

DATE	BY	REVISION



CITY OF LAWRENCE, KANSAS

MUNICIPAL SERVICES AND OPERATIONS



TITLE SHEET

DAVID P. CRONIN
 CITY ENGINEER

CRAIG S. OWENS
 CITY MANAGER

[File Location: X:\T\SBB Drawings\2023\2023-01-12 2023 Ped Improvements.dwg\Design\Sheet\Title\Title_Know_What's Below.dwg] [Plot Date: 6/20/2024 11:20:16 AM] [Last Saved: 2/20/2024 3:16:52 PM] [Buser]

General Notes

- Plans are initially approved for a period of one (1) year, after which they automatically become void and must be updated and re-approved by the City before any construction will be permitted.
- The City of Lawrence plan review is only for general conformance with City of Lawrence Design Criteria and City Code. The City of Lawrence is not responsible of the accuracy or adequacy of the design. The City of Lawrence through the approval of this document assumes no responsibility other than stated above for the completeness and/or accuracy of this document.
- Inspection Fees are to be paid by the Developer.
- The Contractor shall always have one (1) signed copy of the plans (approved by the City of Lawrence) and one (1) copy of the Project Specifications on site.
- All construction shall conform to the City of Lawrence Complete Standard Technical Specifications and Standard Details in effect on the City's approval date shown on these plans.
- Material submittals and shop drawings shall be submitted to appropriate City staff and approved prior to Notice to Proceed, unless otherwise directed by the City. The Contractor should anticipate up to ten (10) business days for review per submittal. City approval of submitted shop drawings and details is for general conformance with the plans and specifications only. The City of Lawrence is not responsible for the accuracy or constructability of the shop drawings. Errors or omissions shall be corrected at Contractor expense.
- All work quality and materials regulated by the City shall be subject to the inspection and approval by City personnel.
- Unless otherwise noted, construction staking is to be provided by the Contractor. Survey stakes, benchmarks, and property pins destroyed by the Contractor shall be replaced at Contractor's expense.
- Contractor shall not be allowed to work Sundays, Holiday or Saturday work shall be as approved by the Municipal Services & Operations Department.
- The Contractor shall notify all landowners in writing at least one (1) week prior to any construction activities which would take place adjacent to their property. Individual detailed notices of access restrictions shall be hand delivered forty-eight (48) hours prior to construction. Twenty-four (24) hour notice shall be given to any water customer prior to interruption of service to make connections.
- All work shall be confined within the construction limits, right-of-way, easements, or City property as shown in the plans. Any damage to adjacent surfacing, pavement markings, curb, sidewalks, bikeways, driveways, streetlights, signal poles, or other objects within or out of the right-of-way shall be repaired at the Contractor's expense.
- Contractor shall call 1-800-DIG-SAFE prior to any project excavation.
- All sidewalk and sidewalk ramps constructed will be required to comply with the Public Right-of-Way Accessibility Guidelines (PROWAG). Building sites located outside of the right-of-way shall comply with the appropriate Americans with Disabilities Act (ADA) requirements.
- When blasting is permitted by Lawrence-Douglas County Fire and Medical Services, the Contractor shall use the utmost care to protect life and property. The Contractor shall comply with all laws, ordinances, and the applicable safety code requirements and regulations relative to the handling, storage and use of explosives and protection of life and property, and they shall be responsible for all damage thereto caused by their or their subcontractor's operations.
- The Contractor shall provide insurance as required by the General Provisions and Covenants and Special Project Specifications before performing any blasting. The governing agency shall be notified at least twenty-four (24) hours before blasting operations begin.
- The Contractor shall contact the City of Lawrence Traffic Division at 785-832-3035 to remove and replace traffic signs which are in conflict with the proposed improvements but are not specified to be removed as a part of this project.
- All disposal sites must be approved by the Kansas Department of Health and Environment. Materials either stockpiled or disposed of in a flood plain 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.
- Geological information as shown herein was completed with the best information available to the Engineer at the time of plan preparation. The Contractor shall be responsible for verifying, identifying and making their own determinations of subsurface conditions. All excavation shall be unclassified. No direct payment will be made for rock, debris, or pavement excavation. All work shall be considered subsidiary to other bid items unless otherwise shown in the plans.

Erosion & Sediment Control Notes

- The Contractor is responsible for providing erosion and sediment control to prevent sediment from reaching paved areas, storm sewer systems, drainage courses and adjacent properties. In the event the prevention measures are not effective, the Contractor shall remove any debris, silt, or mud and restore all disturbed areas to original or better condition.
- The Contractor shall comply with Chapter 9, section 903 of the Code of the City of Lawrence regarding storm water pollution prevention. Unless otherwise noted in the plans or special provisions, all work related to this will be paid for in the bid item "Storm Water Pollution Prevention." This shall include, but not be limited to items such as street cleaning, protecting piled soils from eroding, temporary seeding, regular inspection reporting and documentation, etc.
- All areas disturbed during construction shall be fertilized, seeded, and mulched by the Contractor in accordance with current City of Lawrence Technical Specifications.
- All surface features disturbed by construction activities shall be restored by the Contractor to original condition.
- Maintenance of drainage shall be the contractor's responsibility. Dewatering shall be subsidiary to other items of work.

Paving & Sidewalks Notes

- All concrete for publicly maintained infrastructure shall be KCMMB unless otherwise noted in the plans.
- All asphalt and concrete to be removed shall be neatly saw cut. Saw cuts shall be full depth and shall be subsidiary to related bid items. If the Contractor exceeds the pavement removal limits without approval from the Engineer, removal and replacement shall be at the Contractor's expense.

Utility Notes

- In areas to be graded for street and storm improvements, all exposed manholes shall be backfilled to within 1-foot of the top of rim at a 3:1 (horizontal:vertical) or flatter slope. Place backfill per City Specifications. Positive drainage shall be maintained away from manholes.
- Where existing utilities and service lines are to be encountered, the Owner thereof shall be notified by the Contractor at least forty-eight (48) hours in advance of performing any work in the vicinity.
- The utility information shown herein is based on the best information available to the engineer; however, all existing utilities within the construction limits may not be shown. The Contractor shall verify all utility ownership, type, size, depths and locations prior to construction and coordinate any necessary relocations. Utilities damaged through the negligence of the Contractor to obtain the location of same shall be repaired and replaced by and at the expense of the Contractor.
- Utilities exposed during construction shall be adequately supported by the Contractor to prevent the conduits/lines from sagging and putting stress on any joints.
- Abandoned utilities exposed by Contractor operations shall be removed as directed by the Engineer. This work shall be considered subsidiary to other bid items unless otherwise noted on the plans.
- All manholes, utility valves, and meter pits shall be adjusted or rebuilt to grade as required and set in concrete if in roadway for field adjustment.
- During a period of one year from the date of acceptance by the City, the City shall perform a video inspection on the sanitary sewer line installed under this contract. Per resolution number 5614, or latest update, an inspection fee is required for this service. Contractor shall be responsible for all repairs needed as determined from the video inspection.
- Only authorized employees of the City of Lawrence, Municipal Services & Operations Department shall operate valves.
- The Contractor shall install proposed waterlines without disruption of water service to customers until connections to proposed waterlines are ready to be made. Once service to customers has been interrupted, the Contractor shall work continuously until service is restored.
- The Contractor shall install and properly maintain a mechanical plug at all connection points with existing lines until such time that the new line is tested and approved.
- All water required for the construction of this project shall be purchased from the City of Lawrence Municipal Services & Operations Department using a fire hydrant water meter. Meters can be obtained from the Municipal Services & Operations Department for a nominal deposit, refundable upon the return of the meter.
- Flowable fill shall be used to backfill all excavations within two feet of existing or proposed pavement areas. Flowable fill shall be placed to the top of the subgrade.

Know what's below. Call 811 before you dig
or visit us at www.kansasonecall.com



"Kansas One-Call" is the Underground Utility Notification center for the State of Kansas. Through this facility, you can notify operators of underground facilities of proposed excavations to request that the underground facilities be marked before you dig.

Kansas Statute annotated #66-1801 through #66-1815 requires anyone who engages in any type of excavation to provide advance notice of at least two full working days, but not more than 15 calendar days, excluding weekends and holidays.

The person who is doing the work is responsible for calling Kansas One-Call. If the owner contracts with a professional excavator to do the excavation, then the professional excavator is responsible for calling Kansas One-Call.

The service provided by Kansas One-Call to excavators is free of charge.

Call 785-368-3111 for emergencies with City of Topeka utilities.

ROW & Temporary Traffic Control Notes

- A Temporary ROW permit is required for any temporary use of the ROW or work within the ROW. Any placement of barricades, cones, or equipment in the ROW that affects pedestrian, bicycle, or vehicular traffic shall also require the possession of a Temporary Traffic Control ("TTC") Permit.
- Temporary Traffic Control Plans, when included, are intended to provide a general overview of traffic handling and may not be exhaustive. Traffic control requirements shown on these plans do not attempt to address in depth the variety of situations that may occur once construction has started. In no way do the requirements shown on these plans relieve the Contractor of their responsibility to select proper traffic control devices and implementation procedures to accommodate the safety of motorists, bicyclists, pedestrians, and workers at all times. Additional signs, temporary striping, barricades, sidewalk closures, or other measures necessary to complete the construction and accommodate Contractor staging, as required by the Engineer, shall not be paid for directly, but shall be considered subsidiary to other Temporary Traffic Control items.
- Lane closure hour restrictions listed in the ROW Administrative Regulations, section 8.4 shall be complied with unless an exception is approved and noted on the permit.
- All traffic control devices shall be provided, installed, and maintained in accordance with the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD).
- At least one (1) person present for installation of traffic control devices shall have training in the installation of temporary traffic control devices and provide proof of training on request.
- All flaggers shall possess a flagger certification card issued by American Traffic Safety Services Association (ATSSA), by Kansas Department of Transportation (KDOT), or other approved entity.
- Flaggers shall be equipped with sign paddles.
- All workers in construction zones shall wear MUTCD compliant high-visibility garments.
- The ROW Permit Holder is responsible for maintenance of traffic control devices at all times. Maintenance may be required after hours and on non-working days. Deficiencies shall be corrected in a timely manner. The permit shall include an individual who can be contacted 24 hours a day, 7 days a week in case of emergencies.
- The ROW Permit Holder shall contact the City of Lawrence Traffic Division at 785-832-3035 a minimum of 24 hours in advance about any conditions that will impact the operation of a traffic signal. That includes lane closures, turning restrictions, and any other potential impacts.
- When a difference in pavement elevation is created perpendicular to traffic flow, the ROW Permit Holder shall provide, at the end of the work day, a temporary wedge over an 18" length. The ROW Permit Holder is required to mill the wedge prior to final pavement placement.
- A traffic lane shall not be considered satisfactorily open to traffic unless it is paved to a condition that matches existing pavement material and markings are in place. Where all existing pavement has been removed, a traffic lane shall not be considered as satisfactorily open to traffic, unless graded reasonably smooth and maintained dust free as determined by the City. Hot or cold mix asphalt may be used on a conditional basis only in order to open traffic lanes on a temporary basis; a written letter must be submitted to the City at the time of ROW permit application stating when permanent repairs will be made.
- Small openings in the roadway surface may be bridged with steel plates. An asphalt wedge (or approved device) shall be installed around all edges of the steel plate and the plate shall be anchored so that it does not shift under traffic. Steel plates that are located in travel lanes of roadways with a posted speed of 35 mph or more for a duration of more than 3 days shall be level with the abutting pavement (pavement milled around edges of opening) unless another appropriate solution is approved by the Inspector. Roadway depressions should not exceed 1" in 10'. All visible pushing/shoving of pavement shall be corrected. All temporary pavement shall be inspected daily by the ROW Permit Holder and all maintenance issues corrected within 24 hours.
- The ROW Permit Holder shall be required to post a W8-1 "Bump" advance warning sign 250 feet ahead of a steel plate.
- Private vehicles shall not be parked in a roadway within the work zone.
- Vehicles shall not be parked or driven on sidewalks. If work necessitates that vehicles travel over sidewalks then the condition of the sidewalk should be documented by video or pictures prior to vehicles crossing it. The sidewalk condition shall be inspected after work is complete and any new or undocumented cracks or other damage shall be corrected by the Permit Holder.
- Vehicles shall not drive over non-mountable curb without first properly ramping the gutter to avoid damage to the curb.
- The ROW Permit Holder is responsible to remain at the work site until all barricading is removed from the roadway. All barricading must be removed from the roadway within two hours of work completion or prior to any work hour restrictions detailed in the ROW Administrative Regulations or on the Temporary Traffic Control Permit. If barricades remain longer than two hours after work completion, without prior approval, the City may remove the barricades and may charge the contractor for any time and equipment expended on their behalf.
- Any work zone that requires a TTC Permit shall have a sign posted at each end of the work zone that meets the following requirements:
 - Be placed in a position that can be read by traffic from each direction;
 - Be colored "construction orange" with block letters at least six inches in height; and
 - Contain the name of the company using the ROW and a phone number for a representative of the company.
- Placement of temporary signs shall not obstruct or be obstructed by existing signs to remain active during construction. Temporary signs shall be placed so as to not be obstructed by other existing features (such as foliage, utility poles, etc.).
- All existing signs that are contradictory to the temporary traffic control shall be covered or removed by the contractor. Signs shall be restored immediately upon removal of the temporary traffic control.

LEGEND

Construction Limits	-----	-----	-----	-----
Traffic Signal Line	----- TS ----- TS ----- TS ----- TS -----			
Overhead Telephone Line	----- OHT ----- OHT ----- OHT ----- OHT -----			
Underground Telephone Line	----- T ----- T ----- T ----- T -----			
Overhead Cable	----- OTV ----- OTV ----- OTV ----- OTV -----			
Underground Cable	----- UTV ----- UTV ----- UTV ----- UTV -----			
Overhead Electric Line	----- OHP ----- OHP ----- OHP ----- OHP -----			
Underground Electric Line	----- UGP ----- UGP ----- UGP ----- UGP -----			
Water Line	----- W ----- W ----- W ----- W -----			
Gas Line	----- G ----- G ----- G ----- G -----			
Sanitary Sewer	----- ----- ----- ----- -----			
Storm Sewer	----- ----- ----- ----- -----			
Fiber Optic Line	----- FO ----- FO ----- FO ----- FO -----			
Centerline	----- ----- ----- ----- -----			
Right-of-Way Line	----- ----- ----- ----- -----			
Property Line	----- ----- ----- ----- -----			
Fence	----- o ----- o ----- o ----- o ----- o ----- o ----- o ----- o ----- o -----			
Guard Rail	----- □ ----- □ ----- □ ----- □ ----- □ ----- □ -----			
RailRoad Tracks	----- +----- +----- +----- +----- +----- +----- +----- +----- +----- +-----			
Section Corner	----- Δ -----			
Bench Mark	----- ⊕ -----	Gas Valve	----- ● -----	
Property Pin	----- ⊙ -----	Mail Box	----- □ -----	
Power Pole	----- ■ -----	Existing Storm Inlet	----- [S] -----	
Telephone Pole	----- ⊕ -----	Existing Sanitary Sewer Manhole	----- (S) -----	
Street Light	----- ☼ -----	Existing Storm Sewer Manhole	----- (D) -----	
Guy Pole	----- □ -----	Existing Traffic Manhole	----- (T) -----	
Guy Wire	----- → -----	Sign	----- T -----	
Fire Hydrant	----- ⚡ -----	Tree, Deciduous	----- 🌳 -----	
Water Meter	----- ⌘ -----	Tree, Coniferous	----- 🌲 -----	
Water Valve	----- ▣ -----	Stump	----- 🪵 -----	
Gas Meter	----- ⊕ -----	Shrub	----- 🌿 -----	

SUMMARY OF QUANTITIES
2023 PEDESTRIAN IMPROVEMENTS (MS5-D2300)

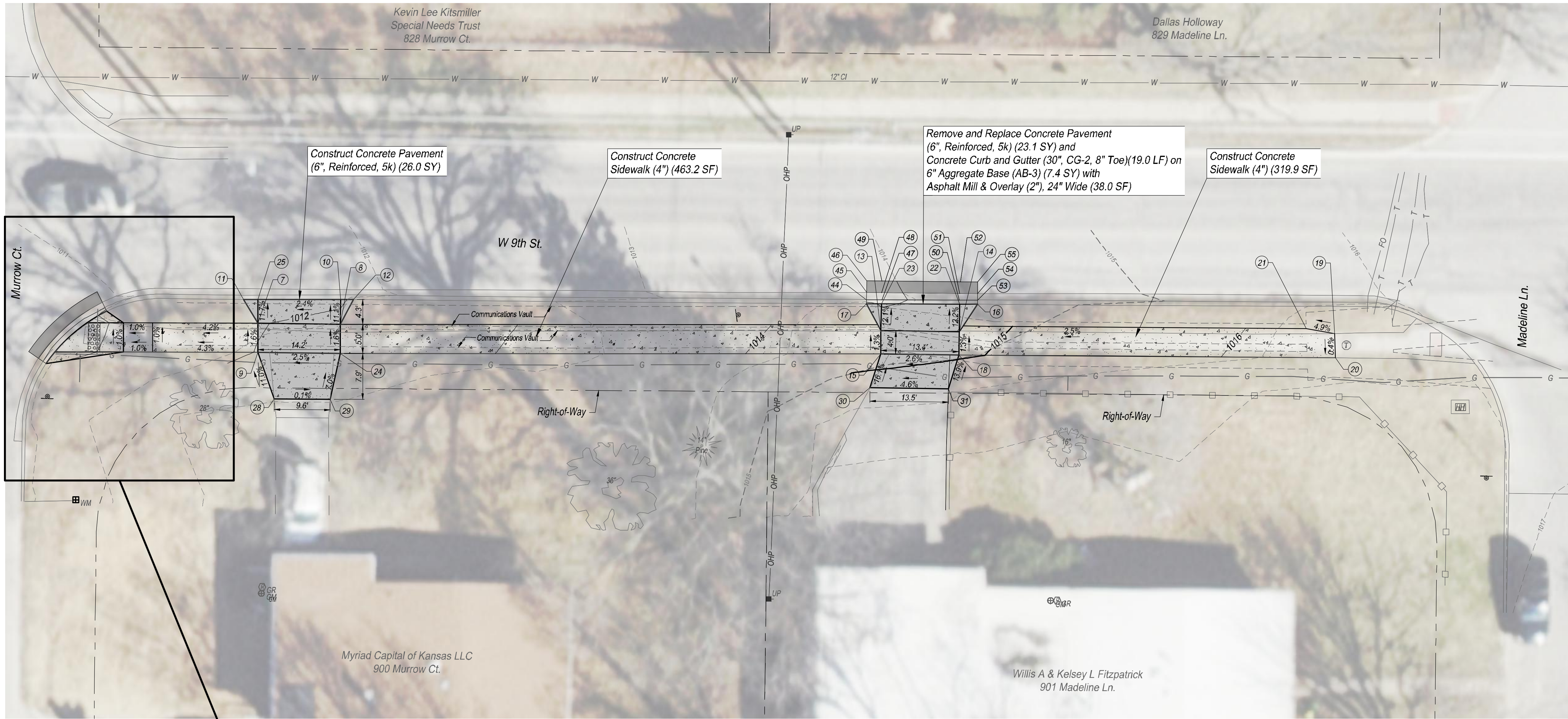
PROJECT QUANTITIES			
ITEM	DESCRIPTION	QTY	UNITS
1	CONTRACTOR CONSTRUCTON STAKING	1	LS
2	MOBILIZATION	1	LS
3	DEMOLITION AND REMOVAL	1	LS
4	CLEARING AND GRUBBING	1	LS
5	EARTHWORK	1	LS
6	DETECTABLE WARNING PANEL	301	SF
7	ACCESS RAMP	1,398	SF
8	ASPHALT MILL & OVERLAY (2"), 24" WIDE	1,174	SF
9	6" AGGREGATE BASE (AB-3)	361	SY
10	CONCRETE PAVEMENT (6", REINFORCED, 5K)	1,429	SY
11	CONCRETE PAVEMENT (7", REINFORCED, 5K)	16	SY
12	CONCRETE PAVEMENT (8", REINFORCED, 5K)	141	SY
13	2" ASPHALTIC PAVEMENT	16	SY
14	CONCRETE CURB AND GUTTER (24", TYPE CG-1, 8" TOE)	490	LF
15	CONCRETE CURB AND GUTTER (30", TYPE CG-2, 8" TOE)	19	LF
16	CONCRETE CURB AND GUTTER (30", TYPE CG-3, 8" TOE)	43	LF
17	CONCRETE SIDEWALK (4")	17,475	SF
18	INTEGRAL CONCRETE SIDEWALK AND RETAINING WALL	113	LF
19	INTEGRAL SIDEWALK CURB	112	LF
20	CRUSHED ROCK SURFACING	278	SF
21	12" STORM SEWER (RCP/PP)	61	LF
22	FLOWABLE FILL	3	CY
23	2'X3' AREA INLET	2	EA
24	4'X4' CURB INLET	1	EA
25	TEMPORARY EROSION CONTROL	1	LS
26	SEEDING (PERMANENT)	1	LS
27	WATER VALVE ADJUSTMENT (PAVED)	2	EA
28	RELOCATE YARD LIGHT AND POST AND RECONNECT	1	EA
29	UTILITY MANHOLE ADJUSTMENT	1	EA
30	62" PEDESTRIAN PUSHBUTTON & PEDESTAL	1	EA
31	TEMPORARY TRAFFIC CONTROL	1	LS

ABBREVIATIONS

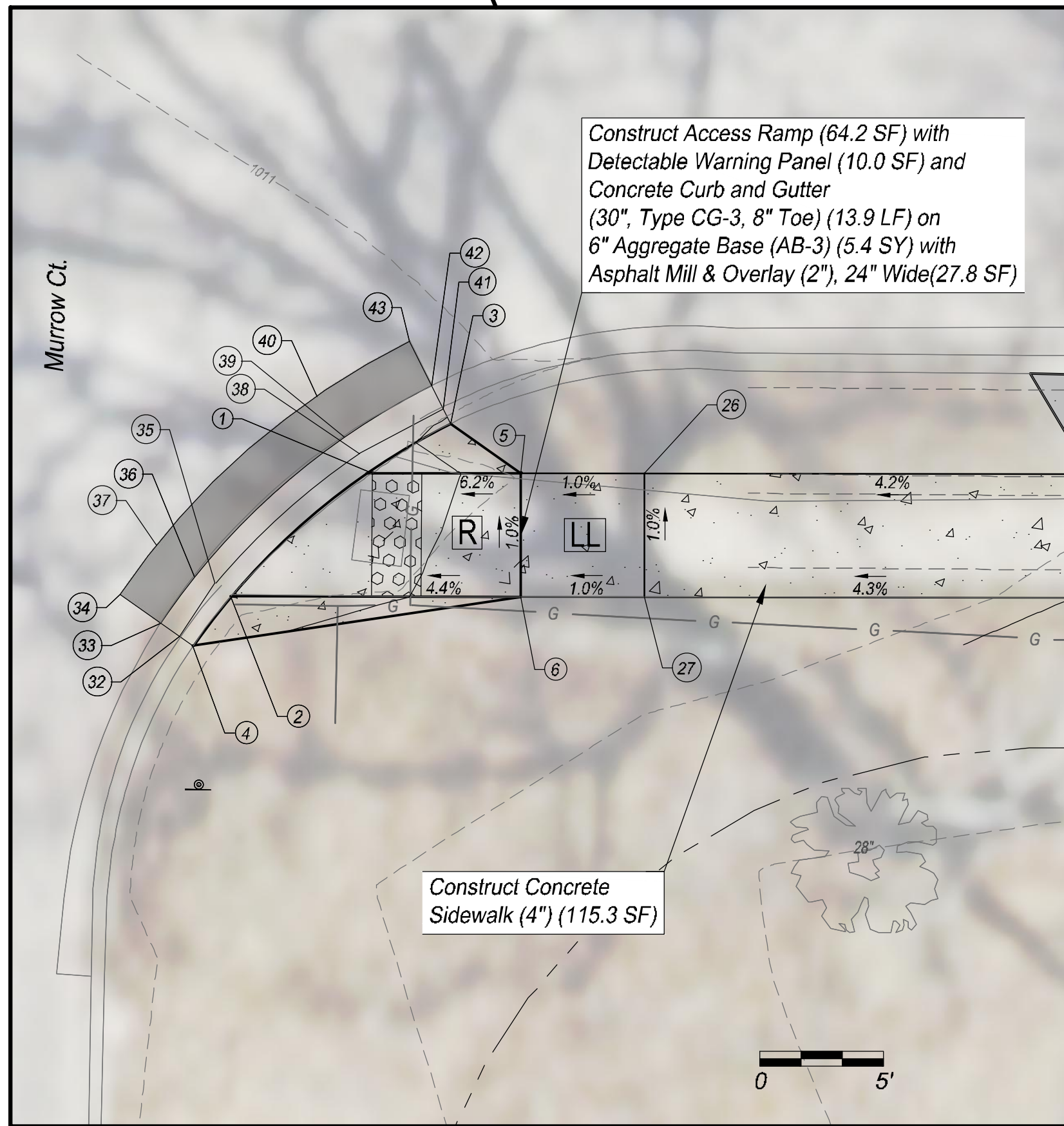
- TC Top of Curb
TP Top of Pavement
TS Top of Sidewalk
TW Top of Retaining Wall
M.E. Match Existing
L.I.P. Leave in Place

CITY PROJECT MS5-D2300
SBB PROJECT 23-012
SHEET 2 OF 43

DATE	BY	REVISION
 CITY OF LAWRENCE, KANSAS MUNICIPAL SERVICES AND OPERATIONS 		
GENERAL NOTES & SUMMARY OF QUANTITIES		
DAVID P. CRONIN CITY ENGINEER		CRAIG S. OWENS CITY MANAGER



Summary Of Quantities		
Description	Qty	Unit
Concrete Sidewalk (4")	898.4	SF
Concrete Pavement (6", Reinforced, 5k)	49.1	SY
Access Ramp	64.2	SF
Detectable Warning Panel	10.0	SF
Asphalt Mill & Overlay (2"), 24" Wide	65.8	SF
6" Aggregate Base (AB-3)	12.8	SY
Concrete Curb and Gutter (30", Type CG-2, 8" Toe)	19.0	LF
Concrete Curb and Gutter (30", Type CG-3, 8" Toe)	13.9	LF
Sod	100	SY



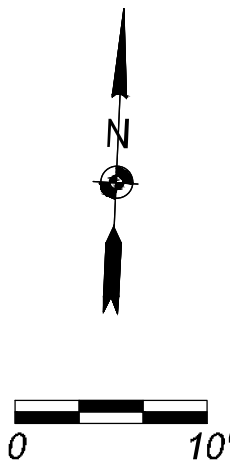
Coordinate Table					
Point #	Northing	Easting	EG Elevation	FG Elevation	Description
1	242836.97	2088853.56	1010.85	1010.78	TC/TS
2	242831.74	2088848.06	1010.93	1010.68	TC/TS
3	242839.10	2088856.64	1011.16	1011.16	TC
4	242829.68	2088846.61	1010.92	1010.92	TC
5	242837.22	2088859.56	1011.02	1011.15	TS
6	242832.23	2088859.76	1011.19	1011.20	TS
7	242838.16	2088882.61	1011.89	1011.95	TS
8	242838.54	2088896.77	1012.11	1012.30	TS
9	242833.16	2088882.81	1012.19	1012.03	TS
10	242842.82	2088896.61	1011.83	1011.82	TC
11	242842.10	2088879.98	1011.78	1011.78	TC
12	242842.92	2088898.82	1012.17	1012.17	TC
13	242841.35	2088989.45	1014.57	1014.49	TS
14	242841.72	2089002.89	1014.73	1014.84	TS
15	242837.36	2088989.58	1014.67	1014.54	TS
16	242846.58	2089005.81	1014.60	1014.60	TC
17	242845.85	2088986.78	1014.17	1014.17	TC
18	242837.73	2089003.00	1014.91	1014.89	TS
19	242844.12	2089067.28	1016.50	1016.50	TS
20	242839.95	2089067.54	1016.48	1016.48	TS
21	242844.77	2089062.37	1016.21	1016.26	TS

Coordinate Table					
Point #	Northing	Easting	EG Elevation	FG Elevation	Description
22	242846.47	2089002.76	1014.20	1014.26	TC/TP
23	242845.95	2088989.40	1013.90	1013.93	TC/TP
24	242833.55	2088896.99	1012.40	1012.38	TS
25	242842.18	2088882.45	1011.47	1011.48	TP
26	242837.42	2088864.55	1011.20	1011.20	TS
27	242832.43	2088864.76	1011.37	1011.25	TS
28	242825.24	2088885.96	1012.96	1012.96	TP
29	242825.58	2088895.58	1012.95	1012.95	TP
30	242831.49	2088988.01	1015.52	1015.52	TP
31	242831.87	2089001.46	1015.73	1015.73	TP
32	242830.04	2088846.04	1010.64	1010.64	GL
33	242830.55	2088845.25	1010.65	1010.65	Lip
34	242831.63	2088843.56	1010.68	1010.68	TP
35	242832.26	2088847.39	1010.67	1010.66	GL
36	242832.48	2088846.55	1010.66	1010.70	Lip
37	242833.69	2088844.97	1010.72	1010.72	TP
38	242837.74	2088852.99	1010.82	1010.76	GL
39	242838.38	2088852.37	1010.80	1010.80	Lip
40	242839.97	2088851.19	1010.85	1010.85	TP
41	242839.69	2088856.31	1010.80	1010.80	GL
42	242840.60	2088855.80	1010.90	1010.90	Lip

Coordinate Table					
Point #	Northing	Easting	EG Elevation	FG Elevation	Description
43	242842.35	2088854.83	1010.92	1010.92	TP
44	242846.52	2088986.76	1013.79	1013.79	GL
45	242847.77	2088986.75	1013.85	1013.85	Lip
46	242849.77	2088986.67	1013.87	1013.87	TP
47	242846.62	2088989.43	1013.86	1013.89	GL
48	242847.85	2088989.32	1013.91	1013.91	Lip
49	242849.85	2088989.29	1013.94	1013.94	TP
50	242847.13	2089002.69	1014.18	1014.22	GL
51	242848.29	2089002.73	1014.24	1014.24	Lip
52	242850.29	2089002.72	1014.27	1014.27	TP
53	242847.25	2089005.79	1014.25	1014.25	GL
54	242848.39	2089005.76	1014.32	1014.32	Lip
55	242850.39	2089005.71	1014.35	1014.35	TP

LEGEND:

- R Ramp
- BT Blended Transition
- TS Turning Space
- LL Level Landing
- SS Special Shaping
- Concrete Sidewalk (4")
- Concrete Pavement (6", Reinf., 5k)
- 2" Mill & Overlay



CITY PROJECT MSS-D2300
SBB PROJECT 23-012
SHEET 3 OF 43

DATE	BY	REVISION



CITY OF LAWRENCE, KANSAS
MUNICIPAL SERVICES AND OPERATIONS

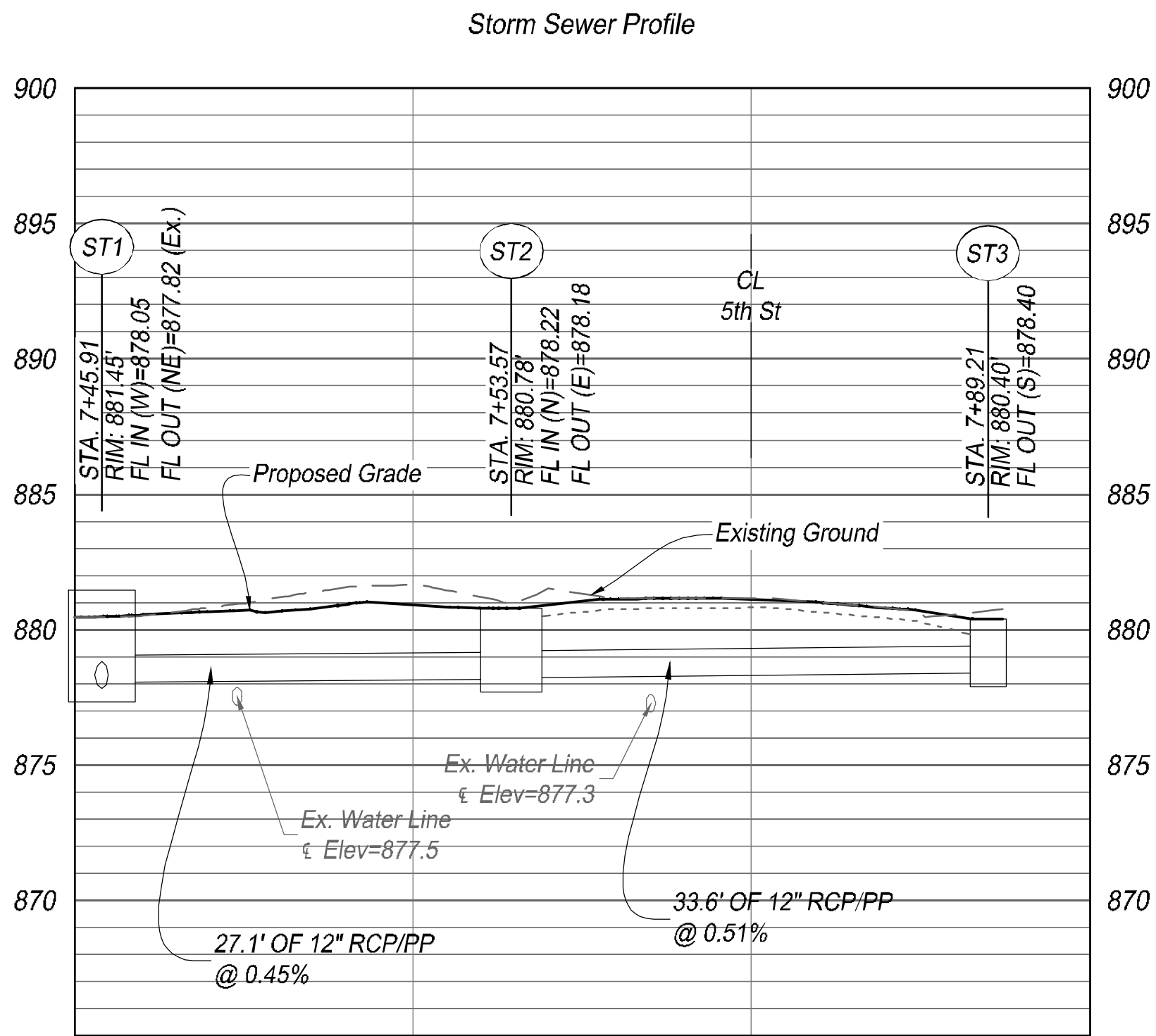
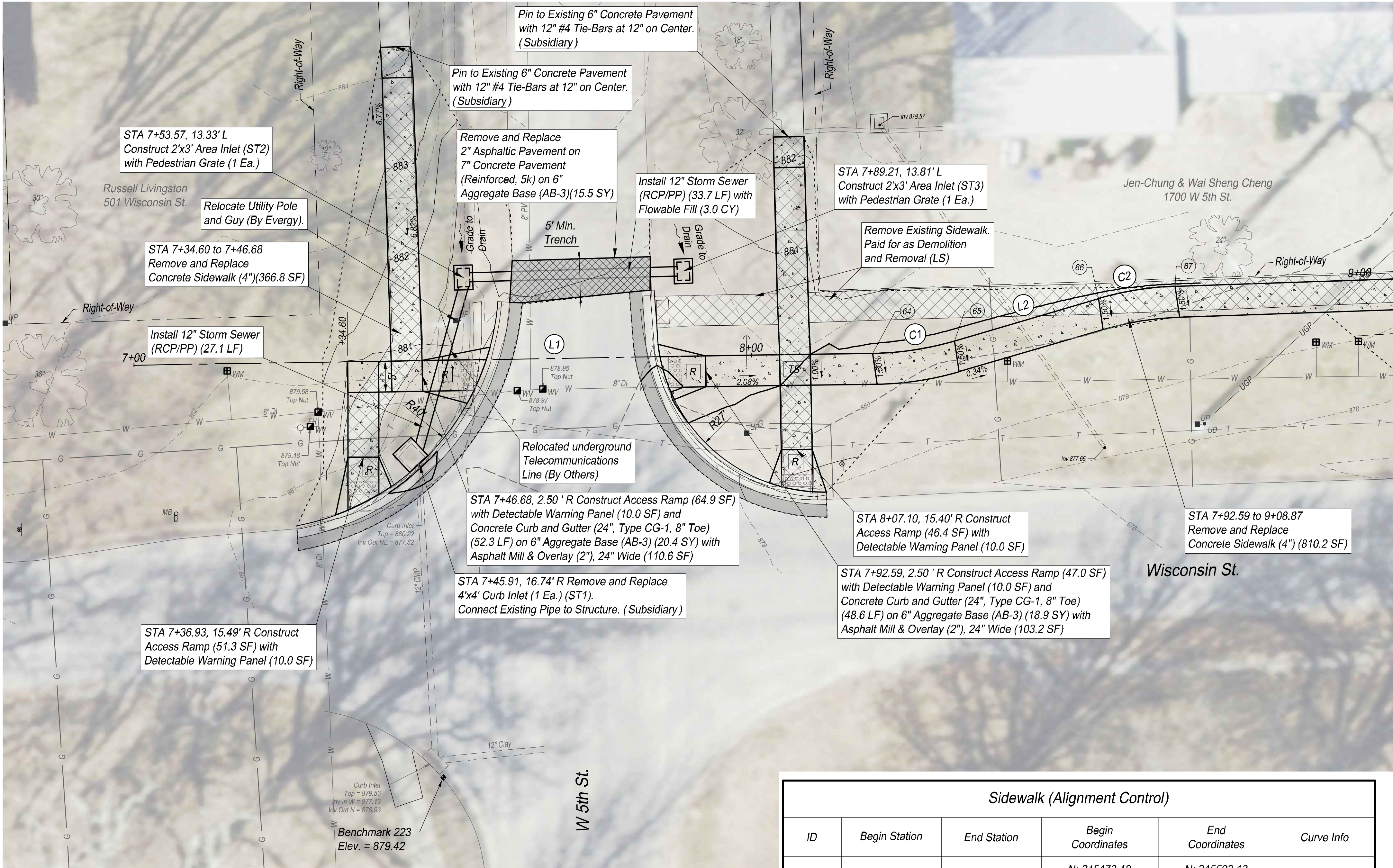


W 9TH STREET
MURROW CT. TO MADELINE ST.

DAVID P. CRONIN
CITY ENGINEER

CRAIG S. OWENS
CITY MANAGER

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Sidewalk (Alignment Control)					
ID	Begin Station	End Station	Begin Coordinates	End Coordinates	Curve Info
L1	7+00.00	8+19.66	N: 245473.48 E: 2092678.53	N: 245593.13 E: 2092676.61	
C1	PC: 8+19.66	PT: 8+33.14	PC: N: 245593.13 E: 2092676.61	PT: N: 245606.41 E: 2092674.59	L: 13.47' T: 6.78' R: 50.00' Δ: 15°26'28" C: 13.43'
L2	8+33.14	8+57.42	N: 245606.41 E: 2092674.59	N: 245629.71 E: 2092667.75	
C2	PC: 8+57.42	PT: 8+70.06	PC: N: 245629.71 E: 2092667.75	PT: N: 245642.15 E: 2092665.75	L: 12.63' T: 6.35' R: 50.00' Δ: 14°28'29" C: 12.60'
L3	8+70.06	10+21.50	N: 245642.15 E: 2092665.75	N: 245793.51 E: 2092660.77	
C3	PC: 10+21.50	PT: 10+39.90	PC: N: 245793.51 E: 2092660.77	PT: N: 245811.60 E: 2092663.53	L: 18.40' T: 9.30' R: 50.00' Δ: 21°04'56" C: 18.29'
L4	10+39.90	10+53.25	N: 245811.60 E: 2092663.53	N: 245824.21 E: 2092667.92	
C4	PC: 10+53.25	PT: 10+71.50	PC: N: 245824.21 E: 2092667.92	PT: N: 245842.14 E: 2092670.68	L: 18.24' T: 9.22' R: 50.01' Δ: 20°54'06" C: 18.14'
L5	10+71.50	11+94.98	N: 245842.14 E: 2092670.68	N: 245965.54 E: 2092666.22	

LEGEND:

- R Ramp
- BT Blended Transition
- TS Turning Space
- LL Level Landing
- SS Special Shaping
- Concrete Sidewalk (4")
- Concrete Pavement (6", Reinf., 5k)
- 2" Asphaltic Pavement on 7" Concrete Pavement (Reinf., 5k)
- Crushed Rock Surfacing
- 2" Mill & Overlay
- Sidewalk Removal

Summary Of Quantities		
Description	Qty	Unit
Concrete Sidewalk (4")	2,297.2	SF
Concrete Pavement (6", Reinforced, 5k)	601.7	SF
Concrete Pavement (7", Reinforced, 5k)	15.5	SY
2" Asphaltic Pavement	15.5	SY
Asphalt Mill & Overlay (2"), 24" Wide	213.8	SY
6" Aggregate Base (AB-3)	39.3	SY
Crushed Rock Surfacing	277.5	SF
Access Ramp	209.6	SF
Detectable Warning Panel	40.0	SF
Concrete Curb and Gutter (24", Type CG-1, 8" Toe)	100.9	LF
12" Storm Sewer (RCP)	60.8	LF
Flowable Fill	3.0	CY
2'x3' Area Inlet	2	EA
4'x4' Curb Inlet	1	EA
Sod	410	SY
Relocate Yard Light and Post and Reconnect	1	EA

Coordinate Table

Point #	Northing	Easting	EG Elevation	FG Elevation	Description
35	245681.18	2092669.47	879.02	879.42	TS
37	245700.18	2092668.85	878.62	878.94	TS
39	245793.51	2092660.77	877.73	877.93	TS
40	245764.56	2092661.73	877.96	877.96	TS
41	245824.21	2092667.92	875.81	875.78	TS
42	245780.86	2092661.19	877.26	877.26	TS
43	245765.26	2092684.81	876.22	876.22	TP
44	245781.24	2092684.76	875.67	875.67	TP
45	245885.57	2092669.11	874.34	874.68	TS
46	245842.14	2092670.68	875.50	875.50	TS
47	245943.03	2092667.03	872.91	872.89	TS
48	245851.47	2092670.34	875.75	875.75	TS
49	245842.33	2092684.10	874.75	874.75	TP
50	245852.04	2092683.83	874.64	874.64	TP
51	245948.15	2092671.68	872.72	872.72	TS
52	245948.03	2092666.88	872.79	872.79	TS
64	245593.13	2092676.61	880.57	880.32	TS
65	245606.41	2092674.59	880.30	880.08	TS
66	245629.71	2092667.75	880.37	880.40	TS
67	245642.15	2092665.75	880.23	880.23	TS
76	245684.35	2092688.10	877.27	877.27	TP
77	245695.08	2092687.63	877.41	877.41	TP

Horizontal & Vertical Project Control

Point #	Northing	Easting	Elevation	Description
222	245709.10	2092737.05	875.76	CP: 1/2" Rebar with SBB Control Cap
223	245523.57	2092745.32	879.42	BM: Square Cut in TBC NE Corner of Curb Inlet
224	246184.98	2092722.17	866.84	CP: 1/2" Rebar with SBB Control Cap
225	246212.28	2092739.60	865.49	BM: Square Cut in SW Corner of Curb Inlet

CITY PROJECT MS5-D2300
SBB PROJECT 23-012
SHEET 4 OF 43

VERTICAL DATUM

NAVD 88

HORIZONTAL DATUM

Kansas State Plane NAD 83, North Zone

DATE

BY

REVISION



CITY OF LAWRENCE, KANSAS
MUNICIPAL SERVICES AND OPERATIONS



WISCONSIN STREET
WEST 5TH STREET TO WEST 4TH STREET

DAVID P. CRONIN
CITY ENGINEER

CRAIG S. OWENS
CITY MANAGER



Coordinate Table					
Point #	Northing	Easting	EG Elevation	FG Elevation	Description
35	245681.18	2092669.47	879.02	879.42	TS
37	245700.18	2092668.85	878.62	878.94	TS
39	245793.51	2092660.77	877.73	877.93	TS
40	245764.56	2092661.73	877.96	877.96	TS
41	245824.21	2092667.92	875.81	875.78	TS
42	245780.86	2092661.19	877.26	877.26	TS
43	245765.26	2092684.81	876.22	876.22	TP
44	245781.24	2092684.76	875.67	875.67	TP
45	245885.57	2092669.11	874.34	874.68	TS
46	245842.14	2092670.68	875.50	875.50	TS
47	245943.03	2092667.03	872.91	872.89	TS
48	245851.47	2092670.34	875.75	875.75	TS
49	245842.33	2092684.10	874.75	874.75	TP
50	245852.04	2092683.83	874.64	874.64	TP
51	245948.15	2092671.68	872.72	872.72	TS
52	245948.03	2092666.88	872.79	872.79	TS
64	245593.13	2092676.61	880.57	880.32	TS
65	245606.41	2092674.59	880.30	880.08	TS
66	245629.71	2092667.75	880.37	880.40	TS
67	245642.15	2092665.75	880.23	880.23	TS
76	245684.35	2092688.10	877.27	877.27	TP
77	245695.08	2092687.63	877.41	877.41	TP

LEGEND:

- R Ramp
- BT Blended Transition
- TS Turning Space
- LL Level Landing
- SS Special Shaping
- Concrete Sidewalk (4")
- Concrete Pavement (6", Reinf., 5k)
- Concrete Pavement (8", Reinf., 5k)
- Crushed Rock Surfacing

CITY PROJECT MSS-D2300
SBB PROJECT 23-012
SHEET 5 OF 43

DATE

BY

REVISION



CITY OF LAWRENCE, KANSAS

MUNICIPAL SERVICES AND OPERATIONS



WISCONSIN STREET

W 5TH STREET TO W 4TH STREET

DAVID P. CRONIN

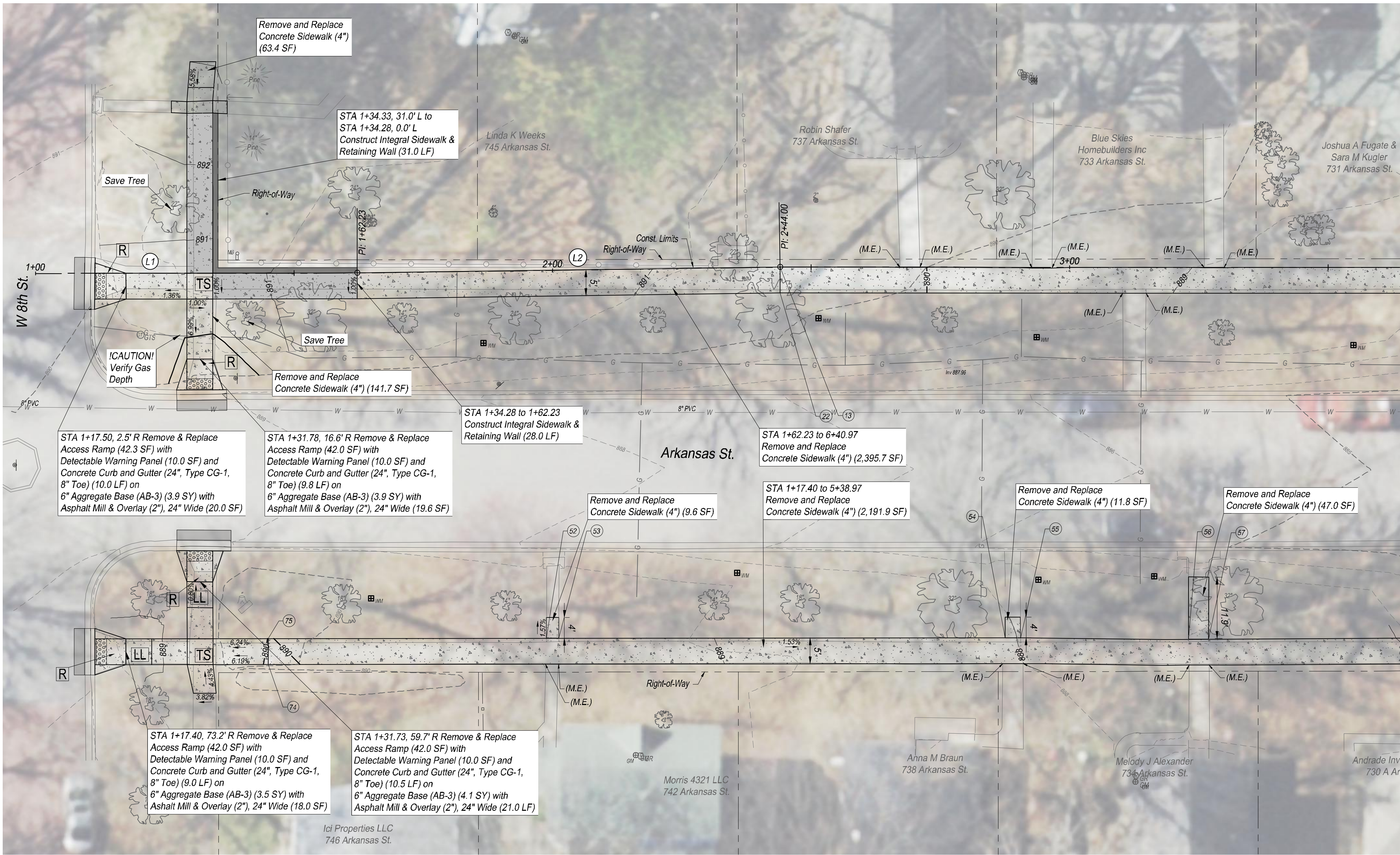
CITY ENGINEER

CRAIG S. OWENS

CITY MANAGER

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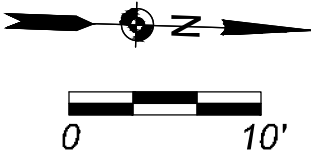


Summary Of Quantities		
Description	Qty	Unit
Concrete Sidewalk (4")	6,682.8	SF
Concrete Pavement (6", Reinforced, 5k)	472.5	SF
Access Ramp	294.7	SF
Detectable Warning Panel	70.0	SF
Integral Sidewalk & Retaining Wall	112.5	LF
Concrete Curb & Gutter (24", Type CG-1, 8" Toe)	86.3	LF
Asphalt Mill & Overlay (2"), 24" Wide	172.6	SF
6" Aggregate Base (AB-3)	33.7	SY
Integral Sidewalk Curb	40.0	LF
Concrete Steps	8.0	SF
Sod	806	SY

LEGEND:

- R Ramp
- BT Blended Transition
- TS Turning Space
- LL Level Landing
- SS Special Shaping

- Concrete Sidewalk (4")
- Concrete Pavement (6", Reinf., 5k)
- Concrete Pavement (8", Reinf., 5k)
- Crushed Rock Surfacing
- 2" Mill & Overlay



Horizontal & Vertical Project Control				
Point #	Northing	Easting	Elevation	Description
82	244244.80	2094080.60	876.45	BM: Square Cut in N ECR, NW Quadrant
83	243501.04	2094146.87	889.74	BM: Square Cut in S ECR, SE Quadrant
309	244178.96	2094133.87	877.66	CP: 1/2" Rebar with SBB Eng Control Cap
310	243493.61	2094107.05	891.15	CP: 1/2" Rebar with SBB Eng Control Cap

VERTICAL DATUM
NAVD 88

HORIZONTAL DATUM
Kansas State Plane NAD 83, North Zone

West Sidewalk (Alignment Control)				
ID	Begin Station	End Station	Begin Coordinates	End Coordinates
L1	1+00.00	1+62.23	N: 243527.70 E: 2094092.55	N: 243589.90 E: 2094090.64
L2	1+62.23	2+44.00	N: 243589.90 E: 2094090.64	N: 243671.59 E: 2094087.09
L3	2+44.00	6+66.50	N: 243671.59 E: 2094087.09	N: 244093.92 E: 2094074.83
L4	6+66.50	7+23.83	N: 244093.92 E: 2094074.83	N: 244151.23 E: 2094073.39
L5	7+23.83	7+77.59	N: 244151.23 E: 2094073.39	N: 244204.96 E: 2094071.79

Coordinate Table					
Point #	Northing	Easting	EG Elevation	FG Elevation	Description
13	243671.59	2094087.09	890.65	890.65	TS
22	243671.74	2094092.08	890.43	890.60	TS
52	243628.50	2094160.19	889.30	889.49	TS
53	243630.92	2094160.11	889.44	889.46	TS
54	243717.22	2094157.46	888.11	888.14	TS
55	243720.18	2094157.37	887.97	887.95	TS
56	243752.65	2094156.73	888.03	887.69	TS
57	243756.55	2094156.60	888.06	887.66	TS
74	243574.94	2094166.84	890.06	890.06	TS
75	243574.79	2094161.84	890.08	890.01	TS

CITY PROJECT MSS-D2300
SBB PROJECT 23-012
SHEET 8 OF 43

DATE	BY	REVISION

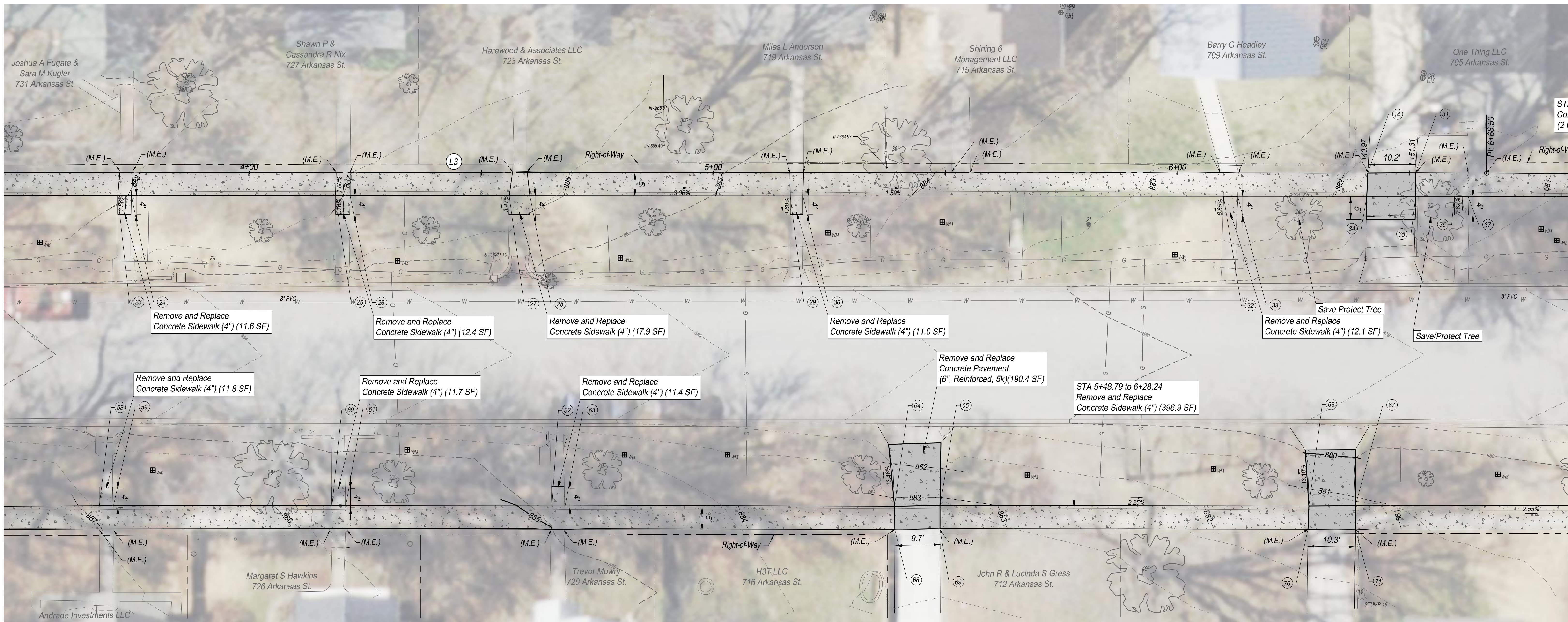


CITY OF LAWRENCE, KANSAS
MUNICIPAL SERVICES AND OPERATIONS



ARKANSAS STREET
WEST 8TH STREET TO WEST 7TH STREET

DAVID P. CRONIN CITY ENGINEER	CRAIG S. OWENS CITY MANAGER
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Coordinate Table					
Point #	Northing	Easting	EG Elevation	FG Elevation	Description
14	244068.37	2094075.57	881.86	881.86	TS
23	243799.36	2094088.38	888.07	888.05	TS
24	243802.29	2094088.30	888.03	887.98	TS
25	243846.25	2094087.02	887.06	887.05	TS
26	243849.37	2094086.93	886.97	886.96	TS
27	243883.68	2094085.93	886.30	886.29	TS
28	243888.13	2094085.81	886.17	886.22	TS
29	243944.18	2094084.18	884.52	884.51	TS
30	243946.92	2094084.10	884.50	884.35	TS
31	244078.70	2094075.24	881.72	881.72	TS
32	244037.44	2094081.47	882.60	882.65	TS
33	244040.49	2094081.38	882.58	882.58	TS
34	244068.28	2094080.58	881.60	881.81	TS
35	244078.82	2094080.27	881.57	881.67	TS
36	244087.20	2094080.03	881.64	881.52	TS
37	244090.10	2094079.95	881.61	881.46	TS
58	243797.35	2094155.54	886.98	886.93	TS
59	243800.31	2094155.45	886.84	886.88	TS
60	243847.41	2094154.00	885.86	885.69	TS
61	243850.37	2094153.91	885.75	885.69	TS

Coordinate Table					
Point #	Northing	Easting	EG Elevation	FG Elevation	Description
62	243894.80	2094152.55	884.94	884.87	TS
63	243897.63	2094152.46	884.84	884.83	TS
64	243968.59	2094150.28	883.07	883.25	TS
65	243978.40	2094149.98	883.04	883.28	TS
66	244057.82	2094147.54	881.34	881.49	TS
67	244067.83	2094147.23	881.11	881.22	TS
68	243968.78	2094155.27	883.30	883.30	TS
69	243978.51	2094154.98	883.34	883.34	TS
70	244057.76	2094152.54	881.54	881.54	TS
71	244068.03	2094152.37	881.27	881.27	TS

LEGEND:

R

Ramp

BT

Blended Transition

TS

Turning Space

LL

Level Landing

SS

Special Shaping

Concrete Sidewalk (4")

Concrete Pavement (6", Reinf., 5k)

Concrete Pavement (8", Reinf., 5k)

Crushed Rock Surfacing

0

10'

CITY PROJECT MS5-D2300
SBB PROJECT 23-012
SHEET 9 OF 43

DATE

BY

REVISION

CITY OF LAWRENCE, KANSAS

MUNICIPAL SERVICES AND OPERATIONS

ARKANSAS STREET

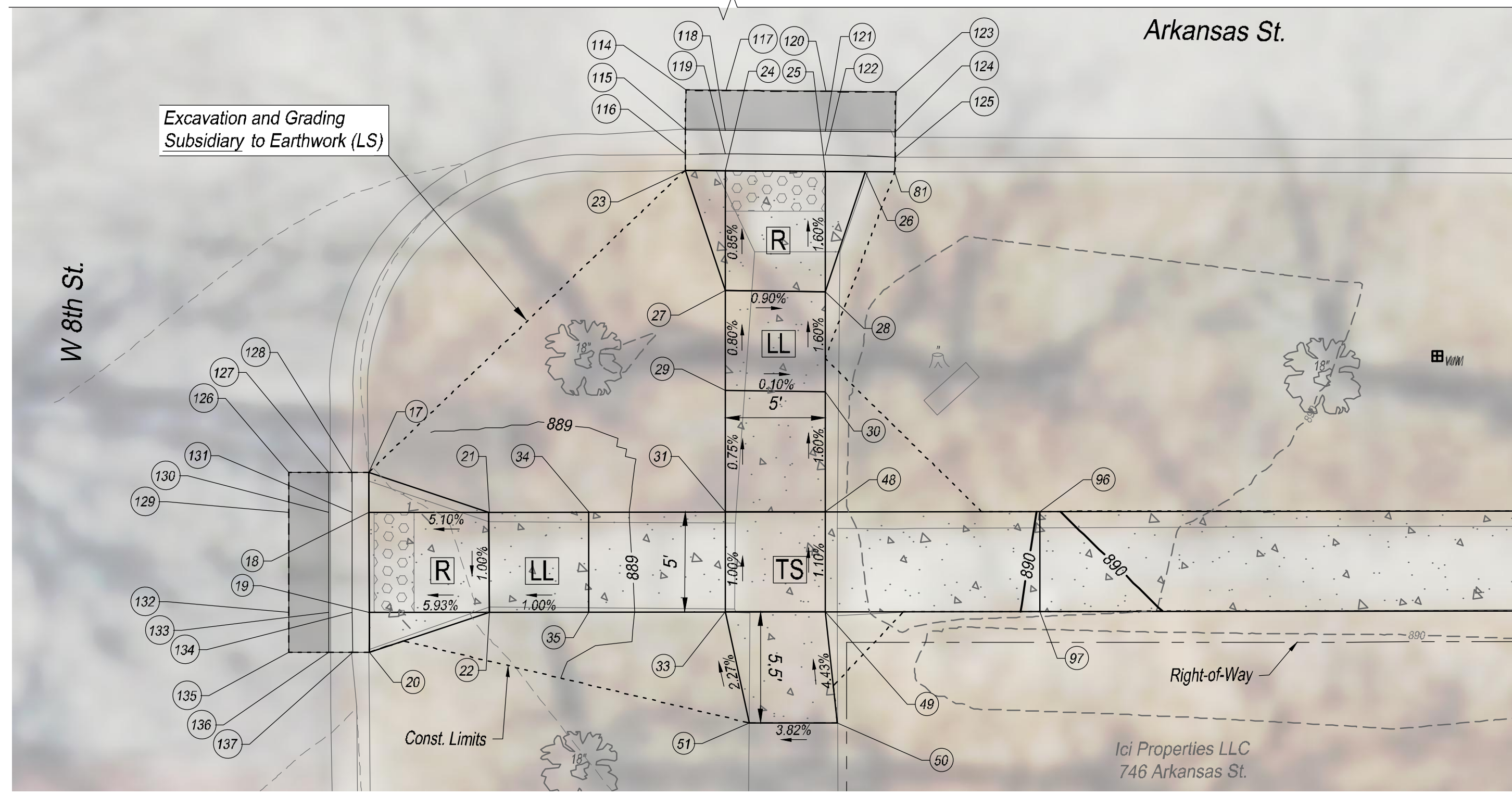
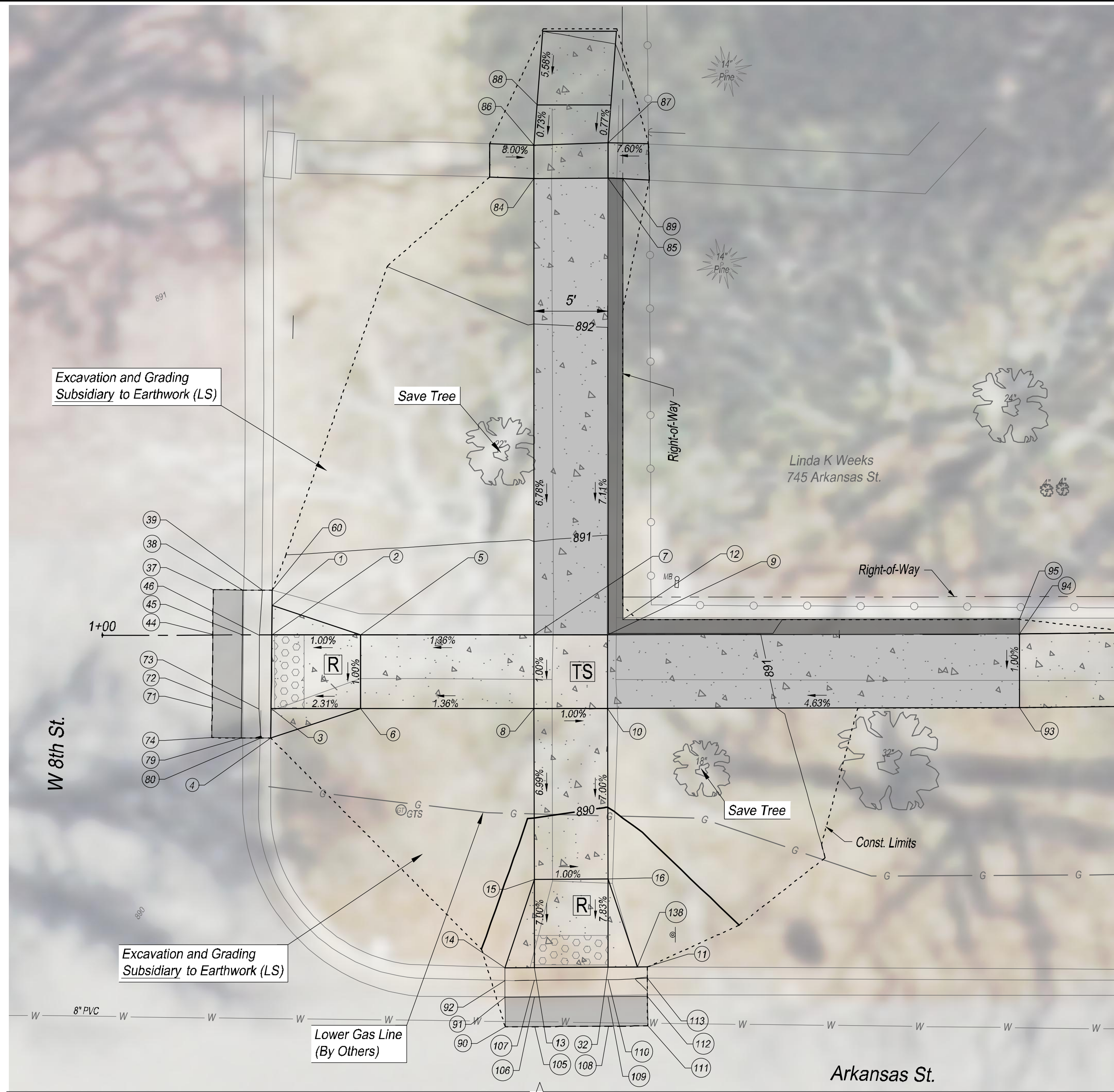
WEST 8TH STREET TO WEST 7TH STREET

DAVID P. CRONIN

CITY ENGINEER

CRAIG S. OWENS

CITY MANAGER

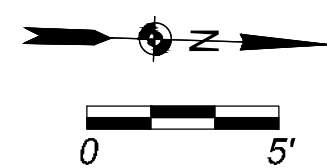


Coordinate Table					
Point #	Northing	Easting	EG Elevation	FG Elevation	Description
1	243539.14	2094090.20	890.48	890.83	TC
2	243539.20	2094092.20	890.22	890.35	TC/TS
3	243539.28	2094097.20	890.45	890.22	TC/TS
4	243539.33	2094099.20	890.44	890.44	TC
5	243545.20	2094092.01	891.55	890.41	TS
6	243545.35	2094097.01	891.25	890.36	TS
7	243556.96	2094091.66	892.07	890.57	TS
8	243557.12	2094096.65	891.83	890.52	TS
9	243561.96	2094091.50	892.14	890.52	TS
10	243562.11	2094096.50	891.96	890.47	TS
11	243565.31	2094113.96	889.48	889.48	TC
12	243562.95	2094090.47	892.12	892.12	TW
13	243557.66	2094114.24	889.64	889.29	TC/TS
14	243555.66	2094114.31	889.75	889.75	TC
15	243557.47	2094108.24	890.63	889.71	TS
16	243562.47	2094108.06	890.68	889.66	TS
17	243541.21	2094160.87	888.91	888.91	TS
18	243541.27	2094162.87	888.53	888.52	TC/TS
19	243541.42	2094167.87	888.29	888.42	TC/TS
20	243541.48	2094169.87	888.54	888.54	TS
21	243547.27	2094162.69	889.26	888.83	TS
22	243547.42	2094167.68	889.06	888.78	TS
23	243556.56	2094145.31	889.57	889.57	TC
24	243558.56	2094145.27	889.51	889.16	TC/TS
25	243563.56	2094145.17	889.28	889.07	TC/TS
26	243565.56	2094145.13	889.55	889.52	TC
27	243558.75	2094151.27	889.95	889.21	TS
28	243563.75	2094151.17	889.90	889.17	TS
29	243558.90	2094156.27	886.82	889.25	TS
30	243563.90	2094156.17	889.92	889.25	TS
31	243559.09	2094162.32	889.66	889.30	TS
32	243562.65	2094114.06	889.26	889.19	TC/TS
33	243559.24	2094167.32	889.62	889.35	TS
34	243552.26	2094162.53	889.46	888.88	TS
35	243552.41	2094167.53	889.31	888.83	TS
37	243535.12	2094089.24	890.47	890.47	TP
38	243537.11	2094089.20	890.38	890.38	Lip
39	243538.45	2094089.17	890.37	890.37	GL
44	243535.18	2094092.28	890.39	890.39	TP
45	243537.17	2094092.24	890.27	890.33	Lip
46	243538.36	2094092.26	890.25	890.31	GL
48	243564.08	2094162.17	889.90	889.34	TS

Coordinate Table					
Point #	Northing	Easting	EG Elevation	FG Elevation	Description
49	243564.24	2094167.17	889.83	889.40	TS
50	243564.99	2094172.69	889.64	889.64	TS
51	243560.59	2094172.83	889.47	889.47	TS
60	243539.11	2094089.16	890.85	890.85	TC
71	243535.28	2094097.28	890.26	890.26	TP
72	243537.28	2094097.24	890.08	890.20	Lip
73	243538.46	2094097.25	890.04	890.18	GL
74	243535.33	2094099.28	890.18	890.18	TP
79	243537.32	2094099.24	890.03	890.03	Lip
80	243538.66	2094099.21	889.99	889.99	GL
81	243567.05	2094145.10	889.56	889.55	TC
84	243556.07	2094060.71	892.91	892.67	TS
85	243561.06	2094060.55	892.91	892.72	TS
86	243556.00	2094058.45	892.97	892.70	TS
87	243560.99	2094058.14	892.97	892.75	TS
88	243556.13	2094055.71	893.00	892.72	TS
89	243562.06	2094060.56	892.91	892.90	TW
90	243555.80	2094118.31	889.36	889.36	TP
91	243555.73	2094116.31	889.22	889.22	Lip
92	243555.69	2094115.17	889.28	889.28	GL
93	243590.05	2094095.64	891.73	891.76	TS
94	243589.90	2094090.64	891.81	891.81	TS
95	243589.87	2094089.64	891.82	891.82	TW
96	243574.79	2094161.84	890.08	890.01	TS
97	243574.94	2094166.84	890.06	890.06	TS
105	243557.80	2094118.23	889.35	889.35	TP
106	243557.73	2094116.23	889.18	889.29	Lip
107	243557.69	2094115.07	889.24	889.25	GL
108	243562.80	2094118.05	889.23	889.23	TP
109	243562.73	2094116.05	889.08	889.17	Lip
110	243562.68	2094114.89	889.09	889.15	GL
111	243565.46	2094117.96	889.16	889.16	TP
112	243565.39	2094115.96	889.03	889.03	Lip
113	243565.34	2094114.72	888.93	888.94	GL
114	243556.48	2094141.32	889.23	889.23	TP
115	243556.52	2094143.31	889.14	889.14	Lip
116	243556.55	2094144.51	889.14	889.14	GL
117	243558.48	2094141.27	889.23	889.23	TP
118	243558.52	2094143.27	889.12	889.14	Lip
119	243558.54	2094144.44	889.13	889.12	GL
120	243563.48	2094141.17	889.20	889.20	TP
121	243563.52	2094143.17	889.07	889.05	Lip

Coordinate Table					
Point #	Northing	Easting	EG Elevation	FG Elevation	Description
122	243563.54	2094144.34	889.09	889.03	GL
123	243566.97	2094141.10	889.15	889.15	TP
124	243567.01	2094143.10	889.02	889.02	Lip
125	243567.04	2094144.34	889.01	889.01	GL
126	243537.21	2094160.99	888.66	888.66	TP
127	243539.21	2094160.93	888.59	888.59	Lip
128	243540.37	2094160.90	888.58	888.58	GL
129	243537.27	2094162.99	888.60	888.60	TP
130	243539.27	2094162.93	888.50	888.50	Lip
131	243540.43	2094162.90	888.48	888.48	GL
132	243537.43	2094167.99	888.42	888.42	TP
133	243539.42	2094167.93	888.27	888.40	Lip
134	243540.59	2094167.89	888.19	888.38	GL
135	243537.49	2094169.99	888.34	888.34	TP
136	243539.49	2094169.93	888.18	888.18	Lip
137	243540.67	2094169.89	888.07	888.07	GL
138	243564.65	2094113.98	889.44	889.49	TC
139	244168.76	2094096.28	876.80	876.85	TS/TC
140	244168.78	2094097.10	876.72	876.81	GL
141	244168.82	2094098.28	876.71	876.83	Lip
142	244168.89	2094100.25	876.85	876.85	TP
143	244173.75	2094096.09	876.90	876.70	TS/TC
144	244173.78	2094096.96	876.61	876.66	GL
145	244173.82	2094098.10	876.57	876.68	Lip
146	244173.89	2094100.07	876.72	876.72	TP
147	244175.77	2094096.75	876.47	876.47	GL
148	244175.81	2094098.01	876.51	876.51	Lip
149	244175.86	2094100.00	876.65	876.65	TP

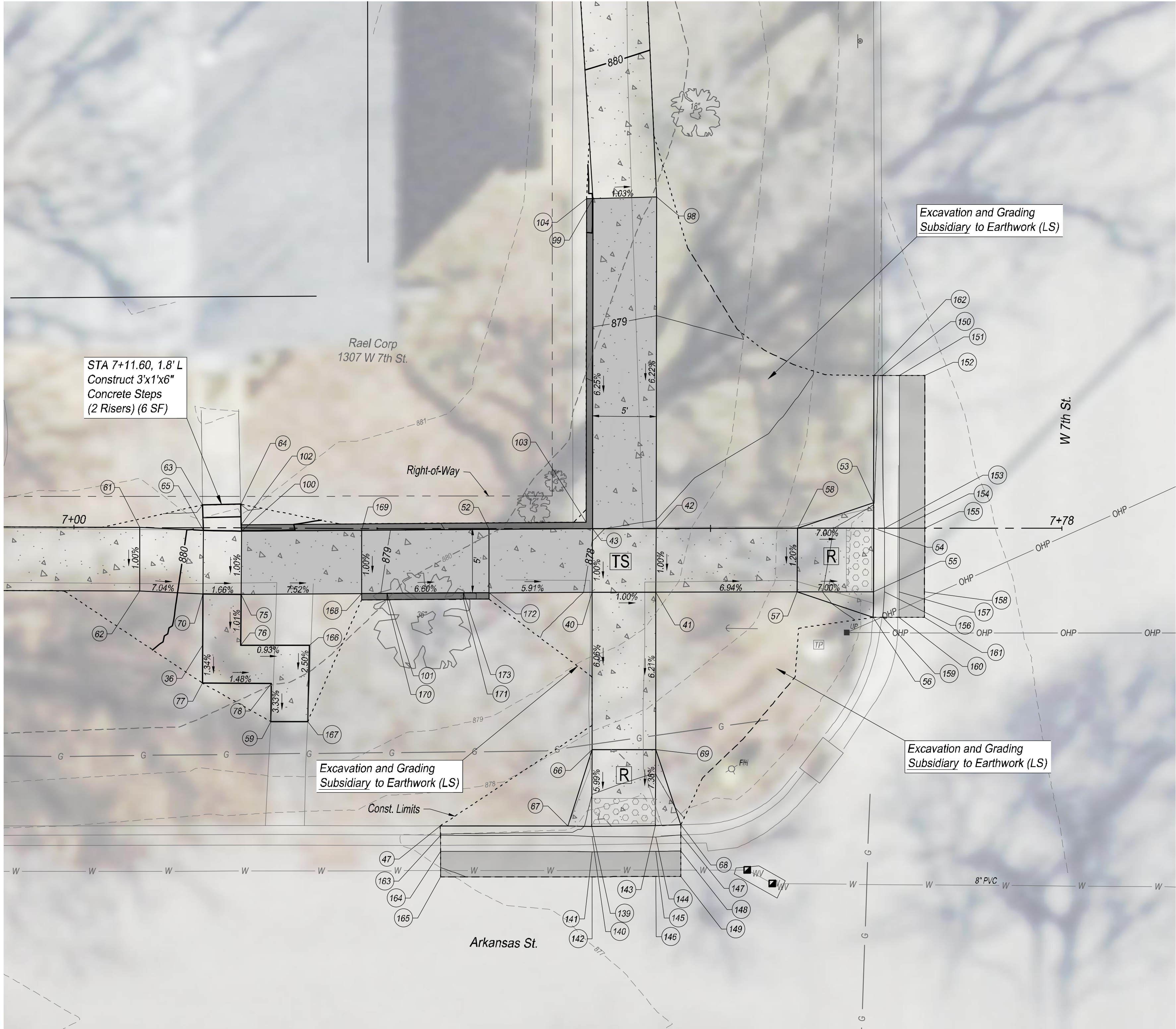
- LEGEND:**
- R Ramp
 - BT Blended Transition
 - TS Turning Space
 - LL Level Landing
 - SS Special Shaping
 - Concrete Sidewalk (4")
 - Concrete Pavement (6", Reinf., 5k)
 - 2" Mill & Overlay



CITY PROJECT MS5-D2300
SBB PROJECT 23-012
SHEET 11 OF 43

DATE	BY	REVISION
 CITY OF LAWRENCE, KANSAS  MUNICIPAL SERVICES AND OPERATIONS		
ARKANSAS STREET RAMPS DETAILS		
DAVID P. CRONIN CITY ENGINEER		CRAIG S. OWENS CITY MANAGER

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Coordinate Table					
Point #	Northing	Easting	EG Elevation	FG Elevation	Description
174	244169.90	2094149.09	878.60	877.89	TS
175	244170.54	2094164.08	878.83	878.83	TS
176	244167.23	2094127.41	877.21	877.21	TS
177	244169.23	2094127.32	876.92	876.72	TS/TC
178	244174.22	2094127.07	876.77	876.65	TS/TC
179	244176.22	2094126.98	877.02	877.02	TS
180	244174.41	2094133.22	877.45	877.05	TS
181	244174.75	2094163.95	878.48	878.48	TS
182	244174.74	2094143.94	878.10	877.79	TS
183	244169.74	2094144.09	878.46	877.84	TS
184	244169.41	2094133.37	877.54	877.10	TS
185	244174.89	2094148.94	878.42	877.84	TS
186	244167.20	2094126.74	876.70	876.70	GL
187	244167.13	2094125.42	876.71	876.71	Lip
188	244167.04	2094123.42	876.82	876.82	TP
189	244169.19	2094126.48	876.79	876.68	GL
190	244169.13	2094125.32	876.68	876.70	Lip
191	244169.03	2094123.32	876.79	876.79	TP
192	244174.18	2094126.24	876.65	876.61	GL
193	244174.13	2094125.08	876.60	876.63	Lip
194	244170.20	2094159.09	878.77	878.52	TS
195	244175.20	2094158.93	878.43	878.47	TS
196	244174.03	2094123.08	876.69	876.69	TP
197	244176.18	2094126.23	876.51	876.51	GL
198	244176.12	2094124.98	876.59	876.59	Lip
199	244176.03	2094122.98	876.66	876.66	TP
350	244149.75	2094144.71	879.13	879.13	TS
351	244149.91	2094149.71	879.18	879.18	TS
352	244149.92	2094150.21	879.43	879.43	TC
353	244169.41	2094149.61	878.63	878.60	TC
354	244169.70	2094159.10	878.81	878.77	TC

LEGEND:

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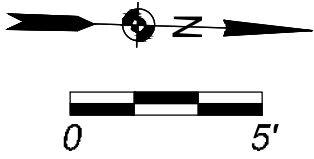
Ramp
- BT

Blended Transition
- TS

Turning Space
- LL

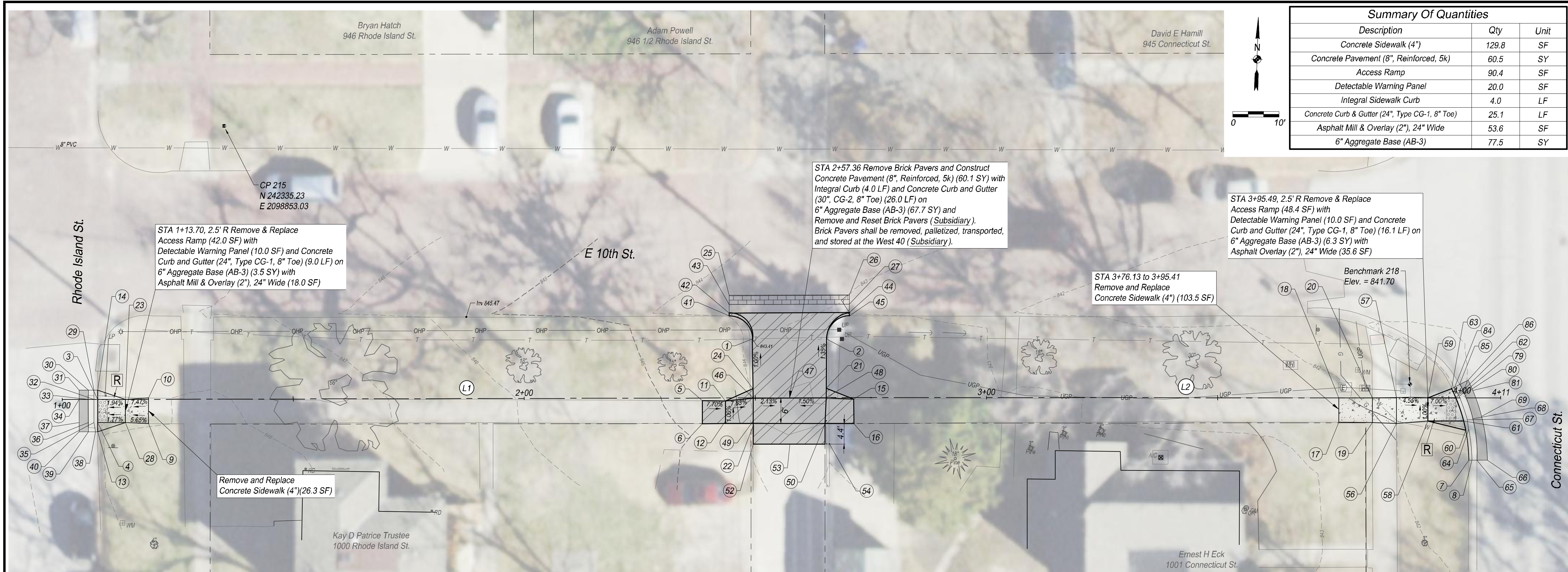
Level Landing
- SS

Special Shaping
- Concrete Sidewalk (4")
- Concrete Pavement (6", Reinf., 5k)
- 2" Mill & Overlay



CITY PROJECT MSS-D2300
SBB PROJECT 23-012
SHEET 13 OF 43

DATE	BY	REVISION
CITY OF LAWRENCE, KANSAS MUNICIPAL SERVICES AND OPERATIONS		
ARKANSAS STREET RAMPS DETAILS		
DAVID P. CRONIN CITY ENGINEER		CRAIG S. OWENS CITY MANAGER



Summary Of Quantities		
Description	Qty	Unit
Concrete Sidewalk (4")	129.8	SF
Concrete Pavement (8", Reinforced, 5k)	60.5	SY
Access Ramp	90.4	SF
Detectable Warning Panel	20.0	SF
Integral Sidewalk Curb	4.0	LF
Concrete Curb & Gutter (24", Type CG-1, 8" Toe)	25.1	LF
Asphalt Mill & Overlay (2"), 24" Wide	53.6	SF
6" Aggregate Base (AB-3)	77.5	SY

Coordinate List					
Point #	Northing	Easting	EG Elevation	FG Elevation	Description
1	242292.69	2098968.69	843.41	843.59	TP
2	242293.17	2098994.70	843.08	843.50	TP
3	242275.29	2098827.52	847.50	847.45	TC/TS
4	242270.29	2098827.68	847.44	847.50	TC/TS
5	242278.98	2098958.25	844.58	844.58	TS
6	242273.99	2098958.42	844.82	844.82	TS
7	242271.15	2099124.38	841.64	841.64	TC
8	242271.18	2099125.05	841.23	841.23	GL
9	242270.41	2098838.69	847.89	847.89	TS
10	242275.93	2098838.50	847.94	847.94	TS
11	242279.09	2098963.25	844.33	844.19	TS
12	242274.74	2098963.40	844.52	844.23	TS
13	242268.30	2098827.75	847.60	847.60	TC
14	242277.29	2098827.45	847.87	847.87	TC
15	242280.31	2098990.98	843.71	843.71	TS
16	242275.01	2098991.21	843.71	843.71	TS
17	242278.51	2099096.00	842.20	842.20	TS
18	242283.80	2099095.84	842.05	842.05	TS
19	242278.69	2099103.33	842.10	842.10	TS
20	242284.02	2099103.12	841.87	841.87	TS
21	242282.45	2098985.00	843.52	843.64	TP

Coordinate List					
Point #	Northing	Easting	EG Elevation	FG Elevation	Description
22	242273.93	2098969.43	843.96	843.81	TP
23	242275.49	2098833.52	847.77	847.57	TS
24	242281.93	2098969.14	847.99	843.70	TP
25	242301.95	2098963.40	843.73	843.73	TP
26	242302.82	2098989.40	842.99	842.99	TP
27	242300.82	2098989.46	842.92	842.92	Lip
28	242270.49	2098833.68	847.72	847.61	TS
29	242277.26	2098826.65	847.33	847.33	GL
30	242277.22	2098825.45	847.42	847.42	Lip
31	242277.16	2098823.45	847.59	847.59	TP
32	242275.26	2098826.68	847.34	847.41	GL
33	242275.22	2098825.52	847.49	847.43	Lip
34	242275.16	2098823.52	847.62	847.61	TP
35	242270.26	2098826.85	847.36	847.46	GL
36	242270.23	2098825.68	847.49	847.48	Lip
37	242270.16	2098823.69	847.63	847.63	TP
38	242268.28	2098827.29	847.37	847.37	GL
39	242268.23	2098825.75	847.49	847.49	Lip
40	242268.16	2098823.75	847.64	847.64	TP
41	242297.49	2098963.54	843.98	843.98	TC
42	242298.12	2098963.52	843.59	843.59	GL
43	242299.95	2098963.46	843.66	843.66	Lip
44	242299.00	2098989.52	842.85	842.85	GL

Coordinate List					
Point #	Northing	Easting	EG Elevation	FG Elevation	Description
45	242298.30	2098989.54	843.39	843.39	TC
46	242279.93	2098969.22	843.65	843.72	TP
47	242280.19	2098977.10	843.43	843.55	TP
48	242280.45	2098985.06	843.61	843.67	TP
49	242274.93	2098969.40	843.95	843.77	TP
50	242275.45	2098985.19	843.76	843.72	TP
52	242269.93	2098969.54	843.97	843.97	TP
53	242270.19	2098977.48	843.65	843.65	TP
54	242270.47	2098986.05	843.90	843.92	TP
56	242278.64	2099108.48	842.00	842.00	TS
57	242284.25	2099108.31	841.80	841.80	TS
58	242279.38	2099115.31	841.74	841.54	TS
59	242284.38	2099115.16	841.61	841.49	TS
60	242277.61	2099123.51	841.51	841.65	TC
61	242279.61	2099122.99	841.18	841.17	TC/TS
62	242284.56	2099121.15	841.08	841.07	TC/TS
63	242286.53	2099120.17	841.26	841.26	TC
64	242277.76	2099124.16	841.18	841.15	GL
65	242271.23	2099126.11	841.30	841.30	Lip
66	242271.32	2099128.38	841.42	841.42	TP
67	242279.87	2099123.79	841.09	841.13	GL
68	242280.14	2099124.93	841.09	841.15	Lip
69	242280.73	2099126.83	841.23	841.23	TP

Coordinate List					
Point #	Northing	Easting	EG Elevation	FG Elevation	Description
79	242284.90	2099121.87	841.04	841.03	GL
80	242285.42	2099122.99	840.98	841.05	Lip
81	242286.24	2099124.78	841.07	841.07	TP
84	242286.90	2099120.87	840.91	840.91	GL
85	242287.47	2099121.94	840.93	840.93	Lip
86	242288.42	2099123.70	841.01	841.01	TP

10th & Connecticut (Alignment Control)				
ID	Begin Station	End Station	Begin Coordinates	End Coordinates
L1	1+00.00	2+75.00	N: 242275.04 E: 2098819.82	N: 242280.76 E: 2098994.73
L2	2+75.00	4+11.19	N: 242280.76 E: 2098994.73	N: 242284.85 E: 2099130.86

Horizontal & Vertical Project Control				
Point #	Northing	Easting	Elevation	Description
215	242335.23	2098853.03	847.93	CP: 1/2" Rebar with SBB Eng Control Cap
216	242285.00	2098791.37	848.03	BM: Square Cut in NW Corner of Curb Inlet
217	242290.54	2099170.50	841.30	CP: 1/2" Rebar with SBB Eng Control Cap
218	242287.15	2099111.15	841.70	BM: Square Cut in NE Corner of Concrete CWSP

VERTICAL DATUM
NAVD 88

HORIZONTAL DATUM

Kansas State Plane NAD 83, North Zone

CITY PROJECT MS5-D2300
SBB PROJECT 23-012
SHEET 14 OF 43

DATE	BY	REVISION



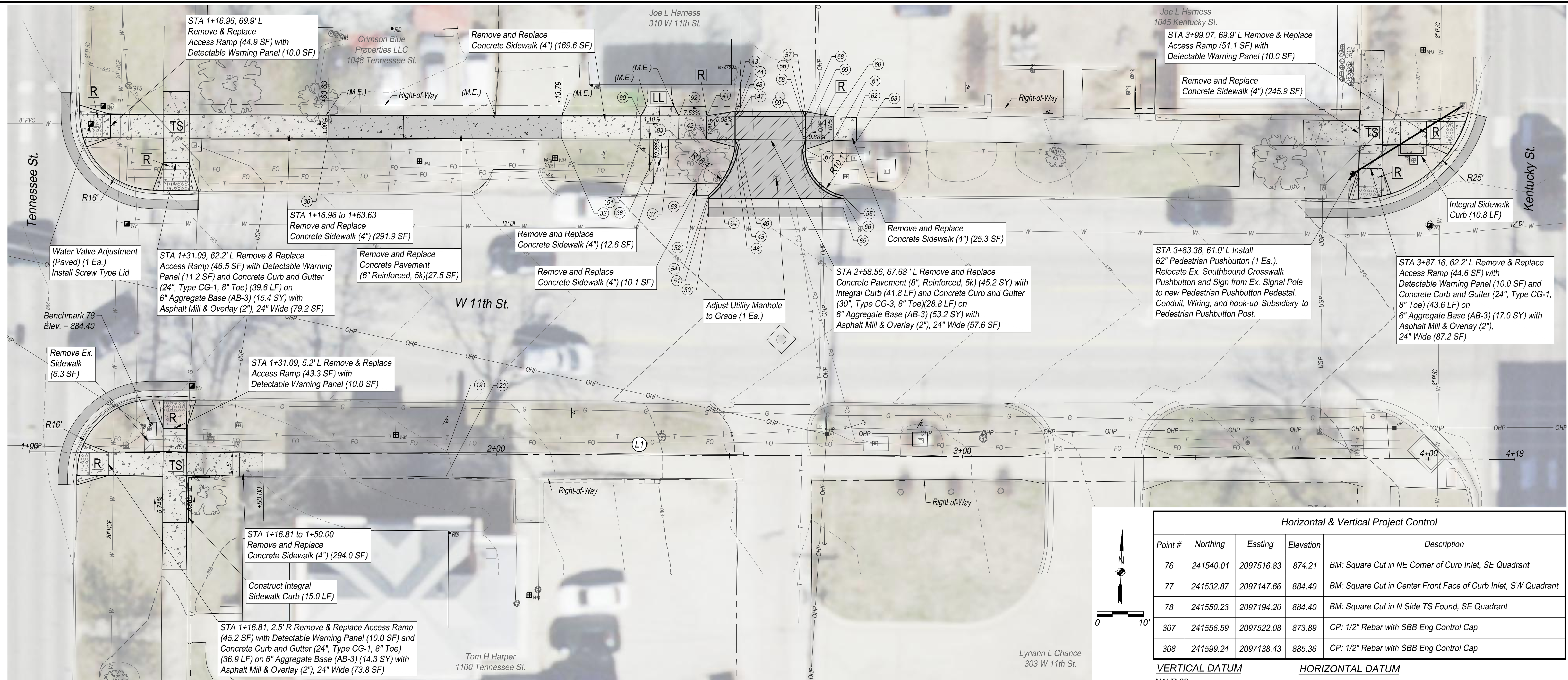
CITY OF LAWRENCE, KANSAS
MUNICIPAL SERVICES AND OPERATIONS



EAST 10TH STREET

DAVID P. CRONIN
CITY ENGINEER

CRAIG S. OWENS
CITY MANAGER



Coordinate List					
Point #	Northing	Easting	EG Elevation	FG Elevation	Description
19	241546.38	2097257.79	882.02	882.02	TS
20	241541.14	2097257.85	882.08	882.08	TS
30	241612.77	2097230.02	881.99	882.05	TS
32	241614.41	2097280.16	880.27	880.40	TS
36	241611.07	2097299.95	880.00	880.00	TS
37	241611.16	2097303.10	879.85	879.85	TS
41	241620.42	2097311.03	879.64	879.10	TS
42	241615.42	2097311.17	879.72	879.15	TS
43	241621.63	2097317.02	879.18	879.18	TC
44	241620.59	2097317.03	878.89	878.74	TC
45	241615.59	2097317.22	878.92	878.79	TC
46	241613.99	2097317.28	879.30	879.30	TC
47	241620.60	2097317.92	878.79	878.70	TP
48	241621.66	2097317.91	878.67	878.67	TP
49	241615.60	2097318.00	878.85	878.75	TP
50	241600.82	2097312.12	879.36	879.36	TP
51	241602.82	2097312.05	879.29	879.29	GL

Coordinate List					
Point #	Northing	Easting	EG Elevation	FG Elevation	Description
52	241603.40	2097309.42	879.52	879.52	TS
53	241605.91	2097309.31	879.65	879.65	TS
54	241603.45	2097312.03	879.40	879.40	TC
55	241604.33	2097340.86	873.36	878.49	TC
56	241622.12	2097331.59	878.42	878.36	TP
57	241622.14	2097332.09	878.38	878.38	TC
58	241620.99	2097331.63	878.41	878.38	TP
59	241615.99	2097331.80	878.34	878.43	TP
60	241621.18	2097338.15	878.51	878.47	TS
61	241616.18	2097338.29	878.56	878.52	TS
62	241621.26	2097343.15	878.49	878.49	TS
63	241616.15	2097343.30	878.45	878.45	TS
64	241606.14	2097314.39	879.39	879.43	TC
65	241601.84	2097340.95	878.38	878.38	TP
66	241603.82	2097340.88	878.30	878.30	GL
67	241613.96	2097332.37	878.34	878.89	TC
68	241621.01	2097332.13	878.42	878.42	TS

Coordinate List					
Point #	Northing	Easting	EG Elevation	FG Elevation	Description
69	241616.01	2097332.30	878.38	878.47	TS
90	241619.96	2097296.89	879.64	879.64	TS
91	241614.96	2097297.03	879.64	879.60	TS
92	241620.23	2097305.06	879.64	879.55	TS
93	241615.23	2097305.20	879.64	879.52	TS

Summary Of Quantities		
Description	Qty	Unit
Concrete Sidewalk (4")	1,027.4	SF
Concrete Pavement (6", Reinforced, 5k)	27.5	SF
Concrete Pavement (8", Reinforced, 5k)	45.2	SY
Access Ramp	275.6	SF
Detectable Warning Panel	61.2	SF
Integral Sidewalk Curb	67.6	LF
Concrete Curb & Gutter (24", Type CG-1, 8" Toe)	120.1	LF
Concrete Curb & Gutter (30", Type CG-3, 8" Toe)	28.8	LF
Water Valve Adjustment (Paved)	1	EA
Asphalt Mill & Overlay (2"), 24" Wide	297.8	SF
6" Aggregate Base (AB-3)	99.9	SY
Utility Manhole Adjustment	1	EA
62" Pedestrian Pushbutton Post	1	EA
Sod	370	SY

South Sidewalk (Alignment Control)				
ID	Begin Station	End Station	Begin Coordinates	End Coordinates
L1	1+00.00	4+18.44	N: 241543.37 E: 2097168.47	N: 241552.97 E: 2097486.77

Horizontal & Vertical Project Control				
Point #	Northing	Easting	Elevation	Description
76	241540.01	2097516.83	874.21	BM: Square Cut in NE Corner of Curb Inlet, SE Quadrant
77	241532.87	2097147.66	884.40	BM: Square Cut in Center Front Face of Curb Inlet, SW Quadrant
78	241550.23	2097194.20	884.40	BM: Square Cut in N Side TS Found, SE Quadrant
307	241556.59	2097522.08	873.89	CP: 1/2" Rebar with SBB Eng Control Cap
308	241599.24	2097138.43	885.36	CP: 1/2" Rebar with SBB Eng Control Cap

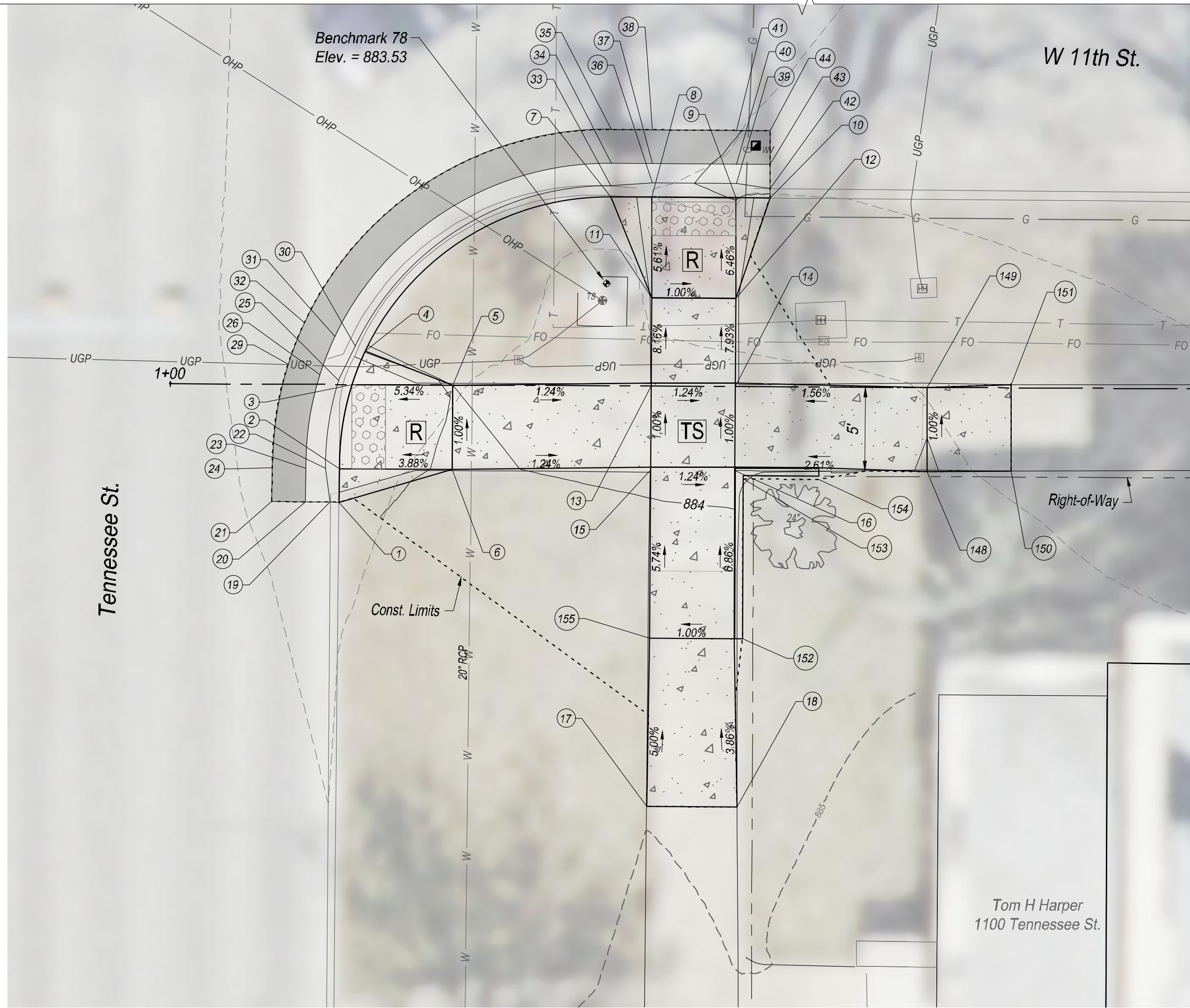
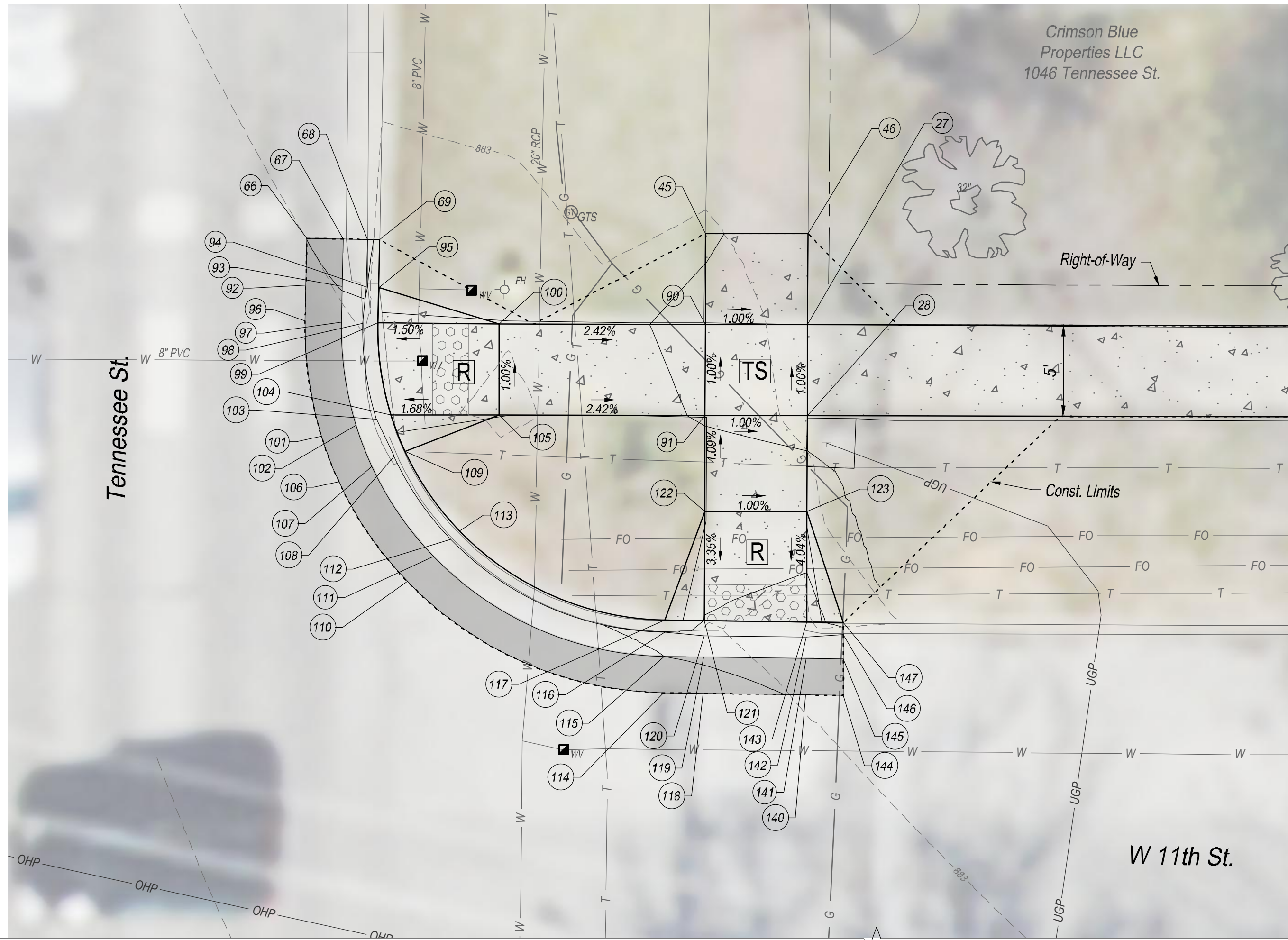
VERTICAL DATUM
NAVD 88

HORIZONTAL DATUM
Kansas State Plane NAD 83, North Zone

CITY PROJECT MS5-D2300
SBB PROJECT 23-012
SHEET 15 OF 43

DATE	BY	REVISION
 CITY OF LAWRENCE, KANSAS MUNICIPAL SERVICES AND OPERATIONS 		
<i>WEST 11TH STREET</i> <i>TENNESSEE STREET TO KENTUCKY STREET</i>		
<u>DAVID P. CRONIN</u> CITY ENGINEER		<u>CRAIG S. OWENS</u> CITY MANAGER

[File Location: X:\1 SBB Drawings\0-2023\23-012 2023 Ped Improvements\dwg\Design\Street Plans\23-012 Plan 11th 12th.dwg] [Plot Date: 2/2/2024 3:26:36 PM] [Last Saved: 2/1/2024 3:01:00 PM; Bauslin]



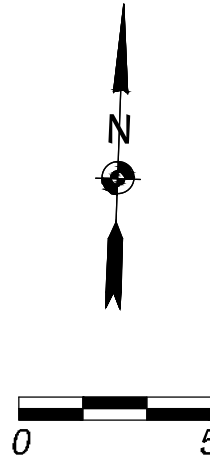
Coordinate List					
Point #	Northing	Easting	EG Elevation	FG Elevation	Description
1	241536.68	2097178.77	883.91	883.91	TC
2	241538.67	2097178.72	883.76	883.79	TC/TS
3	241543.69	2097179.29	883.69	883.68	TC/TS
4	241545.72	2097180.00	883.75	884.01	TC
5	241543.88	2097185.28	883.97	884.00	TS
6	241538.88	2097185.42	884.09	884.05	TS
7	241555.40	2097194.28	883.33	883.51	TC
8	241555.46	2097196.71	883.08	883.09	TC/TS
9	241555.60	2097201.71	882.92	882.99	TC/TS
10	241555.65	2097203.71	883.12	883.12	TC
11	241549.47	2097196.90	883.84	883.43	TS
12	241549.62	2097201.89	883.57	883.38	TS
13	241544.23	2097197.05	884.27	883.85	TS
14	241544.38	2097202.05	884.28	883.79	TS
15	241539.23	2097197.20	884.51	883.90	TS
16	241539.38	2097202.20	884.63	883.84	TS
17	241519.24	2097197.67	885.00	884.98	TS
18	241519.40	2097203.04	884.91	884.91	TS
19	241536.66	2097178.22	883.77	883.77	GL
20	241536.63	2097176.77	883.82	883.82	Lip
21	241536.58	2097174.77	883.91	883.91	TP
22	241538.65	2097177.88	883.77	883.75	GL
23	241538.62	2097176.72	883.80	883.77	Lip
24	241538.58	2097174.72	883.89	883.89	TP
25	241543.92	2097178.49	883.65	883.68	GL
26	241544.23	2097177.37	883.71	883.70	Lip
27	241616.79	2097200.14	882.88	882.87	TS
28	241611.80	2097200.31	882.92	882.92	TS
29	241544.77	2097175.44	883.80	883.80	TP
30	241545.98	2097179.39	883.69	883.58	GL
31	241546.51	2097178.17	883.63	883.60	Lip
32	241547.29	2097176.33	883.75	883.75	TP
33	241556.07	2097194.26	883.09	883.08	GL
34	241557.40	2097194.22	883.18	883.10	Lip
35	241559.40	2097194.17	883.23	883.23	TP
36	241556.30	2097196.69	883.03	883.05	GL
37	241557.46	2097196.66	883.11	883.07	Lip
38	241559.46	2097196.61	883.17	883.17	TP
39	241556.44	2097201.69	882.89	882.95	GL
40	241557.60	2097201.66	882.95	882.97	Lip
41	241559.60	2097201.60	883.01	883.01	TP
42	241556.22	2097203.69	882.85	882.85	GL
43	241557.65	2097203.65	882.90	882.90	Lip
44	241559.65	2097203.59	882.95	882.95	TP
45	241621.61	2097194.37	883.04	883.04	TS
46	241621.79	2097200.01	882.84	882.84	TS
66	241620.58	2097172.51	883.00	883.00	TP
67	241620.61	2097174.51	882.90	882.90	Lip

Coordinate List					
Point #	Northing	Easting	EG Elevation	FG Elevation	Description
68	241620.63	2097175.84	882.83	882.83	GL
69	241620.64	2097176.51	883.18	883.18	TC
90	241616.61	2097194.53	883.17	882.93	TS
91	241611.61	2097194.69	883.21	882.98	TS
92	241617.99	2097172.54	883.07	883.07	TP
93	241617.99	2097174.54	882.97	882.99	Lip
94	241618.01	2097175.87	882.92	882.97	GL
95	241618.02	2097176.54	883.23	883.42	TC
96	241616.02	2097172.57	883.13	883.13	TP
97	241616.05	2097174.57	883.04	883.08	Lip
98	241616.01	2097175.74	882.98	883.06	GL
99	241616.08	2097176.57	883.10	883.10	TC/TS
100	241616.24	2097183.24	883.03	883.20	TS
101	241609.73	2097173.69	883.21	883.21	TP
102	241610.39	2097175.57	883.10	883.13	Lip
103	241610.77	2097176.67	883.05	883.11	GL
104	241611.05	2097177.46	883.08	883.15	TC/TS
105	241611.24	2097183.40	882.96	883.25	TS
106	241607.27	2097174.74	883.24	883.24	TP
107	241608.17	2097176.52	883.12	883.18	Lip
108	241608.77	2097177.71	883.02	883.16	GL
109	241609.08	2097178.30	883.17	883.61	TC
110	241601.93	2097178.68	883.26	883.26	TP
111	241603.37	2097180.07	883.14	883.14	Lip
112	241604.33	2097180.99	883.06	883.06	GL
113	241604.81	2097181.46	883.20	883.56	TC
114	241596.32	2097192.97	883.16	883.16	TP
115	241598.32	2097192.93	883.11	883.00	Lip
116	241599.65	2097192.91	883.08	882.98	GL
117	241600.32	2097192.89	883.29	883.42	TC
118	241596.37	2097195.14	883.10	883.10	TP
119	241598.36	2097195.10	883.06	882.97	Lip
120	241599.53	2097195.09	883.03	882.95	GL
121	241600.36	2097195.06	883.02	882.99	TC/TS
122	241606.36	2097194.87	883.28	883.19	TS
123	241606.54	2097200.48	883.07	883.13	TS
140	241596.48	2097200.76	882.97	882.97	TP
141	241598.48	2097200.72	882.92	882.87	Lip
142	241599.64	2097200.69	882.89	882.85	GL
143	241600.48	2097200.68	882.91	882.89	TC/TS
144	241596.52	2097202.81	882.92	882.92	TP
145	241598.52	2097202.74	882.86	882.86	Lip
146	241599.85	2097202.70	882.82	882.82	GL
147	241600.52	2097202.68	883.10	883.10	TC
148	241539.73	2097213.61	884.14	884.02	TS
149	241544.73	2097213.46	883.97	883.97	TS
150	241539.94	2097218.62	883.88	883.88	TS
151	241545.08	2097218.45	883.74	883.74	TS

Coordinate List					
Point #	Northing	Easting	EG Elevation	FG Elevation	Description
152	241529.40	2097203.00	884.83	884.83	TC
153	241538.90	2097202.72	884.68	884.64	TC
154	241539.03	2097207.21	884.47	884.47	TC
155	241529.24	2097197.51	884.79	884.48	TS
156	241624.58	2097459.80	874.23	874.03	TS
157	241617.68	2097459.96	874.59	874.10	TS
158	241617.17	2097459.47	874.61	874.85	TC
159	241617.80	2097464.96	874.53	874.03	TS

LEGEND:

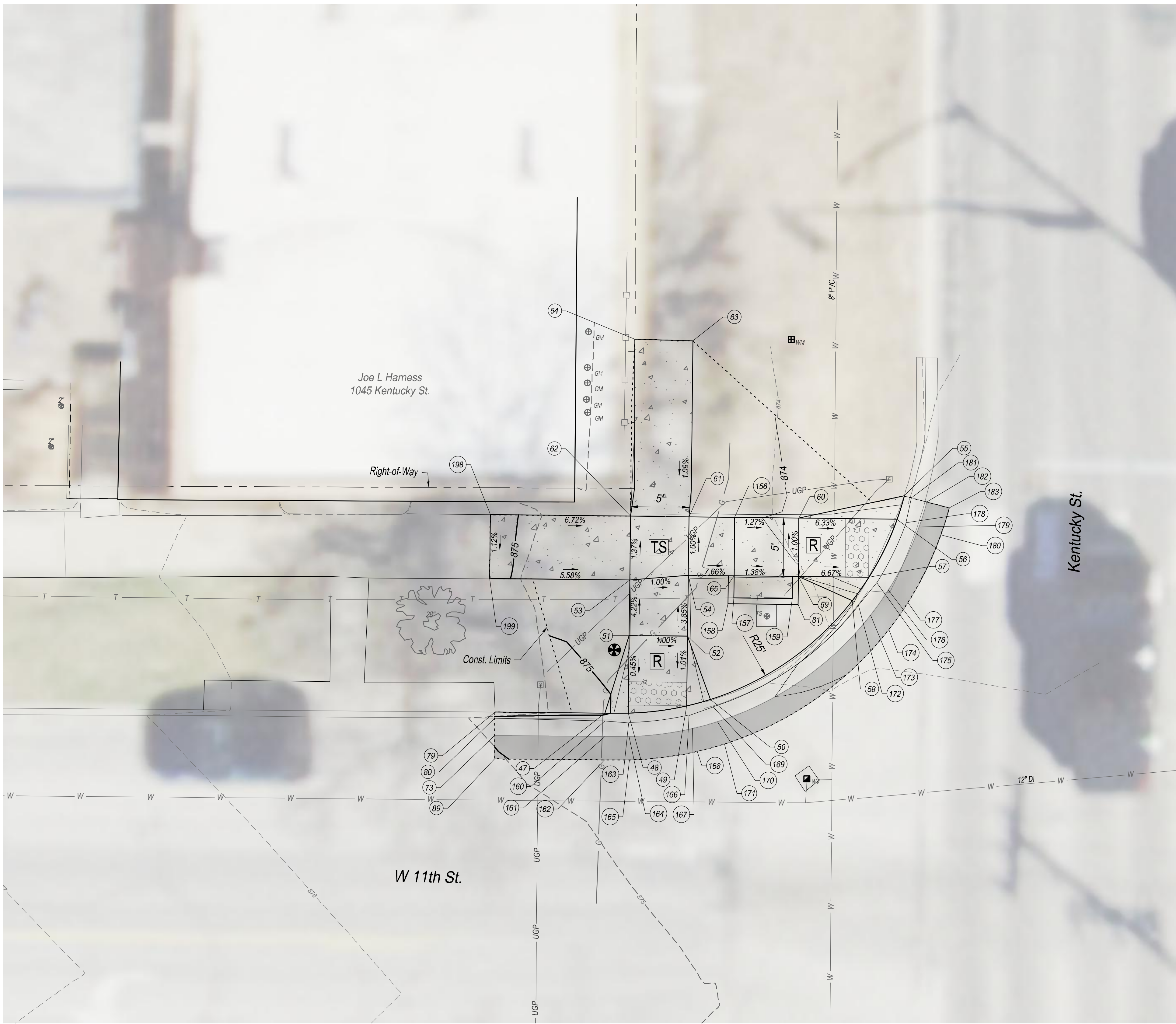
- R Ramp
- BT Blended Transition
- TS Turning Space
- LL Level Landing
- SS Special Shaping
- Concrete Sidewalk (4")
- Concrete Pavement (6", Reinf., 5k)
- 2" Mill & Overlay



CITY PROJECT MSS-D2300
SBB PROJECT 23-012
SHEET 16 OF 43

DATE	BY	REVISION
 CITY OF LAWRENCE, KANSAS MUNICIPAL SERVICES AND OPERATIONS 		
WEST 11TH STREET RAMPS DETAILS		
DAVID P. CRONIN CITY ENGINEER		CRAIG S. OWENS CITY MANAGER

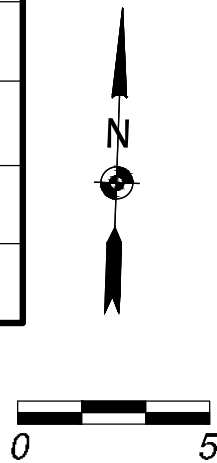
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Coordinate List					
Point #	Northing	Easting	EG Elevation	FG Elevation	Description
47	241607.46	2097449.29	874.78	875.12	TC
48	241607.53	2097451.29	874.47	874.60	TC/TS
49	241608.33	2097456.27	874.39	874.52	TC/TS
50	241608.94	2097458.26	874.48	874.88	TC
51	241614.17	2097451.13	874.61	874.63	TS
52	241614.29	2097456.13	874.48	874.58	TS
53	241618.91	2097451.02	874.65	874.43	TS
54	241619.49	2097456.00	874.46	874.38	TS
55	241626.93	2097474.21	873.36	873.36	TC
56	241624.91	2097473.66	873.29	873.43	TC/TS
57	241619.86	2097471.41	873.52	873.61	TC/TS
58	241617.82	2097470.09	873.84	874.17	TC
59	241619.71	2097465.42	874.04	874.01	TC/TS
60	241624.71	2097465.29	873.87	873.96	TS
61	241624.48	2097455.88	874.49	874.33	TS
62	241624.36	2097450.88	874.72	874.35	TS
63	241639.54	2097455.69	874.38	874.38	TS
64	241639.53	2097450.73	874.56	874.56	TS
65	241619.58	2097459.92	874.30	874.08	TC/TS
73	241605.21	2097439.93	874.97	874.97	Lip
79	241607.21	2097439.87	875.20	875.20	TC
80	241606.69	2097439.89	874.92	874.92	GL
81	241617.31	2097465.47	874.46	874.78	TC
89	241603.21	2097439.98	875.03	875.03	TP
156	241624.58	2097459.80	874.23	874.03	TS
157	241617.68	2097459.96	874.59	874.10	TS
158	241617.17	2097459.47	874.61	874.85	TC
159	241617.80	2097464.96	874.53	874.03	TS
160	241606.79	2097449.31	874.58	874.62	GL
161	241605.46	2097449.34	874.69	874.64	Lip
162	241603.47	2097449.39	874.79	874.79	TP
163	241606.69	2097451.34	874.50	874.56	GL
164	241605.53	2097451.41	874.62	874.58	Lip
165	241603.53	2097451.52	874.73	874.73	TP
166	241607.52	2097456.49	874.42	874.48	GL
167	241606.40	2097456.81	874.46	874.50	Lip
168	241604.46	2097457.30	874.53	874.53	TP
169	241608.32	2097458.51	874.25	874.38	GL
170	241607.06	2097458.93	874.34	874.30	Lip
171	241605.18	2097459.60	874.48	874.48	TP
172	241617.43	2097470.63	873.48	873.67	GL
173	241616.65	2097471.71	873.63	873.40	Lip
174	241615.48	2097473.33	873.79	873.79	TP
175	241619.43	2097472.14	873.46	873.57	GL
176	241618.85	2097473.14	873.45	873.59	Lip
177	241617.84	2097474.87	873.67	873.67	TP
178	241624.66	2097474.46	873.31	873.39	GL
179	241624.31	2097475.57	873.33	873.41	Lip
180	241623.70	2097477.47	873.45	873.45	TP
181	241626.78	2097474.86	873.06	873.06	GL

LEGEND:

- R Ramp
- BT Blended Transition
- TS Turning Space
- LL Level Landing
- SS Special Shaping
- Concrete Sidewalk (4")
- 2" Mill & Overlay



CITY PROJECT MSS-D2300
SBB PROJECT 23-012
SHEET 17 OF 43

DATE

BY

REVISION



CITY OF LAWRENCE, KANSAS

MUNICIPAL SERVICES AND OPERATIONS



WEST 11TH STREET
RAMPS DETAILS

DAVID P. CRONIN

CITY ENGINEER

CRAIG S. OWENS

CITY MANAGER



Summary Of Quantities		
Description	Qty	Unit
Concrete Sidewalk (4")	589.1	SF
Access Ramp	84.7	SF
Detectable Warning Panel	20.0	SF
Concrete Curb & Gutter (24", Type CG-1, 8" Toe)	32.9	LF
Asphalt Mill & Overlay (2"), 24" Wide	65.8	SF
6" Aggregate Base (AB-3)	15.2	SY
Sod	56	SY

Horizontal & Vertical Project Control

Point #	Northing	Easting	Elevation	Description
74	236599.70	2098636.52	863.77	BM: Square Cut in Corner of Curb Inlet, SW Quadrant
75	236582.84	2098939.29	862.72	BM: Square Cut in SE Quadrant
304	236642.44	2098620.10	864.18	CP: 1/2" Rebar with SBB Control Cap
305	236607.09	2099019.06	862.30	CP: 1/2" Rebar with SBB Control Cap

VERTICAL DATUM
NAVD 88

HORIZONTAL DATUM
Kansas State Plane NAD 83, North Zone

Coordinate Table

Point #	Northing	Easting	EG Elevation	FG Elevation	Description
19	236600.51	2098823.38	863.35	863.35	TS
20	236596.10	2098823.46	863.59	863.59	TS
27	236601.24	2098828.37	863.29	863.50	TS
28	236596.24	2098828.45	863.55	863.55	TS
29	236602.48	2098900.90	862.73	862.57	TS
30	236597.48	2098900.99	862.90	862.62	TS
37	236601.77	2098859.39	863.13	863.29	TS
39	236601.82	2098861.96	863.12	863.26	TS
41	236601.89	2098906.44	862.45	862.45	TS
42	236597.31	2098906.66	862.52	862.52	TS

LEGEND:

- R

Ramp
- BT

Blended Transition
- TS

Turning Space
- LL

Level Landing
- SS

Special Shaping
- Concrete Sidewalk (4")
- Concrete Pavement (6", Reinf., 5k)
- 2" Mill & Overlay

CITY PROJECT MS5-D2300
SBB PROJECT 23-012
SHEET 19 OF 43

DATE	BY	REVISION

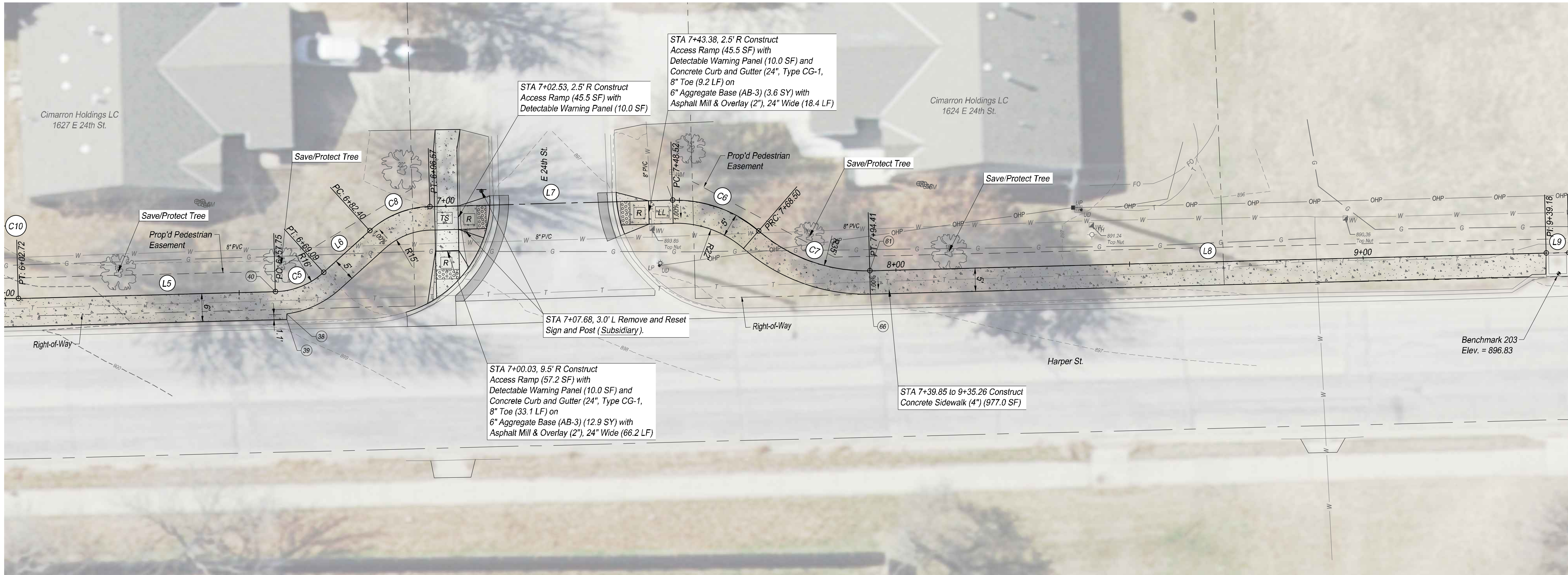


EAST 19TH STREET

DAVID P. CRONIN
CITY ENGINEER

CRAIG S. OWENS
CITY MANAGER

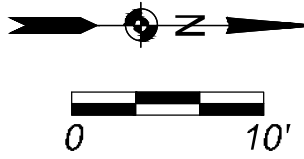
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Coordinate Table					
Point #	Northing	Easting	EG Elevation	FG Elevation	Description
38	233199.75	2104573.51	899.36	899.38	TS
39	233199.78	2104574.64	899.36	899.36	TS
40	233197.31	2104568.70	899.35	899.35	TS
61	233324.54	2104564.23	897.65	897.65	TS
66	233324.67	2104569.23	897.59	897.60	TS

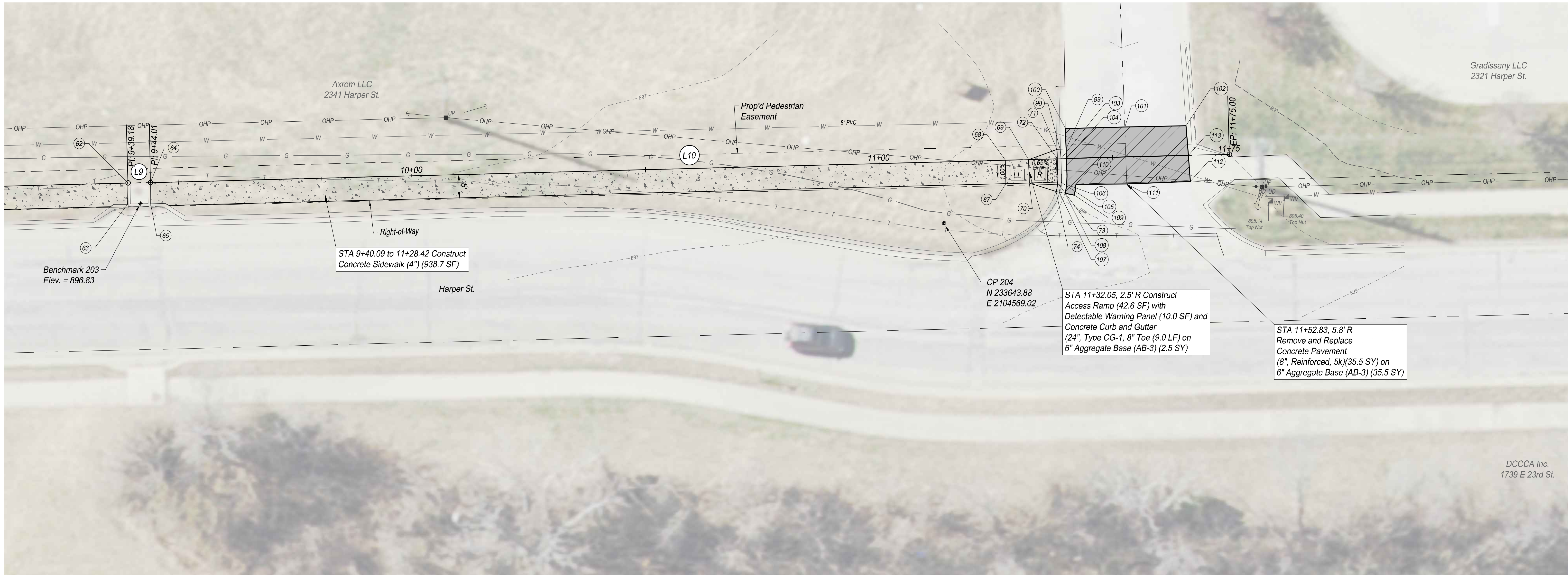
LEGEND:

- [R] Ramp
- [BT] Blended Transition
- [TS] Turning Space
- [LL] Level Landing
- [SS] Special Shaping
- [Pattern] Concrete Sidewalk (4")
- [Pattern] Concrete Pavement (6", Reinf., 5k)
- [Pattern] Concrete Pavement (8", Reinf., 5k)
- [Pattern] Crushed Rock Surfacing
- [Pattern] 2" Mill & Overlay



CITY PROJECT MSS-D2300
SBB PROJECT 23-012
SHEET 23 OF 43

DATE	BY	REVISION
 CITY OF LAWRENCE, KANSAS MUNICIPAL SERVICES AND OPERATIONS 		
HARPER STREET		
DAVID P. CRONIN CITY ENGINEER		CRAIG S. OWENS CITY MANAGER

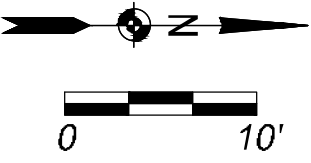


Coordinate Table					
Point #	Northing	Easting	EG Elevation	FG Elevation	Description
62	233469.26	2104560.43	896.76	896.76	TS
63	233469.21	2104564.96	896.77	896.77	TS
64	233474.08	2104560.35	896.64	896.64	TS
65	233474.16	2104564.87	896.74	896.74	TS
67	233657.19	2104560.54	898.27	898.29	TS
68	233657.06	2104555.52	898.34	898.34	TS
69	233662.06	2104555.41	898.49	898.29	TS
70	233662.19	2104560.40	898.38	898.24	TS
71	233668.12	2104553.25	898.65	898.65	TC
72	233668.17	2104555.25	898.62	898.26	TC
73	233668.14	2104560.25	898.52	898.18	TC
74	233667.91	2104562.25	898.46	898.46	TC
98	233668.79	2104553.23	898.31	898.31	GL
99	233670.05	2104553.18	898.26	898.33	Lip
100	233669.89	2104548.75	898.38	898.38	TP
101	233682.64	2104548.45	898.60	898.60	TP
102	233695.73	2104548.15	898.68	898.68	TP
103	233669.00	2104555.22	898.20	898.22	GL
104	233670.14	2104555.19	898.21	898.28	Lip
105	233669.03	2104560.30	898.10	898.14	GL

Coordinate Table					
Point #	Northing	Easting	EG Elevation	FG Elevation	Description
106	233670.15	2104560.74	898.06	898.14	Lip
107	233668.57	2104562.39	898.09	898.09	GL
108	233669.87	2104562.65	898.03	898.03	Lip
109	233671.84	2104563.04	898.05	898.05	Lip
110	233672.16	2104560.72	898.10	898.10	TP
111	233682.98	2104560.61	898.27	898.27	TP
112	233696.64	2104560.13	898.47	898.47	TP
113	233696.22	2104554.51	898.57	898.57	TP

LEGEND:

- R Ramp
- BT Blended Transition
- TS Turning Space
- LL Level Landing
- SS Special Shaping
- Concrete Sidewalk (4")
- Concrete Pavement (6", Reinf., 5k)
- Concrete Pavement (8", Reinf., 5k)
- Crushed Rock Surfacing
- 2" Mill & Overlay



CITY PROJECT MS5-D2300
SBB PROJECT 23-012
SHEET 24 OF 43



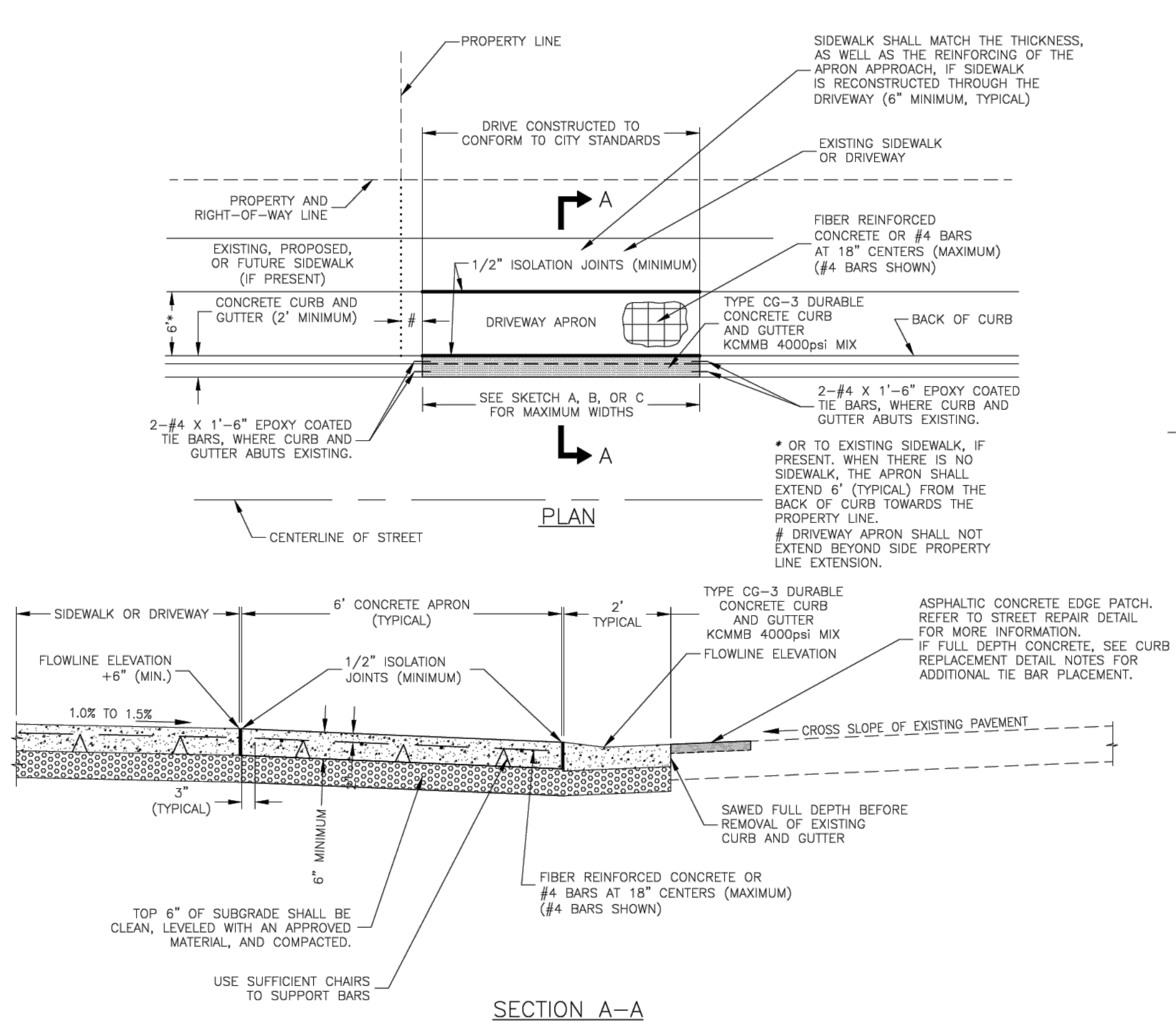
CITY OF LAWRENCE, KANSAS
MUNICIPAL SERVICES AND OPERATIONS



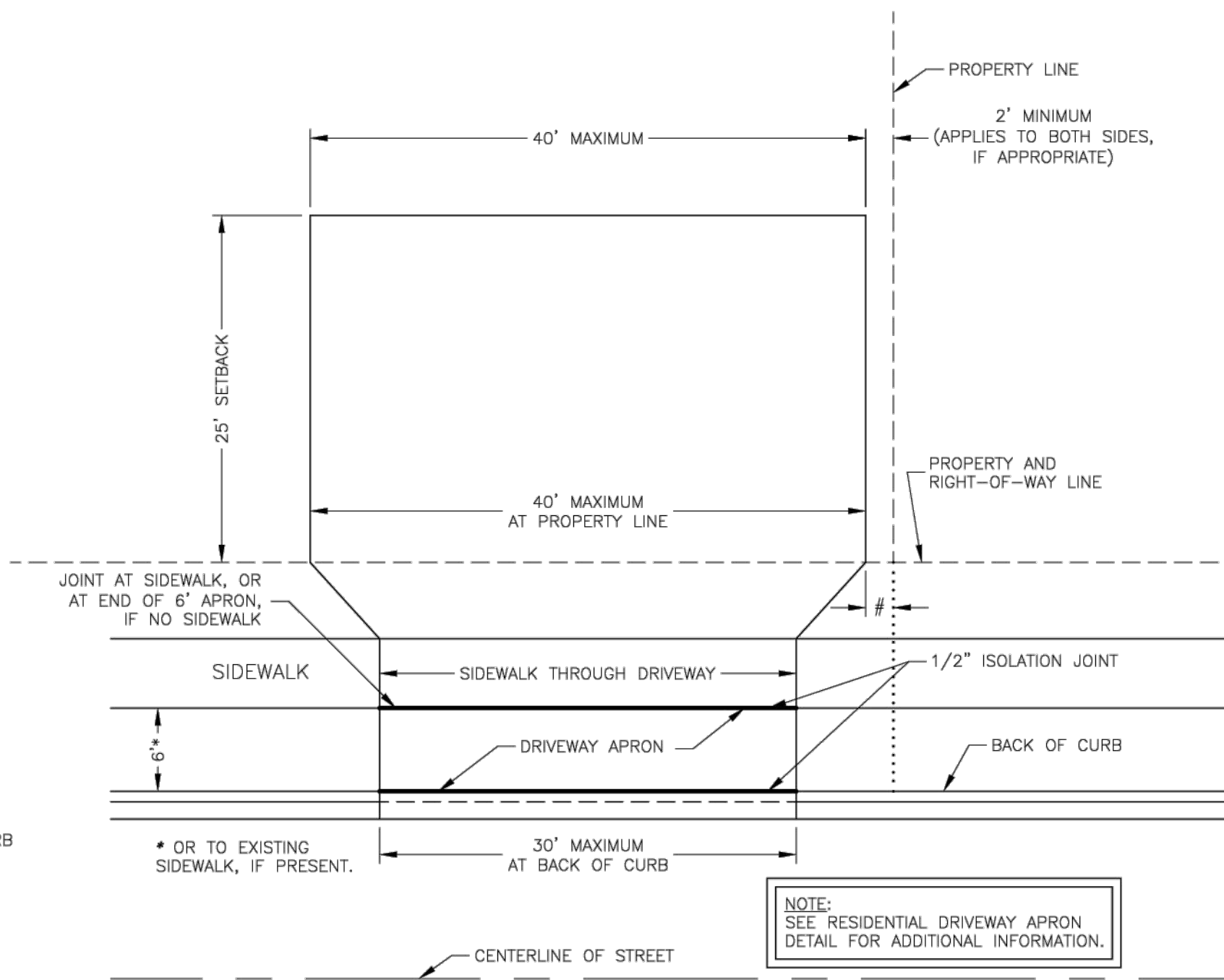
HARPER STREET

DAVID P. CRONIN
CITY ENGINEER

CRAIG S. OWENS
CITY MANAGER



RESIDENTIAL DRIVEWAY APRON

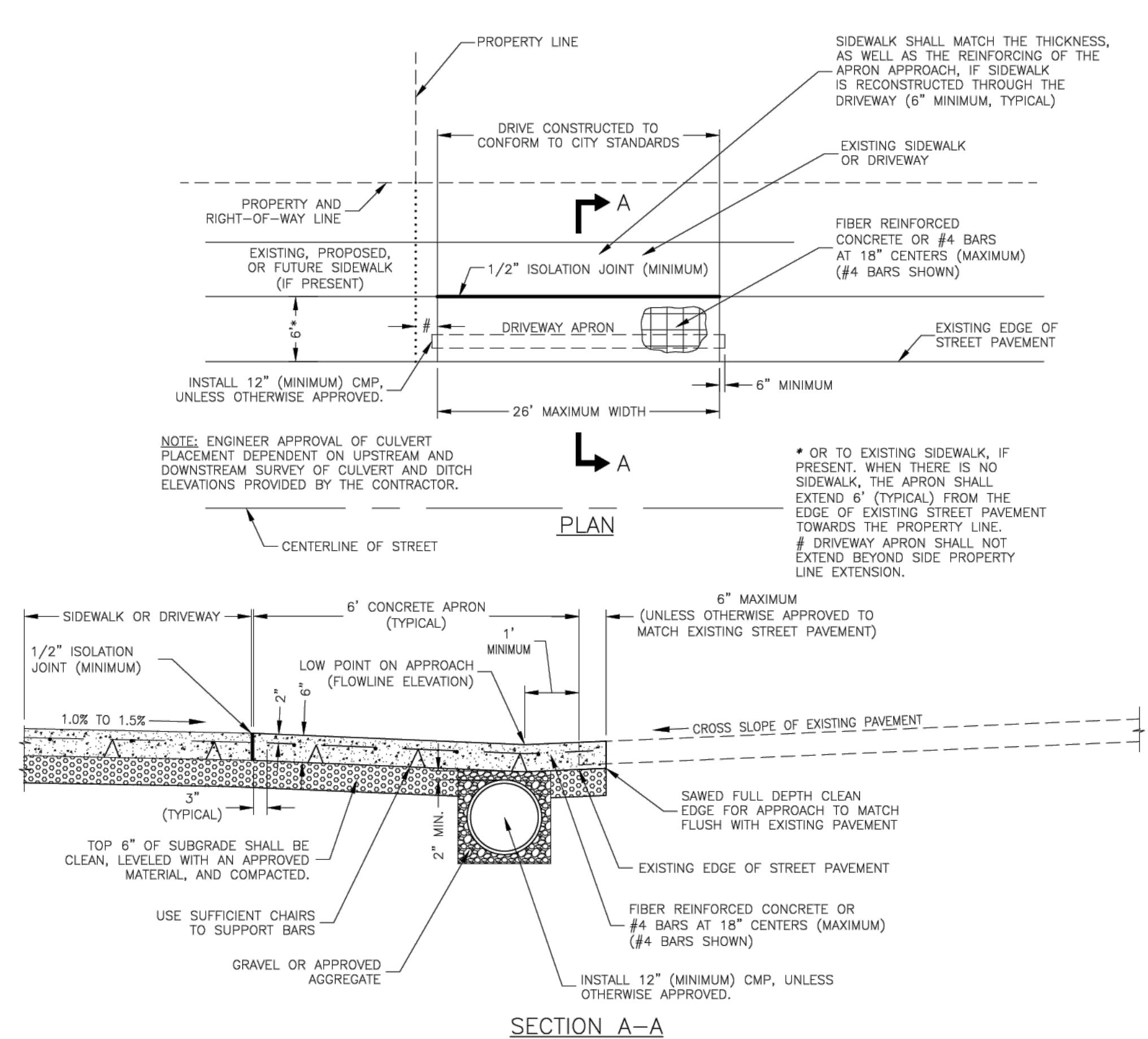


DRIVEWAY DETAIL FOR A DUPLEX WHERE 2-CAR GARAGES ARE SIDE BY SIDE

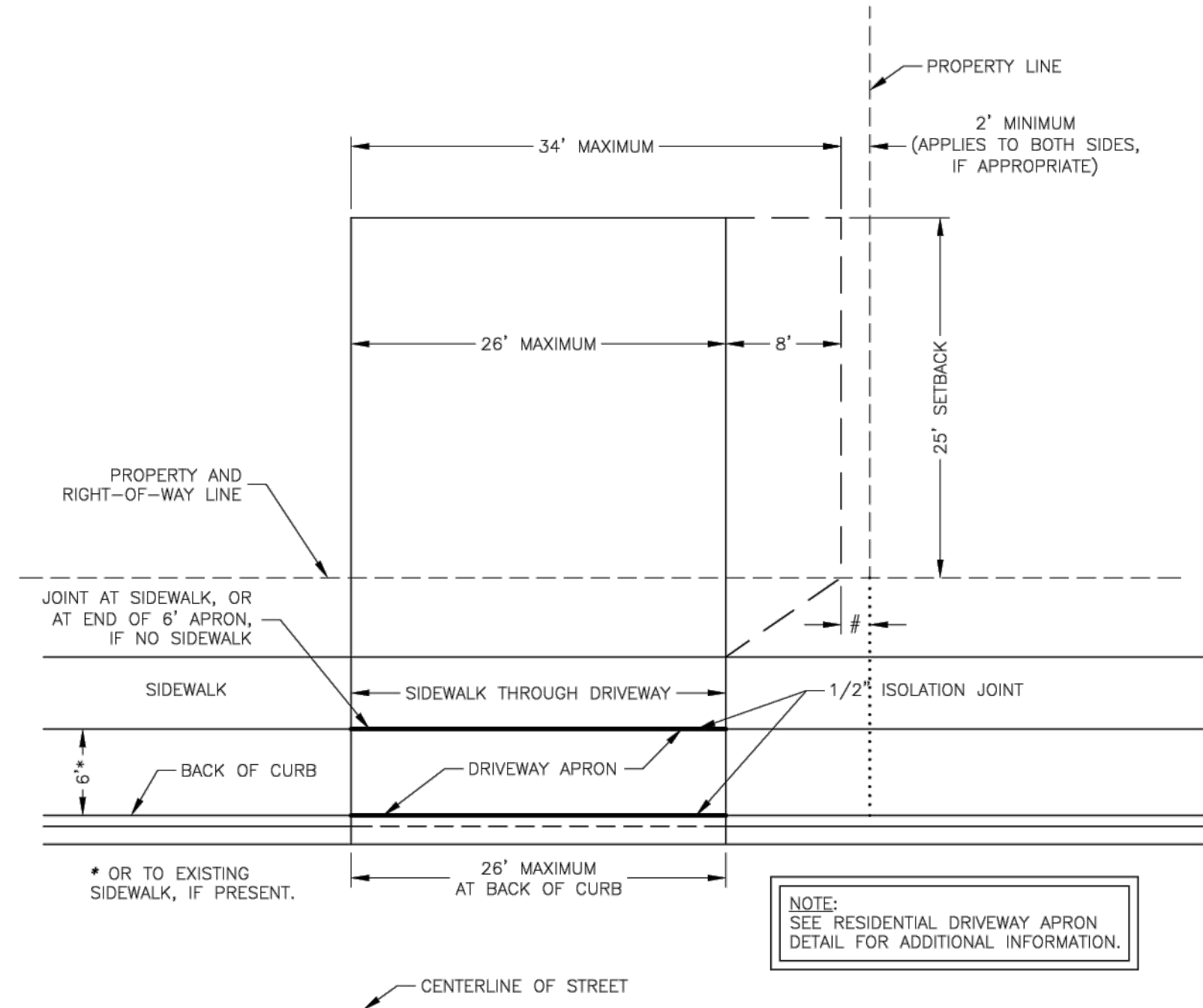
SCALE : 1"=10'

(SKETCH B)

NOTE: DRIVEWAY APRON MAY BE FLARED, IF DESIRED; HOWEVER, THE MAXIMUM WIDTH AT THE CURB REMAINS AT 30 FEET.



RESIDENTIAL DRIVEWAY APRON-NO CURB

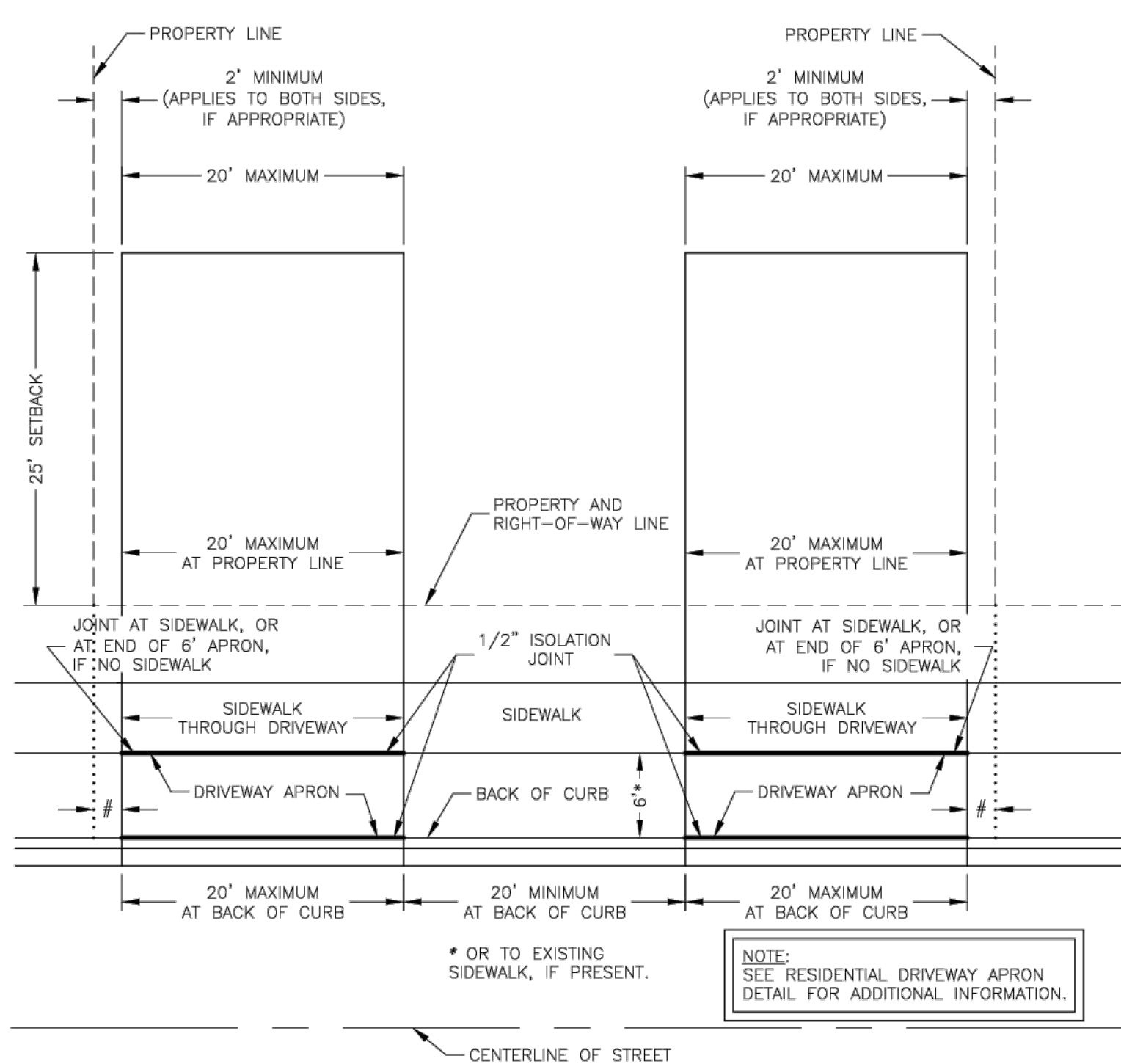


DRIVEWAY DETAIL FOR A SINGLE FAMILY HOME

SCALE : 1"=10'

(SKETCH A)

NOTE: DRIVEWAY APRON MAY BE FLARED, IF DESIRED; HOWEVER, THE MAXIMUM WIDTH AT THE CURB REMAINS AT 26 FEET.

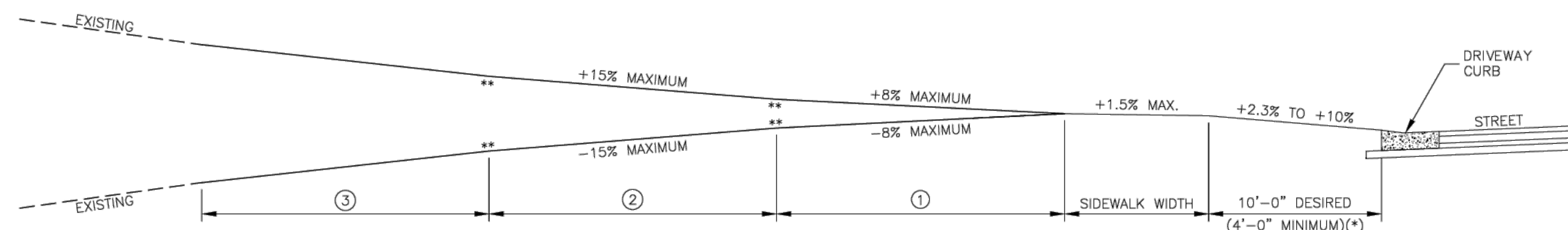


DRIVEWAY DETAIL FOR A DUPLEX WHERE 2-CAR GARAGES ARE SEPARATED

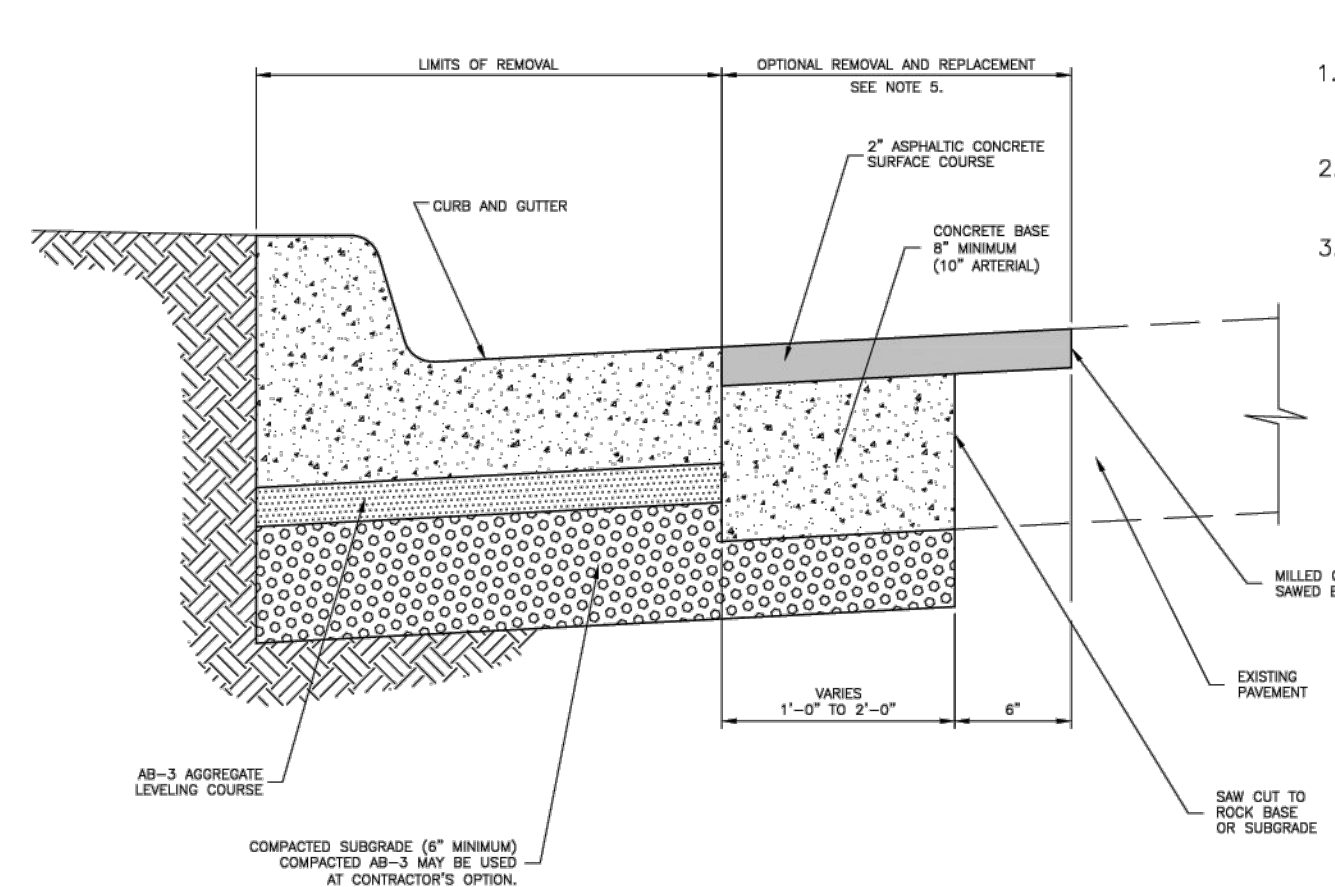
SCALE : 1"=10'

(SKETCH C)

NOTE: DRIVEWAY APRON MAY BE FLARED, IF DESIRED; HOWEVER, THE MAXIMUM WIDTH AT THE CURB REMAINS AT 20 FEET.



PROFILE WITH SIDEWALK (MAXIMUM PERCENT OF GRADE)



CURB REPLACEMENT DETAIL

- NOTES:
1. THIS DETAIL IS TO BE USED ONLY WHEN EXISTING CURB AND GUTTER IS REMOVED AND REPLACED, BUT STREET PAVEMENT REMAINS IN PLACE.
 2. 2- #4 X 1' 6" EPOXY COATED TIE BARS (MINIMUM) SHALL BE INSTALLED IN BOTH ENDS OF CURB REMOVAL LIMITS AT COLD CONSTRUCTION JOINTS.
 3. #5 X 2'-0" EPOXY COATED TIE BARS, 2'-0" ON CENTER, SHALL BE INSTALLED TO TIE THE ADJACENT FULL DEPTH CONCRETE STREET PAVEMENT TO THE NEW CURB TOE. IF EXISTING CONCRETE PAVEMENT OR NEW CURB TOE ARE LESS THAN 6" IN THICKNESS, THEN #4 X 1'-6" EPOXY COATED TIE BARS, 1'-6" ON CENTER, SHALL BE INSTALLED.

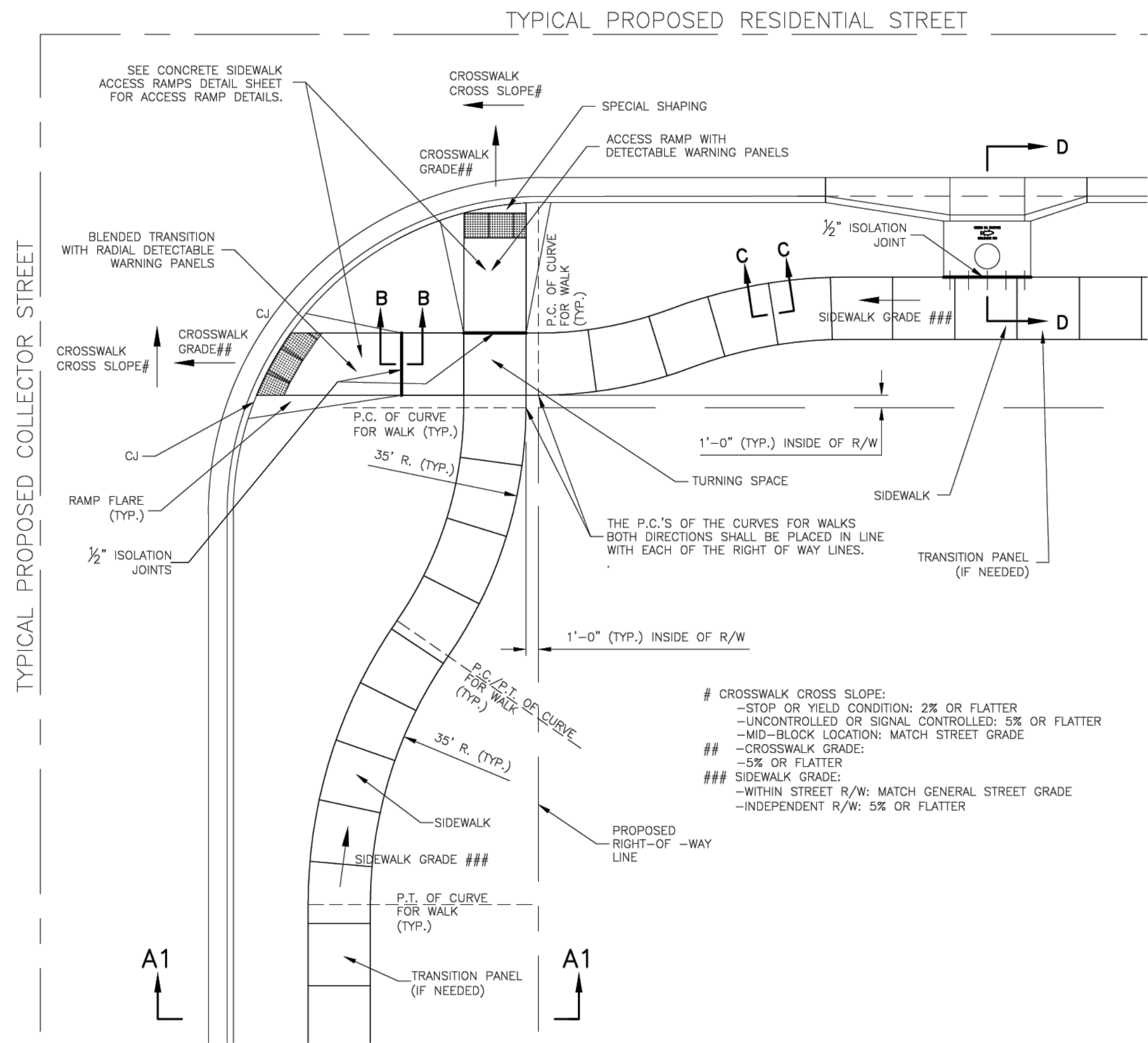
2023 EDITION SHEET 26 OF 43

DATE	BY	REVISION
04-01-23	LJM	REPLACES ALL PREVIOUS VERSIONS OF CONCRETE DRIVEWAY DETAILS
05-01-22	LJM	REPLACES ALL PREVIOUS VERSIONS OF CONCRETE DRIVEWAY DETAILS

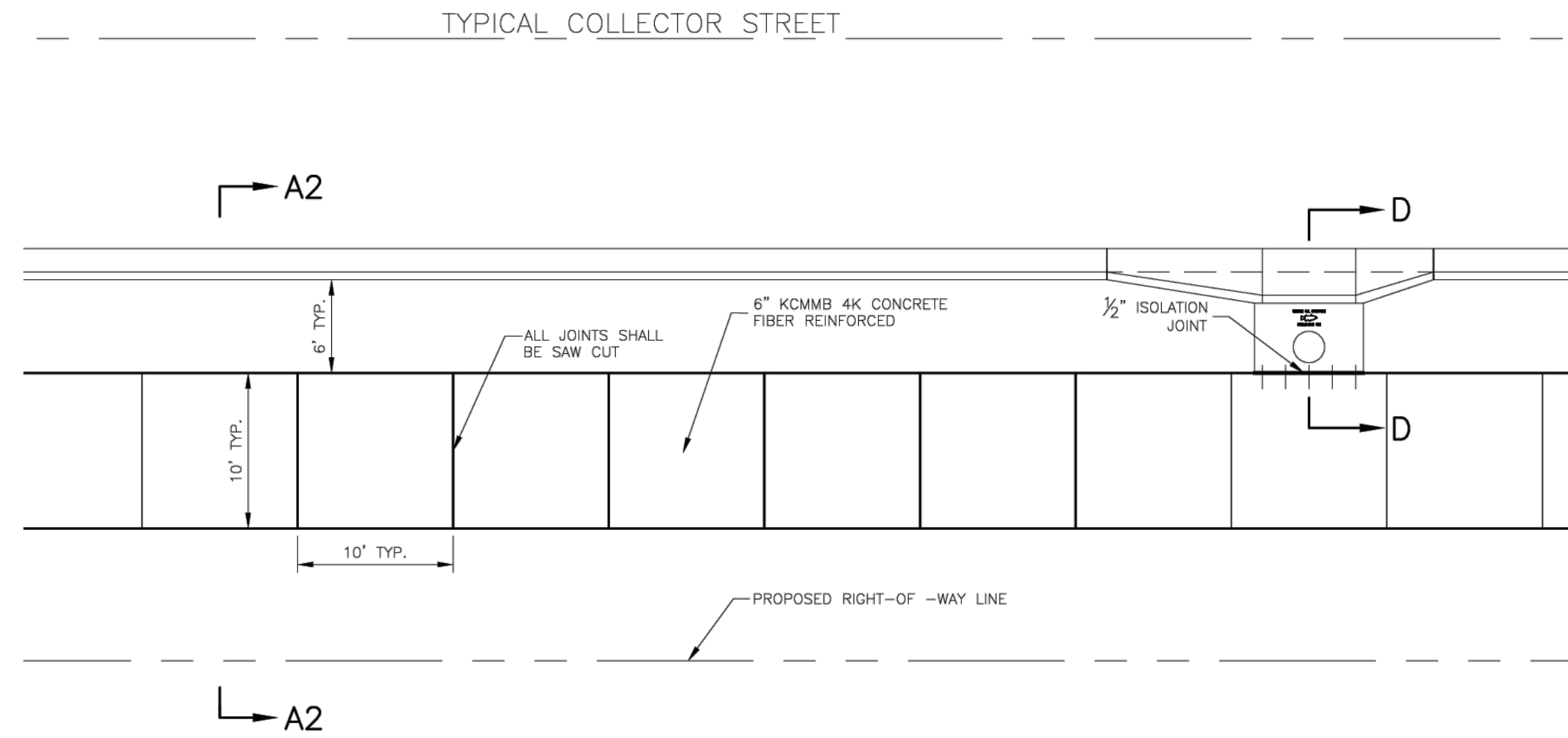


STANDARD DETAILS FOR CONCRETE RESIDENTIAL DRIVEWAYS

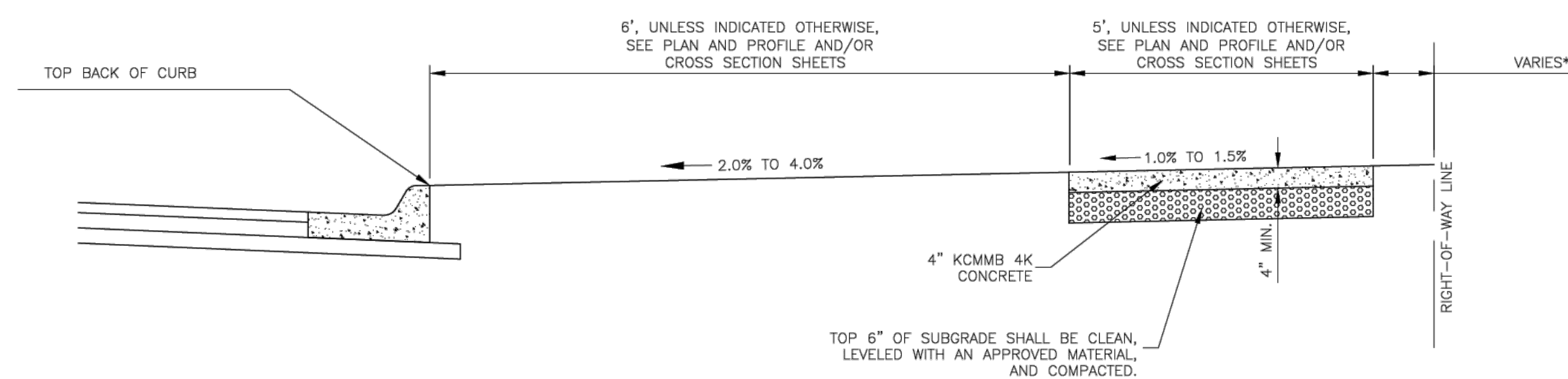
DAVID P. CRONIN CITY ENGINEER CRAIG S. OWENS CITY MANAGER



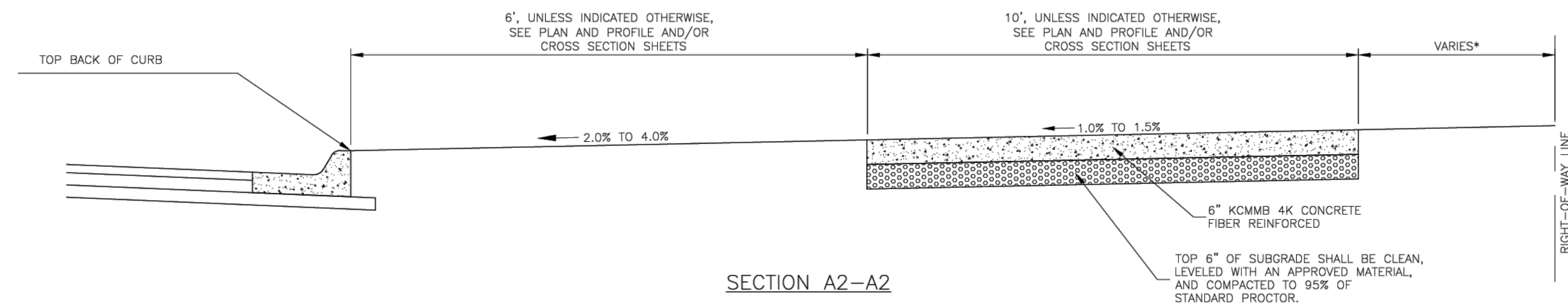
GENERAL SIDEWALK LAYOUT PLAN



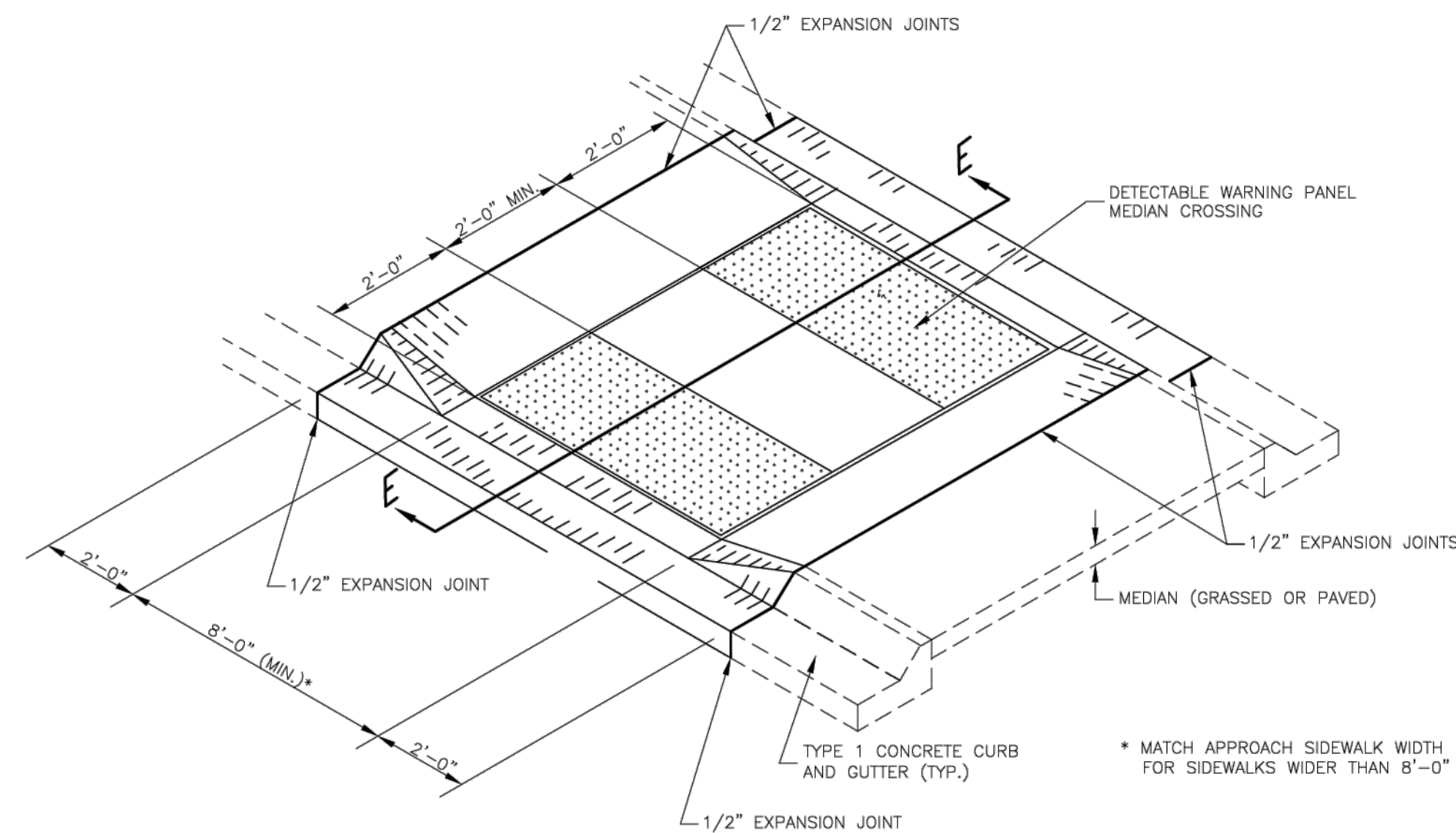
GENERAL SHARED USE PATH LAYOUT PLAN



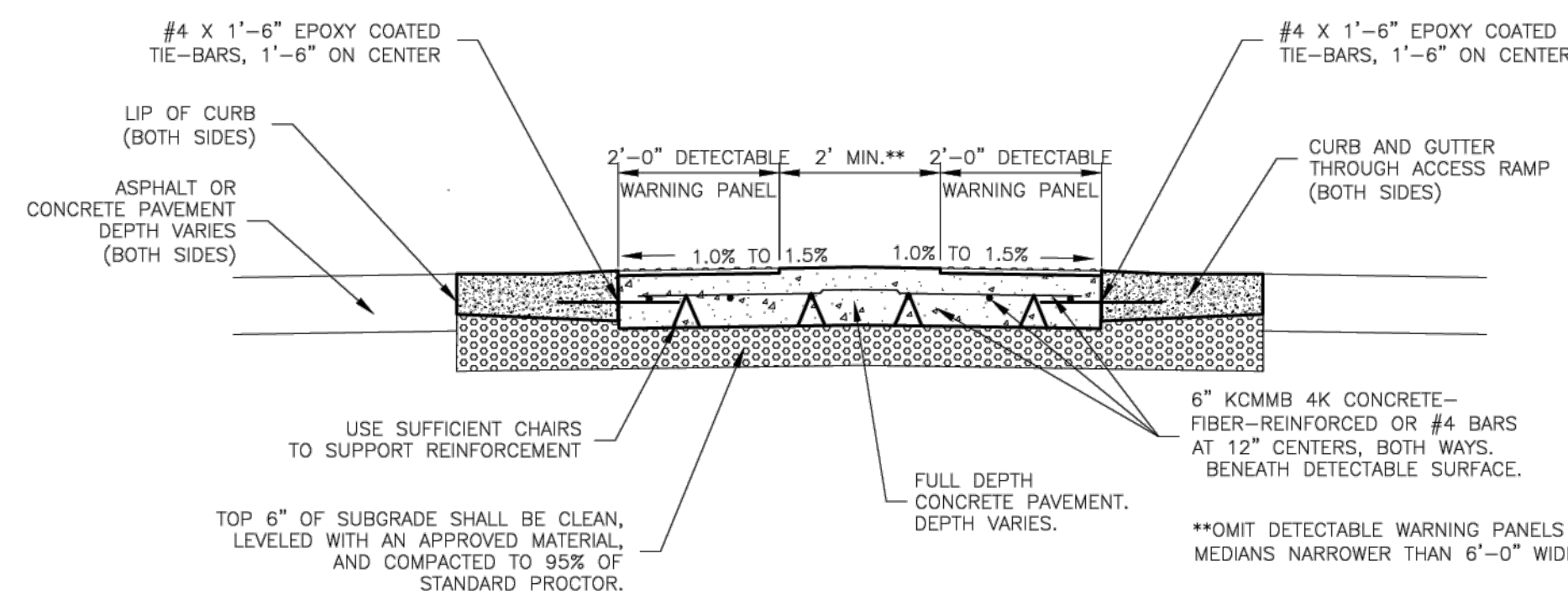
SECTION A1-A1



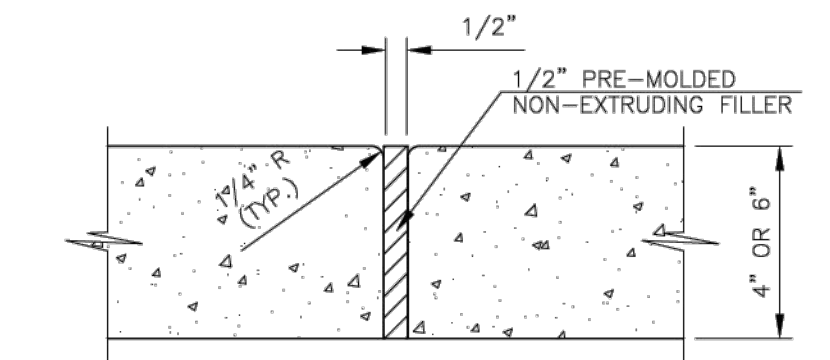
SECTION A2-A2



MEDIAN RAMP CROSSING PLAN

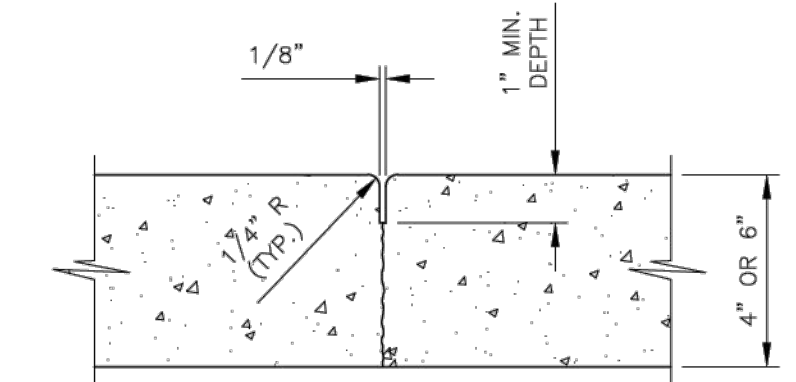


SECTION E-E

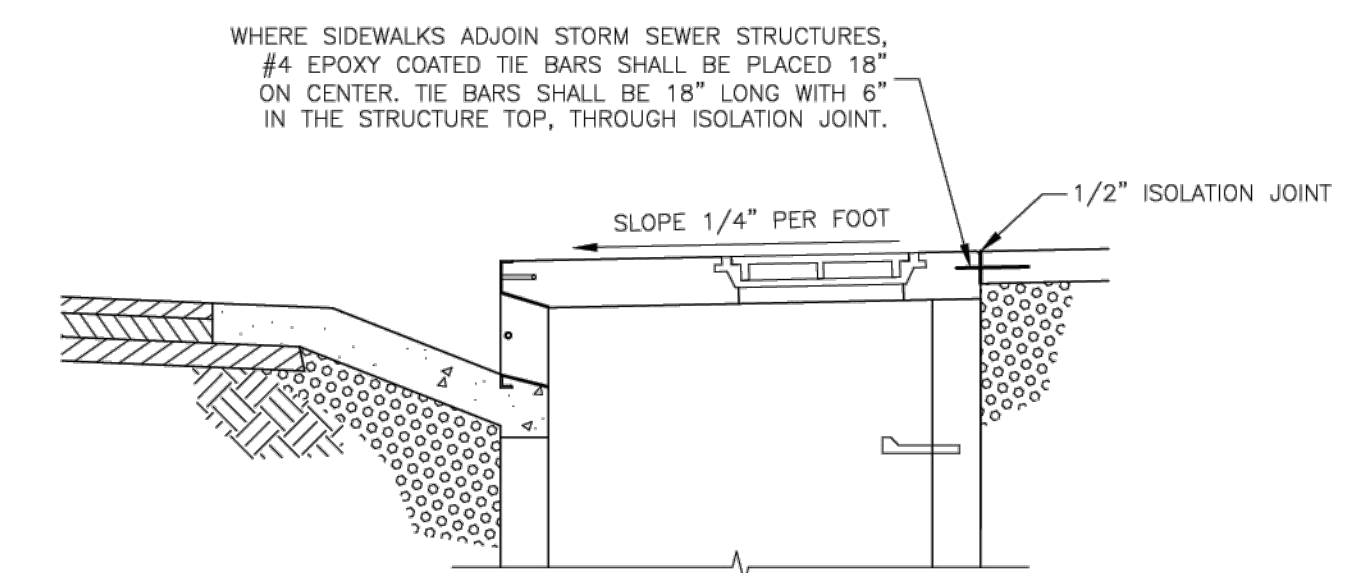


SECTION B-B
ISOLATION JOINT

NOTE: A GRADE BREAK SHOULD NOT BE PLACED BETWEEN THE TURNING SPACE AND BOTTOM OF RAMP, UNLESS A LANDING IS REQUIRED FOR SIGNAL PUSH BUTTONS, OR IN THE CASE OF LONG RAMP. GRADE SHOULD GENERALLY BE CONSTANT BETWEEN GRADE BREAK AT BOTTOM OF RAMP AND TURNING SPACE.



SECTION C-C
CONTRACTION JOINT
(SAWED OR FORMED)



SECTION D-D
SIDEWALK TO INLET DOWELING DETAIL

SIDEWALK GENERAL NOTES

1. CONSTRUCTION JOINTS SHALL BE PLACED IN 5'-0" WIDE SIDEWALKS AT A MINIMUM OF 5'-0" INTERVALS. WHEN OTHER WIDTHS OF SIDEWALK ARE USED, CONSTRUCTION JOINTS SHALL BE PLACED AS DIRECTED BY THE CITY ENGINEER OR AN AUTHORIZED REPRESENTATIVE.
2. ISOLATION JOINTS SHALL BE PLACED AT ALL LOCATIONS WHERE SIDEWALK ABUTS EXISTING STRUCTURES AND AS DIRECTED BY THE CITY ENGINEER OR AN AUTHORIZED REPRESENTATIVE.
3. ACCESS RAMP SHALL BE CONSTRUCTED AT ALL LOCATIONS WHERE SIDEWALKS INTERSECT NEW STREET CONSTRUCTION AND AS OTHERWISE SHOWN ON THE PLANS.
4. ALL SHARED USE PATH JOINTS SHALL BE SAW CUT.
5. ALL SIDEWALKS AND RAMP MUST BE CONSTRUCTED TO CURRENT PROWAG STANDARDS.
6. THERE SHALL BE NO GRADE BREAKS ON THE RAMP. GRADE SHOULD BE CONSTANT BETWEEN GRADE BREAK AT BOTTOM OF RAMP AND TURNING SPACE.
7. SIDEWALK CURB FOR ADA COMPLIANCE IS SUBSIDIARY TO THE RAMP.
8. GRADING REQUIRED TO FACILITATE DRAINAGE BETWEEN THE SIDEWALK AND CURB IS SUBSIDIARY TO THE RAMP.

2023 EDITION

SHEET 27 OF 43

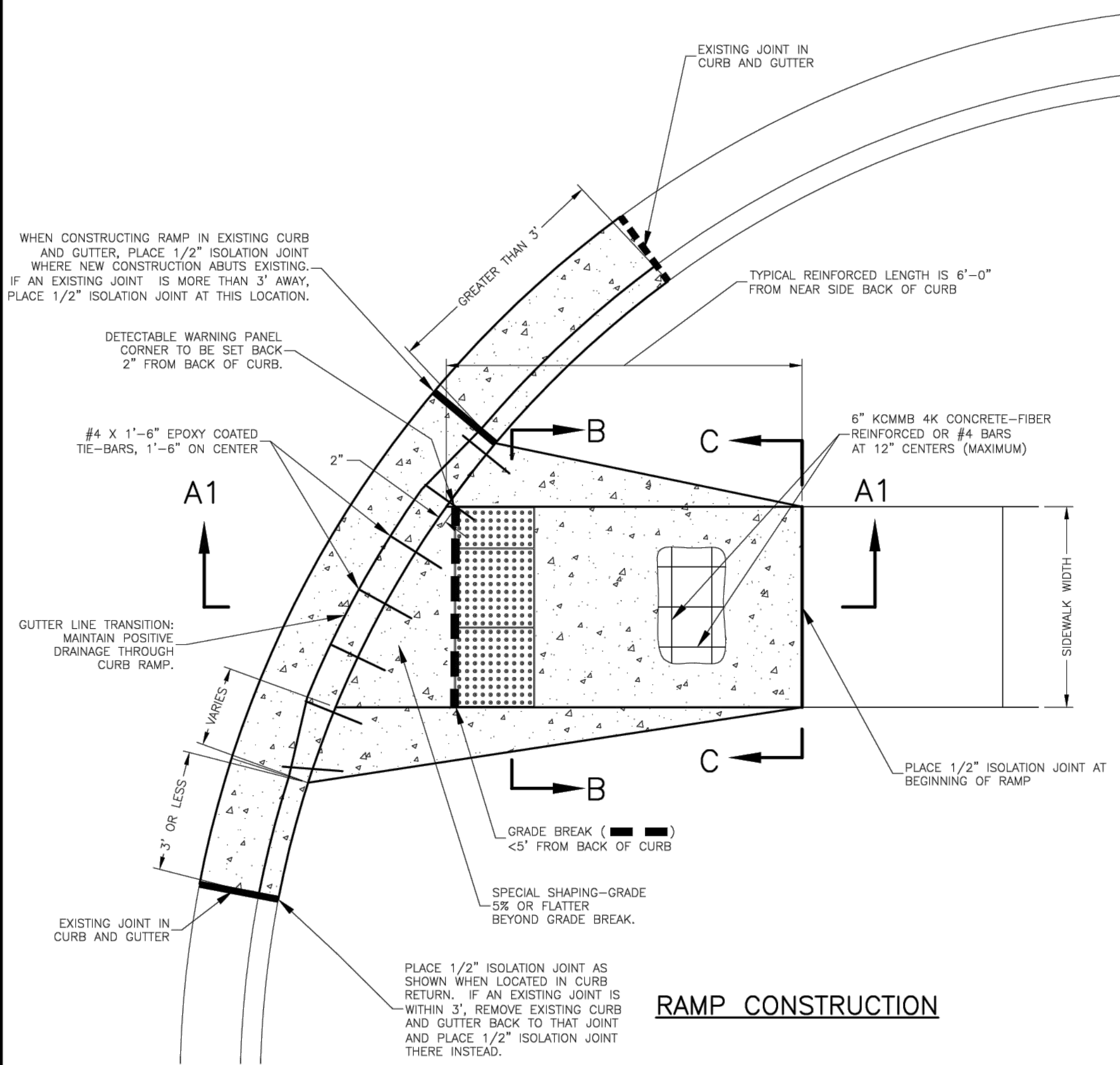
DATE	BY	REVISION
04-01-23	LJM	REPLACES ALL PREVIOUS VERSIONS OF CONCRETE SIDEWALK ACCESS RAMP DETAILS
07-07-22	LJM	ALLOWS FOR THE USE OF CONCRETE-FIBER-REINFORCEMENT IN RAMP



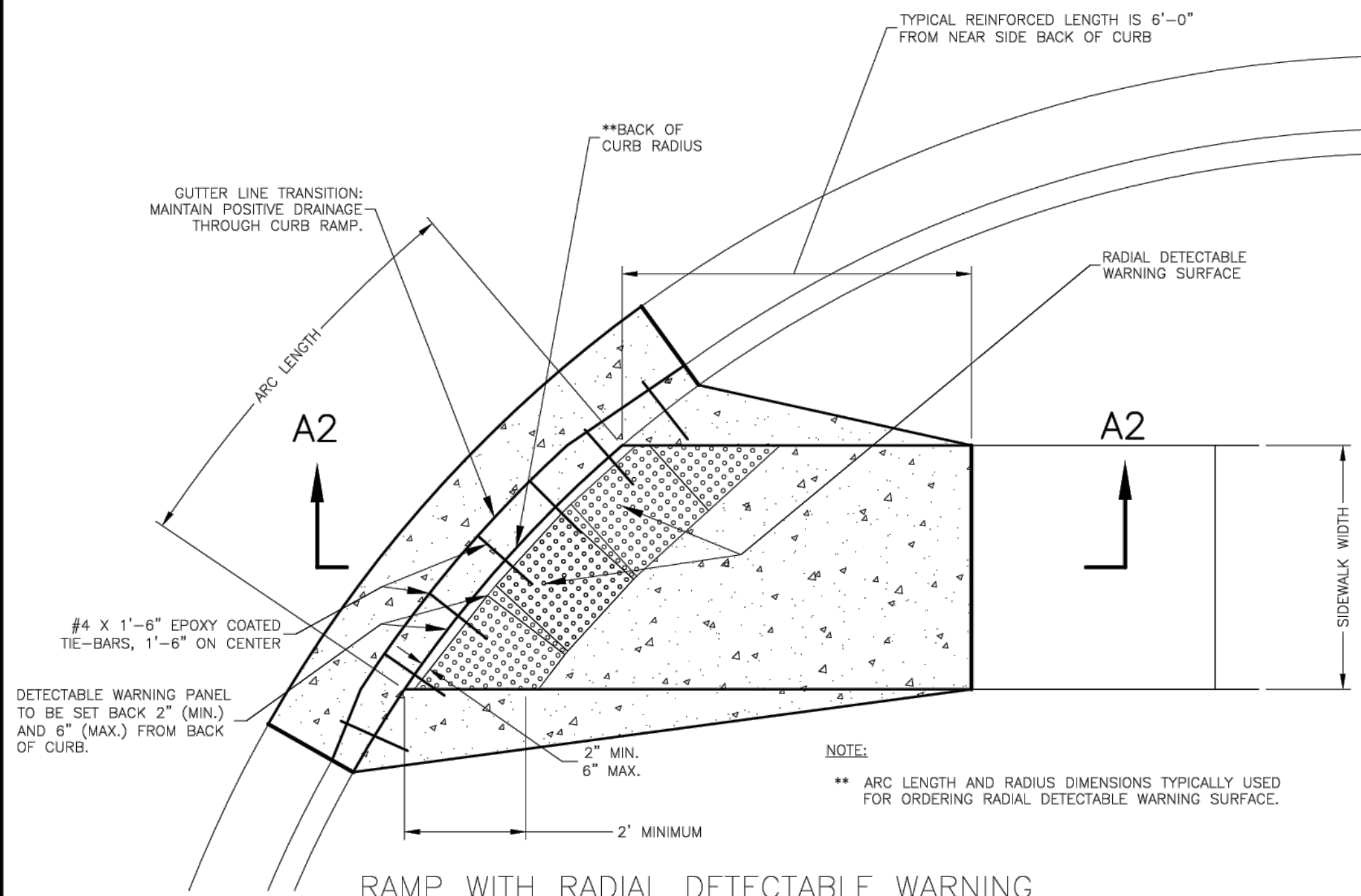
STANDARD DETAILS FOR
CONCRETE SIDEWALK AND SHARED USE PATH LAYOUTS

DAVID P. CRONIN
CITY ENGINEER

CRAIG S. OWENS
CITY MANAGER

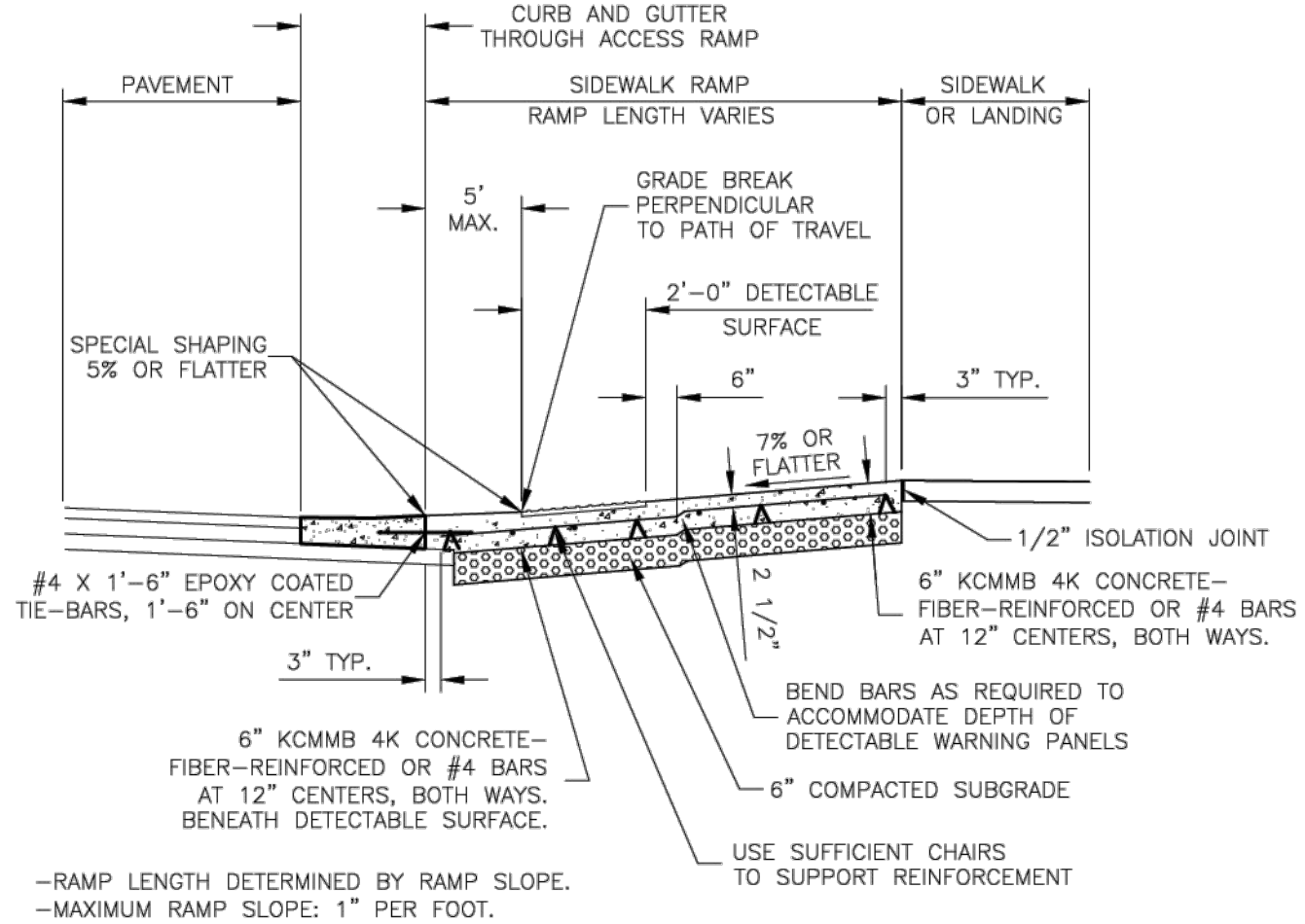


RAMP CONSTRUCTION

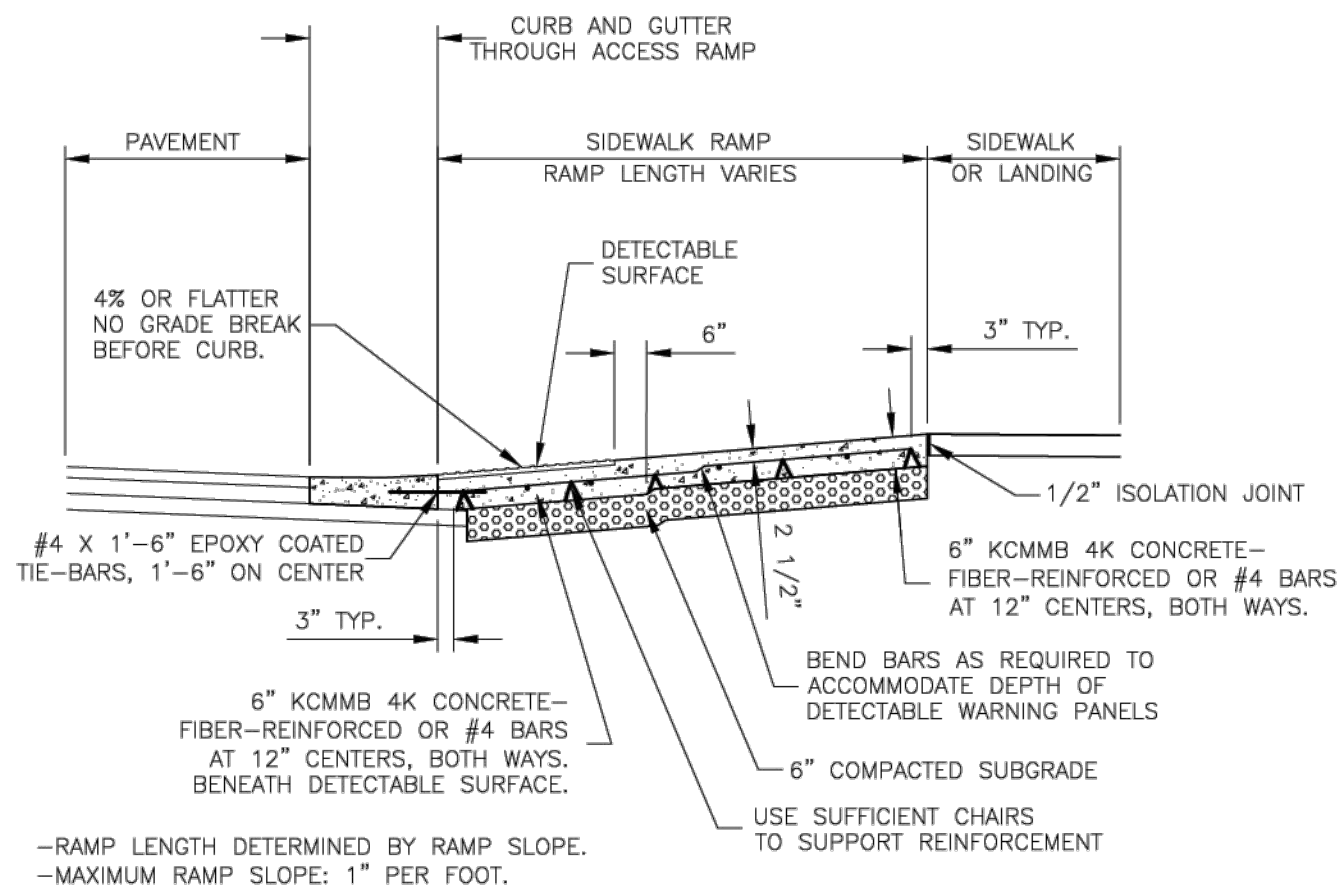


RAMP WITH RADIAL DETECTABLE WARNING

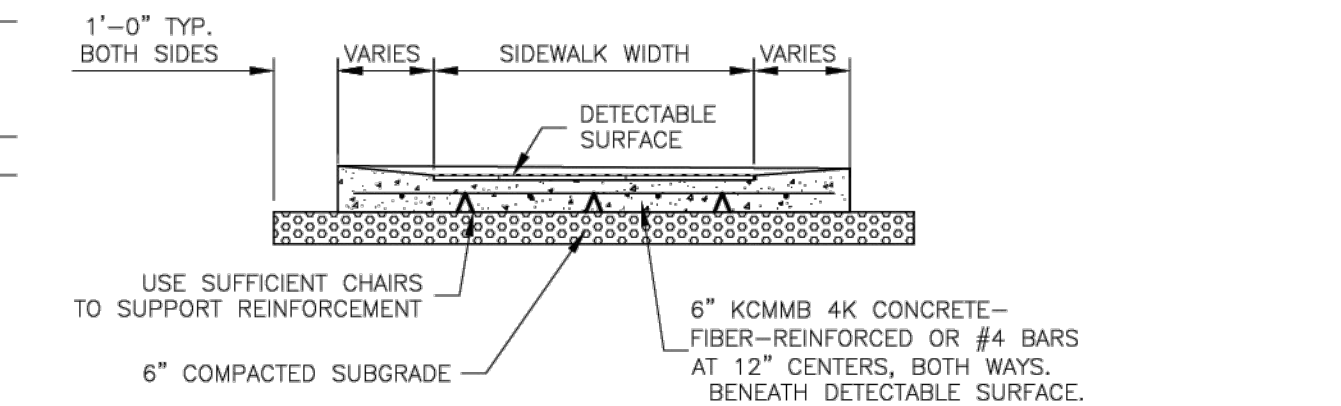
- NOTES**
1. FLARED SIDES SHALL BE 10% OR FLATTER SLOPE, IF ADJACENT TO SIDEWALK, AND 25% OR FLATTER SLOPE, IF ADJACENT TO LANDSCAPED AREAS.
 2. IF THE SPECIAL SHAPING DISTANCE EXCEEDS 5' FROM THE BACK OF CURB, THEN REFER TO THE "BLENDED TRANSITION DETECTABLE WARNING SURFACE DETAIL". IF USING RADIAL DETECTABLE WARNINGS, BLENDED TRANSITION SHOULD HAVE A 4% OR FLATTER SLOPE.
 3. DETECTABLE WARNING DOMES SHALL BE ALIGNED PERPENDICULAR TO THE GRADE BREAK BETWEEN THE RAMP RUN AND STREET, UNLESS A BLENDED TRANSITION AND USING RADIAL DOMES.
 4. DETECTABLE WARNINGS SHALL CONTINUOUSLY EXTEND FOR A MINIMUM OF 24" IN THE PATH OF TRAVEL.
 5. DIMENSIONS SHOWN IN THIS DRAWING ARE TARGET DESIGN VALUES. ALL SIDEWALKS AND RAMPS MUST BE CONSTRUCTED TO CURRENT PROWAG STANDARDS.
 6. IF GRADES DO NOT ALLOW RAMP TO BE CONSTRUCTED BASED ON SLOPES SHOWN, OVERALL LENGTH MAY BE LIMITED TO 15'. EXACT LIMITS TO BE APPROVED BY THE ENGINEER.
 7. COMPACTED SUBGRADE SHALL BE CLEAN, LEVELED WITH AN APPROPRIATE MATERIAL, AND COMPACTED.
 8. THE TERMS "RAMP" AND "BLENDED TRANSITION" REFER TO THE GEOMETRIC REQUIREMENTS OF PROWAG, NOT PAY ITEMS. THE FIRST 6'-0" OF A RAMP OR BLENDED TRANSITION SHALL BE "REINFORCED CONCRETE SIDEWALK". BEYOND 6'-0", THE RAMP OR BLENDED TRANSITION, SHALL BE "CONCRETE SIDEWALK". DETECTABLE WARNINGS SHALL BE MEASURED SEPARATELY. TYPICAL BID ITEMS ARE:
 -CONCRETE SIDEWALK (4"), SY
 -CONCRETE RECREATIONAL PATH (6" FIBER REINFORCED), SY
 -INTEGRAL CONCRETE SIDEWALK AND RETAINING WALL, LF
 -REINFORCED CONCRETE SIDEWALK (ADJACENT TO CURB), SF
 -DETECTABLE WARNING PANELS, SF
 -DETECTABLE WARNING PANELS (RADIAL, XX FT. RADIUS), SF
 -CONCRETE MEDIAN REINFORCED SIDEWALK CROSSING, SF
 9. SIDEWALK CURB FOR ADA COMPLIANCE IS SUBSIDIARY TO THE RAMP.
 10. GRADING REQUIRED TO FACILITATE DRAINAGE BETWEEN THE SIDEWALK AND CURB IS SUBSIDIARY TO THE RAMP.



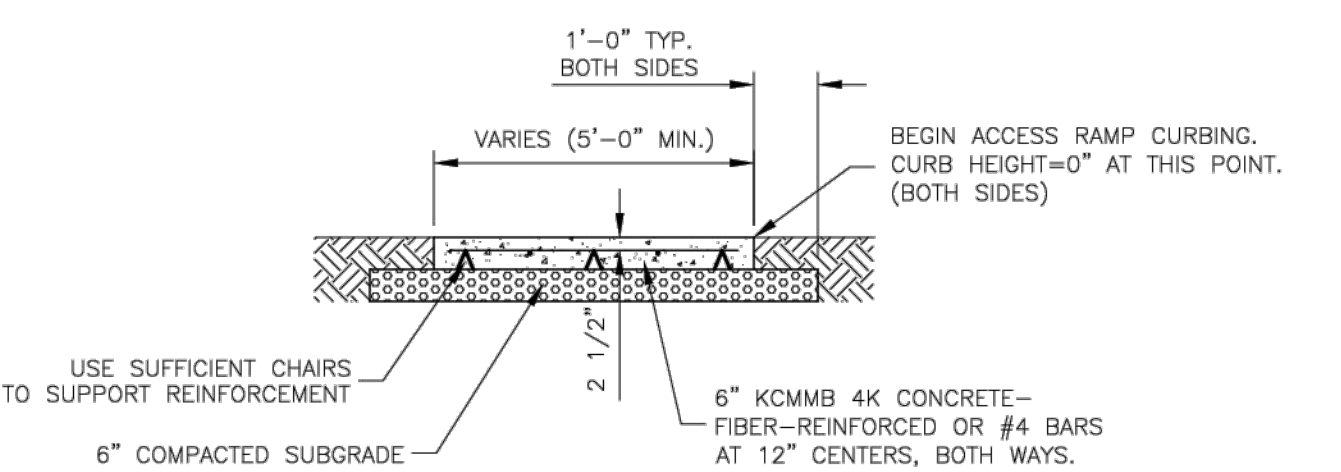
SECTION A1-A1



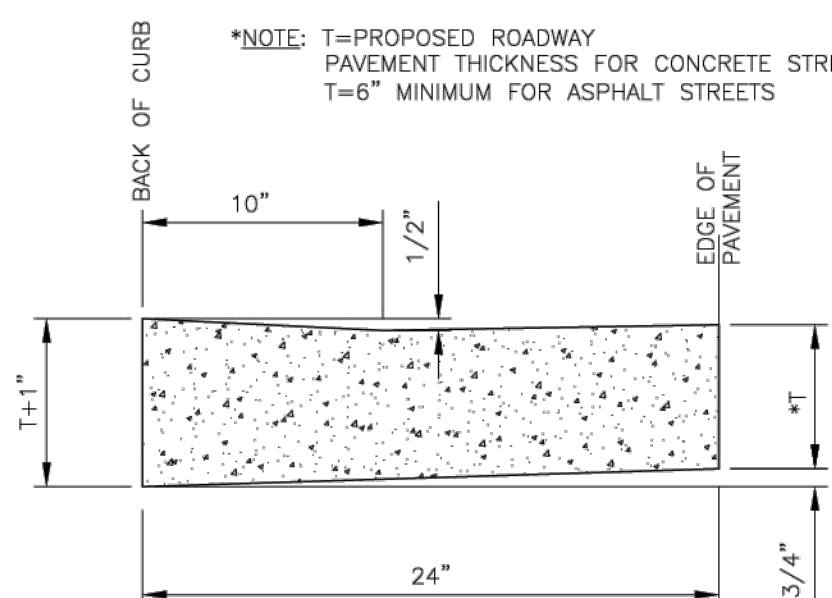
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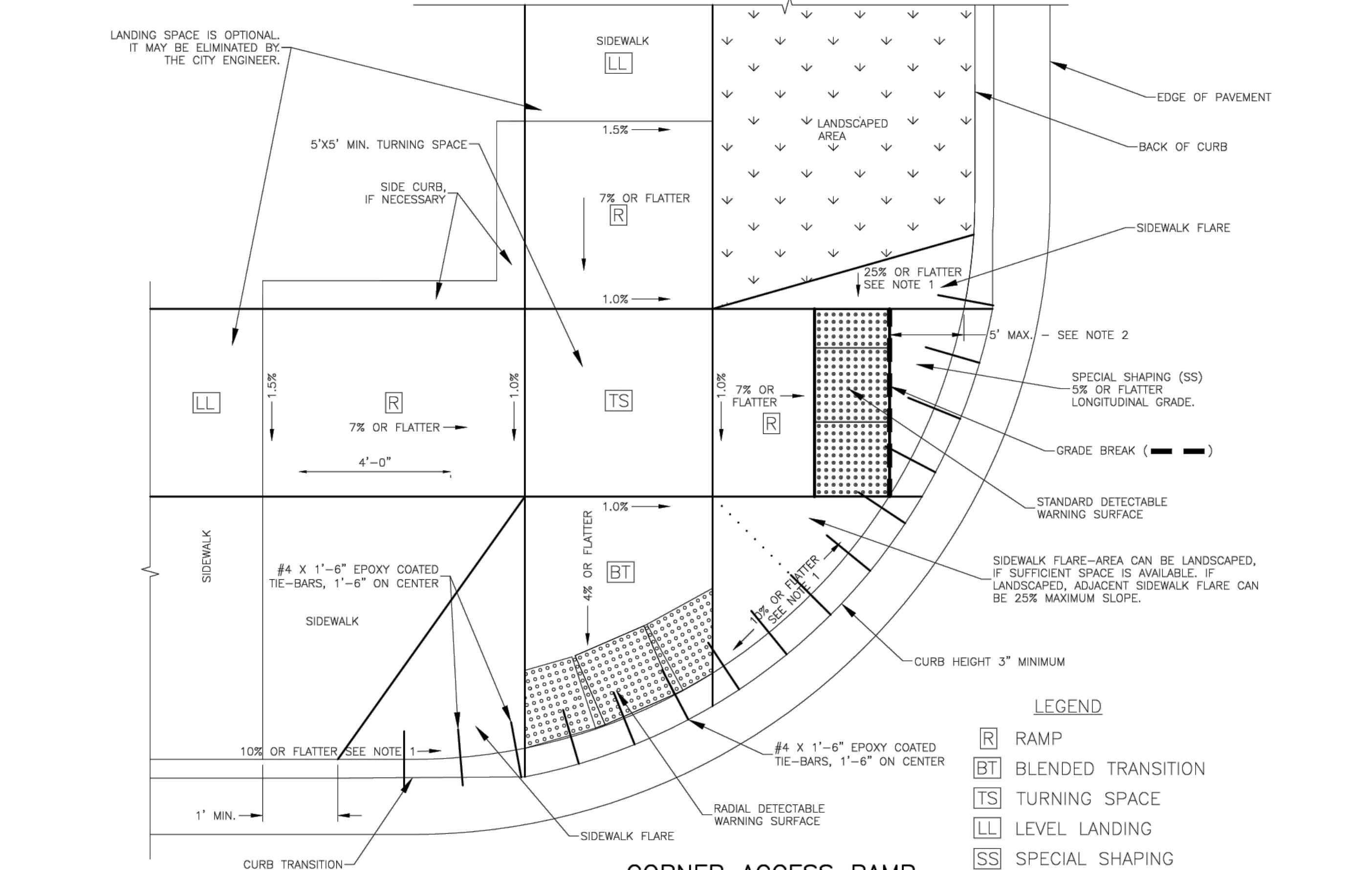
SECTION B-B



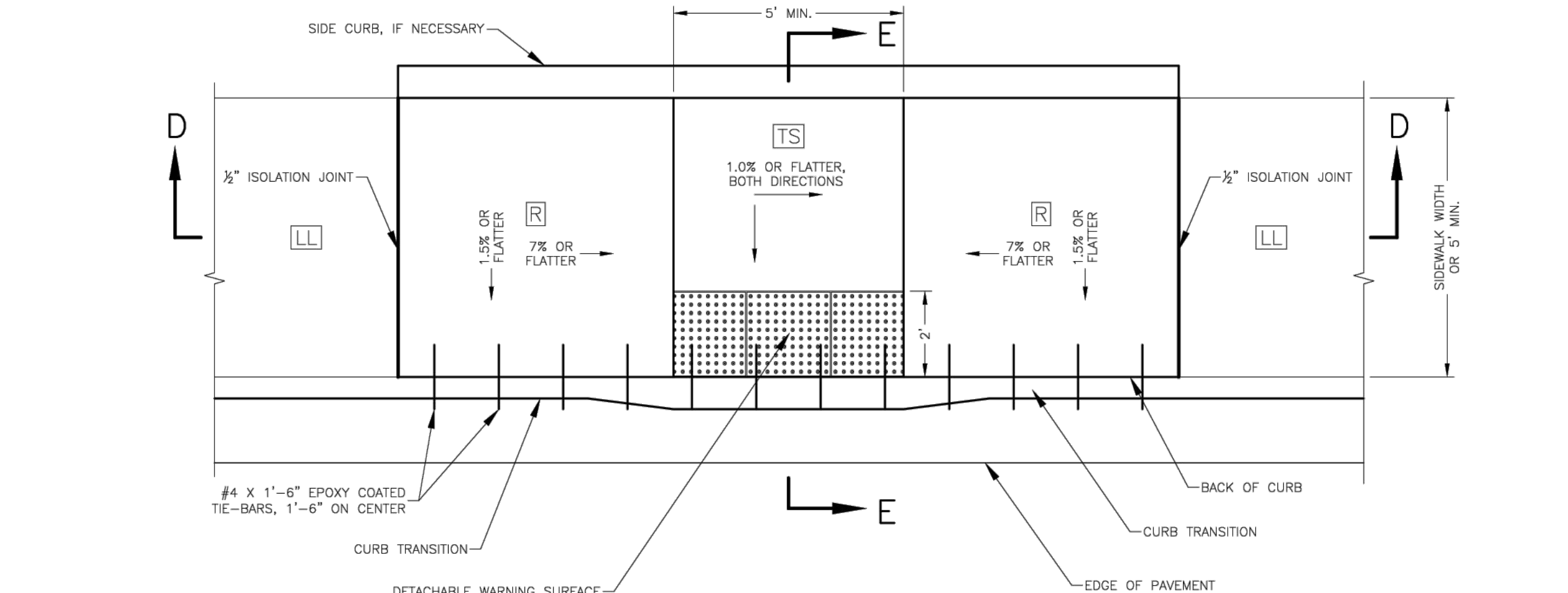
SECTION C-C



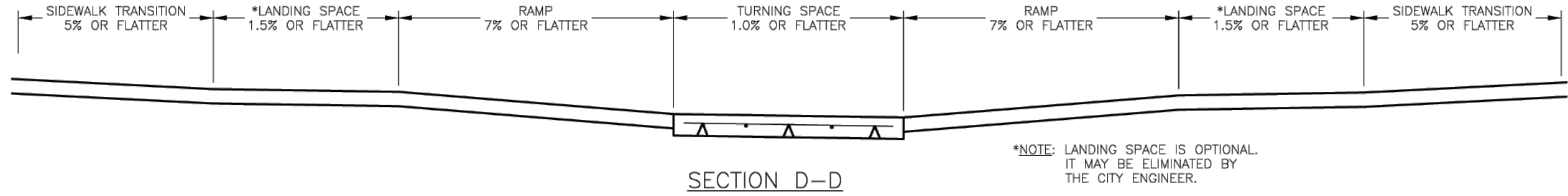
CURB AND GUTTER THROUGH ACCESS RAMP



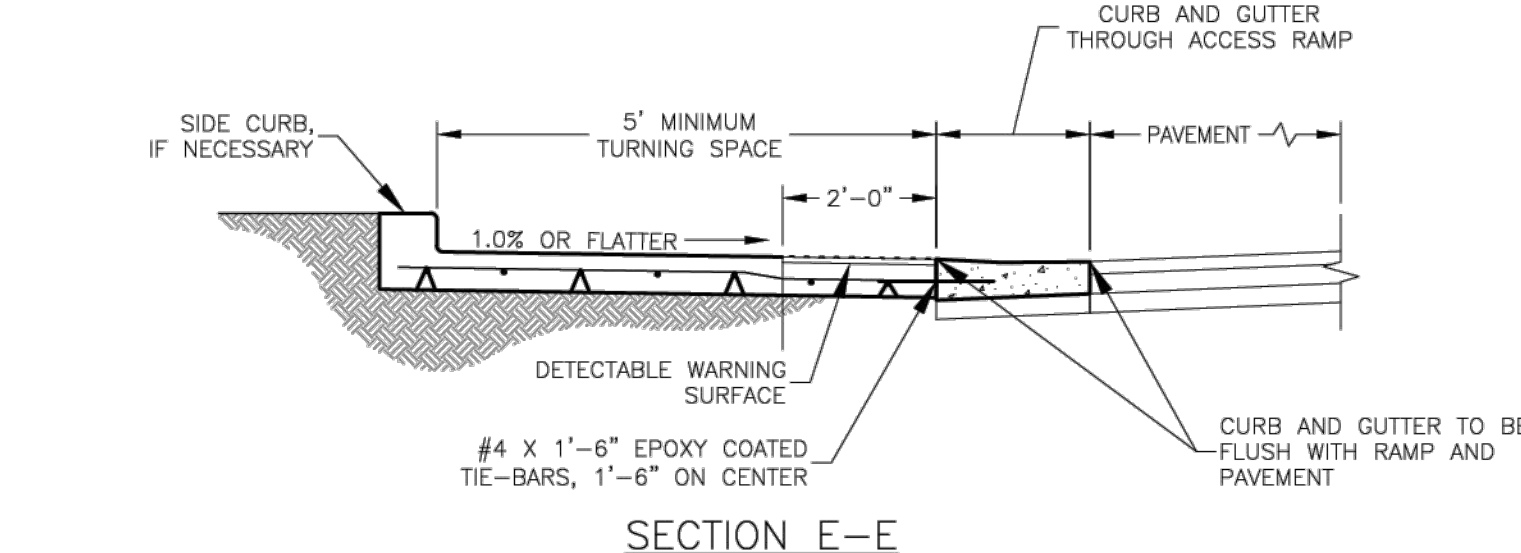
CORNER ACCESS RAMP



PARALLEL RAMP



SECTION D-D



SECTION E-E

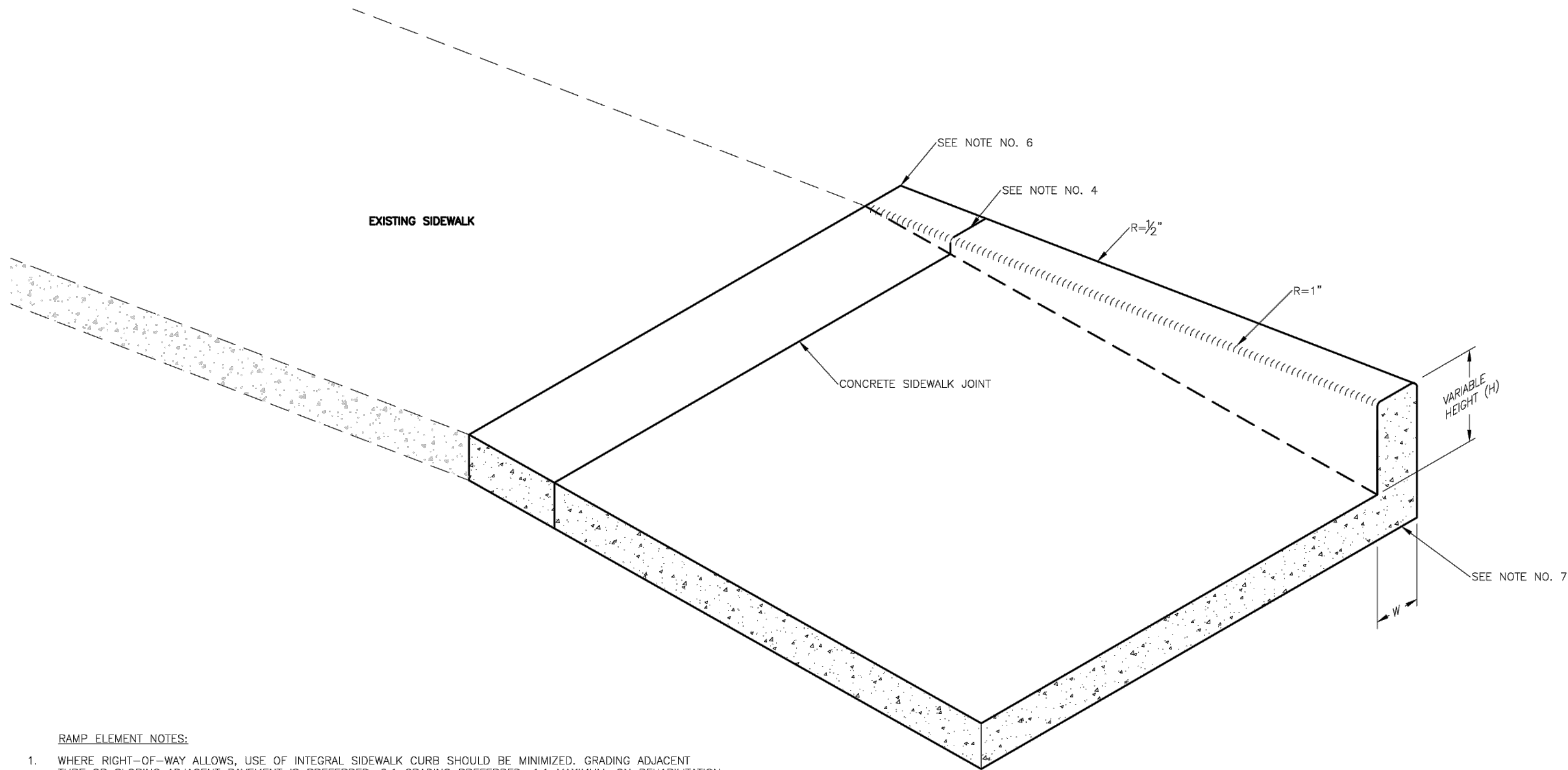
2023 EDITION SHEET 28 OF 43

DATE	BY	REVISION
04-01-23	LJM	REPLACES ALL PREVIOUS VERSIONS OF CONCRETE SIDEWALK ACCESS RAMPS DETAILS
07-07-22	LJM	ALLOWS FOR THE USE OF CONCRETE-FIBER-REINFORCEMENT IN RAMPS

City of Lawrence
MUNICIPAL SERVICES & OPERATIONS

STANDARD DETAILS FOR CONCRETE SIDEWALK ACCESS RAMPS

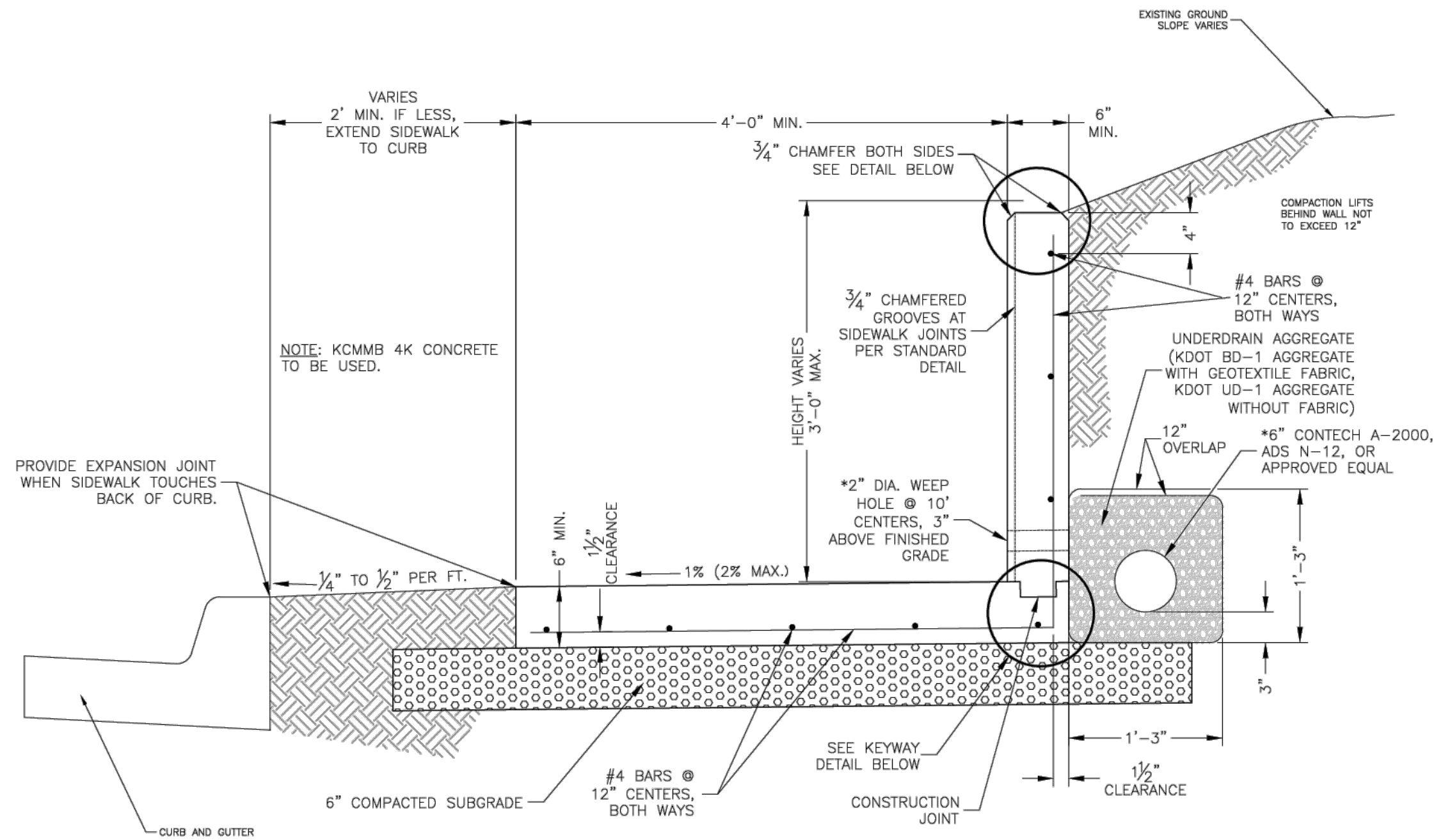
DAVID P. CRONIN CITY ENGINEER
CRAIG S. OWENS CITY MANAGER



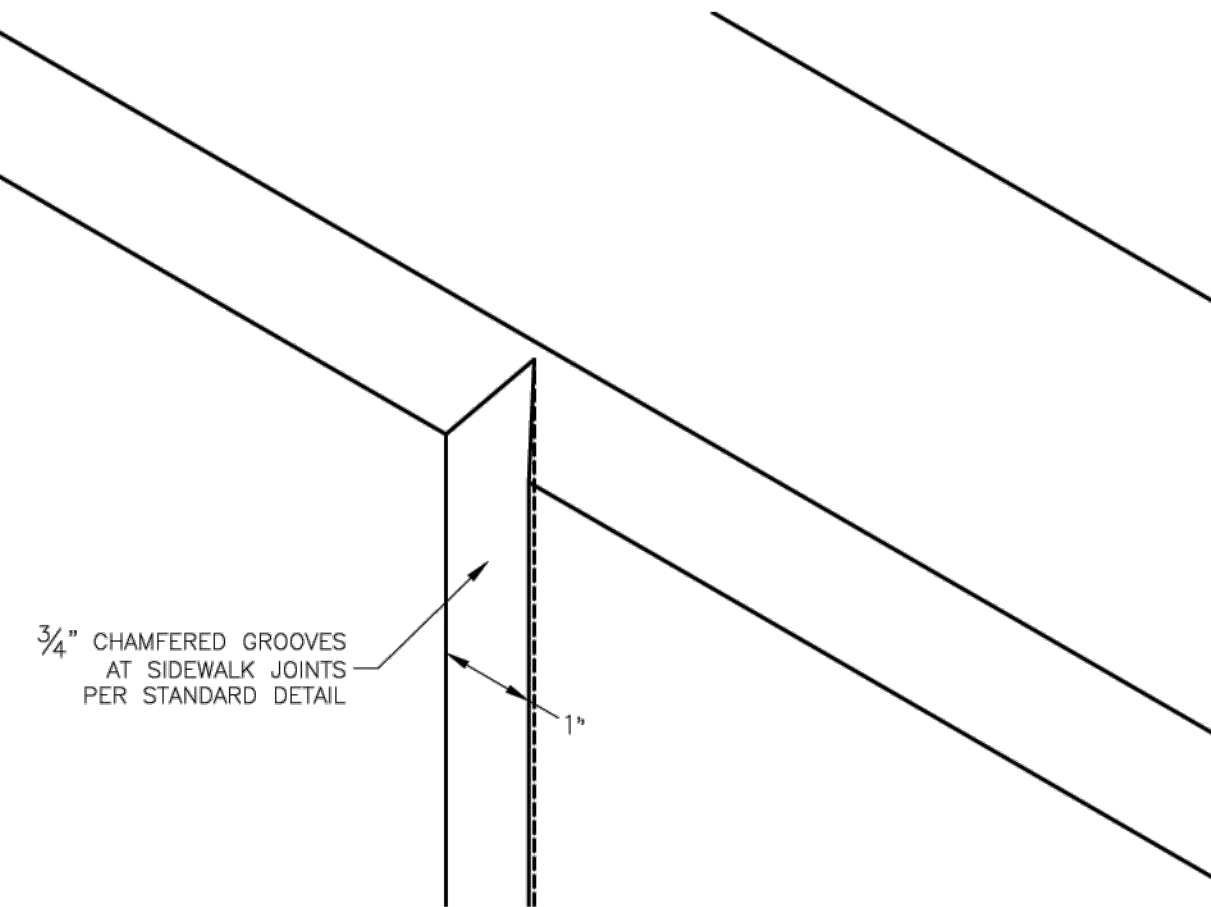
- RAMP ELEMENT NOTES:
- WHERE RIGHT-OF-WAY ALLOWS, USE OF INTEGRAL SIDEWALK CURB SHOULD BE MINIMIZED. GRADING ADJACENT TURF OR SLOPING ADJACENT PAVEMENT IS PREFERRED. 6:1 GRADING PREFERRED, 4:1 MAXIMUM. ON REHABILITATION PROJECTS, IF 3:1 IS EXCEEDED WITHIN RIGHT-OF-WAY, INTEGRAL SIDEWALK CURB SHOULD BE USED.
 - INTEGRAL SIDEWALK CURB SHALL BE PLACED OUTSIDE THE SIDEWALK LIMITS WHEN RIGHT-OF-WAY ALLOWS.
 - INTEGRAL SIDEWALK CURB NEXT TO BUILDING SHALL BE A 4" WIDTH AND SHALL MATCH PREVIOUS TOP OF SIDEWALK ELEVATIONS.
 - ALL INTEGRAL SIDEWALK CURB CONTRACTION JOINTS SHALL MATCH CONCRETE SIDEWALK JOINTS.
 - SOME DETECTABLE WARNING PRODUCTS REQUIRE A CONCRETE BORDER FOR PROPER INSTALLATION. THE CONCRETE BORDER SHOULD NOT EXCEED 2 INCHES.
 - END TAPERS AT TRANSITION SECTION SHALL MATCH INPLACE SIDEWALK GRADES.
 - INTEGRAL SIDEWALK CURB SHALL MATCH BOTTOM OF ADJACENT WALK.

CONCRETE CURB DESIGN V	
CURB HEIGHT H	CURB WIDTH W
<6"	4"
6"-9"	6"
9"-12"	6" W/ REINFORCEMENT

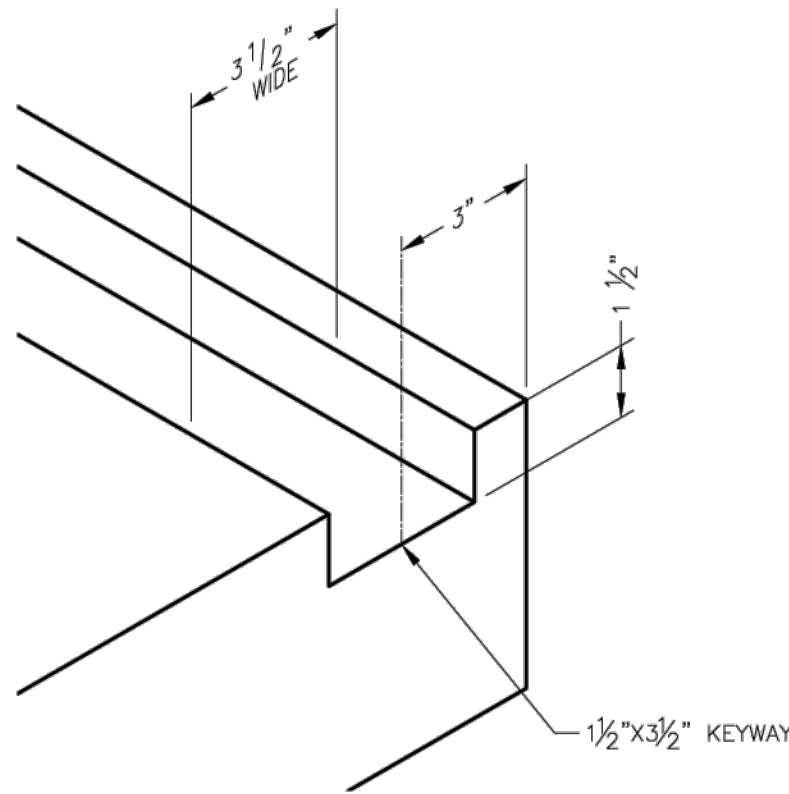
INTEGRAL SIDEWALK CURB



SECTION



RECESSED GROOVE DETAIL



KEYWAY DETAIL

INTEGRAL SIDEWALK AND RETAINING WALL

- NOTES:
- (*) CONTRACTOR SHALL FURNISH AND INSTALL EITHER WEEP HOLES OR UNDERDRAIN AS INDICATED IN THE PROJECT PLANS AND/OR SPECIFICATIONS.

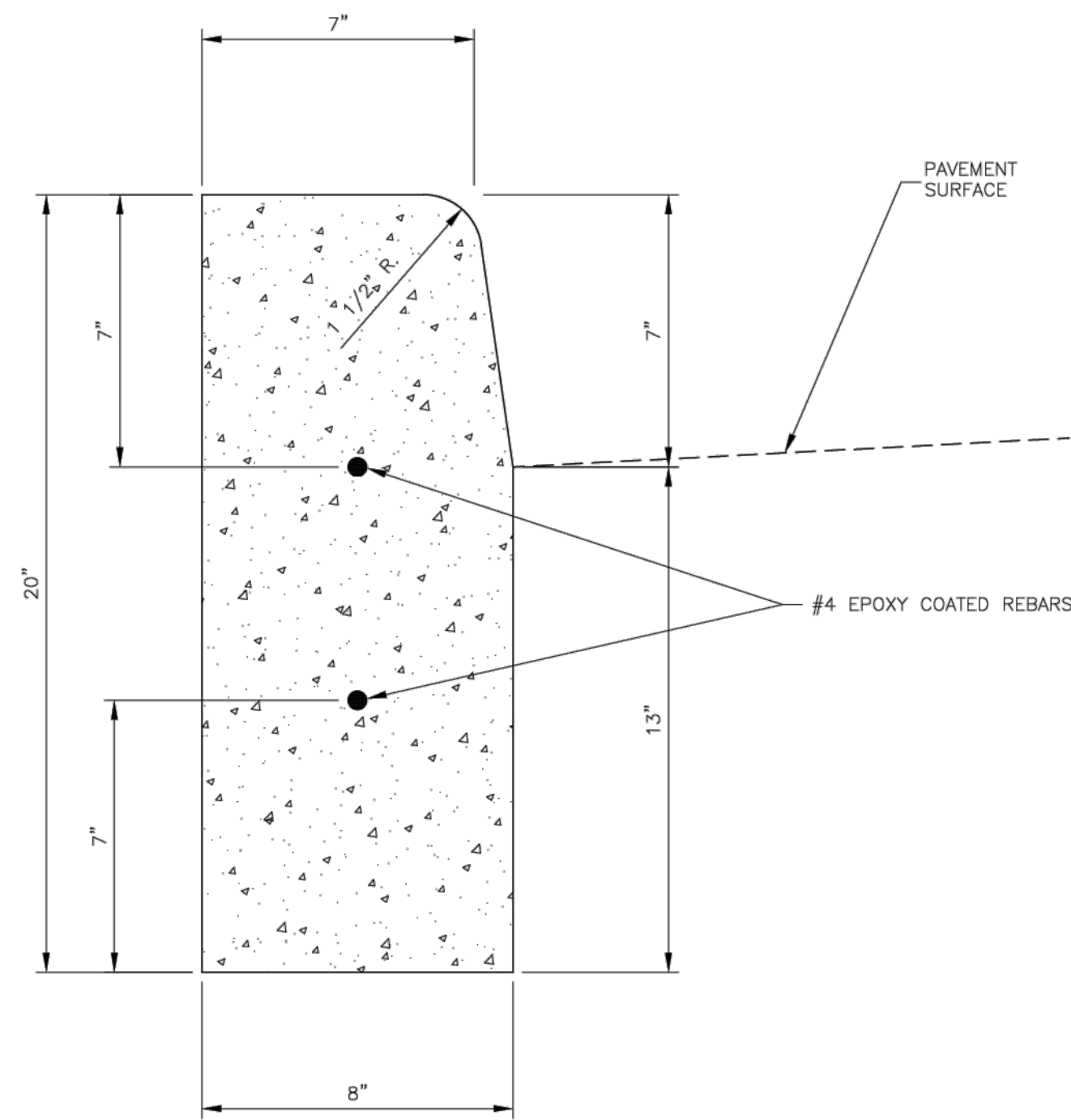
2023 EDITION SHEET 29 OF 43

DATE	BY	REVISION
04-01-23	LJM	REPLACES ALL PREVIOUS VERSIONS OF RETAINING WALL DETAILS
05-01-22	LJM	NEW DETAIL

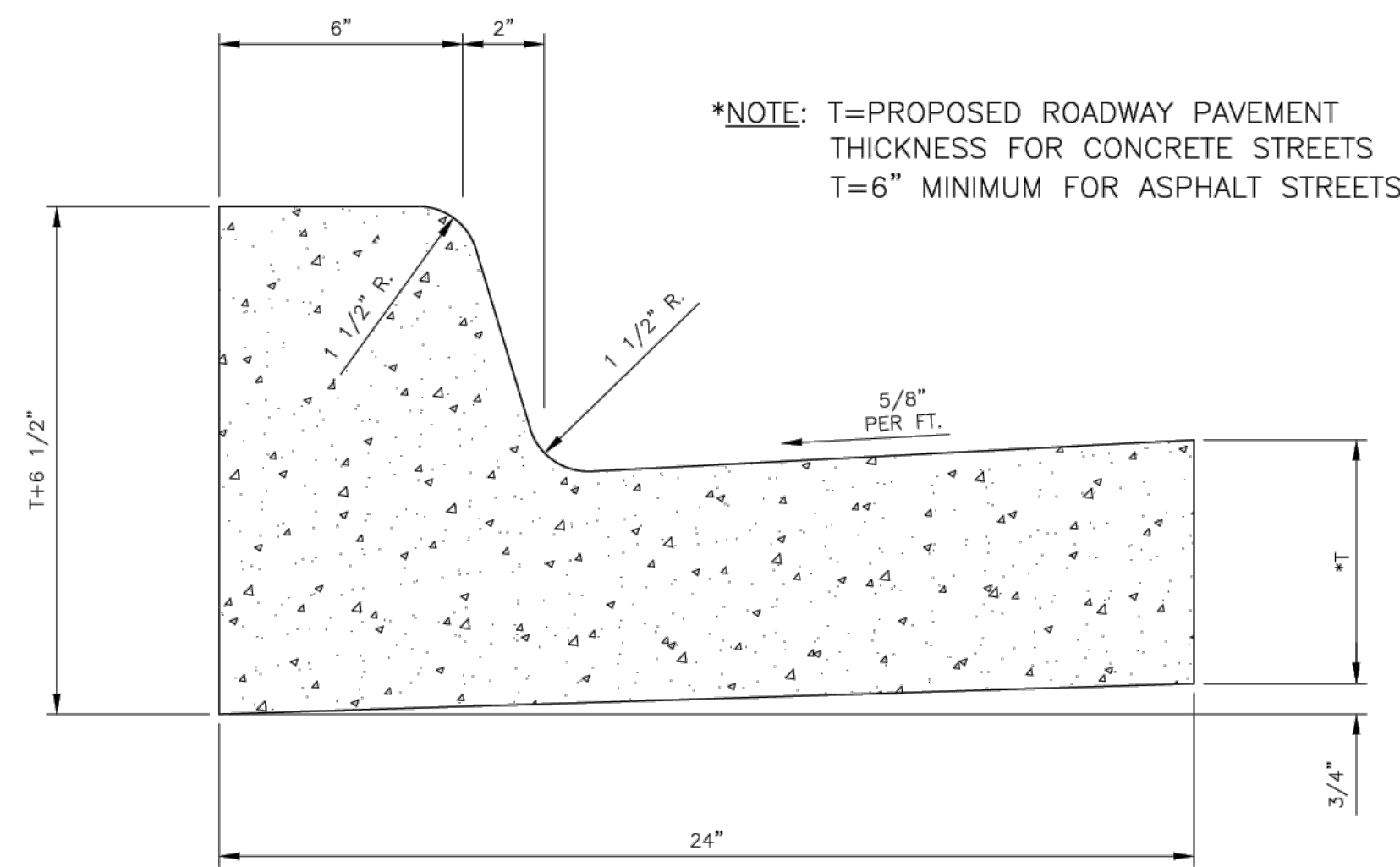


STANDARD DETAILS FOR
RETAINING WALLS

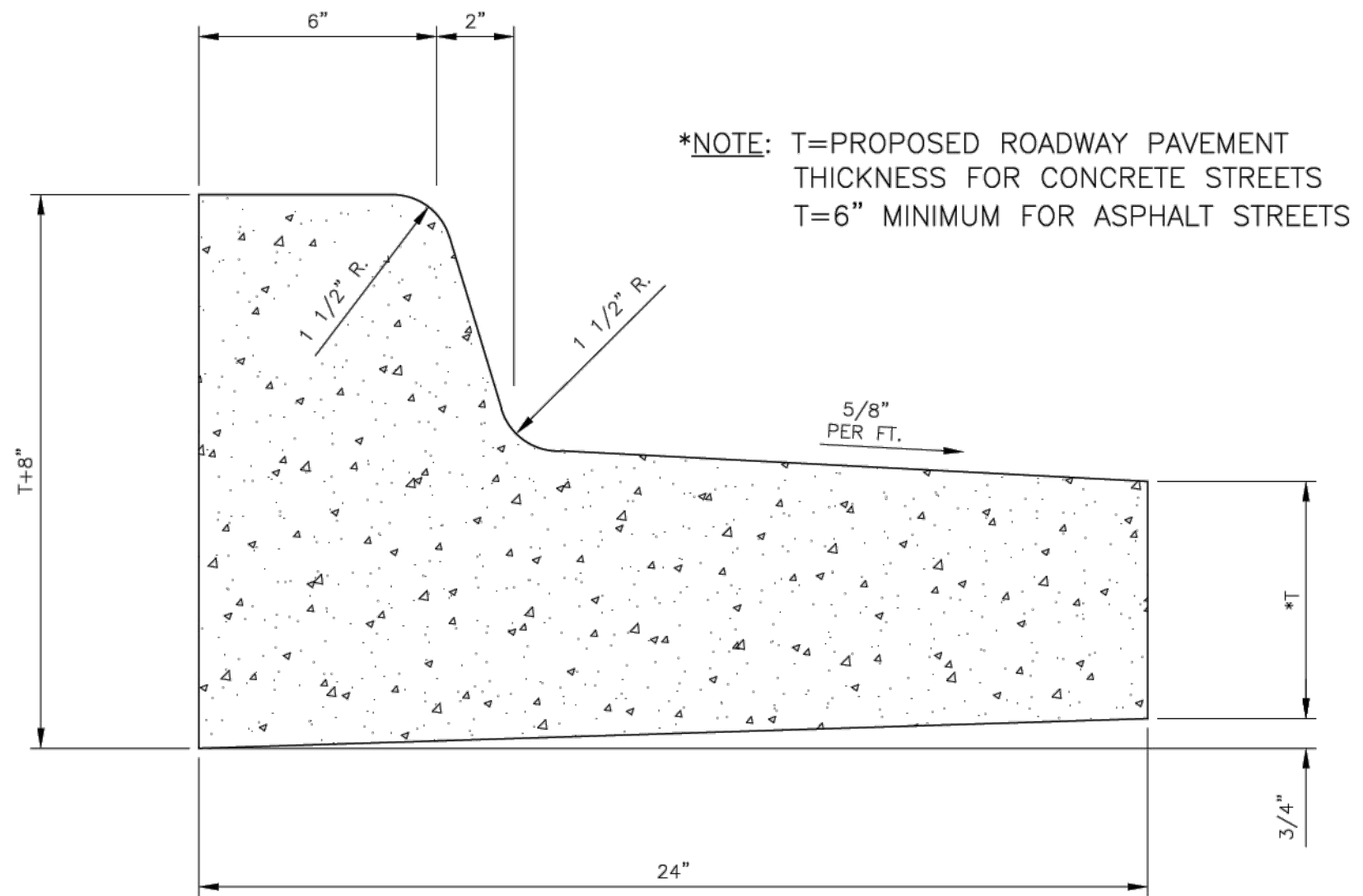
DAVID P. CRONIN CITY ENGINEER CRAIG S. OWENS CITY MANAGER



STRAIGHT CURB
(TYPE C-1)

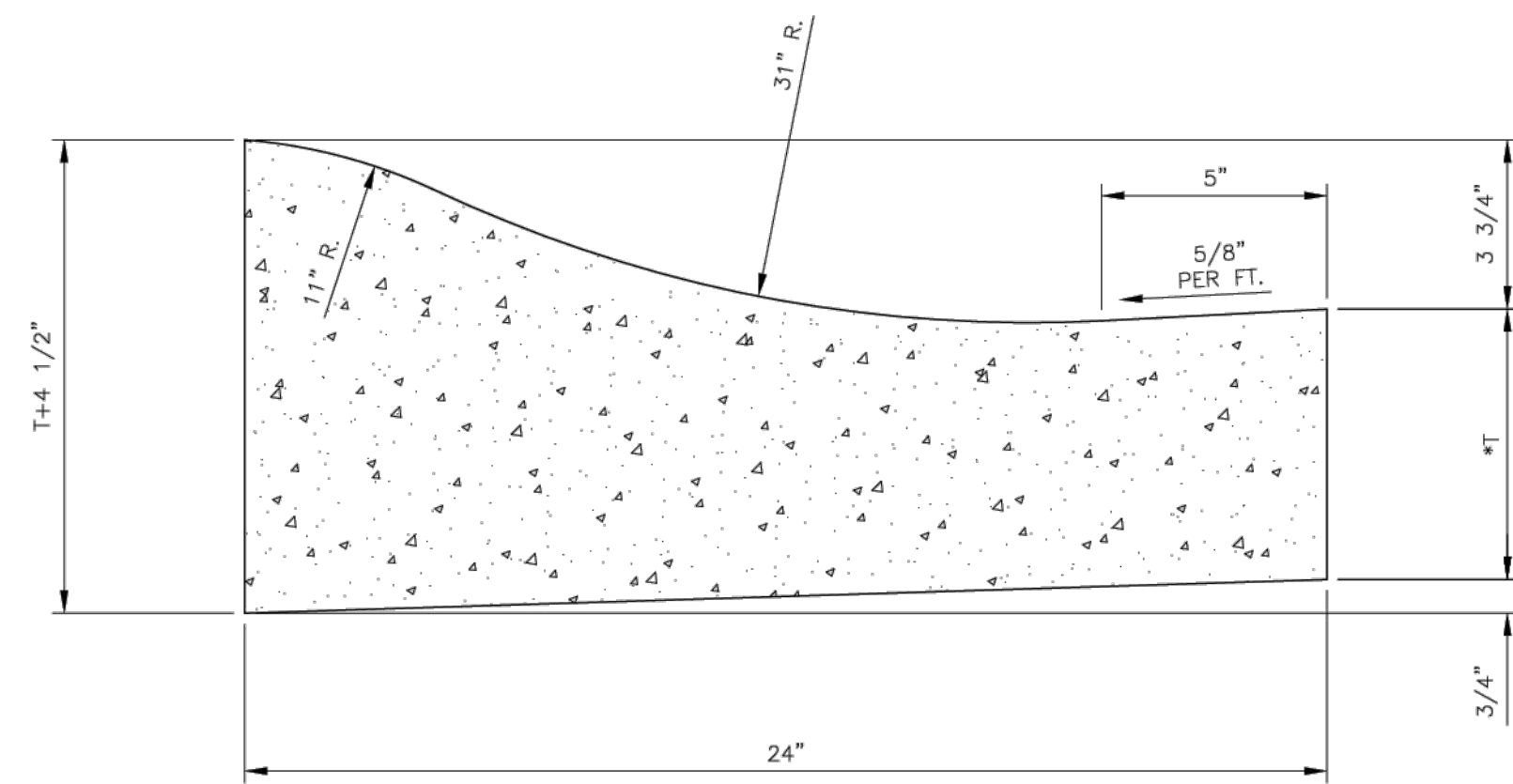


STRAIGHT BACK CURB AND GUTTER
(TYPE CG-1)



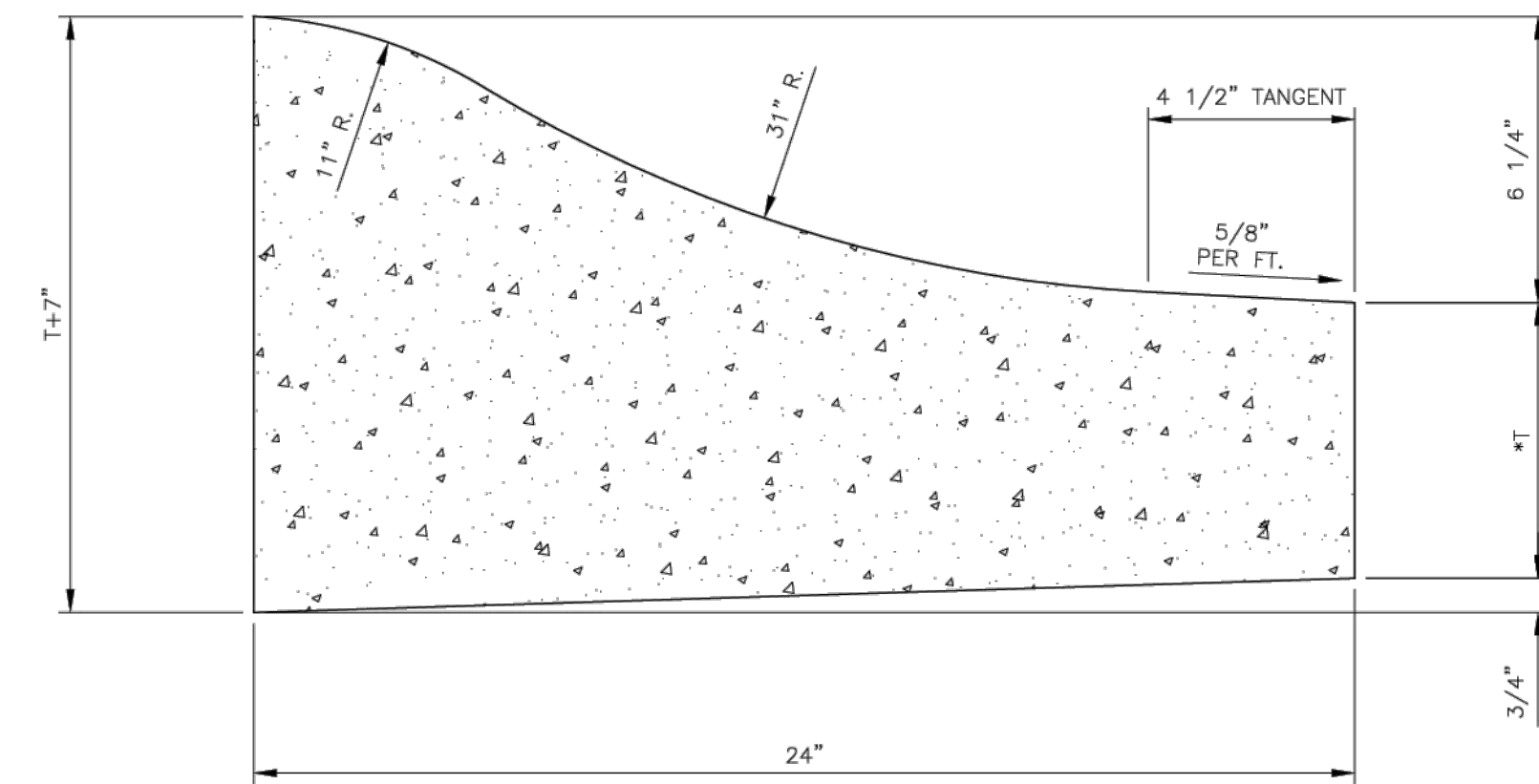
STRAIGHT BACK DRY CURB AND GUTTER
(TYPE CG-1, DRY)

*NOTE: T=PROPOSED ROADWAY PAVEMENT THICKNESS FOR CONCRETE STREETS
T=6" MINIMUM FOR ASPHALT STREETS



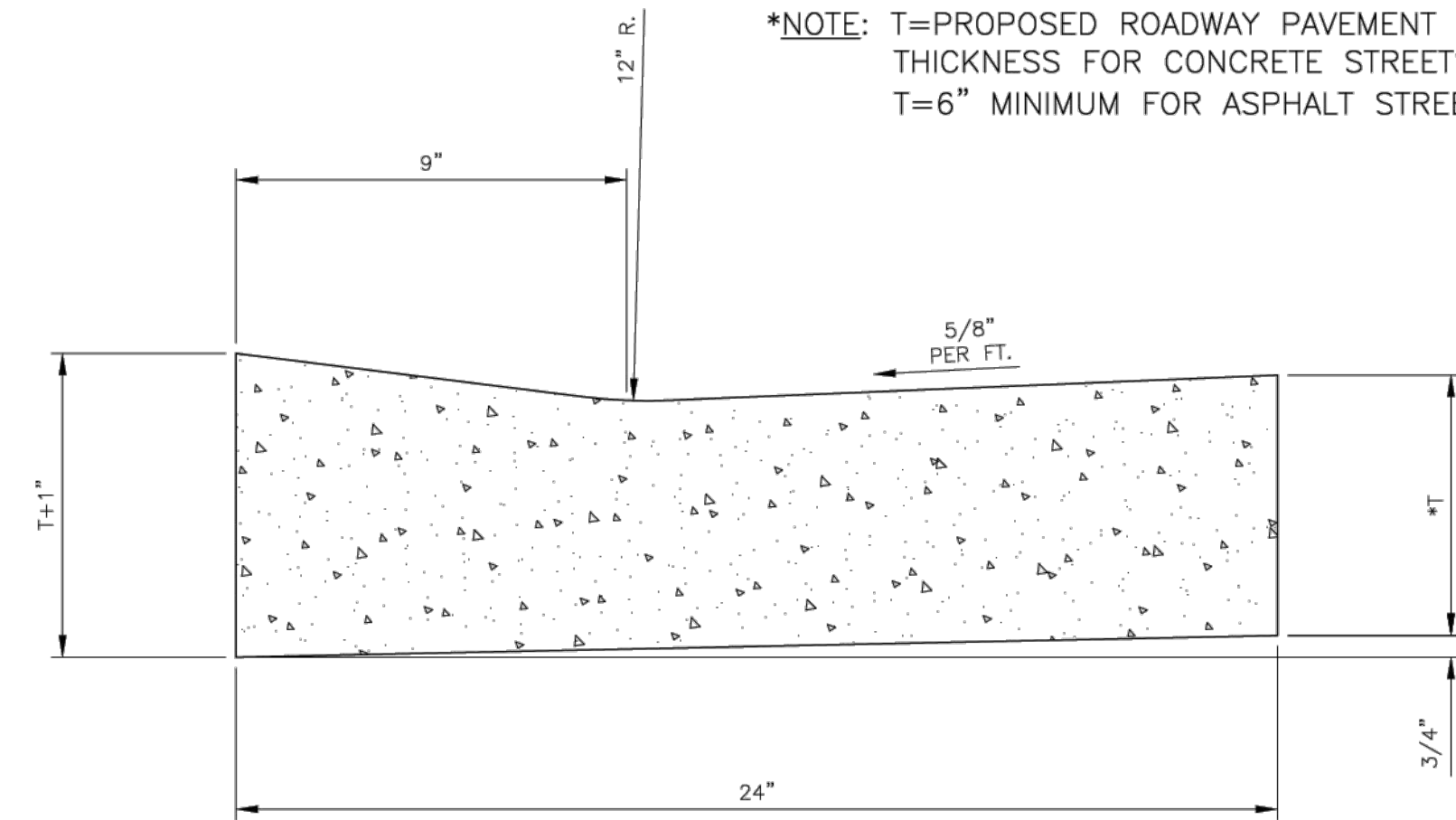
ROLL BACK CURB AND GUTTER
(TYPE CG-2)

*NOTE: T=PROPOSED ROADWAY PAVEMENT THICKNESS FOR CONCRETE STREETS
T=6" MINIMUM FOR ASPHALT STREETS



ROLL BACK CURB AND GUTTER
(TYPE CG-2, DRY)

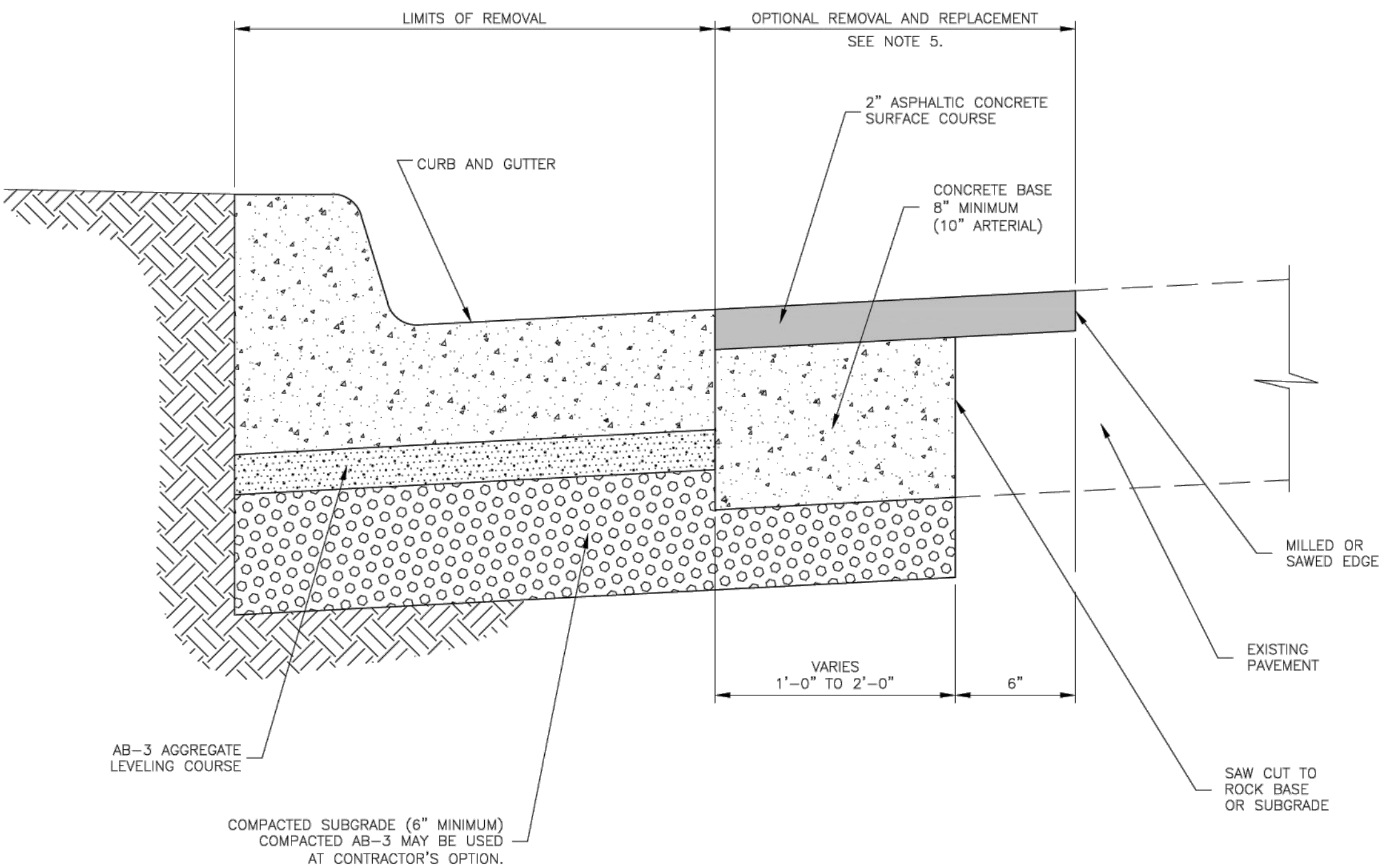
*NOTE: T=PROPOSED ROADWAY PAVEMENT THICKNESS FOR CONCRETE STREETS
T=6" MINIMUM FOR ASPHALT STREETS



CURB AND GUTTER THROUGH DRIVEWAYS
(TYPE CG-3)

CURB AND GUTTER GENERAL NOTES

1. TYPE CG-2 OR CG-2 DRY ROLL BACK CURB AND GUTTER MAY BE USED ONLY ON RESIDENTIAL STREETS. CURB CUTS FOR DRIVEWAYS ARE NOT REQUIRED WITH ROLL BACK CURB AND GUTTER.
2. INSTALL JOINTS IN ACCORDANCE WITH STANDARD SPECIFICATIONS.
3. CONCRETE SHALL CONFORM TO STANDARD SPECIFICATIONS, SECTION 2000.
4. ASPHALTIC CONCRETE SURFACE COURSE SHALL CONFORM TO STANDARD SPECIFICATIONS, SECTION 1300.
5. PAVEMENT REMOVAL AND REPLACEMENT BEYOND THE LIMITS OF CURB AND GUTTER REMOVAL IS AT THE CONTRACTOR'S OPTION AND COST.
6. REFER TO THE "CONCRETE SIDEWALK ACCESS RAMPS" DETAIL FOR "CURB AND GUTTER THROUGH ACCESS RAMP" DETAIL.



CURB REPLACEMENT DETAIL

NOTES:

1. THIS DETAIL IS TO BE USED ONLY WHEN EXISTING CURB AND GUTTER IS REMOVED AND REPLACED, BUT STREET PAVEMENT REMAINS IN PLACE.
2. 2- #4 X 1' 6" EPOXY COATED TIE BARS (MINIMUM) SHALL BE INSTALLED IN BOTH ENDS OF CURB REMOVAL LIMITS AT COLD CONSTRUCTION JOINTS.
3. #5 X 2'-0" EPOXY COATED TIE BARS, 2'-0" ON CENTER, SHALL BE INSTALLED TO TIE THE ADJACENT FULL DEPTH CONCRETE STREET PAVEMENT TO THE NEW CURB TOE. IF EXISTING CONCRETE PAVEMENT OR NEW CURB TOE ARE LESS THAN 8" IN THICKNESS, THEN #4 X 1'-6" EPOXY COATED TIE BARS, 1'-6" ON CENTER, SHALL BE INSTALLED.

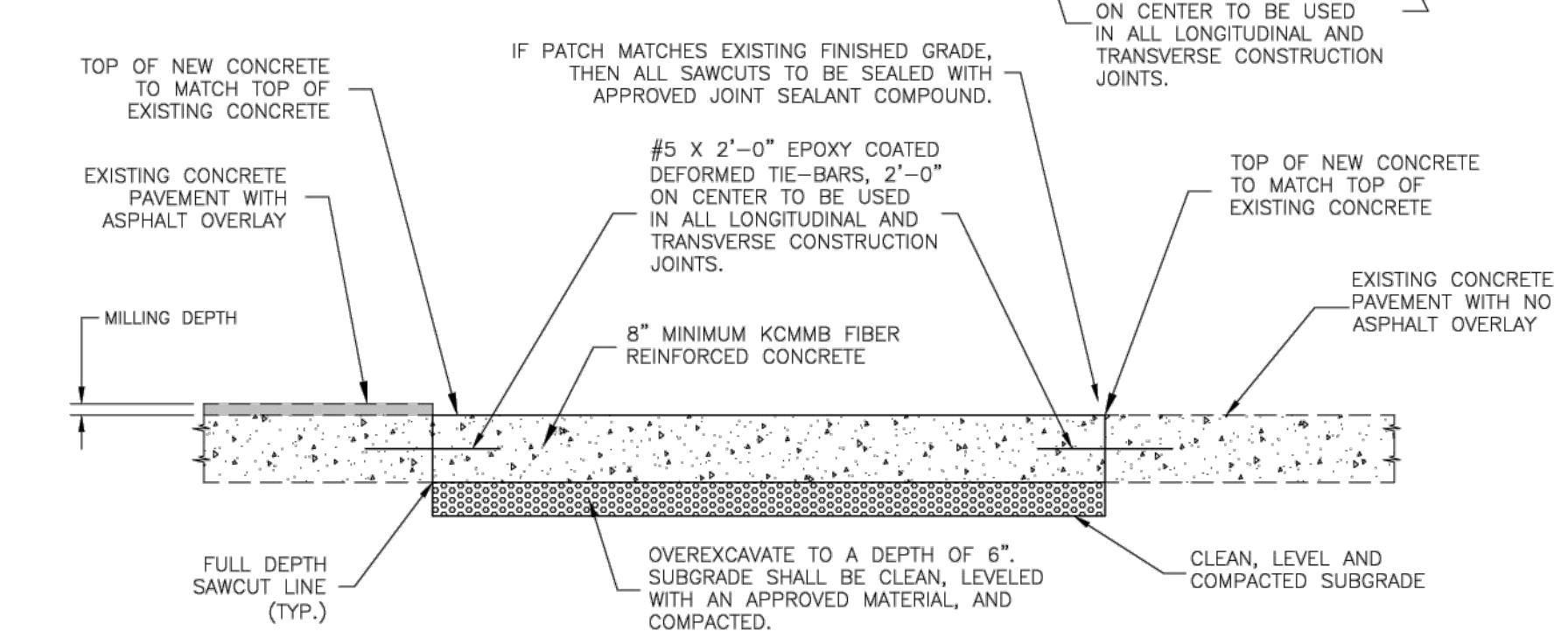
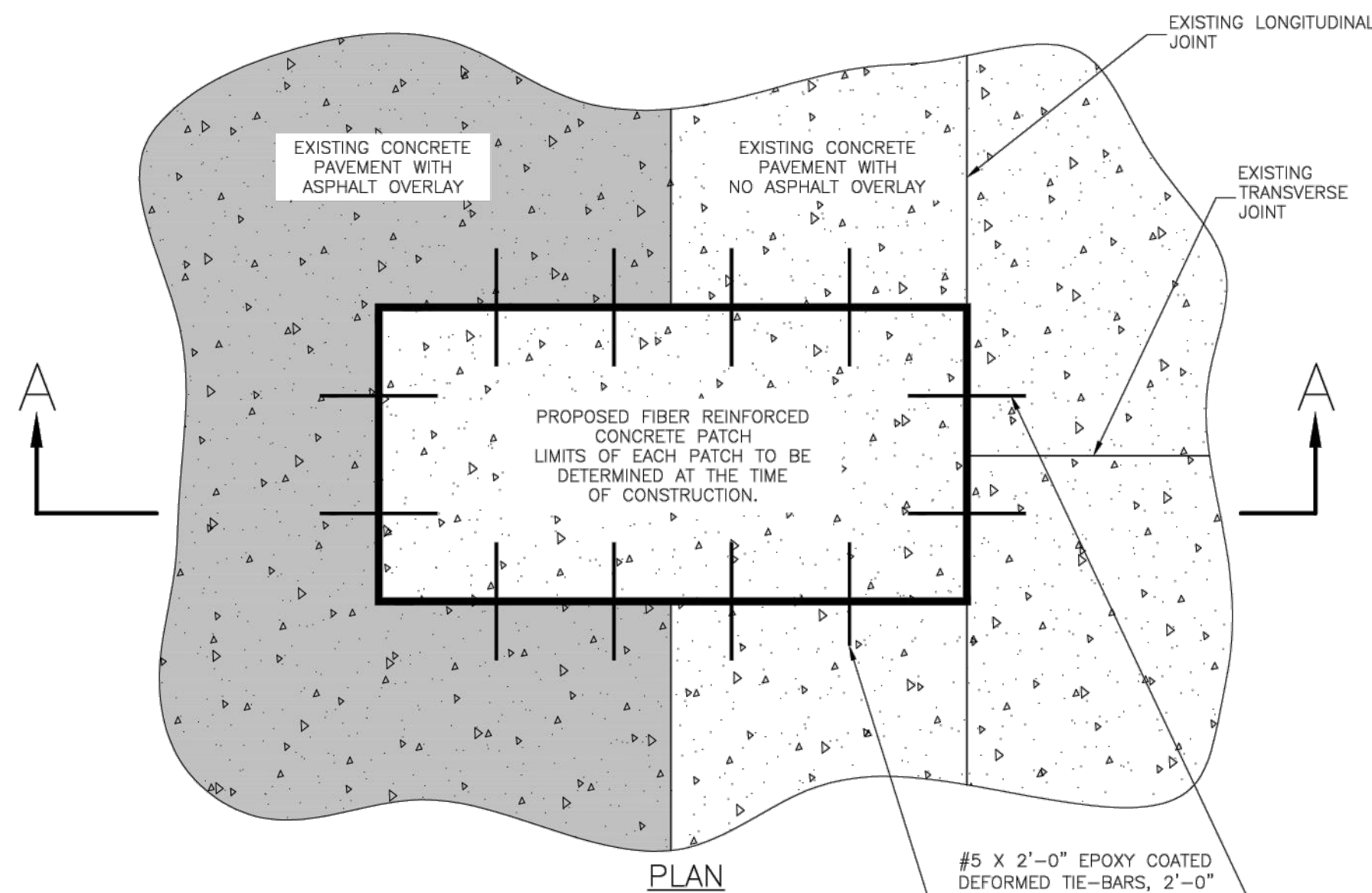
2023 EDITION SHEET 30 OF 43

DATE	BY	REVISION
04-01-23	LJM	REPLACES ALL PREVIOUS VERSIONS OF CONCRETE CURB AND GUTTER DETAILS
05-01-22	LJM	REPLACES ALL PREVIOUS VERSIONS OF CONCRETE CURB AND GUTTER DETAILS

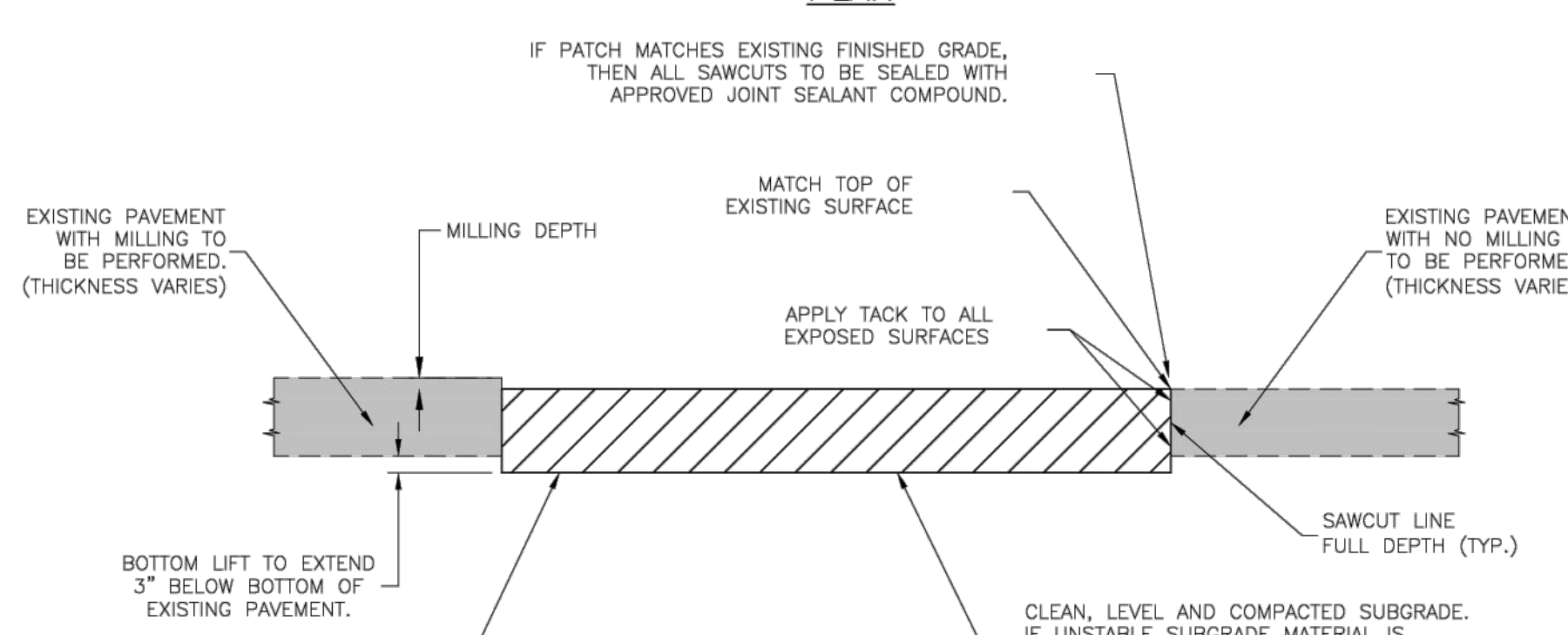
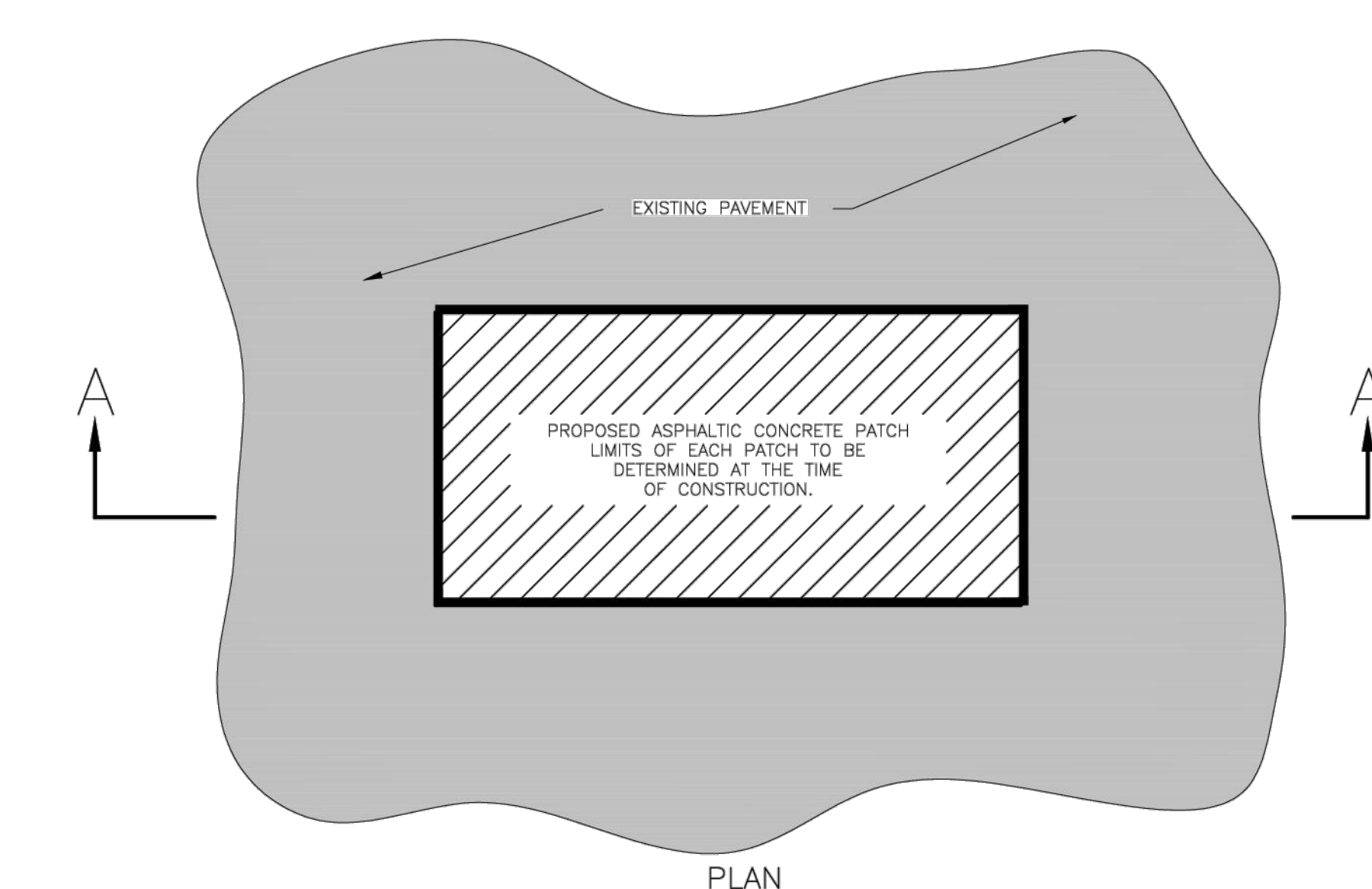


STANDARD DETAILS FOR
CONCRETE CURB AND GUTTER

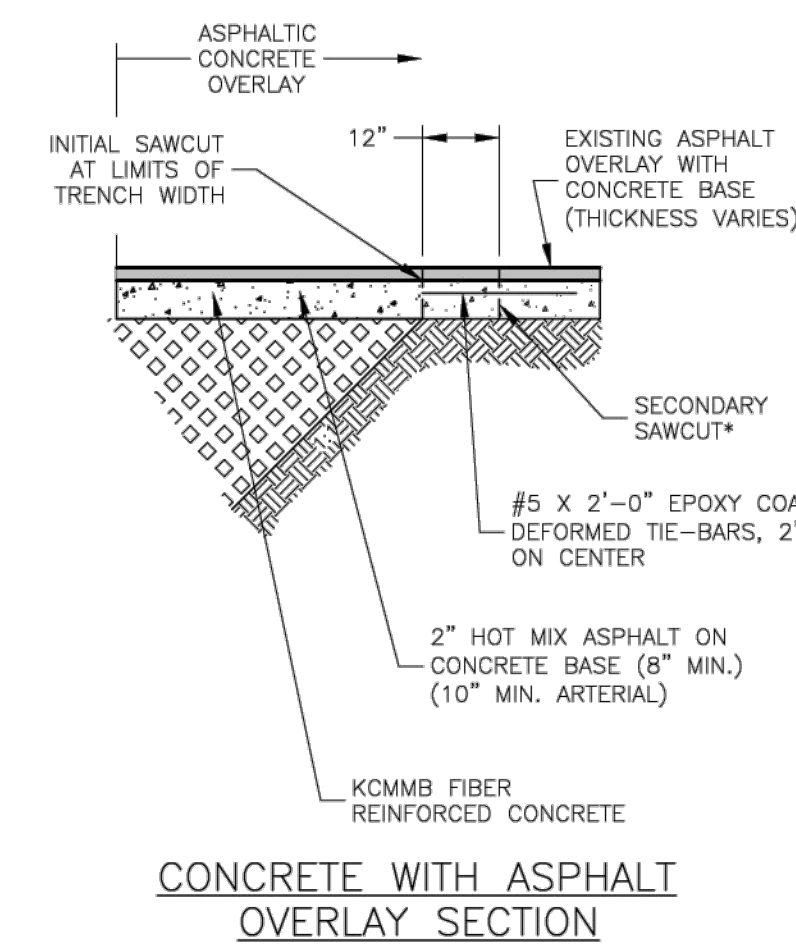
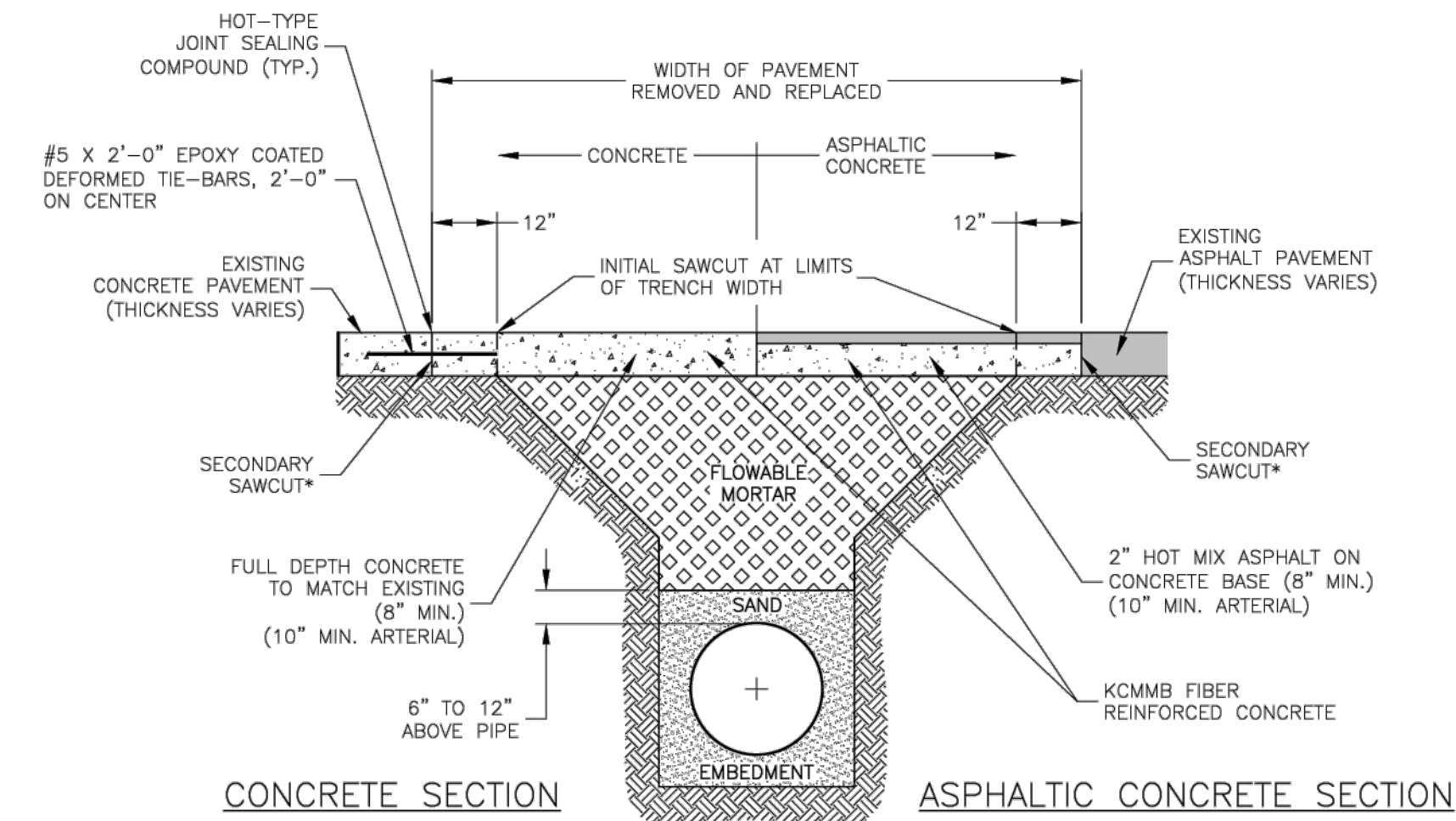
DAVID P. CRONIN CITY ENGINEER CRAIG S. OWENS CITY MANAGER



PORTLAND CEMENT CONCRETE PATCHING DETAILS

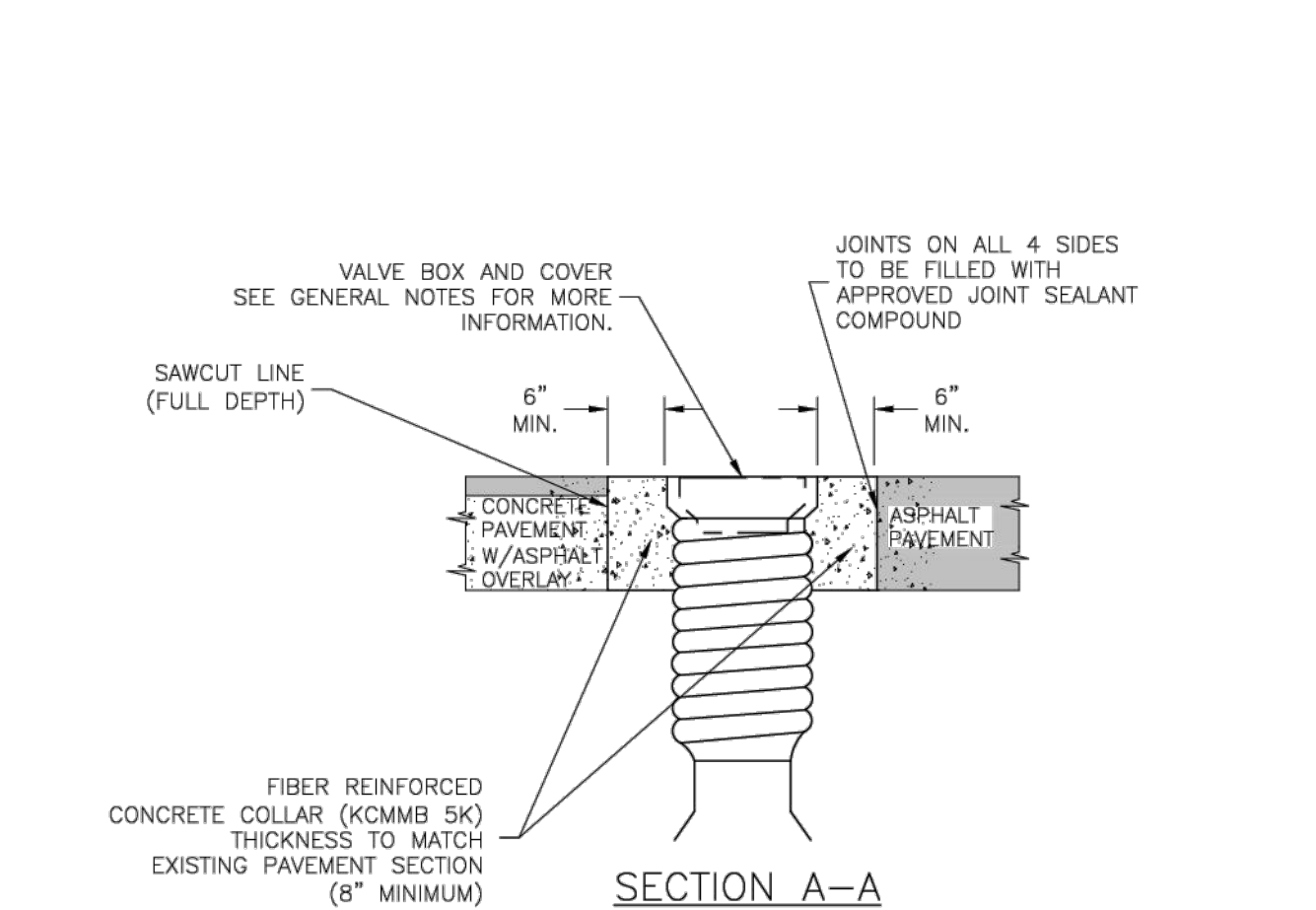
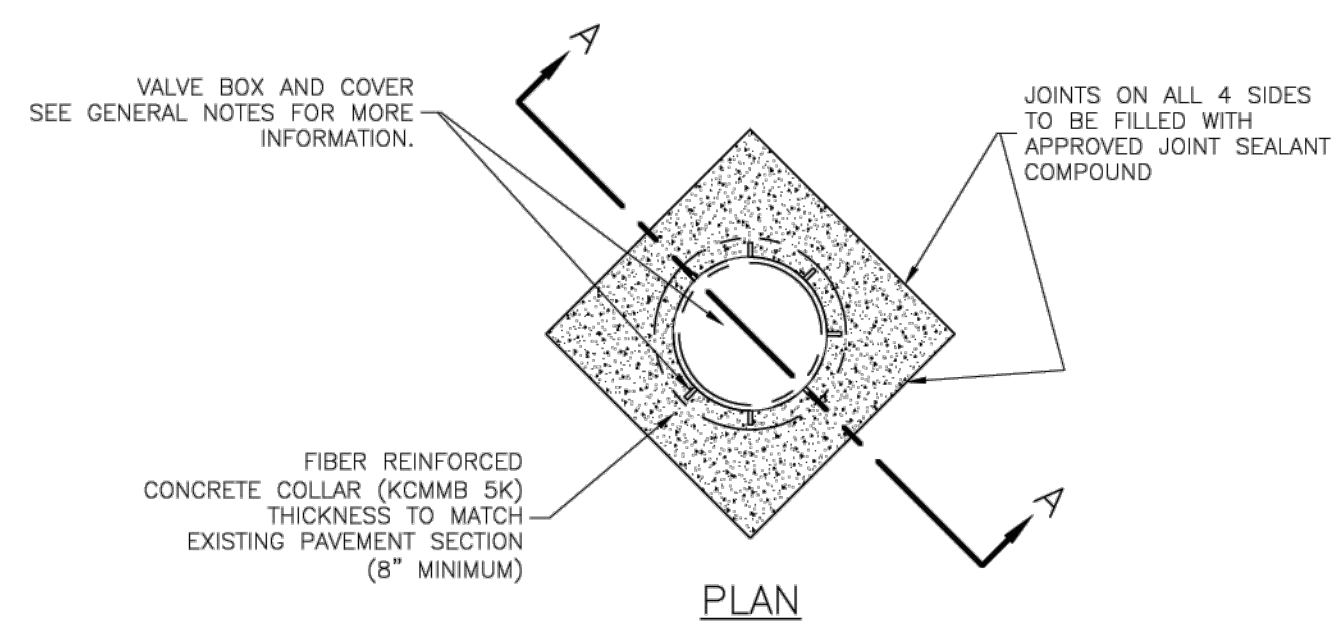


ASPHALTIC CONCRETE PATCHING DETAILS



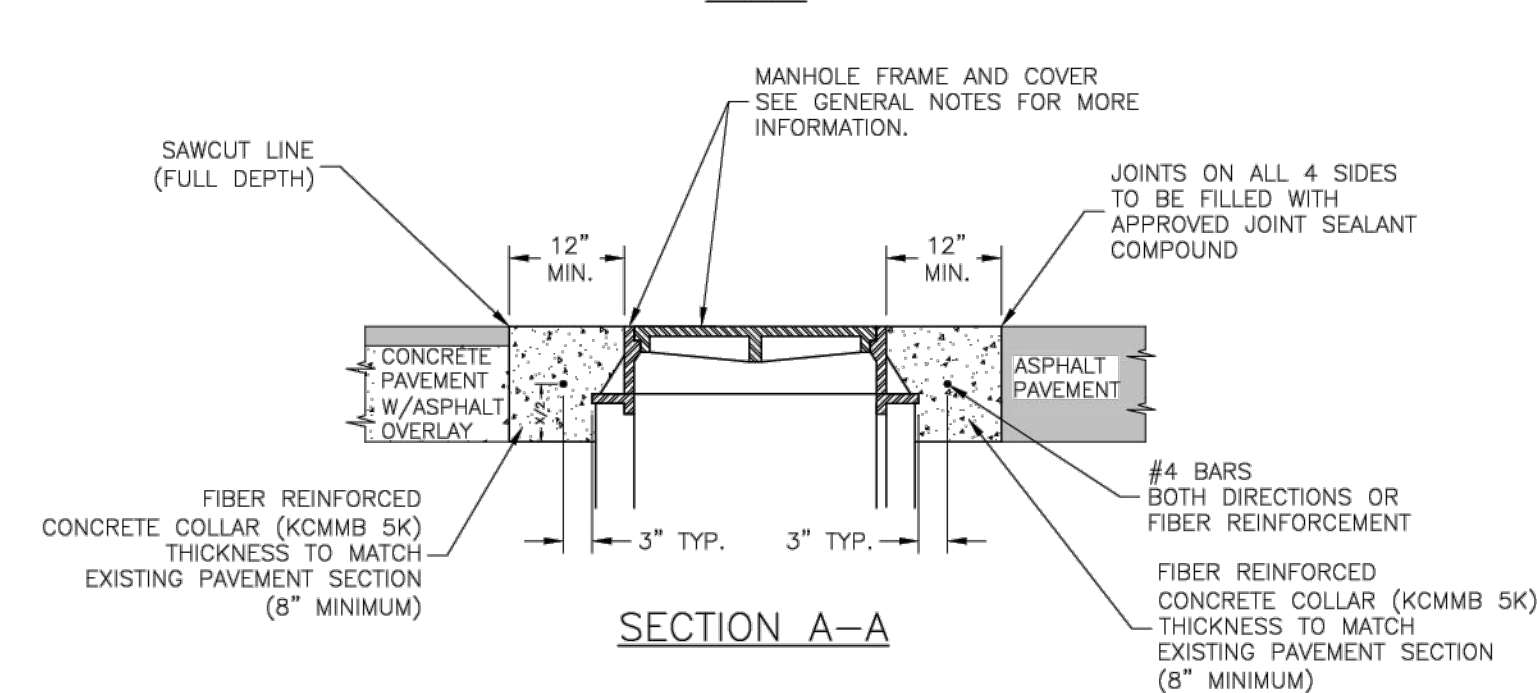
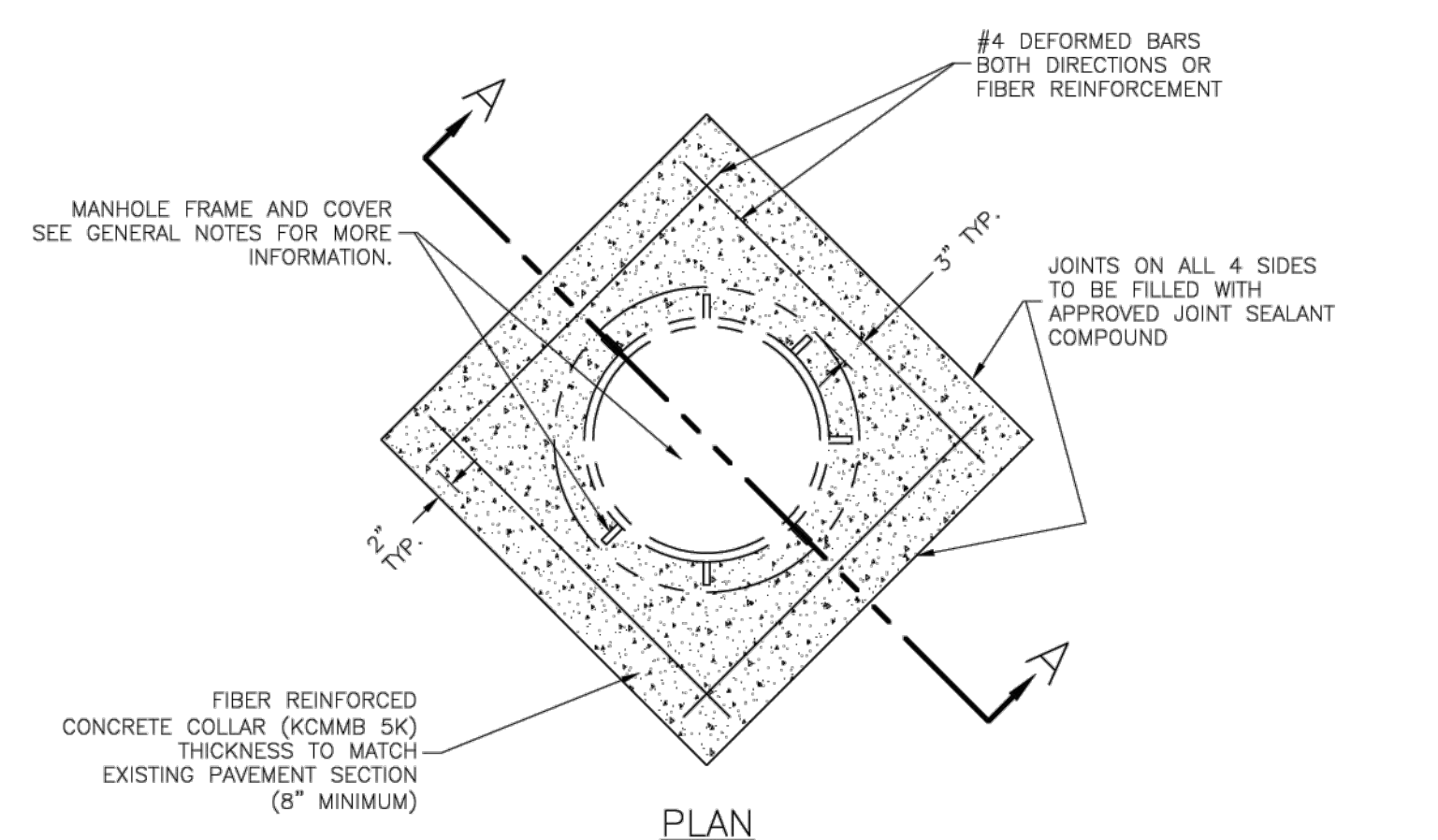
- NOTES
1. ALL PAVEMENT SAW CUTS SHALL BE MADE TO FULL DEPTH OF PAVEMENT THICKNESS AND PAVEMENT REMOVED WITHOUT DAMAGE TO ADJACENT PAVEMENT.
 2. ALL TRENCHING AND BACKFILL SHALL BE ACCOMPLISHED TO PAVING SUBGRADE PRIOR TO INITIATION OF SECOND SAW CUT AND ADDITIONAL PAVEMENT REMOVAL.
 3. PRIOR TO INSTALLATION OF FLOWABLE MORTAR AND NEW PAVEMENT, PAVEMENT SHALL BE OVERCUT TO EXTEND BEYOND ANY LOCATION THAT BECOMES UNDERMINED WITH APPARENT VOIDS UNDER PAVEMENT.
 4. BARS SHALL BE DRILLED AND GROUTED INTO EXISTING CONCRETE PAVEMENT.
 5. DRILLING AND GROUTING SHALL BE PER KDOT SPECIFICATIONS SECTION 842.
 6. TRENCH BACKFILL SHALL BE FLOWABLE FILL FROM TWO (2) FEET BEHIND THE BACK OF CURB ON EACH SIDE OF THE STREET (INCLUSIVE OF GRAVEL DRIVES AND ALLEYS).
 7. FOR OVERLAYED BRICK STREETS, THE BRICKS NEED TO BE CLEANED AND PALLETED. CONTACT THE CITY OF LAWRENCE STREET DIVISION TO SCHEDULE PICKUP. THE REMAINING TRENCH SHOULD BE TREATED AS PER THE ASPHALT OVERLAY DETAIL.
 8. FOR BRICK STREETS, THE BRICK NEEDS TO BE REPLACED.

PERMANENT PAVEMENT REMOVAL AND REPLACEMENT DETAILS



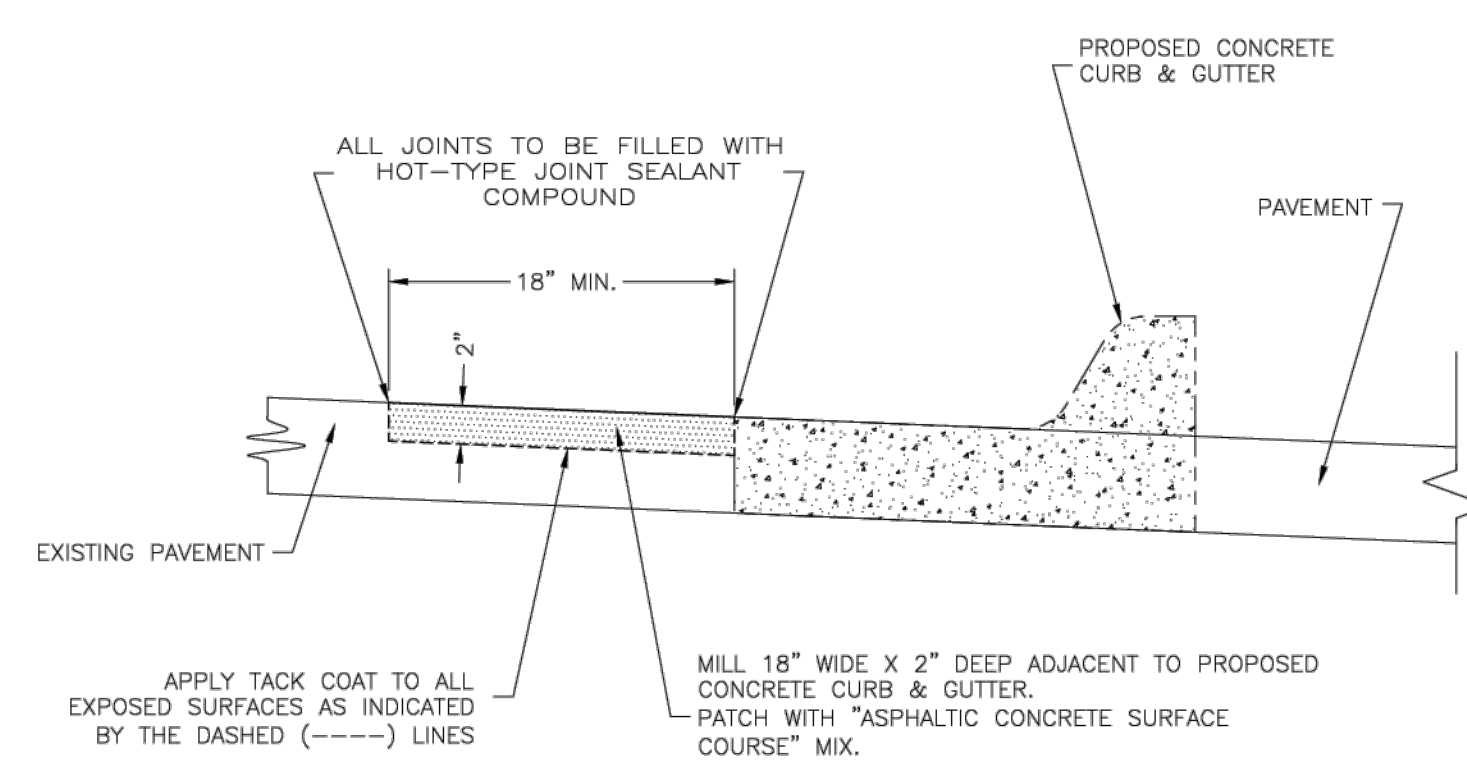
- GENERAL NOTES
- 1.) ADJUST VALVE BOX FRAME AND COVER TO FINISH GRADE AND SLOPE.
 - 2.) THE ORIENTATION OF THE REINFORCED CONCRETE COLLAR SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.
 - 3.) ALL ITEMS SHOWN ABOVE ARE SUBSIDIARY TO THE BID ITEM "VALVE ADJUSTMENT".

STANDARD VALVE ADJUSTMENT DETAILS



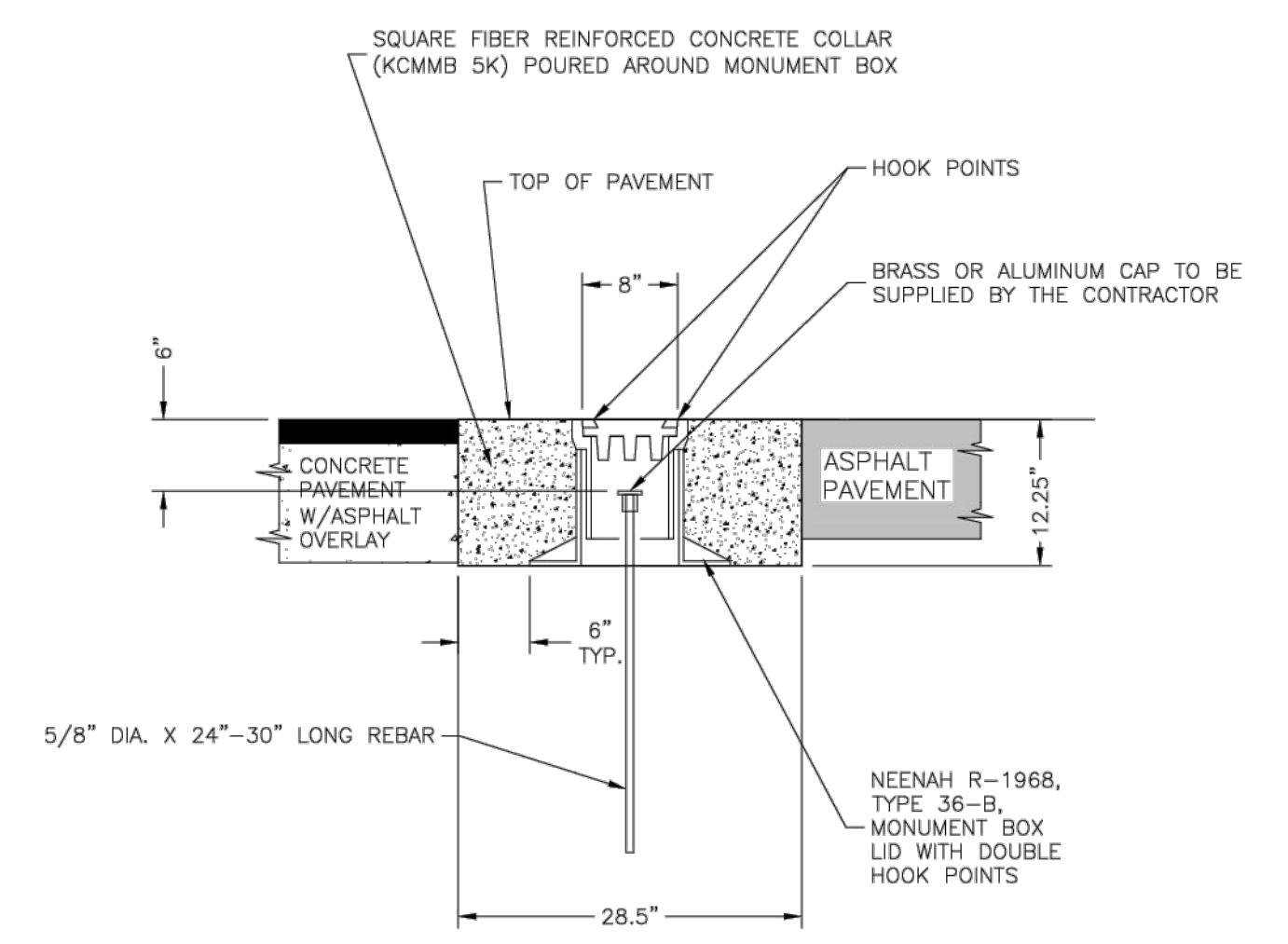
- GENERAL NOTES
- 1.) ADJUST MANHOLE FRAME AND COVER TO FINISH GRADE AND SLOPE WITH CONCRETE ADJUSTMENT RINGS AND LEVELING MORTAR AS REQUIRED.
 - 2.) THE ORIENTATION OF THE REINFORCED CONCRETE COLLAR SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.
 - 3.) ALL ITEMS SHOWN ABOVE ARE SUBSIDIARY TO THE BID ITEM "MANHOLE ADJUSTMENT".

STANDARD MANHOLE ADJUSTMENT DETAILS



- GENERAL NOTES
- 1.) JOINT SEALANT SUBSIDIARY TO OTHER BID ITEMS.
 - 2.) TACK COAT SUBSIDIARY TO OTHER BID ITEMS.
 - 3.) ASPHALTIC CONCRETE EDGE PATCH SUBSIDIARY TO OTHER BID ITEMS.

ASPHALTIC CONCRETE EDGE PATCH DETAIL ADJACENT TO PROPOSED CONCRETE CURB AND GUTTER OR PAVEMENT



TYPE 1 MONUMENT BOX DETAIL

- GENERAL NOTES
- 1.) ADJUST MONUMENT BOX TO FINISH GRADE AND SLOPE WITH CONCRETE ADJUSTMENT RINGS AND LEVELING MORTAR AS REQUIRED.
 - 2.) THE ORIENTATION OF THE REINFORCED CONCRETE COLLAR SHALL BE DETERMINED BY THE CITY SURVEYOR IN THE FIELD.
 - 3.) ALL ITEMS SHOWN ABOVE ARE SUBSIDIARY TO THE BID ITEM "MONUMENT BOX INSTALL/ADJUSTMENT".
 - 4.) OPTION TO INSTALL BY CORING METHOD AS APPROVED BY THE ENGINEER.

DATE	BY	REVISION
04-01-23	LJM	REPLACES ALL PREVIOUS VERSIONS OF STREET REPAIR DETAILS
05-01-22	LJM	REPLACES ALL PREVIOUS VERSIONS OF STREET REPAIR DETAILS

2023 EDITION

SHEET 31 OF 43

City of Lawrence
MUNICIPAL SERVICES & OPERATIONS

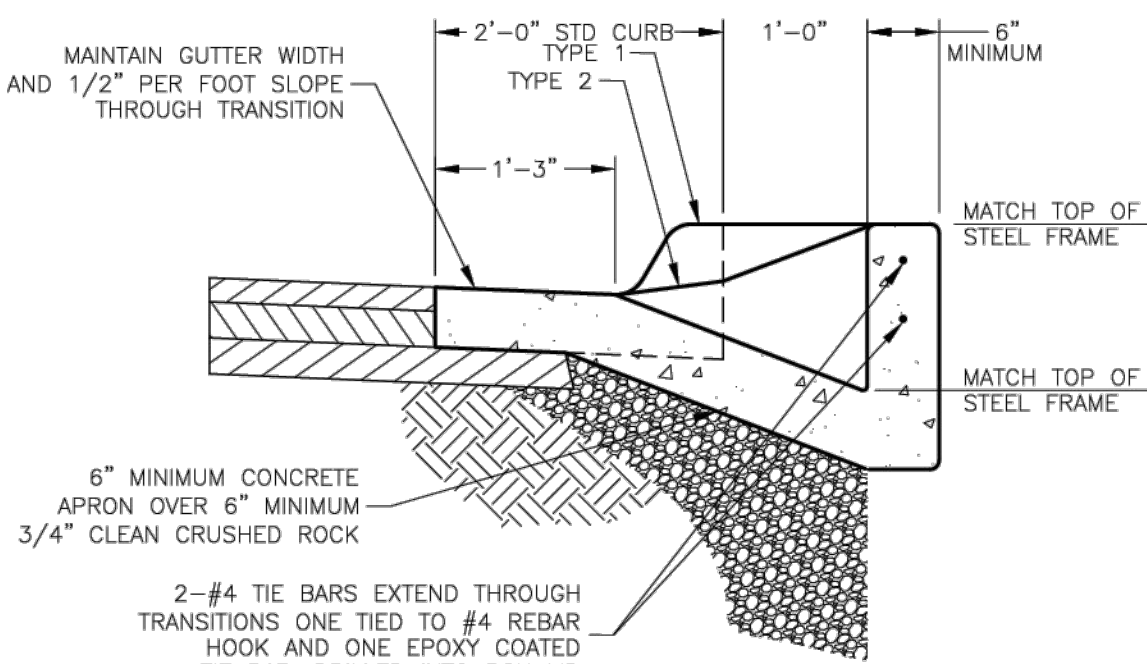
STANDARD DETAILS FOR STREET REPAIR

DAVID P. CRONIN
CITY ENGINEER

CRAIG S. OWENS
CITY MANAGER

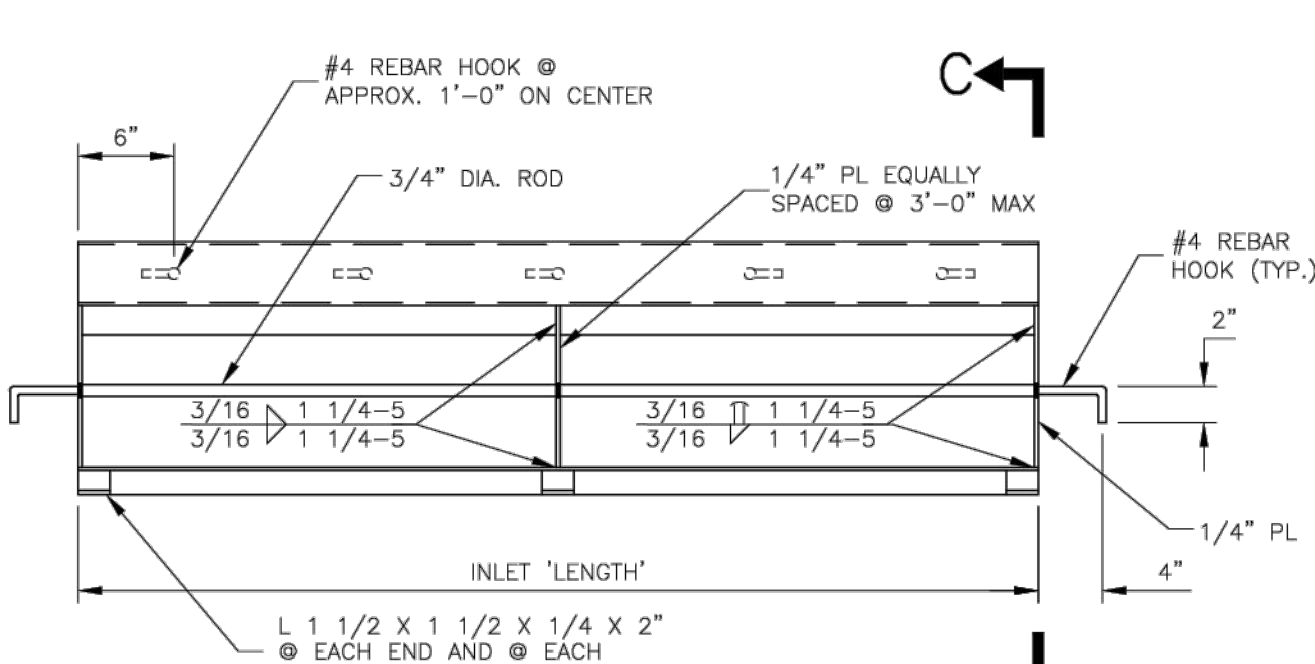
CURB INLET GENERAL NOTES

1. STANDARD DRAWINGS SHALL APPLY ONLY TO STRUCTURES WITHIN THE FOLLOWING LIMITS:
A. INSIDE PLAN DIMENSIONS SHALL NOT EXCEED 40 SQUARE FEET.
B. WALL HEIGHT SHALL NOT EXCEED TO VERTICAL FEET..
2. THE MINIMUM WIDTH OF ALL STRUCTURES SHALL BE 4 FEET OR AS REQUIRED FOR PIPE CLEARANCE.
3. STEPS ARE REQUIRED IN ALL STRUCTURES WITH WALL HEIGHT GREATER THAN 4 FEET.
4. FRAMES, LIDS, CASTINGS, STEPS, INVERT, SUBSURFACE DRAINS, PIPE CONNECTIONS AND OTHER ITEMS SHOWN SHALL BE CONSIDERED SUBSIDIARY TO EACH STANDARD STRUCTURE.
5. SUBSURFACE DRAINS ARE REQUIRED IN ALL STRUCTURES IN THE PUBLIC RIGHT-OF-WAY WITH WALL HEIGHT GREATER THAN 3 FEET. ONE DRAIN PER WALL SHALL BE INSTALLED ONLY IN WALLS WHICH ARE PERPENDICULAR TO THE STREET CENTERLINE.
6. CURB INLETS WITH INSIDE PLAN DIMENSIONS EXCEEDING 25 SQUARE FEET SHALL HAVE TYPE II RING AND COVER. CURB INLETS IN PAVED AREAS SHALL HAVE TYPE II RING AND COVER.
7. WHERE SIDEWALKS ADJOIN STORM SEWER STRUCTURES, #4 EPOXY COATED TIE BARS SHALL BE PLACED 18" ON CENTER. TIE BARS SHALL BE 18" LONG WITH 6" IN THE STRUCTURE TOP, THROUGH ISOLATION JOINT.
8. CURB INLET DIMENSIONS SHALL BE STATED AS 'LENGTH' x 'WIDTH' ON ALL CONSTRUCTION NOTES.
9. THE MINIMUM LENGTH OF CURB INLET OPENING SHALL BE 5 FEET.
10. CURB INLET FRAME TOP CHANNEL SHALL BE FABRICATED FROM 0.15 MAX. CARBON, FORMING QUALITY, OR A36 HOT ROLLED STEEL PLATE.
11. ALL FLAT PLATE AND RODS SHALL BE M1020 MERCHANT QUALITY OR A36 HOT ROLLED STEEL.
12. ALL CURB INLET FRAME MATERIALS SHALL BE FREE FROM RUST AND MILL SCALE.
13. ALL WELDING SHALL CONFORM TO THE PROVISIONS OF THE AWS "STRUCTURAL WELDING CODE."
14. CURB INLET FRAMES SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION PER ASTM A123.
15. CURB INLET FRAMES SHALL BE SLOPED TO MATCH THE STREET CENTERLINE GRADE.
16. STAMPING TOOLS SHALL BE APPROVED PRIOR TO USE. A FULL SIZE FABRICATION PATTERN MAY BE OBTAINED FROM THE MUNICIPAL SERVICES AND OPERATIONS DEPARTMENT. FOR CAST-IN-PLACE INLETS, A STAMPING TOOL MAY BE BORROWED FROM THE DEPARTMENT PER AN APPROVED SCHEDULE.
17. ALL DIMENSIONS AND SIDE SLOPES SHOWN WITHIN THE "TYPICAL TRENCH SECTION DETAILS" ARE TYPICAL. ANY DEVIATION FROM THESE DIMENSIONS MUST BE APPROVED BY THE PROJECT ENGINEER PRIOR TO BEGINNING THE TRENCHING WORK, OR AS SOON AS PRACTICABLE.
18. FLOWABLE FILL QUANTITY IS CALCULATED BASED ON A TYPICAL TRENCH SIDE SLOPE OF 1:1. A SIDE SLOPE FLATTER THAN 1:1 (IF REQUIRED TO ENSURE STABILITY AND SAFETY OF THE TRENCHES) MUST BE APPROVED BY THE PROJECT ENGINEER IN THE FIELD PRIOR TO BEGINNING EXCAVATION FOR TRENCHES, OR AS SOON AS PRACTICABLE. THE INTENT IS TO KEEP THE FLOWABLE FILL QUANTITY TO A MINIMUM.
19. FLOWABLE FILL SHALL BE PLACED TO BOTTOM OF THE PAVEMENT, STABILIZED BASE, OR GRANULAR BASE AS DIRECTED BY ENGINEER.
20. CONCRETE FOR INVERT AND COLLARS SHALL MEET CITY SPECIFICATIONS SECTION 2000 - CONCRETE
21. LIFT HOLES IN PRE-CAST STRUCTURES SHALL BE PATCHED WITH NON-SHRINK GROUT.



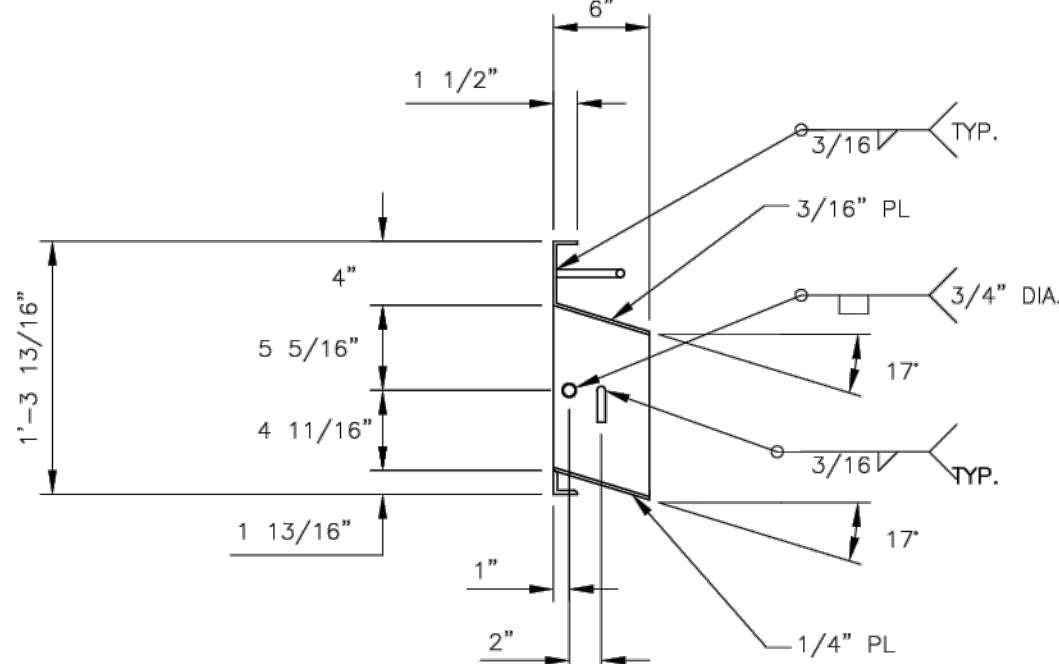
SECTION A-A

CURB TRANSITION

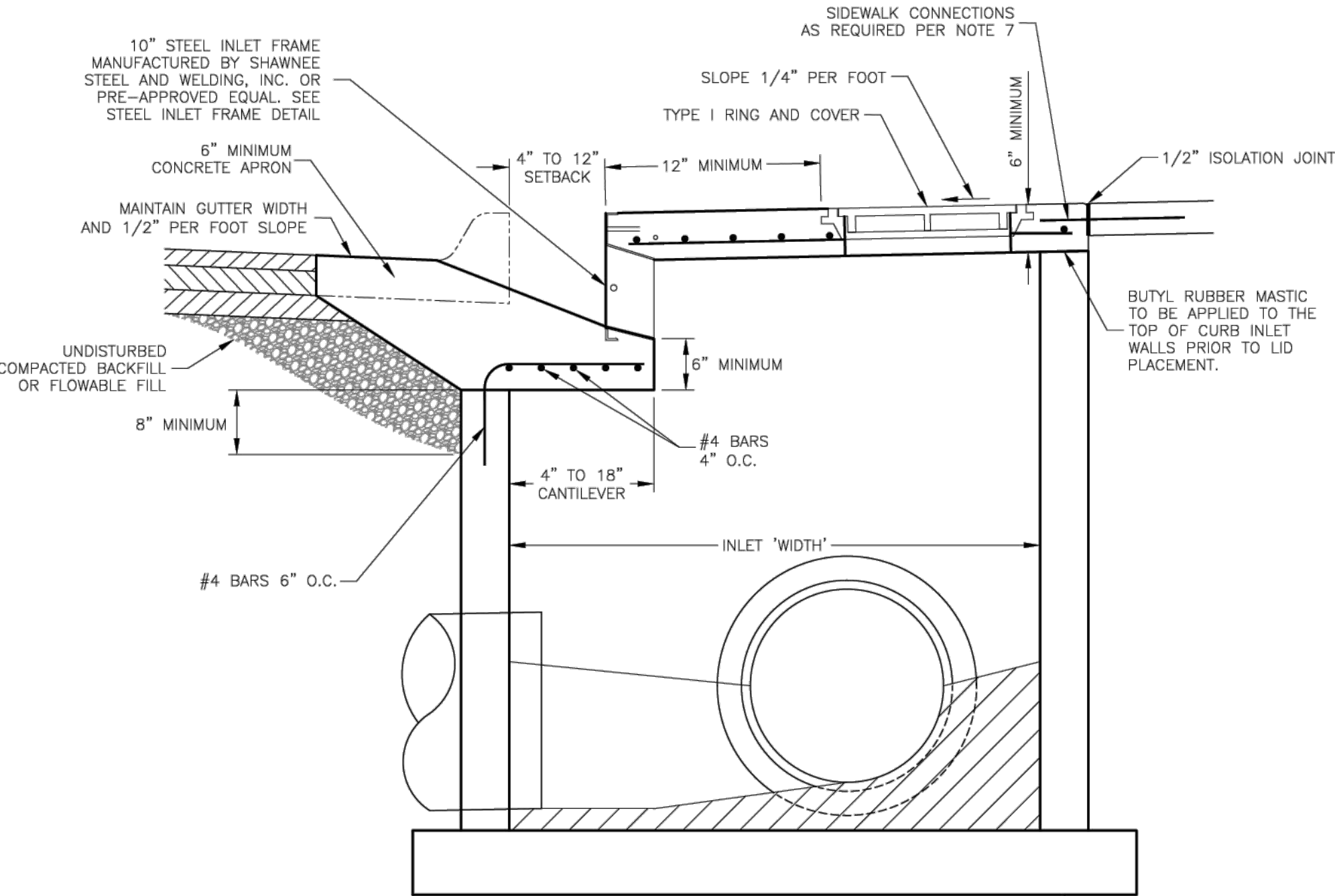


FRONT VIEW

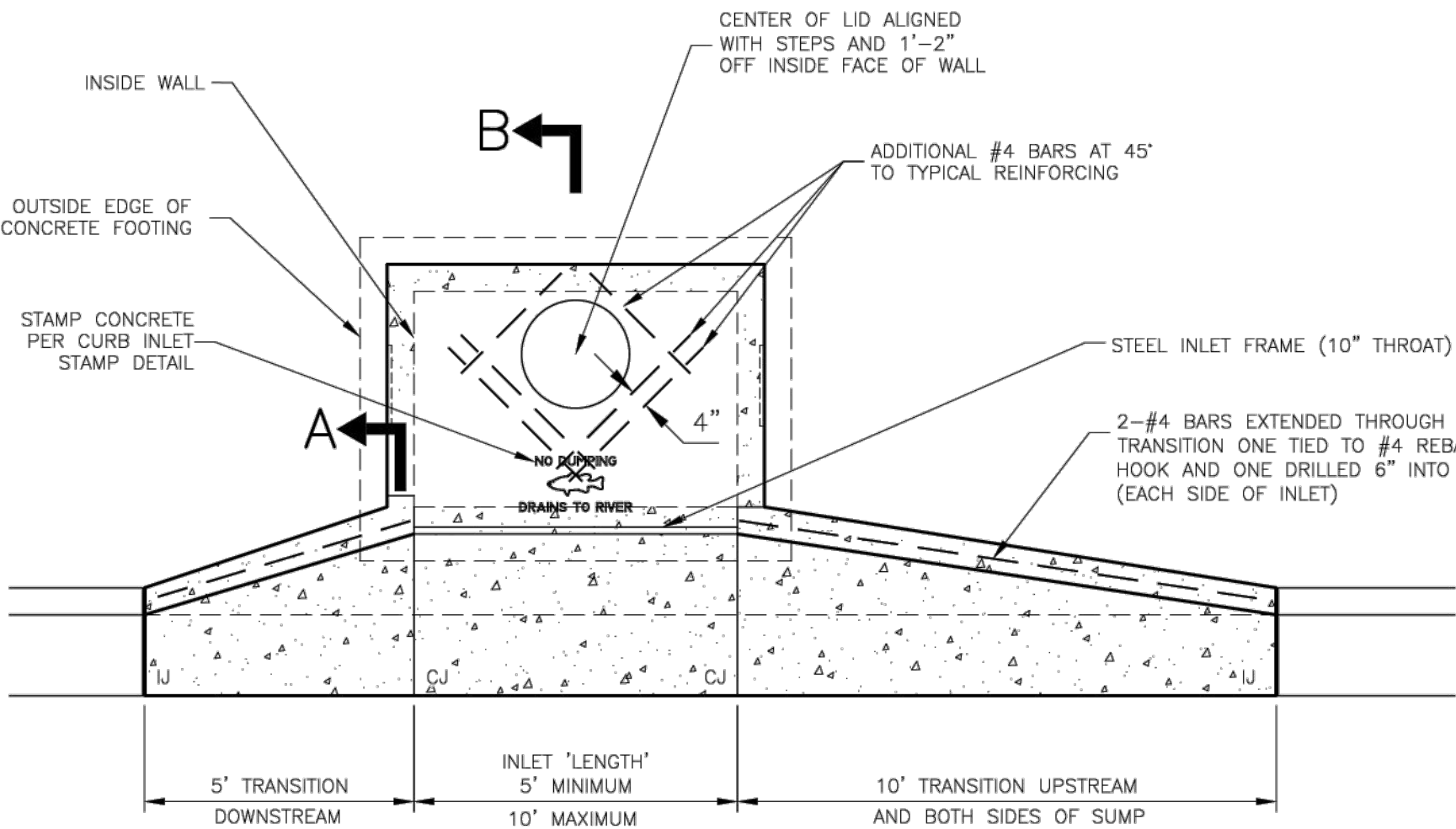
STEEL INLET FRAME



SECTION C-C

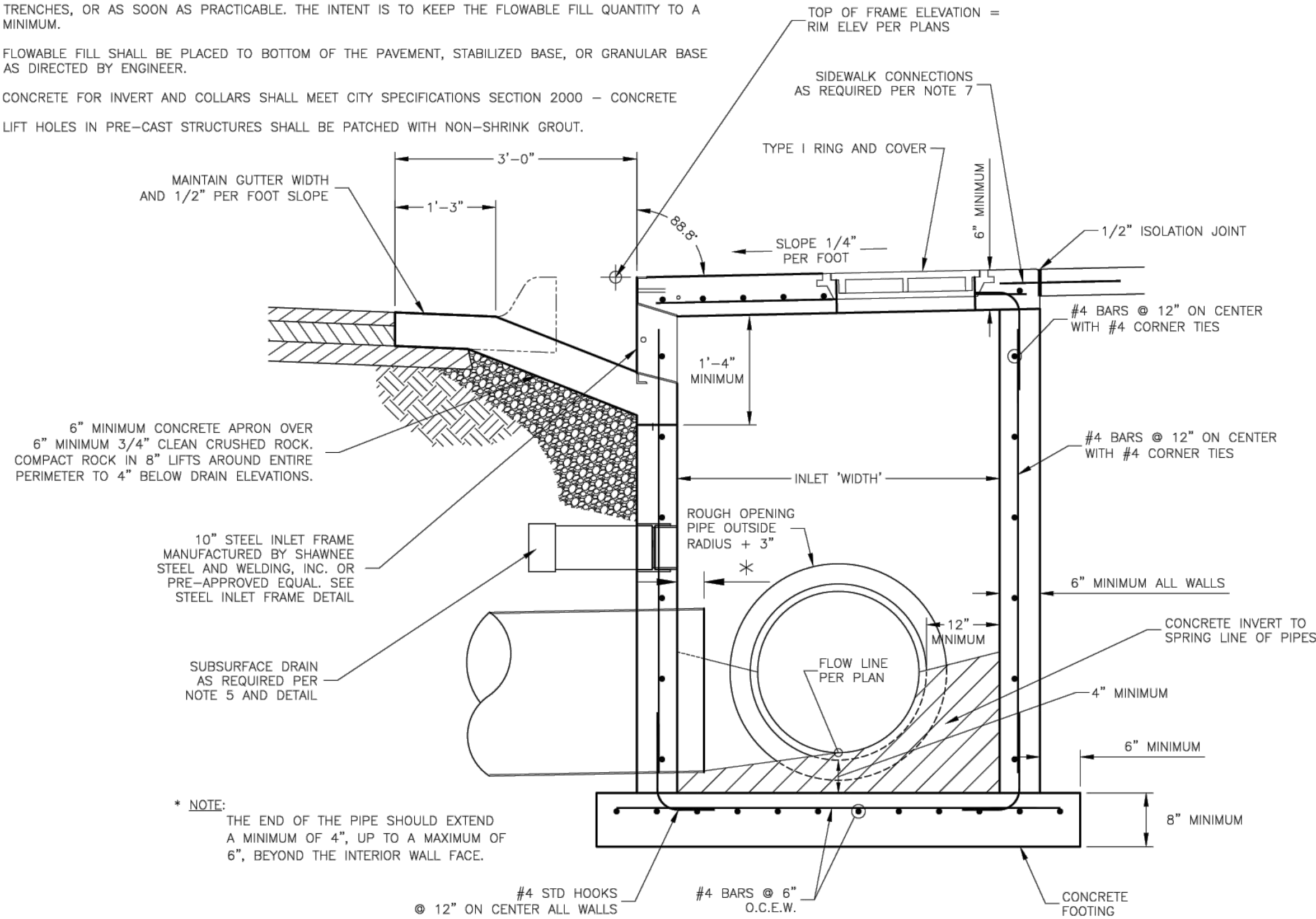


EXISTING CURB INLET CANTILEVER RETROFIT

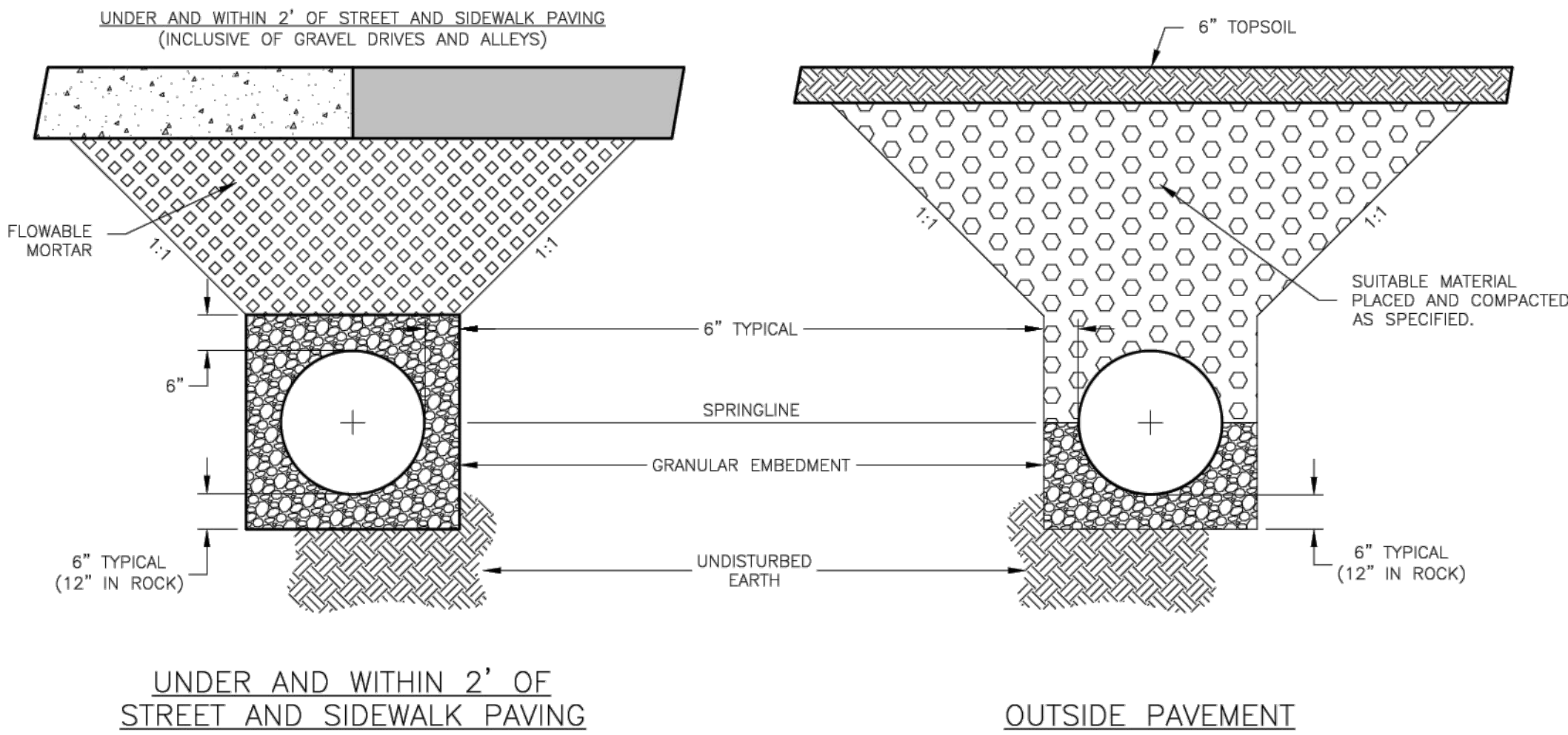


PLAN

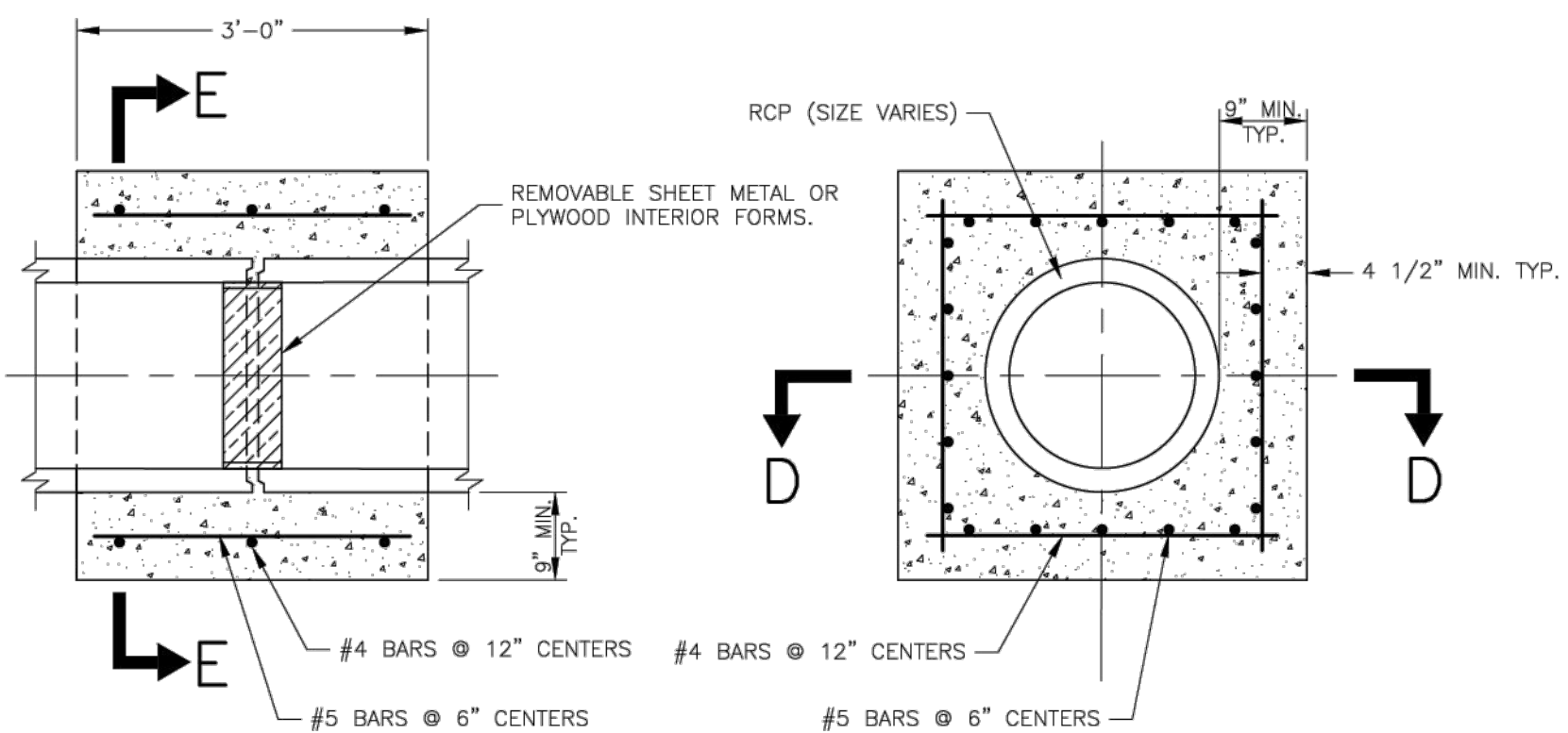
STANDARD CURB INLET



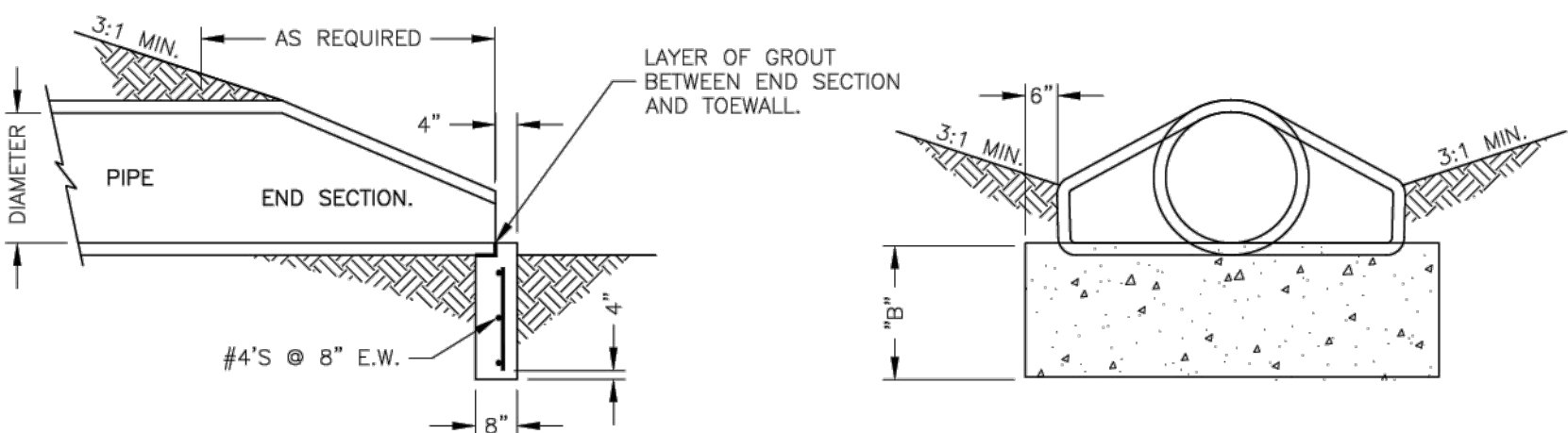
SECTION B-B



TYPICAL TRENCH SECTIONS



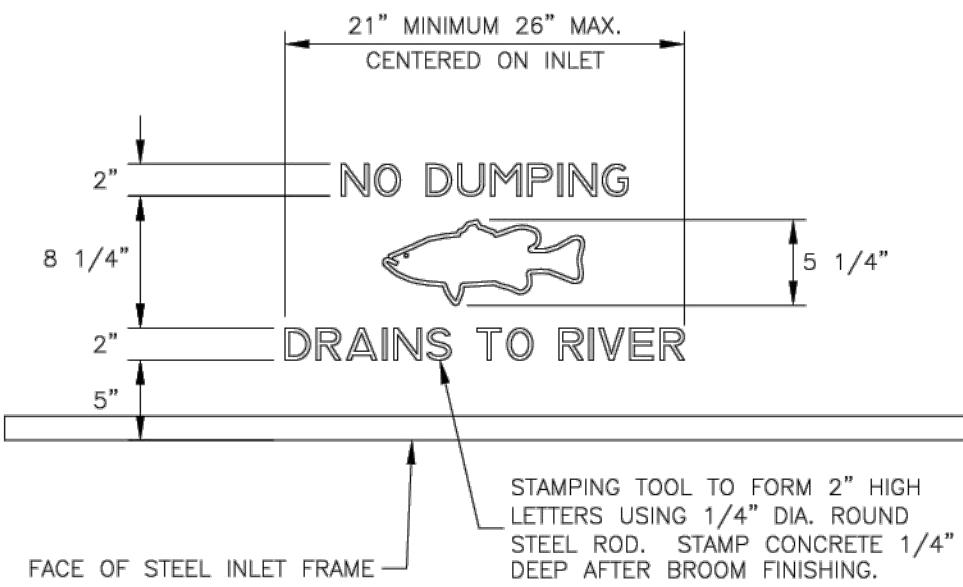
CONCRETE COLLAR



SIDE VIEW

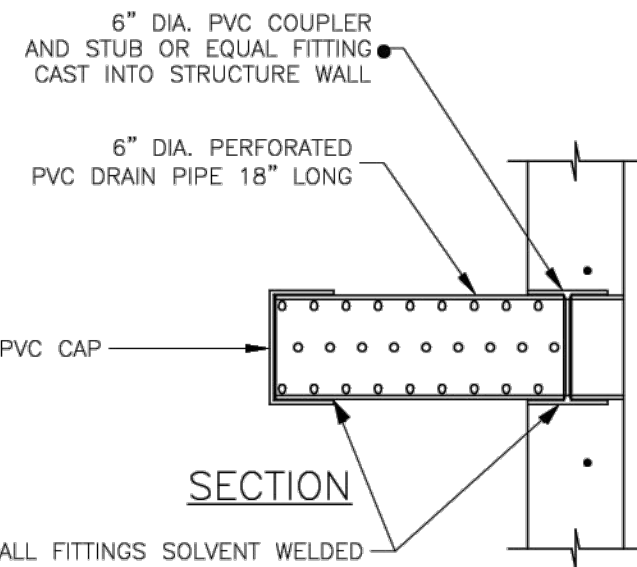
FRONT VIEW

STANDARD END SECTION



PLAN

CURB INLET STAMP



SUBSURFACE DRAIN

2023 EDITION SHEET 32 OF 43

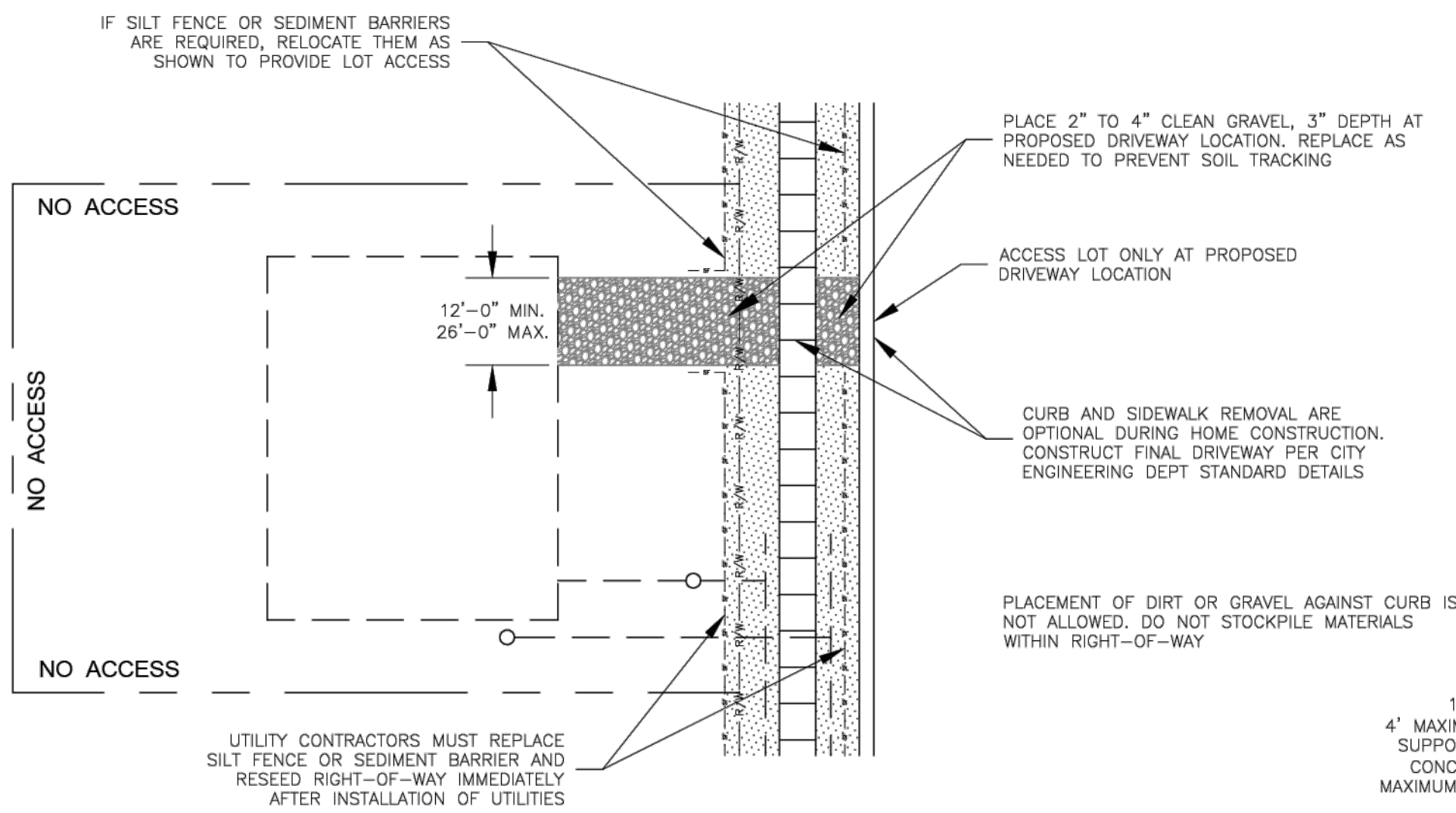
DATE	BY	REVISION
04-01-23	LJM	REPLACES ALL PREVIOUS VERSIONS OF STORM SEWER CURB INLET DETAILS
05-01-22	LJM	REPLACES ALL PREVIOUS VERSIONS OF STORM SEWER CURB INLET DETAILS



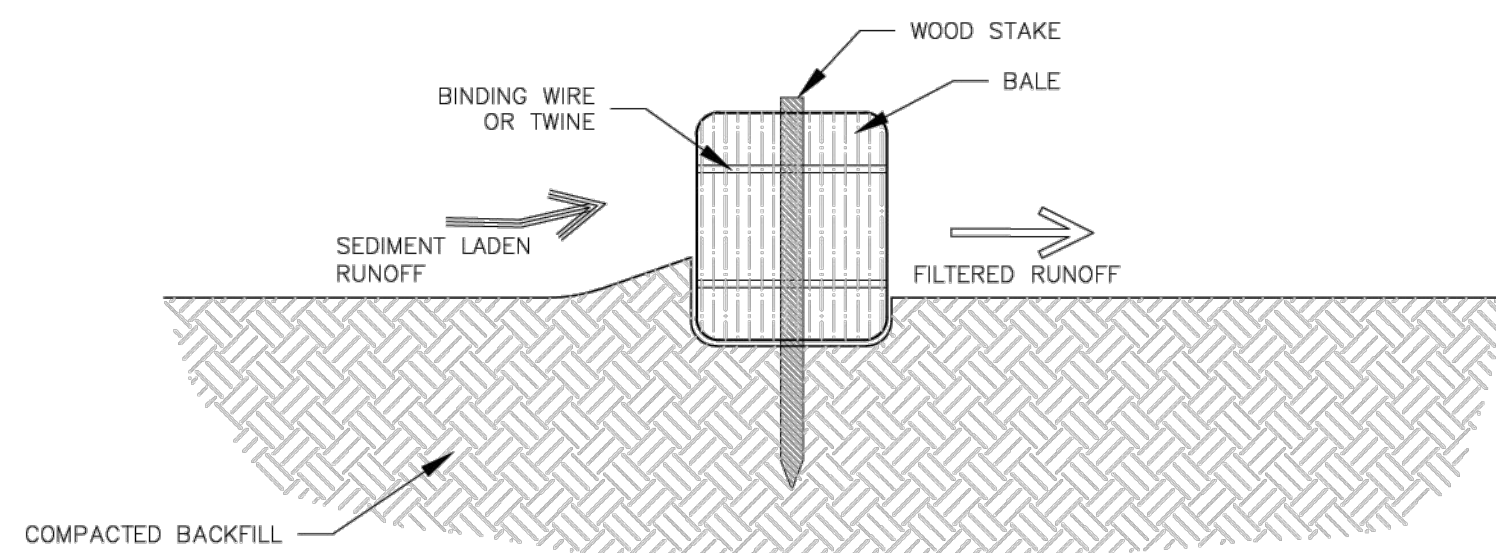
STANDARD DETAILS FOR STORM SEWER CURB INLETS

1 OF 2

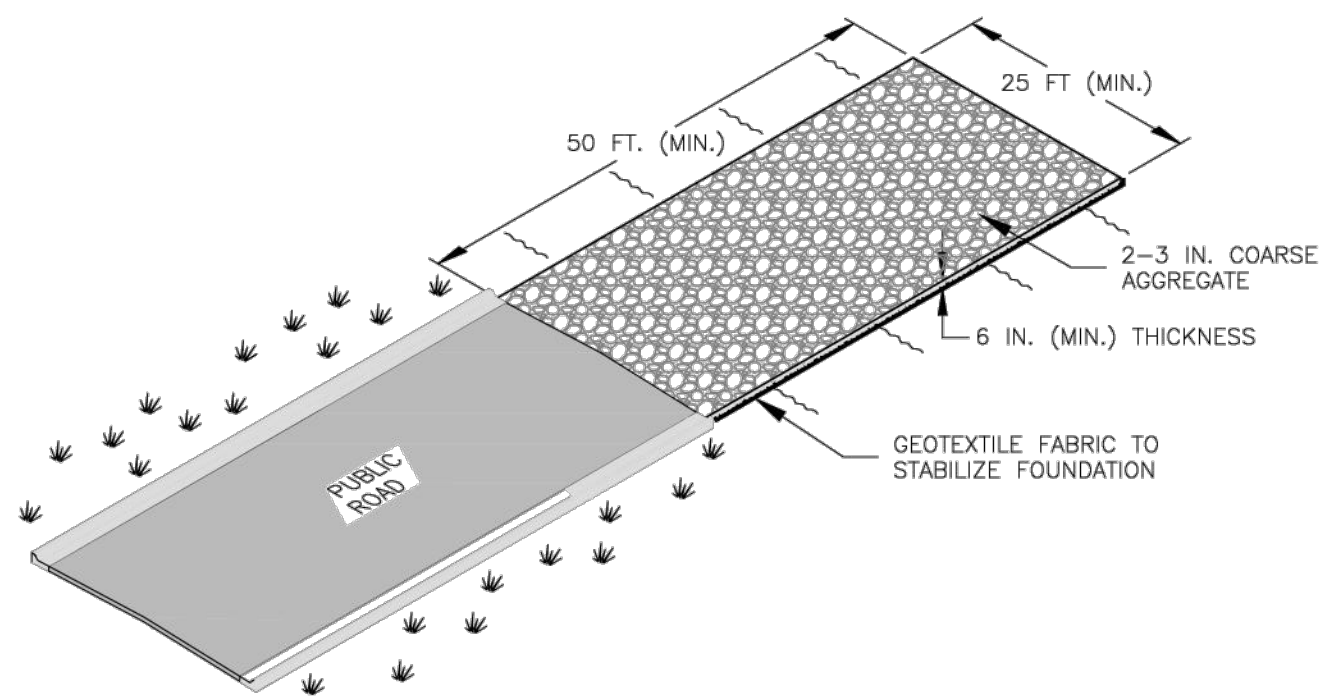
DAVID P. CRONIN CITY ENGINEER CRAIG S. OWENS CITY MANAGER



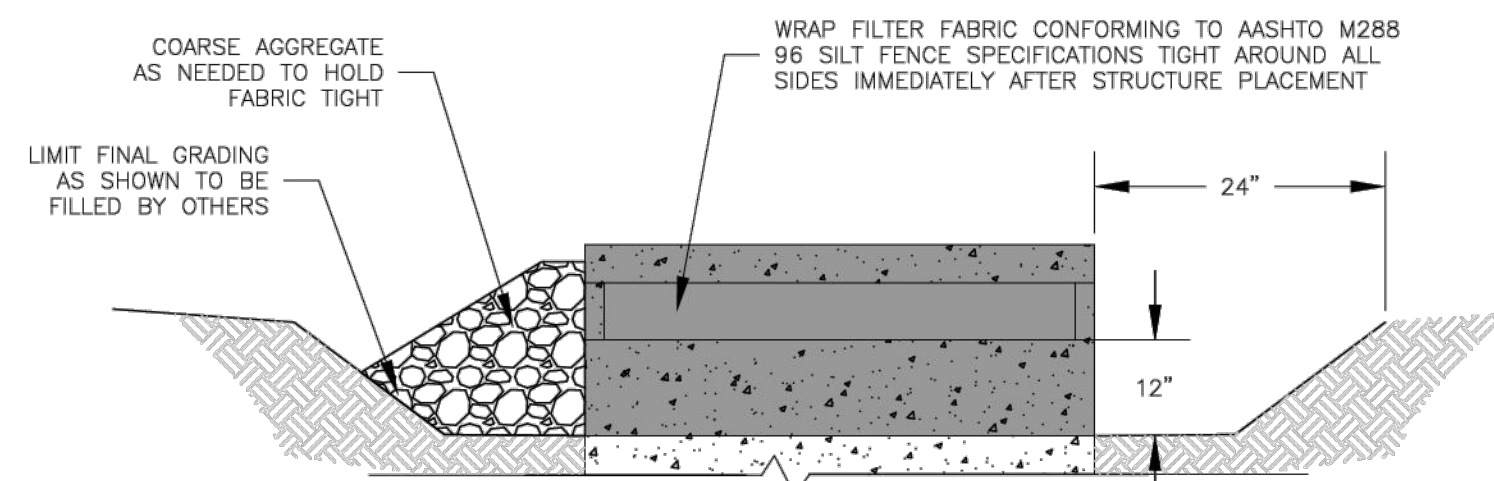
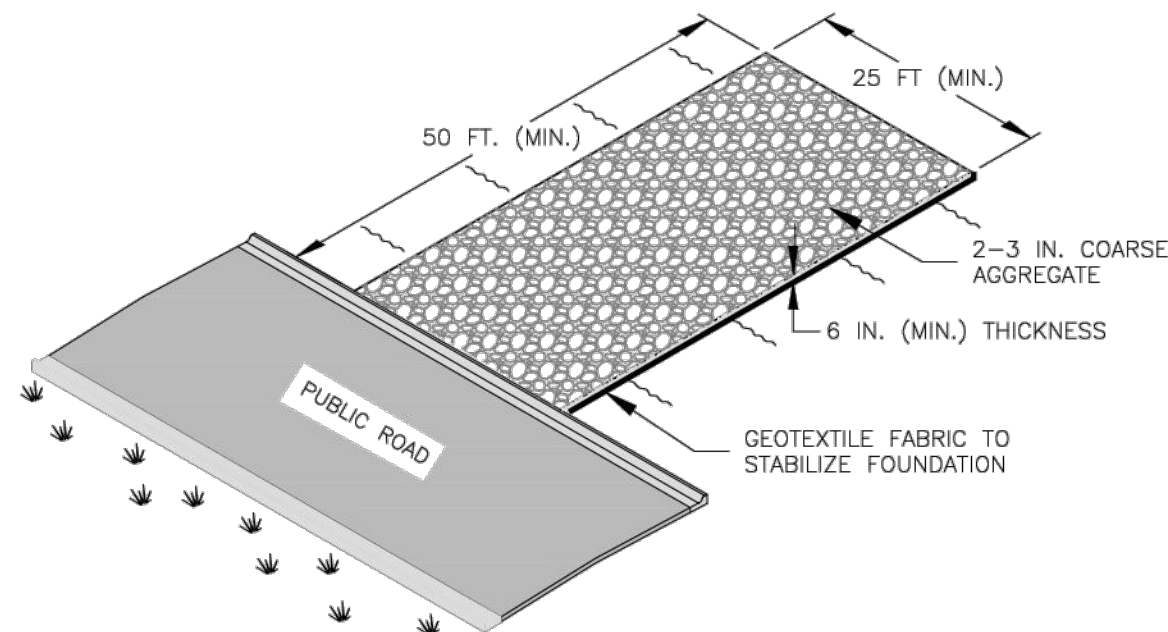
LOT ACCESS DETAIL
APPLIES TO ALL RESIDENTIAL LOTS



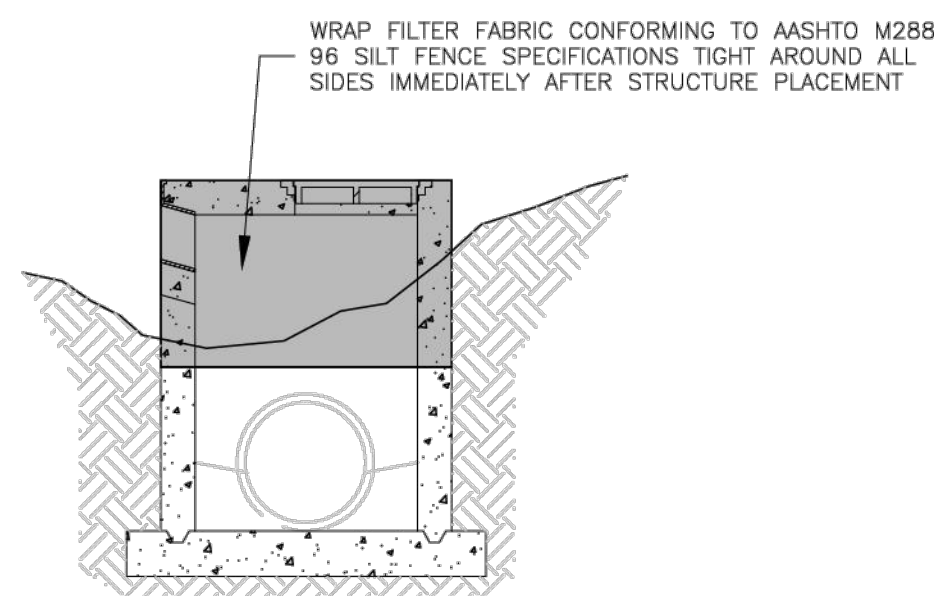
INSTALLATION OF BALE DITCH CHECKS
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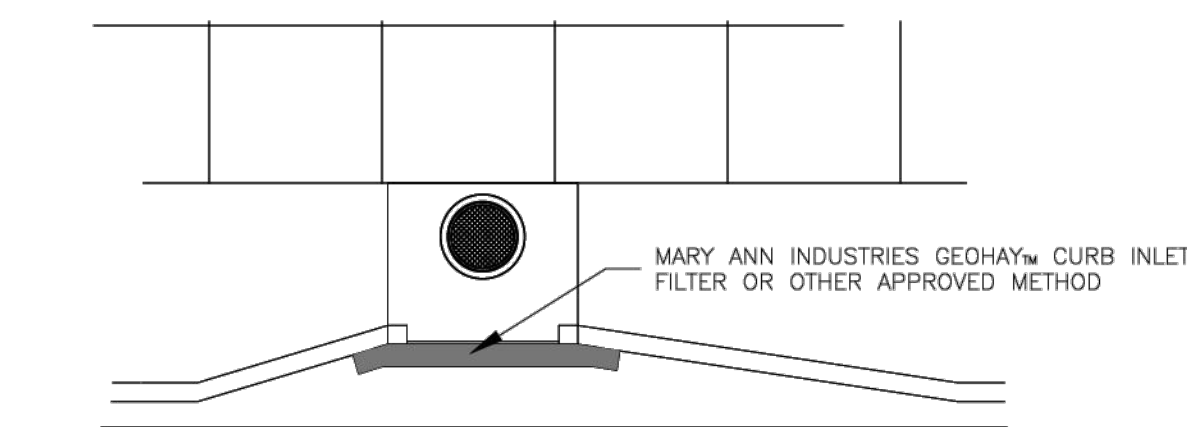
TEMPORARY GRAVEL CONSTRUCTION ENTRANCE PAD
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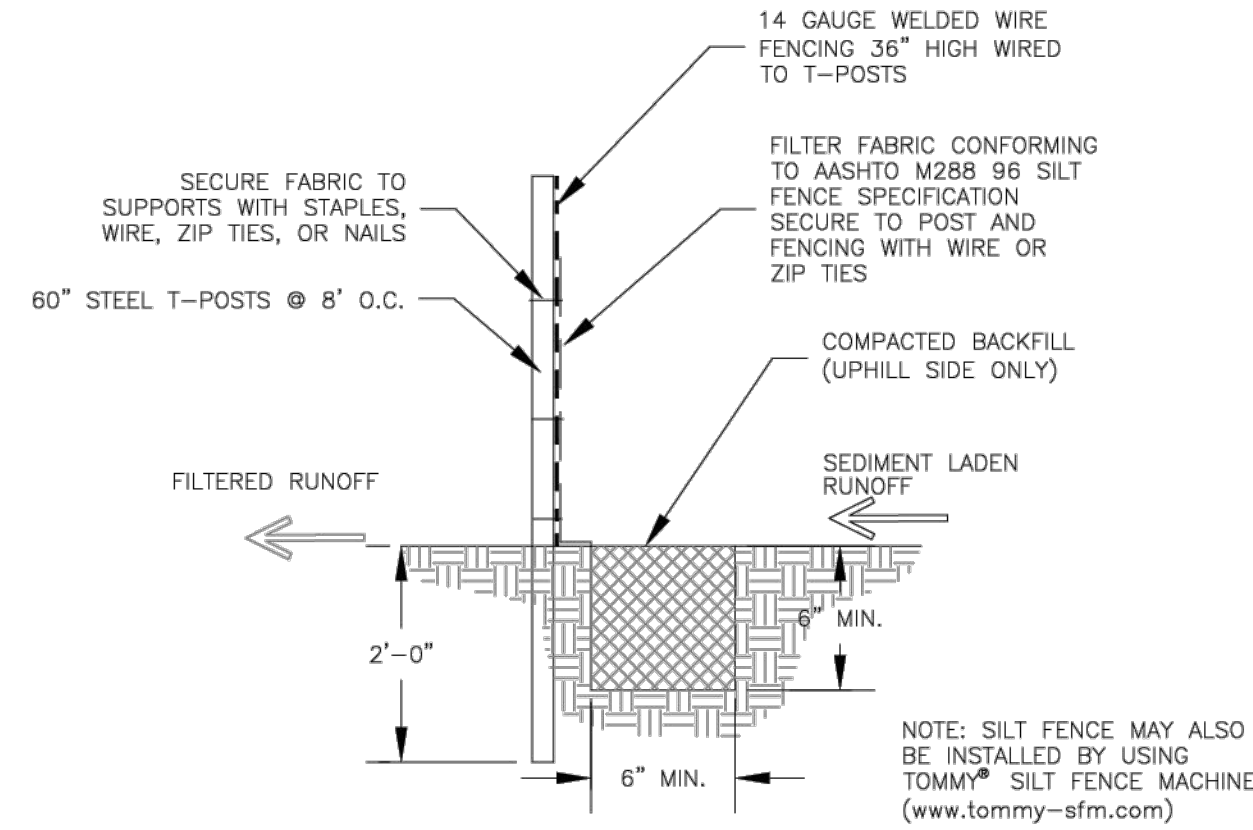
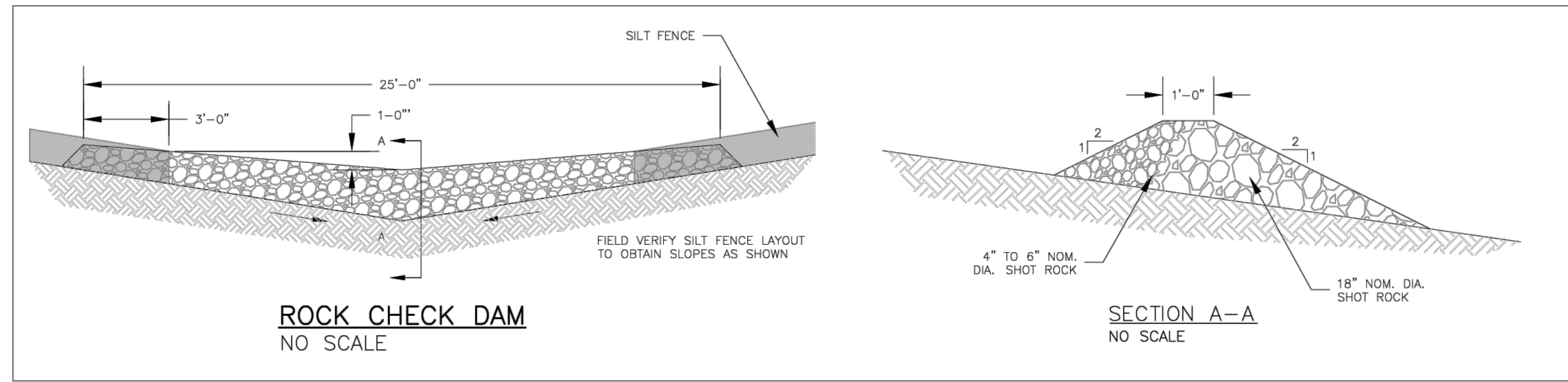
AREA INLET SEDIMENT BARRIER
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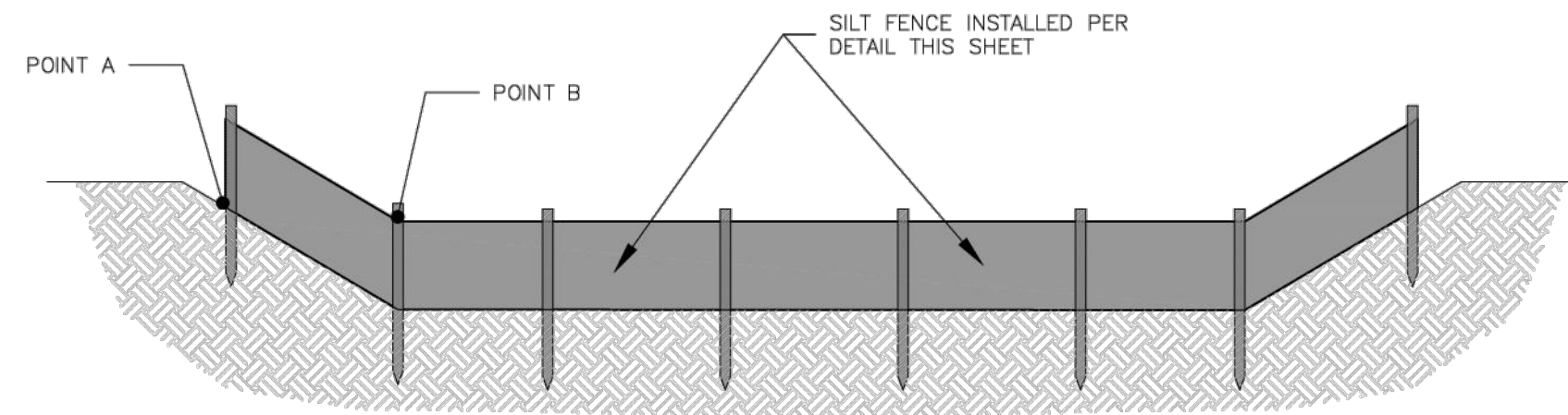
TEMPORARY CURB INLET SEDIMENT BARRIER
NO SCALE



LONG-TERM CURB INLET SEDIMENT BARRIER
NO SCALE



REINFORCED SILT FENCE SLOPE BARRIER DETAIL
NO SCALE



NOTE: POINT A MUST BE HIGHER THAN POINT B SO THAT WATER FLOWS OVER THE BALES AND NOT AROUND THEM.

INSTALLATION OF SILT FENCE DITCH CHECKS
NO SCALE

GENERAL NOTES:

1. ALL CONSTRUCTION ACTIVITIES SHALL COMPLY WITH CITY OF LAWRENCE CODE 9-903 REGARDING STORMWATER POLLUTION PREVENTION.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTATION, INSPECTION, AND MAINTENANCE OF ALL BEST MANAGEMENT PRACTICES (BMPs) AS SHOWN ON THE APPROVED STORMWATER POLLUTION PREVENTION PLAN (SWP3) EXCLUDING CONSTRUCTION UNDER THE CONTROL OF SUBSEQUENT OWNERS OF INDIVIDUAL LOTS AND CONSTRUCTION BY UTILITIES.
3. SUBSEQUENT OWNERS OF INDIVIDUAL LOTS ARE RESPONSIBLE FOR CONTINUED IMPLEMENTATION, INSPECTION, AND MAINTENANCE OF ALL BMPs WITHIN THE LOT AS SHOWN ON THE APPROVED SWP3.
4. CONTRACTOR SHALL PROVIDE A COPY OF THE APPROVED SWP3 TO ALL CONTRACTORS, UTILITIES, AND SUBSEQUENT OWNERS OF INDIVIDUAL LOTS PRIOR TO ANY WORK WITHIN THE SUBDIVISION.
5. CONTRACTORS WILL BE RESPONSIBLE FOR THE IMMEDIATE REMOVAL OF SOIL TRACKED ONTO PAVED STREETS.
6. STREET CONTRACTOR WILL BE RESPONSIBLE FOR MARKING ALL LIMITS OF DISTURBANCE (LOD) AND WILL NOT DISTURB VEGETATIVE COVER OUTSIDE OF THESE LIMITS.
7. INSPECTION OF BMP's SHALL OCCUR AT LEAST ONCE EVERY 14 DAYS AND WITHIN 24 HOURS AFTER A RAINFALL EVENT OF 1/2" OR MORE OF RAIN AS MEASURED ON SITE.
8. MAINTENANCE OF BMPs SHALL INCLUDE NECESSARY REPAIRS, REMOVAL OF SEDIMENT, AND ANY NECESSARY MODIFICATIONS TO BMPs AS AUTHORIZED BY CITY OF LAWRENCE.
9. SILT FENCE WILL BE INSTALLED AS SHOWN ON THIS PLAN WITH MODIFICATIONS (AS APPROVED BY THE CITY) AS NECESSARY AT THE TIME OF INSTALLATION TO FIT THE EXISTING CONDITIONS.
10. TOPSOIL MUST BE STOCKPILED UPSTREAM OF SILT FENCE.
11. SILT FENCE SHALL BE RELOCATED IMMEDIATELY DOWNSTREAM OF ANY ADDITIONAL GRADING OR TRENCHING REQUIRED TO COMPLETE WORK SHOWN ON THESE PLANS.
12. R/W SILT FENCE SHOULD BE INSTALLED AT A DISTANCE OF 3' ON THE UPSLOPE SIDE OF FUTURE SIDEWALKS AND AT A DISTANCE OF 8' FROM THE BACK OF CURB IF NO SIDEWALK IS TO BE CONSTRUCTED AND INSTALLED IMMEDIATELY AFTER FINAL STREET GRADING.
13. TEMPORARY CURB INLET SEDIMENT BARRIERS MUST BE INSTALLED IMMEDIATELY AFTER STRUCTURE PLACEMENT AND ONLY REMOVED JUST PRIOR TO PLACEMENT OF CURB AND GUTTER.
14. AFTER INITIAL DETENTION BASIN GRADING ALL DISTURBED AREAS SHALL BE SEEDED WITH A TEMPORARY COVER CROP OF ANNUAL RYE OR WHEAT. TEMPORARY BASIN OUTLET STRUCTURES SHALL BE INSTALLED PER DETAIL THIS SHEET.
15. AFTER VEGETATIVE COVER OF THE REST OF THE SITE IS ESTABLISHED REMOVE TEMPORARY BASIN OUTLET STRUCTURES, REGRADE BASINS TO REMOVE SEDIMENT, AND RESEED. ALL SEEDED AREAS SHALL BE MULCHED PER CITY OF LAWRENCE STANDARD SPECIFICATIONS.

2023 EDITION

SHEET 33 OF 22

DATE	BY	REVISION
04-01-23	LJM	REPLACES ALL PREVIOUS VERSIONS OF EROSION AND SEDIMENT CONTROL DETAILS
05-01-22	LJM	REPLACES ALL PREVIOUS VERSIONS OF EROSION AND SEDIMENT CONTROL DETAILS



STANDARD DETAILS FOR
EROSION AND SEDIMENT CONTROL

DAVID P. CRONIN
CITY ENGINEER

CRAIG S. OWENS
CITY MANAGER

PEDESTRIAN PUSHBUTTON

AUDIBLE PEDESTRIAN PUSHBUTTON WIRING DIAGRAM

NOTE: REQUIRES POLE ADAPTER WHEN MOUNTING TWO UNITS ON THE SAME PEDESTAL POLE.

SIDE OF POLE SIGN MOUNTING DETAIL

PEDESTAL POLE SIGN MOUNTING DETAIL

MAST ARM SIGN MOUNTING BRACKET DETAIL

SIGN MOUNTING NOTES:

1. SIGNS ON SIDE OF POLE SHALL BE ATTACHED WITH TWO (2) BRACKETS AND STAINLESS STEEL BANDS.
2. HOLES IN SIGN FOR ATTACHMENT TO THE MOUNTING BRACKETS SHALL BE OFFSET A MINIMUM OF 2" FROM THE EDGE OF SIGN.
3. HOLES IN SIGN SHALL BE LOCATED SUCH THAT THE SIGN IS PLUMB AND LEVEL.
4. THIS DETAIL IS NOT INTENDED FOR R10 SERIES SIGNS ATTACHED TO SIGNAL MAST ARMS.
5. WHEN ONLY ONE R10-3E SIGN IS USED ON THE PEDESTAL POLE, MOUNT WITH THE BOLTS CENTERED ON THE SIGN.

SIGN MOUNTING DETAILS

SCREW IN FOUNDATION DETAIL
SEE DETAIL AT RIGHT

- SCREW-IN-FOUNDATION NOTES:
1. FINISH:HOT DIP GALVANIZE PER ASTM-A153 (LATEST REVISION).
 2. BASEPLATE TO BE PERPENDICULAR TO SHAFT AXIS ($\pm 1^\circ$) AND HOLE CENTERLINE CONCENTRIC ($\pm 1/8$) TO SHAFT AXIS.
 3. STENCIL MINIMUM $\frac{1}{2}$ INCH LETTERS MANUFACTURER'S NUMBER AFTER GALVANIZING.
 4. FLAME CUT TWO SLOTS IN SHAFT PERPENDICULAR TO THE BASEPLATE.
 5. PREHEAT, TUMBLEBLAST, HANDGRIND, AND CLEAN BASEPLATE, HELIX, AND PILE POINT ON ALL WELDED AREAS.
 6. FLAMECUT IRREGULARITIES PERMISSIBLE:
 - (1) VALLEYS NOT TO EXCEED $\frac{3}{32}$ INCH BELOW NOMINAL SURFACE LEVEL,
 - (2) PEAKS OR POSITIVE IRREGULARITIES NOT TO EXCEED $\frac{1}{32}$ INCH ABOVE NOMINAL SURFACE LEVEL OR INTERSECTIONS OF NOMINAL SURFACES.
 7. MANUFACTURER TO HAVE IN EFFECT INDUSTRY RECOGNIZED WRITTEN QUALITY CONTROL FOR ALL MATERIALS AND MANUFACTURING PROCESSES.
 8. ALL MATERIAL IS TO BE NEW, UNUSED AND MILL TRACEABLE MEETING THE FOLLOWING SPECIFICATIONS:

BASEPLATE:	ASTM A36--(LATEST REVISION) HOT ROLLED STEEL
PLATE SHAFT:	STEEL TUBING, PER ASTM 500 GRADE B STRUCTURAL.
HELIX:	ASTM A635--(LATEST REVISION) $\frac{5}{16}$ " THICK HOT ROLLED STEEL PLATE OR COIL.
 9. BASEPLATE PERMANENTLY MARKED TO INDICATE CABLEWAY OPENINGS IN SHAFT.
11212363 INCLUDES:
 - (4) .75"x3.5" SAE J429 GR.5 HEX HEAD BOLTS
 - (4) ROUND FLAT WASHERS
 - (4) LOCK WASHERS

PEDESTRIAN PUSHBUTTON POST AND FOUNDATION DETAIL

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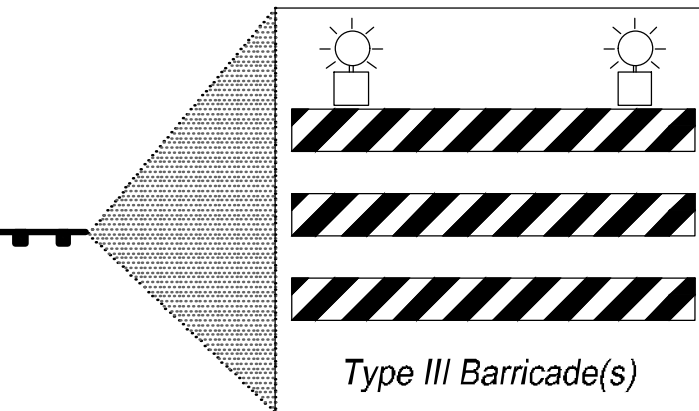
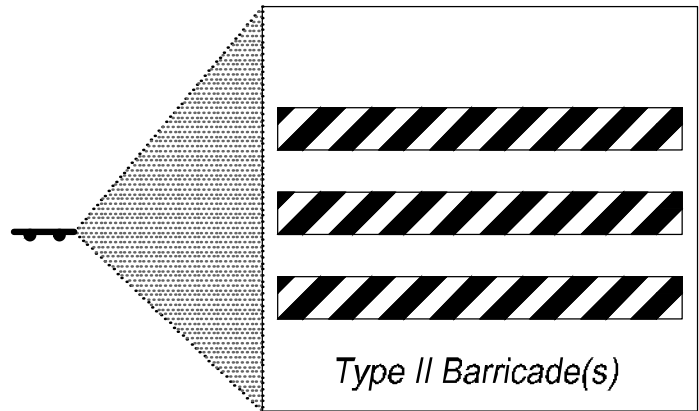
W. 9th Street (Murrow Ct. to Madeline St.)
(See Sheet No. 3)

Temporary Traffic Control Notes:
Contractor will need to apply for Class 3 Right-of-Way Permit and
Temporary Traffic Control Permit.

Temporary Traffic Control devices shall only be placed where
Contractor is actively working.

LEGEND

-  Sidewalk Closure Barricade/Sign
-  Channelizer
-  Construction Sign



CITY PROJECT MS5-D2300
SBB PROJECT 23-012
SHEET 35 OF 43

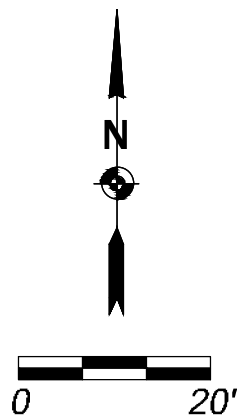
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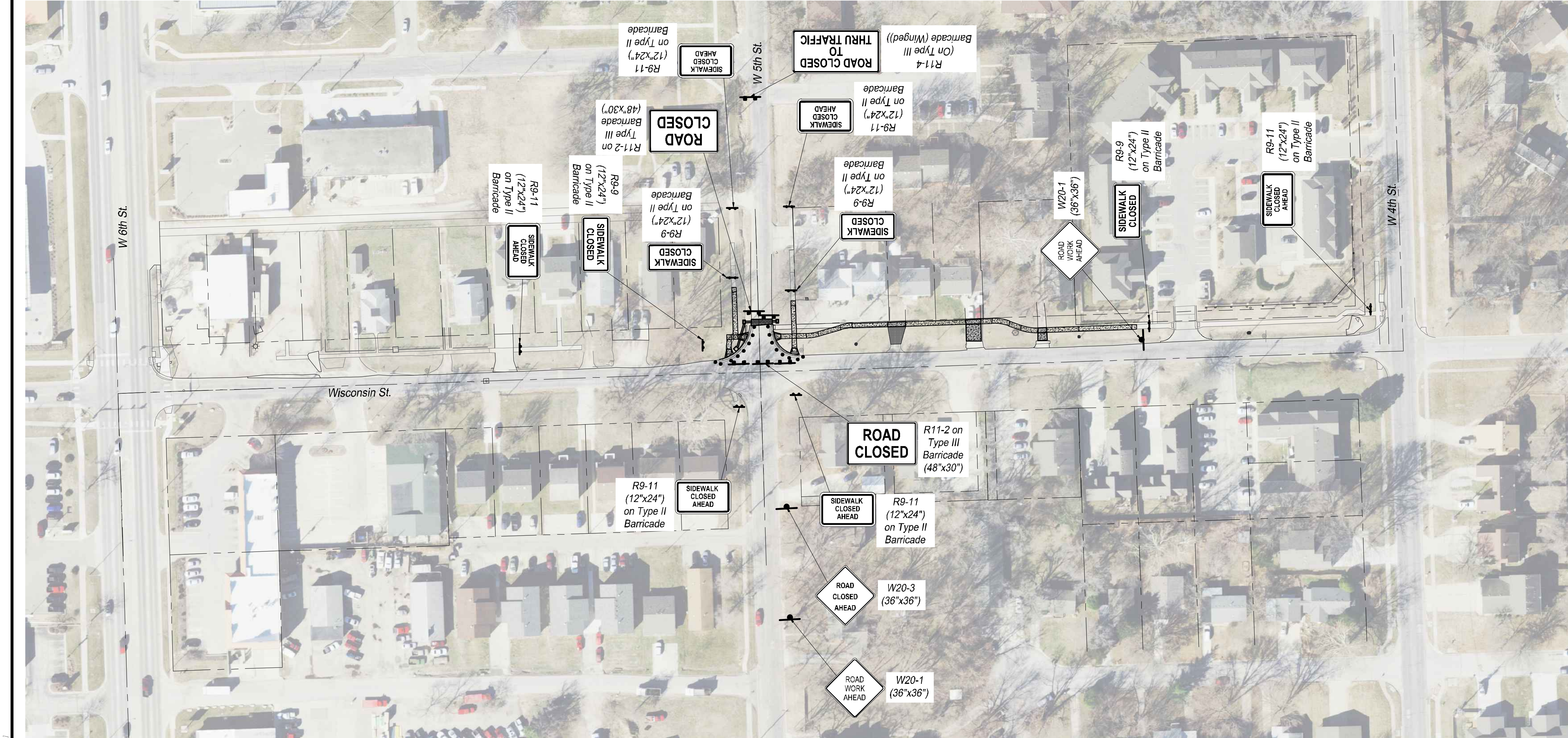


TEMPORARY TRAFFIC CONTROL
W. 9TH STREET

DAVID P. CRONIN
CITY ENGINEER

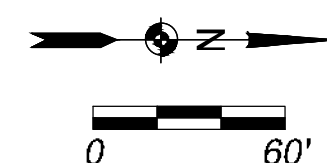
CRAIG S. OWENS
CITY MANAGER





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Wisconsin Street (W. 6th St. to W. 4th St.)
(See Sheet No. 4 - 5)



Temporary Traffic Control Notes:
Contractor will need to apply for Class 3 Right-of-Way Permit and Temporary Traffic Control Permit.

Temporary Traffic Control devices shall only be placed where Contractor is actively working.

LEGEND

- Sidewalk Closure Barricade/Sign
- Channelizer
- Construction Sign

Type II Barricade(s)

Type III Barricade(s)

CITY PROJECT MSS-D2300
SBB PROJECT 23-012
SHEET 36 OF 43

DATE	BY	REVISION

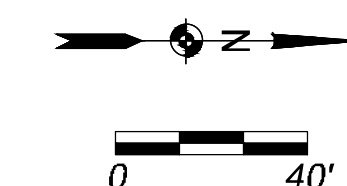
**CITY OF LAWRENCE, KANSAS**
MUNICIPAL SERVICES AND OPERATIONS

**TEMPORARY TRAFFIC CONTROL
WISCONSIN STREET**

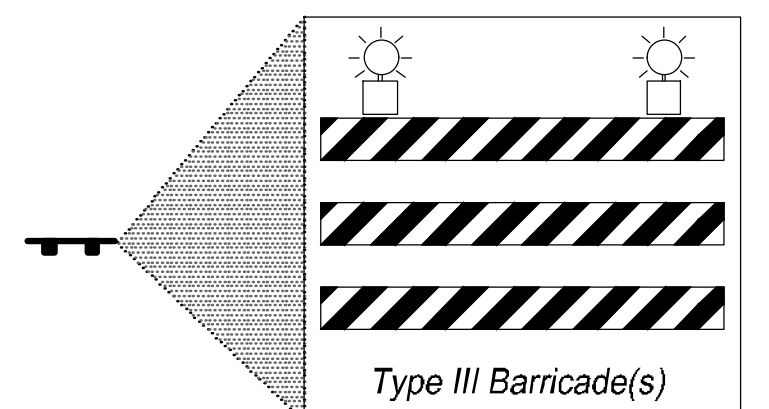
DAVID P. CRONIN
CITY ENGINEER

CRAIG S. OWENS
CITY MANAGER

Temporary Traffic Control devices shall only be placed where Contractor is actively working.



- Sidewalk Closure Barricade/Sign
- Channelizer
- Construction Sign




CITY OF LAWRENCE, KANSAS
 MUNICIPAL SERVICES AND OPERATIONS
 

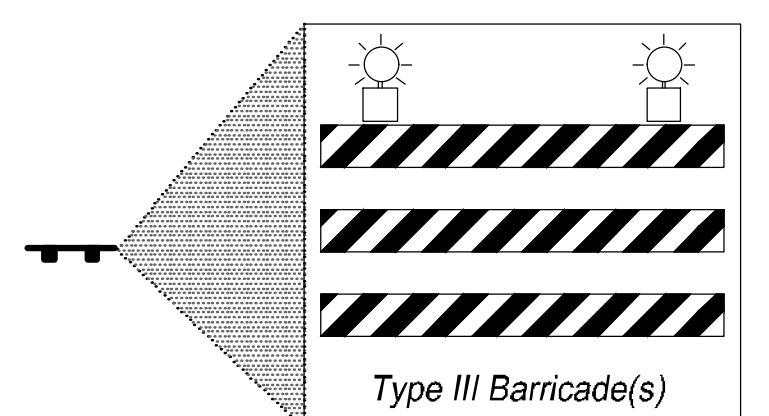
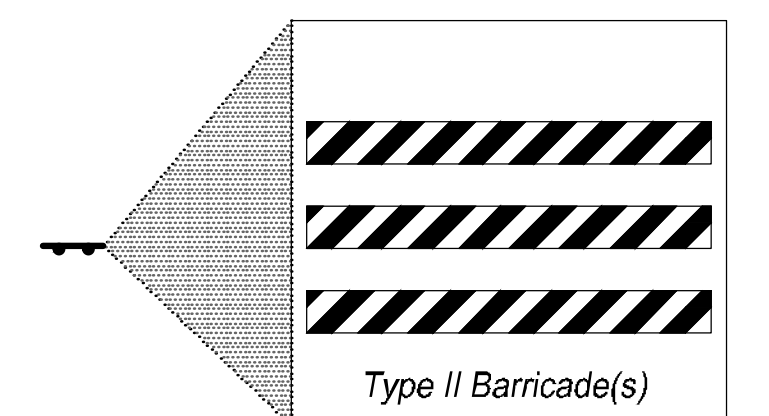
<u>DAVID P. CRONIN</u> CITY ENGINEER	<u>CRAIG S. OWENS</u> CITY MANAGER
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Arkansas Street (W. 8th St. to W. 7th St.)
(See Sheet No. 8 - 10)

Temporary Traffic Control devices shall only be placed where Contractor is actively working.



-  Sidewalk Closure Barricade/Sign
-  Channelizer
-  Construction Sign



CITY PROJECT MS5-D2300
SBB PROJECT 23-012
SHEET 38 OF 43

DATE	BY	REVISION



CITY OF LAWRENCE, KANSAS
MUNICIPAL SERVICES AND OPERATIONS



TEMPORARY TRAFFIC CONTROL
EAST 10TH STREET

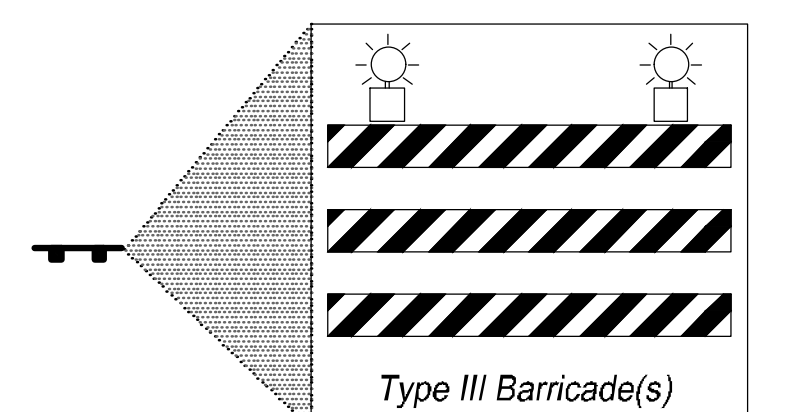
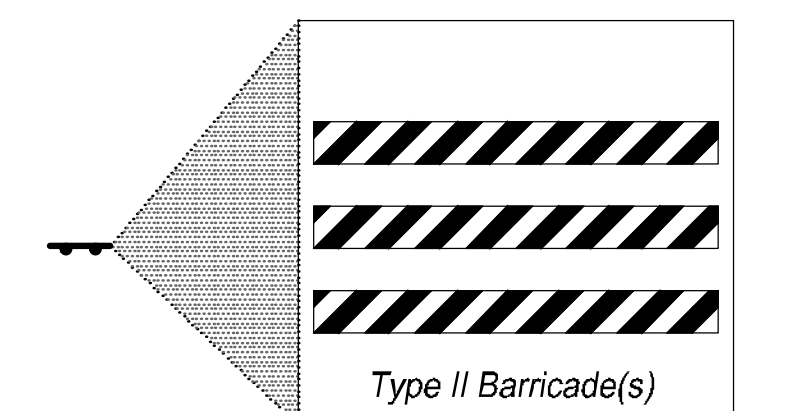
DAVID P. CRONIN
CITY ENGINEER

CRAIG S. OWENS
CITY MANAGER

Temporary Traffic Control devices shall only be placed where Contractor is actively working.



-  Sidewalk Closure Barricade/Sign
-  Channelizer
-  Construction Sign



CITY PROJECT MS5-D2300
SBB PROJECT 23-012
SHEET 39 OF 43

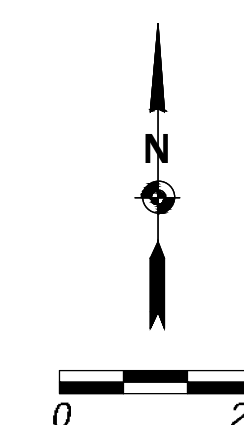
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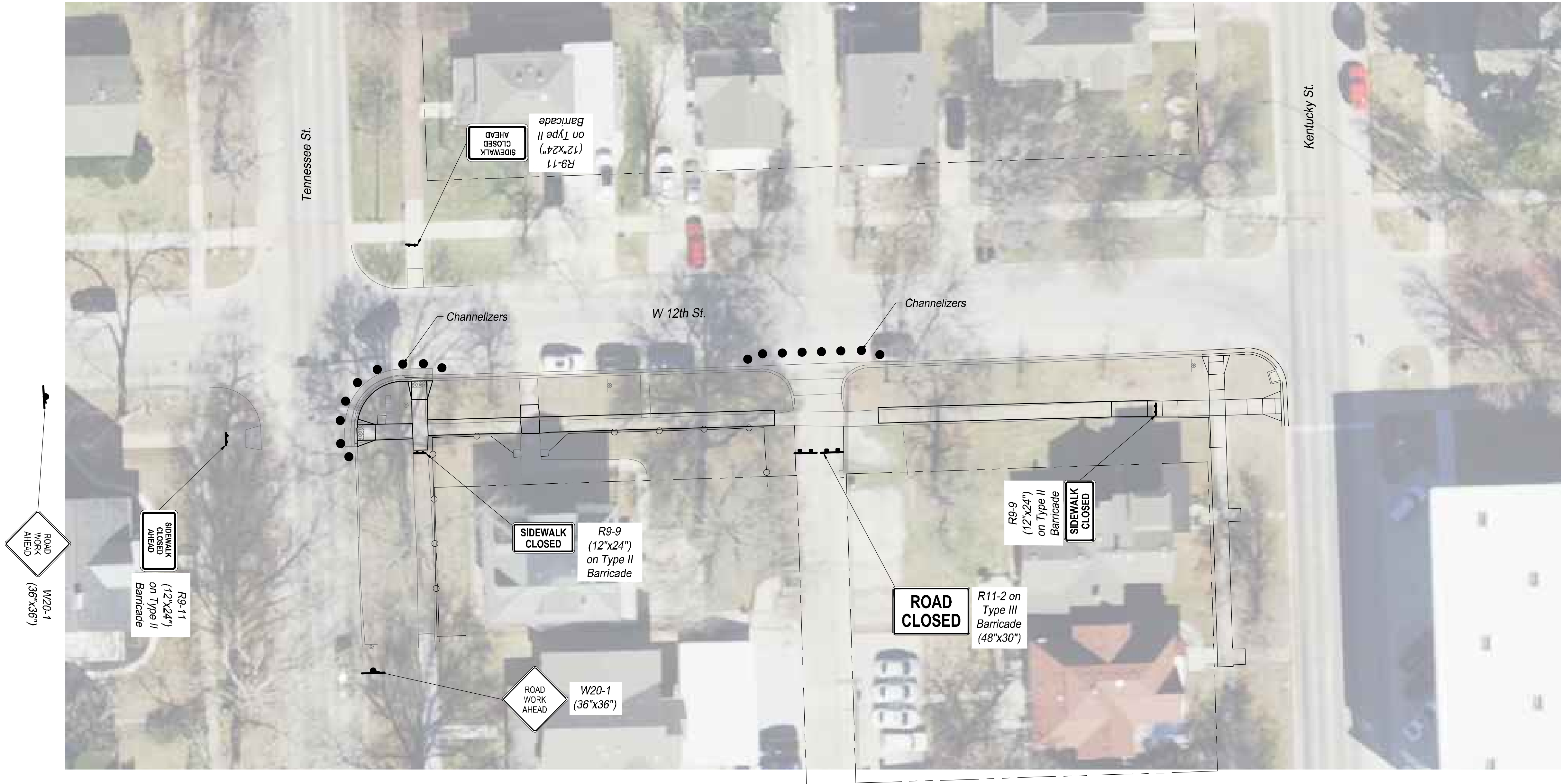
TEMPORARY TRAFFIC CONTROL
WEST 11TH STREET

DAVID P. CRONIN CRAIG S. OWENS
CITY ENGINEER CITY MANAGER

W. 11th Street (Tennessee St. to Kentucky St.)
(See Sheet No. 15)



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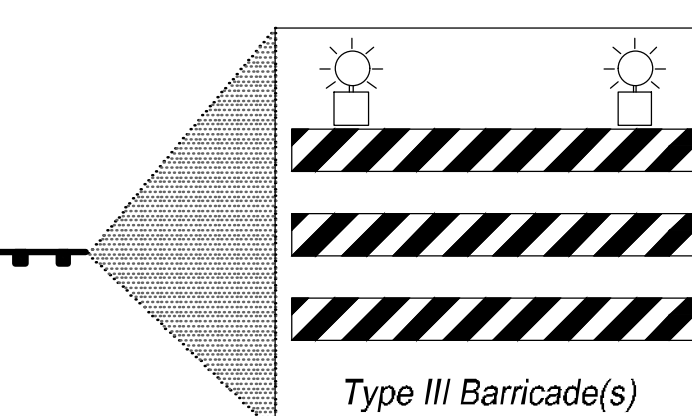
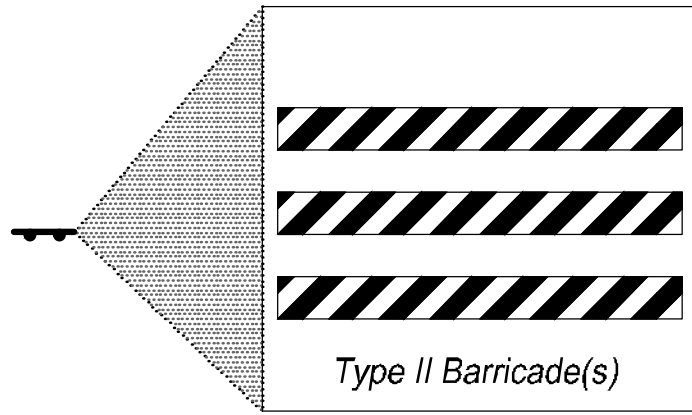


Temporary Traffic Control Notes:
Contractor will need to apply for Class 3 Right-of-Way Permit and
Temporary Traffic Control Permit.

Temporary Traffic Control devices shall only be placed where
Contractor is actively working.

LEGEND

-  Sidewalk Closure Barricade/Sign
-  Channelizer
-  Construction Sign



CITY PROJECT MS5-D2300
SBB PROJECT 23-012
SHEET 40 OF 43

DATE	BY	REVISION

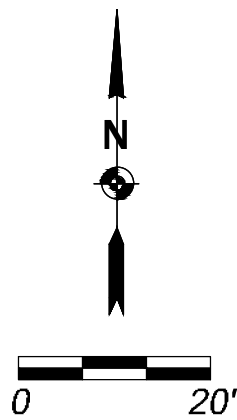


TEMPORARY TRAFFIC CONTROL
WEST 12TH STREET

DAVID P. CRONIN
CITY ENGINEER

CRAIG S. OWENS
CITY MANAGER

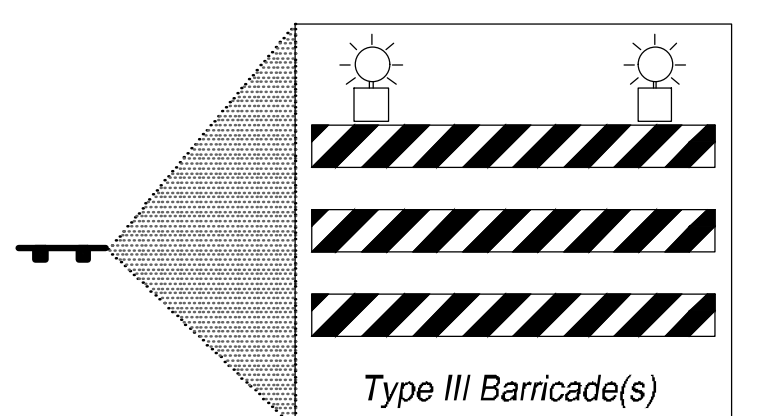
W. 12th Street (Tennessee St. to Kentucky St.)
(See Sheet No. 18)



Temporary Traffic Control devices shall only be placed where Contractor is actively working.



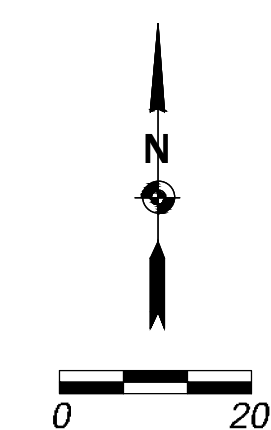
-  Sidewalk Closure Barricade/Sign
-  Channelizer
-  Construction Sign



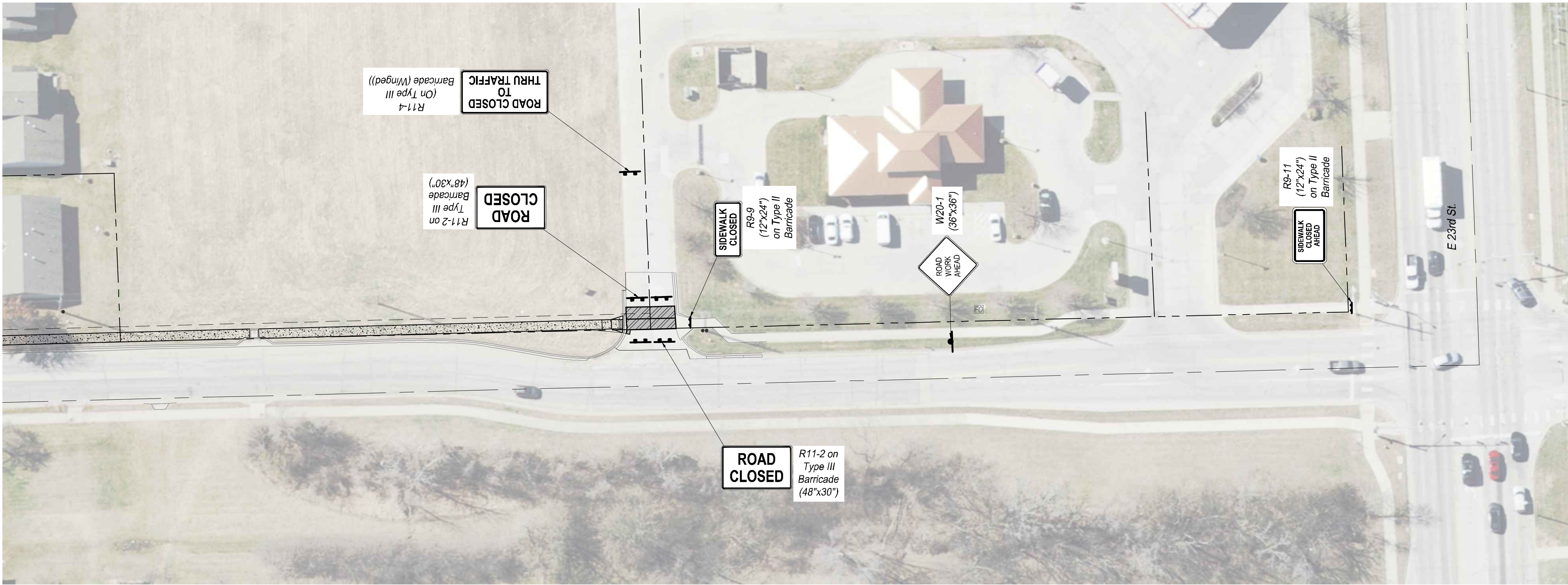
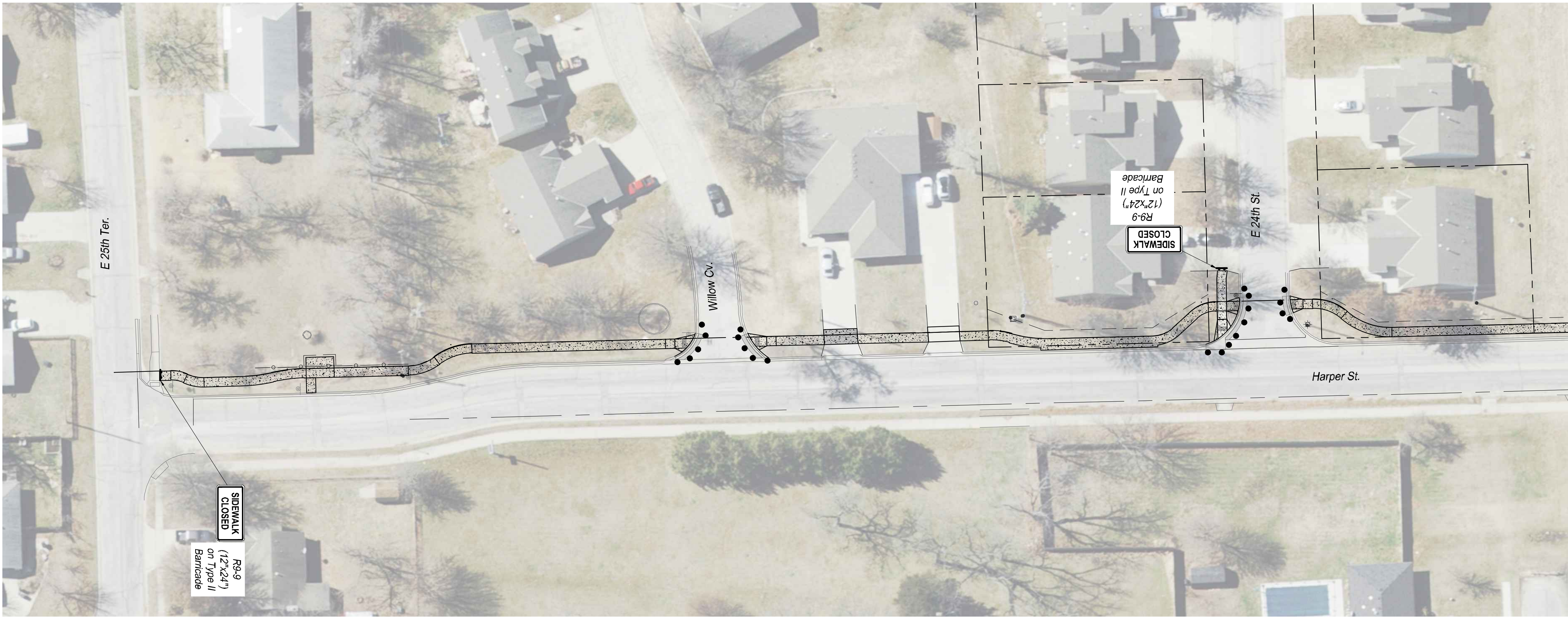
DATE	BY	REVISION



<u>DAVID P. CRONIN</u> CITY ENGINEER	<u>CRAIG S. OWENS</u> CITY MANAGER
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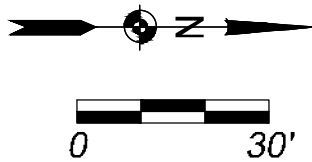
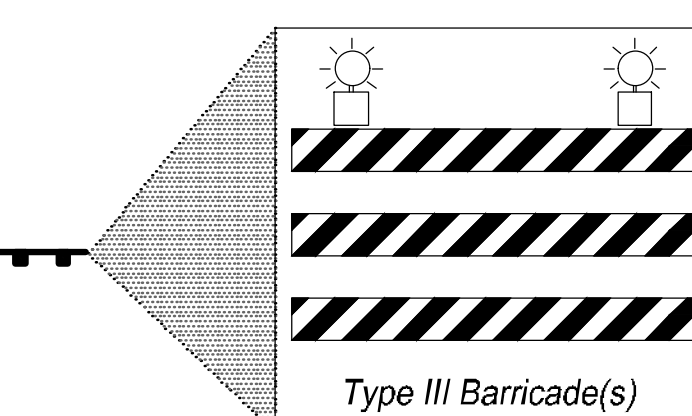
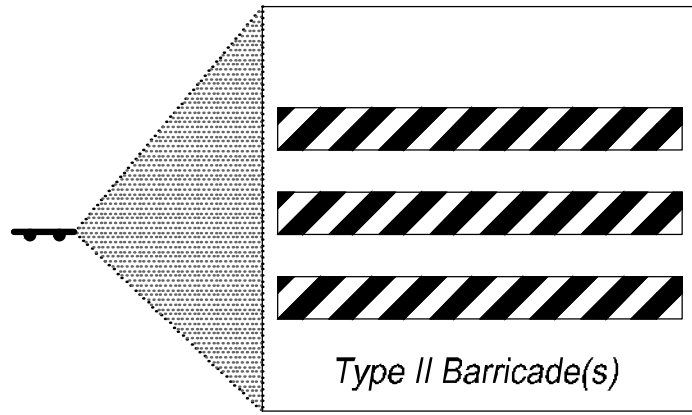
Harper Street (E. 25th Ter. to E. 23rd St.)
(See Sheet No. 21 - 24)

Temporary Traffic Control Notes:
Contractor will need to apply for Class 3 Right-of-Way Permit and Temporary Traffic Control Permit.

Temporary Traffic Control devices shall only be placed where Contractor is actively working.

LEGEND

- Sidewalk Closure Barricade/Sign
- Channelizer
- Construction Sign



CITY PROJECT MS5-D2300
SBB PROJECT 23-012
SHEET 42 OF 43

DATE	BY	REVISION



CITY OF LAWRENCE, KANSAS
MUNICIPAL SERVICES AND OPERATIONS



TEMPORARY TRAFFIC CONTROL
HARPER STREET

DAVID P. CRONIN
CITY ENGINEER

CRAIG S. OWENS
CITY MANAGER

Drawn By : mushock
File : te700.dgn

Plotted : 29-MAR-2018 12:40
Traffic

1) Design Speed: Those items delegated to temporary traffic control should be designed and installed using the posted/legal speed of the roadway prior to work starting.

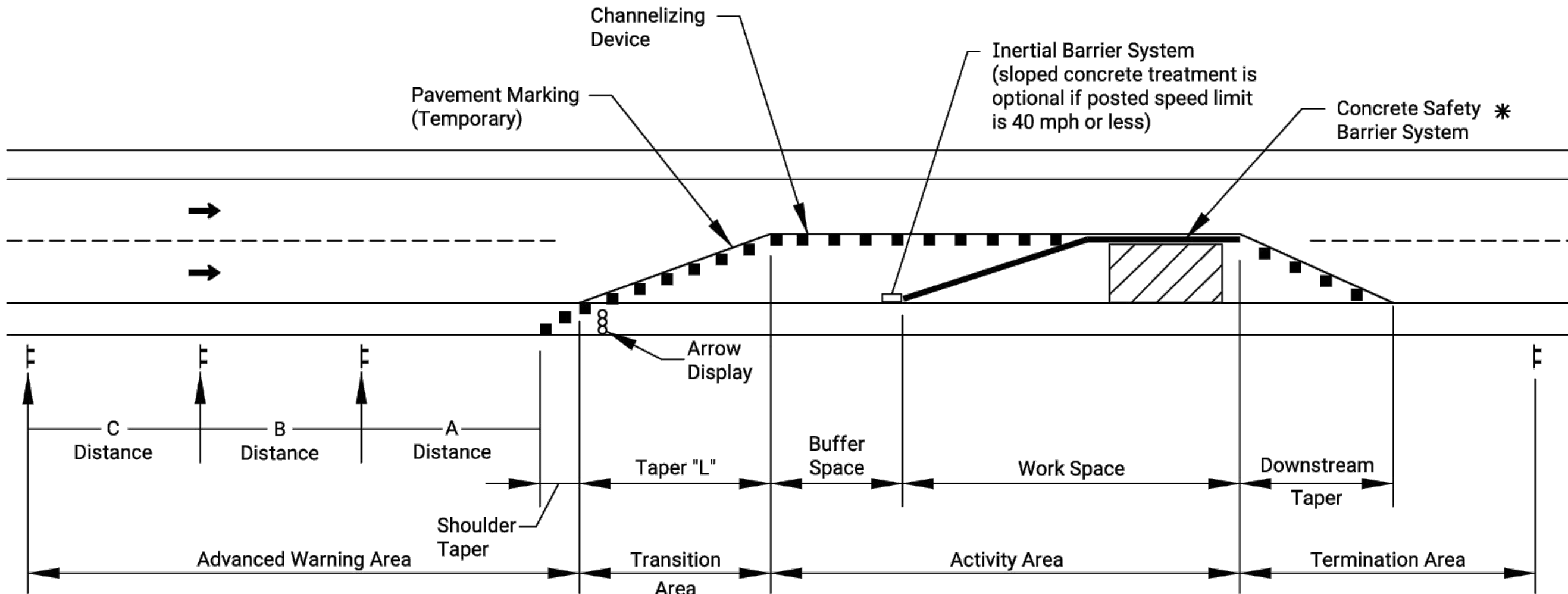
2) Minimum Lane Width: Lane widths shall be a minimum of 11' (measured between centerlines of pavement markings) or as shown on the plans, or as directed by the engineer. A lane width less than 11' may require restricted roadway width signing.

3) Consideration should be made to separate pedestrian and, if needed, bicycle movements from both work site activity and vehicular traffic. Unless a reasonable safe route that does not involve crossing the roadway can be provided, pedestrians should be appropriately directed with advance signing that encourages them to cross to the opposite side of the roadway. In urban and suburban areas with high vehicular traffic volumes, these signs should be placed at intersections (rather than midblock locations) so that pedestrians are not confronted with midblock work sites that will induce them to attempt skirting the work site or making a midblock crossing.

4) When existing pedestrian facilities are disrupted, closed, or relocated, the temporary facilities shall be detectable and include accessibility features consistent with the features present in the existing pedestrian facility.

5) When the driving surface open to traffic is milled or is a temporary surface made of loose material, or when directed by the engineer a W8-15 (Grooved Pavement) or W8-7 (Loose Gravel) sign shall be used on mainline approaches. This sign should be placed a "C" distance after the W20-1 (Road Work Ahead) sign. A W8-15p motorcycle plaque shall be used to supplement the W8-15 or W8-7 signs. All signs shall be displayed as long as the condition is present.

6) Alternative temporary rumble strip options may be available. Please contact the Temporary Traffic Control Unit for more information at 785-296-1179 or 785-296-1183.



TYPICAL WORK ZONE COMPONENTS

* When concrete barrier system is used, portable channelizing devices are not needed along the tangent barrier section.

Minimum advance warning sign spacing (in feet):

SPEED (MPH) *	A	B	C
URBAN (40 MPH OR LOWER)	100	100	100
URBAN (45 MPH OR HIGHER)	350	350	350
RURAL (55 MPH OR LOWER)	500	500	500
RURAL (60 MPH OR HIGHER)	750	750	750
EXPRESSWAY/FREEWAY	1000	1500	2640

* Posted speed prior to work starting

The minimum spacing between signs shall be no less than 100', unless directed by the engineer.

The spacing between any signs may be increased beyond the minimum values in the table above as approved by the engineer in order to maximize visibility.

Taper Formulas:

$L = WS$ for speeds of 45 MPH or more

$L = WS^2/60$ for speeds of 40 MPH or less

Where: L = Minimum length of taper in feet
 S = Numerical value of posted speed prior to work starting in MPH
 W = Width in offset feet

Shifting Taper= $1/2 L$
Shoulder Taper= $1/3 L$

Channelizer Placement:

- The spacing between devices in transition area (taper) should not exceed a distance in feet equal to $1/2$ the posted speed limit in mph prior to work starting.
- The spacing between devices in the advanced warning area and the activity area should not exceed a distance in feet equal to two times the posted speed limit in mph prior to work starting.
- Channelizing devices shall be placed for optimum visibility, normally at right angles to the traffic flow.
- Place directional indicator barricades in series to direct traffic onto the new path. The arrow sign should not be visible to opposing traffic.
- Alternating diagonal orange and white striping must slope downward in the direction traffic is expected to pass.

Buffer Space

SPEED (MPH) *	20	25	30	35	40	45	50	55	60	65	70	75
LENGTH (ft)	115	155	200	250	305	360	425	495	570	645	730	820

* Posted speed prior to work starting

Neither work activity nor storage of equipment, vehicles, or material should occur in the buffer space. When a protection vehicle is placed in advance of the work space, only the space upstream of the vehicle constitutes the buffer space.

If temporary concrete safety barrier system is used to separate approaching traffic from the work space, the barrier system shall be considered part of the activity area. A full lane width should be available throughout the length of the buffer space. See typical work zone components above.

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	MS5-D2300	2023	43	43

3				
2	03/13/18	W8-15p usage changed to Shall	R.W.B.	E.G.K.
1	08/18/15	Channelizer spacing info	R.W.B.	K.E.
NO.	DATE	REVISIONS	BY	APPD
KANSAS DEPARTMENT OF TRANSPORTATION				
TRAFFIC CONTROL GENERAL NOTES				
TE700				
FHWA APPROVAL		03/13/18	APPD	Erio Kocher
DESIGNED	B.A.H.	DETAILED	R.W.B.	QUANTITIES
DESIGN CK.	DETAIL CK.	QUAN. CK.	TRACE CK.	

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