



owner:
Lee's Summit R-7 School District
301 NE Tudor Road
Lee's Summit, MO 64086

architect:
Multistudio
4200 Pennsylvania Avenue
Kansas City, MO 64111
816.931.6655
www.multi.studio

civil engineer:
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Lenexa, KS 66215
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MEPFT/Code::
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structural engineer:
Bob D. Campbell & Company,
4338 Belleview
Kansas City, MO 64111
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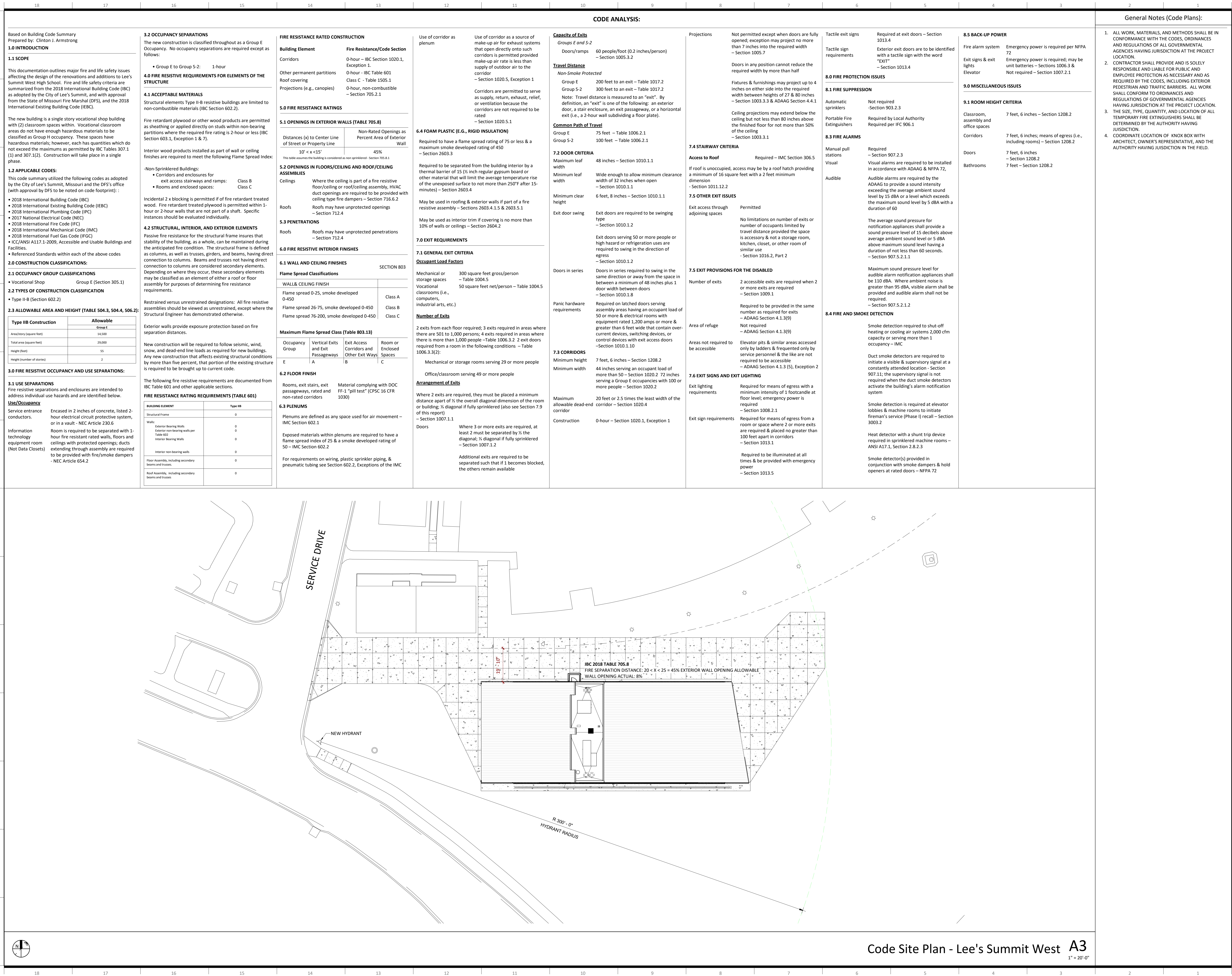
LSW: 2600 SW Ward Rd,
Lee's Summit MO 64082

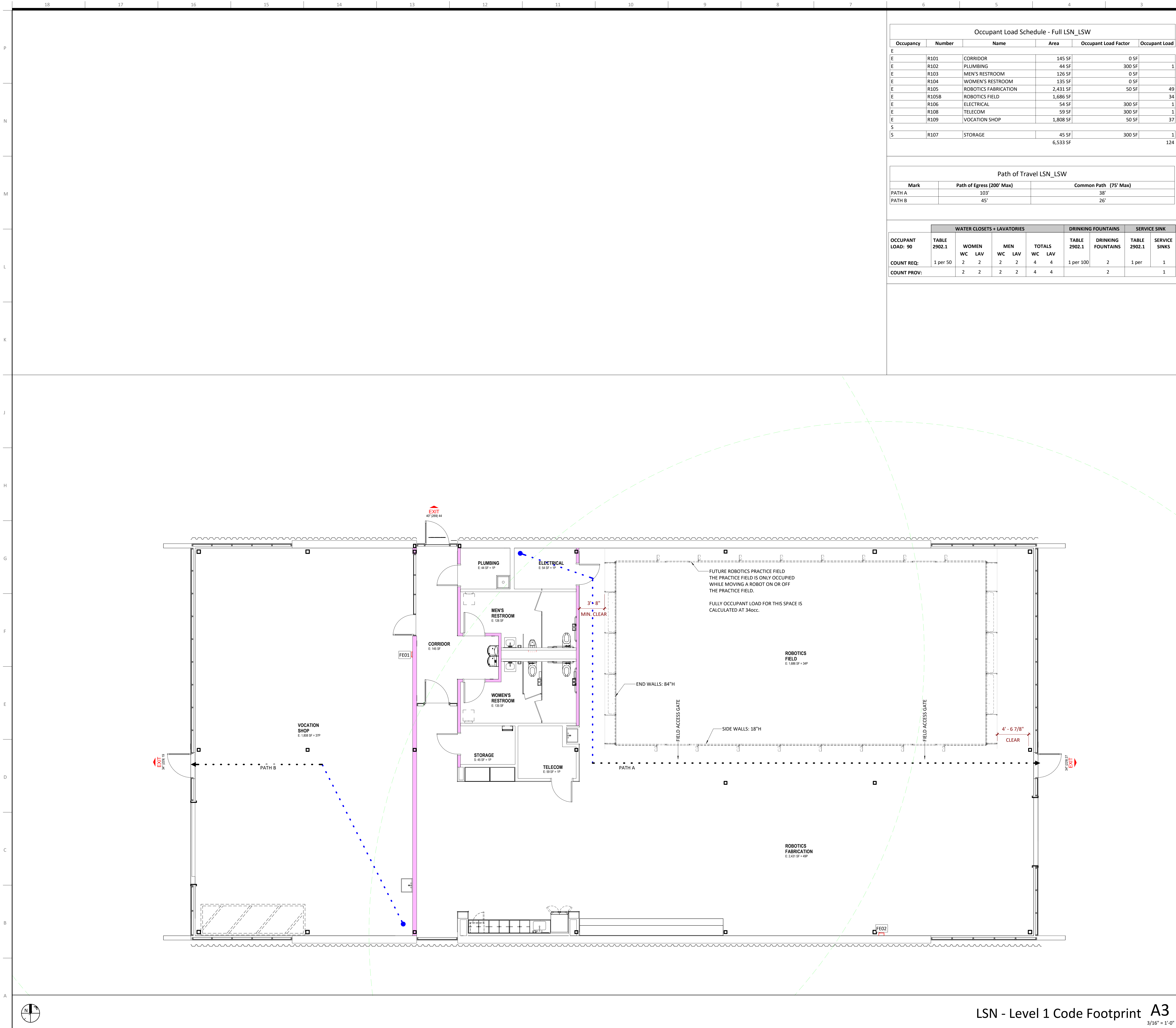
Project Number: 0121-0100
Issue Date: September 9, 2022

RELEASED FOR
CONSTRUCTION
As Noted on Plans Review
Development Services Department
Lee's Summit, Missouri
12/02/2022

LSR7 Robotics, GiC & Phys Education: Construction Documents

multistudio
the evolution of gould evans





LSN - Level 1 Code Footprint A3
3/16" = 1'-0"

General Notes (Code Plans):

- ALL WORK, MATERIALS, AND METHODS SHALL BE IN CONFORMANCE WITH THE CODES, ORDINANCES AND REGULATIONS OF ALL GOVERNMENTAL AGENCIES HAVING JURISDICTION AT THE PROJECT LOCATION.
- CONTRACTOR SHALL PROVIDE AND IS SOLELY RESPONSIBLE AND LIABLE FOR PUBLIC AND EMPLOYEE PROTECTION AS NECESSARY AND AS REQUIRED BY THE CODES, INCLUDING EXTERIOR PEDESTRIAN AND TRAFFIC BARRIERS. ALL WORK SHALL CONFORM TO ORDINANCES AND REGULATIONS OF GOVERNMENTAL AGENCIES HAVING JURISDICTION AT THE PROJECT LOCATION.
- THE SIZE, TYPE, QUANTITY, AND LOCATION OF ALL TEMPORARY FIRE EXTINGUISHERS SHALL BE DETERMINED BY THE AUTHORITY HAVING JUISDICTION.
- COORDINATE LOCATION OF KNOX BOX WITH ARCHITECT, OWNER'S REPRESENTATIVE, AND THE AUTHORITY HAVING JUISDICTION IN THE FIELD.

Code Plan Legend:

Egress Path of Travel
Distance to Exit
Common Path of Travel Distance
50' CPT

Egress Point
Maximum # of Occupants (by width)
Required # of Occupants

Stair Egress
Stair #1 | 4'-0"
Maximum # of Occupants (by width)
Required # of Occupants

Occupancy Tag
Occupancy Group
Area
Occupant Load

Room name
Room # | Area
Occupant Load

Fire Extinguisher Radius
75' Typ

Fire Extinguisher Symbol
FE

1-Hour: Fire Rated Assembly
2-Hour: Fire Rated Assembly
3-Hour: Fire Rated Assembly
4-Hour: Fire Rated Assembly
Smoke Barrier
Smoke Partition

Design No. U419
Nonbearing Wall Ratings — 1, 2, 3 or 4 Hr (See Items 3 & 4)

For Number of Layers and Hourly Ratings See Item 4

1. Floor and Ceiling Runners — (Not shown) — Channel shaped, fabricated from min 25 MSG (min 20 MSG when Item 4A is used) corrosion-protected steel, min width to accommodate stud size, with min 1 in. long legs, attached to floor and ceiling with fasteners 24 in. OC, max.

2. Steel Studs — Channel shaped, fabricated from min 25 MSG (min 20 MSG when Item 4A is used) corrosion-protected steel, min width as indicated under Item 4, min 1-1/4 in. flanges and 1/4 in. return, spaced a max of 24 in. OC. Studs to be cut 3/8 to 3/4 in. less than assembly height.

3. Batts and Blankets* — (Required as indicated under Item 4) — Mineral wool batts, friction fitted between studs and runners. Min room thickness as indicated under Item 4. See Batts and Blankets (BKNV or BZJZ) Categories for names of Classified companies.

3A. Batts and Blankets* — (Optional) — Placed in stud cavity, any glass fiber or mineral wool insulation bearing the UL Classification Marking as to Surface Burning Characteristics and Fire Resistance. See Batts and Blankets (BKNV or BZJZ) Categories for names of Classified companies.

4. Gypsum Board* — Gypsum panels with beveled, square or tapered edges, applied vertically or horizontally. Vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Vertical joints in adjacent layers (multilayer systems) staggered one stud cavity. Horizontal joints need not be backed by steel framing. Horizontal edge joints and horizontal butt joints on opposite sides of studs need not be staggered. Horizontal edge joints and horizontal butt joints in adjacent layers (multilayer systems) staggered a min of 12 in. The thickness and number of layers for the 1 hr, 2 hr, 3 hr and 4 hr ratings are as follows:

Rating	Min Stud Depth	No. of Layers & Thickness	Min Thickness of Insulation (Item 3)
1 hr	3 1/2"	1 layer, 5/8 in. thick	Optional
	1 1/2"	1 layer, 1/2 in. thick	1 1/2 in.
	1 5/8"	1 layer, 3/4 in. thick	Optional
	1 5/8"	2 layers, 1/2 in. thick	Optional
	1 5/8"	2 layers, 5/8 in. thick	Optional
	1 1/2"	1 layer, 3/4 in. thick	3 in.
	1 5/8"	3 layers, 1/2 in. thick	Optional
	1 5/8"	3 layers, 5/8 in. thick	Optional
	1 5/8"	4 layers, 1/2 in. thick	Optional
	1 5/8"	4 layers, 5/8 in. thick	Optional
	2 1/2"	2 layers, 3/4 in. thick	2 in.
	2 hr	3 1/2"	1 layer, 5/8 in. thick
1 1/2"		1 layer, 1/2 in. thick	1 1/2 in.
1 5/8"		1 layer, 3/4 in. thick	Optional
1 5/8"		2 layers, 1/2 in. thick	Optional
1 5/8"		2 layers, 5/8 in. thick	Optional
1 1/2"		1 layer, 3/4 in. thick	3 in.
1 5/8"		3 layers, 1/2 in. thick	Optional
1 5/8"		3 layers, 5/8 in. thick	Optional
1 5/8"		4 layers, 1/2 in. thick	Optional
1 5/8"		4 layers, 5/8 in. thick	Optional
2 1/2"		2 layers, 3/4 in. thick	2 in.

4A. Gypsum Board* — (As an alternate to Item 4) — 5/8 in. thick gypsum panels, installed as described in Item 4 with Type S-12 steel screws. The length and spacing of the screws as specified under Item 5.

4B. Gypsum Board* — (As an alternate to Items 4 and 4A) — 5/8 in. thick, 2 ft. wide, tongue and groove edge, applied horizontally as the outer layer to one side of the assembly. Secured as described in Item 5. Joint covering Item 7I not required.

5. Fasteners — (Not shown) — Type S or S-12 steel screws used to attach panels to studs (Item 2) or furring channels (Item 6). Single layer systems: 1 in. long for 1/2 and 5/8 in. thick panels or 1-1/4 in. long for 3/4 in. thick panels, spaced 8 in. OC when panels are applied horizontally or 8 in. OC along vertical and bottom edges and 12 in. OC in the field when panels are applied vertically. Two layer systems: First layer: 1 in. long for 1/2 and 5/8 in. thick panels or 1-1/4 in. long for 3/4 in. thick panels, spaced 16 in. OC. Second layer: 1-5/8 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Third layer: 2-1/4 in. long for 1/2 in., 5/8 in. thick panels or 2-5/8 in. long for 3/8 in. thick panels, spaced 12 in. OC. Screws offset min 6 in. from layer below. Four layer systems: First layer: 1 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Second layer: 1-5/8 in. long for 1/2 in., 5/8 in. thick panels or 2-5/8 in. long for 3/8 in. thick panels, spaced 24 in. OC. Third layer: 2-1/4 in. long for 1/2 in. thick panels or 2-5/8 in. long for 3/8 in. thick panels, spaced 12 in. OC. Fourth layer: 2-5/8 in. long for 1/2 in. thick panels or 3 in. long for 3/8 in. thick panels, spaced 12 in. OC. Screws offset min 6 in. from layer below.

6. Furring Channels — (Optional, not shown, for single or double layer systems) — Resilient furring channels fabricated from min 25 MSG corrosion-protected steel, spaced vertically a max of 24 in. OC. Flange portion attached to each intersecting stud with 1/2 in. long Type S-12 steel screws. Not for use with Item 4A.

7. Joint Tape and Compound — Vinyl or casing, dry or premixed joint compound applied in two coats to joints and screw heads of outer layers. Paper tape, nom 2 in. wide, embedded in first layer of compound over all joints of outer layer panels. Paper tape and joint compound may be omitted when gypsum panels are supplied with a square edge.

8. Siding, Brick or Stone — (Optional, not shown) — A bed of acoustic trowel applied over gypsum panels. Back veneer attached to studs with corrugated metal wall ties attached to each stud with steel screws, not more than one stud course of brick.

9. Caulking and Sealants — (Optional, not shown) — A bed of acoustic trowel applied to the partition perimeter for sound control.

UNITED STATES GYPSUM CO. — Type SX.

*Bearing the UL Classification Mark

LSR7 Robotics, GiC & Phys Education

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LSW: 2600 SW Ward Rd, Lee's Summit MO 64082
LSHS: 400 SE Blue Pkwy, Lee's Summit MO 64063

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Revisions

NUMBER	DESCRIPTION	DATE
1	RELEASED FOR CONSTRUCTION As Noted on Plans Review Development Services Department Lee's Summit, Missouri 12/02/2022	

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LEE'S SUMMIT WEST HIGH SCHOOL - ROBOTICS BUILDING
GENERAL LAYOUT SHEET
2600 SW WARD RD, LEE'S SUMMIT, MO 64082
SECTION 31 - TOWNSHIP 48 N - RANGE 31 W

multistudio
the evolution of gould evans

Lee's Summit Robotics,
GIC & Phys Educaiton

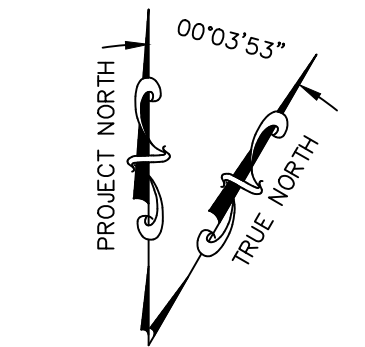
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Lee's Summit West High School

PROJECT
LOCATION



SCALE: 1" = 40'
CONVERGENCE ANGLE
ESTABLISHED FROM JA-142



PROJ. NO. C21-1242 DSN: CJC ENGINEER
CPL: 1242GLS DWN: NJN MO # 2015000538
14700 WEST 114TH TERRACE
LENEXA, KANSAS 66215
PH. (913) 894-5150 | FAX (913) 894-5977
x@kveng.com | www.kveng.com
KAW VALLEY ENGINEERING
KAW VALLEY ENGINEERING, INC. IS AUTHORIZED TO OFFER
ENGINEERING SERVICES BY MISSOURI STATE CERTIFICATE OF
AUTHORITY # 000842. EXPIRES 12/31/23

Revisions		
NUMBER	DESCRIPTION	DATE
1	ADD 01 - CODE COMMENTS	11/22/2022

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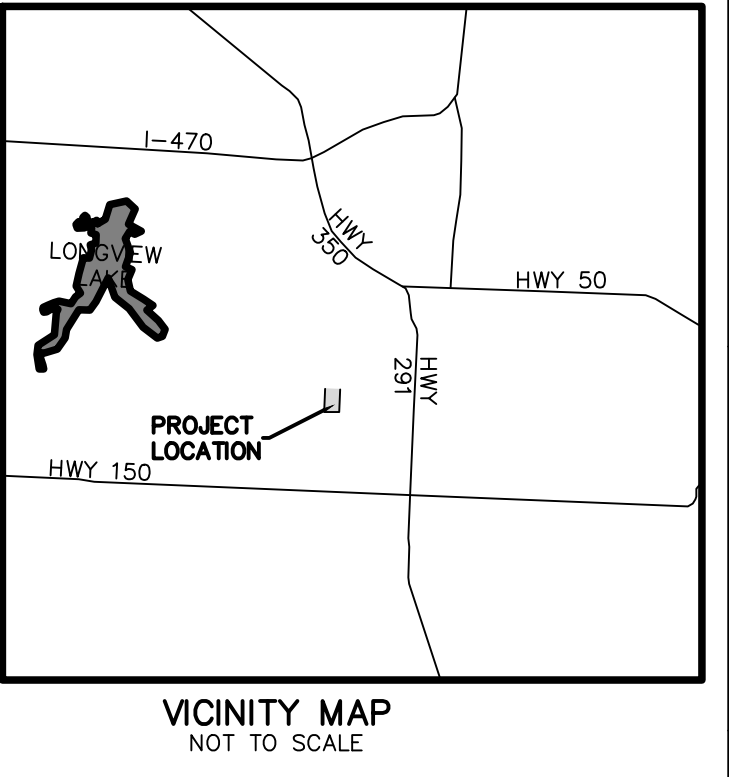
Kaw Valley Engineering, Inc.
Missouri Certificate of Authority: 000842
Christian Crowder Date: 11/22/2022
Engineer License No. PE-2015000538

LSW GENERAL
LAYOUT SHEET

C000-A

LEE'S SUMMIT WEST HIGH SCHOOL - ROBOTICS BUILDING
SITE PLAN
2600 SW WARD RD, LEE'S SUMMIT, MO 64082
SECTION 31 - TOWNSHIP 48 N - RANGE 31 W

COORDINATE TABLE		
NORTHING	EASTING	DESCRIPTION
1000	985053.57	2817526.73 BC
1001	985073.31	2817534.01 EC
1002	985102.35	2817567.56 EC
1003	985091.01	2817577.37 R15
1004	985104.77	2817583.36 EC
1005	985082.95	2817633.45 EC
1006	985079.06	2817636.82 EC
1007	985096.07	2817504.04 BC
1008	985093.72	2817516.34 EC
1009	985256.05	2817703.80 EC
1010	985277.06	2817705.31 EC
1011	985290.38	2817720.70 EC
1012	985265.51	2817742.23 EC
1013	985186.37	2817752.90 EC
1014	985182.48	2817756.27 EC
1016	985070.63	2817514.79 EC
1017	985144.23	2817451.06 EC
1018	985241.24	2817418.81 EC
1019	985244.49	2817428.26 EC
1020	985149.27	2817459.92 EC
1021	985108.69	2817495.06 EC
1022	985036.63	2817549.56 SW
1023	985041.63	2817568.76 SW
1024	985035.89	2817570.24 SW
1025	985030.88	2817550.83 SW
1026	985145.96	2817576.67 SW
1027	985177.71	2817549.17 SW
1028	985145.83	2817723.10 RW
1029	985173.92	2817755.54 RW
1030	985191.71	2817762.27 RW
1031	985288.40	2817749.24 RW
1032	985125.55	2817594.34 EC
1033	985127.53	2817592.63 EC
1034	985162.71	2817633.26 EC
1035	985139.11	2817611.50 B1
1036	985218.76	2817703.47 H1
1037	985176.67	2817739.91 H3
1038	985097.03	2817647.94 B3



PREPARED FOR:
LEE'S SUMMIT R-7 SCHOOL DISTRICT
502 SE TRANSLANT DRIVE,
LEE'S SUMMIT, MO 64081
PHONE: (816) 986-2420
CONTACT: KYLE CORRELL
EMAIL: kyle.correll@r7.net

PREPARED BY:
KAW VALLEY ENGINEERING, INC.
14700 W 114TH TERR,
LENEXA, KANSAS 66215
PHONE: (913) 894-5150
CONTACT: CHRIS CROWDER
EMAIL: crowder@kveeng.com

- NOTES:**
- 6 DISTURBED AREAS TO BE LANDSCAPED OR SODDED AS NOTED ON L SERIES SHEETS.
 - 13 BOLLARDS (REFER TO ARCHITECTURAL SHEETS)
 - 60 STORM SEWER STRUCTURE (SEE SHEET C690-A)
 - 65 CONTRACTOR TO ADJUST LID TO MATCH ELEVATIONS SHOWN ON C300-A
 - 70 SANITARY SEWER SERVICE STRUCTURE (SEE SHEET C700-A)
 - 80 WATER STRUCTURE (SEE SHEET C800-A)
 - 82 FIRE HYDRANT (SEE SHEET C800-A)

- DETAILS - SEE SHEET C190-A FOR THE FOLLOWING DETAILS**
- 001 STANDARD CONCRETE CURB & GUTTER
 - 002 ZERO HEIGHT CURB
 - 040 ASPHALT PAVEMENT
 - 042 CONCRETE PAVEMENT
 - 055 CONCRETE SIDEWALK
 - 130 BOLLARD

- LEGEND:**
- CONTROL POINT
 - BENCHMARK
 - PULL BOX (ELECTRIC)
 - YARD LIGHT
 - LIGHT POLE
 - ELECTRIC METER
 - WALL MOUNTED CAMERA
 - BREAKER BOX
 - GAS METER
 - GAS LINE RISER
 - WATER METER
 - WATER LINE GATE VALVE
 - FIRE HYDRANT
 - SPRINKLER CONTROL BOX
 - WATER MANHOLE
 - WALL MOUNTED SIAMASE FIRE CONNECTOR
 - SANITARY SEWER MANHOLE
 - STORM SEWER MANHOLE
 - PVC POLYVINYL CHLORIDE PIPE
 - HDPE HIGH DENSITY POLYETHYLENE
 - STREET/TRAFFIC SIGN
 - DOOR ELEVATION
 - FF FINISH FLOOR ELEVATION
 - BHE BUILDING HEIGHT/ELEVATION
 - B/B BACK TO BACK OF CURB MEASUREMENT
 - E/E EDGE TO EDGE OF ASPHALT
 - C/C EDGE TO EDGE OF CONCRETE
 - L/S LANDSCAPING AREA
 - BOLLARD
 - GATE POST
 - FENCE POST

- PROPOSED LEGEND:**
- ASPHALT EDGE TREATMENT. SEE SECTION ON C190
 - CONCRETE CURB AND GUTTER
 - CONCRETE CURB AND GUTTER WITH REVERSE FLOW
 - ASPHALT OVERLAY (040)
 - AREAS OF FULL DEPTH ASPHALT (040)
 - TURF
 - CONCRETE PAVEMENT (042) W/JOINTING
 - CONCRETE SIDEWALK (055+005) W/JOINTING
 - JOINT (TYP.)
 - JOINT TYPE
 - L LANDING
 - R RAMP
 - T TRANSITION
 - PROJECT AREA (LIMITS OF DISTURBANCE)

CONSTRUCTION NOTES:

- COORDINATE START-UP AND ALL CONSTRUCTION ACTIVITIES WITH THE LEE'S SUMMIT SCHOOL DISTRICT.
- CONSTRUCTION METHODS AND MATERIALS NOT SPECIFIED IN THESE PLANS ARE TO MEET OR EXCEED THE CURRENT EDITION OF THE KANSAS CITY METROPOLITAN CHAPTER OF AIAA SPECIFICATIONS AS ADOPTED AND AMENDED BY THE CITY OF LEE'S SUMMIT, MISSOURI AND MODIFIED AS NOTED ON THESE PLANS.
- ALL CONSTRUCTION WORK AND UTILITY WORK OUTSIDE OF PROPERTY BOUNDARIES SHALL BE PERFORMED IN COOPERATION WITH AND IN ACCORDANCE WITH REGULATIONS OF THE AUTHORITIES CONCERNED.
- PUBLIC CONVENIENCE AND SAFETY: THE CONTRACTOR SHALL CONDUCT THE WORK IN A MANNER THAT WILL INSURE, AS FAR AS PRACTICABLE, THE LEAST OBSTRUCTION TO TRAFFIC, AND SHALL PROVIDE FOR THE CONVENIENCE AND SAFETY OF THE GENERAL PUBLIC AND RESIDENTS ALONG AND ADJACENT TO PUBLIC ROADWAYS. CONTRACTOR IS RESPONSIBLE TO OBTAIN RIGHT-OF-WAY PERMIT FOR CONSTRUCTION OF DRIVE APPROACHES AND SIDEWALKS ALONG SE MILLER STREET AND SE MAIN STREET. CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL AS REQUIRED BY THE CITY OF LEE'S SUMMIT PUBLIC WORKS DEPARTMENT. REFERENCE MUTCD STANDARD DRAWINGS.
- ALL DIMENSIONS SHOWN ARE TO THE BACK OF CURB UNLESS OTHERWISE NOTED.
- ALL SIDEWALK JOINTS WITHIN PROJECT AREA SHALL BE RECAULKED WITH JOINT SEALANT. REFER TO TYPE 1 AND TYPE 2 JOINTS ON SHEET C190.

UTILITY STATEMENT:
THE UNDERGROUND UTILITIES SHOWN HEREON ARE FROM FIELD SURVEY INFORMATION OF ONE-CALL LOCATED UTILITIES, FIELD SURVEY INFORMATION OF ABOVE GROUND OBSERVABLE EVIDENCE, AND/OR THE SCALING AND PLOTTING OF EXISTING UTILITY MAPS AND DRAWINGS AVAILABLE TO THE SURVEYOR AT THE TIME OF SURVEY. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. FURTHERMORE, THE SURVEYOR DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES BY EXCAVATION UNLESS OTHERWISE NOTED ON THIS SURVEY. MISSOURI ONE CALL TICKET #220632754

WARRANTY / DISCLAIMER
THE DESIGNS REPRESENTED IN THESE PLANS ARE IN ACCORDANCE WITH ESTABLISHED PRACTICES OF CIVIL ENGINEERING FOR THE DESIGN FUNCTIONS AND USES INTENDED BY THE OWNER AT THIS TIME. HOWEVER, NEITHER KAW VALLEY ENGINEERING, INC NOR ITS PERSONNEL CAN OR DO WARRANTY THESE DESIGNS OR PLANS AS CONSTRUCTED, EXCEPT IN THE SPECIFIC CASES WHERE KAW VALLEY ENGINEERING PERSONNEL INSPECT AND CONTROL THE PHYSICAL CONSTRUCTION ON A TEMPORARY BASIS AT THE SITE.

CAUTION - NOTICE TO CONTRACTOR
THE CONTRACTOR IS SPECIALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH PROPOSED IMPROVEMENTS SHOWN ON THE PLANS. THE CONTRACTOR SHALL EXPOSE EXISTING UTILITIES AT LOCATIONS OF POSSIBLE CONFLICTS PRIOR TO ANY CONSTRUCTION.

SAFETY NOTICE TO CONTRACTOR
IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.



PROJ. NO. C21-1242 DSN: CJC
CIN: 1242SP DWN: NJN
ENGINEER
MO # 2015000538
14700 WEST 114TH TERRACE
LENEXA, KANSAS 66215
PH. (913) 894-5150 | FAX (913) 894-5977
c@kveeng.com | www.kveeng.com

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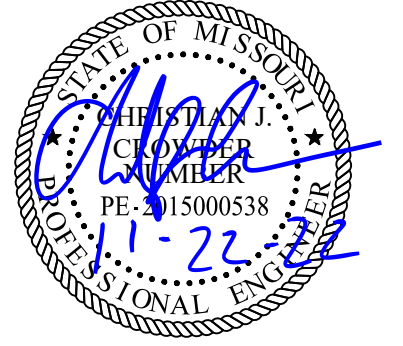
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1	AS B1 - CODE COMMENTS	11/22/2022

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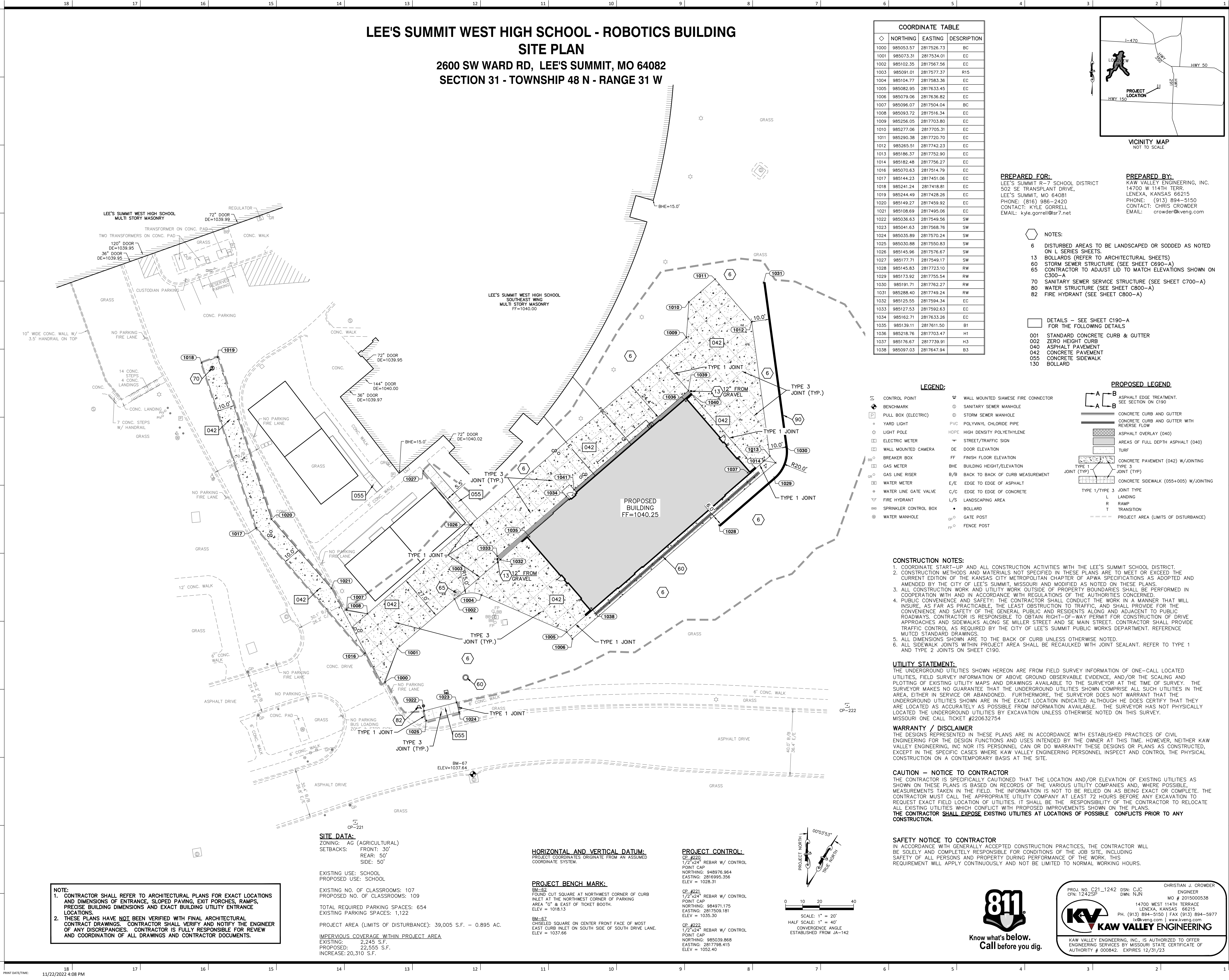
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Kaw Valley Engineering, Inc.
Missouri Certificate of Authority: 000842
Christian Crowder Date: 11/22/2022
Engineer License No. PE-2015000538

LSW SITE AND DIMENSION PLAN

C100-A



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LEGEND:		PROPOSED LEGEND	
⊕	CONTROL POINT	⊕	WALL MOUNTED SIAMSE FIRE CONNECTOR
⊕	BENCHMARK	⊕	SANITARY SEWER MANHOLE
⊕	PULL BOX (ELECTRIC)	⊕	STORM SEWER MANHOLE
⊕	YARD LIGHT	⊕	PVC POLYVINYL CHLORIDE PIPE
⊕	LIGHT POLE	⊕	HDPE HIGH DENSITY POLYETHYLENE
⊕	ELECTRIC METER	⊕	STREET/TRAFFIC SIGN
⊕	WALL MOUNTED CAMERA	⊕	DOOR ELEVATION
⊕	BREAKER BOX	⊕	FF FINISH FLOOR ELEVATION
⊕	GAS METER	⊕	BHE BUILDING HEIGHT/ELEVATION
⊕	GAS LINE RISER	⊕	B/B BACK TO BACK OF CURB MEASUREMENT
⊕	WATER METER	⊕	E/E EDGE TO EDGE OF ASPHALT
⊕	WATER LINE GATE VALVE	⊕	C/C EDGE TO EDGE OF CONCRETE
⊕	FIRE HYDRANT	⊕	L/S LANDSCAPING AREA
⊕	SPRINKLER CONTROL BOX	⊕	• BOLLARD
⊕	WATER MANHOLE	⊕	• GATE POST
⊕		⊕	• FENCE POST

CONSTRUCTION NOTES:

- COORDINATE START-UP AND ALL CONSTRUCTION ACTIVITIES WITH THE LEE'S SUMMIT SCHOOL DISTRICT.
- CONSTRUCTION METHODS AND MATERIALS NOT SPECIFIED IN THESE PLANS ARE TO MEET OR EXCEED THE CURRENT EDITION OF THE KANSAS CITY METROPOLITAN CHAPTER OF APWA SPECIFICATIONS AS ADOPTED AND AMENDED BY THE CITY OF LEE'S SUMMIT, MISSOURI AND MODIFIED AS NOTED ON THESE PLANS.
- ALL CONSTRUCTION WORK AND UTILITY WORK OUTSIDE OF PROPERTY BOUNDARIES SHALL BE PERFORMED IN COOPERATION WITH AND IN ACCORDANCE WITH REGULATIONS OF THE AUTHORITIES CONCERNED.
- PUBLIC CONVENIENCE AND SAFETY: THE CONTRACTOR SHALL CONDUCT THE WORK IN A MANNER THAT WILL INSURE, AS FAR AS PRACTICABLE, THE LEAST OBSTRUCTION TO TRAFFIC, AND SHALL PROVIDE FOR THE CONVENIENCE AND SAFETY OF THE GENERAL PUBLIC AND RESIDENTS ALONG AND ADJACENT TO PUBLIC ROADWAYS. CONTRACTOR IS RESPONSIBLE TO OBTAIN RIGHT-OF-WAY PERMIT FOR CONSTRUCTION OF DRIVE APPROACHES AND SIDEWALKS ALONG SE MILLER STREET AND SE MAIN STREET. CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL AS REQUIRED BY THE CITY OF LEE'S SUMMIT PUBLIC WORKS DEPARTMENT. REFERENCE MUTCD STANDARD DRAWINGS.
- ALL DIMENSIONS SHOWN ARE TO THE BACK OF CURB UNLESS OTHERWISE NOTED.
- ALL SIDEWALK JOINTS WITHIN PROJECT AREA SHALL BE RECAULKED WITH JOINT SEALANT. REFER TO TYPE 1 AND TYPE 2 JOINTS ON SHEET C190.

UTILITY STATEMENT:

THE UNDERGROUND UTILITIES SHOWN HEREON ARE FROM FIELD SURVEY INFORMATION OF ONE-CALL LOCATED UTILITIES, FIELD SURVEY INFORMATION OF ABOVE GROUND OBSERVABLE EVIDENCE, AND/OR THE SCALING AND PLOTTING OF EXISTING UTILITY MAPS AND DRAWINGS AVAILABLE TO THE SURVEYOR AT THE TIME OF SURVEY. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. FURTHERMORE, THE SURVEYOR DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES BY EXCAVATION UNLESS OTHERWISE NOTED ON THIS SURVEY. MISSOURI ONE CALL TICKET #220632754

WARRANTY / DISCLAIMER

THE DESIGNS REPRESENTED IN THESE PLANS ARE IN ACCORDANCE WITH ESTABLISHED PRACTICES OF CIVIL ENGINEERING FOR THE DESIGN FUNCTIONS AND USES INTENDED BY THE OWNER AT THIS TIME. HOWEVER, NEITHER KAW VALLEY ENGINEERING, INC NOR ITS PERSONNEL CAN OR DO WARRANTY THESE DESIGNS OR PLANS AS CONSTRUCTED, EXCEPT IN THE SPECIFIC CASES WHERE KAW VALLEY ENGINEERING PERSONNEL INSPECT AND CONTROL THE PHYSICAL CONSTRUCTION ON A CONTEMPORARY BASIS AT THE SITE.

CAUTION - NOTICE TO CONTRACTOR

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH PROPOSED IMPROVEMENTS SHOWN ON THE PLANS. THE CONTRACTOR SHALL EXPOSE EXISTING UTILITIES AT LOCATIONS OF POSSIBLE CONFLICTS PRIOR TO ANY CONSTRUCTION.

SAFETY NOTICE TO CONTRACTOR

IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.



PROJ. NO. C21_1242 DSN: CJC
CIN: 1242SP DWN: NJN
ENGINEER
MO # 2015000538
14700 WEST 114TH TERRACE
LENEXA, KANSAS 66215
PH. (913) 894-5150 | FAX (913) 894-5977
x@kveng.com | www.kveng.com
KAW VALLEY ENGINEERING
KAW VALLEY ENGINEERING, INC. IS AUTHORIZED TO OFFER
ENGINEERING SERVICES BY MISSOURI STATE CERTIFICATE OF
AUTHORITY # 000842. EXPIRES 12/31/23

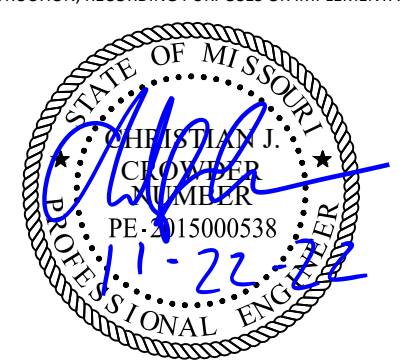
Issue Date: September 9, 2022

Revisions		
NUMBER	DESCRIPTION	DATE
1	AS B1. CODE COMMENTS	11/22/2022

RELEASED FOR
CONSTRUCTION
As Noted on Plans Review

Development Services Department
Lee's Summit, Missouri
12/02/2022

UNLESS A PROFESSIONAL SEAL WITH SIGNATURE AND DATE IS
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Kaw Valley Engineering, Inc.
Missouri Certificate of Authority: 000842
Christian Crowder Date: 11/22/2022
Engineer License No. PE-2015000538

LSW TRUCK TURNING
TEMPLATE

C101-A

NOTE:
1. CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF ENTRANCE, SLOPED PAVING, EXIT PORCHES, RAMPS, PRECISE BUILDING DIMENSIONS AND EXACT BUILDING UTILITY ENTRANCE LOCATIONS.
2. THESE PLANS HAVE NOT BEEN VERIFIED WITH FINAL ARCHITECTURAL CONTRACT DRAWINGS. CONTRACTOR SHALL VERIFY AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES. CONTRACTOR IS FULLY RESPONSIBLE FOR REVIEW AND COORDINATION OF ALL DRAWINGS AND CONTRACTOR DOCUMENTS.

**Lee's Summit Robotics,
Gic & Phys Educaiton**

LSN: 901 NE Douglas St., Lee's Summit MO
64086
LSW: 2600 SW Ward Rd, Lee's Summit MO
64082
LSHS: 400 SE Blue Pkwy, Lee's Summit MO 64063

Project Number: 0121-0100

owner: Lee's Summit R-7 School
301 NE Tudor Road
Lee's Summit, MO 64086

architect: Multistudio
4200 Pennsylvania
Kansas City, MO 64111
816.931.6655
multistudio

civil engineer: Kaw Valley Engineering
14700 West 114th Terrace
Lenexa, KS 66215
913.485.0318
kveng.com

MEP/IT/Code: Henderson Engineers
8345 Lenexa Drive, Suite
300
Lenexa, KS 66214
816.742.5000
www.hendersonengineers.com

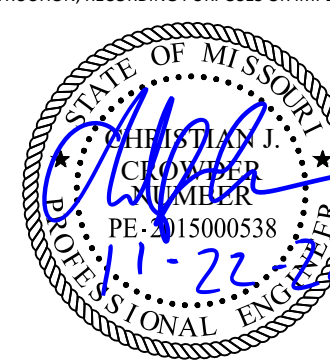
Issue Date: September 9, 2022

Revisions	DESCRIPTION	DATE
NUMBER	ASB 01 - CODE COMMENTS	11/22/2022
1		

**RELEASED FOR
CONSTRUCTION**
As Noted on Plans Review

Development Services Department
Lee's Summit, Missouri
12/02/2022

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Kaw Valley Engineering, Inc.
Missouri Certificate of Authority: 000842
Christian Crowder Date: 11/22/2022
Engineer License No. PE-2015000538

LSW SITE DETAILS

C190-A

ASPHALT NOTES:

PAVING SHALL BE IN ACCORDANCE WITH THE KANSAS CITY METROPOLITAN CHAPTER OF APWA SECTION 2200 AS AMENDED BELOW.

MILLING FOR THE DRIVES AND PARKING LOTS SHALL BE COLD MILLED AS FOLLOWS:

- EQUIPMENT: MILLING THE SURFACE OF PAVEMENTS SHALL BE COMPLETED BY USE OF A MILLING MACHINE CONFORMING TO THE FOLLOWING.

- MACHINE: THE COLD MILLING MACHINE SHALL BE SELF-PROPELLED AND SHALL HAVE IN COMBINATION THE MEANS OF MILLING AND CUTTING, WITHOUT SOFTENING THE OLD SURFACE AND BLADING THE CUTTING INTO A SINGLE WINDROW, OR DEPOSITING THEM DIRECTLY INTO A TRUCK.
- AIR POLLUTION: THE MACHINE SHALL BE EQUIPPED WITH A DUST SUPPRESSION SYSTEM INCLUDING WATER STORAGE TANKS AND HIGH PRESSURE SPRAY BARS.
- OPERATING WIDTH: IT IS DESIRABLE THAT THE CUTTING WIDTH BE GREATER THAN 1 FEET (0.3 m). IN THE EVENT THE CUTTING WIDTH IS LESS THAN 1 FEET (0.3 m) CONTRACTOR IS RESPONSIBLE FOR ENSURING GRADE CONTROL AS NOTED ON PLANS.
- CUTTING DRUM: THE CUTTING DRUM SHALL BE TOTALLY ENCLOSED TO PREVENT DISCHARGE OF ANY LOOSENED MATERIAL ADJACENT TO WORK AREAS.

- CONSTRUCTION DETAILS

- METHODS OF OPERATIONS FOR MILLING:

- OPERATOR: THE MILLING MACHINE SHALL BE OPERATED BY AN EXPERIENCED AND CAPABLE OPERATOR.
- UTILITIES: STREET SURFACES ADJACENT TO MANHOLE, WATER VALVES AND OTHER UTILITY EXTENSIONS, SHALL BE COMPLETELY REMOVED TO THE FULL DEPTH THE CUT SPECIFIED FOR THE STREET UNLESS OTHERWISE SPECIFIED BY THE ENGINEER.
- MATERIAL DISPOSAL: THE MATERIAL WITHDREW BY THE MACHINE SHALL BE REMOVED FROM THE SURFACE OF THE PAVEMENT AND PROPERLY DISPOSED OF BY THE CONTRACTOR.
- SURFACE CONDITIONS: THE DRUM LACING PATTERNS SHALL PRODUCE A SMOOTH SURFACE AFTER MILLING WITH GROOVE DEPTHS NOT TO EXCEED 1/4 INCH (0.64 cm) AND GROOVE SPACING NOT TO EXCEED 1 INCH (2.54 cm) UNLESS OTHERWISE APPROVED BY THE ENGINEER.

- TYPES OF CUTS TO BE MADE BY MILLING:

- LEVELING: SUFFICIENT PASSES SHALL BE MADE SUCH THAT ALL IRREGULARITIES OR HIGH SPOTS ARE ELIMINATED, AND THAT 100% OF THE SURFACE IS MILLED.
- AVERAGE DEPTH: SUFFICIENT PASSES, OR CUTS, SHALL BE MADE IN ORDER TO REMOVE A SPECIFIED DEPTH OVER THE ENTIRE STREET SECTION. THESE DEPTHS WILL BE DESIGNATED ON THE PLANS.
- CURB CUT: SUFFICIENT PASSES, OR CUTS, SHALL BE MADE IN ORDER TO REMOVE A SPECIFIED DEPTH AT THE CURB FOR A SPECIFIED WIDTH. THE DEPTH AT THE WIDTH FURTHEST FROM THE CURB IS 0. THESE DIMENSIONS WILL BE DESIGNATED ON THE PLANS.

- CLEANUP: ALL LOOSE ASPHALT AND DEBRIS SHALL BE REMOVED FROM THE STREET SURFACE AND CURB AND GUTTER. ANY MATERIAL AND DEBRIS THAT ADHERES TO THE CURB AND GUTTER SHALL BE REMOVED.

CRACKS: REFER TO CRACK SEALING/FILLING GUIDELINES.

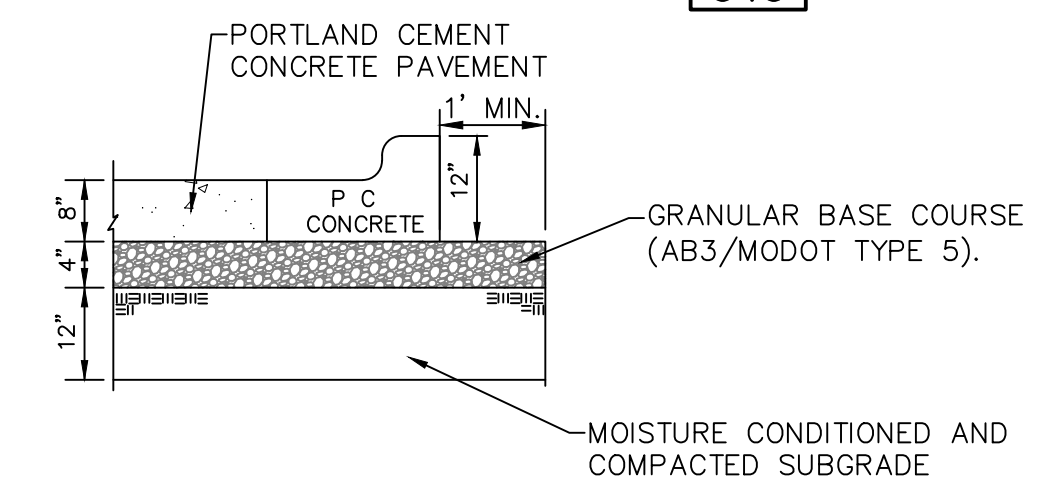
- AREAS OF THE PAVEMENT REQUIRING PATCHING WILL BE DESIGNATED ON THE PLANS OR MARKED BY THE ENGINEER AFTER COMPLETION OF MILLING OPERATIONS FOR THE SECTION OF PAVEMENT UNDER CONSTRUCTION. THE DETERIORATED PAVEMENT WILL BE REMOVED TO THE LIMITS DESIGNATED BY THE ENGINEER. THE SUBGRADE SHALL BE ADJUSTED TO PERMIT THE THICKNESS OF ASPHALT INDICATED ON THE PLANS. THE SUBGRADE SHALL CONSIST OF MODOT TYPE 5 AGGREGATE AND SHALL BE UNIFORMLY COMPACTED BY HAND TAMPING OR ROLLING. BITUMINOUS MIX FOR PATCHING WILL MEET THE REQUIREMENTS FOR APWA TYPE 1 OR 2 ASPHALT CONCRETE AS SPECIFIED IN THE KANSAS CITY METROPOLITAN CHAPTER OF APWA SECTION 2200. AT THE TIME OF PLACING ASPHALT THE EDGE OF THE AREA TO BE PATCHED WILL BE COATED WITH SS-1H EMULSIFIED ASPHALT OR APPROVED EQUAL. THE ASPHALT IN THE PATCH SHALL BE PLACED IN TWO EQUAL LIFTS WITH EACH LIFT THOROUGHLY COMPACTED PRIOR TO PLACEMENT OF THE SUBSEQUENT LIFT.

- CONSTRUCTION OF THE 2 INCH OVERLAY WILL BE PERFORMED IN ACCORDANCE WITH THE KANSAS CITY METROPOLITAN CHAPTER OF APWA SECTION 2200 - ASPHALT CONCRETE SURFACE WITH THE FOLLOWING MODIFICATIONS:

- THE APWA TYPE 3 ASPHALT CONCRETE MIX MAY CONTAIN RECYCLED ASPHALT CONTENT. RECYCLED ASPHALT MIX DESIGN APWA TYPE 3 (FRAP) AND APWA TYPE 1 OR 2 (FRAP) (FOR FULL DEPTH PATCH) MUST BE A 50-BLOW MARSHALL MIX MEETING THE AGGREGATE, GRADATION, AND VOLUMETRIC DESIGN REQUIREMENTS FOR APWA TYPE 3 OR APWA TYPE 3 (FRAP) FOR SURFACE COURSE AND APWA TYPE 1 OR 2 OR APWA TYPE 1 OR 2 (FRAP) FOR BASE COURSES AS DEFINED BY THE KANSAS CITY METROPOLITAN CHAPTER OF APWA SECTION 2200, CURRENT EDITION. ANY SUBMITTED 50-BLOW MARSHALL MIX DESIGN MUST ALSO BE CHECKED FOR RESISTANCE TO STRIPPING DURING DESIGN USING AASHTO T-283 TO DETERMINE IF ANTISTRIPPING AGENT IS NEEDED FOR THE SAME ASPHALT. THE CONCRETE CHOSEN FOR THE PROJECT, THE INDEX OF RETAINED STRENGTH SHALL EXCEED 80%. ANY ASPHALT MIX SUPPLIED TO THE PROJECT DURING PLACEMENT WILL BE SUBJECT TO TESTING BY THE OWNERS REPRESENTATIVES USING THE AASHTO T-283 PROCEDURE FOR TENSILE STRENGTH RATIO.)
- MEASURED DENSITY OF THE COMPLETED OVERLAY SHALL HAVE A COMPACTED DENSITY OF 92% TO 97% OF THE DAILY THEORETICAL MAXIMUM SPECIFIC GRAVITY (GMM) OF THE APWA TYPE 3 MIX SUPPLIED TO THE PROJECT.
- AREAS OF THE PAVEMENT SURFACE ON THE DRIVES AND PARKING LOTS THAT ARE SHOWN TO HAVE SEGREGATION UPON COMPLETION OF FINAL ROLLING SHALL RECEIVE AN ADDITIONAL SURFACE TREATMENT TO CLOSE THE SURFACE. TREATMENT SHALL CONSIST OF MANUFACTURED SAND COATED WITH SS-1H EMULSION WORKED INTO THE SURFACE VOIDS TO YIELD A UNIFORM APPEARING SURFACE.

ASPHALT PAVEMENT

040



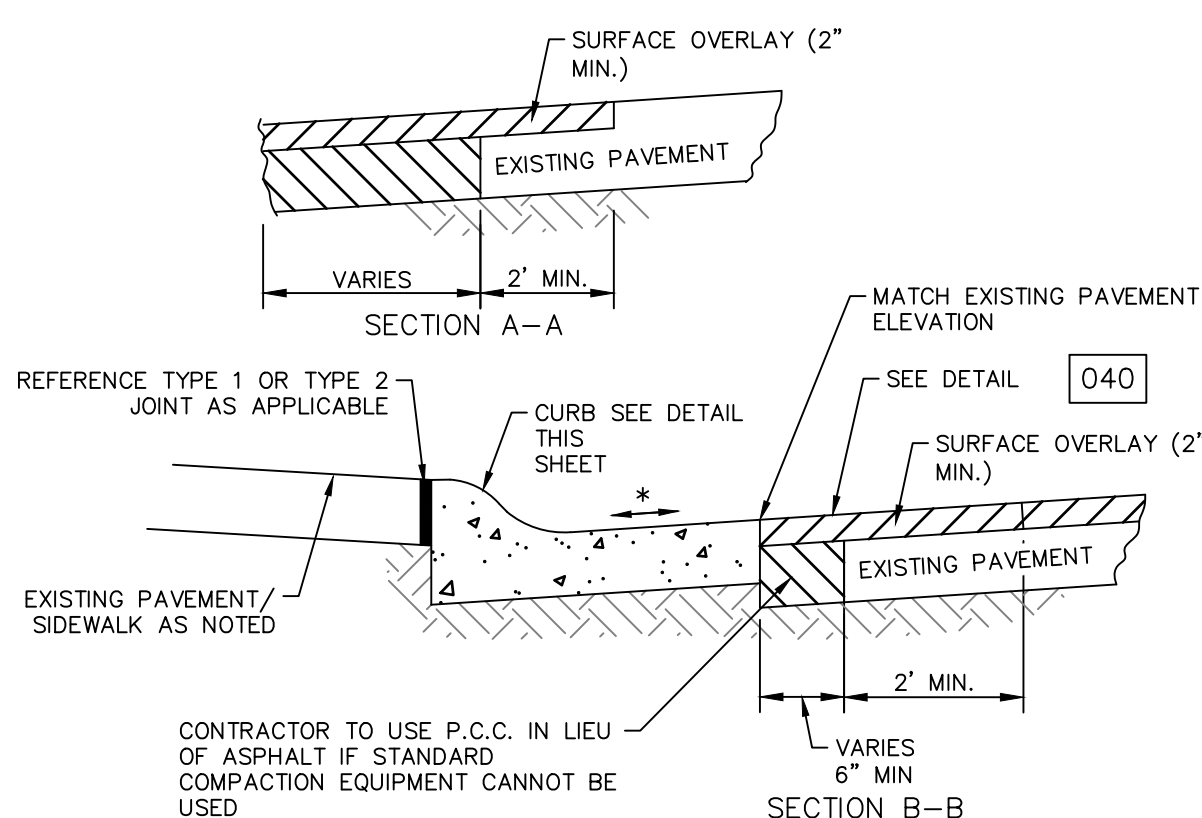
CONCRETE PAVEMENT

042

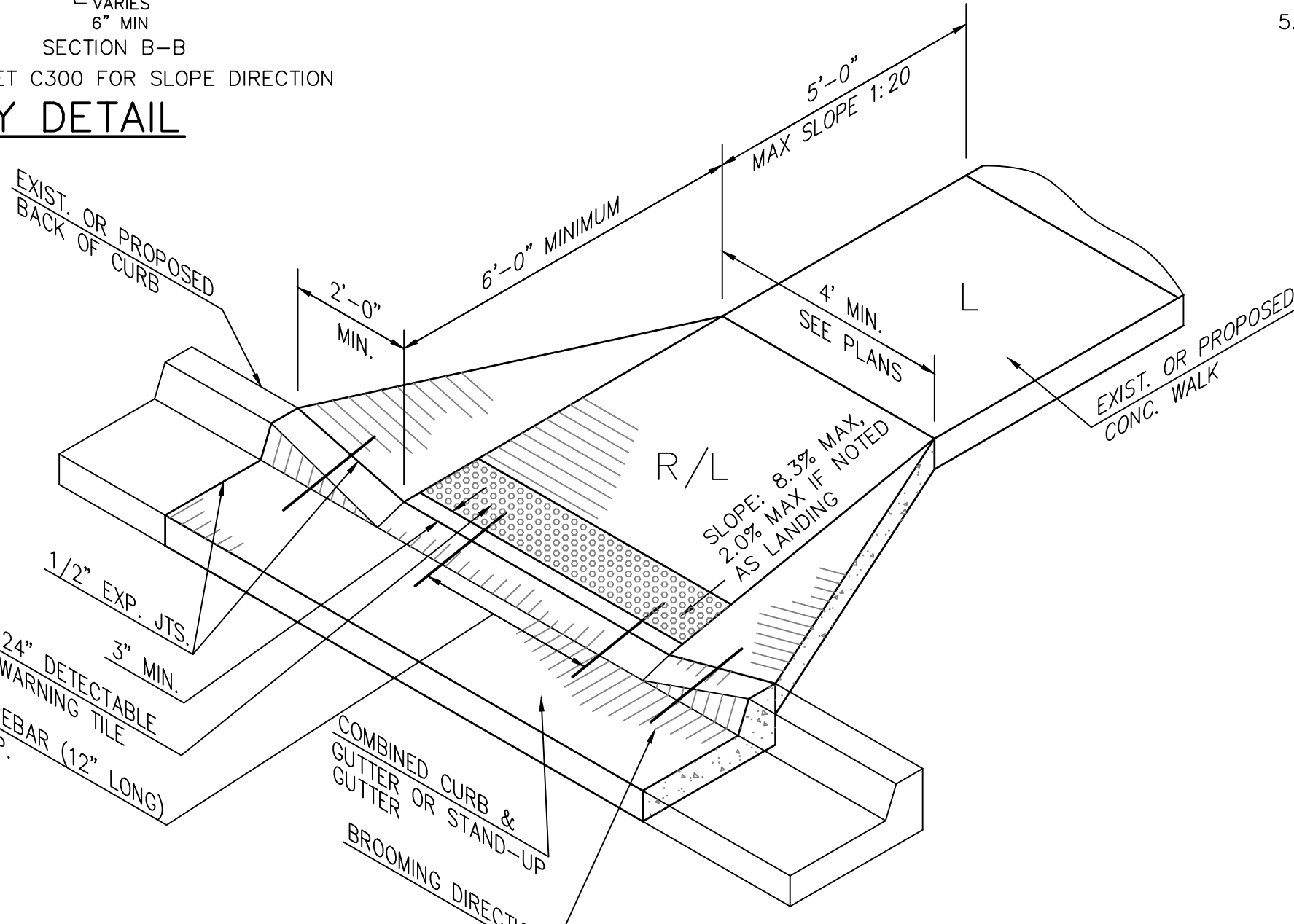
- FLEXIBLE PAVEMENT SHALL BE IN ACCORDANCE WITH THE LATEST (FEBRUARY 2017) EDITION OF THE KANSAS CITY METROPOLITAN CHAPTER OF APWA SECTION 2200 AS AMENDED BY PROJECT SPECIFICATIONS.
- PORTLAND CEMENT CONCRETE FOR DRIVEWAYS SHALL BE A KOMB4K MIX AND SHALL MEET THE LATEST EDITION OF THE KANSAS CITY METROPOLITAN CHAPTER OF APWA SECTION 2200.

ASPHALT SURFACE COURSE - APWA TYPE 3-01

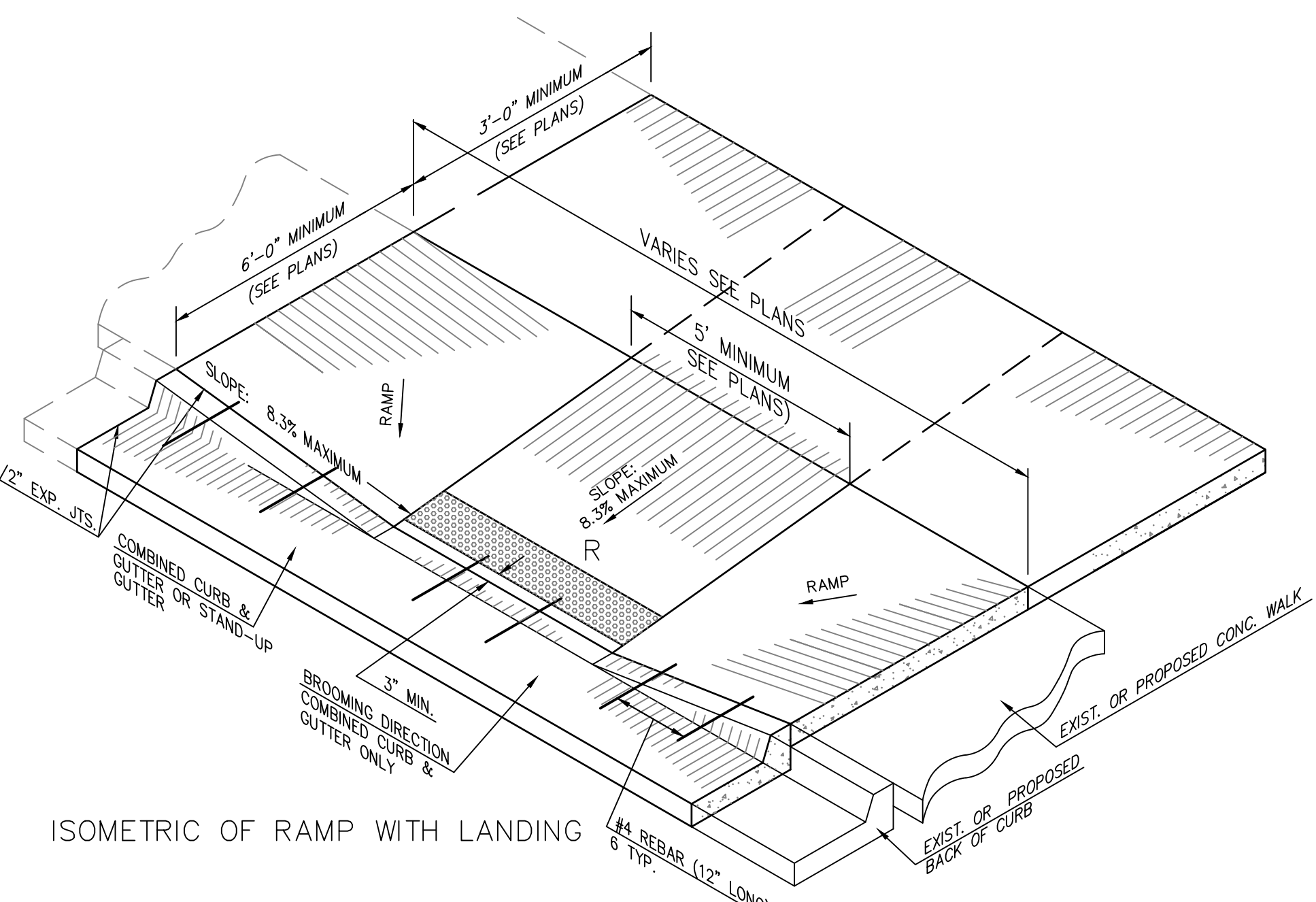
ASPHALT BASE COURSE - APWA TYPE 2-01



MILL AND OVERLAY DETAIL



ISOMETRIC OF RAMP WITH LANDING

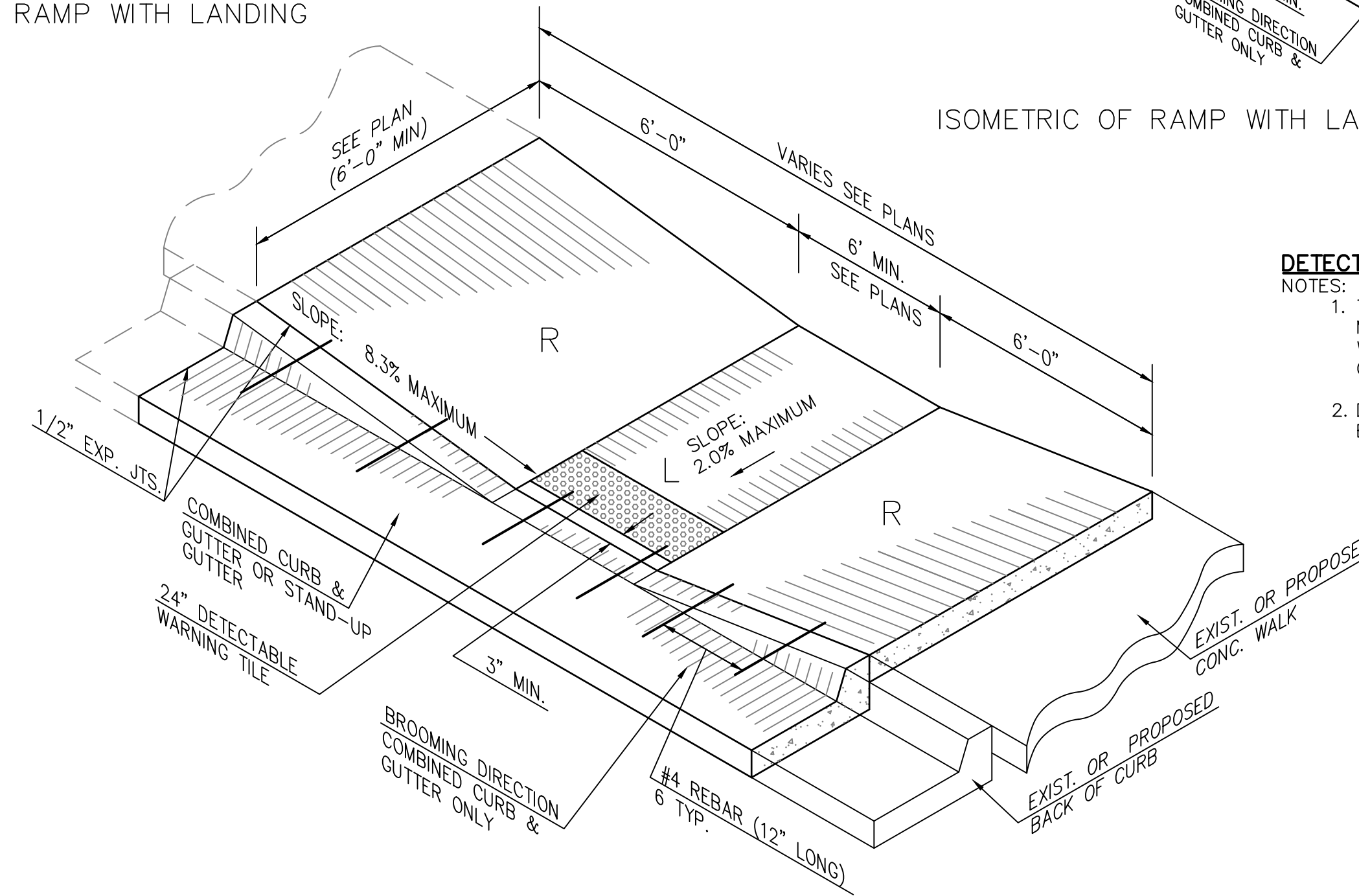


ISOMETRIC OF RAMP WITH LANDING

DETECTABLE WARNING SURFACE TILE

101

- NOTES:
- TILE MATERIAL SHALL BE VITRIFIED POLYMER COMPOSITE AS MANUFACTURED BY ARMOR-TILE OR APPROVED EQUAL. DETECTABLE WARNING TILE TO BE PLACED A MINIMUM OF 3 INCHES FROM BACK OF CURB AND ALIGNED IN THE DIRECTION OF PEDESTRIAN TRAVEL.
 - DETECTABLE WARNING TILE TO BE PLACED A MINIMUM OF 3 INCHES FROM BACK OF CURB AND ALIGNED IN THE DIRECTION OF PEDESTRIAN TRAVEL.



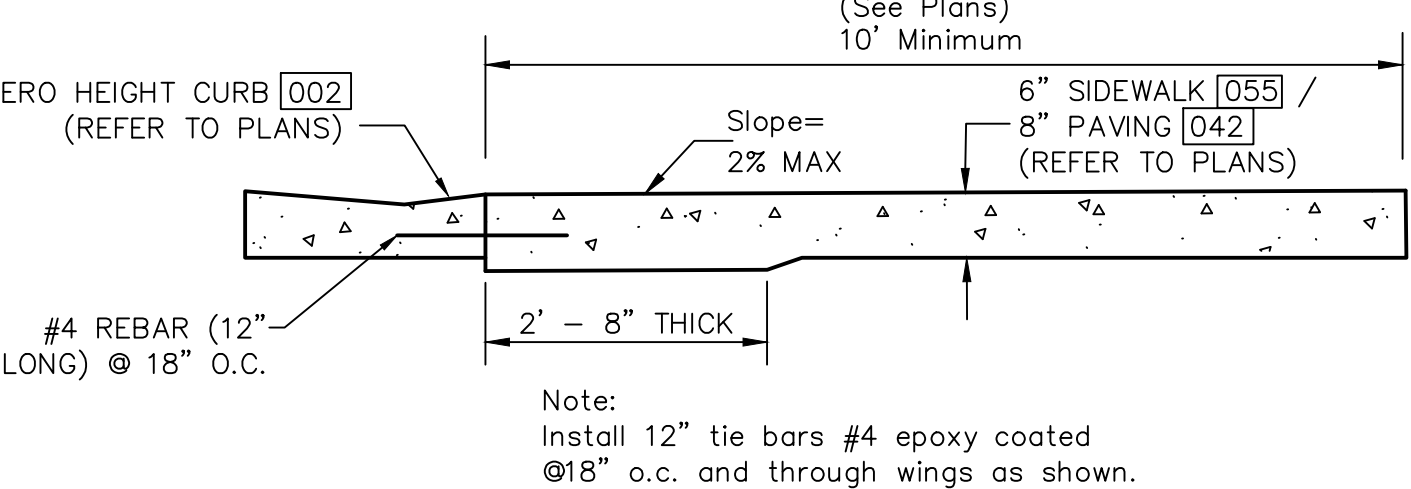
ISOMETRIC OF RAMP WITH LANDING

SIDEWALK RAMPS

060

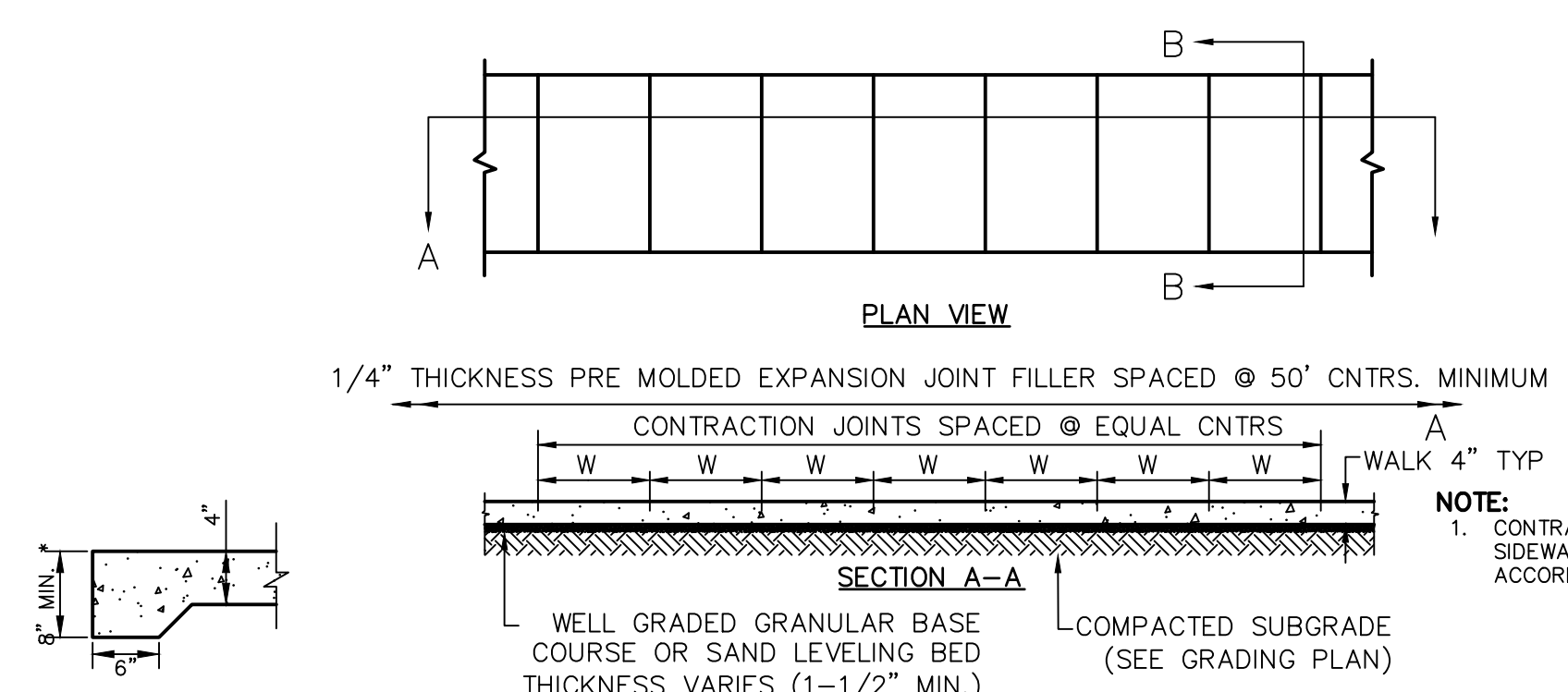
INTEGRAL CURB AND SIDEWALK

005

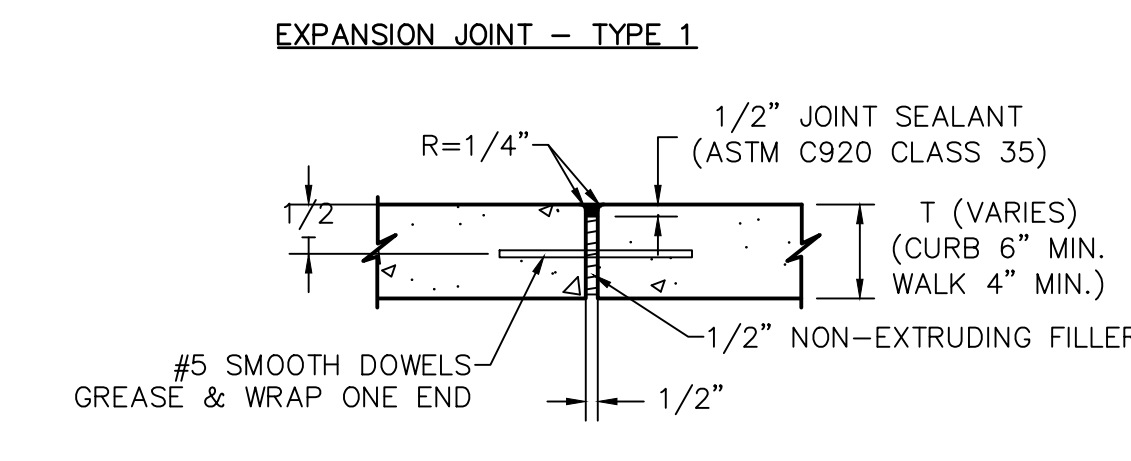


CONCRETE SIDEWALK

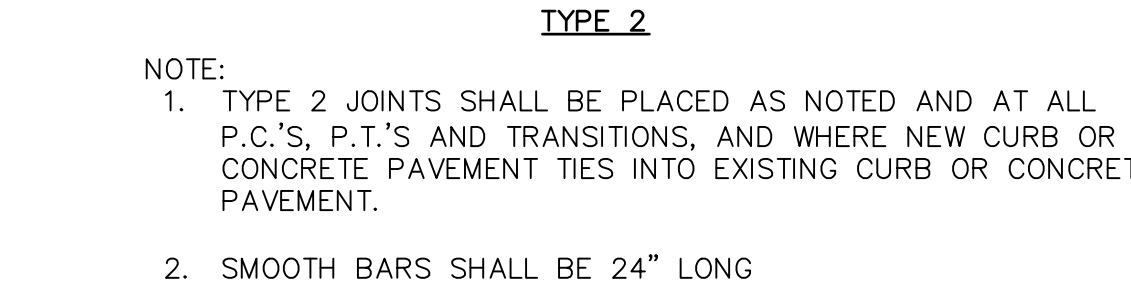
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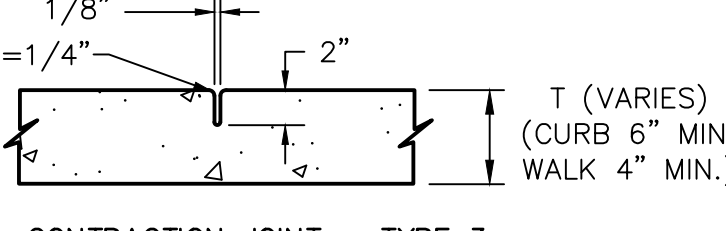
CONCRETE JOINTING DETAILS



EXPANSION JOINT - TYPE 1



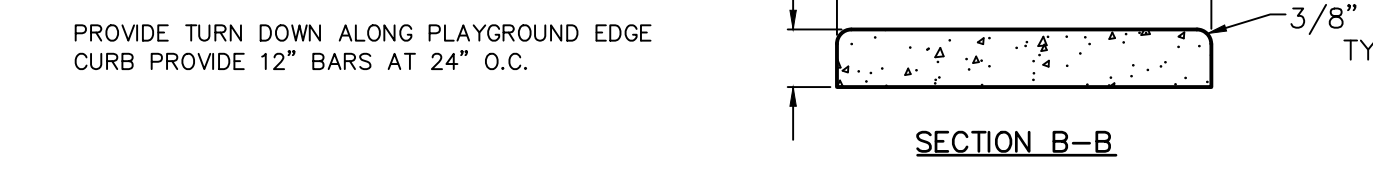
TYPE 2



CONTRACTION JOINT - TYPE 3

TURNDOWN

*MATCH ASPHALT THICKNESS



CONCRETE SIDEWALK

055

CURB & GUTTER NOTES:

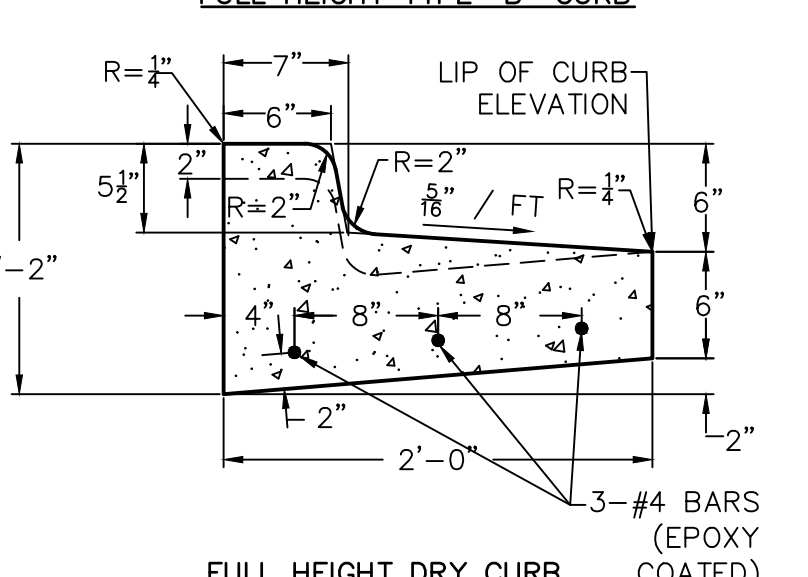
- 1" PREMOLED EXPANSION JOINTS SHALL BE PLACED AT POINTS OF CURVATURE, CURB RETURNS, CURB INLETS AND AT 250' CENTERS. THE EXPANSION JOINTS SHALL BE DOWELED IN ACCORDANCE WITH THE SPECIFICATIONS. CONTRACTION JOINTS SHALL BE 2" DEEP AND PLACED AT 15' INTERVALS EQUALLY SPACED BETWEEN EXPANSION JOINTS.
- ALL CONCRETE USED IN THIS WORK SHALL MEET THE LATEST EDITION OF THE KANSAS CITY METROPOLITAN CHAPTER OF THE AMERICAN PUBLIC WORKS ASSOCIATION. KOMB4K CONCRETE SHALL BE USED THROUGHOUT.
- ALL REINFORCING STEEL SHALL BE SUPPORTED ON FABRICATED STEEL BAR SUPPORTS @ 3'-0" MAXIMUM SPACING.
- SEE SIDEWALK RAMP DETAILS FOR TYPICAL SIDEWALK RAMP CURB & GUTTER SECTIONS.
- DETAILS AS SHOWN FOR CONCRETE AND ASPHALT PAVING. WHEN USED WITH CONCRETE PAVING POURED MONOLITHICALLY WITH CURB NO MODIFICATIONS ARE REQUIRED. WHEN CURB AND CONCRETE PAVING ARE TO BE POURED SEPARATELY #4 BARS, 24" LONG ARE TO BE PROVIDED TO TIE CURB TOGETHER WITH CONCRETE PAVING. PLACE AT 8" O.C.
- ALL REINFORCING SHALL BE 60 GRADE 60 DEFORMED BARS AND COMPLY WITH ASTM A615. EPOXY BARS AS NOTED, SHALL COMPLY WITH ASTM A775.
- CURBS TO BE CONSTRUCTED ON MINIMUM 6 INCHES OF COMPACTED WELL GRADED BASE ROCK.

CURB & GUTTER

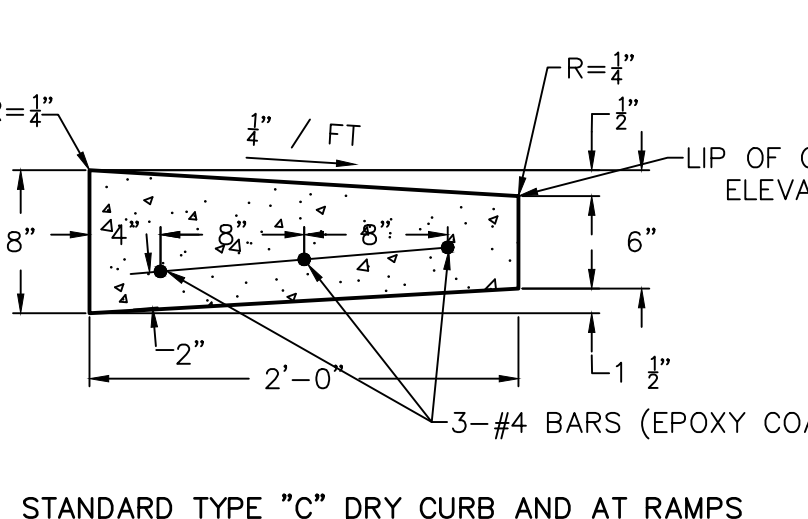
N.T.S

FULL HEIGHT CURB

001



FULL HEIGHT DRY CURB



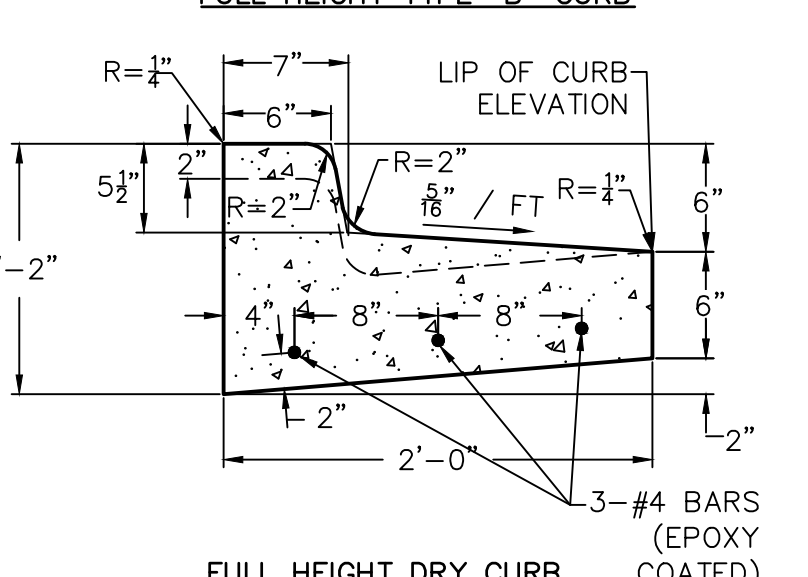
STANDARD TYPE "C" DRY CURB AND AT RAMPS

ZERO HEIGHT CURB

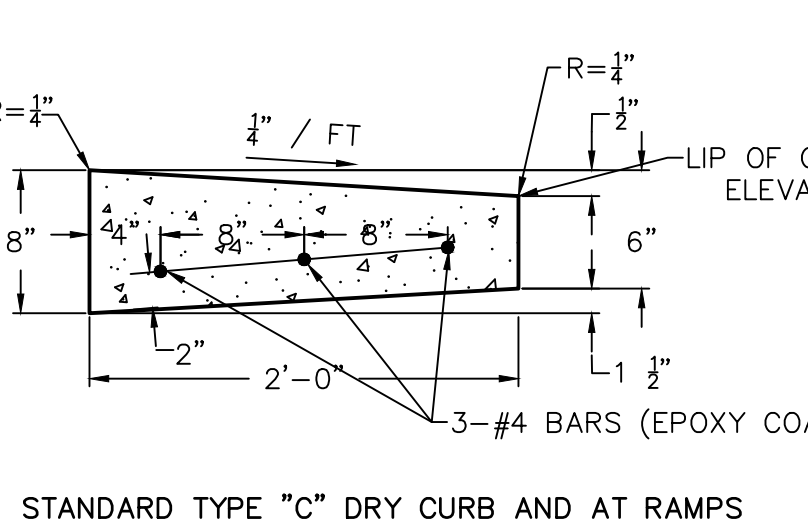
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FULL HEIGHT CURB

001



FULL HEIGHT DRY CURB



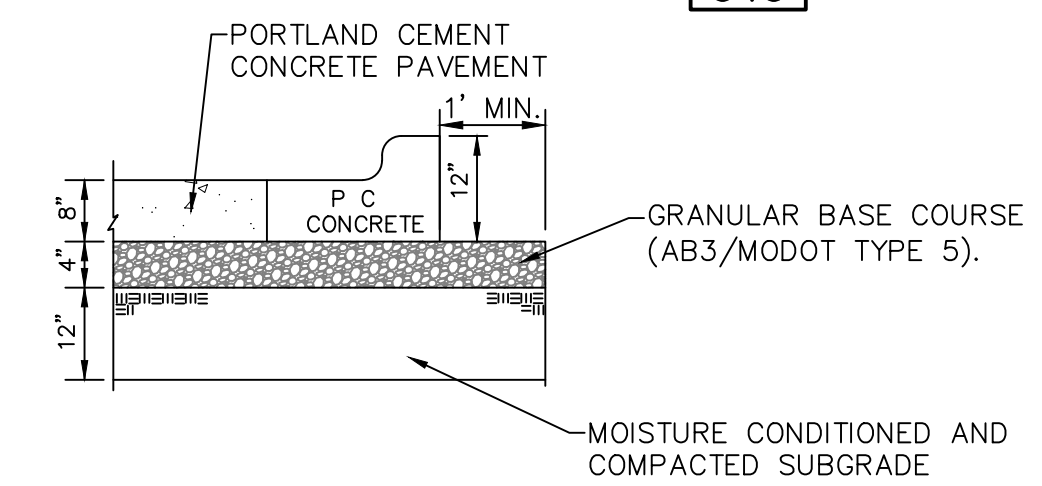
STANDARD TYPE "C" DRY CURB AND AT RAMPS

ZERO HEIGHT CURB

002

ASPHALT PAVEMENT

040



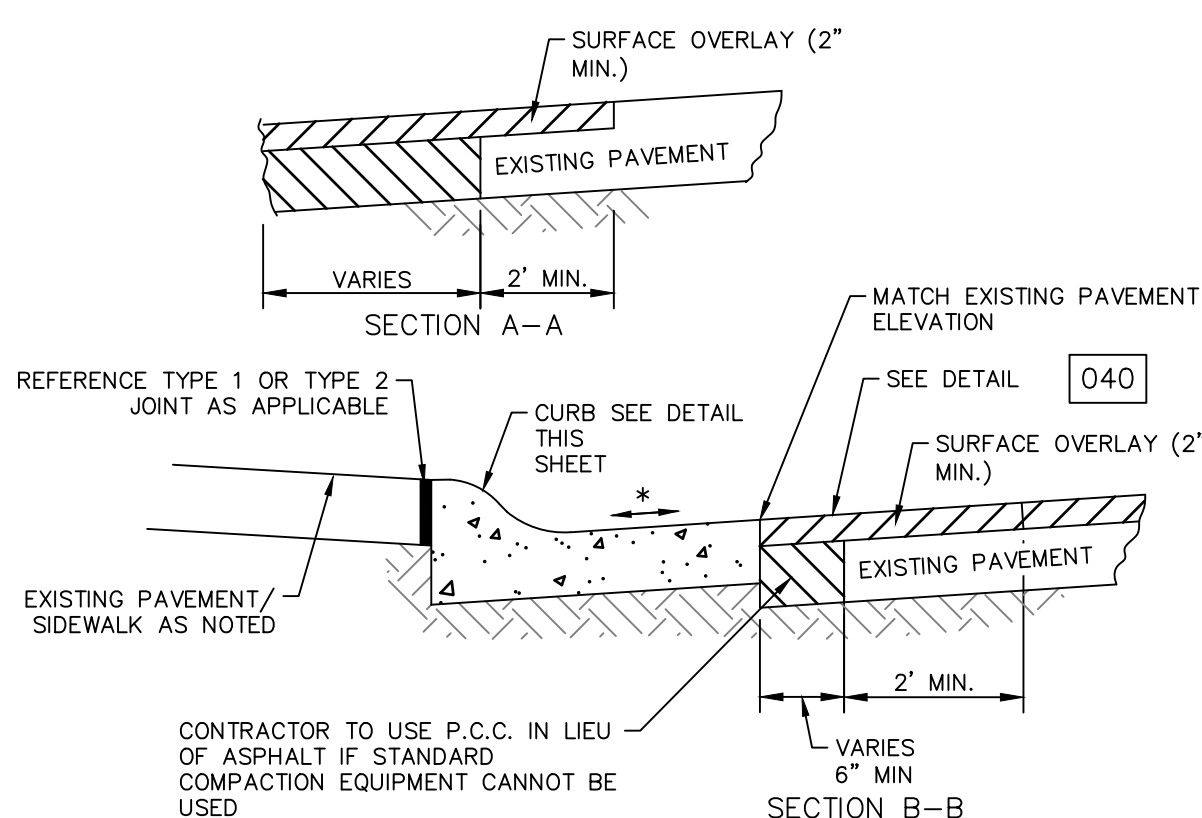
CONCRETE PAVEMENT

042

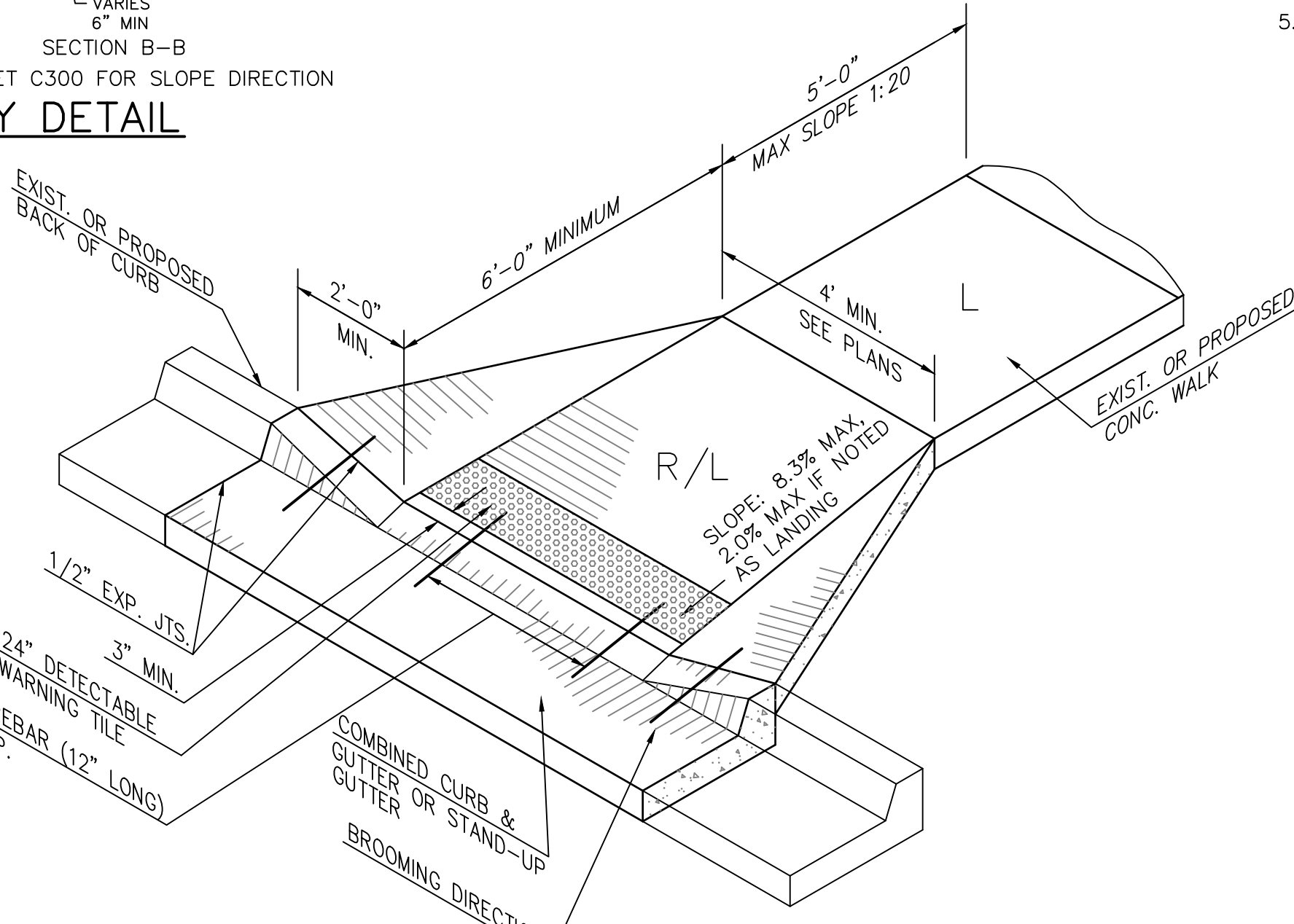
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ASPHALT SURFACE COURSE - APWA TYPE 3-01

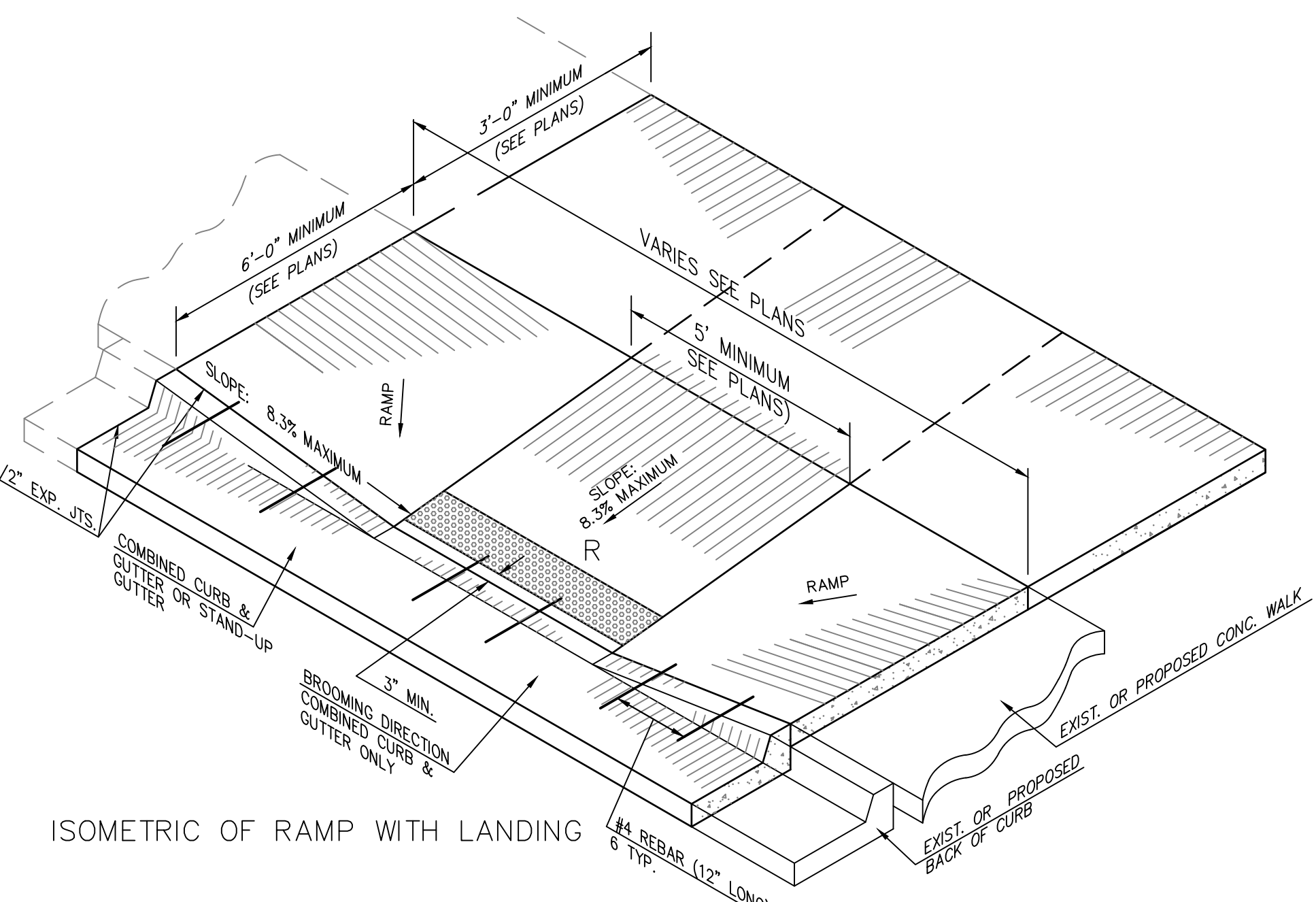
ASPHALT BASE COURSE - APWA TYPE 2-01



MILL AND OVERLAY DETAIL



ISOMETRIC OF RAMP WITH LANDING

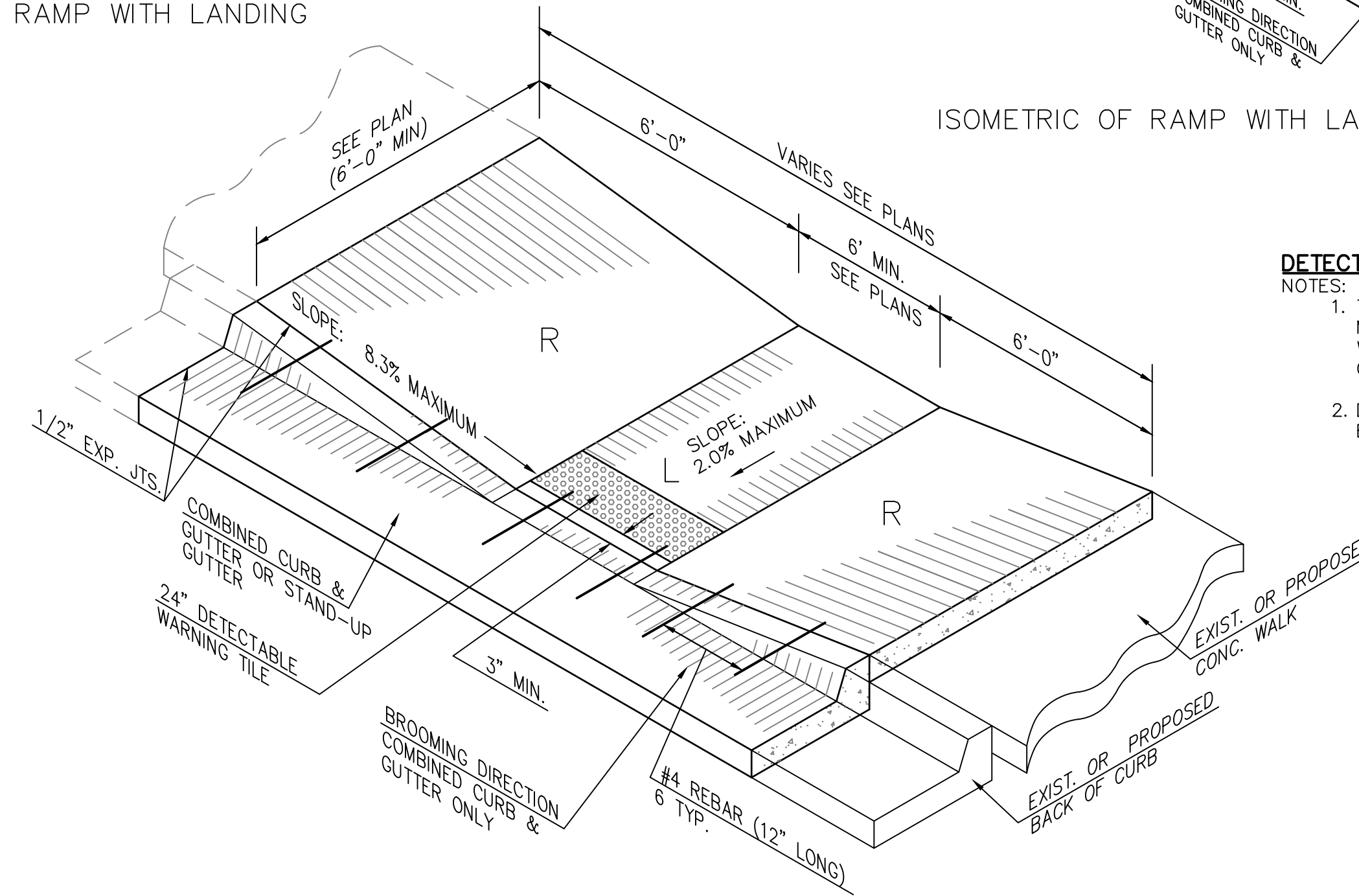


ISOMETRIC OF RAMP WITH LANDING

DETECTABLE WARNING SURFACE TILE

101

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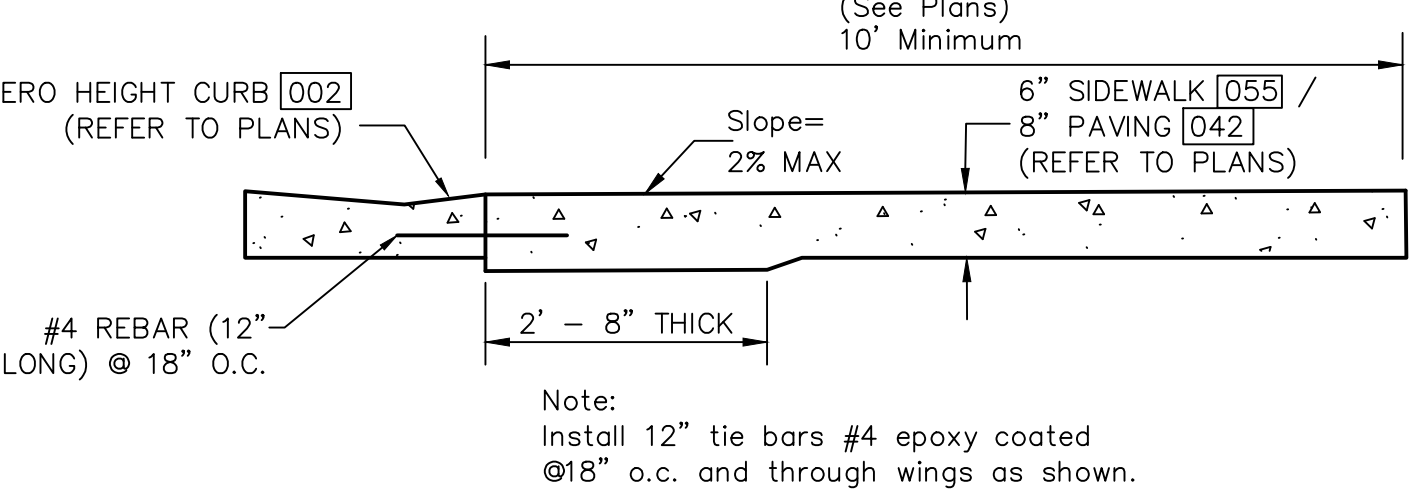
ISOMETRIC OF RAMP WITH LANDING

SIDEWALK RAMPS

060

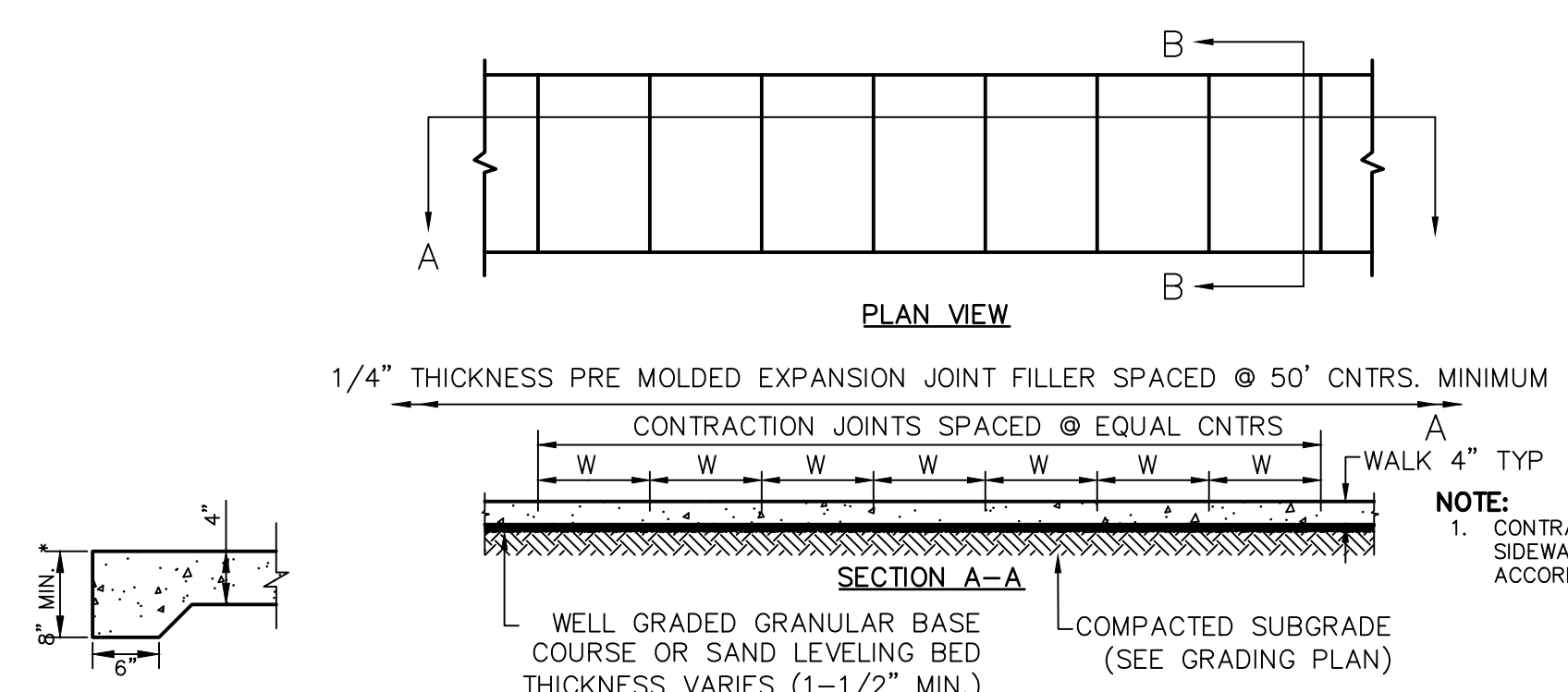
INTEGRAL CURB AND SIDEWALK

005

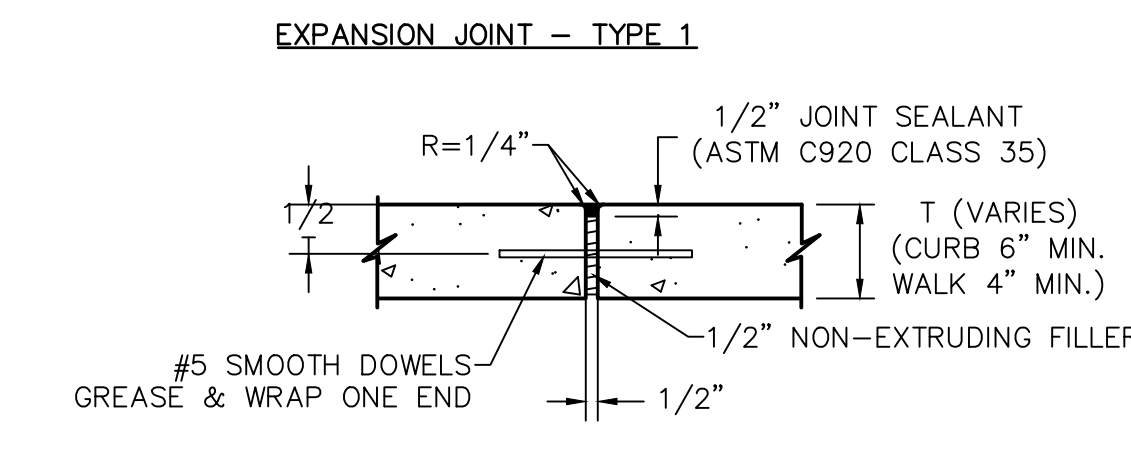


CONCRETE SIDEWALK

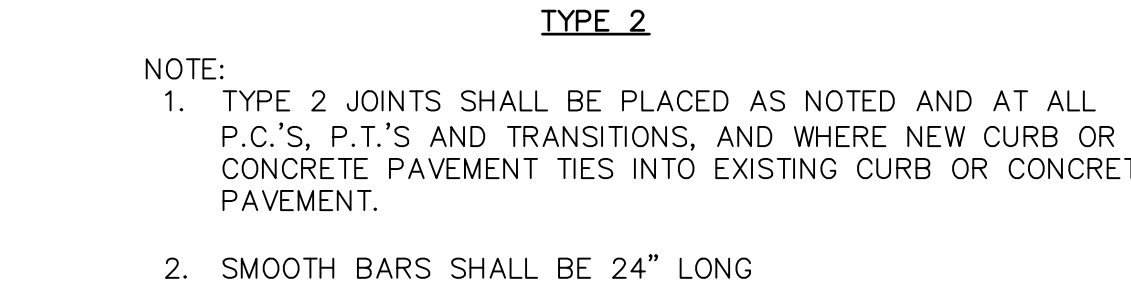
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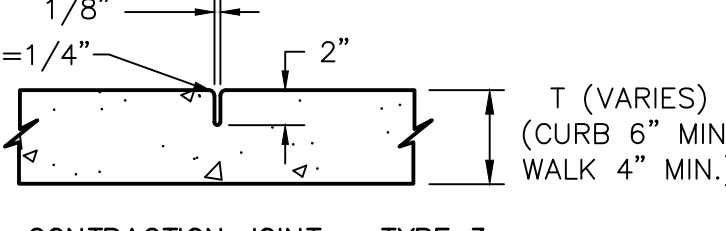
CONCRETE JOINTING DETAILS



EXPANSION JOINT - TYPE 1



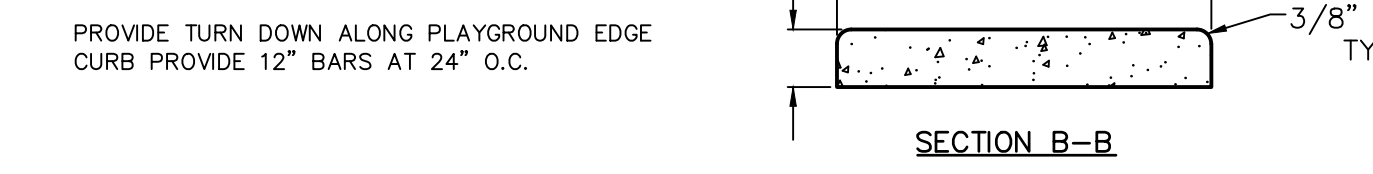
TYPE 2



CONTRACTION JOINT - TYPE 3

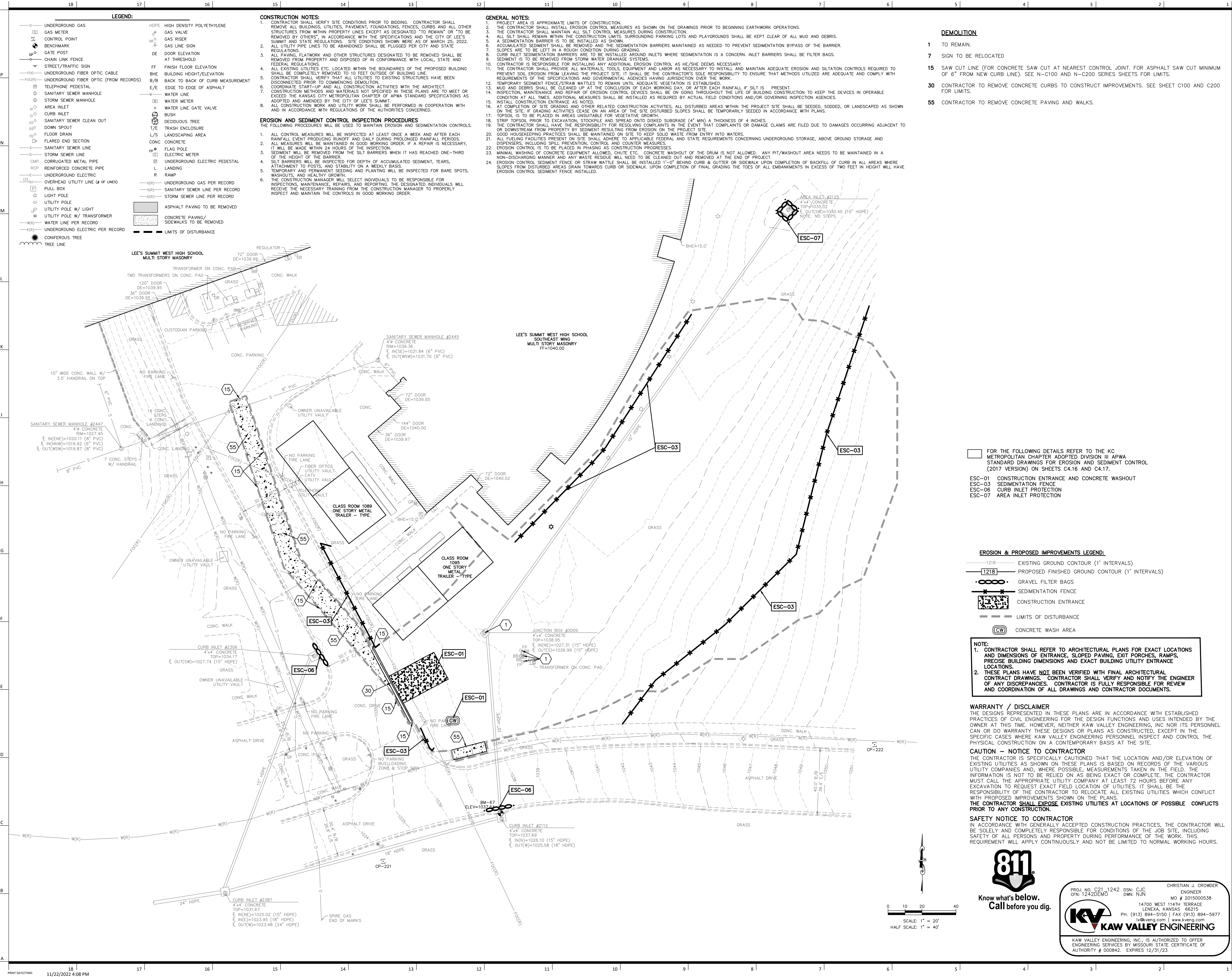
TURNDOWN

*MATCH ASPHALT THICKNESS



CONCRETE SIDEWALK

055



Lee's Summit Robotics, Gic & Phys Educaiton

LSN: 901 NE Douglas St., Lee's Summit MO 64086
LSW: 2600 SW Ward Rd, Lee's Summit MO 64082
LSHS: 400 SE Blue Pkwy, Lee's Summit MO 64063

Project Number: 0121-0100	
owner: Lee's Summit R-7 School 301 NE Tudor Road Lee's Summit, MO 64086	architect: Multistudio 4200 Pennsylvania Kansas City, MO 64111 816.931.6655 multistudio
civil engineer: Kaw Valley Engineering 14700 West 114th Terrace Lenexa, KS 66215 913.485.0318 kveng.com	structural engineer: Bob D. Campbell & 4338 Bellevue Kansas City, MO 64111 816.531.4144 www.bdc-engrs.com
MEP/IT Codes: Henderson Engineers 8345 Lenexa Drive, Suite 300 Lenexa, KS 66214 816.742.5000 www.hendersonengineers.com	

DEMOLITION

- 1 TO REMAIN.
- 7 SIGN TO BE RELOCATED
- 15 SAW CUT LINE (FOR CONCRETE SAW CUT AT NEAREST CONTROL JOINT. FOR ASPHALT SAW CUT MINIMUM OF 6" FROM NEW CURB LINE). SEE N-C100 AND N-C200 SERIES SHEETS FOR LIMITS.
- 30 CONTRACTOR TO REMOVE CONCRETE CURBS TO CONSTRUCT IMPROVEMENTS. SEE SHEET C100 AND C200 FOR LIMITS.
- 55 CONTRACTOR TO REMOVE CONCRETE PAVING AND WALKS.

FOR THE FOLLOWING DETAILS REFER TO THE KC METROPOLITAN CHAPTER ADOPTED DIVISION III APWA STANDARD DRAWINGS FOR EROSION AND SEDIMENT CONTROL (2017 VERSION) ON SHEETS C4.16 AND C4.17.

- ESC-01 CONSTRUCTION ENTRANCE AND CONCRETE WASHOUT
- ESC-03 SEDIMENTATION FENCE
- ESC-06 CURB INLET PROTECTION
- ESC-07 AREA INLET PROTECTION

EROSION & PROPOSED IMPROVEMENTS LEGEND:

- 1218 EXISTING GROUND CONTOUR (1' INTERVALS)
- 1218 PROPOSED FINISHED GROUND CONTOUR (1' INTERVALS)
- GRAVEL FILTER BAGS
- SEDIMENTATION FENCE
- CONSTRUCTION ENTRANCE
- LIMITS OF DISTURBANCE
- CONCRETE WASH AREA

NOTE:
1. CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF ENTRANCE, SLOPED PAVING, EXIT PORCHES, RAMPS, PRECISE BUILDING DIMENSIONS AND EXACT BUILDING UTILITY ENTRANCE LOCATIONS.
2. THESE PLANS HAVE NOT BEEN VERIFIED WITH FINAL ARCHITECTURAL CONTRACT DRAWINGS. CONTRACTOR SHALL VERIFY AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES. CONTRACTOR IS FULLY RESPONSIBLE FOR REVIEW AND COORDINATION OF ALL DRAWINGS AND CONTRACTOR DOCUMENTS.

WARRANTY / DISCLAIMER

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THE CONTRACTOR SHALL EXPOSE EXISTING UTILITIES AT LOCATIONS OF POSSIBLE CONFLICTS PRIOR TO ANY CONSTRUCTION.

SAFETY NOTICE TO CONTRACTOR

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PROJ. NO. C21-1242
CIN: 12420EMO

DSN: CJC
DWN: NJN

CHRISTIAN J. CROWDER
ENGINEER
MO # 2015000538

14700 WEST 114TH TERRACE
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KAW VALLEY ENGINEERING

KAW VALLEY ENGINEERING, INC. IS AUTHORIZED TO OFFER ENGINEERING SERVICES BY MISSOURI STATE CERTIFICATE OF AUTHORITY # 000842. EXPIRES 12/31/23



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Kaw Valley Engineering, Inc.
Missouri Certificate of Authority: 000842
Christian Crowder Date: 11/22/2022
Engineer License No. PE-2015000538

LSW DEMOLITION AND EROSION CONTROL PLAN

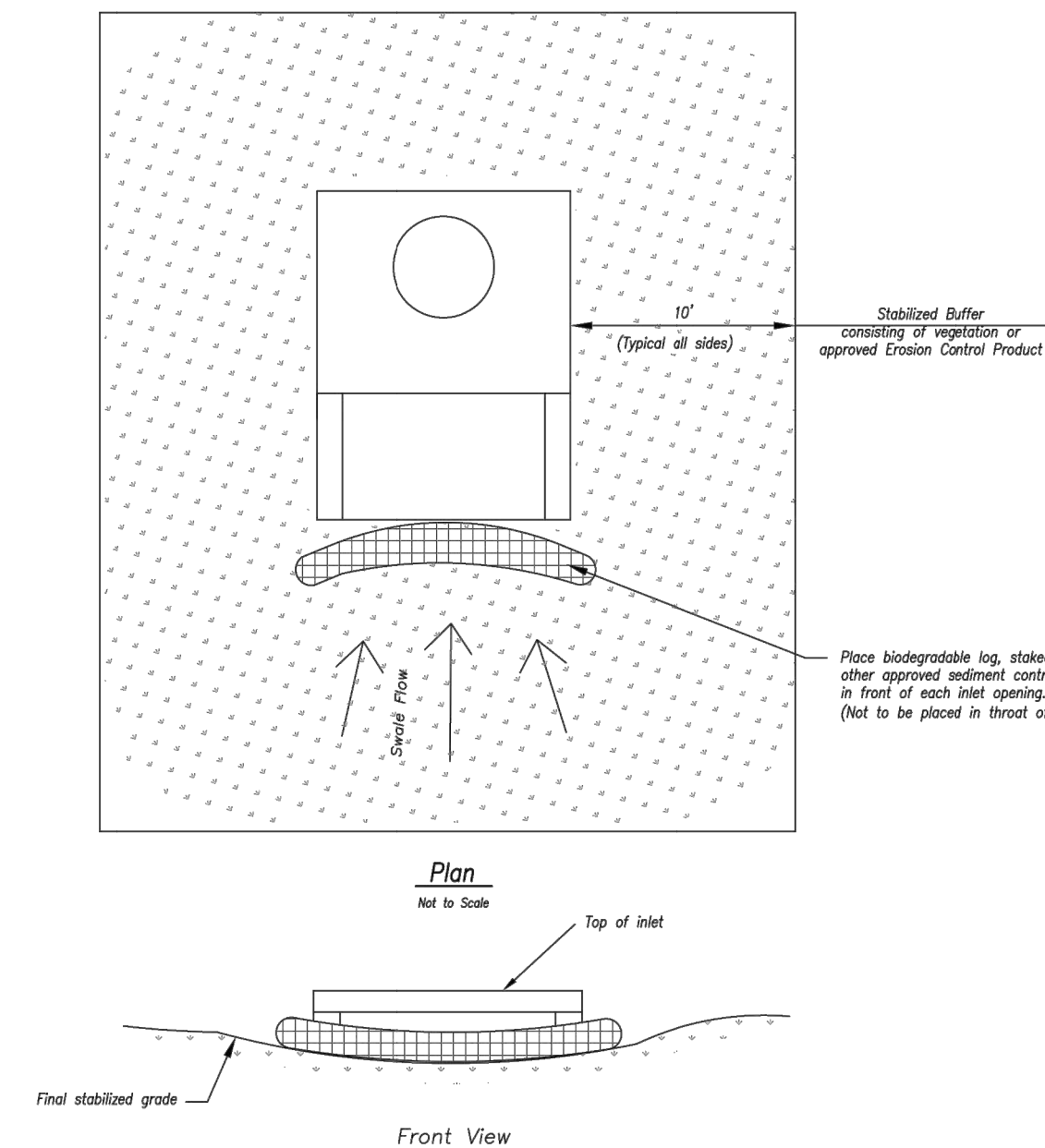
C200-A

**Lee's Summit Robotics,
GIC & Phys Educaiton**

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LSW: 2600 SW Ward Rd, Lee's Summit MO 64082
LSHS: 400 SE Blue Pkwy, Lee's Summit MO 64063

Project Number: 0121-0100

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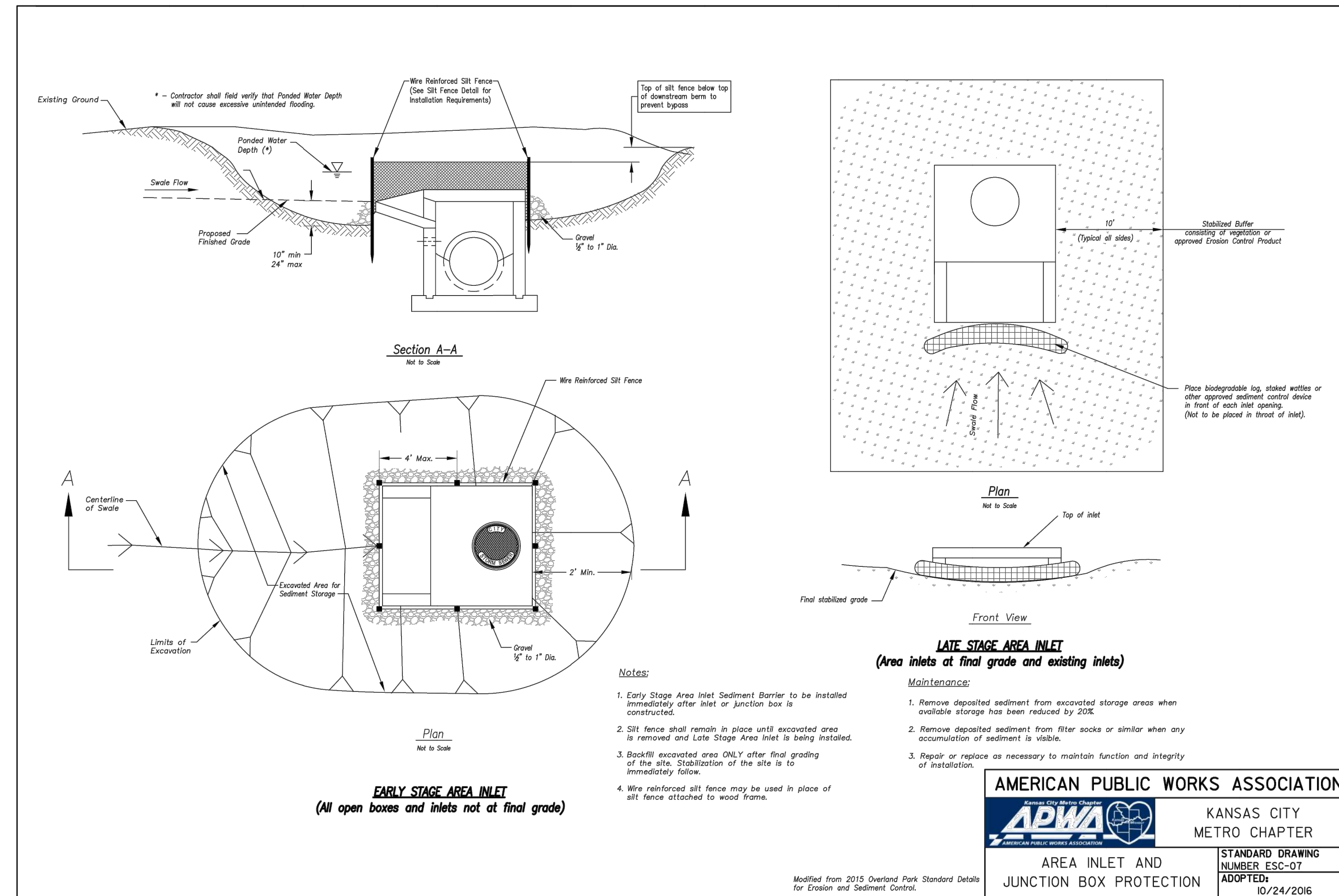


LATE STAGE AREA INLET
(Area inlets at final grade and existing inlets)

- Maintenance:**
1. Remove deposited sediment from excavated storage areas when available storage has been reduced by 20%.
 2. Remove deposited sediment from filter socks or similar when any accumulation of sediment is visible.
 3. Repair or replace as necessary to maintain function and integrity of installation.

AMERICAN PUBLIC WORKS ASSOCIATION	
	KANSAS CITY METRO CHAPTER
AREA INLET AND JUNCTION BOX PROTECTION	STANDARD DRAWING NUMBER ESC-07 ADOPTED: 10/24/2016

Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.



EARLY STAGE AREA INLET
(All open boxes and inlets not at final grade)

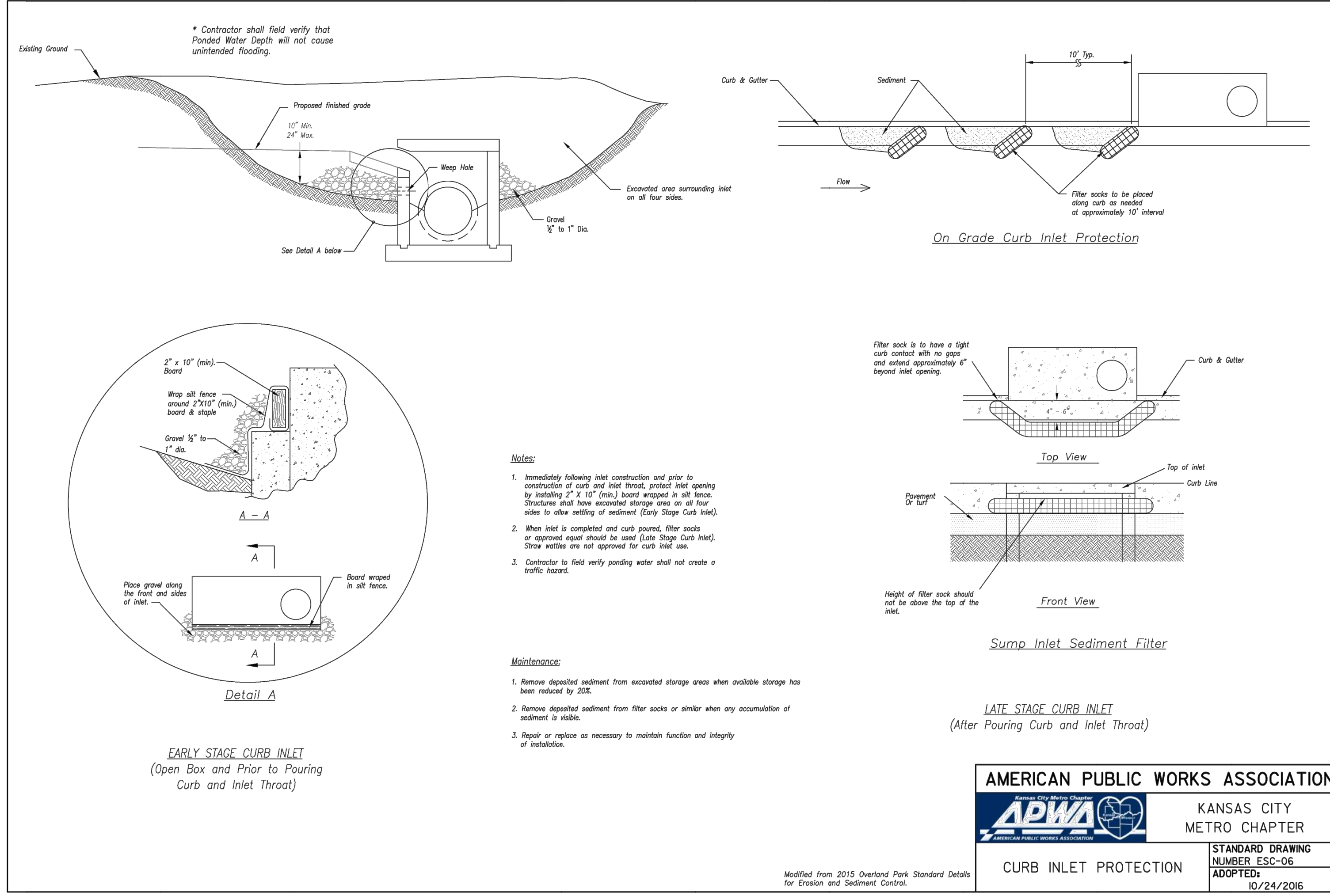
- Notes:**
1. Early Stage Area Inlet Sediment Barrier to be installed immediately after inlet or junction box is constructed.
 2. Silt fence shall remain in place until excavated area is removed and Late Stage Area Inlet is being installed.
 3. Backfill excavated area ONLY after final grading of the site. Stabilization of the site is to immediately follow.
 4. Wire reinforced silt fence may be used in place of silt fence attached to wood frame.

AMERICAN PUBLIC WORKS ASSOCIATION	
	KANSAS CITY METRO CHAPTER
AREA INLET AND JUNCTION BOX PROTECTION	STANDARD DRAWING NUMBER ESC-07 ADOPTED: 10/24/2016

Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

AMERICAN PUBLIC WORKS ASSOCIATION	
	KANSAS CITY METRO CHAPTER
CURB INLET PROTECTION	STANDARD DRAWING NUMBER ESC-06 ADOPTED: 10/24/2016

Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.



EARLY STAGE CURB INLET
(Open Box and Prior to Pouring Curb and Inlet Throat)

- Notes:**
1. Immediately following final construction and prior to construction of curb and inlet throat, ground inlet opening by installing 2' x 10' (min.) board wrapped in silt fence. Structure shall have excavated storage area on all four sides to allow settling of sediment (Early Stage Curb Inlet).
 2. When inlet is completed and curb poured, filter sock or approved silt fence shall be used (Late Stage Curb Inlet). Silt fence shall be approved for use for silt fence.
 3. Contractor to field verify ponding water shall not create a traffic hazard.

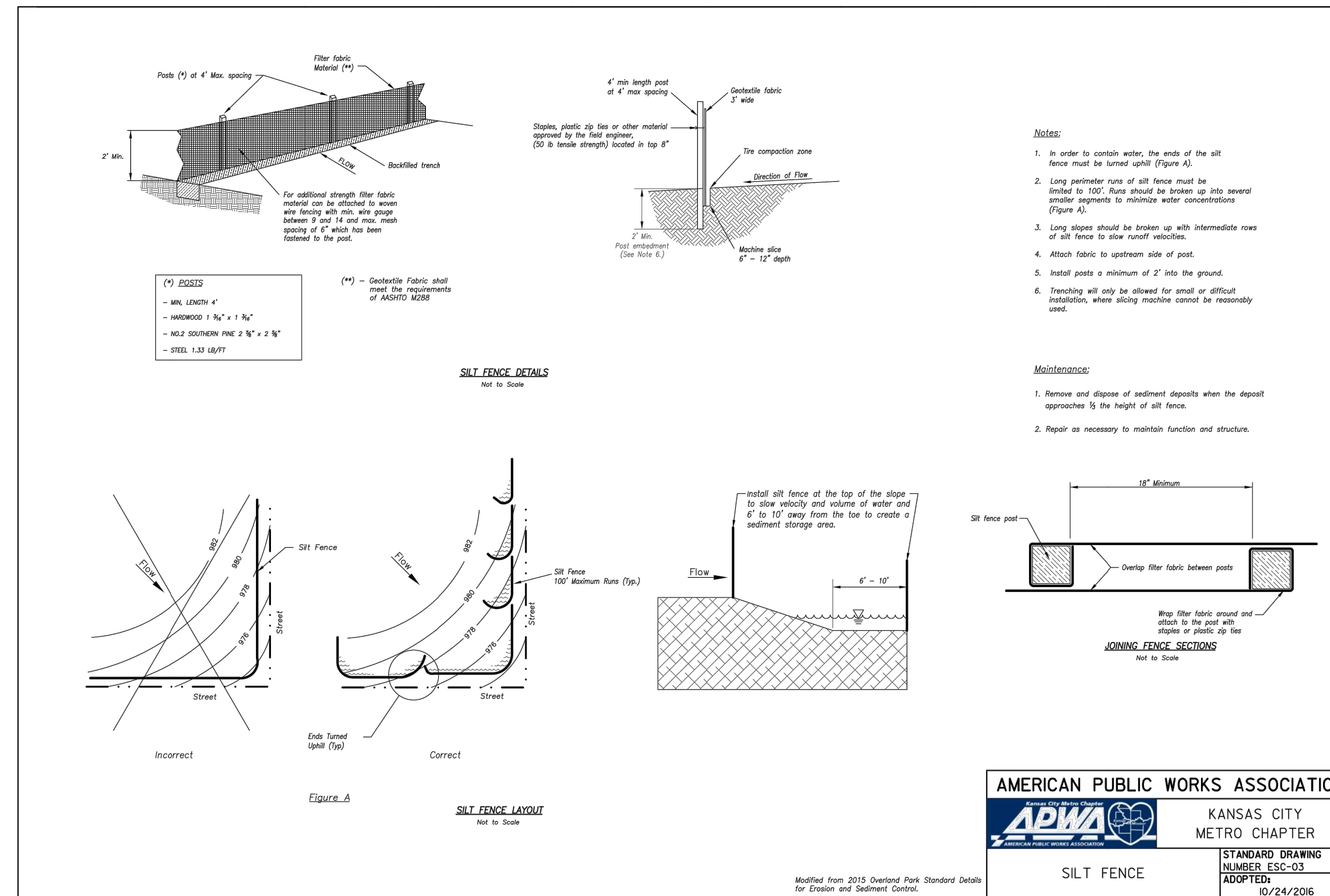
Maintenance:

1. Remove deposited sediment from excavated storage areas when available storage has been reduced by 20%.
2. Remove deposited sediment from filter socks or similar when any accumulation of sediment is visible.
3. Repair or replace as necessary to maintain function and integrity of installation.

LATE STAGE CURB INLET
(After Pouring Curb and Inlet Throat)

AMERICAN PUBLIC WORKS ASSOCIATION	
	KANSAS CITY METRO CHAPTER
CURB INLET PROTECTION	STANDARD DRAWING NUMBER ESC-06 ADOPTED: 10/24/2016

Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.



SILT FENCE DETAILS
Not to Scale

Figure A

SILT FENCE LAYOUT
Not to Scale

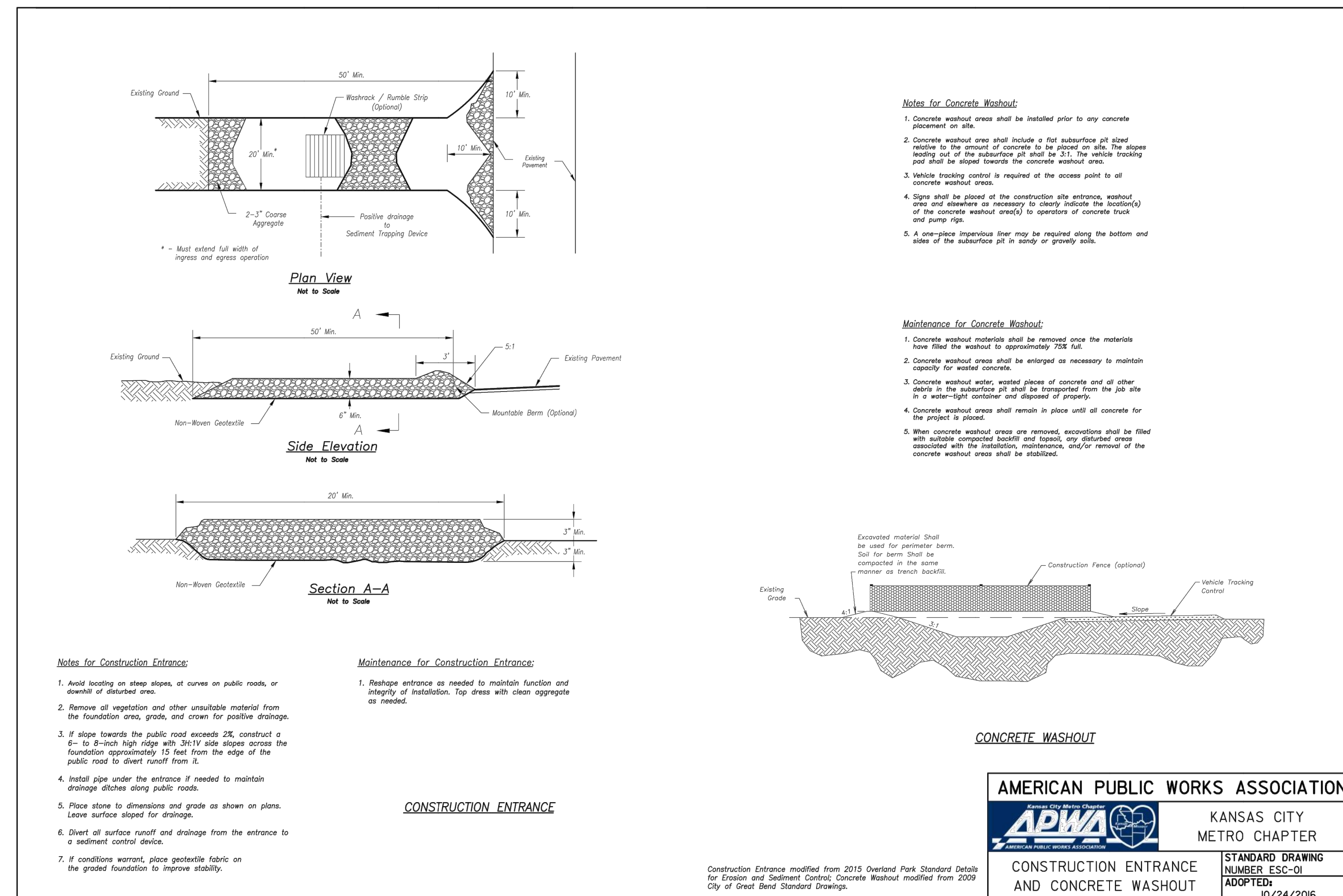
- Notes:**
1. In order to contain water, the ends of the silt fence must be turned uphill (Figure A).
 2. Long perimeter runs of silt fence must be limited to 100'. Runs should be broken up into several smaller segments to minimize water concentrations (Figure A).
 3. Long slopes should be broken up with intermediate rows of silt fence to slow runoff velocities.
 4. Attach fabric to upstream side of post.
 5. Install posts a minimum of 2' into the ground.
 6. Trenching will only be allowed for small or difficult installation, where slicing machine cannot be reasonably used.

Maintenance:

1. Remove and dispose of sediment deposits when the deposit approaches 1/2 the height of silt fence.
2. Repair or replace as necessary to maintain function and structure.

AMERICAN PUBLIC WORKS ASSOCIATION	
	KANSAS CITY METRO CHAPTER
SILT FENCE	STANDARD DRAWING NUMBER ESC-03 ADOPTED: 10/24/2016

Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.



Notes for Concrete Washout:

1. Concrete washout areas shall be installed prior to any concrete placement on site.
2. Concrete washout area shall include a flat subsurface pit sized relative to the amount of concrete to be placed on site. The slopes leading out of the subsurface pit shall be 2:1. The vehicle tracking post shall be placed to prevent the concrete washout area.
3. Vehicle tracking control is required at the access point to all concrete washout areas.
4. Signs shall be placed at the construction site entrance, washout area, and elsewhere as necessary to direct traffic into the washout area of the concrete washout area(s) to operators of concrete truck and pump rigs.
5. A one-place impervious liner may be required along the bottom and sides of the subsurface pit in sandy or gravelly soils.

Maintenance for Concrete Washout:

1. Concrete washout materials shall be removed once the materials have filled the washout to approximately 75% full.
2. Concrete washout areas shall be emptied as necessary to maintain capacity for washed concrete.
3. Concrete washout areas, control pipes of concrete and all other debris in the subsurface pit shall be transported from the job site in a water-tight container and disposed of properly.
4. Concrete washout areas shall remain in place until all concrete for the project is placed.
5. When concrete washout areas are removed, excavations shall be filled with suitable compacted fill and compacted in the same manner as beneath existing.

CONCRETE WASHOUT

AMERICAN PUBLIC WORKS ASSOCIATION	
	KANSAS CITY METRO CHAPTER
CONSTRUCTION ENTRANCE AND CONCRETE WASHOUT	STANDARD DRAWING NUMBER ESC-01 ADOPTED: 10/24/2016

Construction Entrance modified from 2015 Overland Park Standard Details for Erosion and Sediment Control. Concrete Washout modified from 2009 City of Great Bend Standard Drawings.

Notes for Construction Entrances:

1. Avoid locating on steep slopes, at curves on public roads, or adjacent to disturbed areas.
2. Remove all vegetation and other unsuitable material from the foundation area, grade, and crown for positive drainage.
3. If slope towards the public road exceeds 2%, construct a 6'- to 8'-inch high ridge with 3% to 4% side slopes across the foundation approximately 15 feet from the edge of the public road to divert runoff from it.
4. Install pipe under the entrance if needed to maintain drainage ditches along public road.
5. Place stone to disperse and grade as shown on plans. Leave surface sloped for drainage.
6. Direct all surface runoff and drainage from the entrance to a sediment control device.
7. If conditions warrant, place geotextile fabric on the graded foundation to improve stability.

Maintenance for Construction Entrances:

1. Reshape entrance as needed to maintain function and integrity of installation. Top dress with clean aggregate as needed.

CONSTRUCTION ENTRANCE

Issue Date: September 9, 2022

Revisions	DESCRIPTION	DATE
NUMBER 1	ASI 01 - CODE COMMENTS	11/22/2022

RELEASED FOR CONSTRUCTION
As Noted on Plans Review
Development Services Department
Lee's Summit, Missouri
12/02/2022

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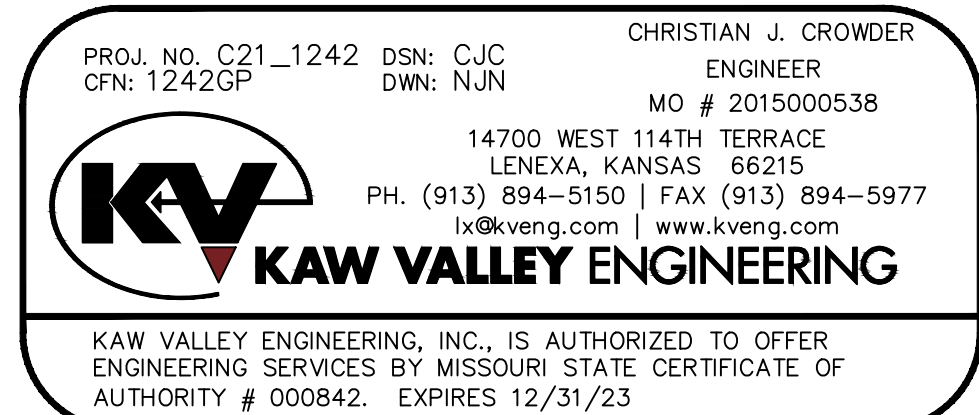


Kaw Valley Engineering, Inc.
Missouri Certificate of Authority: 000842
Christian Crowder Date: 11/22/2022
Engineer License No. PE-2015000538

LSW EROSION CONTROL DETAILS

C290-A

PROJ. NO. C21-1242 DSN: CJC
CIN: 1242DET DWN: NJN
MO # 2015000538
14700 WEST 114TH TERRACE
LENEXA, KANSAS 66215
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KAW VALLEY ENGINEERING
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C300-A

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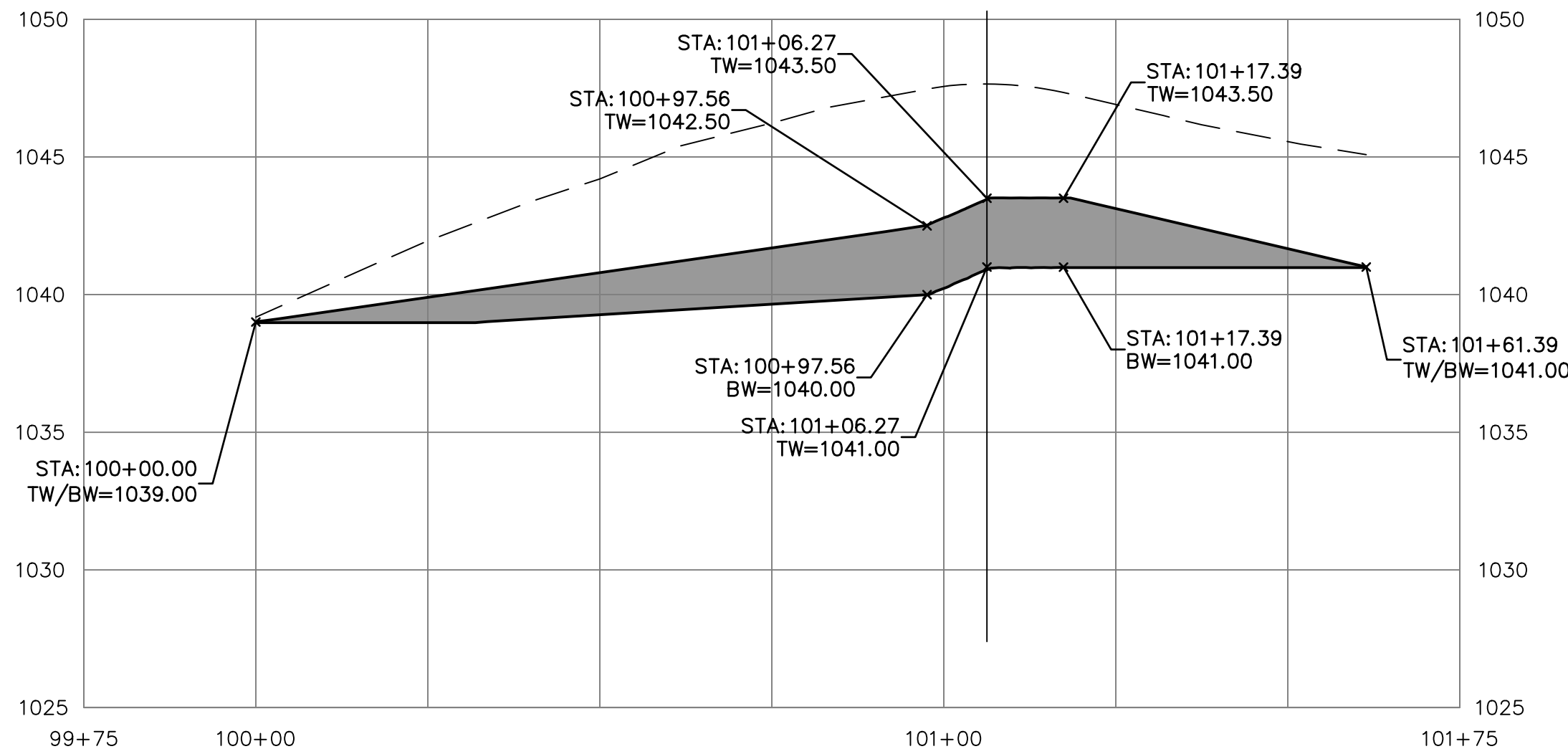
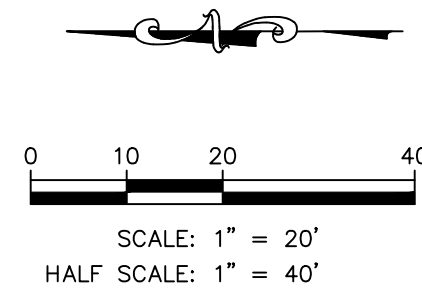
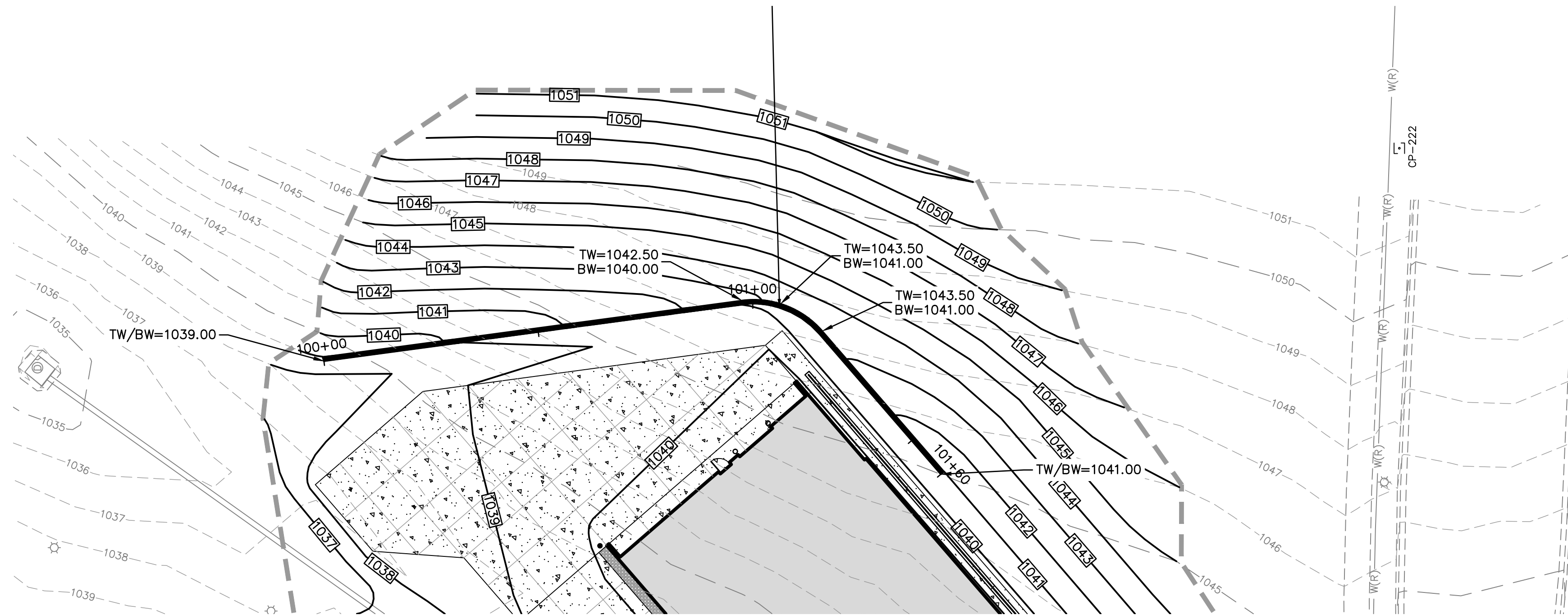
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Christian Crowder Date: 11/22/2022
Engineer License No. PE-2015000538

LSW RETAINING WALL
PLAN AND PROFILE

C310-A

PROJ. NO. 14700 WEST 114TH TERRACE
LENEXA, KANSAS 66215
PH. (913) 894-5150 | FAX (913) 894-5977
x@kveng.com | www.kveng.com

DSN: ENGINEER
DWN: MO # 2015000538

CHRISTIAN J. CROWDER
ENGINEER
MO # 2015000538

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Know what's **below**.
Call before you dig.

The logo for Kaw Valley Engineering is enclosed in an oval border. On the left is a stylized 'KEV' monogram. To its right, the text 'KAW VALLEY ENGINEERING' is written in a bold, sans-serif font. Above this, the company's address is listed: '14700 WEST 114TH TERRACE', 'LENEXA, KANSAS 66215'. Below the address, the phone and fax numbers are provided: 'PH. (913) 894-5150 | FAX (913) 894-5977'. At the bottom of the oval, a line of text states: 'KAW VALLEY ENGINEERING, INC., IS AUTHORIZED TO OFFER ENGINEERING SERVICES BY MISSOURI STATE CERTIFICATE OF AUTHORITY # 000842 EXPIRES 12/31/23'. To the right of the oval, the name 'CHRISTIAN J. CROWDER' and his title 'ENGINEER' are printed, followed by the Missouri Professional Engineer number 'MO # 2015000538'. At the very top of the page, above the oval, is the project identification: 'PROJ. NO. C21_1242' and 'CN: 1242UP'.

LSW UTILITY SHEET

C500-A

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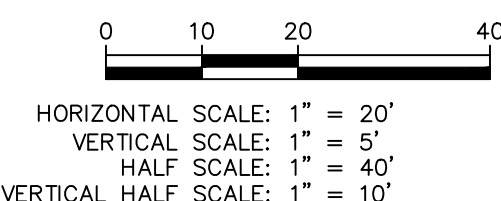
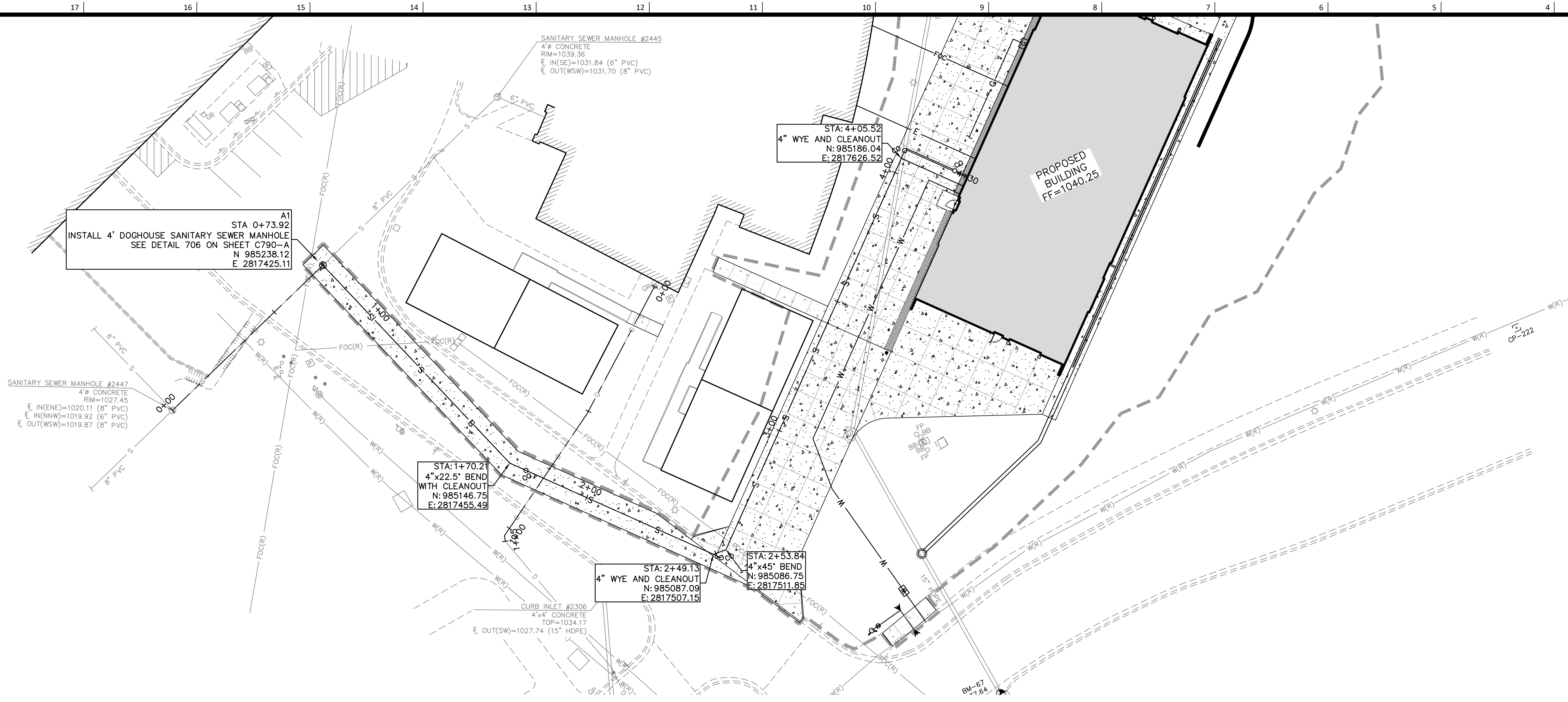
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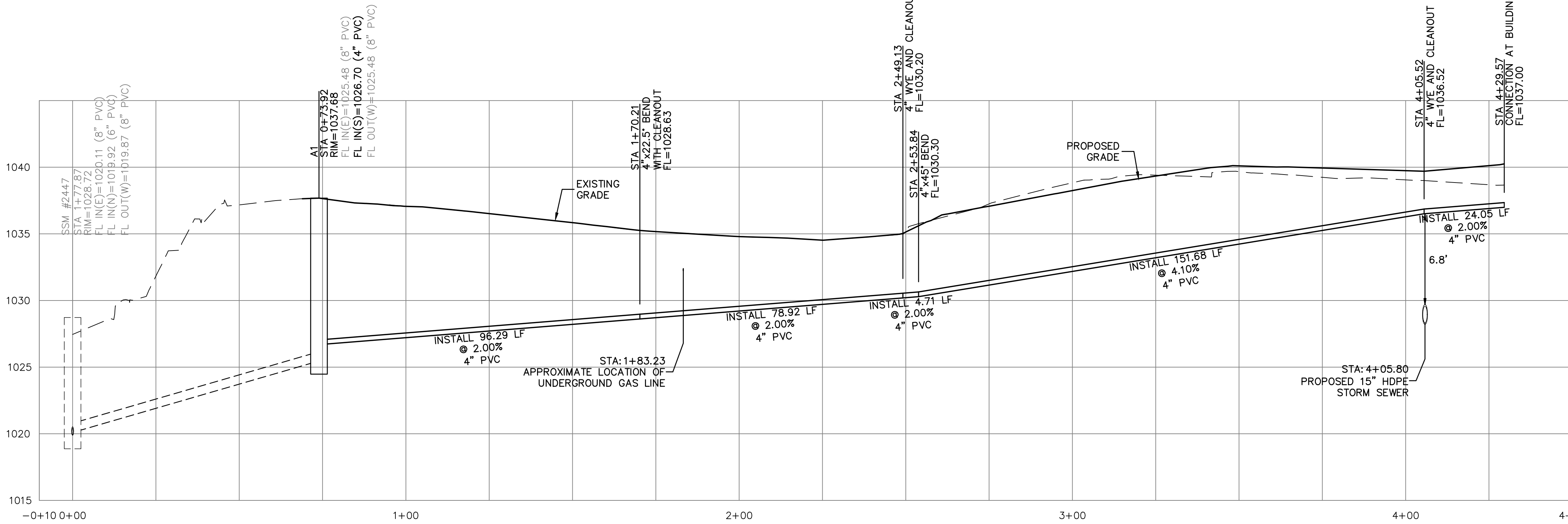
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SANITARY PLAN VIEW



PROPOSED SANITARY PROFILE VIEW

LEGEND:

- CONTROL POINT
- ⬮ BENCHMARK
- ⬮ PULL BOX
- ⬮ YARD LIGHT
- ⬮ LIGHT POLE
- ⬮ ELECTRIC METER
- ⬮ WALL MOUNTED CAMERA
- ⬮ BREAKER BOX
- ⬮ UNDERGROUND GAS
- ⬮ GAS METER
- ⬮ GAS RISER
- ⬮ WATER LINE (RECORD)
- ⬮ WATER METER
- ⬮ WATER LINE GATE VALVE
- ⬮ FIRE HYDRANT
- ⬮ SPRINKLER CONTROL BOX
- ⬮ WATER MANHOLE
- ⬮ WALL MOUNTED SIAMASE FIRE CONNECTOR
- ⬮ SANITARY SEWER MANHOLE
- ⬮ STORM SEWER MANHOLE
- SANITARY SEWER LINE
- PVC
- HDPE
- STREET/TRAFFIC SIGN
- DE
- FF
- BHE
- B/B
- E/E
- C/C
- L/S
- BOLLARD
- ⬮ GATE POST
- ⬮ FENCE POST
- ⬮ EXISTING SPOT ELEVATION
- ⬮ EXISTING GRADE 1" CONTOUR
- ⬮ EXISTING GRADE 5" CONTOUR
- ⬮ ASPHALT PAVEMENT (040)
- ⬮ HEAVY DUTY ASPHALT PAVEMENT (041)
- ⬮ CONCRETE PAVEMENT (042)

SANITARY SEWER MATERIALS AND CONSTRUCTION NOTES:

- ALL WORK RELATED TO SANITARY SEWER SHALL BE COMPLETED IN ACCORDANCE WITH SECTION 3500 SANITARY SEWERS OF THE CITY OF LEE'S SUMMIT, MISSOURI STANDARD SPECIFICATIONS.
- ALL PIPE USED FOR SANITARY SEWER SHALL BE PVC (SDR 26) OR DIP (CL 50) AS NOTED ON PLANS. MATERIAL SHALL CONFORM TO SECTION 3501 C & D OF THE CITY OF LEE'S SUMMIT, MISSOURI STANDARD SPECIFICATIONS.
- MANHOLES SHALL CONFORM TO SECTION 3501 P OF THE CITY OF LEE'S SUMMIT, MISSOURI STANDARD SPECIFICATIONS.
- ALL EXISTING UTILITIES INDICATED ON THE DRAWINGS ARE ACCORDING TO THE BEST INFORMATION AVAILABLE TO THE ENGINEER; HOWEVER, ALL UTILITIES ACTUALLY EXISTING MAY NOT BE SHOWN. UTILITIES DAMAGED THROUGH THE NEGLIGENCE OF THE CONTRACTOR TO OBTAIN THE LOCATION OF SAME SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT HIS EXPENSE.
- ALL INSTALLATION SHALL BE COMPLETED IN ACCORDANCE WITH SECTION 3502 OF THE CITY OF LEE'S SUMMIT, MISSOURI STANDARD SPECIFICATIONS. REFER TO SECTION 3502.C FOR TESTING AND ACCEPTANCE REQUIREMENTS.
- EXCAVATION, TRENCHING AND BACKFILL SHALL BE COMPLETED IN ACCORDANCE WITH SECTION 2100 GRADING AND SITE PREPARATION OF THE KANSAS CITY METROPOLITAN CHAPTER OF APWA SPECIFICATIONS AS ADOPTED AND AMENDED BY THE CITY OF LEE'S SUMMIT. ALL EXCAVATIONS SHALL BE CONSIDERED UNCLASSIFIED. REFER TO PROJECT GEOTECHNICAL REPORT.
- ALL BACKFILL SHALL BE TAMPED. BACKFILL WITHIN THE RIGHT-OF-WAY AND UNDER PARKING AREAS AND SLABS SHALL BE 95% COMPACTION OF OPTIMUM MOISTURE.
- ALL STUB LINES SHALL BE LAID ON 1.00% GRADE FOR 6" PIPE AND 2.00% GRADE FOR 4" PIPE, UNLESS NOTED OTHERWISE.
- RELOCATION OF ANY WATER LINE, SEWER LINE OR SERVICE LINE, THEREOF REQUIRED FOR THE CONSTRUCTION OF THIS PROJECT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE AT HIS EXPENSE. REFER TO PLANS FOR ADDITIONAL INFORMATION.
- REFER TO SHEET C580 FOR SANITARY SEWER DETAILS.

SAFETY NOTICE TO CONTRACTOR

IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.

WARRANTY / DISCLAIMER

THE DESIGNS REPRESENTED IN THESE PLANS ARE IN ACCORDANCE WITH ESTABLISHED PRACTICES OF CIVIL ENGINEERING FOR THE DESIGN FUNCTIONS AND USES INTENDED BY THE OWNER AT THIS TIME. HOWEVER, NEITHER KAW VALLEY ENGINEERING, INC NOR ITS PERSONNEL CAN OR DO WARRANTY THESE DESIGNS OR PLANS AS CONSTRUCTED, EXCEPT IN THE SPECIFIC CASES WHERE KAW VALLEY ENGINEERING PERSONNEL INSPECT AND CONTROL THE PHYSICAL CONSTRUCTION ON A CONTEMPORARY BASIS AT THE SITE.

CAUTION - NOTICE TO CONTRACTOR

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PROJ. NO. C21-1242 DSN: CJC
CIN: 1242SPR DWN: NJN
MO # 2015000538
14700 WEST 114TH TERRACE
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KAW VALLEY ENGINEERING

KAW VALLEY ENGINEERING, INC. IS AUTHORIZED TO OFFER ENGINEERING SERVICES BY MISSOURI STATE CERTIFICATE OF AUTHORITY # 000842. EXPIRES 12/31/23

Issue Date: September 9, 2022

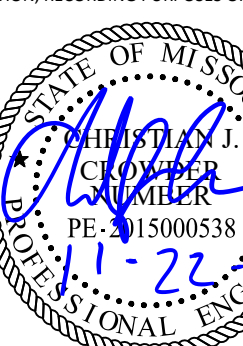
NUMBER	DESCRIPTION	DATE
1	AS NOTED ON PLANS REVIEW	11/22/2022

RELEASED FOR CONSTRUCTION

As Noted on Plans Review

Development Services Department
Lee's Summit, Missouri
12/02/2022

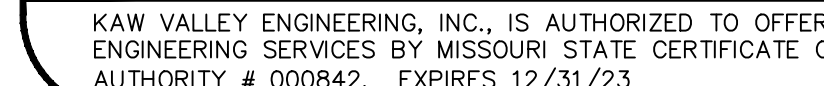
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Kaw Valley Engineering, Inc.
Missouri Certificate of Authority: 000842
Christian Crowder Date: 11/22/2022
Engineer License No. PE-2015000538

LSW SANITARY PLAN AND PROFILE

C700-A



WATER LINE MATERIALS AND CONSTRUCTION NOTES:

- ALL WORK SHALL BE IN ACCORDANCE WITH SECTION 3900 WATER MAINS OF THE CITY OF LEE'S SUMMIT, MISSOURI STANDARD SPECIFICATIONS, CURRENT EDITION.
- CONTRACTOR SHALL NOT OPEN, TURN OFF, INTERFERE WITH, OR ATTACH ANY PIPE OR HOSE TO OR TAP ANY WATER MAIN BELONGING TO CITY OF LEE'S SUMMIT UTILITIES DEPARTMENT UNLESS DULY AUTHORIZED TO DO SO BY THE WATER DISTRICT. ANY ADVERSE CONSEQUENCE OF ANY SCHEDULED OR UNSCHEDULED DISRUPTIONS OF SERVICE TO THE PUBLIC ARE TO BE THE LIABILITY OF THE CONTRACTOR. KAW VALLEY ENGINEERING AND OWNER ARE TO BE HELD HARMLESS. CONTRACTOR SHALL PROVIDE A MINIMUM OF 48 HOURS NOTICE TO THE CITY OF LEE'S SUMMIT WATER UTILITIES OPERATIONS DEPARTMENT PRIOR TO STARTING ANY WORK.
- THE UTILITIES AS SHOWN ON THESE DRAWINGS WERE DEVELOPED FROM THE BEST INFORMATION AVAILABLE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION OF ALL UTILITIES (WHETHER SHOWN OR NOT) AND PROTECT SAID UTILITIES FROM ANY DAMAGE. CONTRACTOR SHALL POT HOLE AND EXPOSE ALL UTILITIES AT LEAST 500 FEET IN ADVANCE OF WATER MAIN CONSTRUCTION, DETERMINING THE DEPTH, SIZE, AND MATERIAL OF THE UTILITIES IN PROXIMITY TO THE PROPOSED WATER MAIN ALIGNMENT. DEFLECT PIPE TO MAINTAIN MINIMUM 5 FEET HORIZONTAL AND 18 INCH VERTICAL CLEARANCES BETWEEN PROPOSED WATER MAIN AND EXISTING UTILITIES. SEPARATION WITH NON-POTABLE LINES REQUIRES 18 INCH VERTICAL CLEARANCE. SEE CONST. NOTE 8.
- THE CONTRACTOR SHALL FURNISH AND INSTALL, AT NO EXTRA COST, ALL FITTINGS AND RESTRAINING DEVICES REQUIRED TO PROVIDE PROPER HORIZONTAL AND VERTICAL ALIGNMENT FOR THE NEW WATER SERVICE, CONNECTING TO EXISTING WATER MAIN, AND INSTALLATION OF FIRE HYDRANTS AT THE PROPER LOCATION AND ELEVATION, WHETHER OR NOT THE FITTINGS ARE CALLED OUT ON THESE PLANS.
- THE CONTRACTOR SHALL FURNISH AND INSTALL, AT NO EXTRA COST, ALL TEMPORARY BLOW-OFF ASSEMBLIES, FITTINGS, AND RESTRAINING DEVICES NECESSARY FOR TEMPORARY CONNECTIONS FOR PRESSURE TESTING, CHLORINATING, DE-CHLORINATING, AND FLUSHING THE NEW WATER MAINS AND SERVICE LINES. THE CONTRACTOR SHALL REMOVE ANY CORPORATION COCKS USED FOR TESTING OR CHLORINATION AND REPLACE THEM WITH TAPERED BRASS PLUGS PRIOR TO PLACING NEW MAINS IN SERVICE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING REQUIRED PERMITS, PAYING ALL FEES AND FOR OTHERWISE COMPLYING WITH ALL APPLICABLE REGULATIONS GOVERNING THE WORK.
- ALL DISTURBED AREAS SHALL BE SEEDED OR STABILIZED AS NOTED ON PLANS.
- WHEN WATER MAINS AND SANITARY SEWERS CROSS, A MINIMUM OF 18 INCHES OF CLEARANCE SHALL BE MAINTAINED BETWEEN THE BOTTOM OF THE WATER MAIN AND THE TOP OF SANITARY SEWER. WHEN 18 INCHES OF CLEARANCE CANNOT BE MAINTAINED OR WHEN A WATER MAIN MUST CROSS UNDER A SANITARY SEWER, THE SANITARY SEWER SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE, PVC PRESSURE PIPE OR PRE-STRESSED CONCRETE CYLINDER PIPE FOR A DISTANCE OF 10.0 FEET ON EACH SIDE OF THE CROSSING. WHEN A WATER MAIN IS CONSTRUCTED PARALLEL TO A SANITARY SEWER, THE HORIZONTAL SEPARATION SHALL BE 10.0 FEET MEASURED FROM THE OUTSIDE OF THE PIPE OR STRUCTURE. IF A VERTICAL SEPARATION OF 18 INCHES CANNOT BE MAINTAINED AND IF THE WATER MAIN IS CONSTRUCTED CLOSER THAN 10.0 FEET TO THE SANITARY SEWER, THE SANITARY SEWER SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE, PVC PRESSURE PIPE OR PRE-STRESSED CONCRETE CYLINDER PIPE, AND SHALL BE PRESSURE TESTED FOR WATER TIGHTNESS.
- CONTRACTOR SHALL FIELD CHECK ALL DIMENSIONS, COORDINATES AND ELEVATIONS BEFORE PROCEEDING WITH NEW WORK AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES IMMEDIATELY. NO NEW CONSTRUCTION SHOULD BE PERFORMED BY "SCALING" FROM THE PLANS.
- ALL EXCAVATION AND BACKFILL SHALL MEET OR EXCEED THE PROJECT SPECIFICATION. ALL TRENCHES SHALL BE BACKFILLED IN UNIFORM LIFTS NOT TO EXCEED 8 INCHES IN LOOSE MEASUREMENT. EACH LIFT SHALL BE COMPACTED TO THE REQUIRED DENSITY PRIOR TO THE NEXT LIFT BEING PLACED. THE BACKFILL MATERIAL SHALL BE COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY WITH A MOISTURE CONTENT OF WITHIN A RANGE OF OPTIMUM TO 4 PERCENT ABOVE OPTIMUM MOISTURE CONTENT FOR SOILS WITH A LIQUID LIMIT LESS THAN 40 AND +1/-3% OF OPTIMUM FOR SOILS WITH A LIQUID LIMIT LESS THAN 40 AS DEFINED BY THE STANDARD PROCTOR (ASTM-D698) UNDER AREAS TO BE PAVED. THE BACKFILL MATERIAL SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY AT OPTIMUM MOISTURE, PLUS 4% IN AREAS NOT TO BE DEVELOPED. COMPACTION TESTS SHALL BE TAKEN AT EACH PAVEMENT CROSSING AND AT LOCATIONS DESIGNATED BY THE ENGINEER. ALL TRENCH BACKFILL WHICH DOES NOT MEET THE REQUIRED DENSITY, SHALL BE RE-EXCAVATED AND RE-COMPACTED UNTIL THE REQUIRED DENSITY IS OBTAINED. COPIES OF ALL COMPACTION TEST REPORTS SHALL BE PROVIDED TO THE ENGINEER.
- NO ROCK LARGER THAN FOUR INCHES MAXIMUM DIMENSION SHALL BE PLACED WITHIN TWO FEET OF THE TOP OF THE PIPE. NO ROCK GREATER THAN ONE FOOT SHALL BE PLACED IN ANY EXCAVATION AS A BACKFILL.
- LOCATIONS SHOWN FOR PROPOSED WATER LINES ARE APPROXIMATE. VARIATIONS MAY BE MADE, WITH APPROVAL OF THE ENGINEER TO AVOID CONFLICTS.
- TAPS 1-1/2" AND LARGER AT EXISTING MAIN WILL BE RESPONSIBILITY OF THE CONTRACTOR. WORK WILL BE COORDINATED WITH THE WATER DISTRICT.
- ALL DUCTILE IRON PIPE AND FITTINGS SHALL COMPLY WITH SECTIONS 3901 B & D OF THE CITY OF LEE'S SUMMIT, MISSOURI STANDARD SPECIFICATIONS SUBJECT TO THE CITY'S CURRENTLY ADOPTED FIRE CODE. THICKNESS SHALL BE SPECIAL THICKNESS CLASS 50.
- ALL POLYVINYL CHLORIDE PIPE AND FITTINGS SHALL COMPLY WITH SECTION 3901 B & D OF THE CITY OF LEE'S SUMMIT, MISSOURI STANDARD SPECIFICATIONS SUBJECT TO RESTRICTION OF THE CITY'S CURRENTLY ADOPTED FIRE CODE. THE MINIMUM PRESSURE CLASS SHALL BE CLASS 235.
- SERVICE LINES 2 INCHES IN DIAMETER AND SMALLER SHALL BE MADE OF TYPE K SOFT COPPER, COMPLYING WITH ASTM B88.
- ALL VALVES AND OTHER MATERIALS SHALL CONFORM TO SECTIONS 3901 E THRU S. REFER TO THE CITY'S APPROVED MATERIALS LIST.
- CONSTRUCTION AND INSTALLATION SHALL BE IN ACCORDANCE WITH SECTION 3902 OF THE CITY OF LEE'S SUMMIT, MISSOURI STANDARD SPECIFICATIONS.
- WATER LINES SHALL HAVE A MINIMUM COVER OF 42" DEEPER EXCAVATIONS FOR CLEARANCE AT EXISTING PROPOSED UTILITIES IS ACCEPTABLE. REFERENCE CONST. NOTES 3 AND 8. FOR WATER MAINS CONSTRUCTED UNDER DRIVES OR PARKING AREAS THE DRIVES OR PARKING AREAS ARE TO BE TO SUBGRADE PRIOR TO WATER MAIN CONSTRUCTION.
- WHERE FIRE HYDRANTS ARE NOT LOCATED AT THE END OF LINES, THE CONTRACTOR SHALL FURNISH A FLUSHING DEVICE.
- ALL TREES SHALL BE SPARED UNLESS MARKED. REFERENCE PROJECT LAND DISTURBANCE PLANS.
- THRUST BLOCKS OR APPROVED JOINT RESTRAINTS SHALL BE PROVIDED AT TEES, BENDS, AND HYDRANT ASSEMBLIES.
- CONSTRUCTION INSPECTION WILL BE PROVIDED BY OWNER.
- CONTRACTOR SHALL INSTALL PIPE, BENDS AND FITTINGS A NECESSARY TO MAKE A COMPLETE OPERATIONAL SYSTEM. LINE IS TO BE AS-BUILT. CONTRACTOR SHALL MAINTAIN "AS CONSTRUCTED DRAWINGS" TO BE SUPPLIED TO LEE'S SUMMIT SCHOOL DISTRICT NOTING VALVE AND FITTING LOCATIONS AT THE END PROJECT.
- THE ABANDONMENT OF ALL WATER MAINS SHALL BE IN ACCORDANCE WITH SECTION 3902 B.12 OF THE CITY OF LEE'S SUMMIT, MISSOURI STANDARD SPECIFICATIONS.
- THE CONTRACTOR SHALL FLUSH, DISINFECT AND COMPLETE HYDROSTATIC AND LEAKAGE TESTS ON WATER MAINS IN ACCORDANCE WITH SECTIONS 3902 C & D OF THE CITY OF LEE'S SUMMIT, MISSOURI STANDARD SPECIFICATIONS.

UTILITY NOTES:

- EXCAVATION, TRENCHING AND BACKFILL SHALL BE COMPLETED IN ACCORDANCE WITH SECTION 2100 GRADING AND SITE PREPARATION OF THE KANSAS CITY METROPOLITAN CHAPTER OF APWA SPECIFICATIONS AS ADOPTED AND AMENDED BY THE CITY OF LEE'S SUMMIT.
- ALL BACKFILL SHALL BE TAMPED, BACKFILL WITHIN THE RIGHT-OF-WAY AND UNDER PARKING AREAS AND SLABS SHALL BE 95% COMPACTION OF OPTIMUM MOISTURE.
- CONTRACTOR SHALL NOT OPEN, TURN OFF, INTERFERE WITH, OR ATTACH ANY PIPE OR HOSE TO OR TAP ANY WATER MAIN BELONGING TO THE CITY OF LEE'S SUMMIT UNLESS DULY AUTHORIZED TO DO SO. ANY ADVERSE CONSEQUENCE OF ANY SCHEDULED OR UNSCHEDULED DISRUPTIONS OF SERVICE TO THE PUBLIC ARE TO BE THE LIABILITY OF THE CONTRACTOR. KAW VALLEY ENGINEERING AND OWNER ARE TO BE HELD HARMLESS. CONTRACTOR SHALL NOTIFY THE KCMO WSD 48 HOURS MINIMUM.
- CONTRACTOR TO INSTALL TRACING TAPE ALONG ALL NON-METALLIC SERVICE LINES PER SPECIFICATIONS. CONTRACTOR SHALL EXPOSE EXISTING UTILITIES AT LOCATIONS OF POSSIBLE CONFLICT AND POINTS OF CONNECTION PRIOR TO ANY CONSTRUCTION OF NEW UTILITIES.
- A MINIMUM HORIZONTAL DISTANCE OF 10' SHALL BE MAINTAINED BETWEEN PARALLEL WATER AND SANITARY SEWER LINES. REFERENCE APWA SPECIFICATIONS AS ADOPTED AND AMENDED BY THE CITY OF LEE'S SUMMIT. CONTRACTOR TO SCHEDULE ALL INSPECTIONS FOR SEWER MAIN CONNECTIONS THROUGH THE PUBLIC WORKS DEPARTMENT.

LEGEND:

- CONTROL POINT
- BENCHMARK
- PULL BOX
- YARD LIGHT
- LIGHT POLE
- ELECTRIC METER
- WALL MOUNTED CAMERA
- BREAKER BOX
- UNDERGROUND GAS
- GAS METER
- GAS RISER
- WATER LINE (RECORD)
- WATER METER
- WATER LINE GATE VALVE
- FIRE HYDRANT
- SPRINKLER CONTROL BOX
- WATER MANHOLE
- WALL MOUNTED SIAMESE FIRE CONNECTOR
- SANITARY SEWER MANHOLE
- STORM SEWER MANHOLE
- SANITARY SEWER LINE
- POLYVINYL CHLORIDE PIPE
- HDPPE HIGH DENSITY POLYETHYLENE
- STREET/TRAFFIC SIGN
- DOOR ELEVATION
- FINISH FLOOR ELEVATION
- BUILDING HEIGHT/ELEVATION
- BACK TO BACK OF CURB MEASUREMENT
- EDGE TO EDGE OF ASPHALT
- EDGE TO EDGE OF CONCRETE
- LANDSCAPING AREA
- BOLLARD
- GATE POST
- FENCE POST
- EXISTING SPOT ELEVATION
- EXISTING GRADE 1' CONTOUR
- EXISTING GRADE 5' CONTOUR
- ASPHALT PAVEMENT (040)
- HEAVY DUTY ASPHALT PAVEMENT (041)
- CONCRETE PAVEMENT (042)

DETAILS - SEE SHEET C890-A
FOR THE FOLLOWING DETAILS

- WAT-1 HORIZONTAL THRUST BLOCKS
- WAT-6 TRENCH CHECK
- WAT-8 HYDRANT WITH 90 DEGREE BEND
- WAT-11 SERVICE CONNECTION/METER WELL

HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: 1" = 5'
HALF SCALE: 1" = 40'
VERTICAL HALF SCALE: 1" = 10'



Know what's below.
Call before you dig.

PROJ. NO. C21-1242 DSN: CJC
CIN: 1242WIP DWN: NJN MO # 2015000538
ENGINEER
14700 WEST 114TH TERRACE
LENEKA, KANSAS 66215
PH. (913) 894-5150 | FAX (913) 894-5977
x@kveg.com | www.kveg.com
KAW VALLEY ENGINEERING, INC. IS AUTHORIZED TO OFFER
ENGINEERING SERVICES BY MISSOURI STATE CERTIFICATE OF
AUTHORITY # 000842. EXPIRES 12/31/23

Issue Date: September 9, 2022

NUMBER	DESCRIPTION	DATE
1	ADD 01 - CODE COMMENTS	11/22/2022

RELEASED FOR
CONSTRUCTION
As Noted on Plans Review
Development Services Department
Lee's Summit, Missouri
12022022

UNLESS A PROFESSIONAL SEAL WITH SIGNATURE AND DATE IS
AFFIXED, THIS DOCUMENT IS PRELIMINARY AND IS NOT INTENDED FOR
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Kaw Valley Engineering, Inc.
Missouri Certificate of Authority: 000842
Christian Crowder Date: 11/22/2022
Engineer License No. PE-2015000538

LSW WATER PLAN AND
PROFILE

C800-A

SANITARY SEWER MANHOLE #2445
4" 8" CONCRETE
D/M=1039.36
E IN(SE)=1031.84 (6" PVC)
E OUT(WSW)=1031.70 (8" PVC)

6" PVC

STA:1+76.80
90° BEND
N:985174.96
E:2817632.06

PROPOSED
BUILDING
FF=1040.25
STA:1+88.85
CONNECTION AT BUILDING
N:985165.85
E:2817639.94

STA:0+76.62
45° BEND
N:985109.38
E:2817556.32

STA:0+57.57
15° BEND??
N:985090.39
E:2817554.95

INSTALL FIRE HYDRANT ASSEMBLY
SEE DETAIL WAT-8 ON SHEET C890-A
N 985039.06
E 2817546.47

INSTALL VAULT FOR 12"
METER SEE DETAIL WAT-11
ON SHEET C890-A

STA:0+00.00
CONNECTION AT MAIN
N:985033.72
E:2817565.12

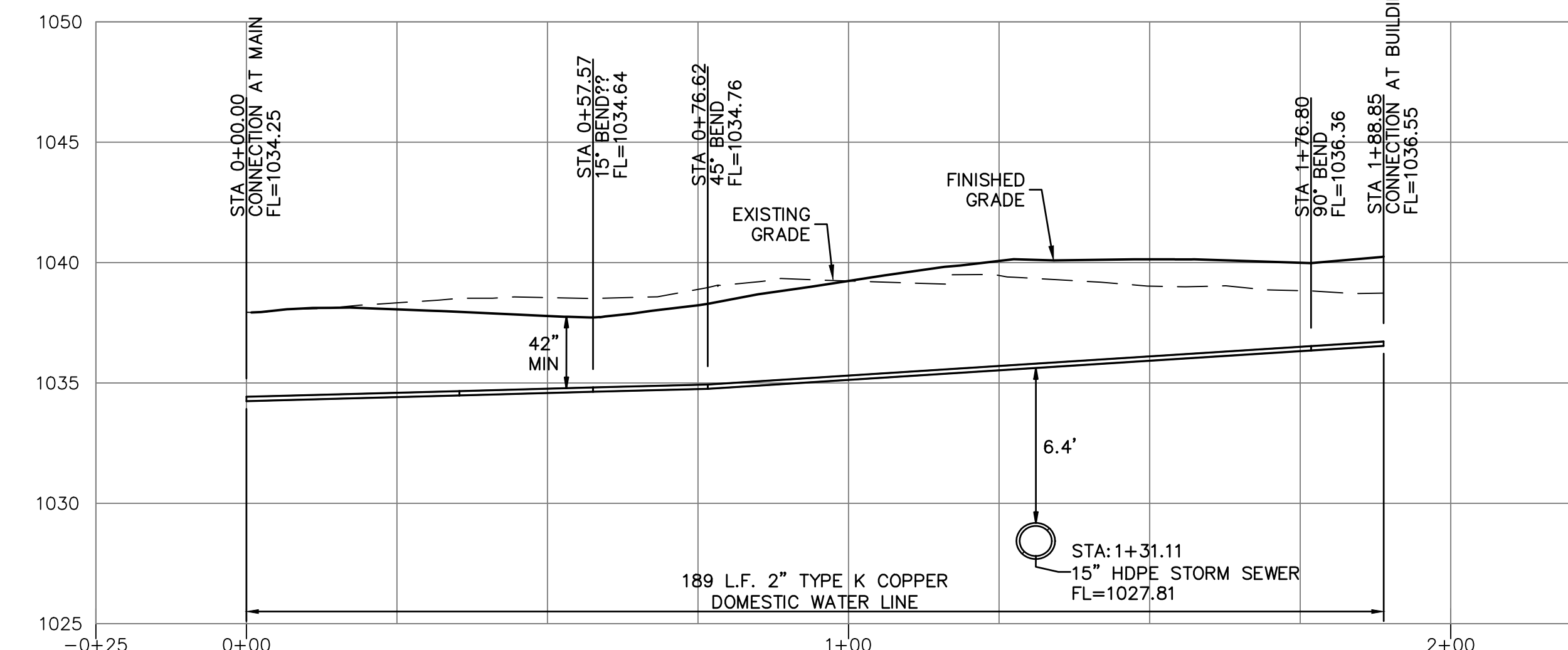
CONNECTION AT MAIN
N:985033.72
E:2817565.12

WATER PLAN VIEW

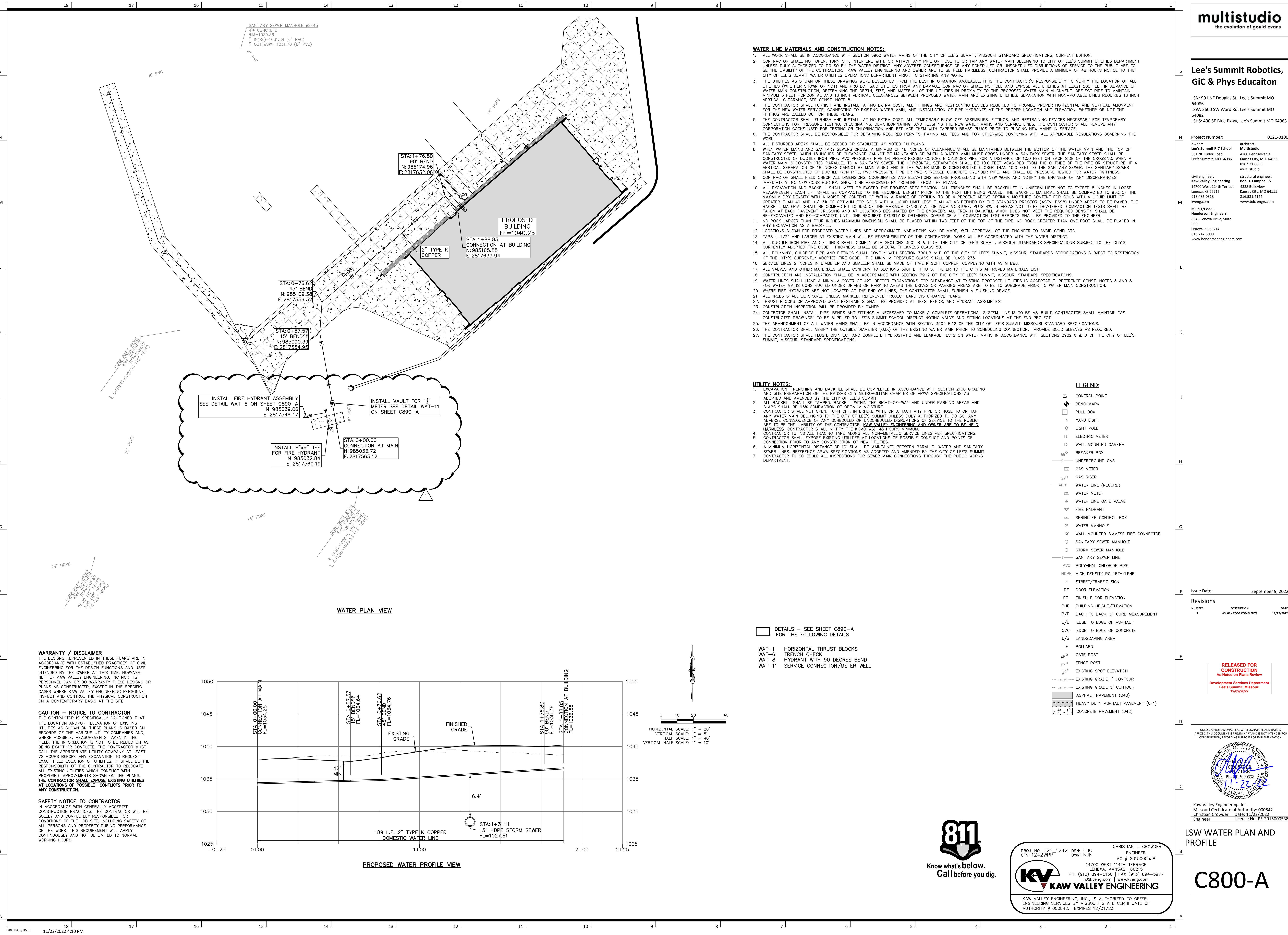
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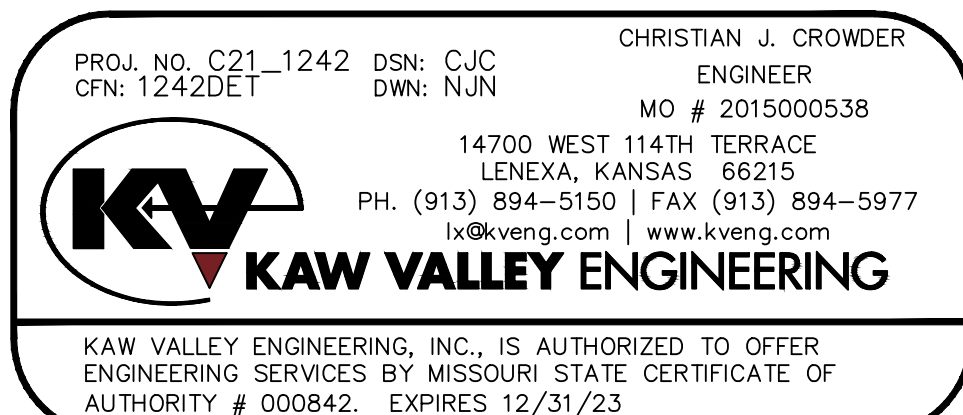
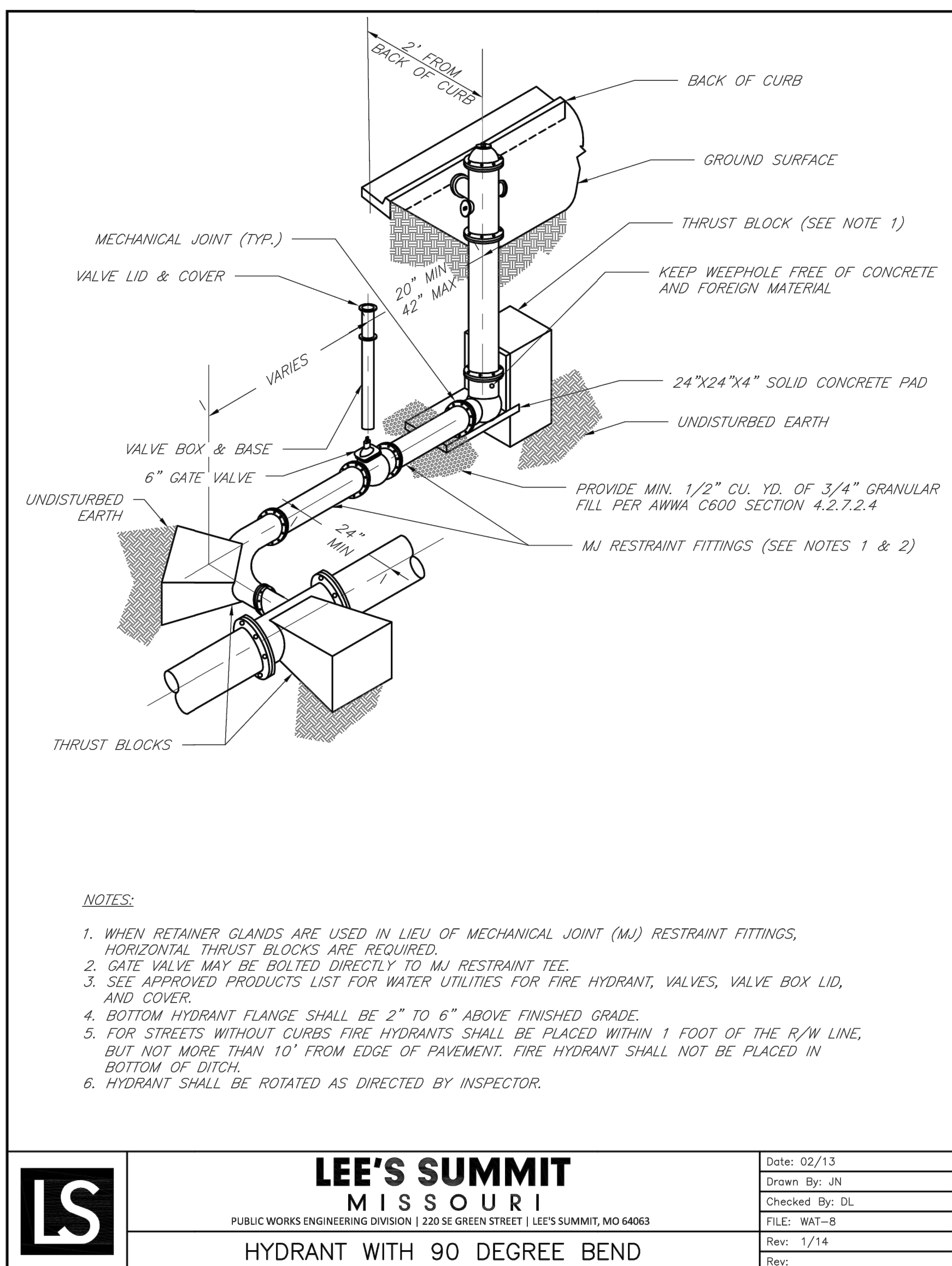
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SAFETY NOTICE TO CONTRACTOR
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PROPOSED WATER PROFILE VIEW





LSR7 Robotics, GiC &
Phys Education

LSN: 901 NE Douglas St., Lee's Summit MO
64086
LSW: 2600 SW Ward Rd, Lee's Summit MO
64082
LSHS: 400 SE Blue Pkwy, Lee's Summit MO 64063

Project Number: 0121-0100

owner:
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301 NE Tudor Road
Lee's Summit, MO 64086

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MEP/T/Code:
Henderson Engineers
8345 Lenexa Drive, Suite
300
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816.742.5000
www.hendersonengineers.com

LSN / LSW - Building Section 3 L1
3/16" = 1'-0"

Issue Date: September 9, 2022

Revisions		
NUMBER	DESCRIPTION	DATE

RELEASED FOR
CONSTRUCTION
As Noted on Plans Review
Development Services Department
Lee's Summit, Missouri
12/02/2022

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Building Sections
A301

LSN / LSW - Building Section 1 A1
3/16" = 1'-0"