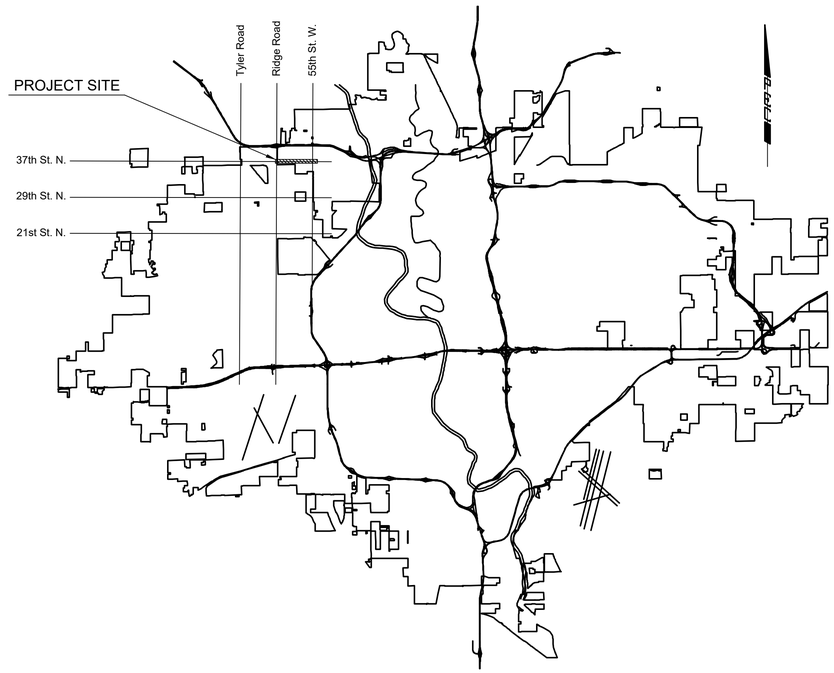
PAVING AND INCIDENTAL DRAINAGE IMPROVEMENTS

CONSTRUCTION PLANS FOR

37TH ST N. SIDEWALK-RIDGE TO RIDGEPORT

CITY OF WICHITA PROJECT NO. 472-2020-085614
ORG NO. 40102920

INDEX OF SHEETS



CITY OF WICHITA, KANSAS

GARY JANZEN, P.E. - CITY ENGINEER

FEBRUARY 2021

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303 SOUTH TOPEKA
WICHITA, KS 67202
316-262-2691 www.pec1.com

CITY OF WICHITA

RILEY J. SCHMITZ
LICENSED
24168
02/08/2021
KANSAS
PROFESSIONAL ENGINEER

37TH ST N. SIDEWALK
RIDGE TO RIDGEPORT

GARY JANZEN, P.E. - CITY ENGINEER
CITY OF WICHITA PROJECT NO. 472-2020-085614
SEDGWICK COUNTY, KANSAS

Issue:		

JOB NO.	207042-001
DATE	FEBRUARY 2021
PM	BMM
DESIGNED BY	KMS
DRAWN BY	BJS
CHECKED BY	RJS

TITLE SHEET

C001
1 OF 41

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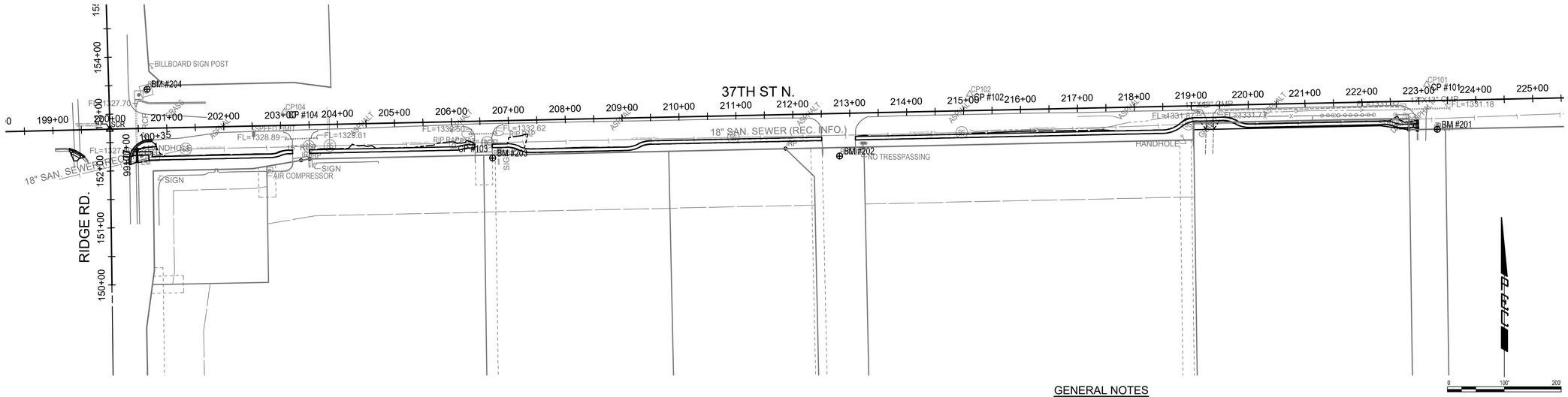

CONTROL POINTS

CP-101
N: 1709454.964 E: 1625072.856
1/2" REBAR W/ PEC C.P. CAP ON NORTH SIDE 37TH STREET NORTH IN CENTERLINE OF RIDGE PORT TO THE SOUTH.
1. 9.6' S TO THE NORTH EDGE OF ASPHALT 37TH STREET.

CP-102
N: 1709437.784 E: 1624270.24
1/2" REBAR W/ PEC C.P. CAP ON NORTH SIDE 37TH STREET NORTH
1. 9.6' S TO THE NORTH EDGE OF ASPHALT 37TH STREET NORTH.
2. 260' E TO THE CENTERLINE OF ESTANCIA STREET TO NORTH.

CP-103
N: 1709347.06 E: 1623363.862
1/2" REBAR W/ PEC C.P. CAP SOUTH SIDE 37TH STREET, WEST OF ENTRANCE FOR CHILDREN'S DENTAL PROFESSIONALS
1. 36.50' E TO THE WEST EDGE OF THE CONCRETE DRIVE FOR CHILDREN'S DENTAL PROFESSIONALS
2. 36.80' N TO THE SOUTH EDGE OF ASPHALT OF 37TH STREET NORTH
3. 35.60' NE TO THE TOP CENTER WEST END OF RCP

CP-104
N: 1709406.584 E: 1623066.118
1/2" REBAR W/ PEC C.P. CAP NORTH SIDE OF 37TH STREET, 350' EAST OF INTERSECTION OF 37TH AND RIDGE RD.
1. 7.25' S TO THE NORTH EDGE OF ASPHALT 37TH STREET
2. 24.30' E TO THE CENTERLINE OF DRIVE TO THE NORTH
3. 15.20' NNE TO THE TOP CENTER OF THE SOUTH OF TWO RCPS AT WEST SIDE OF DRIVE.

BENCHMARK LIST

BMK #201
CHISELED SQUARE ON TOP OF CURB ON EAST SIDE RIDGE PORT, SOUTH OF SIDEWALK RAMP
EL= 1333.04

BMK #202
CHISELED SQUARE ON THE NORTH END OF MEDIAN IN CENTER OF EAST ENTRANCE OF RIDGE MEDICAL PLAZA
EL= 1336.04

BMK #203
CHISELED SQUARE ON TOP OF EAST CURB OF WEST ENTRANCE TO CHILDRENS DENTAL PROFESSIONALS
EL= 1334.87

BMK #204
CHISELED SQUARE ON THE NORTHEAST CORNER OF CONCRETE PAD FOR TRAFFIC SIGNAL MANHOLE AT NORTHEAST CORNER OF 37TH AND RIDGE ROAD.
EL= 1330.31

GENERAL NOTES

1. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE SAFETY REGULATIONS. ALL CONSTRUCTION AND MATERIALS SHALL BE COMPLETED FOLLOWING CURRENT CITY OF WICHITA STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

2. THE CONTRACTOR MUST NOTIFY THE FOLLOWING IN CASE OF AN EMERGENCY:

EMERGENCY DISPATCH	911
AT&T	1-800-246-8464
BLACK HILLS ENERGY	1-800-694-8989
CITY OF WICHITA WATER	1-316-219-8921
CITY OF WICHITA SEWER	1-316-219-8921
CITY OF WICHITA STORM WATER	1-316-268-4090
CITY OF WICHITA TRAFFIC	1-316-268-4034
COX COMMUNICATIONS	1-888-249-3530
KANSAS GAS SERVICE	1-888-482-4950
EVERGY	1-800-544-4857

3. UTILITY SERVICE LINES, POLES, ETC. ARE TO BE ADJUSTED AS NECESSARY BY OTHERS PRIOR TO CONSTRUCTION UNLESS THE PLANS SPECIFICALLY CALL FOR THEIR ADJUSTMENT BY THE CONTRACTOR OR UNLESS THE PLANS SPECIFICALLY IDENTIFY A UTILITY TO BE ADJUSTED BY ITS OWNER DURING CONSTRUCTION. EXISTING UTILITIES AND THEIR LOCATION, AS SHOWN ON THE PLANS, REPRESENT THE BEST INFORMATION OBTAINABLE FOR DESIGN. THE CONTRACTOR WILL BE REQUIRED TO WORK AROUND EXISTING UTILITIES WITHIN THE RIGHT-OF-WAY WHICH DO NOT CONFLICT WITH PROPOSED CONSTRUCTION.

4. RUBBLE FROM THE REMOVAL OF MISCELLANEOUS STRUCTURES AND EXCESS EXCAVATION WHICH IS TO BE WASTED SHALL BE DISPOSED OF ON SITES TO BE PROVIDED BY THE CONTRACTOR. THESE SITES SHALL BE APPROVED BY THE ENGINEER AS TO SUITABILITY, APPEARANCE AND SITE LOCATION. LOCATIONS, IN THE OPINION OF THE ENGINEER, THAT WILL LEAVE AN UNSIGHTLY APPEARANCE WILL NOT BE APPROVED. ALL DISPOSAL SITES MUST BE APPROVED BY THE KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT. MATERIAL EITHER STOCKPILED OR DISPOSED OF IN A FLOOD PLAIN WILL REQUIRE A KANSAS STATE BOARD OF AGRICULTURE PERMIT. ANY MATERIAL DUMPED IN WATERS OF THE UNITED STATES OR WETLANDS IS SUBJECT TO U.S. CORPS OF ENGINEERS PERMITTING REGULATIONS. ANY MATERIAL BURIED OR STOCKPILED BEYOND APPROVED CONSTRUCTION LIMITS WILL REQUIRE ADDITIONAL ARCHAEOLOGICAL INVESTIGATIONS UNLESS BURIED IN A PREVIOUSLY APPROVED BORROW LOCATION.

5. TREES AND SHRUBS IN PUBLIC RIGHT-OF-WAY WHICH ARE IN DIRECT CONFLICT WITH PROPOSED NEW CONSTRUCTION SHALL BE REMOVED BY THE CONTRACTOR WITH THE CITY ENGINEER'S APPROVAL. TREES AND SHRUBS WHICH ARE NOT IN DIRECT CONFLICT WITH PROPOSED NEW CONSTRUCTION SHALL BE SAVED AND PROTECTED FROM DAMAGE.

6. THE CONTRACTOR SHALL GIVE ALL PROPERTY OWNERS AND/OR TENANTS OF DEVELOPED PROPERTY ABUTTING THE CONSTRUCTION OF THIS PROJECT A MINIMUM OF TEN (10) DAYS NOTICE PRIOR TO START OF CONSTRUCTION.

7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PRESERVING PROPERTY IRONS. THE CONTRACTOR WILL BE REQUIRED TO RE-ESTABLISH ANY PROPERTY IRONS WHICH ARE DAMAGED OR DESTROYED BY HIS CONSTRUCTION OPERATIONS. SUCH IRONS SHALL BE RE-ESTABLISHED BY A LICENSED LAND SURVEYOR IN ACCORDANCE WITH STATE LAWS.

8. THE ENGINEERING DIVISION SHALL FIELD LOCATE WATER VALVES ONE TIME DURING CONSTRUCTION WHEN REQUESTED BY THE CONTRACTOR. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PRESERVE SUCH FIELD LOCATIONS DURING THE CONSTRUCTION PROCESS. WATER VALVES, VALVE BOXES OR FIRE HYDRANTS DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED BY CONTRACTOR AT HIS OWN EXPENSE. VALVE BOXES AND WATER METERS WITHIN THE PROJECT LIMITS SHALL BE ADJUSTED TO MATCH FIELD GRADES.

9. IF TRAFFIC WILL BE IMPACTED BY CONSTRUCTION, A TRAFFIC CONTROL PLAN MUST BE SUBMITTED AND APPROVED BY THE CITY TRAFFIC ENGINEER, MIKE ARMOUR, AT TRAFFIC@WICHITA.GOV, BEFORE CONSTRUCTION CAN BEGIN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRAFFIC CONTROL MEASURES TO FACILITATE CONSTRUCTION. ALL CONSTRUCTION ZONE MARKINGS AND SIGNAGE SHALL CONFORM TO THE LATEST VERSION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AS PUBLISHED BY THE US DEPT. OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION. ALL COSTS ASSOCIATED WITH CONSTRUCTION MARKINGS AND SIGNAGE SHALL BE THE CONTRACTORS RESPONSIBILITY.

10. ALL ELEVATIONS SHOWN ARE NAVD 88. PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL RE-ESTABLISH CONTROL POINTS AND BENCH MARKS AND VERIFY THEIR ACCURACY.

11. FENCE REMOVAL AND STORM SEWER END SECTION REMOVAL SHALL BE CONSIDERED SUBSIDIARY TO REMOVAL OF EXISTING STRUCTURES.

12. ALL EXISTING PAVEMENT AND CURB AND GUTTER WITHIN THE CONSTRUCTION LIMITS SHALL BE SAW CUT, FULL DEPTH, TO THE LINES SHOWN ON THE PLANS, OR TO THE NEAREST JOINT, AND REMOVED, UNLESS OTHERWISE NOTED. IF REMOVAL LIMITS ARE WITHIN THREE FEET OF A JOINT, REMOVE TO THE JOINT. ALL ASSOCIATED WORK SHALL BE SUBSIDIARY TO THE PROJECT.

13. ALL TRAFFIC CONTROL DEVICES IN THE WORK ZONE (INCLUDING MARKINGS AND SIGNS) AND THEIR INSTALLATION AND MAINTENANCE SHALL COMPLY WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL TRAFFIC CONTROL DEVICES IN THE TRAVELED WAY OR CLEAR ZONE SHALL BE CRASHWORTHY (NCHRP Report 350 or MASH compliant).
http://safety.fhwa.dot.gov/roadway dept/policy guide/road hardware/wzd

14. ALL CONSTRUCTION EQUIPMENT, INCLUDING VEHICLES, MATERIALS, AND DEBRIS, SHALL BE STORED OUTSIDE OF THE CLEAR ZONE. WHERE THIS CANNOT BE ACHIEVED THE CONTRACTOR SHALL PLACE APPROPRIATE SIGNS, OBJECT IDENTIFIERS, AND/OR BARRICADES IN COMPLIANCE WITH THE MUTCD.

15. EXCEPT WHEN REQUIRED FOR SAFETY, TRAFFIC CONTROL SHALL NOT BLOCK ANY LANES OR SIDEWALKS WHEN WORK IS NOT BEING PERFORMED.

16. EACH BIDDER SHALL VISIT THE SITE OF THE PROJECT BEFORE SUBMITTING THE PROPOSAL FOR THIS WORK SO THAT HE WILL BE FULLY INFORMED OF THE EXISTING FIELD CONDITIONS AND THE OBSTACLES WHICH MIGHT BE ENCOUNTERED. UPON AWARD OF THE CONTRACT THE CONTRACTOR WILL NOT BE GRANTED ANY ADDITIONAL COMPENSATION WITH REGARDS TO TIME AND MONEY FOR CONDITIONS THAT MAY HAVE BEEN EVALUATED DURING ANY INSPECTION OF THE SITE.

17. FIELD LOCATE ALL EXISTING UTILITIES PRIOR TO BEGINNING ANY EXCAVATION WORK. CONTACT THE KANSAS-ONE-CALL SYSTEM AT 811 AT LEAST 72 HOURS IN ADVANCE TO REQUEST FIELD LOCATES. FOR UTILITIES THAT ARE NOT MEMBERS OF THE KANSAS-ONE-CALL SYSTEM, CONTACT THOSE COMPANIES DIRECTLY.

18. THE CONTRACTOR SHALL NOT START WORK ON THE PROJECT UNTIL THE PROJECT INSPECTOR IS ASSIGNED AND IS PRESENT ON THE SITE. ANY WORK DONE WITHOUT INSPECTION WILL BE REQUIRED TO BE UNCOVERED FOR INSPECTION AT THE CONTRACTORS EXPENSE.

19. EASEMENTS AND RIGHT-OF-WAY PROVIDED BY THE OWNER FOR THE PROJECT ARE SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ACQUISITION OF ANY ADDITIONAL TEMPORARY EASEMENTS OR RIGHT-OF-WAY DESIRED TO USE IN COMPLETING THE WORK.

20. THE CONTRACTOR SHALL CONTAIN THEIR OPERATIONS TO PERMIT LOCAL AND EMERGENCY TRAFFIC THROUGH AND ACROSS CONSTRUCTION AT ALL TIMES. INTERURBAN TRAFFIC GENERATED OUTSIDE THE PROJECT AREA AND LOCAL BUSINESS OR RESIDENTIAL TRAFFIC GENERATED WITHIN THE PROJECT AREA ARE TO BE CARRIED THROUGH CONSTRUCTION. THE CONTRACTOR SHALL UTILIZE WARNING SIGNS, FLASHING LIGHTS, BARRICADES, AND FLAGMEN IN COMPLIANCE WITH LATEST VERSION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) TO ENSURE SAFETY.

21. THE CONTRACTOR SHALL RESTORE ALL DITCHES, SWALES, ROAD SHOULDERS, AND BANKS TO THEIR ORIGINAL SLOPES AND GRADES EXCEPT AS SHOWN OTHERWISE. WHERE EXISTING ENTRANCE PIPE, DRAINAGE PIPE, SIGNS, FENCES, IRRIGATION, LANDSCAPING, ETC., CONFLICT WITH THE PROPOSED WORK HEREIN, THEY SHALL BE REMOVED AND REPLACED OR RESET, UNLESS OTHERWISE NOTED ON THE DRAWINGS. THE REPLACEMENT OF ALL THE AFOREMENTIONED ITEMS, INCLUDING SEEDING, FERTILIZER, AND MULCHING SHALL BE CONSIDERED SUBSIDIARY TO "SITE RESTORATION".

22. THE LUMP SUM BID ITEM "SITE RESTORATION" SHALL INCLUDE, BUT NOT BE LIMITED TO MOBILIZATION, REMOVAL OF MINOR OBSTRUCTIONS, REMOVAL AND SALVAGE OF CONFLICTING PRIVATE IMPROVEMENTS WITHIN THE PROJECT AREA, MINOR SHAPING AND GRADING OF SLOPES FOR FINISHED APPEARANCE, REMOVAL OF CONSTRUCTION DEBRIS, REMOVAL OF TREES WITHIN CONSTRUCTION LIMITS, AND GENERAL CLEAN UP.

23. THE CONTRACTOR SHALL COORDINATE ACCESS TO THE SITE WITH THE CITY OF WICHITA PRIOR TO CONSTRUCTION.

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CITY OF WICHITA

RILEY J. SCHMITZ LICENSED 24168 02/08/2021 KANSAS PROFESSIONAL ENGINEER

37TH ST N. SIDEWALK RIDGE TO RIDGEPORT

GARY JANZEN, P.E. - CITY ENGINEER
CITY OF WICHITA PROJECT NO. 472-2020-085614
SEDGWICK COUNTY, KANSAS

Issue:		

JOB NO.	207042-001
DATE	FEBRUARY 2021
PM	BMM
DESIGNED BY	KMS
DRAWN BY	BJS
CHECKED BY	RJS

KEY MAP AMD GENERAL NOTES

C002
2 OF 41

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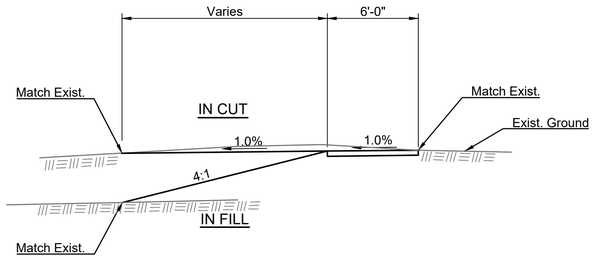
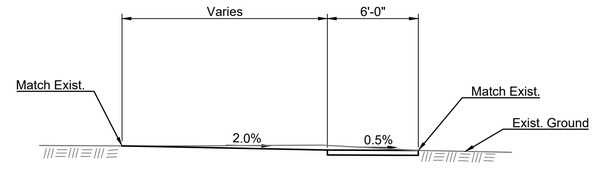
PLOTTED 2/8/2021 9:34:43 AM BY BILL.SEXSON, CET
U:\WICHITA-CIVIL\2020\207042\001\MUNI-TRANS\DRAWINGS\207042-001-02-C-002 KEY MAP AMD GENERAL NOTES.DWG



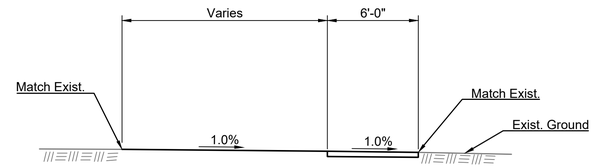
TYPICAL SECTION

Sta. 200+90.70 to Sta. 209+50.00



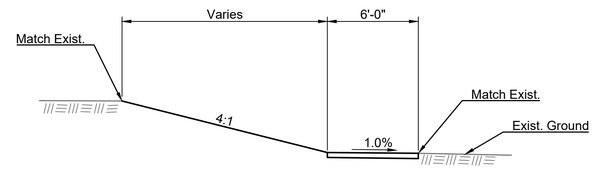
TYPICAL SECTION

Sta. 209+75.00 to Sta. 212+50.10



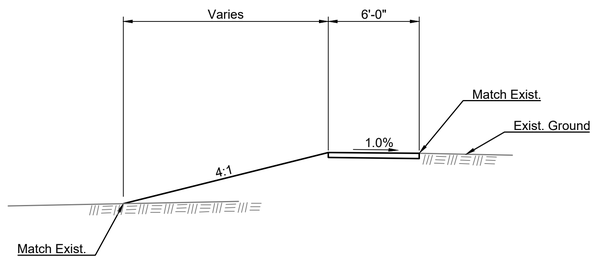
TYPICAL SECTION

Sta. 222+56.50 to Sta. 222+84.74



TYPICAL SECTION

Sta. 213+09.21 to Sta. 215+13.64
Sta. 219+38.67 to Sta. 222+56.50



TYPICAL SECTION

Sta. 215+13.64 to Sta. 219+25.97

EARTHWORK SUMMARY (C.Y.)		
	Unclassified Excavation	Compacted Fill (95%)
Sidewalk	159	42
GRAND TOTAL	159	42

ESTIMATED EXCESS MATERIAL (CONTRACTOR DISPOSAL)
159 - (42/0.85) = 110 C.Y.
VMF = 0.85 (ASSUMED)

THE CONTRACTOR SHALL SATISFY THEMSELVES WITH THE EARTHWORK QUANTITIES AND NO CHANGE ORDER FOR EARTHWORK WILL BE APPROVED.

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TYPICAL SECTIONS

C003
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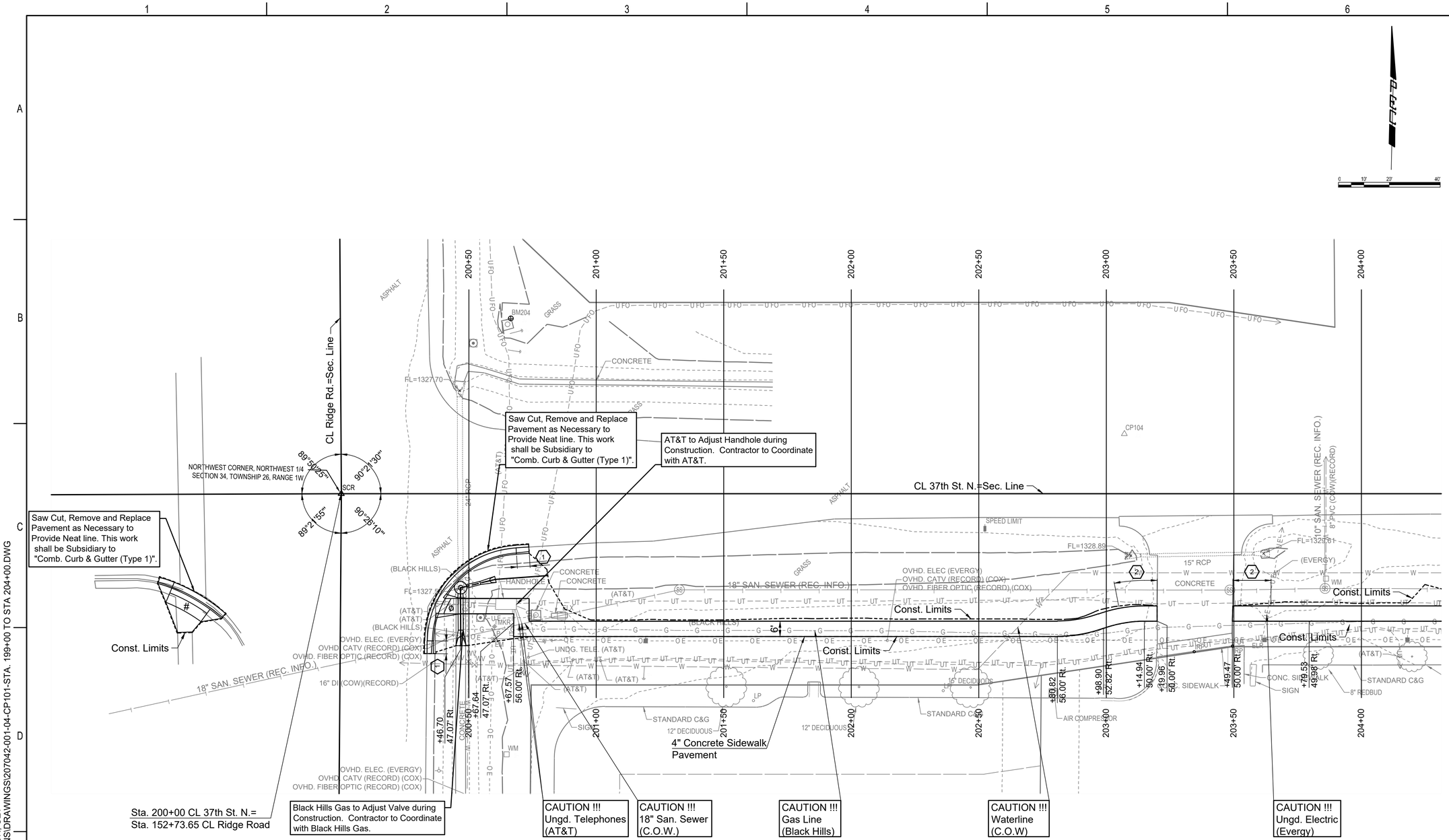

LEGEND

- ϕ 6' Wheelchair Ramp with Detectable Warning
- # 16' Wheelchair Ramp with Detectable Warning
- (1) 5'-0" Curb Transition from Combined Curb & Gutter (Type 1)(6") to No Curb
- (2) 15'-0" X-Slope Transition to Match Existing

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STA. 199+00 TO STA. 204+00

CP101
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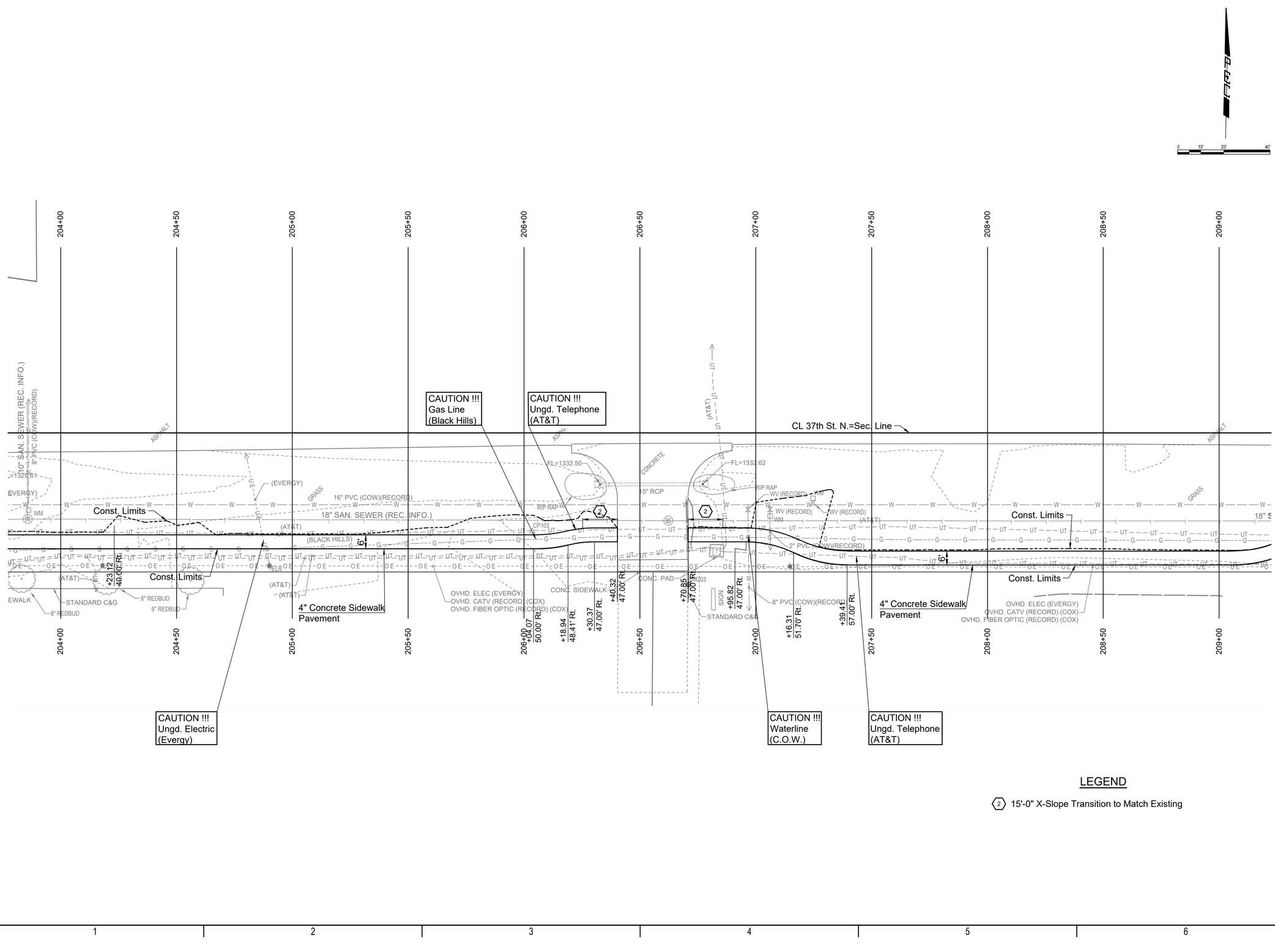

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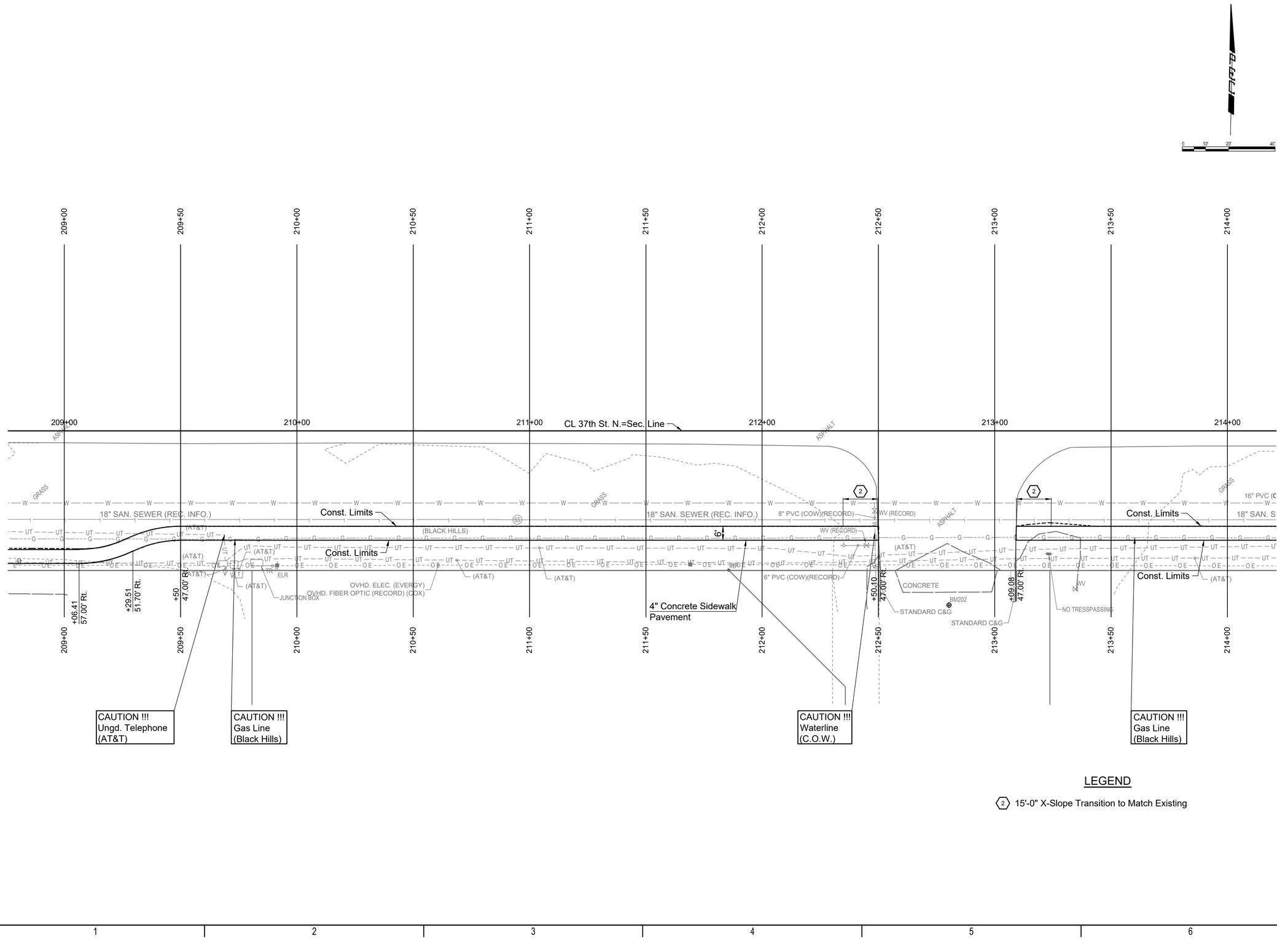
STA. 204+00 TO STA. 209+00

CP102
5 OF 41



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STA. 209+00 TO STA. 214+00

CP103
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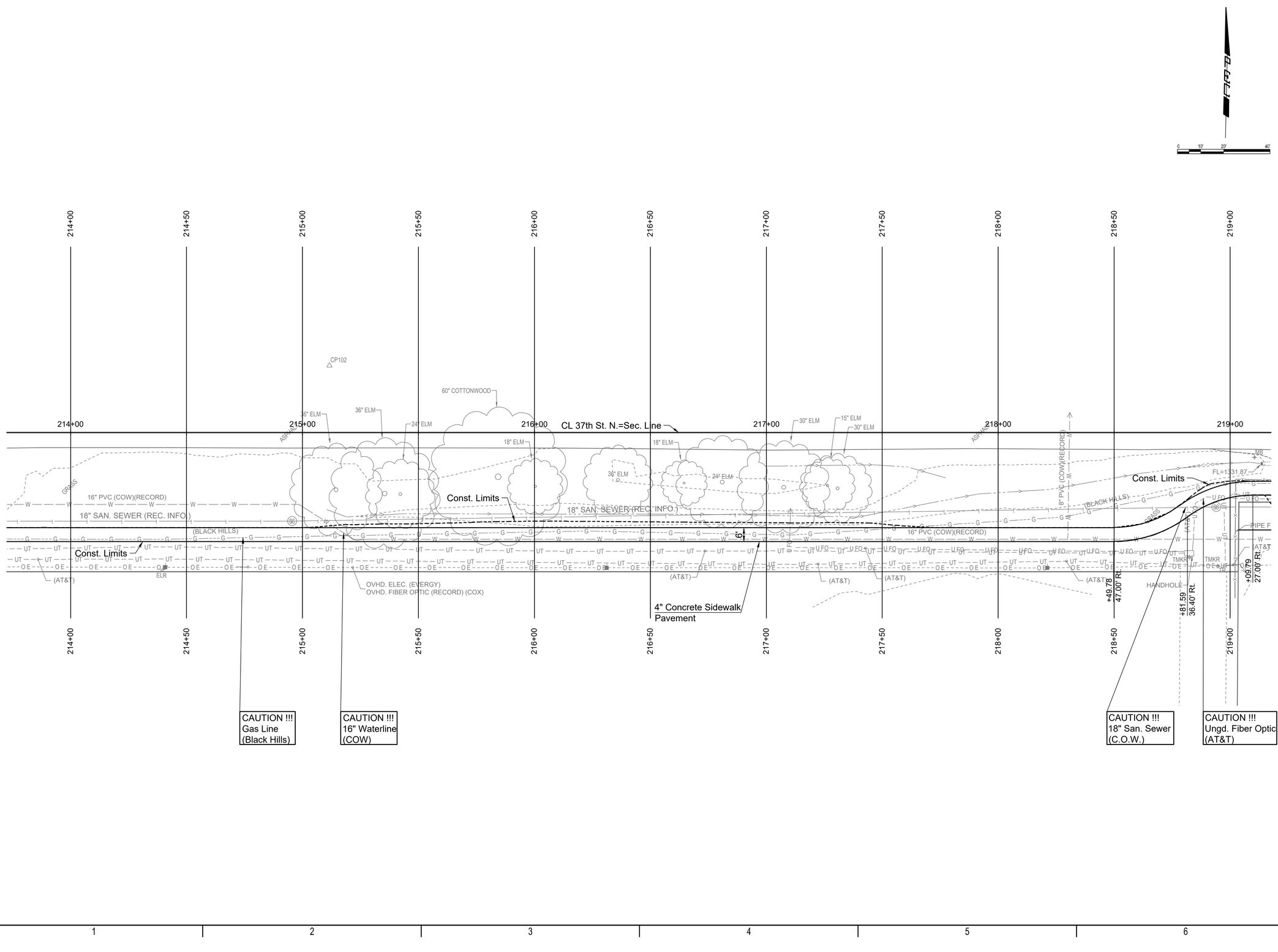

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CP104
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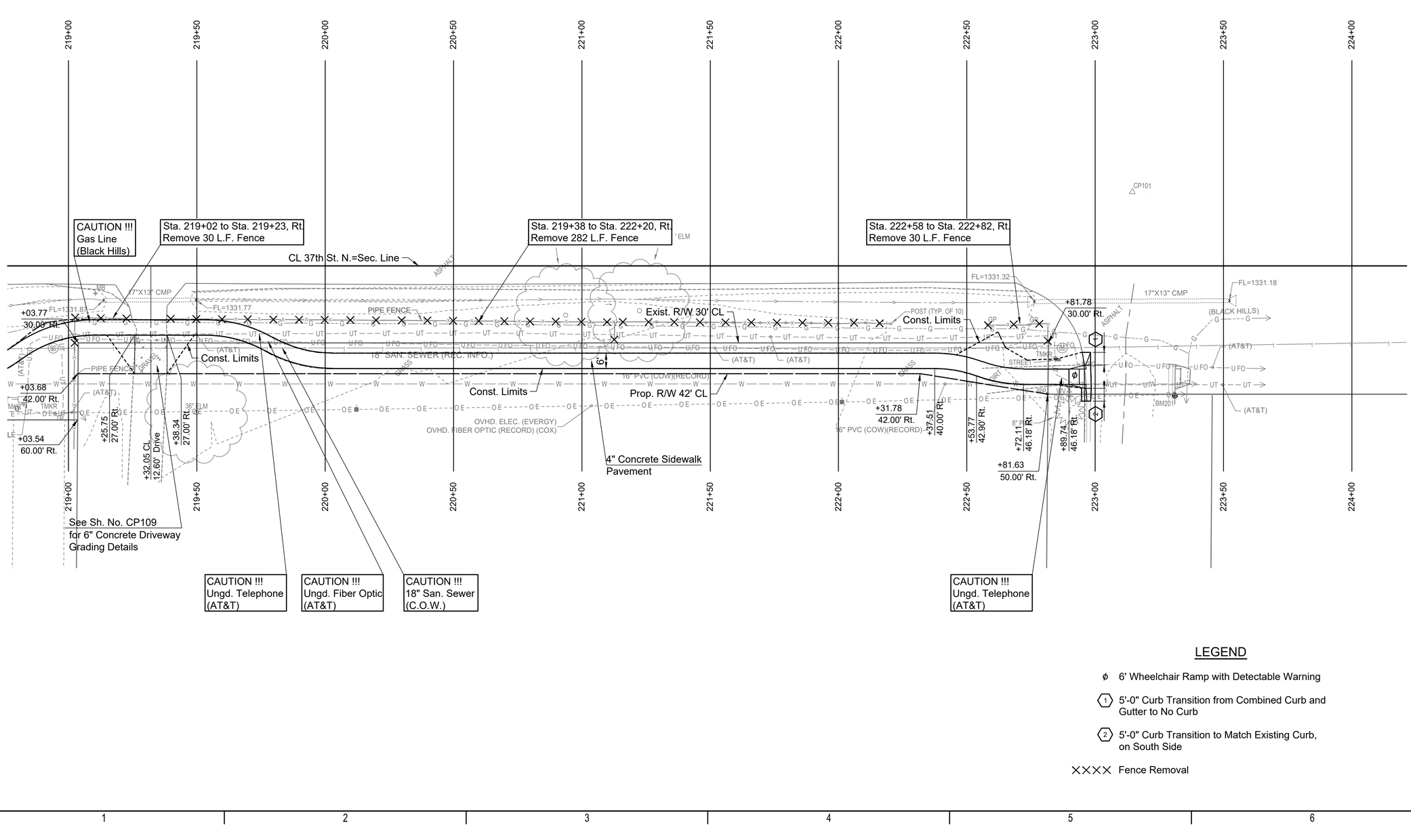

LEGEND

- ϕ 6' Wheelchair Ramp with Detectable Warning
- (1) 5'-0" Curb Transition from Combined Curb and Gutter to No Curb
- (2) 5'-0" Curb Transition to Match Existing Curb, on South Side
- XXXX Fence Removal

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STA. 219+00 TO STA. 224+00

CP105
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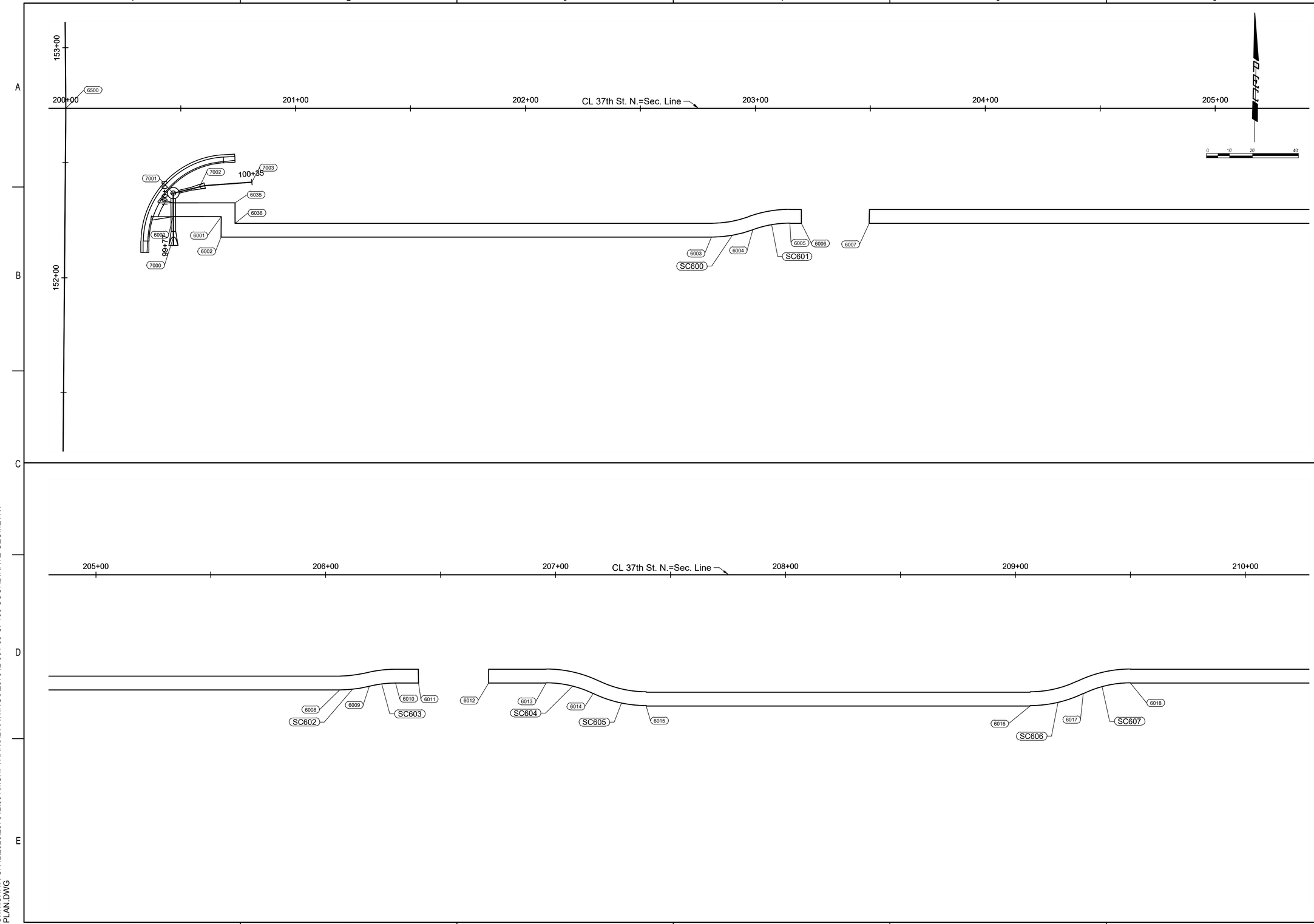

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CITY OF WICHITA

RILEY J. SCHMITZ
LICENSED
24168
02/08/2021
KANSAS
PROFESSIONAL ENGINEER

37TH ST N. SIDEWALK RIDGE TO RIDGEPORT

GARY JANZEN, P.E. - CITY ENGINEER
CITY OF WICHITA PROJECT NO. 472-2020-085614
SEDGWICK COUNTY, KANSAS

Issue:		

JOB NO.	207042-001
DATE	FEBRUARY 2021
PM	BMM
DESIGNED BY	KMS
DRAWN BY	BJS
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COORDINATE GEOMETRY PLAN

CP106
9 OF 41

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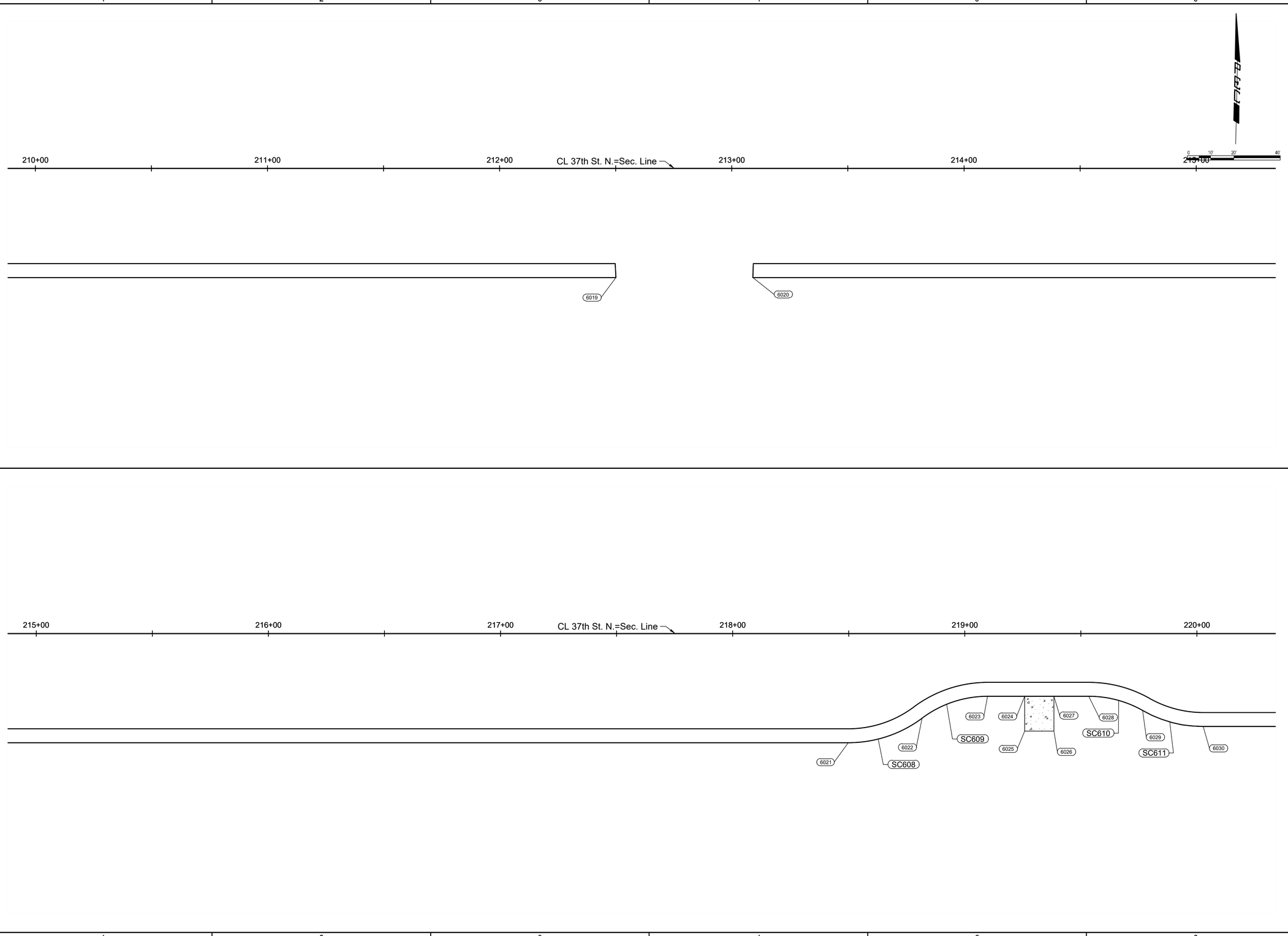

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COORDINATE GEOMETRY PLAN

CP107
10 OF 41

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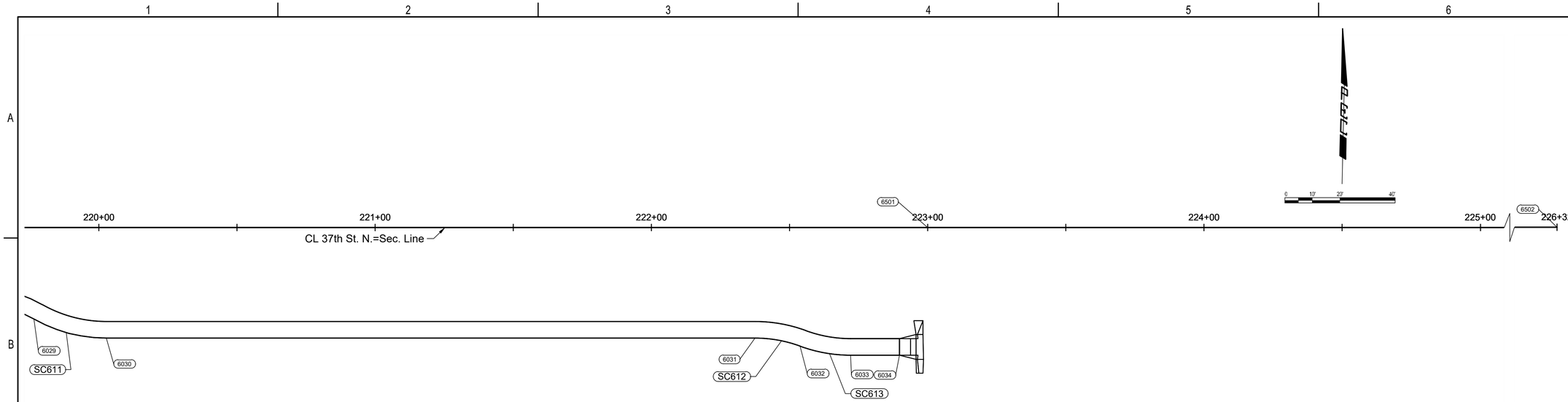

SIDEWALK

COORDINATE LIST		
POINT	NORTHING	EASTING
6000	1,709,330.4551	1,622,807.2827
6001	1,709,330.9041	1,622,828.2228
6002	1,709,321.9732	1,622,828.3457
6003	1,709,326.5441	1,623,041.5469
6004	1,709,330.1110	1,623,059.5568
6005	1,709,333.2741	1,623,075.5279
6006	1,709,333.3816	1,623,080.5461
6007	1,709,334.0141	1,623,110.0468
6008	1,709,339.5141	1,623,366.5814
6009	1,709,341.3799	1,623,379.4289
6010	1,709,343.0345	1,623,390.8244
6011	1,709,343.2473	1,623,400.7722
6012	1,709,343.9009	1,623,431.2898
6013	1,709,344.4373	1,623,456.2556
6014	1,709,340.1777	1,623,476.8380
6015	1,709,335.3743	1,623,500.0480
6016	1,709,338.9540	1,623,667.0141
6017	1,709,344.7477	1,623,689.9969
6018	1,709,349.8855	1,623,710.3778
6019	1,709,356.3181	1,624,010.4138

COORDINATE LIST		
POINT	NORTHING	EASTING
6020	1,709,357.5823	1,624,069.3787
6021	1,709,369.1719	1,624,609.9537
6022	1,709,380.4511	1,624,641.5192
6023	1,709,390.4534	1,624,669.5113
6024	1,709,390.7957	1,624,685.4773
6025	1,709,375.7991	1,624,685.7982
6026	1,709,376.0690	1,624,698.3869
6027	1,709,391.0656	1,624,698.0654
6028	1,709,391.3873	1,624,713.0707
6029	1,709,385.7754	1,624,736.3698
6030	1,709,379.4471	1,624,762.6432
6031	1,709,384.4688	1,624,997.4346
6032	1,709,381.9277	1,625,013.7651
6033	1,709,379.0483	1,625,032.1680
6034	1,709,379.4260	1,625,049.7878
6035	1,709,337.0323	1,622,834.1390
6036	1,709,328.1015	1,622,834.2619

37TH ST. N. ALIGNMENT

COORDINATE LIST		
POINT	NORTHING	EASTING
6500	1,709,376.5120	1,622,759.5890
6501	1,709,425.8113	1,625,059.0602
6502	1,709,432.9230	1,625,390.7725

STORM WATER SEWER

COORDINATE LIST		
POINT	NORTHING	EASTING
7000	1,709,321.5167	1,622,807.6416
7001	1,709,340.6050	1,622,807.1160
7002	1,709,343.6445	1,622,818.5523
7003	1,709,346.1048	1,622,841.2340

CURVE DATA

CURVE #	DELTA	RADIUS (FT.)	T (FT.)	LENGTH (FT.)	P.C. NORTHING	P.C. EASTING	P.T. NORTHING	P.T. EASTING
SC600	019°56'54"	53.00	9.32	18.45	1,709,326.5441	1,623,041.5469	1,709,330.1110	1,623,059.5568
SC601	019°56'54"	47.00	8.27	16.36	1,709,330.1110	1,623,059.5568	1,709,333.2741	1,623,075.5279
SC602	014°04'12"	53.00	6.54	13.01	1,709,339.5141	1,623,366.5814	1,709,341.3799	1,623,379.4289
SC603	014°04'22"	47.00	5.80	11.54	1,709,341.3799	1,623,379.4289	1,709,343.0345	1,623,390.8244
SC604	025°50'29"	47.00	10.78	21.20	1,709,344.4373	1,623,456.2556	1,709,340.1777	1,623,476.8380
SC605	025°50'29"	53.00	12.16	23.90	1,709,340.1777	1,623,476.8380	1,709,335.3743	1,623,500.0480
SC606	025°50'29"	53.00	12.16	23.90	1,709,338.9540	1,623,667.0141	1,709,344.7477	1,623,689.9969
SC607	025°50'29"	47.00	10.78	21.20	1,709,344.7477	1,623,689.9969	1,709,349.8855	1,623,710.3778
SC608	036°52'12"	53.00	17.67	34.11	1,709,369.1719	1,624,609.9537	1,709,380.4511	1,624,641.5192
SC609	036°52'12"	47.00	15.67	30.24	1,709,380.4511	1,624,641.5192	1,709,390.4534	1,624,669.5113
SC610	029°32'29"	47.00	12.39	24.23	1,709,391.3873	1,624,713.0707	1,709,385.7754	1,624,736.3698
SC611	029°32'29"	53.00	13.97	27.33	1,709,385.7754	1,624,736.3698	1,709,379.4471	1,624,762.6432
SC612	020°25'17"	46.62	8.40	16.61	1,709,384.4688	1,624,997.4346	1,709,381.9277	1,625,013.7651
SC613	020°14'30"	53.00	9.46	18.72	1,709,381.9277	1,625,013.7651	1,709,379.0483	1,625,032.1680

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Issue:		

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COORDINATE GEOMETRY PLAN

CP108
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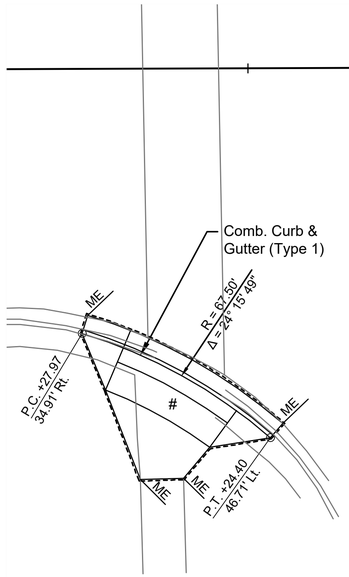
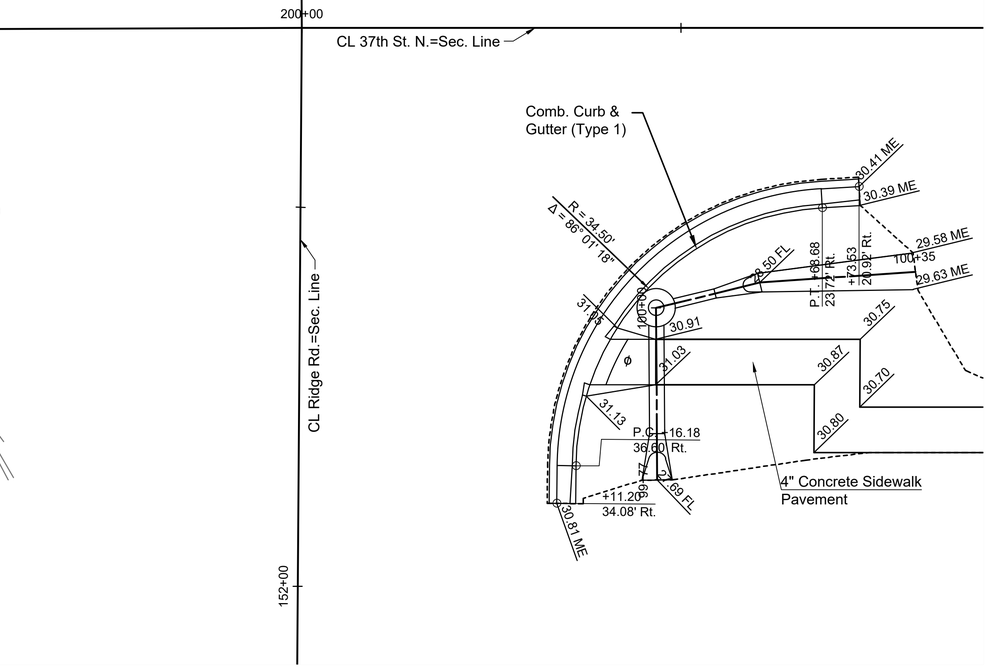
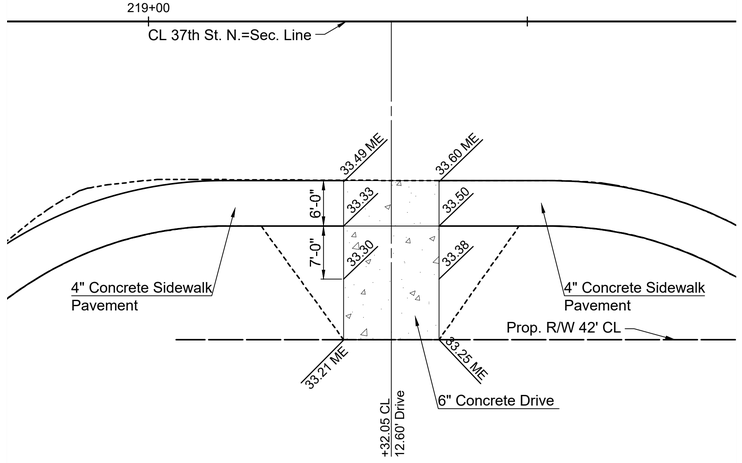
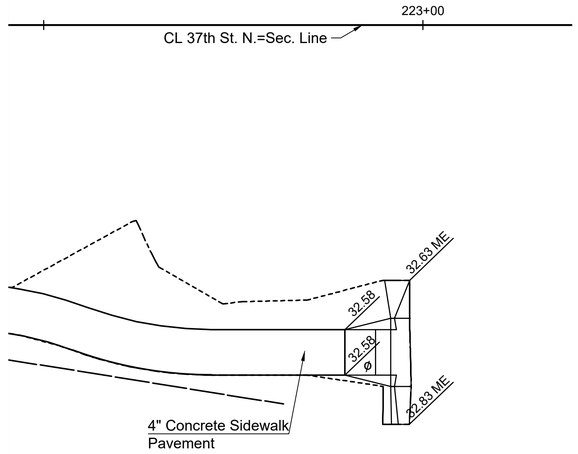




37TH ST N & RIDGE ROAD
SIDEWALK GRADING PLAN



6" CONCRETE DRIVE
GRADING PLAN



37TH ST N & RIDGEPORT
SIDEWALK GRADING PLAN

LEGEND

ø 6' Wheelchair Ramp with Detectable Warning

\# 16' Wheelchair Ramp with Detectable Warning

ME Match Existing

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GRADING PLAN

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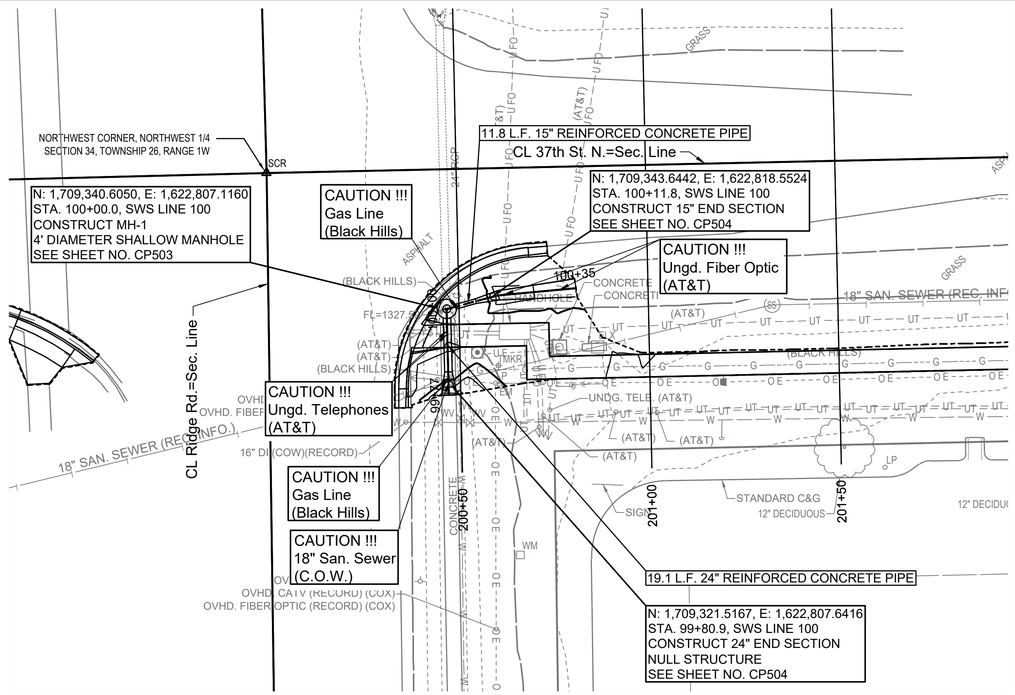

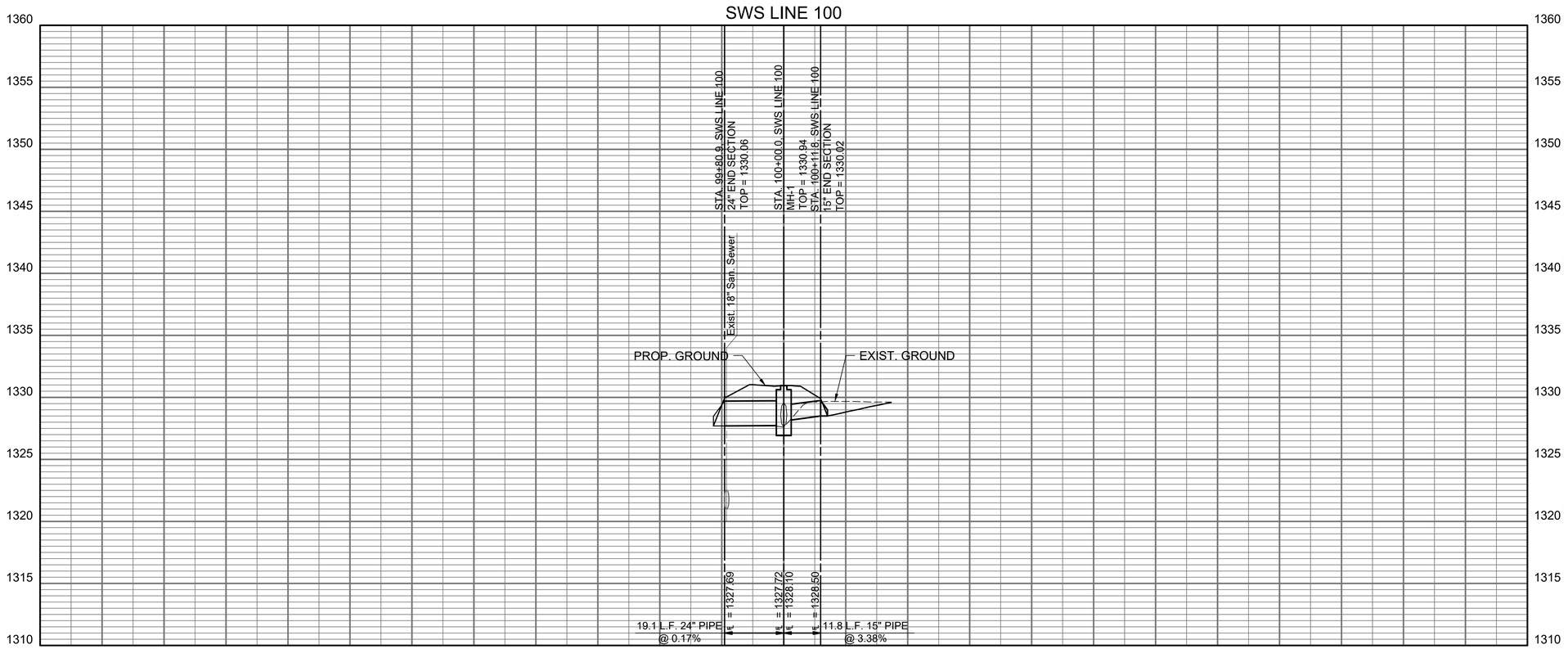

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SWS LINE NO. 100

CP201
13 OF 41

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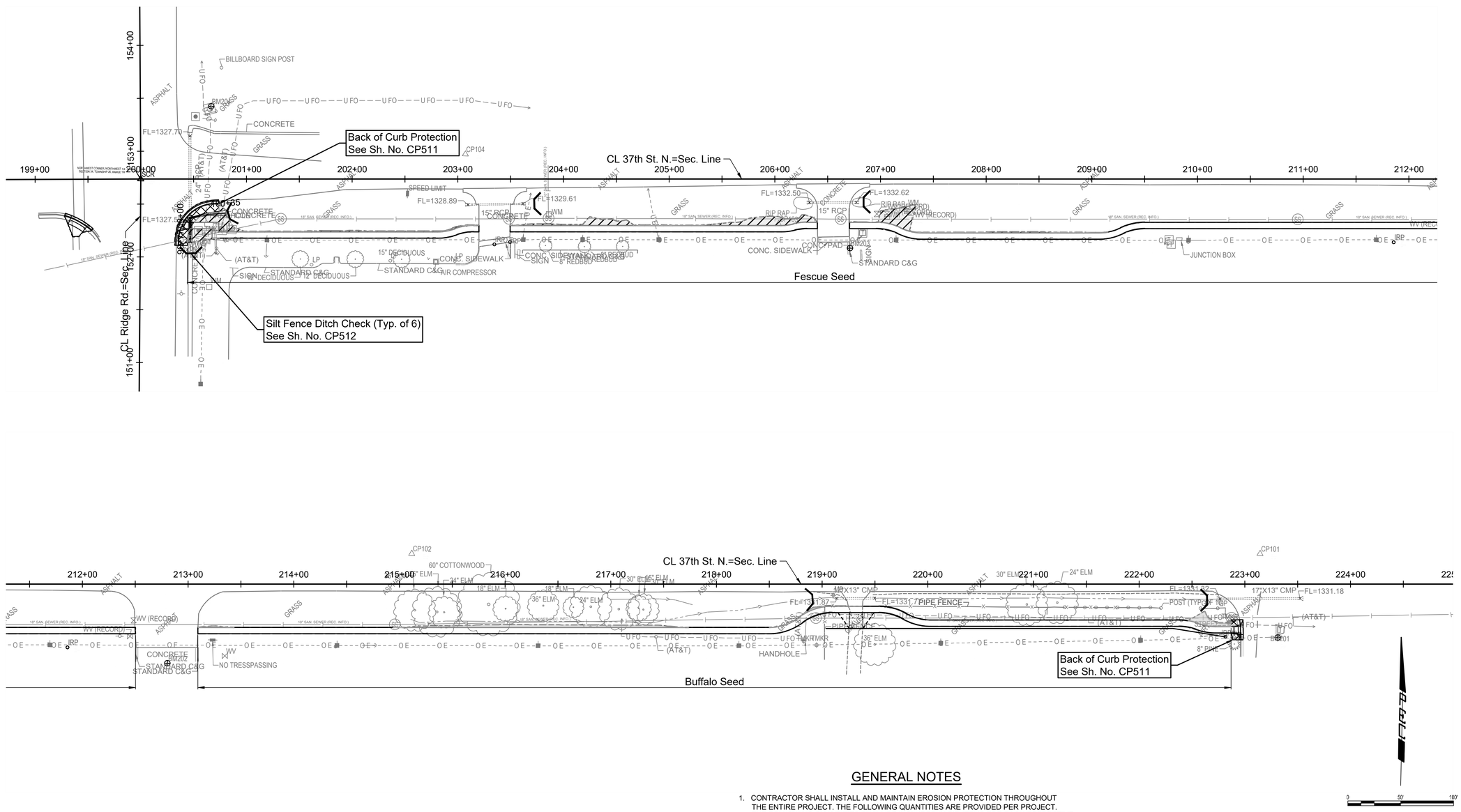

SEEDING NOTES

TEMPORARY PROJECT SEEDING: CONTRACTOR SHALL APPLY TEMPORARY SEED AND MULCH TO ALL GRASSED AREA DISTURBED BY CONSTRUCTION ACTIVITIES, EXCEPT AS NOTED BELOW. SEED SHALL BE ANNUAL RYE APPLIED PER SPECIFICATIONS.

TEMPORARY SEEDING SHALL BE APPLIED WITHIN 14 DAYS AFTER THE AREA TO BE SEEDED HAS BEEN DISTURBED. TEMPORARY SEEDING MAY BE OMITTED IN AREAS WHERE PERMANENT SEEDING IS REQUIRED AND IS IN SEASON FOR IMMEDIATE PLANTING.

PERMANENT PROJECT SEEDING: CONTRACTOR SHALL APPLY SEED, FERTILIZER, AND MULCH TO ALL GRASSED AREA DISTURBED BY CONSTRUCTION ACTIVITIES. SEED SHALL BE FESCUE GRASS AND BUFFALO GRASS APPLIED PER SPECIFICATIONS. PLACE EACH SEED AS SHOWN ABOVE.

GENERAL NOTES

1. CONTRACTOR SHALL INSTALL AND MAINTAIN EROSION PROTECTION THROUGHOUT THE ENTIRE PROJECT. THE FOLLOWING QUANTITIES ARE PROVIDED PER PROJECT. THE FOLLOWING QUANTITIES SHALL BE INCLUDED IN BID ITEMS FOR EACH RESPECTIVE PART. EROSION PROTECTION SHALL BE INCLUDED IN THE BID AS FOLLOWS:

PAVING AND DRAINAGE	
BACK OF CURB PROTECTION	68 L.F.
DITCH CHECK	6 EACH

2. THE EROSION CONTROL DEVICES SHOWN ON THIS SHEET ARE CONSIDERED MINIMUM STANDARDS. WHENEVER SEDIMENT ENTERS THE STREETS, STORM SEWERS, DITCHES, OR PONDS, CONTRACTOR WILL INSTALL ADDITIONAL DEVICES, AS NEEDED, TO CORRECT THE PROBLEM.
3. THE EROSION CONTROL DEVICES SHOWN HEREON MUST BE IN PLACE AT ALL TIMES DURING CONSTRUCTION UNTIL SUCH TIME AS THE SITE IS REESTABLISHED WITH PAVING OR GRASS. TEMPORARY OR PERMANENT SEEDING AND MULCH WILL BE INSTALLED WHEN EARTHWORK ACTIVITIES CEASE IN AN AREA FOR 14 DAYS OR MORE.
4. ANY MUD INADVERTENTLY TRACKED ONTO ANY STREET SHALL BE CLEANED UP BY THE CONTRACTOR, AT THE END OF EACH DAY'S WORK, OR AS DIRECTED BY THE FIELD ENGINEER.
5. CONTRACTOR TO FURNISH A TRUCK WASH-OUT PIT TO BE PLACED AT A CONVENIENT LOCATION THAT DOES NOT CONFLICT WITH CONSTRUCTION. CONTRACTOR SHALL CLEAN OUT AND BACKFILL PIT PRIOR TO FINAL INSPECTION. LOCATION SHALL BE APPROVED BY THE FIELD ENGINEER.

EROSION CONTROL LEGEND

- PROPOSED DITCH CHECK
- PROPOSED BACK OF CURB PROTECTION
- FESCUE SEED
- BUFFALO SEED

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EROSION CONTROL PLAN

CP301
14 OF 41

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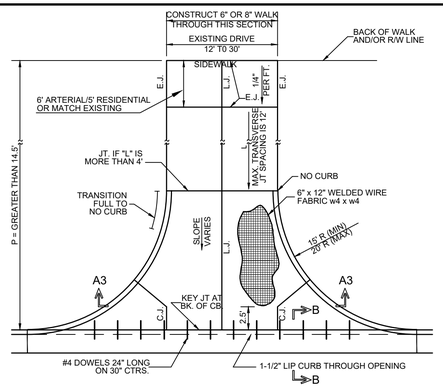
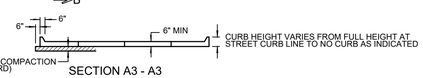
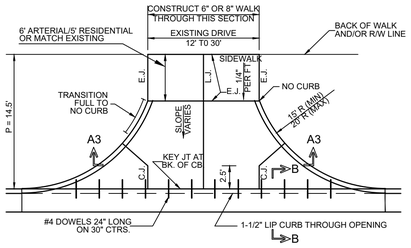
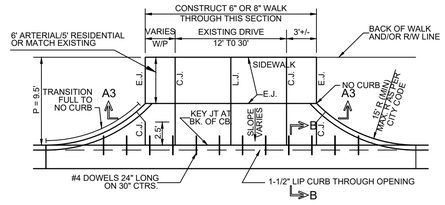


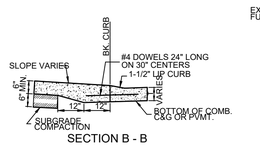


SECTION A3 - A3

FULL RADIUS DRIVES (ARTERIAL/COLLECTOR DRIVEWAY)

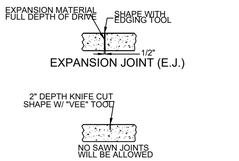




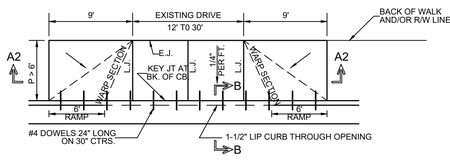


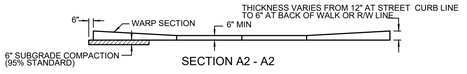
SECTION B - B

ALT. LONGITUDINAL CONSTRUCTION JOINT



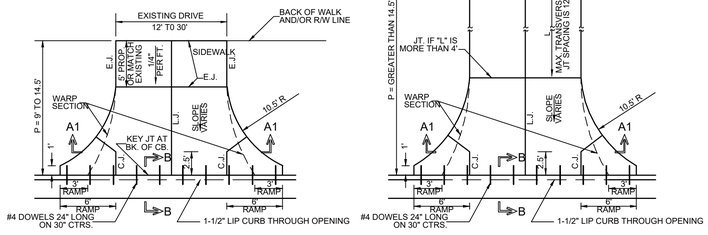
BACK OF CURB DETAIL

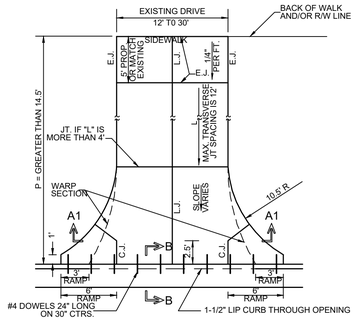


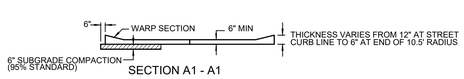


SECTION A2 - A2

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	ORG NUMBER	DATE
472-2020-085614	40102920	

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

SHEET: CP501

PV-126

PEC
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303 SOUTH TOPEKA
WICHITA, KS 67202
316-262-2691 www.pec1.com

CITY OF WICHITA

RILEY J. SCHMITZ LICENSED 24168 02/08/2021 KANSAS PROFESSIONAL ENGINEER

37TH ST N. SIDEWALK
RIDGE TO RIDGEPORT

GARY JANZEN, P.E. - CITY ENGINEER
CITY OF WICHITA PROJECT NO. 472-2020-085614
SEDGWICK COUNTY, KANSAS

Issue:		

JOB NO.	207042-001
DATE	FEBRUARY 2021
PM	BMM
DESIGNED BY	KMS
DRAWN BY	BJS
CHECKED BY	RJS

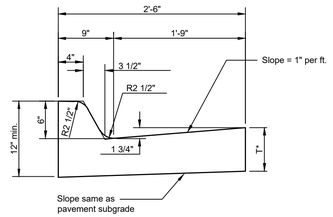
STANDARD DRIVE ENTRANCES

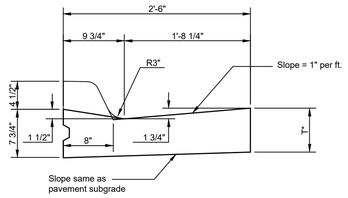
CP501
15 OF 41

Saved: 02-05-2021 - 9:12:14 AM By: BILL.SEXSON
Plotted: 02-05-2021 - 10:29:21 AM By: BILL SEXSON, CET
U:\Wichita-Civil\2020\207042\001\Muni-Trans\Drawings\207042-001-15-CP501 STANDARD DRIVE ENTRANCES.dwg

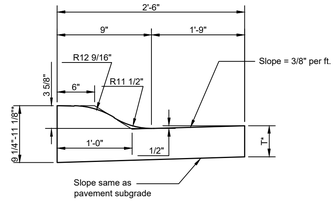
SAVED 2/5/2021 9:12:14 AM BY BILL.SEXSON
PLOTTED 2/5/2021 10:29:21 AM BY BILL SEXSON, CET
U:\WICHITA-CIVIL\2020\207042\001\MUNI-TRANS\DRAWINGS\207042-001-15-CP501 STANDARD DRIVE ENTRANCES.DWG

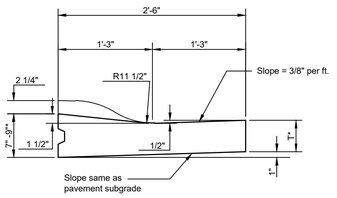
TYPE 1
(Arterial curb)



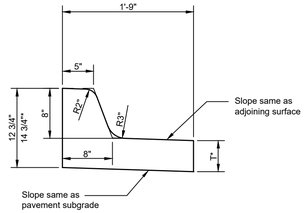


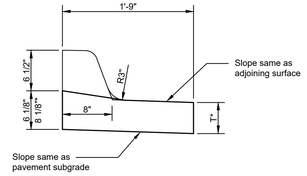
TYPE 2
(Roll curb)



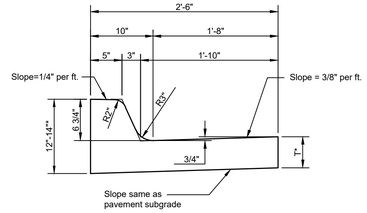


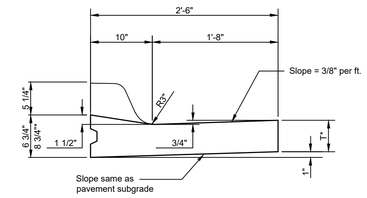
TYPE 3
(Median curb)

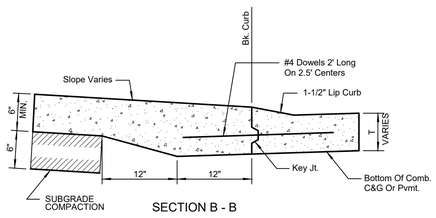




TYPE 4
(Residential curb)

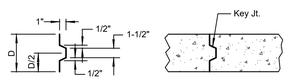




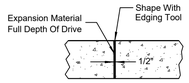


SECTION B - B

BACK OF CURB DETAIL



ALT. LONGITUDINAL CONSTRUCTION JOINT

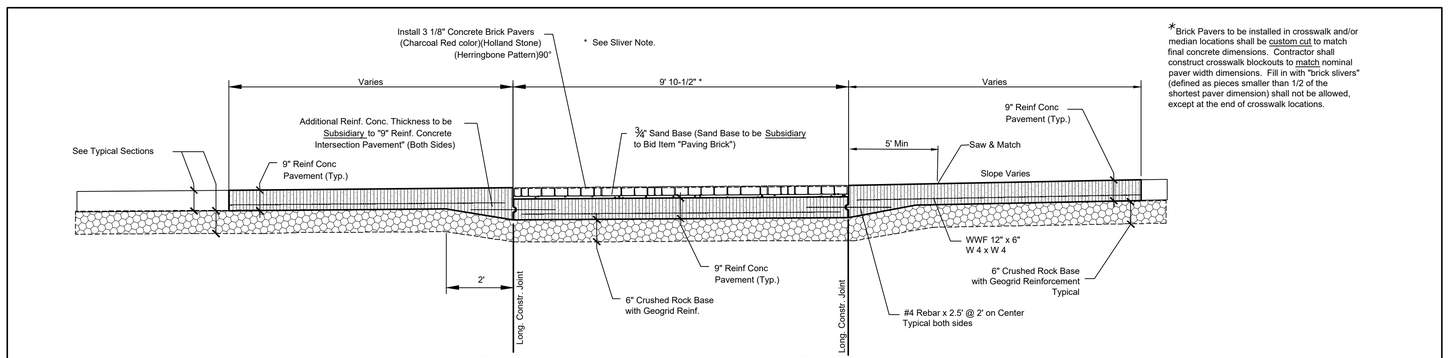


EXPANSION JOINT (E.J.)

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 arteria and industrial streets and at intersections on residential streets.



PAVING BRICK CROSSWALK DETAIL

*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.

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	ORG NUMBER	DATE
472-2020-085614	40102920	

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

SHEET: CP502

PV-101

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316-262-2691 www.pec1.com

CITY OF WICHITA

RILEY J. SCHMITZ LICENSED 24168 02/08/2021 KANSAS PROFESSIONAL ENGINEER

37TH ST N. SIDEWALK
RIDGE TO RIDGEPORT

GARY JANZEN, P.E. - CITY ENGINEER
CITY OF WICHITA PROJECT NO. 472-2020-085614
SEDGWICK COUNTY, KANSAS

Issue:		

JOB NO.	207042-001
DATE	FEBRUARY 2021
PM	BMM
DESIGNED BY	KMS
DRAWN BY	BJS
CHECKED BY	RJS

CURB AND GUTTER DETAILS

CP502
16 OF 41

Saved: 02-05-2021 9:14:02 AM by: BILL.SEXSON
Plot Scale: 1:1 02-05-2021 10:29:26 AM by: BILL.SEXSON
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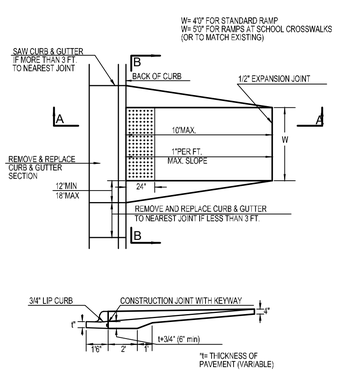
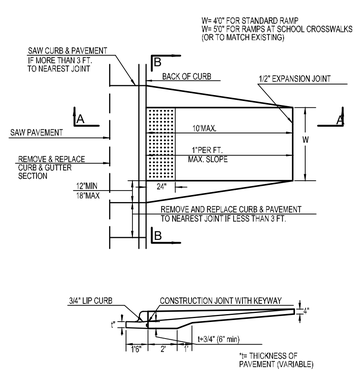
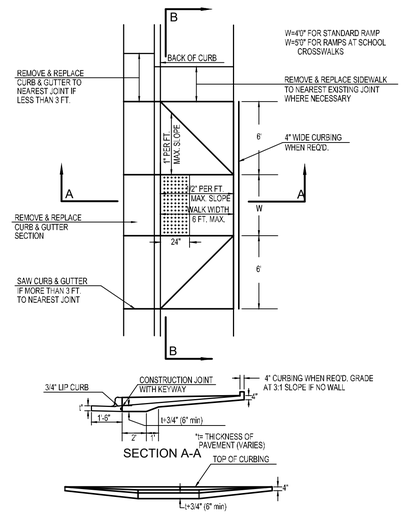
STANDARD WHEELCHAIR RAMP CONSTRUCTION DETAIL FOR STREETS WITH COMBINED CURB & GUTTER (TYPE A)



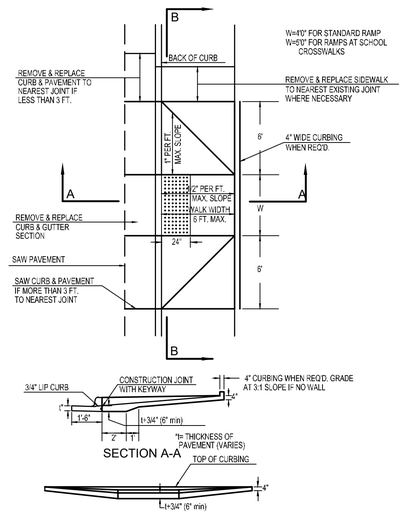
STANDARD WHEELCHAIR RAMP CONSTRUCTION DETAIL FOR CONCRETE STREETS WITH MONOLITHIC CURB (TYPE A)



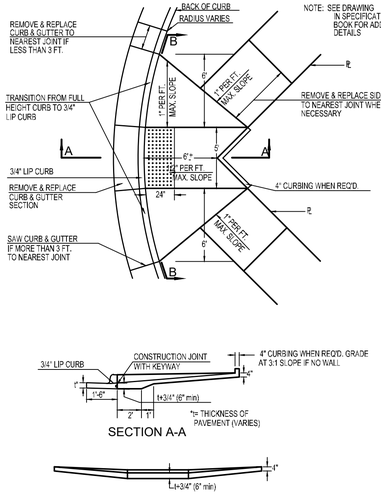
STANDARD WHEELCHAIR RAMP CONSTRUCTION DETAIL FOR STREETS WITH COMBINED CURB & GUTTER AND FULL WALK (TYPE B)



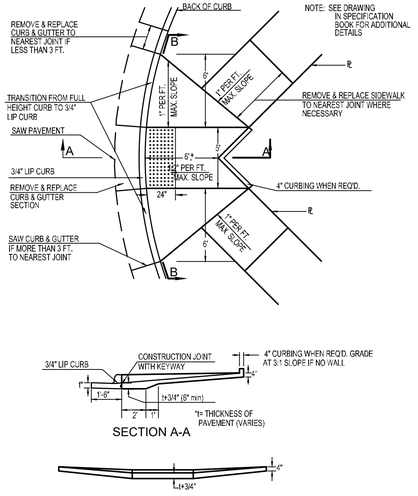
STANDARD WHEELCHAIR RAMP CONSTRUCTION DETAIL FOR STREETS WITH MONOLITHIC CURB AND FULL WALK (TYPE B)



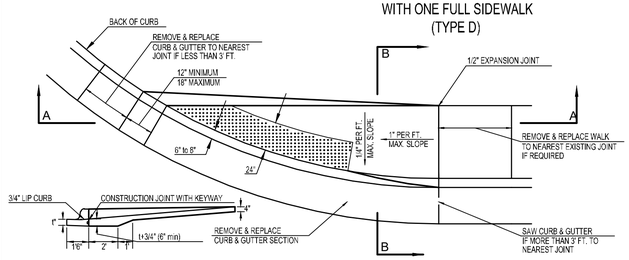
STANDARD WHEELCHAIR RAMP CONSTRUCTION DEAIL FOR STREET WITH COMBINED CURB AND GUTTER ON RADIUS WITH 6'\ FROM BACK OF CURB TO PROPERTY CORNER (TYPE C)



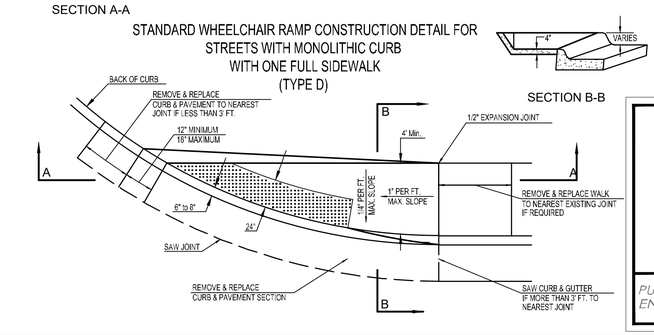
STANDARD WHEELCHAIR RAMP CONSTRUCTION DETAIL FOR STREET WITH MONOLITHIC CURB ON RADIUS WITH 6'\ FROM BACK OF CURB TO PROPERTY CORNER (TYPE C)

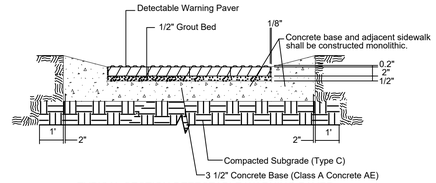


STANDARD WHEELCHAIR RAMP CONSTRUCTION DETAIL FOR STREETS WITH COMBINED CURB & GUTTER WITH ONE FULL SIDEWALK (TYPE D)



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

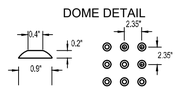




TYPICAL SECTION DETECTABLE WARNING PAVER
SECTION A-A

NOTE: HANOVER DETECTABLE WARNING PAVERS (OR AN APPROVED ALTERNATE) SHALL BE USED IN ALL WHEELCHAIR RAMPS. THE 11 3/4" "RED 15' 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



CITY OF WICHITA
PUBLIC WORKS & UTILITIES ENGINEERING DIVISION

WHEELCHAIR RAMP DETAILS WITH DETECTABLE WARNING

CITY ENGINEER
GARY JANZEN, P.E.

PROJECT NUMBER	ORG NUMBER	DATE
472-2020-085614	40102920	08/2013

CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202-1620
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303 SOUTH TOPEKA
WICHITA, KS 67202
316-262-2691 www.pec1.com

CITY OF WICHITA

RILEY J. SCHMITZ
LICENSED
24168
02/08/2021
KANSAS
PROFESSIONAL ENGINEER

37TH ST N. SIDEWALK RIDGE TO RIDGEPORT

GARY JANZEN, P.E. - CITY ENGINEER
CITY OF WICHITA PROJECT NO. 472-2020-085614
SEDGWICK COUNTY, KANSAS

Issue:		

JOB NO.	207042-001
DATE	FEBRUARY 2021
PM	BMM
DESIGNED BY	KMS
DRAWN BY	BJS
CHECKED BY	RJS

WHEEL CHAIR RAMP DETAILS

CP503
17 OF 41

SAVED 2/5/2021 9:21:20 AM BY BILL.SEXSON
PLOTTED 2/5/2021 10:29:32 AM BY BILL SEXSON. CET
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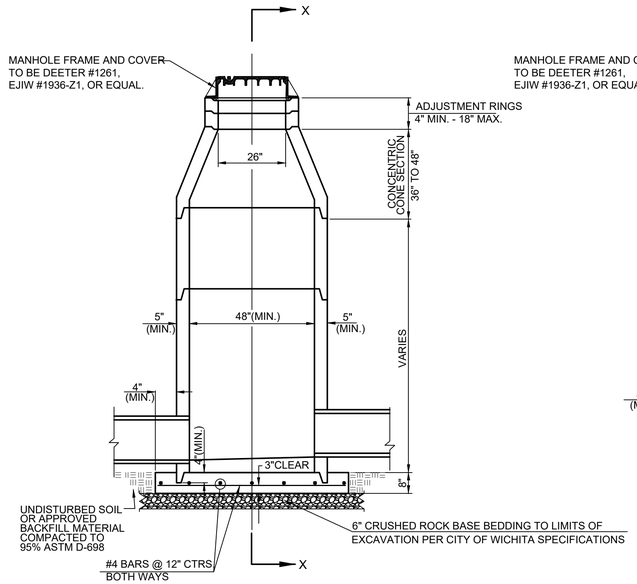
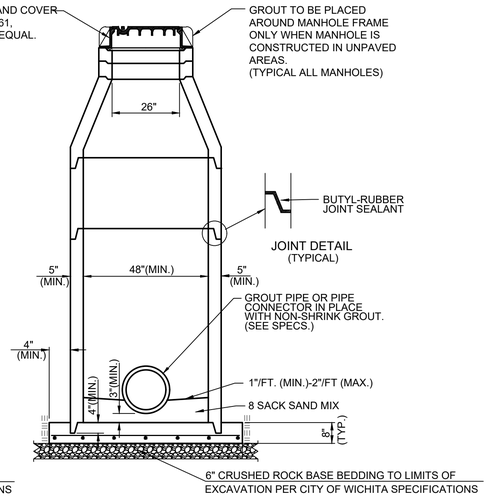
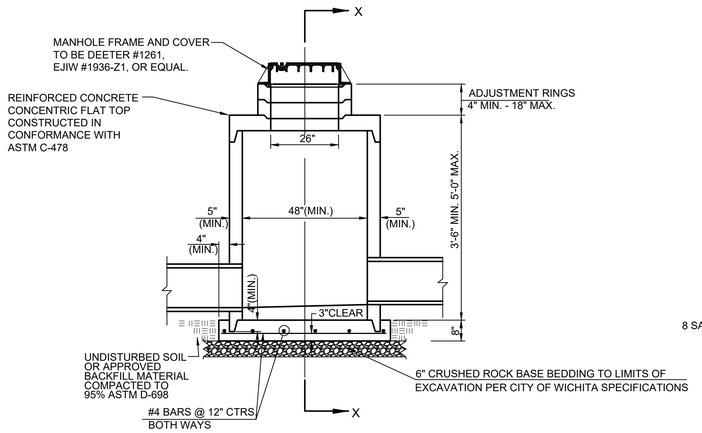


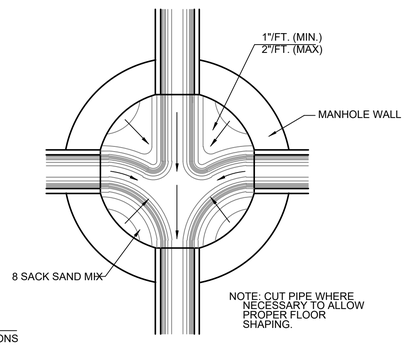
PRECAST
STANDARD MANHOLE
TYPE "A"



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	ORG NUMBER	DATE
472-2020-085614	40102920	

CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
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SHEET
CP504

SW-301

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CITY OF WICHITA

RILEY J. SCHMITZ
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37TH ST N. SIDEWALK
RIDGE TO RIDGEPORT

GARY JANZEN, P.E. - CITY ENGINEER
CITY OF WICHITA PROJECT NO. 472-2020-085614
SEDGWICK COUNTY, KANSAS

Issue:		

JOB NO.	207042-001
DATE	FEBRUARY 2021
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DRAWN BY	BJS
CHECKED BY	RJS

PRECAST CONCRETE MANHOLE DETAILS

CP504
18 OF 41

SAVED 2/5/2021 9:16:08 AM BY BILL.SEXSON
PLOTTED 2/5/2021 10:29:36 AM BY BILL SEXSON, CET
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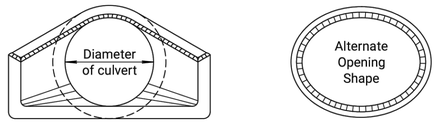
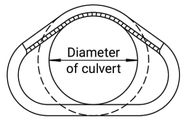
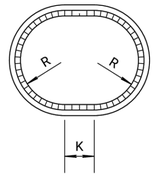


END ELEVATION (TYPE I)



SECTION A-A

Showing rounding of inside edge of end section.



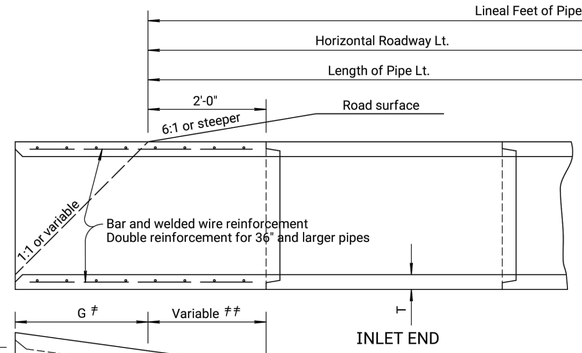
END ELEVATION
(TYPE III)

Note to Designer: KDOT Pipe Policy provides guidance in identifying the prohibited and/or restricted uses of CSP, ACSP, PEP, PVCP, CAP & RCP. Provide end sections of the same type and coating as the pipe. Exceptions to this are noted in the Standard Specifications. Refer to the KDOT Design Manual, Volume I (Part C), Road Section, "Elements of Drainage & Culvert Design" for structural pipe design information which includes: corrugations, sizes, gauges, maximum/minimum fill heights and classes of pipe.

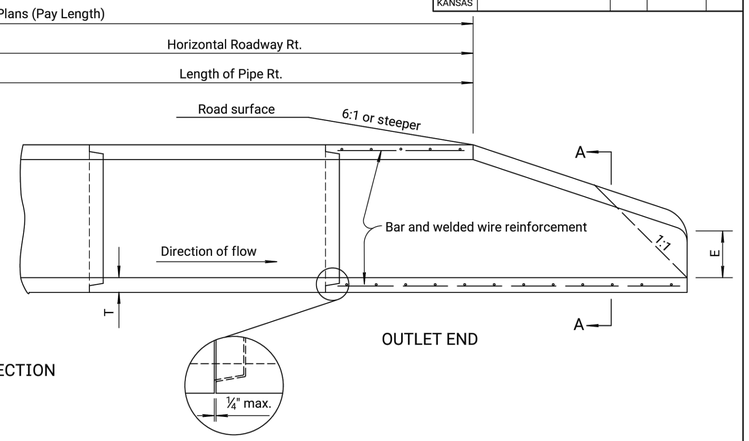
Plotted 29-MAR-2018 10:47

Drawn By: arockers
File: working_rd662.dgn

ϕ Transition to round pipe.
ǂ Paid for as separate item of End Section, except when structures shall bid as alternates. In that case End Sections shall be subsidiary to bid item. "Drainage Structure No. ".
ǂǂ Included in pay length of pipe.
⚹ Minimum waterway area is calculated at the inside of the bevel.



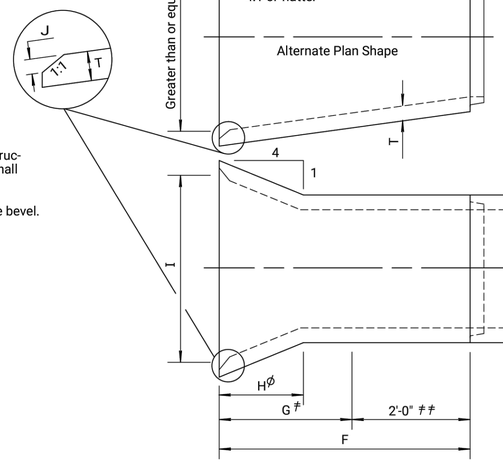
INLET END



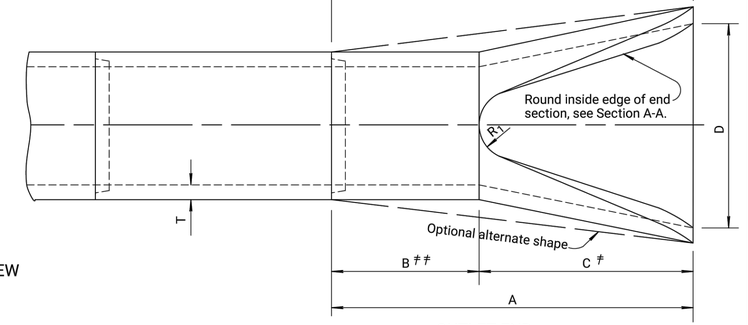
OUTLET END

ELEVATION SECTION

Note: There shall be no payment for gain in length due to joint fit tolerance.



INLET END



OUTLET END

PLAN VIEW

END SECTION (TYPE I) NOMINAL DIMENSIONS

Diam.	A	B ǂǂ	C ǂ	D	E	R_1	Slope	T
12"	6'-0 7/8"	4'-0 7/8"	2'-0"	2'-0"	4"	9	3:1	2"
15"	6'-1"	3'-10"	2'-3"	2'-6"	6"	11	3:1	2 ¼"
18"	6'-1"	3'-10"	2'-3"	3'-0"	9"	12	3:1	2 ½"
24"	6'-1 ½"	2'-6"	3'-7 ½"	4'-0"	9 ½"	14	3:1	3"
30"	6'-1 ¾"	1'-7 ¾"	4'-6"	5'-0"	1'-0"	15	3:1	3 ½"
36"	8'-1 ¾"	2'-10¾"	5'-3"	6'-0"	1'-3"	20	3:1	4"
42"	8'-2"	2'-11"	5'-3"	6'-6"	1'-9"	22	3:1	4 ½"
48"	8'-2"	2'-2"	6'-0"	7'-0"	2'-0"	22	3:1	5"
54"	8'-2 ¼"	2'-9 ¼"	5'-5"	7'-6"	2'-3"	24	2.4:1	5 ½"
60"	8'-3"	3'-3"	5'-0"	8'-0"	2'-11"	24	21	6"
72"	8'-3"	1'-9"	6'-6"	9'-0"	3'-0"	24	1.86:1	7"
84"	9'-3 ½"	1'-9"	7'-6 ½"	10-0"	3'-0"	24	1.6:1	8"

SIDE TAPERED INLET SECTION (TYPE III)-NOMINAL DIMENSIONS

Diam.	Min. W.W.⚹ Area Sq. Ft.	F	G	H	I	J	K	R	T
24"	4.5	4'-3"	2'-3"	1'-5 ⅛"	2'-8"	1 ½"	8"	1'-0"	3"
30"	7.0	4'-9 ½"	2'-9 ½"	1'-9 ½"	3'-4"	2"	10"	1'-3"	3 ½"
36"	10.1	5'-4"	3'-4"	2'-1 ½"	4'-0"	2"	1'-0"	1'-6"	4"
42"	13.7	5'-10 ½"	3'-10 ½"	2'-5 ⅞"	4'-8"	2 ½"	1'-2"	1'-9"	4 ½"
48"	17.9	6'-5"	4'-5"	2'-10 ⅛"	5'-4"	3"	1'-4"	2'-0"	5"
54"	22.7	6'-11 ½"	4'-11 ½"	3'-2 ½"	6'-0"	3 ½"	1'-6"	2'-3"	5 ½"
60"	28.0	7'-6"	5'-6"	3'-6 ⅞"	6'-8"	4"	1'-8"	2'-6"	6"
72"	40.3	8'-7"	6'-7"	4'-3 ⅝"	8'-0"	5"	2'-0"	3'-0"	7"
84"	54.8	9'-8"	7'-8"	5'-0 ⅜"	9'-4"	6"	2'-4"	3'-6"	8"

Dimensions for alternate shapes shall be equal to or greater than those shown in the table, unless otherwise shown.

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS				

NO.	DATE	REVISIONS	BY	APP'D
2	4-18-08	Added ref. to KDOT Pipe Policy	S.W.K	J.O.B
1	4-05-05	Revised reinforcement callout	S.W.K	J.O.B

KANSAS DEPARTMENT OF TRANSPORTATION

CONCRETE END SECTIONS
FOR CONCRETE PIPES
TYPE I & SIDE TAPERED
INLET SECTION (TYPE III)

RD662

FHWA APPROVAL	6-27-08	APP'D. James O. Brewer	
DESIGNED	DETAILED	QUANTITIES	TRACED Bowser
DESIGN CK.	DETAIL CK.	QUAN.CK.	TRACE CK. King

KDOT Graphics Certified 03-29-2018

KDOT Graphics Certified

PEC
PROFESSIONAL ENGINEERING CONSULTANTS
303 SOUTH TOPEKA
WICHITA, KS 67202
316-262-2691 www.pec1.com

CITY OF WICHITA

RILEY J. SCHMITZ
LICENSED
24168
02/08/2021
KANSAS
PROFESSIONAL ENGINEER

37TH ST N. SIDEWALK
RIDGE TO RIDGEPORT

GARY JANZEN, P.E. - CITY ENGINEER
CITY OF WICHITA PROJECT NO. 472-2020-085614
SEDGWICK COUNTY, KANSAS

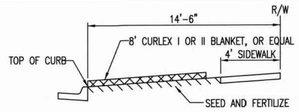
Issue:		

JOB NO.	207042-001
DATE	FEBRUARY 2021
PM	BMM
DESIGNED BY	KMS
DRAWN BY	BJS
CHECKED BY	RJS

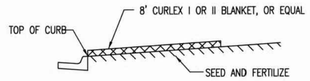
END SECTION DETAILS

CP505
19 OF 41

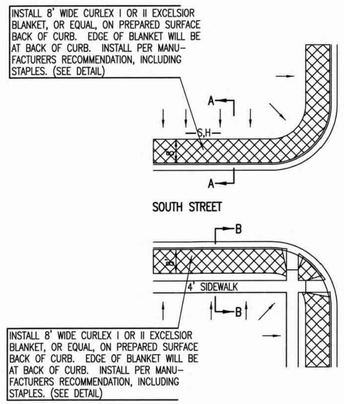
SAVED 2/5/2021 8:58:06 AM BY BILL.SEXSON
PLOTTED 2/5/2021 10:29:42 AM BY BILL.SEXSON, CET
U:\WICHITA-CIVIL\2020\207042\001\MUNI-TRANS\DRAWINGS\207042-001-19-CP505 END SECTION DETAILS.DWG



SECTION B-B



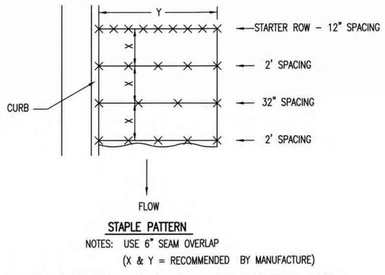
SECTION A-A



GENERAL NOTES

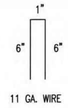
1. EXCELSIOR MAT TO BE INSTALLED WHEN SOD IS NOT SPECIFIED ON PROJECT.
2. EXCELSIOR BLANKET TO BE INSTALLED OVER SEED AND FERTILIZER, AS SPECIFIED IN THE PROJECT SPECIFICATIONS.
3. AFTER INSTALLATION OF EXCELSIOR BLANKET, AT LOCATIONS WHERE CONCENTRATED FLOW CARRIES SEDIMENT OVER THE CURB AND INTO THE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

BACK OF CURB PROTECTION DETAIL



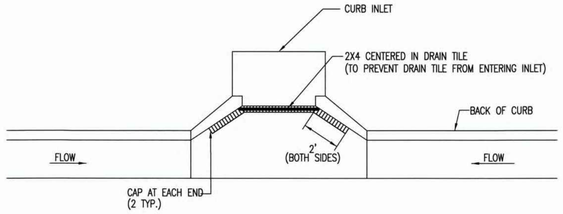
STAPLE PATTERN

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



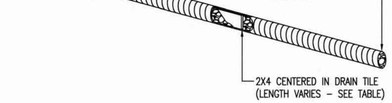
STAPLE

DETAILS FOR APPROVED EROSION CONTROL MAT



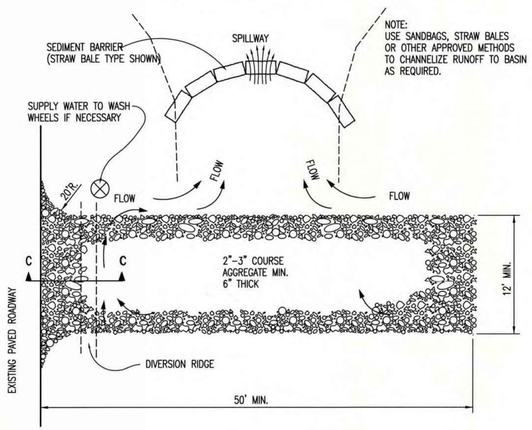
NOTE:
PLACE 4" PERFORATED PVC PIPE, FILLED WITH 1/2"-1" DIA. GRAVEL, IN FRONT OF CURB INLET AS SHOWN.

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 16204 PROFESSIONAL ENGINEER KANSAS
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	ORG NUMBER	DATE
472-2020-085614	40102920	

CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202-1620
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SHEET
CP511

SW-501

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303 SOUTH TOPEKA
WICHITA, KS 67202
316-262-2691 www.pec1.com

CITY OF WICHITA

RILEY J. SCHMITZ LICENSED 24168 02/08/2021 KANSAS PROFESSIONAL ENGINEER

37TH ST N. SIDEWALK RIDGE TO RIDGEPORT

GARY JANZEN, P.E. - CITY ENGINEER
CITY OF WICHITA PROJECT NO. 472-2020-085614
SEDGWICK COUNTY, KANSAS

Issue:		

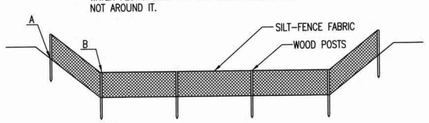
JOB NO.	207042-001
DATE	FEBRUARY 2021
PM	BMM
DESIGNED BY	KMS
DRAWN BY	BJS
CHECKED BY	RJS

BMP STANDARD

CP511
20 OF 41

SAVED 2/5/2021 8:58:09 AM BY BILL.SEXSON
PLOTTED 2/5/2021 10:29:46 AM BY BILL.SEXSON, CET
U:\WICHITA-CIVIL\2020\207042\001\MUNI-TRANS\DRAWINGS\207042-001-20-CP511 BMP STANDARD.DWG

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.

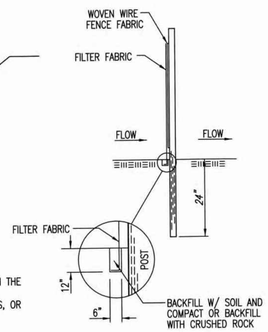
LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

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.

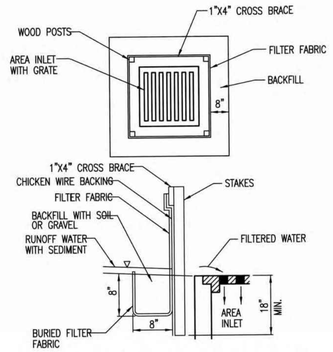
INSPECTION AND MAINTENANCE:

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.

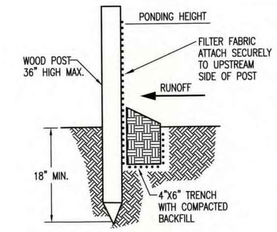
LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

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 — 16294 — KANSAS — PROFESSIONAL ENGINEER — 12/2/13

CITY OF WICHITA
PUBLIC WORKS & UTILITIES ENGINEERING DIVISION

SILT FENCE DITCH CHECK AND BARRIER DETAILS

CITY ENGINEER
GARY JANZEN, P.E.

PROJECT NUMBER	ORG NUMBER	DATE
472-2020-085614	40102920	

CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
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CP512

SW-502

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CITY OF WICHITA

RILEY J. SCHMITZ — LICENSED — 24168 — 02/08/2021 — KANSAS — PROFESSIONAL ENGINEER

37TH ST N. SIDEWALK
RIDGE TO RIDGEPORT

GARY JANZEN, P.E. – CITY ENGINEER
CITY OF WICHITA PROJECT NO. 472-2020-085614
SEDGWICK COUNTY, KANSAS

Issue:		

JOB NO.	207042-001
DATE	FEBRUARY 2021
PM	BMM
DESIGNED BY	KMS
DRAWN BY	BJS
CHECKED BY	RJS

BMP STANDARD

CP512
21 OF 41

SAVED 2/5/2021 8:58:13 AM BY BILL.SEXSON
PLOTTED 2/5/2021 10:29:51 AM BY BILL SEXSON .CET
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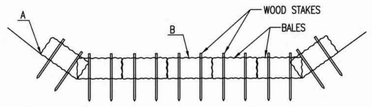
NOTE: POINT A MUST BE HIGHER THAN POINT B SO THAT WATER FLOWS OVER THE BALES AND NOT AROUND THEM.



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 (%)	DITCH 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".

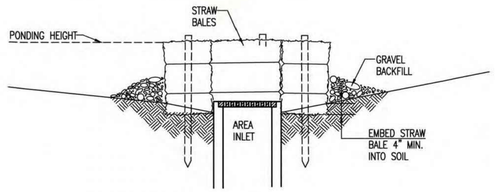
LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

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.

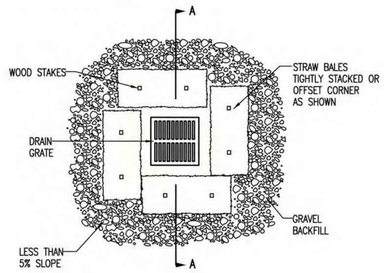
INSPECTION AND MAINTENANCE:

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.

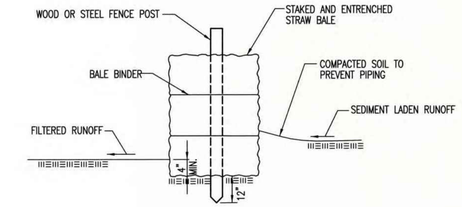
LIST OF COMMON PLACEMENT INSTALLATION MISTAKES TO AVOID:

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 PROFESSIONAL ENGINEER KANSAS 05/31/13

CITY OF WICHITA
PUBLIC WORKS & UTILITIES ENGINEERING DIVISION

STRAW BALE DITCH CHECK AND BARRIER DETAILS

CITY ENGINEER
GARY JANZEN, P.E.

PROJECT NUMBER	ORG NUMBER	DATE
472-2020-085614	40102920	

CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202-1620
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SHEET
CP513

SW-503

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CITY OF WICHITA

RILEY J. SCHMITZ LICENSED 24168 02/08/2021 KANSAS PROFESSIONAL ENGINEER

37TH ST N. SIDEWALK
RIDGE TO RIDGEPORT

GARY JANZEN, P.E. - CITY ENGINEER
CITY OF WICHITA PROJECT NO. 472-2020-085614
SEDGWICK COUNTY, KANSAS

Issue:		

JOB NO.	207042-001
DATE	FEBRUARY 2021
PM	BMM
DESIGNED BY	KMS
DRAWN BY	BJS
CHECKED BY	RJS

BMP STANDARD

CP513
22 OF 41

SAVED 2/5/2021 8:58:22 AM BY BILL.SEXSON
PLOTTED 2/5/2021 10:29:56 AM BY BILL SEXSON, CET
U:\WICHITA-CIVIL\2020\207042\001\MUNI-TRANS\DRAWINGS\207042-001-22-CP513 BMP STANDARD.DWG

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.

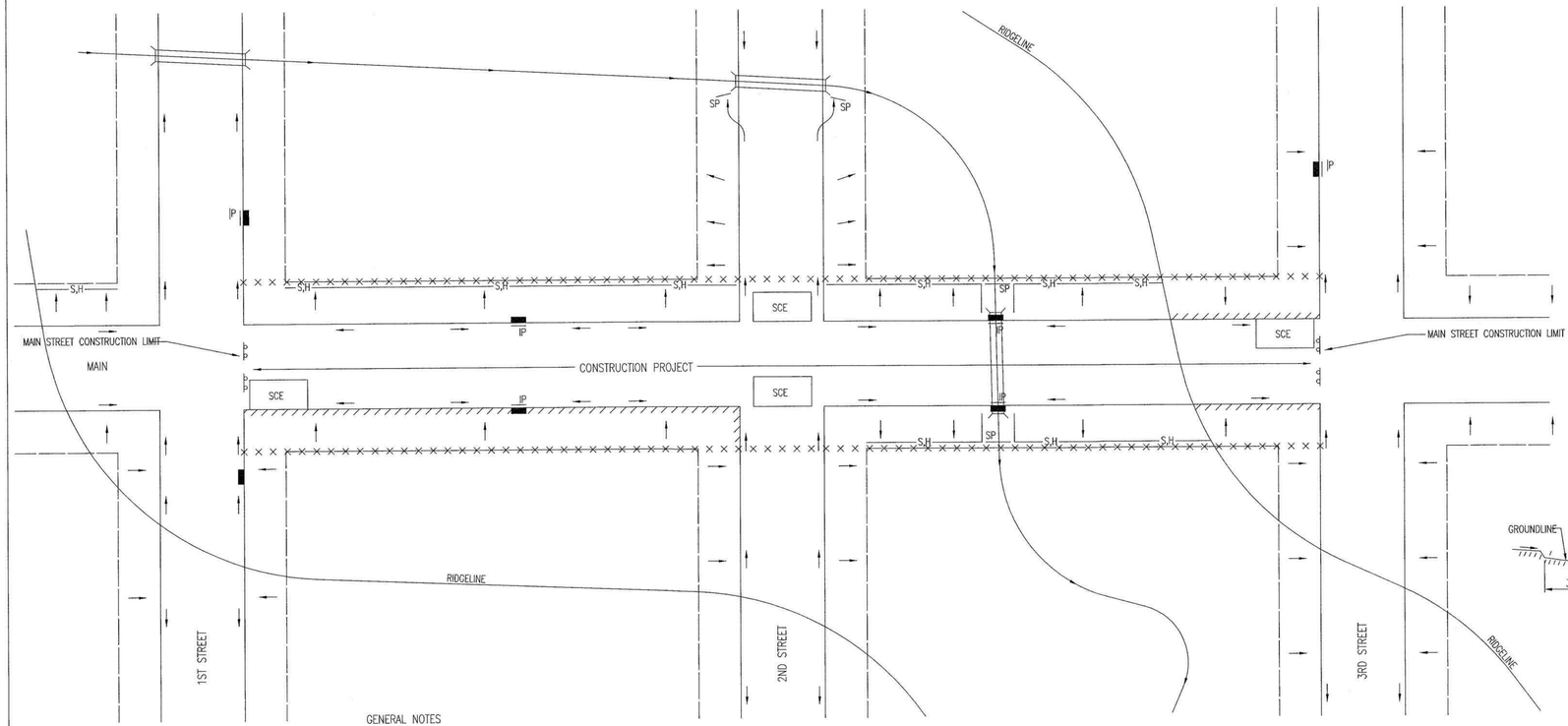
2. EROSION CONTROL DEVICES MUST BE MAINTAINED BY THE CONTRACTOR THROUGHOUT THE CONSTRUCTION PROCESS AND UNTIL THE DISTURBED EARTH IS RESTABILIZED.

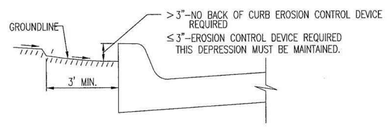
3. IF THE PROJECT WILL DISTURB 1 ACRE OR MORE, A FEDERAL/STATE NPDES STORMWATER PERMIT IS REQUIRED. A DETAILED STORMWATER POLLUTION PREVENTION PLAN, IS REQUIRED. THE EROSION CONTROL DEVICES SHOWN ON THIS SHEET ARE CONSIDERED TO BE THE MINIMUM TO BE SHOWN IN THE POLLUTION PREVENTION PLAN.

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	ORG NUMBER	DATE
472-2020-085614	40102920	

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

SHEET: CP514

SW-504

PEC
PROFESSIONAL ENGINEERING CONSULTANTS
303 SOUTH TOPEKA
WICHITA, KS 67202
316-262-2691 www.pec1.com

CITY OF WICHITA

RILEY J. SCHMITZ LICENSED 24168 02/08/2021 KANSAS PROFESSIONAL ENGINEER

37TH ST N. SIDEWALK RIDGE TO RIDGEPORT

GARY JANZEN, P.E. - CITY ENGINEER
CITY OF WICHITA PROJECT NO. 472-2020-085614
SEDGWICK COUNTY, KANSAS

Issue:		

JOB NO.	207042-001
DATE	FEBRUARY 2021
PM	BMM
DESIGNED BY	KMS
DRAWN BY	BJS
CHECKED BY	RJS

BMP STANDARD

CP514
23 OF 41

SAVED 2/5/2021 8:58:29 AM BY BILL.SEXSON
PLOTTED 2/5/2021 10:30:01 AM BY BILL.SEXSON, CET
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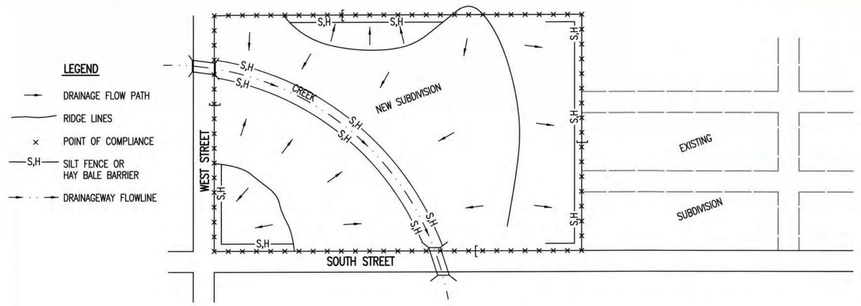
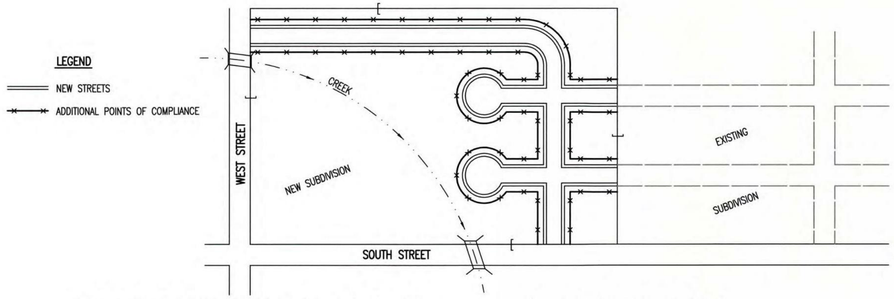
PHASE 1 – INITIAL EARTHWORK AND UTILITIES (EXCEPT STORM SEWER)



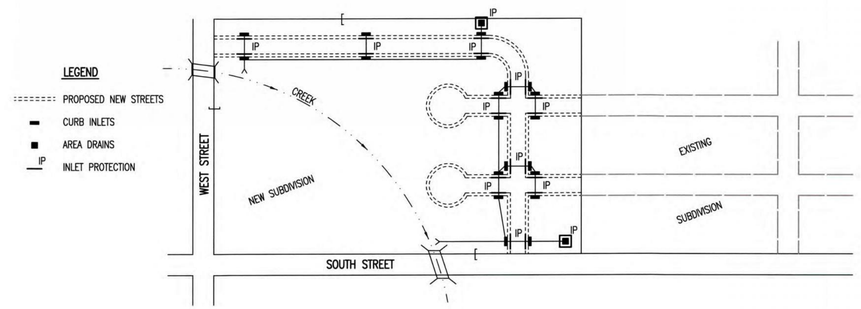
1. DURING THIS PHASE OF SUBDIVISION CONSTRUCTION, THE POINTS OF COMPLIANCE ARE THE PERIMETER BOUNDARIES AND ANY DRAINAGE WAYS OR STORM SEWERS DRAINING THROUGH OR FROM THE SITE. SHOULD LAKES BE CONSTRUCTED WITHIN THE SUBDIVISION THAT WILL DISCHARGE DURING STORMS, THEY ARE ALSO A POINT OF COMPLIANCE.
2. 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 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.

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.

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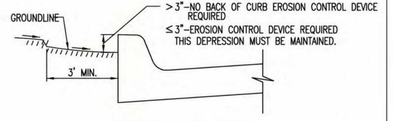
GENERAL NOTES

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.

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

GARY L. JANZEN LICENSED 16294 PROFESSIONAL ENGINEER KANSAS
05.12.13

CITY OF WICHITA
PUBLIC WORKS & UTILITIES ENGINEERING DIVISION

SUBDIVISION DEVELOPMENT PROCESS

CITY ENGINEER: GARY JANZEN, P.E.

PROJECT NUMBER	ORG NUMBER	DATE
472-2020-085614	40102920	

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

SHEET: CP515

SW-505

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WICHITA, KS 67202
316-262-2691 www.pec1.com

CITY OF WICHITA

RILEY J. SCHMITZ LICENSED 24168 02/08/2021 KANSAS PROFESSIONAL ENGINEER

37TH ST N. SIDEWALK
RIDGE TO RIDGEPORT

GARY JANZEN, P.E. - CITY ENGINEER
CITY OF WICHITA PROJECT NO. 472-2020-085614
SEDGWICK COUNTY, KANSAS

Issue:		

JOB NO.	207042-001
DATE	FEBRUARY 2021
PM	BMM
DESIGNED BY	KMS
DRAWN BY	BJS
CHECKED BY	RJS

BMP STANDARD

CP515
24 OF 41

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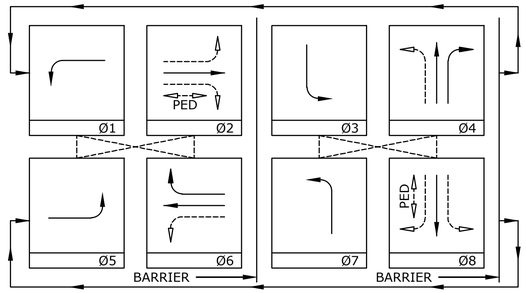
GENERAL NOTES

1. Placement of Signal Poles, Service/Junction Boxes, Conduit runs and Controller are typical and may be adjusted as directed by Engineer to facilitate installation.
2. Utility locations are approximate. The Contractor shall be responsible for locating all underground utilities prior to construction.
3. All traffic signal equipment removed by the Contractor shall be salvaged for the City of Wichita.

TRAFFIC SIGNAL CONSTRUCTION NOTES

1. Contractor shall remove existing pedestrian head, push button and corresponding signal cable from Traffic Signal Pole #1. Contractor shall install rubber plugs within any exposed openings in pole.
2. Contractor shall remove existing pedestrian heads, push buttons and corresponding signal cable from Traffic Signal Pole #4. Contractor shall install rubber plugs within any exposed openings in pole.
3. Contractor shall install pedestal poles, pedestrian heads, pushbuttons and signal cable as shown on the plans and/or wiring diagram.

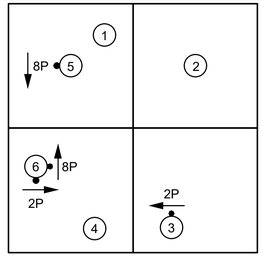
PHASE DIAGRAM

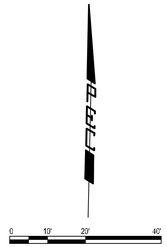


NOTE:
DASHED LINES CONNECTING PHASES DENOTE NON-CONFLICTING SIGNAL PHASES THAT CAN OCCUR CONCURRENTLY.

MOVEMENTS
PROTECTED PHASE
PERMITTED PHASE

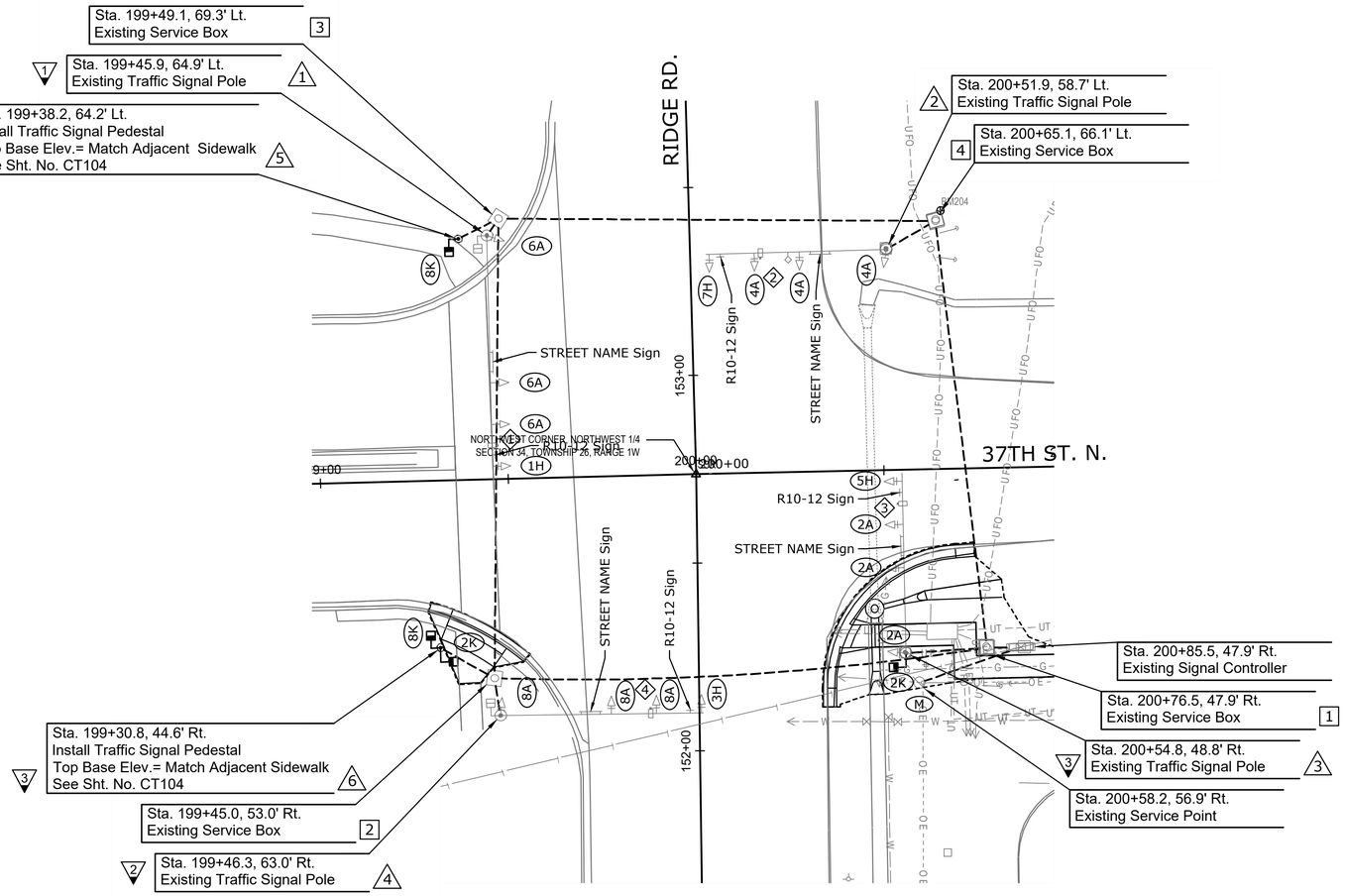
PEDESTRIAN PUSHBUTTON LOCATION & DESIGNATION



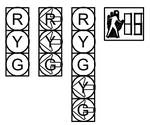


LEGEND

- M — METER AND ENCLOSURE
- TRAFFIC SIGNAL CONTROLLER
- CONDUIT
- SERVICE/JUNCTION BOX
- TRAFFIC SIGNAL POLE w/ MAST ARM
- TRAFFIC SIGNAL PEDESTAL POLE
- SIGNAL HEAD (EXISTING)
- SIGNAL HEAD W/BACKPLATE (EXISTING)
- PEDESTRIAN SIGNAL HEAD (EXISTING)
- COMM. ANTENNA (EXISTING)
- PEDESTRIAN SIGNAL HEAD
- TRAFFIC SIGN
- VIDEO CAMERA UNIT
- 1 — SERVICE/ JUNCTION BOX NUMBER
- 1 — SIGNAL POLE NUMBER
- 1A — SIGNAL HEAD PHASE/TYPE
- 1 — VIDEO CAMERA NUMBER



TRAFFIC SIGNAL HEADS



NOTE:
ALL INDICATIONS SHALL BE L.E.D. DISPLAYS (12" DIA. LENS), EXCEPT PEDESTRIAN DISPLAYS WHICH SHALL BE 18" WIDE x 16" TALL.

UTILITIES

Cable TV	Cox Communications
Gas	Kansas Gas Service
Power	Westar Energy
Sanitary Sewer	City of Wichita
Storm Water Sewer	City of Wichita
Telephone	AT&T
Water	City of Wichita

NOTE: The Station/Offset information provided is from the 37th St. N. Baseline, unless otherwise indicated.

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CITY OF WICHITA

SCOTT ALLAN CANFIELD LICENSED 14308 02/08/2021 KANSAS PROFESSIONAL ENGINEER

37TH ST N. SIDEWALK RIDGE TO RIDGEPORT

GARY JANZEN, P.E. - CITY ENGINEER
CITY OF WICHITA PROJECT NO. 472-2020-085614
SEDGWICK COUNTY, KANSAS

Issue:		

JOB NO.	207042-001
DATE	FEBRUARY 2021
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DRAWN BY	BJS
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SIGNAL PLAN

CT101
25 OF 41

SAVED 2/5/2021 10:23:53 AM BY BILL.SEXSON
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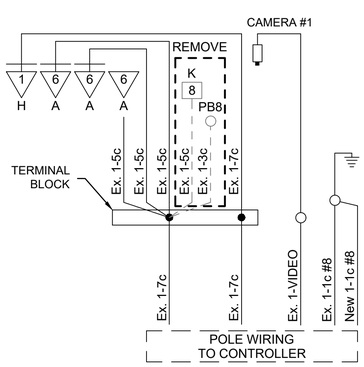
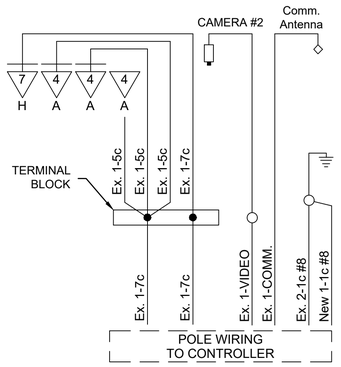
U:\WICHITA-CIVIL\2020\207042\001\MUNI-TRANS\DRAWINGS\207042-001-25-CT101 TRAFFIC SIGNAL PLAN.DWG

POLE WIRING DIAGRAM

NOT TO SCALE



POLE NO. 1



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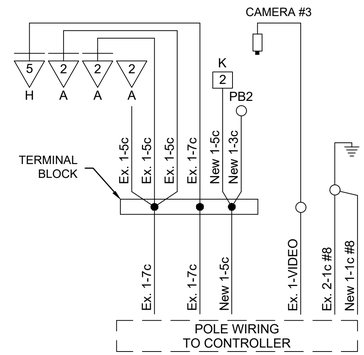

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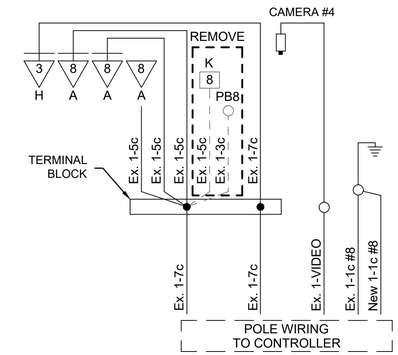

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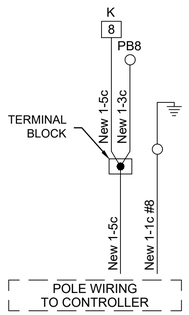
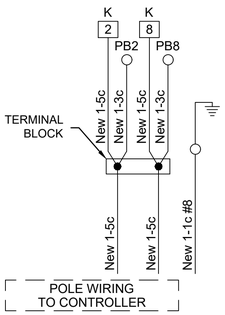


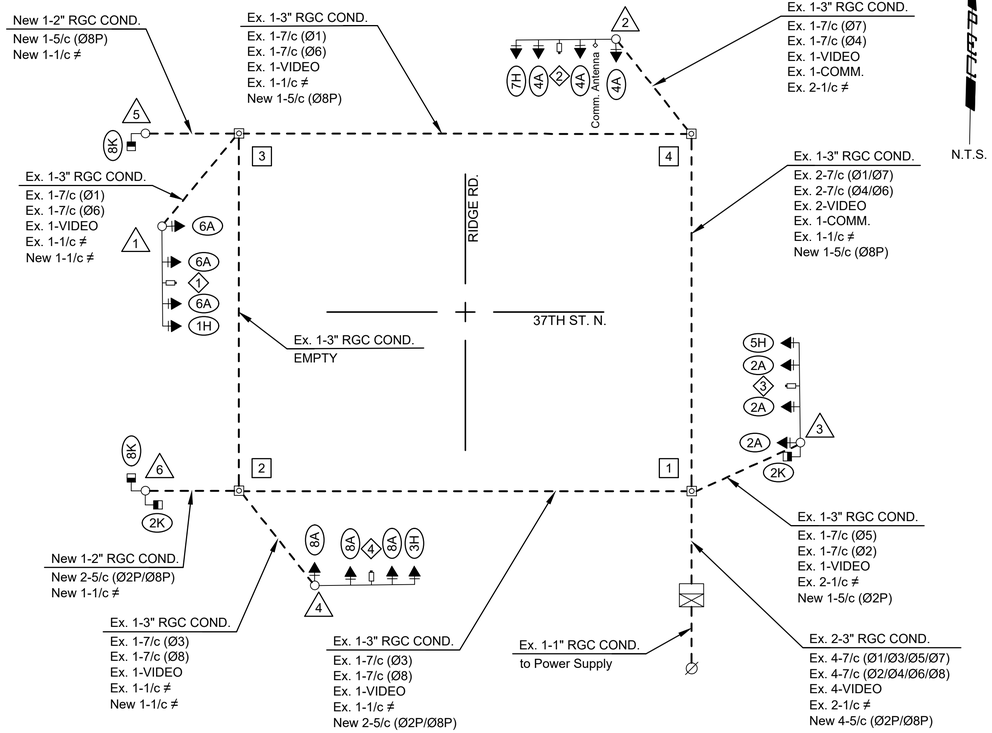
POLE NO. 5



POLE NO. 6

WIRING DIAGRAM

NOT TO SCALE



N.T.S.

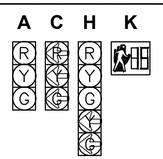
NOTES:
1. All signal cables shall be #14 A.W.G. unless otherwise stated.
2. Ground wire (≠) shall be 1/c #8 A.W.G. (Green) and shall be continuous.
3. Each pole shall have a separate ground rod in addition to continuous ground wire.
4. All splices to signal cable are to be within the pole base - no splices of signal cable are permitted within the service boxes.

LEGEND

- 1 — SERVICE/ JUNCTION BOX NUMBER
- 1 — SIGNAL POLE NUMBER
- 1A — SIGNAL HEAD PHASE/TYPE
- 1 — CAMERA NUMBER

TRAFFIC SIGNAL HEADS

A C H K



NOTE:
ALL INDICATIONS SHALL BE L.E.D. DISPLAYS (12" DIA. LENS), EXCEPT PEDESTRIAN DISPLAYS WHICH SHALL BE 18" WIDE x 16" TALL.

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CITY OF WICHITA

SCOTT ALLAN CAMFIELD LICENSED 14309 02/08/2021 KANSAS PROFESSIONAL ENGINEER

37TH ST N. SIDEWALK
RIDGE TO RIDGEPORT

GARY JANZEN, P.E. - CITY ENGINEER
CITY OF WICHITA PROJECT NO. 472-2020-085614
SEDGWICK COUNTY, KANSAS

Issue:		

JOB NO.	207042-001
DATE	FEBRUARY 2021
PM	BMM
DESIGNED BY	KMS
DRAWN BY	BJS
CHECKED BY	RJS

WIRING DIAGRAM

CT102

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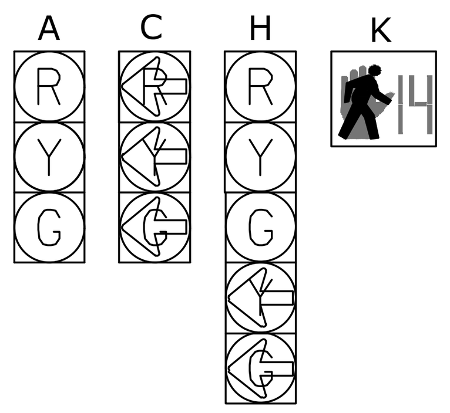
TRAFFIC SIGNAL HEADS



NOTE: ALL LENSES ARE 12" L.E.D. UNLESS OTHERWISE NOTED.

SUMMARY OF TRAFFIC SIGNAL HEADS

SIGNAL FACE NUMBER	SIGNAL FACE ARRANGEMENT	NO. SECTIONS (PER FACE)	SIGNAL MOUNTING TYPE	QUANTITY
2,8	K	1	SIDE-OF-POLE	4
TOTAL				4

TRAFFIC SIGNAL POLE SUMMARY

POLE NO.	POLE HEIGHT	ARM HEIGHT	ARM LENGTH	NO. OF SIGNALS ON ARM	BRACKET TYPE	X1	X2	X3	X4	NO. OF SIGNALS ON POLE	BRACKET TYPE	NO.OF PUSH BUTTONS ON POLE	LUMINAIRE MOUNTING HEIGHT
1	Ex.	---	Ex.	---	---	---	---	---	---	---	---	---	---
2	Ex.	---	Ex.	---	---	---	---	---	---	---	---	---	---
3	Ex.	---	Ex.	---	---	---	---	---	---	1	III	1	---
4	Ex.	---	Ex.	---	---	---	---	---	---	---	---	---	---
5	15	---	---	---	---	---	---	---	---	1	III	1	---
6	15	---	---	---	---	---	---	---	---	2	III	2	---

MAST ARM LENGTHS FOR FUTURE OPERATION WITH PROTECTED LEFT-TURNS.

POLE AND EQUIPMENT FINISH:

Surface preparation
The exterior steel surface shall be blasted clean in accordance with the requirements outlined in the Steel Structures Painting Council Surface Preparation Specification No. 6, (SSPCSP60) utilizing a dry abrasive, closed cycle, recirculating system with centrifugal wheels and abrasive. The abrasive used shall be steel shot conforming to the Society of Automotive Engineers (SAE) Recommended Practice No. J827 with particle size meeting SAE Shot No. S280.

Zinc Coating
The pole assembly shall be hot-dip galvanized to the requirements of either ASTM A123 (Fabricated items) or ASTM A153 (Hardware items) by immersion in a molten bath of prime western grade zinc maintained between 810^F and 850^F. Maximum aluminum content of the bath shall not exceed 0.01%.

Top Coat
All visually exposed exterior surfaces shall be coated with a urethane or triglycidyl isocyanurate (TGIC) polyester powder to a minimum dry film thickness (DFT) of 0.05mm (2.0 mils). Prior to application of the topcoat, the surface shall be mechanically etched and pre-heated to 450^F for a minimum of one hour. The coating shall be electrostatically applied and cured at a minimum temperature of 400^F and the color shall be BLACK.

PHASE TIMING

FUNCTION	PHASE 1	2	3	4	5	6	7	8
MINIMUM GREEN								
MAXIMUM GREEN								
YELLOW CHANGE								
RED CLEAR								
ADDED INITIAL								
MAXIMUM INITIAL								
WALK								
WALK CLEAR								

SERVICE/JUNCTION BOX SUMMARY

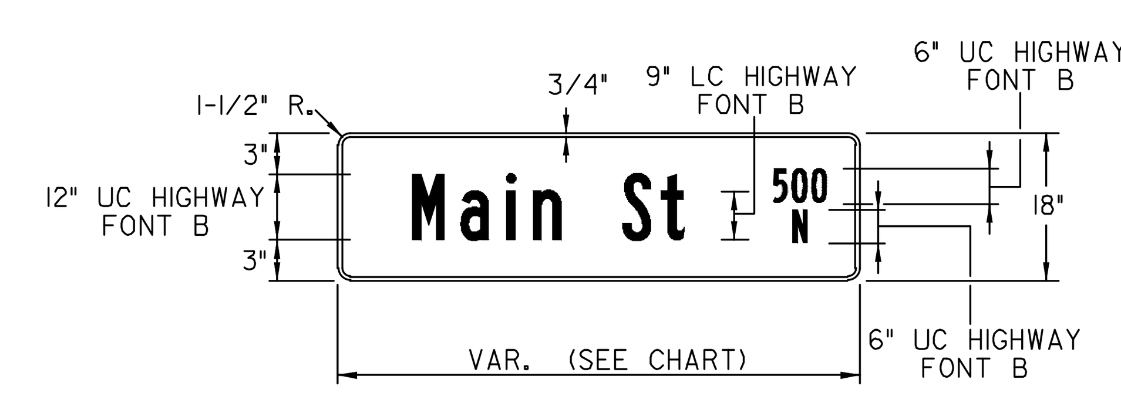
STATION	DIST.-SIDE	BASELINE

DETECTOR SUMMARY

DETECTOR NO.	DETECTION ZONE	MODE	SIZE (LxW)	PHASE CALLED	PHASE EXTENDED	DELAY/ STRETCH TIMER	INITIAL SETTING (SEC.)

OVERHEAD STREET NAME SIGNS

LEGEND	LENGTH	QUANTITY



RECAPITULATION OF TRAFFIC SIGNAL QUANTITIES

ITEM	UNIT	QUANTITY
TRAFFIC SIGNALIZATION (RIDGE RD. & 37TH ST. N)	LUMP SUM	1

NOTE: The traffic signal system shall be complete and the contractor shall furnish and install all equipment and materials necessary for the satisfactory operation of electrical apparatus and for the complete operation of the traffic signal system whether specifically mentioned or not.

BILL OF MATERIALS

ITEM	UNIT	QUANTITY
PAD MOUNTED CABINET	EACH	Ex.
SIGNAL CONTROLLER (2070)	EACH	Ex.
CONFLICT MONITOR (MODEL 2010 ECLip)	EACH	Ex.
BATTERY BACKUP SYSTEM	EACH	---
TRAFFIC SIGNAL HEAD W/MOUNTING HARDWARE	EACH	4
TRAFFIC SIGNAL POLE, STEEL (SEE POLE SUMMARY)	EACH	---
TRAFFIC SIGNAL PEDESTAL ALUM. (5')	EACH	---
TRAFFIC SIGNAL PEDESTAL ALUM. (15')	EACH	2
TRAFFIC SIGNAL PEDESTAL (JOINT USE) ALUM. (35')	EACH	---
LUMINAIRE POLE W/15' ARM (SEE POLE SUMMARY)	EACH	---
CONCRETE CONTROLLER PAD	EACH	---
SCREW-IN FOUNDATION – PEDESTAL (5')	EACH	---
CONCRETE FOOTING – PEDESTAL (15')	EACH	2
CONCRETE FOOTING – PEDESTAL (35')	EACH	---
CONCRETE FOOTING – POLE	EACH	---
CONDUIT ELBOW 90° – 2"	EACH	AS REQ'D
CONDUIT ELBOW 90° – 3"	EACH	AS REQ'D
BACK PLATE 5" 3 SECTION (2" RETROREFLECTIVE)	EACH	---
BACK PLATE 5" 5 SECTION (2" RETROREFLECTIVE)	EACH	---
TERMINAL BLOCK	EACH	2
SERVICE BOX	EACH	---
JUNCTION BOX (PRE-FAB)	EACH	---
GROUND ROD & CLAMP	EACH	2
PEDESTRIAN PUSHBUTTON W/SIGN ◕	EACH	4
PEDESTRIAN INDICATIONS LED (16"x18" COMBINATION) (COUNTDOWN)	EACH	4
LED TRAFFIC SIGNAL LENS (12")	EACH	---
ENTRANCE HEAD	EACH	---
CIRCUIT BREAKER & BOX 50 AMP.	EACH	---
SURGE ARRESTOR – A.C. SERVICE	EACH	---
SURGE ARRESTOR – DETECTOR	EACH	---
6 PR. COMMUNICATION CABLE	LIN.FT.	---
DETECTOR LOOP WIRE NO. 14 AWG 1/c	LIN.FT.	---
SHIELDED DETECTOR LEAD-IN NO.14 AWG 2/c	LIN.FT.	---
MULTI-CONDUCTOR CABLE NO.14 AWG 15/c	LIN.FT.	---
MULTI-CONDUCTOR CABLE NO.14 AWG 7/c	LIN.FT.	---
MULTI-CONDUCTOR CABLE NO.14 AWG 5/c	LIN.FT.	720
MULTI-CONDUCTOR CABLE NO.14 AWG 3/c	LIN.FT.	20
#8 AWG GROUND (GREEN)	LIN.FT.	80
CONDUIT 1"(RGC)	LIN.FT.	AS REQ'D
CONDUIT 1 1/2"(RGC)	LIN.FT.	---
CONDUIT 2"(PVC)	LIN.FT.	---
CONDUIT 2"(RGC)	LIN.FT.	32
CONDUIT 3"(RGC)	LIN.FT.	---
STREET NAME SIGN	EACH	---
LEFT TURN SIGNAL (R10-10) SIGN	EACH	---
LEFT TURN SIGNAL (R10-12) SIGN	EACH	---
LEFT TURN ONLY (R3-5L) SIGN	EACH	---
RIGHT TURN ONLY (R3-5R) SIGN	EACH	---
RADAR DETECTOR UNIT	EACH	---
RADAR DETECTOR CABLE	LIN.FT.	---

-QUANTITIES FOR INFORMATION ONLY-

NOTES: ◕ The traffic signal pushbuttons shall be Accessible Pedestrian Signals (APS) units per City Standard Specifications.

PROFESSIONAL ENGINEERING CONSULTANTS
303 SOUTH TOPEKA
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316-262-2691 www.pec1.com

CITY OF WICHITA

SCOTT ALLAN CANFIELD LICENSED 14369 02/08/2021 KANSAS PROFESSIONAL ENGINEER

37TH ST N. SIDEWALK
RIDGE TO RIDGEPORT

GARY JANZEN, P.E. - CITY ENGINEER
CITY OF WICHITA PROJECT NO. 472-2020-085614
SEDGWICK COUNTY, KANSAS

Issue:

JOB NO.	207042-001
DATE	FEBRUARY 2021
PM	BMM
DESIGNED BY	KMS
DRAWN BY	BJS
CHECKED BY	RJS

SIGNAL QUANTITIES

SAVED 2/5/2021 8:59:07 AM BY BILL.SEXSON
PLOTTED 2/5/2021 10:30:21 AM BY BILL SEXSON, CET
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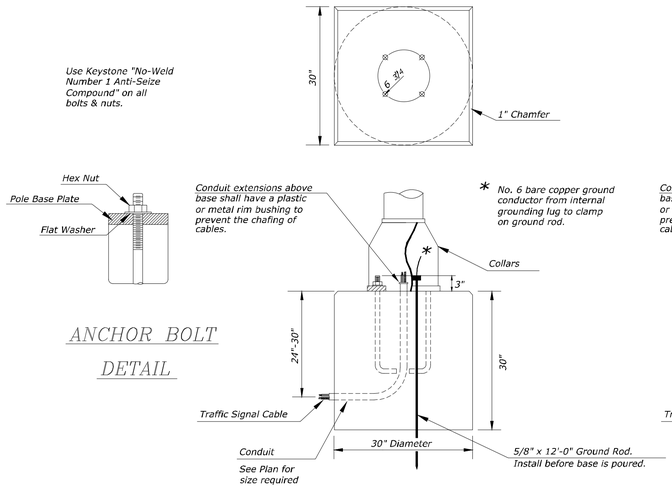
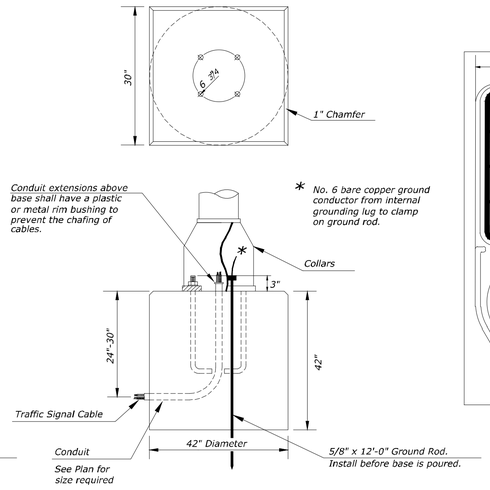
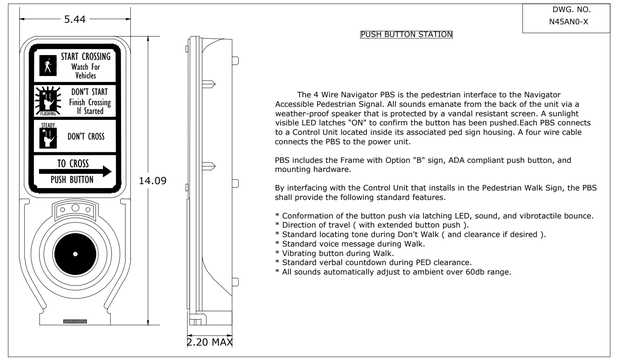


ANCHOR BOLT DETAIL

CONCRETE BASE-A DETAIL



CONCRETE BASE-B DETAIL FOR TRAFFIC SIGNAL PEDESTAL WITH CONTROLLER CABINET



DWG. NO. N45AN0-X

PUSH BUTTON STATION

The 4 Wire Navigator PBS is the pedestrian interface to the Navigator Accessible Pedestrian Signal. All sounds emanate from the back of the unit via a weather-proof speaker that is protected by a vandal resistant screen. A sunlight visible LED latches "ON" to confirm the button has been pushed.Each PBS connects to a Control Unit located inside its associated ped sign housing. A four wire cable connects the PBS to the power unit.

PBS includes the Frame with Option "B" sign, ADA compliant push button, and mounting hardware.

By interfacing with the Control Unit that installs in the Pedestrian Walk Sign, the PBS shall provide the following standard features.

* Conformation of the button push via latching LED, sound, and vibrotactile bounce.
* Direction of travel (with extended button push).
* Standard locating tone during Don't Walk (and clearance if desired).
* Standard voice message during Walk.
* Vibrating button during Walk.
* Standard verbal countdown during PED clearance.
* All sounds automatically adjust to ambient over 60db range.

PEDESTRIAN PUSHBUTTON/SIGN UNIT DETAIL

DWG. NO. N45AN0-X

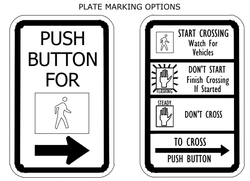
PUSH BUTTON STATION

Message and Sound options include:
* Locating tone
* Verbal Street Name (Example: Crossing Main at Central)
* All features field selectable using a Configurator.

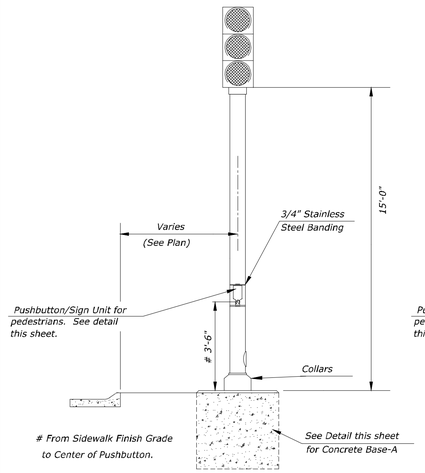
Construction :
* Die-cast aluminum, powder coated Black in color.
* Street Name in Braille in the directional arrow of the sign.
* Option "B" signing option.

Push button :
* ADA compliant
* Raised tactile arrow on the button
* Solid State switch rated at a Minimum of 20 million actuations

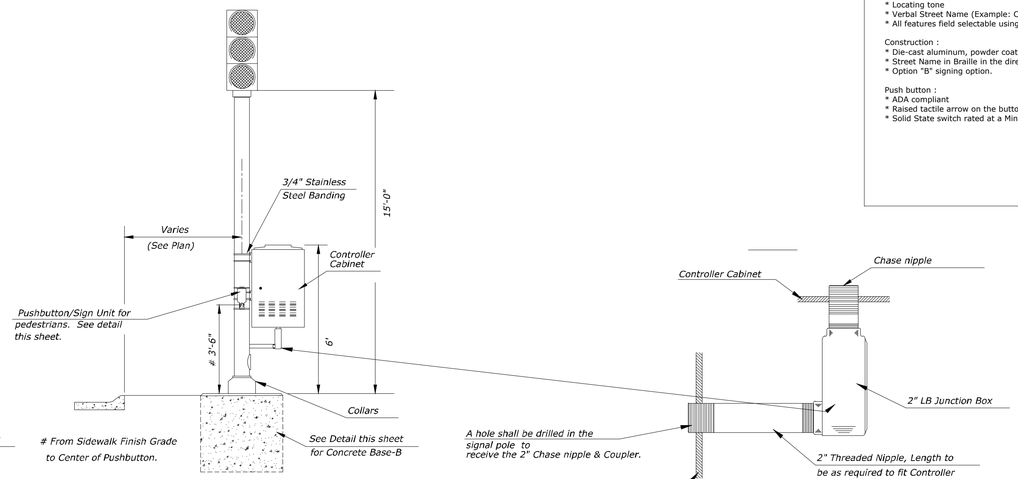
PLATE MARKING OPTIONS



STANDARD OPTION A | OPTION B



TRAFFIC SIGNAL PEDESTAL



TRAFFIC SIGNAL PEDESTAL WITH CONTROLLER CABINET

REVISED: AUGUST 2014

CITY OF WICHITA
PUBLIC WORKS & UTILITIES ENGINEERING DIVISION

SIGNAL PEDESTAL & BASE WITH ADA PUSH BUTTON

TRAFFIC ENGINEER

PROJECT NUMBER	ORG NUMBER	DATE
472-2020-085614	40102920	

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

SHEET CT104

TR-112

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WICHITA, KS 67202
316-262-2691 www.pec1.com

CITY OF WICHITA

SCOTT ALLAN CANTIELLO LICENSED 14369 02/08/2021 KANSAS PROFESSIONAL ENGINEER

37TH ST N. SIDEWALK RIDGE TO RIDGEPORT

GARY JANZEN, P.E. - CITY ENGINEER
CITY OF WICHITA PROJECT NO. 472-2020-085614
SEDGWICK COUNTY, KANSAS

Issue:		

JOB NO.	207042-001
DATE	FEBRUARY 2021
PM	BMM
DESIGNED BY	KMS
DRAWN BY	BJS
CHECKED BY	RJS

SIGNAL PEDESTAL & BASE WITH ADA PUSH BUTTON

CT104
28 OF 41

SAVED 2/5/2021 9:18:35 AM BY BILL.SEXSON
PLOTTED 2/5/2021 10:30:26 AM BY BILL.SEXSON, CET
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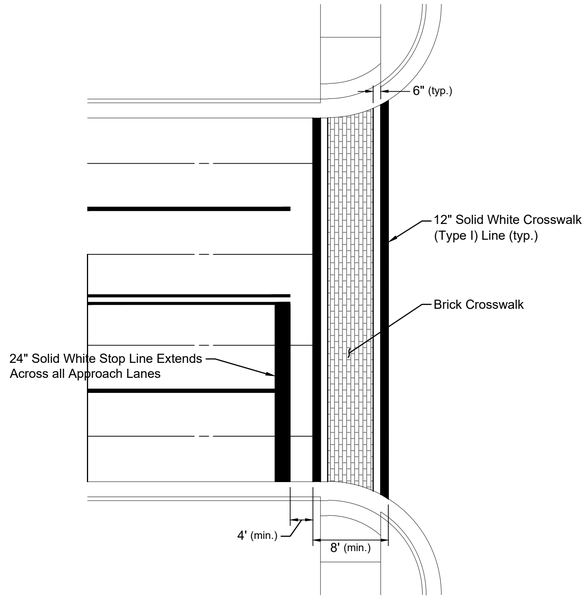
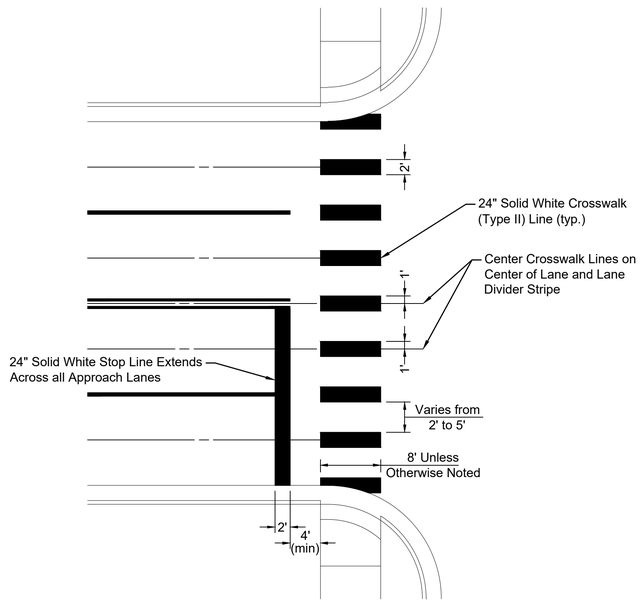
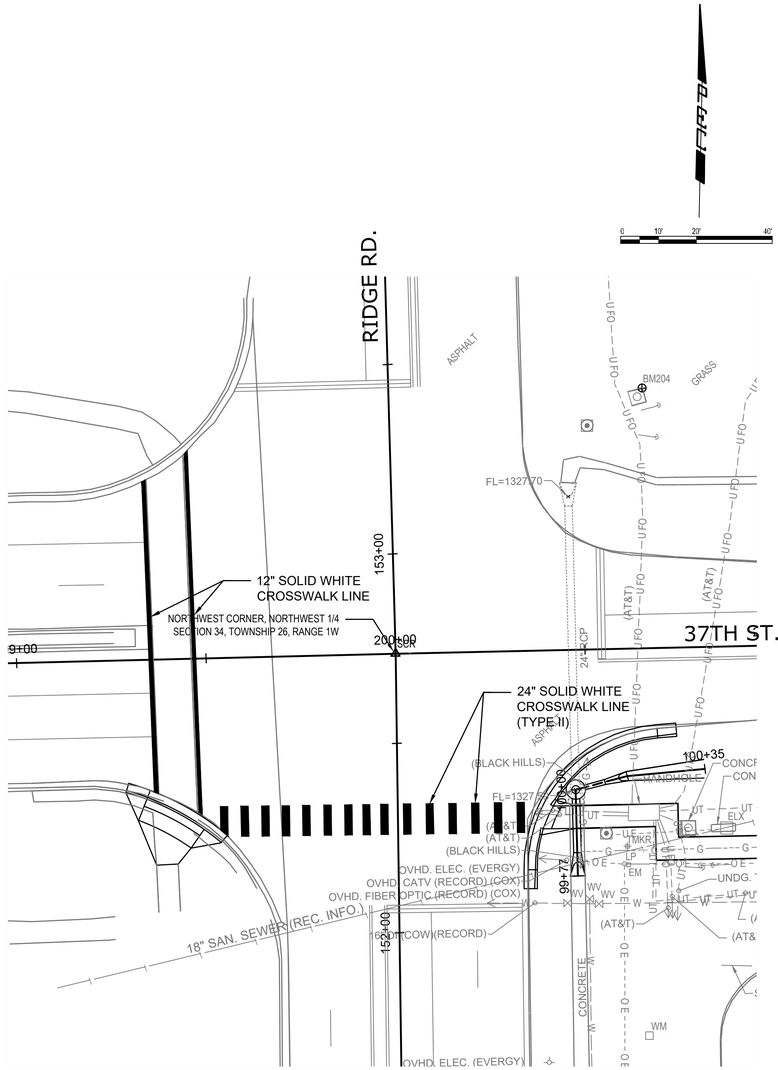


CROSSWALK TYPE I DETAIL



CROSSWALK TYPE II DETAIL



SUMMARY OF PAVEMENT MARKINGS

LOCATION	12" SOLID WHITE (TYPE I) CROSSWALK LINE (L.F.)	24" SOLID WHITE (TYPE II) CROSSWALK LINE (L.F.)
37th St. N	180	
Ridge Rd.		120
TOTALS *	180	120

* Totals reflect total material used.

NOTE: The Station/Offset information provided is from the 37th St. N. Baseline, unless otherwise indicated.

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SCOTT ALLAN CANFIELD LICENSED 14309 02/08/2021 KANSAS PROFESSIONAL ENGINEER

37TH ST N. SIDEWALK RIDGE TO RIDGEPORT

GARY JANZEN, P.E. - CITY ENGINEER
CITY OF WICHITA PROJECT NO. 472-2020-085614
SEDGWICK COUNTY, KANSAS

Issue:		

JOB NO.	207042-001
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PM	BMM
DESIGNED BY	KMS
DRAWN BY	BJS
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PAVMENT MARKING PLAN

CT301
29 OF 41

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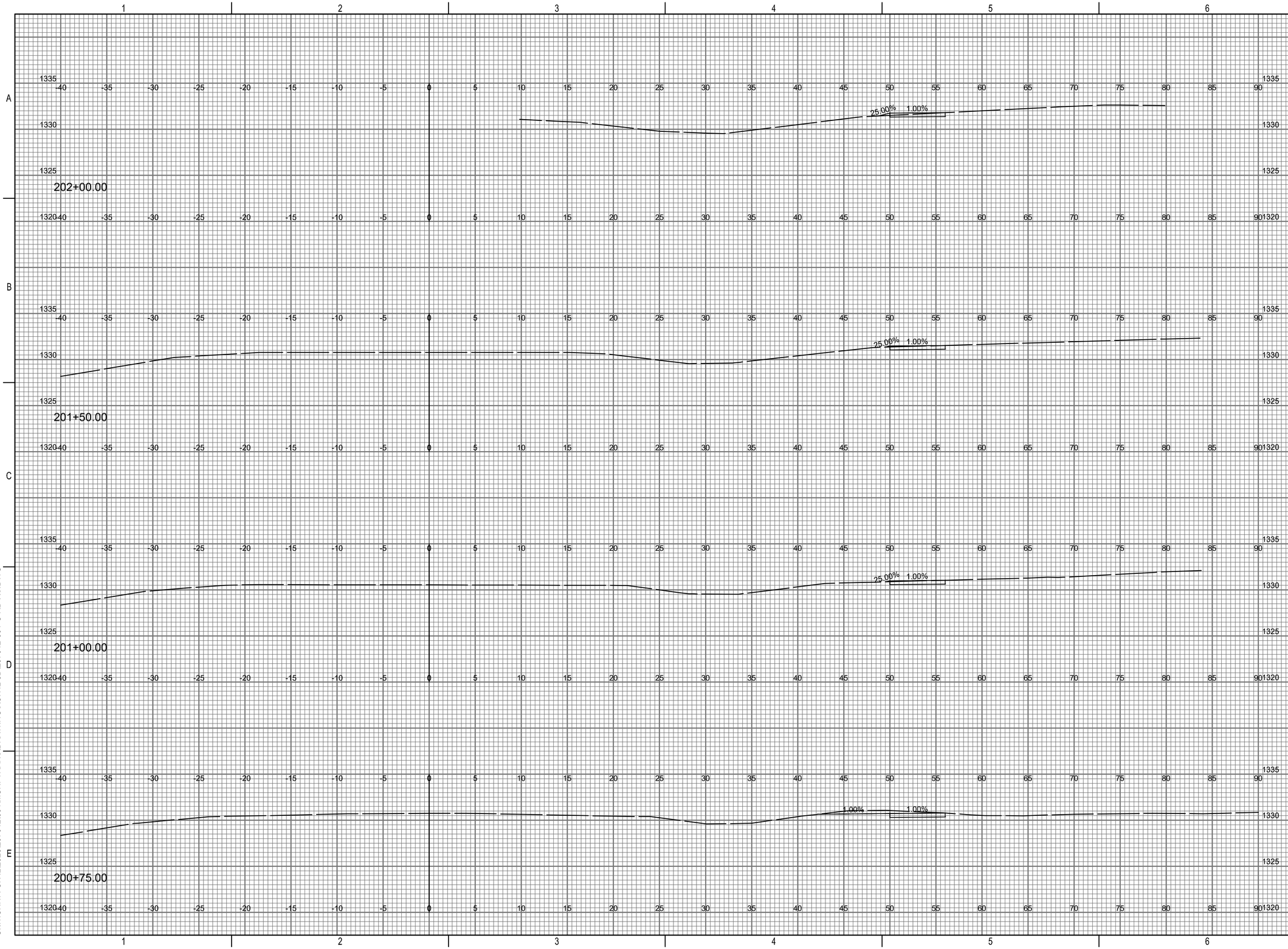

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CITY OF WICHITA

RILEY J. SCHMITZ
LICENSED
24168
02/08/2021
KANSAS
PROFESSIONAL ENGINEER

37TH ST N. SIDEWALK RIDGE TO RIDGEPORT

GARY JANZEN, P.E. - CITY ENGINEER
CITY OF WICHITA PROJECT NO. 472-2020-085614
SEDGWICK COUNTY, KANSAS

Issue:		

JOB NO.	207042-001
DATE	FEBRUARY 2021
PM	BMM
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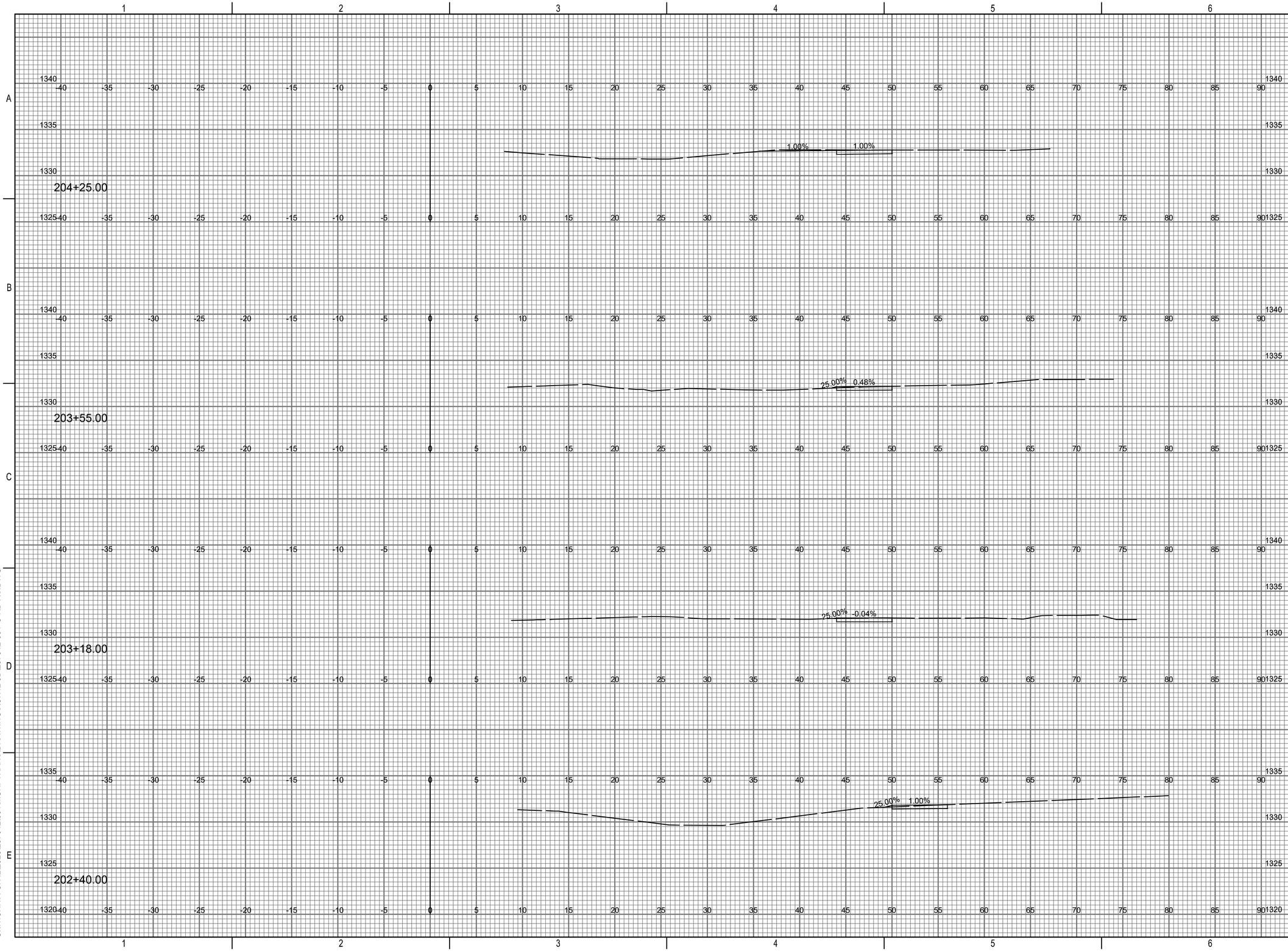
37TH STREET N

CX601
30 OF 41



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37TH ST N. SIDEWALK RIDGE TO RIDGEPORT

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SEDGWICK COUNTY, KANSAS

Issue:		

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37TH STREET N

CX602
31 OF 41

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PLOTTED 2/5/2021 10:30:51 AM BY BILL.SEXSON.CET
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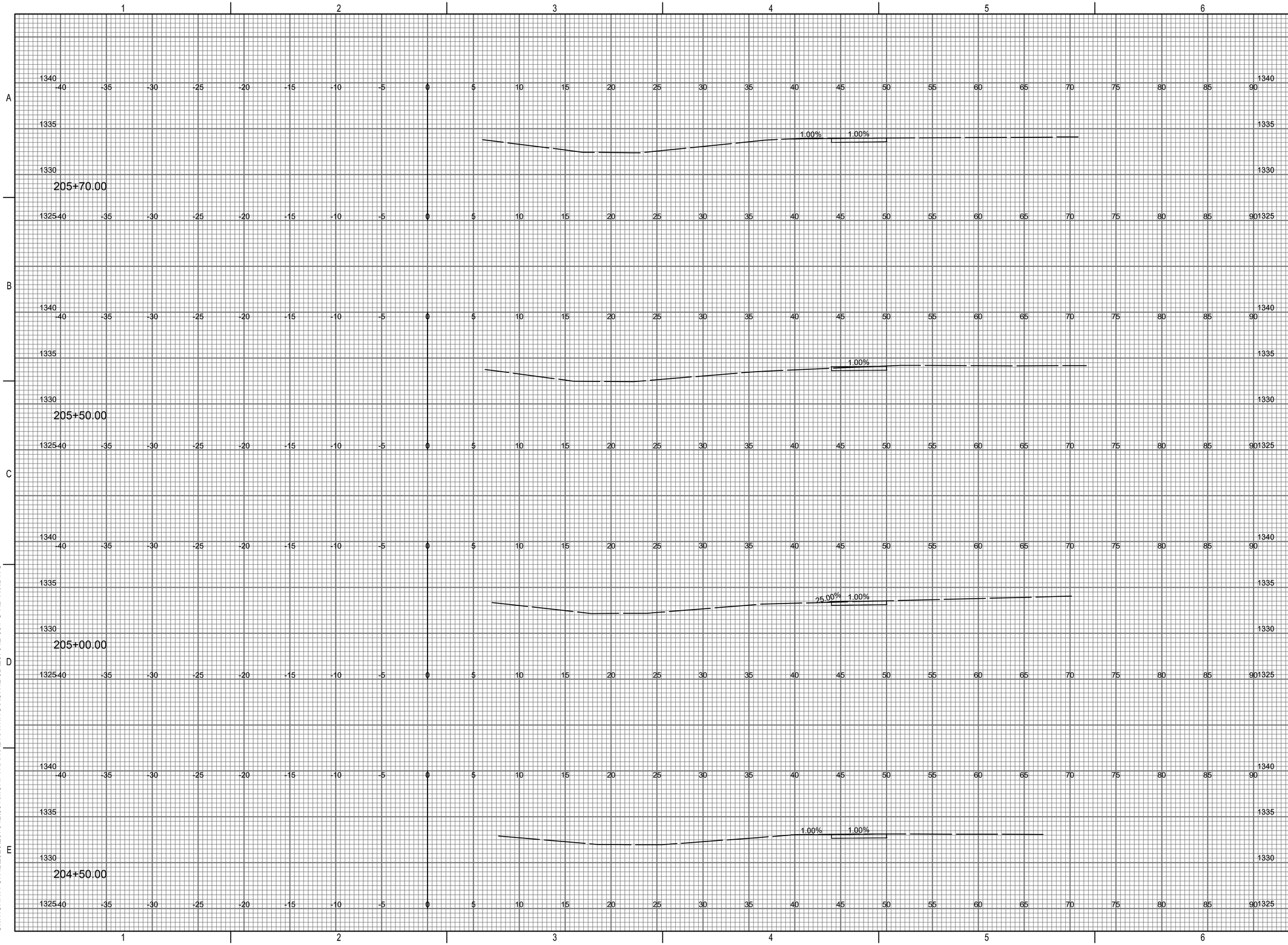

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37TH ST N. SIDEWALK RIDGE TO RIDGEPORT

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SEDGWICK COUNTY, KANSAS

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PM	BMM
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CHECKED BY	RJS

37TH STREET N

CX603
32 OF 41

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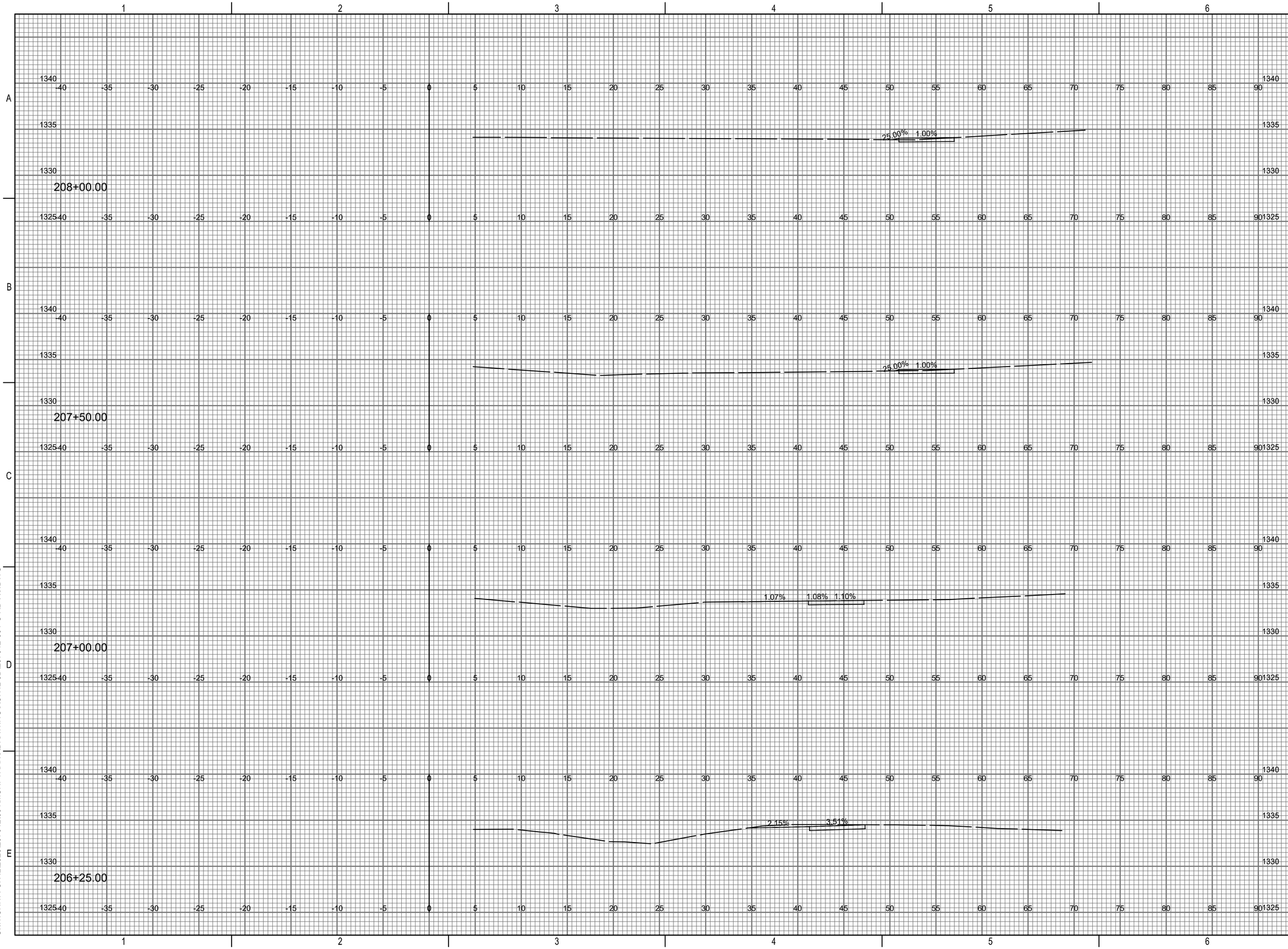

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CITY OF WICHITA

RILEY J. SCHMITZ
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02/08/2021
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PROFESSIONAL ENGINEER

37TH ST N. SIDEWALK RIDGE TO RIDGEPORT

GARY JANIZEN, P.E. - CITY ENGINEER
CITY OF WICHITA PROJECT NO. 472-2020-085614
SEDGWICK COUNTY, KANSAS

Issue:		

JOB NO.	207042-001
DATE	FEBRUARY 2021
PM	BMM
DESIGNED BY	KMS
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CHECKED BY	RJS

37TH STREET N

CX604
33 OF 41

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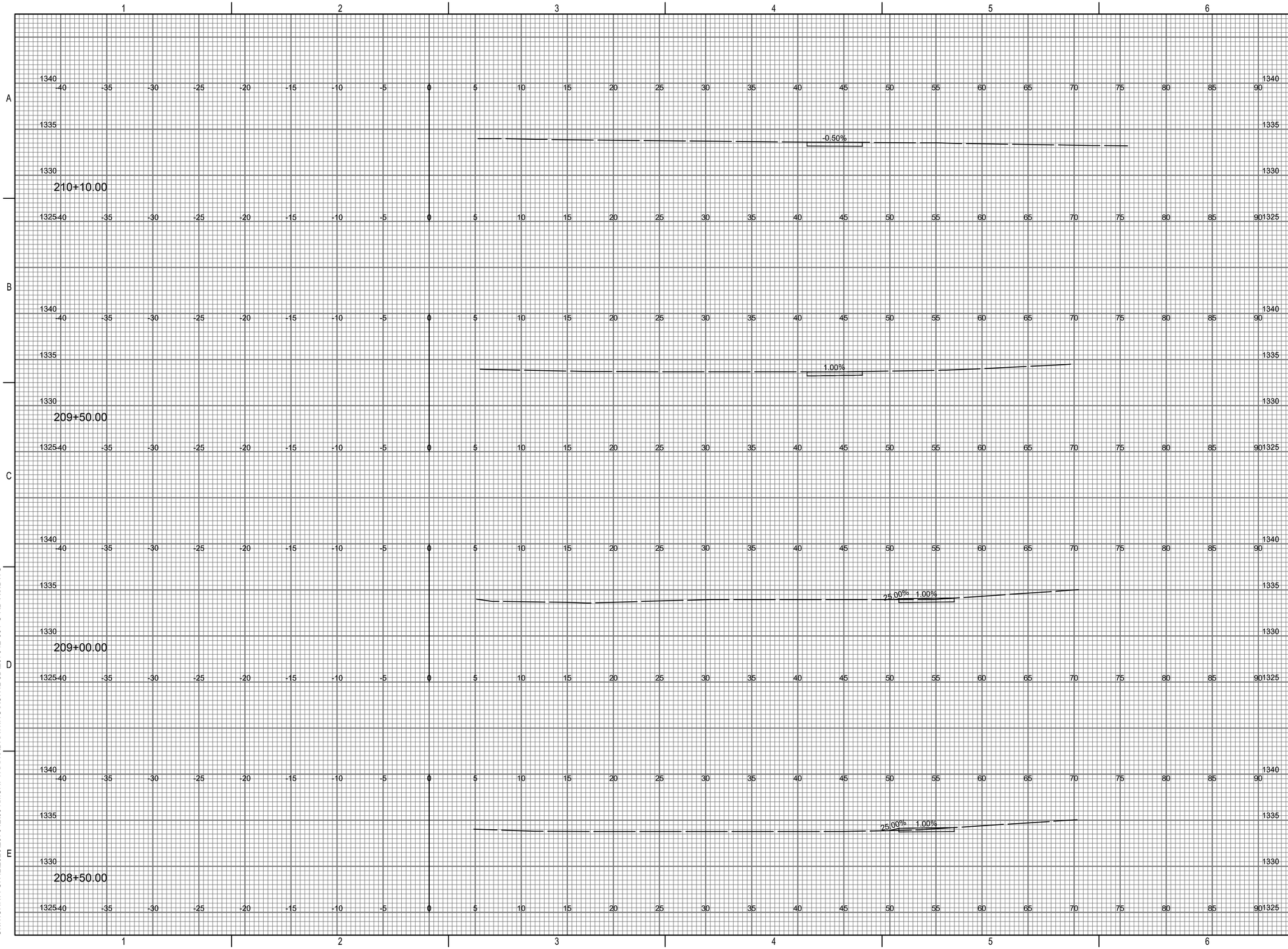

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CITY OF WICHITA

RILEY J. SCHMITZ
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24168
02/08/2021
KANSAS
PROFESSIONAL ENGINEER

37TH ST N. SIDEWALK RIDGE TO RIDGEPORT

GARY JANZEN, P.E. - CITY ENGINEER
CITY OF WICHITA PROJECT NO. 472-2020-085614
SEDGWICK COUNTY, KANSAS

Issue:		

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DATE	FEBRUARY 2021
PM	BMM
DESIGNED BY	KMS
DRAWN BY	BJS
CHECKED BY	RJS

37TH STREET N

CX605
34 OF 41

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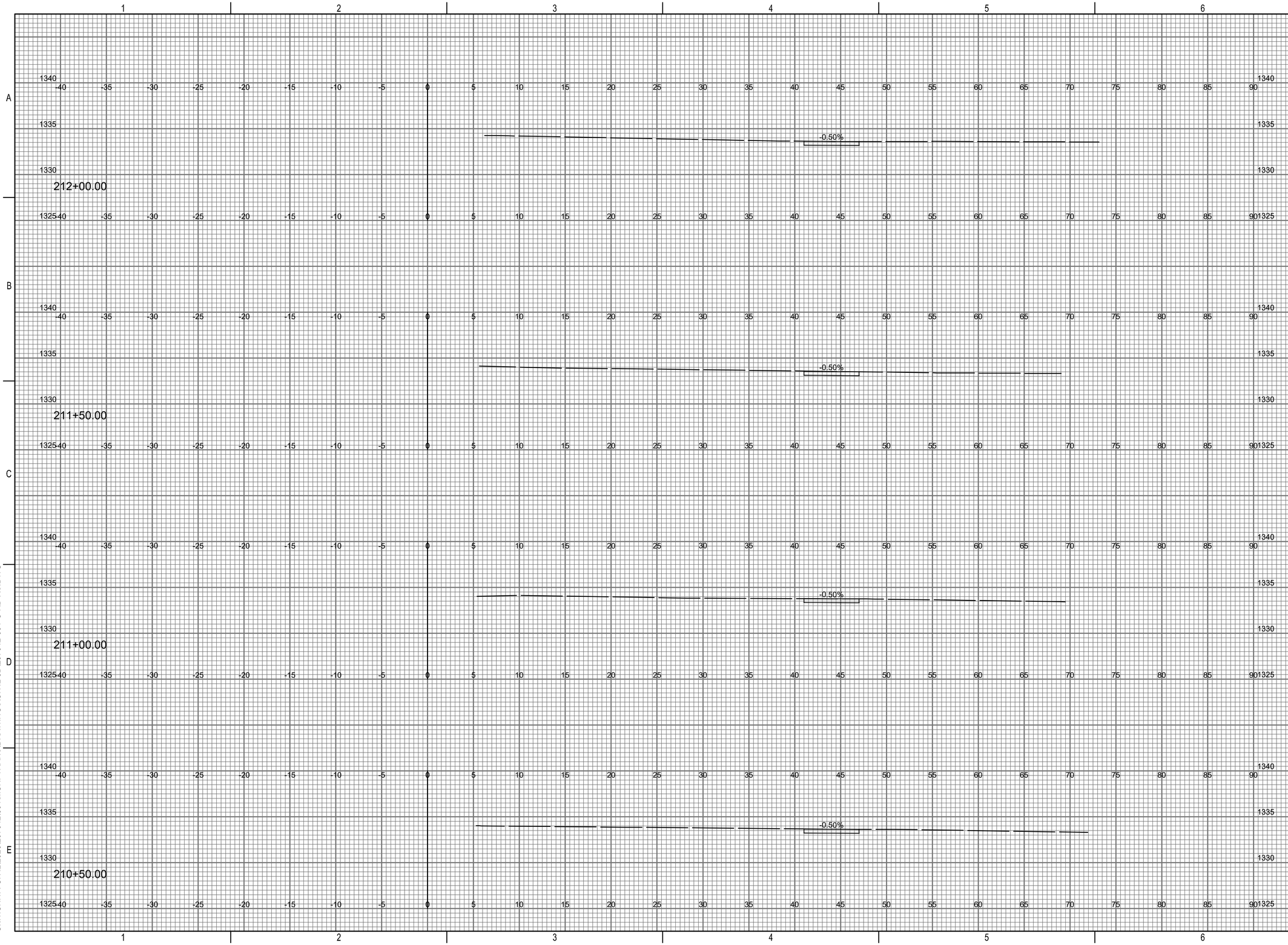

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CITY OF WICHITA

RILEY J. SCHMITZ LICENSED 24168 02/08/2021 KANSAS PROFESSIONAL ENGINEER

37TH ST N. SIDEWALK RIDGE TO RIDGEPORT

GARY JANIZEN, P.E. - CITY ENGINEER
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SEDGWICK COUNTY, KANSAS

Issue:		

JOB NO.	207042-001
DATE	FEBRUARY 2021
PM	BMM
DESIGNED BY	KMS
DRAWN BY	BJS
CHECKED BY	RJS

37TH STREET N

CX606
35 OF 41

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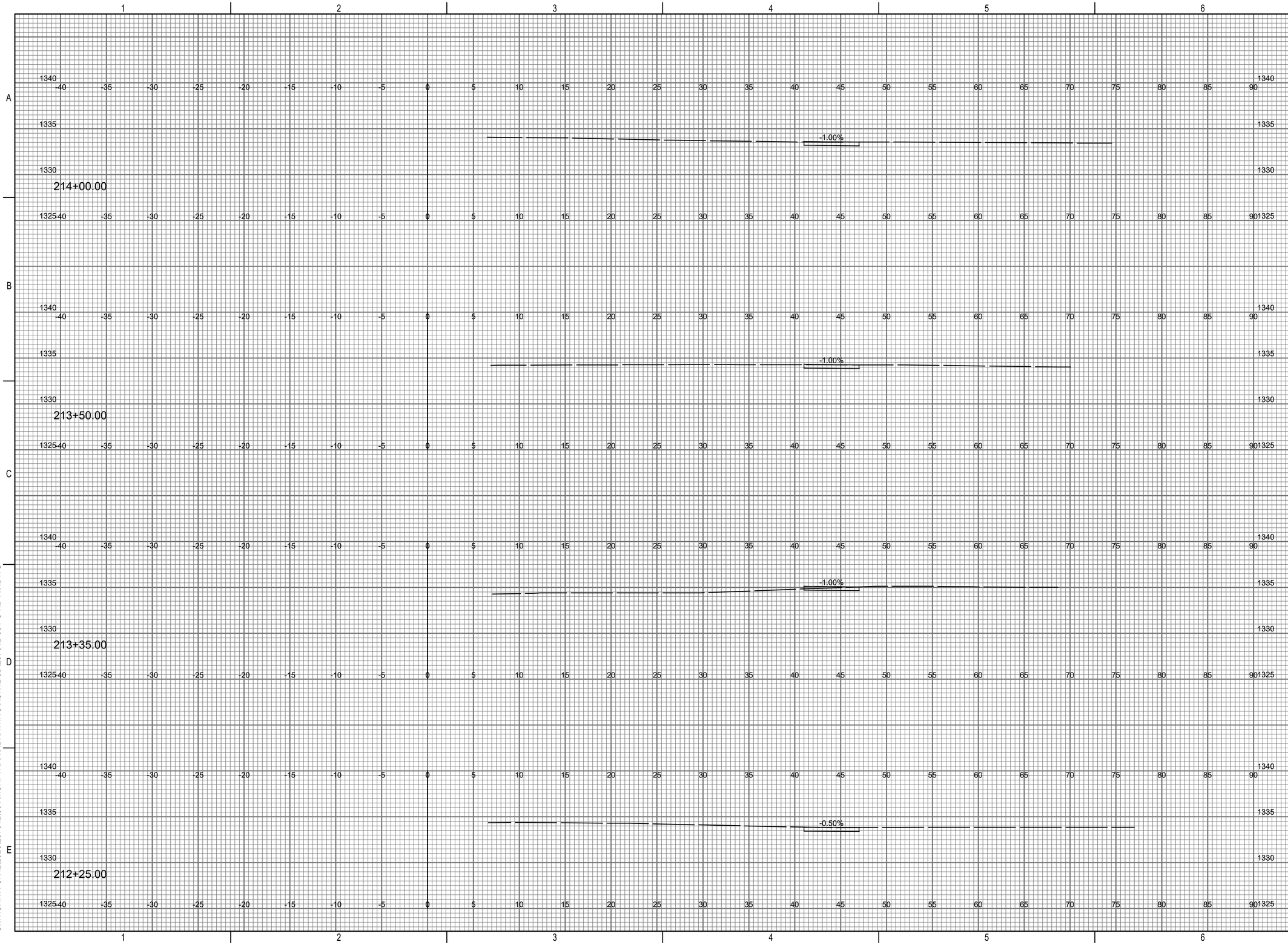

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CITY OF WICHITA

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02/08/2021
KANSAS
PROFESSIONAL ENGINEER

37TH ST N. SIDEWALK RIDGE TO RIDGEPORT

GARY JANZEN, P.E. - CITY ENGINEER
CITY OF WICHITA PROJECT NO. 472-2020-085614
SEDGWICK COUNTY, KANSAS

Issue:		

JOB NO.	207042-001
DATE	FEBRUARY 2021
PM	BMM
DESIGNED BY	KMS
DRAWN BY	BJS
CHECKED BY	RJS

37TH STREET N

CX607
36 OF 41

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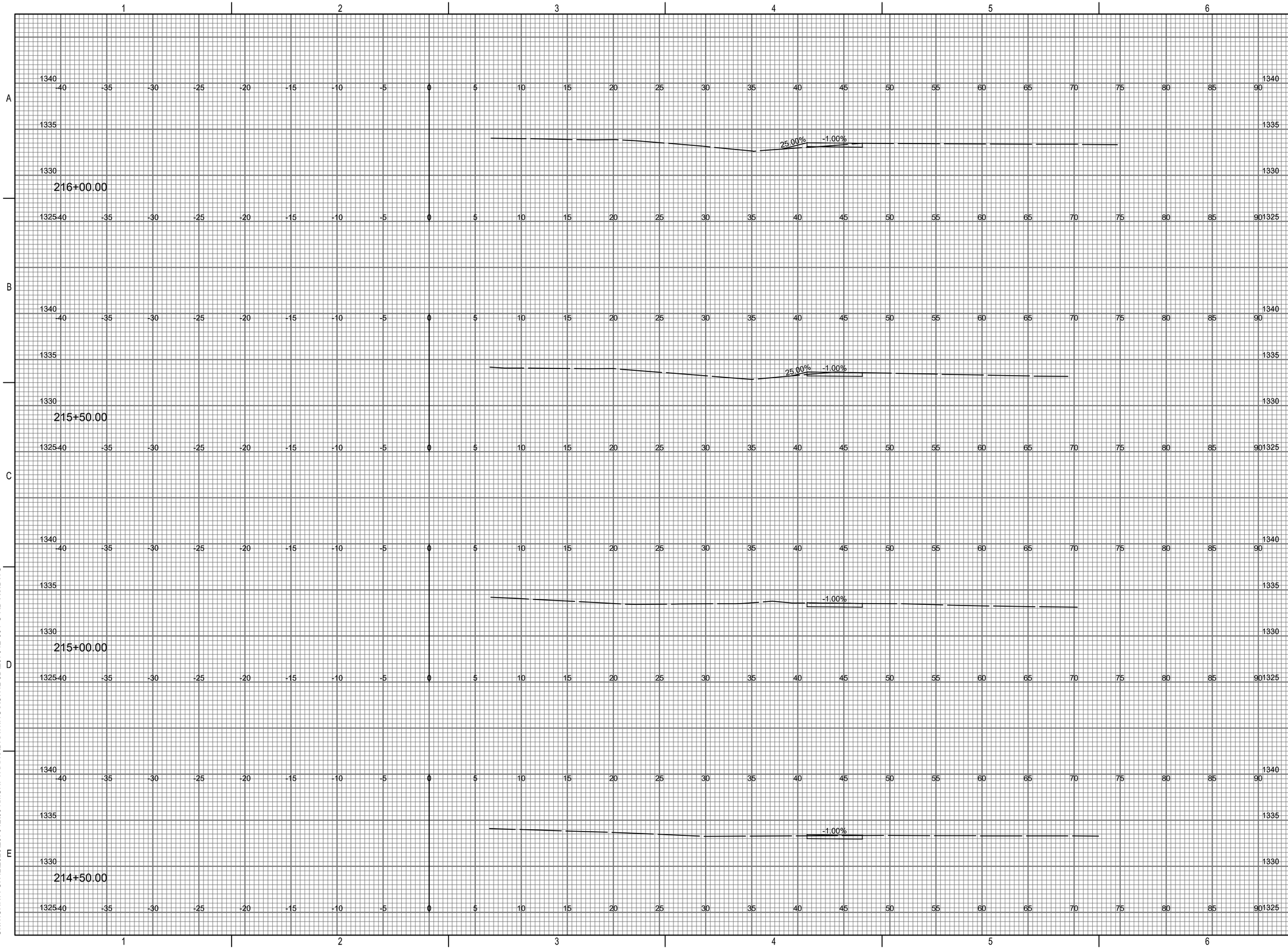

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CITY OF WICHITA

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LICENSED
24168
02/08/2021
KANSAS
PROFESSIONAL ENGINEER

37TH ST N. SIDEWALK RIDGE TO RIDGEPORT

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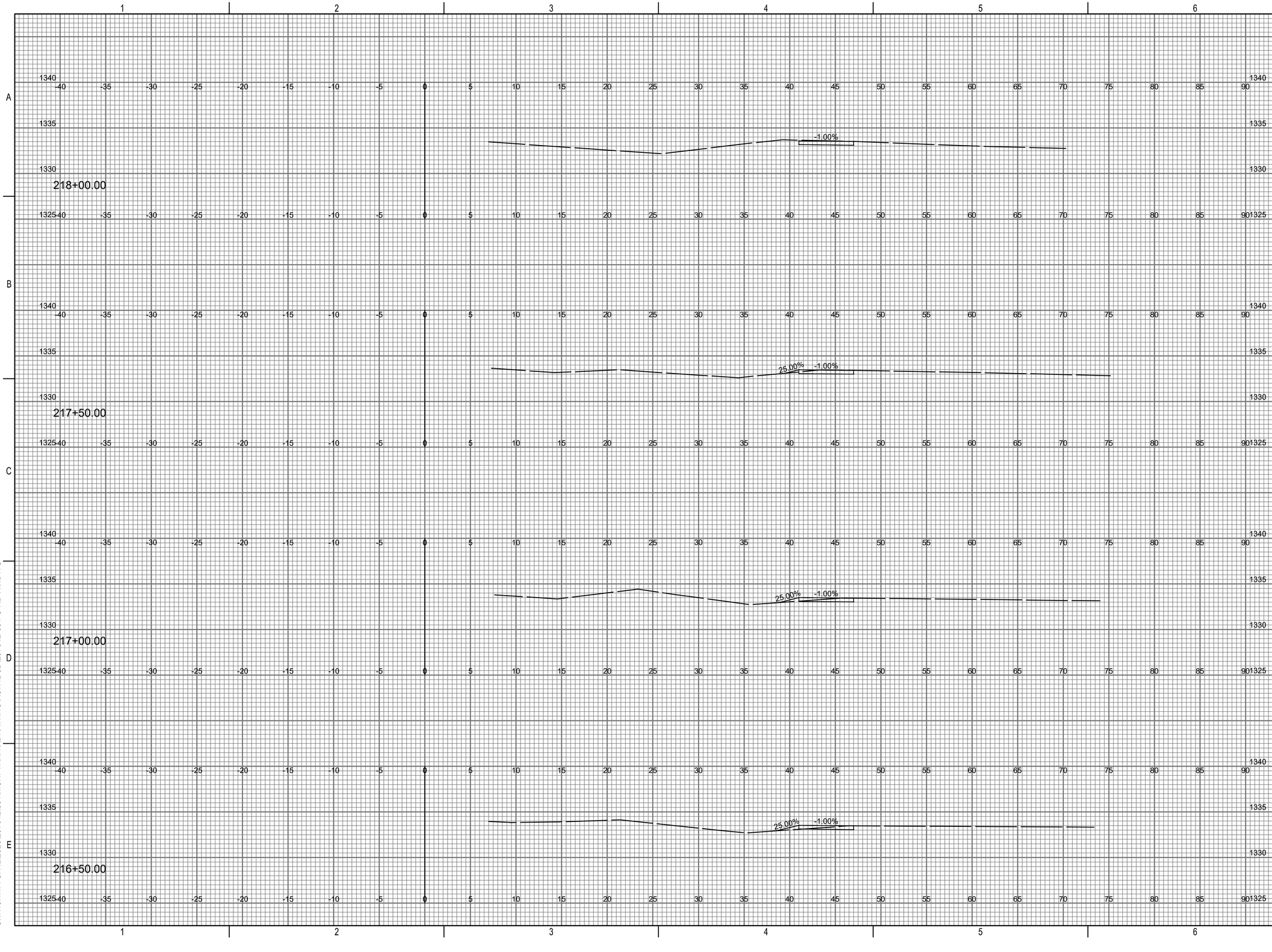

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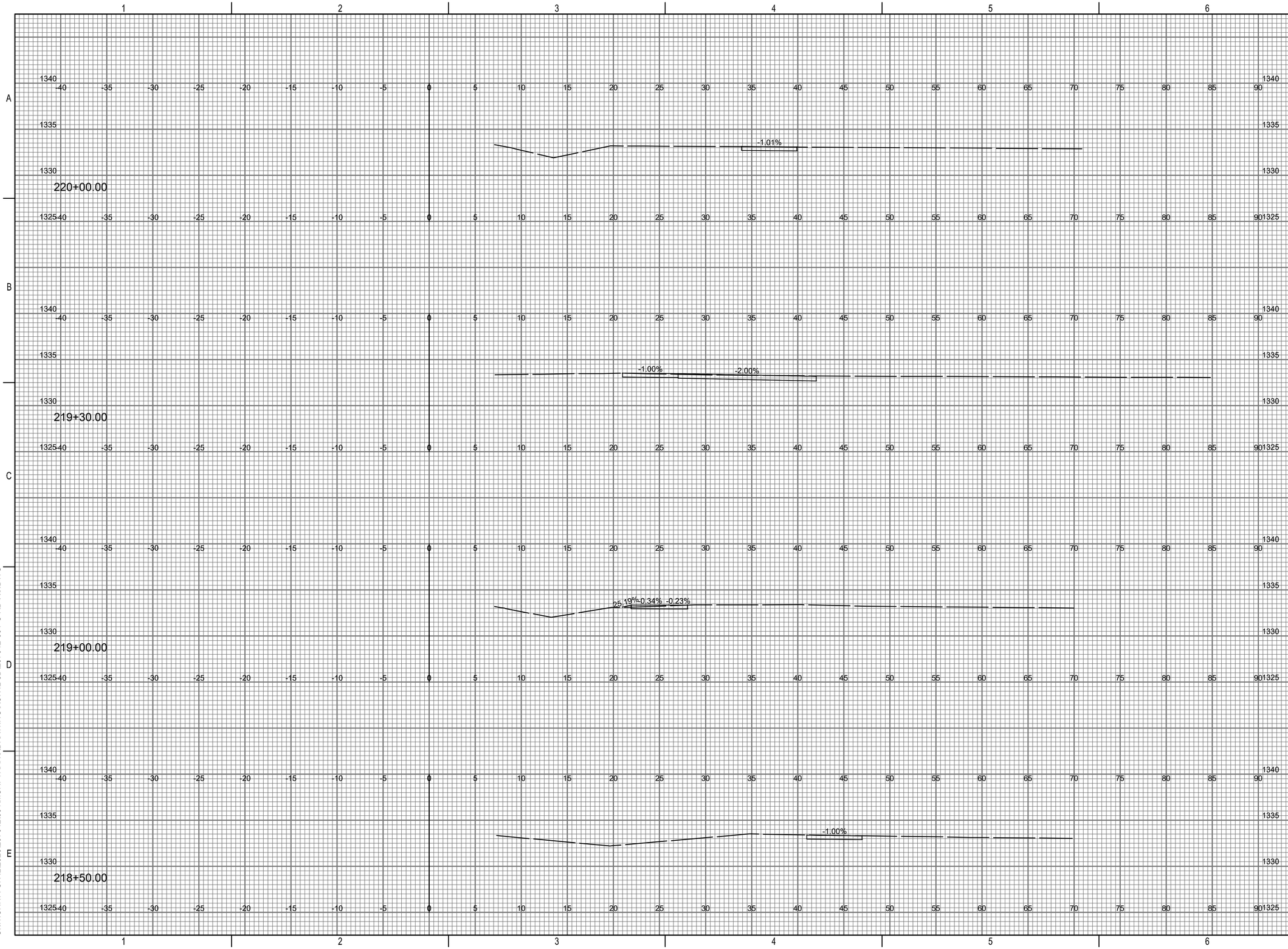

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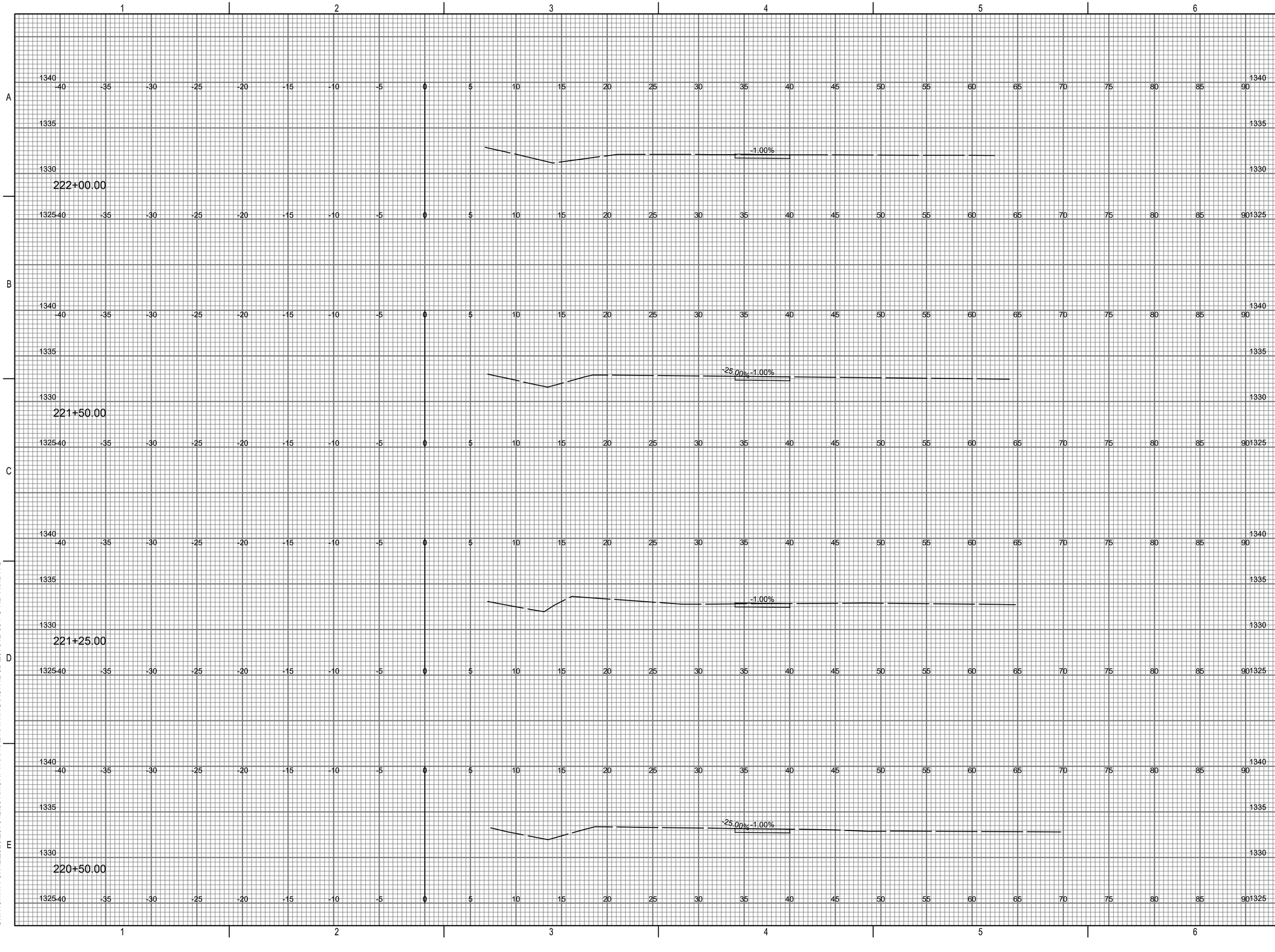

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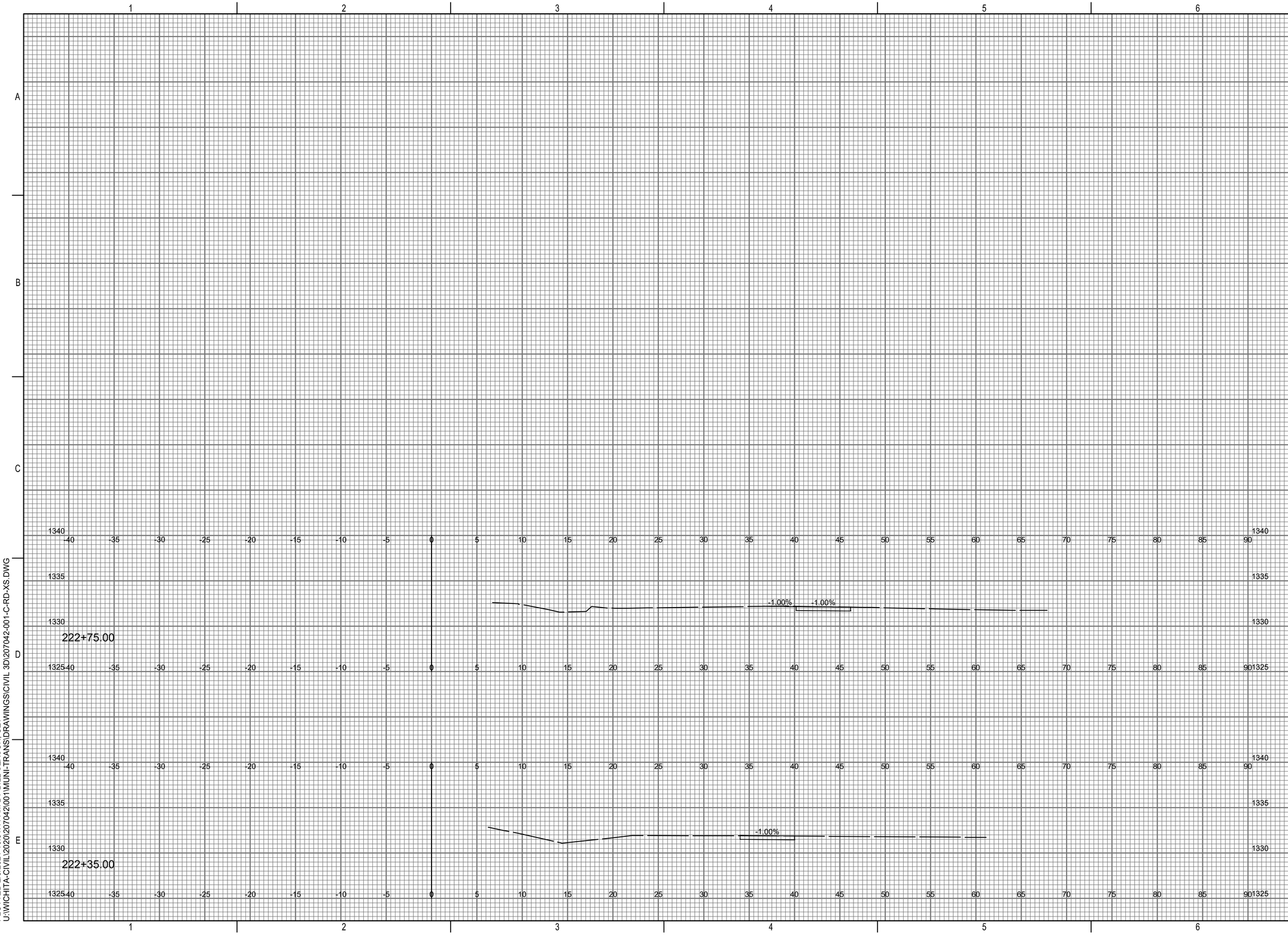

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