LEE'S SUMMIT HIGH SCHOOL
DEVELOPMENT PLAN - EAST PARKING LOT PHASE I
400 SE BLUE PARKWAY, LEE'S SUMMIT, MO 64063
SECTION 8 - TOWNSHIP 47 N - RANGE 31 W

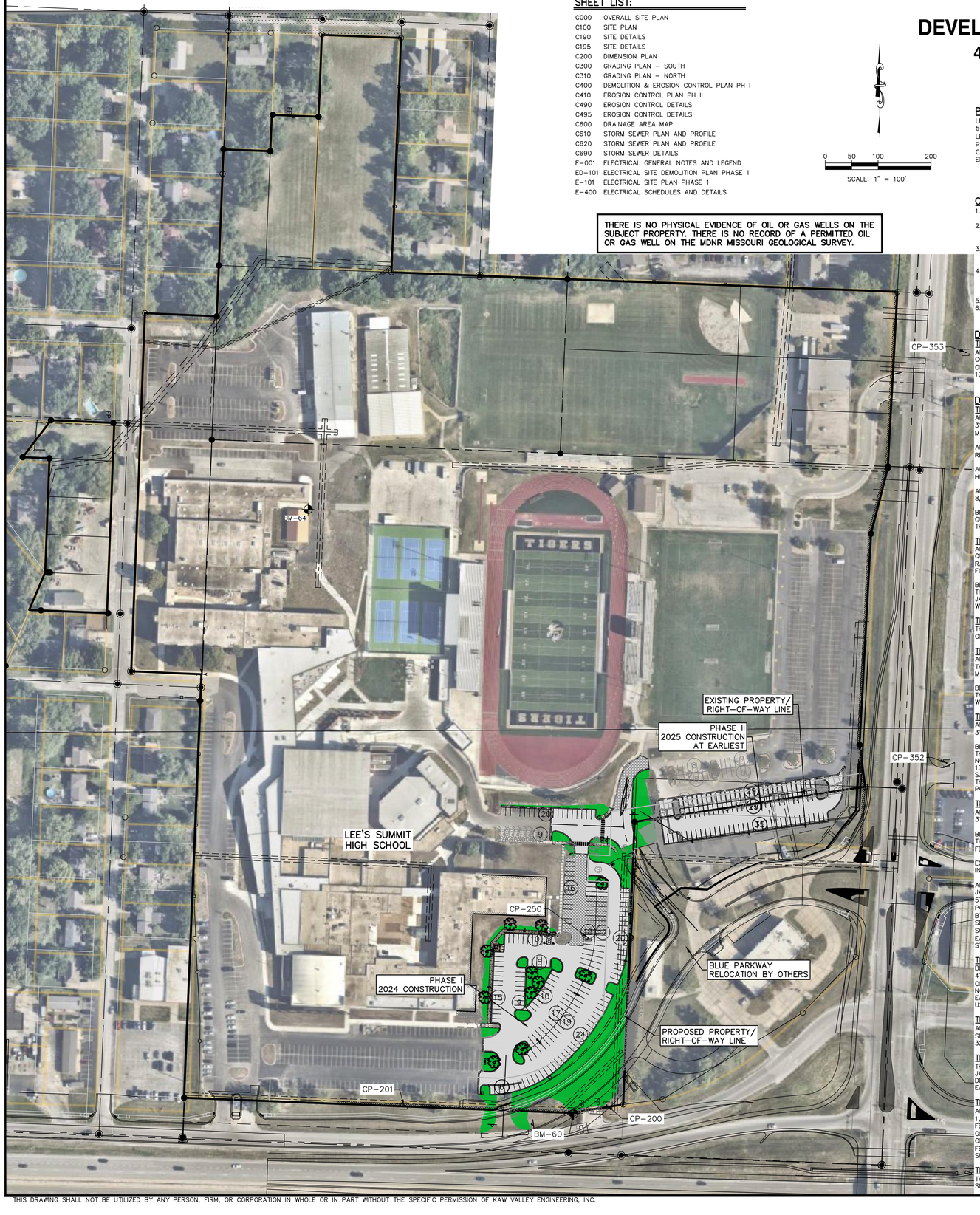
SHEET LIST:

C000	OVERALL SITE PLAN
C100	SITE PLAN
C190	SITE DETAILS
C195	SITE DETAILS
C200	DIMENSION PLAN
C300	GRADING PLAN – SOUTH
C310	GRADING PLAN – NORTH
C400	DEMOLITION & EROSION CONTROL PLAN PH I
C410	EROSION CONTROL PLAN PH II
C490	EROSION CONTROL DETAILS
C495	EROSION CONTROL DETAILS
C600	DRAINAGE AREA MAP
C610	STORM SEWER PLAN AND PROFILE
C620	STORM SEWER PLAN AND PROFILE
C690	STORM SEWER DETAILS
E–001	ELECTRICAL GENERAL NOTES AND LEGEND
ED–101	ELECTRICAL SITE DEMOLITION PLAN PHASE 1
E–101	ELECTRICAL SITE PLAN PHASE 1
E–400	ELECTRICAL SCHEDULES AND DETAILS

0 50 100 200

SCALE: 1" = 100'

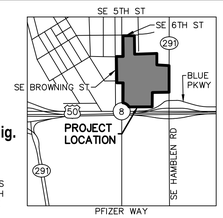
THERE IS NO PHYSICAL EVIDENCE OF OIL OR GAS WELLS ON THE SUBJECT PROPERTY. THERE IS NO RECORD OF A PERMITTED OIL OR GAS WELL ON THE MDNR MISSOURI GEOLOGICAL SURVEY.



PREPARED FOR:
LEE'S SUMMIT SCHOOL DISTRICT
502 SE TRANSPORT RD.
LEE'S SUMMIT, MO 64081
PHONE: (816) 986–2421
CONTACT: KYLE GORRELL
EMAIL: kyle.gorrell@lsr7.net

PREPARED BY:
KAW VALLEY ENGINEERING, INC.
14700 W 114TH TERR.
LENEXA, KANSAS 66215
PHONE: (913) 894–5150
CONTACT: DAVID WOOD
EMAIL: woodd@kveng.com

Know what's below. Call before you dig.



VICINITY MAP
SEC 8 – TWP 47N – RNG 31W
NOT TO SCALE

CONSTRUCTION NOTES:
1. COORDINATE START–UP AND ALL CONSTRUCTION ACTIVITIES WITH THE LEE'S SUMMIT SCHOOL DISTRICT.
2. CONSTRUCTION METHODS AND MATERIALS NOT SPECIFIED IN THESE PLANS ARE TO MEET OR EXCEED THE KANSAS CITY METROPOLITAN CHAPTER OF APWA STANDARD SPECIFICATIONS AS ADOPTED AND AMENDED BY THE CITY OF LEE'S SUMMIT.
3. 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.
4. 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 RIGHT–OF–WAYS IN THE CONSTRUCTION AREA.
5. ALL DIMENSIONS SHOWN ARE TO THE BACK OF CURB UNLESS OTHERWISE NOTED.
6. ALL TRAFFIC CONTROL DEVICES, INSTALLATION AND OPERATIONS SHALL CONFORM WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES".

DESCRIPTION: (PER TITLE COMMITMENT)
TRACT 1: (MISSOURI WARRANTY DEED, Bk. I–80, Pg. 1904)
ALL THAT PART OF LOT 3, MUCKEY ADDITION, A SUBDIVISION OF LAND IN LEE'S SUMMIT, JACKSON COUNTY, MISSOURI ACCORDING TO THE RECORDED PLAT THEREOF, LYING SOUTH OF THE SOUTH LINE OF 6TH STREET IN LEE'S SUMMIT, AS SAID STREET IS DESCRIBED IN THE DEED RECORDED IN BOOK 1039 AT PAGE 122.

DESCRIPTIONS: (PER TITLE COMMITMENT)
TRACT 1: (MISSOURI WARRANTY DEED, BOOK 923, AT PAGE 743)(DEED 1A)
ALL OF THE SOUTHWEST QUARTER OF THE NORTHEAST QUARTER OF SECTION 8, TOWNSHIP 47, RANGE 31, IN LEE'S SUMMIT, JACKSON COUNTY, MISSOURI, EXCEPT THAT PART CONVEYED TO THE STATE OF MISSOURI BY WARRANTY DEED RECORDED IN BOOK 656 AT PAGE 111 (DEED 1B), AND

ALSO EXCEPT THAT PART THEREOF CONVEYED TO THE STATE OF MISSOURI BY WARRANTY DEED RECORDED IN BOOK 661 AT PAGE 166 (DEED 1C),

ALSO EXCEPT THAT PART THEREOF CONVEYED TO ARTHUR B. MCLENNAN AND PAULINE P. MCLENNAN, HUSBAND AND WIFE BY WARRANTY DEED RECORDED IN BOOK 883 AT PAGE 51 (DEED 1D), AND

ALSO EXCEPT A TRACT OF LAND IN SAID SOUTHWEST QUARTER OF THE NORTHEAST QUARTER, SECTION 8, TOWNSHIP 47, RANGE 31 DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT 651.69 FEET NORTH OF THE SOUTHEAST CORNER OF THE SAID QUARTER QUARTER SECTION, THENCE WEST 491.69 FEET; THENCE NORTH 63 FEET; THENCE EAST 491.69 FEET TO THE QUARTER SECTION LINE; THENCE SOUTH 63 FEET TO POINT OF BEGINNING.

TRACT 2: (MISSOURI WARRANTY DEED, BOOK 1243, AT PAGE 716)(DEED 2)
ALL OF THE WEST 327 FEET OF THE NORTH 2 ACRES OF THE SOUTH 5 ACRES OF THE SOUTHEAST QUARTER OF THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER OF SECTION 8, TOWNSHIP 47, RANGE 31, IN LEE'S SUMMIT, JACKSON COUNTY, MISSOURI, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT 198 FEET NORTH OF THE SOUTHWEST CORNER OF THE SOUTHEAST QUARTER OF THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER OF SECTION 8, TOWNSHIP 47, RANGE 31, IN JACKSON COUNTY, MISSOURI, AND RUNNING THENCE EAST 327 FEET; THENCE NORTH 132 FEET; THENCE WEST 327 FEET; THENCE SOUTH 132 FEET TO POINT OF BEGINNING.

TRACT 3: (MISSOURI WARRANTY DEED, BOOK 1277, AT PAGE 325)(DEED 3)
THE SOUTH 5 ACRES OF THE WEST HALF OF THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER OF SECTION 8, TOWNSHIP 47, RANGE 31, IN LEES' SUMMIT, JACKSON COUNTY, MISSOURI.

TRACT 4: (REPORT OF COMMISSIONERS, BOOK 1484, AT PAGE 306)(DEED 4)
ALL OF THE WEST 327 FEET OF THE SOUTH 3 ACRES OF THAT PART OF THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER OF SECTION 8 TOWNSHIP 47, RANGE 31 IN LEE'S SUMMIT, JACKSON COUNTY, MISSOURI DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHWEST CORNER OF THE SOUTHEAST QUARTER OF THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER AND RUNNING THENCE EAST 327 FEET; THENCE NORTH 198 FEET; THENCE WEST 327 FEET; THENCE SOUTH 198 FEET TO THE POINT OF BEGINNING.

TRACT 5: (MISSOURI WARRANTY DEED, BOOK 1491, AT PAGE 140)(DEED 5)
ALL THAT PART OF THE EAST HALF OF THE NORTHWEST QUARTER OF SECTION 8, TOWNSHIP 47, RANGE 31, IN LEE'S SUMMIT, JACKSON COUNTY, MISSOURI DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHEAST CORNER OF THE INTERSECTION OF 7TH STREET AND BROWNING AVENUE; THENCE SOUTH ALONG THE EAST LINE OF BROWNING AVENUE A DISTANCE OF 678.52 FEET TO THE NORTH LINE OF 8TH STREET; THENCE EAST ALONG THE NORTH LINE OF 8TH STREET A DISTANCE OF 133 FEET TO THE EAST LINE OF SAID QUARTER SECTION; THENCE NORTH ALONG THE EAST LINE OF SAID QUARTER SECTION A DISTANCE OF 678.52 FEET TO THE NORTH LINE OF 7TH STREET EXTENDED; THENCE WEST ALONG THE NORTH LINE OF 7TH STREET EXTENDED A DISTANCE OF 135.77 FEET TO THE POINT OF BEGINNING.

TRACT 6: (MISSOURI WARRANTY DEED, BOOK 1536, AT PAGE 205)(DEED 6)
ALL THAT PART OF THE SOUTHWEST 1/4 OF THE NORTHEAST 1/4 OF SECTION 8, TOWNSHIP 47 RANGE 31, DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT 556.69 FEET NORTH OF THE SOUTHEAST CORNER OF 1/4 OF 1/4 SECTION: THENCE WEST 491.68 FEET; THENCE NORTH 158 FEET; THENCE EAST 491.69 FEET; THENCE SOUTH 158 FEET TO THE POINT OF BEGINNING, ALL IN LEE'S SUMMIT, JACKSON COUNTY, MISSOURI,

EXCEPT THAT PART CONTAINED IN THE REPORT OF COMMISSIONERS RECORDED AS DOCUMENT NO I31081 IN BOOK I89 AT PAGE 465, DESCRIBED AS FOLLOWS:

ALL THAT PART OF THE SW 1/4 OF THE NE 1/4 OF SECTION 8, T47N, R31W, IN LEE'S SUMMIT, JACKSON COUNTY, MISSOURI DESCRIBED AS FOLLOWS: BEGINNING AT A POINT 714.69 FEET NORTH AND 57 FEET WEST OF THE SOUTHEAST CORNER OF THE SW 1/4 OF THE NE 1/4 OF SAID SECTION 8, SAID POINT BEING 70 FEET WESTERLY OF THE CENTERLINE OF STATE HIGHWAY DESIGNATED ROUTE 00 (71 BY–PASS), AS MEASURED AT RIGHT ANGLES THERETO; THENCE SOUTH 3 DEGREES 14 MINUTES 23 SECONDS WEST PARALLELING SAID HIGHWAY CENTERLINE, 158 FEET; THENCE WEST PARALLELING THE SOUTH LINE OF SAID 1/4 1/4 SECTION, A DISTANCE OF 432 FEET; THENCE NORTH PARALLELING THE EAST LINE OF SAID 1/4 1/4 SECTION, A DISTANCE OF 75 FEET; THENCE NORTHEASTERLY ALONG A STRAIGHT LINE TO THE POINT OF BEGINNING.

TRACT 7: (MISSOURI WARRANTY DEED, BOOK 1869, AT PAGE 312)(DEED 7)
BEGINNING AT A POINT 1320.0 FEET NORTH OF THE EAST–WEST CENTER LINE OF SECTION 8, TOWNSHIP 47, RANGE 31, IN LEE'S SUMMIT, JACKSON COUNTY, MISSOURI, AND ON THE EAST LINE OF THE EAST ½ OF THE NORTHWEST 1/4 OF THE NORTHEAST 1/4 OF SAID SECTION; THENCE WEST 186.3; THENCE NORTH 100 FEET; THENCE EAST 186.3 FEET TO A POINT ON THE EAST LINE; THENCE SOUTH ON SAID EAST LINE 100.0 FEET TO THE POINT OF BEGINNING, EXCEPTING THEREFROM THAT PART SITUATED IN US HIGHWAY 71 BY–PASS.

TRACT 8: (MISSOURI WARRANTY DEED, BOOK 1869, AT PAGE 313)(DEED 8)
ALL OF THE SOUTH 3 ACRES OF THE EAST ½ OF THE NORTHWEST 1/4 OF THE NORTHEAST 1/4 OF SECTION 8, TOWNSHIP 47, RANGE 31, IN LEE'S SUMMIT JACKSON COUNTY, MISSOURI, EXCEPT THE WEST 327 FEET THEREOF AND ALSO EXCEPT THE SOUTH 100 FEET OF THE EAST 186.3 FEET THEREOF.

TRACT 9: (MISSOURI WARRANTY DEED, BOOK I–79, AT PAGE 635)(DEED 9)
THE EAST 88.5 FEET OF THAT PART OF LOT 1, MUCKEY ADDITION, A SUBDIVISION IN LEE'S SUMMIT, JACKSON COUNTY, MISSOURI, LYING SOUTH OF THE SOUTH LINE OF 6TH STREET, AS SAID STREET IS DESCRIBED IN DEED RECORDED IN BOOK 1039 AT PAGE 122, EXCEPT THE NORTH 155 FEET OF SAID EAST 88.5 FEET.

TRACT 10: (MISSOURI WARRANTY DEED, BOOK 551, AT PAGE 135)(DEED 10)
ALL OF THE NORTH 2 ACRES OF THE SOUTH 5 ACRES OF THE SOUTHEAST 1/4 OF THE NORTHWEST 1/4 OF THE NORTHEAST 1/4 OF SECTION 8, TOWNSHIP 47, RANGE 31, EXCEPT ALL THE WEST 327 FEET THEREOF MORE PARTICULARLY DESCRIBED AS FOLLOWS: BEGINNING AT A POINT 198 FEET NORTH OF THE SOUTHWEST CORNER OF THE SOUTHEAST 1/4 OF THE NORTHWEST 1/4 OF THE NORTHEAST 1/4 OF SECTION 8, TOWNSHIP 47, RANGE 31 AND RUNNING THENCE EAST 327 FEET; THENCE NORTH 132 FEET; THENCE WEST 327 FEET, THENCE SOUTH 132 FEET TO POINT OF BEGINNING, ALL IN LEE'S SUMMIT, JACKSON COUNTY, MISSOURI.

TRACT 11: (MISSOURI WARRANTY DEED, BOOK 623, AT PAGE 833)(DEED 11)
THE SOUTH 220 FEET OF THE WEST 88.5 FEET OF LOT 1, MUCKEY ADDITION, A SUBDIVISION IN LEE'S SUMMIT, JACKSON COUNTY, MISSOURI.

NOTES TO CONTRACTOR:
1. OWNER TO ENGAGE THIRD PARTY TESTING AGENCY. CONTRACTOR IS REQUIRED TO ARRANGE TESTING OF COMPACTION OF FILLS, TRENCH BACKFILL, INSPECTION AND PROOF ROLL OF SUBGRADE, CONCRETE TESTING AND ASPHALT DENSITY. CONTRACTOR SHALL CORRECT DEFICIENCIES IDENTIFIED BY OWNERS TESTING AGENCY. CONTACT CFS ENGINEERS, ADAM McEACHRON (913) 627–9040.
2. CONTRACTOR IS RESPONSIBLE FOR TEMPORARY FACILITIES INCLUDING BUT NOT LIMITED TO WATER, POWER AND PORTA–POTTIES. COORDINATE LOCATION WITH SCHOOL DISTRICT.

STORM WATER MANAGEMENT:
STORM WATER MANAGEMENT IS PROPOSED AS PART OF THIS PROJECT COMPLIES WITH THE KC METROPOLITAN CHAPTER OF APWA DESIGN CRITERIA SECTION 5600 AS ADOPTED BY THE CITY OF LEE'S SUMMIT. PROPOSED STORM WATER MANAGEMENT SYSTEM WILL MITIGATE INCREASES IN RUNOFF FOR THE STORM EVENTS ANALYZED TO A RATE AT OR LESS THAN THE EXISTING CONDITIONS.

UNDERGROUND UTILITY STATEMENT:
THE UNDERGROUND UTILITIES SHOWN HEREON ARE DEPICTED FROM FIELD SURVEY INFORMATION OF ONE–CALL LOCATED UTILITIES AND/OR THE SCALING AND PLOTTING OF EXISTING UTILITY MAPS AND DRAWINGS MADE AVAILABLE TO THE SURVEYOR AT THE TIME OF SURVEY. THE SURVEYOR DOES NOT CERTIFY THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL UNDERGROUND UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. FURTHERMORE, THE SURVEYOR DOES NOT CERTIFY THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION DEPICTED ALTHOUGH HE DOES CERTIFY THAT THEY ARE DEPICTED AS ACCURATELY AS POSSIBLE FROM INFORMATION MADE AVAILABLE TO THE SURVEYOR AT THE TIME OF SURVEY. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES SHOWN HEREON BY EXCAVATION UNLESS OTHERWISE NOTED ON THIS SURVEY.
MISSOURI ONE CALL TICKET NUMBER: #200431409, 200431440, 200431475, 200440745.

FLOOD STATEMENT:
THE SURVEYED PARCEL LIES WITHIN ZONE "X" (AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE
FLOODPLAIN) AS DETERMINED BY FEMA FLOOD INSURANCE RATE MAP NUMBER 29095C0438G, MAP REVISED JANUARY 20, 2017, AND BY MAP NUMBER 29095C0436G, REVISED JANUARY 20, 2017 LEE'S SUMMIT, JACKSON COUNTY, MISSOURI. LOCATION DETERMINED BY A SCALED GRAPHICAL PLOT OF THE FLOOD INSURANCE RATE MAP.

SITE DATA:
TOTAL SITE AREA: 1,983,297 SF – 45.53 Ac

PROJECT AREA/AREA OF DISTURBANCE
PHASE I: 124,423 SF (2.856 AC.)

PARKING
PARKING REQUIRED BY ZONING ORDINANCE:
6 STALLS PER CLASSROOM (103 CLASSROOMS = 618 PARKING STALLS)
EXISTING: 1154 REGULAR (22 ACCESSIBLE) STALLS
PROPOSED (COMPLETION OF PHASE I): 1116 REGULAR (22 ACCESSIBLE) STALLS
PROPOSED: (COMPLETION OF PHASE II): 1171 REGULAR (22 ACCESSIBLE) STALLS

PROPOSED IMPERVIOUS COVERAGE WITHIN PHSAE I PROJECT AREA
EXISTING: 90,419 S.F. – 2.076 AC.
PROPOSED: 76,499 S.F. – 1.756 AC.
DECREASE: 13,920 S.F. – 0.323 AC.

TOTAL: RP–2, CP–1(EAST 290')

HORIZONTAL AND VERTICAL DATUM:
UNLESS OTHERWISE NOTED THE COORDINATES SHOWN HEREON ARE GROUND COORDINATES BASED ON THE MISSOURI STATE PLANE (1983) WEST ZONE (NAD 1983) (NAVD 1988)
CAF: 0.9998978
SCALED AROUND 0,0

JA–25 (PID: 095025)
NORTHING: 303646.030 (GRID/METERS) 996313.829 (GROUND/FEET)
EASTING: 860950.475 (GRID/METERS) 2824923.692 (GROUND/FEET)
ELEVATION: 321.8 (METERS) 1055.77 (FEET)

SITE BENCHMARKS:
BM–60
FOUND CUT SQUARE AT THE SOUTHWEST CORNER OF CONCRETE HEADWALL OF CONCRETE FLUME ON THE WEST SIDE OF THE SCHOOL SOUTHEAST OF ENTRY DRIVE.
ELEVATION= 1042.70

BM–64
SET CUT SQUARE AT THE TOP NORTHEAST CORNER OF A CONCRETE PATIO WITH COVERED TABLES ON THE EAST SIDE OF BUILDING "B".
ELEVATION= 1015.74

PROJECT CONTROL:
CP #200
1/2" REBAR W/ ORANGE KVE CAP
NORTHING: 996572.06 (GROUND) 996470.24 (GRID)
EASTING: 2827438.76 (GROUND) 2827149.83 (GRID)
ELEV = 1049.49

CP #201
1/2" REBAR W/ ORANGE KVE CAP
NORTHING: 996570.39 (GROUND) 996468.55 (GRID)
EASTING: 2827055.45 (GROUND) 2826766.55 (GRID)
ELEV = 1048.24

CP #250
1/2" REBAR W/ ORANGE KVE CAP
NORTHING: 996889.02 (GROUND) 996787.14 (GRID)
EASTING: 2827403.78 (GROUND) 2827114.81 (GRID)
ELEV = 1047.07

CP #352
OLSSON CONTROL POINT #3
NORTHING: 997219.69 (GROUND) 997117.77 (GRID)
EASTING: 2828082.23 (GROUND) 2827793.20 (GRID)
ELEV = 1034.64

CP #353
OLSSON CONTROL POINT #4
NORTHING: 997996.59 (GROUND) 997894.59 (GRID)
EASTING: 2828118.84 (GROUND) 2827829.81 (GRID)
ELEV = 1032.75

RELEASED FOR CONSTRUCTION
As Noted on Plan Review
Development Services Department
Lee's Summit, Missouri
07/05/2024

Digitally signed by Mike Weisenborn
Date: 2024.07.05 15:51:27–05'00'

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.

PL20240664066
PRSITE20242655

REV	DATE	DESCRIPTION	DSN	DWN	CHK
0	3/29/24	ISSUED FOR BID/CITY REVIEW	DDW	NJN	
1	4/23/24	ADDENDUM 2/PER CITY COMMENTS	DDW	NJN	
2	5/16/24	CITY COMMENTS/PR NO. 1	DDW	NJN	
3	6/24/24	CITY COMMENTS/PR NO. 2	TGN	NJN	

STATE OF MISSOURI
DAVID D WOOD
NUMBER PE–2011037427
PROFESSIONAL ENGINEER
6/24/2024

DAVID D. WOOD
ENGINEER
MO # 2011037427

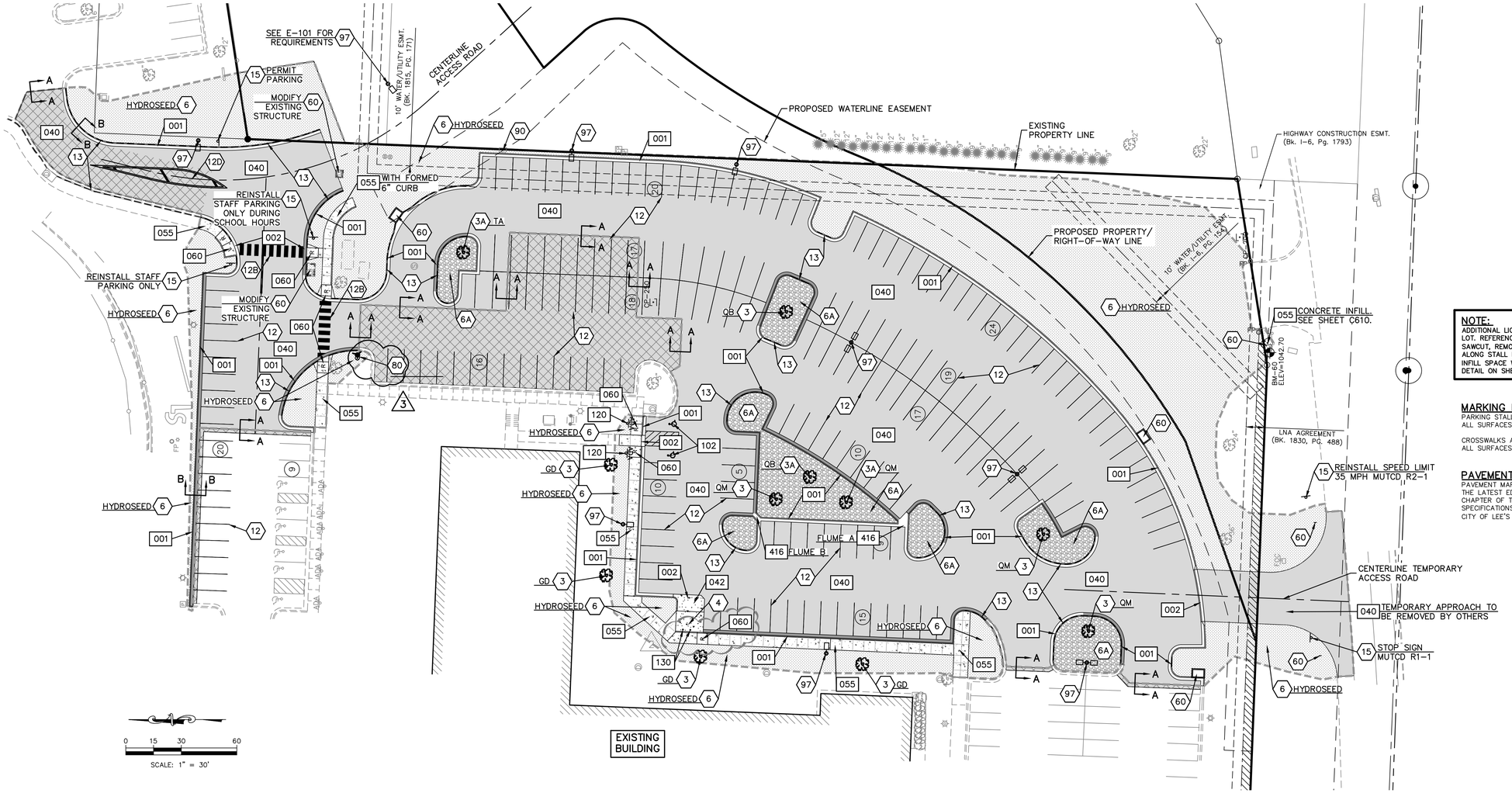
14700 WEST 114TH TERRACE
LENEXA, KANSAS 66215
PH. (913) 894–5150
lx@kveng.com | www.kveng.com

KAW VALLEY ENGINEERING
KAW VALLEY ENGINEERING, INC. IS AUTHORIZED TO OFFER ENGINEERING SERVICES IN MISSOURI. STATE CERTIFICATE OF AUTHORITY # 000842. EXPIRES 12/31/25

LEE'S SUMMIT HS - EAST PARKING LOT
400 SE BLUE PARKWAY
LEE'S SUMMIT, MISSOURI 64063

CONSTRUCTION DOCUMENTS PHASE I
OVERALL SITE PLAN

PROJ. NO. C23_1880
DESIGNER DDW | DRAWN BY NJN
CFN 18800SP
SHEET C000 | REV 3



NOTES:

3 REPLANTED TREE. SEE PLANT SCHEDULE. SEE TREE PLANTING DETAIL ON SHEET C190.
3A NEW TREE. SEE PLANT SCHEDULE. SEE TREE PLANTING DETAIL ON SHEET C190.
4 TRASH/RECYCLE BIN. NOT IN CONTRACT.
6 DISTURBED AREAS TO BE SEEDED AS NOTED ON PLAN. REFER TO SHEET C490 FOR REQUIREMENTS.
6A 4" OF ROCK MULCH ON NON-WOVEN FILTER FABRIC (1/2" TO 1-1/2", KANSAS RIVER ROCK). TOP OF ROCK MULCH BED TO BE AT OR BELOW TOP OF ADJACENT CURB OR WALK AS APPLICABLE.
12 WHITE PARKING LOT STRIPING (SEE SPECIFICATIONS THIS SHEET)
12B CROSSWALK 6'x24" WHITE LINES AT 24" TO DELINEATE CROSSWALK.
12D GORE AREA. DOUBLE YELLOW (4" STRIPES @ 4" SPACING) WITH 12" YELLOW STRIPES AT 45° TO DIRECTION OF TRAVEL. SPACE AT 25', 3 MINIMUM.
13 PAINT CURB RED TO DENOTE FIRE LANE. CONFIRM LIMITS WITH FIRE DEPARTMENT. (SEE SPECIFICATIONS THIS SHEET)
15 SITE SIGNAGE. MOUNT EDGE OF SIGN 2' FROM BACK OF CURB AT 7'-0" IN ACCORDANCE WITH MUTCD.
60 STORM SEWER STRUCTURE (SEE C600 SERIES SHEETS)
3 80 INSTALL PROPOSED FIRE HYDRANT ASSEMBLY. LOCATE HYDRANT 2' BEHIND CURB AND 2' MINIMUM NORTH OF 8" PRIVATE FIRE LINE. CUT IN A TEE AND PROVIDE SOLID SLEEVE. RESTRAIN ALL JOINTS. REFERENCE CITY STANDARD DETAIL WAT-8. SEE DETAIL ON SHEET C195.
90 RESET OR REPLACE QUAZITE BOX IN KIND TO ACCOMMODATE CHANGE IN GRADE.
97 PROPOSED SITE LIGHTING (REFER TO MEP PLANS AND SPECIFICATIONS). CENTER OF POLE BASE SHALL BE PLACED A MINIMUM OF 3'-0" FROM BACK OF CURB. SEE DIMENSION PLAN FOR LOCATIONS.

DETAILS - SEE DETAIL SHEETS C190 AND C195 FOR THE FOLLOWING DETAILS

001 STRAIGHT BACK CURB AND GUTTER
002 CURB AND GUTTER DETAIL AT RAMP
005 INTEGRAL CURB AND GUTTER
014 CONCRETE WHEEL STOPS
040 ASPHALT PAVEMENT
042 CONCRETE PAVEMENT
055 CONCRETE SIDEWALK
060 SIDEWALK RAMP
102 ACCESSIBLE SPACE STRIPING
120 ACCESSIBLE PARKING SIGNAGE
130 BOLLARD (SEE SHEET C195 FOR LAYOUT). DISTRICT TO PROVIDE STEEL PIPE FOR INSTALL.
416 CONCRETE FLUME (SEE SHEET C195)

	PLANT LIST						
	SYM.	BOTANICAL NAME	COMMON NAME	SIZE	POT/B&B	SPACING	REMARKS
		DECIDUOUS TREE					
4	GD	Gymnocladus dioicus 'Expresso'	Seedless Kentucky Coffeetree	2-1/2" Caliper	B&B		Single Straight Leader; Well Branched
4	QB	Quercus bicolor	Swamp White Oak	2-1/2" Caliper	B&B		Single Straight Leader; Well Branched
2	QM	Quercus macrocarpa	Bur Oak	2-1/2" Caliper	B&B		Single Straight Leader; Well Branched
1	TA	Tilia americana 'Boulevard'	Boulevard Linden	2-1/2" Caliper	B&B		Single Straight Leader; Well Branched

WARRANTY PERIOD IS 1 YEAR AND AN ADDITIONAL 1 YEAR FROM THE TIME OF REPLANTING AS APPLICABLE.

LEGEND:

- SECTION CORNER
- CONTROL POINT
- BENCHMARK
- MONUMENT FOUND ORIGIN UNCERTAIN UNLESS OTHERWISE NOTED
- (2)OU OVERHEAD UTILITY LINE (# OF LINES)
- LIGHT POLE
- UTILITY POLE
- ELECTRIC METER
- AIR CONDITIONER
- GAS METER
- WATER METER
- WATER LINE GATE VALVE
- FIRE HYDRANT
- WS WATER SPIGOT
- SV SPRINKLER VALVE
- BB BREAKER BOX
- EO ELECTRIC OUTLET
- DE DOOR ELEVATION (AT THRESHOLD)
- FF FINISH FLOOR ELEVATION
- BUSH
- BASKETBALL GOAL
- LIMITS OF DISTURBANCE
- A A / B B ASPHALT EDGE TREATMENT. SEE SECTION ON C190
- SPLICE BOX
- UV UTILITY VAULT
- SANITARY SEWER MANHOLE
- STORM SEWER MANHOLE
- CO SANITARY SEWER CLEAN OUT
- DS DOWN SPOUT
- GRATE INLET
- FLARED END SECTION
- STREET/TRAFFIC SIGN
- TRAFFIC SIGNAL LIGHT POLE
- HANDICAP SYMBOL
- 5 PARKING STALL COUNT
- HANDICAP SIGN
- DECIDUOUS TREE
- CONIFEROUS TREE
- TREE LINE
- TURN LANE DIRECTION
- ASPHALT SURFACE COURSE
- FULL DEPTH ASPHALT PAVEMENT (040)
- CONCRETE CURB AND GUTTER
- CONCRETE CURB AND GUTTER WITH REVERSE FLOW
- PAINTED CURB FOR FIRE LANE 13
- SECTION CORNER
- MONUMENT FOUND (ORIGIN UNCERTAIN UNLESS OTHERWISE NOTED)
- 1/2"x24" REBAR W/2¼" CAP SET (UNLESS NOTED OTHERWISE)
- MAGNAIL W/ WASHER SET (UNLESS NOTED OTHERWISE)
- CHISELED PLUS SET (UNLESS NOTED OTHERWISE)
- (M) MEASURED VALUE
- (C) CALCULATED
- (D) DEED VALUE
- (P) PLAT VALUE
- (CP) CALCULATED PLAT VALUE
- (CM) CALCULATED MEASURED VALUE
- (R) RECORD VALUE
- SS/E SANITARY SEWER EASEMENT
- D/E STORM DRAINAGE EASEMENT
- CONCRETE PAVEMENT (042) W/JOINTING
- TYPE 1 JOINT (TYP) / TYPE 3 JOINT (TYP)
- CONCRETE SIDEWALK (055+005) W/JOINTING
- L LANDING
- R RAMP
- T TRANSITION

NOTE:
ADDITIONAL LIGHTING TO BE INSTALLED IN SOUTH PARKING LOT. REFERENCE SHEET E-101. CONTRACTOR SHALL SAWCUT, REMOVE 5'x5' CONCRETE DIAMOND WITH POINTS ALONG STALL LINES TO ACCOMMODATE NEW POLE BASES. INFILL SPACE WITH 8" P.C.C. ON 4" AGGREGATE BASE. SEE DETAIL ON SHEET C195.

MARKING MATERIALS: APWA 2306.7G
PARKING STALLS STRIPING AND SYMBOLS
ALL SURFACES - TRAFFIC MARKING PAINT. COLOR AS INDICATED.

CROSSWALKS AND GORE AREAS
ALL SURFACES - TRAFFIC MARKING PAINT. COLOR AS INDICATED.

PAVEMENT MARKING SPECIFICATIONS:
PAVEMENT MARKINGS SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF THE CITY OF KANSAS CITY, MISSOURI CHAPTER OF THE AMERICAN PUBLIC WORKS ASSOCIATION SPECIFICATIONS SECTION 2306 AS ADOPTED AND AMENDED BY THE CITY OF LEE'S SUMMIT.

RELEASED FOR CONSTRUCTION
As Noted on Plan Review
Development Services Department
Lee's Summit, Missouri
07/05/2024

NOTE:
1. ALL DIMENSIONS ARE TO BACK OF CURB UNLESS NOTED OTHERWISE.

THERE IS NO PHYSICAL EVIDENCE OF OIL OR GAS WELLS ON THE SUBJECT PROPERTY. THERE IS NO RECORD OF A PERMITTED OIL OR GAS WELL ON THE MDNR MISSOURI GEOLOGICAL SURVEY.

Know what's below. Call before you dig.

REV	DATE	DESCRIPTION	DSN	DWN	CHK
3	6/24/24	CITY COMMENTS/PR NO. 2	DDW	TGN	
2	5/16/24	CITY COMMENTS/PR NO. 1	DDW	NJN	
1	4/23/24	ADDENDUM 2/PER CITY COMMENTS	DDW	NJN	
0	3/29/24	ISSUED FOR BID/CITY REVIEW	DDW	NJN	

STATE OF MISSOURI
DAVID D. WOOD
NUMBER PE-2011037427
PROFESSIONAL ENGINEER
4/30/2024

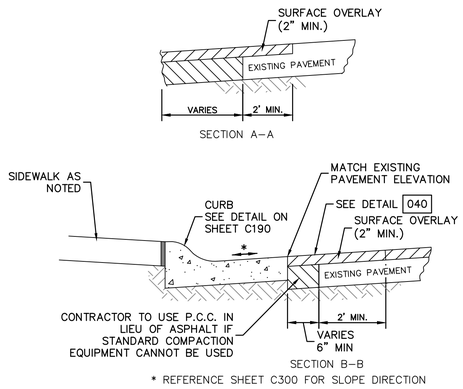
DAVID D. WOOD
ENGINEER
MO # 2011037427

KAW VALLEY ENGINEERING
14700 WEST 114TH TERRACE
LENEXA, KANSAS 66215
PH. (913) 894-5150
kv@kveng.com | www.kveng.com
KAW VALLEY ENGINEERING, INC., IS AUTHORIZED TO OFFER ENGINEERING SERVICES BY MISSOURI STATE CERTIFICATE OF AUTHORITY # 000842. EXPIRES 12/31/25

LEE'S SUMMIT HS - EAST PARKING LOT
400 SE BLUE PARKWAY
LE'S SUMMIT, MISSOURI 64063

CONSTRUCTION DOCUMENTS PHASE I
SITE PLAN

PROJ. NO. C23_1880
DESIGNER DDW | DRAWN BY NJN
CFN 1880SP
SHEET C100 | REV 3



MILL AND OVERLAY DETAIL

ASPHALT MILL AND OVERLAY NOTES:

MILLING SHALL BE IN ACCORDANCE WITH APWA TECHNICAL SPECIFICATIONS SECTION 2207 AS AMENDED BELOW.

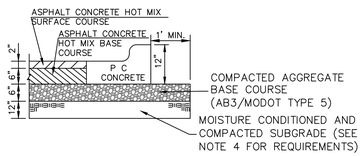
MILLING FOR THE DRIVES AND PARKING LOTS SHALL BE COLD MILLED AS FOLLOWS:

1. EQUIPMENT: MILLING THE SURFACE OF PAVEMENTS SHALL BE COMPLETED BY USE OF A MILLING MACHINE CONFORMING TO THE FOLLOWING.
   - A. 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.
   - B. AIR POLLUTION: THE MACHINE SHALL BE EQUIPPED WITH A DUST SUPPRESSION SYSTEM INCLUDING WATER STORAGE TANKS AND HIGH PRESSURE SPRAY BARS.
   - C. OPERATING WIDTH: IT IS DESIRABLE THAT THE CUTTING WIDTH BE GREATER THAN 6 FEET (2 m). IN THE EVENT THE CUTTING WIDTH IS LESS THAN 6 FEET (2 m) CONTRACTOR IS RESPONSIBLE FOR ENSURING GRADE CONTROL AS NOTED ON PLANS.
   - D. CUTTING DRUM: THE CUTTING DRUM SHALL BE TOTALLY ENCLOSED TO PREVENT DISCHARGE OF ANY LOOSENED MATERIAL ADJACENT TO WORK AREAS.
2. CONSTRUCTION DETAILS
   - A. METHODS OF OPERATIONS FOR MILLING:
     - a. OPERATOR: THE MILLING MACHINE SHALL BE OPERATED BY AN EXPERIENCED AND CAPABLE OPERATOR.
     - b. 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.
     - c. MATERIAL DISPOSAL: THE MATERIAL WITHDREW BY THE MACHINE SHALL BE REMOVED FROM THE SURFACE OF THE PAVEMENT AND PROPERLY DISPOSED OF BY THE CONTRACTOR.
     - d. 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.
   - B. TYPES OF CUTS TO BE MADE BY MILLING:
     - a. LEVELING: SUFFICIENT PASSES SHALL BE MADE SUCH THAT ALL IRREGULARITIES OR HIGH SPOTS ARE ELIMINATED, AND THAT 100% OF THE SURFACE IS MILLED.
     - b. 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.
     - c. 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.
   - C. 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.

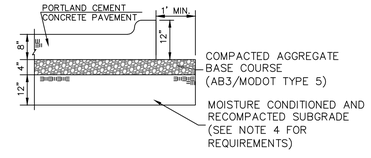
CRACKS: AFTER SURFACE MILLING DETERIORATED (FATIGUE CRACKED OR RAVELED) BLOCK CRACKS AND TRANSVERSE CRACKS THAT HAVE A WIDTH GREATER THAN 1.5–INCHES SHALL BE MILLED OR MECHANICALLY ROUTED OUT TO A MINIMUM DEPTH OF 2–INCHES AND PATCHED WITH A HOT MIX ASPHALT PRIOR TO OVERLAY. UNDETERIORATED PAVEMENT CRACKS WITH WIDTHS BETWEEN 1.5–INCHES AND 0.25–INCHES WIDE SHALL BE BLOWN OUT WITH PRESSURIZED AIR OR CLEANED AND DRIED PRIOR TO FILLING WITH AN APPROVED CRACK SEALING MATERIAL SUCH AS CRAFCO ROADSAVER 514, 515, PARKING LOT SEALANT TYPE 1 OR APPROVED EQUAL.

CONSTRUCTION OF THE OVERLAY WILL BE PERFORMED IN ACCORDANCE WITH APWA SPECIFICATIONS:

1. 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 MIX SUPPLIED TO THE PROJECT.
2. 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 VOIDS. THE SURFACE TREATMENT SHALL CONSIST OF MANUFACTURED SAND COATED WITH SS–1H EMULSION WORKED INTO THE SURFACE VOIDS TO YIELD A UNIFORM APPEARING SURFACE.
3. SEE DETAIL 040 FOR SURFACE MIX.



ASPHALT PAVEMENT 040



CONCRETE PAVEMENT 042

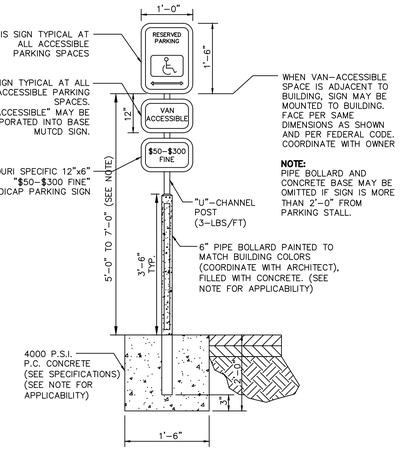
2

1. FLEXIBLE PAVEMENT SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE KANSAS CITY METROPOLITAN CHAPTER OF APWA SECTION 2200 AS AMENDED BY BY THE CITY OF LEE'S SUMMIT. REFER TO THE CITY DESIGN AND CONSTRUCTION MANUAL.

   ASPHALT SURFACE COURSE – KCMMBA2

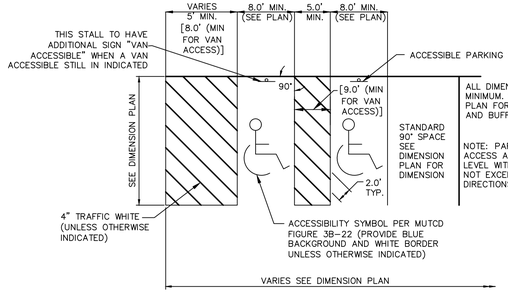
   ASPHALT BASE COURSE – KCMMBA3
2. RECYCLED MIXES MEETING APWA SPECIFICATIONS ARE ACCEPTABLE FOR BOTH BASE AND SURFACE COURSES.
3. PORTLAND CEMENT CONCRETE SHALL BE A KCMMB4K MIX AND SHALL MEET THE LATEST EDITION OF THE KANSAS CITY METROPOLITAN CHAPTER OF APWA SECTION 2200.
4. ONSITE CLAY SOILS SHALL BE STABILIZED WITH 5% PORTLAND CEMENT AS OUTLINED IN THE GEOTECHNICAL REPORT

PAVING DETAILS



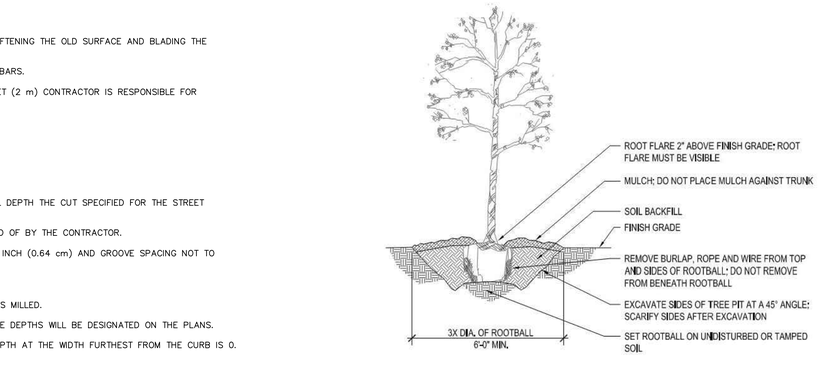
ACCESSIBLE PARKING SIGN 120

HEIGHT ABOVE GRADE FOR POLE MOUNTED SIGNS VARIES. TYPICAL INSTALLATION IS 5'–0" ABOVE GRADE. SIGN SHALL BE MOUNTED AT 7'–0" IF IT FALLS WITHIN A WALKING PATH.

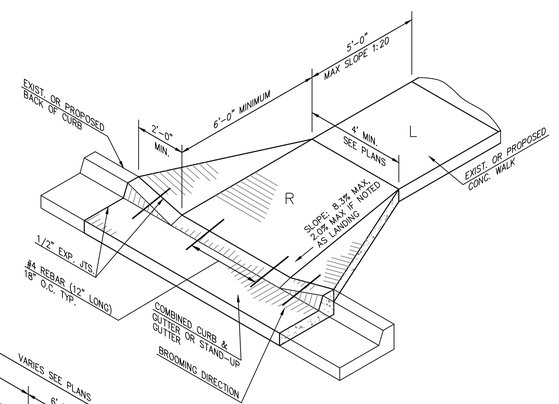


90° SPACE STRIPING

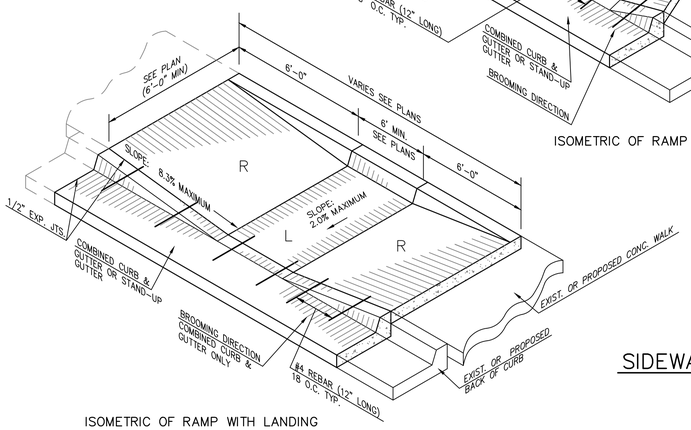
ACCESSIBLE STRIPING 102



TREE PLANTING DETAIL

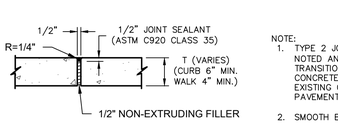


ISOMETRIC OF RAMP WITH LANDING

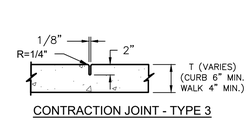


ISOMETRIC OF RAMP WITH LANDING

SIDEWALK RAMPS 060



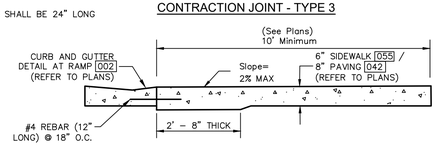
NOTE:
1. TYPE 2 JOINTS SHALL BE PLACED AS NOTED AND AT ALL P.C.'S, P.T.'S AND TRANSITIONS, AND WHERE NEW CURB OR CONCRETE PAVEMENT TIES INTO EXISTING CURB OR CONCRETE PAVEMENT.
2. SMOOTH BARS SHALL BE 24" LONG



CONTRACTION JOINT - TYPE 3

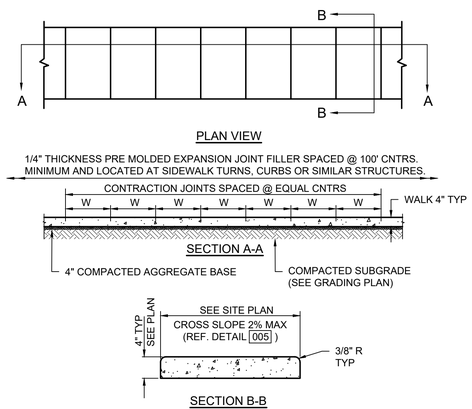
CONCRETE AND SIDEWALK NOTES:

1. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AND COMPLY WITH KCMMB SPECIFICATIONS. ALL CONCRETE SHALL BE PLACED IN ACCORDANCE WITH APWA SECTION 2200.
2. REINFORCING STEEL SHALL BE GRADE 60 AND COMPLY WITH ASTM A615. EPOXY COATED BARS AS NOTED SHALL COMPLY WITH ASTM A775. ALL CUT ENDS OR DAMAGED AREAS SHALL BE FIELD REPAIRED WITH EPOXY COATING.
3. SIDEWALKS TO BE BROOM FINISHED.
4. SUBGRADE TO BE COMPACTED TO 90% MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D698. MOISTURE CONTENT TO BE WITHIN A RANGE OF 2% BELOW TO 2% ABOVE OPTIMUM MOISTURE AS DEFINED BY ASTM D698.
5. SIDEWALK JOINTS MAY BE SAWN UNLESS SHOWN OTHERWISE ON ARCHITECT/LANDSCAPE ARCHITECT PLANS.



INTEGRAL CURB AND SIDEWALK 005

Note:
Install 12" tie bars #4 epoxy coated @18" o.c. and through wings as shown.



CONCRETE SIDEWALK 055

NOTE:
1. CONTRACTOR SHALL BACKFILL SIDEWALKS WITH TOPSOIL AND SEED/SOD IN ACCORDANCE WITH LANDSCAPE PLAN AND PROJECT SPECIFICATIONS.

RELEASED FOR CONSTRUCTION
As Noted on Plan Review
Development Services Department
Lee's Summit, Missouri
07/05/2024

REV	DATE	DESCRIPTION	DSN	DWN	CHK
			DDW	TGN	
3	6/24/24	CITY COMMENTS/PR NO. 2	DDW	NJN	
2	5/16/24	CITY COMMENTS/PR NO. 1	DDW	NJN	
1	4/23/24	ADDENDUM 2/PER CITY COMMENTS	DDW	NJN	
0	3/29/24	ISSUED FOR BID/CITY REVIEW	DDW	NJN	

STATE OF MISSOURI
DAVID D WOOD
NUMBER PE-2011037427
PROFESSIONAL ENGINEER
4/30/2024

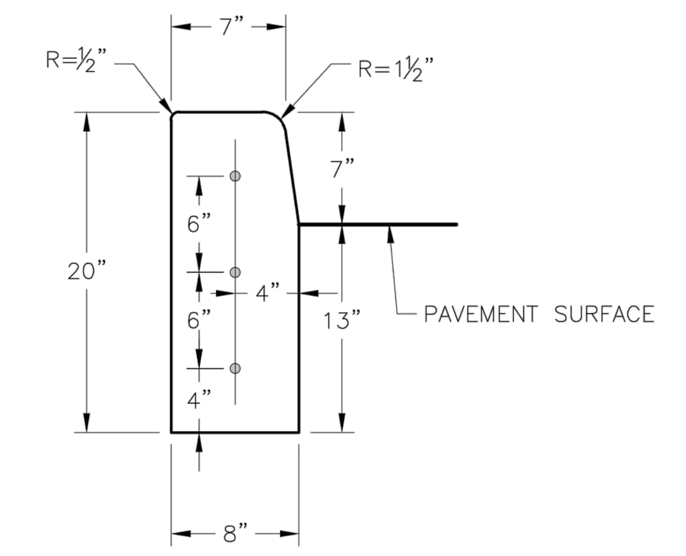
DAVID D. WOOD
ENGINEER
MO # 2011037427

KAW VALLEY ENGINEERING
14700 WEST 114TH TERRACE
LENEXA, KANSAS 66215
PH. (913) 894–5150
ix@kveng.com | www.kveng.com
KAW VALLEY ENGINEERING, INC., IS AUTHORIZED TO OFFER ENGINEERING SERVICES IN MISSOURI UNDER A STATE CERTIFICATE OF AUTHORITY # 000842; EXPIRES 12/31/25

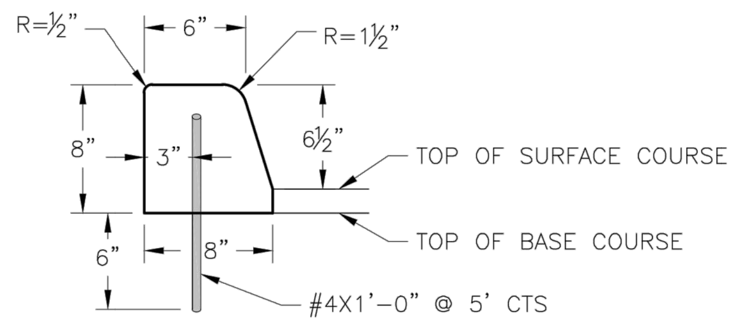
LEE'S SUMMIT HS - EAST PARKING LOT
400 SE BLUE PARKWAY
LEE'S SUMMIT, MISSOURI 64063

CONSTRUCTION DOCUMENTS PHASE I
SITE DETAILS

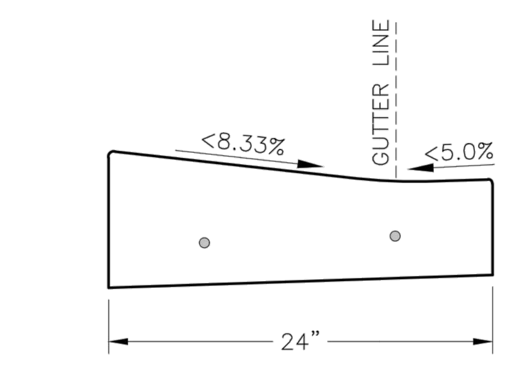
PROJ. NO.	C23_1880
DESIGNER	DDW
DRAWN BY	NJN
CFN	1880DET
SHEET	C190
REV	3



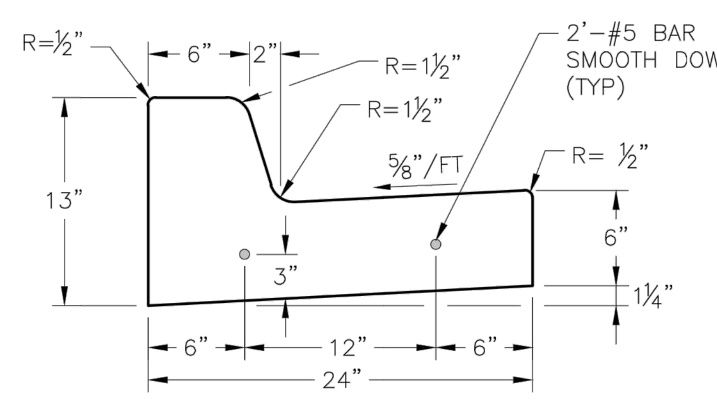
STRAIGHT CURB
(TYPE C-1)



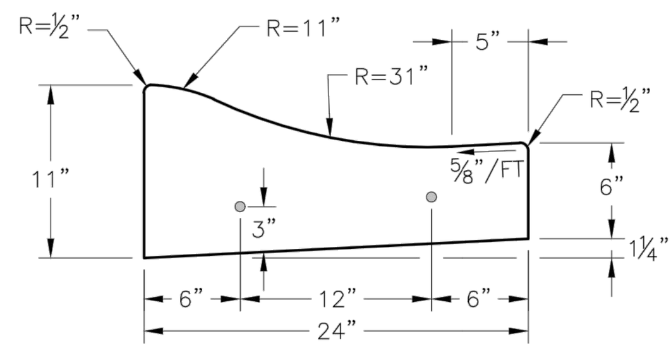
DOWELLED CURB
(TYPE DC)



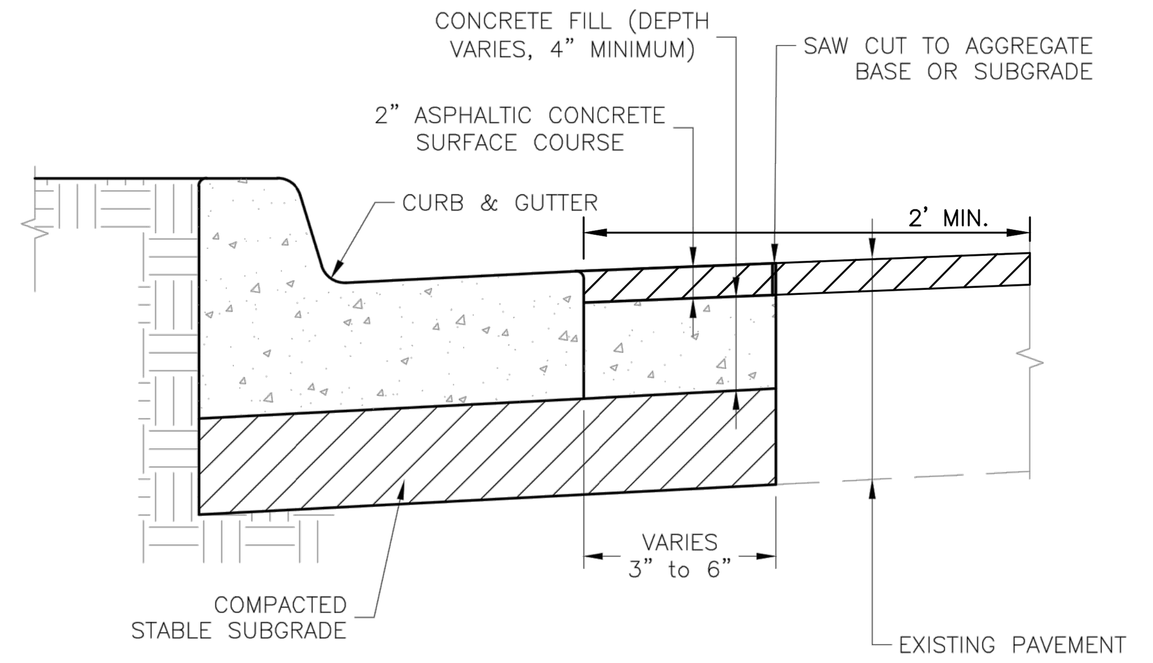
CURB & GUTTER DETAIL AT RAMP 002
(ADA SLOPE REQUIREMENTS)



STRAIGHT BACK CURB & GUTTER 001
(TYPE CG-1)



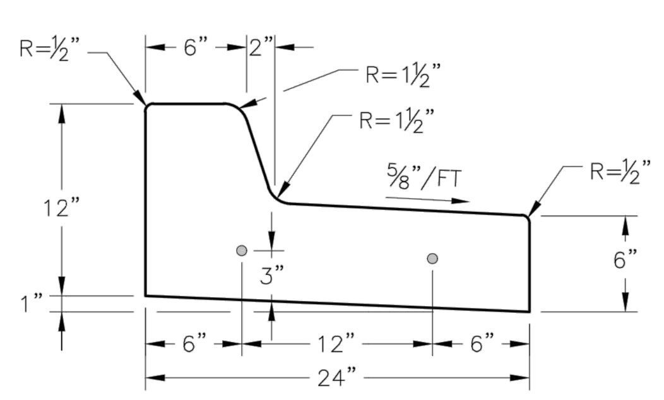
ROLL BACK CURB & GUTTER
(TYPE CG-2)



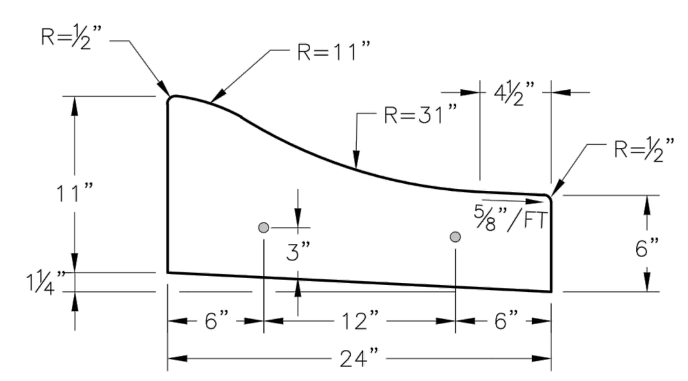
CURB REPLACEMENT DETAIL

GENERAL NOTES

1. ¾" ISOLATION JOINTS WITH 2 (2'-#5 BAR) SMOOTH DOWELS SHALL BE PLACED AT RADIUS POINTS AND AT 150' INTERVALS. THESE DOWEL BARS SHALL BE GREASED AND WRAPPED ON ONE END WITH EXPANSION TUBES.
2. 3" DEEP CONTRACTION JOINTS SHALL BE INSTALLED AT APPROXIMATELY 10' INTERVALS. THESE JOINTS SHALL PASS ACROSS THE ENTIRE CURB SECTION.
3. CONCRETE FILL SHALL HAVE UNIFORM AND SMOOTH FINISH
4. KCMMB 4K CONCRETE SHALL BE USED FOR ALL CURB.
5. ASPHALTIC CONCRETE SURFACE COURSE SHALL CONFORM TO STANDARD SPECIFICATIONS SECTION 2205.2.
6. CURBS FOR NEW STREETS SHALL BE BUILT ON ASPHALT OR AGGREGATE BASE AS SHOWN IN TYPICAL SECTION DETAIL.
7. WHITE CURING COMPOUND MUST BE APPLIED UNIFORMLY TO THE CONCRETE SURFACE IMMEDIATELY AFTER FINAL FINISHING.
8. ALL DOWELS & TIE BARS SHALL BE EPOXY COATED.



STRAIGHT BACK DRY CURB & GUTTER 001
(TYPE CG-1 DRY)



ROLL BACK DRY CURB & GUTTER
(TYPE CG-2 DRY)

LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

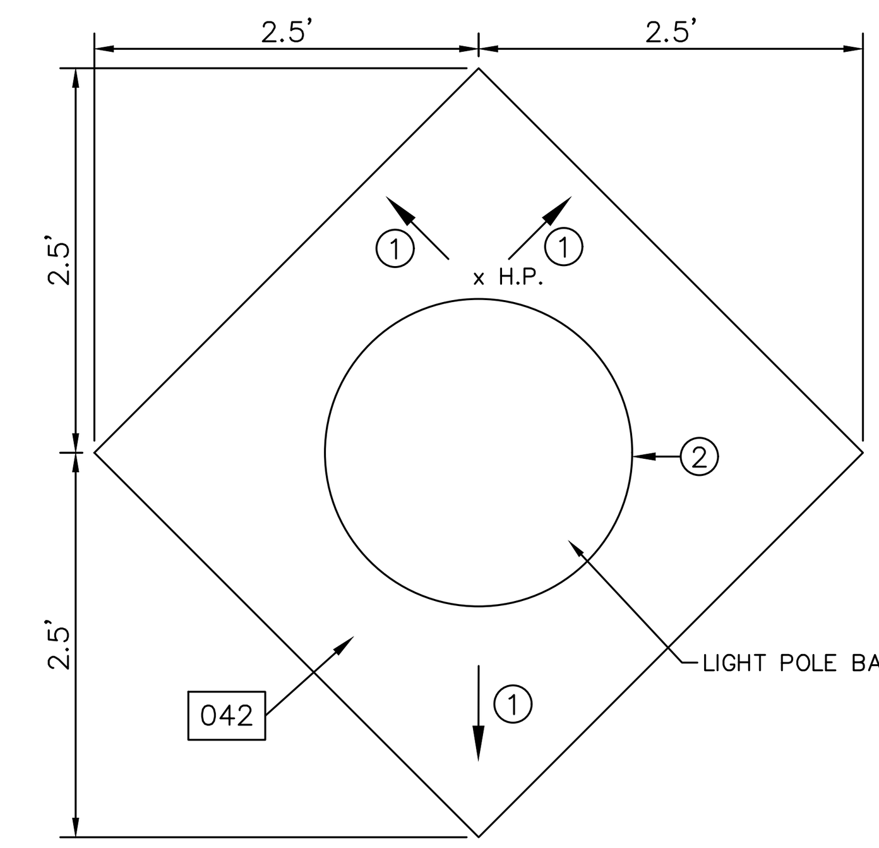
Project: STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO

CURB & GUTTER DETAIL

Drawn By: MJF
Checked By: DL
Date: 08/2023
Proj. #:

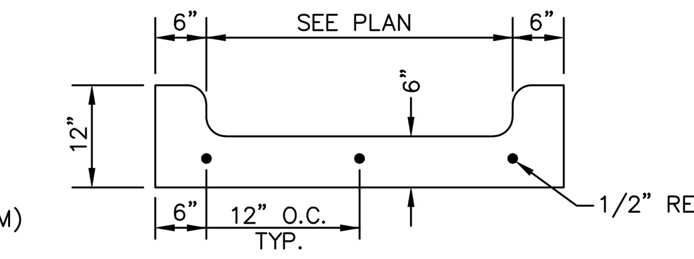
GEN-4

ADDITIONAL CURB & GUTTER NOTES:
1. ALL REINFORCING STEEL SHALL BE SUPPORTED ON FABRICATED STEEL BAR SUPPORTS @ 3'-0" MAXIMUM SPACING.
2. CURBS TO BE CONSTRUCTED ON MINIMUM 6 INCHES OF COMPACTED WELL GRADED BASE ROCK.



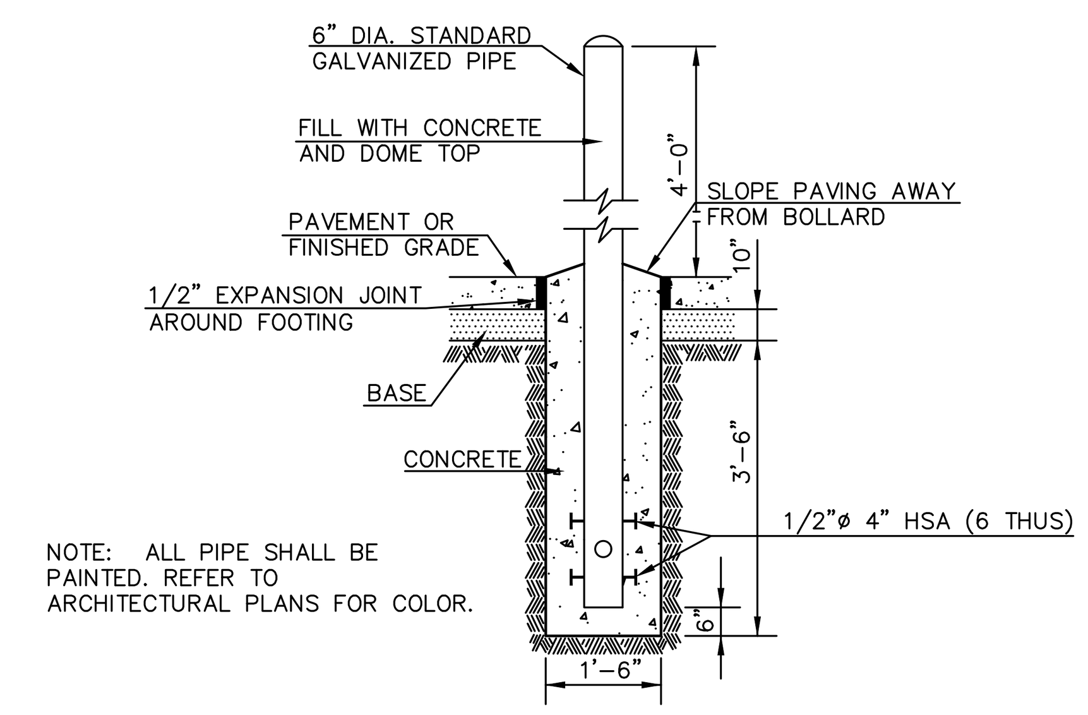
CONCRETE PAVING DETAIL FOR LIGHT POLES IN EXISTING PARKING LOT

1 SLOPE TO DRAIN (1.0% MINIMUM)
2 TYPE 1 EXPANSION JOINT



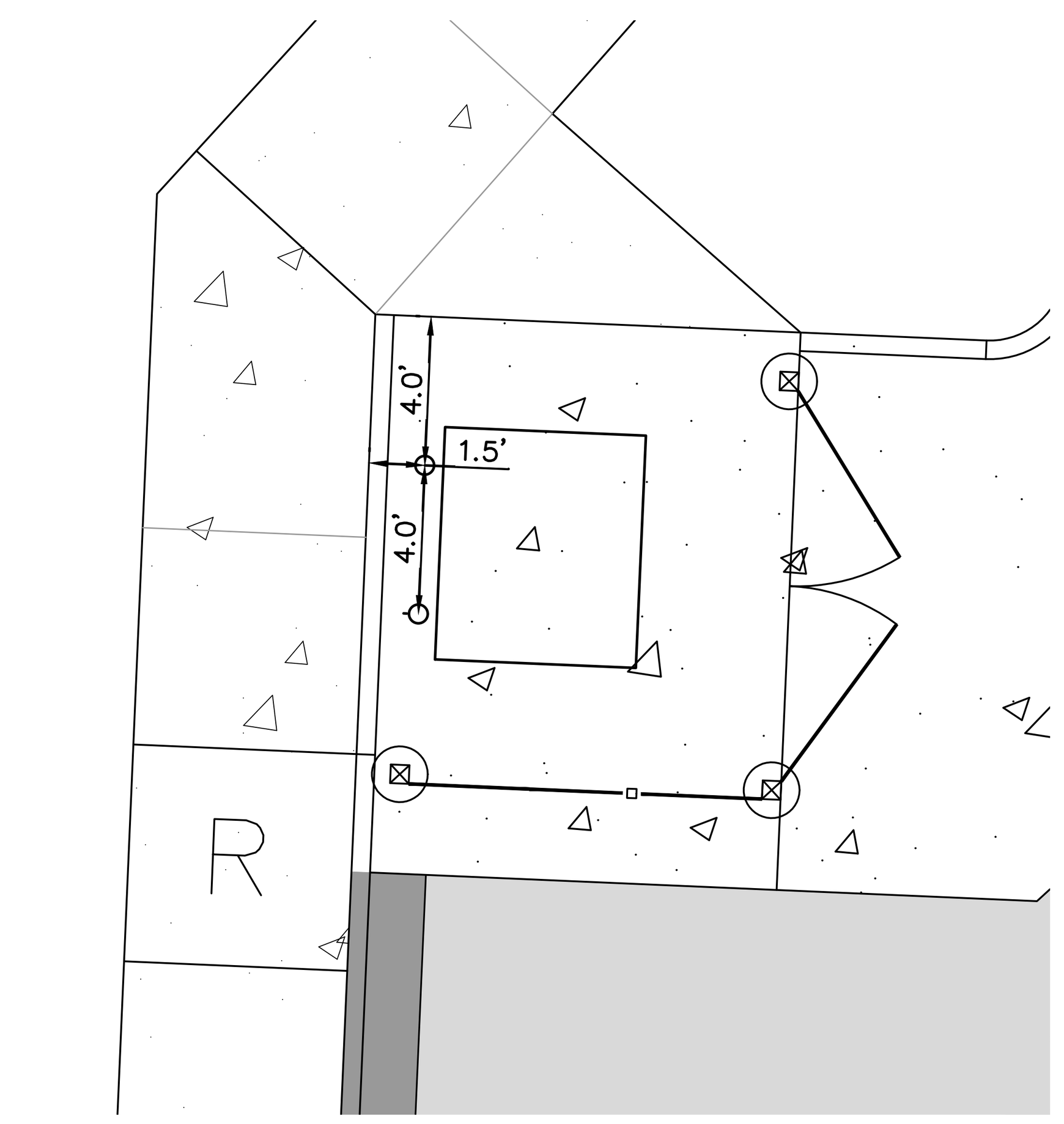
NO.	FLUME WIDTH	FLUME LENGTH
416-A	5.25	6.4±
416-B	2.0	3.6±

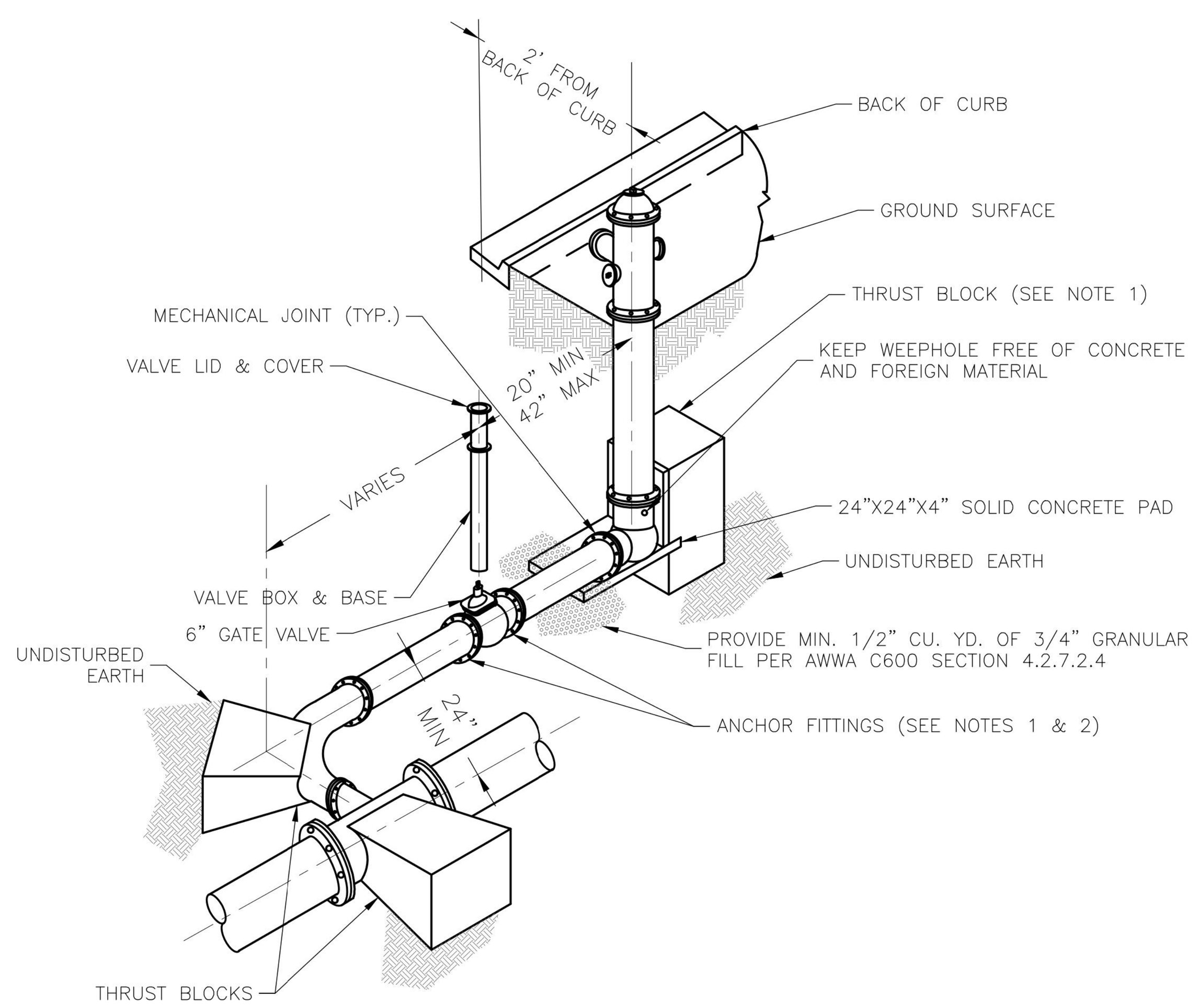
CONCRETE DRAINAGE FLUME 416



NOTE: ALL PIPE SHALL BE PAINTED. REFER TO ARCHITECTURAL PLANS FOR COLOR.

BOLLARDS 130





NOTES:

1. WHEN RETAINER GLANDS ARE USED IN LIEU OF ANCHOR RESTRAINT FITTINGS, HORIZONTAL THRUST BLOCKS ARE REQUIRED.
2. GATE VALVE MAY BE BOLTED DIRECTLY TO ANCHOR TEE.
3. SEE APPROVED PRODUCTS LIST FOR WATER UTILITIES FOR FIRE HYDRANT, VALVES, VALVE BOX LID, AND COVER.
4. BOTTOM HYDRANT FLANGE SHALL BE 2" TO 6" ABOVE FINISHED GRADE.
5. FOR STREETS WITHOUT CURBS FIRE HYDRANTS SHALL BE PLACED WITHIN 1 FOOT OF THE R/W LINE, BUT NOT MORE THAN 10' FROM EDGE OF PAVEMENT. FIRE HYDRANT SHALL NOT BE PLACED IN BOTTOM OF DITCH.
6. HYDRANT SHALL BE ROTATED AS DIRECTED BY INSPECTOR.

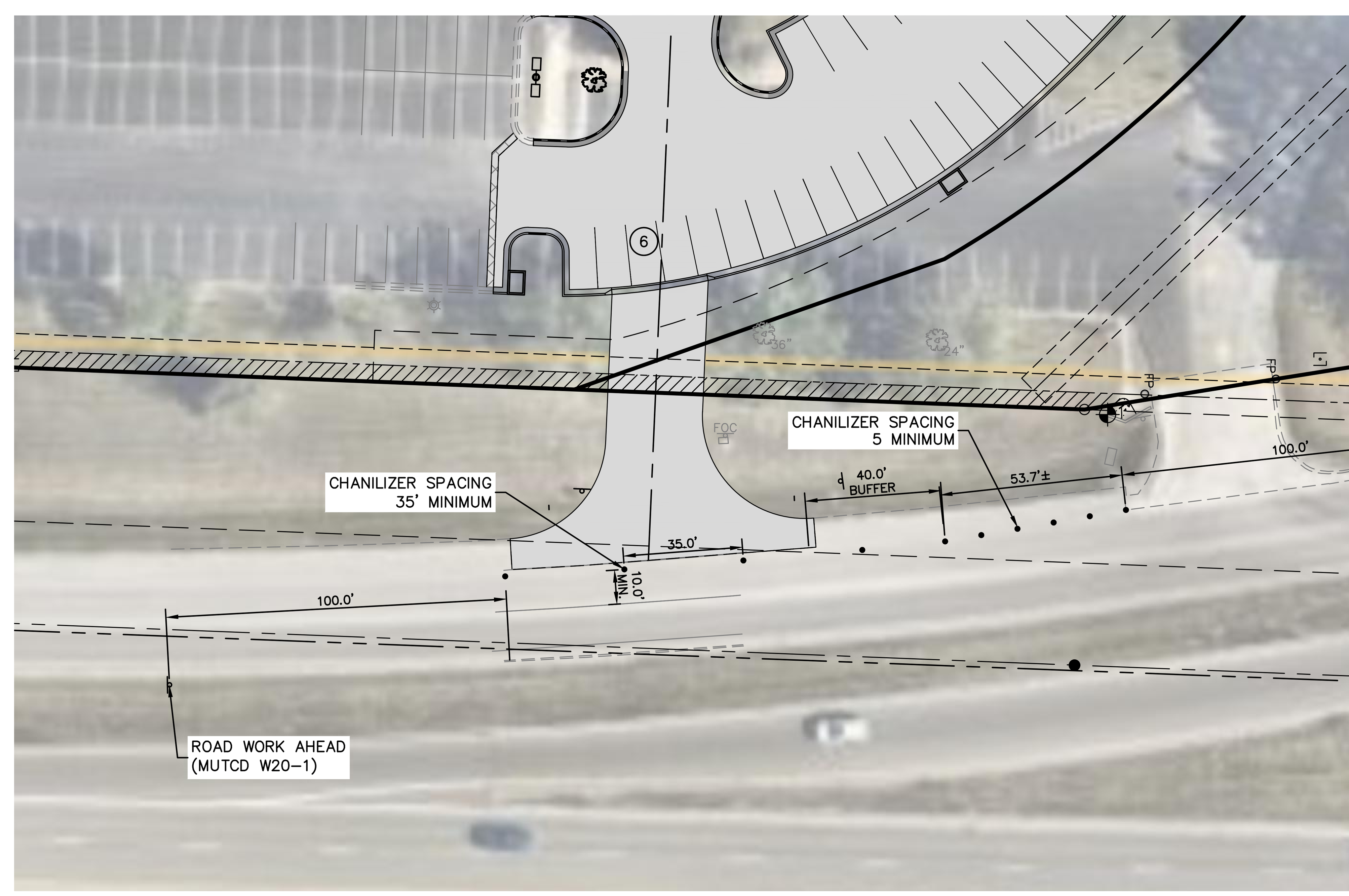
LEE'S SUMMIT
MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

HYDRANT WITH 90 DEGREE BEND

Date: 08/2023
Drawn By: MJF
Checked By: KLY

WAT-8

3



W8-17R

W20-1

TRAFFIC CONTROL (SHOULDER WORK WITH MINOR ENCROACHMENT (REFERENCE MUTCD TA-6)

SCALE: 1" = 30'

W8-17P

RELEASED FOR CONSTRUCTION
As Noted on Plan Review
Development Services Department
Lee's Summit, Missouri
07/05/2024

REV	DATE	DESCRIPTION	DSN	DWN	CHK
3	6/24/24	CITY COMMENTS/PR NO. 2	DDW	TGN	
2	5/16/24	CITY COMMENTS/PR NO. 1	DDW	NJN	
1	4/23/24	ADDENDUM 2/PER CITY COMMENTS	DDW	NJN	
0	3/29/24	ISSUED FOR BID/CITY REVIEW	DDW	NJN	

STATE OF MISSOURI
DAVID D. WOOD
NUMBER PE-2011037427
PROFESSIONAL ENGINEER
6.24.2024

DAVID D. WOOD
ENGINEER
MO # 2011037427

14700 WEST 114TH TERRACE
LENEXA, KANSAS 66215
PH. (913) 894-5150
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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 12/31/25

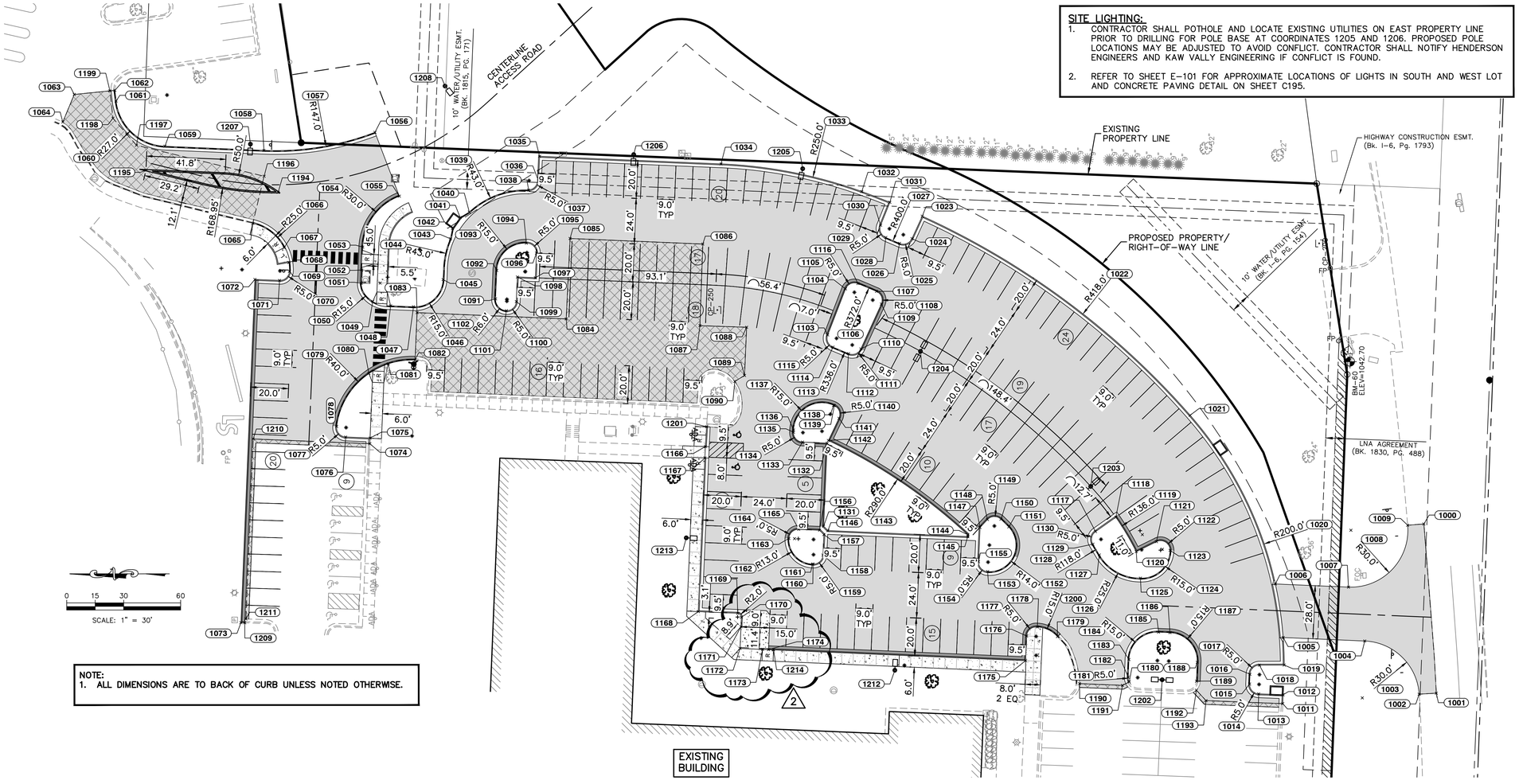
LEE'S SUMMIT HS - EAST PARKING LOT
400 SE BLUE PARKWAY
LEE'S SUMMIT, MISSOURI 64063

CONSTRUCTION DOCUMENTS PHASE I
SITE DETAILS

PROJ. NO. C23_1880
DESIGNER DDW
DRAWN BY NJN
CFN 1880DET
SHEET C195
REV 3

SITE LIGHTING:

1. CONTRACTOR SHALL POTHOLE AND LOCATE EXISTING UTILITIES ON EAST PROPERTY LINE PRIOR TO DRILLING FOR POLE BASE AT COORDINATES 1205 AND 1206. PROPOSED POLE LOCATIONS MAY BE ADJUSTED TO AVOID CONFLICT. CONTRACTOR SHALL NOTIFY HENDERSON ENGINEERS AND KAW VALLY ENGINEERING IF CONFLICT IS FOUND.
2. REFER TO SHEET E-101 FOR APPROXIMATE LOCATIONS OF LIGHTS IN SOUTH AND WEST LOT AND CONCRETE PAVING DETAIL ON SHEET C195.



NOTE:
1. ALL DIMENSIONS ARE TO BACK OF CURB UNLESS NOTED OTHERWISE.

LEGEND:

- SECTION CORNER
- CONTROL POINT
- BENCHMARK
- MONUMENT FOUND ORIGIN UNCERTAIN UNLESS OTHERWISE NOTED
- (2) OU — OVERHEAD UTILITY LINE (# OF LINES)
- LIGHT POLE
- UTILITY POLE
- ELECTRIC METER
- AIR CONDITIONER
- GAS METER
- WATER METER
- WATER LINE GATE VALVE
- FIRE HYDRANT
- WS — WATER SPIGOT
- SV — SPRINKLER VALVE
- BB — BREAKER BOX
- EO — ELECTRIC OUTLET
- DE — DOOR ELEVATION (AT THRESHOLD)
- FF — FINISH FLOOR ELEVATION
- BUSH
- BASKETBALL GOAL
- SPLICE BOX
- UV — UTILITY VAULT
- SANITARY SEWER MANHOLE
- STORM SEWER MANHOLE
- CO — SANITARY SEWER CLEAN OUT
- DS — DOWN SPOUT
- GRATE INLET
- FLARED END SECTION
- STREET/TRAFFIC SIGN
- TRAFFIC SIGNAL LIGHT POLE
- HANDICAP SYMBOL
- (5) — PARKING STALL COUNT
- HANDICAP SIGN
- DECIDUOUS TREE
- CONIFEROUS TREE
- TREE LINE
- TURN LANE DIRECTION
- SECTION CORNER
- MONUMENT FOUND (ORIGIN UNCERTAIN UNLESS OTHERWISE NOTED)
- 1/2"x24" REBAR W/214F CAP SET (UNLESS NOTED OTHERWISE)
- MAGNAIL W/ WASHER SET (UNLESS NOTED OTHERWISE)
- CHISELED PLUS SET (UNLESS NOTED OTHERWISE)
- (M) MEASURED VALUE
- (C) CALCULATED
- (D) DEED VALUE
- (P) PLAT VALUE
- (CP) CALCULATED PLAT VALUE
- (CM) CALCULATED MEASURED VALUE
- (R) RECORD VALUE
- SS/E SANITARY SEWER EASEMENT
- D/E STORM DRAINAGE EASEMENT
- ASPHALT SURFACE COURSE
- FULL DEPTH ASPHALT PAVEMENT (040)
- CONCRETE CURB AND GUTTER
- CONCRETE CURB AND GUTTER WITH REVERSE FLOW
- PAINTED CURB FOR FIRE LANE (13)
- L LANDING
- R RAMP
- T TRANSITION
- CONCRETE PAVEMENT (042) W/JOINTING
- TYPE 1 JOINT (TYP) / TYPE 3 JOINT (TYP)
- CONCRETE SIDEWALK (055+005) W/JOINTING
- LIMITS OF DISTURBANCE
- 1000 — COORDINATE POINT

COORDINATE TABLE			
	NORTHING	EASTING	DESCRIPTION
1000	996516.95	2827291.07	SAW CUT
1001	996510.40	2827201.93	SAW CUT
1002	996519.44	2827201.41	EA
1003	996549.38	2827199.44	R30.0
1004	996548.09	2827229.42	EA
1005	996591.04	2827231.26	EA
1006	996595.16	2827259.46	EA
1007	996556.66	2827257.81	EA
1008	996555.38	2827287.78	R30.0
1009	996525.49	2827290.40	EA
1011	996591.28	2827196.42	BC
1012	996591.10	2827201.07	BC
1013	996603.94	2827201.56	BC
1014	996603.75	2827206.56	R5.0
1015	996608.74	2827206.76	BC
1016	996608.54	2827211.90	BC
1017	996603.54	2827211.70	R5.0
1018	996603.56	2827216.70	BC
1019	996590.50	2827216.75	BC
1020	996790.50	2827216.54	R200.0
1021	996640.07	2827348.34	BC
1022	996954.47	2827072.88	R418.0
1023	996781.11	2827453.24	BC
1024	996786.53	2827441.38	BC
1025	996791.08	2827443.46	R5.0
1026	996793.10	2827438.89	BC
1027	996954.47	2827072.88	R400.0
1028	996800.31	2827441.98	BC
1029	996798.38	2827446.60	R5.0
1030	996803.02	2827448.46	BC
1031	996798.16	2827460.56	BC

COORDINATE TABLE			
	NORTHING	EASTING	DESCRIPTION
1032	996812.96	2827466.20	BC
1033	996897.59	2827230.96	R250.0
1034	996887.08	2827480.74	BC
1035	996982.64	2827484.76	BC
1036	996983.19	2827471.77	BC
1037	996988.18	2827471.98	R5.0
1038	996988.39	2827466.99	BC
1039	996990.20	2827424.03	R43.0
1040	997019.64	2827455.37	BC
1041	997024.44	2827452.52	BC
1042	997028.48	2827446.80	BC
1043	997029.57	2827441.32	BC
1044	996990.20	2827424.03	R43.0
1045	997033.42	2827419.84	BC
1046	997048.40	2827420.47	R15.0
1047	997049.03	2827405.49	BC
1048	997061.07	2827405.99	BC
1049	997070.48	2827408.29	BC
1050	997066.55	2827417.98	R15.0
1051	997076.55	2827417.89	BC
1052	997076.28	2827424.89	BC
1053	997075.79	2827436.95	BC
1054	997045.82	2827435.73	R30.0
1055	997056.50	2827463.76	BC
1056	997069.32	2827497.40	BC
1057	997121.68	2827634.76	R147.0
1058	997127.78	2827487.89	BC
1059	997179.94	2827490.05	BC
1060	997178.82	2827517.03	R27.0
1061	997205.64	2827513.89	BC
1062	997206.29	2827519.52	BC

COORDINATE TABLE			
	NORTHING	EASTING	DESCRIPTION
1063	997227.67	2827517.36	MILL LIMITS
1064	997233.71	2827502.85	MILL LIMITS
1065	997133.67	2827449.43	BC
1066	997139.33	2827425.08	R25.0
1067	997117.16	2827436.64	BC
1068	997114.61	2827428.82	BC
1069	997114.34	2827424.19	BC
1070	997119.34	2827424.37	R5.0
1071	997119.54	2827419.38	BC
1072	997132.53	2827419.90	BC
1073	997139.89	2827239.11	BC
1074	997072.02	2827333.35	BC
1075	997071.89	2827336.35	BC
1076	997084.74	2827336.87	BC
1077	997084.53	2827341.87	R5.0
1078	997089.49	2827342.50	BC
1079	997049.81	2827337.44	R40.0
1080	997072.52	2827370.37	BC
1081	997062.28	2827375.45	BC
1082	997048.20	2827377.41	BC
1083	997047.15	2827402.40	SAW CUT
1084	996968.61	2827399.10	SAW CUT
1085	996966.58	2827441.48	SAW CUT
1086	996896.68	2827438.56	SAW CUT
1087	996898.19	2827395.57	SAW CUT
1088	996873.61	2827394.71	SAW CUT
1089	996874.70	2827369.30	SAW CUT
1090	996879.81	2827366.18	SAW CUT
1091	997005.82	2827409.67	BC
1092	997005.19	2827424.66	BC
1093	996990.20	2827424.03	R15.0

COORDINATE TABLE			
	NORTHING	EASTING	DESCRIPTION
1094	996989.57	2827439.01	BC
1095	996989.28	2827434.00	R5.0
1096	996984.29	2827433.79	BC
1097	996984.83	2827420.80	BC
1098	996994.32	2827421.20	BC
1099	996994.87	2827408.21	BC
1100	996999.87	2827408.42	R5.0
1101	997000.08	2827403.42	BC
1102	996999.82	2827409.42	R6.0
1103	996830.91	2827390.66	BC
1104	996821.52	2827414.91	BC
1105	996816.86	2827413.11	R5.0
1106	996954.47	2827072.88	R372.0
1107	996805.18	2827413.61	BC
1108	996807.18	2827409.03	R5.0
1109	996802.63	2827406.96	BC
1110	996813.42	2827383.30	BC
1111	996817.97	2827385.37	R5.0
1112	996819.97	2827380.79	BC
1113	996954.47	2827072.88	R336.0
1114	996828.13	2827384.22	BC
1115	996826.25	2827388.86	R5.0
1116	996814.99	2827417.74	BC
1117	996689.87	2827287.07	BC
1118	996679.16	2827294.64	BC
1119	996790.50	2827216.54	R136.0
1120	996668.43	2827276.49	BC
1121	996657.80	2827281.76	BC
1122	996654.65	2827277.74	R5.0
1123	996650.58	2827277.17	BC
1124	996665.58	2827277.50	R15.0

COORDINATE TABLE			
	NORTHING	EASTING	DESCRIPTION
1125	996666.22	2827262.51	BC
1126	996665.20	2827285.46	R25.0
1127	996687.91	2827274.76	BC
1128	996790.50	2827216.54	R118.0
1129	996691.28	2827280.43	BC
1130	996686.99	2827282.99	R5.0
1131	996833.07	2827289.89	BC
1132	996831.19	2827333.65	BC
1133	996844.17	2827334.21	BC
1134	996843.96	2827339.21	R5.0
1135	996848.96	2827339.42	BC
1136	996848.91	2827340.58	BC
1137	996833.92	2827339.93	R15.0
1138	996827.79	2827353.62	BC
1139	996827.41	2827353.45	BC
1140	996829.48	2827348.90	R5.0
1141	996824.96	2827346.76	BC
1142	996830.51	2827335.06	BC
1143	996954.47	2827072.88	R290.0
1144	996757.11	2827285.37	BC
1145	996757.15	2827284.43	BC
1146	996830.79	2827287.59	BC
1147	996750.69	2827289.27	BC
1148	996746.78	2827293.43	BC
1149	996743.13	2827290.01	R5.0
1150	996739.64	2827293.60	BC
1151	996735.52	2827289.51	BC
1152	996745.76	2827279.94	R15.0
1153	996746.68	2827265.97	BC
1154	996746.47	2827270.96	R5.0
1155	996751.46	2827271.18	BC

COORDINATE TABLE			
	NORTHING	EASTING	DESCRIPTION
1156	996835.20	2827287.78	BC
1157	996832.92	2827285.49	BC
1158	996833.39	2827274.69	BC
1159	996838.38	2827274.91	R5.0
1160	996838.60	2827269.91	BC
1161	996838.93	2827269.93	BC
1162	996838.37	2827282.92	R13.0
1163	996851.36	2827283.47	BC
1164	996848.36	2827283.34	R5.0
1165	996846.15	2827288.25	BC
1166	996895.32	2827331.86	BC
1167	996895.58	2827325.87	BC
1168	996899.06	2827244.92	BC
1169	996878.27	2827244.03	BC
1170	996876.36	2827241.94	BC
1171	996876.58	2827236.95	BC
1172	996877.07	2827225.52	BC
1173	996865.24	2827225.02	BC
1174	996862.08	2827224.88	BC
1175	996726.70	2827219.07	BC
1176	996726.15	2827232.06	BC
1177	996721.15	2827231.84	R5.0
1178	996720.52	2827236.82	BC
1179	996709.91	2827231.75	BC
1180	996672.11	2827207.88	BC
1181	996667.66	2827210.15	R5.0
1182	996672.65	2827210.35	BC
1183	996672.28	2827219.69	BC
1184	996657.29	2827219.09	R15.0
1185	996656.65	2827234.08	BC
1186	996650.65	2827233.82	BC

COORDINATE TABLE			
	NORTHING	EASTING	DESCRIPTION
1187	996651.30	2827218.83	R15.0
1188	996636.31	2827218.24	BC
1189	996636.71	2827208.26	BC
1190	996698.29	2827206.96	SAW CUT
1191	996675.67	2827206.06	SAW CUT
1192	996636.75	2827203.51	SAW CUT
1193	996631.68	2827198.02	SAW CUT
1194	997120.31	2827465.82	STRIPE
1195	997189.90	2827477.46	STRIPE
1196	997127.70	2827474.26	SAW CUT
1197	997194.93	2827490.62	SAW CUT
1198	997207.30	2827504.81	SAW CUT
1199	997208.91	2827519.26	SAW CUT
1200	996721.15	2827221.85	R10
1201	996894.68	2827342.30	BC
1202	996654.76	2827208.99	LP
1203	996692.39	2827310.85	LP
1204	996782.03	2827382.04	LP
1205	996844.06	2827478.23	LP
1206	996933.06	2827485.68	LP
1207	997134.91	2827491.19	LP
1208	997032.39	2827521.79	LP
1209	997137.89	2827239.03	BC
1210	997133.45	2827335.85	SAWCUT
1211	997137.31	2827241.00	SAWCUT
1212	996795.54	2827214.02	LP
1213	996905.39	2827283.77	LP
1214	996859.42	2827224.77	BC

RELEASED FOR CONSTRUCTION
As Noted on Plan Review
Development Services Department
Lee's Summit, Missouri
07/05/2024

Know what's below. Call before you dig.

REV	DATE	DESCRIPTION	DSN	DWN	CHK
3	6/24/24	CITY COMMENTS/PR NO. 2	DDW	TGN	
2	5/16/24	CITY COMMENTS/PR NO. 1	DDW	NJN	
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0	3/29/24	ISSUED FOR BID/CITY REVIEW	DDW	NJN	

STATE OF MISSOURI
DAVID D WOOD
NUMBER 2011037427
PROFESSIONAL ENGINEER
4/24/2024

DAVID D. WOOD
ENGINEER
MO # 2011037427

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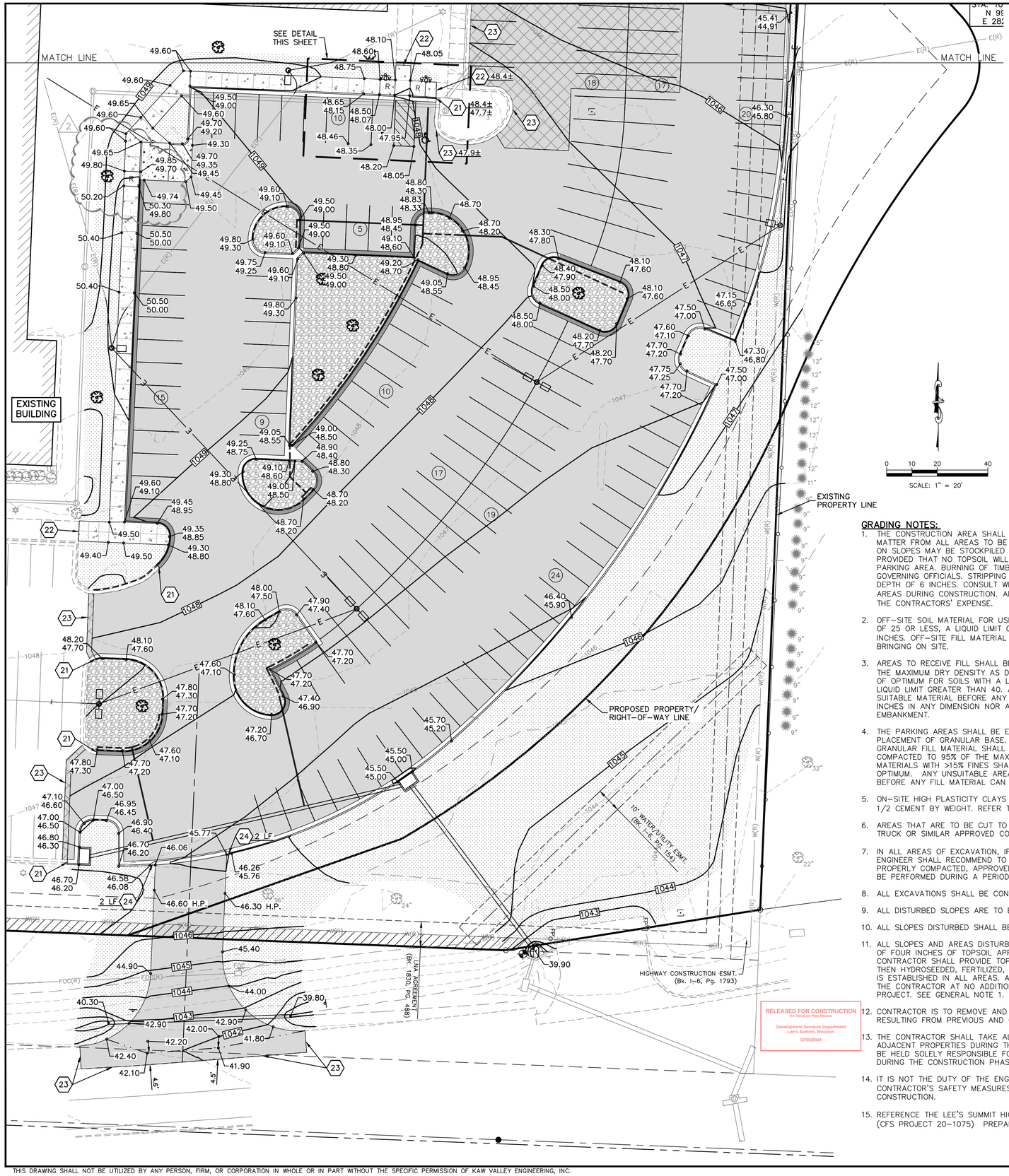
KAW VALLEY ENGINEERING, INC., IS AUTHORIZED TO OFFER ENGINEERING SERVICES IN MISSOURI BY STATE CERTIFICATE OF AUTHORITY # 000842. EXPIRES 12/31/25

LEE'S SUMMIT HS - EAST PARKING LOT
400 SE BLUE PARKWAY
LE'S SUMMIT, MISSOURI 64063

CONSTRUCTION DOCUMENTS PHASE I
DIMENSION PLAN

PROJ. NO.	C23_1880
DESIGNER	DRAWN BY
DDW	NJN
CFN	1880DIM
SHEET	REV
C200	3



0 10 20 40
SCALE: 1" = 20'

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

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- CONTROL POINT
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- CONCRETE SIDEWALK (055+005) W/JOINTING
- L LANDING
- R RAMP
- T TRANSITION

NOTES:

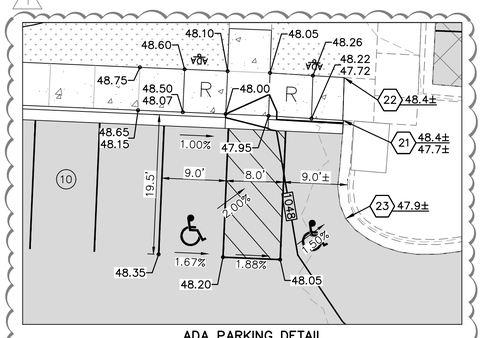
21 MATCH EXISTING CURB ELEVATION.
22 MATCH EXISTING SIDEWALK ELEVATION.
23 MATCH EXISTING PAVEMENT ELEVATION.
24 TRANSITION FROM ZERO HEIGHT CURB TO FULL HEIGHT CURB

LEGEND (PROPOSED)

- 22.9 SPOT ELEVATION (ADD 1000), TOP OF PAVEMENT
- 23.6 TOP OF CURB (ADD 1000)
- 23.1 FLOWLINE OF CURB (ADD 1000)
- FLOW DIRECTION
- 1050 FINISHED 1' CONTOUR INTERVALS, TOP OF PAVEMENT
- SWALE
- LP LOW POINT
- HP HIGH POINT
- LOC LIP OF CURB

GRADING NOTES:

1. THE CONSTRUCTION AREA SHALL BE CLEARED, GRUBBED, AND STRIPPED OF TOPSOIL AND ORGANIC MATTER FROM ALL AREAS TO BE OCCUPIED BY BUILDING AND PAVING. TOPSOIL FOR REPLACEMENT ON SLOPES MAY BE STOCKPILED ON THE SITE. EXCESS TOPSOIL MAY BE WASTED IN FILL SLOPES PROVIDED THAT NO TOPSOIL WILL BE WASTED WITHIN 10 FEET OF THE EDGE OF THE BUILDING OR PARKING AREA. BURNING OF TIMBER WILL NOT BE PERMITTED UNLESS APPROVAL IS OBTAINED FROM GOVERNING OFFICIALS. STRIPPING EXISTING TOPSOIL AND ORGANIC MATTER SHALL BE TO A MINIMUM DEPTH OF 6 INCHES. CONSULT WITH SCHOOL DISTRICT FOR APPROVED LOCATIONS FOR STOCKPILE AREAS DURING CONSTRUCTION. ANY UNAUTHORIZED STOCKPILE SHALL BE REMOVE/RELOACTED AT THE CONTRACTORS' EXPENSE.
2. OFF-SITE SOIL MATERIAL FOR USE UNDER THE PAVEMENT SECTION SHALL HAVE A PLASTICITY INDEX OF 25 OR LESS, A LIQUID LIMIT OF 45 OR LESS AND CONTAIN NO ROCK LARGER THAN THREE INCHES. OFF-SITE FILL MATERIAL SHALL BE APPROVED BY THE OWNER'S TESTING AGENCY PRIOR TO BRINGING ON SITE.
3. AREAS TO RECEIVE FILL SHALL BE SCARIFIED AND THE TOP 12-INCH DEPTH COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D 698 WITH A MOISTURE CONTENT OF +/-3% OF OPTIMUM FOR SOILS WITH A LIQUID LIMIT OF LESS THAN 40 AND 0 TO +4% FOR SOILS WITH A LIQUID LIMIT GREATER THAN 40. ANY UNSUITABLE AREAS SHALL BE UNDERCUT AND REPLACED WITH SUITABLE MATERIAL BEFORE ANY FILL MATERIAL CAN BE APPLIED. NO ROCK LARGER THAN THREE INCHES IN ANY DIMENSION NOR ANY SHALE SHALL BE PLACED IN THE TOP 24 INCHES OF EMBANKMENT.
4. THE PARKING AREAS SHALL BE EXCAVATED AS REQUIRED TO TREAT THE SOILS AND ALLOW THE PLACEMENT OF GRANULAR BASE. REFER TO THE TYPICAL PAVING SECTIONS ON SHEET C190. GRANULAR FILL MATERIAL SHALL BE MADE IN LIFTS NOT TO EXCEED EIGHT INCHES DEPTH COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D 698. GRANULAR MATERIALS WITH >15% FINES SHALL BE COMPACTED AT A MOISTURE CONTENT OF -3 TO 3% OF OPTIMUM. ANY UNSUITABLE AREAS SHALL BE UNDERCUT AND REPLACED WITH SUITABLE MATERIAL BEFORE ANY FILL MATERIAL CAN BE APPLIED.
5. ON-SITE HIGH PLASTICITY CLAYS UNDER PAVED AREAS SHALL BE TREATED WITH 5% TYPE PORTLAND 1/2 CEMENT BY WEIGHT. REFER TO PROJECT GEOTECHNICAL REPORT FOR ADDITIONAL INFORMATION.
6. AREAS THAT ARE TO BE CUT TO SUBGRADE LEVELS SHALL BE PROOF ROLLED WITH A LOADED DUMP TRUCK OR SIMILAR APPROVED CONSTRUCTION EQUIPMENT TO DETECT UNSUITABLE SOIL CONDITIONS.
7. IN ALL AREAS OF EXCAVATION, IF UNSUITABLE SOIL CONDITIONS ARE ENCOUNTERED, THE OWNER'S ENGINEER SHALL RECOMMEND TO THE OWNER THE METHODS OF UNDERCUTTING AND REPLACEMENT OF PROPERLY COMPACTED, APPROVED FILL MATERIAL. ALL PROOFROLLING AND UNDERCUTTING SHOULD BE PERFORMED DURING A PERIOD OF DRY WEATHER.
8. ALL EXCAVATIONS SHALL BE CONSIDERED AS UNCLASSIFIED. REFER TO THE GEOTECHNICAL REPORT.
9. ALL DISTURBED SLOPES ARE TO BE 3:1 OR FLATTER.
10. ALL SLOPES DISTURBED SHALL BE HYDROSEEDED OR LANDSCAPED AS NOTED ON THE SITE PLAN.
11. ALL SLOPES AND AREAS DISTURBED BY CONSTRUCTION SHALL BE GRADED SMOOTH AND A MINIMUM OF FOUR INCHES OF TOPSOIL APPLIED. IF ADEQUATE TOPSOIL IS NOT AVAILABLE ON-SITE, THE CONTRACTOR SHALL PROVIDE TOPSOIL, APPROVED BY THE OWNER, AS NEEDED. THE AREA SHALL THEN HYDROSEEDED, FERTILIZED, MULCHED, WATERED AND MAINTAINED UNTIL HARDY GRASS GROWTH IS ESTABLISHED IN ALL AREAS. ANY AREAS DISTURBED FOR ANY REASON SHALL BE CORRECTED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER PRIOR TO FINAL ACCEPTANCE OF THE PROJECT. SEE GENERAL NOTE 1.
12. CONTRACTOR IS TO REMOVE AND DISPOSE OF ALL DEBRIS, RUBBISH AND OTHER MATERIALS RESULTING FROM PREVIOUS AND CURRENT DEMOLITION OPERATIONS.
13. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO AVOID PROPERTY DAMAGE TO ADJACENT PROPERTIES DURING THE CONSTRUCTION PHASES OF THIS PROJECT. THE CONTRACTOR WILL BE HELD SOLELY RESPONSIBLE FOR ANY DAMAGES TO THE ADJACENT PROPERTIES OCCURRING DURING THE CONSTRUCTION PHASES OF THIS PROJECT.
14. IT IS NOT THE DUTY OF THE ENGINEER OR THE OWNER TO REVIEW THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES, IN, ON OR NEAR THE CONSTRUCTION SITE AT ANY TIME DURING CONSTRUCTION.
15. REFERENCE THE LEE'S SUMMIT HIGH SCHOOL ADDITIONS GEOTECHNICAL REPORT DATED JUNE 12, 2020 (CFS PROJECT 20-1075) PREPARED BY CFS ENGINEERS FOR ADDITIONAL INFORMATION.



ADA PARKING DETAIL
SCALE: 1"=10'

GENERAL NOTES:

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2. REFER TO APWA STANDARD ESC DRAWINGS FOR ADDITIONAL DETAILS AND SPECIFICATIONS.

WARRANTY / DISCLAIMER

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CAUTION – NOTICE TO CONTRACTOR

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REV	DATE	DESCRIPTION	DSN	DWN	CHK
3	6/24/24	CITY COMMENTS/PR NO. 2	DDW	TGN	
2	5/16/24	CITY COMMENTS/PR NO. 1	DDW	NJN	
1	4/23/24	ADDENDUM 2/PER CITY COMMENTS	DDW	NJN	
0	3/29/24	ISSUED FOR BID/CITY REVIEW	DDW	NJN	

STATE OF MISSOURI
DAVID D WOOD
NUMBER
PE-2011037427
PROFESSIONAL ENGINEER
4/24/2024

DAVID D. WOOD
ENGINEER
MO # 2011037427

KAW VALLEY ENGINEERING
14700 WEST 114TH TERRACE
LENEXA, KANSAS 66215
PH. (913) 894-5150
lx@kveng.com | www.kveng.com
KAW VALLEY ENGINEERING, INC. IS AUTHORIZED TO OFFER ENGINEERING SERVICES IN MISSOURI BY MISSOURI STATE CERTIFICATE OF AUTHORITY # 2008042. EXPIRES 12/31/25

LEE'S SUMMIT HS - EAST PARKING LOT
400 SE BLUE PARKWAY
LEE'S SUMMIT, MISSOURI 64063

CONSTRUCTION DOCUMENTS PHASE I
GRADING PLAN - SOUTH

PROJ. NO.	C23_1880
DESIGNER	DRAWN BY
DDW	NJN
CFN	1880GP
SHEET	REV
C300	3

WARRANTY / DISCLAIMER

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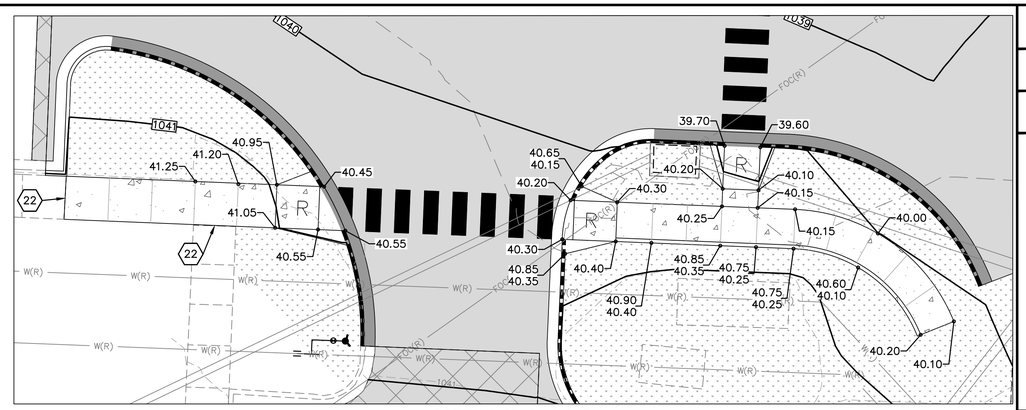
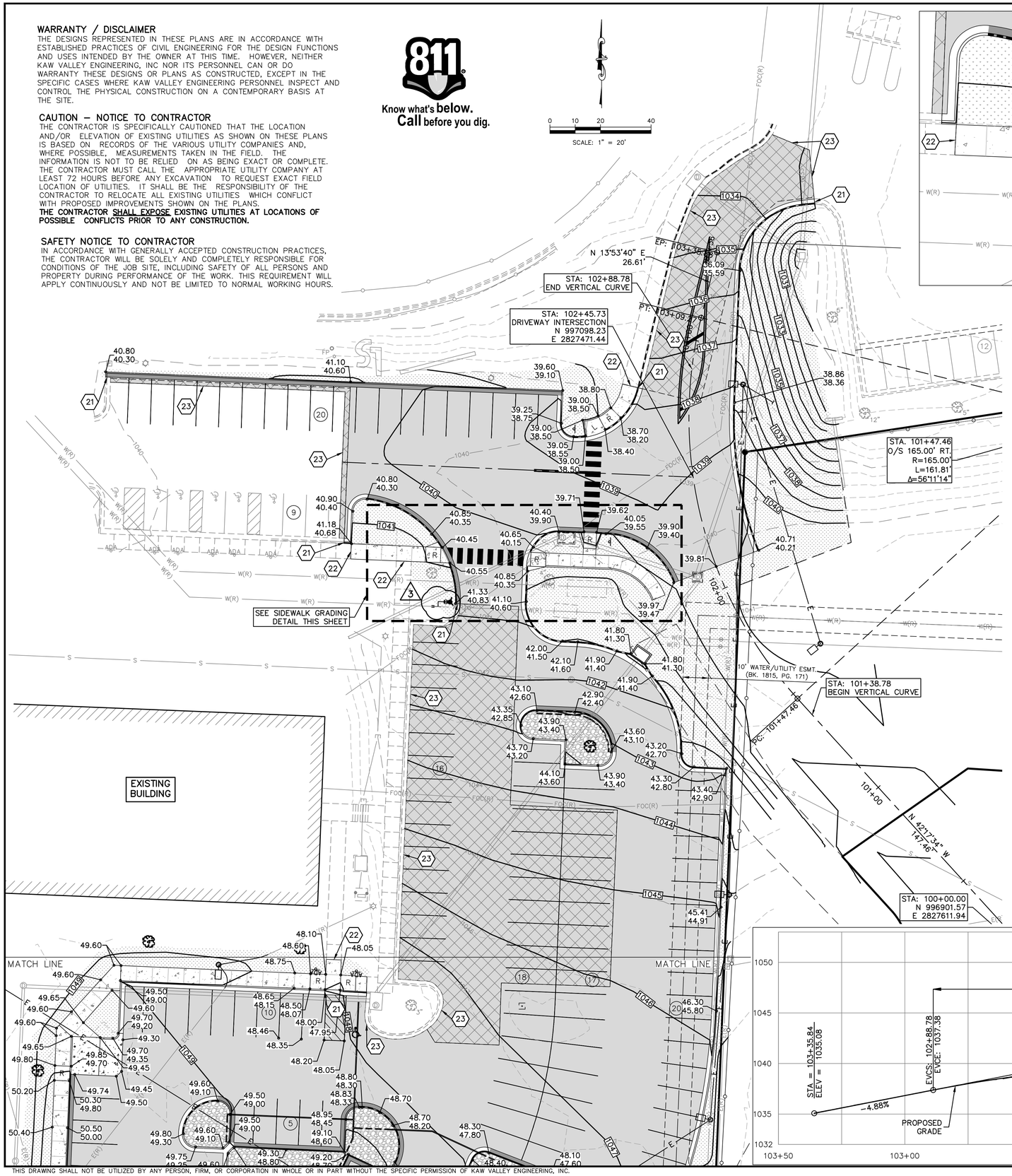
811 Know what's **below.** **Call** before you dig.

SCALE: 1" = 20'



SIDEWALK GRADING DETAIL
SCALE: 1"=10'



LEGEND:

- SECTION CORNER
- CONTROL POINT
- BENCHMARK
- MONUMENT FOUND ORIGIN UNCERTAIN UNLESS OTHERWISE NOTED
- (2)OU OVERHEAD UTILITY LINE (# OF LINES)
- LIGHT POLE
- UTILITY POLE
- ELECTRIC METER
- AIR CONDITIONER
- GAS METER
- WATER METER
- WATER LINE GATE VALVE
- FIRE HYDRANT
- WS WATER SPIGOT
- SV SPRINKLER VALVE
- BB BREAKER BOX
- EO ELECTRIC OUTLET
- DE DOOR ELEVATION (AT THRESHOLD)
- FF FINISH FLOOR ELEVATION
- BUSH
- BASKETBALL GOAL
- LIMITS OF DISTURBANCE
- SPLICE BOX
- UV UTILITY VAULT
- SANITARY SEWER MANHOLE
- STORM SEWER MANHOLE
- SS SANITARY SEWER CLEAN OUT
- DS DOWN SPOUT
- GRATE INLET
- FLARED END SECTION
- STREET/TRAFFIC SIGN
- TRAFFIC SIGNAL LIGHT POLE
- HANDICAP SYMBOL
- (5) PARKING STALL COUNT
- HANDICAP SIGN
- DECIDUOUS TREE
- CONIFEROUS TREE
- TREE LINE
- TURN LANE DIRECTION
- ASPHALT SURFACE COURSE
- FULL DEPTH ASPHALT PAVEMENT (040)
- CONCRETE CURB AND GUTTER
- CONCRETE CURB AND GUTTER WITH REVERSE FLOW
- PAINTED CURB FOR FIRE LANE
- SECTION CORNER
- MONUMENT FOUND (ORIGIN UNCERTAIN UNLESS OTHERWISE NOTED)
- 1/2"x24" REBAR W/214F CAP SET (UNLESS NOTED OTHERWISE)
- MAGNAIL W/ WASHER SET (UNLESS NOTED OTHERWISE)
- CHISELED PLUS SET (UNLESS NOTED OTHERWISE)
- (M) MEASURED VALUE
- (C) CALCULATED
- (D) DEED VALUE
- (P) PLAT VALUE
- (CP) CALCULATED PLAT VALUE
- (CM) CALCULATED MEASURED VALUE
- (R) RECORD VALUE
- SS/E SANITARY SEWER EASEMENT
- D/E STORM DRAINAGE EASEMENT
- CONCRETE PAVEMENT (042) W/JOINTING
- TYPE 1 JOINT (TYP) / TYPE 3 JOINT (TYP)
- CONCRETE SIDEWALK (055+005) W/JOINTING
- L LANDING
- R RAMP
- T TRANSITION

LEGEND (PROPOSED)

- 22.9 SPOT ELEVATION (ADD 1000), TOP OF PAVEMENT
- 23.6 TOP OF CURB (ADD 1000)
- 23.1 FLOWLINE OF CURB (ADD 1000)
- FLOW DIRECTION
- 950 FINISHED 1' CONTOUR INTERVALS, TOP OF PAVEMENT
- SWALE
- LP LOW POINT
- HP HIGH POINT
- LOC LIP OF CURB

NOTES:

21 MATCH EXISTING CURB ELEVATION.
22 MATCH EXISTING SIDEWALK ELEVATION.
23 MATCH EXISTING PAVEMENT ELEVATION.
24 TRANSITION FROM ZERO HEIGHT CURB TO FULL HEIGHT CURB

GENERAL NOTES:

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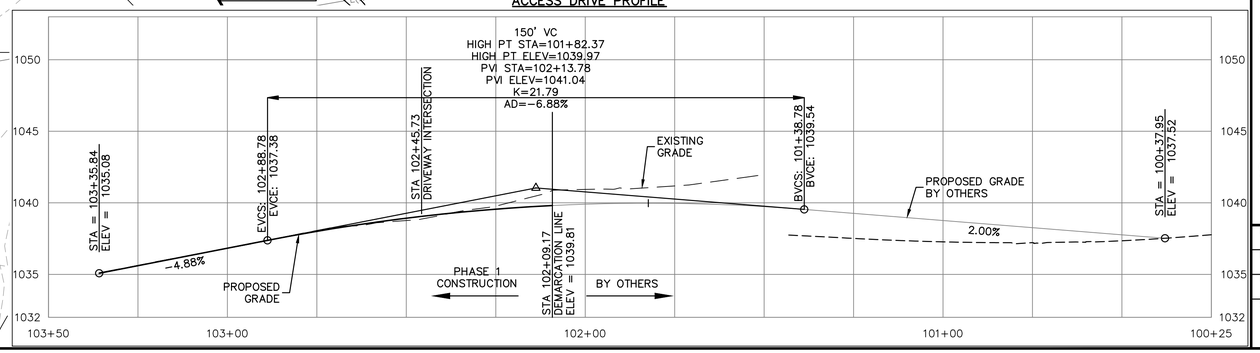
2. REFER TO APWA STANDARD ESC DRAWINGS FOR ADDITIONAL DETAILS AND SPECIFICATIONS.

RELEASED FOR CONSTRUCTION
As Noted on Plan Review
Development Services Department
Lee's Summit, Missouri
07/05/2024

ACCESS DRIVE PROFILE



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STATE OF MISSOURI
DAVID D. WOOD
NUMBER
PROFESSIONAL ENGINEER
4/30/2024

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LEE'S SUMMIT HS - EAST PARKING LOT

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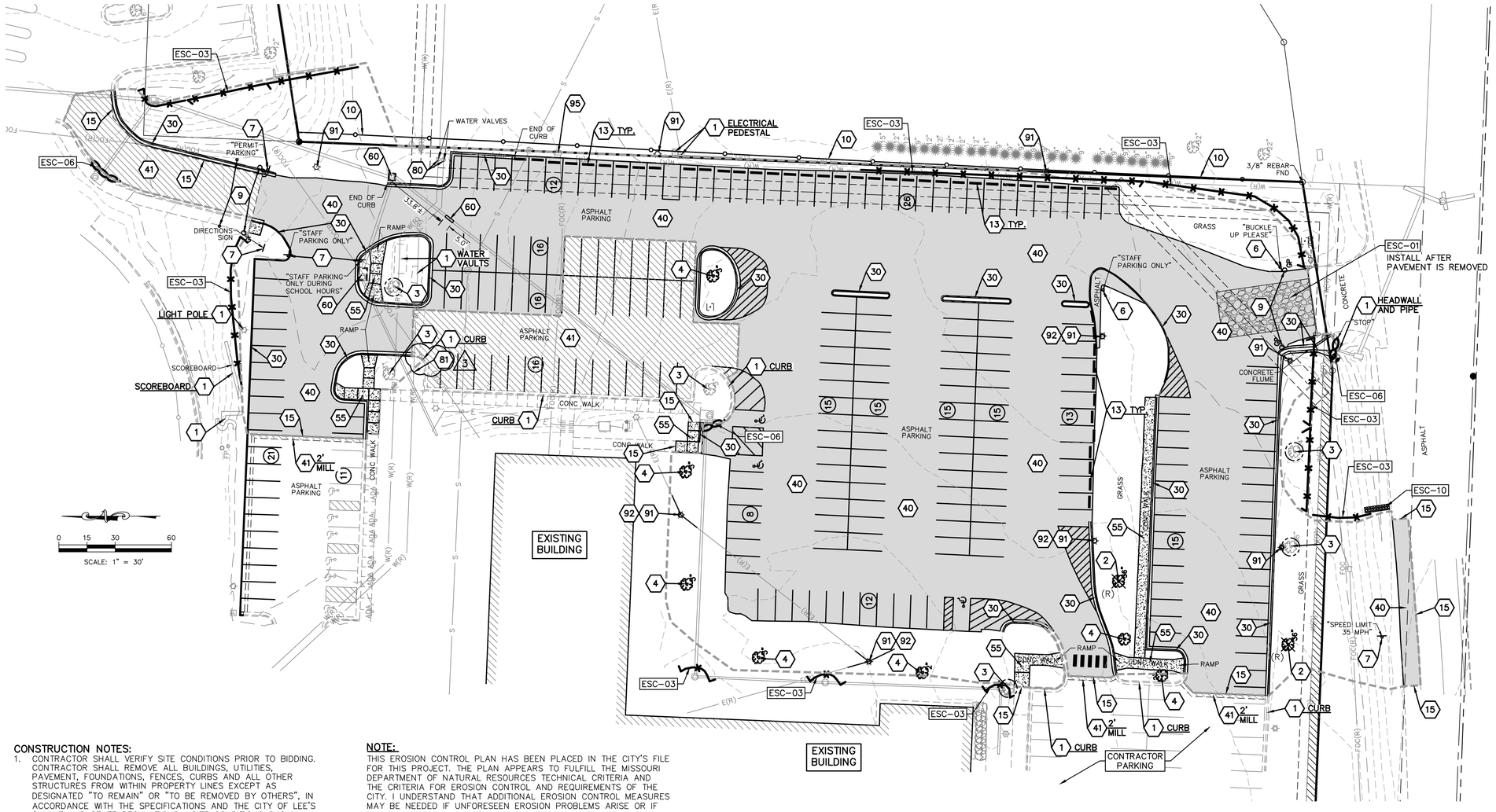
LEE'S SUMMIT, MISSOURI 64063

CONSTRUCTION DOCUMENTS PHASE I
GRADING PLAN - NORTH

PROJ. NO.	C23_1880
DESIGNER	DDW
DRAWN BY	NJN
CFN	1880GP
SHEET	C310
REV	3



CONSTRUCTION NOTES:

1. CONTRACTOR SHALL VERIFY SITE CONDITIONS PRIOR TO BIDDING. CONTRACTOR SHALL REMOVE ALL BUILDINGS, UTILITIES, PAVEMENT, FOUNDATIONS, FENCES, CURBS AND ALL OTHER STRUCTURES FROM WITHIN PROPERTY LINES EXCEPT AS DESIGNATED "TO REMAIN" OR "TO BE REMOVED BY OTHERS", IN ACCORDANCE WITH THE SPECIFICATIONS AND THE CITY OF LEE'S SUMMIT AND STATE REGULATIONS. SITE CONDITIONS SHOWN WERE AS OF FEBRUARY 19, 2024.
2. ALL UTILITY PIPE LINES TO BE ABANDONED SHALL BE PLUGGED PER CITY AND STATE REGULATIONS.
3. DRIVES, PAVING AND OTHER STRUCTURES ON STREET OR HIGHWAY RIGHT-OF-WAY SHALL BE REMOVED AS NECESSARY TO CONSTRUCT IMPROVEMENTS SHOWN ON THESE PLANS. REMOVAL AND DISPOSAL SHALL BE IN CONFORMANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.
4. ALL PAVING WITHIN PROPERTY TO BE REMOVED AND DISPOSED OF IN CONFORMANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.
5. COORDINATE ELECTRICAL DEMO WITH E SERIES SHEETS.

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NOTE:

THIS EROSION CONTROL PLAN HAS BEEN PLACED IN THE CITY'S FILE FOR THIS PROJECT. THE PLAN APPEARS TO FULFILL THE MISSOURI DEPARTMENT OF NATURAL RESOURCES TECHNICAL CRITERIA AND THE CRITERIA FOR EROSION CONTROL AND REQUIREMENTS OF THE CITY. I UNDERSTAND THAT ADDITIONAL EROSION CONTROL MEASURES MAY BE NEEDED IF UNFORESEEN EROSION PROBLEMS ARISE OR IF THE SUBMITTED PLAN DOES NOT FUNCTION AS INTENDED. THE REQUIREMENTS OF THIS PLAN SHALL RUN WITH THE LAND AND BE THE OBLIGATION OF THE LAND OWNER UNTIL SUCH TIME AS THE PLAN IS PROPERLY COMPLETED, MODIFIED OR VOIDED.

GENERAL NOTES:

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2. REFER TO APWA STANDARD ESC DRAWINGS FOR ADDITIONAL DETAILS AND SPECIFICATIONS.

DESCRIPTION OF WORK – PRE CONSTRUCTION AND PHASE I:

- OBTAIN REVIEW COMPLIANCE AND APPLICABLE PERMITS.
- HOLD PRE-CONSTRUCTION CONFERENCE.
- INSTALL PERIMETER EROSION CONTROL MEASURES, INLET PROTECTION DOWNSTREAM OF DEMOLITION AREAS AND TREE PROTECTION FENCING WITHIN CLEARING LIMITS AS APPLICABLE.
- SAWCUT AND REMOVE PAVEMENT, FLATWORK AND CURBING AT PERIMETER TIE-INS. COORDINATE WORK WITH LEE'S SUMMIT SCHOOL DISTRICT (LSSD). MAINTAIN PEDESTRIAN AND VEHICULAR TRAFFIC ACCESS TO CAMPUS AS DIRECTED BY LSSD.
- PROVIDE STABILIZED CONSTRUCTION INTO WORK AREA AS REQUIRED.

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DEMOLITION

1 TO REMAIN.

2 REMOVE TREES/BUSHES/LANDSCAPING/SITE FURNITURE. (COORDINATE WITH PROJECT SITE PLAN)

3 TREES TO REMAIN. PROVIDE TREE PROTECTION FENCE AT DRIPLINE. A MINIMUM RADIUS OF 10' FROM TREE SHALL BE PROVIDED ANYWHERE WHERE PORTIONS OF DRIPLINE ARE NOT FENCED OFF, A LAYER OF MULCH (6" MINIMUM) SHALL BE PROVIDED TO PROTECT ROOT SYSTEM FROM DAMAGE.

4 RELOCATE SMALL CALIPER TREES. SEE SHEET C100.

6 SIGN TO BE REMOVED

7 SIGN TO BE RELOCATED

9 BOLLARD/SWING GATE TO BE REMOVED. BACKFILL AND COMPACT FOOTINGS.

10 REMOVE CHAINLINK FENCE AND POST. BACKFILL AND COMPACT FOOTINGS.

13 CONCRETE WHEEL STOP TO BE REMOVED.

15 SAW CUT LINE (FOR CONCRETE SAW CUT AT NEAREST CONTROL JOINT. FOR ASPHALT SAW CUT MINIMUM OF 6" FROM NEW CURB LINE). SEE SHEET C100 AND C200 FOR LIMITS.

30 CONTRACTOR TO REMOVE CONCRETE CURBS TO CONSTRUCT IMPROVEMENTS. SEE SHEET C100 AND C200 FOR LIMITS.

40 CONTRACTOR TO REMOVE ASPHALT PAVING AS REQUIRED TO CONSTRUCT IMPROVEMENTS.

41 CONTRACTOR TO MILL ASPHALT SURFACE, MINIMUM 2' OUTSIDE ASPHALT REMOVAL. REFER TO C100 AND C200 SHEETS FOR LIMITS. REFER TO SECTIONS A-A AND B-B ON SHEET C190.

55 CONTRACTOR TO REMOVE CONCRETE PAVING AND WALKS.

60 CONTRACTOR TO MODIFY, REMOVE AND/OR REROUTE STORM SEWER OR STRUCTURE. REFER TO C600 SHEETS FOR ADDITIONAL INFORMATION.

80 CONTRACTOR TO RESET EXISTING WATER VALVES TO GRADE. SEE SHEET C310.

3 81 LOCATE, CUT, AND REMOVE EXISTING 8" FIRE LINE AS NEEDED TO INSTALL 8"x6" TEE FOR NEW FIRE HYDRANT ASSEMBLY. SEE SHEETS C100 & C195 FOR ADDITIONAL INFORMATION.

91 REMOVE SITE LIGHTING REFER TO SITE ELECTRICAL PLAN. COORDINATE WITH EVERGY AS APPLICABLE.

92 REMOVE FIXTURE AND SALVAGE FOR REINSTALL.

95 CONTRACTOR TO MODIFY EXISTING FIBER OPTICS VAULT TO MEET NEW GRADE. SEE SHEET C310.

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 C490 AND C495.

ESC-01 CONSTRUCTION ENTRANCE
ESC-03 SEDIMENTATION FENCE
ESC-06 CURB INLET PROTECTION
ESC-10 ROCK DITCH CHECKS

EROSION & PROPOSED IMPROVEMENTS LEGEND:

- 1218 EXISTING GROUND CONTOUR (1' INTERVALS)
- 1218 PROPOSED FINISHED GROUND CONTOUR (1' INTERVALS)
- GRAVEL FILTER BAGS AND INLET PROTECTION (ESC-06 & ESC-07)
- OTPF FENCE (OTPF)
- SEDIMENTATION FENCE (ESC-03)
- LIMITS OF DISTURBANCE
- (R) INDICATES TREE/SHRUB TO BE REMOVED
- CONSTRUCTION ENTRANCE AND STAGING (ESC-01)
- ROCK DITCH CHECK (ESC-10)

RELEASED FOR CONSTRUCTION
As Noted on Plan Review
Development Services Department
Lee's Summit, Missouri
07/05/2024

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

LEGEND:

- CONTROL POINT
- BENCHMARK
- GATE POST
- CHAIN LINK FENCE
- WOOD FENCE
- BOLLARD
- STREET/TRAFFIC SIGN
- PAINTED DIRECTIONAL ARROW
- TURN LANE DIRECTION
- HANDICAP SYMBOL
- PARKING STALL COUNT
- HANDICAP SIGN
- HRMP HANDICAP RAMP
- WHEEL STOP
- FOC UNDERGROUND FIBER OPTIC CABLE
- FOC(R) UNDERGROUND FIBER OPTIC (FROM RECORDS)
- TELEPHONE PEDESTAL
- SANITARY SEWER MANHOLE
- STORM SEWER MANHOLE
- AI AREA INLET
- CI CURB INLET
- CO SANITARY SEWER CLEAN OUT
- DS DOWN SPOUT
- FD FLOOR DRAIN
- FLARED END SECTION
- S SANITARY SEWER LINE
- D STORM SEWER LINE
- CMP CORRUGATED METAL PIPE
- RCP REINFORCED CONCRETE PIPE
- E(R) UNDERGROUND ELECTRIC PER RECORD
- AC AIR CONDITIONER
- E WALL MOUNTED ELECTRICAL OUTLET
- G UNDERGROUND GAS
- GM GAS METER
- GV GAS VALVE
- GR GAS RISER
- GAS LINE SIGN
- 950 EXISTING GRADE 5' CONTOUR
- 939 EXISTING GRADE 1' CONTOUR
- W WATER LINE
- WM WATER METER
- WATER LINE GATE VALVE
- FIRE HYDRANT
- SPRINKLER CONTROL BOX
- WATER MANHOLE
- SV SPRINKLER VALVE
- SIAMESE FIRE CONNECTOR
- CANOPY SUPPORT
- MB MAIL BOX
- CONCRETE JOINT/CUT LINE
- BUSH
- DECIDUOUS TREE
- CONIFEROUS TREE
- TREE LINE
- FP FLAG POLE
- T/E TRASH ENCLOSURE
- L/S LANDSCAPING AREA
- CONC CONCRETE
- VCP VITRIFIED CLAY PIPE
- DIP DUCTILE IRON PIPE
- HDPE HIGH DENSITY POLYETHYLENE
- WALL MOUNTED LIGHT
- WALL MOUNTED CAMERA
- E UNDERGROUND ELECTRIC
- (2) OU OVERHEAD UTILITY LINE (# OF LINES)
- P PULL BOX
- LIGHT POLE
- UTILITY POLE
- UTILITY POLE W/ LIGHT
- UTILITY POLE W/ TRANSFORMER
- GUY ANCHOR
- W(R) WATER LINE PER RECORD
- LW LOWEST WIRE HEIGHT
- E ELECTRIC METER
- UNDERGROUND ELECTRIC PEDESTAL
- SPEAKER BOX
- BB BREAKER BOX
- G(R) UNDERGROUND GAS PER RECORD
- S(R) SANITARY SEWER LINE PER RECORD
- D(R) STORM SEWER LINE PER RECORD
- ASPHALT PAVING TO BE REMOVED
- CONCRETE PAVING/SIDEWALKS TO BE REMOVED
- AREA TO BE MILLED

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STATE OF MISSOURI
DAVID D WOOD
NUMBER 2011037427
PROFESSIONAL ENGINEER
4/24/2024

DAVID D. WOOD
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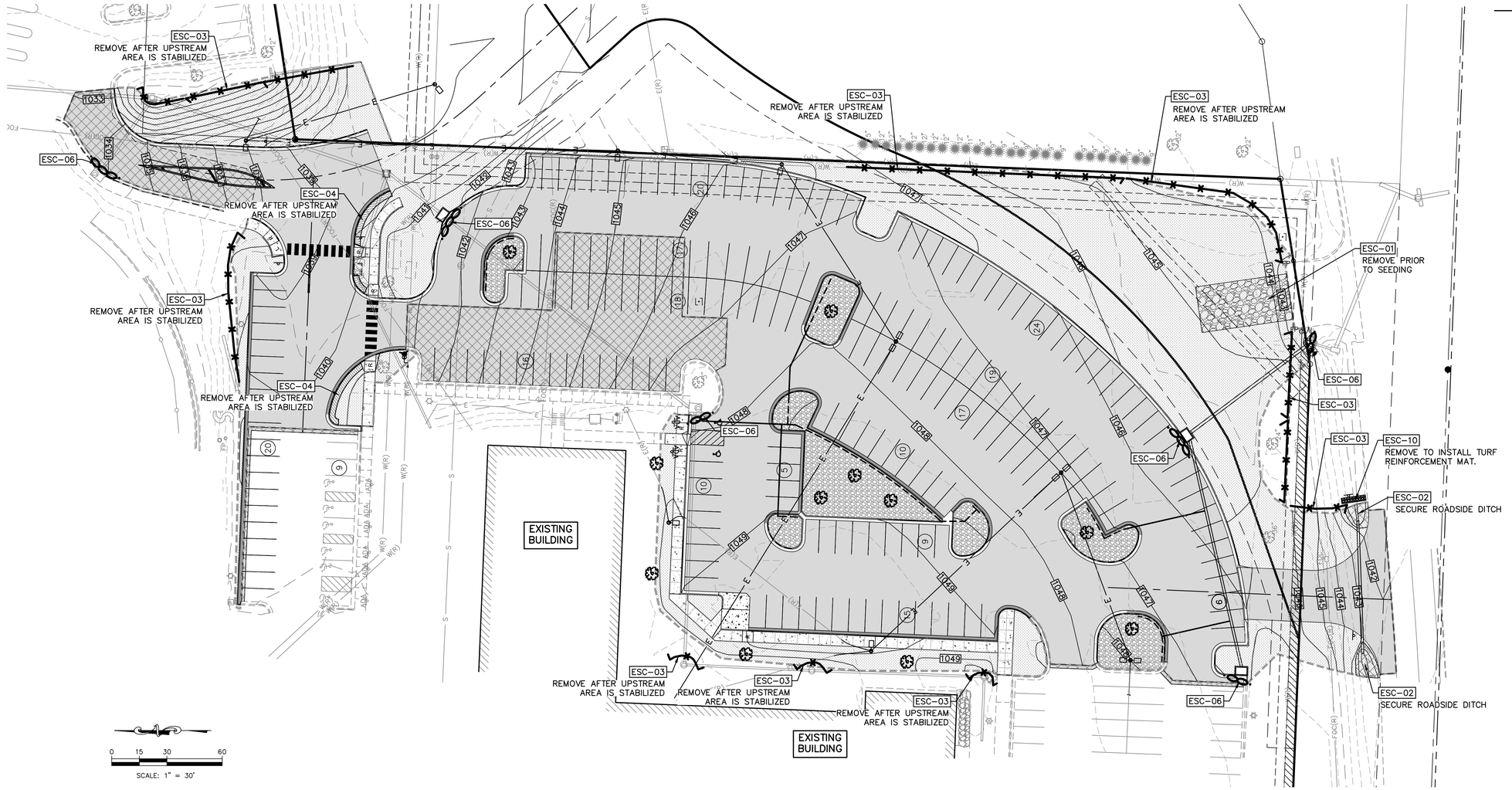
LEE'S SUMMIT HS - EAST PARKING LOT

400 SE BLUE PARKWAY
LEE'S SUMMIT, MISSOURI 64063

CONSTRUCTION DOCUMENTS PHASE I
DEMOLITION & EROSION CONTROL PLAN PH I

PROJ. NO. C23_1880
DESIGNER DDW | DRAWN BY NJN
CFN 1880DEMO
SHEET C400 | REV 3



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- PARKING STALL COUNT
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- D STORM SEWER LINE
- CMP CORRUGATED METAL PIPE
- RCP REINFORCED CONCRETE PIPE
- E(R) UNDERGROUND ELECTRIC PER RECORD
- AC AIR CONDITIONER
- WO WALL MOUNTED ELECTRICAL OUTLET
- G UNDERGROUND GAS
- GM GAS METER
- GV GAS VALVE
- GR GAS RISER
- GAS LINE SIGN
- 950 EXISTING GRADE 5' CONTOUR
- 939 EXISTING GRADE 1' CONTOUR
- W WATER LINE
- WM WATER METER
- WATER LINE GATE VALVE
- FIRE HYDRANT
- SPRINKLER CONTROL BOX
- WATER MANHOLE
- SV SPRINKLER VALVE
- SIAMESE FIRE CONNECTOR
- CANOPY SUPPORT
- MB MAIL BOX
- CONCRETE JOINT/CUT LINE
- BUSH
- DECIDUOUS TREE
- CONIFEROUS TREE
- TREE LINE
- FP FLAG POLE
- T/E TRASH ENCLOSURE
- L/S LANDSCAPING AREA
- CONC CONCRETE
- VCP VITRIFIED CLAY PIPE
- DIP DUCTILE IRON PIPE
- HDPE HIGH DENSITY POLYETHYLENE
- WALL MOUNTED LIGHT
- WALL MOUNTED CAMERA
- E UNDERGROUND ELECTRIC
- (2)OU OVERHEAD UTILITY LINE (# OF LINES)
- P PULL BOX
- LIGHT POLE
- UTILITY POLE
- UTILITY POLE W/ LIGHT
- UTILITY POLE W/ TRANSFORMER
- GUY ANCHOR
- W(R) WATER LINE PER RECORD
- LW LOWEST WIRE HEIGHT
- E ELECTRIC METER
- UNDERGROUND ELECTRIC PEDESTAL
- SPEAKER BOX
- BB BREAKER BOX
- G(R) UNDERGROUND GAS PER RECORD
- S(R) SANITARY SEWER LINE PER RECORD
- D(R) STORM SEWER LINE PER RECORD

EROSION & PROPOSED IMPROVEMENTS LEGEND:

- 1218 EXISTING GROUND CONTOUR (1' INTERVALS)
- 1218 PROPOSED FINISHED GROUND CONTOUR (1' INTERVALS)
- GRAVEL FILTER BAGS AND INLET PROTECTION (ESC-06 & ESC-07)
- OTPF FENCE (OTPF)
- SEDIMENTATION FENCE (ESC-03)
- LIMITS OF DISTURBANCE
- (R) INDICATES TREE/SHRUB TO BE REMOVED
- CONSTRUCTION ENTRANCE AND STAGING (ESC-01)
- WATTLE/BIODEGRADABLE LOG (ESC-04)
- ROCK DITCH CHECK (ESC-10)
- CW CONCRETE WASH AREA (ESC-01)
- LIMITS OF AREA TO BE PAVED – REFERENCE GRADING PLAN FOR CONSTRUCTION SPECIFICATIONS
- EROSION CONTROL BLANKET (ESC-02)

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 C490 AND C495.

ESC-01 CONSTRUCTION ENTRANCE AND CONCRETE WASHOUT
ESC-02 EROSION CONTROL BLANKETS AND TURF REINFORCEMENT MAT
ESC-03 SEDIMENTATION FENCE
ESC-06 CURB INLET PROTECTION
ESC-10 ROCK DITCH CHECKS

FINAL ACCEPTANCE:

ALL DISTURBED AREAS SHALL BE PREPPED FOR SEEDING OR SODDING IN ACCORDANCE WITH CITY ADOPTED APWA CRITERIA. THE SITE DISTURBANCE PERMIT SHALL BE MAINTAINED IN AN OPEN STATUS UNTIL FINAL ACCEPTANCE PER CITY ADOPTED APWA SECTION 2400.6.

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.

NOTE:

THIS EROSION CONTROL PLAN HAS BEEN PLACED IN THE CITY'S FILE FOR THIS PROJECT. THE PLAN APPEARS TO FULFILL THE MISSOURI DEPARTMENT OF NATURAL RESOURCES TECHNICAL CRITERIA AND THE CRITERIA FOR EROSION CONTROL AND REQUIREMENTS OF THE CITY. I UNDERSTAND THAT ADDITIONAL EROSION CONTROL MEASURES MAY BE NEEDED IF UNFORESEEN EROSION PROBLEMS ARISE OR IF THE SUBMITTED PLAN DOES NOT FUNCTION AS INTENDED. THE REQUIREMENTS OF THIS PLAN SHALL RUN WITH THE LAND AND BE THE OBLIGATION OF THE LAND OWNER UNTIL SUCH TIME AS THE PLAN IS PROPERLY COMPLETED, MODIFIED OR VOIDED.

GENERAL NOTES:

1. REFER TO SHEET C495 FOR PERMANENT SEEDING/STABILIZATION REQUIREMENTS.
2. REFER TO APWA STANDARD ESC DRAWINGS FOR ADDITIONAL DETAILS AND SPECIFICATIONS.

DESCRIPTION OF WORK – PHASE II AND POST CONSTRUCTION:

- ROUGH GRADE SITE TO PROPOSED SUBGRADE.
- INSTALL OR RELOCATE UTILITIES: STORM, CONDUITS FOR SITE LIGHTING, TELECOM.
- INSTALL EROSION CONTROL MEASURES AROUND STORM SEWERS AND DIVERT RUNOFF TO STORM STRUCTURES.
- PLACE AGGREGATE BASE FOR PARKING AREAS.
- INSTALL CURB FOR PARKING AREAS.
- INSTALL PAVING BASE COURSE.
- INSTALL ADDITIONAL EROSION CONTROL MEASURES AT TOES OF SLOPE ADJACENT TO CURB LINE AS APPLICABLE.
- COMPLETE FINAL GRADING AND SEED/SOD AND LANDSCAPE PERIMETER AREAS (ESTABLISH VEGETATION).
- INSTALL SURFACE COURSE ON PARKING LOT, WALKS AND FLATWORK.
- COMPLETE FINAL GRADING AND SEED, SOD OR LANDSCAPE WITHIN PROJECT LIMITS AS APPLICABLE.
- FINAL SITE CLEANUP.
- MAINTAIN EROSION CONTROL MEASURES UNTIL SITE IS STABILIZED.
- INSPECT AND RESEED REMAINING DISTURBED AREAS, WASHOUTS, ETC.
- REMOVE SEDIMENT BUILDUP, RESEED AND STABILIZE AS EROSION CONTROL MEASURES ARE REMOVED.

RELEASED FOR CONSTRUCTION
As Noted on Plan Review
Development Services Department
Lee's Summit, Missouri
07/05/2024

Know what's below. Call before you dig.

REV	DATE	DESCRIPTION	DSN	DWN	CHK
3	6/24/24	CITY COMMENTS/PR NO. 2	DDW	TGN	
2	5/16/24	CITY COMMENTS/PR NO. 1	DDW	NJN	
1	4/23/24	ADDENDUM 2/PER CITY COMMENTS	DDW	NJN	
0	3/29/24	ISSUED FOR BID/CITY REVIEW	DDW	NJN	

STATE OF MISSOURI
DAVID D WOOD
NUMBER 2011037427
PROFESSIONAL ENGINEER
4/24/2024

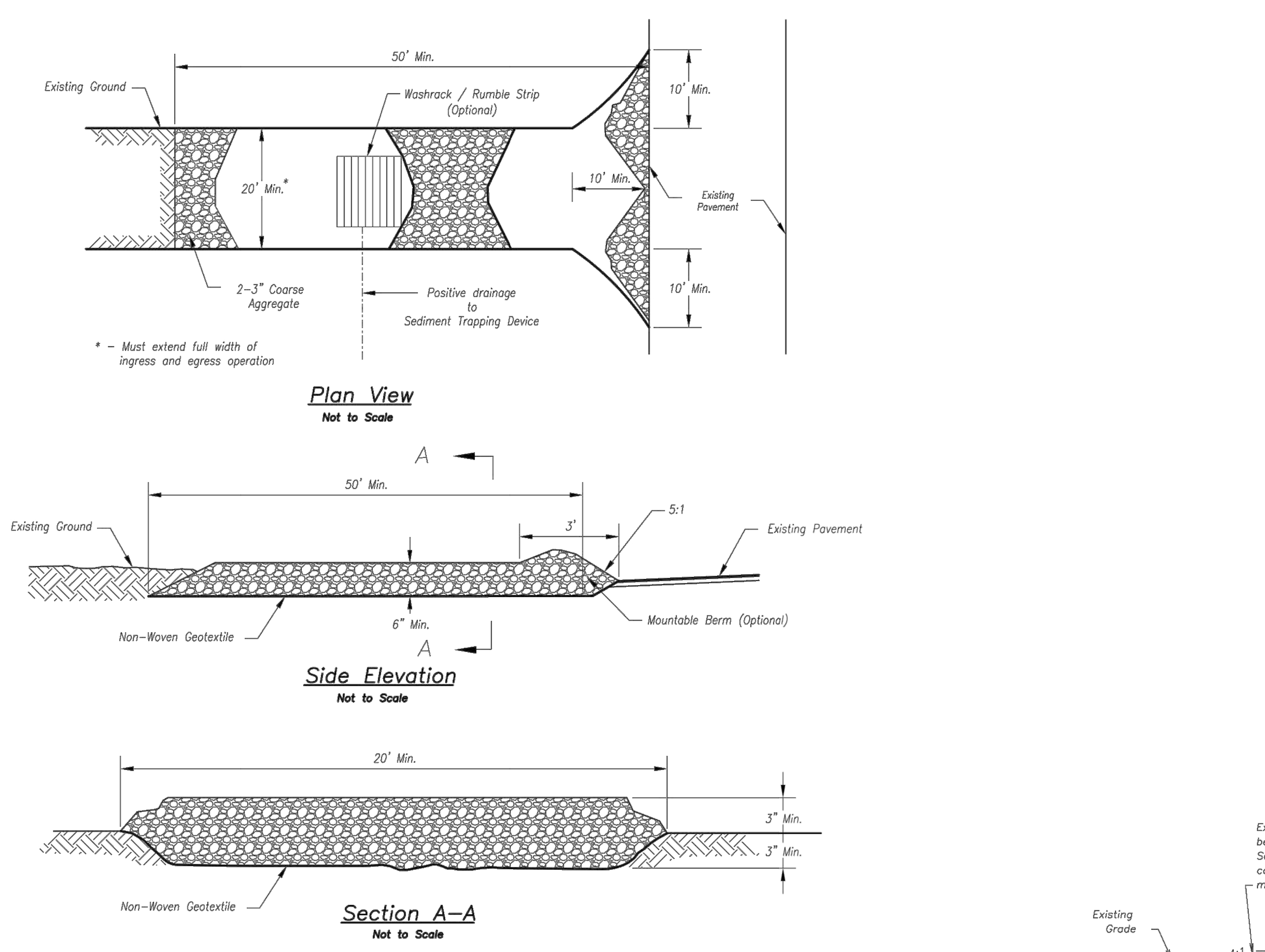
DAVID D. WOOD
ENGINEER
MO # 2011037427

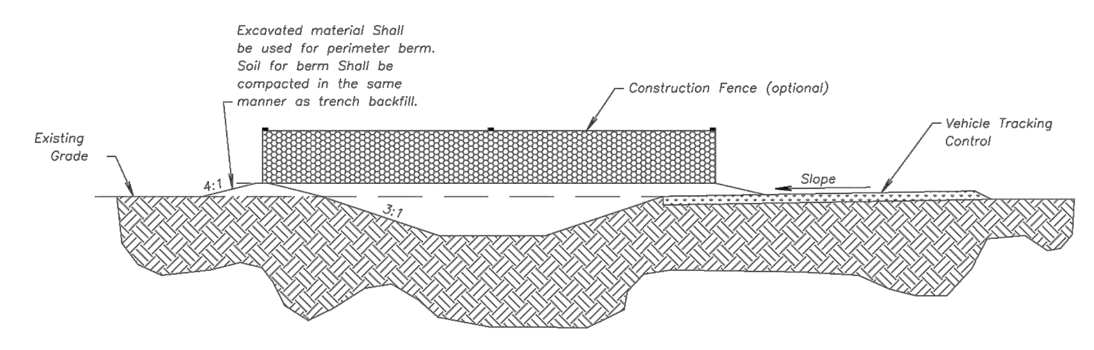
KAW VALLEY ENGINEERING
14700 WEST 114TH TERRACE
LENEXA, KANSAS 66215
PH. (913) 894-5150
lx@kveng.com | www.kveng.com
KAW VALLEY ENGINEERING, INC., IS AUTHORIZED TO OFFER ENGINEERING SERVICES BY MISSOURI STATE CERTIFICATE OF AUTHORITY # 000842. EXPIRES 12/31/25

LEE'S SUMMIT HS - EAST PARKING LOT
400 SE BLUE PARKWAY
LEE'S SUMMIT, MISSOURI 64063

CONSTRUCTION DOCUMENTS PHASE I
EROSION CONTROL PLAN PH II

PROJ. NO.	C23_1880
DESIGNER	DDW
DRAWN BY	NJN
CFN	1880ECP
SHEET	C410
REV	3





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 3:1. The vehicle tracking pad shall be sloped towards 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 clearly indicate the location(s) of the concrete washout area(s) to operators of concrete truck and pump rigs.
5. A one–piece 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 enlarged as necessary to maintain capacity for wasted concrete.
3. Concrete washout water, wasted pieces 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 backfill and topsoil, any disturbed areas associated with the installation, maintenance, and/or removal of the concrete washout areas shall be stabilized.

Excavated material Shall be used for perimeter berm. Soil for berm Shall be compacted in the same manner as trench backfill.

Notes for Construction Entrance:

1. Avoid locating on steep slopes, at curves on public roads, or downhill of disturbed area.
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 3H:1V 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 roads.
5. Place stone to dimensions and grade as shown on plans. Leave surface sloped for drainage.
6. Divert 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 Entrance:

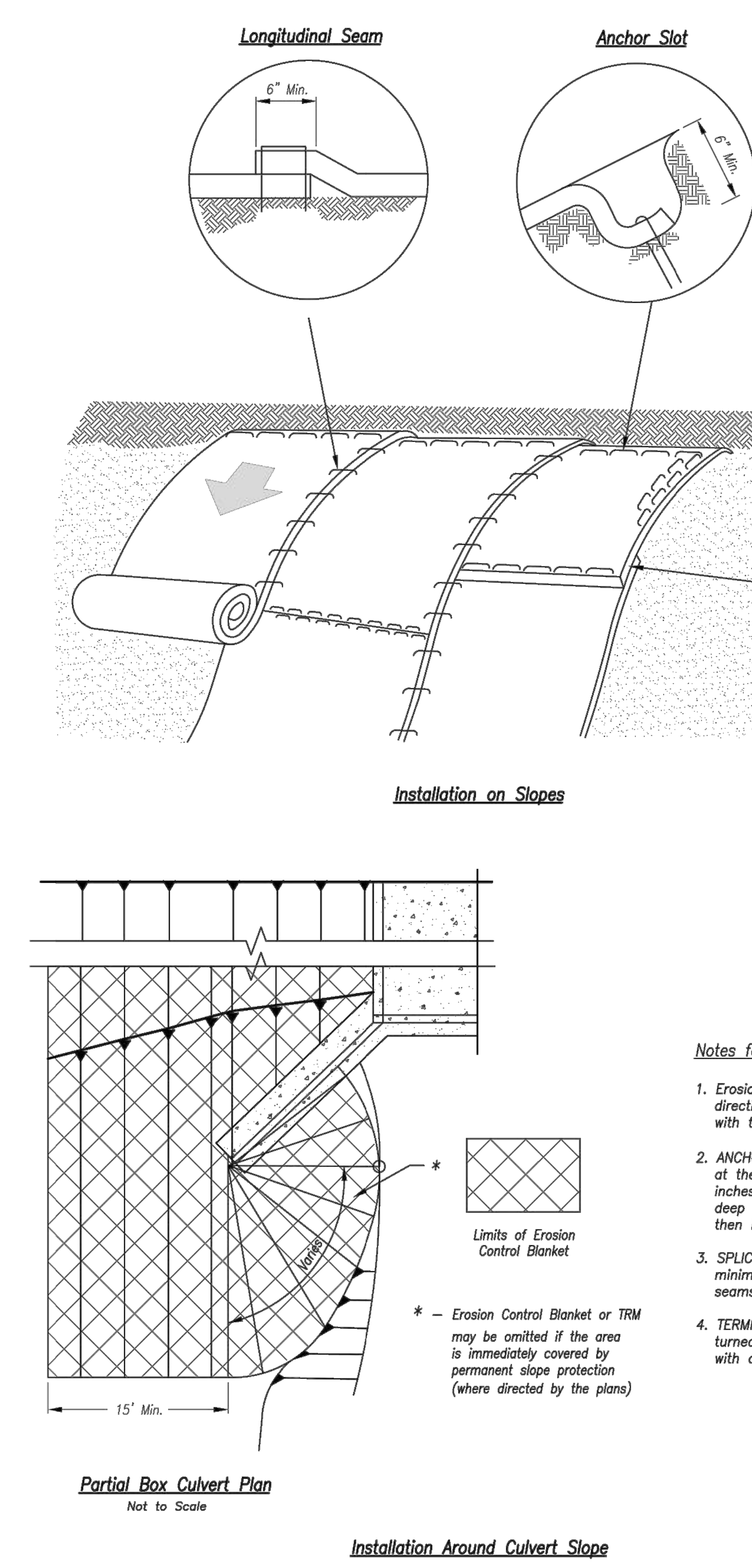
1. Reshape entrance as needed to maintain function and integrity of Installation. Top dress with clean aggregate as needed.

CONSTRUCTION ENTRANCE

CONCRETE WASHOUT

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.

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



General Notes:

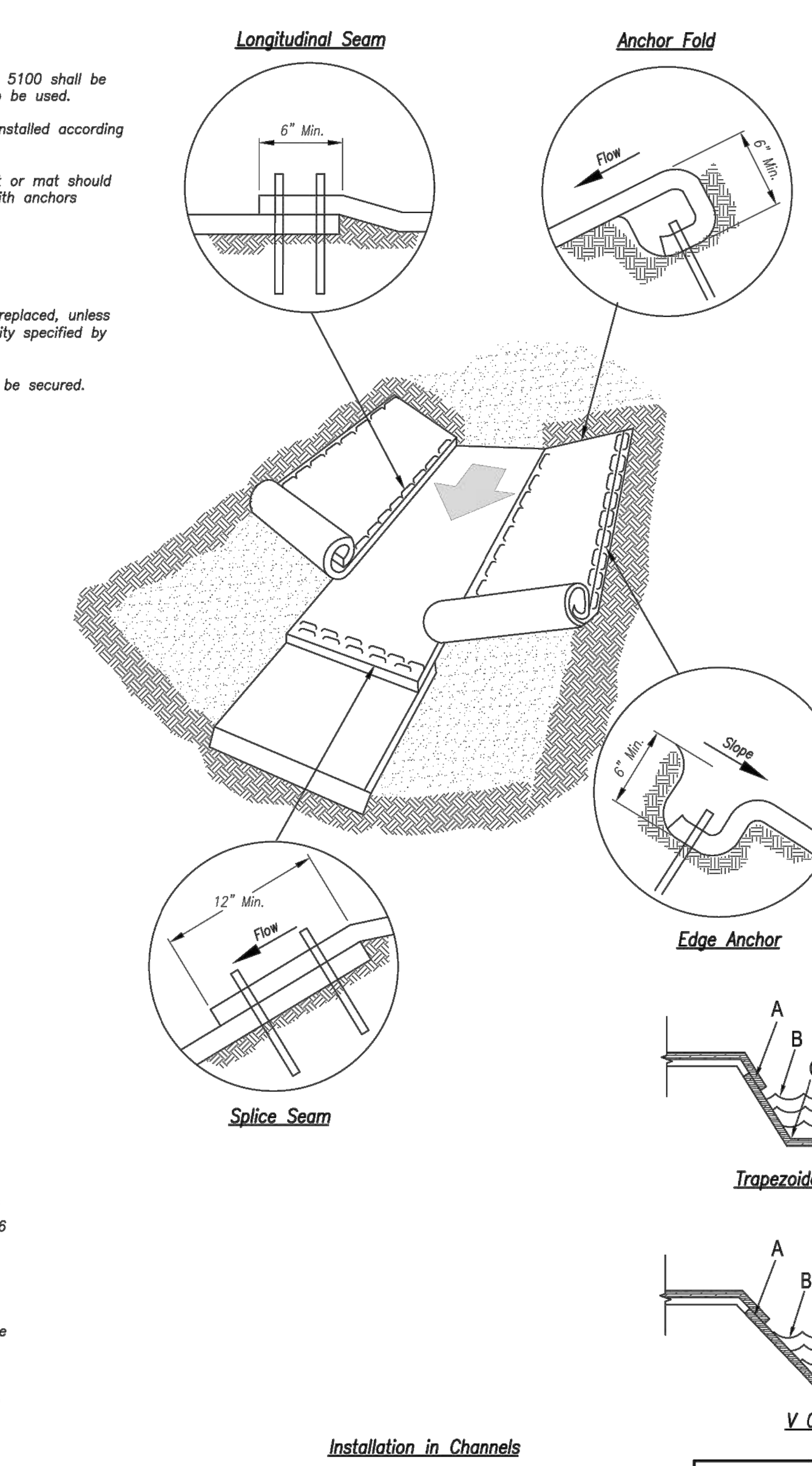
1. APWA Specifications 2150 and Design Guidance 5100 shall be referenced to select type of blanket or mat to be used.
2. Typical anchors and pattern/spacing shall be installed according to the manufacturers instructions.
3. LONGITUDINAL SEAMS: The edges of the blanket or mat should overlap each other a minimum of 6 inches, with anchors catching the edges of both blankets.

Maintenance:

1. Torn or degraded product shall be repaired or replaced, unless such degradation is within the functional longevity specified by the manufacturer.
2. Edges or seams that are loose or frayed shall be secured.

Notes for Installation on Slopes:

1. Erosion Control Blankets and TRMs shall be laid in the direction of the slope. In order for blanket to be in contact with the soil, lay blanket loosely, avoiding stretching.
2. ANCHOR SLOTS: The top of the blanket should be "slotted in" at the top of the slope and anchored in place with anchors 6 inches apart. The slots should be 6 inches wide x 6 inches deep with the blanket anchored in the bottom of the slot, then backfilled, tamped and seeded.
3. SPLICE SEAM: When splices are necessary, overlap end a minimum of 8 inches in direction of water flow. Stagger splice seams.
4. TERMINAL FOLD: The bottom edge of the blanket shall be turned under a minimum of 4 inches, then anchored in place with anchors 9 inches apart.



Notes for Installation in Channels:

1. Erosion Control Blankets and TRMs shall be laid in the direction of the flow, with the first course at the centerline of channel, where applicable. In order for the mat to be in contact with the soil, lay the mat loosely, avoiding stretching.
2. ANCHOR FOLD: The top of the mat should be folded under, buried and secured with wood or other approved anchors placed 6 inches apart. The top edge of the mat should be buried in a slot 6 inches wide x 6 inches deep, anchored in the bottom of the slot, backfilled, and the mat folded over the top as shown in detail.
3. SPLICE SEAM: When splices are necessary, overlap end a minimum of 12 inches in direction of water flow. Stagger splice seams.
4. CHECK SLOTS: Establish check slots transverse to slope every 30 feet. The slots should be 6 inches wide x 6 inches deep. The mat shall be cut to a length 12 inches beyond the slot. The top of the downstream mat shall be slotted in, secured and buried similar to the edge anchor fold. The upstream mat shall then cover the slot and be anchored as shown.
5. EDGE ANCHORS: Lay outside edge of mat into trench at top of the slope and anchor.
6. TERMINUS: The bottom edge of the mat shall be anchored.

Critical Points:

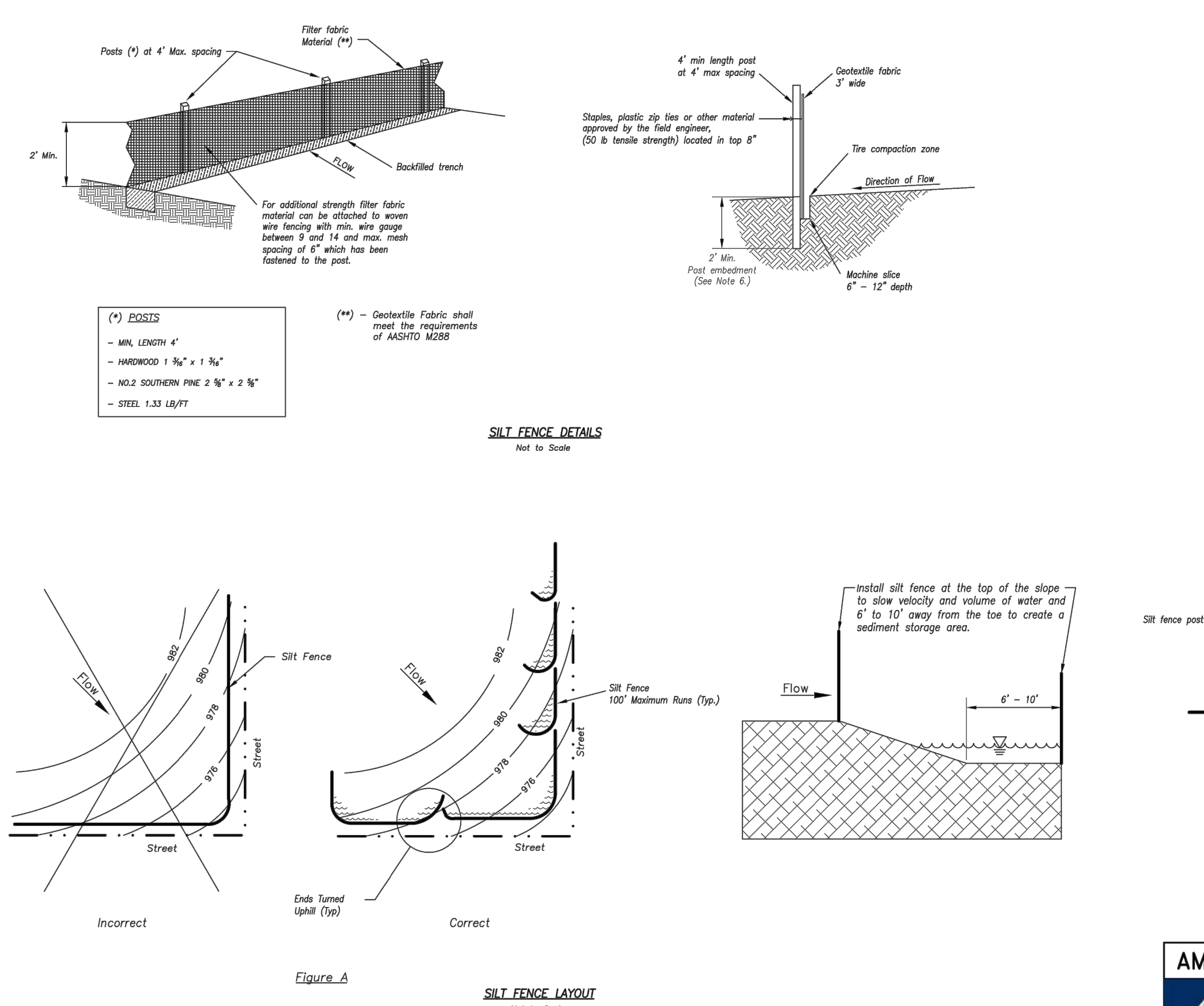
A – Overlaps and seams;

B – Projected water line;

C – Channel bottom / side slope vertices;

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

AMERICAN PUBLIC WORKS ASSOCIATION	
APWA Kansas City Metro Chapter	KANSAS CITY METRO CHAPTER
EROSION CONTROL BLANKETS AND TURF REINFORCEMENT MATS	STANDARD DRAWING NUMBER ESC-02 ADOPTED: 10/24/2016



Notes:

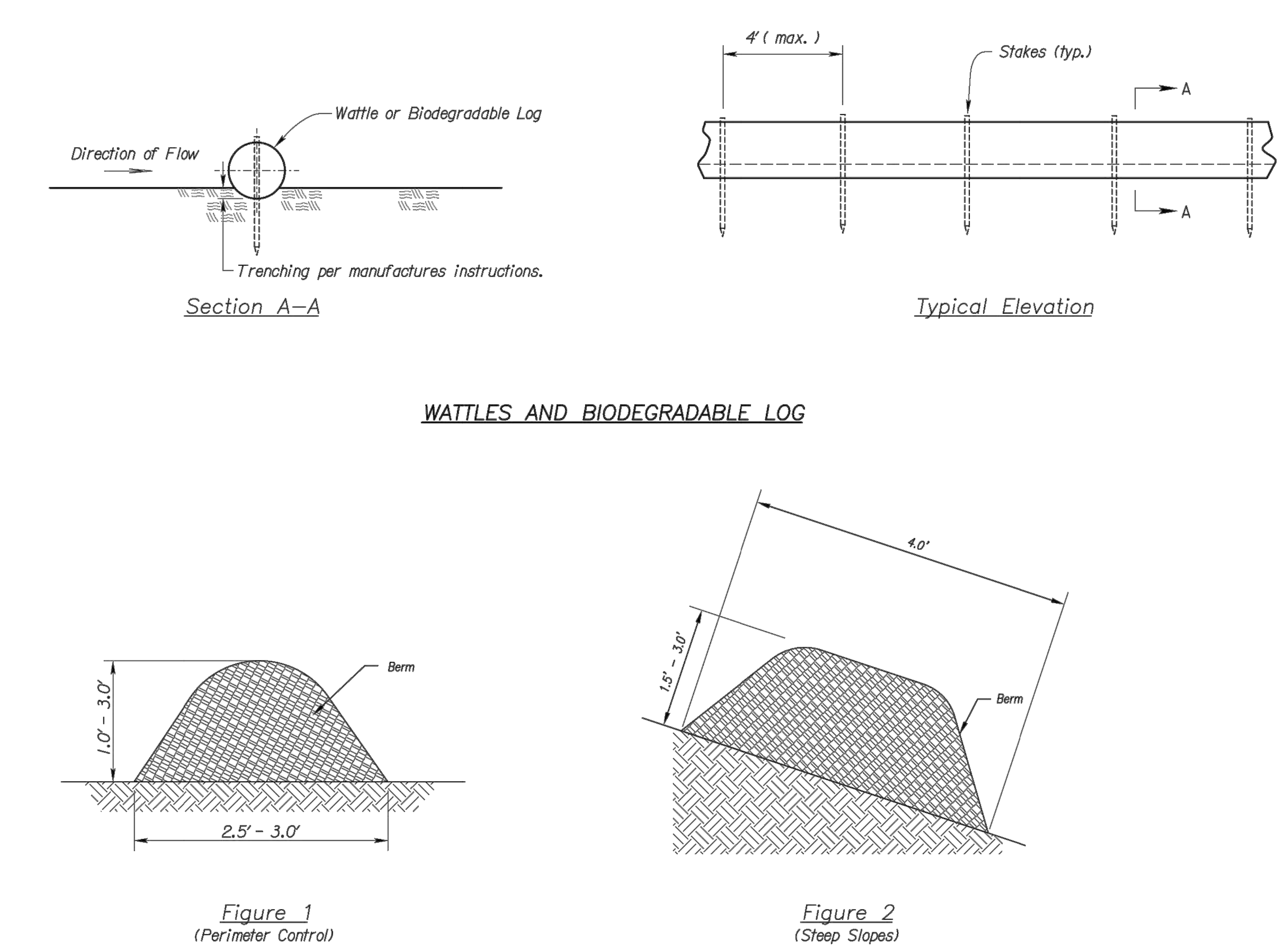
1. In order to contain water, the ends of the silt fence must be turned uphill (Figure A).
2. Long perimeter runs of silt fence must be limited to 100'. Runs should be broken up into several smaller segments to minimize water concentrations (Figure A).
3. Long slopes should be broken up with intermediate 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 ⅓ the height of silt fence.
2. Repair as necessary to maintain function and structure.

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

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



Notes for Wattles and Biodegradable Log Slope Protection:

1. The Slope barriers shall be placed along contour lines, with a short section turned upgrade at each end of the barrier. The maximum length of the slope barrier shall not exceed 250 feet, and the barrier ends need to be staggered.
2. Install wattles and biodegradable logs per manufacturer's instructions.
3. Spacing of stakes per manufacturer's instructions with 4' max. spacing. Length of stakes shall be a minimum of 2 times the diameter of the log with minimum of 24".

Notes for Mulch and Compost Filter Beam:

1. The sediment control berm shall be placed uncompacted in a windrow at locations shown on the plans or as directed by the engineer.
2. Parallel to the base of the slope, or around the perimeter of other affected areas, construct a 1 to 3 foot high by 2.5 to 3 foot wide berm (see Figure 1). For maximum water treatment ability or for steep slopes, construct a 1.5 to 3 foot high trapezoidal berm that is a minimum of 4 feet wide at the base (see Figure 2). In extreme conditions, or where specified by the engineer, a second berm shall be constructed at the top of the slope. Engineer will specify berm requirements.
3. If berm is to be left as permanent or part of the natural landscape, the compost berm may be seeded during application for permanent vegetation.
4. Do not use compost or wood mulch berms in any runoff channels or concentrated flow areas.
5. Wood mulch shall consist of tree and shrub debris resulting from clearing and grubbing and shall be ground by the mechanical means such as a chipper, hammermill, tub grinder or other approved method. Mulch sizing varies with a maximum width of 2" and a maximum length of 10".

Maintenance for Mulch and Compost Filter Beam:

1. Berm shall be reshaped and material added as necessary to maintain function and dimensions.
2. Breaches in the berm shall be repaired promptly.

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

AMERICAN PUBLIC WORKS ASSOCIATION	
APWA Kansas City Metro Chapter	KANSAS CITY METRO CHAPTER
WATTLES/BIODEGRADABLE LOG AND MULCH/COMPOST FILTER BERM	STANDARD DRAWING NUMBER ESC-04 ADOPTED: 10/24/2016

RELEASED FOR CONSTRUCTION
As Noted on Plan Review
Development Services Department
Lee's Summit, Missouri
07/05/2024

REV	DATE	DESCRIPTION	DSN	DWN	CHK
3	6/24/24	CITY COMMENTS/PR NO. 2	DDW	TGN	
2	5/16/24	CITY COMMENTS/PR NO. 1	DDW	NJN	
1	4/23/24	ADDENDUM 2/PER CITY COMMENTS	DDW	NJN	
0	3/29/24	ISSUED FOR BID/CITY REVIEW	DDW	NJN	

STATE OF MISSOURI
DAVID D. WOOD
NUMBER PE-2011037427
PROFESSIONAL ENGINEER
6.24.2024

DAVID D. WOOD
ENGINEER
MO # 2011037427

KAW VALLEY ENGINEERING
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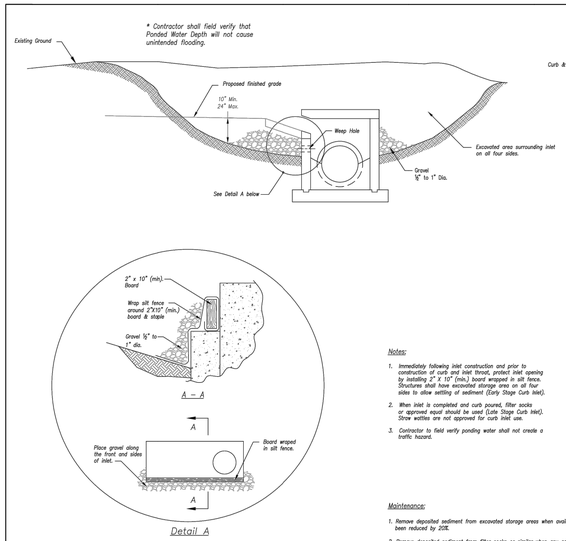
PH. (913) 894-5150
lx@kveng.com | www.kveng.com

KAW VALLEY ENGINEERING, INC., IS AUTHORIZED TO OFFER ENGINEERING SERVICES BY MISSOURI STATE CERTIFICATE OF AUTHORITY # 000842. EXPIRES 12/31/25

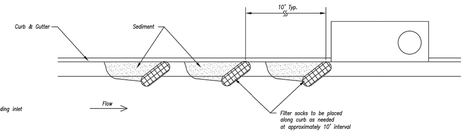
LEE'S SUMMIT HS - EAST PARKING LOT
400 SE BLUE PARKWAY
LEE'S SUMMIT, MISSOURI 64063

CONSTRUCTION DOCUMENTS PHASE I
EROSION CONTROL DETAILS

PROJ. NO. C23_1880
DESIGNER DDW
DRAWN BY NJN
CFN 1880DET
SHEET C490
REV 3



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



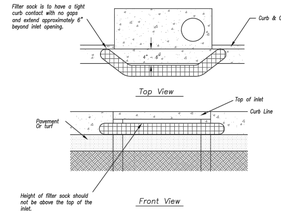
On Grade Curb Inlet Protection

Notes:

1. Immediately following inlet construction and prior to construction of curb and inlet throat, protect inlet opening by installing 2" X 10" (min.) board wrapped in silt fence. Structures 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 socks or approved equal should be used (Late Stage Curb Inlet). Straw wattles are not approved for curb inlet use.
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.

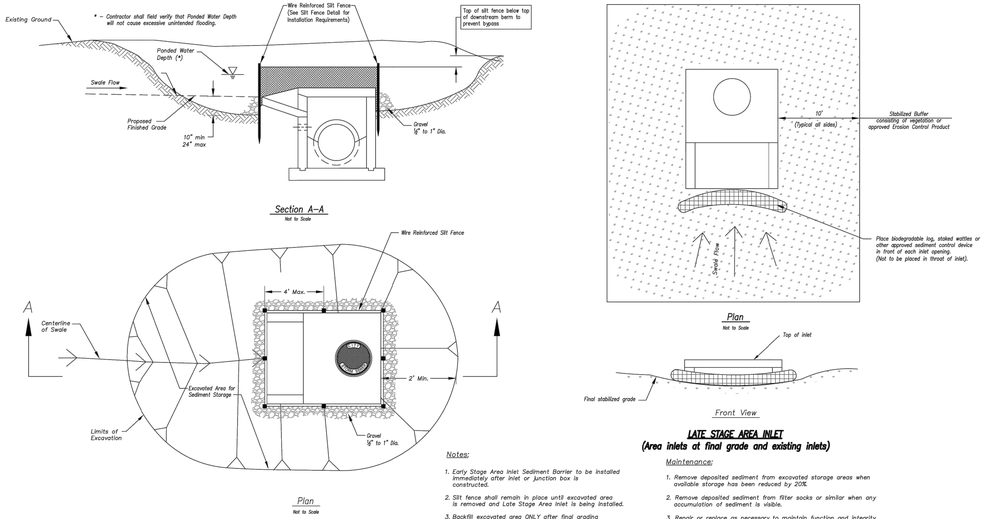


Sump Inlet Sediment Filter

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

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



Notes:

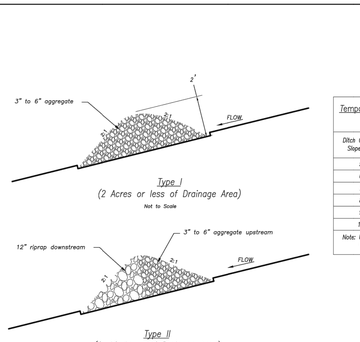
1. Early Stage Area Inlet Sediment Barrier to be installed immediately after inlet or junction box is constructed.
2. Silt fence shall remain in place until excavated area is removed and Late Stage Area Inlet is being installed.
3. Backfill excavated area ONLY after final grading of the site. Stabilization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

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.

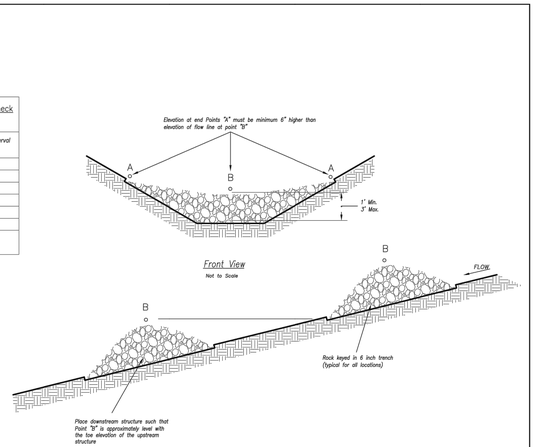
Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

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



ROCK DITCH CHECK

Temporary Rock Ditch Check Spacing	
Ditch Centerline Slope (ft)	Spacing Interval (feet)
5.0	60
6.0	50
7.0	43
8.0	36
9.0	33
10.0	29
Note: Use this spacing only for Rock Ditch Checks.	



Notes:

1. Rock check dams shall be used only for drainage areas less that 10 acres unless approved by the City Engineer.
2. Use rock checks only in situations where the ditch slope exceeds 6%.

Maintenance:

1. Remove and dispose of sediment deposits when the deposit approaches ½ the height of the ditch check.
2. Replace and reshape as necessary to maintain function and integrity of installation.

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

AMERICAN PUBLIC WORKS ASSOCIATION	KANSAS CITY METRO CHAPTER	
ROCK DITCH CHECKS	STANDARD DRAWING NUMBER ESC-10	ADOPTED: 10/24/2016

PERMANENT SEEDING:

DISTURBED AREAS ARE TO BE SEEDED AS NOTED. APPLICATION OF SEED SHALL BE IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS. SEED MIX TO BE USED SHALL BE IN ACCORDANCE WITH APWA SPECIFICATION 2401.2 A1, SEEDING MIX # 1 (TURF AREAS) WITH THE FOLLOWING EXCEPTIONS. BLEND SHALL BE 90% FESCUE (THREEPART) AND 10% KENTUCKY BLUEGRASS.

PREPARATION OF THE SEED BED

UNLESS NOTED OTHERWISE ON THE LANDSCAPE PLANS AND SPECIFICATIONS ALL DISTURBED AREAS SHALL BE PREPPED FOR SEEDING AND SODDING IN ACCORDANCE WITH KANSAS CITY METROPOLITAN CHAPTER OF APWA SPECIFICATIONS SECTION 2406. THE AREA TO BE SEEDED SHALL BE THOROUGHLY TILLED TO A DEPTH OF AT LEAST THREE (3) INCHES BY DISCING, HARROWING OR OTHER APPROVED METHODS UNTIL THE SOIL IS WELL PULVERIZED. AFTER COMPLETION OF THE TILLING OPERATION, THE SURFACE SHALL BE CLEARED OF ALL STONES, STUMPS, OR OTHER OBJECTS LARGER THAN 1–1/2 INCHES IN DIAMETER, AND OF ROOTS, WIRE, GRADE STAKES, AND OTHER OBJECTS THAT MIGHT HINDER MAINTENANCE OPERATIONS.

REFERENCE APWA SPECIFICATIONS SECTION 2401.3 FOR ADDITIONAL INFORMATION.

PLACEMENT OF SEED

SEEDING SHALL BE ACCOMPLISHED BY HYDROSEEDING. REFERENCE APWA SECTION 2404. CONSTRUCTION SHALL COMPLY WITH SECTION 2404.3.

CONTRACTOR IS RESPONSIBLE FOR ONGOING MAINTENANCE, PROTECTION AND REPAIR OF TEMPORARY AND PERMANENT SEED AREAS. COORDINATE PLACEMENT OF INTERMEDIATE EROSION CONTROL MEASURES AS REQUIRED TO REDUCE CONCENTRATED FLOWS FROM RUNOFF.

REFERENCE APWA SPECIFICATIONS SECTION 2401.3 FOR ADDITIONAL INFORMATION RELATED TO PREPERATION OF SEEC BED FERTILIZATION AND MAINTENANCE PERIOD.

FINAL ACCEPTANCE

THE MDNR SITE DISTURBANCE PERMIT SHALL BE MAINTAINED IN AN "OPEN" STATUS UNTIL FINAL ACCEPTANCE IS PROVIDED BY THE OWNER IN ACCORDANCE WITH APWA SPECIFICATION SECTION 2400.6.

SEDIMENTATION AND EROSION CONTROL MEASURES:

TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL INCLUDE AS A MINIMUM, BUT NOT BE LIMITED TO:

1. TEMPORARY SEDIMENT FENCE– SILT FENCE WILL BE INSTALLED AS SHOWN ON THE DRAWING. THIS WILL SLOW RUNOFF VELOCITIES AND MINIMIZE EROSION OF THE SLOPES SHOWN ON THE PLANS.
2. TEMPORARY INLET PROTECTION.

PERMANENT SEDIMENTATION AND EROSION CONTROL MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO:

1. STABILIZATION OF PIPE INLETS AND OUTLETS WHERE INDICATED.
2. HYDROSEEDING OR LANDSCAPING OF ALL DISTURBED AREAS.

EROSION CONTROL NOTES:

1. PROPERTY LINE IS LIMIT OF DISTURBANCE EXCEPT AS SHOWN.
2. ALL DISTURBED AREAS SHALL BE STABILIZED WITH VEGETATION WITHIN 14 DAYS OF COMPLETION OF WORK. AS WORK PROGRESSES AROUND SITE, SURROUNDING AREAS SHALL BE TEMPORARILY SEEDED.
3. EROSION CONTROLS SHALL BE INSTALLED AND MAINTAINED BY CONTRACTOR.
4. TEMPORARY SEDIMENT FENCE OR WATTLES TO REMAIN UNTIL ADEQUATE VEGETATION IS ESTABLISHED.
5. MUD AND DEBRIS SHALL BE CLEANED UP AT THE CONCLUSION OF EACH WORKING DAY, OR AFTER EACH RAINFALL IF SILT IS PRESENT.
6. INSPECTION, MAINTENANCE AND REPAIR OF EROSION CONTROL DEVICES SHALL BE ONGOING THROUGHOUT THE LIFE OF CONSTRUCTION TO KEEP THE DEVICES IN OPERABLE CONDITION AT ALL TIMES. ADDITIONAL MEASURES SHALL BE INSTALLED AS REQUIRED BY ACTUAL FIELD CONDITIONS AND/OR OWNER'S INSPECTION AGENCY.

REV	DATE	DESCRIPTION	DSN	DWN	CHK
3	6/24/24	CITY COMMENTS/PR NO. 2	DDW	TGN	
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STATE OF MISSOURI
DAVID D WOOD
NUMBER PE-2011037427
PROFESSIONAL ENGINEER
4/24/2024

DAVID D. WOOD
ENGINEER
MO # 2011037427

KAW VALLEY ENGINEERING
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14700 WEST 114TH TERRACE
LENEXA, KANSAS 66215
PH. (913) 894-5150
ix@kveng.com | www.kveng.com

LEE'S SUMMIT HS - EAST PARKING LOT
400 SE BLUE PARKWAY
LEE'S SUMMIT, MISSOURI 64063

CONSTRUCTION DOCUMENTS PHASE I
EROSION CONTROL DETAILS

RELEASED FOR CONSTRUCTION
As Noted on Plan Review
Development Services Department
Lee's Summit, Missouri
07/05/2024

PROJ. NO. C23_1880
DESIGNER DDW | DRAWN BY NJN
CFN 1880DET
SHEET C495 | REV 3

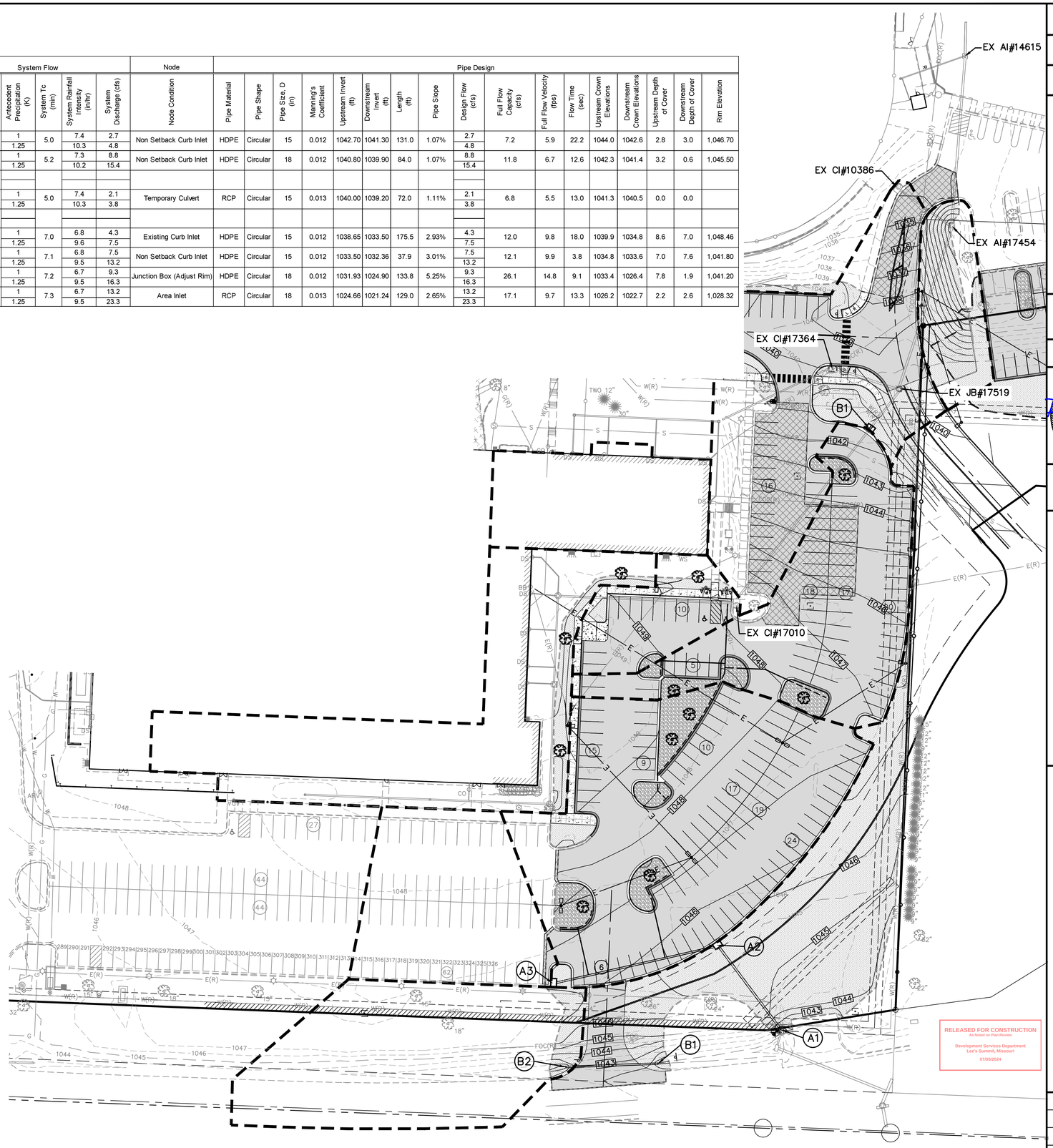
Storm Sewer Calculations 3-5-2024
Lee's Summit School District - LSHS Southeast Parking Lot
KVE Project # C23D1880

		Overland Flow											System Flow						Node	Pipe Design														
KVE	Design Storm (years)	Structure	Downstream Structure	Pipe	Tributary Area, A (ac)	Impervious Area (ac)	Runoff Coefficient C	Antecedent Precipitation (K)	A x C (ac)	Time of Concentration, Tc (min)	Rainfall Intensity (in/hr)	Tributary Runoff (cfs)	Total Area, A (ac)	Summation of Inlet A x C (ac)	Antecedent Precipitation (K)	System Tc (min)	System Rainfall Intensity (in/hr)	System Discharge (cfs)	Node Condition	Pipe Material	Pipe Shape	Pipe Size, D (in)	Manning's Coefficient	Upstream Invert (ft)	Downstream Invert (ft)	Length (ft)	Pipe Slope	Design Flow (cfs)	Full Flow Capacity (cfs)	Full Flow Velocity (fps)	Flow Time (sec)	Upstream Crown Elevations	Downstream Crown Elevations	Upstream Depth of Cover	Downstream Depth of Cover	Rim Elevation
Lee's Summit East Parking Lot - Phase I Private Storm Sewer	10-year	A3	A2	A3 - A2	0.41	0.41	0.90	1	0.37	5.0	7.4	2.7	0.41	0.37	1	5.0	7.4	2.7	Non Setback Curb Inlet	HDPE	Circular	15	0.012	1042.70	1041.30	131.0	1.07%	2.7	7.2	5.9	22.2	1044.0	1042.6	2.8	3.0	1,046.70
	100-year							1.25			10.3	4.8			1.25		10.3	4.8										4.8								
	10-year	A2	A1	A2 - A1	1.00	0.89	0.83	1	0.83	5.0	7.4	6.1	1.41	1.20	1	5.2	7.3	8.8	Non Setback Curb Inlet	HDPE	Circular	18	0.012	1040.80	1039.90	84.0	1.07%	8.8	11.8	6.7	12.6	1042.3	1041.4	3.2	0.6	1,045.50
	100-year							1.25			10.3	10.8			1.25		10.2	15.4										15.4								
	10-year	B2	B1	B2 - B1	0.59	0.19	0.49	1	0.29	5.0	7.4	2.1	0.59	0.29	1	5.0	7.4	2.1	Temporary Culvert	RCP	Circular	15	0.013	1040.00	1039.20	72.0	1.11%	2.1	6.8	5.5	13.0	1041.3	1040.5	0.0	0.0	
	100-year							1.25			10.3	3.8			1.25		10.3	3.8										3.8								
	10-year	C#17010	C1	C#17010 - C1	0.18	0.14	0.77	1	0.14	5.3	7.3	1.0	0.92	0.63	1	7.0	6.8	4.3	Existing Curb Inlet	HDPE	Circular	15	0.012	1038.65	1033.50	175.5	2.93%	4.3	12.0	9.8	18.0	1039.9	1034.8	8.6	7.0	1,048.46
	100-year							1.25			10.2	1.8			1.25		9.6	7.5										7.5								
	10-year	C1	JB#17519	C1 - JB#17519	0.56	0.51	0.85	1	0.47	5.0	7.4	3.5	1.48	1.10	1	7.1	6.8	7.5	Non Setback Curb Inlet	HDPE	Circular	15	0.012	1033.50	1032.36	37.9	3.01%	7.5	12.1	9.9	3.8	1034.8	1033.6	7.0	7.6	1,041.80
	100-year							1.25			10.3	6.1			1.25		9.5	13.2										13.2								
	10-year	JB#17519	A1 #17454	JB#17519 - A1 #17454									1.78	1.37	1	7.2	6.7	9.3	Junction Box (Adjust Rim)	HDPE	Circular	18	0.012	1031.93	1024.90	133.8	5.25%	9.3	26.1	14.8	9.1	1033.4	1026.4	7.8	1.9	1,041.20
	100-year														1.25		9.5	16.3										16.3								
	10-year	A#17454	A1 #17454	A#17454 - A1 #17454	0.16	0.00	0.30	1	0.05	7.2	6.7	0.3	2.68	1.97	1	7.3	6.7	13.2	Area Inlet	RCP	Circular	18	0.013	1024.66	1021.24	129.0	2.65%	13.2	17.1	9.7	13.3	1026.2	1022.7	2.2	2.6	1,028.32
	100-year							1.25			9.5	0.6			1.25		9.5	23.3										23.3								

Upstream System	10-year	Upstream C#17010	C#17010	Upstream C#17010 - C#17010	0.74	0.45	0.66	1	0.49	7.0	6.8	3.3
	100-year							1.25			9.6	5.9
	10-year	Upstream System JB #17159	JB#17159	Upstream System JB #17159 - JB#17159	0.30	0.30	0.90	1	0.27	5.2	7.3	2.0
	100-year							1.25			10.2	3.5
	10-year	C#10386	A#17454	C#10386 - A#17454	0.74	0.54	0.74	1.5	0.55	6.2	7.0	5.7
	100-year							1.75			9.8	9.4

T_C Calculations 3-5-2024
Lee's Summit School District - LSHS Southeast Parking Lot
KVE Project # C23D1880

Time of Concentration													
Structure	Pipe	Design Storm (years)	Tributary Area, A (ac)	Impervious Area	Runoff Coefficient C	Total Distance	D1	Slope	Inlet Time (min)	D2	Travel Time (min)	Time of Concentration (min)	Notes
A3	A3 - A2	10-year	0.41	0.41	0.90	210	100	1.8	3.0	110	0.2	3.1	5 Min Minimum
		100-year											
A2	A2 - A1	10-year	1.00	0.89	0.83	255	100	2.0	3.8	155	0.3	4.1	5 Min Minimum
		100-year											
B2	B2 - B1	10-year											
		100-year											
C#17010	C#17010 - C1	10-year	0.18	0.14	0.77	130	100	1.5	5.2	30	0.1	5.3	
		100-year											
C1	C1 - JB#17519	10-year	0.56	0.51	0.85	330	100	1.5	4.0	230	0.4	4.4	5 Min Minimum
		100-year											
JB#17519	JB#17519 - A1 #17454	10-year											
		100-year											
A#17454	A#17454 - A1 #17454	10-year	0.16	0.00	0.30	120	100	8.0	7.2	20	0.0	7.2	
		100-year											



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.

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

RELEASED FOR CONSTRUCTION
As Noted on Plan Review
Development Services Department
Lee's Summit, Missouri
07/05/2024

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STATE OF MISSOURI
DAVID D. WOOD
NUMBER PE-2011037427
PROFESSIONAL ENGINEER
4/24/2024

DAVID D. WOOD
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LEE'S SUMMIT HS - EAST PARKING LOT
400 SE BLUE PARKWAY
LE'S SUMMIT, MISSOURI 64063

CONSTRUCTION DOCUMENTS PHASE I
DRAINAGE AREA MAP

PROJ. NO.	C23_1880
DESIGNER	DDW
DRAWN BY	NJN
CFN	1880DAM
SHEET	C600
REV	3

SAFETY NOTICE TO CONTRACTOR

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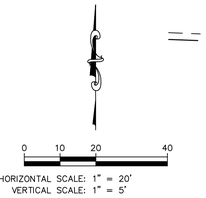
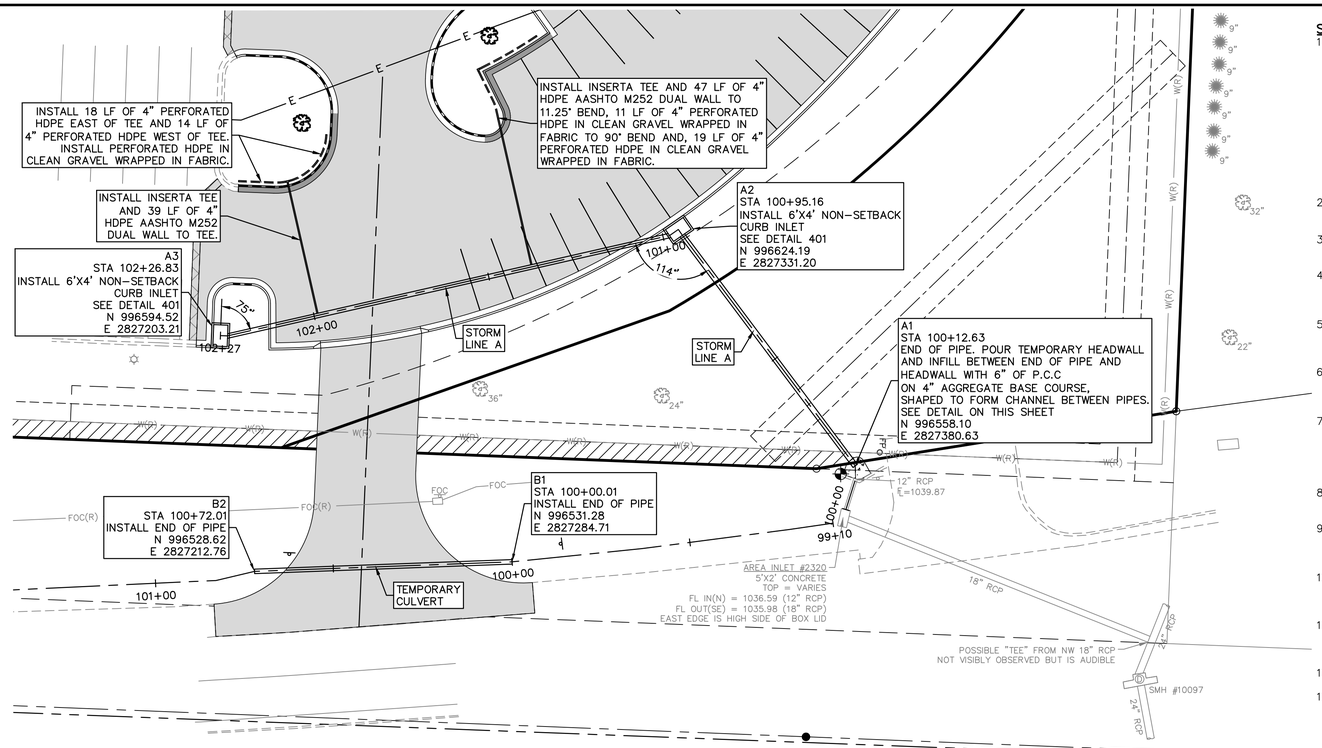
THE CONTRACTOR SHALL EXPOSE EXISTING UTILITIES AT LOCATIONS OF POSSIBLE CONFLICTS PRIOR TO ANY CONSTRUCTION.

DETAILS SEE SHEET C690

401 NON-SETBACK CURB INLET
402 JUNCTION BOX/GRATE INLET



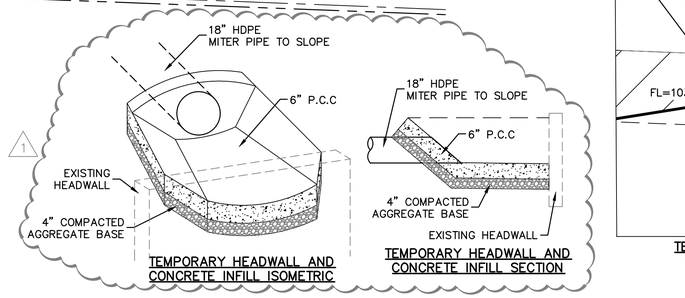
HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: 1" = 5'



PRIVATE STORM SEWER LINES A AND B PLAN

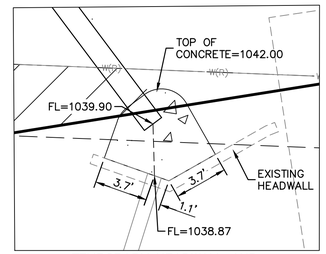
STORM SEWER CONSTRUCTION NOTES:

1. ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH SECTION 2600 STORM SEWER OF THE KANSAS CITY METRO CHAPTER OF APWA SPECIFICATIONS AS ADOPTED AND AMENDED BY THE CITY OF LEE'S SUMMIT, MISSOURI STANDARD SPECIFICATIONS. REFERENCE APWA SPECIFICATION SECTION 2102.4 FOR EXCAVATION, TRENCHING AND BACKFILLING FOR PIPE AND STORM STRUCTURES. ALL EXCAVATION SHALL BE CONSIDERED UNCLASSIFIED. REFER TO THE PROJECT GEOTECHNICAL REPORT AND SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS. COMPACTION TESTS SHALL BE TAKEN EVERY 150' (PER LIFT), AT EACH PAVEMENT CROSSING (PER LIFT) AND AT LOCATIONS DESIGNATED BY THE CITY INSPECTOR OR OWNER'S TESTING AGENCY. 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.
2. PIPE FOR SEWER CONSTRUCTION SHALL CONFORM TO SECTION 2602 UNLESS NOTED OTHERWISE.
3. A MINIMUM OF 18" COVER SHALL BE PROVIDED PRIOR TO AND MAINTAINED AFTER INSTALLATION OF STORM SEWER.
4. ALL COORDINATES FOR CURB INLETS ARE TO THE MIDDLE OF THE INSIDE FRONT FACE. ALL COORDINATES FOR PVC STRUCTURES AND CONCRETE YARD INLETS ARE TO THE CENTER OF THE STRUCTURE.
5. ALL JUNCTION BOXES/AREA INLETS HAVE ONE COORDINATE PROVIDED AT THE CENTER OF STRUCTURE. SEE PLAN FOR CLARIFICATION. ORIENT STRUCTURES PARALLEL TO ADJACENT CURB, BUILDING OR WALL FACE, UNLESS NOTED OTHERWISE.
6. RIM ELEVATION IS PROVIDED AT COORDINATE, UNLESS NOTED OTHERWISE. CONTRACTOR TO ADJUST ELEVATION OF RIM AS REQUIRED TO MATCH SLOPE OF ADJACENT CURB LINE. REFER TO GRADING PLAN (C300 SERIES SHEETS).
7. ALL EXISTING UTILITIES INDICATED ON THE DRAWING 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 THEIR EXPENSE.
8. ALL BACKFILL SHALL BE COMPACTED TO 95 PERCENT STANDARD DENSITY AT OPTIMUM MOISTURE.
9. ALL EXCAVATION BENEATH THE STREETS AND PARKING LOTS FOR DRAINAGE PIPE LESS THAN 4'-0" IN DIAMETER SHALL BE BACKFILLED WITH AGGREGATE TO FOUR FEET (4') PAST BACK OF CURB IN ACCORDANCE WITH APWA SPECIFICATIONS SECTION 2102.4.J.
10. 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 THEIR EXPENSE.
11. IF PRECAST STORM STRUCTURES ARE TO BE USED ON THIS PROJECT, THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND HAVE THEM APPROVED BY THE ENGINEER PRIOR TO FABRICATION OF THE STRUCTURES. FAILURE TO DO SO SHALL BE CAUSE FOR REJECTION.
12. ALL HDPE PIPE JOINTS SHALL BE WATER TIGHT.
13. SEE LANDSCAPE PLAN BED PIPE DETAIL ON SHEET C690.

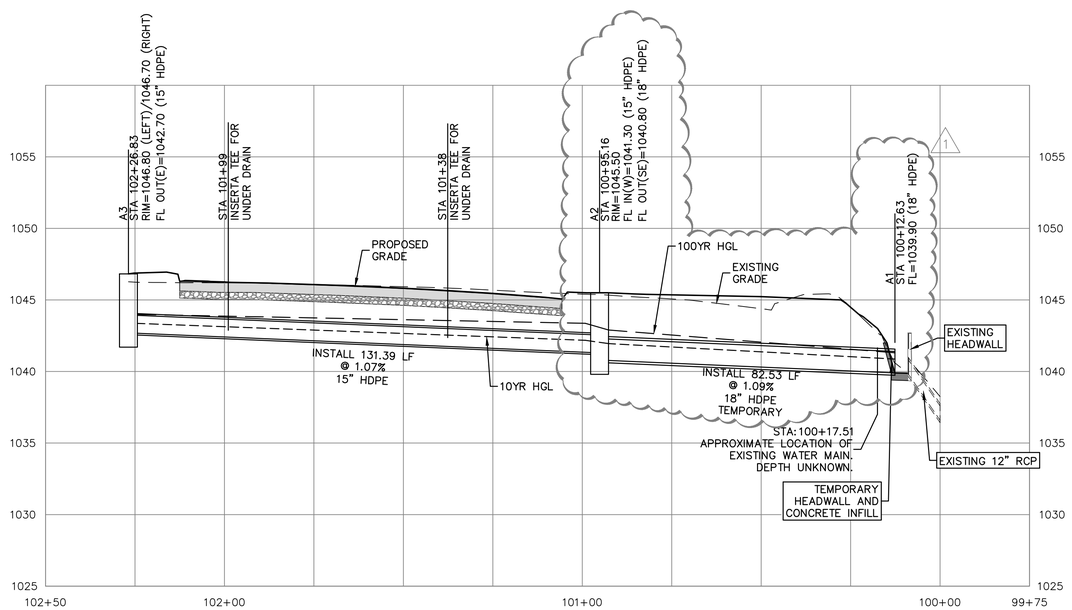


TEMPORARY HEADWALL AND CONCRETE INFILL ISOMETRIC

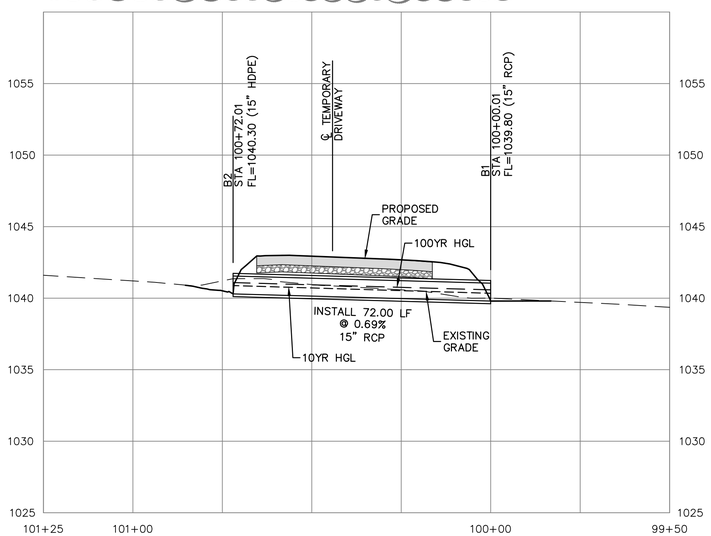
TEMPORARY HEADWALL AND CONCRETE INFILL SECTION



TEMPORARY HEADWALL AND CONCRETE INFILL DETAIL



PRIVATE STORM SEWER LINE A PROFILE



PRIVATE STORM SEWER LINE B PROFILE
*CONTRACTOR MAY ADJUST LENGTH TO USE STOCK LAYING LENGTHS

RELEASED FOR CONSTRUCTION
As Noted on Plan Review
Development Services Department
Lee's Summit, Missouri
07/05/2024

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2	5/16/24	CITY COMMENTS/PR NO. 1	DDW	NJN	
1	4/23/24	ADDENDUM 2/PER CITY COMMENTS	DDW	NJN	
0	3/29/24	ISSUED FOR BID/CITY REVIEW	DDW	NJN	

STATE OF MISSOURI
DAVID D WOOD
NUMBER
PE-2011037427
PROFESSIONAL ENGINEER
4/24/2024

DAVID D. WOOD
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MO # 2011037427

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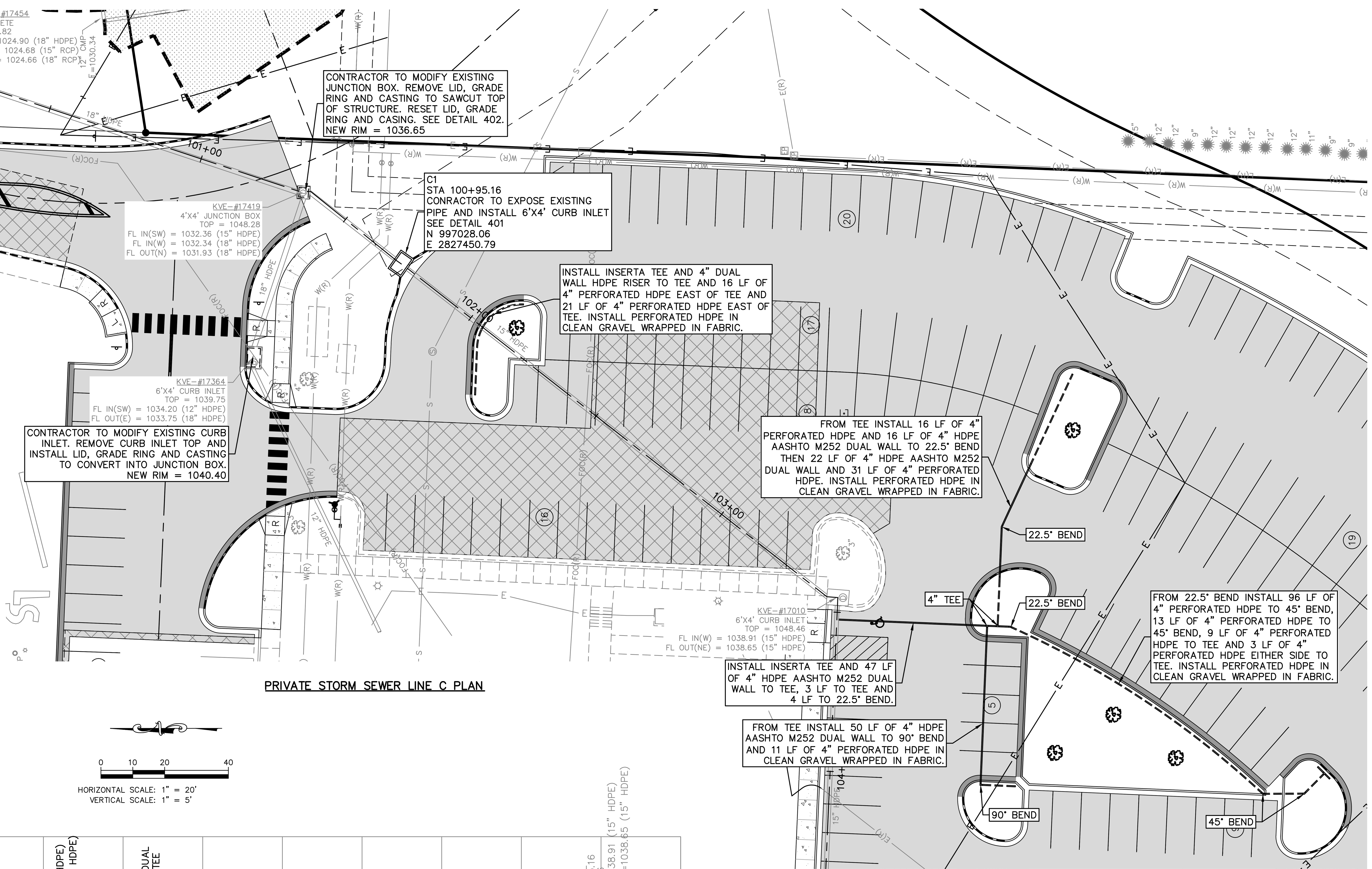
LEE'S SUMMIT HS - EAST PARKING LOT
400 SE BLUE PARKWAY
LEE'S SUMMIT, MISSOURI 64063

CONSTRUCTION DOCUMENTS PHASE I
STORM SEWER PLAN AND PROFILE

PROJ. NO.	C23_1880	
DESIGNER	DDW	DRAWN BY NJN
CFN	1880DPP	
SHEET	C610	REV 3



PRIVATE STORM SEWER LINE C PLAN

0 10 20 40
HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: 1" = 5'

STORM SEWER CONSTRUCTION NOTES:

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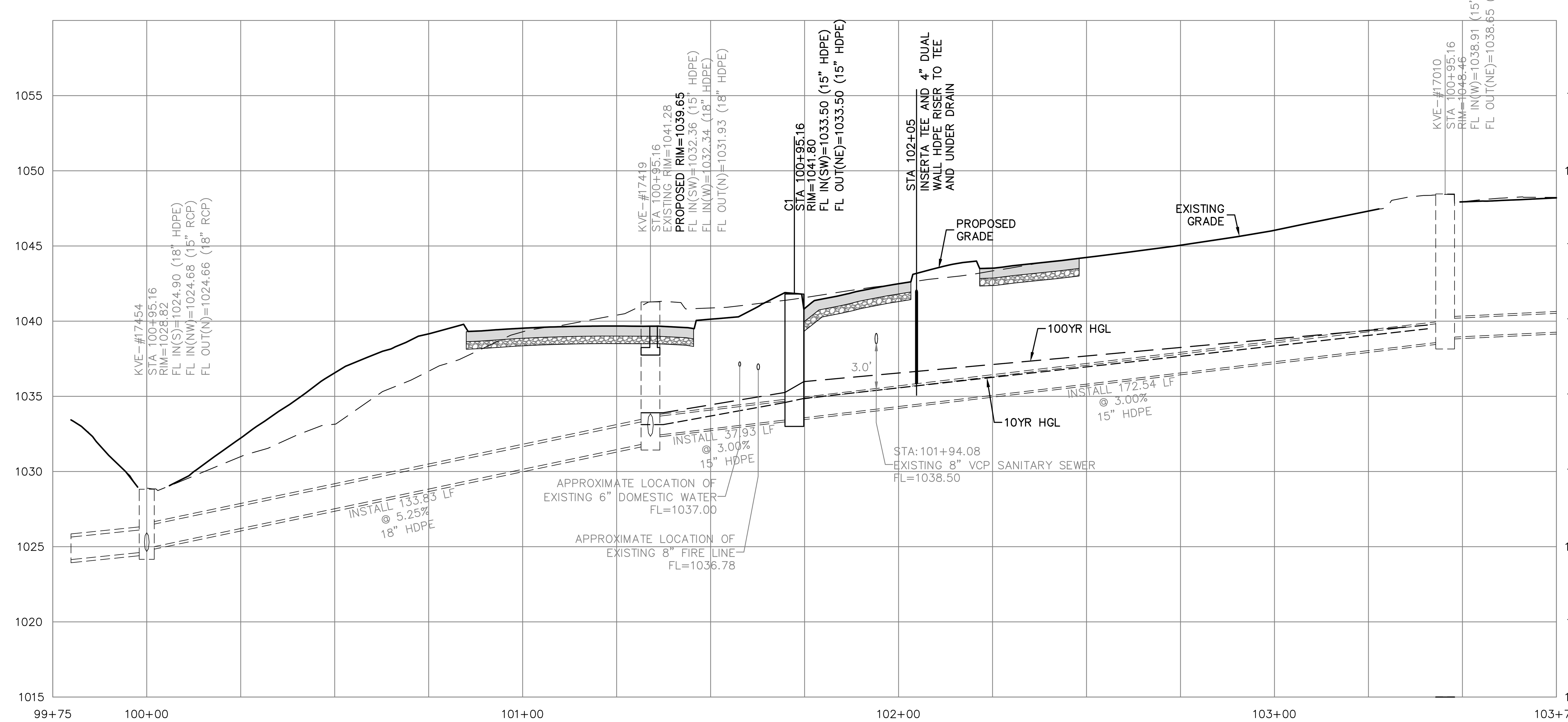
2. PIPE FOR SEWER CONSTRUCTION SHALL CONFORM TO SECTION 2602 UNLESS NOTED OTHERWISE.
3. A MINIMUM OF 18" COVER SHALL BE PROVIDED PRIOR TO AND MAINTAINED AFTER INSTALLATION OF STORM SEWER.
4. ALL COORDINATES FOR CURB INLETS ARE TO THE MIDDLE OF THE INSIDE FRONT FACE. ALL COORDINATES FOR PVC STRUCTURES AND CONCRETE YARD INLETS ARE TO THE CENTER OF THE STRUCTURE.
5. ALL JUNCTION BOXES/AREA INLETS HAVE ONE COORDINATE PROVIDED AT THE CENTER OF STRUCTURE. SEE PLAN FOR CLARIFICATION. ORIENT STRUCTURES PARALLEL TO ADJACENT CURB, BUILDING OR WALL FACE, UNLESS NOTED OTHERWISE.
6. RIM ELEVATION IS PROVIDED AT COORDINATE, UNLESS NOTED OTHERWISE. CONTRACTOR TO ADJUST ELEVATION OF RIM AS REQUIRED TO MATCH SLOPE OF ADJACENT CURB LINE. REFER TO GRADING PLAN (C300 SERIES SHEETS).
7. ALL EXISTING UTILITIES INDICATED ON THE DRAWING 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 THEIR EXPENSE.
8. ALL BACKFILL SHALL BE COMPACTED TO 95 PERCENT STANDARD DENSITY AT OPTIMUM MOISTURE.
9. ALL EXCAVATION BENEATH THE STREETS AND PARKING LOTS FOR DRAINAGE PIPE LESS THAN 4'-0" IN DIAMETER SHALL BE BACKFILLED WITH AGGREGATE TO FOUR FEET (4') PAST BACK OF CURB IN ACCORDANCE WITH APWA SPECIFICATIONS SECTION 2102.4J.
10. 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 THEIR EXPENSE.
11. IF PRECAST STORM STRUCTURES ARE TO BE USED ON THIS PROJECT, THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND HAVE THEM APPROVED BY THE ENGINEER PRIOR TO FABRICATION OF THE STRUCTURES. FAILURE TO DO SO SHALL BE CAUSE FOR REJECTION.
12. ALL HDPE PIPE JOINTS SHALL BE WATER TIGHT.
13. SEE LANDSCAPE PLAN BED PIPE DETAIL ON SHEET C690.



PRIVATE STORM SEWER LINE C PROFILE

DETAILS SEE SHEET C690
401 NON-SETBACK CURB INLET
402 JUNCTION BOX/GRATE INLET

RELEASED FOR CONSTRUCTION
As Noted on Plan Review
Development Services Department
Lee's Summit, Missouri
07/09/2024

811
Know what's below.
Call before you dig.

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

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.

REV	DATE	DESCRIPTION	DSN	DWN	CHK
3	6/24/24	CITY COMMENTS/PR NO. 2	DDW	TGN	
2	5/16/24	CITY COMMENTS/PR NO. 1	DDW	NJN	
1	4/23/24	ADDENDUM 2/PER CITY COMMENTS	DDW	NJN	
0	3/29/24	ISSUED FOR BID/CITY REVIEW	DDW	NJN	

STATE OF MISSOURI
DAVID D. WOOD
NUMBER PE-2011037427
PROFESSIONAL ENGINEER
6.24.24

DAVID D. WOOD
ENGINEER
MO # 2011037427

KAW VALLEY ENGINEERING
14700 WEST 114TH TERRACE
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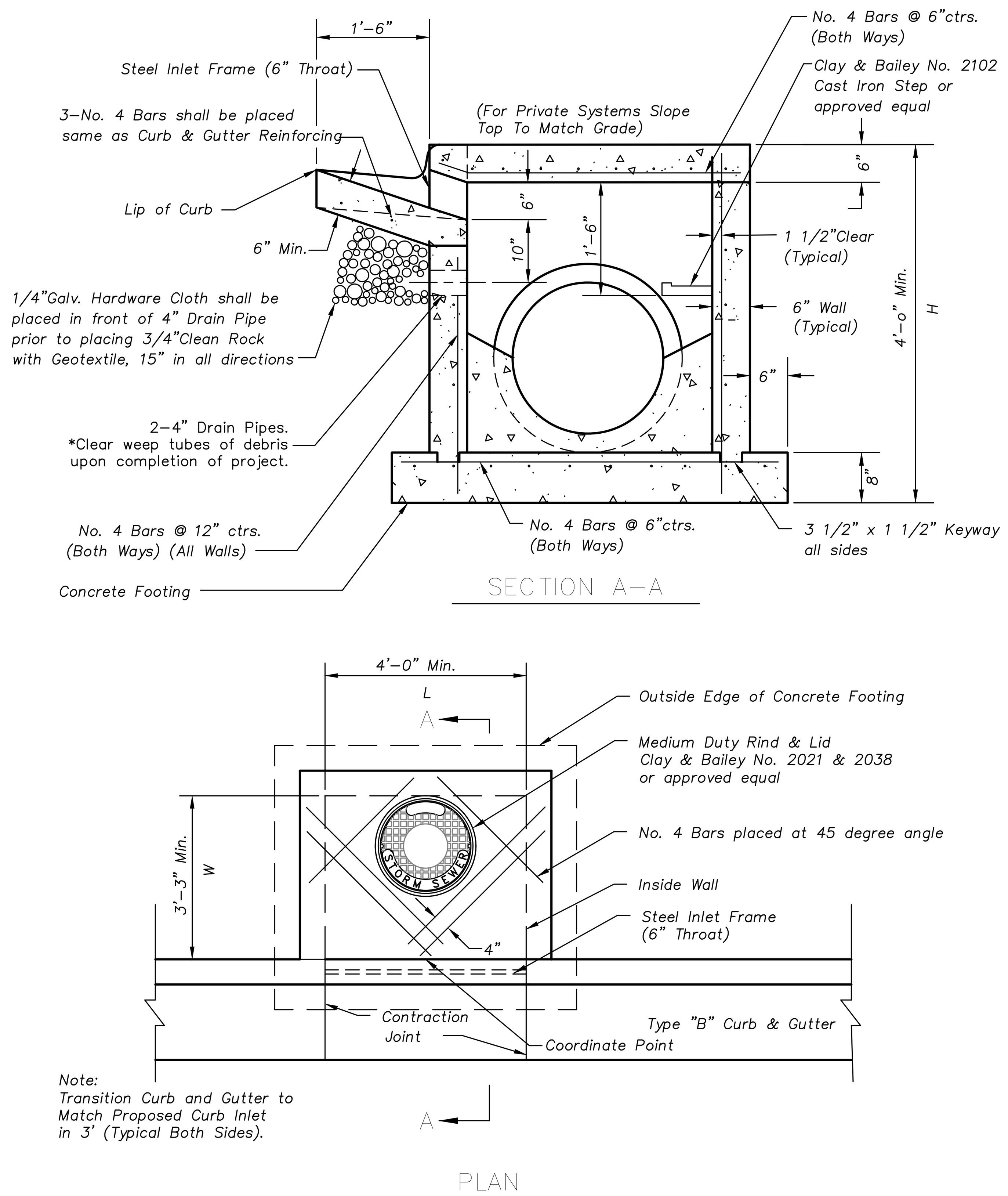
lx@kveng.com | www.kveng.com
KAW VALLEY ENGINEERING, INC., IS AUTHORIZED TO OFFER ENGINEERING SERVICES BY MISSOURI STATE CERTIFICATE OF AUTHORITY # 000842. EXPIRES 12/31/25

LEE'S SUMMIT HS - EAST PARKING LOT
400 SE BLUE PARKWAY
LEE'S SUMMIT, MISSOURI 64063

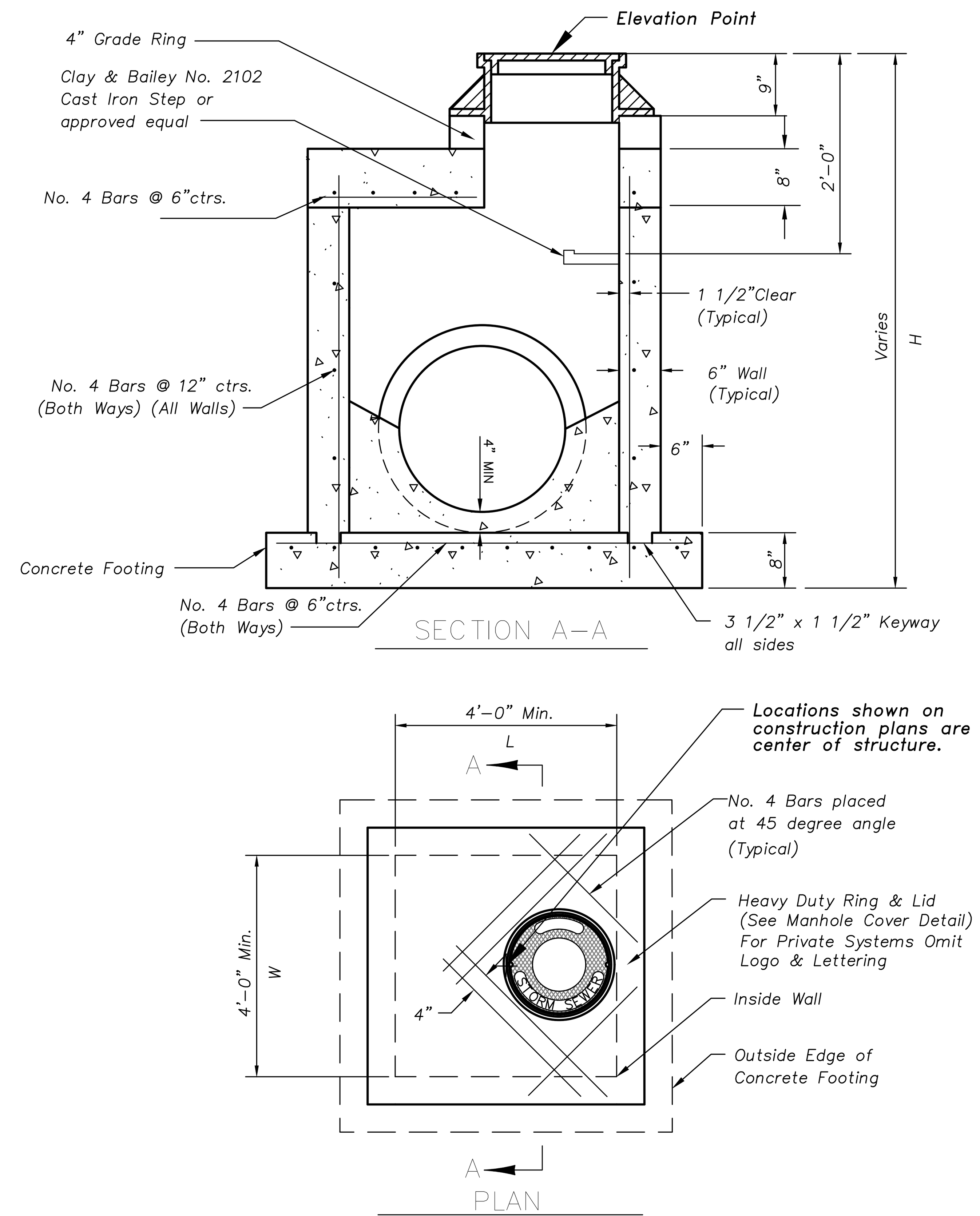
CONSTRUCTION DOCUMENTS PHASE I
STORM SEWER PLAN AND PROFILE

PROJ. NO. C23_1880
DESIGNER DDW
DRAWN BY NJN
CFN 1880DPP
SHEET C620
REV 3

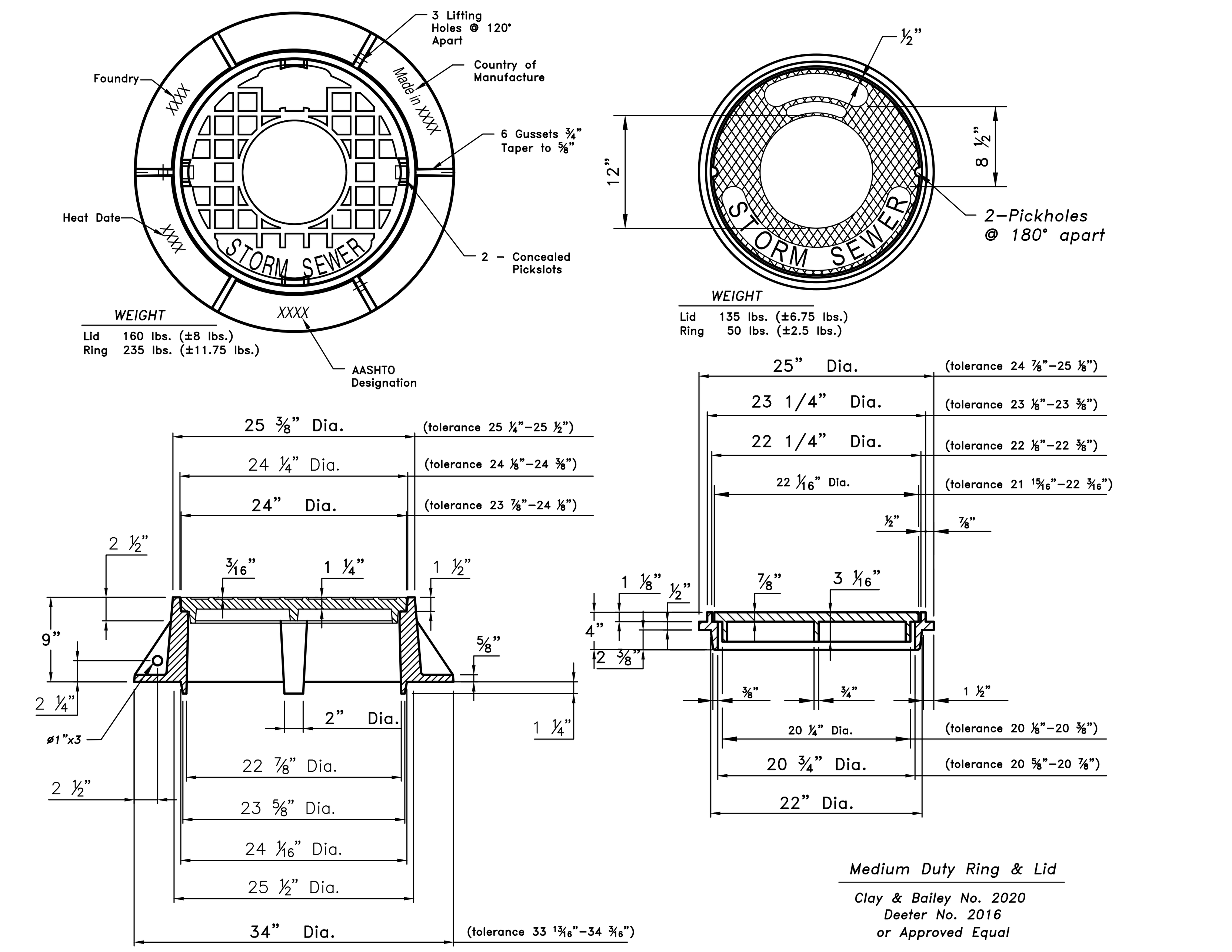


NON-SETBACK CURB INLET 401

USE STEEL INLET FRAME WITH 6" THROAT
PARKING LOTS ONLY



JUNCTION BOX 402



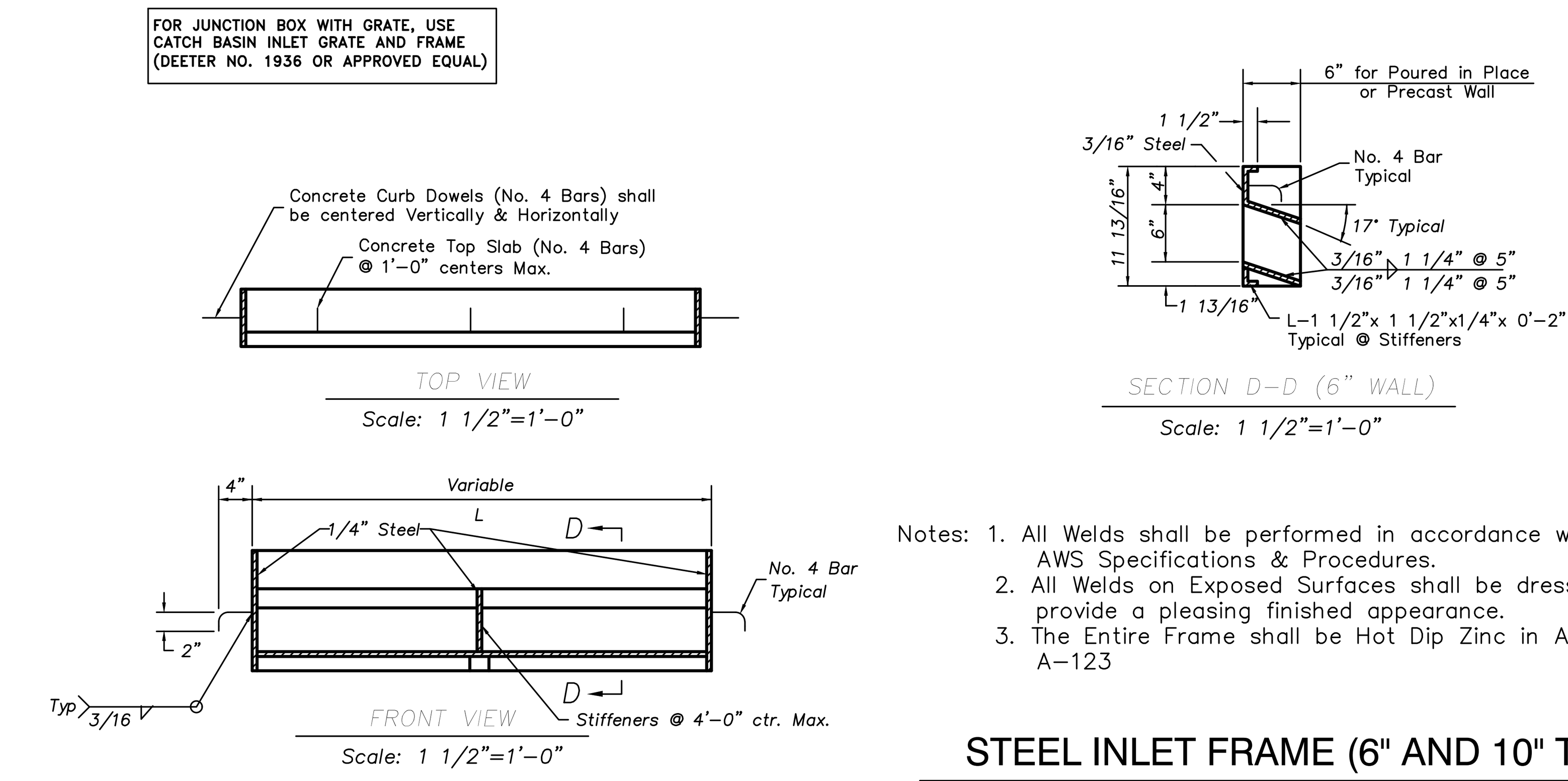
Manhole Cover Notes:

1. Casting shall comply with ASTM A-48 and AASHTO M306-04.
2. As-cast dimensions may vary ± 1/16 inch per foot.
3. Each Casting shall be marked in accordance with AASHTO M 306-04, Sec.9.
4. Raised surfaces shall be cast as non-skid finish.
5. Horizontal bearing surfaces shall be machined.
6. Paint is optional unless specified.

MANHOLE COVER

(Public Systems Only)

SCALE: 1 ½" = 1'-0"
(Rev. Feb. 2005)



Notes: 1. All Welds shall be performed in accordance with appropriate AWS Specifications & Procedures.
2. All Welds on Exposed Surfaces shall be dressed so as to provide a pleasing finished appearance.
3. The Entire Frame shall be Hot Dip Zinc in Accordance ASTM A–123

STEEL INLET FRAME (6" AND 10" THROAT)

USE 6" WITH NON–SETBACK CURB INLET/AREA INLET
USE 10" WITH SETBACK CURB INLET

JUNCTION BOX YARD INLETS AND CURB INLET NOTES

GENERAL

1. ALL STORM SEWER STRUCTURES SHALL BE PRE–CAST OR POURED IN PLACE. IF PRE–CAST STRUCTURES ARE USED FOR PUBLICLY FINANCED, MAINTAINED OR ADMINISTERED CONSTRUCTION, THE TOPS SHALL BE POURED IN PLACE AND THE WALL STEEL SHALL BE LEFT EXPOSED TO A HEIGHT 2" BELOW THE FINISH TOP ELEVATION, OR AS DIRECTED BY THE CITY ENGINEER.
2. PRE–CAST SHOP DRAWINGS ARE TO BE APPROVED BY THE ENGINEER.
3. DO NOT SCALE THESE DRAWINGS FOR DIMENSIONS OR CLEARANCES. ANY QUESTIONS REGARDING DIMENSIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO CONSTRUCTION.
4. THE FIRST DIMENSION LISTED IN THE CONSTRUCTION NOTES IS THE "L" DIMENSION. THE SECOND DIMENSION IS THE "W" DIMENSION. THE CONCRETE THICKNESS AND REINFORCEMENT SHOWN IS FOR BOXES WITH ("L"+"H") AND ("W"+"H") LESS THEN OR EQUAL TO 20. FOR BOXES WITH EITHER OF THESE CALCULATIONS GREATER THAN 20, A SPECIAL DESIGN IS REQUIRED. PRECASTER SHALL PROVIDE DESIGN CALCULATIONS FOR DEEP STRUCTURES TO ENGINEER PRIOR TO CONSTRUCTING BOX.

CONCRETE

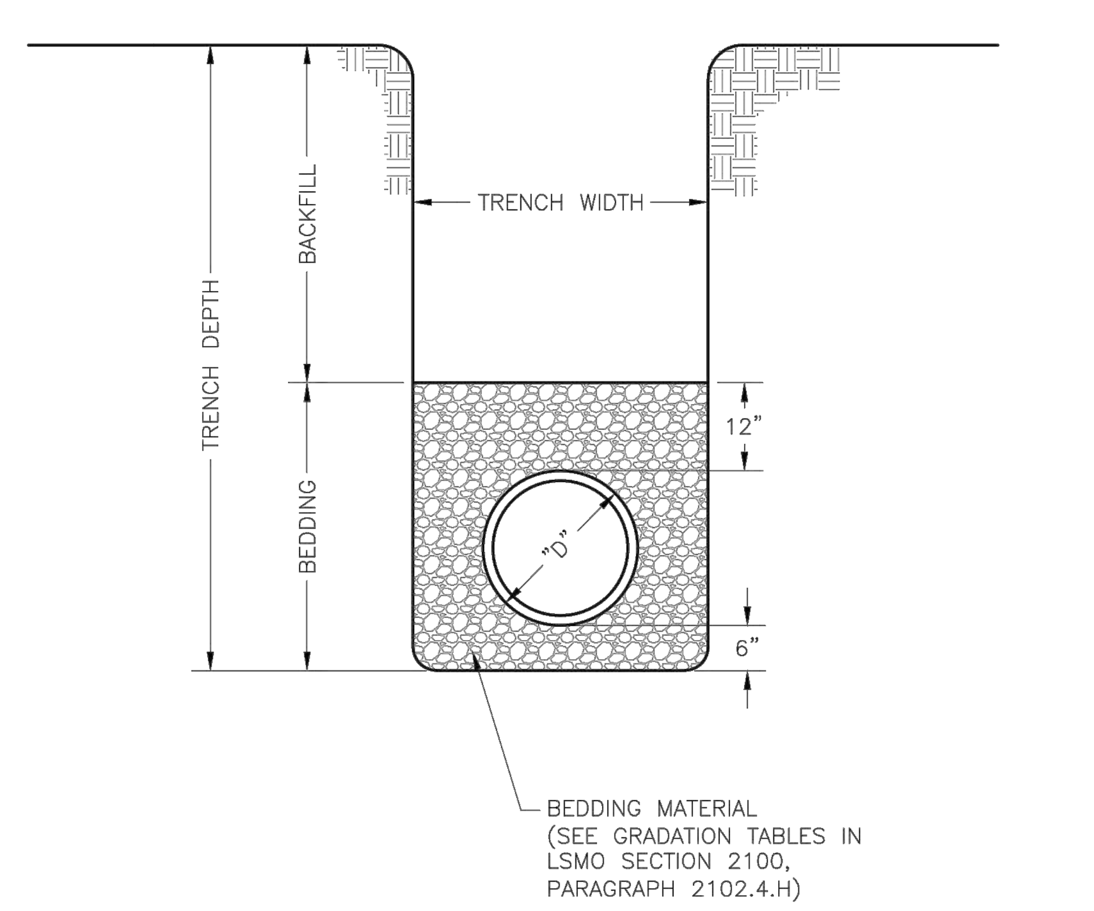
5. CONCRETE USED IN THIS WORK SHALL BE CLASS "A" CONCRETE (AE) THROUGHOUT, AND SHALL MEET THE REQUIREMENTS OF THE KANSAS CITY METROPOLITAN CHAPTER OF THE APWA TECHNICAL SPECIFICATIONS.
6. CONCRETE CONSTRUCTION SHALL MEET THE APPLICABLE REQUIREMENTS OF STANDARD SPECIFICATIONS FOR MCIB, LATEST EDITION, EXCEPT AS MODIFIED IN THE APWA TECHNICAL SPECIFICATIONS.
7. INLET FLOORS SHALL BE SHAPED WITH NON–REINFORCED CONCRETE INVERTS TO PROVIDE SMOOTH FLOW.
8. BEVEL ALL EXPOSED EDGES WITH ¾" TRIANGULAR MOLDING.
9. 8" SOLID CONCRETE BLOCK OR BRICK MAY BE USED IN WALLS IN LIEU OF POURED CONCRETE WHERE NEITHER "H"+"L" NOR "H"+"W" (IN FEET) EXCEED FOURTEEN. BLOCK OR BRICK MAY BE USED IN ANY BOX WHERE "H" IS 5' OR LESS.
10. ALL CRUSHED STONE USED AS AGGREGATE FOR CONCRETE CONSTRUCTION SHALL BE OBTAINED FROM QUARRIES AND BEDS DESIGNATED BY THE MISSOURI DEPARTMENT OF TRANSPORTATION AS MEETING DURABILITY REQUIREMENTS OF KANSAS CITY METROPOLITAN CHAPTER OF THE APWA TECHNICAL SPECIFICATIONS.

REINFORCING STEEL

11. REINFORCING STEEL SHALL BE NEW BILLET, MINIMUM GRADE 60 AS PER ASTM A615, AND SHALL BE BENT COLD.
12. ALL DIMENSIONS RELATIVE TO REINFORCING STEEL ARE TO CENTERLINE OF BARS. 2" CLEARANCE SHALL BE PROVIDED THROUGHOUT UNLESS NOTED OTHERWISE. TOLERANCE OF +/– ⅛" SHALL BE PERMITTED.
13. ALL LAP SPLICES NOT SHOWN SHALL BE A MINIMUM OF 40 BAR DIAMETERS IN LENGTH.
14. ALL REINFORCING STEEL SHALL BE SUPPORTED ON FABRICATED STEEL BAR SUPPORTS @ 3'–0" MAXIMUM SPACING.
15. ALL DOWELS SHALL BE ACCURATELY PLACED AND SECURELY TIED IN PLACE PRIOR TO PLACEMENT OF BOTTOM SLAB CONCRETE. STICKING OF DOWELS INTO FRESH OR PARTIALLY HARDENED CONCRETE WILL NOT BE ACCEPTABLE.

CONSTRUCTION

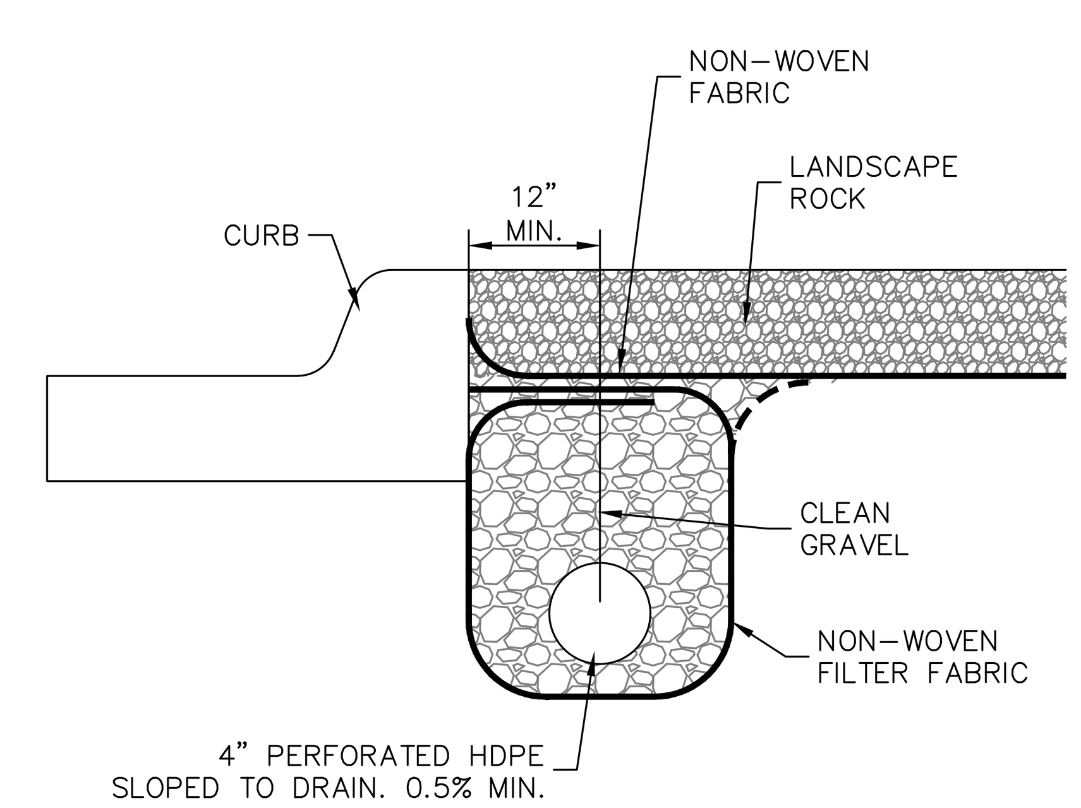
16. THE BOTTOM SLAB SHALL BE AT LEAST 24 HOURS OLD BEFORE PLACING SIDEWALL CONCRETE. ALL SIDEWALL FORMS SHALL REMAIN IN PLACE A MINIMUM OF 24 HOURS AFTER SIDEWALLS ARE POURED BEFORE REMOVAL, AND AFTER REMOVAL SHALL BE IMMEDIATELY TREATED WITH MEMBRANE CURING COMPOUND.
17. PIPE CONNECTIONS TO PRE–CAST STRUCTURES SHALL HAVE A MINIMUM OF 6" OF CONCRETE AROUND THE ENTIRE PIPE WITHIN 2' OF THE STRUCTURE.
18. MATERIAL SELECTION AND COMPACTION REQUIREMENTS FOR BACKFILL AROUND STRUCTURES SHALL BE AS SPECIFIED IN THE KANSAS CITY METROPOLITAN CHAPTER OF THE APWA TECHNICAL SPECIFICATIONS.



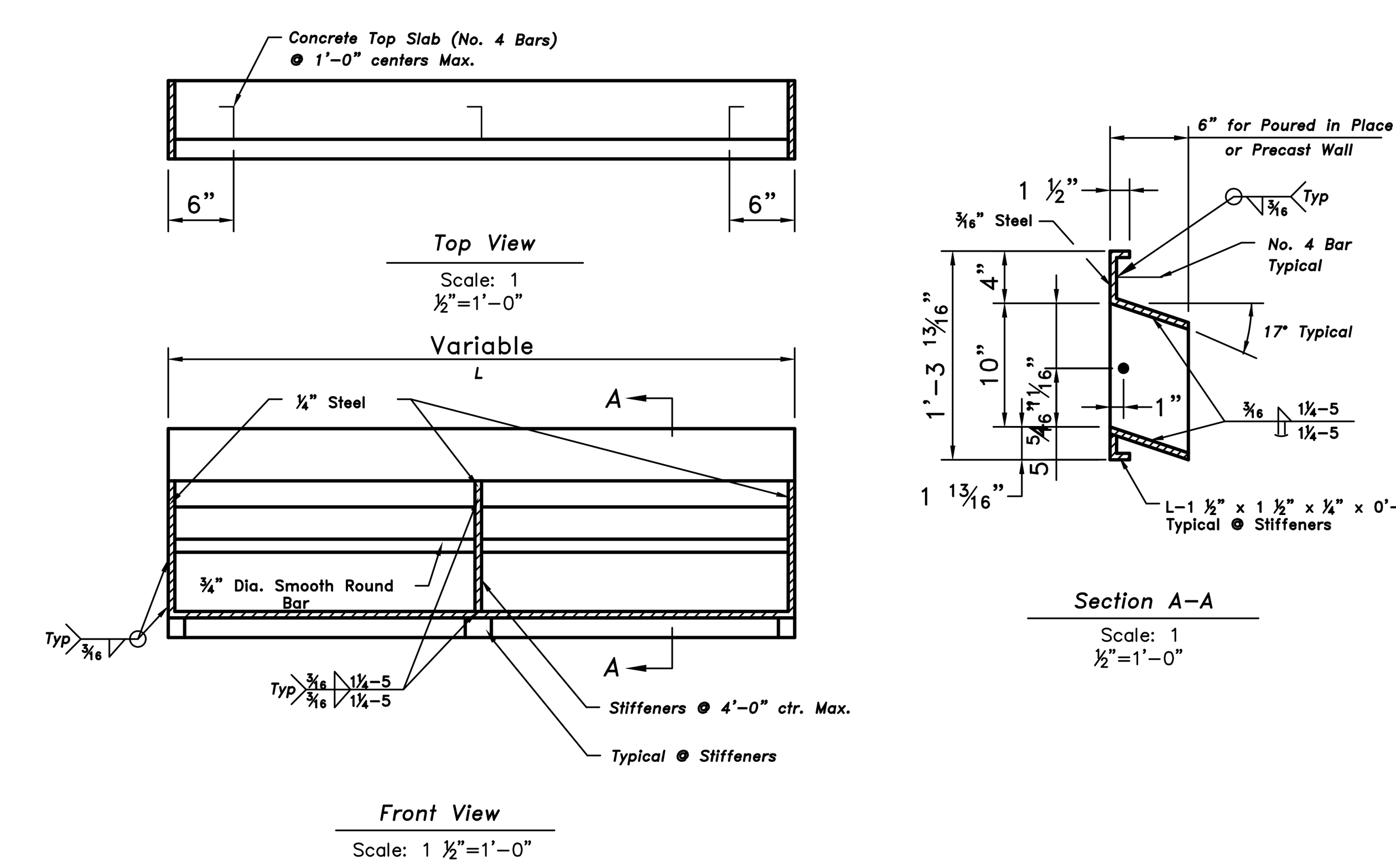
NOTES:

1. FOR TRENCHING AND PAVEMENT PATCHING REPAIRS WITHIN EXISTING OR FUTURE STREETS SEE STANDARD DETAIL GEN–5.
2. EXCAVATION DEPTH, SLOPES, SHORING, AND STOCKPILE LOCATIONS SHALL COMPLY WITH OSHA REGULATIONS.

LEE'S SUMMIT MISSOURI PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063	Date: 08/2023 Drawn By: MJF Checked By: GMB
PIPE BEDDING DETAIL	GEN-6



LANDSCAPE BED DETAILS



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STATE OF MISSOURI
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NUMBER PE-2011037427
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CONSTRUCTION DOCUMENTS PHASE I
STORM SEWER DETAILS

RELEASED FOR CONSTRUCTION
As Noted on Plan Review
Development Services Department
Lee's Summit, Missouri
07/05/2024

PROJ. NO.	C23_1880
DESIGNER: DDW	DRAWN BY: NJN
CFN	1880DET
SHEET: C690	REV: 3

ELECTRICAL SYMBOLS

THIS IS A MASTER LEGEND AND NOT ALL SYMBOLS OR ABBREVIATIONS ARE USED.

V4.01

STANDARD MOUNTING HEIGHTS

AUDIBLE APPLIANCE (CENTERLINE)	84"
ALARM (TOP OF DEVICE)	46"
ANNUNCIATOR PANEL (TOP OF DISPLAY)	60"
CONTROLS (TOP OF DEVICE)	46"
DATA WALL OUTLET	SAME AS ADJACENT DEVICE, UNO
EXIT SIGN (WALL MOUNTED)	92"
FIRE ALARM ANNUNCIATOR PANEL (TOP OF DISPLAY)	60"
FIRE ALARM BELL (EXTERIOR) (CENTERLINE)	120"
FIRE ALARM CONTROL PANEL/UNIT (TOP OF DISPLAY)	60"
INTERCOM (TOP OF DEVICE)	46"
PULL STATION (TOP OF DEVICE)	46"
RECEPTACLE	16"
RECEPTACLE (ABOVE COUNTER)	+6" ABOVE BACKSPLASH/COUNTER, 40" MAX
RECEPTACLE (CLOCK) (CENTERLINE)	84"
RECEPTACLE (EQUIPMENT ROOMS) (TOP OF DEVICE)	46"
RECEPTACLE (EXTERIOR)	24"
RECEPTACLE (GARAGES)	24"
REMOTE INDICATING LIGHT (EQUIPMENT ROOMS) (TOP OF DEVICE)	46"
REMOTE INDICATING LIGHT (FINISHED AREAS)	CEILING
SAFETY SWITCH (TOP OF DEVICE)	46"
STARTER (TOP OF DEVICE)	46"
SWITCH (TOP OF DEVICE)	46"
TELEPHONE WALL OUTLET (TOP OF DEVICE)	46"
TELECOMMUNICATIONS BACKBOARD	6"
TELEVISION OUTLET	REFER TO DRAWINGS
VISIBLE APPLIANCE (CENTERLINE)	84"

INSTALL DEVICES/OUTLET BOXES AT THE MOUNTING HEIGHTS SHOWN ABOVE UNO IN THE CONSTRUCTION DOCUMENTS. MOUNTING HEIGHTS LISTED ABOVE, OR ELSEWHERE IN THE CONSTRUCTION DOCUMENTS, ARE AFF OR AFG TO BOTTOM, UNO. ALL DEVICES SHALL BE INSTALLED IN COMPLIANCE WITH CURRENT ADA AND LOCAL REQUIREMENTS.

ABBREVIATIONS

AF	AMPERE FUSE SIZE
AFC	ABOVE FINISHED CEILING
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHJ	AUTHORITY HAVING JURISDICTION
AHU	AIR HANDLING UNIT
AIC	AMPERE INTERRUPTING CAPACITY
AS	AMPERE SWITCH SIZE
AT	AMPERE TRIP SETTING
ATS	AUTOMATIC TRANSFER SWITCH
AV	AUDIO VISUAL
BAS	BUILDING AUTOMATION SYSTEM
BESS	BATTERY ENERGY STORAGE SYSTEM
BKR	BREAKER
C	CONDUIT
CAT	CATEGORY
CATV	CABLE TELEVISION SYSTEM
CCTV	CLOSED CIRCUIT TELEVISION
CD	CANDELA
CKT	CIRCUIT
CODE	APPLICABLE CODE ADOPTED BY JURISDICTION
CT	CURRENT TRANSFORMER
CTR	CENTER
CTRL	CONTROL/CONTROLLED
CVD	CUMULATIVE VOLTAGE DROP
D/DEMO	DEMOLITION
DPDT	DOUBLE-POLE, DOUBLE-THROW
DPST	DOUBLE-POLE, SINGLE-THROW
E/ETR/EX	EXISTING TO REMAIN
EC	ELECTRICAL CONTRACTOR
EF	EXHAUST FAN
EM	EMERGENCY
EMS	ENERGY MANAGEMENT SYSTEM
ELV	ELECTRONIC LOW-VOLTAGE
ERMS	ENERGY-REDUCING MAINTENANCE SWITCH
EV	ELECTRIC VEHICLE
EWC	ELECTRIC WATER COOLER
FAAP	FIRE ALARM ANNUNCIATOR PANEL
FACP	FIRE ALARM CONTROL PANEL
FBO	FURNISHED BY OTHERS
FCA	FAULT CURRENT AMPS AVAILABLE
FCU	FAN COIL UNIT
FF	FINISHED FLOOR
FLA	FULL LOAD AMPS
FLR	FLOOR
GC	GENERAL CONTRACTOR
GEC	GROUNDING ELECTRODE CONDUCTOR
GES	GROUNDING ELECTRODE SYSTEM
GFR	GROUND FAULT RELAY
G	GROUND
IG	ISOLATED GROUND
ISC	SHORT CIRCUIT CURRENT
JB/J-BOX	JUNCTION BOX
LF	LINEAR FEET
LRA	LOCKED ROTOR AMPS
LTG/LTS	LIGHTING/LIGHTS
MAU	MAKE-UP AIR UNIT
MAX	MAXIMUM
MCA	MINIMUM CIRCUIT AMPACITY
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MFR	MANUFACTURER
MIN	MINIMUM
MLO	MAIN LUGS ONLY
MLV	MAGNETIC LOW-VOLTAGE
MOCP	MAXIMUM OVERCURRENT PROTECTION
MTD	MOUNTED
N/A	NOT APPLICABLE
NF	NON-FUSED
NL	NIGHT LIGHT (24HR ON)
NIC	NOT IN CONTRACT
NIS	NOT IN SCOPE
NRTL	NATIONALLY RECOGNIZED TESTING LABORATORY (CSA,ETL,NSF,UL)
NTS	NOT TO SCALE
OS	OCCUPANCY SENSOR
P	POLE
PART	PARTIAL CIRCUIT
PH/Ø	PHASE
PNL	PANEL
PNLBD	PANELBOARD
PROVIDE	FURNISH AND INSTALL
PT	POTENTIAL TRANSFORMER
PV	PHOTOVOLTAIC
QTY	QUANTITY
R/REL	RELOCATE
RCPT	RECEPTACLE
RLA	RUNNING LOAD AMPS
RTU	ROOFTOP UNIT
SCCR	SHORT-CIRCUIT CURRENT RATING
SD	SMOKE DUCT DETECTOR
SF	SQUARE FEET
SPDT	SINGLE-POLE, DOUBLE-THROW
SPST	SINGLE-POLE, SINGLE-THROW
SSBJ	SUPPLY-SIDE BONDING JUMPER
ST	SHUNT TRIP
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
TBB	TELECOMMUNICATIONS BONDING BACKBONE
TBD	TO BE DETERMINED
TGB	TELECOMMUNICATIONS GROUND BUS BAR
TL	TWISTLOCK
TMGB	TELECOMMUNICATIONS MAIN GROUND BUS BAR
TX/XFMR	TRANSFORMER
TYP	TYPICAL
U/F	UNDERFLOOR
U/G	UNDERGROUND
U/S	UNDERSLAB
UH	UNIT HEATER
UNO	UNLESS NOTED OTHERWISE
UPS	UNINTERRUPTIBLE POWER SUPPLY
VD	VOLTAGE DROP
VFD	VARIABLE FREQUENCY DRIVE
VS	VACANCY SENSOR
W	WIRE
W/	WITH
WP	WEATHER PROOF
WR	WEATHER RESISTANT
WT	WATERTIGHT
XP	EXPLOSION-PROOF

LINETYPE LEGEND

THROUGHOUT THE DRAWINGS DIFFERENT LINETYPES ARE USED IN COMBINATION WITH THE SYMBOLS TO INDICATE THE STATUS OF ITEMS AS EXISTING, TO BE DEMOLISHED, TO BE INCLUDED AS PART OF NEW WORK AND/OR ITEMS WHICH ARE ANTICIPATED TO BE PROVIDED IN THE FUTURE. THE STATUS OF ITEMS USING THESE LINETYPES ARE RELATIVE TO THE VIEW IN WHICH THEY APPEAR. PHASING SHOWN IN DRAWINGS IS NOT INTENDED TO FULLY DESCRIBE ALL NECESSARY CONSTRUCTION PHASING, WHICH IS DETERMINED BY THE CONTRACTOR AS PART OF THEIR RESPONSIBILITIES. ANY SUCH PHASES DESCRIBED IN THE CONSTRUCTION DOCUMENTS ARE GENERAL AND ONLY INTENDED TO INDICATE A BROAD ORDER FOR THE SEQUENCE OF DESCRIBING THE PROJECT. THE FOLLOWING LINETYPES MAY BE USED ON ANY DEVICE, EQUIPMENT, NOTE, LINE, SHAPE, ETC.

EXISTING — NEW

DEMOLISH — FUTURE

HATCHING LEGEND

ENLARGED PLAN

NOT IN SCOPE (NIS)

ANNOTATION

- MECHANICAL OR FIRE PROTECTION PLAN NOTE CALLOUT
- PLUMBING PLAN NOTE CALLOUT
- ELECTRICAL OR FIRE ALARM PLAN NOTE CALLOUT
- TECHNOLOGY PLAN NOTE CALLOUT
- PLUMBING EQUIPMENT DESIGNATION. (CONTRACTOR FURNISHED AND INSTALLED, UNO). REFER TO PLUMBING FIXTURE OR EQUIPMENT SCHEDULES
- EQUIPMENT DESIGNATION (OWNER FURNISHED, CONTRACTOR INSTALLED, UNO)
- CU / 1 — MECHANICAL EQUIPMENT DESIGNATION (CONTRACTOR FURNISHED AND INSTALLED, UNO)
- CONNECTION POINT OF NEW WORK TO EXISTING
- 1 / E1 — DETAIL REFERENCE UPPER NUMBER INDICATES DETAIL NUMBER LOWER NUMBER INDICATES SHEET NUMBER
- 1 / E1 — SECTION CUT DESIGNATION
- DEDICATED EQUIPMENT ACCESS TILE
- ACCESS PANEL

CIRCUITING & WIRING

- 7 5 3 [R-#] P1 OR P1-3,5,7 — HOMERUN TO PANELBOARD. INFORMATION AT ARROWS ARE CIRCUIT NUMBERS AND PANELBOARD FOR TERMINATION. REFER TO PANELBOARD SCHEDULES FOR BRANCH CIRCUIT CONDUCTOR SIZES.
  - INDICATES RELAY NUMBER
- CIRCUIT CONTINUATION OR PARTIAL CIRCUIT
- CONDUIT CONCEALED
- EM — CONDUIT CONCEALED (EMERGENCY)
- CONDUIT IN/UNDER FLOOR/GROUND CONSTRUCTION
- EXPOSED CONDUIT
- EM — EXPOSED CONDUIT (EMERGENCY)
- FLEXIBLE CONDUIT
- LOW VOLTAGE CABLE (NOT ROUTED IN CONDUIT)
- CONDUIT TURNING DOWN
- CONDUIT TURNING UP
- CONNECTION POINT OR EQUIPMENT TERMINATION
- EQUIPMENT TERMINATION

CONDUCTOR TICK MARK LEGEND

WHERE TICK MARKS ARE SHOWN, THE FOLLOWING SHALL GOVERN:

- SWITCHED HOT (PHASE) CONDUCTORS (SHOWN TRAILING NEUTRAL)
- NEUTRAL (GROUNDED) CONDUCTOR
- UNSWITCHED HOT (PHASE) CONDUCTORS (SHOWN LEADING NEUTRAL)
- NOTE: HASH MARKS INDICATE QUANTITY OF CONDUCTORS
- EQUIPMENT GROUNDING CONDUCTOR IN CONDUIT (GREEN INSULATION OR BARE)
- ISOLATED GROUNDING CONDUCTOR IN CONDUIT (GREEN INSULATION WITH YELLOW TRACER)

BRANCH CIRCUIT CONDUCTOR TABLE

WHERE TICK MARKS ARE NOT SHOWN, THE FOLLOWING SHALL GOVERN:

# OF POLES	HOT (PHASE)*	NEUTRAL (GROUNDED)**	GROUNDING***
1P	(1)	(1) UNO	(1)
2P	(2)	(1) UNO	(1)
3P	(3)	(1) UNO	(1)

* PROVIDE ADDITIONAL CONDUCTORS THROUGH ENTIRE CIRCUIT (SWITCHED, UNSWITCHED/EM, ETC.) AS INDICATED THROUGHOUT CONSTRUCTION DOCUMENTS AND AS REQUIRED FOR A COMPLETE AND WORKING SYSTEM.

** REFER TO SPECIFICATIONS FOR LIMITATIONS ON SHARING NEUTRAL (GROUNDED) CONDUCTORS. DO NOT CIRCUIT AS A MULTI-WIRE BRANCH CIRCUIT, UNO.

*** PROVIDE ADDITIONAL ISOLATED GROUNDING CONDUCTORS WHERE INDICATED.

REFER TO SPECIFICATIONS, PLANS, NOTES, WIRING AND CONTROL DIAGRAMS FOR ADDITIONAL CIRCUITING REQUIREMENTS.

LIGHTING

- LIGHT FIXTURE
  - a = LOWER CASE LETTER IS SWITCH IDENTIFIER
  - A = UPPER CASE LETTER INDICATES LIGHT FIXTURE TYPE
  - [OS] = INTEGRAL OCCUPANCY SENSOR
  - = WALL MOUNT
  - 〉 = ARROW INDICATES AIMING DIRECTION
- LIGHT FIXTURE CIRCUITED AS A NIGHT LIGHT (NL)
- EMERGENCY LIGHT FIXTURE WITH EMERGENCY LIGHTING BATTERY PACK OR CONNECTED TO EMERGENCY SOURCE
- NIGHT LIGHT/EMERGENCY LIGHT FIXTURE WITH EMERGENCY BATTERY PACK OR CONNECTED TO EMERGENCY SOURCE
- LIGHT FIXTURE WITH DUAL BALLASTS CIRCUITED SEPARATELY (SHADING IMPLIES EMERGENCY LIGHT FIXTURE)
- [#] LIGHTING TRACK (# INDICATES RELAY NUMBER)
- MIRROR LIGHTS
- EXTERIOR PARKING LOT LIGHT FIXTURE
- EXTERIOR PEDESTRIAN POST TOP LIGHT FIXTURE
- EXTERIOR LIT BOLLARD LIGHT FIXTURE
- EXIT SIGN - CEILING / WALL MOUNTED, ARROWS AS INDICATED, FACE HATCHED
- EMERGENCY LIGHTING UNIT EQUIPMENT WITH BATTERY PACK - CEILING/WALL MOUNTED
- AFEA (AREA FOR EVACUATION ASSISTANCE) SIGN - CEILING/WALL MOUNTED, ARROWS AS INDICATED

REFER TO LIGHT FIXTURE SCHEDULE FOR MORE INFORMATION.

POWER EQUIPMENT

- ELECTRICAL PANELBOARD (SURFACE OR FLUSH MOUNT)
- ELECTRICAL CABINET (SURFACE OR FLUSH MOUNT), TYPE AS NOTED
- PLYWOOD TERMINAL BOARD FOR TELEPHONE SYSTEM, UNO. SIZE AS NOTED
- ELECTRICAL EQUIPMENT ON HOUSEKEEPING PAD
- FRONT — TRANSFORMER
- 200/3/150/3R — DISCONNECT SWITCH,
  - 200/3/150/3R = AMPERES/POLES/FUSE/NEMA ENCLOSURE RATING
  - CB = CIRCUIT BREAKER (200/3/CB)
  - FM = FACTORY FURNISHED AND MOUNTED
  - NF = NON-FUSED
  - OL = SIZE INDICATED ON ONE-LINE DIAGRAM
  - NO VALUE FOR NEMA ENCLOSURE = NEMA 1
- 30/3/15/1/3R — COMBINATION DISCONNECT (SAFETY) SWITCH AND MOTOR STARTER,
  - 30/3/15/1/3R = AMPERES/POLES/FUSE/NEMA STARTER SIZE/NEMA ENCLOSURE RATING
  - CB = CIRCUIT BREAKER (30/3/CB/1)
  - FM = FACTORY FURNISHED AND MOUNTED
  - NF = NON-FUSED
  - OL = SIZE INDICATED ON ONE-LINE DIAGRAM
  - NO VALUE FOR NEMA ENCLOSURE = NEMA 1
- 2 — MAGNETIC MOTOR STARTER, NEMA SIZE AS NOTED. 3-POLE, UNO
- VFD — VARIABLE FREQUENCY DRIVE
- INDICATING LIGHT
- EMERGENCY POWER OFF BUTTON
- STOP-START PUSH BUTTON CONTROL STATION
- HAND-OFF-AUTO PUSH BUTTON CONTROL STATION
- MUSHROOM-TYPE PUSH BUTTON
- OVERHEAD PADDLE FAN

BOXES, LIGHTING CONTROL & WIRING DEVICES

- $# / $30/3/3R — SWITCH LETTER DESIGNATIONS AS FOLLOWS:
  - BLANK = SINGLE POLE
  - 2 = TWO POLE
  - 3 = THREE-WAY
  - 4 = FOUR-WAY
  - D = DIMMER
  - F = FAN SPEED CONTROL
  - FM = FACTORY FURNISHED AND MOUNTED
  - FH = FRACTIONAL HORSEPOWER MANUAL CONTROLLER
  - IH = INTEGRAL HORSEPOWER MANUAL CONTROLLER
  - K = KEYED
  - LV# = LOW VOLTAGE / DIGITAL
  - M = MANUAL MOTOR STARTER DISCONNECT
  - OS# = OCCUPANCY SENSOR
  - P = SPST PILOT LIGHT
  - WP = WEATHER PROOF
  - 30/3/3R = AMPERES/POLES/NEMA ENCLOSURE RATING
  - # = REFER TO LIGHTING CONTROL DEVICE SCHEDULE
- ALC — AUTOMATIC LOAD CONTROL RELAY
- BTS — BRANCH CIRCUIT TRANSFER SWITCH
- CEILING / WALL MOUNTED OCCUPANCY SENSOR (# INDICATES TYPE PER SCHEDULE)
  - CORNER 90 DEGREE SENSING
  - ONE-DIRECTION SENSING, CEILING/WALL MOUNT
  - CEILING MOUNT, TWO-DIRECTION SENSING
  - CEILING MOUNT, FOUR-DIRECTION SENSING
- C# — CONTACTOR (SIZE, COIL VOLTAGE AND NUMBER OF POLES AS INDICATED)
- CL## — TRACK-MOUNTED CURRENT LIMITER (## INDICATES AMPERAGE)
- D# — DAYLIGHT SENSOR (# INDICATES TYPE PER SCHEDULE)
- LC — LIGHTING CONTROLS PROCESSOR AND/OR EQUIPMENT
- P# — POWER PACK (# INDICATES TYPE PER SCHEDULE)
- PS# — PHOTOELECTRIC SWITCH
- R## — ROOM CONTROLLER (# INDICATES TYPE PER SCHEDULE)
- TS# — TIME SWITCH
- SIMPLEX RECEPTACLE - NEMA 5-20R, UNO
- DUPLEX RECEPTACLE - NEMA 5-20R, UNO
- DOUBLE DUPLEX RECEPTACLE - NEMA 5-20R, UNO
- SPECIAL RECEPTACLE - NEMA TYPE AS NOTED
- TWIST-LOCK TYPE RECEPTACLE
- G — BLANK FACE GFCI FEED THROUGH DEVICE
- OR GFCI — GFCI TYPE RECEPTACLE*
- AUTOMATICALLY CONTROLLED SIMPLEX RECEPTACLE
- SPLIT-WIRED DUPLEX RECEPTACLE*, HALF AUTOMATICALLY CONTROLLED
- AUTOMATICALLY CONTROLLED DUPLEX RECEPTACLE*
- DOUBLE DUPLEX RECEPTACLE WITH ONE DUPLEX AUTOMATICALLY CONTROLLED
- DOUBLE DUPLEX RECEPTACLE WITH BOTH DUPLEXES AUTOMATICALLY CONTROLLED
- OR EM — EMERGENCY RECEPTACLE*
- RECEPTACLE INSTALLED ABOVE COUNTER OR BACKSPLASH*
- RECEPTACLE INSTALLED IN CEILING*
- A — RECEPTACLE INSTALLED IN FLOOR. A = TYPE. *
- RECEPTACLE INSTALLED VIA DROP CORD*
- OR H — RECEPTACLE INSTALLED IN HORIZONTAL ORIENTATION*
- # — ADDITIONAL RECEPTACLE LETTER DESIGNATIONS AS FOLLOWS:
  - CH = CLOCK HANGER TYPE
  - G = RCPT PROTECTED BY GFCI CIRCUIT BREAKER OR UPSTREAM GFCI DEVICE
  - IG = ISOLATED GROUND
  - S = MANUALLY SWITCHED
  - SP / TVSS = SURGE PROTECTION
  - TR = TAMPER RESISTANT
  - TV = TELEVISION
  - USB = USB/DUPLEX
  - WP = WEATHER PROOF COVER
  - WR = WEATHER RESISTANT
- MULTI-OUTLET ASSEMBLY
- TELEPHONE OUTLET
- DATA OUTLET
- MULTI-SERVICE OUTLET; TELEPHONE AND DATA
  - ABOVE COUNTER, TYP
  - WALL, TYP
  - FLOOR, TYP. A = TYPE
- A — MULTI-SERVICE POWER POLE WITH TELEPHONE, DATA AND POWER OUTLETS A = TYPE, REFER TO PLANS, SCHEDULES AND SPECIFICATIONS
- A — MULTI-SERVICE FLOOR BOX WITH TELEPHONE, DATA AND POWER OUTLETS A = TYPE, REFER TO PLANS, SCHEDULES AND SPECIFICATIONS
- A — POKE THROUGH, A = TYPE, REFER TO PLANS, SCHEDULES AND SPECIFICATIONS
- T — THERMOSTAT
- J — JUNCTION/OUTLET BOX. MOUNTING AS NOTED OR DETAILED.

* SYMBOL DEMONSTRATED WITH DUPLEX RECEPTACLE, WHEN USED IN COMBINATION WITH OTHER DEVICES MEANING IS SIMILAR FOR THOSE DEVICE TYPES.

REFER TO LIGHTING CONTROL DEVICE SCHEDULE FOR MORE INFORMATION.

ELECTRICAL ONE-LINE & RISER DIAGRAM

- ##A 3P — SWITCH (RATING AND POLES AS INDICATED)
- ##A 3P ##AT #### — DRAWOUT CIRCUIT BREAKER (RATING, POLES, TRIP SIZE AND BREAKER TYPE AS INDICATED)
- ##AS 3P ##AF #### — FUSED SWITCH (RATING, POLES, FUSE SIZE AND TYPE AS INDICATED)
- ##AS 3P ##AF #### NEMA # NEMA # — COMBINATION FUSED SWITCH/STARTER (RATING, POLES, FUSE SIZE, FUSE TYPE, NEMA STARTER SIZE, NEMA ENCLOSURE TYPE AS INDICATED)
- ##A 3P ##AT #### — CIRCUIT BREAKER (RATING, POLES, TRIP SIZE AND BREAKER TYPE AS INDICATED)
- ##A 3P ##AT #### NEMA # NEMA # — COMBINATION CIRCUIT BREAKER/STARTER (RATING, POLES, TRIP SIZE, BREAKER TYPE, NEMA STARTER SIZE, NEMA ENCLOSURE TYPE AS INDICATED)
- LSIG — CIRCUIT BREAKER TRIP FUNCTIONS
  - L = LONG TIME
  - S = SHORT TIME
  - I = INSTANTANEOUS
  - G = GROUND FAULT
- PANELBOARD, SINGLE OR MULTI-SECTION (REFER TO SCHEDULES)
- ISOLATED POWER PANELBOARD W/ INTEGRAL TRANSFORMER (REFER TO SCHEDULES)
- TX# — TRANSFORMER (TYPE AND RATINGS AS INDICATED)
- TX# — SHIELDED TRANSFORMER (TYPE AND RATINGS AS INDICATED)
- ATS# ##A — TRANSFER SWITCH (RATINGS AS INDICATED)
  - ATS = AUTOMATIC TRANSFER SWITCH
  - MTS = MANUAL TRANSFER SWITCH
  - NTS = NON-AUTOMATIC TRANSFER SWITCH
- ATS# (W/BYPASS) ##A — TRANSFER SWITCH WITH BYPASS (RATINGS AS INDICATED),
- ## KW GENERATOR 480Y/277V, 3Ø, 4W ##A, 3P M/G — GENERATOR (RATINGS AS INDICATED)
  - INDICATES CONNECTION TO GROUNDING ELECTRODE SYSTEM IF GENERATOR IS CONNECTED AS A SEPARATELY DERIVED SOURCE
- MDP SWITCHBOARD ELEC ROOM ### AMPS 480Y/277V 3Ø 4W — SWITCHGEAR, SWITCHBOARD AND/OR DISTRIBUTION PANELBOARD (TYPE, RATING, DEVICES AND ACCESSORIES AS INDICATED)
- AS — AMMETER SWITCH
- VS — VOLTMETER SWITCH
- AM — AMMETER (RANGE AS SPECIFIED OR REQUIRED)
- VM — VOLTMETER (RANGE AS SPECIFIED OR REQUIRED)
- DIGITAL VM AM — COMBINATION DIGITAL VOLTMETER/AMMETER
- UTILITY METER M — UTILITY METER (AS REQUIRED BY UTILITY)
- WH D 15 — WATT-HOUR METER, "D" DENOTES DEMAND REGISTER, "15" DENOTES MINUTES OF DEMAND INTERVAL
- CURRENT TRANSFORMER RATING AS SPECIFIED OR REQUIRED
- POTENTIAL TRANSFORMER RATING AS SPECIFIED OR REQUIRED
- ### — CIRCUIT/EQUIPMENT IDENTIFICATION (REFER TO SCHEDULE)
- ERMS — ENERGY-REDUCING MAINTENANCE SWITCH
- GFR — GROUND FAULT RELAY
- PFR — PHASE FAILURE RELAY
- PRM — PHASE ROTATION MONITOR
- R — RELAY
- KK# — KIRK-KEY INTERLOCK (# INDICATES KEY PAIR)
- ST — SHUNT TRIP
- SPD — SURGE-PROTECTIVE DEVICE
- VFD — VARIABLE FREQUENCY DRIVE
- GROUND CONNECTION
- GROUND CONNECTION WITH TEST WELL
- GROUND ROD
- LIGHTNING ARRESTER
- CAPACITOR
- CONTACT (OPEN OR CLOSED)
- HEATER
- HP — MOTOR
- ## — BLOCK LOAD KW OR KVA
- × F# × FP# — FAULT POINT REFERENCED IN SHORT CIRCUIT CURRENT AND VOLTAGE DROP SPREADSHEET

APPLICABLE ELECTRICAL CODES:

NOTE: PROJECT IS DESIGNED IN COMPLIANCE WITH THE FOLLOWING CODES. THIS IS NOT AN EXHAUSTIVE LIST. PROJECT SHALL COMPLY WITH ALL APPLICABLE CODES, STANDARDS AND LOCAL REQUIREMENTS. REFER TO THE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

ELECTRICAL CODE: 2017 NATIONAL ELECTRICAL CODE, (NFPA 70)

BUILDING CODE: 2018 INTERNATIONAL BUILDING CODE

SITE ELECTRICAL GENERAL NOTES:

1. EXISTING CONDITIONS WERE TAKEN FROM ORIGINAL DRAWINGS AND SITE VISITS AND MAY NOT REFLECT ACTUAL "AS-BUILT" CONDITIONS. VERIFY EXISTING CONDITIONS PRIOR TO SUBMITTING FINAL BID. COORDINATE NEW AND DEMOLITION WORK WITH ALL OTHER TRADES AND EXISTING CONDITIONS.
2. NOTIFY ENGINEER AND OWNER, AS APPLICABLE, IF ANY DANGEROUS CONDITIONS EXIST ON JOB SITE BEFORE ANY DEMOLITION OR REMODEL WORK BEGINS.
3. COORDINATE ANY NECESSARY POWER OUTAGES WITH THE OWNER AND MAKE EVERY ATTEMPT TO SCHEDULE DURING NON-BUSINESS OR OFF-PEAK BUSINESS HOURS TO MINIMIZE DISRUPTION TO BUSINESS OPERATIONS. REQUESTS FOR ELECTRICAL SHUTDOWNS SHALL BE BROUGHT IN WRITING TO THE ATTENTION OF THE OWNER AT LEAST 7 DAYS IN ADVANCE. SHUTDOWNS SHALL NOT BE PERFORMED WITHOUT WRITTEN APPROVAL FROM THE OWNER.
4. FOR AREAS AND EQUIPMENT WITHIN THE SCOPE OF THIS SITE WORK: EXISTING ELECTRICAL EQUIPMENT AND CIRCUITRY MAY BE REUSED IF IN GOOD CONDITION AND NEW DESIGN REQUIREMENTS CAN BE MET; OTHERWISE REPLACE.

ELECTRICAL SUPPLEMENTAL SPECIFICATIONS:

1. PRIOR TO SUBMITTING BID, VISIT THE JOB SITE AND BECOME FULLY ACQUAINTED WITH THE EXISTING CONDITIONS. AS APPLICABLE, REVIEW THE OWNER CRITERIA, GENERAL NOTES, OTHER TRADE DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS THAT MAY NOT BE CALLED OUT IN THIS PORTION OF THE CONSTRUCTION DOCUMENTS. NOTIFY ARCHITECT AND ENGINEER OF ANY CONFLICTS OR DISCREPANCIES PRIOR TO SUBMITTING BID.
2. ALL WORK SHALL CONFORM TO ALL LOCAL CODES AND ORDINANCES AS WELL AS APPLICABLE INDUSTRY STANDARDS. ALL EQUIPMENT SHALL BEAR LABELS FOR THE USE INTENDED BY AN AHJ ACCEPTED NATIONALLY RECOGNIZED TESTING LABORATORY (NRTL), SUCH AS UL OR ETL. THE FINAL ELECTRICAL INSTALLATION OF THE FACILITY OCCUPIED BY OWNER SHALL BE FREE FROM ELECTRICAL DEFECTS TO THE SATISFACTION OF THE AHJ, OWNER, ARCHITECT AND ENGINEER.
3. COORDINATE FINAL LOCATION AND INSTALLATION REQUIREMENTS OF ALL LIGHT FIXTURES, ELECTRICAL EQUIPMENT AND ELECTRICAL DEVICES WITH CIVEL DRAWINGS, EXISTING CONDITIONS AND OTHER TRADES PRIOR TO ROUGH-IN. PROVIDE ALL NECESSARY DEVICES, CORDS, PLUGS, DISCONNECTS AND FINAL CONNECTIONS TO ELECTRICAL EQUIPMENT FOR PROPER OPERATION IN ACCORDANCE WITH CODE, OWNER AND MANUFACTURER REQUIREMENTS.
4. ELECTRICAL DRAWINGS ARE DIAGRAMMATIC/SCHEMATIC IN NATURE AND REPRESENT THE GENERAL SCOPE OF WORK. IT IS NOT WITHIN THE SCOPE OF THE ELECTRICAL DRAWINGS TO SHOW ALL NECESSARY RACEWAY ROUTING, BENDS, OFFSETS, PULL BOXES AND OBSTRUCTIONS. CONTRACTOR SHALL COORDINATE THE FINAL LOCATION OF EQUIPMENT AND WIRING DEVICES WITH OTHER TRADES PRIOR TO INSTALLATION AND INSTALL ALL WORK TO CONFORM TO THE OWNER REQUIREMENTS.
5. ALL CONDUCTOR AND CONDUIT LENGTHS SHOWN IN THESE DESIGN DOCUMENTS ARE INTENDED SOLELY FOR USE IN THE DESIGN CALCULATIONS BY THE DESIGN PROFESSIONAL, UNLESS NOTED OTHERWISE. LENGTHS SHOWN SHALL NOT BE USED TO ASSIST IN THE BIDDING TAKEOFF PROCESS. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE MATERIAL QUANTITIES REQUIRED TO BID AND CONSTRUCT THE COMPLETE PROJECT.
6. PROVIDE PROPER FIRE PROOFING AND SEALANT FOR PENETRATIONS THROUGH FIRE RATED ASSEMBLIES. THE FIRE STOPPING METHOD, MATERIAL AND ITS APPLICATION SHALL BE NRTL LISTED, CODE COMPLIANT AND APPROVED BY AHJ.
7. ALL EMPTY CONDUIT/RACEWAY SHALL BE INSTALLED WITH PULL STRINGS. TERMINATE CONDUIT STUB-UP WITH A NYLON BUSHING.
8. EXPOSED CONDUIT/RACEWAY SHALL BE PAINTED TO MATCH ADJACENT SURFACE, UNLESS NOTED OTHERWISE. COORDINATE REQUIREMENTS WITH ARCHITECT AND OWNER PRIOR TO INSTALLATION.
9. CONDUITS/RACEWAYS SHALL BE CONCEALED FROM VIEW WHEREVER PRACTICABLE, UNLESS NOTED OTHERWISE. DO NOT ROUTE CONDUITS ACROSS SKYLIGHTS, ACCESS PANELS, HATCHED TILES, HVAC DIFFUSERS, OR EQUIPMENT WORKING CLEARANCE SPACE. ROUTE ALL EXPOSED NON-FLEXIBLE CONDUITS TIGHT TO STRUCTURE, PARALLEL TO BUILDING LINES AND IN STRUT OR CABLE/PIPE TRAY WHERE PRACTICABLE. INSTALL CONDUITS PLUMB/ LEVEL WHERE EXPOSED TO VIEW. COORDINATE RACEWAY ROUTING AND INSTALLATION WITH OTHER TRADES PRIOR TO ROUGH-IN.
10. MULTIWIRE BRANCH CIRCUITS ARE NOT ALLOWED, UNLESS NOTED OTHERWISE.
11. PROVIDE INSULATED EQUIPMENT GROUNDING CONDUCTOR FOR ALL CIRCUITS, UNLESS NOTED OTHERWISE.

RELEASED FOR CONSTRUCTION
As Noted on Plan Review
Development Services Department
Lee's Summit, Missouri
07/05/2024

HENDERSON ENGINEERS
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10/31/24

LEE'S SUMMIT SCHOOL DISTRICT
LSHS SE PARKING LOT LIGHTING
400 SE BLUE PKWY
LEE'S SUMMIT, MO 64063

STATE OF MISSOURI
DOUGLAS M. EVERHART
NUMBER PE-2019007648
PROFESSIONAL ENGINEER
03/29/2024
DOUGLAS M. EVERHART
LICENSE # PE-2019007648
PROFESSIONAL SEAL

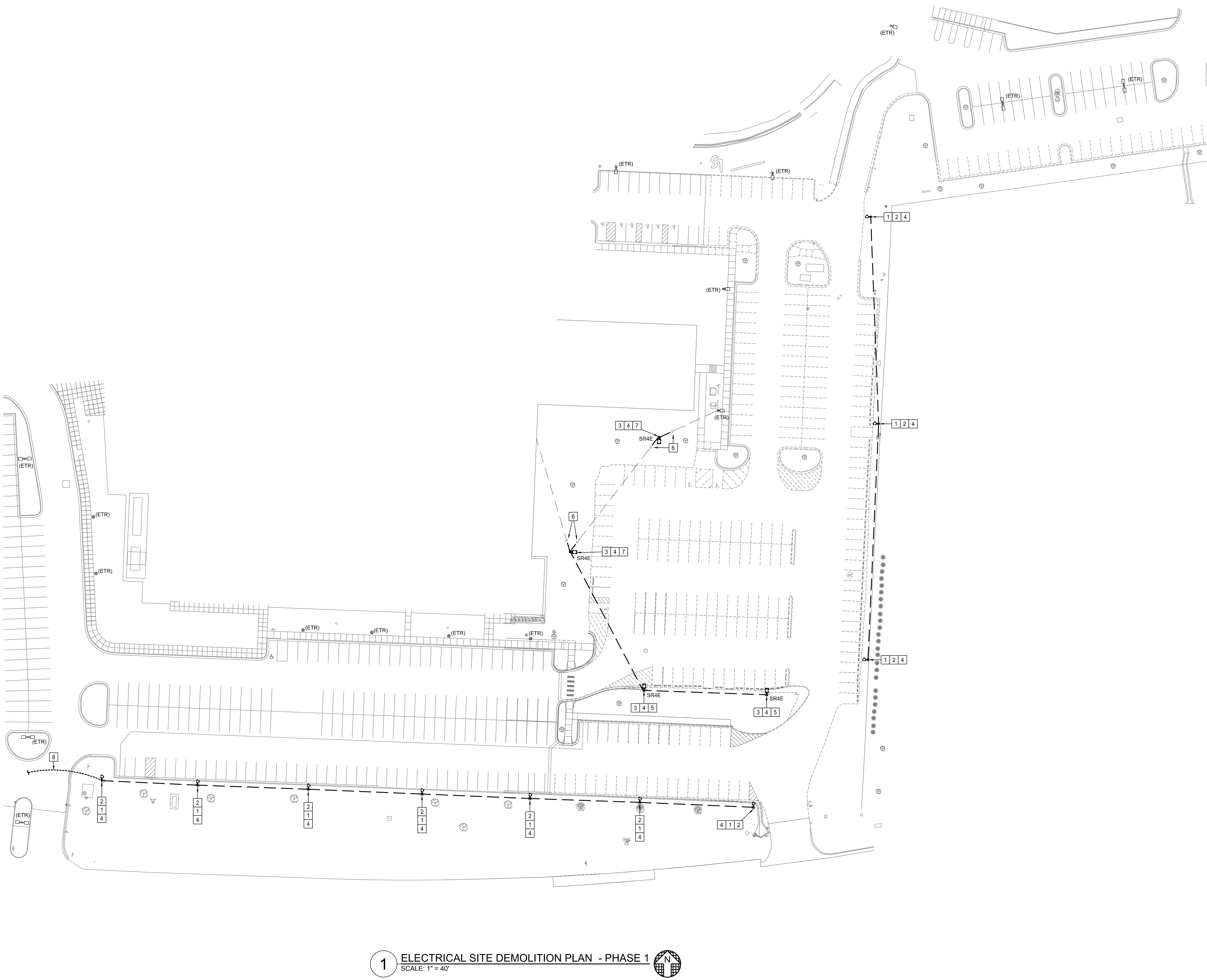
REVISIONS

JOB NO:	2450001728
DATE:	03-08-24
CHECKED BY:	OD
DRAWN BY:	ASM

ELECTRICAL GENERAL NOTES AND LEGEND

E-001

DOUGLAS M. EVERHART



1 ELECTRICAL SITE DEMOLITION PLAN - PHASE 1
SCALE: 1" = 40'

ELECTRICAL DEMOLITION GENERAL NOTES:

1. REFERENCE CIVIL DRAWINGS FOR THE FULL EXTENT OF DEMOLITION WORK AND PHASING. NOTIFY ENGINEER AND OWNER, AS APPLICABLE, OF ANY CONFLICTS OR DISCREPANCIES BETWEEN DRAWINGS AND JOB SITE CONDITIONS PRIOR TO SUBMITTING BID.
2. COORDINATE DEMOLITION AND REMOVAL OF EXISTING ELECTRICAL EQUIPMENT AND LIGHTING SYSTEMS WITH CONSTRUCTION PHASING AND OWNER TO ALLOW NECESSARY SYSTEMS TO REMAIN OPERATIONAL DURING CONSTRUCTION. (NOTE: NOT ALL EXISTING/DEMOLISHED EQUIPMENT, LIGHT FIXTURES, DEVICES OR RACEWAYS WILL BE SHOWN ON THE DRAWINGS).
3. AVOID DAMAGING FACILITIES, INCLUDING EQUIPMENT, LIGHT FIXTURES AND DEVICES THAT ARE EXISTING TO REMAIN, NEW OR REUSED. REPAIR ALL DAMAGE CAUSED DURING WORK AT NO EXTRA COST TO THE OWNER.
4. DISPOSE OF ALL ELECTRICAL EQUIPMENT, LIGHT FIXTURES, AND DEVICES SHOWN TO BE REMOVED, UNLESS NOTED OTHERWISE. COORDINATE WITH THE OWNER THE ITEMS TO BE SALVAGED, AND THE LOCATION FOR STORAGE. AVOID DAMAGING SALVAGED ITEMS DURING DEMOLITION WORK AND DURING TRANSPORT TO OWNER'S DESIGNATED STORAGE LOCATION.
5. WHERE DEMOLITION WORK INTERRUPTS ELECTRICAL CONTINUITY OF CIRCUITS THAT ARE TO REMAIN IN USE, PROVIDE NECESSARY DEVICES AND RELATED CIRCUITRY TO MAINTAIN ELECTRICAL CONTINUITY IN ACCORDANCE WITH OWNER REQUIREMENTS. RECIRCUIT REUSED ELECTRICAL EQUIPMENT, LIGHT FIXTURES, AND WIRING DEVICES PREVIOUSLY POWERED FROM DEMOLISHED EQUIPMENT TO NEW OR TEMPORARY EQUIPMENT AS NEEDED.

ELECTRICAL DEMOLITION PLAN NOTES:

1. REMOVE EXISTING UTILITY OWNED LIGHT POLES AND TURN OVER TO EVERGY FOR REUSE. COORDINATE EXACT REQUIREMENTS WITH EVERGY PRIOR TO BID.
2. REMOVE CONCRETE POLE BASE, CONDUIT, AND ALL ASSOCIATED WIRING USED FOR UTILITY LIGHTING BACK TO NEAREST POLE TO REMAIN.
3. REMOVE EXISTING DISTRICT OWNED TYPE 'SR4E' POLE LIGHT AND STORE FOR REUSE IN NEW WORK. INSPECT EXISTING EQUIPMENT AND NOTIFY OWNER OF ANY DEFECTS PRIOR TO NEW WORK.
4. REMOVE EXISTING BANNERS AND BANNER ARMS FROM POLES AND STORE FOR REUSE IN NEW WORK. INSPECT EXISTING EQUIPMENT AND NOTIFY OWNER OF ANY DEFECTS PRIOR TO NEW WORK.
5. REMOVE UNDERGROUND POLE BASE, CONDUIT, AND WIRING BACK TO NEAREST POLE TO REMAIN.
6. FIELD VERIFY EXACT LOCATION OF EXISTING UNDERGROUND CONDUITS AND PREPARE FOR NEW CONNECTION TO REPLACEMENT CONCRETE POLE BASE. COORDINATE EXTENTS OF UNDERGROUND DISTURBANCE WITH CIVIL PRIOR TO NEW WORK. REFER TO NEW WORK PLANS FOR MORE INFORMATION.
7. REMOVE UNDERGROUND POLE BASE TO BE REPLACED DUE TO GRADE CHANGE. REFER TO CIVIL PLANS AND NEW WORK FOR MORE INFORMATION.
8. COORDINATE REMOVAL OF EXISTING OVERHEAD LINE POWERING UTILITY LIGHT POLES WITH EVERGY PRIOR TO BID.

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DRAWN BY:	ASM

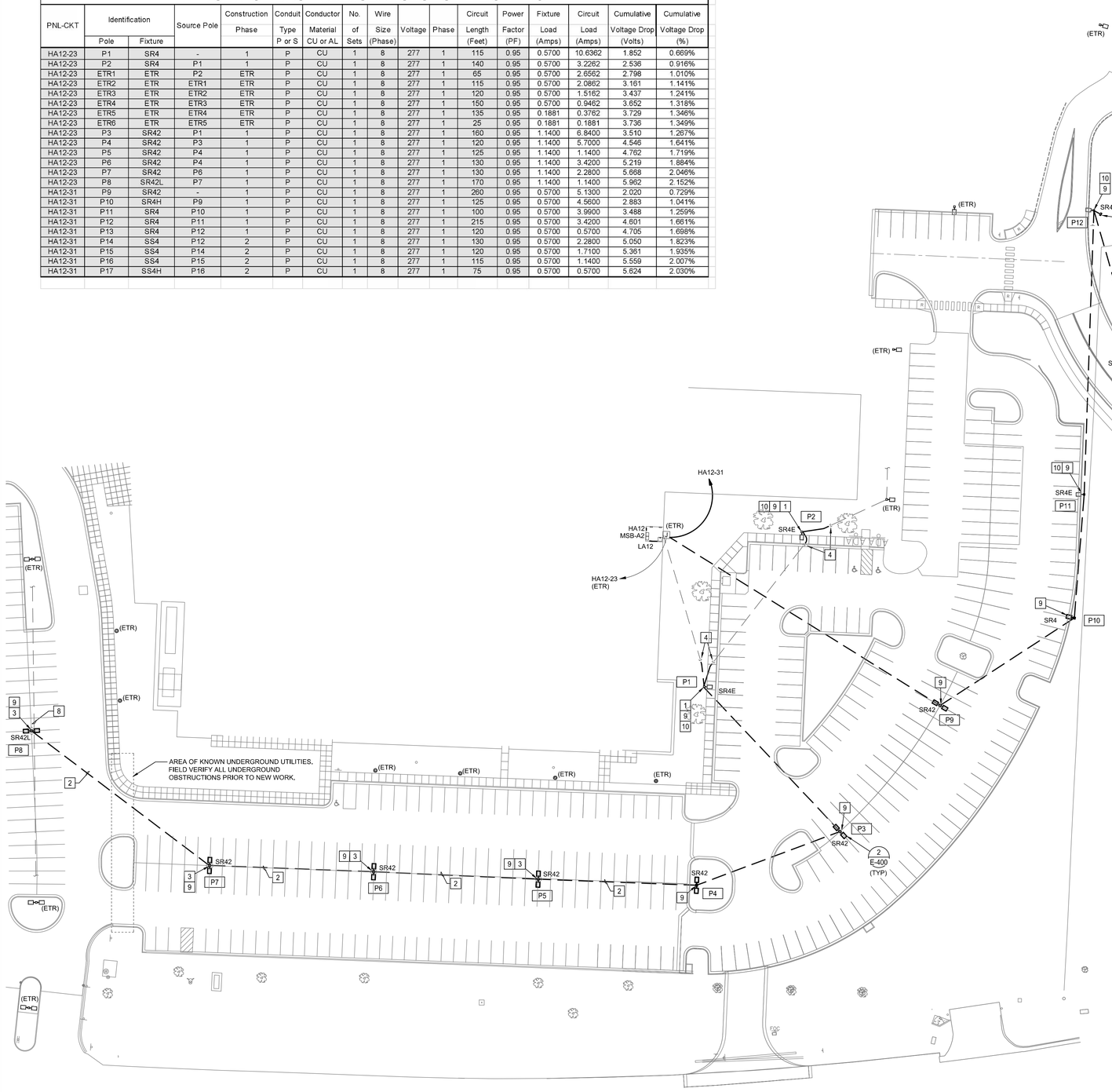
ELECTRICAL SITE DEMOLITION PLAN PHASE 1

ED-101

DOUGLAS M. EVERHART

VOLTAGE DROP CALCULATIONS - SITE LIGHTING

PNL-CKT	Identification		Source Pole	Construction	Conduit	Conductor	No.	Wire			Circuit	Power	Fixture	Circuit	Cumulative	Cumulative
				Phase	Type	Material	of	Size	Voltage	Phase	Length	Factor	Load	Load	Voltage Drop	Voltage Drop
	Pole	Fixture			P or S	CU or AL	Sets	(Phase)			(Feet)	(PF)	(Amps)	(Amps)	(Volts)	(%)
HA12-23	P1	SR4	-	1	P	CU	1	8	277	1	115	0.95	0.5700	10.6362	1.852	0.669%
HA12-23	P2	SR4	P1	1	P	CU	1	8	277	1	140	0.95	0.5700	3.2262	2.536	0.916%
HA12-23	ETR1	ETR	P2	ETR	P	CU	1	8	277	1	65	0.95	0.5700	2.6562	2.798	1.010%
HA12-23	ETR2	ETR	ETR1	ETR	P	CU	1	8	277	1	115	0.95	0.5700	2.0862	3.161	1.141%
HA12-23	ETR3	ETR	ETR2	ETR	P	CU	1	8	277	1	120	0.95	0.5700	1.5162	3.437	1.241%
HA12-23	ETR4	ETR	ETR3	ETR	P	CU	1	8	277	1	150	0.95	0.5700	0.9462	3.652	1.318%
HA12-23	ETR5	ETR	ETR4	ETR	P	CU	1	8	277	1	135	0.95	0.1881	0.3762	3.729	1.346%
HA12-23	ETR6	ETR	ETR5	ETR	P	CU	1	8	277	1	25	0.95	0.1881	0.1881	3.736	1.349%
HA12-23	P3	SR42	P1	1	P	CU	1	8	277	1	160	0.95	1.1400	6.8400	3.510	1.267%
HA12-23	P4	SR42	P3	1	P	CU	1	8	277	1	120	0.95	1.1400	5.7000	4.548	1.641%
HA12-23	P5	SR42	P4	1	P	CU	1	8	277	1	125	0.95	1.1400	1.1400	4.762	1.719%
HA12-23	P6	SR42	P4	1	P	CU	1	8	277	1	130	0.95	1.1400	3.4200	5.219	1.884%
HA12-23	P7	SR42	P6	1	P	CU	1	8	277	1	130	0.95	1.1400	2.2800	5.668	2.046%
HA12-23	P8	SR42L	P7	1	P	CU	1	8	277	1	170	0.95	1.1400	1.1400	5.962	2.152%
HA12-31	P9	SR42	-	1	P	CU	1	8	277	1	260	0.95	0.5700	5.1300	2.020	0.729%
HA12-31	P10	SR4H	P9	1	P	CU	1	8	277	1	125	0.95	0.5700	4.5600	2.883	1.041%
HA12-31	P11	SR4	P10	1	P	CU	1	8	277	1	100	0.95	0.5700	3.9900	3.488	1.259%
HA12-31	P12	SR4	P11	1	P	CU	1	8	277	1	215	0.95	0.5700	3.4200	4.601	1.661%
HA12-31	P13	SR4	P12	1	P	CU	1	8	277	1	120	0.95	0.5700	0.5700	4.705	1.698%
HA12-31	P14	SS4	P12	2	P	CU	1	8	277	1	130	0.95	0.5700	2.2800	5.050	1.823%
HA12-31	P15	SS4	P14	2	P	CU	1	8	277	1	120	0.95	0.5700	1.7100	5.361	1.935%
HA12-31	P16	SS4	P15	2	P	CU	1	8	277	1	115	0.95	0.5700	1.1400	5.559	2.007%
HA12-31	P17	SS4H	P16	2	P	CU	1	8	277	1	75	0.95	0.5700	0.5700	5.624	2.030%



1 ELECTRICAL SITE PLAN - PHASE 1
SCALE: 1" = 40'

SITE ELECTRICAL GENERAL NOTES:

1. REFER TO CIVIL DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION. COORDINATE THE FINAL LOCATION OF ALL SITE LIGHTING POLES, UNDERGROUND UTILITIES, CONDUITS, CIRCUITRY, WITH CIVIL DRAWINGS, LANDSCAPING DRAWINGS AND OWNER PRIOR TO INSTALLATION.
2. COORDINATE ALL SITE ELECTRICAL REQUIREMENTS WITH EQUIPMENT MANUFACTURER INFORMATION AND OTHER TRADES AND ADJUST ELECTRICAL PROVISIONS AS REQUIRED TO MEET REQUIREMENTS.
3. SITE ELECTRICAL CONDUITS SHALL BE 1" MINIMUM, UNLESS NOTED OTHERWISE, WHERE PRACTICABLE, ALL SITE ELECTRICAL CONDUITS SHALL BE INSTALLED A MINIMUM OF 24" BELOW GRADE, UNLESS NOTED OTHERWISE. COORDINATE FINAL CONDUIT ROUTING WITH EXISTING OBSTRUCTIONS AND OTHER TRADES AND ADJUST AS NECESSARY.
4. CAP AND MARK ALL UNDERGROUND CONDUITS PROVIDED FOR FUTURE USE AND INCLUDE PULL STRINGS. PROVIDE DIMENSIONED LOCATIONS OF TERMINATION POINTS ON AS-BUILT DRAWINGS AND SUBMIT TO OWNER.
5. PROVIDE SPLICE AND PULL BOXES FOR SITE LIGHTING AND SITE ELECTRICAL POWER TO LIMIT MAXIMUM CONDUIT RUN TO 300'. PLACE BOXES IN A PLANTER AREA CLEAR OF VEGETATION WHEREVER PRACTICABLE; (COORDINATE FINAL LOCATION WITH CIVIL, LANDSCAPE CONTRACTOR AND OWNER). BOXES SHALL BE SUITABLE FOR LOCATION AND PROPERLY SIZED FOR QUANTITY AND SIZE OF CONDUITS IN AND OUT AND SHALL BE MARKED "ELECTRICAL". NOT ALL OF THESE BOXES ARE SHOWN ON SITE ELECTRICAL DRAWINGS. CONTRACTOR SHALL PROVIDE LOCATION ON AS-BUILT DRAWINGS AND SUBMIT TO OWNER. SPLICE BOX SHALL BE APPROPRIATE FOR LOCATION AND SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS. SPLICE BOX SHALL HAVE A MINIMUM NOMINAL SIZE OF 12"X12"X12". SHALL BE AN OPEN BOTTOM NRTL LISTED UNDERGROUND ENCLOSURE, AND SHALL AT A MINIMUM BE TIER 15 TRAFFIC RATED.

PHASE 1 ELECTRICAL PLAN NOTES:

1. PROVIDE REPLACEMENT CONCRETE POLE BASE TO ACCOMMODATE GRADE CHANGE. REFER TO CIVIL PLANS FOR MORE INFORMATION. PROVIDE NEW CONDUCTORS AS NEEDED TO INCREASE CONNECTION LENGTH AND REINSTALL EXISTING LIGHT POLE ON UPDATED BASE.
2. PROVIDE DIRECTIONAL BORE BELOW RECENTLY UPDATED PARKING SURFACE FOR NEW LIGHT POLE CONNECTION INDICATED. FIELD VERIFY EXISTING UNDERGROUND OBSTRUCTIONS PRIOR TO ANY NEW WORK AND COORDINATE EXACT REQUIREMENTS WITH OWNER AND CIVIL.
3. PROVIDE DIAMOND SHAPE CUTOUT IN PARKING SURFACE FOR INSTALLATION OF NEW CONCRETE POLE BASE. PROTECT ADJACENT SURFACE FROM INADVERTENT DAMAGE DURING CONSTRUCTION. COORDINATE EXACT REQUIREMENTS WITH CIVIL.
4. EXTEND EXISTING UNDERGROUND CONDUIT FOR NEW CONNECTION TO UPDATED BASE. COORDINATE EXTENTS OF UNDERGROUND DISTURBANCE WITH CIVIL PRIOR TO NEW WORK.
5. PROVIDE UNDERGROUND CONDUIT STUBBED FROM POLE BASE FOR FUTURE CONNECTION TO NEW LIGHT POLE IN PHASE 2. REFER TO SHEET E-102 FOR MORE INFORMATION.
6. PROVIDE UNDERGROUND CONDUIT AS NEEDED FOR CONNECTION OF NEW CONCRETE LIGHT POLE BASE INSTALLED UNDER SEPARATE CONTRACT. COORDINATE EXACT REQUIREMENTS WITH OWNER AND GENERAL CONTRACTOR FOR CITIES BLUE PARKWAY RELOCATION PROJECT PRIOR TO BID.
7. PROVIDE NEW LIGHT POLE ON TO CONCRETE POLE BASE. FURNISHED UNDER SEPARATE CONTRACT. PROVIDE ALL CONNECTIONS AND CONTROL PROGRAMMING REQUIRED FOR A COMPLETE AND FUNCTIONAL INSTALLATION. COORDINATE PROPOSED SCHEDULE AND OTHER REQUIREMENTS WITH OWNER AND GENERAL CONTRACTOR FOR CITIES BLUE PARKWAY RELOCATION PROJECT PRIOR TO BID.
8. FIELD VERIFY EXACT LOCATION OF EXISTING UNDERGROUND LINE FOR PARKING LOT LIGHTING AND PROTECT FROM DAMAGE UNDER NEW WORK.
9. REINSTALL BANNERS AND BANNER ARMS REMOVED FROM PREVIOUSLY REMOVED LIGHT POLES TO MATCH EXISTING LIGHT POLE BANNER HEIGHT.
10. REINSTALL EXISTING TYPE 'SR4E' POLE LIGHT AS INDICATED AND RECONNECT TO EXISTING LIGHTING CONTROL SYSTEM. REFER TO DEMO PLAN FOR MORE INFORMATION.

RELEASED FOR CONSTRUCTION
As Noted on Plan Review
Development Services Department
Lee's Summit, Missouri
07/05/2024

HENDERSON ENGINEERS
8345 LENEXA DRIVE, SUITE 300
LENEXA, KS 66214
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2450001728
MO. CORPORATE NUMBER: E-556D
10/31/24

LEE'S SUMMIT SCHOOL DISTRICT
LSHS SE PARKING LOT LIGHTING
400 SE BLUE PKWY
LEE'S SUMMIT, MO 64063

STATE OF MISSOURI
DOUGLAS M. EVERHART
NUMBER PE-2019007648
PROFESSIONAL ENGINEER

03/29/2024
DOUGLAS M. EVERHART
LICENSE # PE-2019007648
PROFESSIONAL SEAL

REVISIONS

JOB NO:	2450001728
DATE:	03-08-24
CHECKED BY:	OD
DRAWN BY:	ASM

ELECTRICAL SITE PLAN PHASE 1

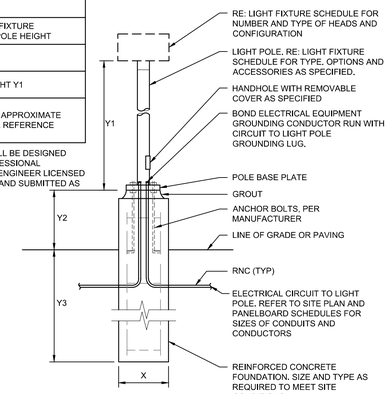
E-101

DOUGLAS M. EVERHART

TABLE OF DIMENSIONS*	
X	2'-0"
Y1	REFER TO LIGHT FIXTURE SCHEDULE FOR POLE HEIGHT
Y2	3'-0"
Y3	1/4 OF POLE HEIGHT Y1

* NOTE:
ALL DIMENSIONS ARE APPROXIMATE AND ARE SHOWN FOR REFERENCE ONLY.

POLE FOUNDATION SHALL BE DESIGNED AND SEALED BY A PROFESSIONAL STRUCTURAL OR CIVIL ENGINEER LICENSED IN THE PROJECT STATE AND SUBMITTED AS PART OF THE SUBMITTAL PROCESS.



2 POLE BASE DETAIL
NO SCALE

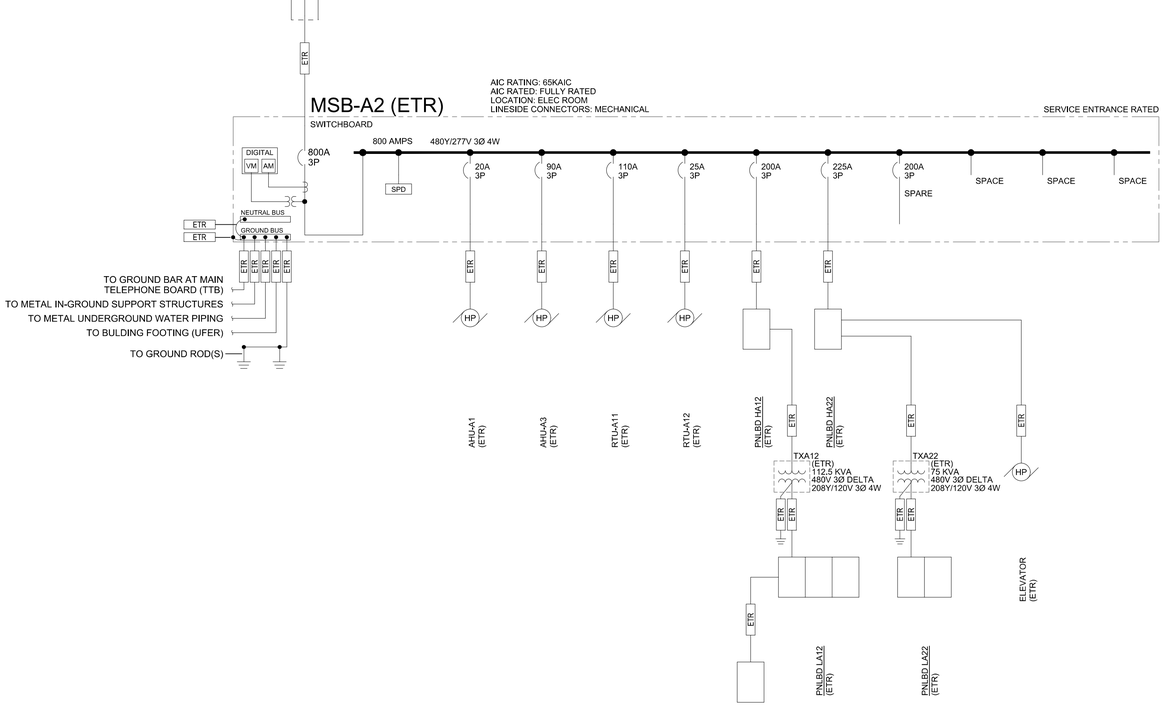
LIGHT FIXTURE SCHEDULE

TYPE	MANUFACTURER	SERIES / MODEL	APPROVED ALTERNATES	SOURCE					CONTROL	VOLTAGE	INPUT	INPUT	DESCRIPTION	NOTES
				QTY	TYPE	CRI	CCT	LUMENS	TYPE		WATTS	VA		
SR4	LUMARK	PREVAIL PRV-C60-D-UNV-T4-SA-XX ZW-SWPD5BZ	(NONE)	1	LED	70	4000K	20,000	WIRELESS	277	153	158	PROVIDE FIXTURE WITH STANDARD FINISH TO MATCH ADJACENT LIGHTS AND WAVELINX SENSOR CONFIGURED TO INTERFACE WITH EXISTING SITE LIGHTING CONTROL SYSTEM. PROVIDE 20' TALL 5" ROUND STRAIGHT POLE WITH STANDARD FINISH TO MATCH ADJACENT FIXTURES.	1,2
SR4E	LUMARK	PREVAIL PRV-C40-D-UNV-T4-SA-XX ZW-SWPD5BZ	(NONE)	1	LED	70	4000K	20,000	WIRELESS	277	153	158	EXISTING TYPE 'SR4' TO BE REUSED. SHOWN FOR REFRENCE ONLY.	
SR42	LUMARK	PREVAIL PRV-C40-D-UNV-T4-SA-XX ZW-SWPD5BZ	(NONE)	2	LED	70	4000K	20,000	WIRELESS	277	306	316	SIMILAR TO TYPE 'SR4' ONLY WITH (2) FIXTURE HEADS AT 180 DEGREES.	1,2
SR4B	LUMARK	PREVAIL PRV-C40-D-UNV-T4-SA-XX ZW-SWPD5BZ	(NONE)	1	LED	70	4000K	20,000	WIRELESS	277	153	158	SIMILAR TO TYPE 'SR4' ONLY WITH BOLT PATTERN COORDINATED WITH OTHERS AND INCLUDING INDIVIDUAL SETUP OF WIRELESS CONTROL AND INTEGRATION TO ACCOMMODATE CONSTRUCTION SCHEDULE.	1,2
SR42L	LUMARK	PREVAIL PRV-C40-D-UNV-T4-SA-XX ZW-SWPD5BZ	(NONE)	2	LED	70	4000K	20,000	WIRELESS	277	306	316	SIMILAR TO TYPE 'SR42' ONLY WITH 18' TALL POLE.	1,2
SS4	LUMARK	PREVAIL PRV-C40-D-UNV-T4-SA-XX ZW-SWPD5BZ	(NONE)	1	LED	70	4000K	20,000	WIRELESS	277	153	158	PROVIDE FIXTURE WITH STANDARD FINISH TO MATCH ADJACENT LIGHTS AND WAVELINX SENSOR CONFIGURED TO INTERFACE WITH EXISTING SITE LIGHTING CONTROL SYSTEM. PROVIDE 22' TALL 4" SQUARE STRAIGHT POLE WITH VIBRATION DAMPENER AND STANDARD FINISH TO MATCH ADJACENT FIXTURES.	1,2

GENERAL NOTES:
A. REFER TO LIGHT FIXTURE SCHEDULE GENERAL NOTES AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.

NOTES:
1. DUE TO AESTHETIC OR PERFORMANCE CRITERIA, SPECIFIED MANUFACTURER SHALL BE THE ONLY MANUFACTURER ALLOWED TO BID UNLESS OTHERWISE BY ENGINEER.
2. PROVIDE WIRELESS CONTROL INTERFACE COMPATIBLE WITH EXISTING COOPER WAVELINX SITE LIGHTING CONTROL SYSTEM. PROVIDE INTEGRATION AND PROGRAMMING AS NEEDED TO CONTROL NEW LIGHTS WITH EXISTING SYSTEM.

TO PAD MOUNT SWITCH 'MVS4'



NO NEW WORK. SHOWN FOR REFERENCE ONLY

1 BUILDING A ONE-LINE DIAGRAM
SCALE: NO SCALE

LIGHT FIXTURE SCHEDULE GENERAL NOTES:

1. ALL LIGHT FIXTURES AND RELATED COMPONENTS SHALL BE PROVIDED BY THE CONTRACTOR, UNLESS NOTED OTHERWISE.
2. THE PARTY SUPPLYING THE LIGHT FIXTURES IS RESPONSIBLE FOR SUPPLYING THE PROPER QUANTITY OF LIGHT FIXTURES.
3. COORDINATE WITH OWNER TO RECEIVE (1) EXISTING 'SR4' HEAD AND (2) 20 FOOT ROUND POLES FROM OWNERS ATTIC STOCK TO BE USED IN PHASE-1 OF THIS PROJECT. INSPECT AND CLEAN EXISTING EQUIPMENT AND NOTIFY OWNER OF ANY DEFECTS FOUND PRIOR TO INSTALLATION. PROVIDE NEW POLE BASE COVERS, MOUNTING ARMS, AND OTHER ACCESSORIES NEEDED TO MATCH NEW INSTALLATIONS.

LIGHT FIXTURE SCHEDULE SUPPLEMENTAL SPECIFICATIONS:

1. CATALOG NUMBERS SHALL NOT BE CONSIDERED COMPLETE AND MATERIAL SHALL NOT BE ORDERED BY MANUFACTURER AND CATALOG NUMBERS ONLY. FIRST READ THE COMPLETE DESCRIPTION, NOTES AND SPECIFICATIONS IN CONJUNCTION WITH THE CATALOG NUMBER TO DETERMINE THE MATERIAL AND ACCESSORIES TO BE ORDERED. THE MANUFACTURERS LISTED ARE THE BASIS FOR THE DESIGN.
2. FOR SUBSTITUTIONS: PROVIDE PHOTOMETRIC CALCULATIONS AND OTHER NECESSARY INFORMATION FOR ENGINEER REVIEW. REFER TO SPECIFICATIONS FOR MORE INFORMATION.

PANELBOARD: HA12 (ETR)
BUS AMPS: 250A
MAIN SIZE/TYPE: MLO
VOLTS/PHASE: 208Y/120V, 3PH, 4W
SECTION: 1

FED FROM: **MSB-A2**
AIC RATING: 35000; FULLY RATED
MOUNTING: SURFACE
SERVES: BLDG A LTG
LOCATION: ELECTRICAL, ROOM #: 2262

LINE-SIDE LUGS: MECHANICAL
EQUIPMENT GROUND BUS

	CKT NO	DESCRIPTION	VOLTAMPS/PHASE A	B	C	WIRE NO.	BKR AMP	P	P	BKR AMP	WIRE NO.	VOLTAMPS/PHASE A	B	C	DESCRIPTION	CKT NO.	
	1		29,321					1							DEDICATED SPACE	2	EX
EX	3	TXA12		24,553		EX	175	3	1						DEDICATED SPACE	4	EX
	5				26,354				1						DEDICATED SPACE	6	EX
	7								1	20	EX	40			EXT. LTG. + BSMNT FITNESS RM.	8	EX
EX	9	SPD				EX	30	3	1	20	EX		2,000		UH-7	10	EX
	11								1	20	EX			2,000	UH-8	12	EX
EX	13	LTG RM 2263	1,000			EX	20	1	1	20	EX	1,000			EXISTING LOAD	14	EX
EX	15	EXISTING LOAD		1,000		EX	20	1	1	20	EX		1,000		EXISTING LOAD	16	EX
EX	17	EXISTING LOAD			1,000	EX	20	1	1	20					SPARE	18	EX
EX	19	EXISTING LOAD	1,000			EX	20	1	1	20					SPARE	20	EX
EX	21	EXT LTG		1,000		EX	20	1	1	20	EX		1,000		LTG RM 2276,2280,2278	22	EX
EX	23	EXT LTG SE PARKING LOT			2,946	EX	20	1	1	20	EX			1,000	LTG RM 2275	24	EX
EX	25	EXISTING LOAD	1,000			EX	20	1	1	20	EX	1,000			LTG RM 2258	26	EX
EX	27	EXISTING LOAD		500		EX	20	1	1	20	EX		1,000		LTG RM 2262	28	EX
EX	29	EXISTING LOAD			500	EX	20	1	1	20	EX			1,000	EXISTING LOAD	30	EX
N	31	EXT LTG E PARKING LOT	1,421			8	20	1	1	20					SPARE	32	EX
EX	33	SPARE					20	1	1		EX				EQUIPPED SPACE	34	
	35	EQUIPPED SPACE				EX		1	1		EX				EQUIPPED SPACE	36	
	37	EQUIPPED SPACE				EX		1	1		EX				EQUIPPED SPACE	38	
	39	EQUIPPED SPACE				EX		1	1		EX				EQUIPPED SPACE	40	
	41	EQUIPPED SPACE				EX		1	1		EX				EQUIPPED SPACE	42	
		SUBTOTAL	33,742	27,053	30,800							2,040	5,000	4,000	SUBTOTAL		

TOTAL PHASE A - VA	35,782	LOAD		CONN. VA	DF	LOAD		CONN. VA	DF
AMPS	298	COOLING	[C]	6,585	1.00	REFRIG	[F]		1.00
TOTAL PHASE B - VA	32,053	HEATING	[H]	4,962	0	SIGNAGE	[S]		1.25
AMPS	267	LIGHTING	[L]	18,407	1.25	KITCHEN	[K]	3,000	1.00
TOTAL PHASE C - VA	34,800	RECEPTACLES	[R]	45,330	1.0/.5	EXISTING	[E]	5,001	1.00
AMPS	290	MOTORS	[M]	4,803	1.00	LRG MOTOR			1.25
TOTAL PNLBD - VA	102,635	SUPP HEAT	[U]	4,000	1.00	SHOW WND [W]			1.25
AMPS	285	MISC EQUIP	[Z]	15,509	1.00	LTG TRACK			1.00

TOTAL DEMAND
89,572 VA
249 A

PANELBOARD NOTES
EX - EXISTING
R - REUSE EXSTG CKT BRKR FOR NEW/REVISED LOAD

RELEASED FOR CONSTRUCTION
As Noted on Plan Review
Development Services Department
Lee's Summit, Missouri
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ONE-LINE DIAGRAM SUPPLEMENTAL SPECIFICATIONS:

1. PROVIDE TYPED UPDATED CIRCUIT DIRECTORY FOR PANELBOARDS TO REFLECT ACTUAL AS-BUILT CONDITIONS. COORDINATE FINAL ROOM NAMES, NUMBERS AND DESCRIPTIONS WITH OWNER PRIOR TO COMPLETION. CIRCUIT DESCRIPTIONS SHALL BE PER CODE AND SHALL BE DISTINGUISHABLE FROM ALL OTHERS.

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2450001728
MO. CORPORATE NUMBER: E-556D
10/31/24

LEE'S SUMMIT SCHOOL DISTRICT
LSHS SE PARKING LOT LIGHTING
400 SE BLUE PKWY
LEE'S SUMMIT, MO 64063

STATE OF MISSOURI
DOUGLAS M. EVERHART
NUMBER PE-2019007648
PROFESSIONAL ENGINEER
03/29/2024
DOUGLAS M. EVERHART
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PROFESSIONAL SEAL

REVISIONS

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ELECTRICAL SCHEDULES AND DETAILS

E-400

DOUGLAS M. EVERHART