09	10-16-13	Revised_General_Note	S.W.K.	J.O.B.
08	04-04-13	Rev._Joint_Width_Det._Table	S.W.K.	J.O.B.

KANSAS DEPARTMENT OF TRANSPORTATION

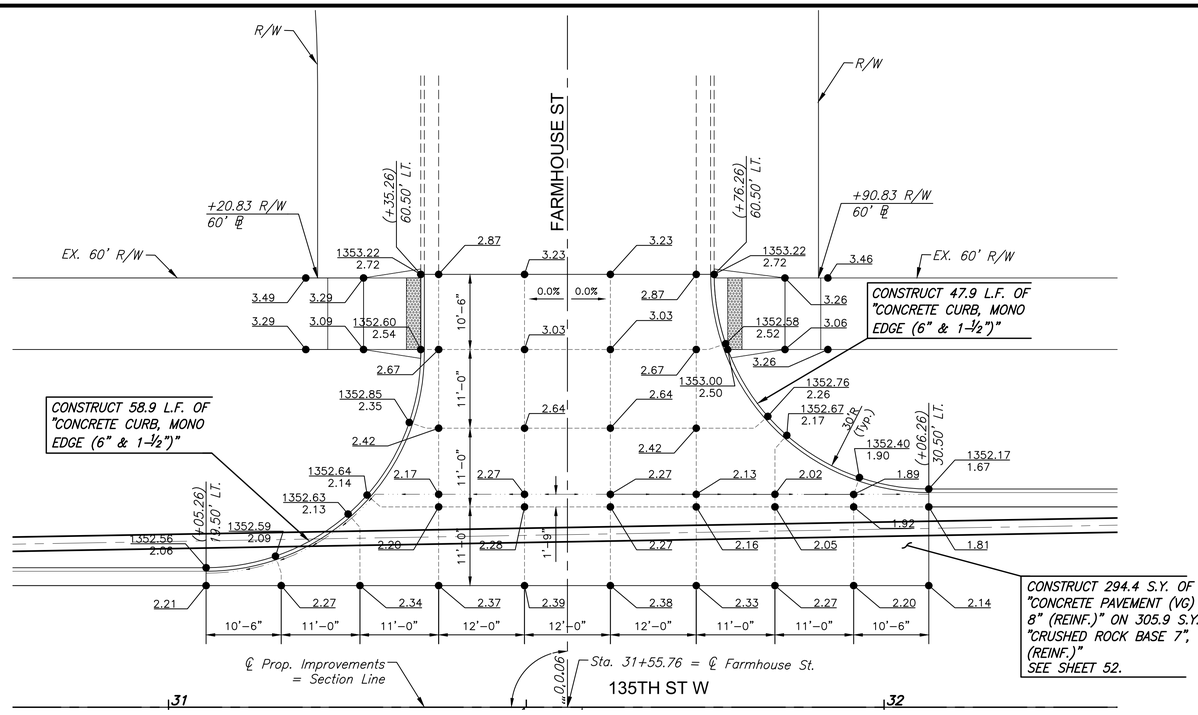
BRIDGE APPROACH SLAB DETAILS EXPANSION/PRESSURE RELIEF JOINT/ BRIDGE APPROACH SLAB FOOTING

RD712

FHWA_APPROVAL		02-01-16	APP'D.		Scott_W._King
DESIGNED		DETAILED		QUANTITIES	TRACED
DESIGN CK.		DETAIL CK.		QUAN.CK.	TRACE CK.

J:\Projects\2022\220101044?_COW_135th Street from Central to 13th Street\00 220447 CAD\SHTS\05 Civil\Std\Road\RD-712.dwg

PLOTTED: Friday, February 20, 2026 @ 01:20PM

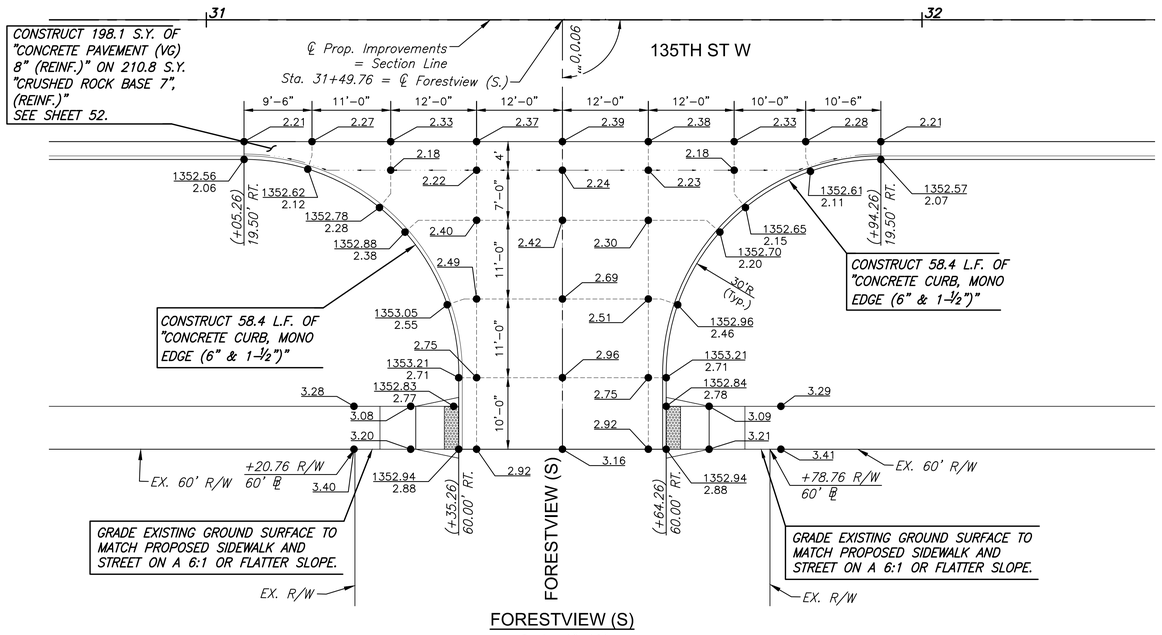


FARMHOUSE ST

Scale: 1"=10'

SCALE: 1"=10'

0 10 20



FORESTVIEW (S)

Scale: 1"=10'

LEGEND

= Valley Gutter Flow Direction

100.00 / 99.50 — Back of Curb Elevation / Flow Line Elevation

100.00 — High Edge of Curb Elevation

100.00 / 99.65 — Back of Curb Elevation / Flow Line Elevation

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STREET IMPROVEMENTS FOR

135TH STREET WEST

FROM CENTRAL AVE TO 13TH STREET

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VALLEY GUTTER PAVING PLAN

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	1"=10'

DESIGNED	DRAWN	CHECKED
DMU	RAM	JRA

NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

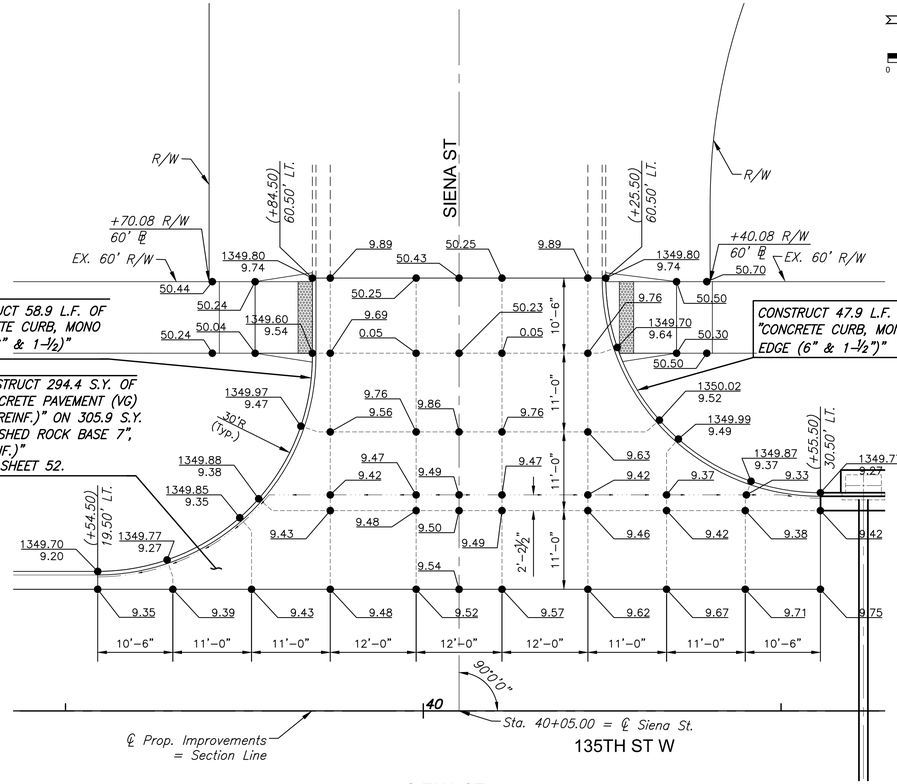
SHEET NO.

48 OF 156

Sh. No. 48

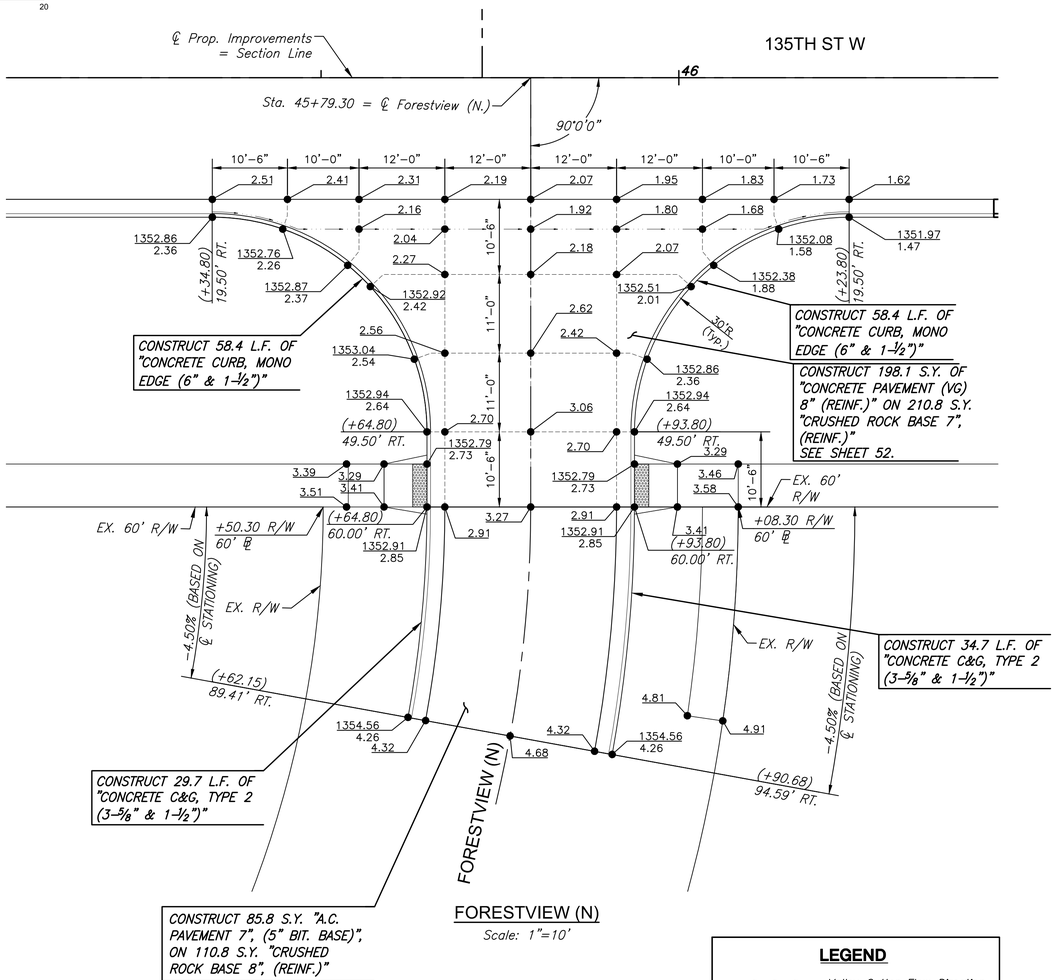
J:\PROJECTS\0222201\010447_COV_135TH STREET FROM CENTRAL TO 13TH STREET\00 220447 CAD\SHTS\05 CIVIL\PAV\220447-05-5170.DWG

PLOTTED: Friday, February 20, 2026 @ 01:20PM



SIENA ST

Scale: 1"=10'



FORESTVIEW (N)

Scale: 1"=10'

LEGEND

= Valley Gutter Flow Direction

100.00 / 99.50 — Back of Curb Elevation / Flow Line Elevation

100.00 — High Edge of Curb Elevation

100.00 / 99.65 — Back of Curb Elevation / Flow Line Elevation

MKEC
Wichita, KS • 316-684-9600

STREET IMPROVEMENTS FOR

135TH STREET WEST

FROM CENTRAL AVE TO 13TH STREET

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VALLEY GUTTER PAVING PLAN

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	1"=10'

DESIGNED	DRAWN	CHECKED
DMU	RAM	JRA

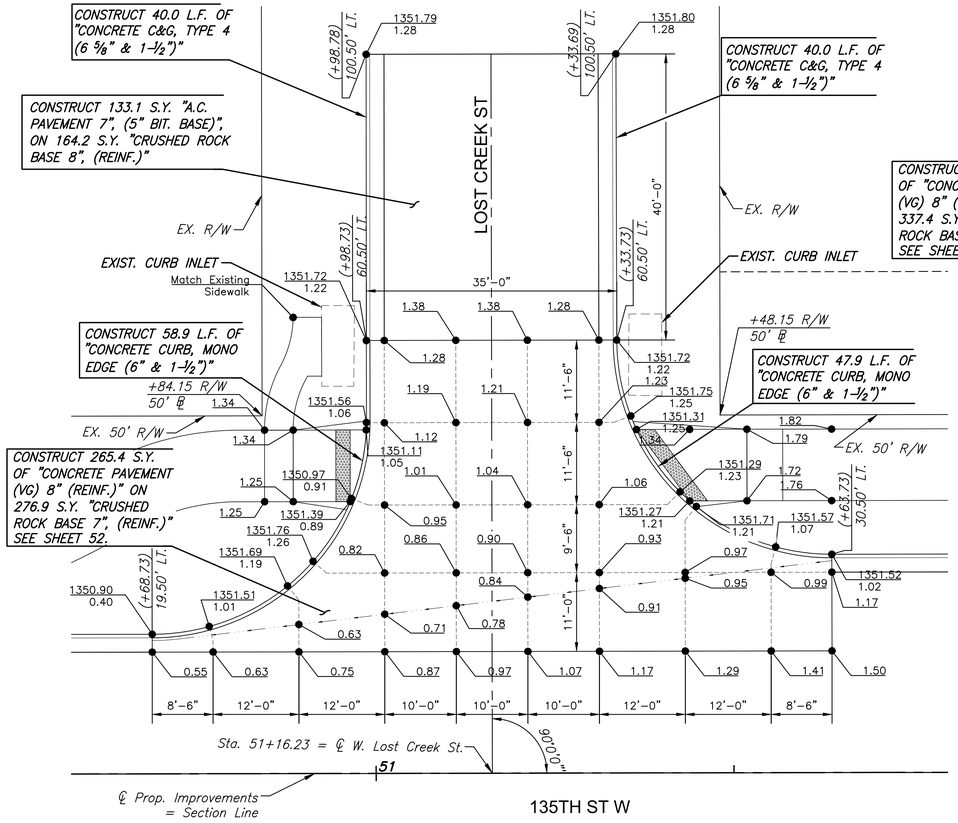
NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

SHEET NO.

49 OF 156

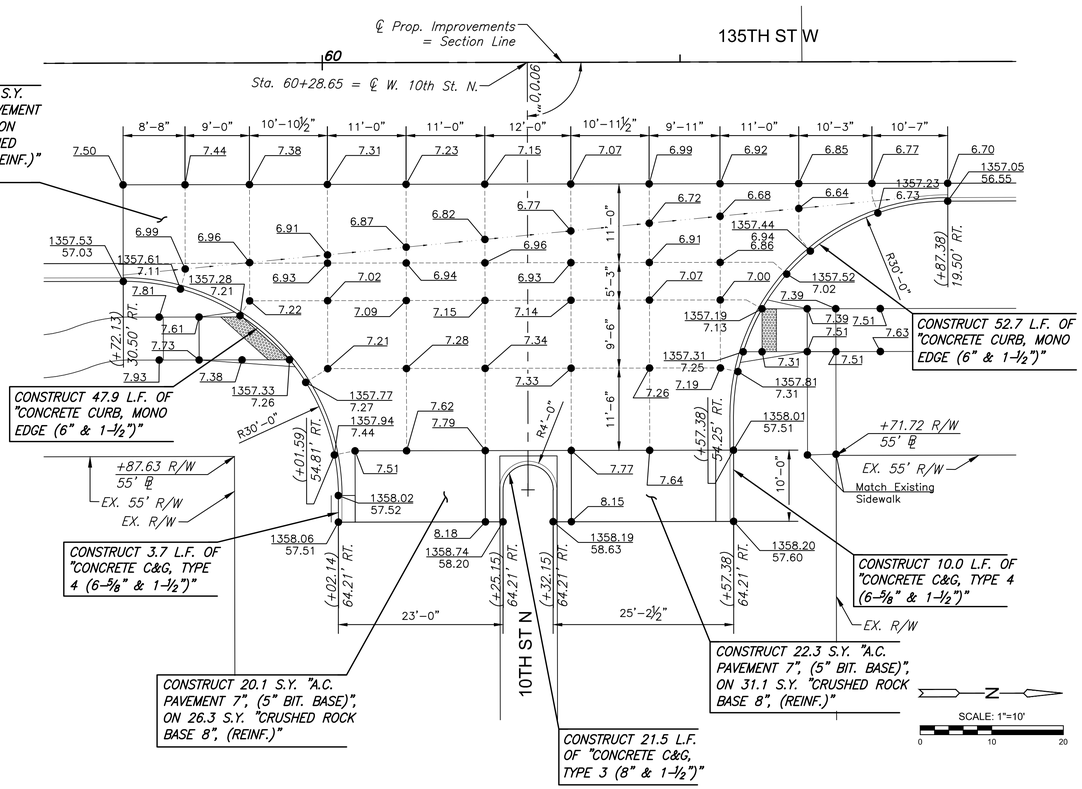
J:\PROJECTS\0222\20161\0447_COV_135TH STREET FROM CENTRAL TO 13TH STREET\00 220447 CAD\SHTS\05 CIVIL\PAV\220447-05-5170.DWG

PLOTTED: Friday, February 20, 2026 @ 01:20PM



LOST CREEK ST

Scale: 1"=10'



10TH ST N

Scale: 1"=10'

LEGEND

= Valley Gutter Flow Direction

100.00 / 99.50 — Back of Curb Elevation / Flow Line Elevation

100.00 — High Edge of Curb Elevation

100.00 / 99.65 — Back of Curb Elevation / Flow Line Elevation

MKEC
Wichita, KS • 316-684-9600

STREET IMPROVEMENTS FOR

135TH STREET WEST

FROM CENTRAL AVE TO 13TH STREET

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VALLEY GUTTER PAVING PLAN

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	1"=10'

DESIGNED	DRAWN	CHECKED
DMU	RAM	JRA

NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

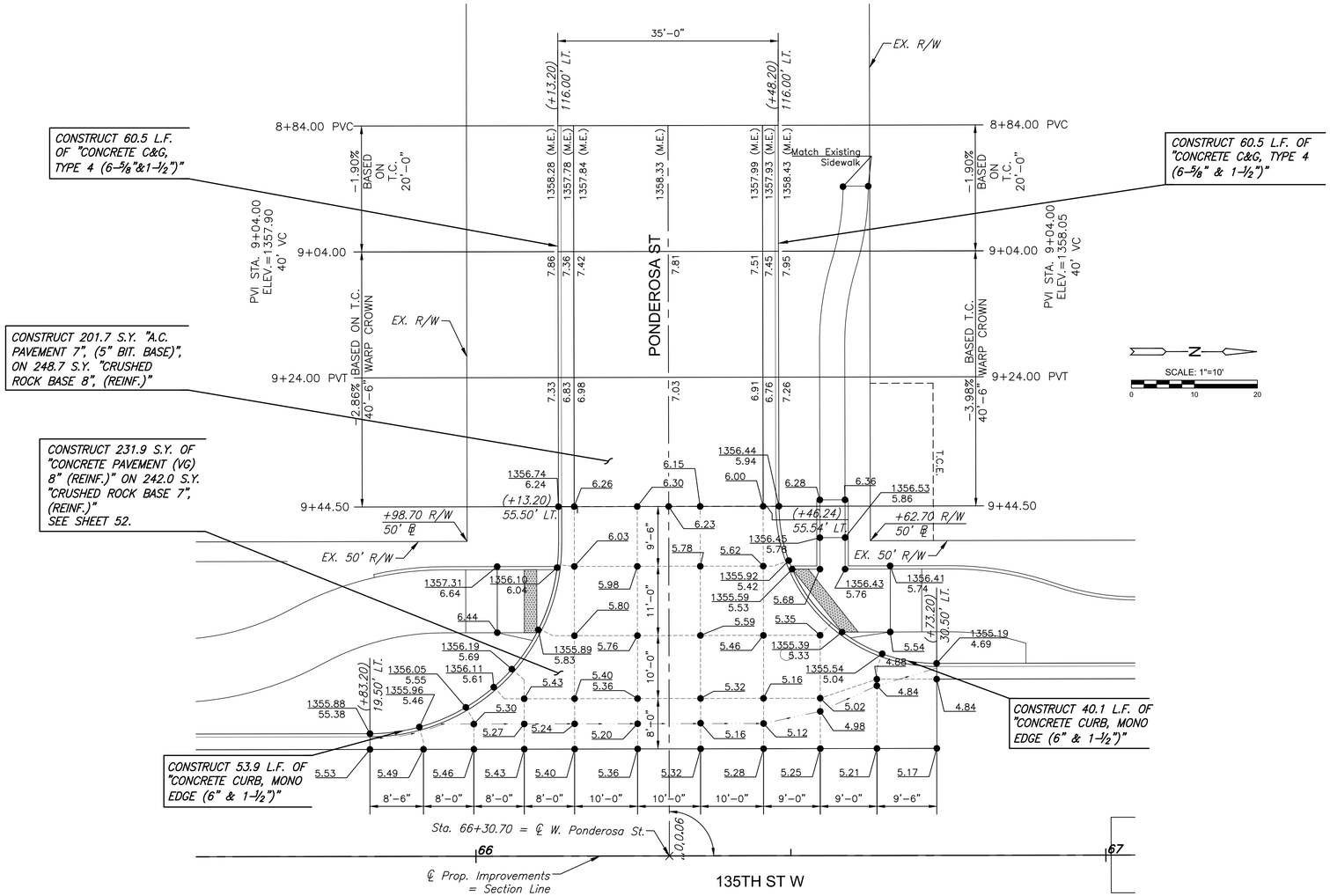
SHEET NO.

50 OF 156

Sh. No. 50

J:\PROJECTS\2022\2201010447_COW_135TH STREET FROM CENTRAL TO 13TH STREET\00 220447 CAD\SHTS\VS CIVIL\PAV\220447-05-S170.DWG

PLOTTED: Friday, February 20, 2026 @ 01:20PM



PONDEROSA ST

Scale: 1"=10'

LEGEND

- = Valley Gutter Flow Direction
- 100.00 / 99.50 — Back of Curb Elevation / Flow Line Elevation
- 100.00 — High Edge of Curb Elevation
- 100.00 / 99.65 — Back of Curb Elevation / Flow Line Elevation

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STREET IMPROVEMENTS FOR

135TH STREET WEST

FROM CENTRAL AVE TO 13TH STREET

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VALLEY GUTTER PAVING PLAN

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	1"=10'

DESIGNED	DRAWN	CHECKED
DMU	RAM	JRA

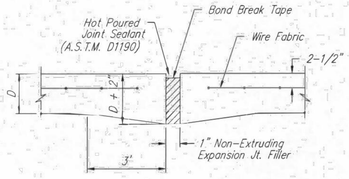
NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

SHEET NO.

51 OF 156

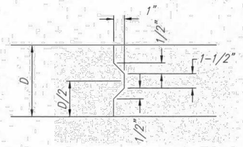
Sh. No. 51

J:\PROJECTS\2022\2201010447_COW_135TH STREET FROM CENTRAL TO 13TH STREET\00 220447 CAD\SHTS\05 CIVIL\PAV\220447-05-5170.DWG

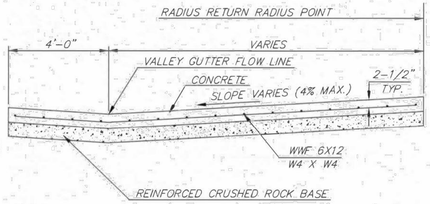


EXPANSION JOINT

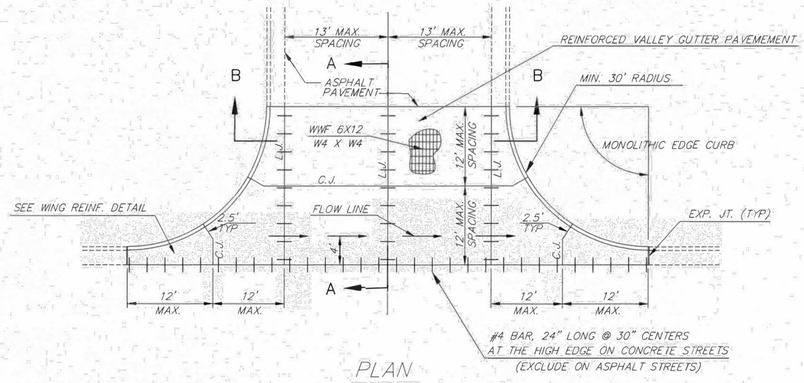
NOTE: Extra Thickness to be Subsidiary to Price of Square Yards Pavement



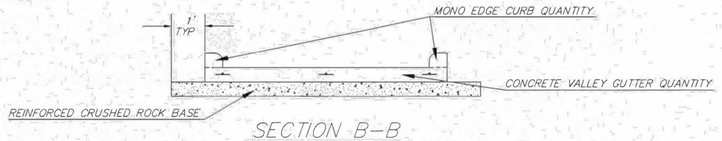
KEYWAY DETAIL



SECTION A-A

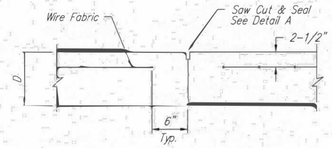


PLAN

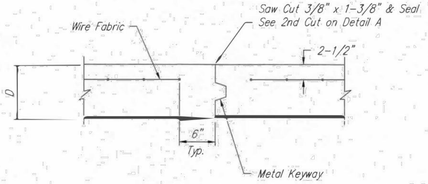


SECTION B-B

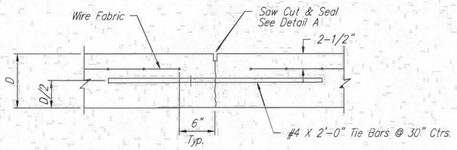
REINFORCED VALLEY GUTTER DETAIL



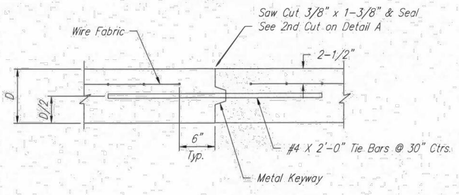
CONTRACTION JOINT DETAIL (C.J.)



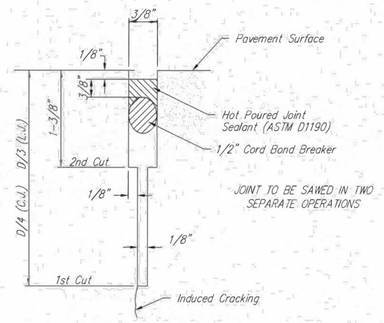
OPTIONAL CONTRACTION JOINT



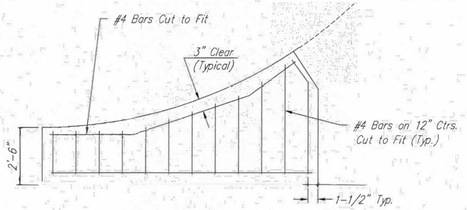
LONGITUDINAL JOINT DETAIL (L.J.)



OPTIONAL LONGITUDINAL JOINT DETAIL (L.J.)



SAW JOINT DETAIL
(DETAIL A)



WING REINFORCING DETAIL

GARY L. JANZEN
LICENSED
12/2/25
KANSAS
PROFESSIONAL ENGINEER

REVISION MAY 2017	SECTION B-B, ROCK EXTENDED ONE FOOT BEYOND PAVEMENT

CITY OF WICHITA

PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

VALLEY GUTTER DETAILS

CITY ENGINEER
GARY JANZEN, P.E.

PROJECT NUMBER	OCA NUMBER	DATE
472-2021-085756	40106822	9/26/2025

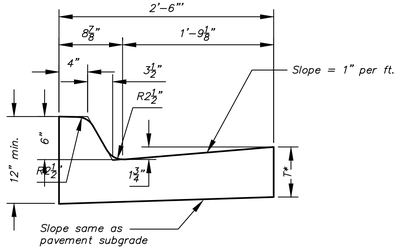
CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202-1620
(316) 268-4501

SHEET
52 OF 156

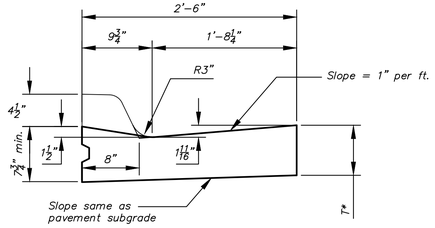
PV-108
Sh. No. 52

J:\Projects\2022\220010447_COW_135th Street from Central to 13th Street\00 220447 CAD\SHTS\05 Civil\Std\Pav\COW\DWG\PV-109 Valley Gutter Details.dwg

TYPE 1
(Arterial curb)

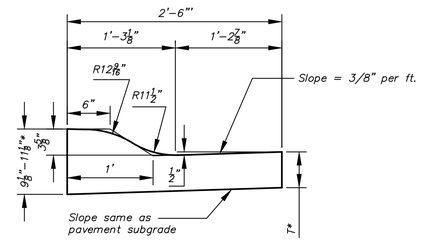


Combined Curb & Gutter (6")

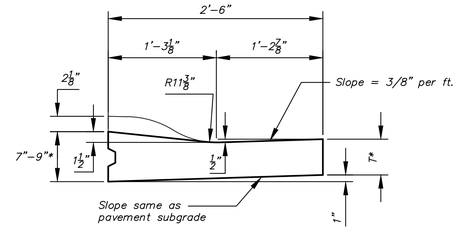


Combined Curb & Gutter (1 1/2")

TYPE 2
(Roll curb)

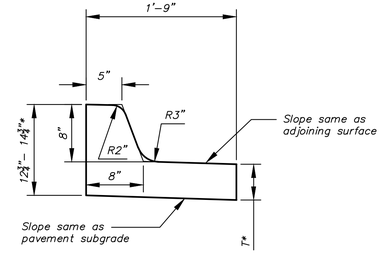


Combined Curb & Gutter (3 5/8")

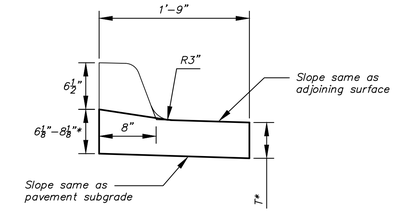


Combined Curb & Gutter (1 1/2")

TYPE 3
(Median curb)

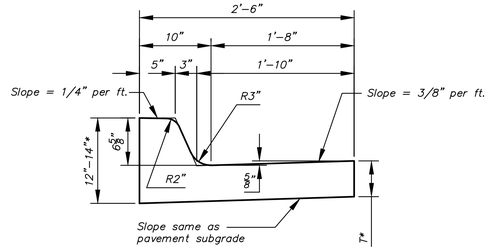


Combined Curb & Gutter (8")

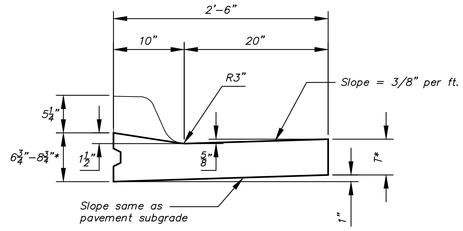


Combined Curb & Gutter (1 1/2")

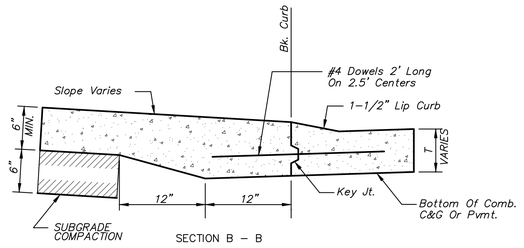
TYPE 4
(Residential curb)



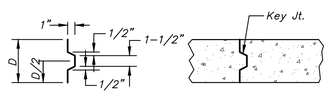
Combined Curb & Gutter (6 5/8")



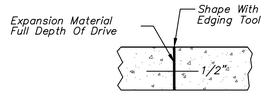
Combined Curb & Gutter (1 1/2")



BACK OF CURB DETAIL



ALT. LONGITUDINAL CONSTRUCTION JOINT

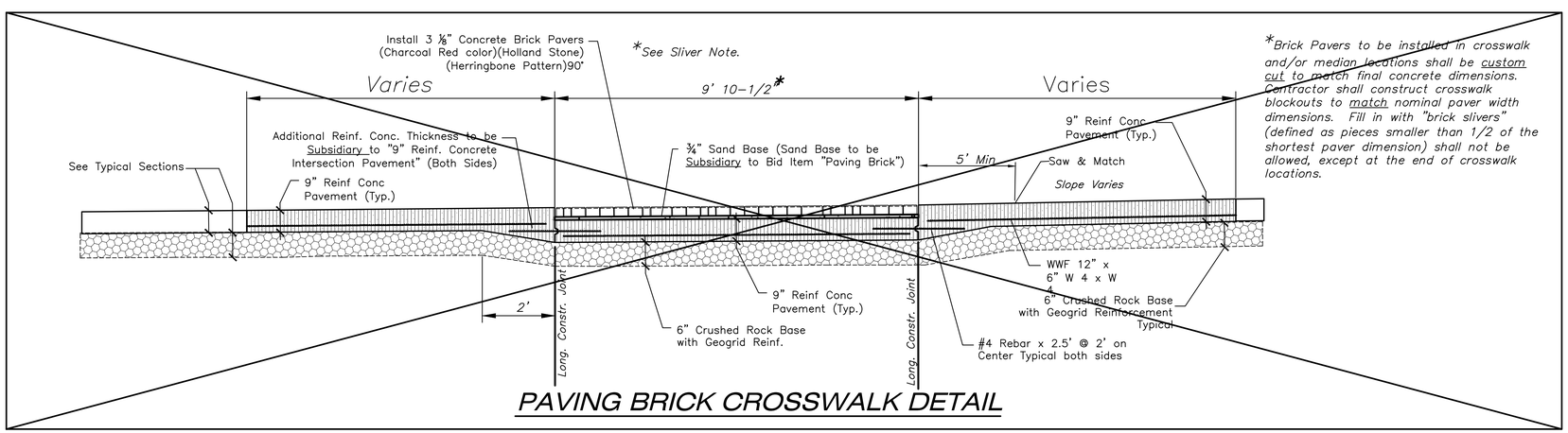


EXPANSION JOINT (E.J.)

T* = Thickness of curb to adjust with pavement thickness

GENERAL NOTES

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



*Brick Pavers to be installed in crosswalk and/or median locations shall be custom cut to match final concrete dimensions. Contractor shall construct crosswalk blockouts to match nominal paver width dimensions. Fill in with "brick slivers" (defined as pieces smaller than 1/2 of the shortest paver dimension) shall not be allowed, except at the end of crosswalk locations.

PAVING BRICK CROSSWALK DETAIL

REVISED: OCTOBER 2015

CITY OF WICHITA
PUBLIC WORKS & UTILITIES ENGINEERING DIVISION

CURB & GUTTER & PAVING BRICK CROSSWALK DETAILS

CITY ENGINEER
GARY JANZEN, P.E.

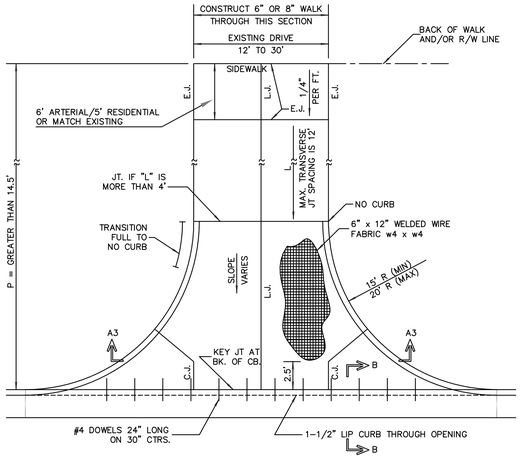
PROJECT NUMBER	OCA NUMBER	DATE
472-2021-085756	40106822	9/26/2025

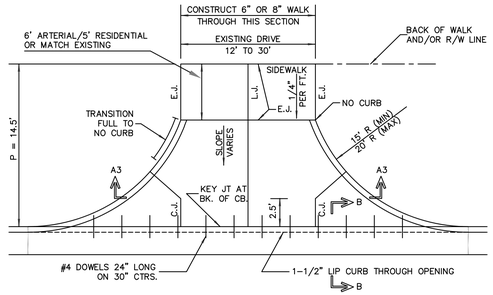
CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202-1620
(316) 268-4501

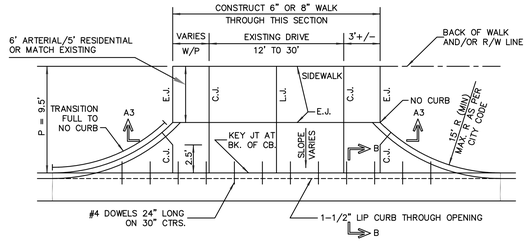
SHEET
53 OF 156

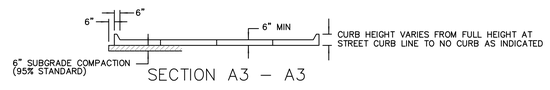
PV-101

J:\Projects\2022\220101044?_COW_135th Street from Central to 13th Street\00 220447 CAD\SHTS\05 Civil\Std\Pav\COW\DWG\PV-101 C & G-Paving Brick Crosswalk.DWG



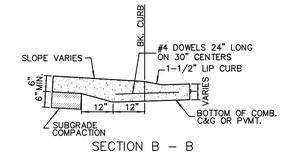






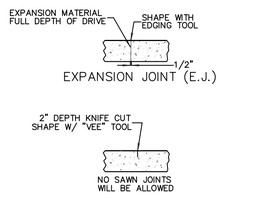
SECTION A3 – A3

FULL RADIUS DRIVES (ARTERIAL/COLLECTOR DRIVEWAY)

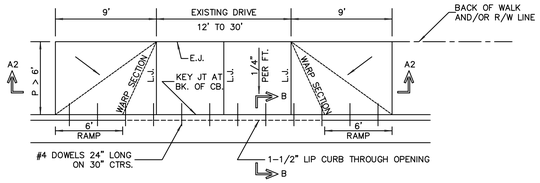


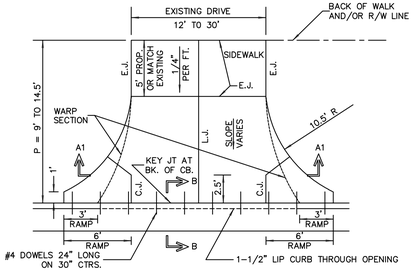
SECTION B – B

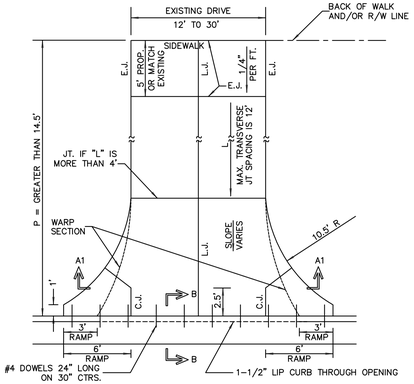
ALT. LONGITUDINAL CONSTRUCTION JOINT

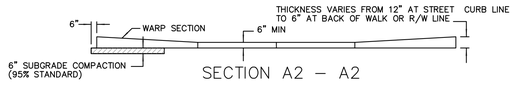


BACK OF CURB DETAIL



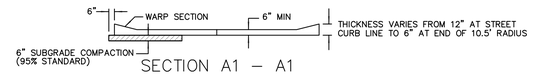






SECTION A2 – A2

FULL RAMP DRIVES (P = 4.0' & 6.5')



SECTION A1 – A1

RADIUS RAMP DRIVES (RESIDENTIAL DRIVEWAY)

GENERAL NOTES

1. DRIVEWAY CONSTRUCTION DETAILED ON THIS SHEET IS FOR USE WITH FULL HEIGHT STREET CURBS AND IN AREAS WITHOUT FULL WALK CONSTRUCTION IN THE PARKING. SEE OTHER DETAIL SHEETS FOR DRIVEWAY CONSTRUCTION WITH ROLL CURB AND/OR FULL WALK.
2. ONE LONGITUDINAL JOINT SHALL BE CONSTRUCTED ALONG THE CENTERLINE OF DRIVES HAVING A WIDTH DIMENSION OF 24' OR LESS. TWO LONGITUDINAL JOINTS SHALL BE CONSTRUCTED WITH EQUAL SPACINGS NOT TO EXCEED 10' FOR DRIVES WITH A WIDTH DIMENSION GREATER THAN 24'.
3. DRIVEWAY WIDTH DENOTED AS WIDTH ON THE DETAIL DRAWINGS SHALL BE A MINIMUM OF 12' AND A MAXIMUM OF 30'. THE MAXIMUM OPENING FOR RADIUS TYPE DRIVES WITH CURBS THROUGH THE RADIUS SHALL NOT EXCEED 52' AT THE STREET CURB LINE.
4. CONTRACTION JOINT SPACING IN THE DRIVEWAY WALK SECTION SHALL BE A MINIMUM OF 3' AND A MAXIMUM OF 6' AND ARE TO BE EQUALLY SPACED WITHIN THIS RANGE. WALK SECTION SHALL BE CONSTRUCTED TO THE SAME THICKNESS AS THE DRIVEWAY.
5. ADDITIONAL THICKNESS OF DRIVE AS INDICATED IN THE DRAWINGS WILL NOT BE PAID FOR DIRECTLY AND THIS COST SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE DRIVEWAY CONSTRUCTION.
6. ONE HALF INCH EXPANSION JOINTS SHALL BE INSTALLED WHEREVER DRIVE CONSTRUCTION ABUTS SIDEWALK. ONE HALF INCH EXPANSION JOINTS SHALL ALSO BE INSTALLED ALONG THE PROPERTY LINE AND/OR BACK OF WALK LINE WHEN DRIVE CONSTRUCTION ALONG THIS LINE ABUTS CONCRETE PARKING LOTS OR CONCRETE DRIVE EXTENSION.
7. DRIVEWAYS ONLY ON RESIDENTIAL PROPERTIES ONLY CAN BE CONSTRUCTED WITH 6" IN THICKNESS AND CAN BE WITHOUT REINFORCEMENT.
8. ALL DRIVEWAYS TO NONRESIDENTIAL PROPERTY SHALL BE A MINIMUM OF 8" IN THICKNESS AND SHALL HAVE REINFORCEMENT WITH 6"x12", W4xW4.

REVISED: NOVEMBER 2015

CITY OF WICHITA
PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

STANDARD DRIVE ENTRANCES FULL HEIGHT CURB

CITY ENGINEER
GARY JANZEN, P.E.

PROJECT NUMBER	OCA NUMBER	DATE
472-2021-085756	40106822	9/26/2025

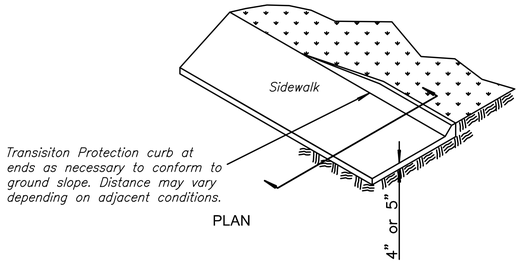
CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202-1620
(316) 268-4501

SHEET
54 OF 156

PV-126

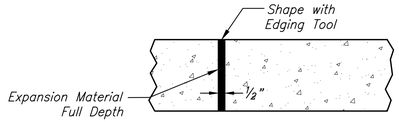
J:\Projects\2022\220101047_COW_135th Street from Central to 13th Street\00 220447 CAD\SHTS\05 Civil\Std\Pav\COW\DWG\PV-126 Standard Drive Details.DWG

PLOTTED: Friday, February 20, 2026 @ 01:20PM



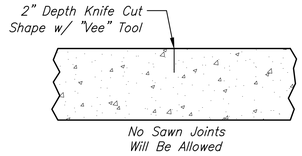
PLAN

Note:
1. Protection Curb shall be constructed at locations as directed by Engineer.
2. Protection Curb shall be constructed monolithically with sidewalk.
3. Protection Curb height will vary as shown on grading sheets. No distinction will be made between heights regarding payment.

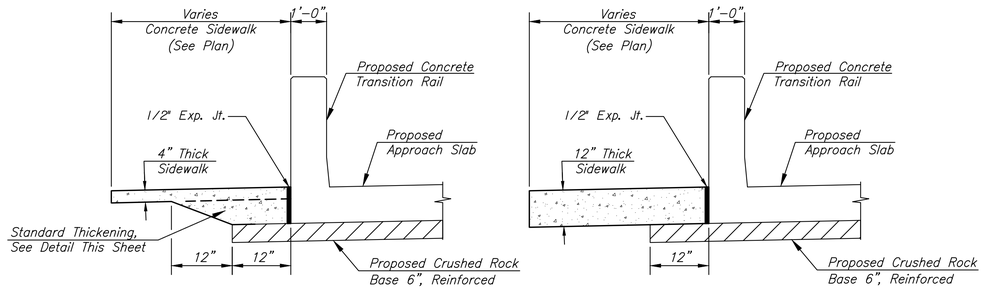


EXPANSION JOINT (E.J.)

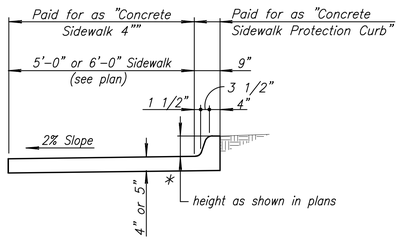
Note: When sidewalks of varying thickness abut against each other, add expansion joint material.



CONTRACTION JOINT (C.J.)



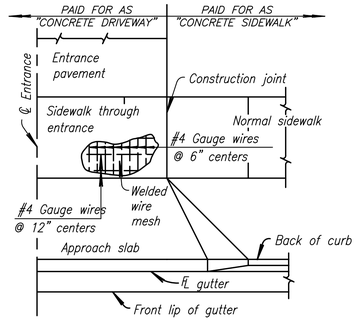
SIDEWALK AT BRIDGE APPROACH



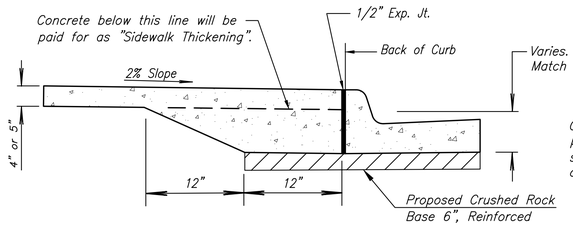
SECTION

* Transition at ends as shown on the plans.

CONCRETE SIDEWALK PROTECTION CURB

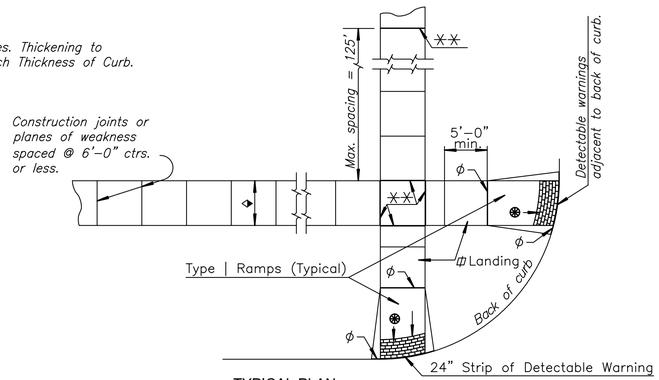


REINFORCEMENT DIAGRAM SIDEWALK THROUGH DRIVE APPROACH

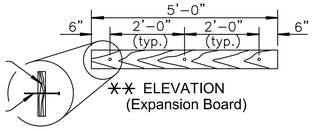


SIDEWALK THICKENING

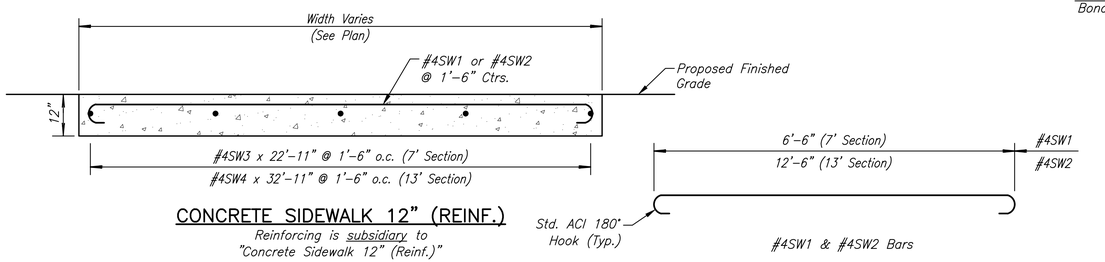
Note: All Sidewalk at Back of Curb Shall Conform to this Detail



TYPICAL PLAN

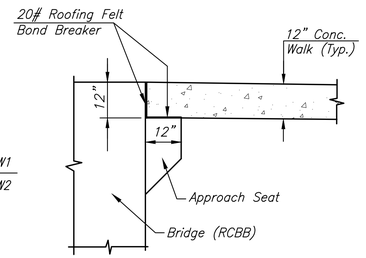


For other than 5'-0" (width) use 6" from the end and balanced (3'-0" max.) nail spacing.

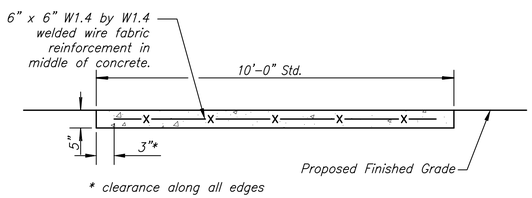


CONCRETE SIDEWALK 12" (REINF.)

Reinforcing is subsidiary to "Concrete Sidewalk 12" (Reinf.)"

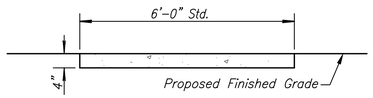


SIDEWALK AT BRIDGE APPROACH SEAT



CONCRETE SIDEWALK 5" (REINF.)

Reinforcing is subsidiary to "Concrete Sidewalk 5" (Reinf.)"



CONCRETE SIDEWALK 4"

ϕ Expansion Joint (3/4" board) placed at either back of curb line or at sidewalk back of curb line or at sidewalk line.

✳✳ Expansion joint (3/4" board) located as shown.

◆ Variable width (5'-0" min.). Entrance walk to be same width as approach walk. Use sidewalk width of 4'-0" where existing conditions prohibit use of 5'-0".

✡ New construction ramp slopes are 12: 1 or flatter. Desirable ramp slopes for existing sites are 12:1 or flatter. Where space limitations prohibit construction of a 12:1 slope on existing sites, use the following slopes:
8:1 or flatter for a maximum rise of 3 inches
10:1 or flatter for a maximum rise of 6 inches

⧈ Use a landing slope of 48: 1 or flatter. Landings are the same width as ramp and a minimum 5'-0" in length.

Ψ Use a counter slope of 20:1 or flatter at the base of sidewalk ramps. See curb and gutter detail sheet.

✲ Detectable warning installation is typical and required on Sidewalk Ramps Type 1, Type 2, Type 3, median ramp crossings and other locations as shown in the plans. See ramp detail sheeet.

TYPICAL SIDEWALK PLAN AND DETAILS

MKEC
Wichita, KS • 316-684-9600

STREET IMPROVEMENTS FOR

135TH STREET WEST

FROM CENTRAL AVE TO 13TH STREET

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SIDEWALK DETAILS

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	NTS

DESIGNED	DRAWN	CHECKED
JRA	RAM	JRA

NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

SHEET NO.

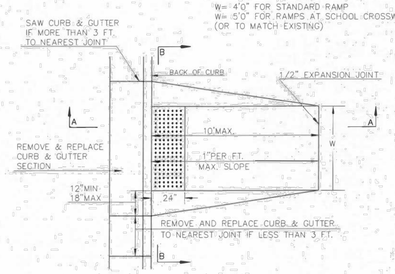
55 OF 156

Sh. No. 55

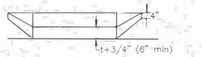
J:\PROJECTS\2022\2201910447_COV_135TH STREET FROM CENTRAL TO 13TH STREET\00 220447 CAD\SHTS\05 CIVIL\PAV\2210447-05-SIDEWALK DETAILS.DWG

J:\Projects\2022\220101447_COW_135th Street from Central to 13th Street\00 220447 CAD\SHTS\05 Civil\Std\Pav\COW\DWG\PV-110 Wheelchair Ramp Details.dwg

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

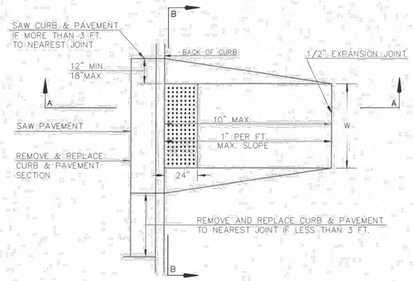


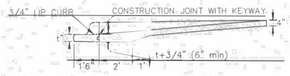
SECTION A–A



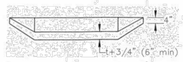
SECTION B–B

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



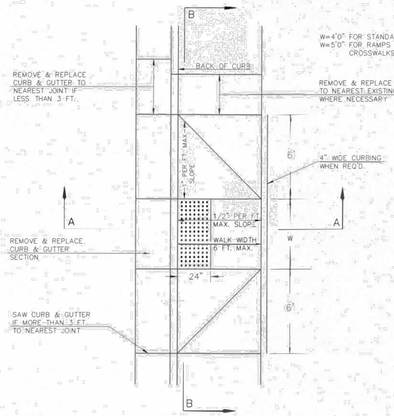


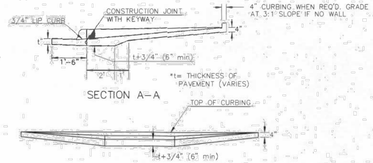
SECTION A–A



SECTION B–B

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

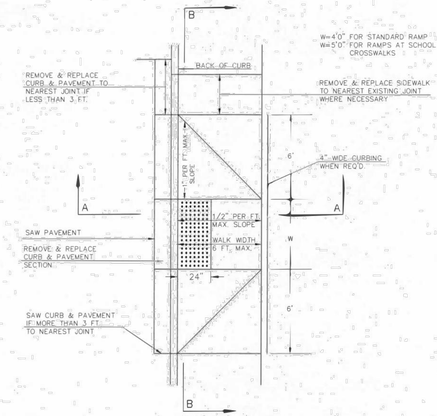


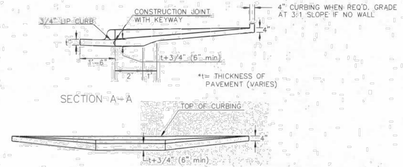


SECTION A–A

SECTION B–B

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

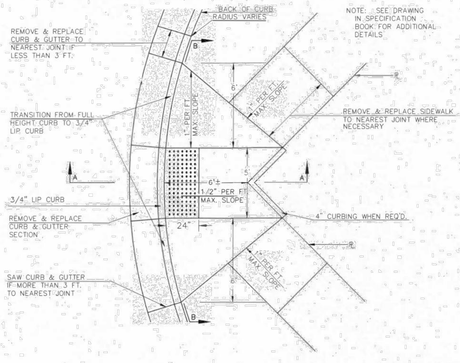


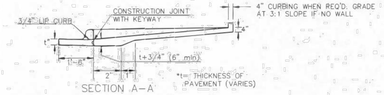


SECTION A–A

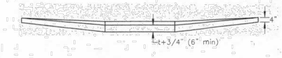
SECTION B–B

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



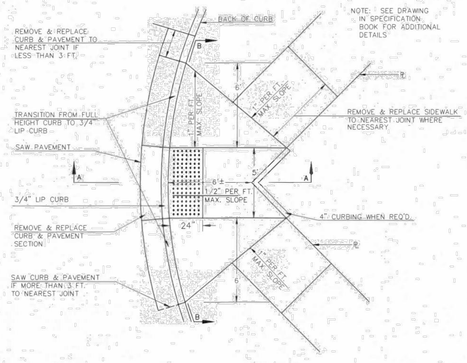


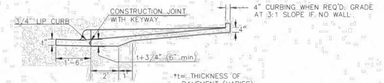
SECTION A–A



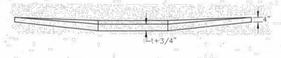
SECTION B–B

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



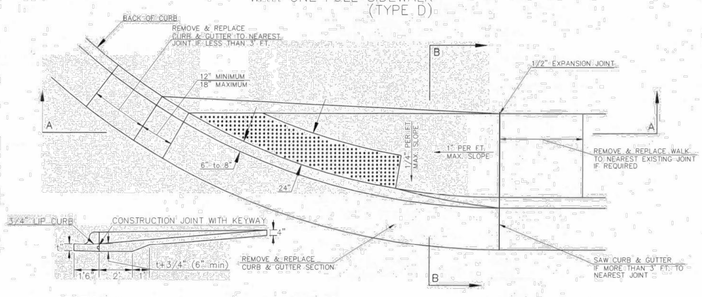


SECTION A–A



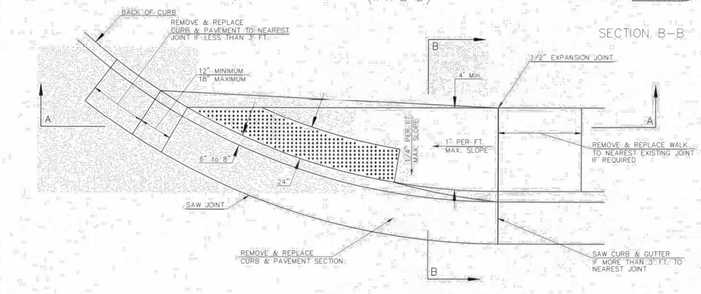
SECTION B–B

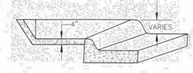
STANDARD WHEELCHAIR RAMP CONSTRUCTION DETAIL FOR STREETS WITH COMBINED CURB & GUTTER WITH ONE FULL SIDEWALK (TYPE D)



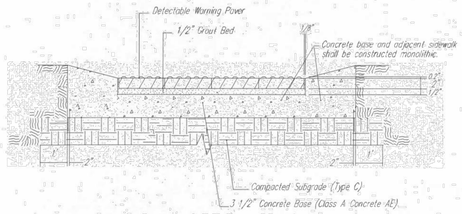
SECTION A–A

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





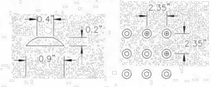
SECTION B–B



TYPICAL SECTION DETECTABLE WARNING PAVER SECTION A–A

NOTE: HANOVER DETECTABLE WARNING PAVERS (OR AN APPROVED ALTERNATE) SHALL BE USED IN ALL WHEELCHAIR RAMPS. THE 11 3/4" RED 13" PAVER SHALL BE USED IN ALL APPLICATIONS
HANOVER ARCHITECTURAL PRODUCTS
240 BENDER ROAD
HANOVER, PA 17331
1-717-637-0500
www.hanoverpavers.com

DOME DETAIL



GARY L. JANZEN LICENSED 16894 2/21/13 KANSAS PROFESSIONAL ENGINEER

CITY OF WICHITA
PUBLIC WORKS & UTILITIES ENGINEERING DIVISION

WHEELCHAIR RAMP DETAILS WITH DETECTABLE WARNING

CITY ENGINEER
GARY JANZEN, P.E.

PROJECT NUMBER	OCA NUMBER	DATE
472-2021-085756	40106822	9/26/2025

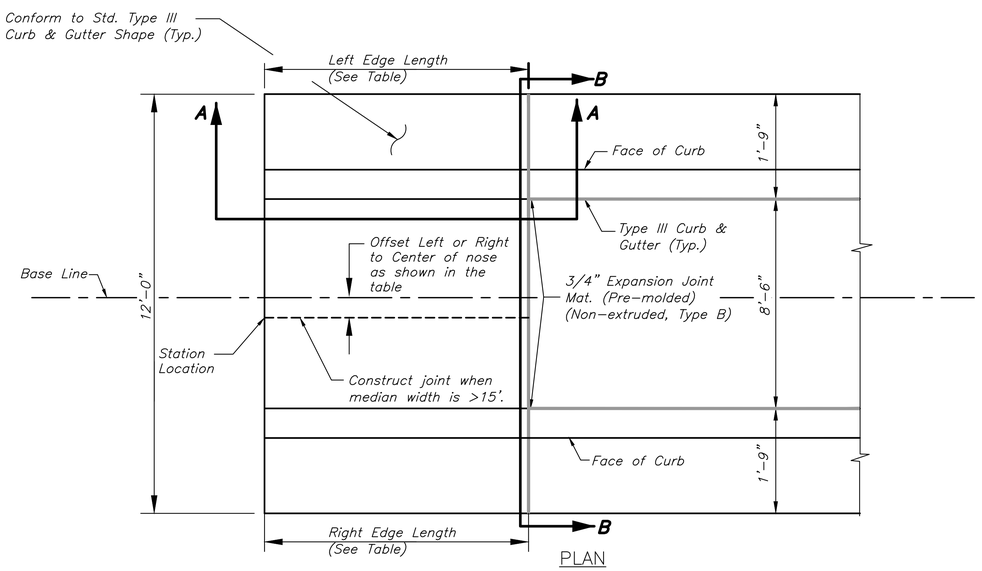
CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202-1620
(316) 268-4501

SHEET
56 OF 156

PV-110

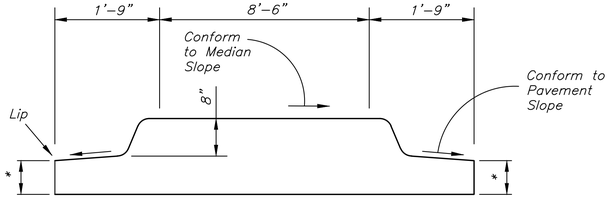
Sh. No. 56

PLOTTED: Friday, February 20, 2026 @ 01:20PM



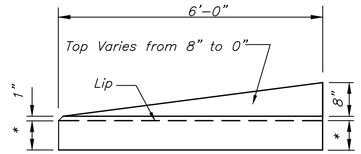
PLAN

CONCRETE MEDIAN NOSE

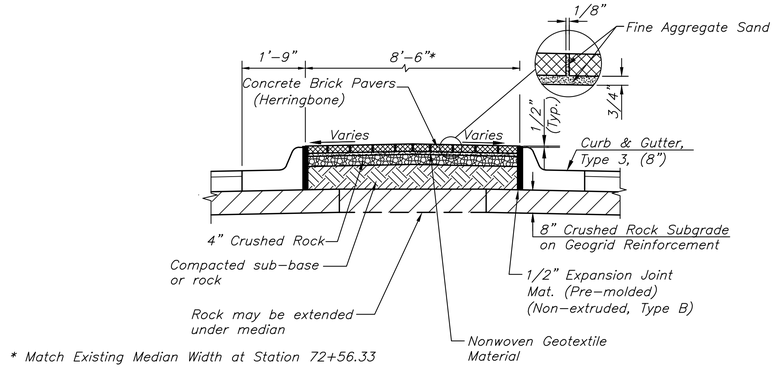


SECTION B-B

* Match Pavement Thickness



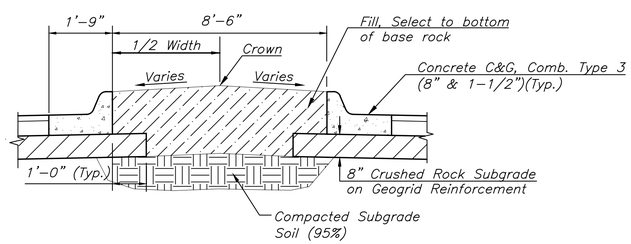
SECTION A-A



* Match Existing Median Width at Station 72+56.33

PAVING BRICK MEDIAN DETAIL

STA. 72+18.09 TO 72+56.33



SELECT SOIL MEDIAN DETAIL

STA. 34+06.26 TO 37+80.00
STA. 40+84.00 TO 44+99.52
STA. 51.92.23 TO 57+65.88
STA. 60+28.65 (10TH ST N)
STA. 67+06.84 TO 70+71.00

NOTE:
See Sheet 99 for additional Select Soil Median Details.

MEDIAN PAVER NOTES:

1. Concrete unit pavers shall meet or exceed ASTM C 936. The style shall be "Holland Stone" (4"x8"x3 1/8") as manufactured by Pavestone, Inc., or equal as approved by the engineer. Color shall be "charcoal red" and laying pattern shall be herringbone. Payment shall be at the contract bid price per square foot for concrete unit pavers.

2. Sand bedding shall meet the specification requirements for fine aggregate. An uncompacted sand laying course shall be spread evenly over the area to be paved and then screeded to a level of approximately 3/4" max. thickness. Once screeded and leveled to the desired elevation, the sand laying course shall not be disturbed in any way.

3. The paving brick shall be installed in a herringbone pattern as shown in the plan. Stones shall be placed with the chamfered side up, and joint spaces kept uniform approximately 1/8 inch thick. The gaps at the edge of the paved surface shall be filled with stones cut to fit. Cutting shall be accomplished to leave a clean edge toward the traffic surface, using a masonry saw. Whenever possible, no cuts should result with a paver less than one-third of its original dimension.

4. Paving brick shall be vibrated to their final level in the sand laying course by two or three passes of a vibrating compactor capable of 3000 to 5000 pounds compaction force with the surface clean and joints open.

5. After vibration, clean concrete sand shall be spread over the paving stone surface, allowed to dry, and vibrated into the joints with additional passes of the plate vibrator so as to completely fill the joints. A light coating of sand shall be swept over the completed surface and left to weather in.

MKEC
Wichita, KS • 316-684-9600

STREET IMPROVEMENTS FOR

135TH STREET WEST

FROM CENTRAL AVE TO 13TH STREET

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MEDIAN AND BRICK PAVER DETAILS

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	NTS

DESIGNED	DRAWN	CHECKED
JRA	LNP	JRA

NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

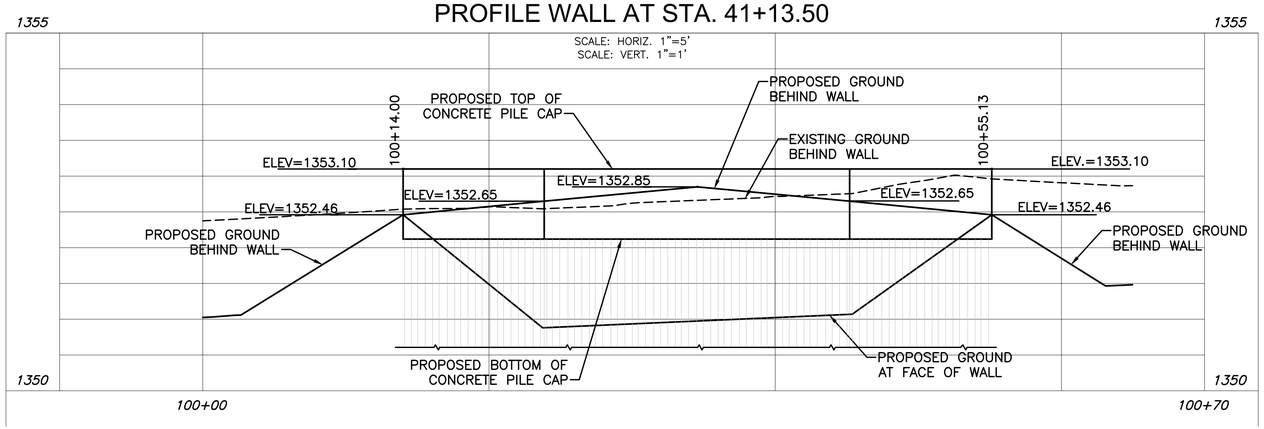
SHEET NO.

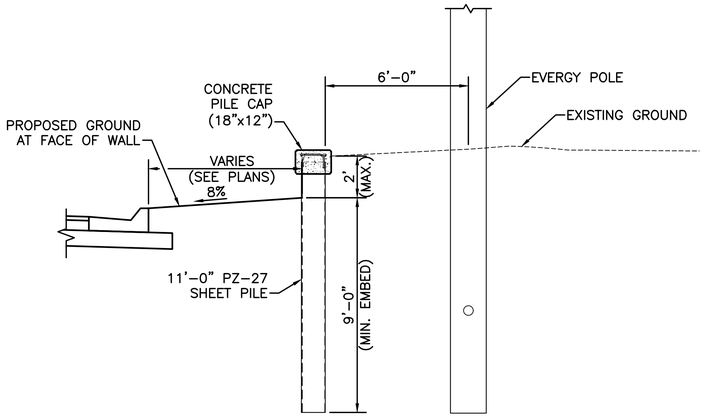
57 OF 156

J:\PROJECTS\2022\2201010447_COW_135TH STREET FROM CENTRAL TO 13TH STREET\00 220447 CAD\SHTS\05 CIVIL\PAV\210447-05-MEDIAN DETAILS.DWG

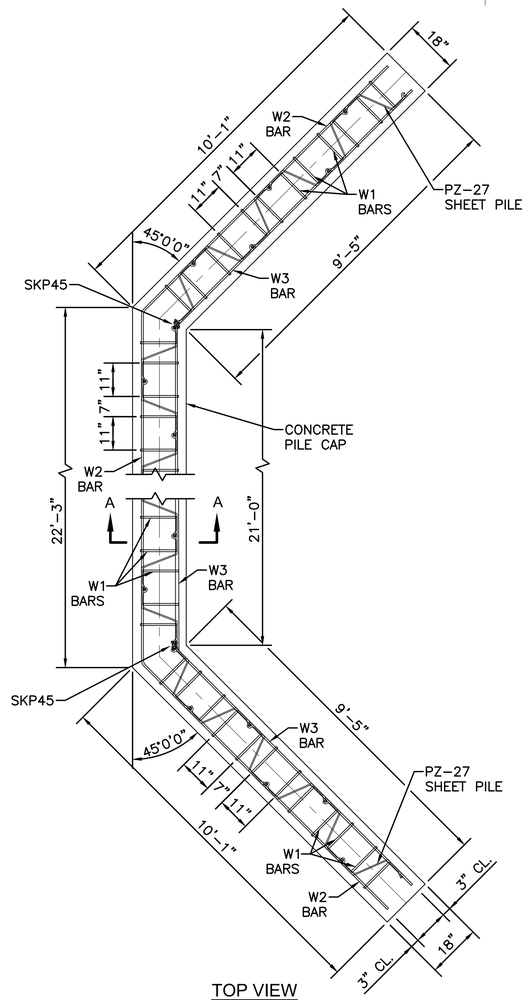
PLOTTED: Friday, February 20, 2026 @ 01:20PM

PROFILE WALL AT STA. 41+13.50

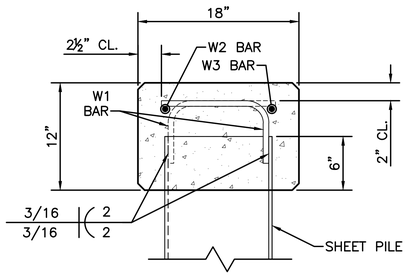




ELEVATION VIEW

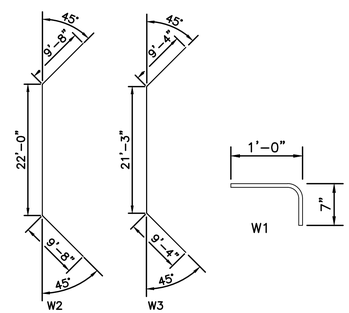


TOP VIEW



SECTION A-A

CONCRETE PILE CAP



BAR BENDING DIAGRAM

SHEET PILE RETAINING WALL

SUMMARY OF QUANTITIES	(FOR INFORMATION ONLY)
CONCRETE (GRADE 4.0)	2.3 C.Y.
REINFORCING STEEL (GRADE 60)	170.4 LBS.
SHEET PILE, PZ–27	429 S.F.

NOTE: ALL ITEMS SUBSIDIARY TO "RETAINING WALL, SHEET PILE".

FOR INFORMATION ONLY

BILL OF REINFORCING STEEL				
BENT BARS				
MARK	SIZE	NO.	LENGTH	REMARKS
W1	#5	52	1'–7"	
W2	#5	1	41'–4"	
W3	#5	1	39'–11"	

J:\PROJECTS\2022\2201010447_COV_135TH STREET FROM CENTRAL TO 13TH STREET\00 220447 CAD\SHTS\05 CIVIL\GRD\220447-05-EVERGY POLE DETAIL.DWG

MKEC
Wichita, KS • 316-684-9600

STREET IMPROVEMENTS FOR

135TH STREET WEST

FROM CENTRAL AVE TO 13TH STREET

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www.mkec.com
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RETAINING WALL PROFILES AND DETAILS

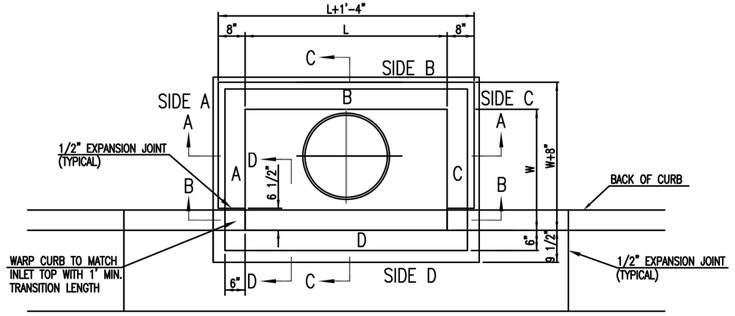
PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	NTS

DESIGNED	DRAWN	CHECKED
JRA	LNP	JRA

NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

SHEET NO.

58 OF 156



TOP VIEW

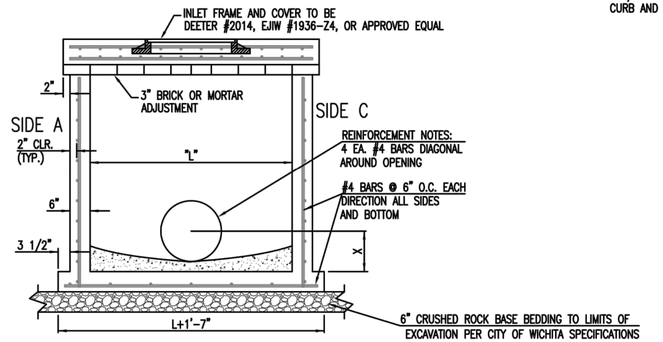
BAR SCHEDULE		
INLET OPENING	B1 BARS	SPACING
5'-0"	#4	4"
10'-0"	#6	3.5"

PRECAST CURB INLET WIDTHS				
W	PRE-CAST TOP SIZE			PIPE DIA.**
	WIDTH	LENGTH	TOP	
3'-0"	W+8"	L+1'-4"	7 1/2"	21" & SMALLER
4'-0"	W+8"	L+1'-4"	7 1/2"	24" & 30"
5'-0"	W+8"	L+1'-4"	7 1/2"	36" & 42"
6'-0"	W+8"	L+1'-4"	7 1/2"	48" & 54"
7'-0"	W+8"	L+1'-4"	7 1/2"	60" & 66"

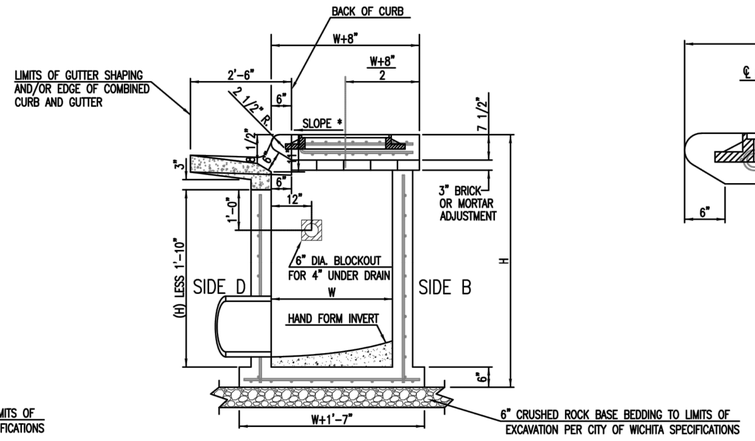
** FOR PIPES PERPENDICULAR TO INLET WALL

GENERAL NOTES

1. CONCRETE TOPS TO BE INSTALLED ON THIN MORTAR CUSHION TO INSURE FULL SUPPORT ALONG BRICK. CONCRETE TOPS MAY BE CAST IN PLACE OR PRECAST. CONCRETE USED FOR INLET CONSTRUCTION SHALL CONFORM TO CITY OF WICHITA SPECIFICATIONS FOR CONCRETE PAVEMENT MIX.
2. CONTRACTOR SHALL HAVE THE OPTION OF CONSTRUCTING 8" BRICK MASONRY WALLS BETWEEN THE CONCRETE INLET BASE AND TOP OF THIS INLET WHEN W=5'-0" AND H=7'-0" OR LESS.
3. INLET INVERT SHALL BE SHAPED WITH 8 SACK SAND MIX CONCRETE TO CREATE FLOW CHANNELS AND TO INCREASE HYDRAULIC EFFICIENCY SUCH THAT THE INLET WILL BE SELF CLEANING BETWEEN ALL INLET AND/OR OUTLET PIPES.
4. THE ENDS OF ALL PIPES INSTALLED IN INLETS SHALL BE CUT OFF FLUSH WITH THE INSIDE FACE OF THE INLET WALL.
5. INLET FRAME AND COVER TO BE DEETER #2014, EJIW #1936 Z4, OR APPROVED EQUAL, SEE SW-303.
6. CONTRACTOR SHALL REMOVE LIFTING HOOKS AFTER INSTALLATION. RECESSES IN INLET WALL SHALL BE GROUTED FLUSH TO THE INLET WALL WITH HYDRAULIC CEMENT AFTER THE INLET IS IN PLACE. LIFTING HOLES THRU THE INLET WALL WILL NOT BE ACCEPTED.

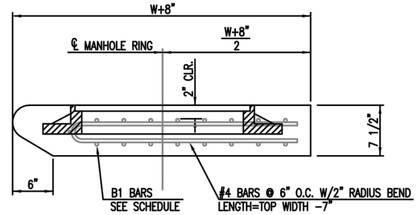


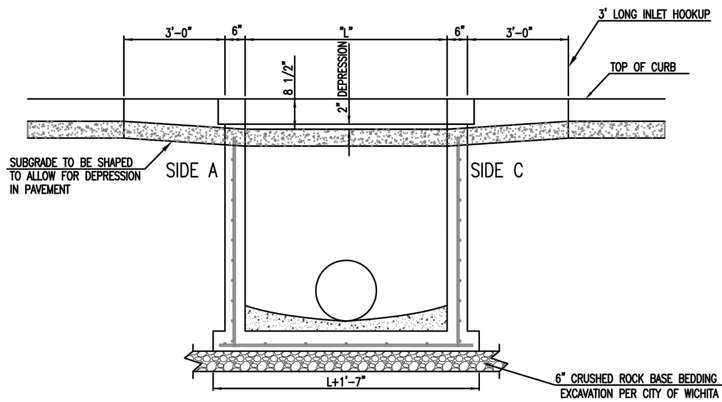
SECTION "A-A"



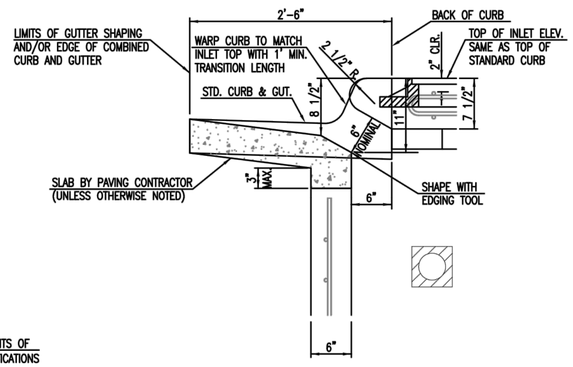
SECTION "C-C"

NOTES:
* SLOPE OF INLET TOP TO MATCH SIDEWALK OR PARKING SLOPES WITHIN LIMITS INDICATED.





SECTION "B-B"



SECTION "D-D"

REVISED: MARCH 2015

CITY OF WICHITA
PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

STANDARD TYPE 1
CURB INLET
5'-0" OR 10'-0" OPENING

CITY ENGINEER
GARY JANZEN, P.E.

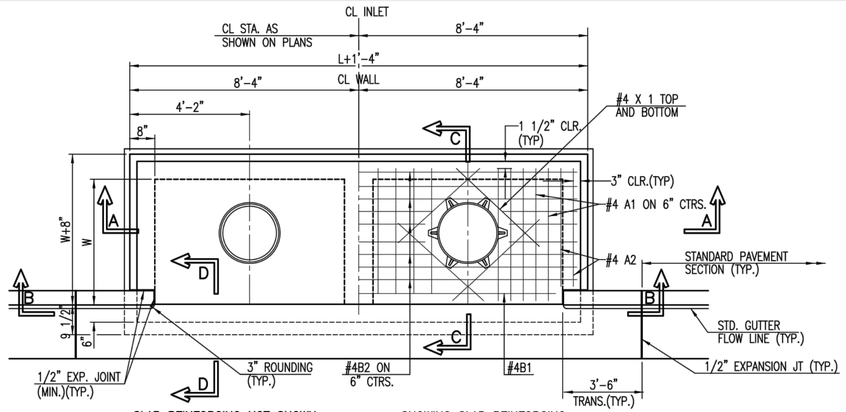
PROJECT NUMBER	OCA NUMBER	DATE
472-2021-085756	40106822	9/26/2025

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

SHEET
59 OF 156

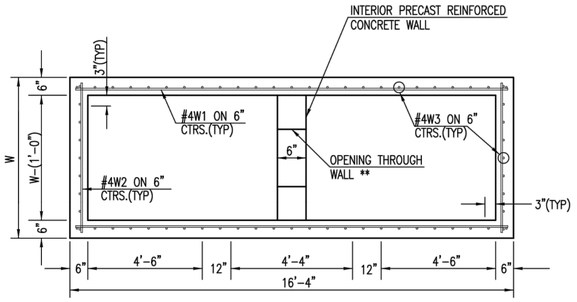
SW-101
Sh. No. 59

J:\Projects\2022\220101044?_COW_135th Street from Central to 13th Street\00 220447 CAD\SHTS\05 Civil\Std\Storm Sewer\COW\SW-101 Type 1 Inlet 5 or 10ft.dwg



SLAB REINFORCING NOT SHOWN SHOWING SLAB REINFORCING

PLAN



SECTION B–B

PRECAST CURB INLET WIDTHS				
W	PRE–CAST TOP SIZE			PIPE DIA.***
	WIDTH	LENGTH	TOP	
3'–0"	W+8"	L+1'–4"	7 1/2"	21" & SMALLER
4'–0"	W+8"	L+1'–4"	7 1/2"	24" & 30"
5'–0"	W+8"	L+1'–4"	7 1/2"	36" & 42"
6'–0"	W+8"	L+1'–4"	7 1/2"	48" & 54"
7'–0"	W+8"	L+1'–4"	7 1/2"	60" & 66"

*** FOR PIPES PERPENDICULAR TO INLET WALL

GENERAL NOTES

1. CONCRETE TOPS TO BE INSTALLED ON THIN MORTAR CUSHION TO INSURE FULL SUPPORT ALONG BRICK. CONCRETE TOPS MAY BE CAST IN PLACE OR PRECAST. CONCRETE USED FOR INLET CONSTRUCTION SHALL CONFORM TO CITY OF WICHITA SPECIFICATIONS FOR CONCRETE PAVEMENT MIX.
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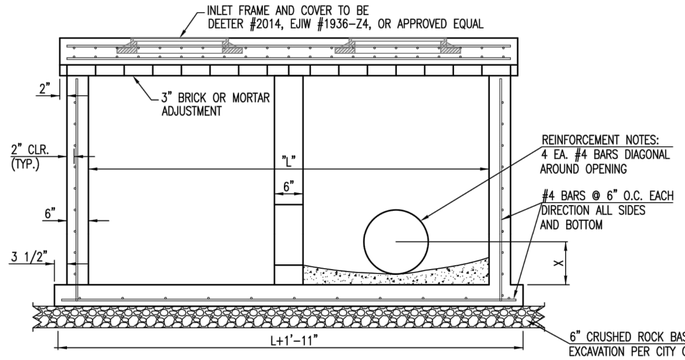
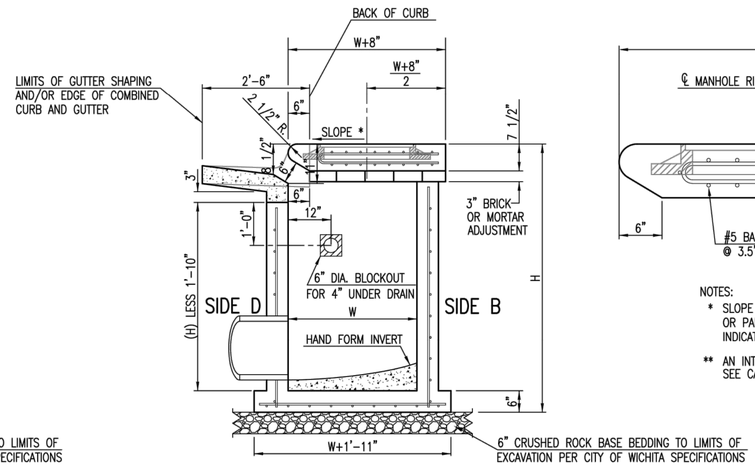
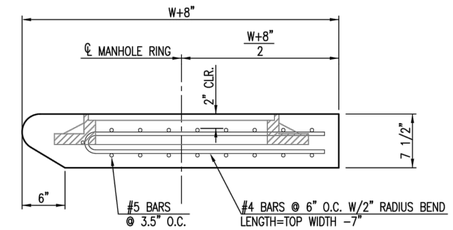


SECTION "A–A"

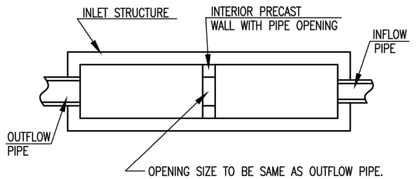


SECTION "C–C"

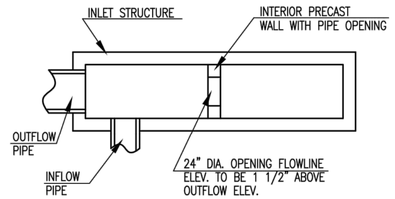


NOTES:
* SLOPE OF INLET TOP TO MATCH SIDEWALK OR PARKING SLOPES WITHIN LIMITS INDICATED.

** AN INTERIOR WALL OPENING SHALL BE PROVIDED. SEE CASE I AND CASE II.

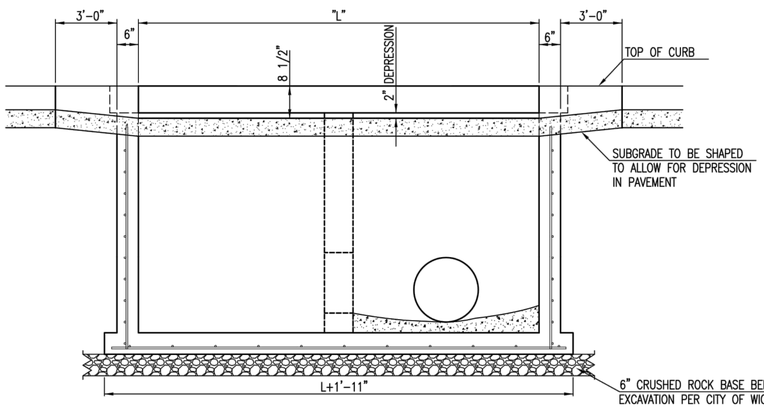


CASE I



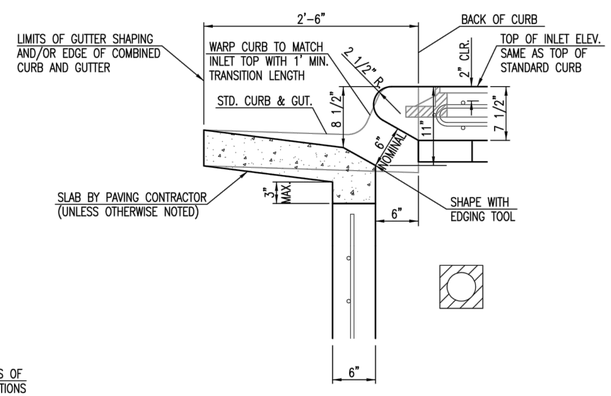
CASE II

NOTE: INTERIOR WALL OPENING SIZE SHALL BE AS SPECIFIED IN THE INLET CONSTRUCTION NOTE ON THE PLAN/ PROFILE SHEETS FOR THOSE CASES NOT SHOWN HERE.



SECTION "B–B"

NOTES:
* SLOPE OF INLET TOP TO MATCH SIDEWALK OR PARKING SLOPES WITHIN LIMITS INDICATED.



SECTION "D–D"

REVISED: MARCH 2015

CITY OF WICHITA
PUBLIC WORKS & UTILITIES ENGINEERING DIVISION

STANDARD TYPE 1
CURB INLET
15'-0" OPENING

CITY ENGINEER
GARY JANZEN, P.E.

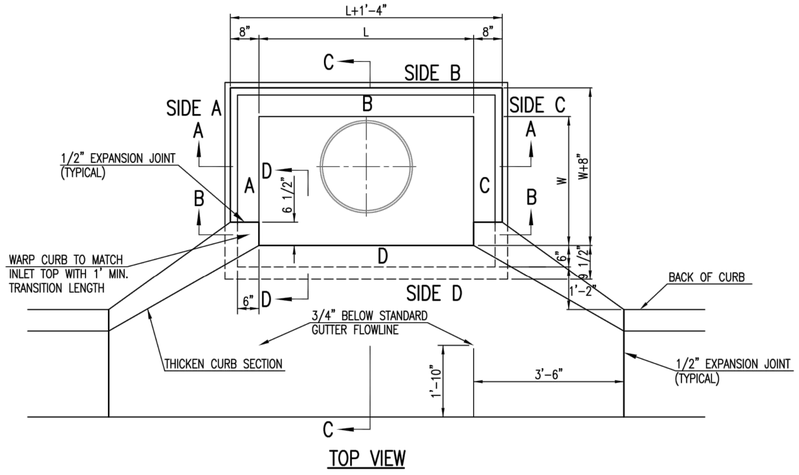
PROJECT NUMBER	OCA NUMBER	DATE
472-2021-085756	40106822	9/26/2025

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

SHEET
60 OF 156

SW-102
Sh. No. 60

J:\Projects\2022\220101047_CGW_135th Street from Central to 13th Street\00 220447 CAD\SHTS\05 Civil\Std\Storm Sewer\COW\SW-102 Type 1 Inlet 15ft.dwg



TOP VIEW

BAR SCHEDULE		
INLET OPENING	B1 BARS	SPACING
5'-0"	#4	4"
10'-0"	#6	3.5"

PRECAST CURB INLET WIDTHS				
W	PRE-CAST TOP SIZE			PIPE DIA.**
	WIDTH	LENGTH	TOP	
3'-0"	W+8"	L+1'-4"	7 1/2"	21" & SMALLER
4'-0"	W+8"	L+1'-4"	7 1/2"	24" & 30"
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** FOR PIPES PERPENDICULAR TO INLET WALL

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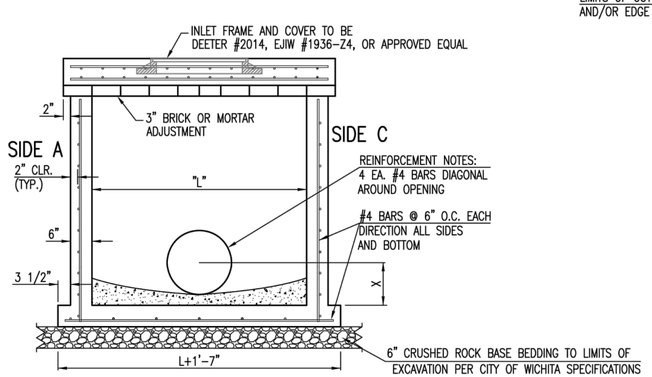
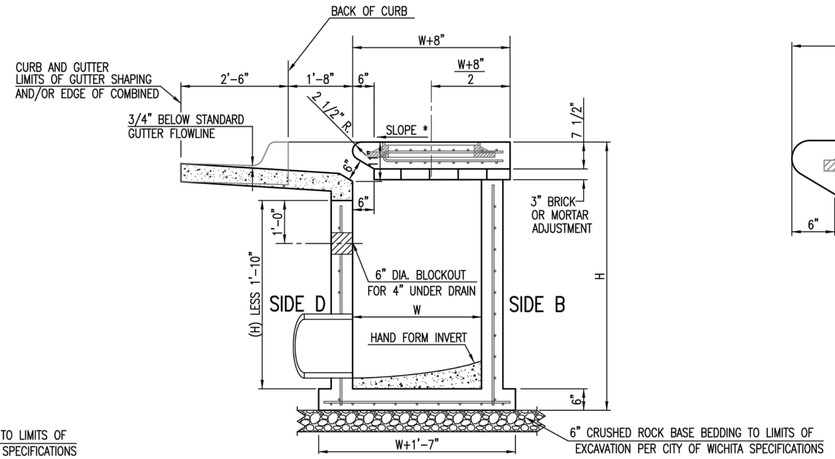
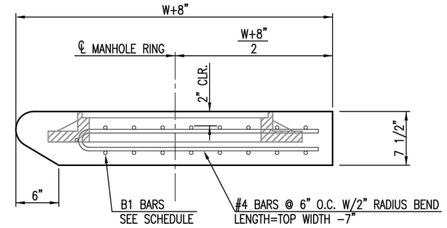


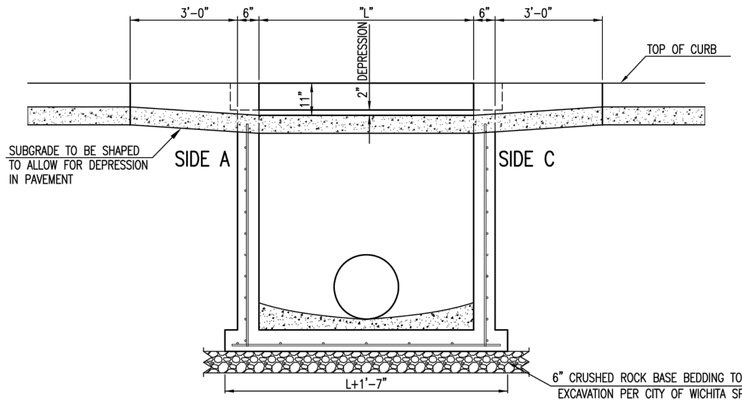
SECTION "A-A"



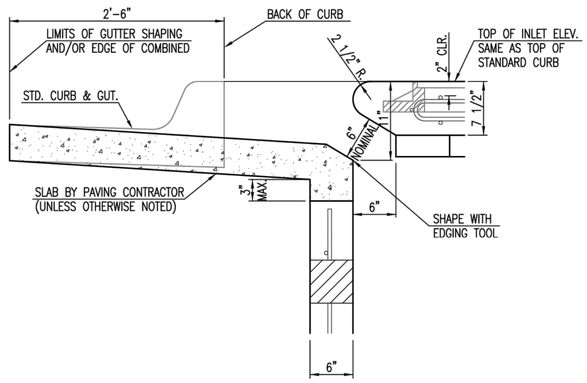
SECTION "C-C"

NOTES:
* SLOPE OF INLET TOP TO MATCH SIDEWALK OR PARKING SLOPES WITHIN LIMITS INDICATED.





SECTION "B-B"



SECTION "D-D"

REVISION MAY 2017	UPDATED SET BACK DIMENSION ON TOP VIEW

CITY OF WICHITA
PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

STANDARD TYPE 1A CURB INLET 5'-0" OR 10'-0" OPENING

CITY ENGINEER
GARY JANZEN, P.E.

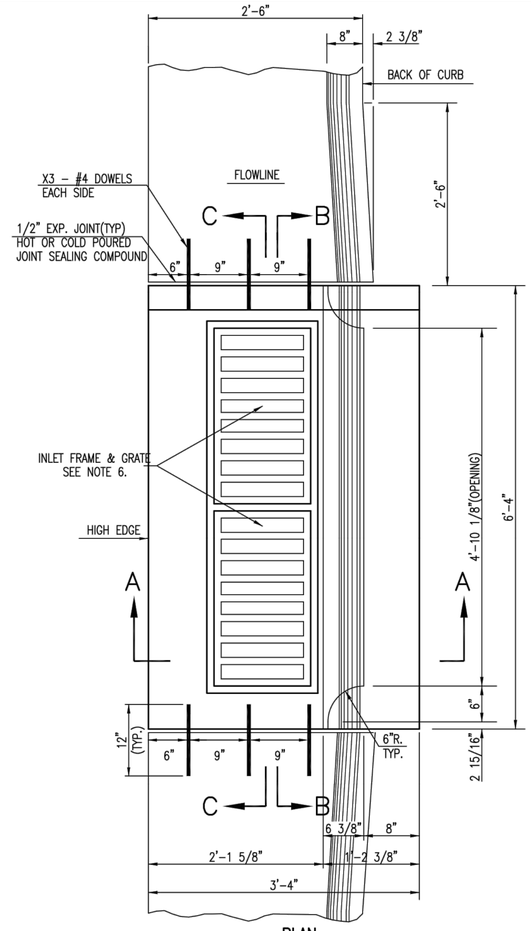
PROJECT NUMBER	OCA NUMBER	DATE
472-2021-085756	40106822	9/26/2025

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

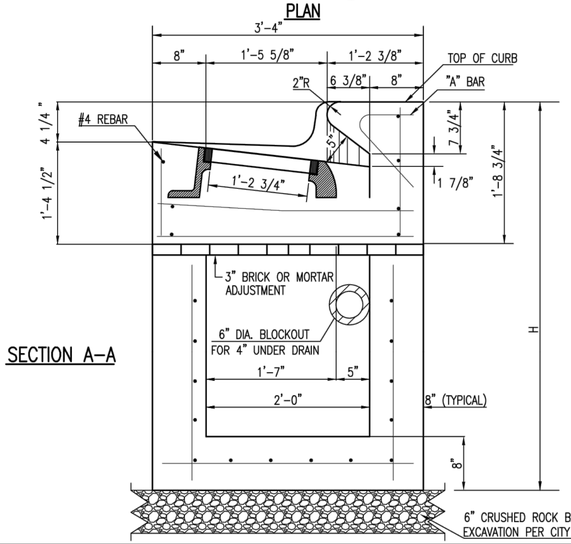
SHEET
61 OF 156

SW-103
Sh. No. 61

J:\Projects\2022\220101044?_CGW_135th Street from Central to 13th Street\00 220447 CAD\SHTS\05 Civil\Std\Storm Sewer\COW\SW-103 Type 1A Inlet 5 or 10.dwg

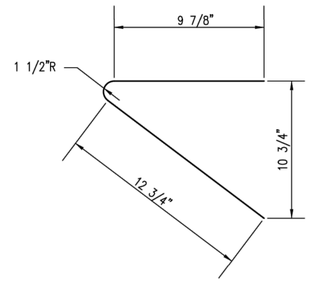


PLAN



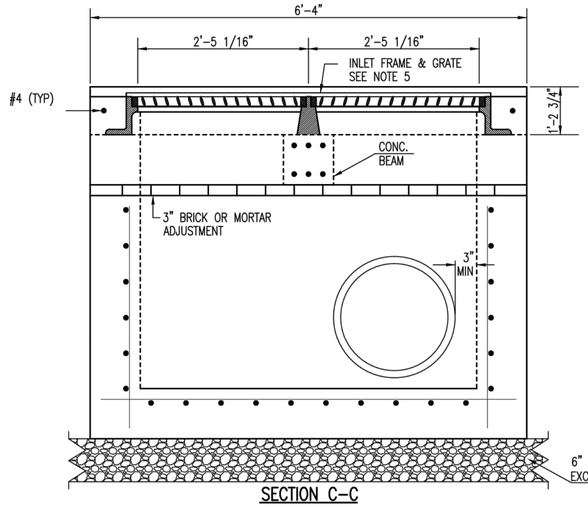
SECTION A-A

6" CRUSHED ROCK BASE BEDDING TO LIMITS OF EXCAVATION PER CITY OF WICHITA SPECIFICATIONS



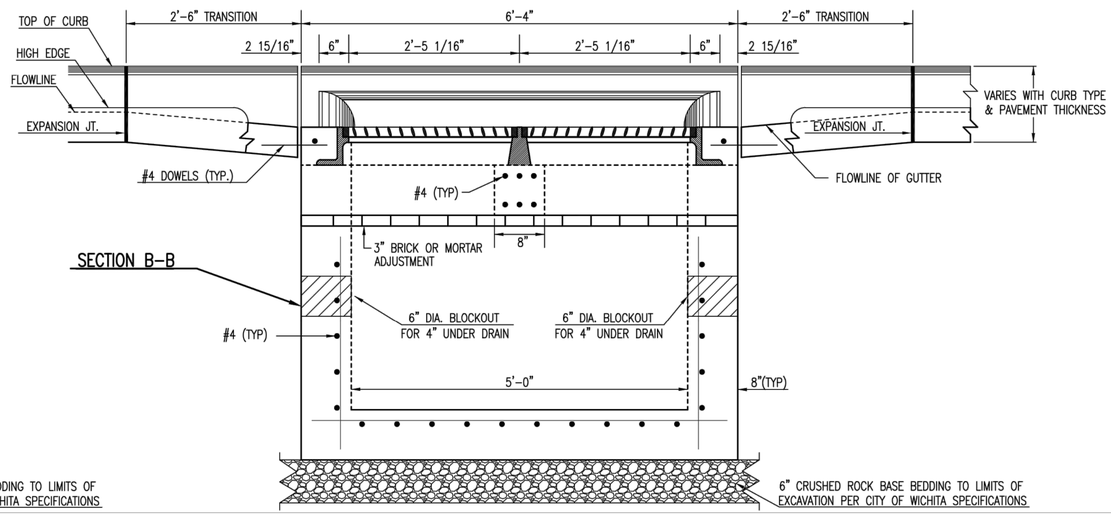
"A" BAR

BENDING DIAGRAM

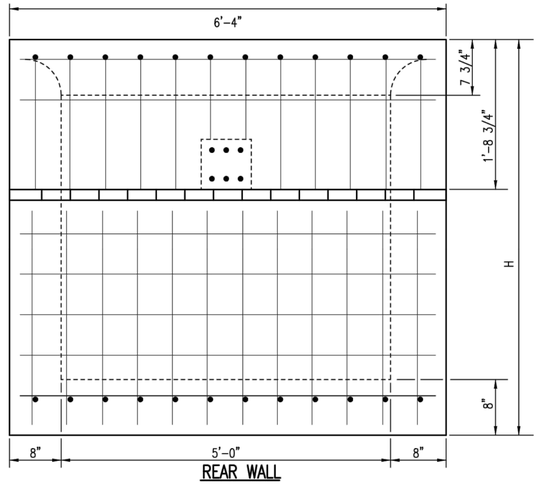


SECTION C-C

6" CRUSHED ROCK BASE BEDDING TO LIMITS OF EXCAVATION PER CITY OF WICHITA SPECIFICATIONS



6" CRUSHED ROCK BASE BEDDING TO LIMITS OF EXCAVATION PER CITY OF WICHITA SPECIFICATIONS



REAR WALL

GENERAL NOTES

1. USE THE CONCRETE MIX SPECIFIED FOR THE CITY OF WICHITA CONCRETE PAVEMENT THROUGHOUT. ALL EXPOSED EDGES SHALL BE FINISHED WITH AN EDGING TOOL. REINFORCING BARS SHALL BE BENT AROUND PIPE.
2. INLET INVERT SHALL BE SHAPED WITH 8 SACK MIX CONCRETE TO CREATE FLOW CHANNELS AND TO INCREASE HYDRAULIC EFFICIENCY SUCH THAT THE INLET WILL BE SELF CLEANING BETWEEN ALL INLET AND/OR OUTLET PIPES.
3. ALL BARS ARE #4 WITH 6" SPACING AND SHALL HAVE A MINIMUM CLEARANCE OF 1 1/2 INCHES UNLESS OTHERWISE NOTED ON THE PLANS.
4. NO DEDUCTIONS WILL BE MADE IN PAY LENGTH OF CURB, GUTTER, OR CURB AND GUTTER THROUGH THE INLET AREA.
5. USE DEETER FOUNDRY, INC. CASTING NO. 2442/43 OR EJIW 7600Z LEFT SIDE, 7600 RIGHT SIDE IN INLET FRAME AND GRATE WITH STYLE H GRATE. INLET FRAME TO BE PROOF LOAD TESTED TO 40,000 LBS. ON UNSUPPORTED SIDE.
6. REINFORCING BARS SHALL BE CUT OR BENT AROUND PIPES. NO DEDUCTION IN CONCRETE QUANTITIES SHALL BE MADE FOR PIPE OPENINGS.
7. THE VANES OF THE GRATE SHALL BE ORIENTED WITH RESPECT TO THE FLOW ARROWS SHOWN ON THE PLANS.
8. CONTRACTOR SHALL REMOVE LIFTING HOOKS AFTER INSTALLATION. RECESSES IN INLET WALL SHALL BE GROUTED FLUSH TO THE INLET WALL WITH HYDRAULIC CEMENT AFTER THE INLET IS IN PLACE. LIFTING HOLES THRU THE INLET WALL WILL NOT BE ACCEPTED.

REVISED: MARCH 2015

CITY OF WICHITA
PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

STANDARD DOUBLE TYPE II CURB INLET

CITY ENGINEER
GARY JANZEN, P.E.

PROJECT NUMBER	OCA NUMBER	DATE
472-2021-085756	40106822	9/26/2025

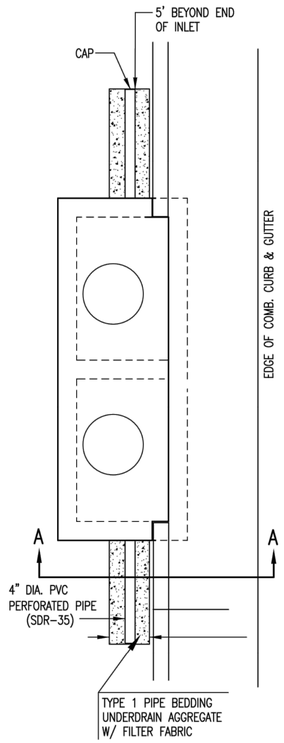
CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202-1620
(316) 268-4501

SHEET
62 OF 156

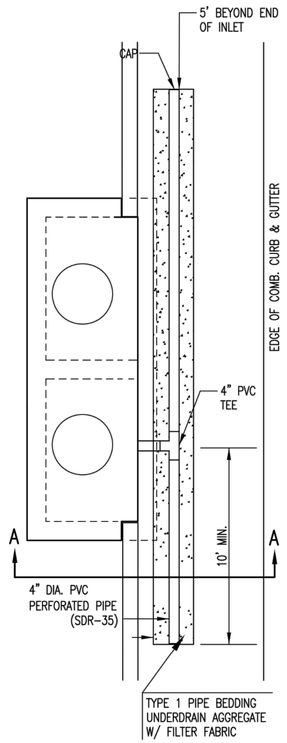
Sh. No. 62

J:\Projects\2022\220101047_COW_135th Street from Central to 13th Street\00 220447 CAD\SHTS\05 Civil\Std\Storm Sewer\COW\SW-106 Type 2 Inlet Double.dwg

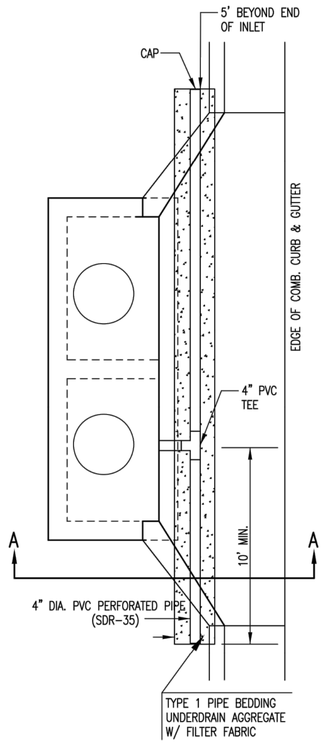
PAVEMENT UNDERDRAIN SHALL BE INSTALLED ON ALL CURB INLETS.



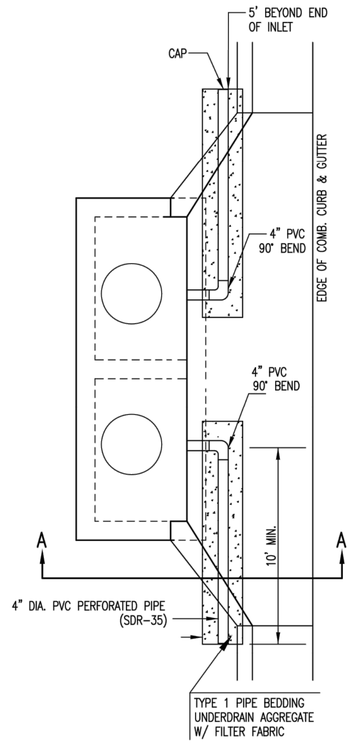
TYPE 1
OPTION 1



TYPE 1
OPTION 2



TYPE 1-A INLET
OPTION 1



TYPE 1-A INLET
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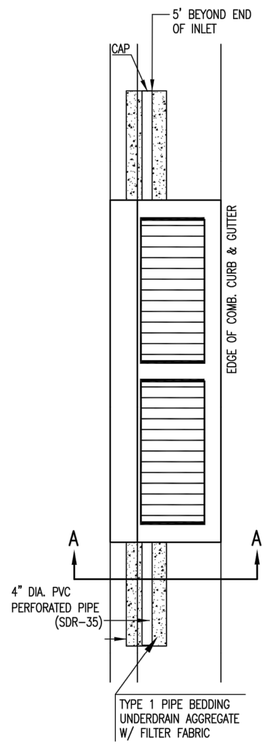
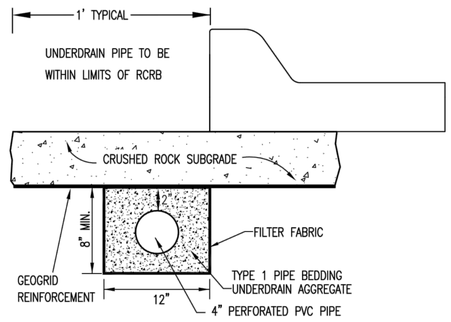
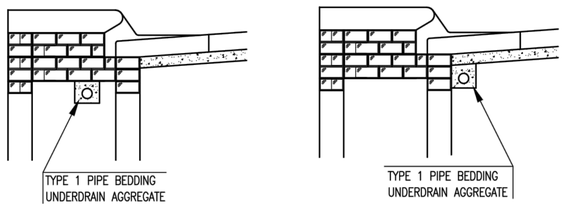


TYPE 2

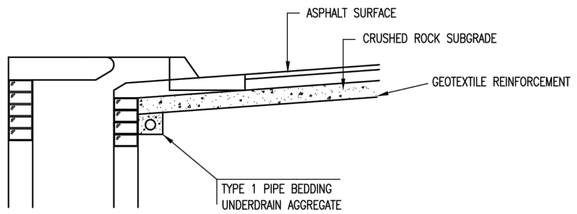


SECTION A-A (TYPICAL)



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

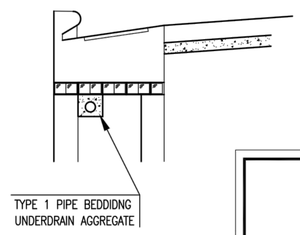
SECTION A-A



SECTION A-A

PAVEMENT UNDERDRAIN DETAIL

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



SECTION A-A

GENERAL NOTES

1. PAVEMENT CONTRACTOR WILL BE REQUIRED TO INSTALL SDR 35, 4" PERFORATED DRAIN PIPE AND TEE AS INDICATED IN THE DETAILS.
2. 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.
2. UNDERDRAIN PIPE SHALL BE PAID AS A MEASURED QUANTITY BY THE LINEAL FOOT.

CITY OF WICHITA
PUBLIC WORKS & UTILITIES ENGINEERING DIVISION

CURB INLET PAVEMENT UNDERDRAIN DETAIL

CITY ENGINEER
GARY JANZEN, P.E.

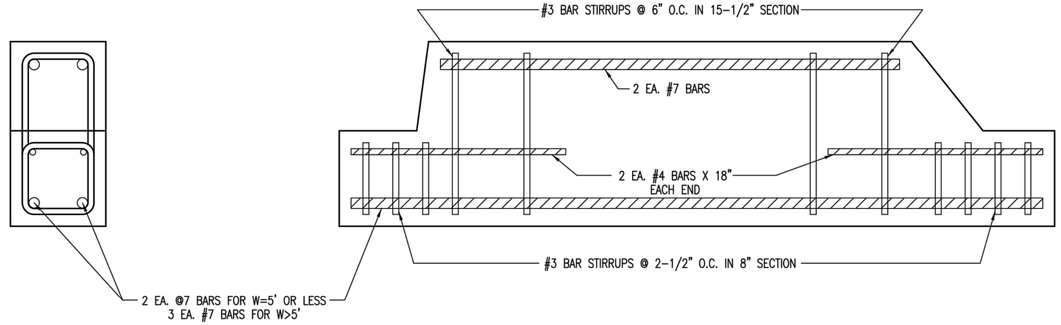
PROJECT NUMBER	OCA NUMBER	DATE
472-2021-085756	40106822	9/26/2025

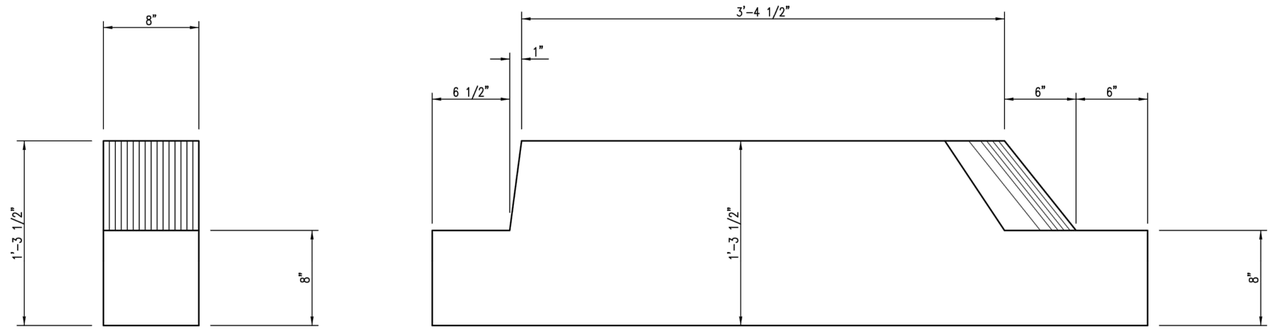
CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202-1620
(316) 268-4501

SHEET
63 OF 156

SW-111
Sh. No. 63

J:\Projects\2022\220101047_COW_135th Street from Central to 13th Street\00 220447 CAD\SHTS\05 Civil\Std\Storm Sewer\COW\SW-111 Inlet Pav Underdrain.dwg





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CITY OF WICHITA
PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

INLET BEAM

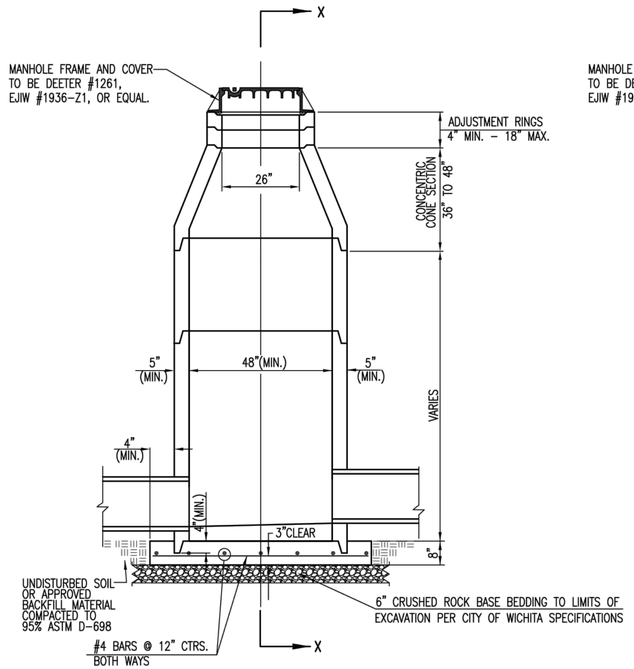
CITY ENGINEER
GARY JANZEN, P.E.

PROJECT NUMBER	OCA NUMBER	DATE
472-2021-085756	40106822	9/26/2025

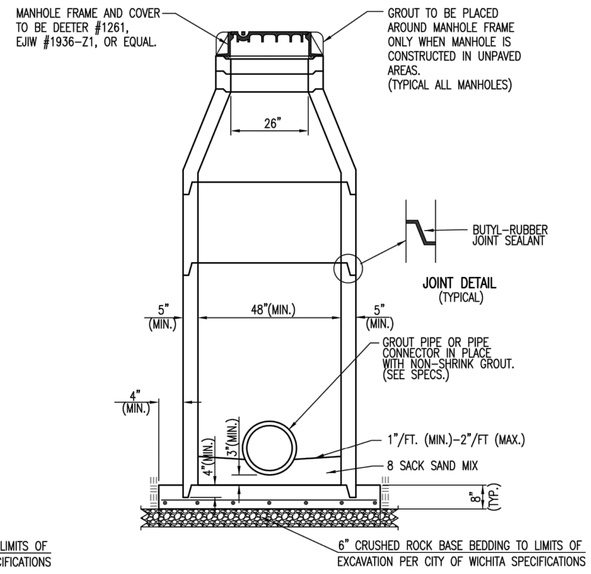
CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202-1620
(316) 268-4501

SHEET
64 OF 156

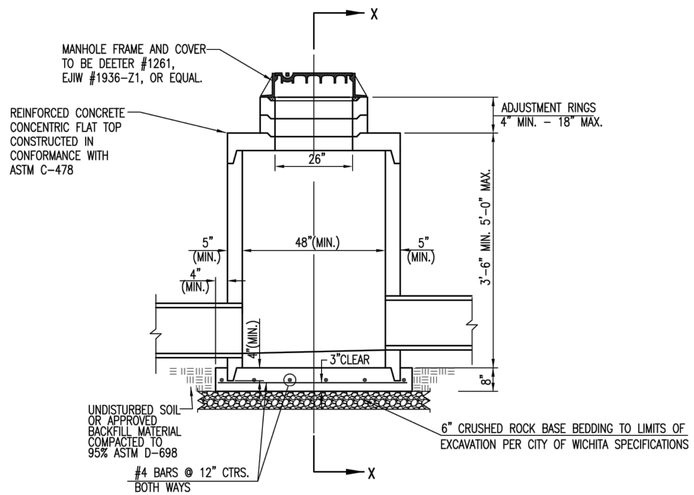
SW-110
Sh. No. 64



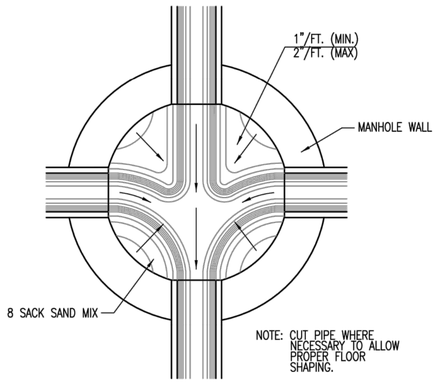
PRECAST
STANDARD MANHOLE
TYPE "A"



SECTION X-X
(TYPICAL)



PRECAST
SHALLOW MANHOLE
TYPE "B"



TYPICAL MANHOLE
FLOOR SHAPING

GENERAL NOTES

1. IF, IN THE OPINION OF THE ENGINEER, THE MANHOLE SUBGRADE APPEARS UNSTABLE, THE CONTRACTOR WILL HAVE THE OPTION TO COMPACT SUBGRADE AS SHOWN OR INCREASE THE THICKNESS OF THE MANHOLE BASE AS DIRECTED BY THE ENGINEER.
2. STEEL REINFORCING WILL BE REQUIRED IN ALL MANHOLE BASES.
3. ALL MANHOLE CONSTRUCTION SHALL BE WATER TIGHT.
4. TOP OF MANHOLE FLOOR SLAB SHALL BE AT LEAST 3 INCHES BELOW THE FLOW LINE OF THE OUTLET PIPE TO INSURE SUFFICIENT MINIMUM THICKNESS OF SHAPED INVERT.
5. ALL PRECAST CONCRETE MANHOLE SECTIONS SHALL CONFORM TO THE LATEST REVISION OF ASTM C-478 AS MODIFIED BY THE SPECIFICATIONS.
6. CONCRETE USED FOR MANHOLE CONSTRUCTION SHALL CONFORM TO CITY OF WICHITA SPECIFICATIONS FOR CONCRETE PAVEMENT MIX.
7. PRECAST MANHOLES SHALL BE SET AT LEAST 4 INCHES INTO MANHOLE BASE.
8. MANHOLES WITH PIPE SIZES 24" AND LARGER SHALL HAVE 5 FOOT INSIDE DIAMETER (MIN.)
9. MANHOLES WITH PRECAST BASES MAY BE USED AT THE CONTRACTORS OPTION. THESE MANHOLES SHALL HAVE AN 8" MINIMUM BASE THICKNESS AND SHALL BE PLACED ON AN 8" MIN. CRUSHED ROCK BASE. PIPES SHALL BE ENCASED WITH CRUSHED ROCK TO AT LEAST 3 FEET FROM THE MANHOLE WALL.
10. CONTRACTOR SHALL REMOVE LIFTING HOOKS AFTER INSTALLATION. RECESSES IN MANHOLE WALL SHALL BE GROUTED FLUSH TO THE MANHOLE WALL WITH HYDRAULIC CEMENT AFTER THE MANHOLE IS IN PLACE. LIFTING HOLES THRU THE MANHOLE WALL WILL NOT BE ACCEPTED.
11. THE ENDS OF ALL PIPES IN MANHOLES SHALL BE CUT OFF FLUSH WITH THE INSIDE FACE OF THE MANHOLE WALL.
12. MANHOLE INVERT SHALL BE SHAPED WITH 8 SACK SAND MIX CONCRETE TO CREATE FLOW CHANNELS AND TO INCREASE HYDRAULIC EFFICIENCY SUCH THAT THE MANHOLE WILL BE SELF CLEANING BETWEEN ALL INLET AND/OR OUTLET PIPES.
13. MANHOLE FRAME AND COVER TO BE DEETER #1261, EJIW #1936-Z1, OR APPROVED EQUAL, SEE SW-303.
14. FOR FLAT GRATED INLET APPLICATION, GRATE TO BE DEETER #1933, EJIW #1205 MDI, OR APPROVED EQUAL.
15. FOR BEEHIVE GRATE APPLICATION, GRATE TO BE DEETER #4495, EJIW #120545, OR APPROVED EQUAL.

REVISED: MARCH 2015

CITY OF WICHITA
PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

PRECAST CONCRETE MANHOLE (STORM SEWER)

CITY ENGINEER
GARY JANZEN, P.E.

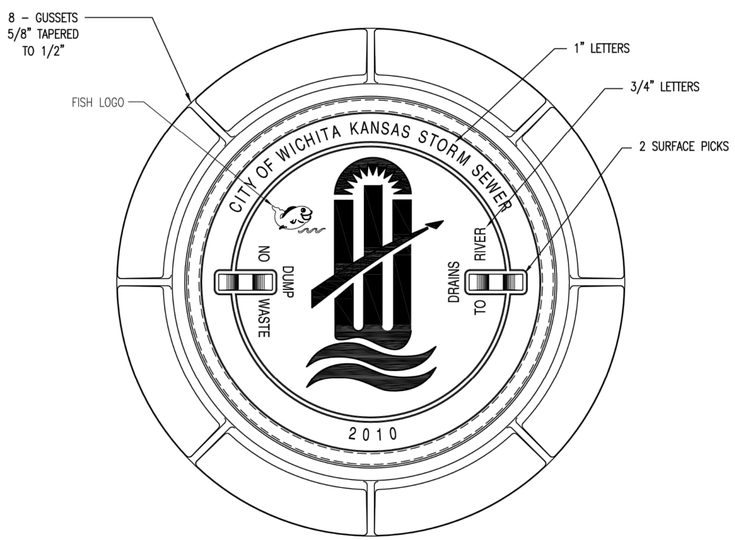
PROJECT NUMBER	OCA NUMBER	DATE
472-2021-085756	40106822	9/26/2025

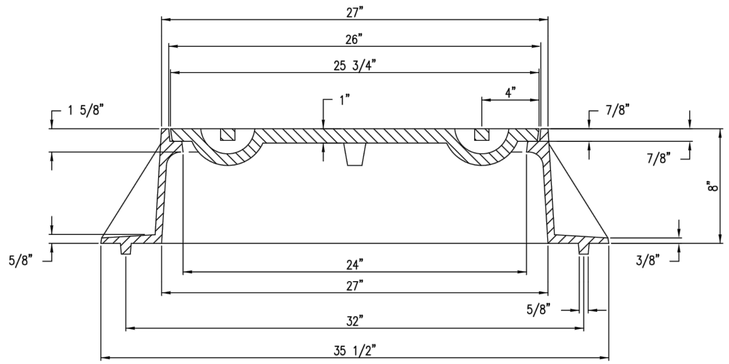
CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202-1620
(316) 268-4501

SHEET
65 OF 156

SW-301
Sh. No. 65

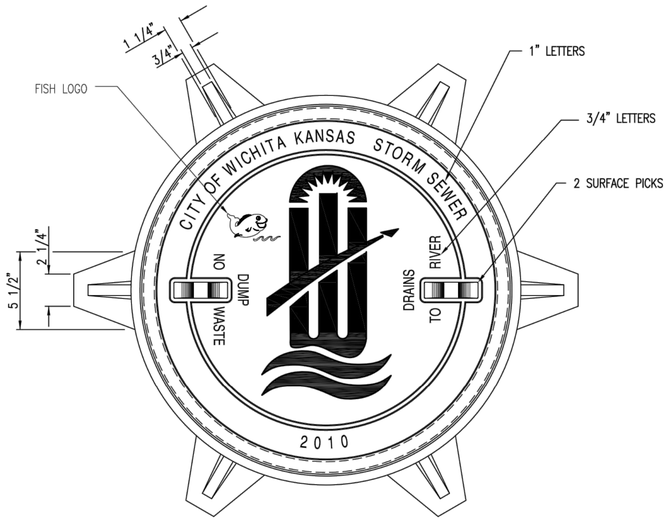
J:\Projects\2022\220101447_COW_135th Street from Central to 13th Street\00 220447 CAD\SHTS\05 Civil\Std\Storm Sewer\COW\SW-301 Precast Conc Manhole SWS.dwg

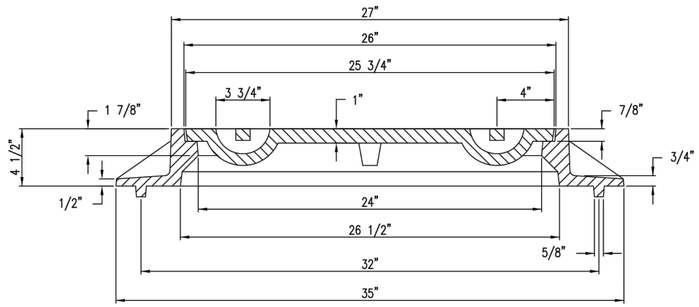




MANHOLE FRAME
DEETER #1261 OR EJIW #1936–Z1

NOTE:
1. FURNISHED WITH MACHINED HORIZONTAL BEARING SURFACE.
2. COVER TO BE DEETER #1261 OR EJIW #1936A.





INLET FRAME
DEETER #2014 OR EJIW #1936–Z4

NOTE:
1. FURNISHED WITH MACHINED HORIZONTAL BEARING SURFACES.
2. NOT TO BE USED UNDER PAVEMENT.
3. COVER TO BE DEETER #1261 OR EJIW #1936A.

CITY OF WICHITA
PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

MANHOLE/INLET FRAME AND COVER (STORM SEWER)

CITY ENGINEER
GARY JANZEN, P.E.

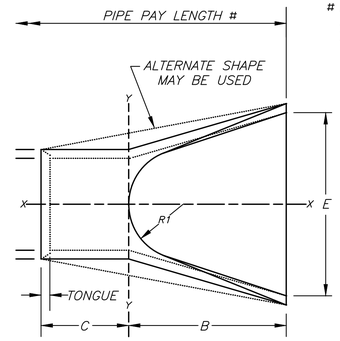
PROJECT NUMBER	OCA NUMBER	DATE
472-2021-085756	40106822	9/26/2025

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

SHEET
66 OF 156

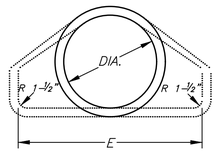
SW–303
Sh. No. 66

J:\Projects\2022\2201010447_COW_13th Street from Central to 13th Street\00 220447 CAD\SHTS\05 Civil\Std\Storm Sewer\COW\SW-303 Manhole Inlet Frame and Cover SWS.dwg

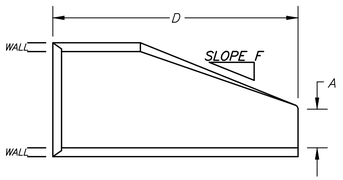


PIPE PLAN
ROUND PIPE

END SECTIONS ARE NOT PAID FOR SEPARATELY BUT ARE INCLUDED IN THE OVERALL PIPE LENGTH.



SECTION Y–Y
ROUND PIPE

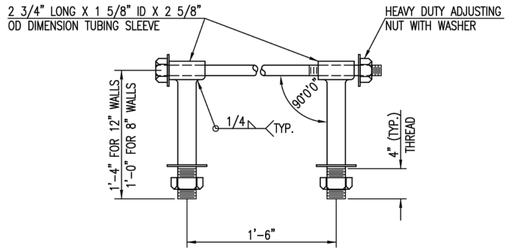


SECTION X–X

DIAM.	A	B	C	D	E	F	R1	TONGUE	WALL
18"	9"	2'–3"	3'–10"	6'–1"	3'–0"	3:1	12"	2.5"	2.5"
24"	9.5"	3'–7.5"	2'–6"	6'–1.5"	4'–0"	3:1	14"	2.5"	3"

REINFORCED CONCRETE PIPE END SECTIONS

NOTE: ADDITIONAL STORM SEWER DETAILS ARE LOCATED ON SHEET 70.

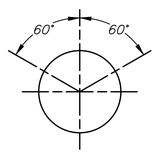


HEAVY DUTY (H.D.) COUPLER

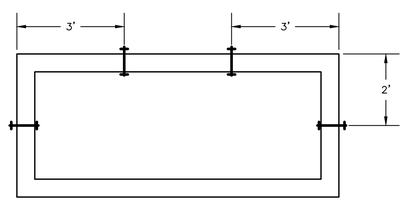
NO SCALE

NOTES

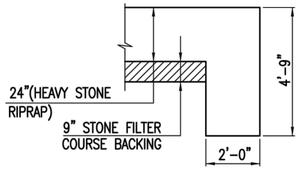
1. BOLTS TO BE A–36 1 ½" DIAMETER.
2. BOLTS, BUTS, WASHERS, AND SLEEVES TO BE ZINC PLATED.
3. WASHERS TO BE 3 ½" O.D. X 7 GAUGE.
4. SHIP WITH NUTS AND WASHERS PLACED ON BOLTS.
5. INSTALL COUPLERS AT ALL STORM SEWER OUTFALLS. COUPLE A MINIMUM OF THREE JOINTS FROM THE END OF THE LINE.
6. COUPLERS ARE SUBSIDIARY TO THE COST OF STORM SEWER CONSTRUCTION.
7. INSTALL COUPLERS AS SHOWN TO CONNECT ALL PRECAST RCB SECTIONS TOGETHER.



COUPLER INSTALLATION (PIPE)



COUPLER INSTALLATION (10' x 3' RCB)



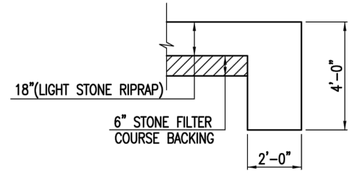
TYPICAL SECTION THRU TOEWALL

NO SCALE

NOTES

1. ALL RIPRAP FOR THIS PROJECT SHALL BE NATURAL STONE. NEITHER BROKEN CONCRETE, FABRIC ENVELOPE, NOR PREMIXED DRY PACKAGED CONCRETE BAG ALTERNATES WILL BE ALLOWED, UNLESS INDICATED OTHERWISE.
2. TOEWALLS SHALL BE INSTALLED ALONG ALL UNPROTECTED EDGES OF STONE RIPRAP.
3. GROUTING OF THE SURFACE OF THE RIPRAP SHALL NOT BE PERFORMED, UNLESS INDICATED OTHERWISE. GROUTING OF THE TOEWALLS SHALL BE PERFORMED PER CITY SPECIFICATIONS.

HEAVY STONE RIPRAP DETAILS



TYPICAL SECTION THRU TOEWALL

NO SCALE

NOTES

1. ALL RIPRAP FOR THIS PROJECT SHALL BE NATURAL STONE. NEITHER BROKEN CONCRETE, FABRIC ENVELOPE, NOR PREMIXED DRY PACKAGED CONCRETE BAG ALTERNATES WILL BE ALLOWED, UNLESS INDICATED OTHERWISE.
2. TOEWALLS SHALL BE INSTALLED ALONG ALL UNPROTECTED EDGES OF STONE RIPRAP.
3. GROUTING OF THE SURFACE OF THE RIPRAP SHALL NOT BE PERFORMED, UNLESS INDICATED OTHERWISE. GROUTING OF THE TOEWALLS SHALL BE PERFORMED PER CITY SPECIFICATIONS.

LIGHT STONE RIPRAP DETAILS

MKEC
Wichita, KS • 316-684-9600

STREET IMPROVEMENTS FOR

135TH STREET WEST

FROM CENTRAL AVE TO 13TH STREET

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MISCELLANEOUS DETAILS (STORM SEWER)

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	NTS

DESIGNED	DRAWN	CHECKED
JRA	LNP	JRA

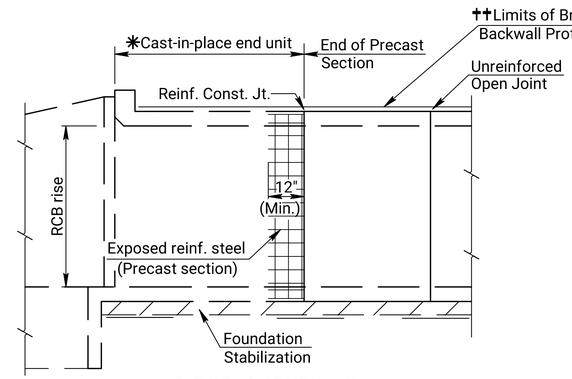
NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

SHEET NO.

67 OF 156

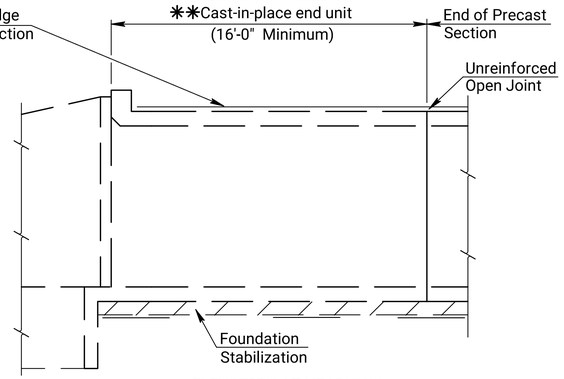
Sh. No. 67

PLOTTED: Friday, February 20, 2026 @ 01:31PM
J:\PROJECTS\2022\2021010447_COV_135TH STREET FROM CENTRAL TO 13TH STREET\00 220447 CAD\SHTS\VS CIVIL\STD\STORM SEWER\COVS\VS-401 MISC DETAILS STORM SEWER.DWG



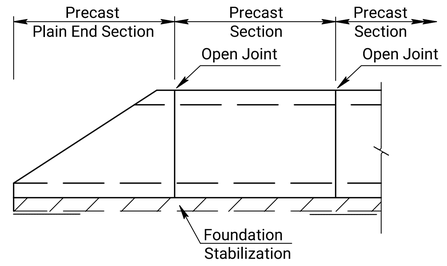
ELEVATION AT HEADWALL

✳Minimum barrel length of cast-in-place end unit shall equal the RCB rise or 8'-0", whichever is less. This length can be used when the joint between the cast-in-place end unit and the precast section is reinforced as shown.



ELEVATION AT HEADWALL

✳✳Minimum barrel length of cast-in-place end unit shall be 16'-0" when using an unreinforced open joint at the end of the precast section.



ELEVATION AT PRECAST END SECTION

(Precast End Sections are permitted where straight wings are shown in the plans or at the downstream end for single cell RCB with a rise of six feet or less.)

NOTE: See "Bridge Excavation" sheet, (Std. No. BR100B), for excavation details and basis of payment.

NOTE: Minimum length of precast section shall be 4'-0".

NOTE: A single cell box of equivalent area may be substituted for a double cell box with cell spans less than or equal to 6'-0". Any revision in the cell height from that shown on the plans will not be permitted, unless approved by the Engineer. Two single cell boxes may be substituted for a double cell box, when approved by the Engineer.

NOTE: See respective RCB Standard Sheets for cast-in-place details.

NOTE: When the fill height is 2'-0" or less "Bridge Backwall Protection" is required.

GENERAL NOTES

(All Items on this sheet are subsidiary)

PRECAST BOX CULVERTS: If precast boxes are specified, construct them at the locations shown in the plans and according to the requirement shown on this sheet. When approved by the Engineer, precast box culverts may be used in lieu of cast-in-place box culverts. If the Contractor chooses the precast option, use the cast-in-place quantities as the cost basis. This cost includes all labor equipment, material and incidentals necessary to complete the installation.

Unless otherwise approved by the Engineer, use cast-in-place collars at horizontal and vertical changes in RCB alignment. Use cast-in-place end sections and wingwalls except as noted on this sheet. The Engineer may require cast-in-place sections at junctions of drainage structures.

Cast-in-place concrete work shall conform to the requirements of the KDOT Specifications and Chapter 12 of KDOT's Bridge Design Manual. Use Grade 4.0 concrete and Grade 60 reinforcing steel conforming to ASTM A615 for cast-in-place construction.

Cast-in-place box sections shall have member thicknesses and reinforcement not less than the RCB Standard from the original design. Connections between the cast-in-place and precast members shall be drilled and grouted according to details shown on this sheet. When the wall thicknesses differ between the cast-in-place and precast, transition at a 4:1 without reducing the box opening size. See KDOT Specifications for further requirements.

SPECIFICATIONS: Single-cell Precast Concrete Box Culverts shall conform to the requirements of the following specifications except as noted in the KDOT Specifications. Design multiple-cell precast boxes in accordance with the criteria used to develop the single-cell precast boxes. (See Appendix of ASTM Specification C 1577-08, Table 2 and the latest AASHTO LRFD Specifications.)

DISTRIBUTION SLAB: Fill heights less than 2 feet require a distribution slab. Construct the distribution slab over the width of the exterior walls of the barrel to the outside edges of the roadway shoulders. Terminate the slab a minimum of 2 feet from the edge of a barrel segment.

If the fill height is less than or equal to one foot then:

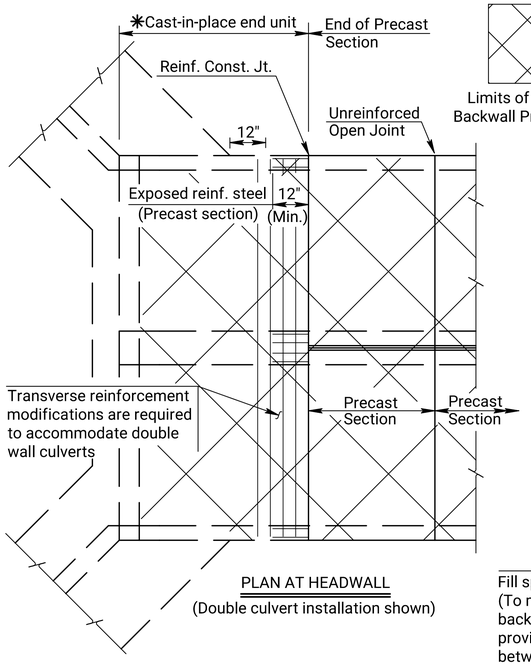
A distribution slab shall be a minimum of 6 inches thick, reinforced with #4 bars spaced at 18 inches, placed perpendicular to centerline of the box and with #5 bars spaced at 12 inches, placed parallel to centerline of the box. Substitution of an equivalent welded wire fabric is acceptable. Place a min. of 3" of granular material between the box and slab.

If the fill height is greater than one foot then:

(Use one of the following options)

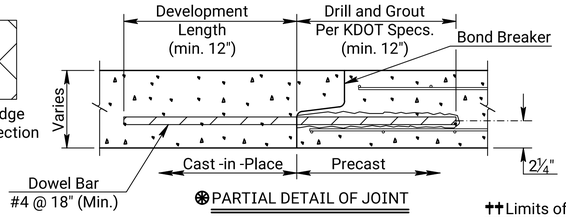
1. Use the cast-in-place criteria above.
2. Use precast distribution slabs with same criteria as the cast-in-place above. Center the joints in slabs over the box segments. Provide a minimum of 3 inches of granular material between the box and the slabs.
3. Reinforced concrete pavement (min. 6 inches thick) will meet the requirements of a distribution slab. Reinforce as noted above. Provide a minimum of 3 inches of granular material between the concrete pavement and the precast boxes.
4. Asphalt pavement (min. 6 inches thick) will meet the requirements of a distribution slab. Provide a minimum of 6 inches of granular material between the asphalt and the precast boxes. Also provide geogrid with 4" of cover to the asphalt within the granular material.

A special design will be required when the above options are not geometrically possible.

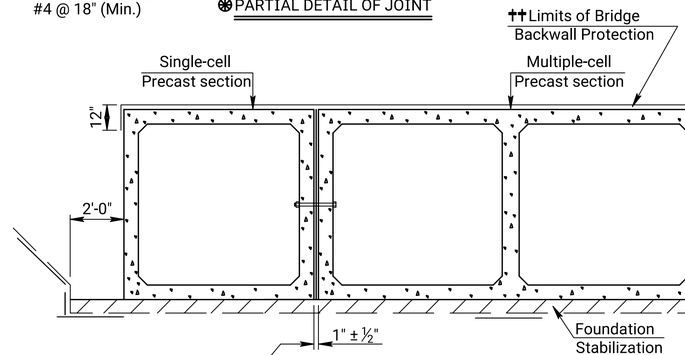


PLAN AT HEADWALL

(Double culvert installation shown)



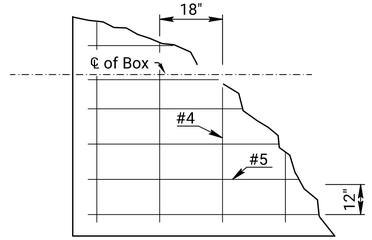
❁PARTIAL DETAIL OF JOINT



TYPICAL INSTALLATION DETAILS

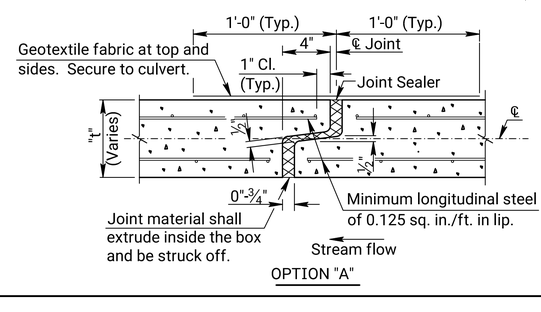
Fill space between boxes with grout. (To maintain proper joint gap, partially backfill boxes prior to grouting or provide a mechanical connection between boxes.)

❁Bridge Backwall Protection not shown for clarity.

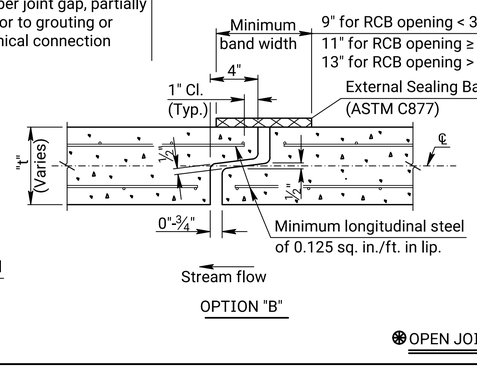


CAST IN PLACE DISTRIBUTION SLAB

(Partial plan of reinforcement)

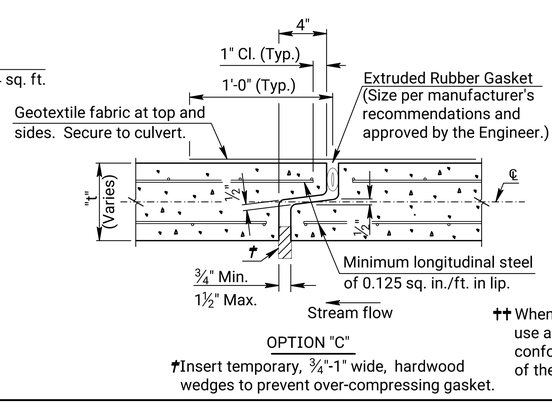


OPTION "A"



OPTION "B"

❁OPEN JOINT DETAIL



OPTION "C"

†Insert temporary, ¾"-1" wide, hardwood wedges to prevent over-compressing gasket.

††When shown on the shop details use a Bridge Backwall Protection conforming to Section 1700 of the KDOT Specifications.

NO.	DATE	REVISIONS	BY	APP'D
05	08-19-13	Edit Geogrid Placement	J.P.J.	T.L.F.
04	07-28-11	Added Bridge Backwall Protection	J.P.J.	K.F.H.
03	03-10-10	Clarification of Extension	J.P.J.	K.F.H.

KANSAS DEPARTMENT OF TRANSPORTATION

PRECAST CONCRETE BOX CULVERT DETAILS

BR031

FHWA APPROVAL	09-20-11	APP'D.	Kenneth F. Hurst
DESIGNED	DETAILED P.F.	QUANTITIES	TRACED
DESIGN CK.	DETAIL CK. R.A.M.	QUAN.CK.	TRACE CK.

J:\Projects\2022\220101047_COW_135th Street from Central to 13th Street\00 220447 CAD\Shts\05 Civil\Std\Storm Sewer\KDOT\Br031.dwg

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GENERAL NOTE

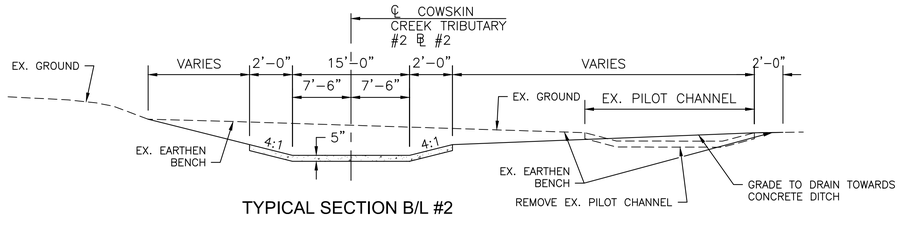
Welded wire reinforcement shall be of the electrically welded square mesh type with No. W1.4 wires spaced at 6" ctrs. each way.

Reinforcement as shown is included in the unit price bid for "Concrete Ditch Liner 5"".

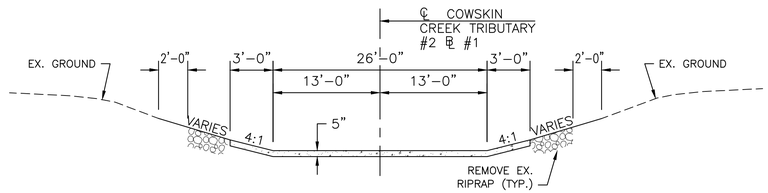
Measurements of Concrete Ditch Lining shall be in sq. yds. of outside surface area. Toe Wall Construction is subsidiary.

The exact location and dimensions may be adjusted, if required, by the Engineer at the time of construction.

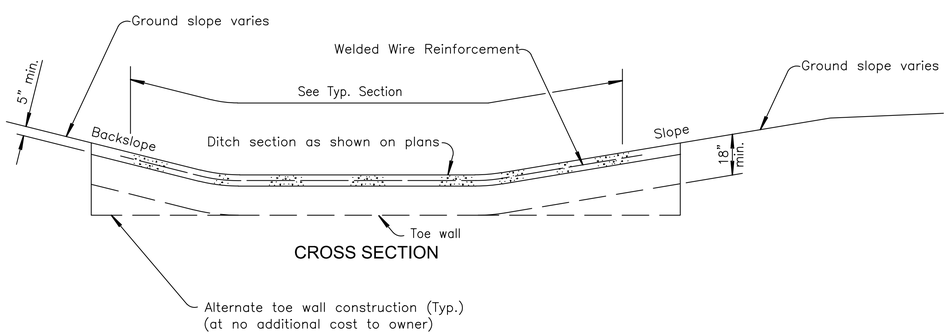
Longitudinal construction joints shall be constructed. to match the adjoining existing lining.



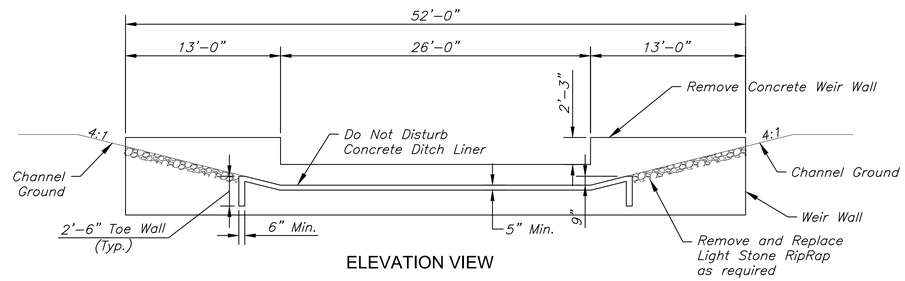
TYPICAL SECTION B/L #2



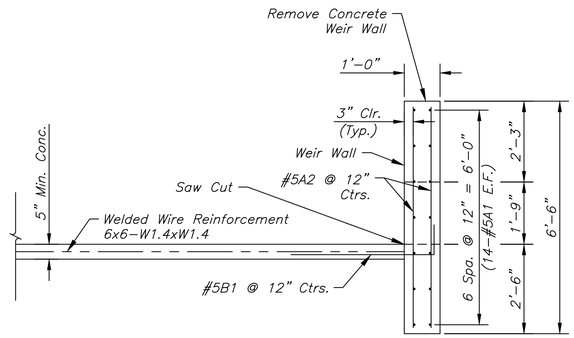
TYPICAL SECTION B/L #1



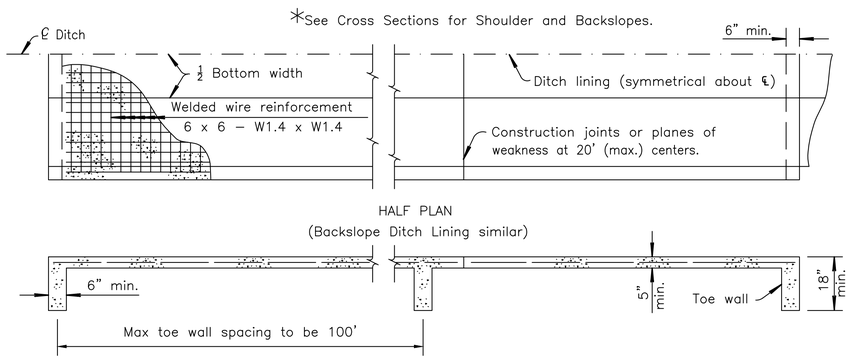
CROSS SECTION



ELEVATION VIEW



SECTION VIEW
WEIR REMOVAL DETAILS



LONGITUDINAL SECTION

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STREET IMPROVEMENTS FOR

135TH STREET WEST

FROM CENTRAL AVE TO 13TH STREET

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CONCRETE DITCH LINING DETAILS

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	NTS

DESIGNED	DRAWN	CHECKED
JRA	LNP	JRA

NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

SHEET NO.

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J:\PROJECTS\2022\2201010447_COW_135TH STREET FROM CENTRAL TO 13TH STREET\00 220447 CAD\SHTS\IVS CIVIL\GRD\210447-05-DITCH LINING DETAILS.DWG

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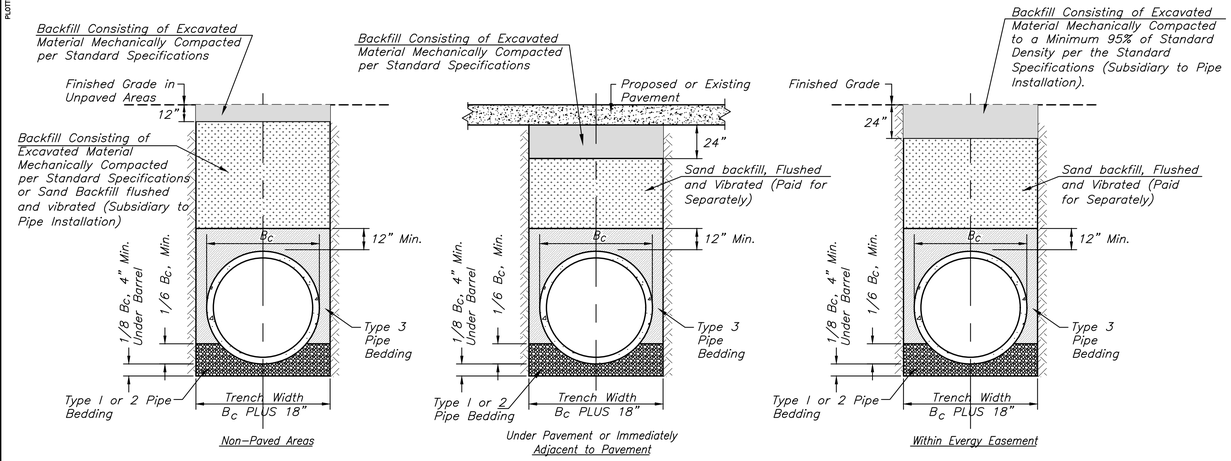
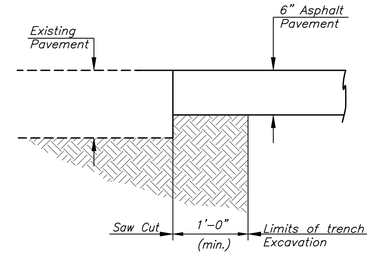
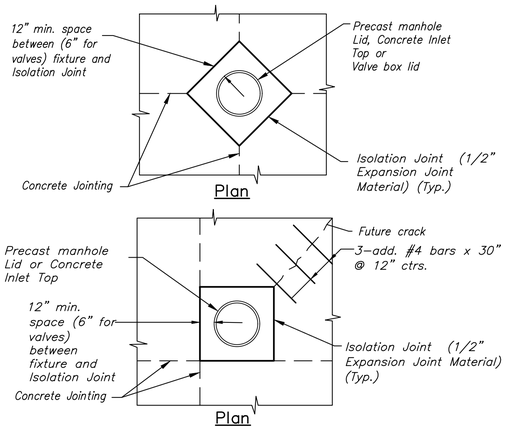


STORM SEWER TRENCH DETAILS



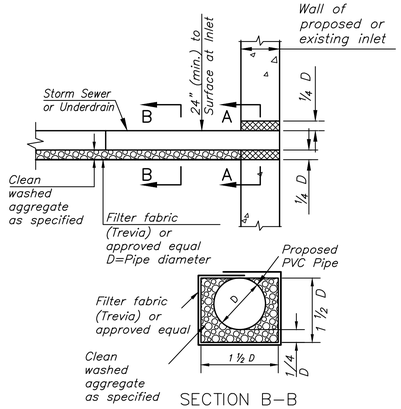
TEMPORARY PAVEMENT PATCH

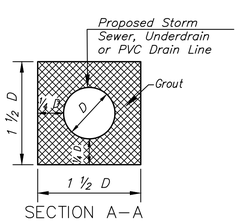
Paid for as "Temporary Asphalt Pavement (6")(Utility Patch)" and measured per linear foot of asphalt pavement placed. The removal of temporary pavement is Subsidiary to this item. See sheets 28, 29, 30, 31, 33, 35, 38, and 39 for temporary pavement patch locations and plan quantities.



TYPICAL UTILITY BOX-OUT DETAILS

Note: Contractor shall construct box-outs around all surface utility fixtures, as shown, when fixtures fall on or near concrete joints, or as directed by the Engineer. All other fixtures shall have an isolation joint or bond breaker between them and concrete pavement. Cost shall be subsidiary.

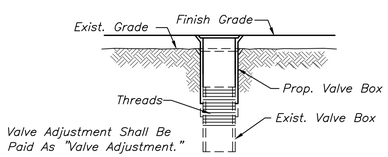




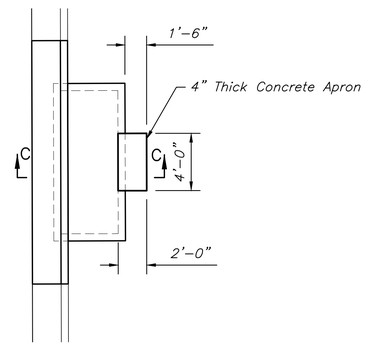
Contractor to remove section from existing (or proposed structure) and patch around pipe.

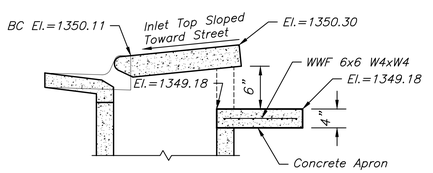
NOTE: A hole shall be made through existing structures as shown to accommodate pipe connections. Round holes are acceptable. Clean gravel and filter fabric around pipe will not be required around concrete storm sewer pipe.

PIPE CONNECTION DETAIL



WATER VALVE BOX ADJUSTMENT DETAIL

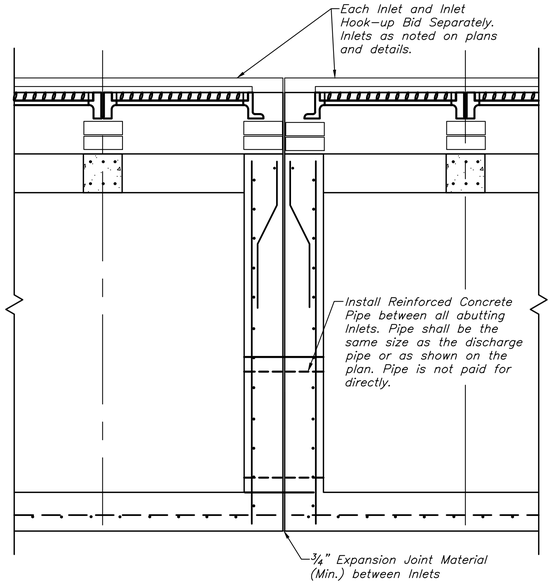




Note: Cost of Blockout and Apron is Subsidiary to Inlet Construction.

INLET BLOCKOUT DETAILS

Sta. 49+85.00



ABUTTING INLET CONNECTION DETAIL

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STREET IMPROVEMENTS FOR

135TH STREET WEST

FROM CENTRAL AVE TO 13TH STREET

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MISCELLANEOUS DETAILS

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	NTS

DESIGNED	DRAWN	CHECKED
JRA	LNP	JRA

NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

SHEET NO.

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Sh. No. 70

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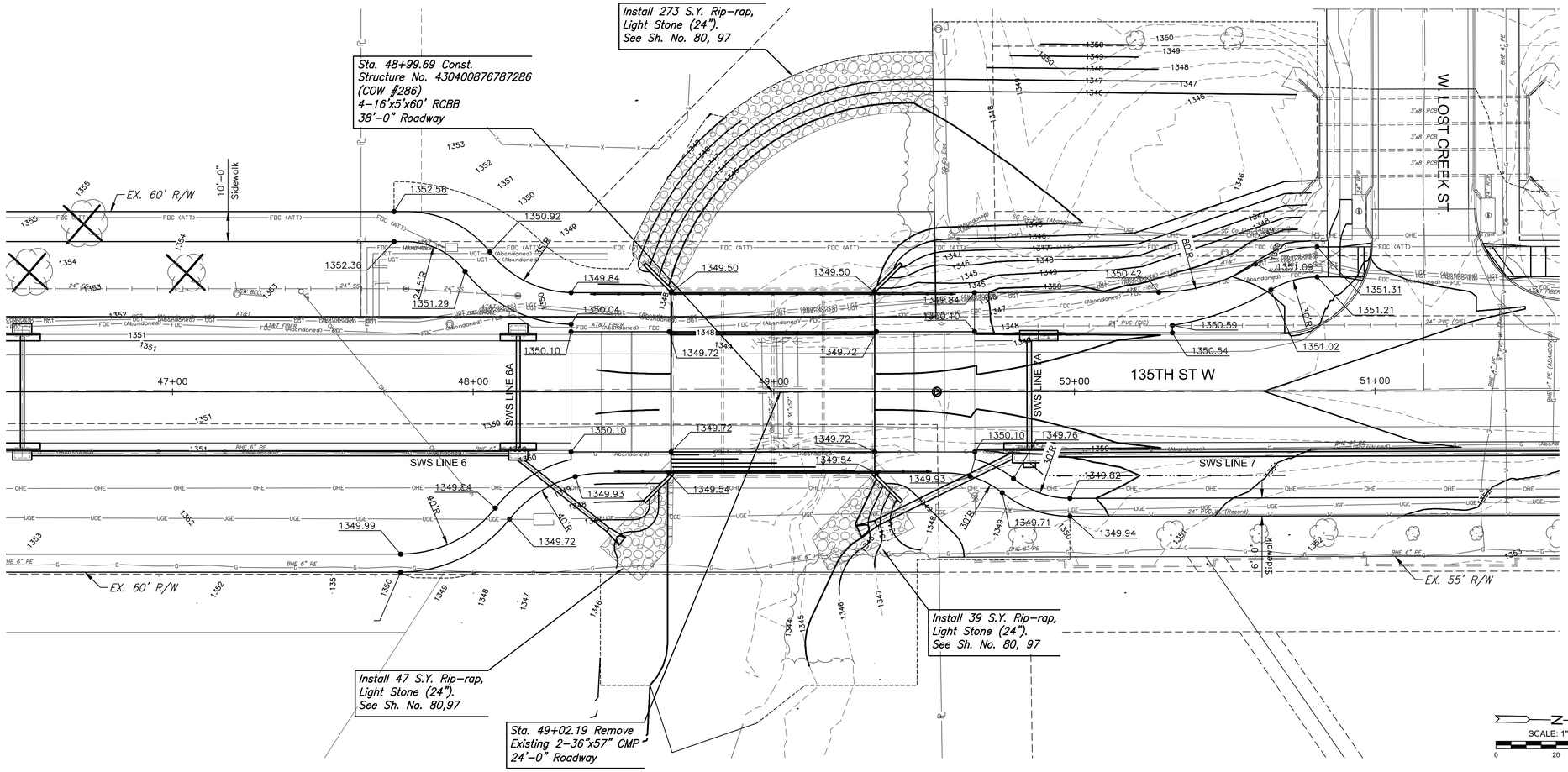

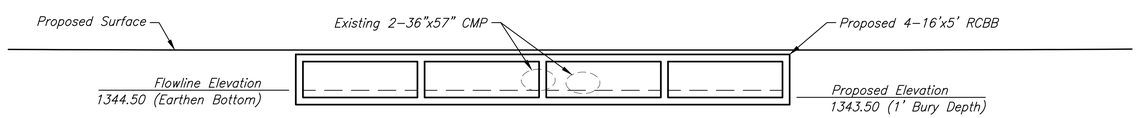

EXISTING CHANNEL

Existing Waterway Opening: 23 Sq. Ft. (2–36"x57" CMP)
Proposed Waterway Opening: 256 Sq. Ft. (4–16'x5' RCBB)

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STREET IMPROVEMENTS FOR

135TH STREET WEST

FROM CENTRAL AVE TO 13TH STREET

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BRIDGE CONTOUR MAP

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	1"=20'

DESIGNED	DRAWN	CHECKED
DMU	RAM	JRA

NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

SHEET NO.

71 OF 156

Sh. No. 71

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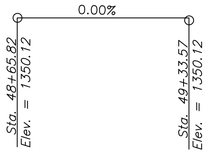
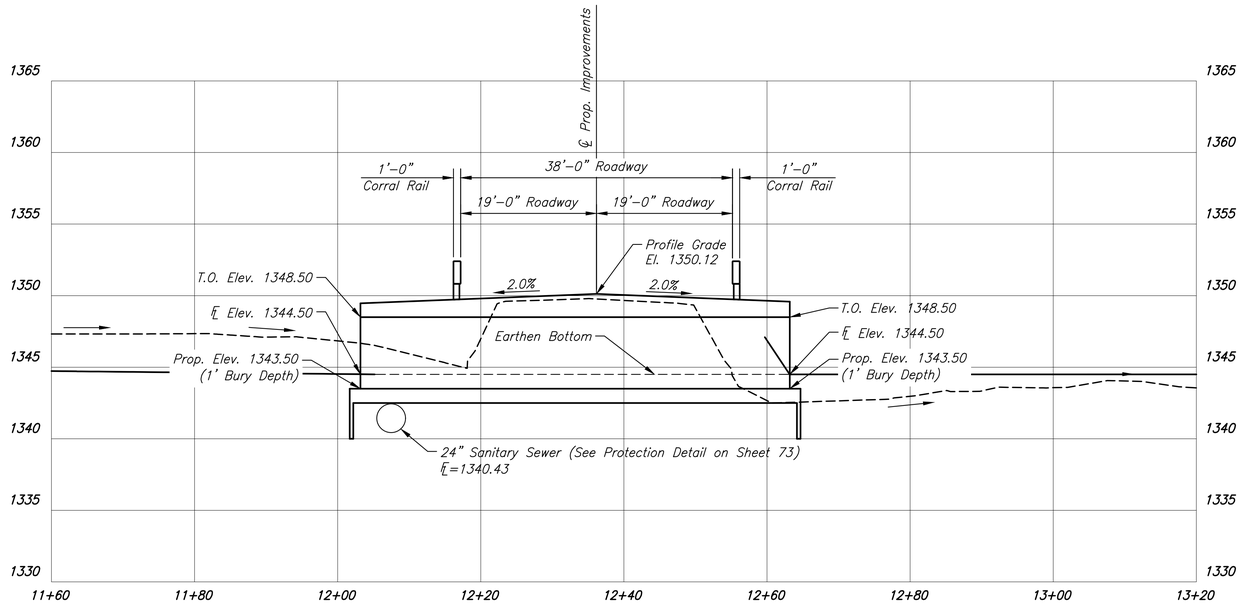


N. 135th St. W.
PROFILE GRADE LINE

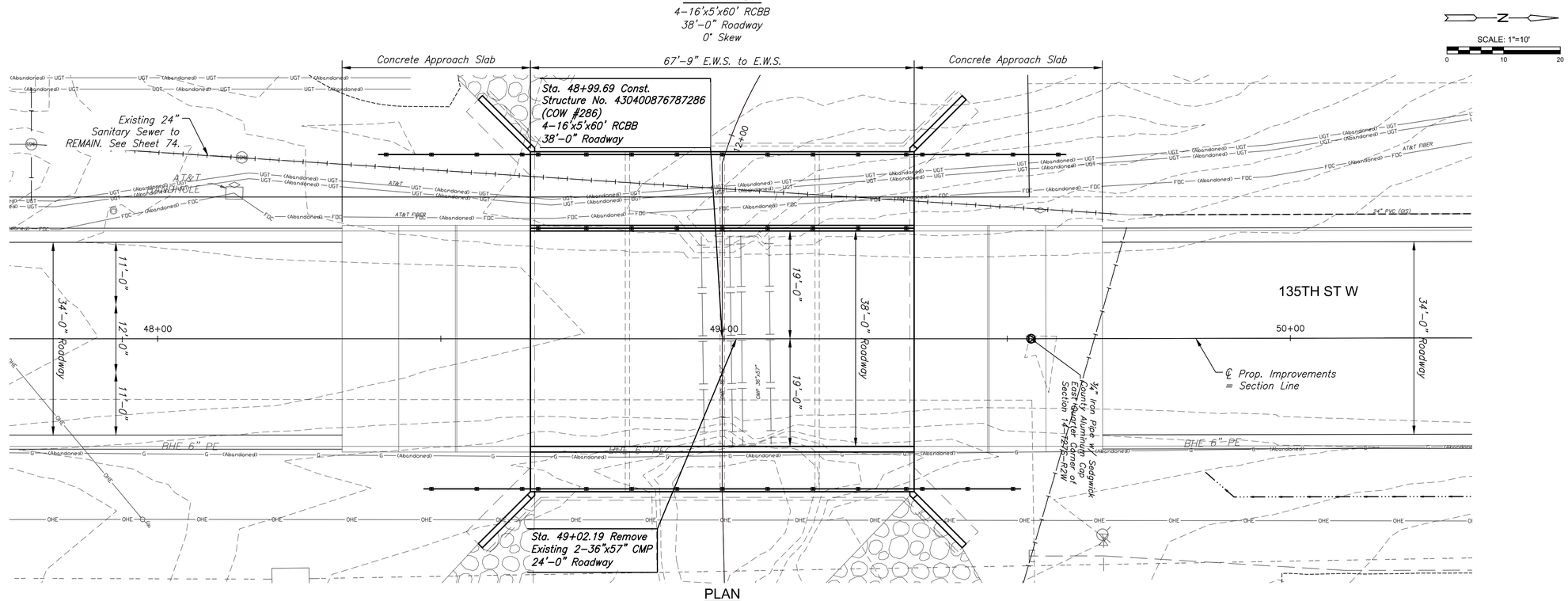


ELEVATION
4–16'x5'x60' RCBB
38'–0" Roadway
0° Skew

DRAINAGE DATA

Drainage Area	0.46 Sq. Mi.
Design Frequency	100 Years
Design Discharge	1,687 cfs
Design Velocity	6.6 fps
Design High Water Elevation	1,349.03'
Overtopping Elevation	1,350.12'
Overtopping Discharge	>1,687 cfs
Overtopping Frequency	>100 Years
Historic High Water Elevation	Unknown
Estimated Ordinary High Water Discharge	166 cfs
Estimated Ordinary High Water Elevation	1,345.45'
Design waterway provided	256 ft²

LRFD Rating Factors		
Design Load \ Rating Load	Inventory	Operating
HL–93 Loading	1.78	2.30
2017 Manual for Bridge Evaluation		



PLAN

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135TH STREET WEST

STREET IMPROVEMENTS FOR
FROM CENTRAL AVE TO 13TH STREET

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BRIDGE CONSTRUCTION LAYOUT

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	1"=10'

DESIGNED	DRAWN	CHECKED
DMU	RAM	JRA

NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

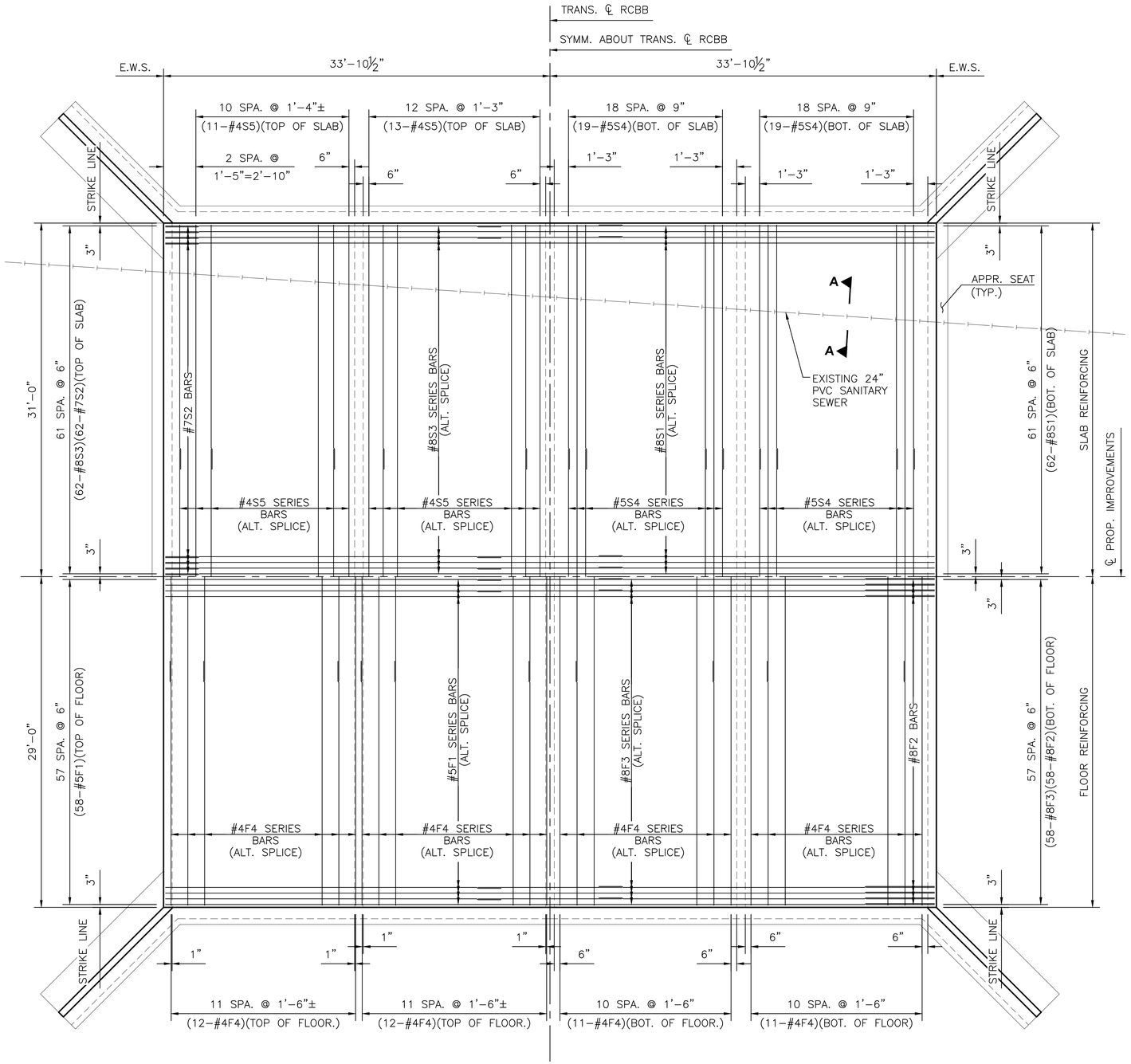
SHEET NO.

72 OF 156

Sh. No. 72

J:\PROJECTS\2022\2210\10447_COW_135TH STREET FROM CENTRAL TO 13TH STREET\00 220447 CAD\SHTS\05 CIVIL\BRIDGE\220447-05-0251.DWG

PLOTTED: Friday, February 20, 2026 @ 01:23PM



SLAB AND FLOOR PLAN

BARREL GENERAL NOTES

DESIGN SPECIFICATION: AASHTO LRFD Spec., 2007 Ed., 2009 Int.
DESIGN LOADING: HL93
UNIT STRESSES: Grade 4.0 Concrete; f'c=4,000 p.s.i.
Reinforcing Steel; fy=60,000 p.s.i.

CONCRETE: Grade 4.0 Concrete shall be used throughout. Bevel all exposed edges with a ¾ inch triangular moulding. Where Grade 4.0 Concrete (AE) is specified, it shall be placed in the top slab above the Construction Joint.

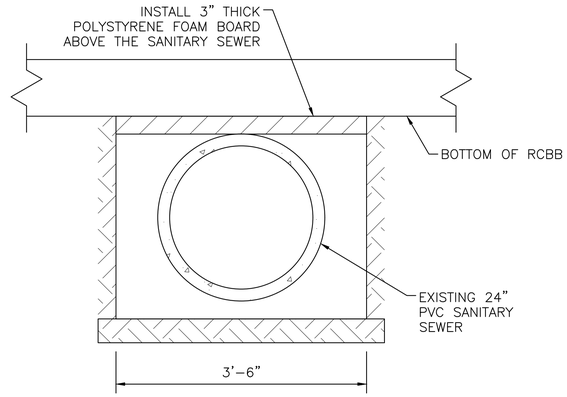
REINFORCING: All reinforcing shall conform to ASTM A615, Grade 60. All dimensions relative to reinforcing steel shall be to centerline of bar unless otherwise noted.

SEAL COURSE: A Seal Course may be required by the Engineer. The Seal Course shall be unreinforced Concrete (Commercial Grade) to a minimum depth of 3 inches or as determined by the Engineer. Concrete for the seal course shall be paid for at the unit price set for Concrete for Seal Course.

FOUNDATION STABILIZATION: The Foundation Stabilization quantity has been calculated to the limits shown on the "RCB Auxiliary Details" sheet. The depth may be increased by the Engineer. The Contractor may underrun Foundation Stabilization under the barrel if founded on firm material and with the Engineer's approval. Use Foundation Stabilization on all wingwalls unless founded on rock or granular material.

QUANTITIES: The quantities shown in the Summary of Quantities include apron and/or soil saver quantities when their construction is required by the plans. Payment for additional quantities that result from including seal course and/or floating apron, as a change in original plans, shall be made at the Unit Price bid for the various items involved.

STRIKE LINE: Wingwalls and that portion of the RCB outside the Strike Line shall be constructed level. Footing for wingwalls shall be constructed with the culvert floor. See wingwall details sheet.



SECTION A-A

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STREET IMPROVEMENTS FOR

135TH STREET WEST

FROM CENTRAL AVE TO 13TH STREET

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BARREL DETAILS

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	NTS

DESIGNED	DRAWN	CHECKED
DMU	RAM	JRA

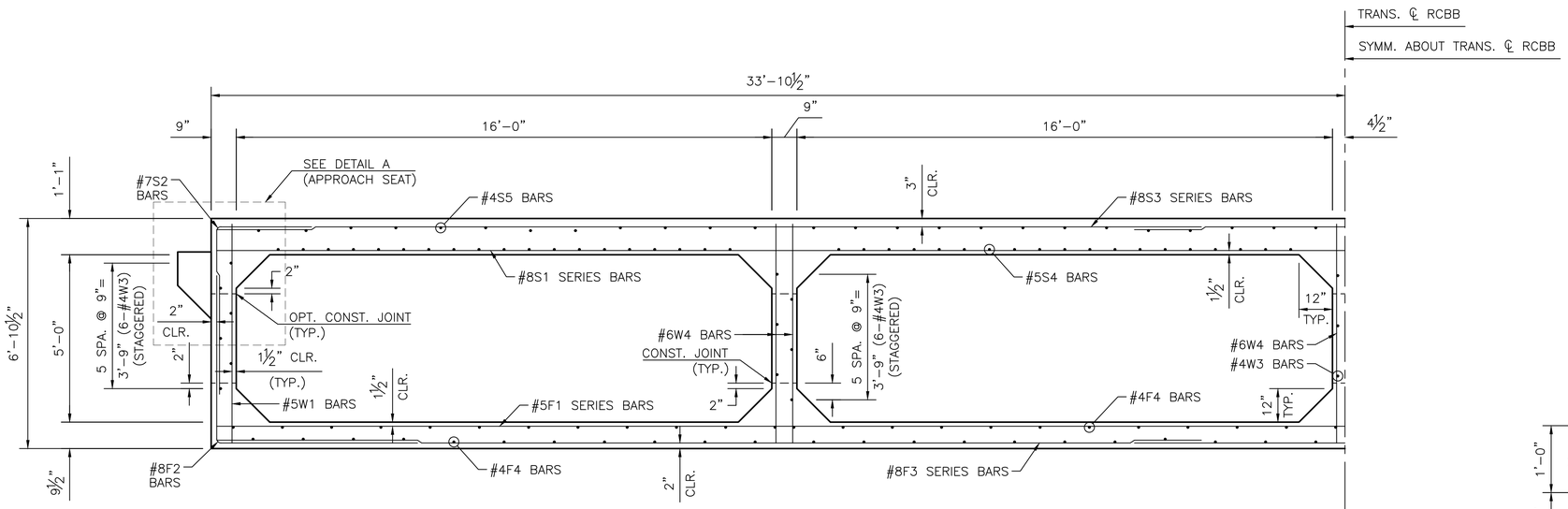
NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

SHEET NO.
73 OF 156

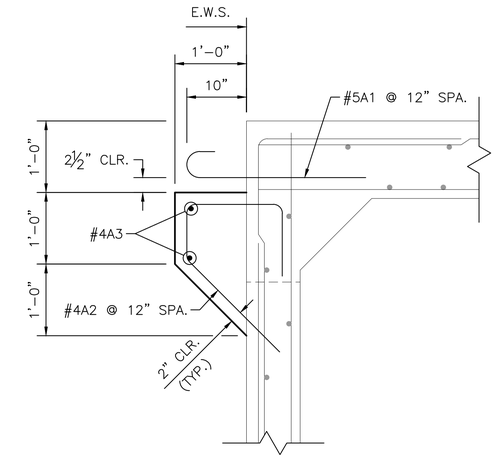
Sh. No. 73

J:\PROJECTS\2022\2201610447_COW_135TH STREET FROM CENTRAL TO 13TH STREET\00 220447 CAD\SHTS\05 CIVIL\BRIDGE\220447-05-5255.DWG

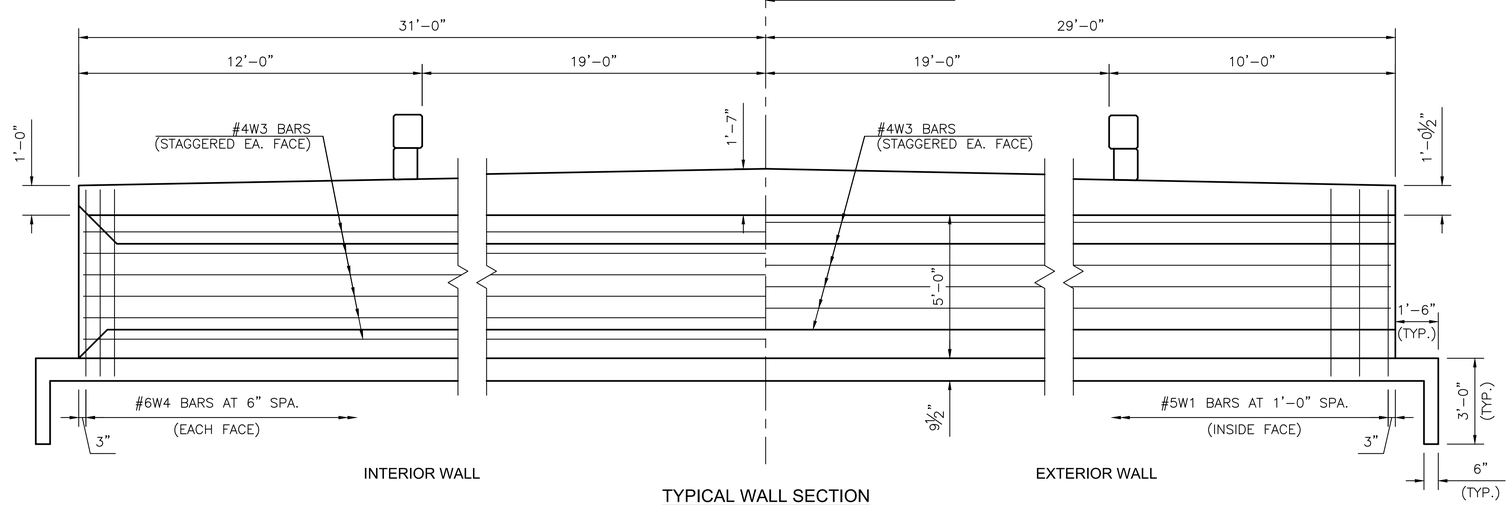
PLOTTED: Friday, February 20, 2026 @ 01:22PM



HALF TYPICAL BARREL SECTION



DETAIL A



INTERIOR WALL

EXTERIOR WALL

TYPICAL WALL SECTION

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STREET IMPROVEMENTS FOR

135TH STREET WEST

FROM CENTRAL AVE TO 13TH STREET

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BARREL DETAILS

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	NTS

DESIGNED	DRAWN	CHECKED
DMU	RAM	JRA

NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

SHEET NO.

74 OF 156

Sh. No. 74

J:\PROJECTS\0222\2021010447_CDW_135TH STREET FROM CENTRAL TO 13TH STREET\00 220447 CAD\SHTS\05 CIVIL\BRIDGE\220447-05-0255.DWG

PLOTTED: Friday, February 20, 2026 @ 01:23PM

FOR INFORMATION ONLY

SUMMARY OF QUANTITIES (Barrels & Approach Seat)	
Concrete (Grade 4.0)	*177.6 C.Y.*
Reinforcing Steel (Grade 60)	*49,290 Lbs.*
Concrete (Grade 4.0)(AE)	*225.2 C.Y.*
Reinforcing Steel (Grade 60)(Epoxy Coated)	*53,890 Lbs.*
Foundation Stabilization	*82.4 C.Y.*

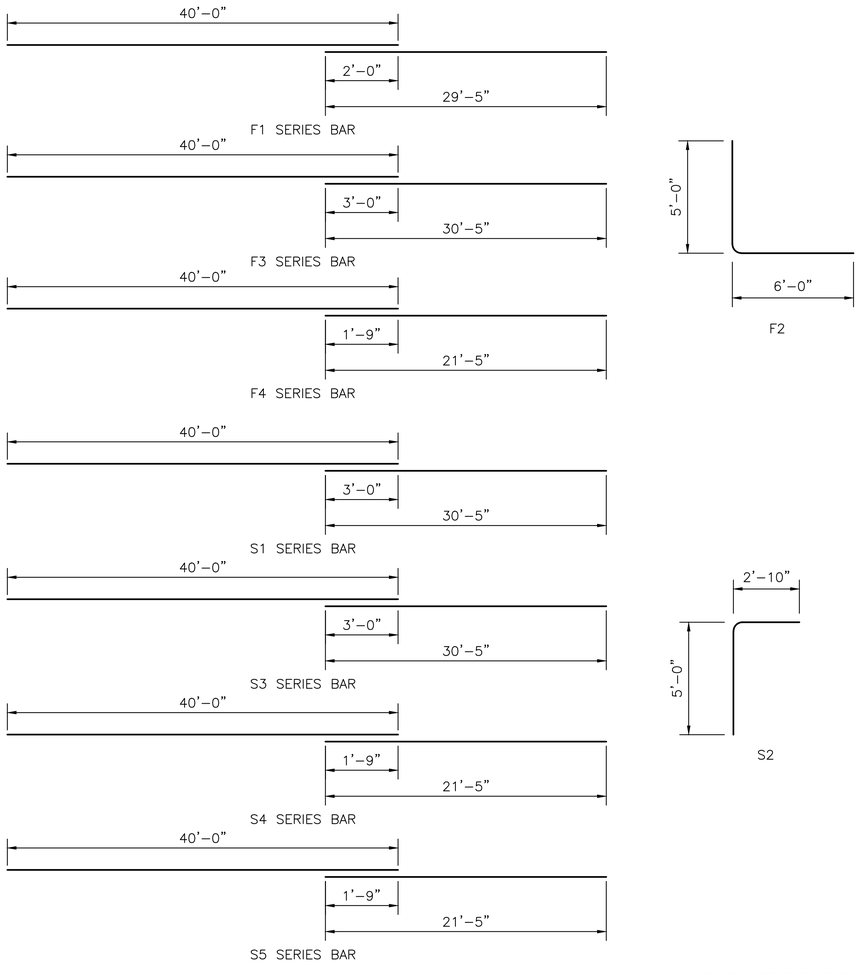
Note: All items Subsidiary to "Pipe, SWS, RCBC (4–16'x5')"

FOR INFORMATION ONLY

BILL OF REINFORCING STEEL
(Barrels & Approach Seat)

Straight Bars					*Bent Bars*				
Mark	*Size*	*No.*	*Length*	*Remarks*	*Mark*	*Size*	*No.*	*Length*	*Remarks*
A3	*#4*	*4*	** 61'–5"*		*A1*	*#5*	*120*	*3'–2"*	
F1	*#5*	*120*	** 69'–5"*		*A2*	*#4*	*120*	*4'–11"*	
F3	*#8*	*120*	** 70'–5"*		*F2*	*#8*	*120*	*11'–0"*	
F4	*#4*	*92*	** 61'–5"*		*ΔS2*	*#7*	*120*	*7'–10"*	
ΔS1	*#8*	*120*	** 70'–5"*						
ΔS3	*#8*	*120*	** 70'–5"*						
ΔS4	*#5*	*76*	** 61'–5"*						
ΔS5	*#4*	*48*	** 61'–5"*						
W1	*#5*	*122*	*6'–10" Avg.*	*Varies 6'–6" to 7'–1"*					
W3	*#4*	*30*	** 61'–5"*						
W4	*#6*	*720*	*6'–10" Avg.*	*Varies 6'–6" to 7'–1"*					

** SEE BAR BENDING DIAGRAM*
Δ EPOXY COATED REINFORCING STEEL



BAR BENDING DIAGRAM

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STREET IMPROVEMENTS FOR

135TH STREET WEST

FROM CENTRAL AVE TO 13TH STREET

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BARREL DETAILS

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	NTS

DESIGNED	DRAWN	CHECKED
DMU	RAM	JRA

NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

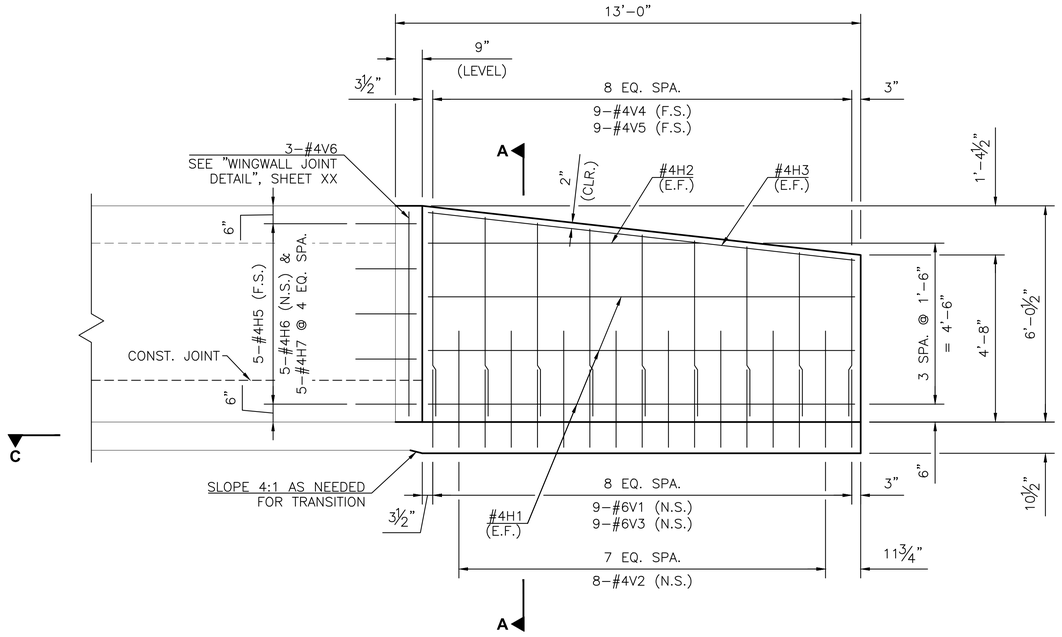
SHEET NO.

75 OF 156

Sh. No. 75

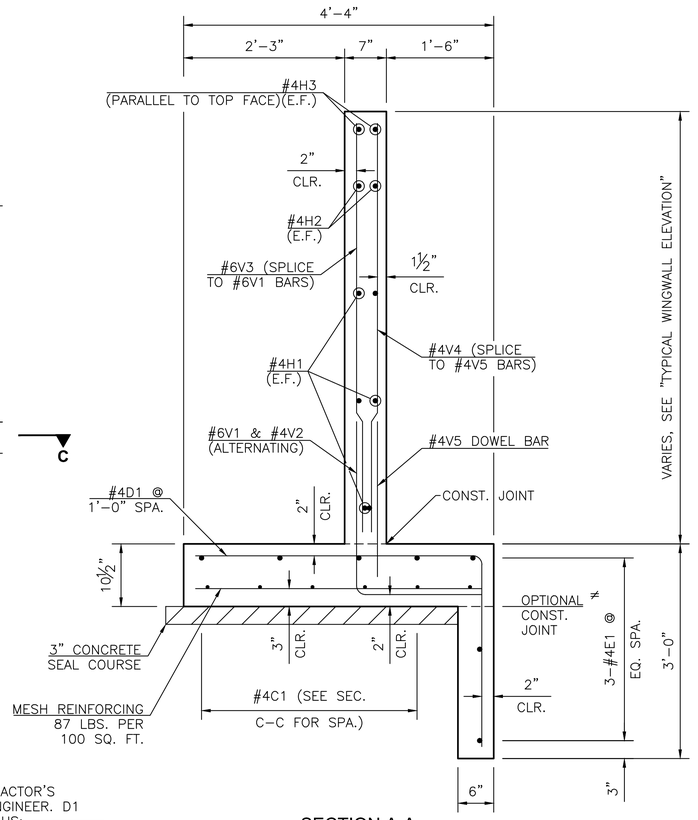
J:\PROJECTS\2022\2291\10447_COW_135TH STREET FROM CENTRAL TO 13TH STREET\100 220447 CAD\SHTS\05 CIVIL\BRIDGE\220447-05-4265.DWG

PLOTTED: Friday, February 20, 2026 @ 01:23PM



TYPICAL WINGWALL ELEVATION

(BACKFACE SHOWN)



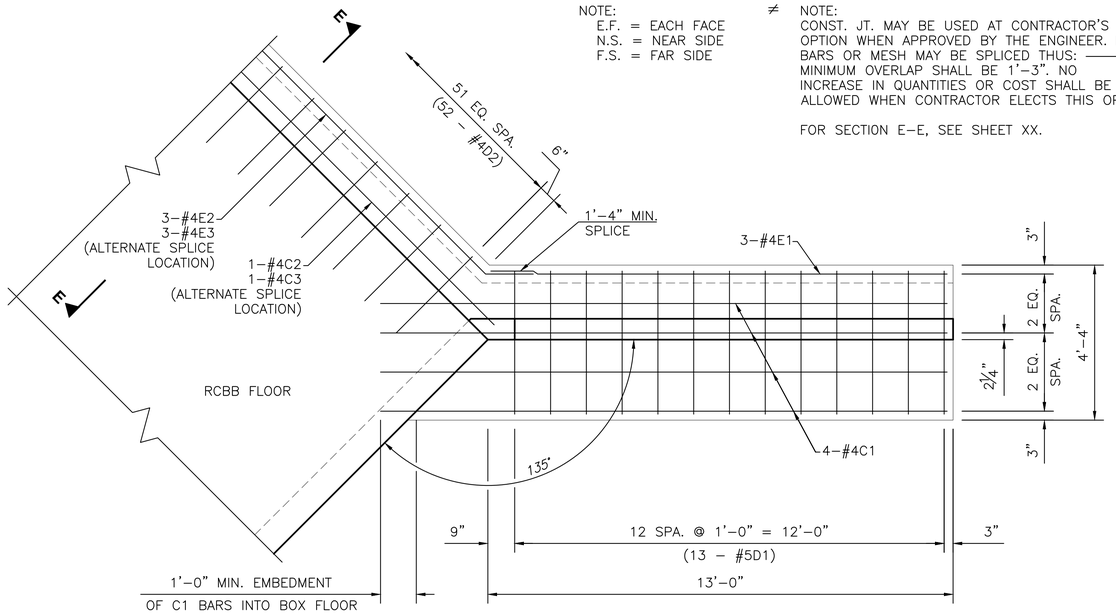
SECTION A-A

NOTE:
E.F. = EACH FACE
N.S. = NEAR SIDE
F.S. = FAR SIDE

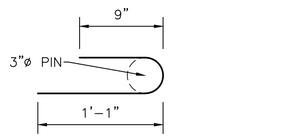
≠

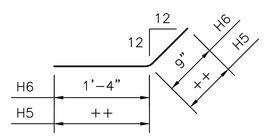
NOTE:
CONST. JT. MAY BE USED AT CONTRACTOR'S OPTION WHEN APPROVED BY THE ENGINEER. D1 BARS OR MESH MAY BE SPLICED THUS: ——— MINIMUM OVERLAP SHALL BE 1'-3". NO INCREASE IN QUANTITIES OR COST SHALL BE ALLOWED WHEN CONTRACTOR ELECTS THIS OPTION.

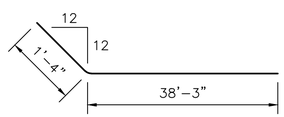
FOR SECTION E-E, SEE SHEET XX.

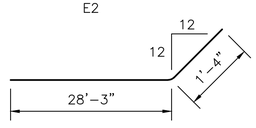


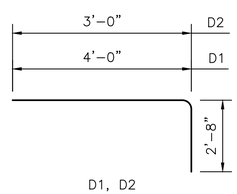
SECTION C-C

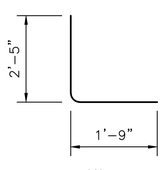


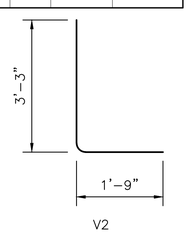












BAR BENDING DIAGRAM

++ BEND IN FIELD

WINGWALL GENERAL NOTES

DESIGN SPECIFICATION: AASHTO LRFD Spec., 2007 Ed., 2009 Int.
DESIGN LOADING: HL93
UNIT STRESSES: Grade 4.0 Concrete; f'c=4,000 p.s.i. Reinforcing Steel; fy=60,000 p.s.i.
CONCRETE: Grade 4.0 Concrete shall be used throughout. Bevel all exposed edges with a ¾ inch triangular moulding.
REINFORCING: All reinforcing shall conform to ASTM A615, Grade 60. Welded Wire Reinforcement shall conform to ASTM A185. All dimensions relative to reinforcing steel shall be to centerline of bar unless otherwise noted. Welded Wire Reinforcement shall be classified as pounds of reinforcing and included in the total quantity for the bid item Reinforcing Steel (Gr. 60).
QUANTITIES: Wingwall Quantities include all quantities outside the neat lines of the box.
BACKFILL MATERIAL: Use Granular Backfill material meeting the requirements of SB-1, SB-2, SCA-1, SCA-2. Backfill all wings to limits shown on the "RCB Auxiliary Sheet".
FILTER FABRIC: Separate in-situ material from granular backfill with approved filter fabric complying with Section 1710. Filter Fabric is subsidiary to "Granular Backfill".
FOUNDATION STABILIZATION: Use Foundation Stabilization on all wingwalls unless founded on rock or granular material.

FOR INFORMATION ONLY

SUMMARY OF QUANTITIES
(All Four Wings Included)

Concrete (Grade 4.0)	*15.9 C.Y.*
Reinforcing Steel (Grade 60)	*2,330 Lbs.*
Foundation Stabilization	*5.6 C.Y.*
Granular Backfill (Wingwalls)	*36.4 C.Y.*
Filter Fabric (Subsidiary)	*101.5 S.Y.*
Abutment Strip Drain	*16.0 S.Y.*

Note: All items Subsidiary to "Pipe, SWS, RCBC (4-16'x5')"

FOR INFORMATION ONLY

BILL OF REINFORCING STEEL
(All Four Wings Included)

Straight Bars					*Bent Bars*				
Mark	*Size*	*No.*	*Length*	*Remarks*	*Mark*	*Size*	*No.*	*Length*	*Remarks*
C1	*#4*	*16*	*15'-10"*		*D1*	*#4*	*52*	*6'-8"*	
C2	*#4*	*2*	*40'-0"*		*D2*	*#4*	*104*	*5'-8"*	
C3	*#4*	*2*	*28'-10"*		*E2*	*#4*	*3*	*38'-3"*	
E1	*#4*	*12*	*12'-9"*		*E3*	*#4*	*3*	*28'-3"*	
H1	*#4*	*24*	*11'-11"*		*H5*	*#4*	*20*	*2'-1"*	
H2	*#4*	*8*	*7'-8"*		*H6*	*#4*	*20*	*2'-1"*	
H3	*#4*	*8*	*12'-0"*		*H7*	*#4*	*20*	*1'-11"*	
V3	*#6*	*36*	*5'-1" Avg.*	*Varies 4'-5" to 5'-9"*	*V1*	*#6*	*36*	*4'-2"*	
V4	*#4*	*36*	*5'-1" Avg.*	*Varies 4'-5" to 5'-9"*	*V2*	*#4*	*32*	*5'-0"*	
V5	*#4*	*36*	*2'-2"*						
V6	*#4*	*12*	*5'-9"*						

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STREET IMPROVEMENTS FOR

135TH STREET WEST

FROM CENTRAL AVE TO 13TH STREET

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WINGWALL DETAILS

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	NTS
DESIGNED	DMU
DRAWN	RAM
CHECKED	JRA

NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

SHEET NO.

76 OF 156

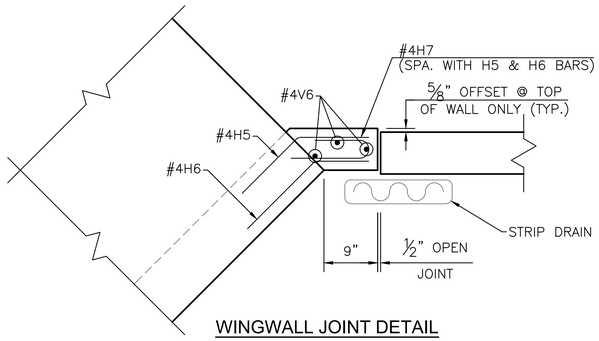
J:\PROJECTS\2022\2201010447_COV_135TH STREET FROM CENTRAL TO 13TH STREET\100 220447 CAD\SHTS\05 CIVIL\BRIDGE\220447-05-2536.DWG

PLOTTED: Friday, February 20, 2026 @ 01:23PM

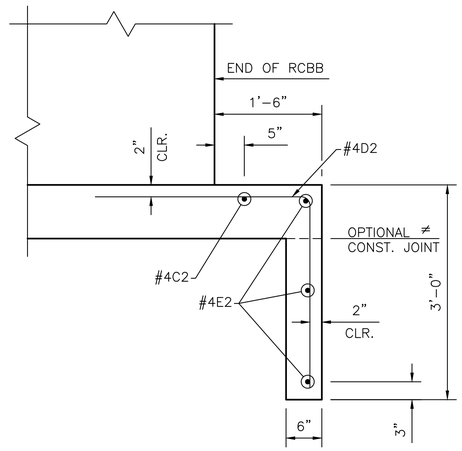
NOTE:
E.F. = EACH FACE
N.S. = NEAR SIDE
F.S. = FAR SIDE

≠ NOTE:
CONST. JT. MAY BE USED AT CONTRACTOR'S OPTION WHEN APPROVED BY THE ENGINEER. D1 BARS OR MESH MAY BE SPLICED THUS: ——— MINIMUM OVERLAP SHALL BE 1'–3". NO INCREASE IN QUANTITIES OR COST SHALL BE ALLOWED WHEN CONTRACTOR ELECTS THIS OPTION.

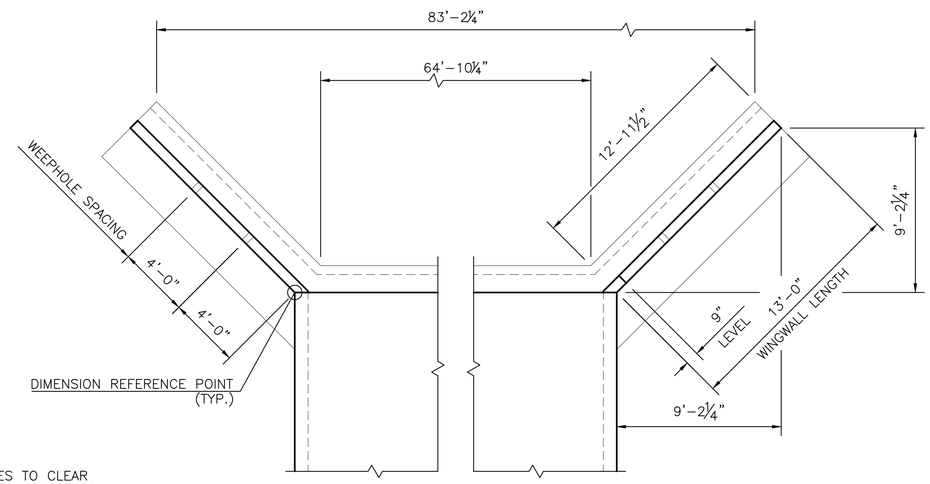
FOR BAR BENDING DIAGRAMS & QUANTITIES, SEE SHEET 75.



WINGWALL JOINT DETAIL
(PLAN VIEW)



SECTION E-E



NOTE:
SPACE WEEPHOLES TO CLEAR REINFORCING STEEL. SEE "RCB AUXILIARY DETAILS" SHEET FOR ADDITIONAL WEEPHOLE DETAILS.

WING DIMENSIONS FOR NORMAL BOX
(3½":1 EMBANKMENT SLOPE)

J:\PROJECTS\0222\20161\0447_COW_135TH STREET FROM CENTRAL TO 13TH STREET\00 220447 CAD\SHTS\05 CIVIL\BRIDGE\220447-05-0256.DWG

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STREET IMPROVEMENTS FOR
135TH STREET WEST
FROM CENTRAL AVE TO 13TH STREET

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WINGWALL DETAILS

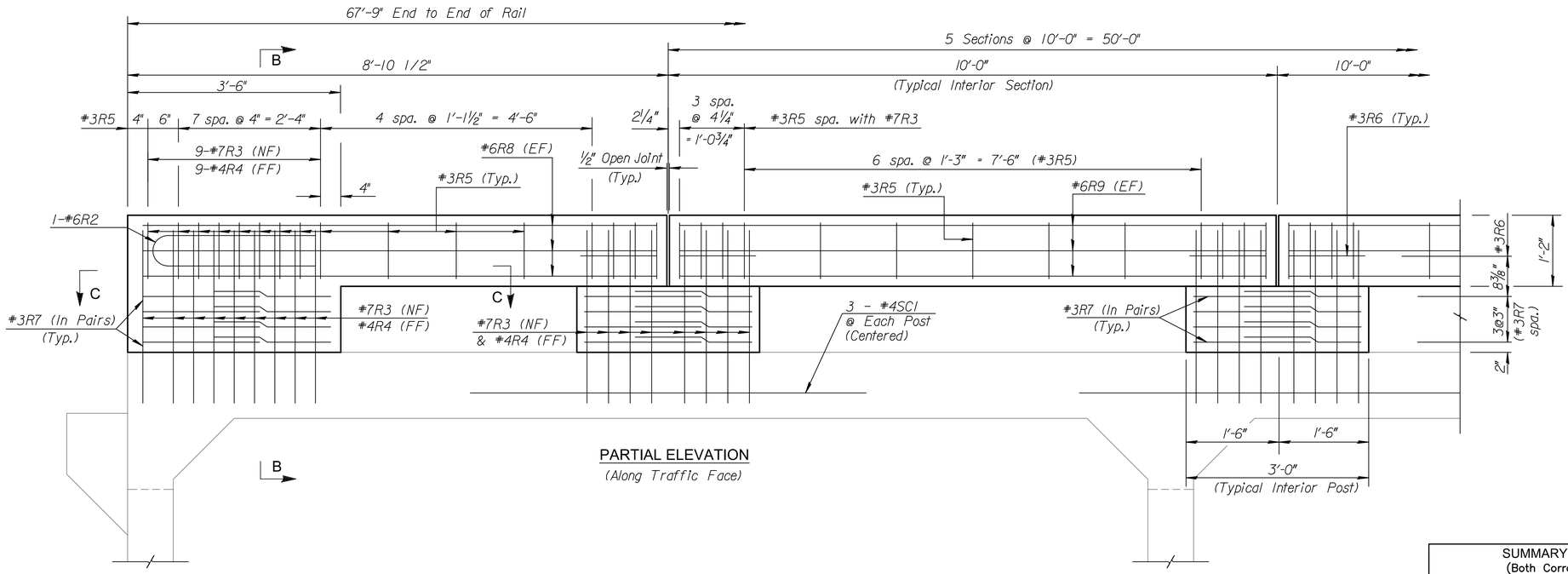
PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	NTS

DESIGNED	DRAWN	CHECKED
DMU	RAM	JRA

NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

SHEET NO.
77 OF 156

PLOTTED: Friday, February 20, 2026 @ 01:23PM



PARTIAL ELEVATION
(Along Traffic Face)

LEGEND
NF = Near Face
FF = Far Face
EF = Each Face

FOR INFORMATION ONLY

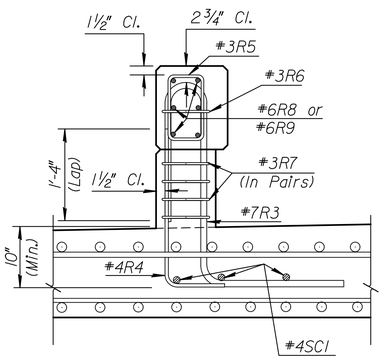
SUMMARY OF QUANTITIES (Both Corral Rails Included)	
Concrete (Grade 4.0)	7.8 C.Y.
Reinforcing Steel (Gr. 60, Epoxy-Coated)	4,050 Lbs.

NOTE:
All items Subsidiary to "Concrete Safety Barrier, Corral Rail".

FOR INFORMATION ONLY

BILL OF REINFORCING STEEL
(Both Corral Rails Included)

Straight Bars					Bent Bars				
Mark	Size	No.	Length	Remarks	Mark	Size	No.	Length	Remarks
R8	#6	24	8'-6"		R2	#6	4	5'-8"	
R9	#6	60	9'-8"		R3	#7	132	6'-11"	
SC1	#4	36	6'-6"		R4	#4	132	3'-5"	
					R5	#3	194	3'-6"	
					R6	#3	24	4'-6"	
					R7	#3	128	4'-6"	



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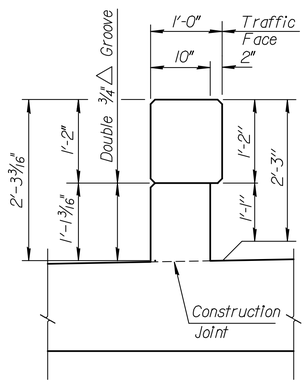
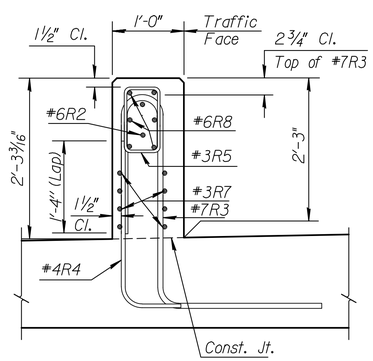
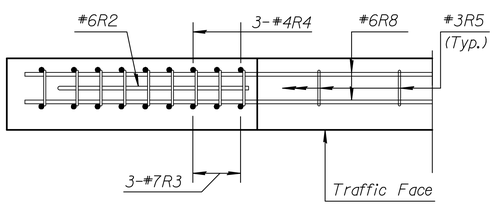


TYPICAL INTERIOR POST

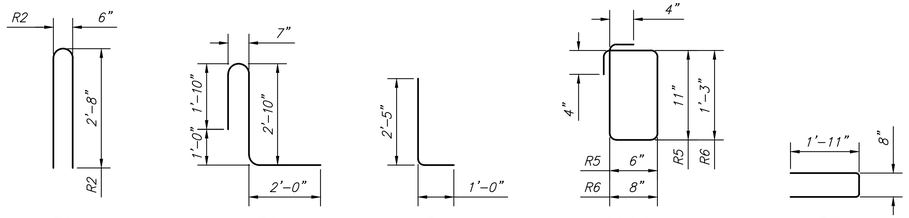


SECTION B-B



SECTION C-C

NOTE:
All work Subsidiary to "Concrete Safety Barrier, Corral Rail".



R2 R3 R4 R5 & R6 R7

BAR BENDING DIAGRAM

J:\PROJECTS\2022\2201010447_COW_135TH STREET FROM CENTRAL TO I-35\TH STREET\00 220447 CAD\SHTS\05 CIVIL\BRIDGE\220447-05-0257.DWG

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STREET IMPROVEMENTS FOR
135TH STREET WEST
FROM CENTRAL AVE TO 13TH STREET

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CORRAL RAIL DETAILS

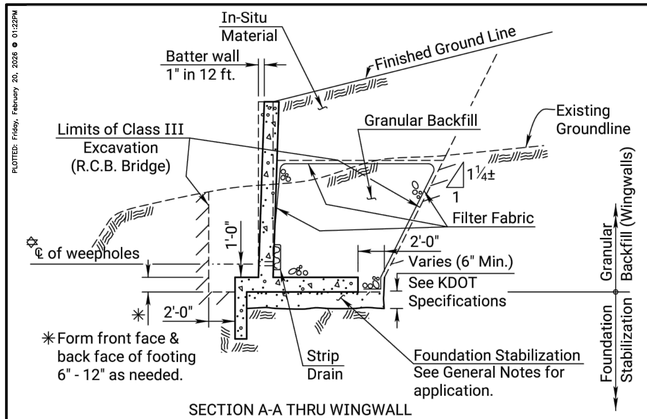
PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	NTS
DESIGNED	JRA
DRAWN	RAM
CHECKED	JRA

NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

SHEET NO.
78 OF 156

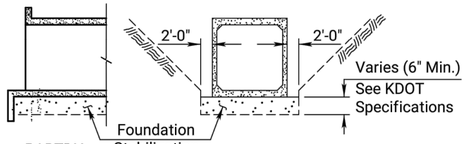
Sh. No. 78

PLOTTED: Friday, February 20, 2026 @ 01:23PM



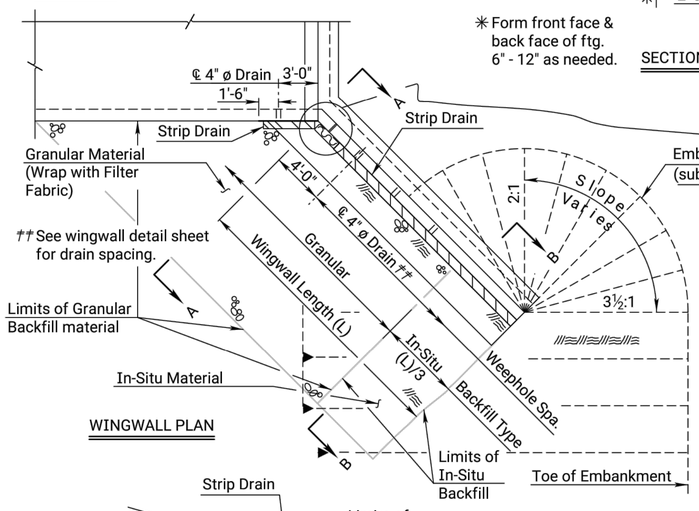
SECTION A-A THRU WINGWALL

Granular Backfill And Foundation Stabilization



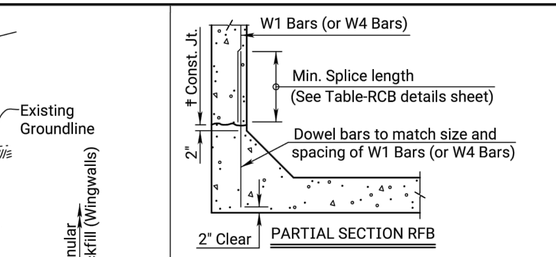
PARTIAL ELEVATION

SECTION



††See wingwall detail sheet for drain spacing.

WINGWALL PLAN



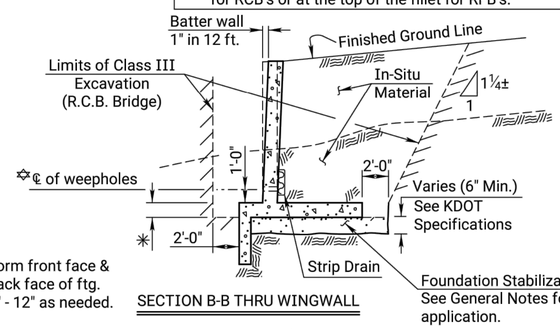
PARTIAL SECTION RFB

OPTIONAL BAR DETAIL

The Contractor shall have the option of using Dowel Bars to match vertical wall bars as shown, however no allowance will be made for additional steel required for bar laps.

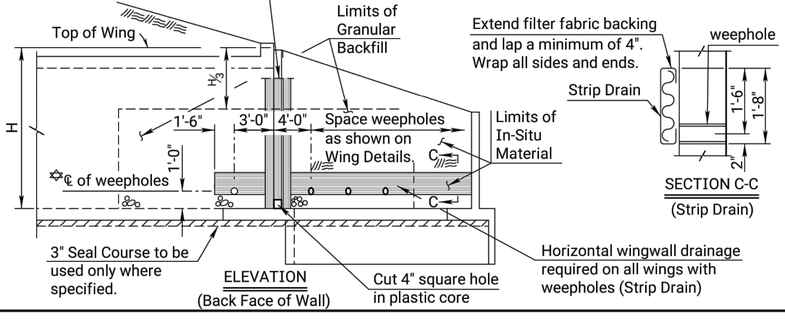
†OPTIONAL COLD JOINT

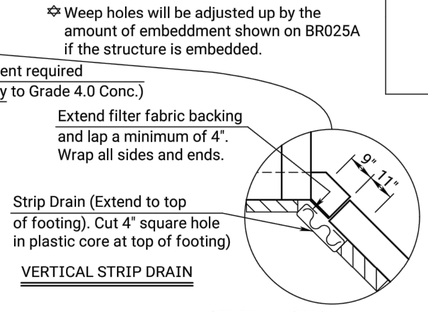
The Contractor has the option of placing the Lower Horizontal Construction Joint at the top of the slab for RCB's or at the top of the fillet for RFB's.



SECTION B-B THRU WINGWALL

✡Weep holes will be adjusted up by the amount of embeddment shown on BR025A if the structure is embedded.





VERTICAL STRIP DRAIN

SECTION C-C (Strip Drain)

GENERAL NOTES

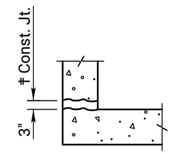
Wingwall Drainage:

1. All wingwalls with weepholes shall have horizontal and vertical wingwall drainage as shown. Strip drains will be used. See KDOT Specifications for "Abutment Strip Drains" for strip drain requirements.
2. Construction and materials for wingwall drainage, including weepholes, and strip drain shall be subsidiary to the bid item, "Grade 4.0 Concrete". Weepholes may be a formed opening or corrugated polyethylene tubing.

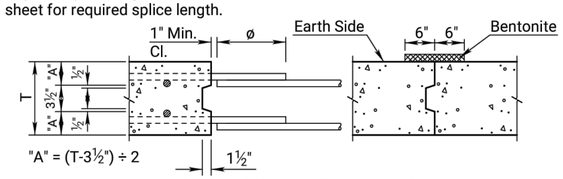
Wingwall Foundation Stabilization:
The Foundation Stabilization quantity has been calculated to the limits shown in the Section Thru Wingwall. The depth may be increased by the Engineer. Use Foundation Stabilization on all wingwalls unless founded on rock or granular material.

Seal Course:
Seal Course consisting of 3" min. of Commercial Grade Concrete shall be constructed to the limits directed by the Engineer. No reinforcing in the floor of the slab or wall footing shall be placed until the Seal Course has gained sufficient strength to permit working upon it without injury.

ø Longitudinal bars shall extend through the joint to provide a minimum lap equal to the required splice length. See RCB Details sheet for required splice length.



PARTIAL SECTION RCB

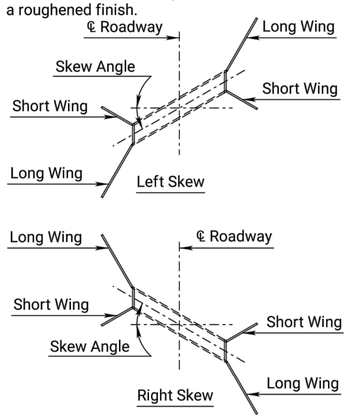


VERTICAL CONSTRUCTION JOINTS

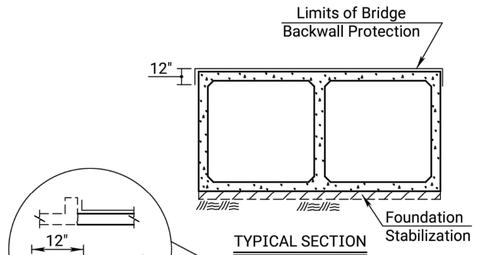
NOTE: Vertical construction joints shall be perpendicular to the longitudinal axis of the RCB and shall be placed at any location as needed for construction and as approved by the Engineer.

NOTE: Horizontal construction joints shall be a roughened finish.

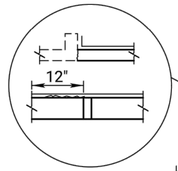
NOTE: Barrel Construction Joints located in a median with less than 5 ft. of fill or at locations specified by the Engineer, shall be protected by a bentonite based system as shown. Place the bentonite on the exterior walls and top slab. See requirements for bentonite in the KDOT Specifications for "Bridge Backwall Protection System". Material and installation of the bentonite system shall be subsidiary to the bid item "Grade 4.0 Concrete".

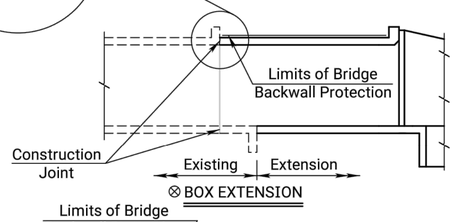


PLAN VIEW SKEWED R.C.B.



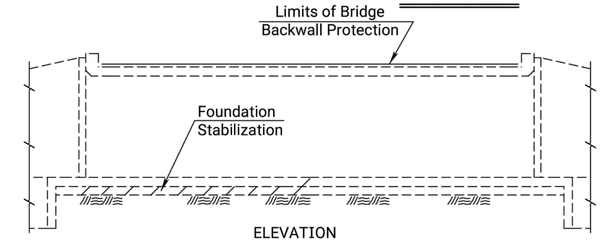
TYPICAL SECTION





⊗BOX EXTENSION

⊗See "Typical Culvert Extension" RD080 for additional information.



ELEVATION

(New Construction)

GENERAL NOTES

Foundation Stabilization:
The depth of Foundation Stabilization may be increased by the Engineer. The Contractor may underrun Foundation Stabilization under the barrel if founded on firm material and with the Engineer's approval. Use Foundation Stabilization on all wingwalls unless founded on rock or granular material.

Granular Backfill (Wingwalls):

1. Granular Backfill shall be used to backfill behind wingwalls to the limits shown in the WINGWALL PLAN and Elevation detail. Granular Backfill construction may be used separately or combined with Foundation Stabilization as directed by the Engineer.
2. Measurement for the bid item, "Granular Backfill (Wingwalls)", shall be measured in Cubic Yards to the theoretical limits as shown.
3. Material for Granular Backfill (Wingwalls) shall conform to the requirements of SB-1, SB-2, SCA-1 or SCA-2.
4. Consolidate Granular Backfill using hand equipment only. Avoid over consolidation.
5. Use filter fabric complying with Section 1710. Use only within the limits of Granular Backfill to separate from the In-Situ Material. Filter Fabric is subsidiary to "Granular Backfill".

In-Situ Backfill (Wingwalls):

1. Use any material found within the project limits except Highly Plastic Clay(s) or organic material. The material is subsidiary to "Granular Backfill".
2. Use Type "B" Compaction.
3. Use only hand or walk behind equipment for Compaction.

GENERAL NOTES

Bridge Backwall Protection System:

1. For all structures with less than or equal to 2'-0" of fill, apply a "Bridge Backwall Protection System" from Section 1700 to the limits shown. Do not place hot mix asphalt directly on this material.
2. Use a "non-coal tar" material from KDOT's approved list.
3. Protect this material from damage during backfilling. Repair at no additional cost.
4. When the Plans show hot mix asphalt placed directly on the slab, substitute "Pavement Water Proofing" material from Section 800, this material shall be subsidiary. Wait 28 days after top slab is completed before applying this material.

NO.	DATE	REVISIONS	BY	APP'D
07	02-06-18	Filter Fabric Clarification	M.L.L.	J.P.J.
06	06-07-17	Filter Fabric Modification	J.P.J.	J.P.J.
05	10-11-13	Granular Backfill Limits	J.P.J.	L.R.R.

KANSAS DEPARTMENT OF TRANSPORTATION

RCB AUXILIARY DETAILS (LRFD)

BR020B

FHWA APPROVAL			04-17-10	APP'D.		Terry L. Fleck	
DESIGNED	J.P.J.	DETAILED	R.A.A.	QUANTITIES		TRACED	R.A.A.
DESIGN CK.	J.S.R.	DETAIL CK.	J.P.J.	QUAN.CK.		TRACE CK.	J.P.J.

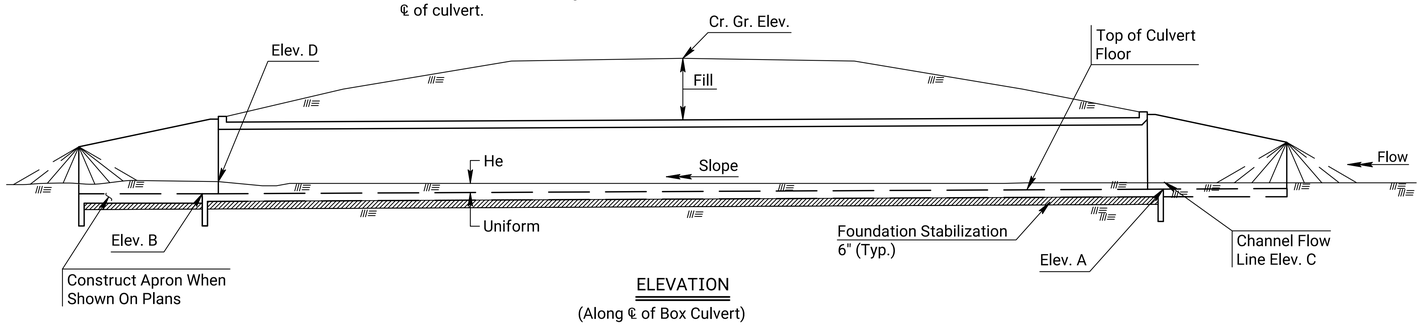
KDOT Graphics Certified 06-20-2022

KDOT Graphics Certified

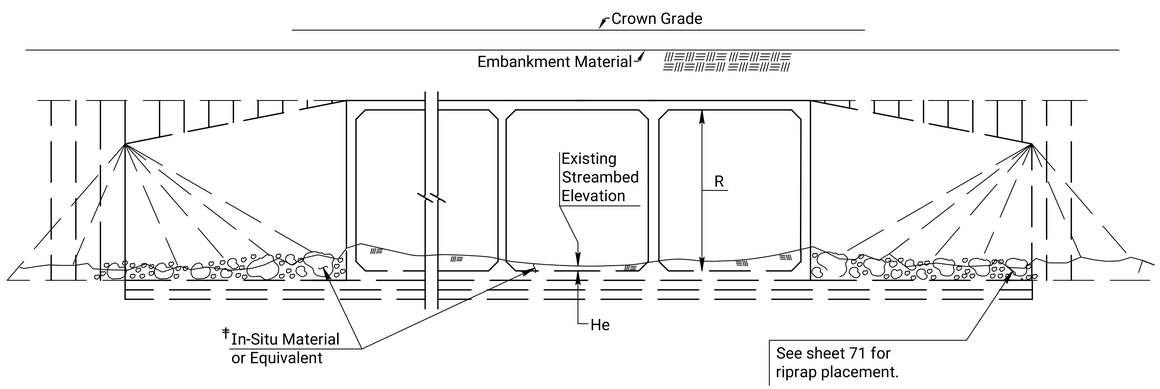
J:\PROJECTS\2022\2291910447_COW_13STH STREET FROM CENTRAL TO 13TH STREET\00 220447 CAD\SHTS\05 CIVIL\STD\BRIDGE\220447_BR020B.DWG

SUMMARY OF HYDRAULIC STRUCTURES											
Serial No.	Str. Type	Sta.	Size No. Cells - Span x Rise	Cr. Gr. Elev.	He	Floor Elev. A	Floor Elev. B	BackFill Elev. C	BackFill Elev. D	Up Stream Apron	Down Stream Apron
	RFB	48+99.69	4 - 16' x 5'	1350.12	1.0	1343.50	1343.50	1344.50	1344.50	NO	NO

NOTE:
All elevations taken along
℄ of culvert.



ELEVATION
(Along ℄ of Box Culvert)



TYPICAL SECTION
(At the end of the box culvert)

GENERAL NOTES

‡

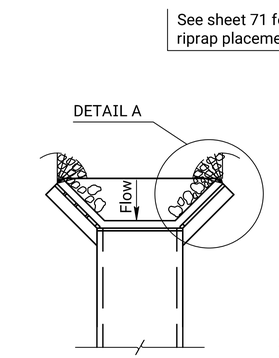
BACKFILL:
The backfill within the barrel will occur by natural process for structures equal to or less than 4'-0" in height. For these structures the contractor will backfill to the limits shown outside of the barrel. Backfill structures larger than 4'-0" in height to a minimum depth of 1'-0". Work and material required for backfill is not paid for directly, but is subsidiary.

MATERIAL:
Backfill shall be with insitu or equivalent material. Material shall be reasonably free of organic material. The intent of the Slope Protection material is to protect the toe of the embankment which wraps around the wing walls.

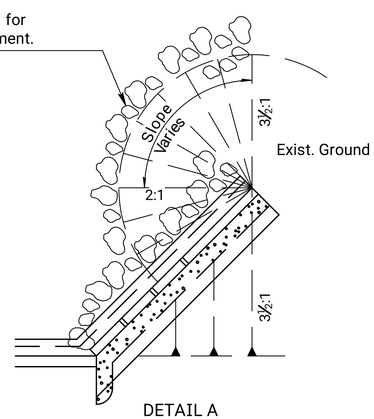
EXCAVATION:
The grading contractor will excavate and clear the channel to the limits shown on standard BR100. All Excavation and backfill shall be subsidiary to "Pipe, SWS, RCPC (4-16'x5').

LOADING:
For structures larger than 4'-0" in height, place in-situ material or equivalent in an uncompacted state to a minimum depth of 1'-0". Do not operate equipment on floor until the concrete has reached a strength of at least 3.0 ksi.

‡Backfill material is limited to the material found within the footprint of the excavated structure.



PARTIAL PLAN NEAR ENDS



DETAIL A

NO.	DATE	REVISIONS	BY	APP'D
03	07-21-22	Change Shot Rock to Riprap Stone	M.L.L.	M.A.H.
02	05-06-16	Various Revisions	M.J.O.	J.P.J.
01	06-18-12	Modified per 2012 requirements	J.P.J.	T.L.F.

KANSAS DEPARTMENT OF TRANSPORTATION

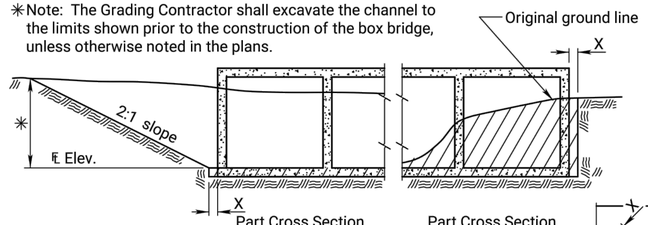
RCB AUXILIARY DETAILS
(Embedded Structure)
With Rise > 48"

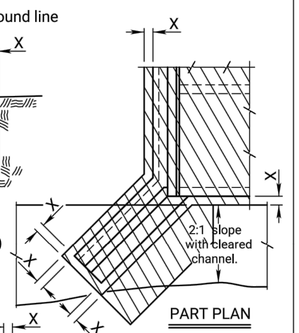
DESIGNED	M.J.O.	DETAILED	M.J.O.	QUANTITIES		CADD	R.A.A.
DESIGN CK.		DETAIL CK.		QUAN.CK.		CADD CK.	

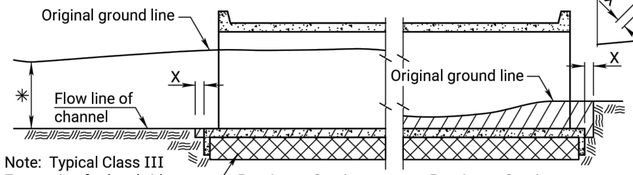
J:\Projects\2022\2201010447_COW_135th Street from Central to 13th Street\00 220447 CAD\SHTS\05 Civil\Std\Bridge\Br025A.dwg

PLOTTED: Friday, February 20, 2026 @ 01:23PM

✳Note: The Grading Contractor shall excavate the channel to the limits shown prior to the construction of the box bridge, unless otherwise noted in the plans.

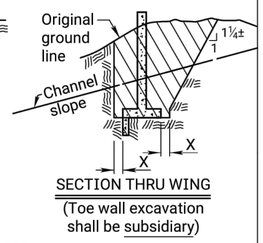






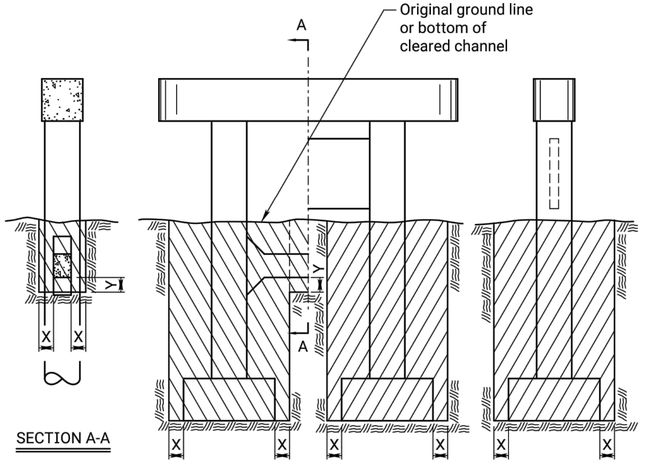
Note: Typical Class III Excavation for box bridges shall be below the "cleared" channel unless otherwise noted on the plans.

Excavation below the elevation of the bottom of the box floor and/or wingwalls is subsidiary to "Foundation Stabilization".



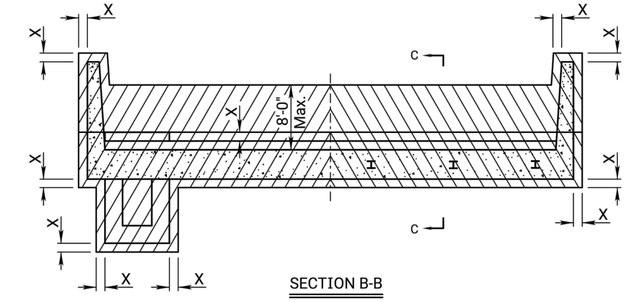
EXCAVATION DETAILS FOR REINFORCED CONCRETE BOX CULVERT

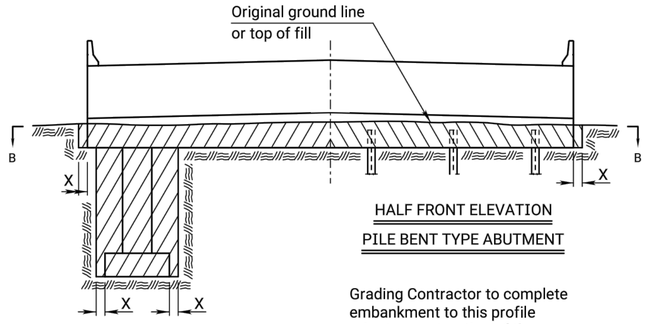
Note: Excavation for culverts less than bridge length and the additional excavation for "Embedded Structures" shall not be paid for as Class III Excavation, but shall be subsidiary to Grade 4.0 Concrete.



EXCAVATION DETAILS FOR TYPICAL PIERS

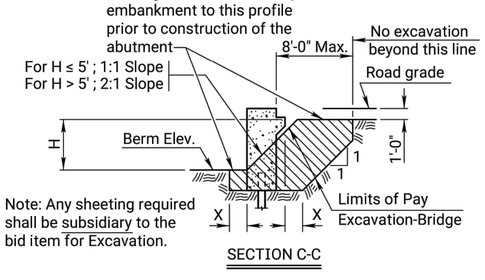
See detail when rock or shale (rock) is encountered. ⊛





Grading Contractor to complete embankment to this profile prior to construction of the abutment

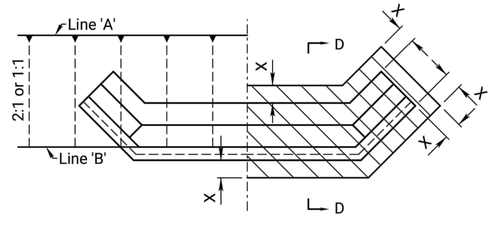
Note: Bridge Contractor shall finish the embankment and berms after the construction of the abutment and dispose of any excess material as approved by the Engineer.

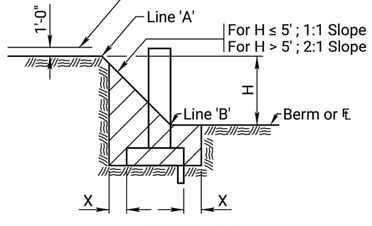


Note: Any sheeting required shall be subsidiary to the bid item for Excavation.

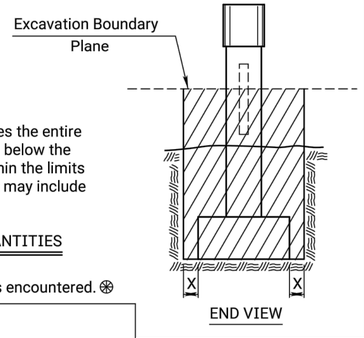
EXCAVATION DETAILS FOR TYPICAL ABUTMENTS

See detail when rock or shale (rock) is encountered. ⊛





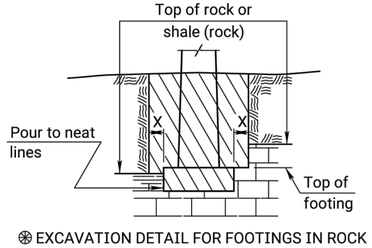
EXCAVATION DETAILS FOR ABUTMENTS WITH FLARED WINGWALLS



Note: Class II Excavation includes the entire volume of whatever nature found below the "Excavation Boundary Plane", within the limits specified for measurement. This may include water or air.

CLASS II EXCAVATION QUANTITIES

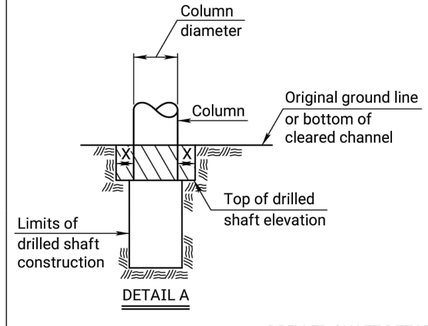
See detail when rock or shale (rock) is encountered. ⊛

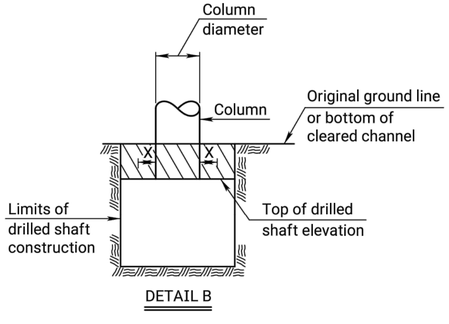


⊛ EXCAVATION DETAIL FOR FOOTINGS IN ROCK OR SHALE (ROCK)

(Piers and Abutments)

Note: Excavation below top of rock, hard shale or below top of footing, whichever is lower, shall be to neat lines of the concrete construction.





DRILLED SHAFT DETAILS

Note: Whenever the limits of the drilled shaft construction are greater than the Column Diameter + 2X, the limits of Class I, II or III Excavation shall be the limits of the drilled shaft construction. (See Detail B)

Note: All bridge excavation shall be computed on the basis of the cross-hatch areas and boundary lines indicated on this sheet and the Excavation Boundary Plane on the Construction Layout.

Sides of trenches in hard or compacted soil including embankments shall be shored, sheeted, braced or otherwise supported when the trench is more than 5 feet in depth and 8 feet or more in length. In lieu of the shoring, the sides of the trench above the 5 foot level may be sloped to preclude collapse. The slope for average soils shall be 1:1. If the angle of repose of the soil is less, flatter slopes shall be required.

Dimension "X" shall be 2'-0" unless indicated otherwise on the general plans.

Dimension "Y" shall be 1'-6" unless indicated otherwise on the general plans.

NO.	DATE	REVISIONS	BY	APP'D
06	08-15-12	Embedment Excavation Subsidiary	J.P.J.	T.L.F.
05	05-15-12	Revised Wing Excavation	J.P.J.	T.L.F.
04	03-03-10	Revised Wing Excavation	J.P.J.	T.L.F.

KANSAS DEPARTMENT OF TRANSPORTATION

BRIDGE EXCAVATION (LRFD)

BR100B

FHWA APPROVAL		04-17-10	APP'D.		Terry L. Fleck
DESIGNED	DETAILED	R.D.R.	QUANTITIES	TRACED	
DESIGN CK.	DETAIL CK.	L.R.R.	QUAN.CK.	TRACE CK.	

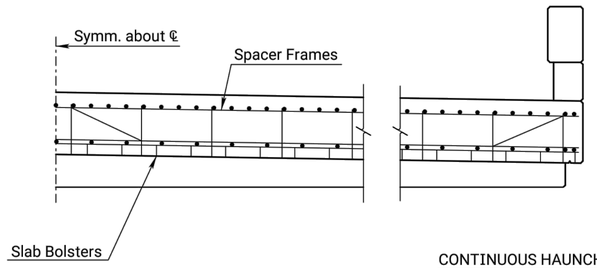
KDOT Graphics Certified 06-20-2022

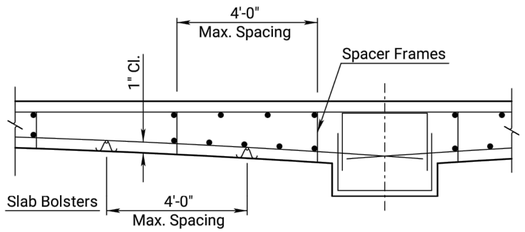
Sh. No. 81

KDOT Graphics Certified

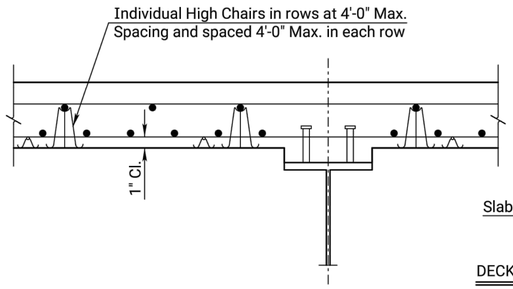
J:\PROJECTS\2022\2291\10447_COW_135TH STREET FROM CENTRAL TO 131TH STREET\00 220447 CAD\SHTS\05 CIVIL\STD\BRIDGE\220447_BR100B.DWG

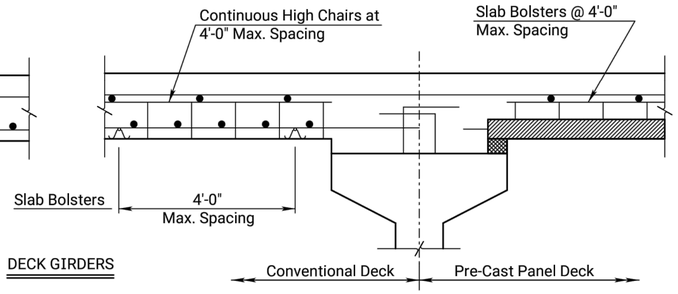
PLOTTED: Friday, February 20, 2026 @ 01:22PM



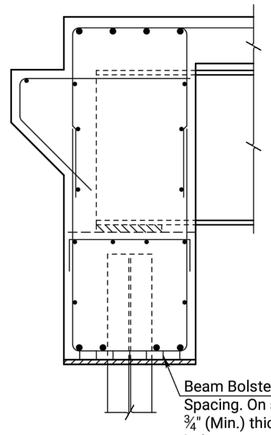


CONTINUOUS HAUNCHED SLAB

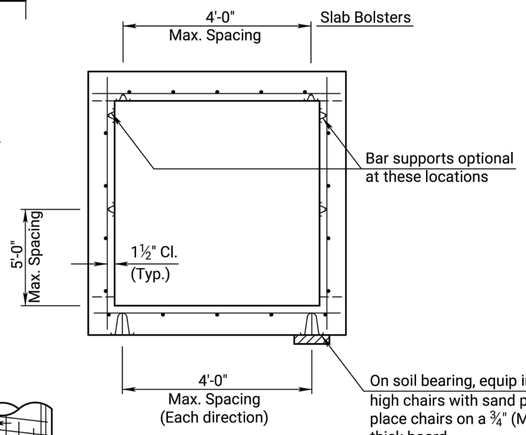


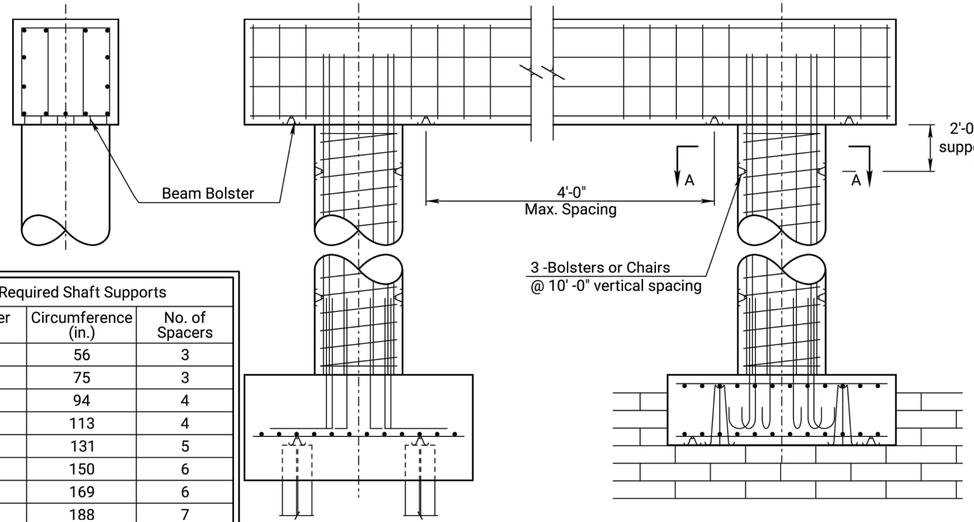


DECK GIRDERS



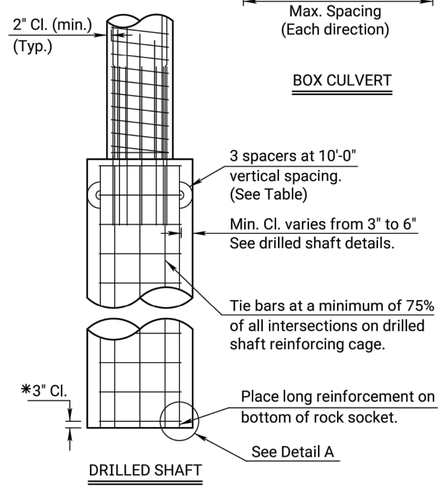
ABUTMENT



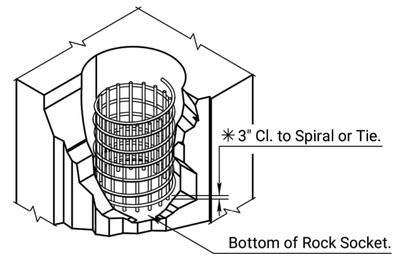


PIER

Required Shaft Supports		
Diameter (in.)	Circumference (in.)	No. of Spacers
18	56	3
24	75	3
30	94	4
36	113	4
42	131	5
48	150	6
54	169	6
60	188	7
66	207	7
72	226	8
78	244	9
84	263	9
90	282	10
96	301	11
102	320	11
108	339	12

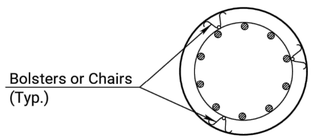


DRILLED SHAFT



DETAIL A

✳Note: Longitudinal reinforcing steel is placed on the bottom of the rock socket. Maintain 3" clearance from the bottom of rock socket to the first spiral or tie bar.



SECTION A-A

GENERAL NOTES

Reference is made to the latest edition of the CRSI "Manual of Standard Practice" for recommended industry practices concerning reinforcing steel.

Use only the following types of bar supports:

1) Wire Bar Supports:

   a) Epoxy coated reinforcing: Class 1 Protection
   b) Non-epoxy coated reinforcing: Class 1, 2, or 3 Protection

2) Plastic Bar Supports

3) Supplementary bars

When securing epoxy coated reinforcement, use tie wires or metal clips that are epoxy or plastic coated.

Do not weld reinforcing steel to bar supports or to other reinforcing steel. Shop weld spacer frames for haunched slabs.

Tie bars at all intersections around the perimeter of each mat and at not less than 2'-0" centers or at every intersection, whichever is greater.

Where more than one length of bar support is required, lap the end legs so they are locked or tied together.

Use proper height supports to maintain the distance between the reinforcing and the formed surface or the top surface of deck slabs within ¼" of that indicated on the plans.

Spacings shown are maximums. Use sufficient supports, as determined by the Engineer, to retain the reinforcing steel in position.

Construct any platforms, required for the support of workers and/or equipment during concrete placement, directly on the forms and not on the reinforcing steel.

Designs and arrangements of Supports or Spacers other than as shown on this sheet, may be used with the permission of the Engineer.

NO.	DATE	REVISIONS	BY	APP'D
05	11-10-10	Column Bar Supports Required	J.P.J.	T.L.F.
04	12-01-05	Drilled Shaft Spiral Steel Placement	J.P.J.	K.F.H.
03	08-21-00	Added Pre-Cast Panel Detail	R.A.M.	K.F.H.

KANSAS DEPARTMENT OF TRANSPORTATION

SUPPORTS AND SPACERS FOR REINFORCING STEEL

BR120

FHWA APPROVAL		11-17-10	APP'D.	Terry L. Fleck	
DESIGNED	R.A.M.	DETAILED	R.A.A.	QUANTITIES	TRACED R.A.A.
DESIGN CK.	L.R.R.	DETAIL CK.	R.A.M.	QUAN.CK.	TRACE CK. R.A.M.

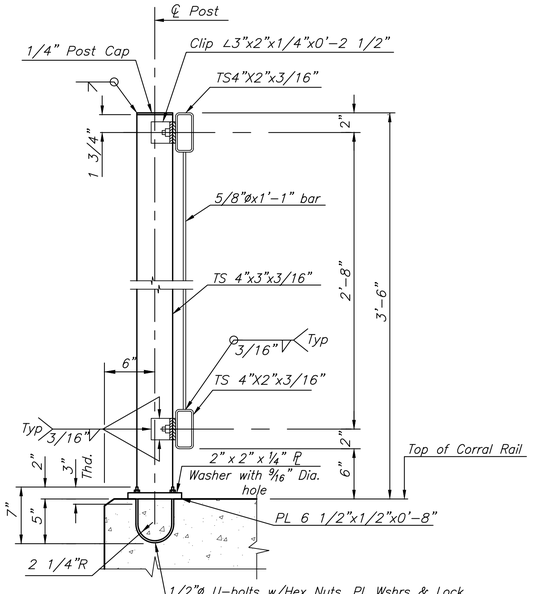
KDOT Graphics Certified 06-20-2022

Sh. No. 82

KDOT Graphics Certified

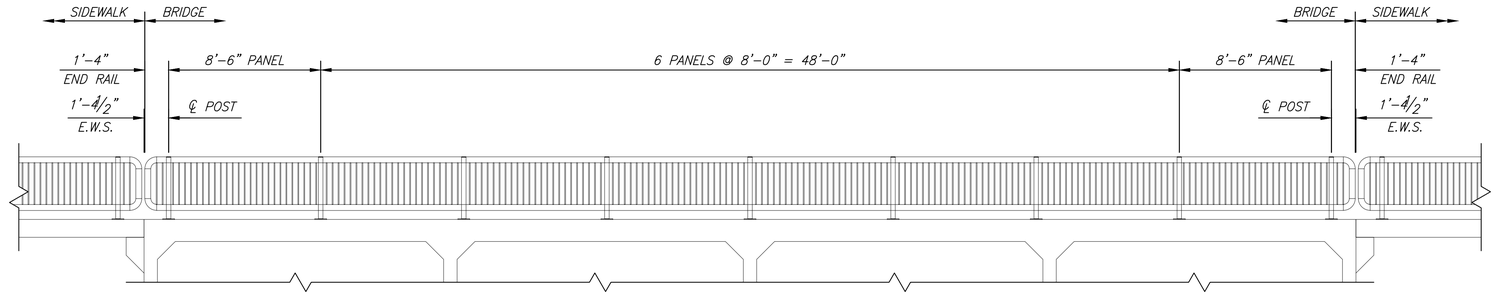
J:\PROJECTS\2022\2201010447_COW_135TH STREET FROM CENTRAL TO 13TH STREET\00 220447 CAD\SHTS\05 CIVIL\STD\BRIDGE\220447_BR120.DWG

PLOTTED: Friday, February 20, 2026 @ 01:43PM



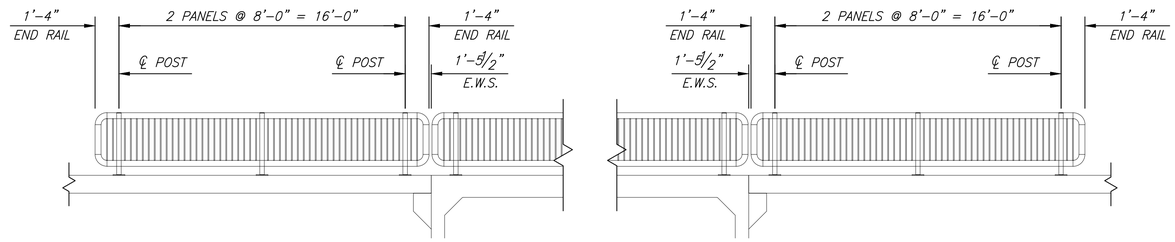
TYPICAL RAIL SECTION

(ON RCBB OR SIDEWALK)



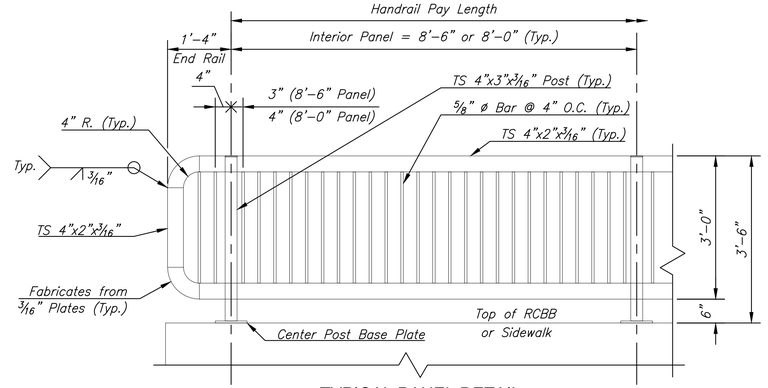
ELEVATION - HANDRAIL, PEDESTRIAN

(SHOWN AND DIMENSIONED ALONG WALKWAY FACE OF HANDRAIL)



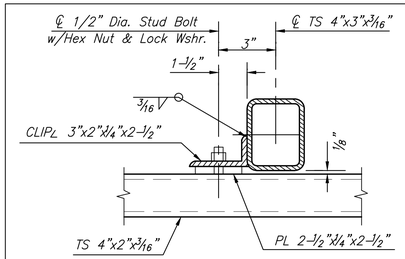
ELEVATION - HANDRAIL, PEDESTRIAN

(SHOWN AND DIMENSIONED ALONG WALKWAY FACE OF HANDRAIL)

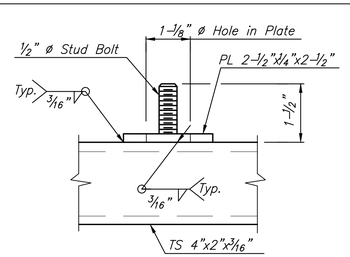


TYPICAL PANEL DETAIL

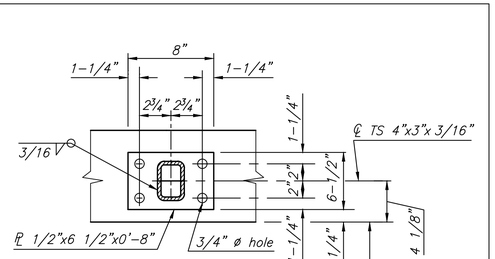
(On RCBB or Sidewalk)



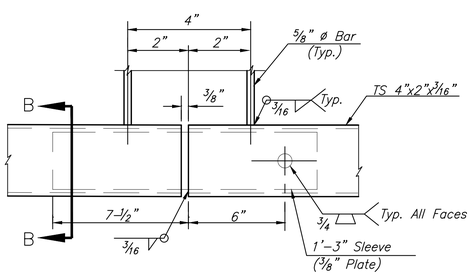
RAIL CONNECTION DETAIL



STUD BOLT DETAIL

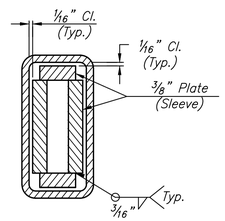


BASE PLATE DETAIL

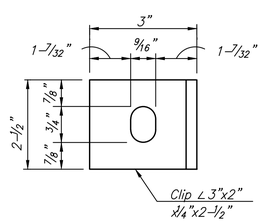


SLEEVE DETAIL

(Bottom Rail Shown, Top Rail Similar)



SECTION B-B



CLIP DETAIL

NOTE:
HANDRAIL FABRICATION DETAILS AND HANDRAIL NOTES TO BE USED FOR BOTH PEDESTRIAN AND BICYCLE HANDRAIL CONSTRUCTION.

HANDRAIL NOTES

1. *The rail members shall conform to ASTM Designation A36 or equivalent.*
2. *Rail shall be fabricated in lengths to include a minimum of two and a maximum of three panels. Posts shall be set vertical. Shims may be used between concrete and base plates of posts.*
3. *All parts of handrail shall be painted. The primer coat shall conform to the inorganic zinc system. Surface preparation shall be in accordance with that for structural steel. The finish coat shall be in accordance with water-borne acrylic finish coat.*
4. *The Contractor shall submit color chart for approval by the City. The color shall be "black (carboline C900)".*
5. *All materials, equipment and labor necessary for the installation of the handrail shall be subsidiary to the various handrail bid items.*

MKEC
Wichita, KS • 316-684-9600

STREET IMPROVEMENTS FOR

135TH STREET WEST

FROM CENTRAL AVE TO 13TH STREET

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HANDRAIL, PEDESTRIAN DETAILS

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	NTS

DESIGNED	DRAWN	CHECKED
JRA	RAM	JRA

NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

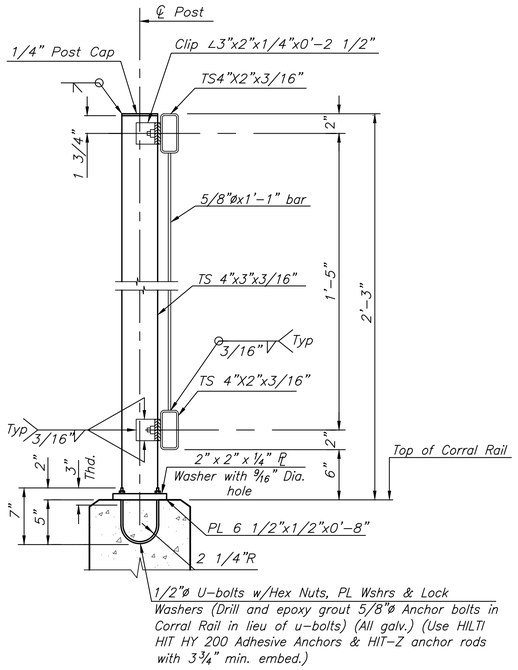
SHEET NO.

83 OF 156

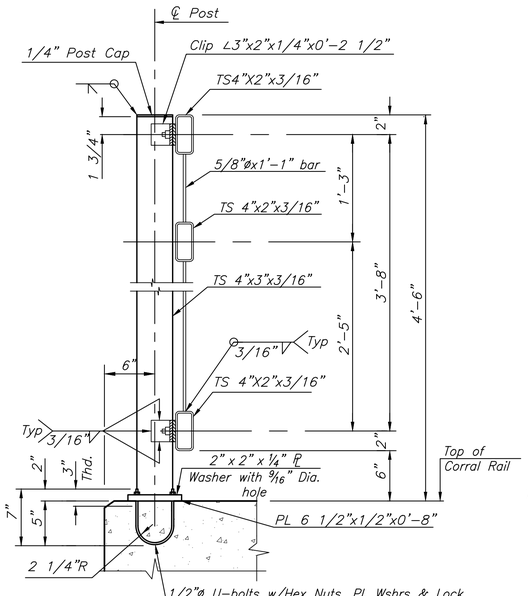
Sh. No. 83

J:\PROJECTS\2022\2201610447_COV_135TH STREET FROM CENTRAL TO 13TH STREET\100 220447 CAD\SHTS\05 CIVIL\PAV\210447-05-HANDRAILS.DWG

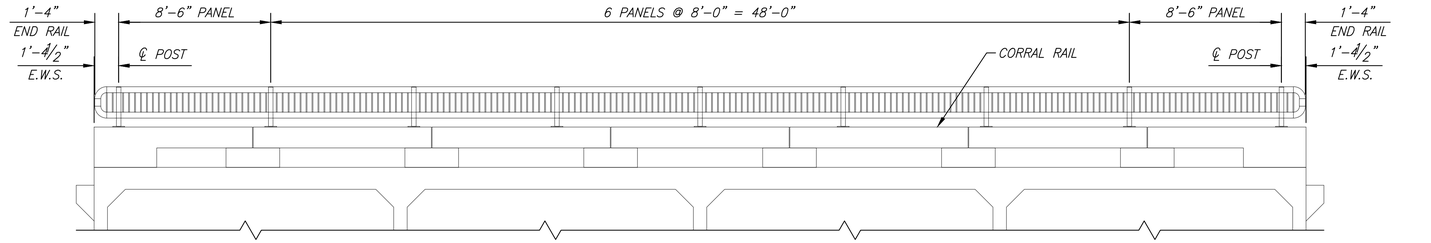
PLOTTED: Friday, February 20, 2026 @ 01:43PM



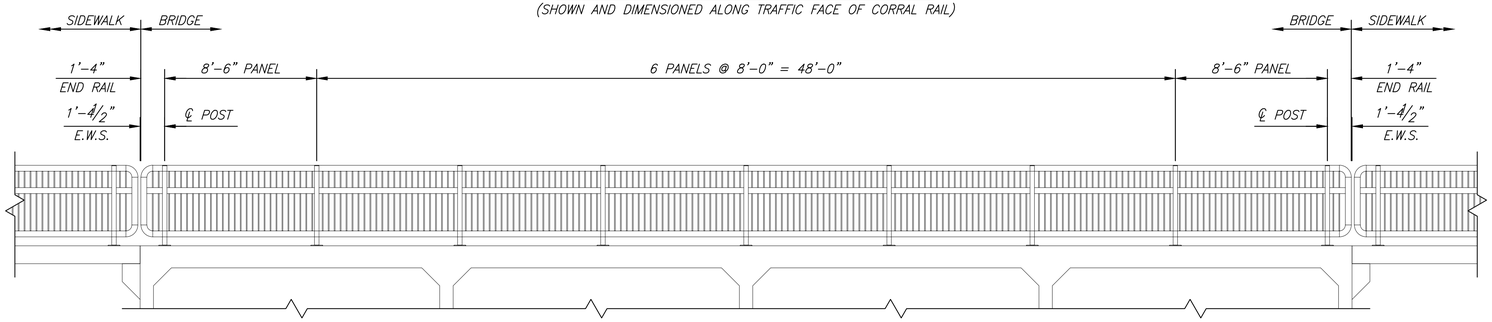
TYPICAL RAIL SECTION
(ON CORRAL RAIL)



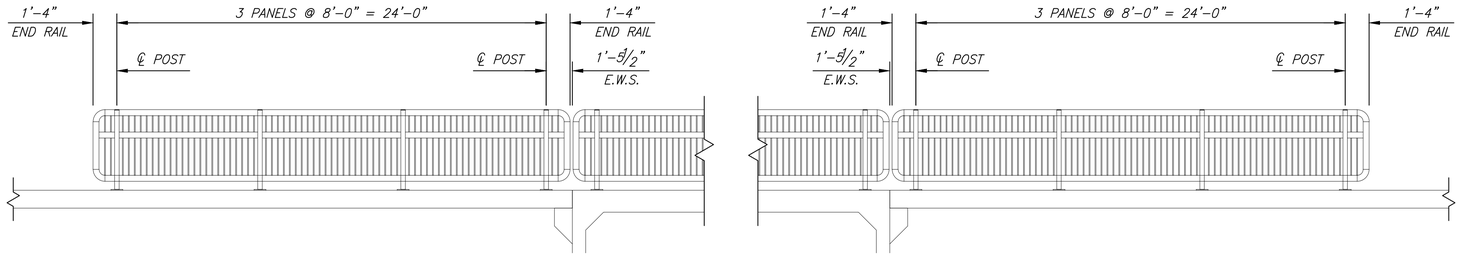
TYPICAL RAIL SECTION
(ON RCBB OR SIDEWALK)



ELEVATION - HANDRAIL, BICYCLE (SPECIAL)
(SHOWN AND DIMENSIONED ALONG TRAFFIC FACE OF CORRAL RAIL)

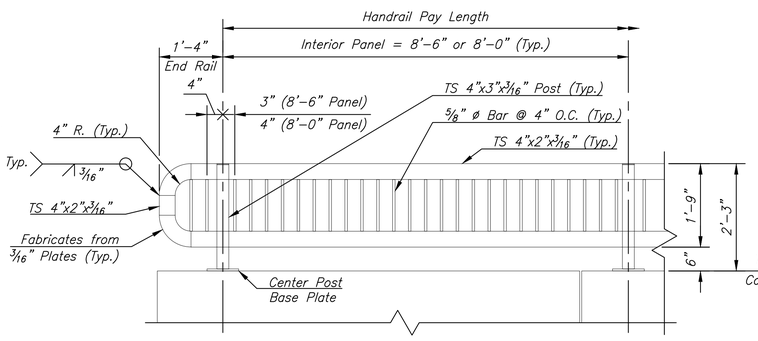


ELEVATION - HANDRAIL, BICYCLE
(SHOWN AND DIMENSIONED ALONG WALKWAY FACE OF HANDRAIL)

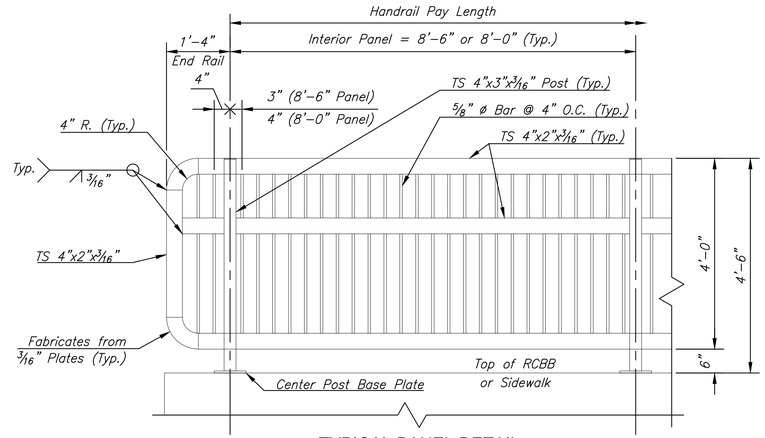


ELEVATION - HANDRAIL, BICYCLE
(SHOWN AND DIMENSIONED ALONG WALKWAY FACE OF HANDRAIL)

NOTE: SEE SHEET 83 FOR ADDITIONAL HANDRAIL DETAILS AND NOTES.



TYPICAL PANEL DETAIL
(On Corral Rail)



TYPICAL PANEL DETAIL
(On RCBB or Sidewalk)

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STREET IMPROVEMENTS FOR

135TH STREET WEST

FROM CENTRAL AVE TO 13TH STREET

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HANDRAIL, BICYCLE DETAILS

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	NTS

DESIGNED	DRAWN	CHECKED
JRA	RAM	JRA

NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

SHEET NO.

84 OF 156

Sh. No. 84

J:\PROJECTS\2022\22101\10447_COV_135TH STREET FROM CENTRAL TO 13TH STREET\00 220447 CAD\SHTS\05 CIVIL\PAV\210447-05-HANDRAILS.DWG

PLOTTED: Friday, February 20, 2026 @ 02:18PM

SIDEWALK CONSTRUCTION

Location	Side	Concrete Sidewalk 4" (sf)	Concrete Sidewalk 5" (Reinf.) (sf)	Concrete Sidewalk 12" (Reinf.) (sf)	Sidewalk Thickening (lf)	Wheelchair Ramp w/Detectable Warnings (ea)	Concrete Protection Curb (lf)	Remarks
135th Street								
25+88.58 to 26+89.75	Rt.	643.8			46.2			
26+00.80 to 26+90.89	Lt.		968.1		33.4			
27+09.74 to 31+29.26	Rt.	2,521.2						
27+10.89 to 31+27.26	Lt.		4,163.7					
31+27.26 to 31+35.25	Lt.					1		
31+29.26 to 31+35.26	Rt.					1		
31+64.26 to 31+64.26	Rt.					1		
31+70.26 to 45+58.80	Rt.	8,416.1						
31+76.85 to 31+86.15	Lt.					1		
31+86.15 to 39+76.50	Lt.		7,992.0					
39+76.50 to 39+84.50	Lt.					1		
40+26.02 to 40+35.40	Lt.					1		
40+35.40 to 45+65.52	Lt.		5,301.2					
45+58+80 to 45+64.80'	Rt.					1		
45+79.52 to 48+32.57	Lt.		2,640.3					
45+93.80 to 45+99.80	Rt.					1		
45+99.80 to 48+42.64	Rt.	1,681.0			10.0			Includes Forestview
48+32.57 to 48+65.82	Lt.			432.3				
48+42.64 to 48+65.82	Rt.			162.2				
49+33.57 to 49+56.82	Rt.			163.0				
49+33.57 to 49+66.81	Lt.			431.6				
49+56.82 to 59+82.72	Rt.	6,198.1			10.0			
49+66.81 to 50+88.48	Lt.		1,484.0		65.8			
50+84.48 to 50+92.48	Lt.	71.1						
50+88.48 to 50+97.98	Lt.					1		
51+39.67 to 51+51.89	Lt.					1		
51+51.89 to 58+85.84	Lt.		7,346.9					
53+81.51 to 53+89.28	Lt.	30.7						
59+03.92 to 66+03.45	Lt.		7,041.6					
59+82.72 to 59+92.26	Rt.					1		
60+59.90 to 60+67.71	Rt.					1		
60+67.71 to 70+98.64	Rt.	6,291.8			17.5			
65+83.90 to 66+13.00	Rt.						29.2	
66+03.45 to 66+11.63	Lt.					1		
66+50.08 to 66+54.70'	Lt.						14.6	
66+53.87 to 66+65.85	Lt.					1		
66+54.70 to 66+62.48	Lt.	224.8						
66+58.70 to 70+10.87	Lt.						362.7	
66+65.85 to 70+73.56	Lt.		4,132.1		343.3			
74+01.84 to 74+57.07	Rt.	336.3						
Various Locations							150.0	Not shown in plans
Totals		26,414.8	41,069.9	1,189.1	526.3	14	556.6	

DRIVEWAY PAVEMENT

Location	Side	P (ft)	X (ft)	Width (ft)	Concrete Driveway 8" (Reinf.) (sf)	Quantities on Private Property or past ROW Line: Concrete Driveway 8" (Reinf.) (sf)		Remarks
135th Street								
26+99.74	Rt.	38.54		20	941.3			
27+00.89	Lt.	37.23		20	916.6			
45+72.52	Lt.	40.50	50.50	14	738.7	140.6		
58+94.88	Lt.	30.50	43.69	18	720.9	236.7		
71+12.05	Rt.	18.09		18	493.5			
71+82.03	Rt.	15.78		20	471.2			
Totals					4,282.2	377.3		

P = DISTANCE FROM BACK OF CURB TO RIGHT-OF-WAY LINE.
X = DISTANCE FROM BACK OF CURB TO LIMITS OF DRIVEWAY CONSTRUCTION.

TEMPORARY ASPHALT PAVEMENT

CONSTRUCTION PHASE	STATION	DESCRIPTION	PLAN SHEET NO.	Temporary Asphalt Pavement (6") (SY)	Temporary Asphalt Pavement (6") (Utility Patch) (LF)	Temporary Asphalt Pavement (6") (Incl. 5" CRB) (Widening) (SY)	Concrete C & G Removed & Replaced (LF)
2	34+70.00	Pavement patch above SWS Line 2	28, 70, 107		25		
2	36+51.00	Pavement patch above SWS Line 3	29, 70, 107		24		
2	37+10.30	Pavement patch above SWS Line 4	30, 70, 107		24		
2	38+18.00	Pavement patch above SWS Line 5A	31, 70, 107		24		
3	45+34.80	Temporary pavement widening near Forestview St.	105, 107			427	
3A	51+63.73	Temporary pavement wedge near Lost Creek Dr.	105, 107	180			
3A		Temporary pavement widening, West side of 135th	105, 107			1,250	
4	45+34.80	Temporary pavement transition near Forestview St.	105, 109			314	80
5B	53+69.40	Pavement patch above SWS Line 7B, west half of road only	33, 70, 109		13		
5B	57+00.00	Pavement patch above SWS Line 7, west half of road only	35, 70, 109		12		
5B	61+45.34	Pavement patch above SWS Line 8, west half of road only	38, 70, 109		12		
5B	63+32.50	Pavement patch above SWS Line 8C, west half of road only	38, 70, 109		12		
5B	66+81.70	Pavement patch above SWS Line 8B, west half of road only	39, 70, 109		12		
5B	70+34.88	Pavement patch above SWS Line 8A, west half of road only	39, 70, 109		23		
All Phases	N/A	Temporary Asphalt Material Allowance	105	250			
		Totals		430	181	1,991	80

PAVEMENT AND BASE

Location	Side	AC Pavement 7" (5" Bit. Base) (sy)	Crushed Rock Base 8", Reinf. (sy)	Concrete Pavement 12" Reinf. (sy)	Concrete Approach 12", Bridge (sy)	Crushed Rock Base 6", Reinf. (sy)	Bridge Approach Slab Footing (cy)	Ditch Liner, Concrete 5" (sy)	Remarks
135th Street									
26+00.66 to 48+32.57	CL	8255.4	10358.7						
45+79.30	Rt.	85.8	110.8						Forestview North
48+32.57 to 48+65.82	CL			88.9	57.8	155.2	23.7		
49+33.57 to 49+66.81	CL			88.9	57.8	155.2	23.7		
49+66.81 to 72+56.33	CL	8545.8	10845.7						
51+16.23	Lt.	133.1	164.2						W. Lost Creek
60+28.65	Rt.	42.4	57.4						W. 10th St.
66+30.70	Lt.	201.7	248.7						W. Ponderosa
Cowskin Creek Tributary									
10+00.00 to 12+11.25	CL							1049.4	
Totals		17,264.2	21,785.5	177.8	115.6	310.4	47.4	1,049.4	

CONCRETE VALLEY GUTTERS

Location	Side	Concrete Pavement (VG) 8" Reinf. (sy)	Crushed Rock Base 7", Reinf. (sy)	Concrete Curb, Mono Edge (6" & 1-1/2") (lf)	Remarks
135th Street					
31+49.76	Rt.	198.1	210.8	116.8	Forestview South
31+55.76	Lt.	294.4	305.9	106.8	Farmhouse
40+05.00	Lt.	294.4	305.9	106.8	Siena
45+79.30	Rt.	198.1	210.8	116.8	Forestview North
51+16.23	Lt.	265.4	276.9	106.8	W. Lost Creek
60+28.65	Rt.	326.5	337.4	100.6	W. 10th St.
66+30.70	Lt.	231.9	242.0	94.0	W. Ponderosa
Totals		1,808.8	1,889.7	748.6	

HANDRAIL

Location	Side	Handrail, Pedestrian (lf)	Handrail, Bicycle (lf)	Handrail, Bicycle (Special) (lf)	Remarks
135th Street					
48+48.36 to 49+51.02	Rt.	97.0			
48+67.19 to 49+32.19	Lt.			65.0	
48+40.36 to 49+59.09	Lt.		113.0		
Totals		97.0	113.0	65.0	

MAILBOX REMOVED & RESET

Location	Side	Mailbox Removed & Reset (ea)	Remarks
135th Street			
45+85.13	Lt.	1	
59+13.17	Lt.	1	
Totals		2	

RETAINING WALL

Location	Side	Retaining Wall, Sheet Pile (lf)	Remarks
135th Street			
40+96.03 to 41+31.66	Rt.	42.0	
Totals		42.0	

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135TH STREET WEST

STREET IMPROVEMENTS FOR
FROM CENTRAL AVE TO 13TH STREET

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SUMMARY OF QUANTITIES

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	N/A

DESIGNED	DRAWN	CHECKED
JRA	RAM	JRA

NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

SHEET NO.
85 OF 156

Sh. No. 85

J:\PROJECTS\0222\2021\0447_COV_135TH STREET FROM CENTRAL TO 13TH STREET\00 220447 CAD\SHTS\05 CIVIL\QUANTITIES\210447-05-SUMM OF QUANTITIES.DWG

PLOTTED: Friday, February 20, 2026 @ 02:18PM

CONCRETE CURB AND GUTTER

Location	Side	Concrete C & G, Type 1 (6" & 1-1/2") (lf)	Concrete C & G, Type 2 (3-5/8" & 1-1/2") (lf)	Concrete C & G, Type 3 (8" & 1-1/2") (lf)	Concrete C & G, Type 4 (6-5/8" & 1-1/2") (lf)	Concrete Ramp Nose Section (ea)	Remarks
135th Street							
26+00.79 to 31+05.26	Lt.	504.7					
26+00.79 to 31+05.26	Rt.	504.7					
32+06.26 to 39+54.50	Lt.	749.2					
31+94.26 to 45+34.80	Rt.	1,340.5					
34+00.26 to 37+86.00	Lt.			373.7		1	
34+00.26 to 37+86.00	Rt.			373.7		1	
40+55.50 to 48+32.57	Lt.	778.1					
40+78.00 to 45+05.52	Lt.			415.5		1	
40+78.00 to 45+05.52	Rt.			415.5		1	
45+79.30	Rt.		64.4				Forestview (N)
46+23.80 to 48+32.57	Rt.	208.8					
49+66.81 to 50+68.73	Lt.	101.9					
49+66.82 to 59+72.13	Rt.	1,006.3					
51+16.23	Lt.				80.0		W. Lost Creek
51+63.73 to 65+83.20	Lt.	1,420.5					
51+86.23 to 57+71.88	Lt.			573.6		1	
51+86.23 to 57+71.88	Rt.			573.6		1	
60+28.65	Rt.			21.5	13.7		W. 10th St.
60+87.36 to 72+56.34	Rt.	1,169.2					
66+30.70	Lt.				121.0		W. Ponderosa
66+73.20 to 72+56.34	Lt.	583.1					
67+00.84 to 70+77.00	Lt.			364.2		1	
67+00.84 to 70+77.00	Rt.			364.2		1	
72+12.09 to 72+56.33	Lt.			38.2		1	
72+12.09 to 72+56.33	Rt.			38.2			
	Totals	8,367.0	64.4	3,551.9	214.7	9	

TREE REMOVAL

Location	Offset	Large	Small	Remarks
135th Street				
31+11.25	57.292' Lt.	1		
31+68.56	56.257' Lt.	1		
46+52.32	39.778' Lt.		1	
46+70.43	55.815' Lt.		1	
47+04.62	39.510' Lt.		1	
67+27.04	42.521' Lt.		1	
68+01.72	42.368' Lt.		1	
68+25.66	42.310' Lt.		1	
68+50.62	42.464' Lt.		1	
	Totals	2	7	

BRICK PAVER

Location	Side	Brick Pavers, Median (sy)	Remarks
135th Street			
72+18.09 to 72+56.33	CL	36.15	
	Totals	36.15	

CONCRETE SAFETY BARRIER

Location	Side	Concrete Safety Barrier, Corral Rail (lf)	Concrete Safety Barrier, Special (lf)	Remarks
135th Street				
48+32.57 to 48+65.82	Lt.		33.25	
48+32.57 to 48+65.82	Rt.		33.25	
48+35.82 to 49+33.57	Lt.	67.75		
48+65.82 to 49+33.57	Rt.	67.75		
49+33.57 to 49+66.81	Lt.		33.25	
49+33.57 to 49+66.81	Rt.		33.25	
	Totals	135.5	133.0	

EARTHWORK

Location	EXCAVATION ITEMS				Fill, Compacted (95% Density) (cy)	Fill, Compacted (90% Density) (cy)	Fill, Select (cy)	Excavation to be Wasted (cy)
	Pavement &/or Curb Removed Δ (sy)	Sidewalk, Drive, &/or Pkg Lot Removed * (sy)	Excavation (cy)	VMF				
135TH ST.								
26+00.78 - 72+56.34	16,012.7	519.4	20,013.2	0.85	2,583.1		958.2	16,974.3
PONDEROSA	235.1	22.3	102.3	0.85				102.3
FORESTVIEW (N)	103.7	16.5	63.9	0.85	3.0			60.4
COWSKIN CREEK TRIBUTARY								
10+00 - 12+11.25	315.6		721.3	0.85		11.4		707.9
Totals	16,351.5	558.2	20,179.4		2,586.1	11.4	958.2	17,844.8

*INCLUDES ALL SIDEWALK, RAMPS, AND DRIVEWAYS.

Δ EXISTING PAVEMENT THICKNESS IS BASED ON A MEASURED DEPTH OF 8.5". THICKNESSES MAY VARY. FORESTVIEW PAVEMENT THICKNESS IS 5".

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STREET IMPROVEMENTS FOR

135TH STREET WEST

FROM CENTRAL AVE TO 13TH STREET

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SUMMARY OF QUANTITIES

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	N/A

DESIGNED	DRAWN	CHECKED
JRA	RAM	JRA

NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

SHEET NO.

86 OF 156

PLOTTED: Friday, February 20, 2026 @ 02:18PM

RECAPITULATION OF QUANTITIES

LINE NO.	BID ITEM DESCRIPTION	QUANTITY	UNIT
Paving Items			
1	Field Office and Laboratory (Type A)	1	EA
2	Mobilization	1	LS
3	Construction Staking, Bridge	1	LS
4	Removal of Existing Structures	1	LS
5	Transport of Salvaged Materials	1	LS
6	Site Clearing	1	LS
7	Site Restoration	1	LS
8	Pavement &/or Curb Removed	16,040	SY
9	Sidewalk, Drive, &/or Parking Lot Removed	576	SY
10	Excavation	22,383	CY
11	Fill, Compacted (90% Density)	279	CY
12	Fill, Compacted (95% Density)	2,298	CY
13	Fill, Select	959	CY
14	AC Pavement, 7" (5" Bit. Base)	17,265	SY
15	Concrete Pavement 12" (Reinf.)	178	SY
16	Concrete Approach 12", Bridge	116	SY
17	Bridge Approach Slab Footing	48	CY
18	Concrete Pavement (VG) 8" Reinf.	1,809	SY
19	Crushed Rock Base 6", Reinf.	311	SY
20	Crushed Rock Base 7", Reinf.	1,890	SY
21	Crushed Rock Base 8", Reinf.	21,786	SY
22	Concrete Driveway 8" (Reinf.)	4,660	SF
23	Concrete Sidewalk 4"	26,415	SF
24	Concrete Sidewalk 5" (Reinf.)	41,070	SF
25	Concrete Sidewalk 12" (Reinf.)	1,190	SF
26	Sidewalk Thickening	527	LF
27	Wheelchair Ramp w/ Detectable Warnings	14	EA
28	Concrete C&G, Type 1 (6" & 1-1/2")	8,367	LF
29	Concrete C&G, Type 2 (3-5/8" & 1-1/2")	65	LF
30	Concrete C&G, Type 3 (8" & 1-1/2")	3,552	LF
31	Concrete C&G, Type 4 (6-5/8" & 1-1/2"8" & 1-1/2")	215	LF
32	Concrete Curb, Mono Edge (6" & 1-1/2")	749	LF
33	Ditch Liner, Concrete 5"	1,050	SY
34	Concrete Protection Curb	557	LF
35	Concrete Ramp Nose Section	9	EA
36	Brick Pavers, Median	37	SY
37	Concrete Safety Barrier, Corral Rail	136	LF
38	Concrete Safety Barrier, Special	133	LF
39	Retaining Wall, Sheet Pile	42	LF
40	Handrail, Pedestrian	97	LF
41	Handrail, Bicycle	113	LF
42	Handrail, Bicycle (Special)	65	LF
43	Riprap, Light Stone, Removed & Replaced	585	SY
44	Turf Reinforcement Mat	4,515	SY
45	Inlet Removed	5	EA
46	Pipe Removed	953	LF
47	Inlet Adjusted	2	EA
48	Manhole Adjusted w/o New Ring & Cover	10	EA
49	Fire Hydrant Adjusted	4	EA
50	Valve Box Adjusted	9	EA
51	Mailbox Removed and Reset	2	EA

RECAPITULATION OF QUANTITIES

Drainage Items			
52	Pipe, SWS 15" RCP	1,123	LF
53	Pipe, SWS 18" RCP	1,750	LF
54	Pipe, SWS 24" RCP	1,067	LF
55	Pipe, SWS 30" RCP	812	LF
56	Pipe, SWS, RCBC (10' x 3')	105	LF
57	Pipe, SWS, RCBC (4-16' x 5')	60	LF
58	Sand Backfill, Flushed and Vibrated	4,906	LF
58	Inlet, Curb (Type 1)(L=5' W=3')	8	EA
59	Inlet, Curb (Type 1)(L=10' W=3')	12	EA
59	Inlet, Curb (Type 1)(L=5' W=4')	1	EA
60	Inlet, Curb (Type 1)(L=10' W=4')	5	EA
61	Inlet, Curb (Type 1)(L=10' W=7')	1	EA
62	Inlet, Curb (Type 1)(L=15' W=3')	1	EA
63	Inlet, Curb (Type 1A)(L=10' W=7')	1	EA
64	Inlet, Curb (Type 2)(L=6' 2 1/2" W=3' 4 3/8")	8	EA
65	MH, Standard SWS (5')	4	EA
66	Pipe, SWS, PVC 4", Perforated	680	LF
67	Inlet Hook-up	39	EA
Erosion Control Items			
68	BMP, Back of Curb Protection	12,235	LF
69	BMP, Curb Inlet Protection	34	EA
70	BMP, Biodegradable Log	2,570	LF
71	BMP, Construction Entrance	7	EA
Landscaping Items			
72	Sodding	1	LS
73	Seeding	1	LS
74	Tree Removal, Large	2	EA
75	Tree Removal, Small	7	EA
76	Chinese Pistache	23	EA
77	Swamp White Oak	6	EA
78	Shantung Maple	9	EA
79	Hot Wings Tatarian Maple	44	EA
Traffic Items			
80	Pavement Marking	1	LS
81	Signing, Except Street Name Signing	1	LS
82	Signing, Street Name Signs Only	1	LS
Traffic Control Items			
83	Traffic Control	1	LS
84	Portable Changeable Electronic Message Sign	160	Days
85	Temporary Asphalt Pavement (6")	430	SY
86	Temporary Asphalt Pavement (6")(Utility Patch)	181	LF
87	Temporary Asphalt Pavement (6")(Incl. 5" CRB)(Widening)	1,991	SY
88	Concrete C & G Removed & Replaced	80	LF

FOR STORM SEWER SUMMARY OF QUANTITIES SEE SH. NO. 25.
FOR EROSION CONTROL BMP SUMMARY OF QUANTITIES SEE SH. NO. 90.
FOR ROADSIDE IMPROVEMENTS SUMMARY OF QUANTITIES SEE SH. NO. 98.
FOR TREE PLANTING SUMMARY OF QUANTITIES SEE SH. NO. 99.
FOR PAVEMENT MARKING SUMMARY OF QUANTITIES SEE SH. NO. 103.
FOR SIGINING SUMMARY OF QUANTITITES SEE SH. NO. 104.

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STREET IMPROVEMENTS FOR
135TH STREET WEST
FROM CENTRAL AVE TO 13TH STREET

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RECAPITULATION OF QUANTITIES

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	N/A

DESIGNED	DRAWN	CHECKED
JRA	RAM	JRA

NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

SHEET NO.
87 OF 156

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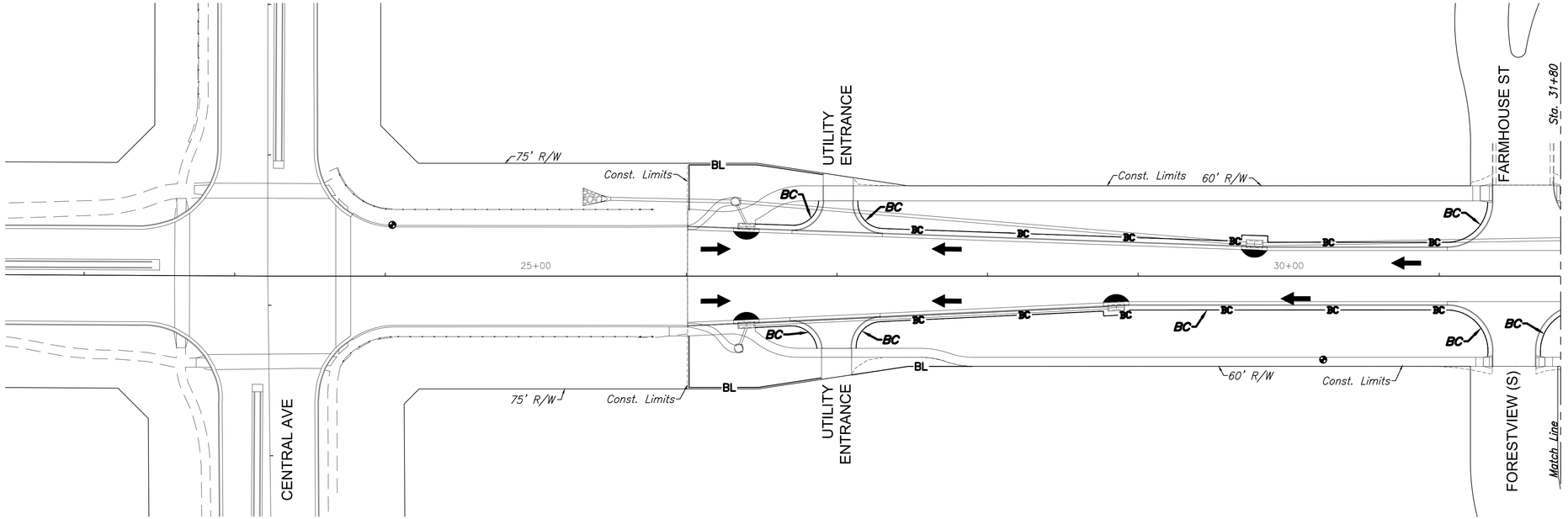
PLOTTED: Friday, February 20, 2026 @ 01:52PM



135TH ST W

SCALE: 1"=40'
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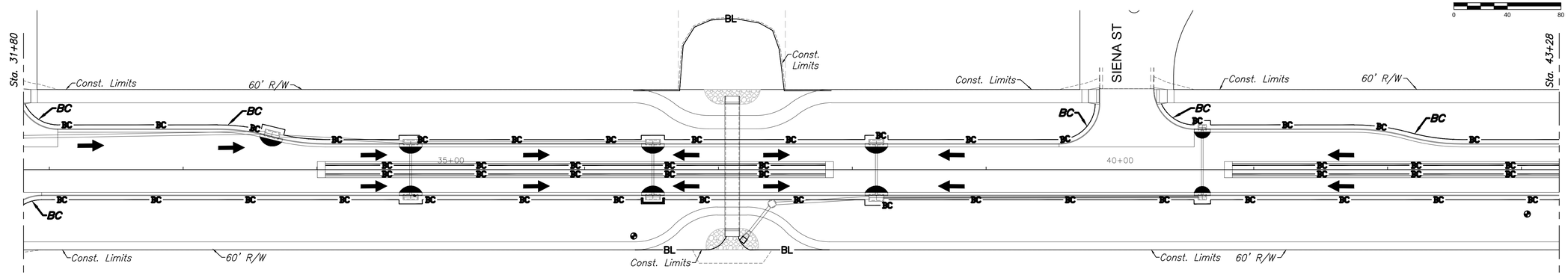

135TH ST W

EROSION CONTROL NOTES

THIS PROJECT WILL NOT DISTURB MORE THAN 6.0 ACRES AT A TIME.

REFER TO CITY OF WICHITA STANDARDS FOR BMP INSTALLATION, INSPECTION AND MAINTENANCE DETAILS AND SPECIFICATIONS.

COST FOR EACH EROSION AND SEDIMENT CONTROL ITEM SHALL INCLUDE MAINTENANCE, INSPECTION AND EVENTUAL REMOVAL. BESIDES KEEPING EACH DEVICE IN WORKING ORDER, MAINTENANCE SHALL INCLUDE, AT A MINIMUM, SEDIMENT REMOVAL BEFORE 50% OF THE DEVICE'S CAPACITY IS REACHED.

CONTRACTOR SHALL ADJUST EROSION AND SEDIMENT CONTROL PLANS TO CONFORM TO ACTUAL CONSTRUCTION OPERATIONS. ALL CHANGES TO PLAN SHALL BE APPROVED BY THE CITY.

STABILIZED ENTRANCES SHALL BE PROVIDED AS DIRECTED BY THE CITY. 7 TOTAL ENTRANCES ARE ANTICIPATED ON THE PROJECT.

STOCKPILING OF EXCAVATED MATERIAL ON THE PROJECT SITE IS GENERALLY PROHIBITED. SMALL AND INTERIM STOCK PILES NOT IMMEDIATELY HAULED OFF-SITE SHOULD BE ENCLOSED AND PROTECTED WITH BIODEGRADABLE LOG AROUND THE ENTIRE CIRCUMFERENCE OF THE STOCK PILE. INSTALLING AND MAINTAINING THIS EROSION CONTROL DEVICE SHALL BE CONSIDERED SUBSIDIARY TO THE BID ITEM "BMP, BIODEGRADABLE LOG".

EROSION CONTROL DEVICES WILL NEED TO BE INSTALLED AS APPLICABLE FOR THE APPROPRIATE CONSTRUCTION PHASE. CONTRACTOR SHALL ADJUST EROSION AND SEDIMENT CONTROL PLAN TO CONFORM TO ACTUAL CONSTRUCTION OPERATIONS. ONCE INSTALLED, THE DEVICES SHALL REMAIN IN-PLACE AND CONTINUE TO BE MAINTAINED UNTIL NO LONGER NECESSARY AS DETERMINED BY THE CITY.

ALL AREAS DISTURBED BY CONSTRUCTION THAT ARE ADJACENT TO DEVELOPED PROPERTIES SHALL BE RESTORED WITH SOD TO MATCH EXISTING TURF TYPE. RESTORATION OF DISTURBED AREAS SHALL INCLUDE BUT NOT BE LIMITED TO, TOP SOIL PREPARATION AND SODDING. ALL SODDING WORK SHALL BE IN ACCORDANCE WITH CITY STANDARD SPECIFICATIONS AND THE CITY ADMINISTRATIVE REGULATION NO. AR6.5, WHICH GOVERNS CLEANUP AND RESTORATION OR REPLACEMENT FOLLOWING CONSTRUCTION. THE "RECAPITULATION OF QUANTITIES" SHOWS THE ESTIMATED SQUARE YARDS OF SODDING, WITH A BID ITEM FOR THE SAME. WHEN THE WEATHER/SEASON PREVENTS THE INSTALLATION OF SOD, THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING EROSION CONTROL BLANKET (CURLEX I, OR APPROVED EQUAL) AT THE BACK OF CURB (8" WIDE MINIMUM). ALL COST FOR EROSION MAT INSTALLATION SHALL BE SUBSIDIARY TO "SITE RESTORATION".

THE CONTRACTOR SHALL RESEED ALL UNDEVELOPED AREAS DISTURBED BY CONSTRUCTION WITH A MIXTURE OF RYEGRASS (APPLIED AT A RATE OF 200 LBS. PER ACRE) AND BUFFALO GRASS, DEPENDING ON THE SOIL CONDITIONS (APPLIED AT A RATE OF 200 LBS. PER ACRE) AND BUFFALO GRASS, DEPENDING ON THE SOIL CONDITIONS (APPLIED PER STANDARD SPECIFICATIONS). PURE NITROGEN FERTILIZER SHALL ALSO BE APPLIED AT A RATE OF 1.5 LBS. PER THOUSAND SQUARE FEET. THE SEED SHALL BE WATERED WITH A DEEP SOAKING EVERY TWO (2) WEEKS DURING DRY PERIODS UNTIL A MATURE STAND OF GRASS IS OBTAINED. THE "RECAPITULATION OF QUANTITIES" SHOWS THE ESTIMATED SQUARE YARDS OF DISTURBED AREA TO BE SEEDED, WITH A BID ITEM FOR THE SAME. THE PERMANENT SEEDING MAY BE OMITTED ONLY IF SODDING IS REQUIRED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING EROSION CONTROL BLANKET (CURLEX I, OR APPROVED EQUAL) AT THE BACK OF CURB, TO AND INCLUDING THE LIMITS OF ALL SEEDED AREAS. ALL COSTS FOR THIS WORK SHALL BE SUBSIDIARY TO THE SEEDING BID ITEMS.

LEGEND

- Flow Arrow
- BL — Biodegradable Log
- Stream Flow
- BC — Back of Curb Protection
- Curb Inlet Protection
- IP — Drop Inlet Protection
- Riprap

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STREET IMPROVEMENTS FOR

135TH STREET WEST

FROM CENTRAL AVE TO 13TH STREET

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EROSION CONTROL PLAN

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	1"=40'

DESIGNED	DRAWN	CHECKED
JRA	ZSS	JRA

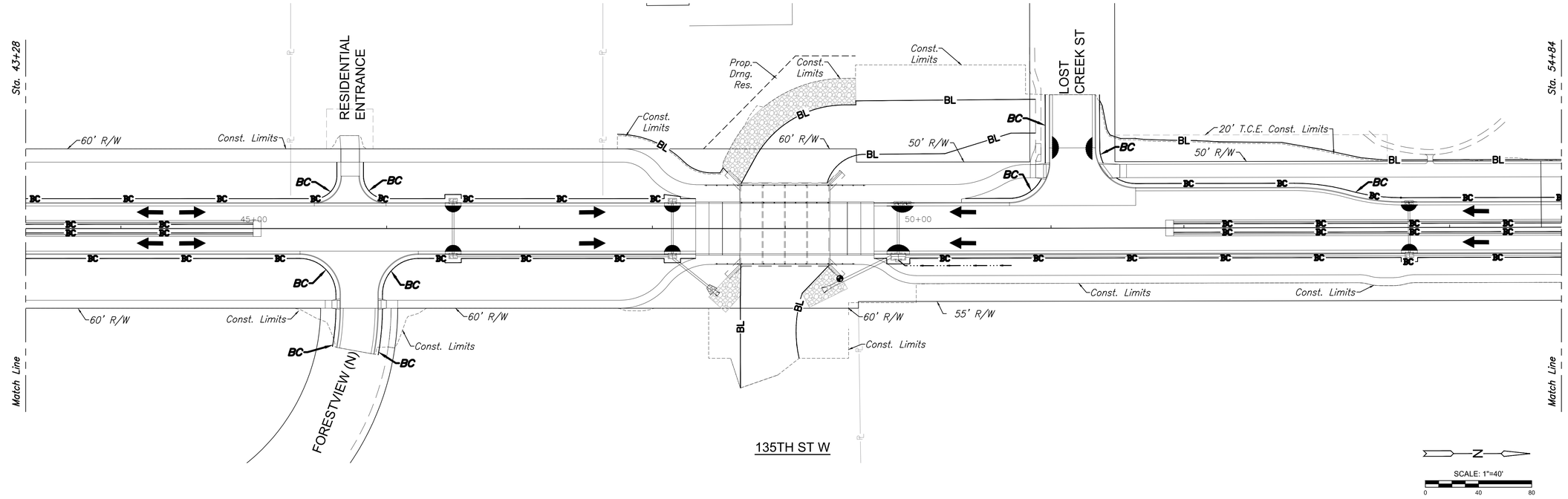
NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

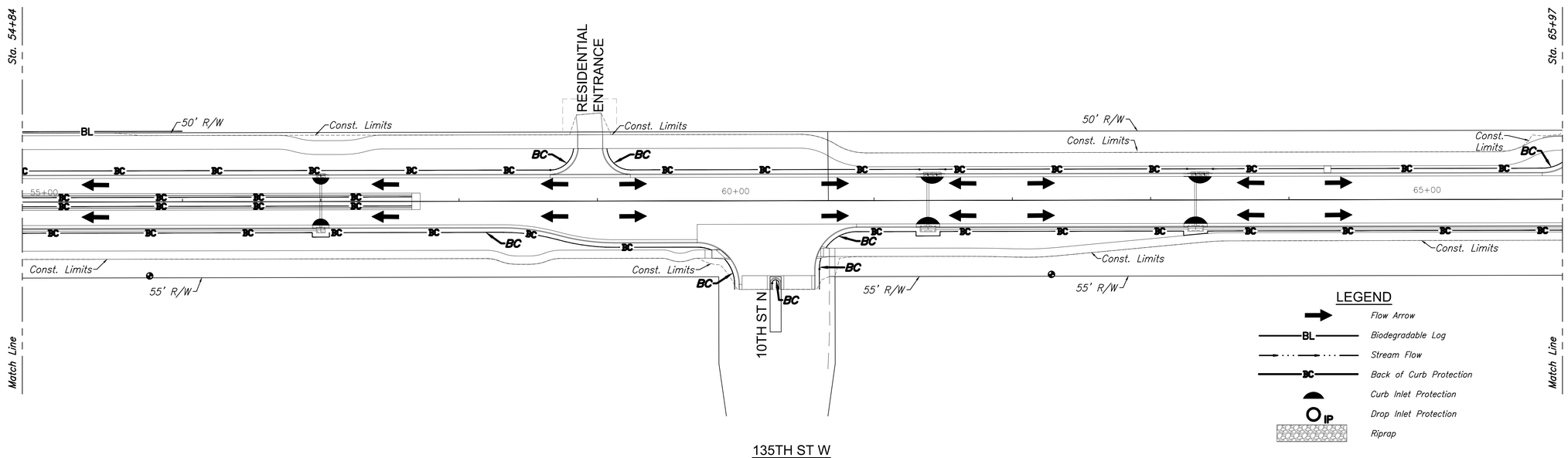
SHEET NO.

88 OF 156

Sh. No. 88

PLOTTED: Friday, February 20, 2026 @ 01:52PM





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STREET IMPROVEMENTS FOR

135TH STREET WEST

FROM CENTRAL AVE TO 13TH STREET

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EROSION CONTROL PLAN

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	1"=40"'

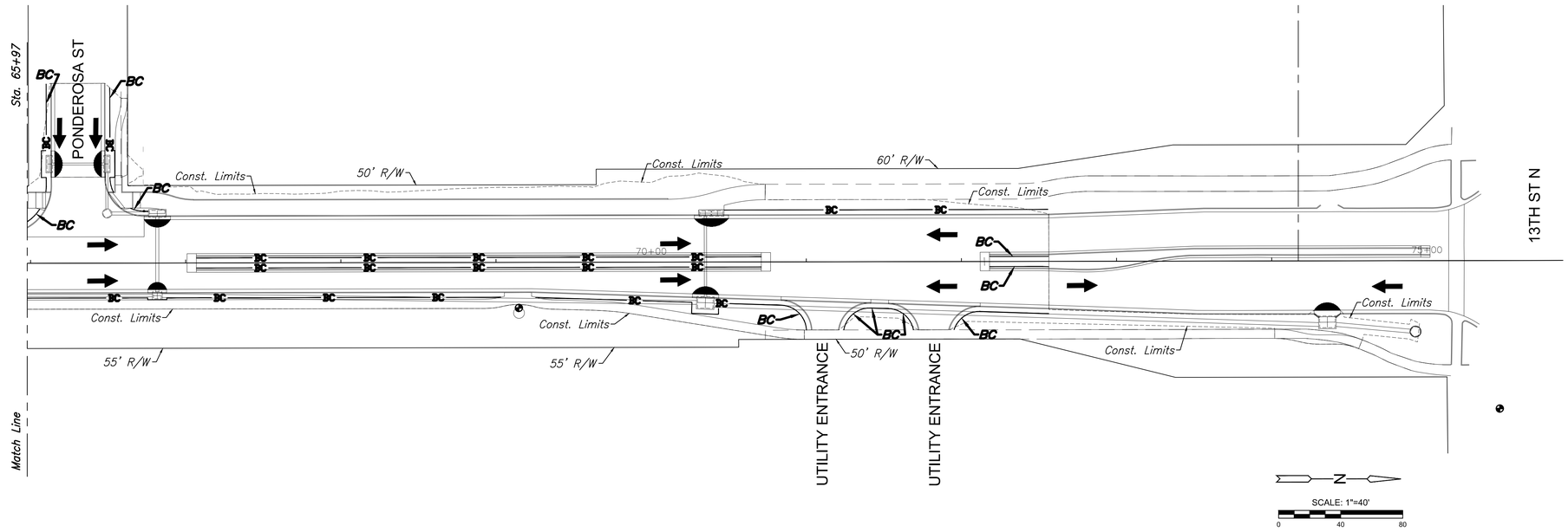
DESIGNED	DRAWN	CHECKED
JRA	ZSS	JRA

NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

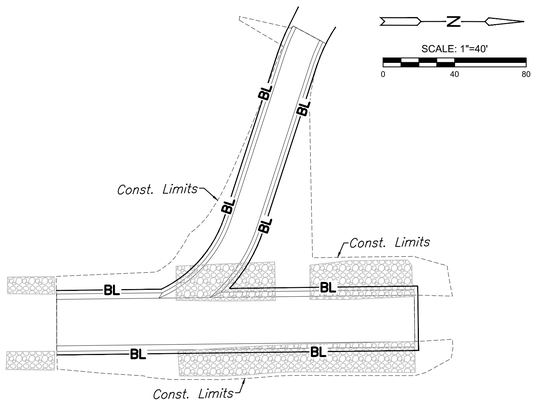
SHEET NO.

89 OF 156

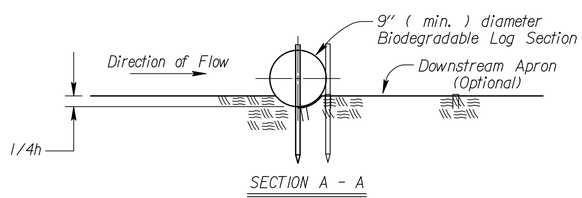
PLOTTED: Friday, February 20, 2026 @ 01:52PM

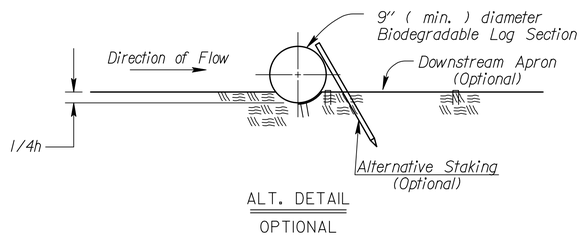


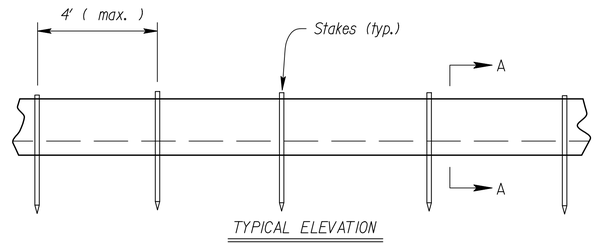
135TH ST W



COWSKIN TRIBUTARY NO. 2







BIODEGRADABLE LOG INSTALLATION DETAIL

EROSION CONTROL BMP SUMMARY		
ITEMS	QUANTITY	UNIT
BMP, Back of Curb Protection	12,356	L.F.
BMP, Curb Inlet Protection	36	Each
BMP, Biodegradable Log	2,570	L.F.
BMP, Construction Entrance (TBD in field, per phase of construction)	7	Each

LEGEND

- Flow Arrow
- BL — Biodegradable Log
- Stream Flow
- BC — Back of Curb Protection
- Curb Inlet Protection
- IP — Drop Inlet Protection
- Riprap

MKEC
Wichita, KS • 316-684-9600

STREET IMPROVEMENTS FOR

135TH STREET WEST

FROM CENTRAL AVE TO 13TH STREET

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EROSION CONTROL PLAN

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	1"=40'

DESIGNED	DRAWN	CHECKED
JRA	ZSS	JRA

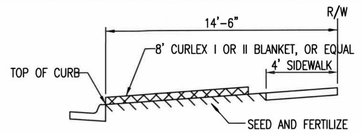
NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

SHEET NO.

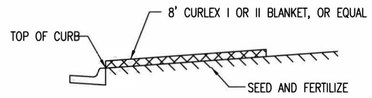
90 OF 156

Sh. No. 90

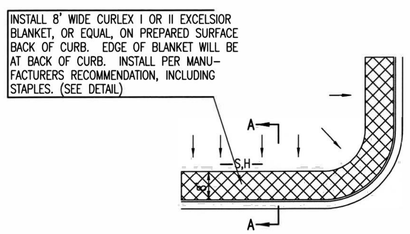
J:\PROJECTS\2022\2201010447_COV_135TH STREET FROM CENTRAL TO 13TH STREET\100 220447 CAD\SHTS\05 CIVIL\EROSION\EC SHEETS\220447 EROSION CONTROL.DWG



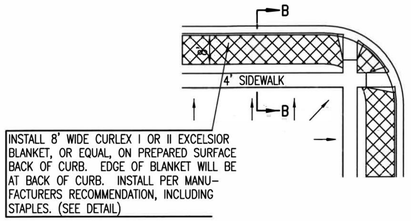
SECTION B-B



SECTION A-A



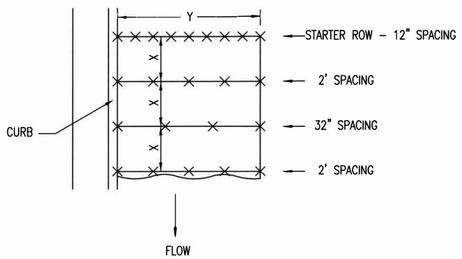
SOUTH STREET

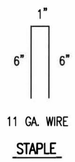


GENERAL NOTES

1. EXCELSIOR MAT TO BE INSTALLED WHEN SOD IS NOT SPECIFIED ON PROJECT.
2. EXCELSIOR BLANKET TO BE INSTALLED OVER SEED AND FERTILIZER, AS SPECIFIED IN THE PROJECT SPECIFICATIONS.
3. 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



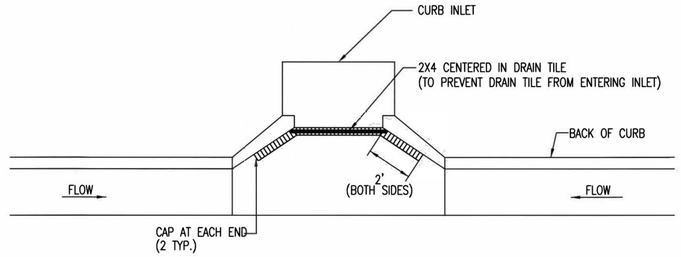


STAPLE

STAPLE PATTERN

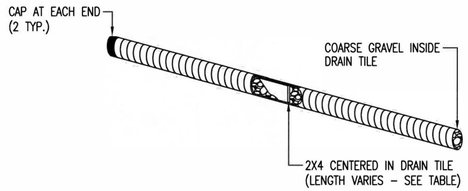
NOTES: USE 6" SEAM OVERLAP
(X & Y = RECOMMENDED BY MANUFACTURE)

DETAILS FOR APPROVED EROSION CONTROL MAT



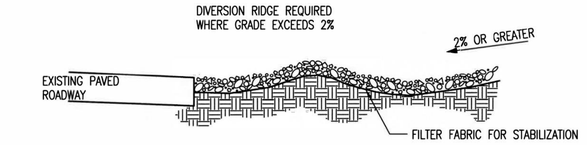
NOTE:
PLACE 4" PERFORATED PVC PIPE, FILLED WITH 1/2"-1" DIA. GRAVEL, IN FRONT OF CURB INLET AS SHOWN.

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

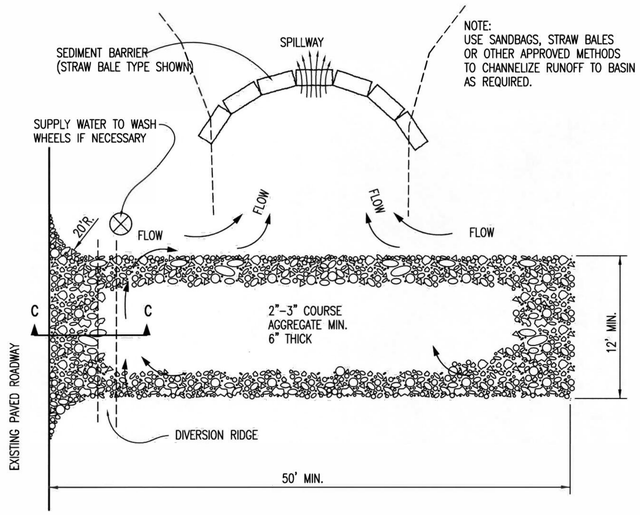


CURB INLET PROTECTION

4" PERFORATED PIPE W/ GRAVEL



SECTION C-C



STABILIZED CONSTRUCTION ENTRANCE

GENERAL NOTES

1. 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.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
3. 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.
4. 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

GARY L. JANZEN LICENSED 16294 KANSAS PROFESSIONAL ENGINEER
05/31/13

CITY OF WICHITA
PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

BACK OF CURB PROTECTION, CURB INLET PROTECTION AND CONSTRUCTION ENTRANCE

CITY ENGINEER
GARY JANZEN, P.E.

PROJECT NUMBER	OCA NUMBER	DATE
472-2021-085756		9/26/2025

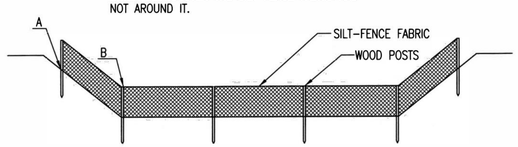
CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202-1620
(316) 268-4501

SHEET
91 OF 156

J:\Projects\2022\2201010447_COW_135th Street from Central to 13th Street\00 220447 CAD\SHTS\05 Civil\Std\Erosion Control\COW\SW-501 Erosion Control Details.dwg

SW-501

NOTE: POINT A MUST BE HIGHER THAN POINT B SO THAT WATER FLOWS OVER THE SILT FENCE FABRIC AND NOT AROUND IT.



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 DOWNSTREAM SIDE OF THE TRENCH.
PLACE THE EDGE OF THE FABRIC IN THE TRENCH STARTING AT THE TOP UPSTREAM 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 UPSTREAM SIDE OF THE TRENCH TO CLEAR AN AREA FOR DRIVING IN THE POSTS. JUST DOWNSTREAM 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.

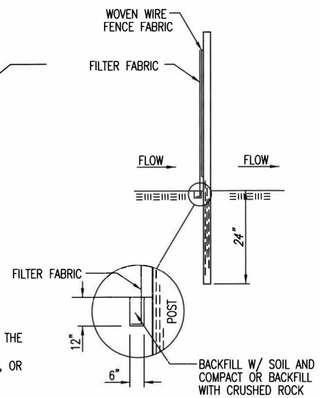
LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

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 UPSTREAM 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.

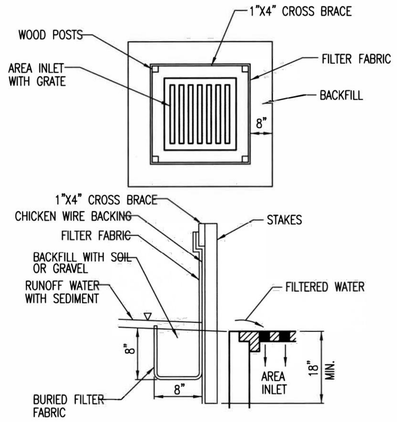
INSPECTION AND MAINTENANCE:

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.

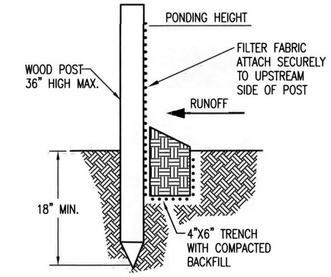
LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

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 RESISTED 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 SLOPE 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

GARY L. JANZEN LICENSED 16294 KANSAS PROFESSIONAL ENGINEER
05/30/13

CITY OF WICHITA
PUBLIC WORKS & UTILITIES ENGINEERING DIVISION

SILT FENCE DITCH CHECK AND BARRIER DETAILS

CITY ENGINEER: GARY JANZEN, P.E.

PROJECT NUMBER	OCA NUMBER	DATE
472-2021-085756		9/26/2025

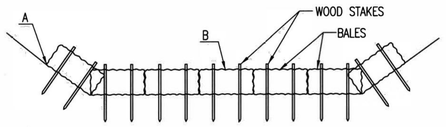
CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202-1620
(316) 268-4501

SHEET: 92 OF 156

SW-502

J:\Projects\2022\2201010447_COW_13th Street from Central to 13th Street\00 220447 CAD\SHTS\05 Civil\Std\Erosion Control\Silt Fence Ditch Check and Barrier Details.dwg

NOTE: POINT A MUST BE HIGHER THAN POINT B
SO THAT WATER FLOWS OVER THE BALES AND
NOT AROUND THEM.



STRAW BALE DITCH CHECKS

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".

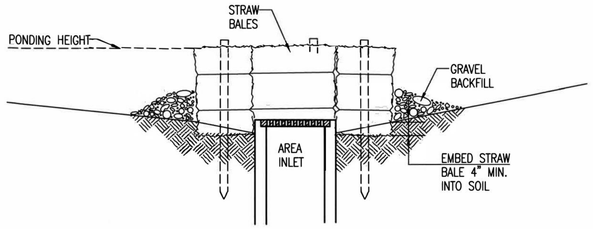
LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

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.

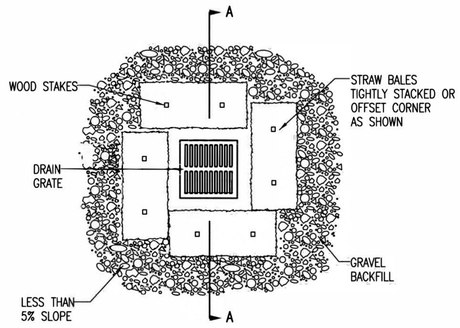
INSPECTION AND MAINTENANCE:

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?



SECTION A-A



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.

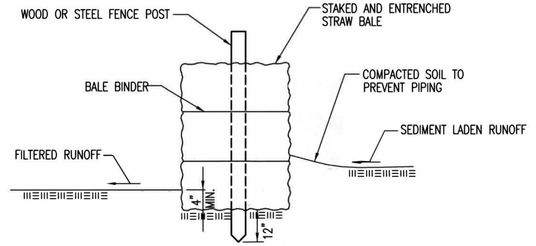
LIST OF COMMON PLACEMENT INSTALLATION MISTAKES TO AVOID:

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 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

GARY L. JANZEN LICENSED 16294 KANSAS PROFESSIONAL ENGINEER
05/30/13

CITY OF WICHITA
PUBLIC WORKS & UTILITIES ENGINEERING DIVISION

STRAW BALE DITCH CHECK AND BARRIER DETAILS

CITY ENGINEER
GARY JANZEN, P.E.

PROJECT NUMBER	OCA NUMBER	DATE
472-2021-085756		9/26/2025

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

SHEET
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SW-503

GENERAL NOTES

1. 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.

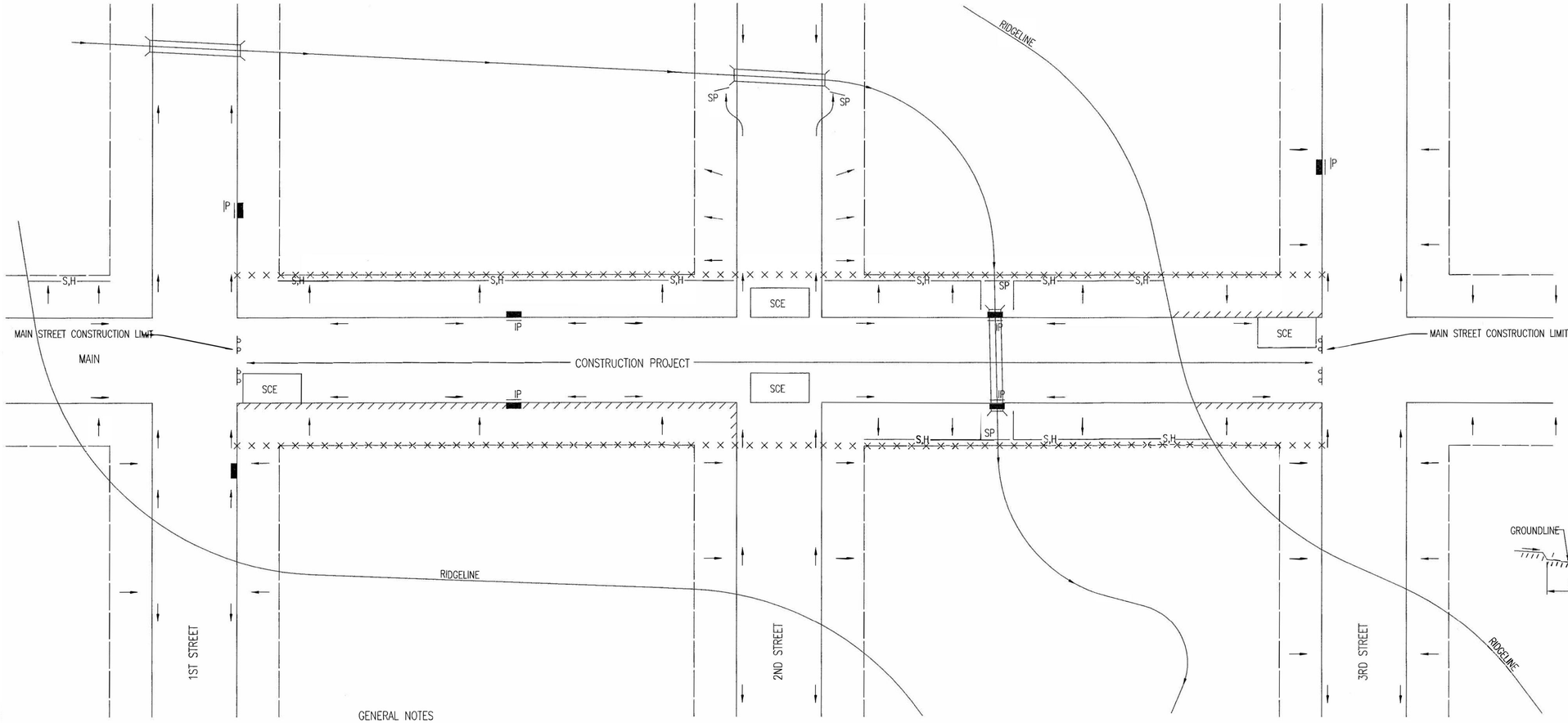
2. EROSION CONTROL DEVICES MUST BE MAINTAINED BY THE CONTRACTOR THROUGHOUT THE CONSTRUCTION PROCESS AND UNTIL THE DISTURBED EARTH IS RESTABILIZED.

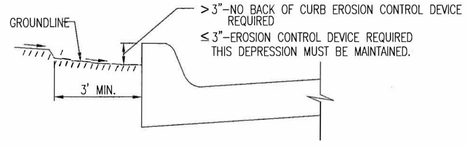
3. IF THE PROJECT WILL DISTURB 1 ACRE OR MORE, A FEDERAL/STATE NPDES STORMWATER PERMIT IS REQUIRED. A DETAILED STORMWATER POLLUTION PREVENTION PLAN, IS REQUIRED. THE EROSION CONTROL DEVICES SHOWN ON THIS SHEET ARE CONSIDERED TO BE THE MINIMUM TO BE SHOWN IN THE POLLUTION PREVENTION PLAN.

4. 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.

5. 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.

6. 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.





CURB BACKFILL DETAIL

THIS IS A TEMPORARY MEASURE ONLY, WHEN APPROVED BY THE PROJECT ENGINEER. THE DIRT GRADE BEHIND THE CURB SHALL BE BROUGHT TO THE TOP OF CURB, WITH TEMPORARY EROSION CONTROL MAT OR PERMANENT VEGETATION PLACED, PRIOR TO THE COMPLETION OF ALL PROJECTS.

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

GENERAL NOTES

1. 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.

2. THE POINT OF COMPLIANCE IS GENERALLY THE RIGHT-OF-WAY LINES WITHIN THE LIMITS OF CONSTRUCTION.

3. EROSION CONTROL DEVICES WILL BE REQUIRED AT ALL POINTS ALONG THE PROJECT WHERE DISTURBED EARTH CAN DRAIN ONTO PRIVATE PROPERTY.

4. INLET PROTECTION DEVICES WILL BE REQUIRED WHEREVER WATER CAN DRAIN OFF THE PROJECT SITE INTO AN INLET, INCLUDING ANY SIDE STREET INLETS.

5. EROSION CONTROL DEVICES SHALL BE INSTALLED AT CREEK CROSSINGS SO AS TO PREVENT SEDIMENT FROM ENTERING THEREIN.

6. 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.

7. ANY MUD TRACKED ONTO STREETS MUST BE REMOVED AT THE END OF EACH WORK DAY.

8. THE CONTACTOR 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:
   A. 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)
   B. 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.
   C. ADDITIONALLY, OTHER EROSION CONTROL DEVICES (HAY BALES, SILT FENCE, ETC.) WILL BE INSTALLED AT LOCATIONS OF CONCENTRATED FLOW RESULTING IN SEDIMENT OVERRUNNING THE MAT.
   D. 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)

GARY L. JANZEN LICENSED 16294 KANSAS PROFESSIONAL ENGINEER 06/05/15

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
472-2021-085756		9/26/2025

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

SHEET
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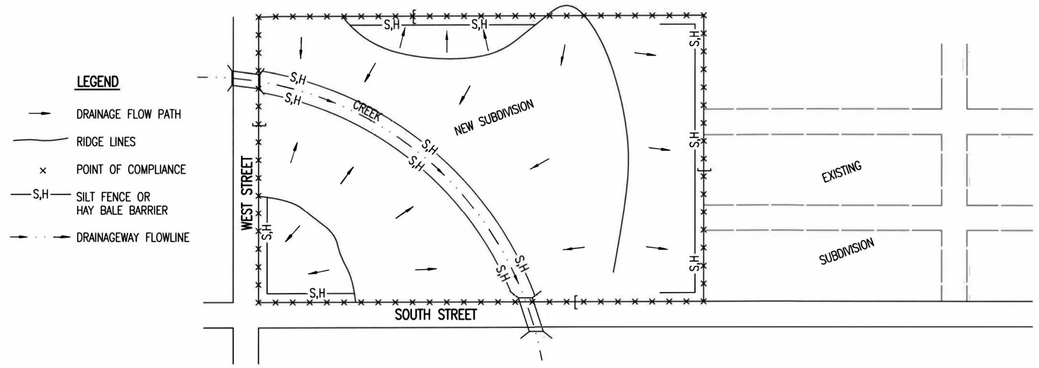
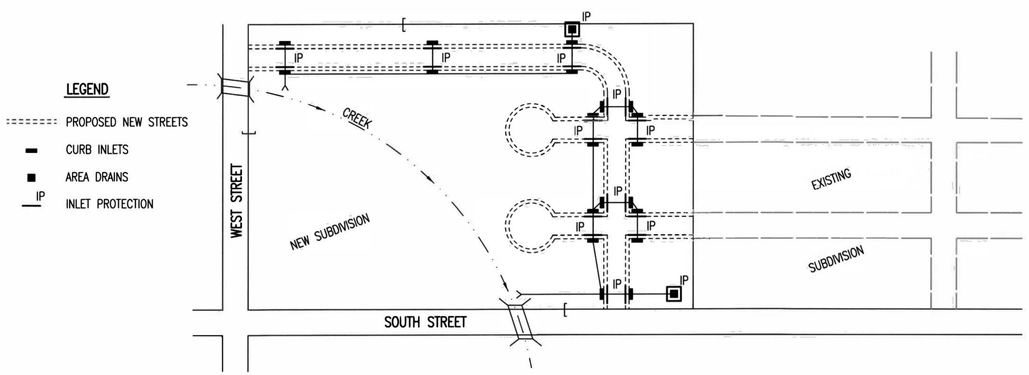
SW-504

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



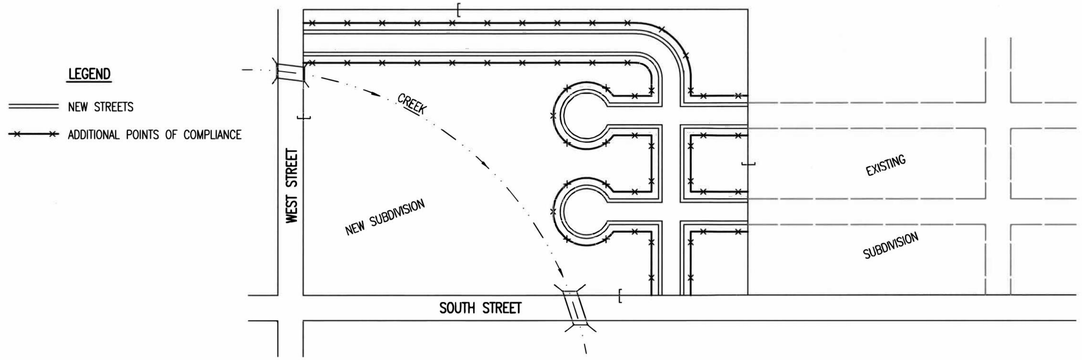
1. DURING THIS PHASE OF SUBDIVISION CONSTRUCTION, THE POINTS OF COMPLIANCE ARE THE PERIMETER BOUNDARIES AND ANY DRAINAGE WAYS OR STORM SEWERS DRAINING THROUGH OR FROM THE SITE. SHOULD LAKES BE CONSTRUCTED WITHIN THE SUBDIVISION THAT WILL DISCHARGE DURING STORMS, THEY ARE ALSO A POINT OF COMPLIANCE.
2. 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 2 – INSTALLATION OF STORM SEWER



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.

PHASE 3 – STREET CONSTRUCTION



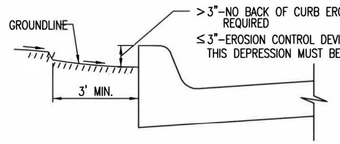
1. DURING THIS PHASE OF SUBDIVISION CONSTRUCTION, NEW STREETS ARE INSTALLED. ALL EROSION CONTROL DEVICES INSTALLED DURING PHASE 1 AND 2 MUST STILL BE MAINTAINED. THE POINT OF COMPLIANCE NOW SHIFTS TO THE BACK OF CURB ALONG EACH STREET.
2. CURB OPENING INLET PROTECTION:
   A. SUMP AREAS – INLET PROTECTION 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.

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.

GARY L. JANZEN LICENSED 16294 KANSAS PROFESSIONAL ENGINEER
05/30/13

SEE DETAIL SHEET FOR BACK OF CURB PROTECTION DETAIL



CURB BACKFILL DETAIL (STREET CONSTRUCTION ONLY)

THIS IS A TEMPORARY MEASURE ONLY, WHEN APPROVED BY THE PROJECT ENGINEER. THE DIRT GRADE BEHIND THE CURB SHALL BE BROUGHT TO THE TOP OF CURB, WITH TEMPORARY EROSION CONTROL MAT OR PERMANENT VEGETATION PLACED, PRIOR TO THE COMPLETION OF ALL PROJECTS.

REVISION DATE: MAY 2013

CITY OF WICHITA
PUBLIC WORKS & UTILITIES ENGINEERING DIVISION

SUBDIVISION DEVELOPMENT PROCESS

CITY ENGINEER
GARY JANZEN, P.E.

PROJECT NUMBER	OCA NUMBER	DATE
472-2021-085756		9/26/2025

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

SHEET
95 OF 156

J:\Projects\2022\220101447_COW_135th Street from Central to 13th Street\00 220447 CAD\SHTS\05 Civil\Std\Erosion Control\COW\SW-505 Erosion Control Details.dwg

SW-505

PLOTTED: Friday, February 20, 2026 @ 01:50PM

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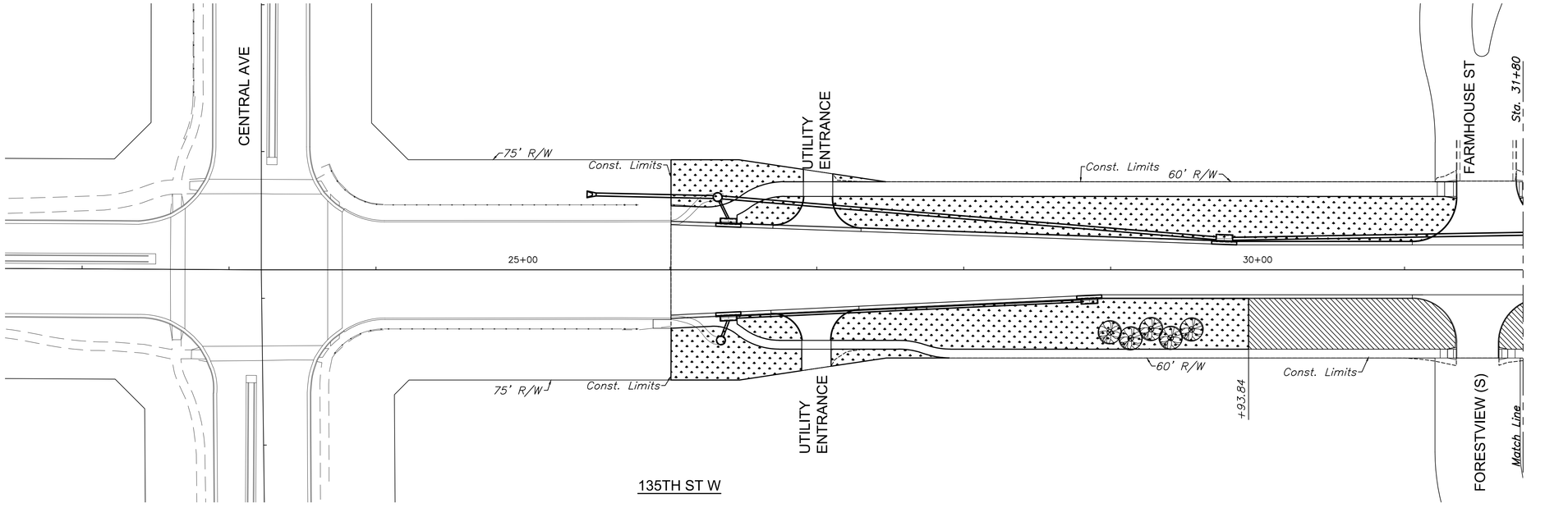

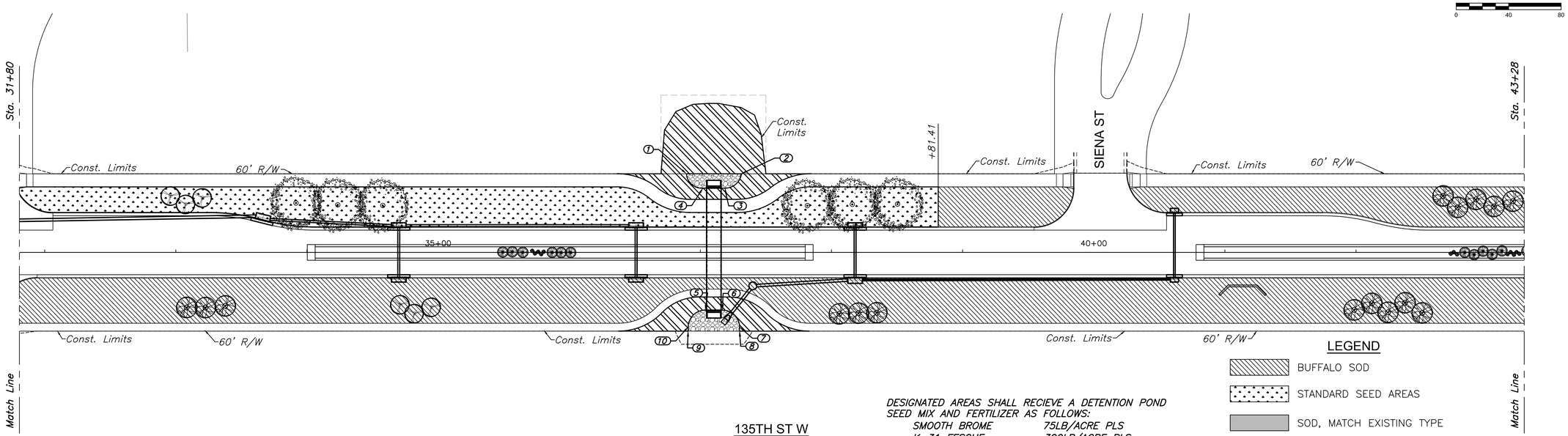

DESIGNATED AREAS SHALL RECIEVE A DETENTION POND SEED MIX AND FERTILIZER AS FOLLOWS:

SMOOTH BROME	*75LB/ACRE PLS*
K–31 FESCUE	*300LB/ACRE PLS*
ANNUAL RYE	*100LB/ACRE PLS*
FERTILIZER (10–20–10)	*350LB/ACRE*

NOTE:
TREE LOCATION IS APPROXIMATE AND MAY BE ADJUSTED IN THE FIELD.
DO NOT PLANT TREES DIRECTLY UNDER OVERHEAD ELECTRIC LINES OR ABOVE BURIED UTILITY LINES.

LEGEND

- BUFFALO SOD
- STANDARD SEED AREAS
- SOD, MATCH EXISTING TYPE
- RIPRAP
- STREAM CHANNEL SEED AREAS AND TURF REINFORCEMENT MAT. SEE SH. NO. 100

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STREET IMPROVEMENTS FOR

135TH STREET WEST

FROM CENTRAL AVE TO 13TH STREET

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ROADSIDE IMPROVEMENT PLAN

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	1"=40'

DESIGNED	DRAWN	CHECKED
JRA	ZSS	JRA

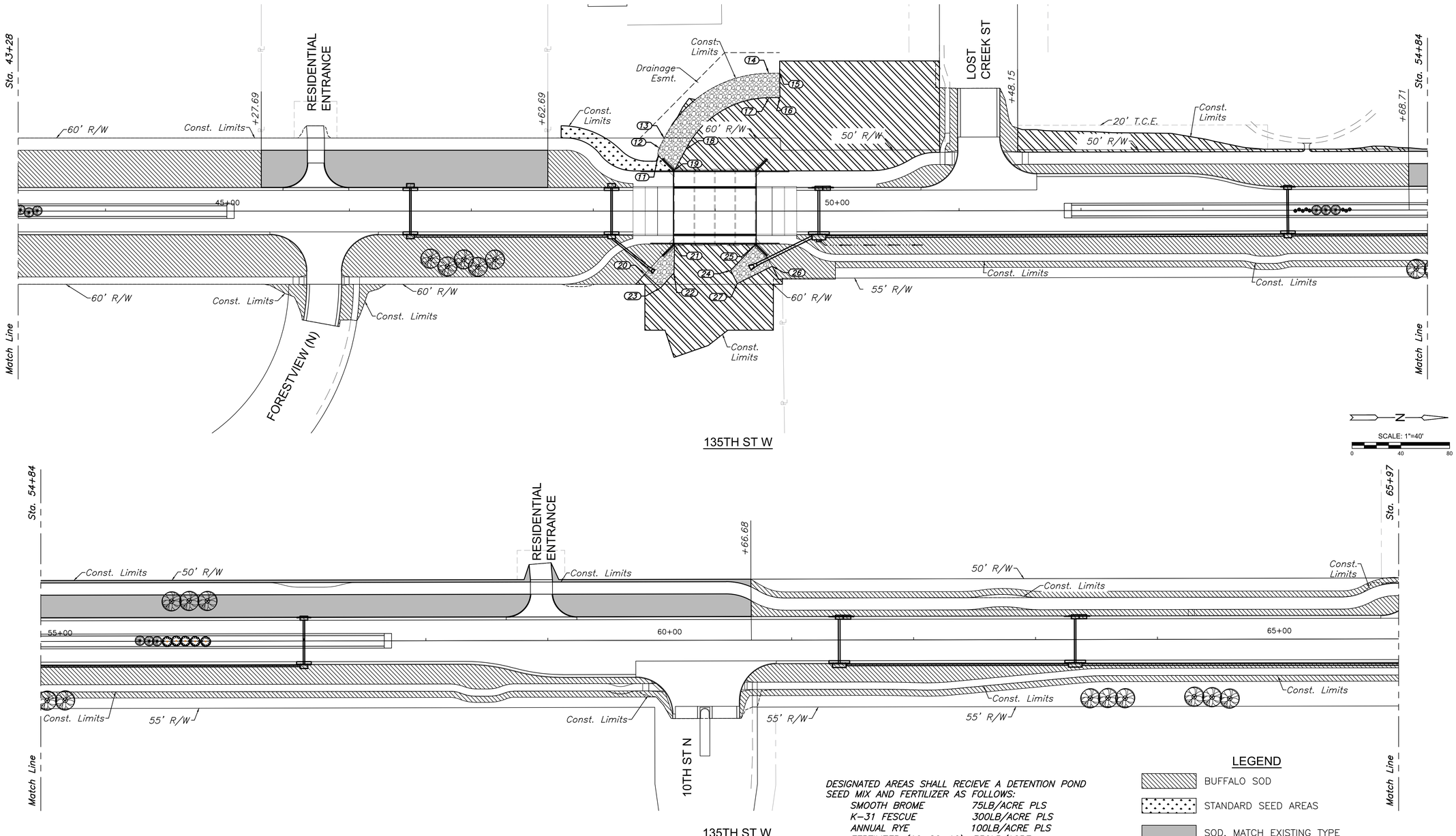
NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

SHEET NO.

96 OF 156

PLOTTED: Friday, February 20, 2026 @ 01:52PM

J:\PROJECTS\2022\2201610447_COW_135TH STREET FROM CENTRAL TO 13TH STREET\00 220447 CAD\SHTS\05 CIVIL\EROSION\EC SHEETS\ROADSIDE IMPROVEMENTS\220447 ROADSIDE IMPROVEMENT.DWG



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STREET IMPROVEMENTS FOR

135TH STREET WEST

FROM CENTRAL AVE TO 13TH STREET

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ROADSIDE IMPROVEMENT PLAN

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	1"=40'

DESIGNED	DRAWN	CHECKED
JRA	ZSS	JRA

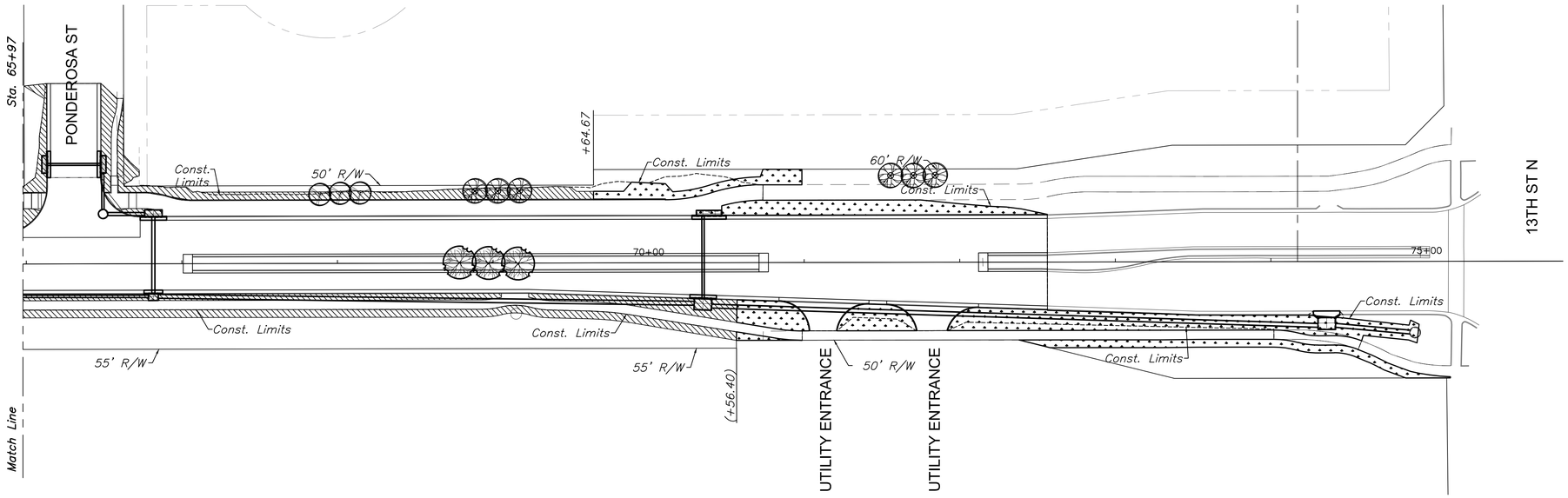
NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

SHEET NO.

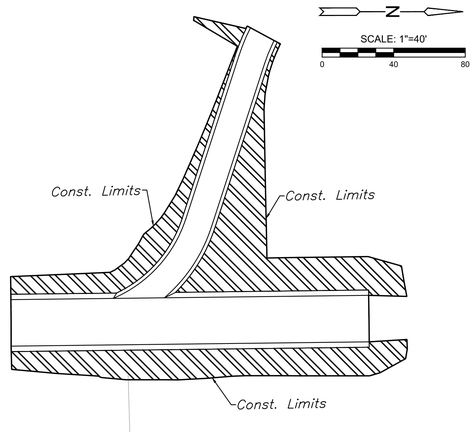
97 OF 156

Sh. No. 97

PLOTTED: Friday, February 20, 2026 @ 01:50PM



135TH ST W



COWSKIN TRIBUTARY
NO. 2

SCALE: 1"=40'
0 40 80

SCALE: 1"=40'
0 40 80

RIPRAP CONSTRUCTION POINTS			
Point #	Sta./Offset	Northing	Easting
1	36+89.34/60.0' Lt.	1689239.84	1602154.95
2	37+31.25/60.0' Lt.	1689281.74	1602154.18
3	37+18.69/49.0' Lt.	1689269.38	1602165.41
4	37+01.90/49.0' Lt.	1689252.60	1602165.72
5	37+03.71/44.0' Rt.	1689256.12	1602258.67
6	37+16.88/44.0' Rt.	1689269.29	1602258.42
7	37+29.88/56.8' Rt.	1689282.52	1602271.03
8	37+29.92/60.0' Rt.	1689282.62	1602274.18
9	36+90.68/60.0' Rt.	1689243.38	1602274.90
10	36+90.71/56.8' Rt.	1689243.36	1602271.75
11	48+53.15/45.7' Lt.	1690403.71	1602147.84
12	48+54.08/51.8' Lt.	1690404.53	1602141.67
13	48+58.11/59.8' Lt.	1690408.41	1602133.62
14	49+43.90/113.1' Lt.	1690493.20	1602078.73
15	49+52.84/113.2' Lt.	1690502.14	1602078.49
16	49+53.08/93.2' Lt.	1690502.75	1602098.49
17	49+44.07/93.1' Lt.	1690493.74	1602098.73
18	48+75.96/50.8' Lt.	1690426.43	1602142.30
19	48+66.57/33.7' Lt.	1690417.34	1602159.60
20	48+42.33/51.6' Rt.	1690394.68	1602245.29
21	48+66.57/27.7' Rt.	1690418.47	1602220.91
22	48+66.19/50.6' Rt.	1690418.52	1602243.81
23	48+55.16/63.0' Rt.	1690407.72	1602256.44
24	49+12.72/48.6' Rt.	1690465.01	1602241.03
25	49+32.82/27.7' Rt.	1690484.71	1602219.69
26	49+46.77/45.2' Rt.	1690498.99	1602236.96
27	49+18.04/59.4' Rt.	1690470.52	1602251.68

NOTE: NO ADDITIONAL PAYMENT WILL BE MADE FOR THE INSTALLATION OF NEW RIPRAP. WORK IS SUBSIDIARY TO "RIPRAP, LIGHT STONE, REMOVED AND REPLACED."

DESIGNATED AREAS SHALL RECIEVE A DETENTION POND SEED MIX AND FERTILIZER AS FOLLOWS:

SMOOTH BROME	*75LB/ACRE PLS*
K-31 FESCUE	*300LB/ACRE PLS*
ANNUAL RYE	*100LB/ACRE PLS*
FERTILIZER (10-20-10)	*350LB/ACRE*

ROADSIDE IMPROVEMENTS SUMMARY (FOR INFORMATION ONLY)

PROJECT PORTION	*AREA (S.Y.)*
PROJECT TOTAL STANDARD SEED	*5,946.6*
PROJECT TOTAL BUFFALO SOD	*13,903.3*
PROJECT TOTAL SOD (NON BUFFALO)	*2,039.3*
PROJECT TOTAL STREAM SEED MIX	*4,562.2*
PROJECT TOTAL TURF REINFORCEMENT MAT	*4,562.2*
PROJECT TOTAL RIPRAP, LIGHT STONE, REMOVED & REPLACED	*467.6*

LEGEND

- BUFFALO SOD
- STANDARD SEED AREAS
- SOD, MATCH EXISTING TYPE
- RIPRAP
- STREAM CHANNEL SEED AREAS AND TURF REINFORCEMENT MAT. SEE SH. NO. 100

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STREET IMPROVEMENTS FOR

135TH STREET WEST

FROM CENTRAL AVE TO 13TH STREET

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ROADSIDE IMPROVEMENT PLAN

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	1"=40'

DESIGNED	DRAWN	CHECKED
JRA	ZSS	JRA

NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

SHEET NO.

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Sh. No. 98

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PLOTTED: Friday, February 20, 2026 @ 01:54PM
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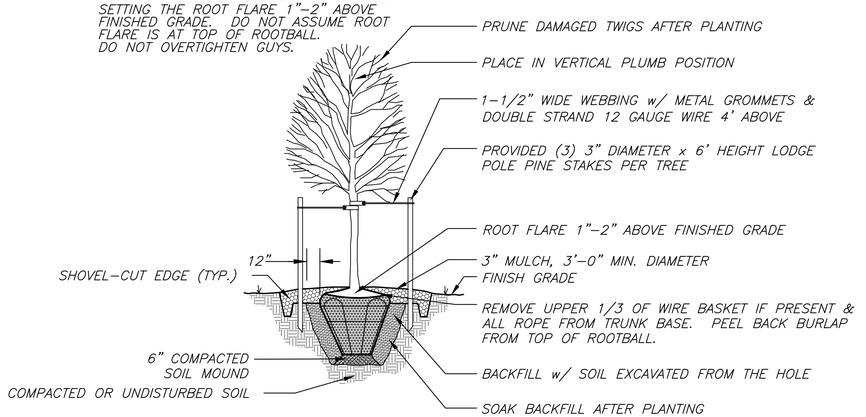
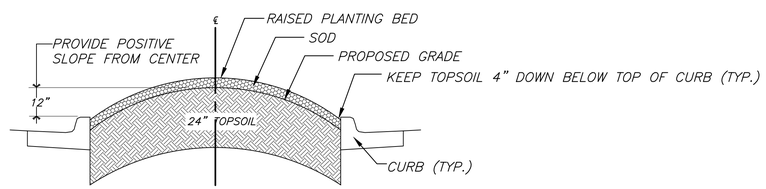
NOTES:
BALL OF PLANT TO BE KEPT MOIST AND PROTECTED FROM DAMAGE PRIOR TO PLANTING. ADD ROOT STIMULATOR TO SURFACE IMMEDIATELY AFTER PLANTING AS PER THE MANUFACTURER'S RECOMMENDATIONS. PLANTING DEPTH SHALL BE DETERMINED BY SETTING THE ROOT FLARE 1"–2" ABOVE FINISHED GRADE. DO NOT ASSUME ROOT FLARE IS AT TOP OF ROOTBALL. DO NOT OVERTIGHTEN GUYS.



TREE PLANTING DETAIL
NOT TO SCALE

NOTES:
IMPORTED TOPSOIL SHALL BE A SANDY LOAM. IT SHALL BE CERTIFIED THAT IT IS FREE OF BERMUDA GRASS.



RAISED MEDIAN PLANTING BED DIAGRAM
NOT TO SCALE

PLANT SCHEDULE						
SYMBOL	CODE	QTY	COMMON NAME	BOTANICAL NAME	SIZE	REMARKS
DECIDUOUS TREES						
	CHI	23	CHINESE PISTACHE	PISTACIA CHINENSIS	15` - 20` MIN. HT. / B&B	MALE TREES ONLY
	SWA	6	SWAMP WHITE OAK	QUERCUS BICOLOR	3" CAL. / B&B	
ORNAMENTAL TREES						
	SHA	9	SHANTUNG MAPLE	ACER TRUNCATUM	2" CAL. / B&B	
	TAT	44	'HOT WINGS' TATARIAN MAPLE	ACER TATARICUM 'GARANN'	10` MIN. HT. / B&B	

TREE PLANTING NOTES:
1. ALL PLANTS SHALL CONFORM TO ANSI Z60.1 FOR SIZE AND QUALITY STANDARDS.

2. LABEL EACH PLANT WITH A SECURELY ATTACHED, WATERPROOF TAG BEARING LEGIBLE DESIGNATION OF BOTH BOTANICAL AND COMMON NAME. DO NOT REMOVE UNTIL AFTER PROVISIONAL ACCEPTANCE.

3. SUBSTITUTION OF PLANT SPECIES FOR THOSE LISTED IN THE PLANT LIST IS NOT PERMISSIBLE. ONLY SIZE WILL BE CONSIDERED.

4. ALL PLANTS MUST BE HEALTHY, VIGOROUS MATERIAL; FREE OF PEST AND DISEASES. ALL PLANTS MUST BE CONTAINER–GROWN OR BALLED AND BURLAPPED AS INDICATED IN THE PLANT LIST. ALL TREES SHALL BE STRAIGHT–TRUNKED, OR OF TYPICAL FORM TO THE SPECIES, FULL–HEADED AND MEET THE REQUIREMENTS AS SPECIFIED. ALL TREES MUST BE STAKED.

5. STAKES AND GUYING SHALL BE REMOVED AT THE END OF ONE FULL GROWING SEASON.

6. ALL LANDSCAPE PLANTS SHALL BE GUARANTEED FOR ONE YEAR FOLLOWING INITIAL ACCEPTANCE. DEAD OR DEFICIENT PLANTINGS SHALL BE ACCEPTABLY REPLACED, IN PROPER PLANTING SEASON, ONE TIME AT NO COST TO THE OWNER. SOD AND SEED AREAS MAY BE FINAL ACCEPTED AT TIME OF COMPLETION OF ESTABLISHMENT, (SEE NOTES ABOVE), WITH NO FURTHER GUARANTEE REQUIRED.

7. THE LOCATIONS OF TREES TO BE PLANTED ARE APPROXIMATE. CONTRACTOR SHALL ENSURE TREES ARE NOT PLANTED OVER UTILITIES OR OTHER BURIED OBSTRUCTIONS.

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STREET IMPROVEMENTS FOR
135TH STREET WEST
FROM CENTRAL AVE TO 13TH STREET

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PLANTING DETAILS AND SCHEDULE

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	N.T.S.

DESIGNED	DRAWN	CHECKED
JRA	ZSS	JRA

NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

SHEET NO.
99 OF 156

PLOTTED: Friday, February 20, 2026 @ 01:54PM

INSTALLATION DETAILS ON SLOPES

Material shall be laid loosely in the direction of the slope, beginning at the bottom of the slope. In order for the blanket to be in contact with the soil, lay the blanket loosely, avoiding stretching.

1. Install product in accordance with the manufacturers recommendations.

2. ANCHOR SLOTS: The top of the blanket should be "slotted in" at the top of the slope and anchored in place with anchors 6 inches apart. The slots should be 6 inches wide x 6 inches deep with the blanket anchored in the bottom of the slot, then backfilled, tamped and seeded.

3. LONGITUDINAL SEAMS: The edges of the blanket should overlap each other a minimum of 6 inches, with anchors catching the edges of both blankets.

4. SPLICE SEAM: When splices are necessary, overlap end a minimum of 6 inches in direction of water flow. Stagger splice seams.

5. CHECK SLOTS: Establish check slots transverse to slope every 30 feet. The slots should be 6 inches wide x 6 inches deep. The blanket shall be cut to a length 6 inches beyond the slot. The top of the downslope blanket shall be slotted in, anchored and buried, tamped and seeded similar to the top anchor slot. The upslope blanket shall then cover the slot and be anchored as shown.

6. TERMINAL FOLD: The bottom edge of the blanket shall be turned under a minimum of 4 inches, then anchored in place with anchors 9 inches apart.

7. TYPICAL ANCHORS: Anchor design shall be as recommended by the manufacturer.

GENERAL NOTES

1. *This sheet applies to the installation of erosion control blankets and turf reinforcement mats.*
2. *As noted on sheet 2, erosion control blankets shall be installed on all seeded surfaces. Surfaces to receive stream channel seed mix shall receive turf reinforcement mat in place of erosion control mat.*
3. *All mat shall be installed in accordance with the details on this sheet and with the manufacturer's instructions. If contradictions exist between the two are Manufacturer's instructions will take precedence over the information on this sheet.*
4. *Turf reinforcement mat shall be 100% biodegradable (not just photodegradable), shall be rated for a minimum of 2 lb. per sq. ft. shear stress with up to a 24 month protection life. Suitable mats include North American Green model BioNet C125BN, American Excelsior model AEC Premier Straw/Coconut FibreNet, and Western Excelsior model Excel CS–3 All Natural.*
5. *All material and installation costs for erosion control mat is subsidiary to "Seeding". All material and installation costs for turf reinforcement mat shall be paid for as "Turf Reinforcement Mat". Seeding and surface preparation below turf reinforcement mat shall be subsidiary to "Seeding".*

INSTALLATION DETAILS IN CHANNELS

Material shall be laid loosely in the direction of the flow, with the first course at the centerline of channel, where applicable. In order for the mat to be in contact with the soil, lay the mat loosely, avoiding stretching.

1. Install product in accordance with manufacturers recommendations.

2. ANCHOR FOLD: The top of the mat should be folded under, buried and secured with wood or other approved anchors placed 6 inches apart. The top edge of the mat should be buried in a slot, 6 inches x 6 inches deep; anchored in the bottom of the slot, backfilled and the mat folded over the top as shown in detail.

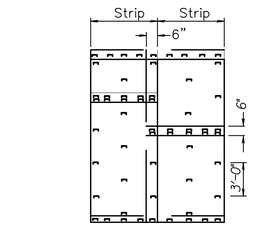
3. LONGITUDINAL SEAMS: The adjacent edges of the mat should overlap a minimum of 6 inches, with anchors catching the edges of both mats.

4. SPLICE SEAM: When splices are necessary, overlap end a minimum of 12 inches in direction of water flow. Stagger splice seams.

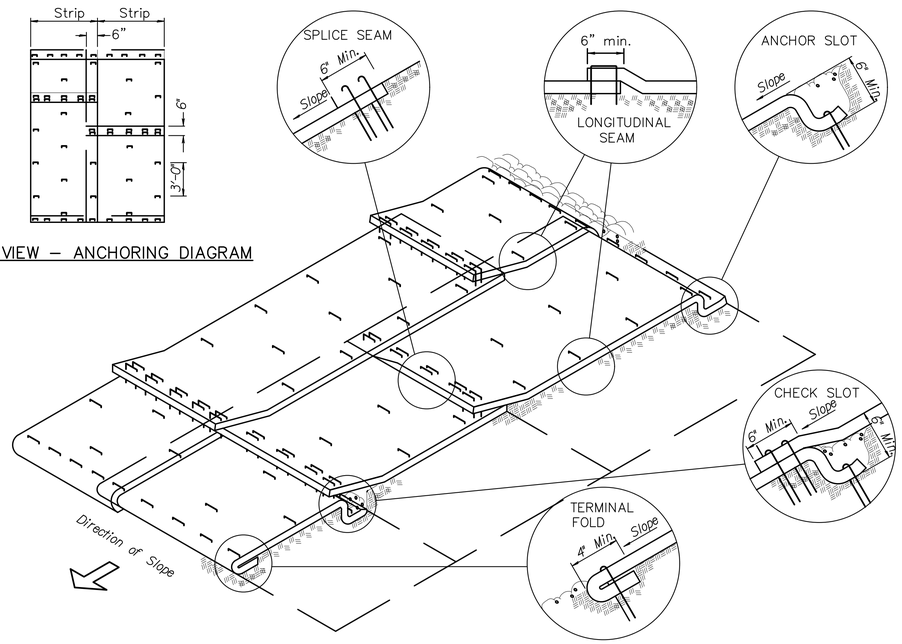
5. CHECK SLOTS: Establish check slots transverse to slope every 30 feet. The slots should be 6 inches wide x 6 inches deep. T he mat shall be cut to a length 12 inches beyond the slot. The top of the downstream mat shall be slotted in, secured and buried similar to the edge anchor fold. The upstream mat shall then cover the slot and be anchored as shown.

6. EDGE ANCHOR: Lay outside edge of mat into trench at top of side slope. Anchor at 3 foot intervals along trench.

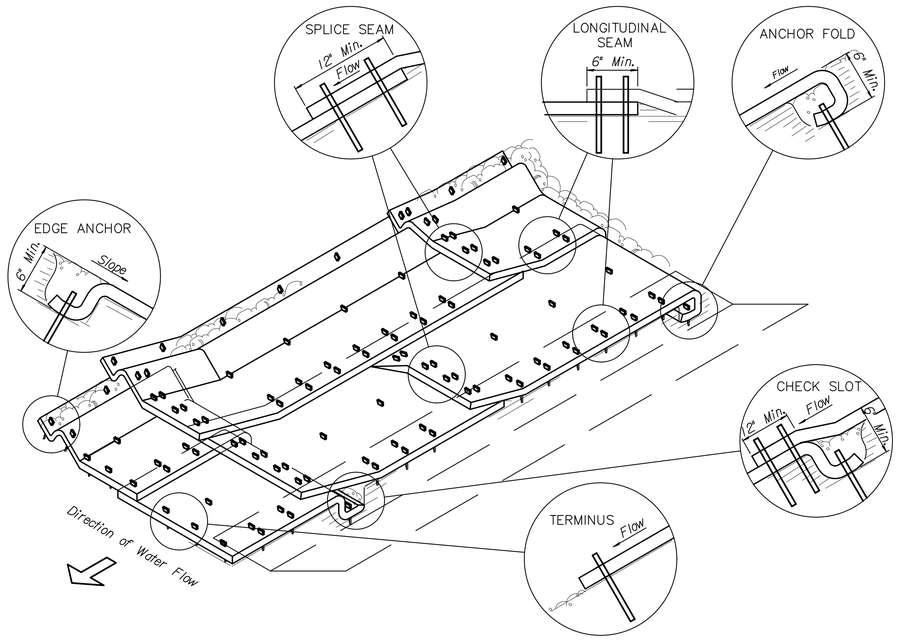
7. TERMINUS: The bottom edge of the mat shall be anchored in place with anchors spread at 9 inch intervals along the terminating edge.



PLAN VIEW – ANCHORING DIAGRAM



INSTALLATION ON SLOPES



INSTALLATION IN CHANNELS

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STREET IMPROVEMENTS FOR

135TH STREET WEST

FROM CENTRAL AVE TO 13TH STREET

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TURF REINFORCEMENT MAT DETAILS

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	NTS

DESIGNED	DRAWN	CHECKED
JRA	RAM	JRA

NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

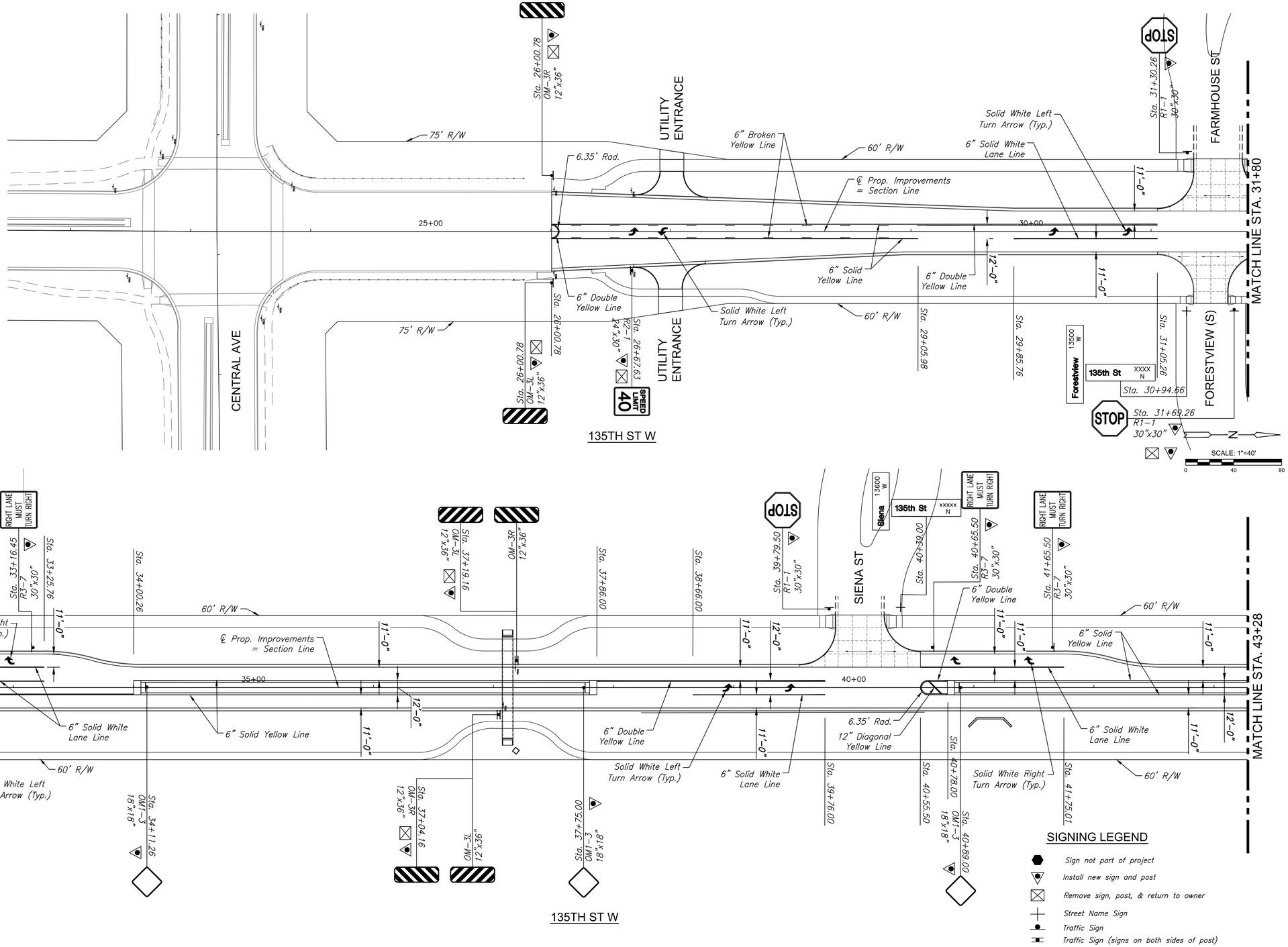
SHEET NO.

100 OF 156

Sh. No. 100

J:\PROJECTS\2022\2201010447_COW_135TH STREET FROM CENTRAL TO 13TH STREET\00 220447 CAD\SHTS\05 CIVIL\EROSION\EC SHEETS\220447 FLEXIBLE DITCH AND SLOPE PROTECTION.DWG

PLOTTED: Friday, February 20, 2026 @ 03:21PM



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STREET IMPROVEMENTS FOR

135TH STREET WEST

FROM CENTRAL AVE TO 13TH STREET

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PAVEMENT MARKING AND SIGNING PLAN

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	1"=40'

DESIGNED	DRAWN	CHECKED
JRA	RAM	JRA

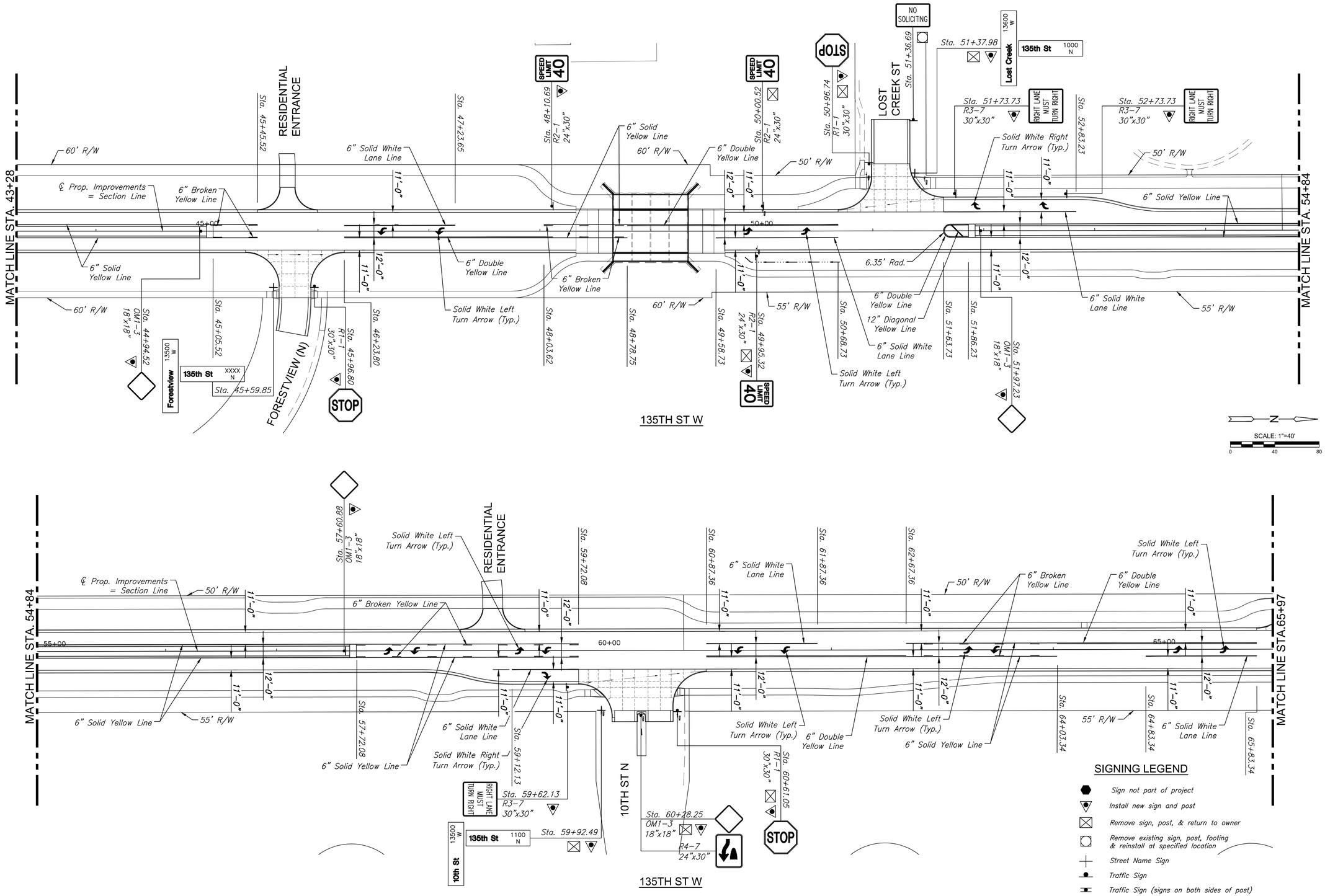
NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

SHEET NO.

101 OF 156

Sh. No. 101

PLOTTED: Friday, February 20, 2026 @ 03:21PM



MKEC
Wichita, KS • 316-684-9600

STREET IMPROVEMENTS FOR

135TH STREET WEST

FROM CENTRAL AVE TO 13TH STREET

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SHEET NO.

102 OF 156

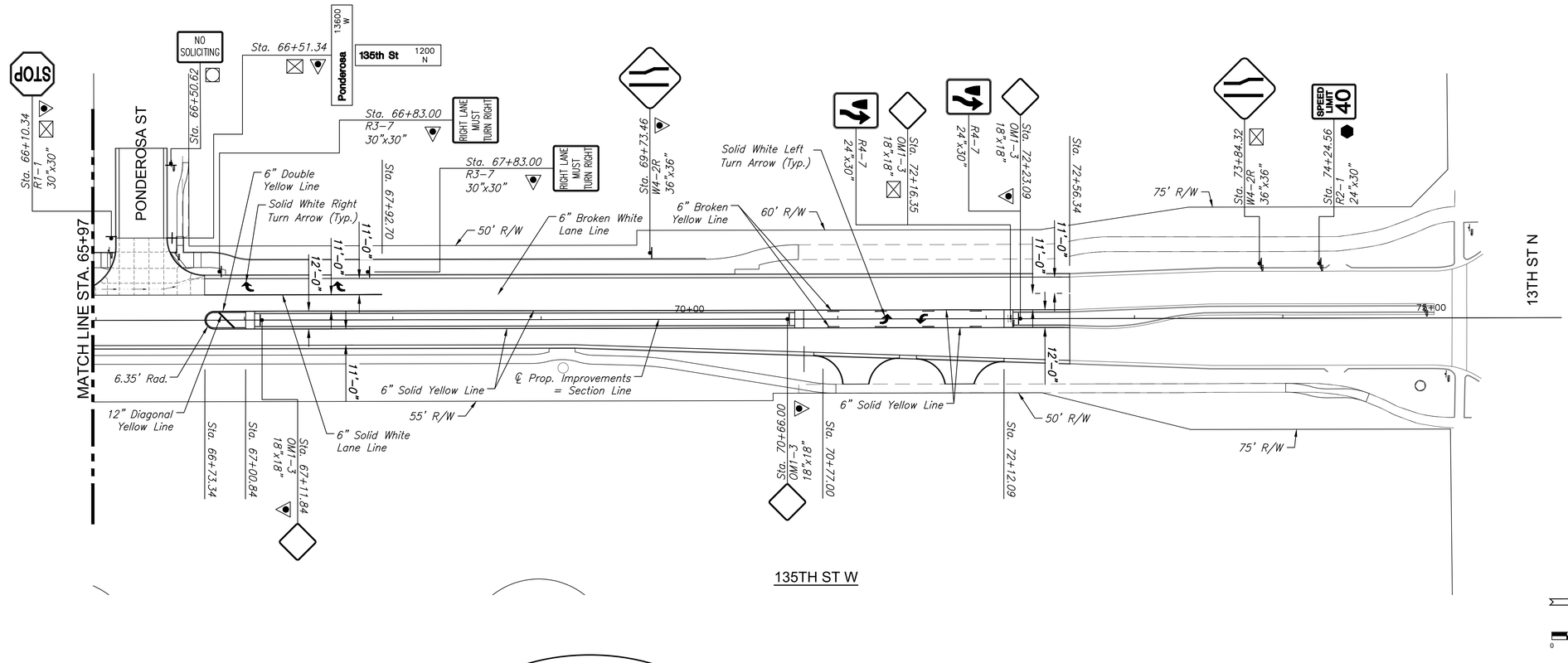
Sh. No. 102

SIGNING LEGEND

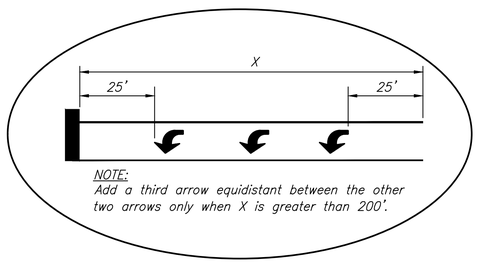
- Sign not part of project
- Install new sign and post
- Remove sign, post, & return to owner
- Remove existing sign, post, footing & reinstall at specified location
- Street Name Sign
- Traffic Sign
- Traffic Sign (signs on both sides of post)

J:\PROJECTS\0222\20101\0447_CON_135TH STREET FROM CENTRAL TO 13TH STREET\00 220447 CAD\SHTS\05 CIVIL\PAV\220447-05-5600.DWG

PLOTTED: Friday, February 20, 2026 @ 03:21PM

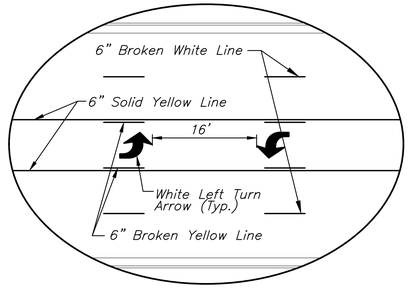


SCALE: 1"=40'
0 40 80

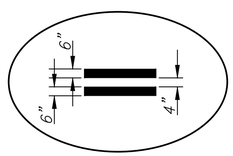


NOTE:
Add a third arrow equidistant between the other two arrows only when X is greater than 200'.

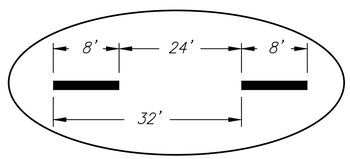
ARROW SPACING DETAIL



TWO WAY LEFT TURN DETAIL



TYPICAL SPACING FOR 6" DOUBLE YELLOW LINE



TYPICAL SPACING FOR 6" BROKEN WHITE LANE LINES AND 6" BROKEN YELLOW LINES

Pavement Markings – All pavement markings shall be epoxy, unless otherwise approved by the Engineer. Pavement markings shall be installed per manufacturer's recommendations and shall meet KDOT's 2015 Edition of the Standard Specification Section 806. Full traffic may not be restored (and substantial project completion achieved) until all pavement markings are in place. Should construction timing be such that restoration of traffic becomes necessary during weather prohibiting the installation of markings, the contractor shall install and maintain temporary markings until such time that permanent markings may be properly installed. Except for the material requirement, temporary pavement markings shall be placed equivalent, in every manner (i.e. dimension, frequency, spacing, etc.), to the permanent marking layout. The cost for temporary pavement markings will not be paid for directly, but shall be considered Subsidiary to the bid item for "Pavement Markings".

SUMMARY OF QUANTITIES (FOR INFORMATION ONLY)		
ITEMS	QUANTITY	UNIT
PAVEMENT MARKING (WHITE)(6")	1429	L.F.
PAVEMENT MARKING (YELLOW)(12")	44	L.F.
PAVEMENT MARKING (YELLOW)(6")	8905	L.F.
PAVEMENT MARKING SYMBOL (LEFT TURN)	24	EACH
PAVEMENT MARKING SYMBOL (RIGHT TURN)	11	EACH

RECAPITULATION OF QUANTITIES		
BID ITEMS	QUANTITY	UNIT
PAVEMENT MARKING	LUMP SUM	L.S.

SIGNING LEGEND

- Sign not part of project
- Install new sign and post
- Remove sign, post, & return to owner
- Remove existing sign, post, footing & reinstall at specified location
- Street Name Sign
- Traffic Sign
- Traffic Sign (signs on both sides of post)

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STREET IMPROVEMENTS FOR

135TH STREET WEST

FROM CENTRAL AVE TO 13TH STREET

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PAVEMENT MARKING AND SIGNING PLAN

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	1"=40'

DESIGNED	DRAWN	CHECKED
JRA	RAM	JRA

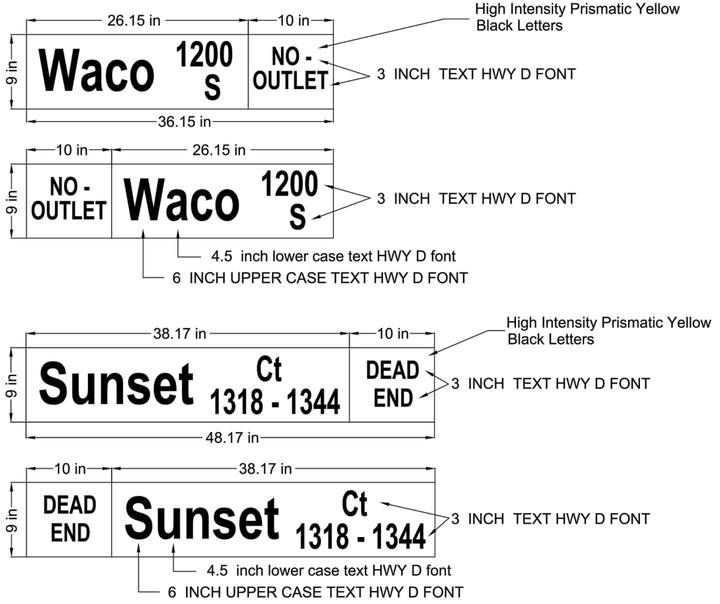
NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

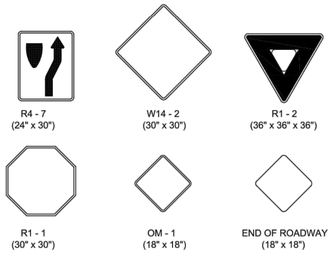
SHEET NO.

103 OF 156

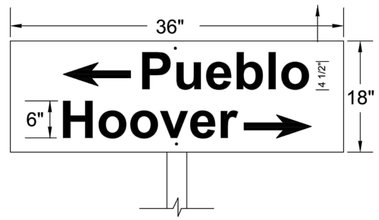
Sh. No. 103

J:\PROJECTS\2022\220101\10447_COW_135TH STREET FROM CENTRAL TO 13TH STREET\00 220447 CAD\SHTS\05 CIVIL\PAV\220447-05-5800.DWG

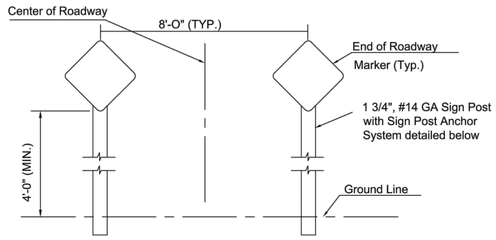




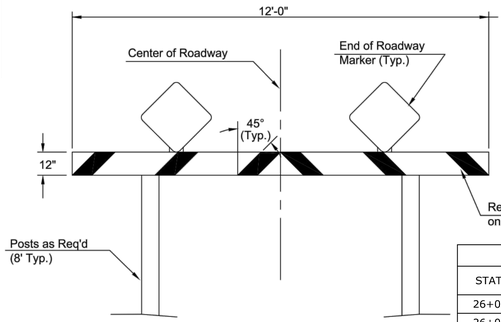
* IN NO CASE SHALL THE SPECIFICATIONS BE LESS THAN REQUIRED BY THE CURRENT MUTCD.



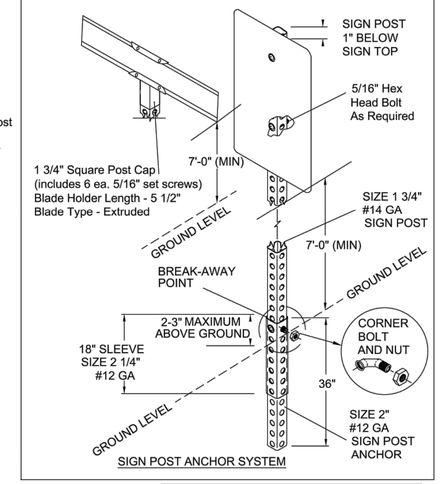
FLAT PLATE STREET NAME SIGN



TYPICAL END OF ROADWAY SIGN MOUNTING INSTALLATION



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



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

1. ***FABRICATION AND INSTALLATION OF ALL SIGNS SHALL CONFORM TO THE LATEST EDITION OF THE MUTCD.***

1a. POST ANCHORS: POSTS SHALL BE ANCHORED WITH A YIELDING BASE POST SUPPORT AS DETAILED.

2. 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.

3. 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.

4. POSTS FOR END OF ROADWAY SIGN TO BE 8' LONG AND INSTALLED A MINIMUM OF 4' FROM ROADWAY TO BOTTOM OF SIGN.

5. SIGN BLANKS FOR TRAFFIC CONTROL SIGNS: SIGN BLANKS SHALL BE FABRICATED FROM 0.080" ALUMINUM ALLOY 6063-T6 CONFORMING TO THE REQUIREMENTS OF SUBSECTION 1627 OF THE STANDARD SPECIFICATIONS.

6. SIGN BLADES FOR STREET NAME SIGNS: EXTRUDED ALUMINUM BLADES SHALL BE ALUMINUM ALLOY CONFORMING TO 6063-T6 OR 5052-H38 (ASTM SPECIFICATION B221, LATEST ISSUE). BLADES SHALL HAVE AN ALODINE OR PHOSPHATE ETCHED FINISH. BLADES SHALL HAVE SQUARE CORNERS AND NO HOLES.
MINIMUM BLADE LENGTH SHALL BE 24". MAXIMUM BLADE LENGTH SHALL BE 48". LENGTH VARIES BY INCREMENTS OF 6".
BLADES BEARING THE STREET NAMES SHALL BE FIRMLY ATTACHED TO THE MOUNTING BRACKETS USING ALLEN-TYPE CONICAL SET SCREWS. THE BLADES SHALL BE ORIENTED PARALLEL TO THE STREET.

7. MOUNTING BRACKETS FOR SIGNS: DIE-CAST ALUMINUM BRACKETS SHALL BE ALUMINUM ALLOY 360 HAVING A TENSILE STRENGTH OF 44,000 PSI. THE BRACKETS SHALL BE SMOOTHLY FINISHED FREE OF PITS, BURRS, AND FLAWS. EACH BRACKET SHALL BE TAPPED AND DRILLED FOR 5/16" ZINC-PLATED ALLEN-TYPE SET SCREWS HAVING SELF-LOCKING SAW-TOOTH ENDS.

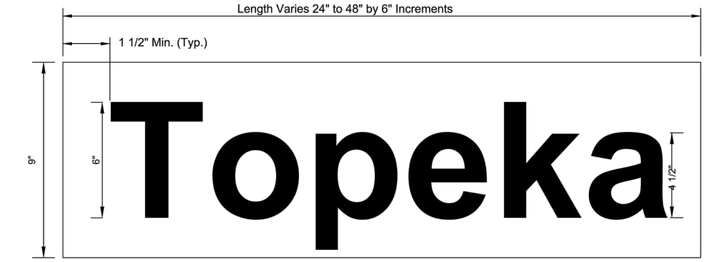
8. FASTENERS: ALL STEEL FASTENERS FOR TRAFFIC CONTROL SIGNS SHALL BE GALVANIZED AND SHALL CONFORM TO THE REQUIREMENTS OF SUBSECTION 1614 OF THE STANDARD SPECIFICATIONS.

9. REFLECTIVE SHEETING: REFLECTIVE SHEETING SHALL BE A MINIMUM OF HIGH INTENSITY PRISMATIC.

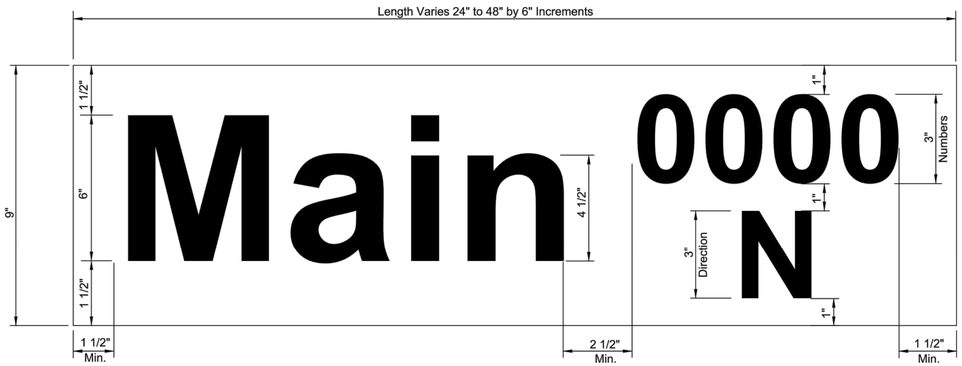
10. PROCESS INK: ALL PROCESS INK SHALL CONFORM TO THE REQUIREMENTS OF SUBSECTION 2202 OF THE STANDARD SPECIFICATIONS.

11. DETAILS - SNS: THE REFLECTIVE SHEETING FOR THE 9" STANDARD SIZE SNS IS TO BE THE HIGHWAY GREEN BACKGOUND 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.

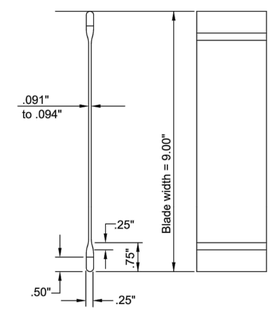
12. PERMANENT TRAFFIC CONTROL AND SNS: PERMANENT TRAFFIC CONTROL AND SNS SHALL BE MEASURED AND PAID FOR AT THE LUMP SUM PRICE FOR SIGNING. THE PAYMENT AS SET FORTH ABOVE SHALL BE CONSIDERED FULL COMPENSATION FOR ALL EXCAVATION, BACKFILLING. POSTS, ANCHORS, FASTENERS, MATERIALS, LABOR, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THIS WORK.



DETAIL A
9" STANDARD



DETAIL B
9" METRO



STREET NAME SIGN
BLADE DETAILS

SIGN ASSEMBLY TABLE

STATION	OFFSET	SIGN	QUANTITY *
26+00.78	42.8' RT.	OM-3L	1
26+00.78	46.6 'LT.	OM-3R	1
26+67.63	32.5' RT.	R2-1	1
31+30.26	65.5' LT.	R1-1	1
31+69.26	65.0' RT.	R1-1	1
32+16.45	33.6' LT.	R3-7	1
33+16.45	33.3' LT.	R3-7	1
34+11.26	0.0' C/L	OM1-3	1
37+04.16	22.5' RT.	OM-3R	1
37+04.16	22.5' RT.	OM-3L	1
37+19.16	22.5' LT.	OM-3L	1
37+19.16	22.5' LT.	OM-3R	1
37+75.00	0.0' C/L	OM1-3	1
39+79.50	65.5' LT.	R1-1	1
40+65.50	33.5' LT.	R3-7	1
40+89.00	0.0' C/L	OM1-3	1
41+65.50	33.5' LT.	R3-7	1
44+94.52	0.0' C/L	OM1-3	1
45+96.80	49.5' RT.	R1-1	1
48+10.69	22.5' LT.	R2-1	1
49+95.32	22.5' RT.	R2-1	1
50+96.74	60.4' LT.	R1-1	1
51+73.73	33.5' LT.	R3-7	1
51+97.23	0.0' C/L	OM1-3	1
52+73.73	33.1' LT.	R3-7	1

SIGN ASSEMBLY TABLE CONT.

STATION	OFFSET	SIGN	QUANTITY *
57+60.88	0.0' C/L	OM1-3	1
59+62.13	33' RT.	R3-7	1
60+28.25	58.6' RT.	OM1-3	1
60+28.25	58.6' RT.	R4-7	1
60+61.05	54.1' RT.	R1-1	1
66+10.34	55.3' LT.	R1-1	1
66+83.00	32.8' LT.	R3-7	1
67+11.84	0.0' C/L	OM1-3	1
67+83.00	32.3' LT.	R3-7	1
69+73.46	44.8' LT.	W4-2R	1
70+66.00	0.0' C/L	OM1-3	1
72+23.09	0.0' C/L	OM1-3	1
72+23.09	0.0' C/L	R4-7	1
TOTAL			38

STREET NAME	NO. BLADES REQ'D	
	9" STD.	9" METRO
Farmhouse 13600 W		1
135th St XXXX N		1
Forestview 13500 W		1
135th St XXXX N		1
Siena 13600 W		1
135th St XXXX N		1
Forestview 13500 W		1
135th St XXXX N		1
Lost Creek 13600 W		1
135th St 1000 N		1
10th St 13500 W		1
135th St 1100 N.		1
Ponderosa 13600 W		1
135th St 1200 N		1

CITY OF WICHITA
PUBLIC WORKS & UTILITIES ENGINEERING DIVISION

SIGN DETAILS

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

PROJECT NUMBER	ORG NUMBER	DATE
472-2021-085756		9/26/2025

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

SHEET
104 OF 156
TR-112

J:\Projects\2022\220010447_COW_135th Street from Central to 13th Street\00 220447 CAD\SHTS\05 Civil\Std\Traffic\COW\TR-112 Sign Details.dwg

PLOTTED: Friday, February 20, 2026 @ 01:24PM

CONSTRUCTION SEQUENCE SUMMARY

PHASING	HANDLING OF TRAFFIC	MAJOR CONSTRUCTION ITEMS	REMARKS
1	Maintain two-directional traffic on 135th Street . Erect traffic control in accordance with Phase 1 traffic control plan for work activities adjacent to the roadway.	Construct SWS Lines 1 and 2A and portions of SWS Line 2 and 3 which do not impede traffic.	Phase 1 traffic control plan may be partially erected to correspond with the storm sewer work being constructed as approved by the engineer.
2	Close 135th Street immediately north of the south Forestview (S.) intersection and immediately south of the Siena Street intersection. Close 135th Street north of Central to all but local traffic. Close 135th Street south of 13th Street to all but local traffic. All side streets will remain open during this phase. Erect Phase 2 two-directional detour utilizing Central, 119th, and 13th Streets.	Construct remaining portions of SWS Lines 2 and 3. Construct SWS Lines 4 and 5A.	Construct temporary pavement patches over newly constructed storm sewer lines crossing 135th Street. Phase 2 duration will be limited to 2 weeks.
3	Close 135th Street immediately south of the north Forestview (N.) intersection and immediately south of the Lost Creek Street intersection. Close 135th Street north of Central to all but local traffic. Close 135th Street south of 13th Street to all but local traffic. Construct temporary asphalt pavement adjacent to Siena Street to maintain access to and from 135th Street. Close the north Forestview (N.). All other side streets will remain open during this phase. Maintain two-directional detour utilizing Central, 119th, and 13th Streets.	Construct 135th Street paving and storm sewer improvements between the north Forestview (N.) and Lost Creek Street, including the north Forestview (N.) and 135th Street intersection. Construct the 4 - 16'x5' RCB.	Phase 3 duration will be limited to 4 months. Maintain access to the private residence at station 45+72.52 at all times during this phase.
3A	Maintain Phase 3 traffic control and adjust traffic control as follows: Move the north full closure to immediately south of the residential entrance at station 58+94.88. Close Lost Creek Street.	Continue constructing Phase 3 items. Construct the 135th Street and Lost Creek Street intersection and all improvements on Lost Creek Street.	Phase 3A to run concurrently with Phase 3. No additional time will be permitted for construction beyond the 4 months allowed for Phase 3. Construct temporary pavement widening west of the existing 135th Street pavement where necessary to maintain a lane of traffic on 135th during Phase 4. Construct the temporary pavement wedge immediately north of the Lost Creek Street intersection and the temporary pavement transition north of Siena Street to bridge the elevation differential between new and extisting pavement surfaces. See sheet 107 of the plans.
4	Close 135th Street to southbound traffic and erect Phase 4 and 5 detour for southbound 135th Street traffic utilizing 13th Street, 119th Street and Central. Maintain a single lane of northbound 135th Street traffic through the construction zone in accordance with the Phase 4 traffic control plan. Close the south Forestview (S.). Maintain two-directional traffic through the 10th Street intersection. See sheet 110 of the plans. All other side streets will remain open during this phase.	Construct the east half of 135th Street improvements, including storm sewers, not yet completed. Construct the 10th Street intersection half at a time.	Phase 4 duration will be limited to 2 months. Construct a temporary asphalt wedge between new and existing pavements to maintain 10th Street traffic during this phase.
4A	Close 135th Street immediately north of the Lost Creek Street intersection and immediately south of the 13th Street intersection. Close 135th Street north of Central to all but local traffic. Close 10th Street. Close Ponderosa Street. All other side streets will remain open during this phase. Erect 2 two-directional detour utilizing Central, 119th, and 13th Streets.	Construct remaining portions of SWS Lines 7B, 8A, and 8C and remaining portions of SWS Line 7, 8, and 8B which cross 135th Street.	Construct temporary pavement patches over newly constructed storm sewer lines crossing 135th Street. Phase 4A duration will be limited to 3 days. Phase 4A may be eliminated if the Contractor submits, and the City approves, a plan to construct items to be constructed during this phase as part of other construction phases. Maintain access to the private residence at station 58+94.88 during this phase.
5	Maintain closure of 135th Street to southbound traffic and Phase 4 and 5 detour for southbound 135th Street traffic utilizing 13th Street, 119th Street and Central. Maintain a single lane of northbound 135th Street traffic through the construction zone in accordance with the Phase 5 traffic control plan. Close Ponderosa Street. All other side streets will remain open during this phase.	Construct the west half of 135th Street improvements, including storm sewers, not yet completed.	Maintain traffic access on Farmhouse Street or Siena Street at all times during this phase. Phase 5 duration will be limited to 2 months.
6	Maintain two-directonal traffic on 135th Street throughout this phase. Utilize flagger operations for temporary lane closures and localized traffic control measures as necessary.	Construct asphalt surface courses on entire project and install pavement markings. Perform permanent seeding, sodding, and roadside improvements. Construct all remaining items not yet completed in previous phases.	See sheet 118 (TE724) for lane shifts traffic control requirements. See sheet 119 (TE730) for traffic control using flaggers.

GENERAL NOTES

All signs and pavement markings conflicting with construction traffic control shall be covered or removed as directed by the Engineer.

As the various construction activities progress, certain situations may arise that will preclude adhering to the original construction sequence or which, in the opinion of the Contractor, would readily adapt themselves to a more efficient phasing operation. Should this occur, the Contractor may submit to the Engineer an alternative plan for approval.

Contractor shall maintain existing drainage system during construction and address local drainage issues as necessary during construction. Temporary drainage measures will be subsidiary to other items in the contract. Contractor shall provide for drainage in sump areas opened to traffic. Ponded stormwater in sump areas will not be allowed.

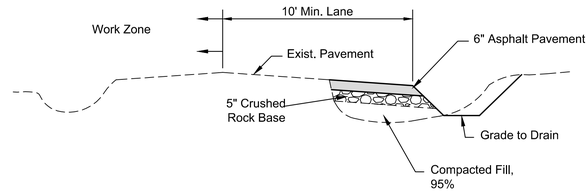
All traffic control signs and devices shall be in conformance with the latest edition of the Manual on Uniform Traffic Control Devices.

The contractor shall provide a temporary asphalt pavement wedge where necessary to bridge grade differentials between new and existing pavement. Cost of Temporary Surfacing Shall be paid for as "AC Pavement 6", Temporary (Phase Shifts)" and will be measured by the square yard. The depth of the wedge will vary throughout. The measurement will be based on the area of the base of the wedge.

In the locations indicated and where else necessary to facilitate construction and traffic through construction, the contractor shall construct temporary asphalt pavement widening in accordance with the plans. The temporary pavement section shall consist of 6" asphalt over 5" crushed rock base on compacted subgrade. Temporary pavement shall be paid for as "A.C. Pavement 6", Temporary (widening)" and "Crushed Rock Base 5" Temporary" and shall include all work to construct and eventually remove the temporary pavement. Compaction below the rock base and excavation for temporary ditches are Subsidiary to "A.C. Pavement 6", Temporary (widening)".

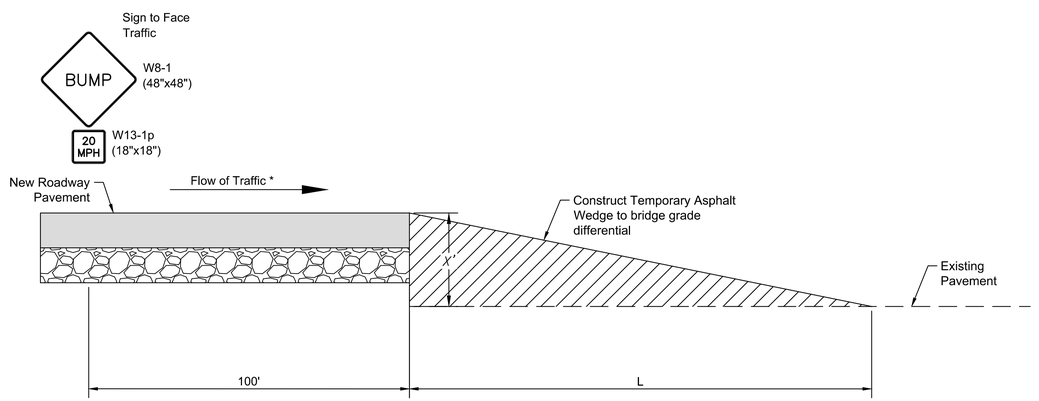
The contractor is responsible for draining sumps created by grade differentials between existing and new permanent pavements and by temporary pavements. This work shall be Subsidiary to “Traffic Control”

All temporary asphalt pavement shall be placed and compacted in 4" maximum lifts, including pavement wedges.



Paid for as "Temporary Asphalt Pavement (6")(Incl. 5" CRB)(Widening)" and measured per square yards of asphalt pavement placed. Crushed rock base, excavation, and compacted fill are Subsidiary. The removal of temporary pavement is also Subsidiary.

TEMPORARY ASPHALT WIDENING SECTION



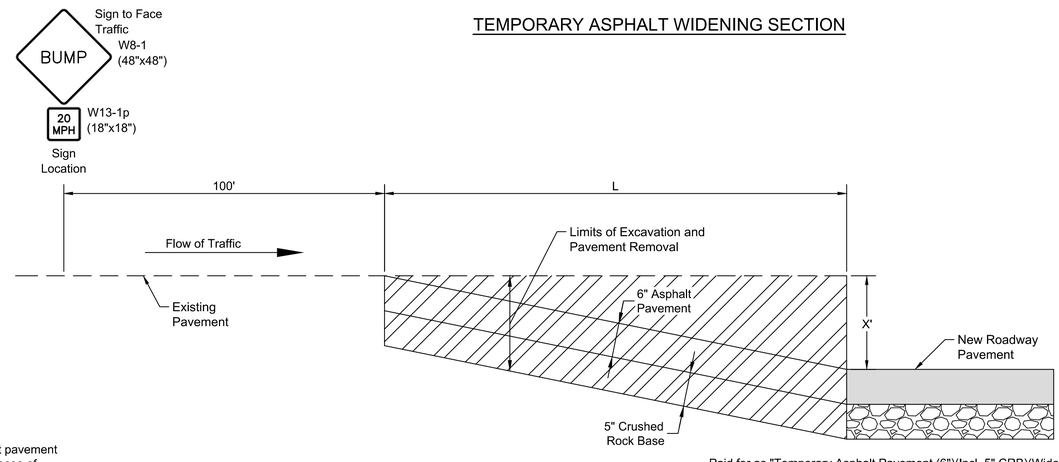
*Traffic flow in both directions during Phase 4.

SECTION VIEW

$L_{min} = X * 40'$

Paid for as "Temporary Asphalt Pavement (6")" and measured per square yards of asphalt pavement placed. Thickness will vary. All other temporary asphalt pavement constructed for the purpose of maintaining traffic through construction, unless otherwise noted, will be measured and paid for in this manner. An additional 250 square yards of temporary asphalt have been included in the contract. The removal of temporary pavement is Subsidiary.

TEMPORARY PAVEMENT WEDGE DETAIL
(WHERE PROPOSED PAVEMENT IS HIGHER THAN EXISTING)



SECTION VIEW

$L_{min} = X * 40'$

Paid for as "Temporary Asphalt Pavement (6")(Incl. 5" CRB)(Widening)" and measured per square yards of asphalt pavement placed. Crushed rock base and the removal of temporary pavement are Subsidiary to this item.

TEMPORARY PAVEMENT TRANSITION DETAIL
(WHERE PROPOSED PAVEMENT IS LOWER THAN EXISTING)

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STREET IMPROVEMENTS FOR

135TH STREET WEST

FROM CENTRAL AVE TO 13TH STREET

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CONSTRUCTION SEQUENCE SUMMARY

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	NTS

DESIGNED	DRAWN	CHECKED
JRA	RAM	JRA

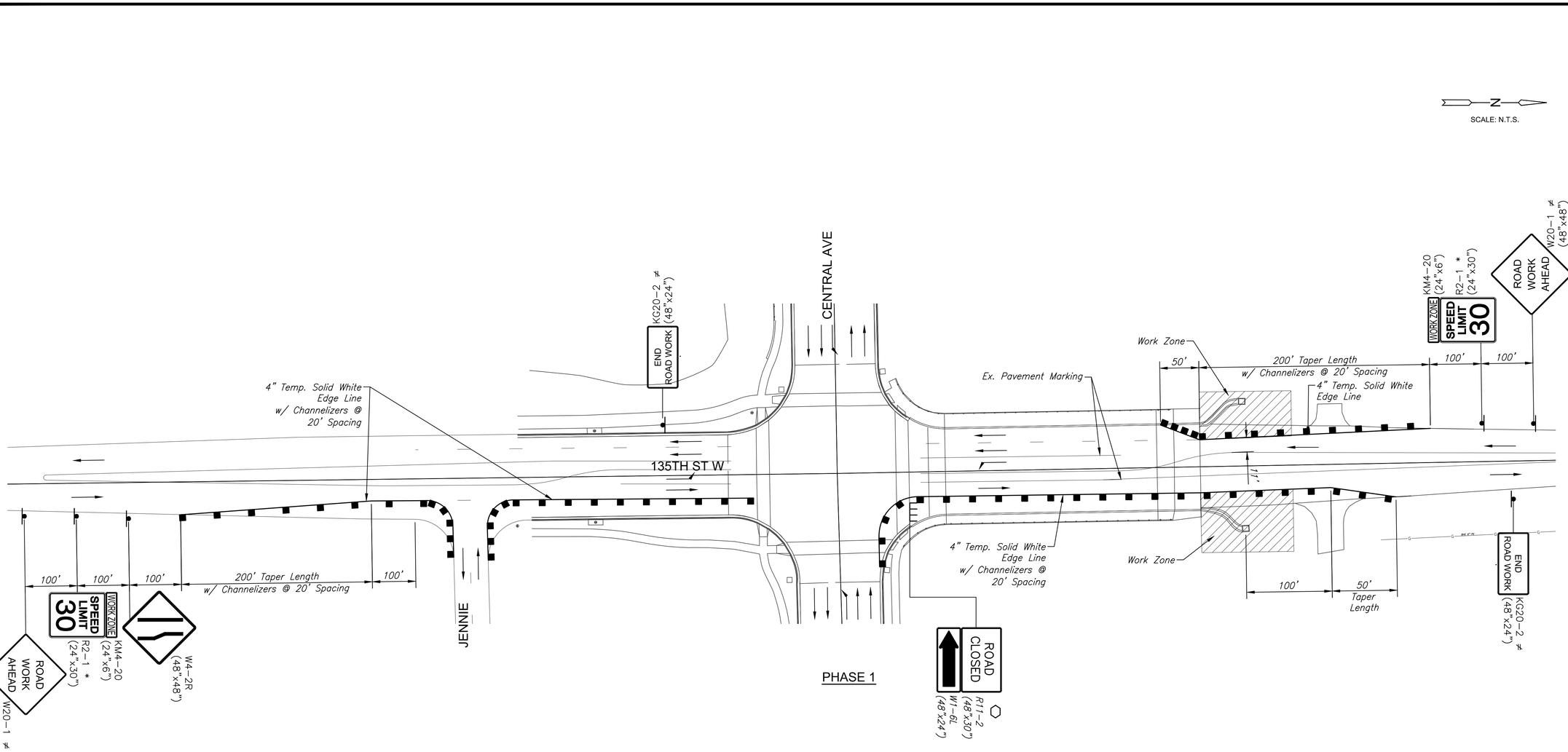
NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

SHEET NO.

105 OF 156

J:\PROJECTS\2022\2201010447_COW_135TH STREET FROM CENTRAL TO 13TH STREET\00 220447 CAD\SHTS\05 CIVIL\PAV\220447-05-5700.DWG

PLOTTED: Friday, February 20, 2026 @ 01:58PM



LEGEND

- Work Zone
- Construction Completed
- Temporary Pavement
- Traffic Flow
- E Traffic Barricades
- Sign
- Mount on Traffic Barricades

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STREET IMPROVEMENTS FOR

135TH STREET WEST

FROM CENTRAL AVE TO 13TH STREET

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TRAFFIC CONTROL PLAN - PHASE 1

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	N.T.S.

DESIGNED	DRAWN	CHECKED
JRA	WNJ	JRA

NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

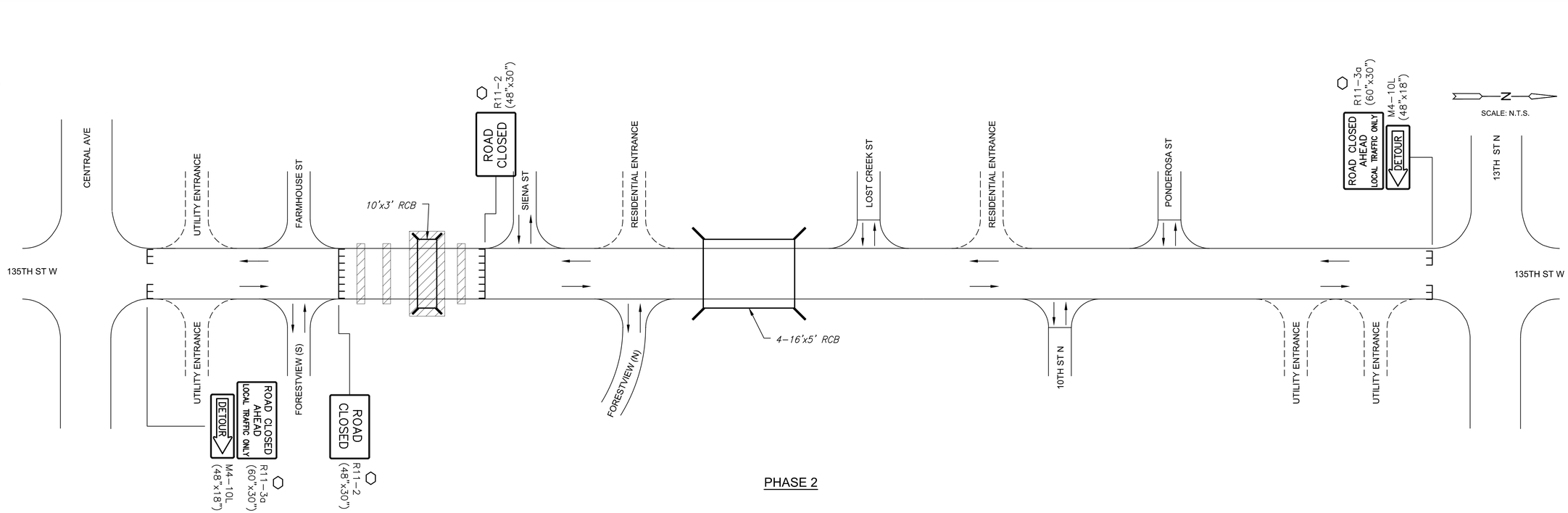
SHEET NO.

106 OF 156

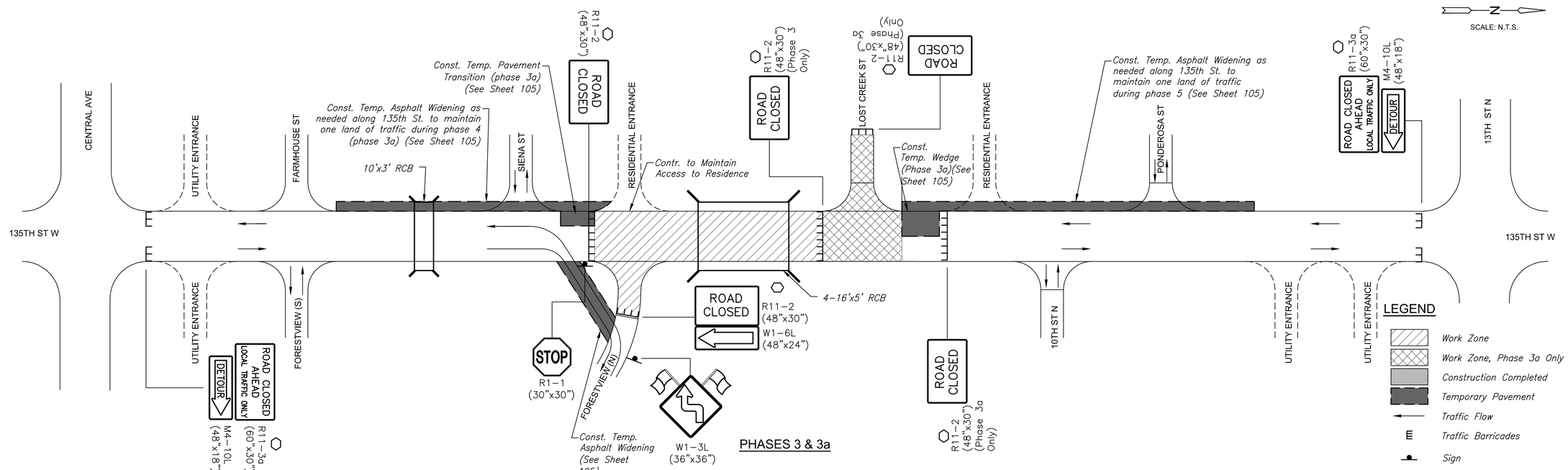
Sh. No. 106

J:\PROJECTS\0222\20101044\7_CDW_135TH STREET FROM CENTRAL TO 13TH STREET\00 220447 CAD\SHTS\05 CIVIL\TRAF\220447 - TRAFFIC CONTROL PHASING_ALT.DWG

PLOTTED: Friday, February 20, 2026 @ 01:58PM



PHASE 2



PHASES 3 & 3a

J:\PROJECTS\0222\20101047_COV_135TH STREET FROM CENTRAL TO 13TH STREET\00 220447 CAD\SHTS\05 CIVIL\TRAF\220477 - TRAFFIC CONTROL PHASING_ALT.DWG

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STREET IMPROVEMENTS FOR

135TH STREET WEST

FROM CENTRAL AVE TO 13TH STREET

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TRAFFIC CONTROL PLAN - PHASE 2, 3, AND 3A

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	N.T.S.

DESIGNED	DRAWN	CHECKED
JRA	ZSS	JRA

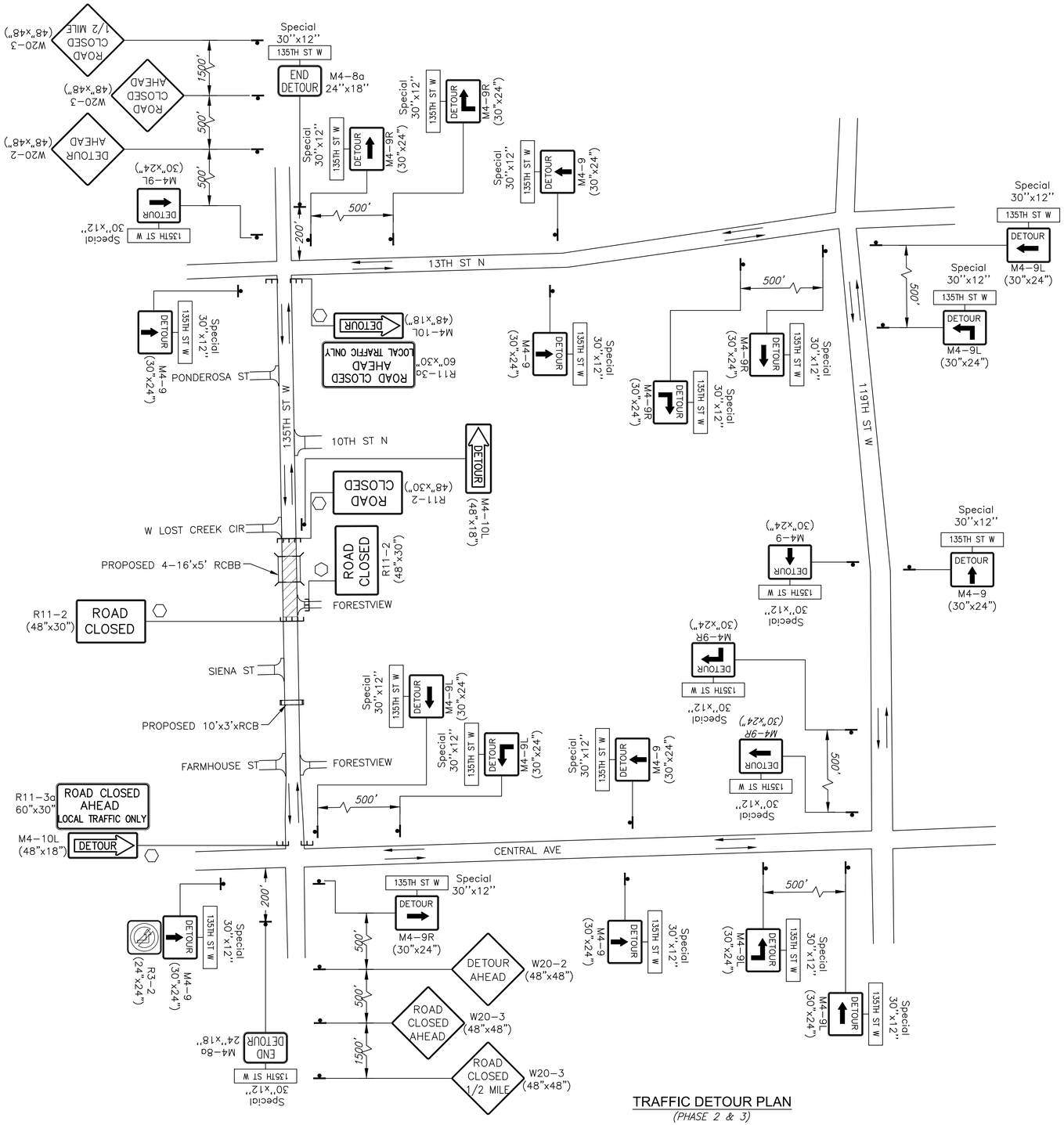
NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

SHEET NO.

107 OF 156

Sh. No. 107

PLOTTED: Friday, February 20, 2026 @ 01:58PM



TRAFFIC DETOUR PLAN
(PHASE 2 & 3)

N
NTS

LEGEND

- Work Zone
- Traffic Flow
- Traffic Barricades
- Sign
- Mount on Traffic Barricades

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STREET IMPROVEMENTS FOR

135TH STREET WEST

FROM CENTRAL AVE TO 13TH STREET

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TRAFFIC DETOUR PLAN - PHASE 2 AND 3

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	NTS

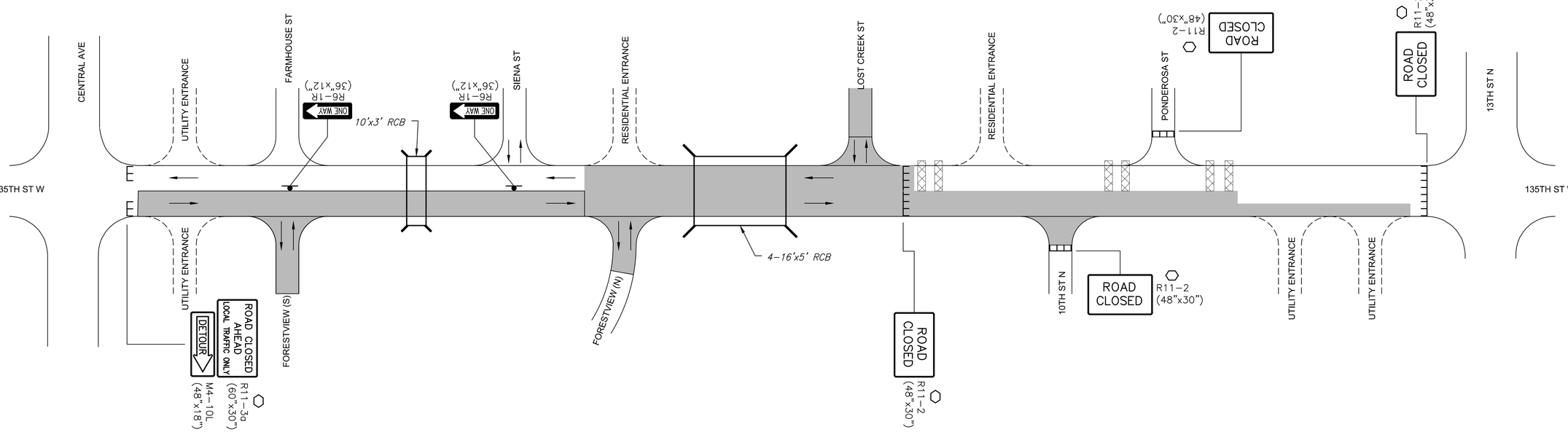
DESIGNED	DRAWN	CHECKED
JRA	RAM	

NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

SHEET NO.
108 OF 156

J:\PROJECTS\2022\220101\10447_COW_135TH STREET FROM CENTRAL TO 13TH STREET\00 220447 CAD\SHTS\05 CIVIL\TRAF\220447-05-5750.DWG

PLOTTED: Friday, February 20, 2026 @ 01:58PM



SCALE: N.T.S.

LEGEND

- Work Zone
- Construction Completed
- Traffic Flow
- Traffic Barricades
- Sign
- Mount on Traffic Barricades

PHASES 4A

J:\PROJECTS\2022\2201610447_COW_135TH STREET FROM CENTRAL TO 13TH STREET\00 220447 CAD\SHTS\05 CIVIL\TRAF\220477 - TRAFFIC CONTROL PHASING_ALT.DWG

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STREET IMPROVEMENTS FOR

135TH STREET WEST

FROM CENTRAL AVE TO 13TH STREET

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TRAFFIC CONTROL PLAN - PHASE 4A

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	N.T.S.

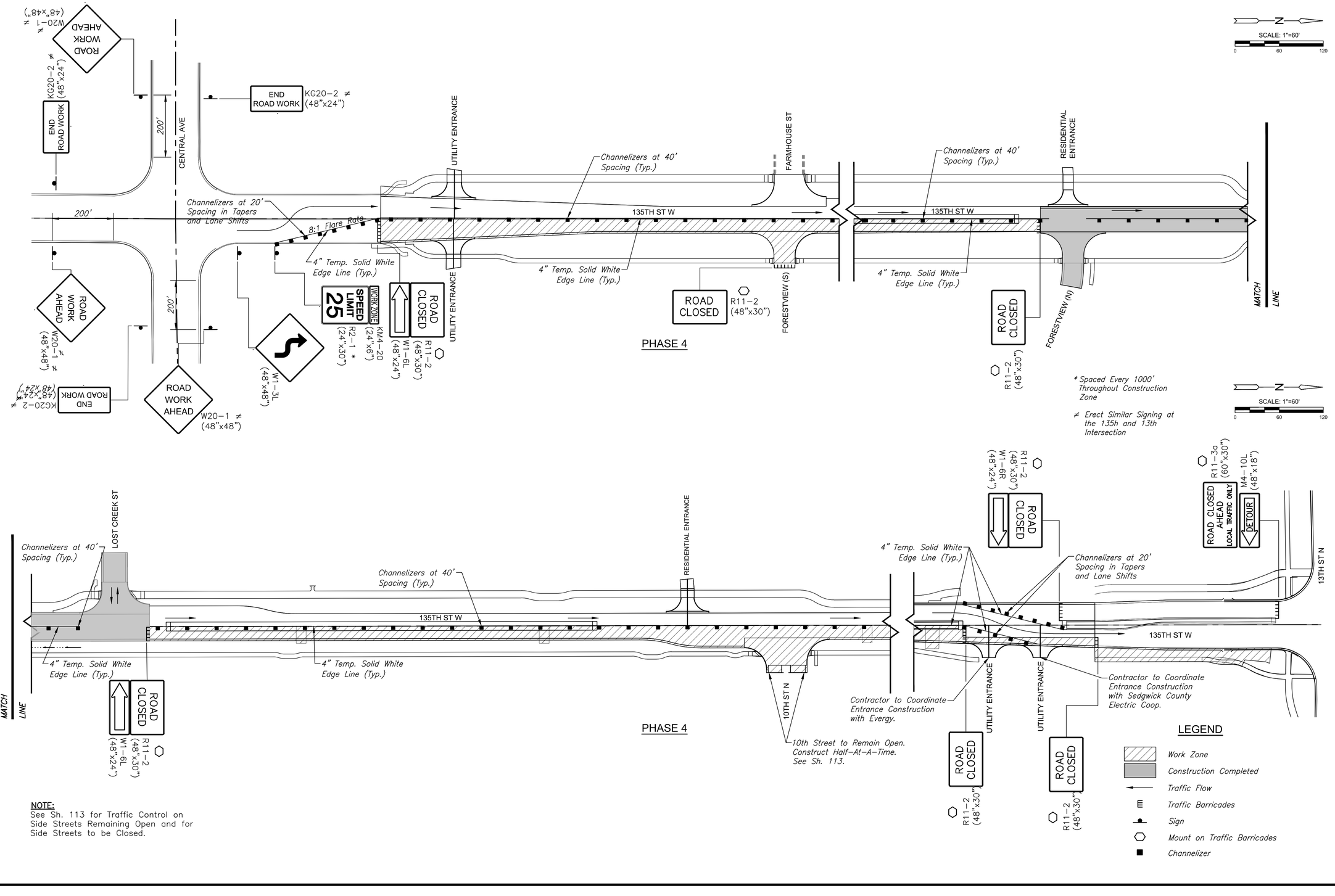
DESIGNED	DRAWN	CHECKED
JRA	ZSS	JRA

NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

SHEET NO.

109 OF 156

PLOTTED: Friday, February 20, 2026 @ 01:58PM



NOTE:
See Sh. 113 for Traffic Control on Side Streets Remaining Open and for Side Streets to be Closed.

J:\PROJECTS\2022\2201010447_COV_135TH STREET FROM CENTRAL TO 13TH STREET\00 220447 CAD\SHTS\05 CIVIL\TRAF\220477 - TRAFFIC CONTROL PHASING_ALT.DWG

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STREET IMPROVEMENTS FOR

135TH STREET WEST

FROM CENTRAL AVE TO 13TH STREET

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TRAFFIC CONTROL PLAN - PHASE 4

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	1" = 60'

DESIGNED	DRAWN	CHECKED
JRA	ZSS	JRA

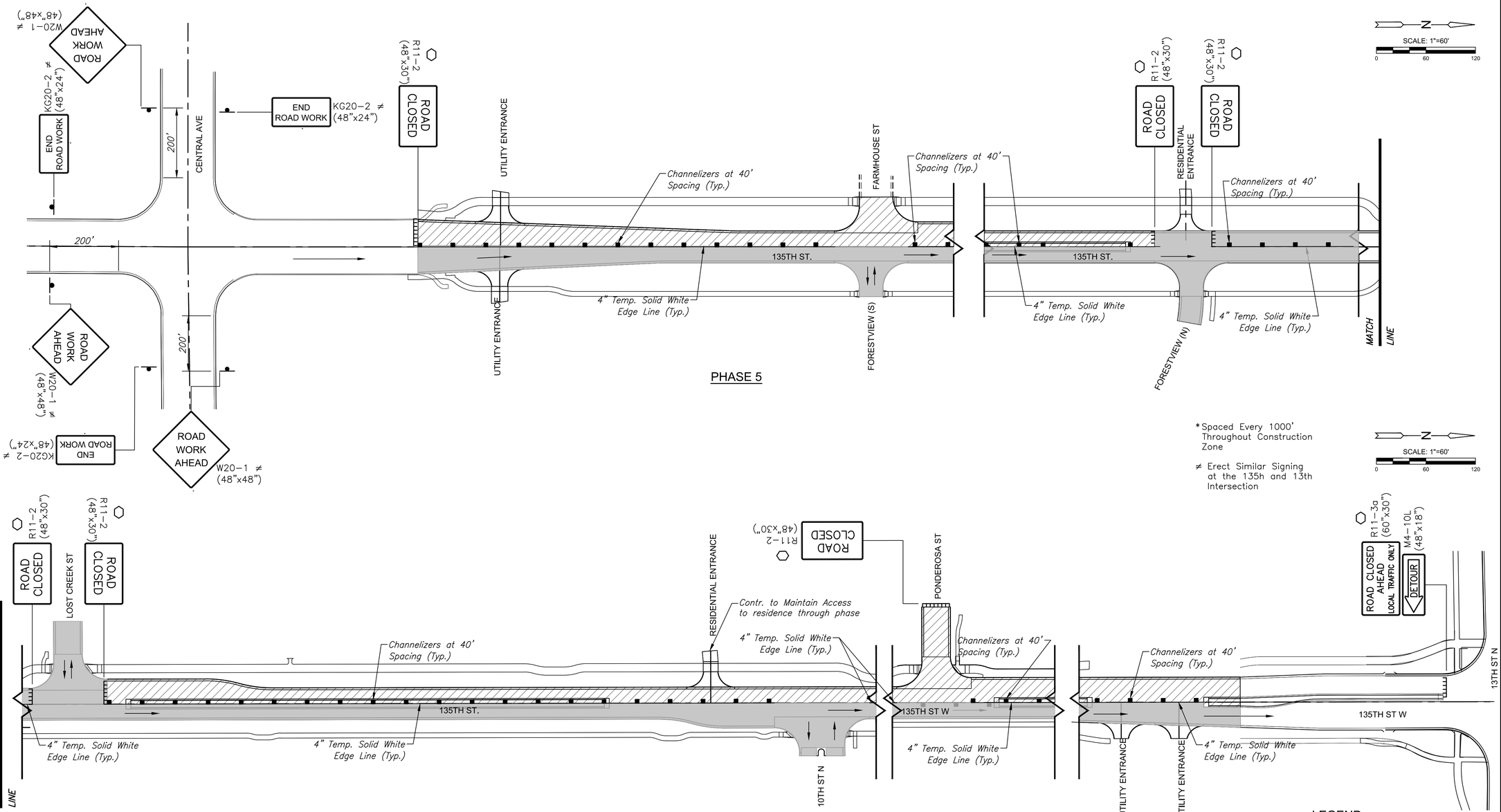
NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

SHEET NO.

110 OF 156

Sh. No. 110

PLOTTED: Friday, February 20, 2026 @ 01:58PM



NOTE:
See Sh. 113 for Traffic Control on Side Streets Remaining Open and for Side Streets to be Closed.

LEGEND

- Work Zone
- Construction Completed
- Traffic Flow
- Traffic Barricades
- Sign
- Mount on Traffic Barricades
- Channelizer

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STREET IMPROVEMENTS FOR

135TH STREET WEST

FROM CENTRAL AVE TO 13TH STREET

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TRAFFIC CONTROL PLAN - PHASE 5

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	1" = 60'

DESIGNED	DRAWN	CHECKED
JRA	ZSS	JRA

NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

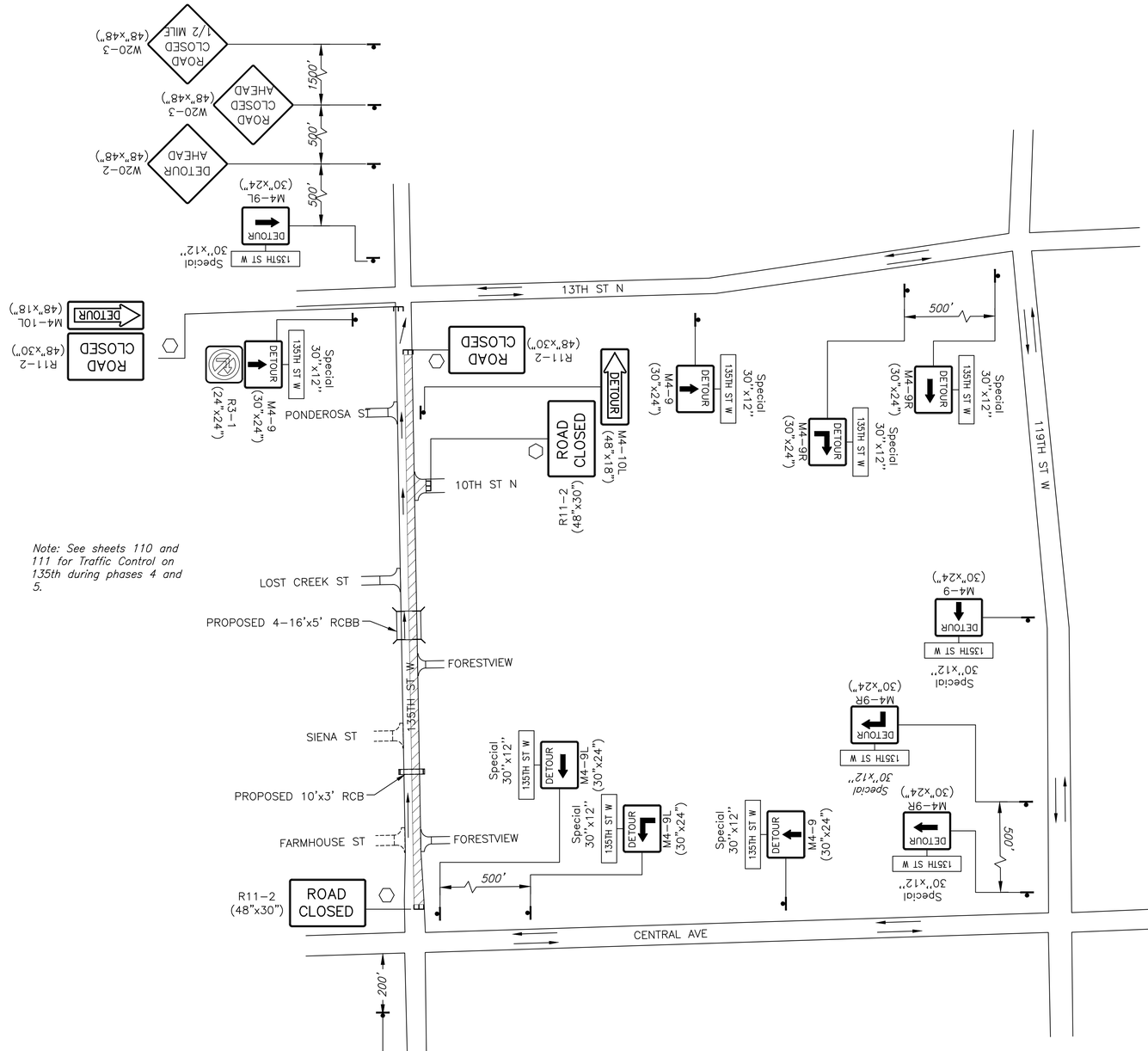
SHEET NO.

111 OF 156

Sh. No. 111

J:\PROJECTS\2022\2021010447_COV_135TH STREET FROM CENTRAL TO 13TH STREET\00 220447 CAD\SHTS\05 CIVIL\TRAF\220477 - TRAFFIC CONTROL PHASING_ALT.DWG

PLOTTED: Friday, February 20, 2026 @ 01:25PM



Note: See sheets 110 and 111 for Traffic Control on 135th during phases 4 and 5.

TRAFFIC DETOUR PLAN
(PHASE 4 & 5)

N

NTS

LEGEND

- *Work Zone*
- *Traffic Flow*
- *Traffic Barricades*
- *Sign*
- *Mount on Traffic Barricades*

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STREET IMPROVEMENTS FOR

135TH STREET WEST

FROM CENTRAL AVE TO 13TH STREET

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TRAFFIC DETOUR PLAN - PHASE 4 AND 5

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	NTS

DESIGNED	DRAWN	CHECKED
JRA	RAM	

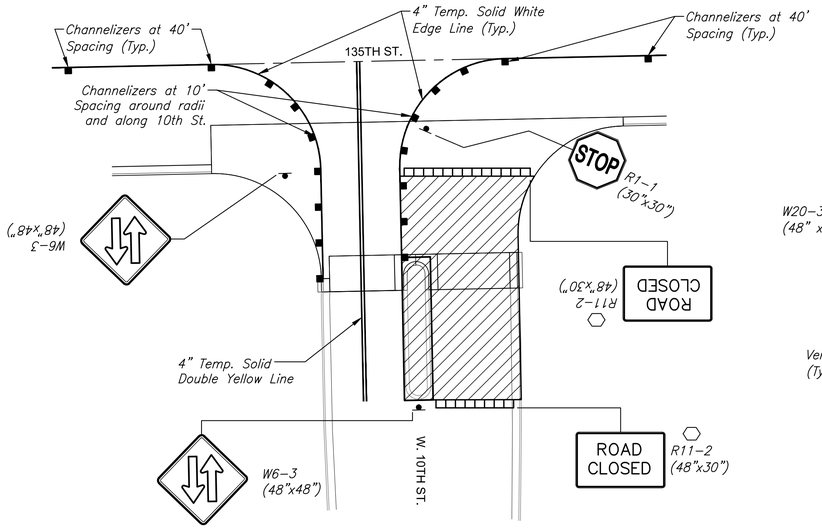
NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

SHEET NO.

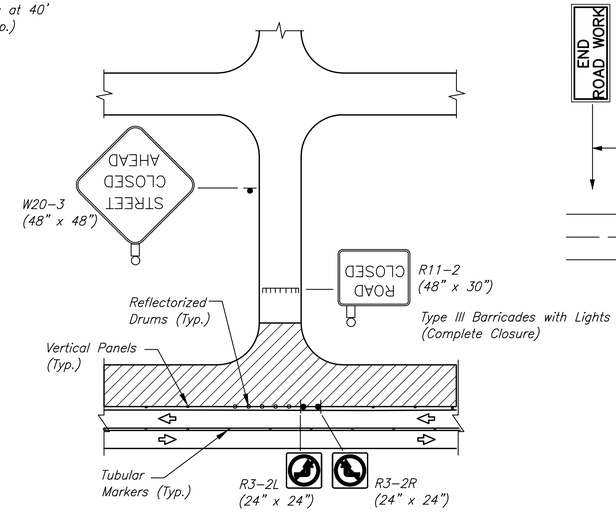
112 OF 156

J:\PROJECTS\2022\2201010447_COW_135TH STREET FROM CENTRAL TO 13TH STREET\00 220447 CAD\SHTS\05 CIVIL\TRAF\220447-05-5751.DWG

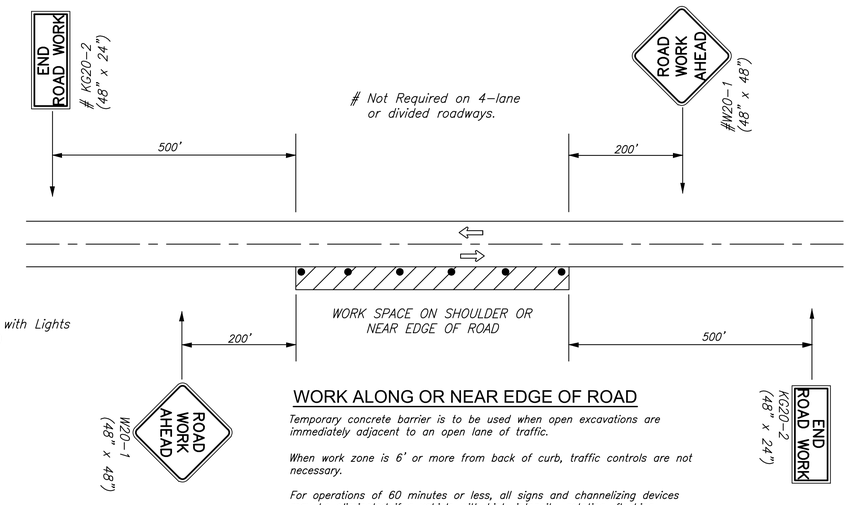
PLOTTED: Friday, February 20, 2026 @ 01:25PM



W. 10TH ST. DETAIL
(TYPICAL HALF-AT-A-TIME CONSTRUCTION)



TYPICAL CLOSED SIDE STREET

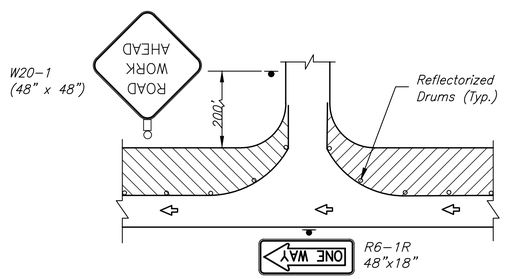


WORK ALONG OR NEAR EDGE OF ROAD

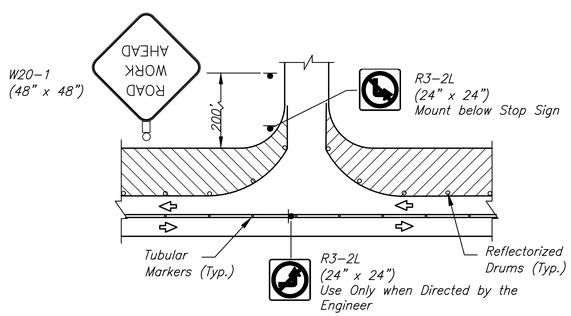
Temporary concrete barrier is to be used when open excavations are immediately adjacent to an open lane of traffic.

When work zone is 6' or more from back of curb, traffic controls are not necessary.

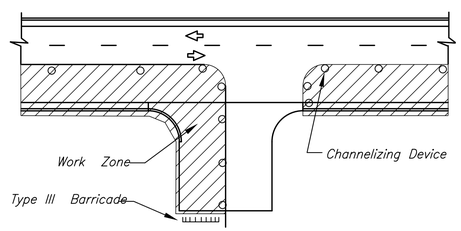
For operations of 60 minutes or less, all signs and channelizing devices may be eliminated if a vehicle with high-intensity, rotating, flashing, oscillating, or strobe lights is used.



TYPICAL ENTRANCE AND SIDE STREET
(ONE-WAY TRAFFIC ON MAIN ROAD)



TYPICAL ENTRANCE AND SIDE STREET
(TWO-WAY TRAFFIC ON MAIN ROAD)



TYPICAL DRIVEWAY ENTRANCE CONSTRUCTION

Maintain access to businesses at all times. If a single property has multiple entrances, one entrance at a time may be closed for construction.

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STREET IMPROVEMENTS FOR

135TH STREET WEST

FROM CENTRAL AVE TO 13TH STREET

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MISCELLANEOUS TRAFFIC CONTROL DETAILS

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	NTS

DESIGNED	DRAWN	CHECKED
SLF	ZSS	JRA

NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

SHEET NO.

113 OF 156

Sh. No. 113

J:\PROJECTS\0222\20161\0447_COV_135TH STREET FROM CENTRAL TO 13TH STREET\00 220447 CAD\SHTS\05 CIVIL\TRAF\220477-T.C. MISc DETAILS.DWG

PLOTTED: Friday, February 20, 2026 @ 01:25PM

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	472–2021–085756	2026	114	156

1) Design Speed: Those items delegated to temporary traffic control should be designed and installed using the posted/legal speed of the roadway prior to work starting.

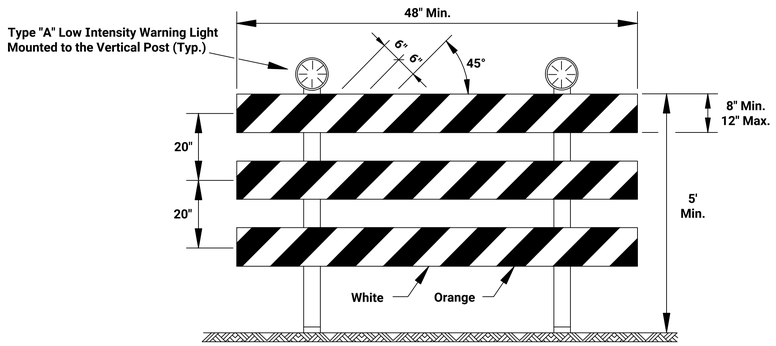
2) Minimum Lane Width: Lane widths shall be a minimum of 11' (measured between centerlines of pavement markings) or as shown on the plans, or as directed by the engineer. A lane width less than 11' may require restricted roadway width signing.

3) Consideration should be made to separate pedestrian and, if needed, bicycle movements from both work site activity and vehicular traffic. Unless a reasonable safe route that does not involve crossing the roadway can be provided, pedestrians should be appropriately directed with advance signing that encourages them to cross to the opposite side of the roadway. In urban and suburban areas with high vehicular traffic volumes, these signs should be placed at intersections (rather than midblock locations) so that pedestrians are not confronted with midblock work sites that will induce them to attempt skirting the work site or making a midblock crossing.

4) When existing pedestrian facilities are disrupted, closed, or relocated, the temporary facilities shall be detectable and include accessibility features consistent with the features present in the existing pedestrian facility.

5) When the driving surface open to traffic is milled or is a temporary surface made of loose material, or when directed by the engineer a W8-15 (Grooved Pavement) or W8-7 (Loose Gravel) sign shall be used on mainline approaches. This sign should be placed a "C" distance after the W20-1 (Road Work Ahead) sign. A W8-15p motorcycle plaque shall be used to supplement the W8-15 or W8-7 signs. All signs shall be displayed as long as the condition is present.

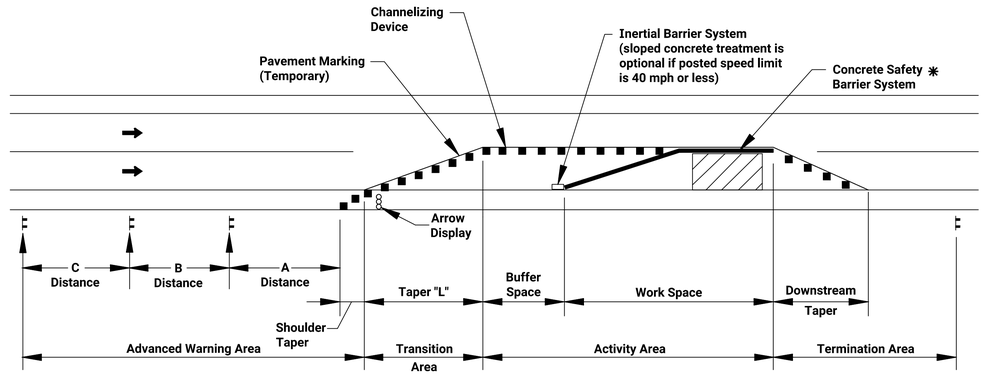
6) Alternative temporary rumble strip options may be available. Please contact the Temporary Traffic Control Unit for more information at 785-296-1179 or 785-296-1183.



TYPE 3 BARRICADE WITH LIGHTS

Approved signs mounted on Type 3 barricades should not cover more than 50% of the top two rails or 33% of the total area of the three rails.

When barricades are placed end-to-end or staggered, a Type "A" low intensity warning light shall be mounted to the vertical post near each outside corner of the end barricades.



TYPICAL WORK ZONE COMPONENTS

✳ When concrete barrier system is used, portable channelizing devices are not needed along the tangent barrier section.

Minimum advance warning sign spacing (in feet):

SPEED (MPH) ✳	*A*	*B*	*C*
URBAN (40 MPH OR LOWER)	*100*	*100*	*100*
URBAN (45 MPH OR HIGHER)	*350*	*350*	*350*
RURAL (55 MPH OR LOWER)	*500*	*500*	*500*
RURAL (60 MPH OR HIGHER)	*750*	*750*	*750*
EXPRESSWAY/FREEWAY	*1000*	*1500*	*2640*

✳ **Posted speed prior to work starting**

The minimum spacing between signs shall be no less than 100', unless directed by the engineer.

The spacing between any signs may be increased beyond the minimum values in the table above as approved by the engineer in order to maximize visibility.

Taper Formulas:

L = WS for speeds of 45 MPH or more

$L = WS^2/60$ for speeds of 40 MPH or less

Where: L = Minimum length of taper in feet
S = Numericial value of posted speed prior to work starting in MPH
W = Width in offset feet

Shifting Taper=1/2 L
Shoulder Taper=1/3 L

Channelizer Placement:

(1) The spacing between devices in transition area (taper) should not exceed a distance in feet equal to 1/2 the posted speed limit in mph prior to work starting.

(2) The spacing between devices in the advanced warning area and the activity area should not exceed a distance in feet equal to two times the posted speed limit in mph prior to work starting.

(3) Channelizing devices shall be placed for optimum visibility, normally at right angles to the traffic flow.

(4) Place directional indicator barricades in series to direct traffic onto the new path. The arrow sign should not be visible to opposing traffic.

(5) Alternating diagonal orange and white striping must slope downward in the direction traffic is expected to pass.

Buffer Space

SPEED (MPH) ✳	*20*	*25*	*30*	*35*	*40*	*45*	*50*	*55*	*60*	*65*	*70*	*75*
LENGTH (ft)	*115*	*155*	*200*	*250*	*305*	*360*	*425*	*495*	*570*	*645*	*730*	*820*

✳ **Posted speed prior to work starting**

Neither work activity nor storage of equipment, vehicles, or material should occur in the buffer space. When a protection vehicle is placed in advance of the work space, only the space upstream of the vehicle constitutes the buffer space.

If temporary concrete safety barrier system is used to separate approaching traffic from the work space, the barrier system shall be considered part of the activity area. A full lane width should be available throughout the length of the buffer space. See typical work zone components above.

NO.	DATE	REVISIONS	BY	APP'D
3_				
2_	03/13/18	_____W8-15p_usage_changed_to_Shall_____	R.W.B.	E.G.K.
1_	08/18/15	_____Channelizer_spacing_info_____	R.W.B.	_K.E._

KANSAS DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL GENERAL NOTES

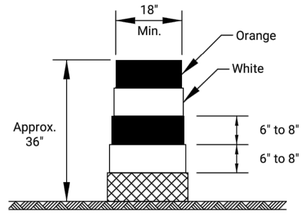
~~TE700~~__

FHWA APPROVAL			_03/13/18	APP'D	Eric Kocher		
DESIGNED	B.A.H.	DETAILED	_R.W.B	QUANTITIES	____	TRACED	____
DESIGN CK.	____	DETAIL CK.	____	QUAN. CK.	____	TRACE CK.	____

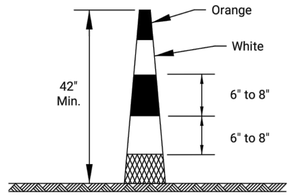
J:\PROJECTS\2022\2201910447_COV_135TH STREET FROM CENTRAL TO 13TH STREET\00 220447 CAD\SHTS\05 CIVIL\STDYTRAFFIC\KDOTTE700.DWG

PLOTTED: Friday, February 20, 2026 @ 01:25PM

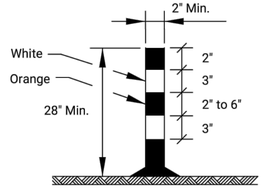
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	472-2021-085756	2026	115	156



DRUM

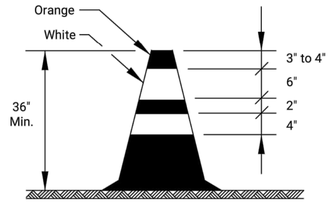


CONICAL DELINEATOR

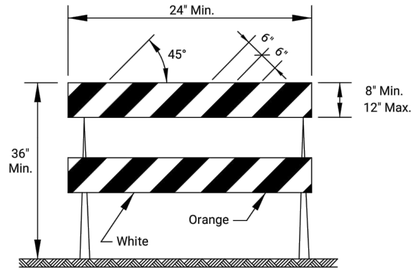


TUBULAR MARKER

Striping as shown for up to 42".

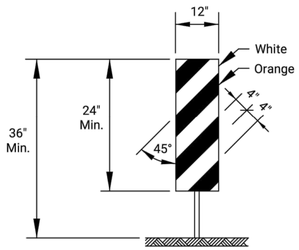


TRAFFIC CONE



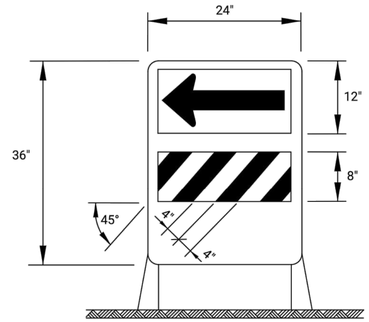
TYPE 2 BARRICADE

For rails less than 36" long, 4" wide stripes may be used. All stripes shall slope downward to the traffic side for channelization.



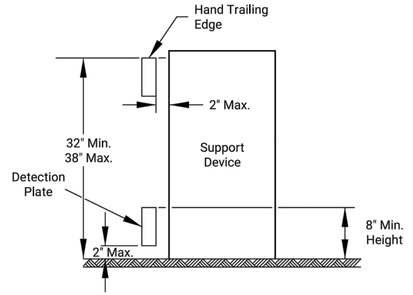
VERTICAL PANEL

The stripes shall slope downward to the traffic side for channelization.



DIRECTION INDICATOR BARRICADE

The stripes shall slope downward in the direction traffic is to pass. The direction indicator barricade shall be used in series to direct the motorist into the intended lane of travel.



PEDESTRIAN CHANNELIZER

1. Support device shall not project beyond the detection plate into the pathway.
2. Hand trailing edges and detection plates are optional for continuous walls.
3. Interconnect pedestrian channelizers to prevent displacement and to provide continuous guidance through or around work.
4. Alternate pathways shall be firm, stable, and slip resistant.
5. Treat height differentials > 1/2" in the surfaces of alternate paths with a firm, stable, and slip resistant temporary ramp having a slope of 12:1 or flatter and having a width equal to the alternate path.
6. Use alternating orange/white on interconnected devices.

Item	Location	Cross-overs	Shoofly Diversions	Tangents	Tapers	Ramps	Head to Head	Object Identifier	Lead-in Devices	Gores
Portable										
	Drums	Yes	Yes	Yes	Yes	Yes	(1)	Yes	Yes	Yes
	Conical Delineators	Yes	Yes	Yes	Yes	Yes	(1)	Yes	Yes	Yes
	Vertical Panels	(2)	(2)	(2)	(2)	(2)	(1,2)	Yes	(2)	(2)
	Direction Indicator Barricade	No	No	No	Yes	No	No	No	No	No
	Type 2 Barricade	(2)	(2)	(2)	(2)	No	No	Yes	No	No
	Traffic Cones	No	No	(4)	(4)	(4)	No	(4)	(4)	(4)
Fixed										
	Tubular Markers	(3)	(3)	(3)	No	(3)	Yes	No	Yes	Yes
	Vertical Panels	(3)	(3)	(3)	(3)	(3)	(3)	Yes	(2,3)	(2)

(1) Not allowed on centerline delineation along freeways or expressways.
(2) The stripes shall slope downward to the traffic side for channelization.
(3) May be used upon the approval of the engineer.
(4) Daytime operations only.

NO.	DATE	REVISIONS	BY	APP'D

KANSAS DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL CHANNELIZING DEVICES

TE702

FHWA APPROVAL		06-01-15	APP'D.	Kristina Ericksen	
DESIGNED	L.E.R.	DETAILED R.W.B.	QUANTITIES	TRACED	
DESIGN CK.		DETAIL CK.	QUAN.CK.	TRACE CK.	

J:\PROJECTS\2022\2201010447_COV_135TH STREET FROM CENTRAL TO 13TH STREET\00 220447 CAD\SHTS\05 CIVIL\STD\TRAFFIC\KDOT\TE702.DWG

PLOTTED: Friday, February 20, 2026 @ 01:25PM

SIGN LAYOUT INFORMATION

KG20-2

Std. Size Expwy/Freeway
6" C
48"x 24"

KG20-5

Std. Size Expwy/Freeway
6" C
48"x 24"

KM4-20

Std. Size
3" C
24"x 6"

Expwy/Freeway
6" C
48"x 12"

W7-3a

Mileage to be Determined by the Engineer.

W8-17

Std. Size Expwy/Freeway
48"x 48"

W8-15

Std. Size Expwy/Freeway
8" D
48"x 48"

W8-7

Std. Size Expwy/Freeway
8" D
48"x 48"

W8-15p

Std. Size Expwy/Freeway
30"x 24"

W8-11

Std. Size Expwy/Freeway
8" D
48"x 48"

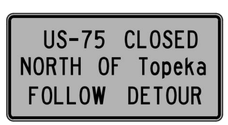
W8-17P
(Optional)

Std. Size Expwy/Freeway
30"x 24"

SP-01
(Special Sign)

Std. Size
6" C

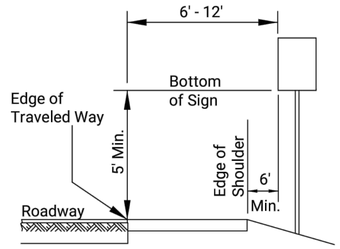
Expwy/Freeway
10" D



SP-02
(Special Sign)

Std. Size		Expwy/Freeway	
Uppercase:	6" C	Uppercase:	10" D
Lowercase:	4.5" C	Lowercase:	8" D

All city names and street names on special signs and destination signs must have upper and lower case letters.

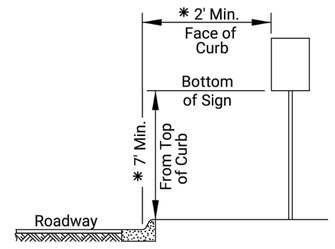


RURAL

1) Ground-mounted signs shall be mounted at a minimum height of 5' measured from the bottom of sign to the near edge of the pavement.

2) Large signs having an area exceeding 50 square feet installed on multiple breakaway posts shall be mounted a minimum of 7' above the ground.

3) The height of the secondary sign mounted below another sign may be 4' measured from the bottom of the sign to the near edge of the pavement. Signs shall not overlap each other.



URBAN

1) Signs shall be mounted at a minimum height of 7' measured from the bottom of sign to the near edge of the pavement.

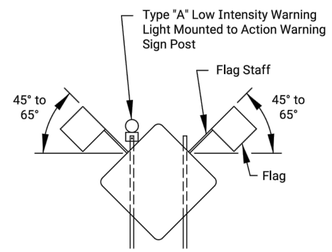
2) Neither portable nor permanent sign supports should be located on sidewalks or areas designated for pedestrian or bicycle traffic.

3) Signs mounted lower than 7' should not project more than 4" into pedestrian facilities.

4) The height from of the secondary sign mounted below another sign may be 6' measured from the bottom of sign to the near edge of the pavement. Signs shall not overlap each other.

5) Large signs having an area exceeding 50 square feet installed on multiple breakaway posts shall be mounted a minimum of 7' above the ground.

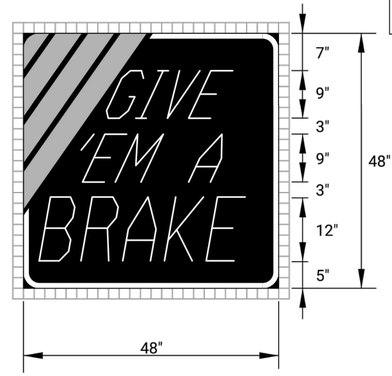
✱ 6) Pedestrian detour signing shall be a minimum of 2' measured from the top of the pedestrian pathway to the bottom of the sign and shall not protrude into the walkway nor shall it project beyond the back of curb.



When the sign width is equal to or greater than 9', three or more wood posts may be used with a minimum of 4' between the centerline of each post. All signs less than 9' in width shall use a maximum of two wood posts.

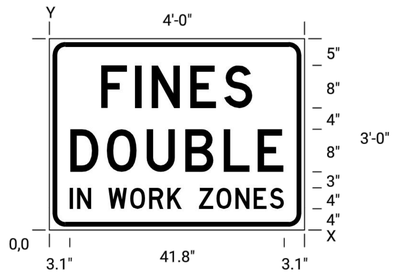
In the case of hitting rock when driving posts
1. Shift the sign location. Do not violate minimum sign spacing.
2. With the engineer's approval, use acceptable alternative sign stands.

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	472–2021–085756	2026	116	156



KI-104a

Sign Number	GIVE EM A BRAKE
Width x Height	4'-0" x 4'-0"
Border Width	1.0"
Corner Radius	4.0"
Stripe Width	3.0"
Mounting	Ground
Background	Type: Non-Reflective
	Color: Black
Legend/Border	Type: Reflective
	Color: White
Legend Font	Dutch 801 Roman SWC 25 Degree Slant
Stripes	Type: Reflective
	Color: Orange



KI-105a

Sign Number	FINES DOUBLE
Width x Height	4'-0" x 3'-0"
Border Width	0.9"
Corner Radius	3.0"
Mounting	Ground
Background	Type: Reflective
	Color: White
Legend/Border	Type: Non-Reflective
	Color: Black

Dimensions in inches — Spacings are to start of next letter

Y FONT	LETTER SPACINGS															HT LEN
23.0 D		F	I	N	E	S										8.0
	9.7	6.4	3.2	7.3	6.4	5.4	9.7									28.6
11.0 D		D	O	U	B	L	E									8.0
	3.9	6.9	7.5	7.3	7.3	6.4	4.9	3.9								40.3
4.0 D		I	N		W	O	R	K		Z	O	N	E	S		4.0
	3.1	1.6	2.7	3.2	4.3	3.8	3.6	2.8	3.2	3.4	3.8	3.6	3.2	2.7	3.1	41.8

Notes:

Typically, there are two sets of informational signs installed per project: one for each direction of traffic.

Install signs a minimum of 500' in advance of the road work ahead sign. The engineer may designate a more appropriate location if conditions dictate.

The informational signs are not to interfere with the traffic control signs for the project.

NO.	DATE	REVISIONS	BY	APP'D

KANSAS DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SIGN INFORMATION

TE710

FHWA APPROVAL		06-01-15	APP'D.		Kristina Ericksen
DESIGNED	R.W.B.	DETAILED	R.W.B.	QUANTITIES	TRACED
DESIGN CK.		DETAIL CK.		QUAN.CK.	TRACE CK.

J:\PROJECTS\2022\2201010447_COV_135TH STREET FROM CENTRAL TO 13TH STREET\100 220447 CAD\SHTS\05 CIVIL\STD\TRAFFIC\KDOTTE710.DWG

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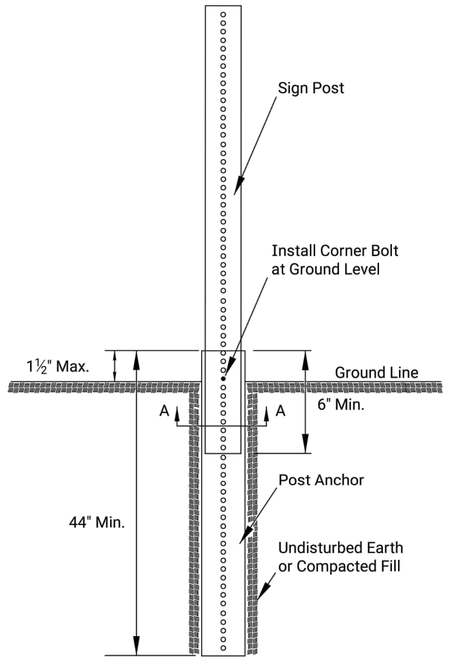
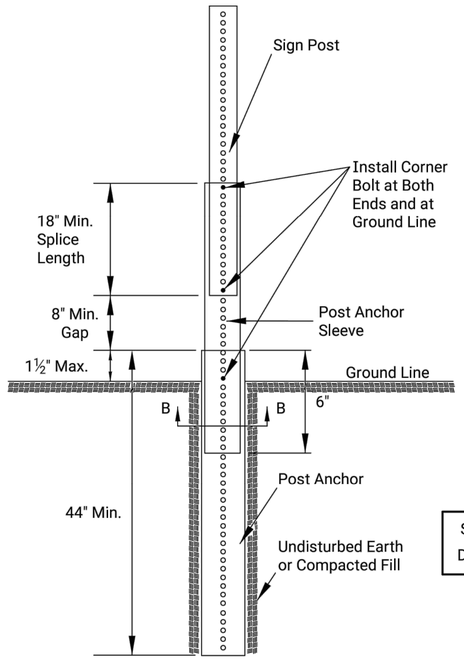
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	472–2021–085756	2026	117	156

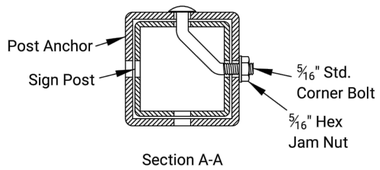
PERFORATED SQUARE STEEL TUBE (P.S.S.T.) POST SETUP



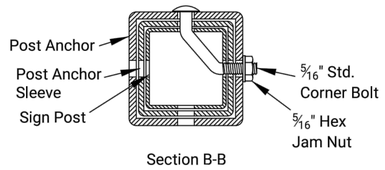
P.S.S.T. Detail



Telescoping P.S.S.T. Detail



Section A-A

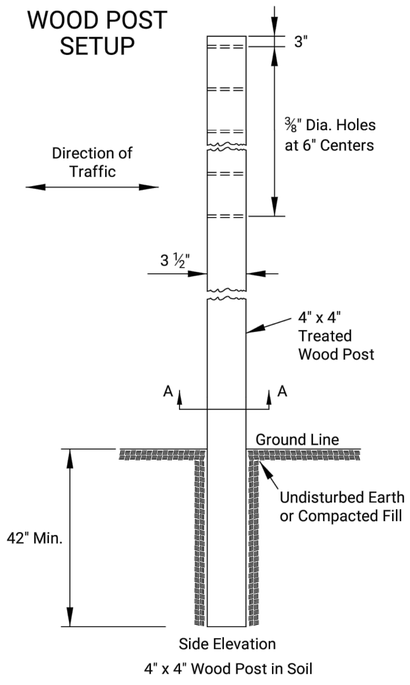


Section B-B

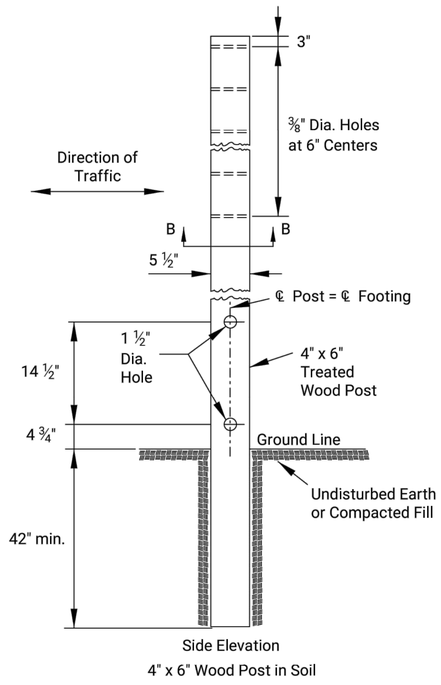
Details for 2", 2 ¼", or 2 ½" sign posts

Place bolts in the same corner along each sign post.

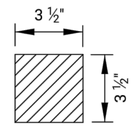
WOOD POST SETUP



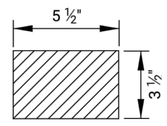
Side Elevation
4" x 4" Wood Post in Soil



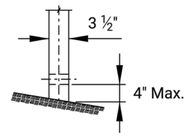
Side Elevation
4" x 6" Wood Post in Soil



Section A-A



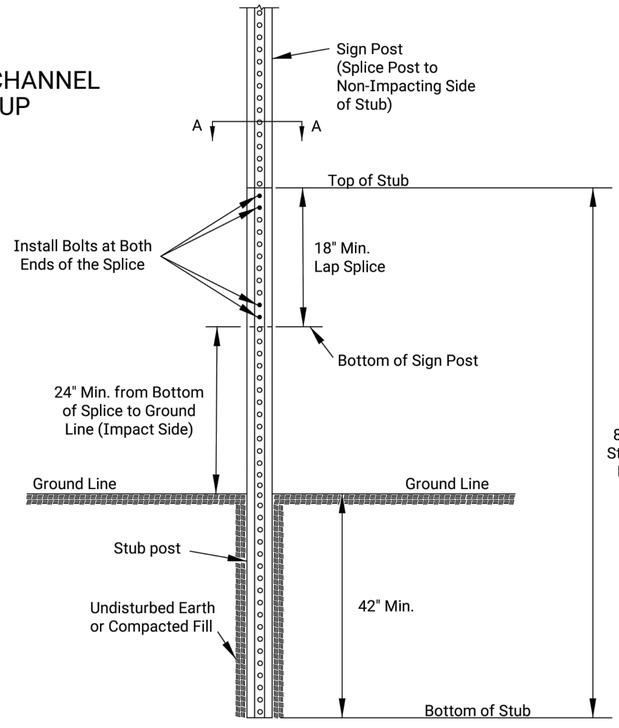
Section B-B



Front Elevation

See TE710 for Additional Details and Requirements

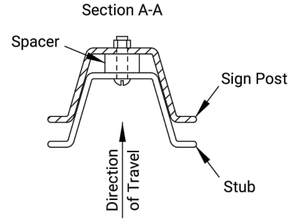
3 LB/F U-CHANNEL SETUP



Notes:

Place two bolts at both ends of the splice through the holes nearest the ends of the splice.

Use manufacturer recommended spacers over the bolts between the spliced pieces of U-Channel.



NO.	DATE	REVISIONS	BY	APP'D

KANSAS DEPARTMENT OF TRANSPORTATION

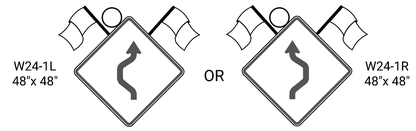
TRAFFIC CONTROL SIGN POSTS

TE712

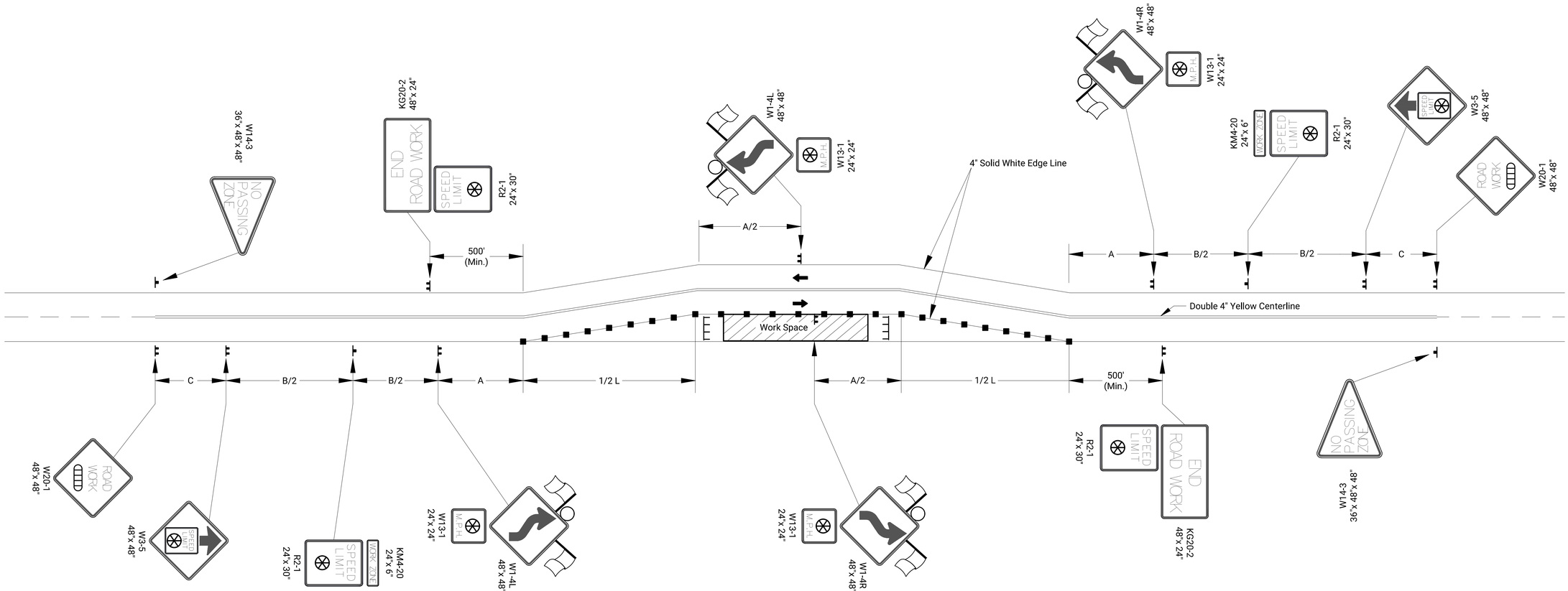
FHWA APPROVAL			06-01-15	APP'D.	Kristina Ericksen		
DESIGNED	B.A.H.	DETAILED	R.W.B.	QUANTITIES		TRACED	
DESIGN CK.		DETAIL CK.		QUAN.CK.		TRACE CK.	

J:\PROJECTS\2022\2201910447_COV_135TH STREET FROM CENTRAL TO 13TH STREET\00 220447 CAD\SHTS\05 CIVIL\STD\TRAFFIC\KDOT\TE712.DWG

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	472-2021-085756	2026	118	156



One W24-1 should be used per approach where the tangent distance between two reverse curves is less than 600 ft. If used, use in place of the first W1-4 and eliminate the second.



- ■ Channelizing Device
- Type 3 Barricades
- Ahead, 1500 ft, or 1 Mile
- Speed to be Determined by the Engineer
- Type "A" Low Intensity Warning Light

NO.	DATE	REVISIONS	BY	APP'D
01	03-13-18	W24-1 usage changed to Should	R.W.B.	E.G.K.

KANSAS DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL LANE SHIFT

TE724

FHWA_APPROVAL	03-13-18	APP'D.	Eric_Kocher
DESIGNED R.W.B.	DETAILED R.W.B.	QUANTITIES	TRACED
DESIGN CK.	DETAIL CK.	QUAN.CK.	TRACE CK.

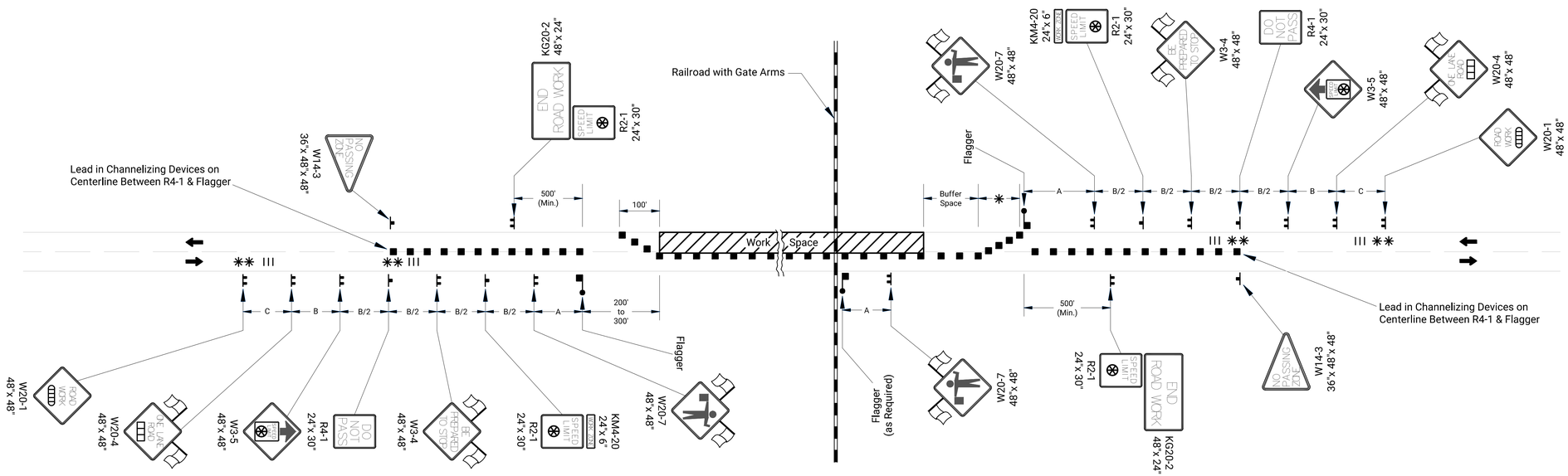
KDOT Graphics Certified 07-18-2022 Sh. No. 118

KDOT Graphics Certified

Drawn By: : $$USERNAME$$ Plotted : $$$$$$$YTIME$$$$$$
File : $$$$$$$$$$$$$$$$DGNSPEC$$$$$$$$$$$$$$$$

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	472-2021-085756	2026	119	156

FLAGGER



USE TE731 FOR FLAGGER OR PILOT CAR ON ROADWAYS WITH CONCRETE SHOULDERS GREATER THAN 8 FT.

Notes:

Trucks hauling material to the project should STOP at the Flagger. After stopping, upon approval of the Engineer, trucks may be allowed to move around the Flagger.

Place a Flagger at all highway and major collector intersections and at-grade railroad intersections with lights and gates in the work space to control traffic crossing the tracks to the left of the gate arm. The need for a Flagger at minor side road intersections shall be determined by the Engineer. Place a W20-7 (Flagger symbol) sign on each side road that is controlled by a Flagger.

Existing signs shall not be covered or removed between Flagger stations.

Temporary rumble strips may be used in lieu of lead in channelizing devices when the roadway is less than or equal to 30' including paved shoulders. When extenuating circumstances exist, the Area Engineer may elect to eliminate both the lead in channelizers and the rumble strips.

✳ Minimum six (6) channelizers spaced at 20' intervals.

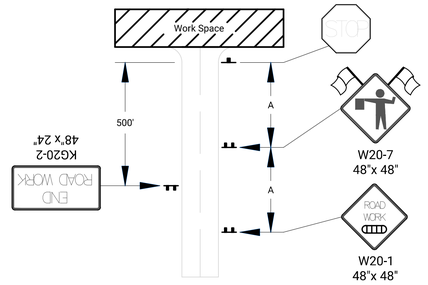
✳✳ Optional rumble strips may be placed: One set between the W20-1 and W20-4, and one set between the R4-1 and W3-4, on each approach.

△ Not required on substantial maintenance projects (1R).

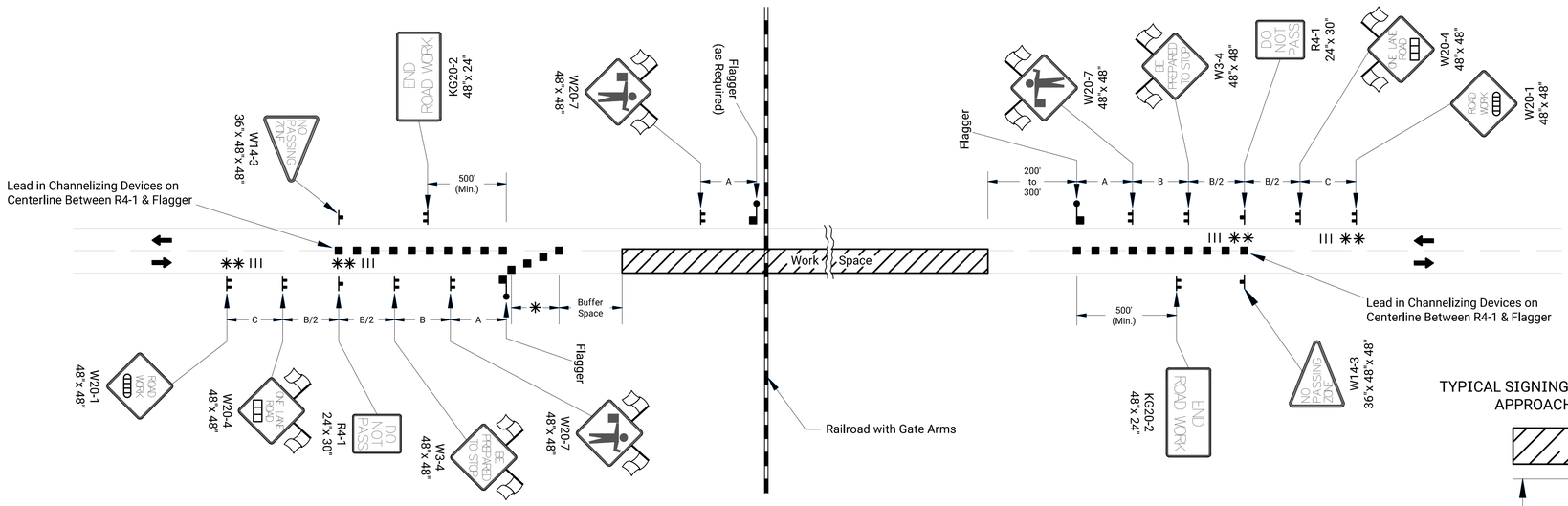
△△ The KG20-5 (WAIT FOR PILOT CAR) sign shall be mounted on an approved portable support and not attached to the existing stop sign post.

The KG20-5 sign shall be placed immediately in front of the existing stop sign, a minimum of 6" below the bottom of the stop sign. The sign should be removed or covered when there is no pilot car.

TYPICAL SIGNING FOR HIGHWAY OR MAJOR COLLECTOR APPROACH TO WORK SPACE

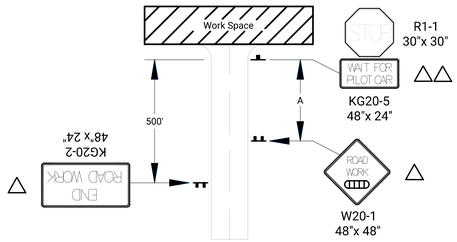


FLAGGER AND PILOT CAR



- ■ Channelizing Device
- Ahead, 1500 ft, or 1 Mile
- Ahead, 1000 ft, 1500 ft, or ½ Mile
- ⊗ Speed to be Determined by the Engineer
- ○ Type "A" Low Intensity Warning Light
- III Temporary Portable Rumble Strips

TYPICAL SIGNING FOR A MINOR SIDE ROAD APPROACH TO WORK SPACE



NO.	DATE	REVISIONS	BY	APP'D

KANSAS DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL FLAGGER OR PILOT CAR

TE730

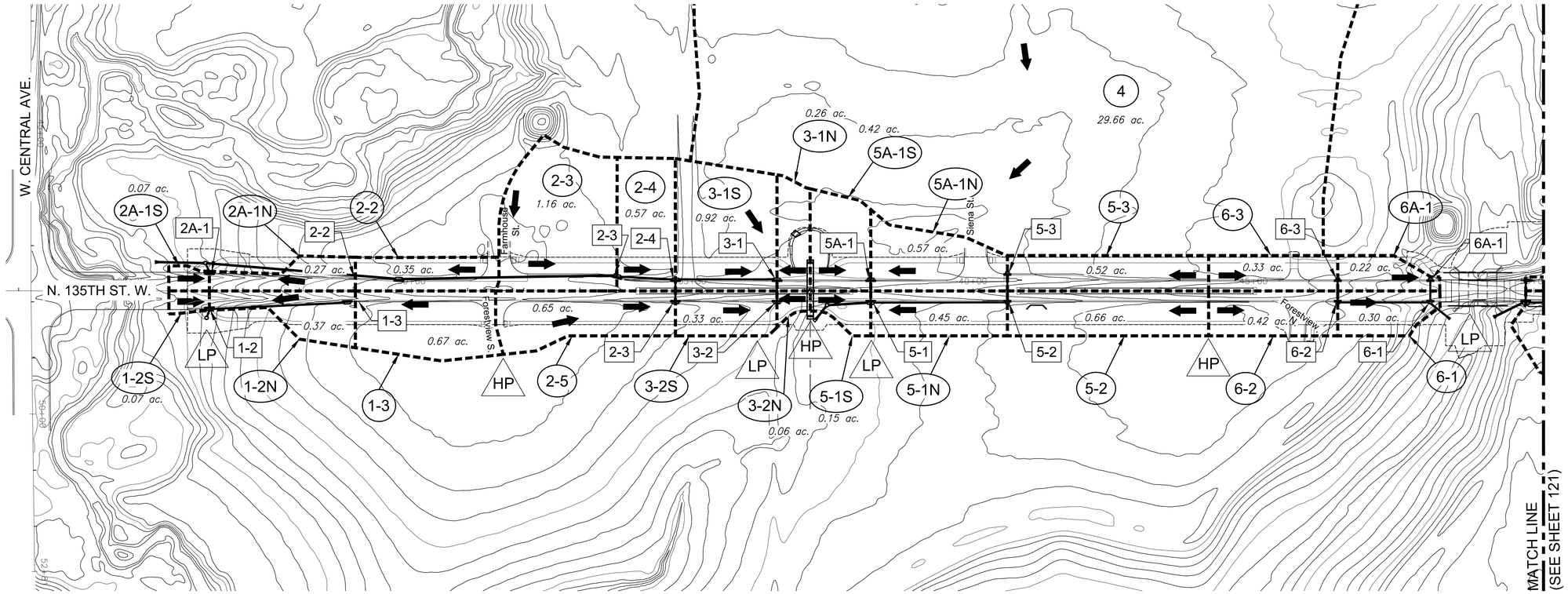
FHWA_APPROVAL		06-01-15	APP'D.	Kristina_Ericksen	
DESIGNED	B.A.H.	DETAILED	R.W.B.	QUANTITIES	TRACED
DESIGN CK.		DETAIL CK.		QUAN.CK.	TRACE CK.

KDOT Graphics Certified 07-18-2022 Sh. No. 119

KDOT Graphics Certified

Drawn By : $$USERNAME$$ Plotted : $$$$SYTIME$$$$$
File : $$$$$$$$$$$$$$DGNSPEC$$$$$$$$$$$$$$$$$$$$

PLOTTED: Friday, February 20, 2026 @ 01:25PM



Note: Structures 1-1, 2-1, 8-1 and 8B-2 are not shown.

SCALE: 1" = 100'

0 100 200

LEGEND

- A1 = Inlet Number
- (A) = Drainage Basin Number
- = Drainage Basin Boundary
- LP = Low Point
- HP = High Point
- = Direction of Flow
- 2.02 = Drainage Basin Area (Acres)

MKEC
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STREET IMPROVEMENTS FOR

135TH STREET WEST

FROM CENTRAL AVE TO 13TH STREET

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DRAINAGE MAP

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	1"=100'

DESIGNED	DRAWN	CHECKED
DMU	RAM	JRA

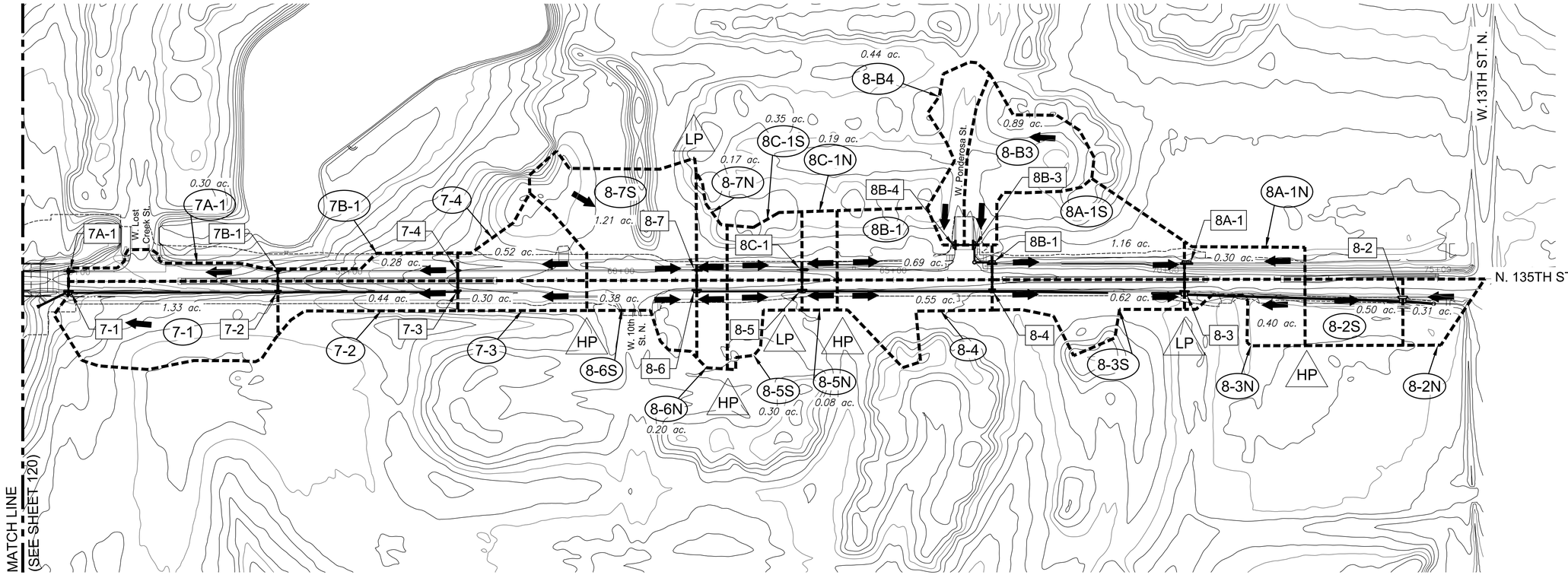
NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

SHEET NO.

120 OF 156

J:\PROJECTS\2022\2201610447_COW_135TH STREET FROM CENTRAL TO 13TH STREET\00 220447 CAD\SHTS\05 CIVIL\DRAINAGE\220447-05-5800.DWG

PLOTTED: Friday, February 20, 2026 @ 01:25PM



Note: Structures 1-1, 2-1, 8-1 and 8B-2 are not shown.

SCALE: 1" = 100'

0 100 200

LEGEND

- A1 = Inlet Number
- A = Drainage Basin Number
- = Drainage Basin Boundary
- LP = Low Point
- HP = High Point
- = Direction of Flow
- 2.02 = Drainage Basin Area (Acres)

MKEC
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STREET IMPROVEMENTS FOR

135TH STREET WEST

FROM CENTRAL AVE TO 13TH STREET

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DRAINAGE MAP

PROJECT NO.	472-2021-085756
DATE	9/26/2025
SCALE	1"=100'

DESIGNED	DRAWN	CHECKED
DMU	RAM	JRA

NO.	REVISION	DATE
1	ISSUE FOR BID	2/20/2026

SHEET NO.

121 OF 156

J:\PROJECTS\0222\20101\0447_COW_135TH STREET FROM CENTRAL TO 13TH STREET\00 220447 CAD\SHTS\05 CIVIL\DRAINAGE\220447-05-5800.DWG

PLOTTED: Friday, February 20, 2026 @ 02:00PM

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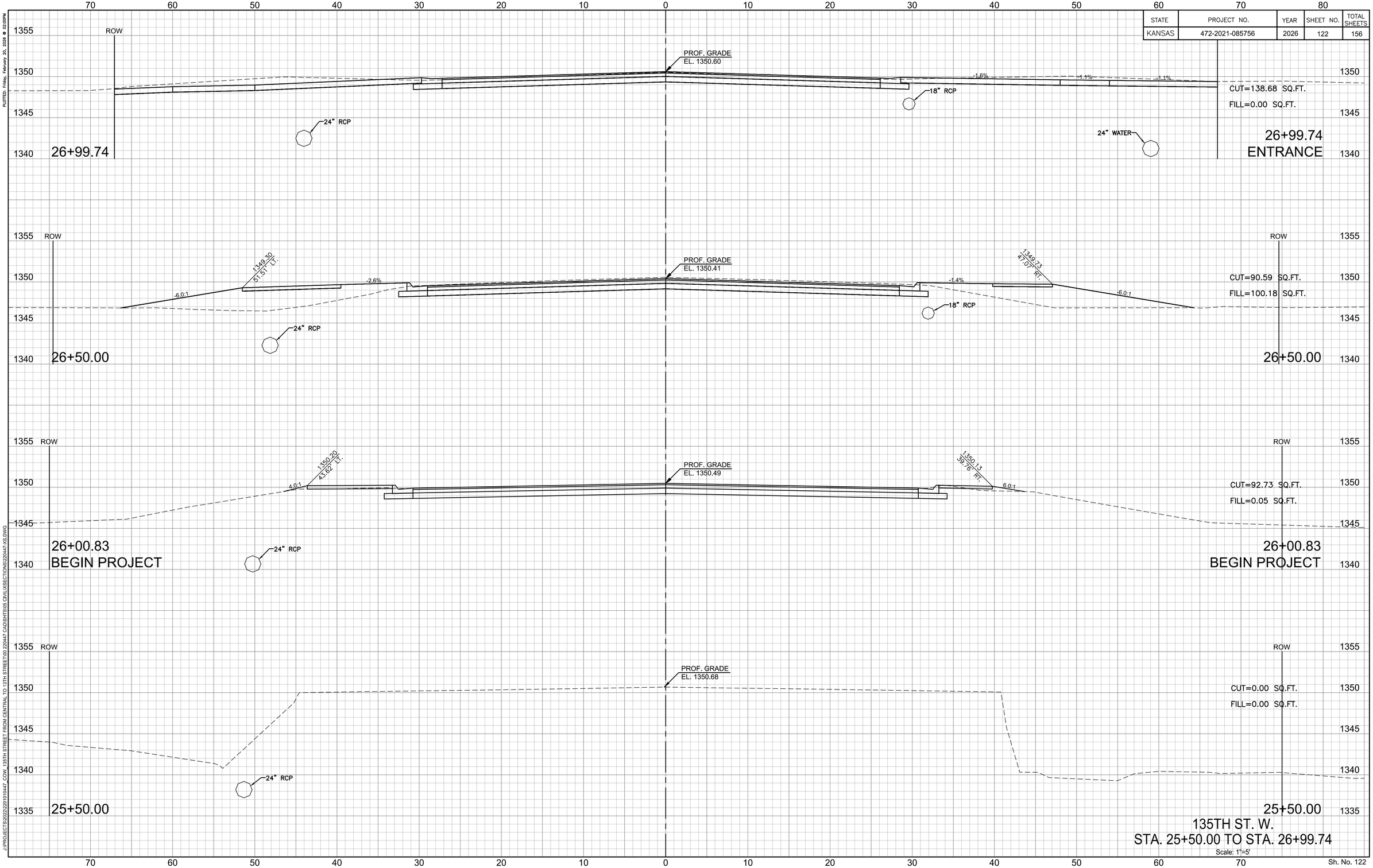
KANSAS	472-2021-085756	2026	122	156



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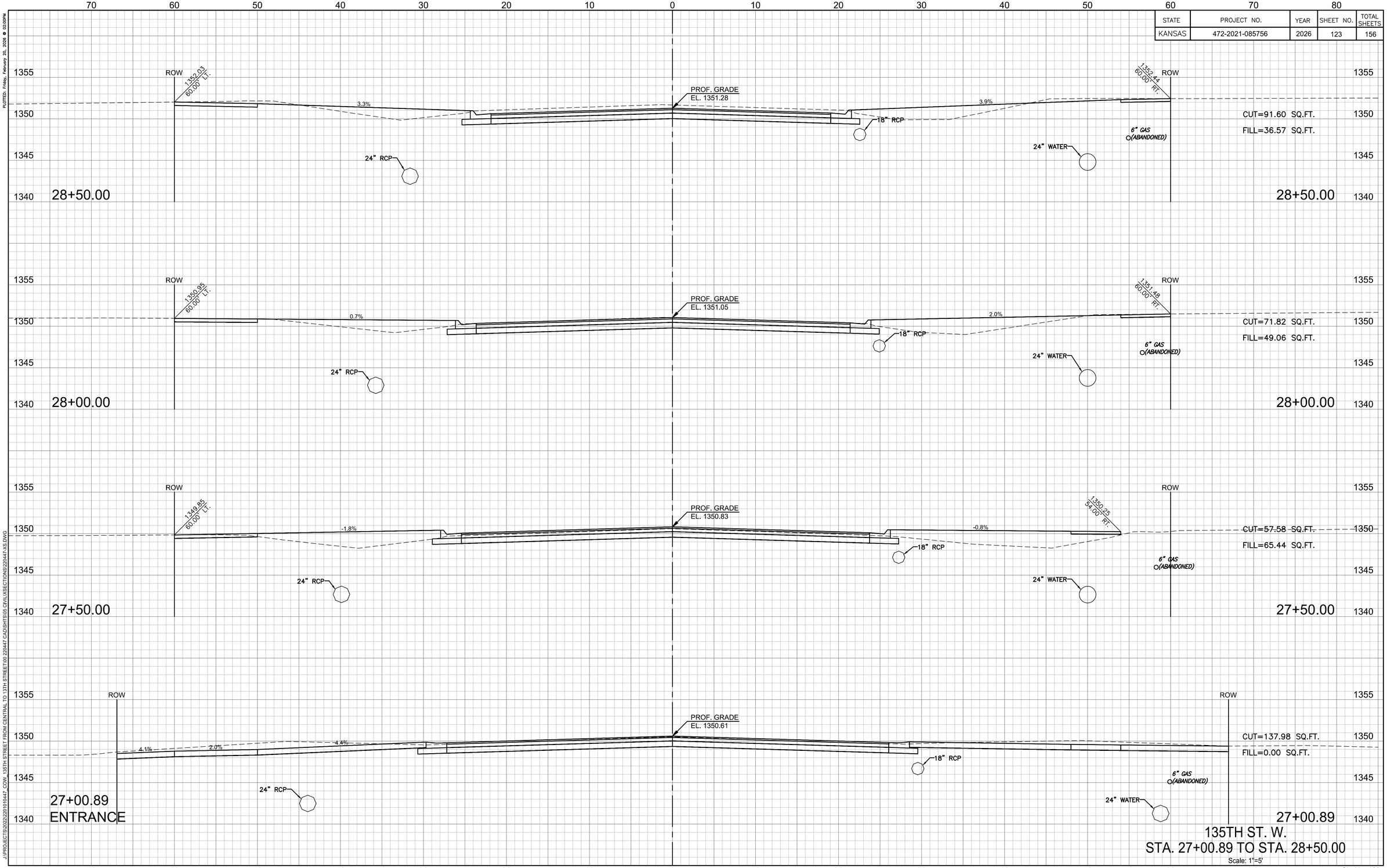
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	472-2021-085756	2026	123	156



135TH ST. W.
STA. 27+00.89 TO STA. 28+50.00

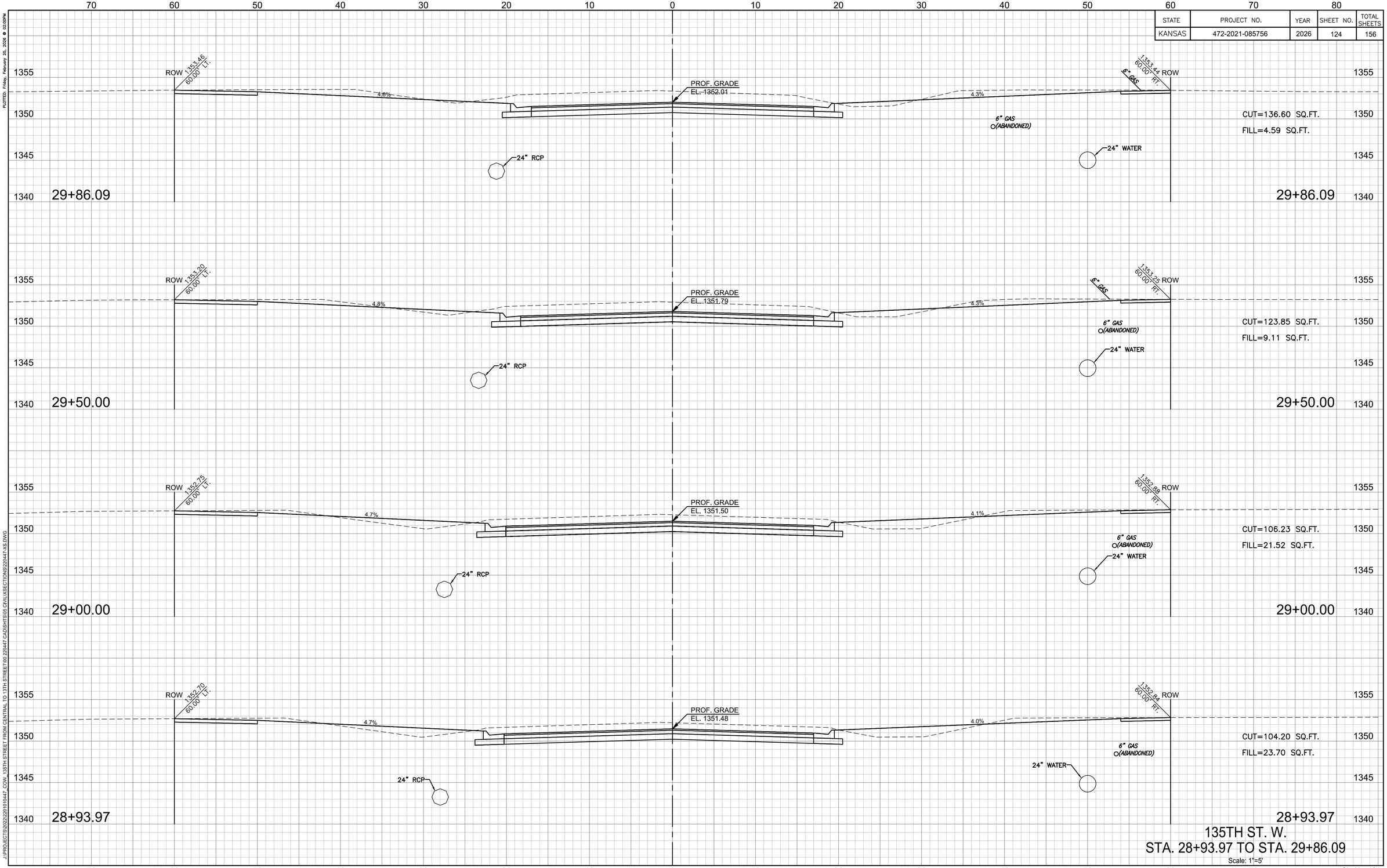
Scale: 1"=5'

Sh. No. 123

PLOTTED: Friday, February 20, 2026 @ 02:00PM

J:\PROJECTS\2022\2201010447.COW - 135TH STREET FROM CENTRAL TO 13TH STREET\00 220447 CAD\SHTS\05 CIVIL\XSECTIONS\220447-XS.DWG

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	472-2021-085756	2026	124	156



135TH ST. W.
STA. 28+93.97 TO STA. 29+86.09

Scale: 1"=5'

PLOTTED: Friday, February 20, 2026 @ 02:00PM
J:\PROJECTS\2022\2201010447.COW - 135TH STREET FROM CENTRAL TO 13TH STREET\00 220447 CAD\SHTS\05 CIVIL\XSECTIONS\220447-XS.DWG

PLOTTED: Friday, February 20, 2026 @ 02:00PM

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	472-2021-085756	2026	125	156

70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80

1355 1350 1345 1340

ROW 1353.92 60.00' LT.
PROF. GRADE EL. 1352.69
3.9%
3.3%
1357.79 60.00' RT. 6" GAS ROW
24" RCP
6" GAS (ABANDONED)
24" WATER
CUT=146.98 SQ.FT.
FILL=0.00 SQ.FT.
31+00.00

ROW 1353.87 60.00' LT.
EVERGY POLE
PROF. GRADE EL. 1352.46
4.5%
24.6%
7.2%
3.9%
1353.73 60.00' RT. 6" GAS ROW
24" RCP
6" GAS (ABANDONED)
24" WATER
CUT=146.45 SQ.FT.
FILL=2.67 SQ.FT.
30+61.92

ROW 1353.84 60.00' LT.
PROF. GRADE EL. 1352.39
4.6%
3.9%
1353.68 60.00' RT. 6" GAS ROW
24" RCP
6" GAS (ABANDONED)
24" WATER
CUT=151.50 SQ.FT.
FILL=3.60 SQ.FT.
30+50.00

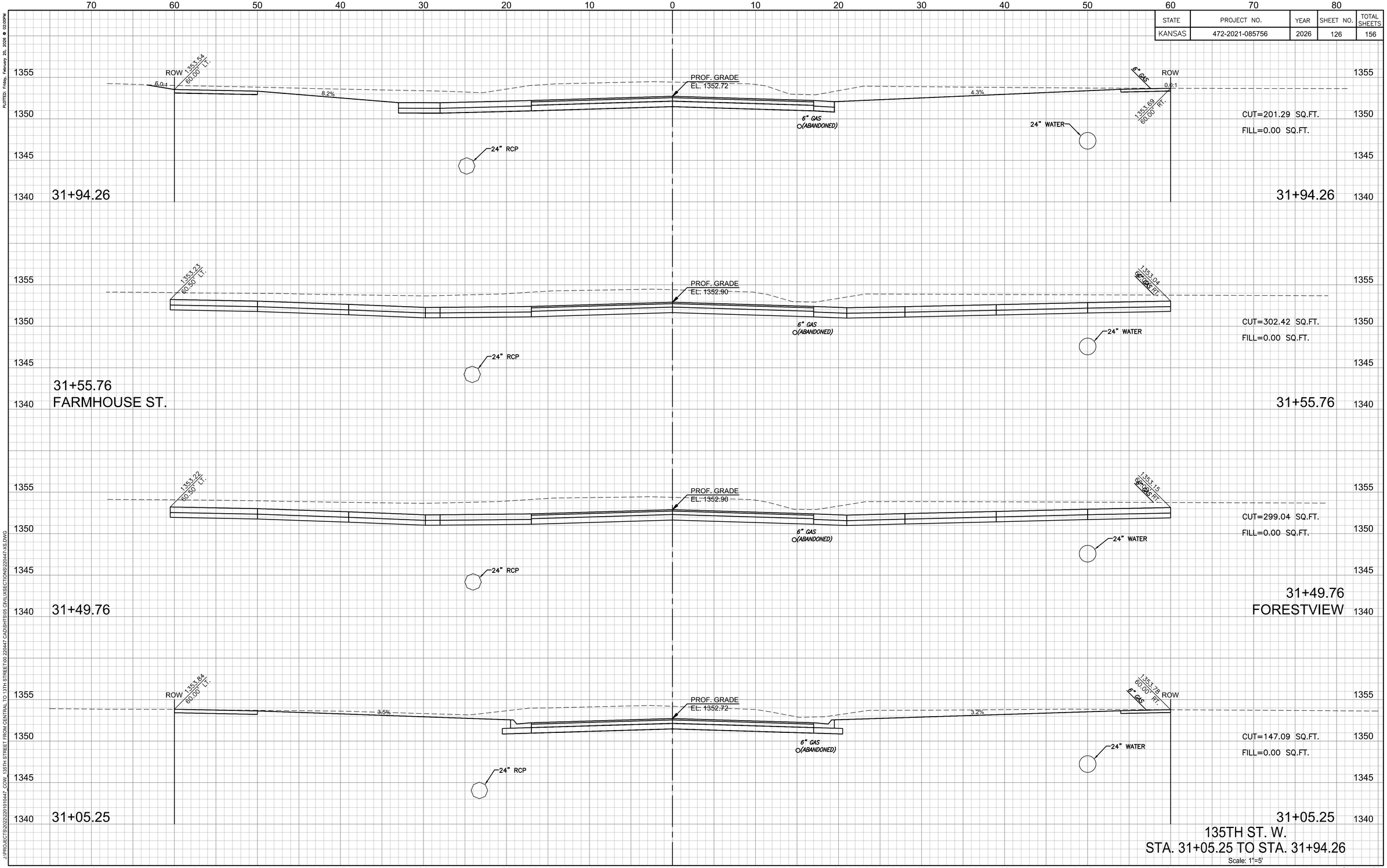
ROW 1353.54 60.00' LT.
PROF. GRADE EL. 1352.09
4.6%
4.3%
1353.55 60.00' RT. 6" GAS ROW
24" RCP
6" GAS (ABANDONED)
24" WATER
CUT=140.47 SQ.FT.
FILL=2.19 SQ.FT.
30+00.00

135TH ST. W.
STA. 30+00.00 TO STA. 31+00.00

Scale: 1"=5'

J:\PROJECTS\2022\2201010447.COW - 135TH STREET FROM CENTRAL TO 13TH STREET\00 220447 CAD\SHTS\05 CIVIL\XSECTIONS\220447-XS.DWG

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	472-2021-085756	2026	126	156



PLOTTED: Friday, February 20, 2026 @ 02:00PM

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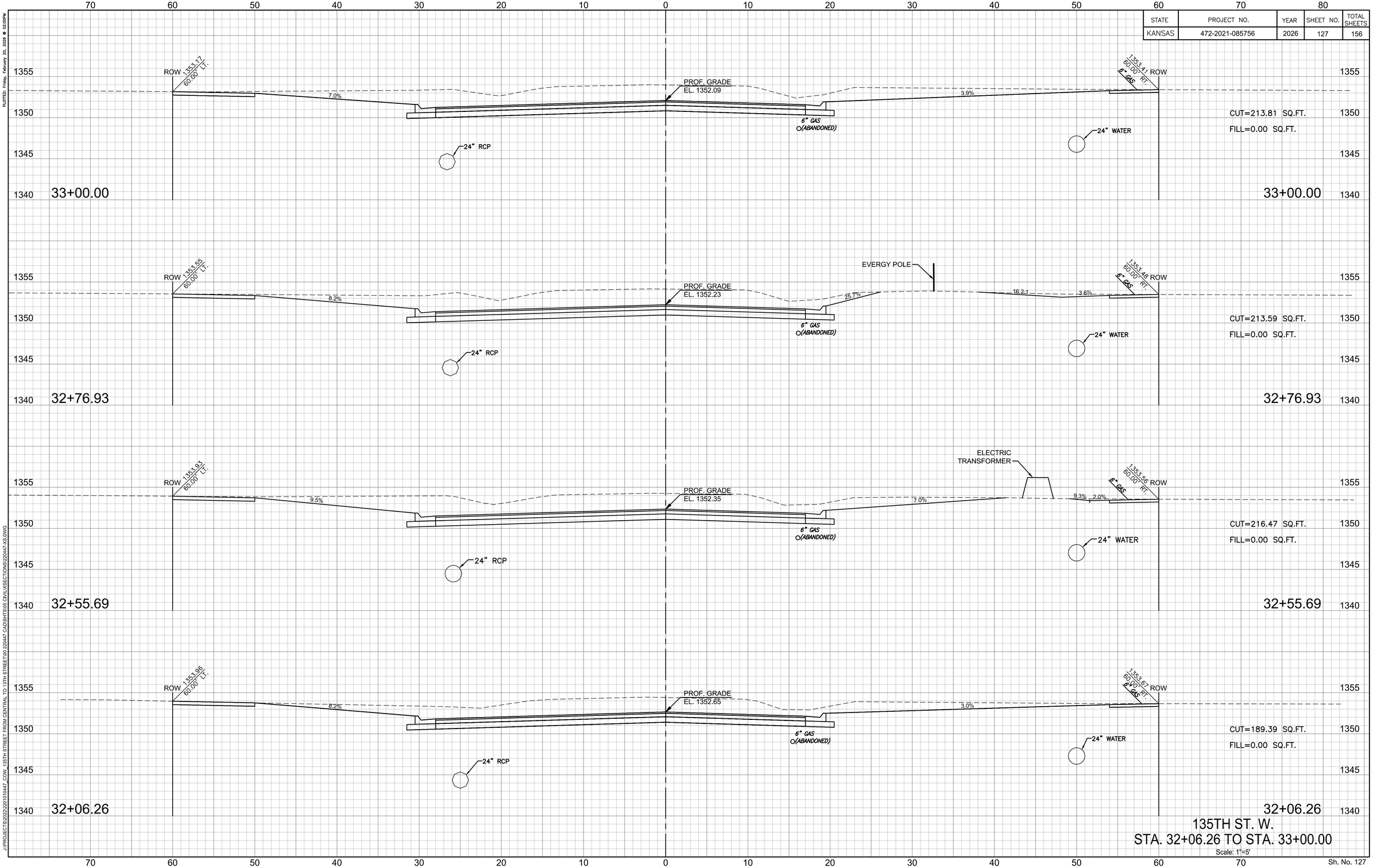
PLOTTED: Friday, February 20, 2026 @ 02:00PM

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	472-2021-085756	2026	127	156



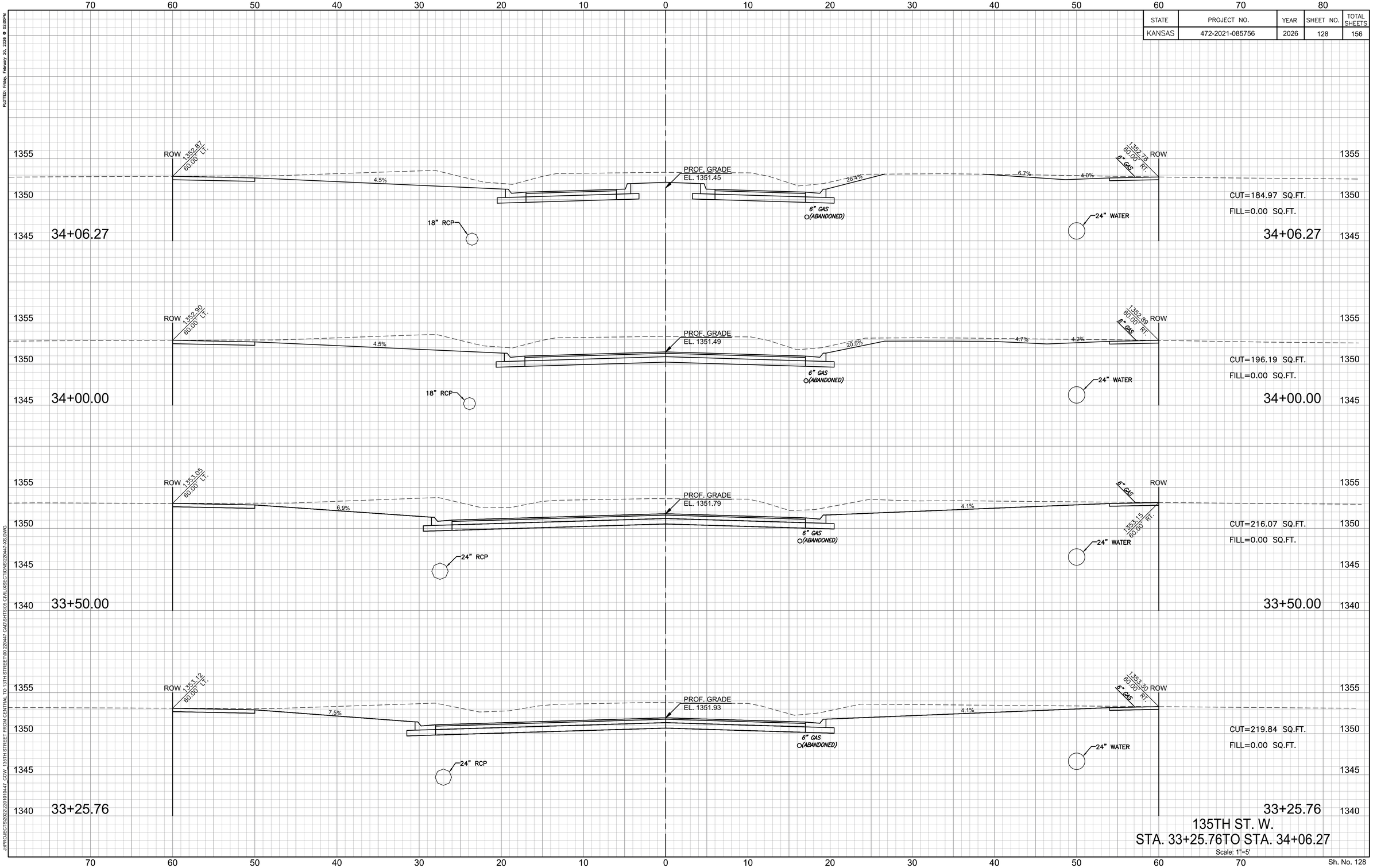
135TH ST. W.
STA. 32+06.26 TO STA. 33+00.00

Scale: 1"=5'

J:\PROJECTS\2022\2201010447.COW - 135TH STREET FROM CENTRAL TO 13TH STREET\100 220447 CAD\SHTS\05 CIVIL\XSECTIONS\220447-XS.DWG

PLOTTED: Friday, February 20, 2026 @ 02:00PM

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	472-2021-085756	2026	128	156



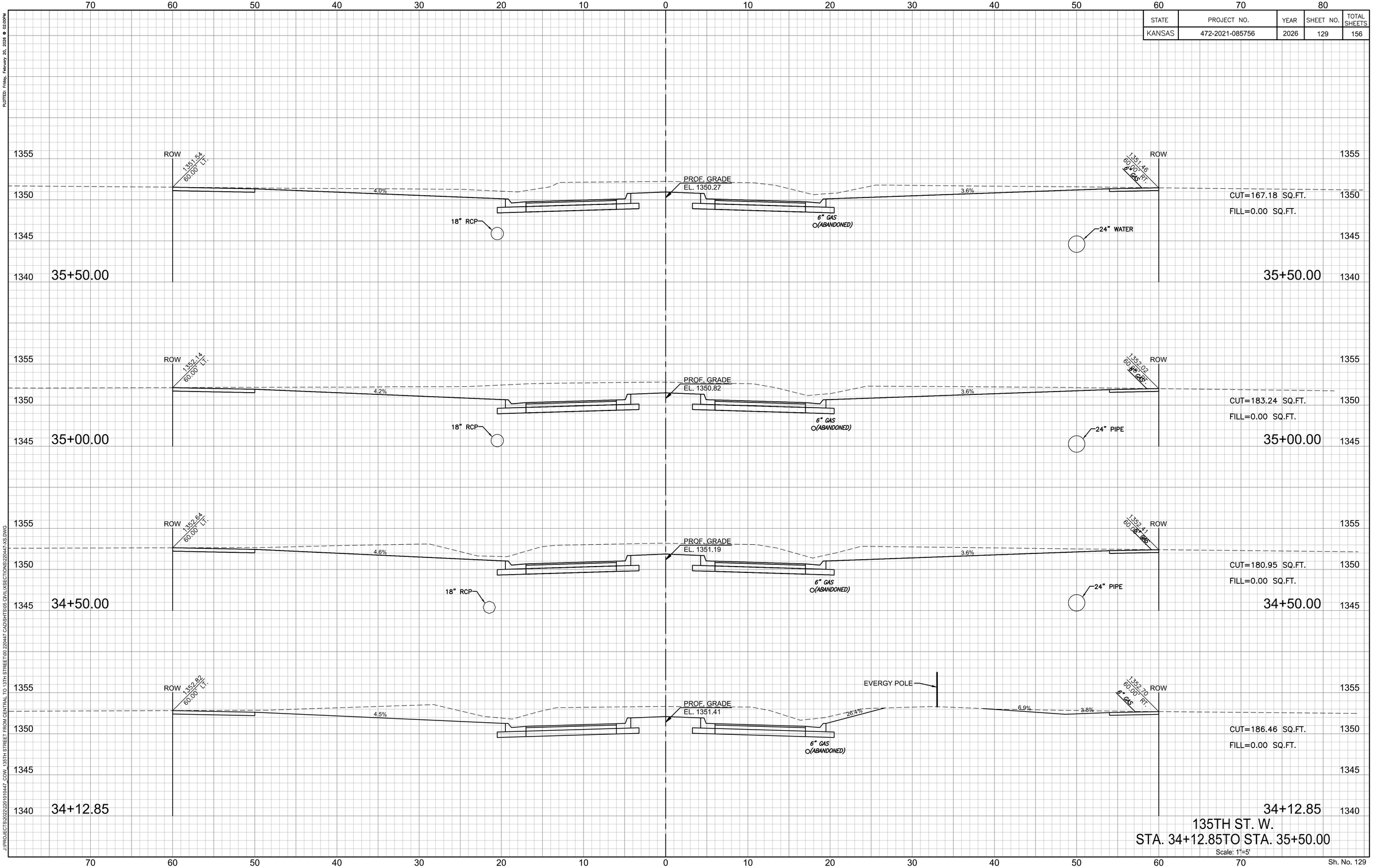
J:\PROJECTS\2022\2201010447.COW - 135TH STREET FROM CENTRAL TO 13TH STREET\00 220447 CAD\SHTS\05 CIVIL\XSECTIONS\220447-XS.DWG

135TH ST. W.
STA. 33+25.76TO STA. 34+06.27

Scale: 1"=5'

PLOTTED: Friday, February 20, 2026 @ 02:00PM

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	472-2021-085756	2026	129	156



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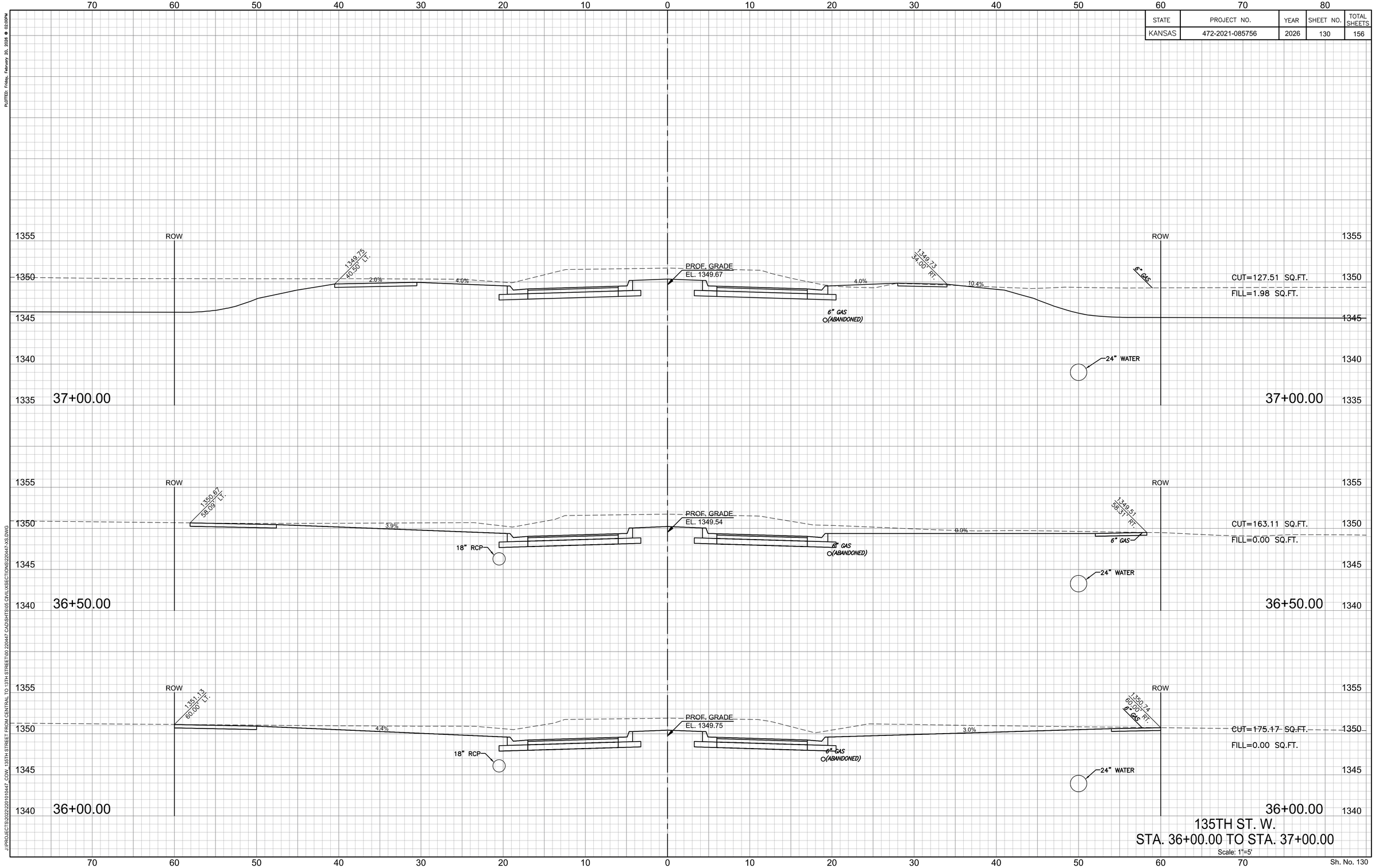
135TH ST. W.
STA. 34+12.85TO STA. 35+50.00

Scale: 1"=5'

PLOTTED: Friday, February 20, 2026 @ 02:00PM

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	472-2021-085756	2026	130	156



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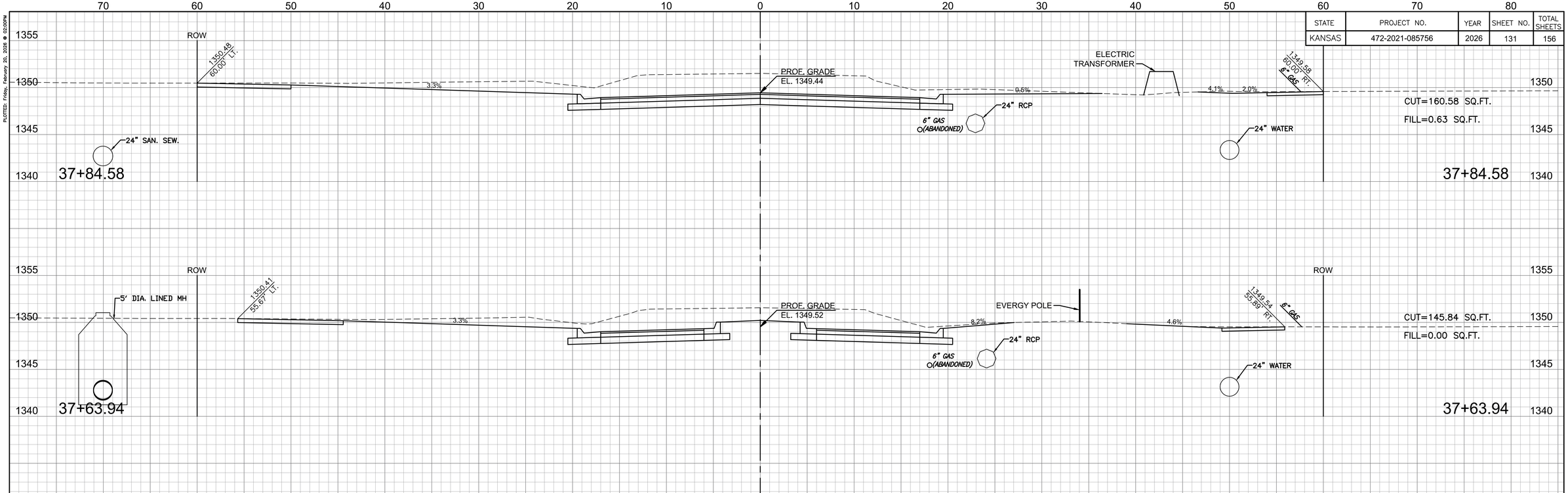
135TH ST. W.
STA. 36+00.00 TO STA. 37+00.00

Scale: 1"=5'

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	472-2021-085756	2026	131	156



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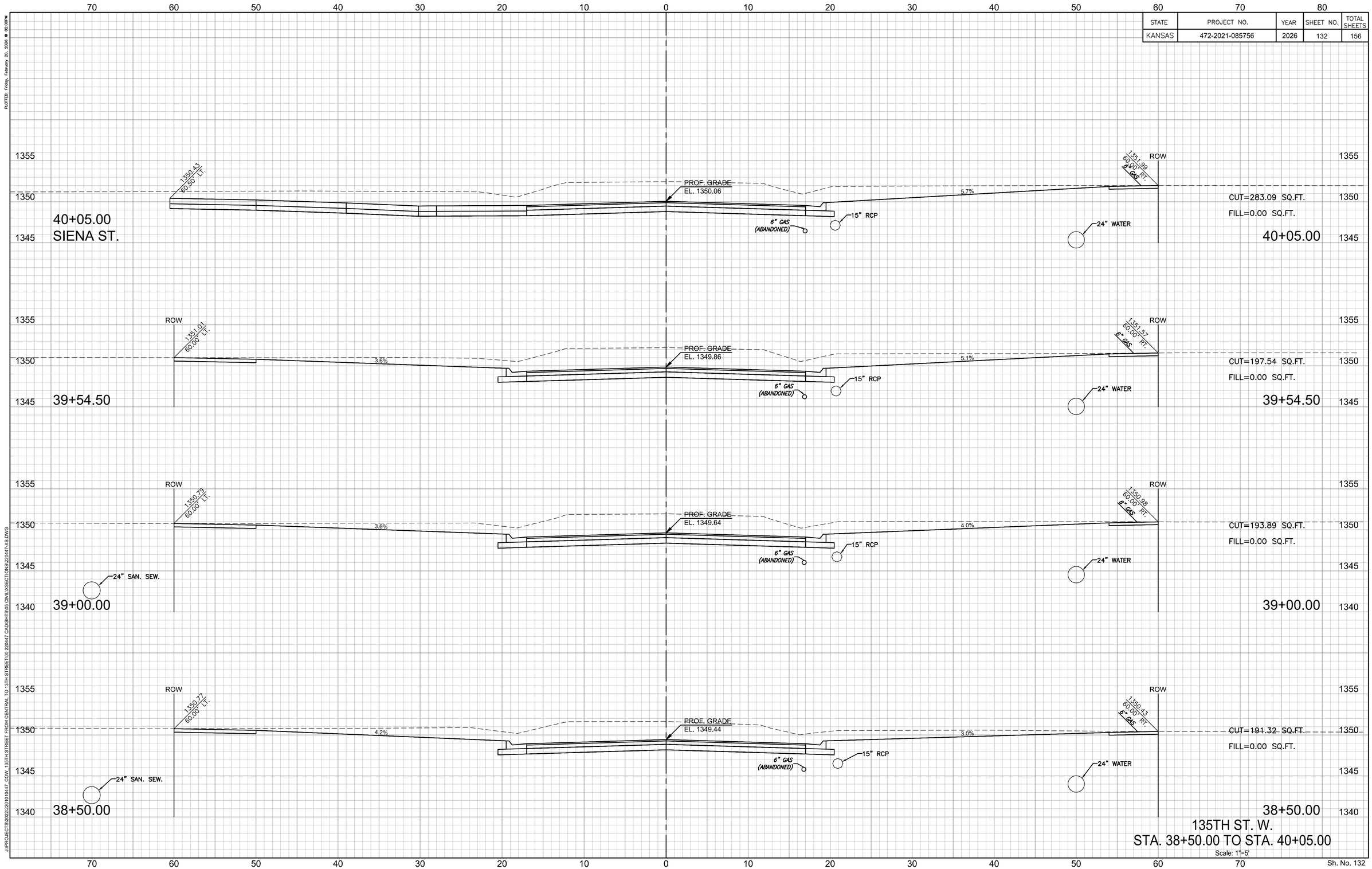
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	472-2021-085756	2026	132	156



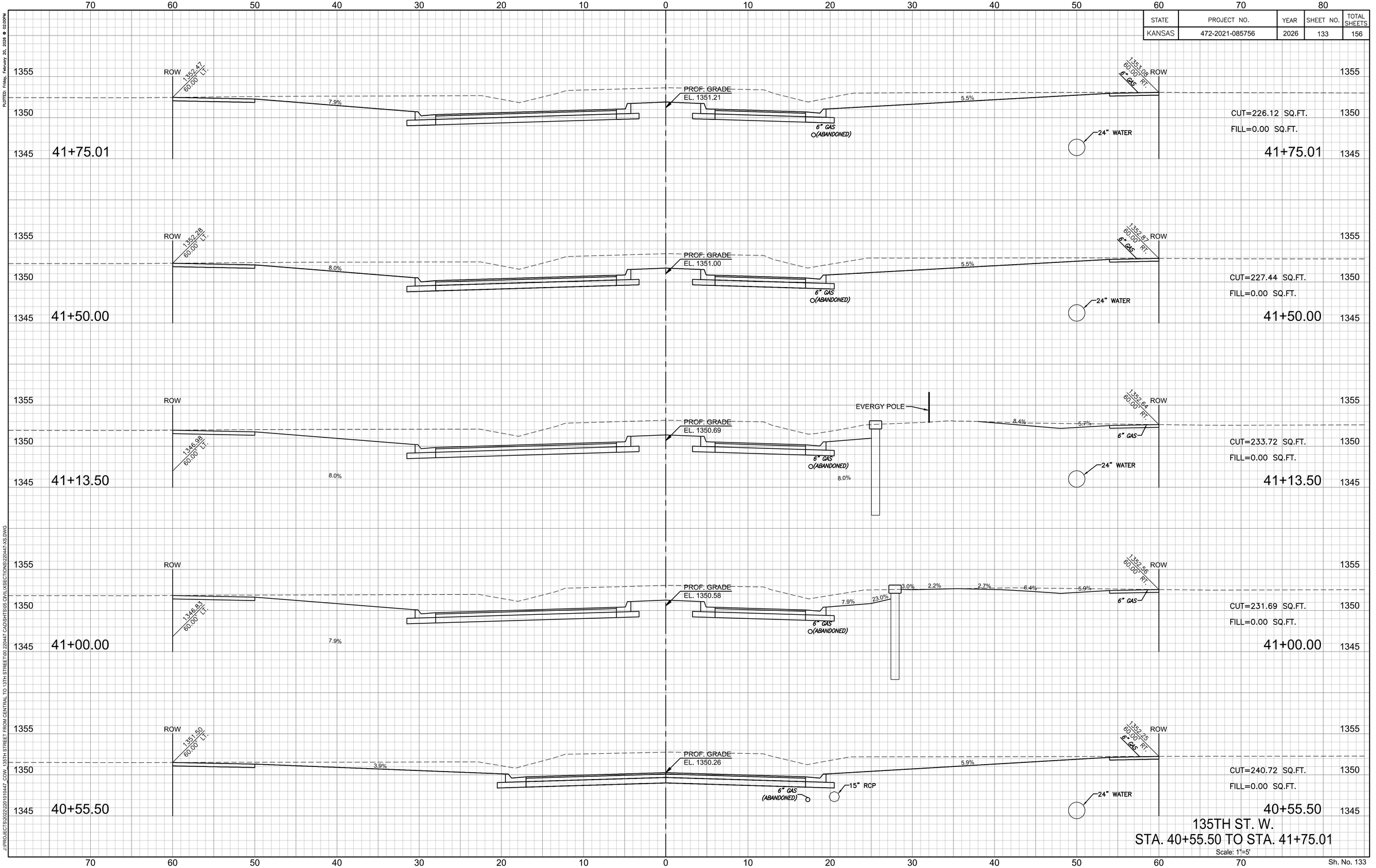
135TH ST. W.
STA. 38+50.00 TO STA. 40+05.00

Scale: 1"=5'

J:\PROJECTS\2022\2201010447.COW_135TH STREET FROM CENTRAL TO 13TH STREET\100 220447 CAD\SHTS\05 CIVIL\XSECTIONS\220447-XS.DWG

PLOTTED: Friday, February 20, 2026 @ 02:00PM

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	472-2021-085756	2026	133	156



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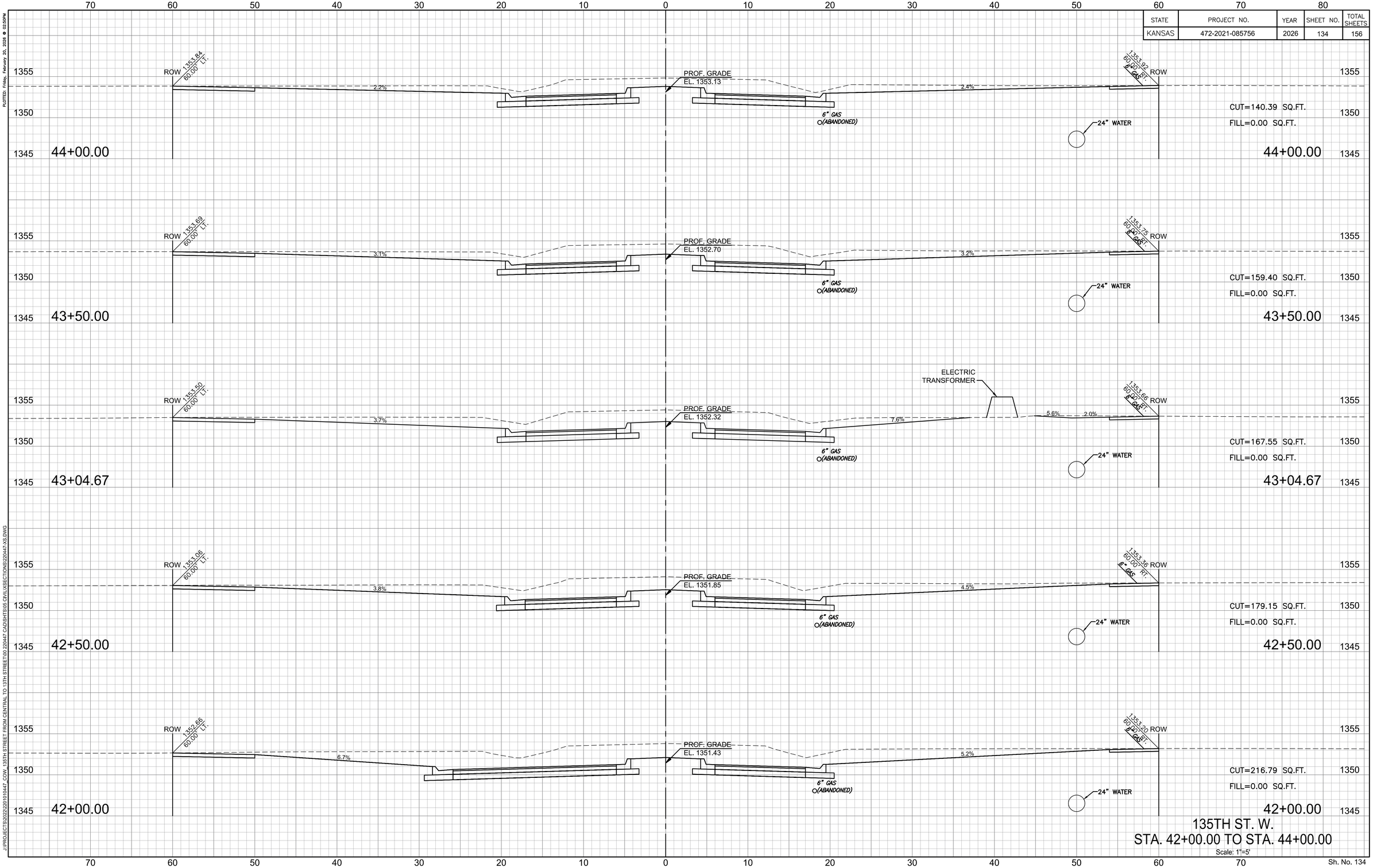
135TH ST. W.
STA. 40+55.50 TO STA. 41+75.01

Scale: 1"=5'

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	472-2021-085756	2026	134	156



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PLOTTED: Friday, February 20, 2026 @ 02:00PM

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	472-2021-085756	2026	135	156

70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80

1355 1350 1345

ROW 1354.51 60.00' LT.

4.7%

PROF. GRADE EL. 1353.02

6" GAS (ABANDONED)

4.6%

1354.59 60.00' RT. 6" GAS

ROW

EXISTING GROUND (BRIDGER @ CENTRAL ADD.)

24" WATER

CUT=171.56 SQ.FT.

FILL=6.61 SQ.FT.

45+34.80

45+34.80

ROW 1354.28 60.00' LT.

2.9%

PROF. GRADE EL. 1353.34

6" GAS (ABANDONED)

2.6%

1354.20 60.00' RT. 6" GAS

ROW

24" WATER

CUT=159.60 SQ.FT.

FILL=0.00 SQ.FT.

45+00.00

45+00.00

1360 1355 1350 1345

ROW 1354.04 60.00' LT.

1.7%

PROF. GRADE EL. 1353.47

4.0%

6" GAS (ABANDONED)

EVERGY POLE

4.7%

4.2%

1353.95 60.00' RT. 6" GAS

ROW

24" WATER

CUT=134.96 SQ.FT.

FILL=0.00 SQ.FT.

44+63.38

44+63.38

ROW 1354.00 60.00' LT.

1.7%

PROF. GRADE EL. 1353.45

6" GAS (ABANDONED)

1.6%

1353.97 60.00' RT. 6" GAS

ROW

CUT=131.18 SQ.FT.

FILL=0.00 SQ.FT.

44+50.00

44+50.00

135TH ST. W.
STA. 44+50.00 TO STA. 45+34.80

Scale: 1"=5'

Sh. No. 135

J:\PROJECTS\2022\2201010447.COW - 135TH STREET FROM CENTRAL TO 13TH STREET\00 220447 CAD\SHTS\05 CIVIL\XSECTIONS\220447-XS.DWG

PLOTTED: Friday, February 20, 2026 @ 02:49PM

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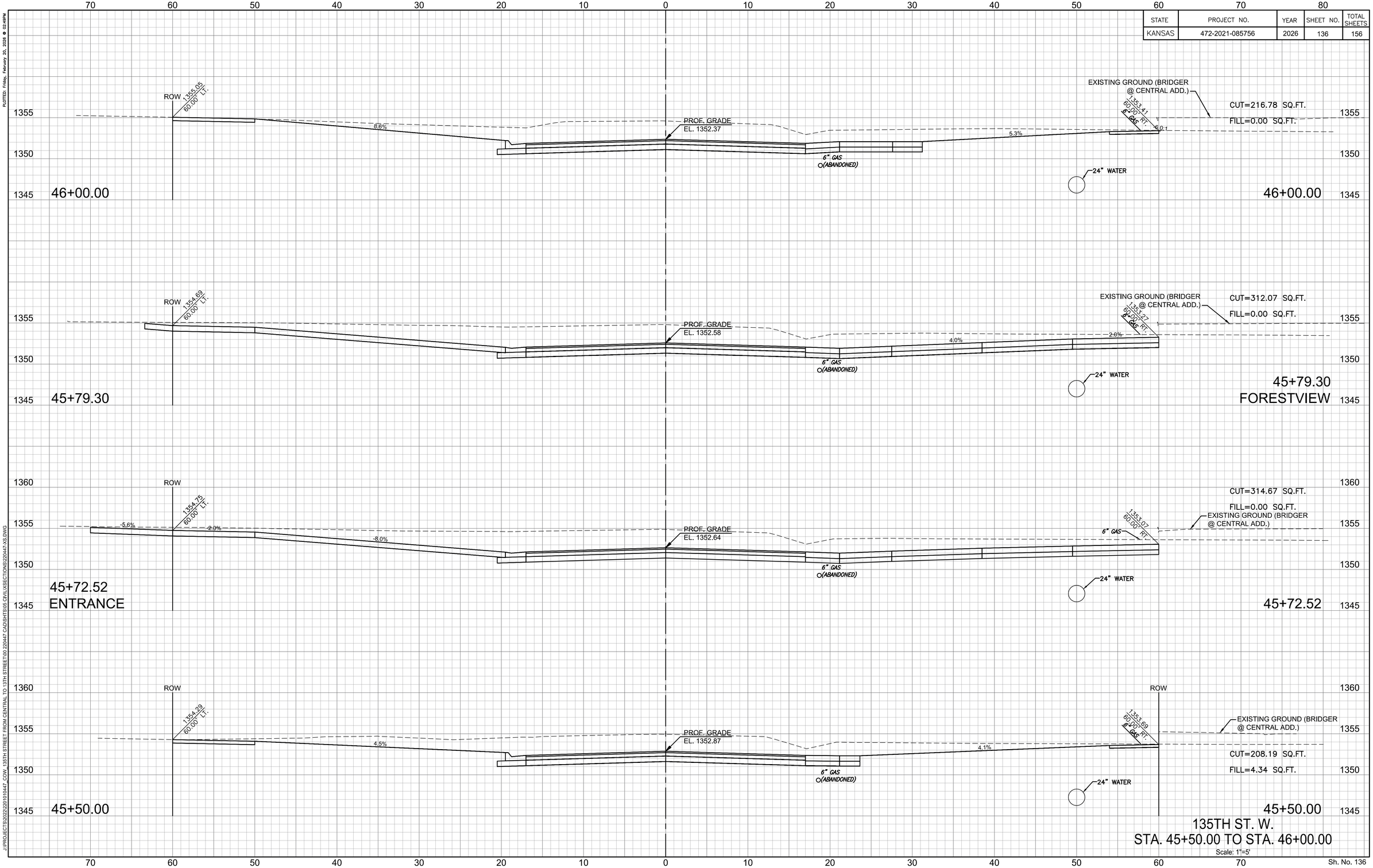

PLOTTED: Friday, February 20, 2026 @ 02:01PM

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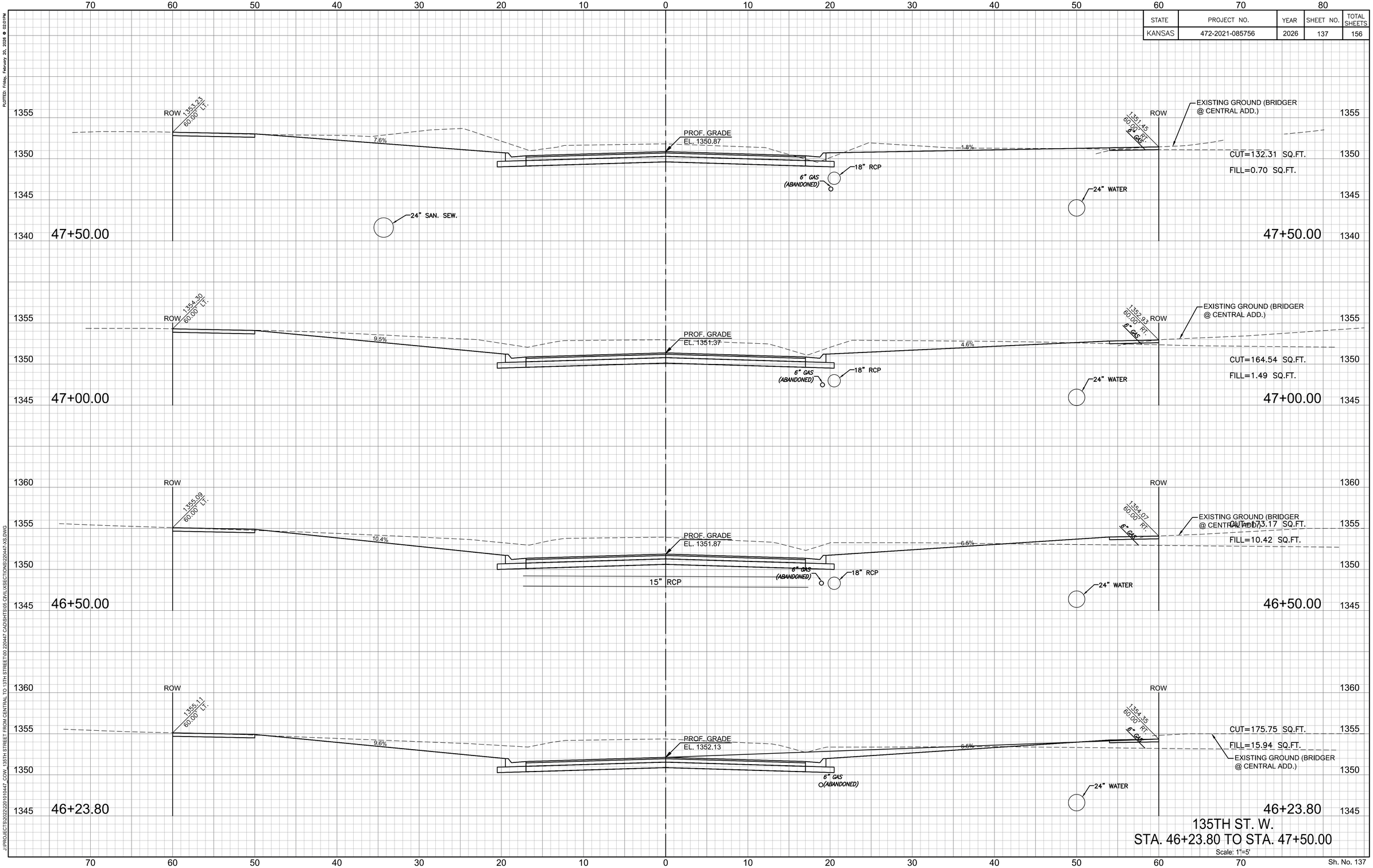
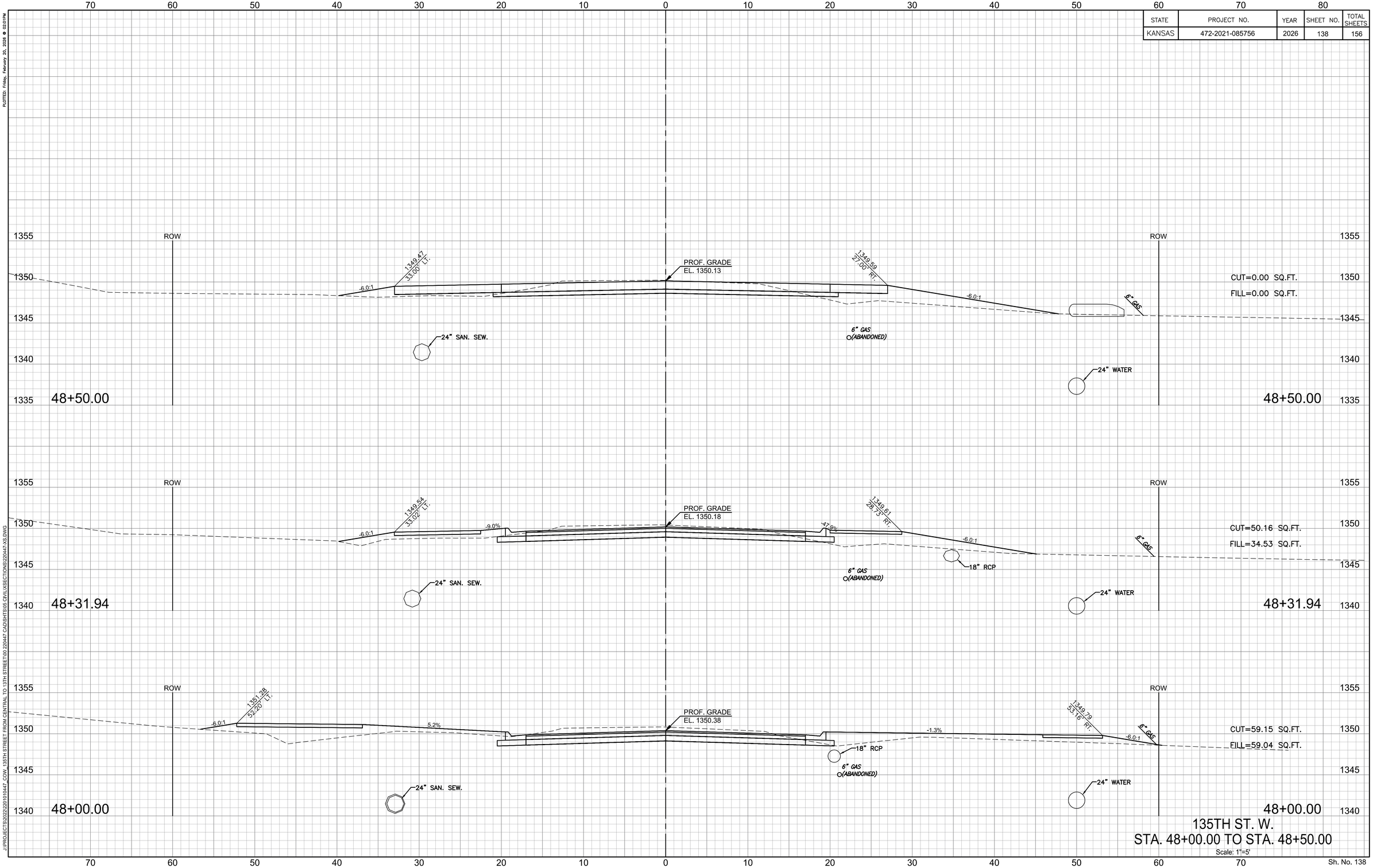


135TH ST. W.
STA. 46+23.80 TO STA. 47+50.00

Scale: 1"=5'

PLOTTED: Friday, February 20, 2026 @ 02:01PM

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	472-2021-085756	2026	138	156



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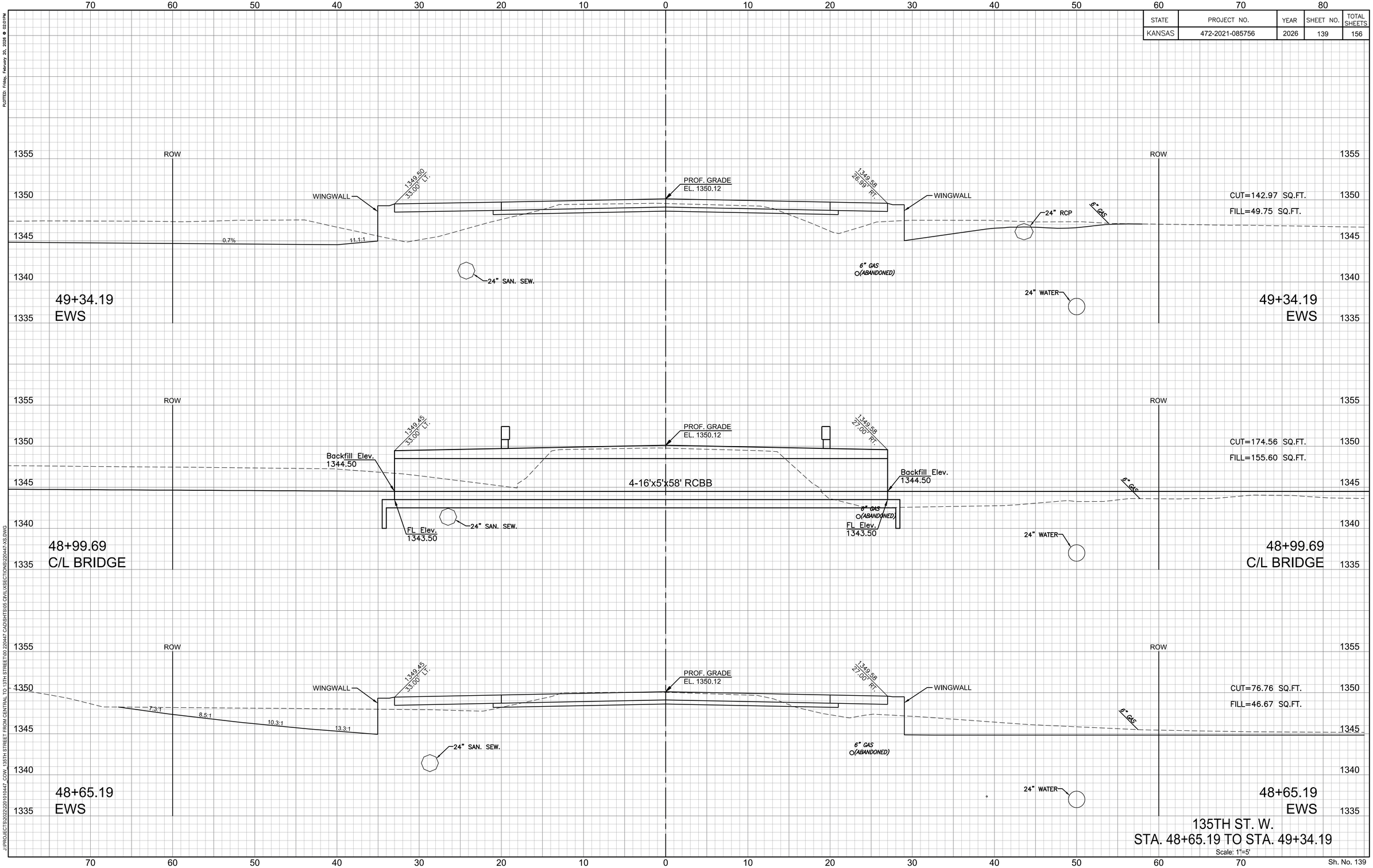
PLOTTED: Friday, February 20, 2026 @ 02:01PM

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	472-2021-085756	2026	139	156



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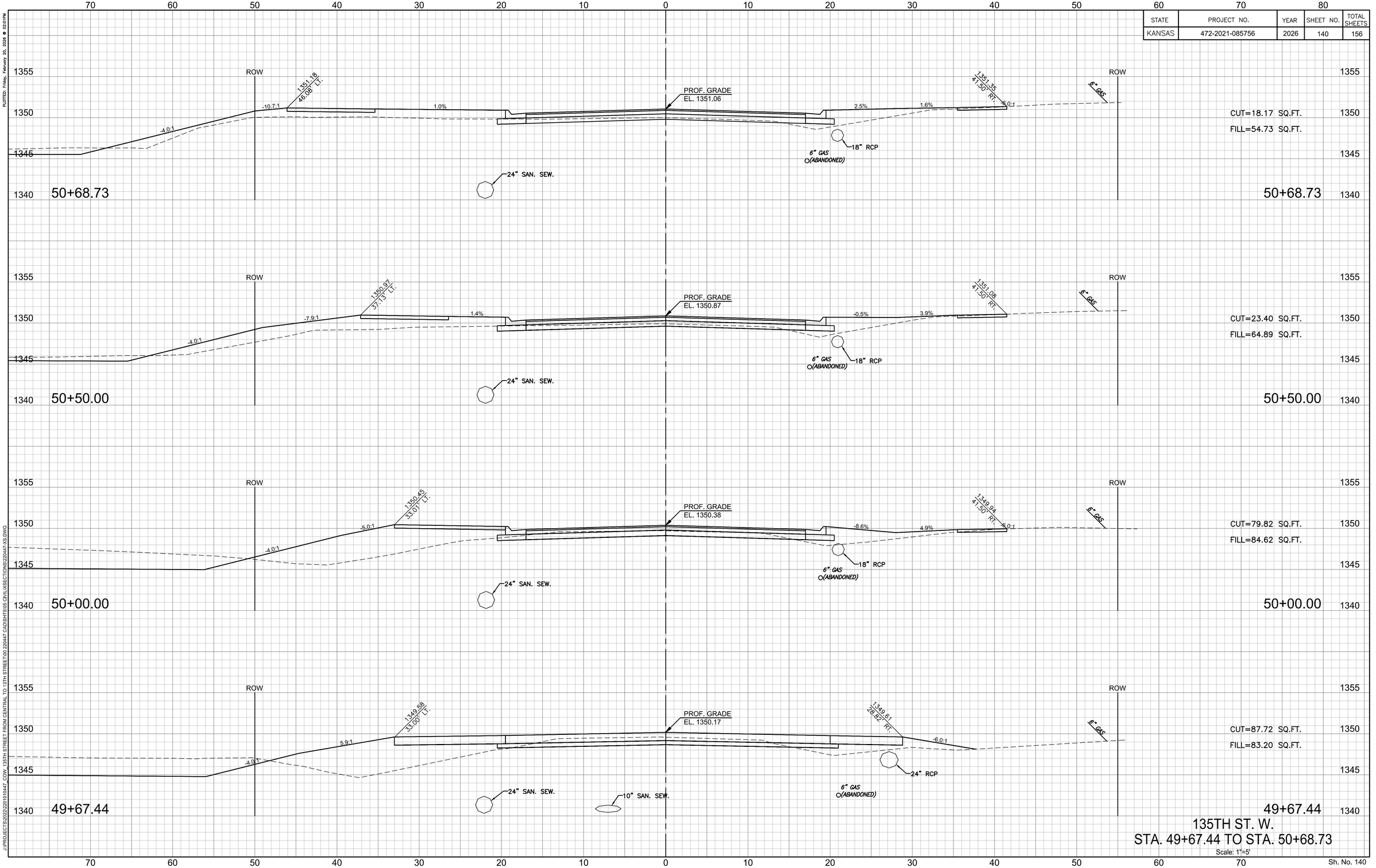
PLOTTED: Friday, February 20, 2026 @ 02:01PM

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	472-2021-085756	2026	140	156

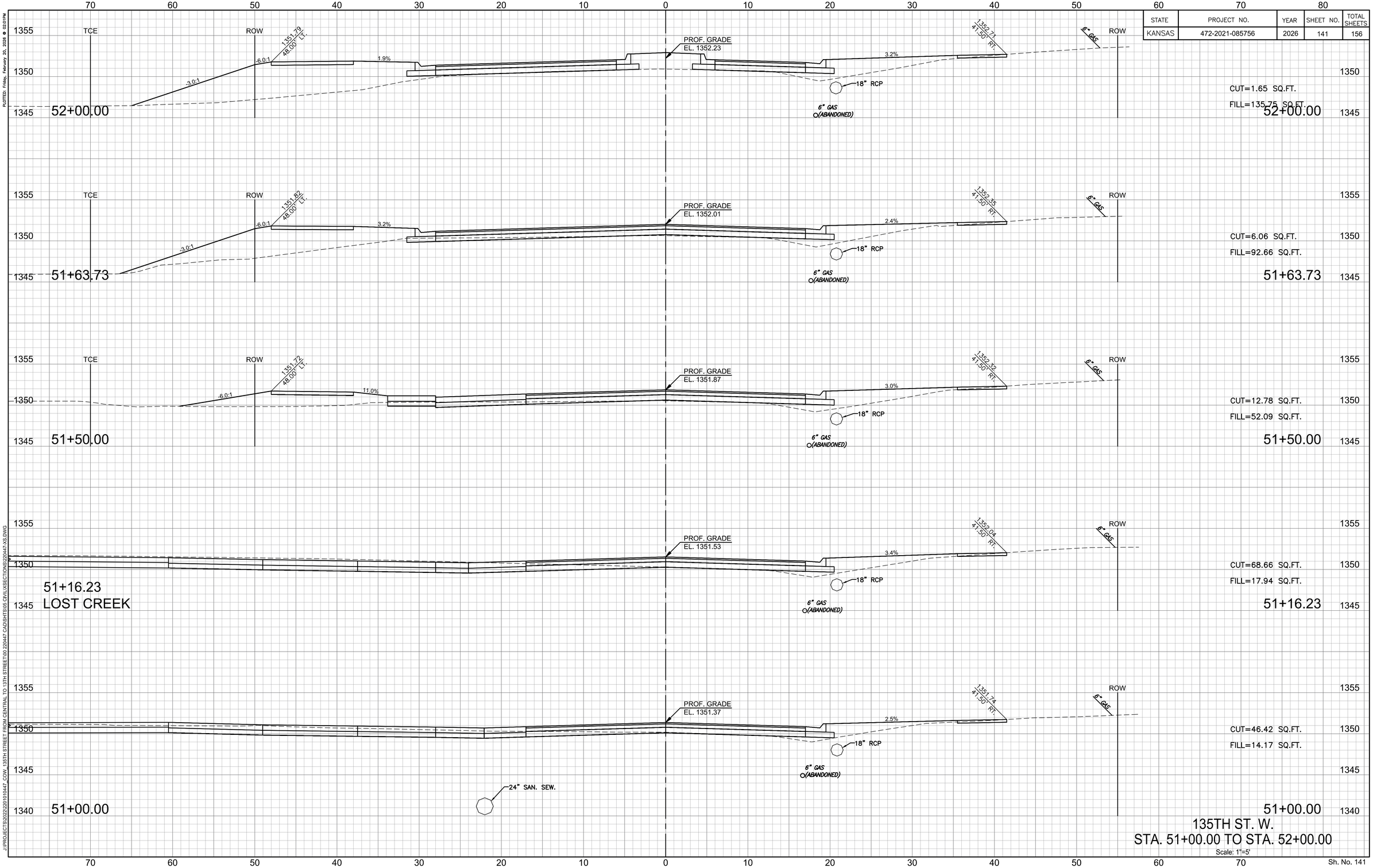


135TH ST. W.
STA. 49+67.44 TO STA. 50+68.73

Scale: 1"=5'

J:\PROJECTS\2022\2201010447.COW - 135TH STREET FROM CENTRAL TO 13TH STREET\100 220447 CAD\SHTS\05 CIVIL\XSECTIONS\220447-XS.DWG

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	472-2021-085756	2026	141	156



135TH ST. W.
STA. 51+00.00 TO STA. 52+00.00
Scale: 1"=5'

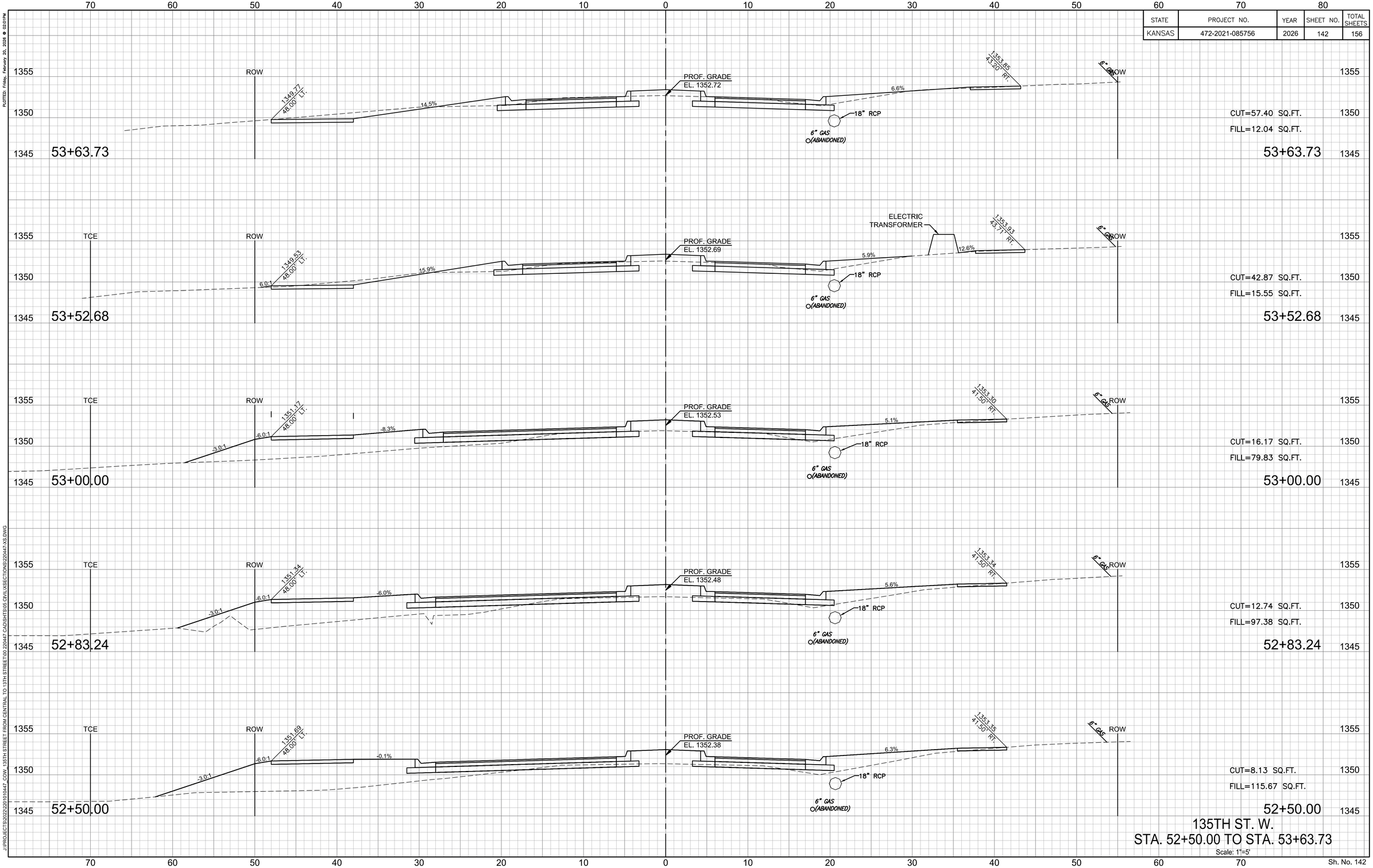
Sh. No. 141

PLOTTED: Friday, February 20, 2026 @ 02:01PM

J:\PROJECTS\2022\220101047 .COW - 135TH STREET FROM CENTRAL TO 13TH STREET\00 220447 CAD\SHTS\03 CIVIL\XSECTIONS\220447-XS.DWG

PLOTTED: Friday, February 20, 2026 @ 02:01PM

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	472-2021-085756	2026	142	156

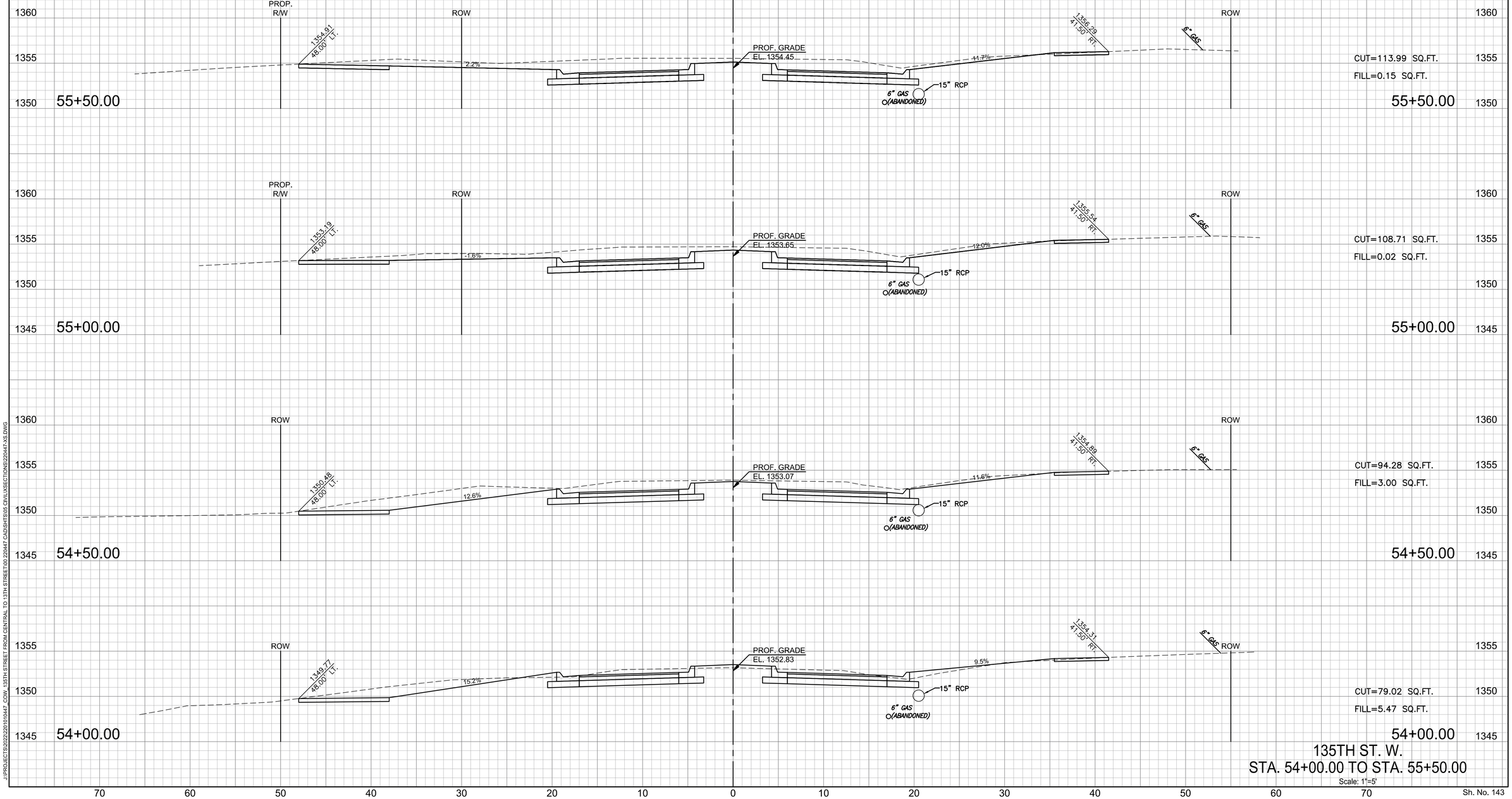


J:\PROJECTS\2022\2201010447.COW_135TH STREET FROM CENTRAL TO 13TH STREET\00 220447 CAD\SHTS\03 CIVIL\XSECTIONS\220447-XS.DWG

135TH ST. W.
STA. 52+50.00 TO STA. 53+63.73
Scale: 1"=5'

PLOTTED: Friday, February 20, 2026 @ 02:01PM

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	472-2021-085756	2026	143	156



135TH ST. W.
STA. 54+00.00 TO STA. 55+50.00

Scale: 1"=5'

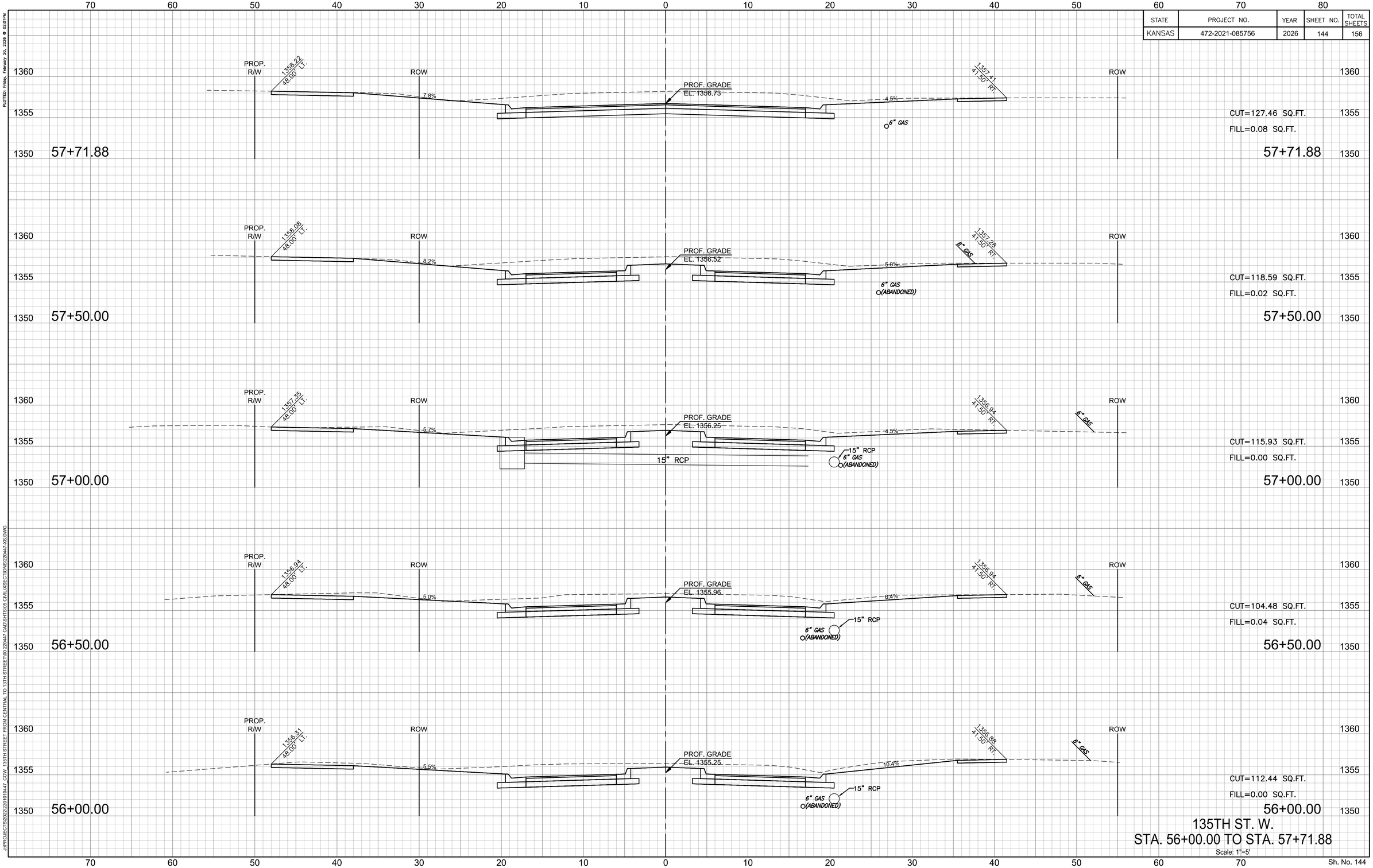
J:\PROJECTS\2022\2201010447.COW - 135TH STREET FROM CENTRAL TO 13TH STREET\00 220447 CAD\SHTS\03 CIVIL\XSECTIONS\220447-XS.DWG

PLOTTED: Friday, February 20, 2026 @ 02:01PM

J:\PROJECTS\2022\2201010447.COW - 135TH STREET FROM CENTRAL TO 13TH STREET\100 220447 CAD\SHTS\05 CIVIL\XSECTIONS\220447-XS.DWG

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	472-2021-085756	2026	144	156

70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80

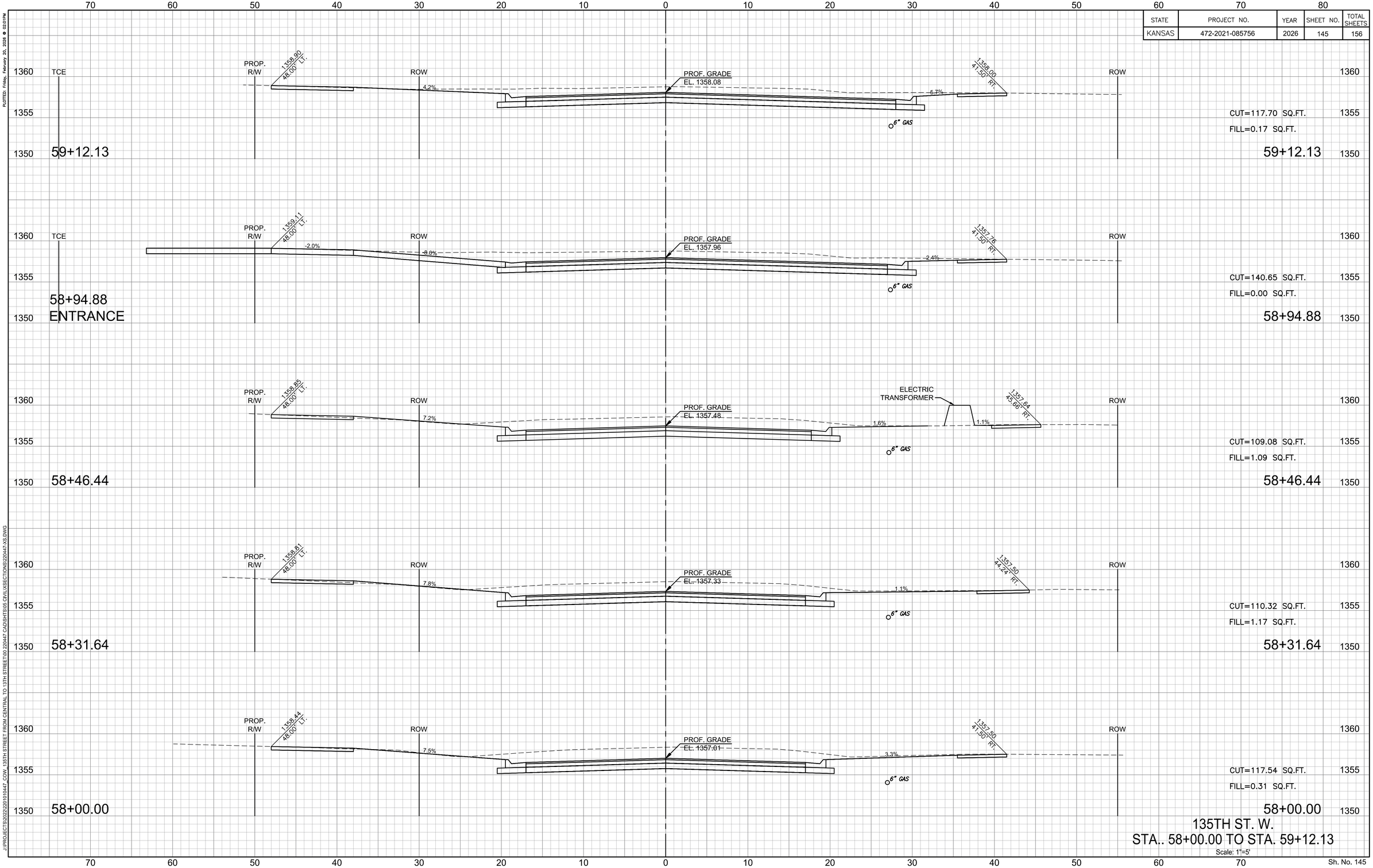


135TH ST. W.
STA. 56+00.00 TO STA. 57+71.88

Scale: 1"=5'

Sh. No. 144

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	472-2021-085756	2026	145	156



135TH ST. W.
STA.. 58+00.00 TO STA. 59+12.13
Scale: 1"=5'

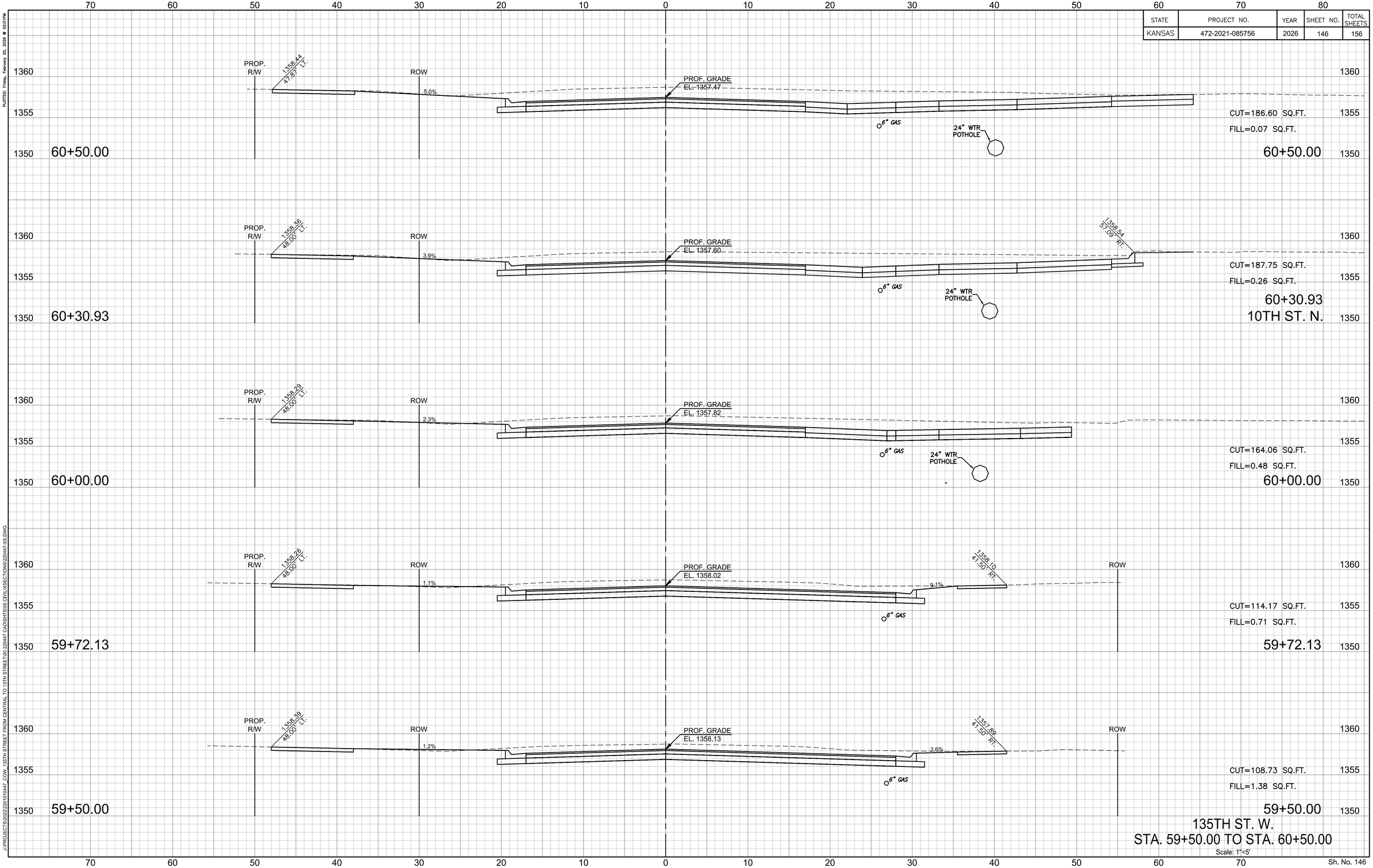
Sh. No. 145

PLOTTED: Friday, February 20, 2026 @ 02:01PM

J:\PROJECTS\2022\220101047.COW_135TH STREET FROM CENTRAL TO 13TH STREET\00 220447 CAD\SHTS\03 CIVIL\XSECTIONS\220447-XS.DWG

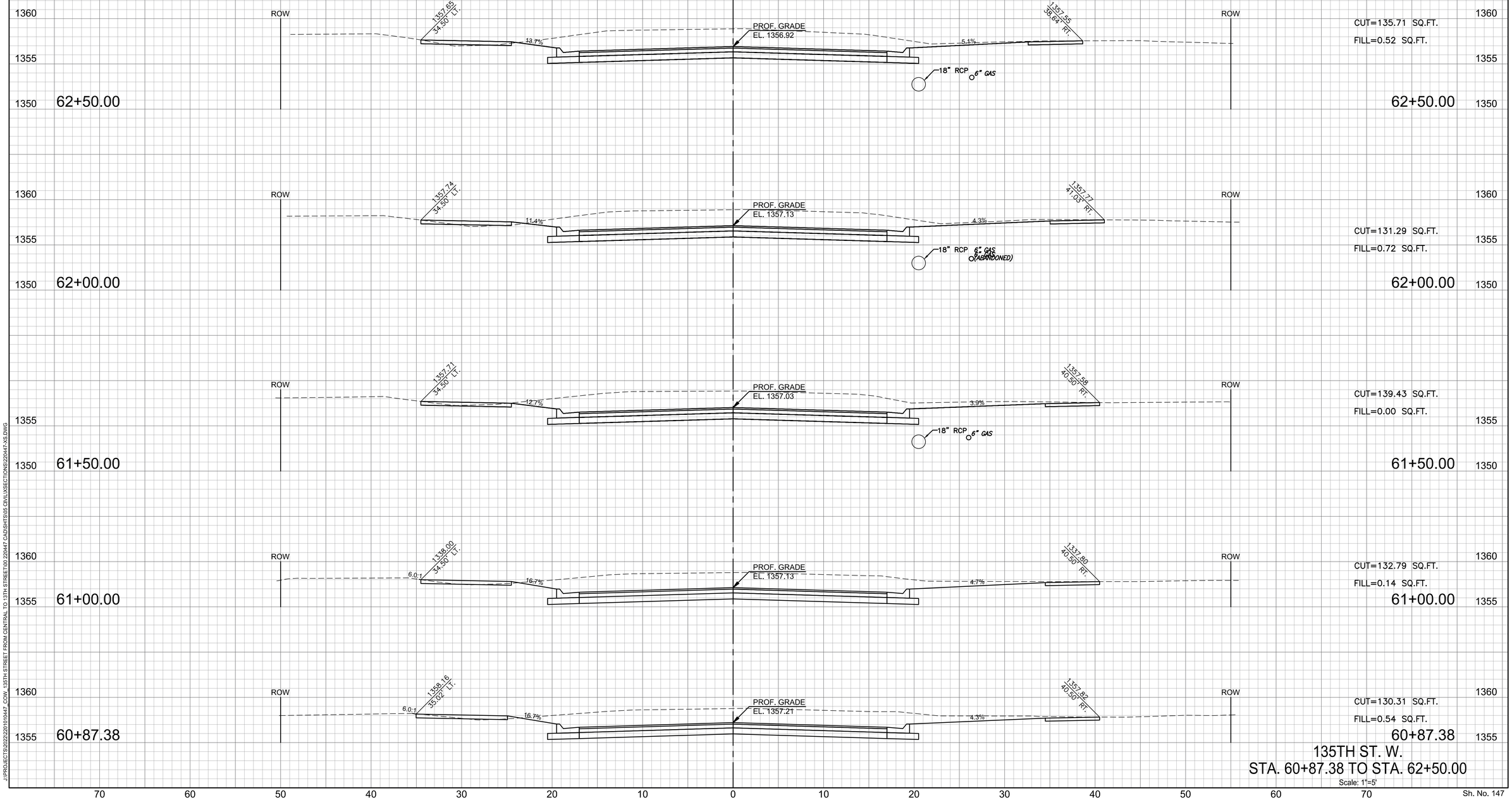
PLOTTED: Friday, February 20, 2026 @ 02:01PM

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	472-2021-085756	2026	146	156



J:\PROJECTS\2022\220101\0447_COW - 135TH STREET FROM CENTRAL TO 13TH STREET\00 220447 CAD\SHTS\05 CIVIL\XSECTIONS\220447-XS.DWG

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	472-2021-085756	2026	147	156



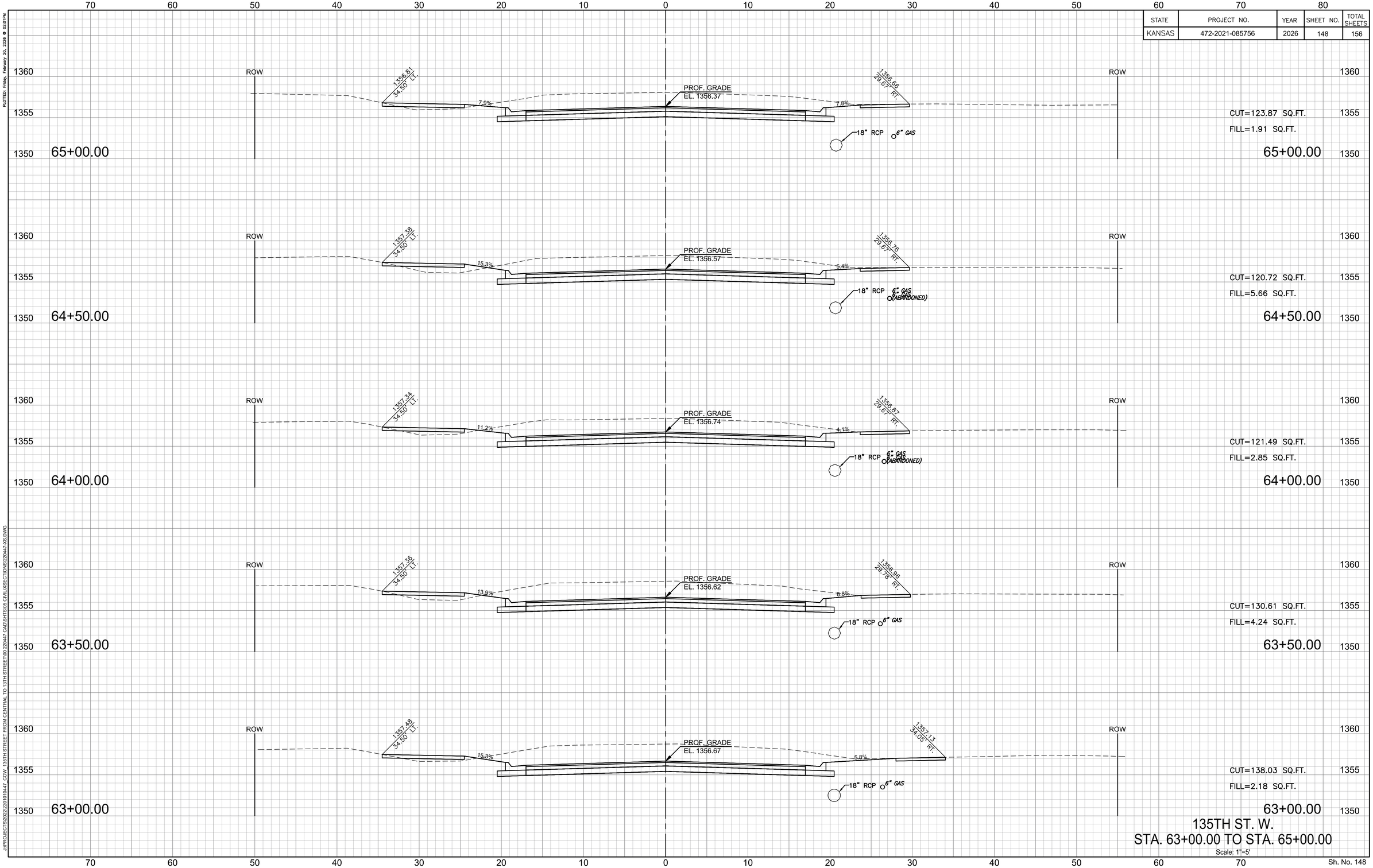
135TH ST. W.
STA. 60+87.38 TO STA. 62+50.00

Scale: 1"=5'

Sh. No. 147

PLOTTED: Friday, February 20, 2026 @ 02:47PM
J:\PROJECTS\2022\2201010447.COW - 135TH STREET FROM CENTRAL TO 13TH STREET\00 220447 CAD\SHTS\05 CIVIL\XSECTIONS\220447-XS.DWG

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	472-2021-085756	2026	148	156



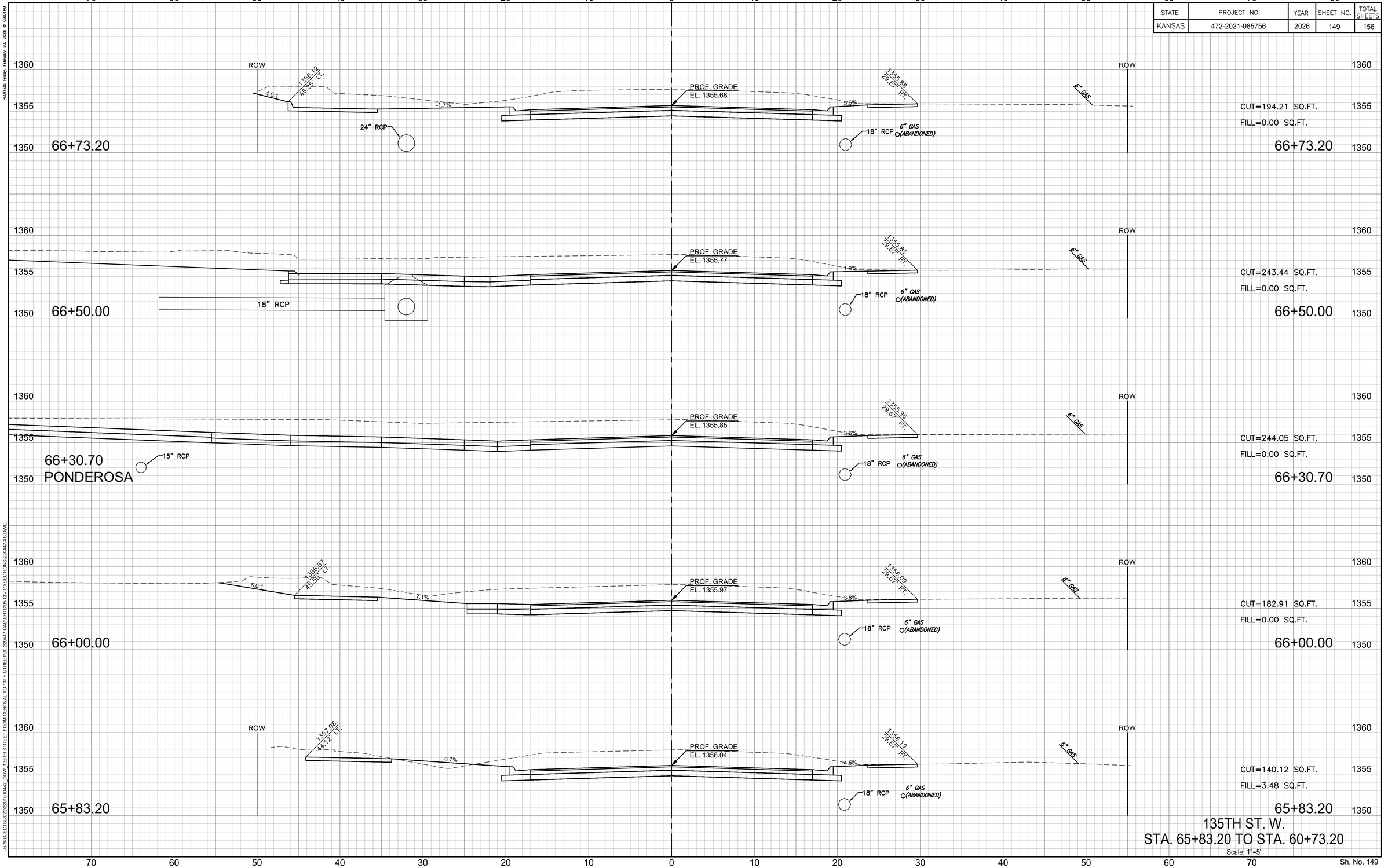
135TH ST. W.
STA. 63+00.00 TO STA. 65+00.00

Scale: 1"=5'

PLOTTED: Friday, February 20, 2026 @ 02:01PM
J:\PROJECTS\2022\220101047.COW_135TH STREET FROM CENTRAL TO 13TH STREET\00 220447 CAD\SHTS\03 CIVIL\XSECTIONS\220447-XS.DWG

PLOTTED: Friday, February 20, 2026 @ 02:01PM

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	472-2021-085756	2026	149	156



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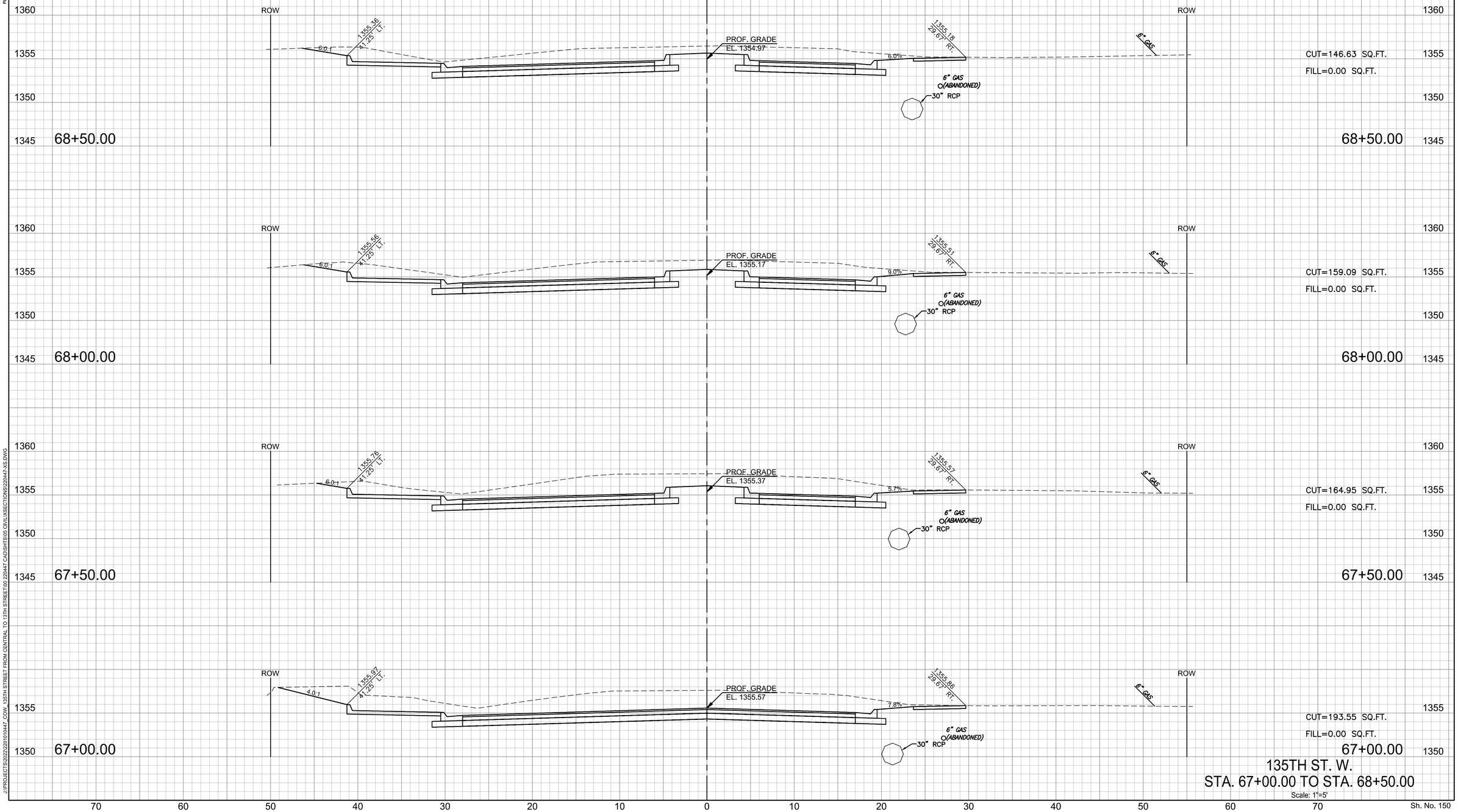
135TH ST. W.
STA. 65+83.20 TO STA. 60+73.20
Scale: 1"=5'

PLOTTED: Friday, February 20, 2026 @ 02:01PM

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	472-2021-085756	2026	150	156

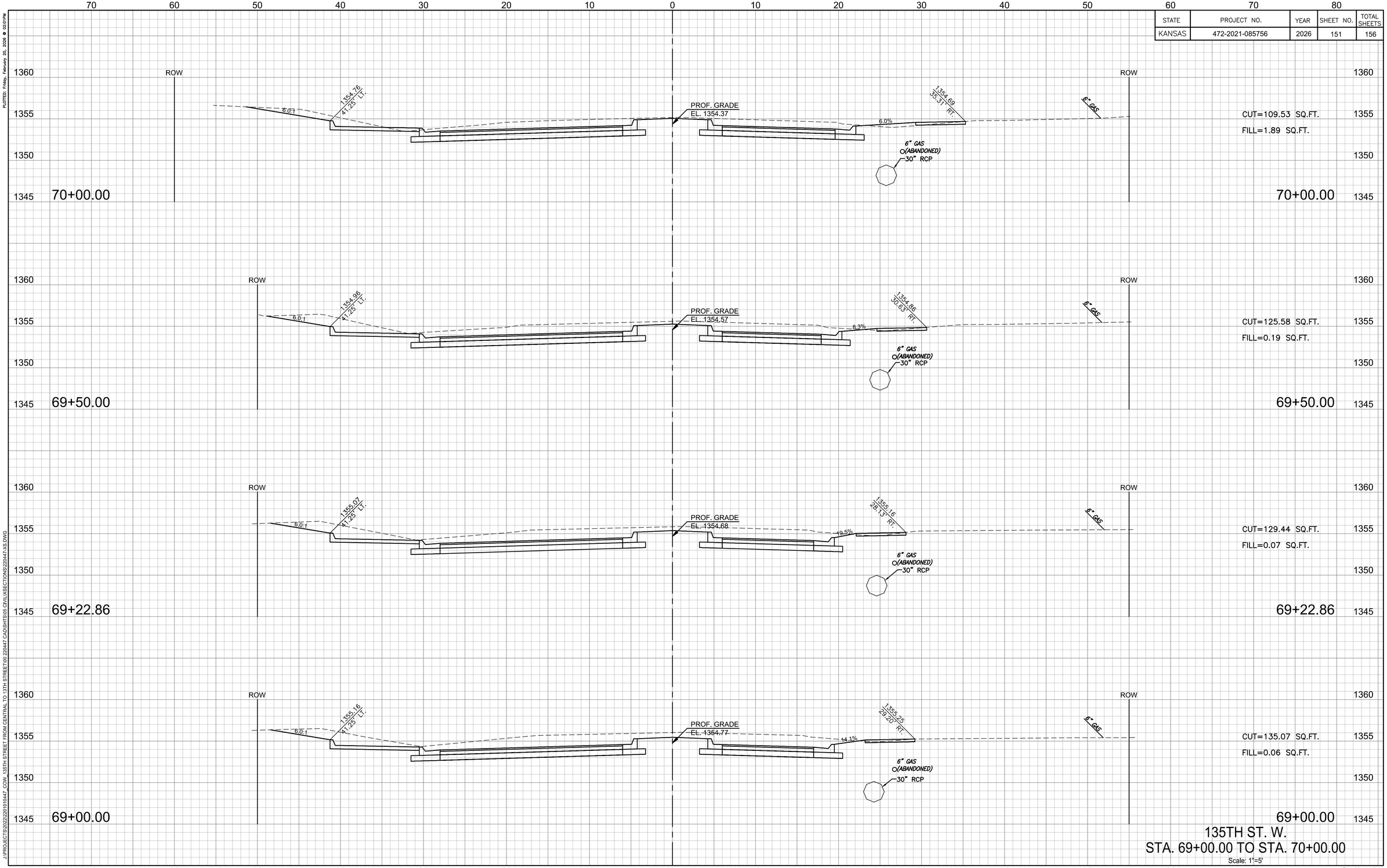


J:\PROJECTS\2022\2201010447.COW_135TH STREET FROM CENTRAL TO 13TH STREET\00 220447 CAD\SHTS\03 CIVIL\XSECTIONS\220447-XS.DWG

135TH ST. W.
STA. 67+00.00 TO STA. 68+50.00

Scale: 1"=5'

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	472-2021-085756	2026	151	156



135TH ST. W.
STA. 69+00.00 TO STA. 70+00.00

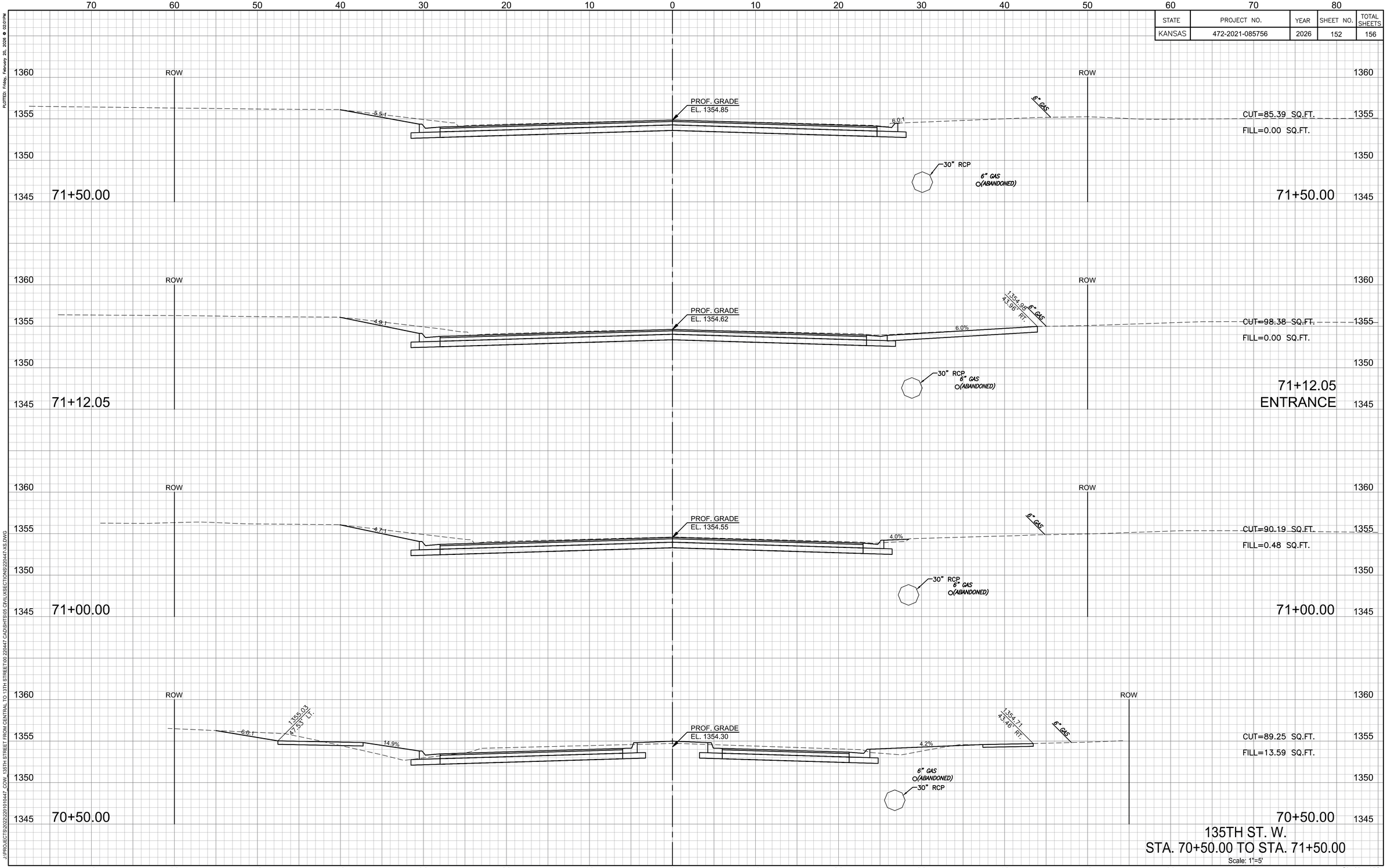
Scale: 1"=5'

Sh. No. 151

PLOTTED: Friday, February 20, 2026 @ 02:01PM

J:\PROJECTS\2022\2201010447.COM_135TH STREET FROM CENTRAL TO 13TH STREET\100 220447 CAD\SHTS\05 CIVIL\XSECTIONS\220447-XS.DWG

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	472-2021-085756	2026	152	156



PLOTTED: Friday, February 20, 2026 @ 02:01PM

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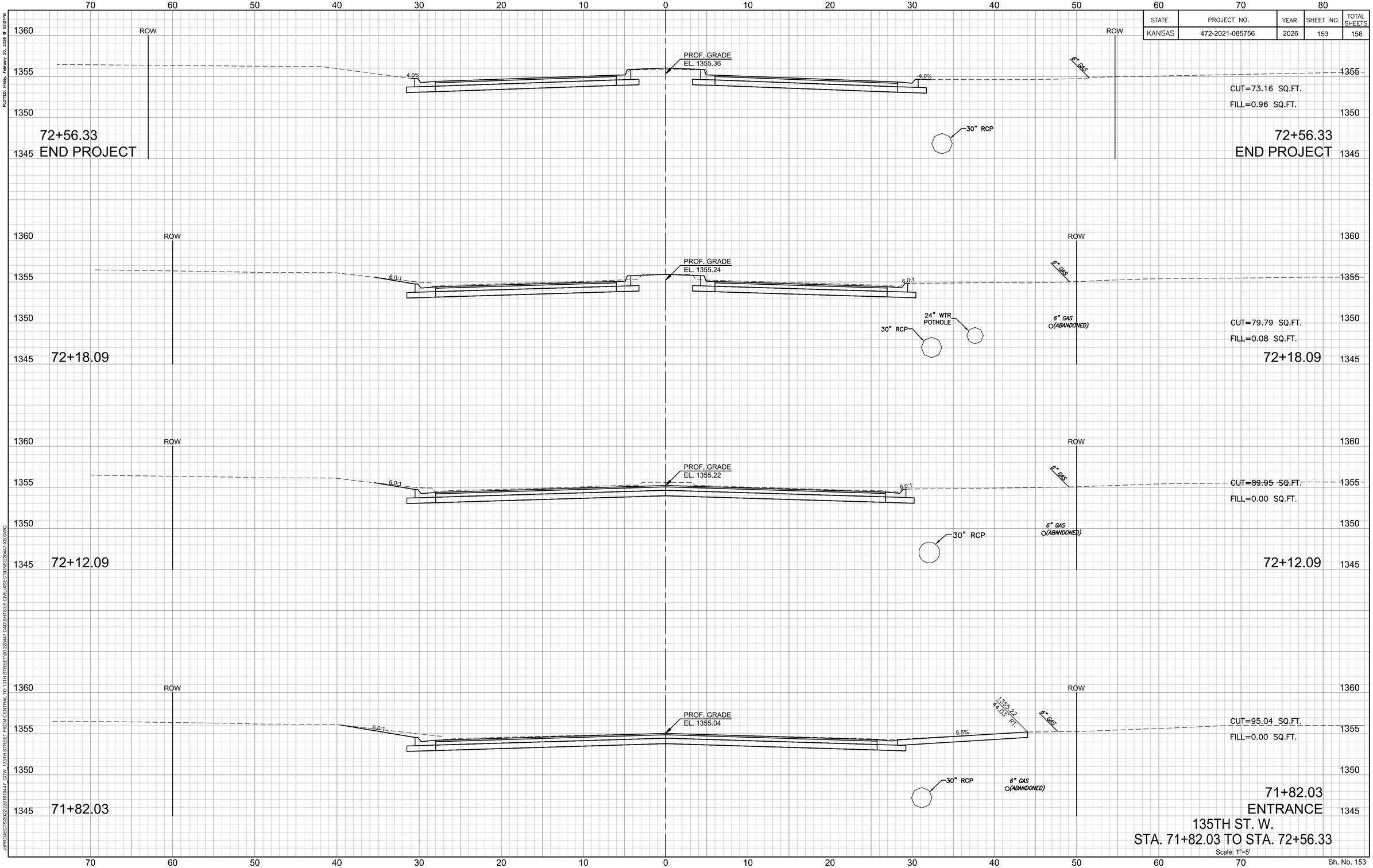
PLOTTED: Friday, February 20, 2026 @ 02:01PM

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	472-2021-085756	2026	153	156



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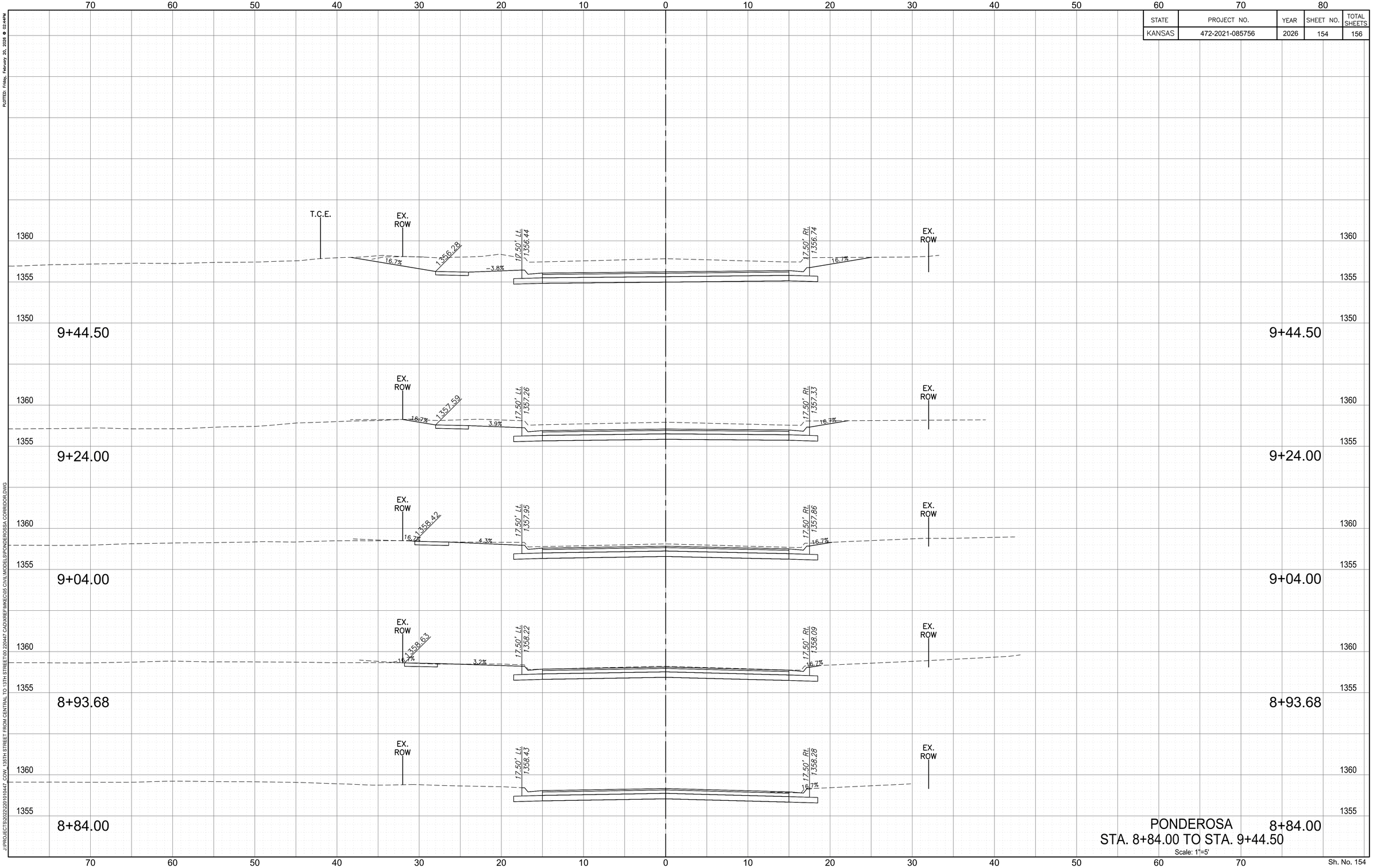
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	472-2021-085756	2026	154	156



PONDEROSA

STA. 8+84.00 TO STA. 9+44.50

Scale: 1"=5'

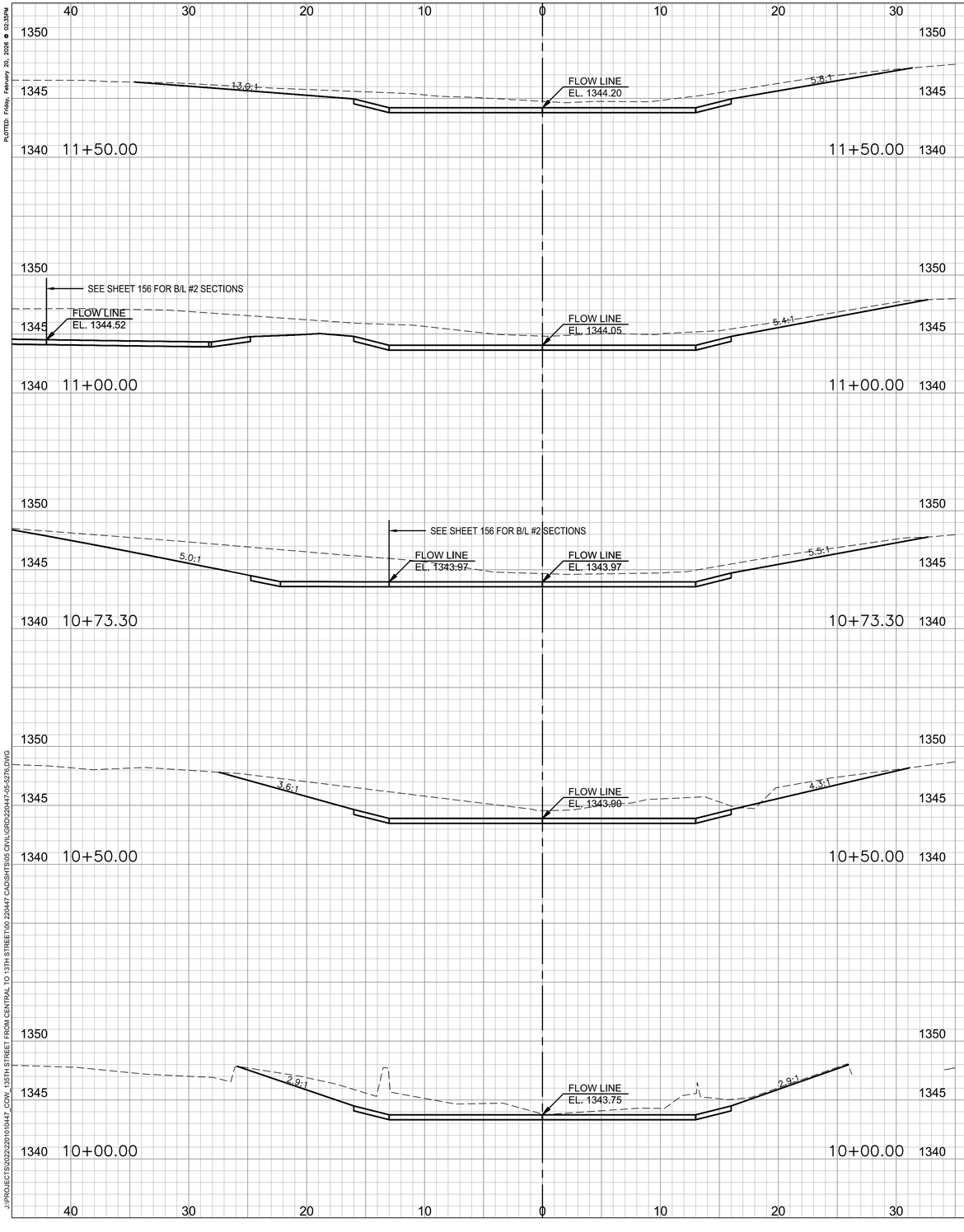
Sh. No. 154

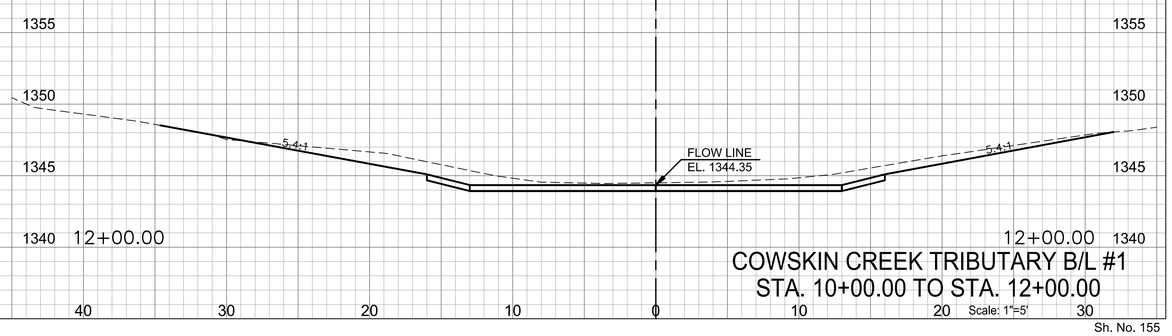
PLOTTED: Friday, February 20, 2026 @ 02:44PM

J:\PROJECTS\2022\220101047.COW_135TH STREET FROM CENTRAL TO 13TH STREET\00 220447 CAD\XREF\MKEC05 CIVIL\MODELS\PONDEROSSA CORRIDOR.DWG

PLOTTED: Friday, February 20, 2026 @ 02:35PM

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	472-2021-085756	2026	155	156





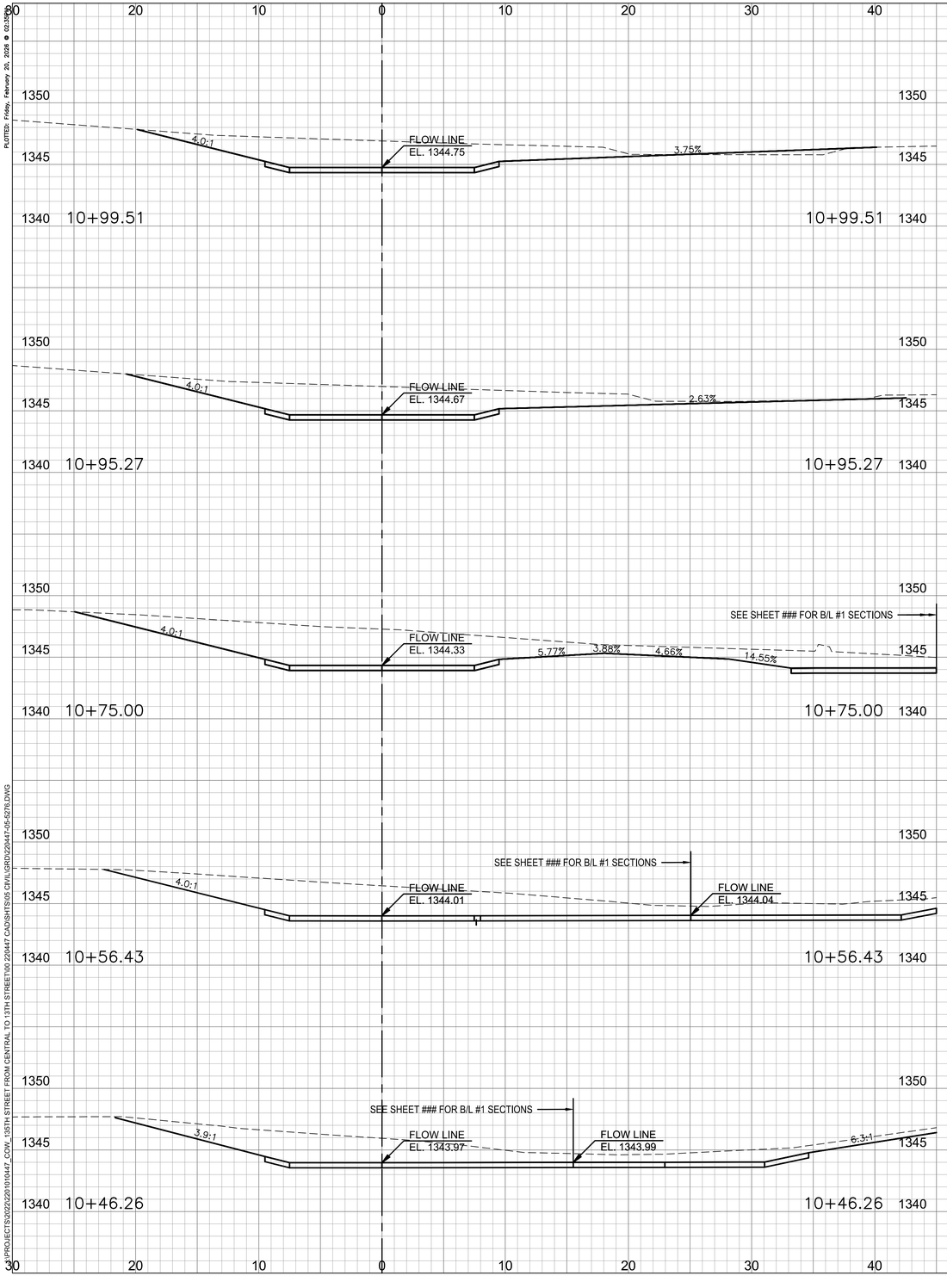
COWSKIN CREEK TRIBUTARY B/L #1
STA. 10+00.00 TO STA. 12+00.00

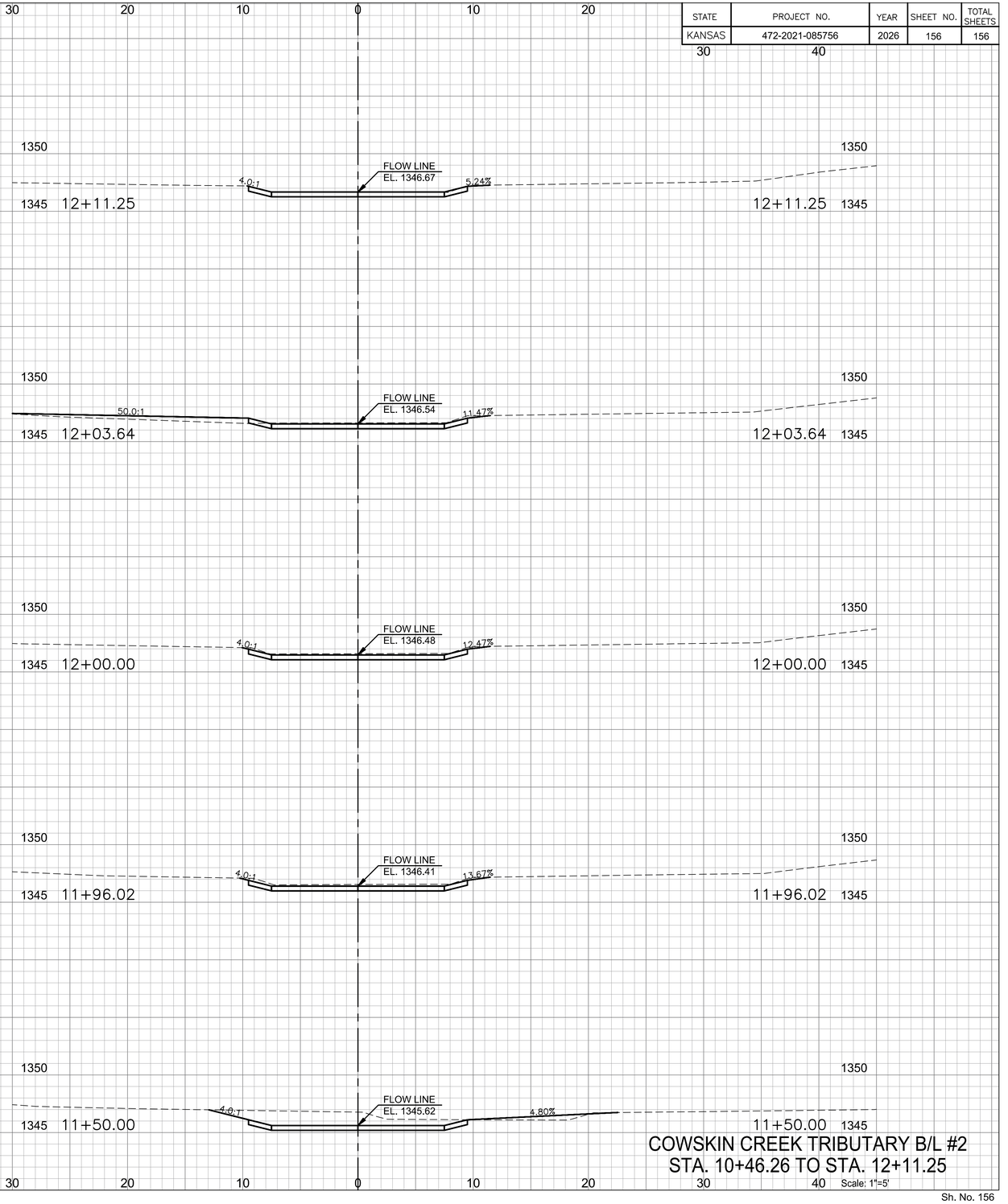
Scale: 1"=5'

Sh. No. 155

J:\PROJECTS\2022\2201010447_COW_135TH STREET FROM CENTRAL TO 13TH STREET\100 220447 CAD\SHTS\05 CIVIL\GRD\220447-05-5276.DWG

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	472-2021-085756	2026	156	156





COWSKIN CREEK TRIBUTARY B/L #2
STA. 10+46.26 TO STA. 12+11.25

Scale: 1"=5'

Sh. No. 156

PLOTTED: Friday, February 20, 2026 @ 02:32pm
J:\PROJECTS\2022\2201010447_COW_135TH STREET FROM CENTRAL TO 13TH STREET\00 220447 CAD\SHTS\05 CIVIL\GRD\220447-05-5276.DWG