CONSTRUCTION DRAWINGS

COSTCO WHOLESALE DEVELOPMENT

MARKET AT

LEE'S SUMMIT, MISSOURI

OWNER:
COSTCO WHOLESALE
999 LAKE DRIVE
ISSAQUAH, WASHINGTON 98027
(425) 313-8100

ENGINEER:
CIVIL & ENVIRONMENTAL CONSULTANTS, INC.
1450 BEALE STREET, SUITE 305
ST. CHARLES, MO 63303
CONTACT: DAN R. KOZIATEK, P.E.
(314) 656-4566
(314) 656-4588 (direct)
dkoziatek@cecinc.com

ARCHITECT:
MG2
1101 SECOND AVENUE, SUITE 100
SEATTLE, WASHINGTON 98101
CONTACT: WILLIE MAK
(206) 962-6500
(206) 962-6679 (direct)
willie.mak@MG2.com

LEGAL DESCRIPTION

ALL THAT PART OF THE SOUTHWEST QUARTER OF SECTION 8, TOWNSHIP 47, RANGE 31, IN LEE'S SUMMIT, JACKSON COUNTY, MISSOURI, DESCRIBED AS FOLLOWS:

COMMENCING AT A POINT ON THE NORTH LINE OF SAID QUARTER SECTION, AND 270 FEET EAST OF THE NORTHWEST CORNER THEREOF; THENCE SOUTH 00° 21' 55" WEST, A DISTANCE OF 323.29 FEET; THENCE NORTH 84° 48' 15" EAST, A DISTANCE OF 40.19 FEET TO THE TRUE POINT OF BEGINNING, WHICH IS AT A POINT OF INTERSECTION OF THE EAST RIGHT-OF-WAY OF U.S. HIGHWAY NO. 71 BYPASS AND THE SOUTHERLY RIGHT-OF-WAY OF U.S. HIGHWAY NO. 50, AS SAID HIGHWAYS ARE NOW ESTABLISHED; THENCE NORTH 84° 48' 15" EAST, ALONG THE SOUTHERLY RIGHT-OF-WAY LINE OF U.S. HIGHWAY NO. 50, A DISTANCE OF 21.18 FEET, TO A POINT OPPOSITE AND 215 FEET FROM BASE LINE STATION 691+96.85 (AHEAD) OF SAID HIGHWAY; THENCE NORTH 85° 19' 57" EAST, ALONG THE SOUTHERLY RIGHT-OF-WAY LINE OF U.S. HIGHWAY NO. 50, A DISTANCE OF 843.72 FEET TO A POINT ON THE SOUTHWESTERLY RIGHT-OF-WAY LINE OF THE MISSOURI PACIFIC RAILROAD, AS NOW ESTABLISHED, AND 50 FEET FROM THE CENTERLINE OF THE MAIN TRACKS THEREOF, SAID POINT ALSO BEING OPPOSITE AND 155 FEET FROM STATION 700+36.7 OF U.S. HIGHWAY NO. 50; THENCE SOUTH 31° 41' 20" EAST, ALONG SAID RAILROAD RIGHT-OF-WAY LINE, A DISTANCE OF 1144.59 FEET; THENCE SOUTH 89° 59' 20" WEST, PARALLEL WITH THE SOUTH LINE OF SAID QUARTER SECTION, A DISTANCE OF 1429.04 FEET TO A POINT ON THE EAST RIGHT-OF-WAY LINE OF U.S. HIGHWAY NO. 71 BYPASS, AND 80 FEET EAST OF THE CENTERLINE THEREOF; THENCE NORTH 00° 21' 55" EAST, ALONG SAID RIGHT-OF-WAY, A DISTANCE OF 93.20 FEET, TO A POINT OPPOSITE AND 80 FEET FROM THE STATION 11+31.27 (AHEAD) OF THE CENTERLINE OF SAID HIGHWAY; THENCE IN A NORTHEASTERLY, NORTHERLY AND NORTHWESTERLY DIRECTION ALONG A CURVE TO THE LEFT HAVING A RADIUS OF 1512.39 FEET, AND TANGENT TO THE LAST DESCRIBED COURSE, AND ALONG THE EASTERLY RIGHT-OF-WAY LINE, OF SAID HIGHWAY, AN ARC DISTANCE OF 348.59 FEET; THENCE NORTH 00° 21' 55" EAST, ALONG SAID EASTERLY RIGHT-OF-WAY LINE, A DISTANCE OF 464.70 FEET TO THE TRUE POINT OF BEGINNING. THE BEARINGS IN THE DESCRIPTION REFER TO THE NORTH LINE OF THE SOUTHWEST QUARTER OF SECTION 8, TOWNSHIP 47, RANGE 31, AS HAVING A BEARING OF DUE EAST; EXCEPT ALL THAT PART IN STREETS, ROADS AND HIGHWAY RIGHT OF WAY AND EXCEPT THOSE PORTIONS CONVEYED TO THE STATE OF MISSOURI, ACTING BY THROUGH THE MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION IN A GENERAL WARRANTY DEED RECORDED AUGUST 25, 2016 AS DOCUMENT NO. 2016E0078768.

VICINITY MAP



SITE VICINITY MAP SCALE: 1" = 2000'

USGS US TOPO 7.5-MINUTE MAP FOR LEE'S SUMMIT & LAKE JACOMO, MO 2025
USGS MAP COURTESY OF THE NATIONAL MAP
https://topobuilder.nationalmap.gov/ ACCESSED ON 12/04/2025

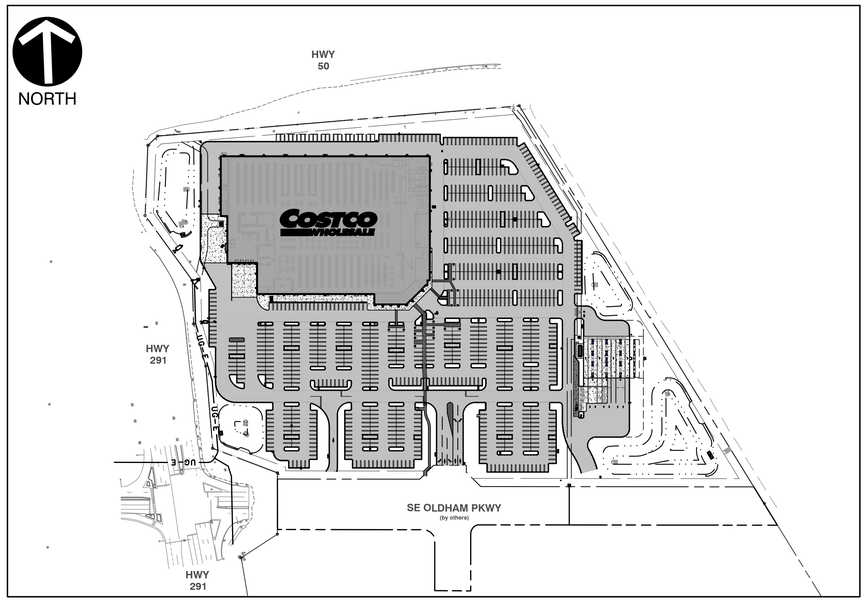
REGIONAL MAP



USGS TOPO MAP SCALE: 1" = 5000'

USGS US TOPO 7.5-MINUTE MAP FOR LEE'S SUMMIT & LAKE JACOMO, MO 2025
USGS MAP COURTESY OF THE NATIONAL MAP
https://topobuilder.nationalmap.gov/ ACCESSED ON 12/04/2025

SITE MAP



UTILITY CONTACTS:

STORM SEWER
CITY OF LEE'S SUMMIT PUBLIC WORKS
220 SE GREEN ST.
LEE'S SUMMIT, MO 64063
PHONE: (816) 969-1800

WATER & SANITARY SEWER
CITY OF LEE'S SUMMIT WATER UTILITIES
1200 SE HAMBLEN RD
LEE'S SUMMIT, MO 64081
PHONE: (816) 969-1900

ELECTRIC SERVICE
EVERGY
1300 SE HAMBLEN RD
LEE'S SUMMIT, MO 64081
PHONE: (816) 298-1196

GAS SERVICE
SPIRE GAS
3025 SE CLOVER DR
(816) 969-2200
CELL: (816) 969-2200

TELEPHONE / FIBER
AT&T
635 NW MURRAY RD
LEE'S SUMMIT, MO 64081
PHONE: (816) 736-2335

CABLE
AT&T
635 NW MURRAY RD
LEE'S SUMMIT, MO 64081
PHONE: (816) 736-2335

FIRE PROTECTION
LEE'S SUMMIT FIRE DEPT.
207 SE DOUGLAS ST
LEE'S SUMMIT, MO 64063
PHONE: (816) 969-7360

BENCHMARK

MISSOURI DEPARTMENT OF NATURAL RESOURCES BENCHMARK JA-25, DESCRIBED AS STANDARD MO DNR GPS DISK STAMPED "JA-25 1987"
ELEVATION NAVD 1988 = 1055.63
HORIZONTAL NAD 1983 = N:996212.17, E:2824634.92

MISSOURI 811
811 or 1-800-344-7483
https://missouri-811.org

REFERENCE

EXISTING TOPOGRAPHIC DATA AND FEATURES ARE A COMBINATION OF THE FOLLOWING:
1. ALTA SURVEY DATED 08-20-2025 BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC.
2. DEVELOPMENT PLANS FOR OLDHAM VILLAGE (BY OTHER)
3. SITE DEVELOPMENT PLANS DATED 12-22-2025 BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC.

NOTE TO CONTRACTOR: PRIOR TO ANY EXCAVATION FOR UNDERGROUND UTILITIES, CONTRACTOR SHALL EXPOSE AND VERIFY LOCATIONS (HORIZONTAL AND VERTICAL) OF ALL EXISTING UTILITIES INCLUDING BUT NOT LIMITED TO GAS, WATER, BROADBAND, PHONE, SANITARY AND STORM SEWERS. ANY CONFLICT SHALL BE REPORTED IMMEDIATELY TO THE ENGINEER AND APPROPRIATE AUTHORITIES

PROJECT DATA

CLIENT:	COSTCO WHOLESALE 730 LAKE DRIVE ISSAQUAH, WA 98027
PROJECT ADDRESS:	10 & 20 SE OLDHAM PKWY LEE'S SUMMIT, MO 64081

SITE DATA:

TOTAL SITE AREA:	23.863 ACRES (1,039,464 SF)
PROPOSED ROW AREA:	1.388 ACRES (60,478 SF)
PROPOSED LOT AREA:	22.475 ACRES (978,986 SF)
JURISDICTION:	LEE'S SUMMIT MO
ZONING:	PLANNED MIXED USE DISTRICT (PMIX)

BUILDING DATA:

TOTAL BUILDING FOOTPRINT AREA:	161,540 SF
INCLUDES:	
WAREHOUSE MAIN LEVEL	155,420 SF
ENCLOSED CANOPY	6,120 SF

SETBACKS:	REQUIRED		ACTUAL
FRONT:	15'	FRONT:	20'
SIDE:	10'	SIDE:	10'
REAR:	20'	REAR:	20'

LOT COVERAGE:

PROPOSED IMPERVIOUS AREA:	16.089 ACRES (700,838 SF)
PROPOSED PERVIOUS AREA:	6.385 ACRES (278,148 SF)
PROPOSED PERCENT IMPERVIOUS:	71.59%

PARKING DATA:

TOTAL PARKING:	913 STALLS
INCLUDES:	
MAIN LEVEL PARKING PROVIDED:	
(P) 10' WIDE STALLS	870 STALLS
(P) ACCESSIBLE STALLS	19 STALLS
FUTURE STALLS	24 STALLS
NUMBER OF STALLS PER 1000 SF OF BUILDING AREA:	5.75 STALLS

FLOOD:

INFO:	MAP PANEL 29095C0419G EFFECTIVE DATE OF 01/20/2017 LIES WITHIN ZONE X

NOTES:
- EXISTING CONDITIONS TO BE FIELD VERIFIED.
- A SEPARATE PERMIT IS REQUIRED FOR ANY WORK WITHIN THE CITY OWNED RIGHT OF WAY THAT DISTURBS OR OCCUPIES ANY PORTION OF THE PAVEMENT, CURB AND GUTTER, DRIVEWAY ENTRANCES, SIDEWALK, LANDSCAPING OR GRASSED AREAS, ETC. A RIGHT-OF-WAY PERMIT IS ALSO REQUIRED FOR EQUIPMENT OR MATERIAL STORAGE ON THE STREET OR SIDEWALK FOR MORE THAN 4 HOURS. PLEASE CONTACT THE DEPARTMENT OF PUBLIC WORKS AND PARKS (816-969-1809) TO DETERMINE IF A RIGHT-OF-WAY PERMIT IS REQUIRED.

SHEET LIST

NO.	NAME	TITLE
01	C000	COVER
02	C100	EXISTING CONDITIONS
03	C200	SITE PLAN
04	C201	CURB ISLAND DIMENSION PLAN
05	C202	FIRE APPARATUS TURNING
06	C300	GRADING PLAN
07	C301	ADA GRADING PLAN
08	C400	STORM SEWER PLAN
09	C401	EXISTING DRAINAGE AREA MAP
10	C402	PROPOSED DRAINAGE AREA MAP
11	C403	STORM SEWER PROFILES
12	C404	STORM SEWER PROFILES
13	C405	STORM HYDRAULICS
14	C406	STORMWATER MANAGEMENT BASIN
15	C407	STORMWATER MANAGEMENT BASIN
16	C408	ROOF DRAIN PLAN
17	C500	UTILITY PLAN
18	C501	SANITARY PROFILES
19	C502	WATER PROFILES
20	C700	FUEL FACILITY SITE PLAN
21	C701	FUEL FACILITY GRADING PLAN
22	C702	FUEL FACILITY DETAILS SECTIONS & NOTES
23	C800	SITE DETAILS
24	C801	SITE DETAILS
25	C802	SITE DETAILS
26	C803	LOCAL UTILITY DETAILS
27	C804	LOCAL UTILITY DETAILS
28	C805	LOCAL UTILITY DETAILS
29	C806	SUB-SURFACE BUILDING PAD DETAILS
30	C900	EROSION CONTROL PLAN
31	C901	E&S DETAILS

NOTES:

1. CONTRACTOR SHALL REFER TO OTHER PLANS WITHIN THIS CONSTRUCTION SET FOR OTHER PERTINENT INFORMATION. IT IS NOT THE ENGINEER'S INTENT THAT ANY SINGLE PLAN SHEET IN THIS SET OF DOCUMENTS FULLY DEPICT ALL WORK ASSOCIATED WITH THIS PROJECT.

KARL A. SCHOENIKE, PE
(MO PE# 2003015039)

STATE OF MISSOURI
KARL A. SCHOENIKE
NUMBER PE-2003015039
03/13/2026
PROFESSIONAL ENGINEER

REVISION RECORD

NO.	DATE	DESCRIPTION
	01/30/2026	BID SET ADDENDUM 2
	02/03/2026	FUEL BID SET
	02/20/2026	REVISED PER REVIEW AND COMMENTS
	03/13/2026	Revised per Approved Final Development Plans

ENGINEERING, SURVEYING, AND LANDSCAPE ARCHITECTURE IN THE STATE OF NORTH CAROLINA WILL BE PROVIDED BY CEC SURVEYING AND LANDSCAPE ARCHITECTS OF NC, PLLC. CEC KANSAS, LLC. ENGINEERING IN THE STATE OF KANSAS WILL BE PROVIDED BY CEC ENGINEERS & CONSULTANTS, LLC. LANDSCAPE ARCHITECTURE SERVICES IN THE STATE OF IOWA WILL BE PROVIDED BY MG2 ARCHITECTS, LLC.

1450 Beale Street
Suite 305
St. Charles, MO 63303
Ph: 314.656.4566
www.cecinc.com

Civil & Environmental Consultants, Inc.

COSTCO WHOLESALE
LEE'S SUMMIT, MISSOURI

COSTCO LEES SUMMIT
CONSTRUCTION DOCUMENTS
COVER
REVIEW SET - NOT FOR CONSTRUCTION

DATE:	DECEMBER 22, 2025
DWG SCALE:	AS NOTED
PROJECT NO:	353-308.0002
DRAWN BY:	MK
CHECKED BY:	KAS
APPROVED BY:	DRK

DRAWING NO.: C000
SHEET 01 OF 31

A:\353-0001\353-308\~DATA\Dwg\civil\C000.dwg(C000) 12/22/2025 - bschenke@ - LP: 3/12/2026 2:02 PM

NORTH

DEMOLITION LEGEND:

DOC # ____ — DENOTES EXISTING ITEM TO REMAIN

12" METAL INV.= 1046.12 (6) 34" — 12" METAL INV.= 1047.32 — DENOTES EXISTING ITEM TO BE REMOVED

LEGEND

- EXISTING PROPERTY LINE
- EXISTING SETBACK
- EXISTING EASEMENT
- 385 EXISTING INDEX (MAJOR) CONTOUR
- 384 EXISTING INTERMEDIATE (MINOR) CONTOUR
- EXISTING GUARD RAIL
- EXISTING FENCE
- EXISTING VERTICAL CONCRETE CURB
- EXISTING EDGE OF PAVEMENT
- EXISTING DITCH FLOW LINE
- EXISTING TREE LINE
- DIA. EXISTING TREE WITH TRUNK SIZE
- OH-E EXISTING OVERHEAD ELECTRIC
- UG-E EXISTING UNDERGROUND ELECTRIC
- FO EXISTING FIBER OPTIC LINE
- W EXISTING WATER LINE
- SAN EXISTING SANITARY SEWER LINE
- EXISTING STORM DRAIN
- EXISTING TRAFFIC POLE WITH ARM
- EXISTING LIGHT POLE WITH ARM
- EXISTING UTILITY POLE AND GUY WIRE
- EXISTING ELECTRIC PULL BOX
- EXISTING FIBER OPTIC PULL BOX
- FMK EXISTING FIBER MARKER
- W EXISTING WATER MANHOLE
- HYD EXISTING FIRE HYDRANT
- WV EXISTING WATER VALVE
- EXISTING WATER METER
- S EXISTING SANITARY MANHOLE
- EXISTING CURB INLET
- EXISTING FLARED END SECTION (F.E.S.)
- EXISTING GRATED CATCH BASIN
- EXISTING STORMWATER MANHOLE

KEY NOTES (#)

1. EXISTING PROPERTY LINE.
2. EXISTING CONCRETE DEBRIS TO BE REMOVED.
3. REMOVE EXISTING TREES, SHRUBS, AND VEGETATION WITHIN DEMOLITION AREA.
4. REMOVE OVERHEAD ELECTRICAL WIRE, POLE, AND ASSOCIATED GUY WIRES. COORDINATE WITH LOCAL UTILITY PROVIDER PRIOR TO REMOVAL.
5. EXISTING FENCE TO BE REMOVED.
6. REMOVE EXISTING STORM SEWER PIPING AND STRUCTURES.
7. FUTURE RIGHT OF WAY LINE.
8. EXISTING GUARD RAIL TO BE REMOVED.
9. EXISTING SIGNAGE TO BE REMOVED.
10. GUY WIRES TO BE REMOVED AND RELOCATED, COORDINATE WITH EVERGY.
11. STORM SEWERS BUILT BY DEVELOPER DURING INTERIM GRADING.

DEMOLITION NOTES

1. ALL EXISTING ABOVE AND BELOW GROUND STRUCTURES WITHIN THE LIMITS OF CONSTRUCTION SHALL BE REMOVED UNLESS NOTED OTHERWISE WITHIN THIS CONSTRUCTION SET AND/OR PROJECT SPECIFICATIONS. THIS INCLUDES FOUNDATION SLABS, WALLS AND FOOTINGS. CAVITIES LEFT BY STRUCTURE REMOVAL SHALL BE BACKFILLED WITH SATISFACTORY MATERIALS AND COMPACTED TO THE GEOTECHNICAL ENGINEER'S RECOMMENDATION.
2. CLEARING LIMITS SHALL BE PHYSICALLY MARKED IN THE FIELD BY THE CONTRACTOR.
3. NO TREES SHALL BE REMOVED, NOR VEGETATION DISTURBED BEYOND THE LIMITS OF CONSTRUCTION WITHOUT THE EXPRESS WRITTEN APPROVAL OF THE OWNER'S REPRESENTATIVE.
4. TREE PROTECTION FENCING SHALL BE IN ACCORDANCE WITH JACKSON COUNTY STANDARDS – OR – IN ACCORDANCE WITH THE DETAILED DRAWINGS. DO NOT OPERATE OR STORE EQUIPMENT, NOR HANDLE OR STORE MATERIALS WITHIN THE DRIP LINES OF THE TREES SHOWN TO REMAIN.
5. PROTECTION OF EXISTING TREES AND VEGETATION: PROTECT EXISTING TREES AND OTHER VEGETATION INDICATED TO REMAIN IN PLACE AGAINST UNNECESSARY CUTTING, BREAKING OR SKINNING OF ROOTS, SKINNING OR BRUISING OF BARK, SMOTHERING OF TREES BY STOCKPILING CONSTRUCTION MATERIALS OR EXCAVATED MATERIALS WITHIN DRIP LINE, EXCESS FOOT OR VEHICULAR TRAFFIC, OR PARKING OF VEHICLES WITHIN DRIP LINE. PROVIDE TEMPORARY GUARDS TO PROTECT TREES AND VEGETATION TO BE LEFT STANDING.
6. ALL DEMOLITION WASTE AND CONSTRUCTION DEBRIS SHALL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE DESIGNATED AND SHALL BE REMOVED BY THE CONTRACTOR AND DISPOSED OF OFFSITE IN A STATE APPROVED WASTE SITE AND IN ACCORDANCE WITH ALL LOCAL AND STATE CODES AND PERMIT REQUIREMENTS. TAKE CARE TO PROTECT UTILITIES THAT ARE TO REMAIN. REPAIR DAMAGE ACCORDING TO THE APPROPRIATE UTILITY COMPANY STANDARDS AND AT THE CONTRACTOR'S EXPENSE.
7. ALL UTILITY DISCONNECTION, REMOVAL, RELOCATION, CUTTING, CAPPING AND/OR ABANDONMENT SHALL BE COORDINATED WITH THE APPROPRIATE UTILITY COMPANY / AGENCY. UTILITY CONTACTS ARE LISTED ON THE COVER SHEET.
8. THE BURNING OF CLEARED MATERIAL AND DEBRIS SHALL NOT BE ALLOWED UNLESS CONTRACTOR OBTAINS PRIOR WRITTEN AUTHORIZATION FROM THE LOCAL AUTHORITIES.
9. EROSION & SEDIMENT CONTROL MEASURES AROUND AREAS OF DEMOLITION SHALL BE PROPERLY INSTALLED AND FUNCTION PROPERLY PRIOR TO INITIALIZATION OF DEMOLITION ACTIVITIES.
10. ASBESTOS OR HAZARDOUS MATERIALS ARE NOT EXPECTED, IF FOUND ON SITE, SUCH MATERIALS SHALL BE REMOVED BY A LICENSED HAZARDOUS MATERIALS CONTRACTOR. CONTRACTOR SHALL NOTIFY OWNER IMMEDIATELY IF HAZARDOUS MATERIALS ARE ENCOUNTERED.
11. CONTRACTOR SHALL ADHERE TO ALL LOCAL, STATE, FEDERAL AND OSHA REGULATIONS DURING ALL DEMOLITION ACTIVITIES.
12. CONTRACTOR SHALL PROTECT ALL CORNER PINS, MONUMENTS, PROPERTY CORNERS AND BENCHMARKS DURING DEMOLITION ACTIVITIES. IF DISTURBED, CONTRACTOR SHALL HAVE DISTURBED ITEMS RESET BY A LICENSED SURVEYOR AT NO ADDITIONAL COST TO THE OWNER.
13. CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES, STRUCTURES, AND FEATURES TO REMAIN. ANY ITEMS TO REMAIN THAT HAVE BEEN DISTURBED OR DAMAGED AS A RESULT OF CONSTRUCTION SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT CONTRACTOR'S EXPENSE.
14. CONTRACTOR SHALL PROVIDE AND MAINTAIN TRAFFIC CONTROL MEASURES IN ACCORDANCE WITH STATE DEPARTMENT OF TRANSPORTATION REGULATIONS AND AS REQUIRED BY LOCAL AGENCIES WHEN WORKING IN AND/OR ALONG STREETS, ROADS, HIGHWAYS, ETC.. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN APPROVAL AND COORDINATE WITH LOCAL AND/OR STATE AGENCIES REGARDING THE NEED, EXTENT AND LIMITATIONS ASSOCIATED WITH INSTALLING AND MAINTAINING TRAFFIC CONTROL MEASURES.
15. PROVIDE NEAT, STRAIGHT, FULL DEPTH, SAW CUTS OF EXISTING PAVEMENT WHERE INDICATED ALONG LIMITS OF PAVEMENT DEMOLITION.
16. ALL UTILITY AND STRUCTURE REMOVAL, RELOCATION, CUTTING, CAPPING AND/OR ABANDONMENT SHALL BE COORDINATED AND PROPERLY DOCUMENTED BY A CERTIFIED PROFESSIONAL, WHEN APPLICABLE, WITH THE APPROPRIATE UTILITY COMPANY, MUNICIPALITY AND/OR AGENCY. DEMOLITION OF REGULATED ITEMS MAY INCLUDE, BUT ARE NOT LIMITED TO WELLS, ASBESTOS, UNDER GROUND STORAGE TANKS, SEPTIC TANKS AND ELECTRIC TRANSFORMERS. DEMOLITION CONTRACTOR SHALL REFER TO ANY ENVIRONMENTAL STUDIES FOR DEMOLITION RECOMMENDATIONS AND GUIDANCE. AVAILABLE ENVIRONMENTAL STUDIES MAY INCLUDE, BUT ARE NOT LIMITED TO PHASE I ESA, PHASE II, WETLAND AND STREAM DELINEATION AND ASBESTOS SURVEY. ALL APPLICABLE ENVIRONMENTAL STUDIES SHALL BE MADE AVAILABLE UPON REQUEST.
17. ALL PAVEMENT, BASE COURSES, SIDEWALKS, CURBS, BUILDINGS, FOUNDATIONS, ETC., WITHIN THE AREA TO BE DEMOLISHED SHALL BE REMOVED TO FULL DEPTH. EXISTING BASE COURSE MATERIALS MAY BE WORKED INTO THE NEW PAVEMENT OR BUILDING SUBGRADE IF THE GRADATION, CONSISTENCY, COMPACTION, SUBGRADE CONDITION, ETC., ARE IN ACCORDANCE WITH THE SPECIFICATIONS AND RECOMMENDATIONS OF THE REPORT OF GEOTECHNICAL INVESTIGATION. BASE COURSE MATERIALS SHALL NOT BE WORKED INTO THE SUBGRADE AREAS TO RECEIVE LANDSCAPING.
18. THE CONTRACTOR SHALL USE SUITABLE METHODS TO CONTROL DUST AND DIRT CAUSED BY THE DEMOLITION ACTIVITIES.

NOTES:

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SCALE IN FEET
0 50 100

KARL A. SCHOENIKE, PE (MO PE# 2003015039)

STATE OF MISSOURI — KARL A. SCHOENIKE — NUMBER PE-2003015039 — 03/13/2026 — PROFESSIONAL ENGINEER

REFERENCE

EXISTING TOPOGRAPHIC DATA AND FEATURES ARE A COMBINATION OF THE FOLLOWING:
1. ALTA SURVEY DATED 08-20-2025 BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC.
2. DEVELOPMENT PLANS FOR OLDHAM VILLAGE (BY OTHER)
3. SITE DEVELOPMENT PLANS DATED 12-22-2025 BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC.

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MISSOURI 811
811 or 1-800-344-7483
https://missouri-811.org

REVISION RECORD

NO	DATE	DESCRIPTION
	01/30/2026	BID SET ADDENDUM 2
	02/03/2026	PLAT BID SET
	02/20/2026	REVISED PER REVIEW AND COMMENTS
	03/13/2026	Revised per Approved Final Development Plans

CIVIL, SURVEYING, AND LANDSCAPE ARCHITECTURE IN THE STATE OF NORTH CAROLINA WILL BE PROVIDED BY CEC SURVEYING AND LANDSCAPE ARCHITECTS OF MO, PLLC. CIVIL AND LANDSCAPE ARCHITECTURE IN THE STATE OF MISSOURI WILL BE PROVIDED BY CEC ENGINEERS & CONSULTANTS, LLC. LANDSCAPE ARCHITECTURE SERVICES IN THE STATE OF OHIO WILL BE PROVIDED BY CEC ENGINEERS & CONSULTANTS, LLC.

1450 Beale Street
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St. Charles, MO 63303
Ph: 314.656.4566
www.cecinc.com

Civil & Environmental Consultants, Inc.

COSTCO WHOLESALE

LEE'S SUMMIT, MISSOURI

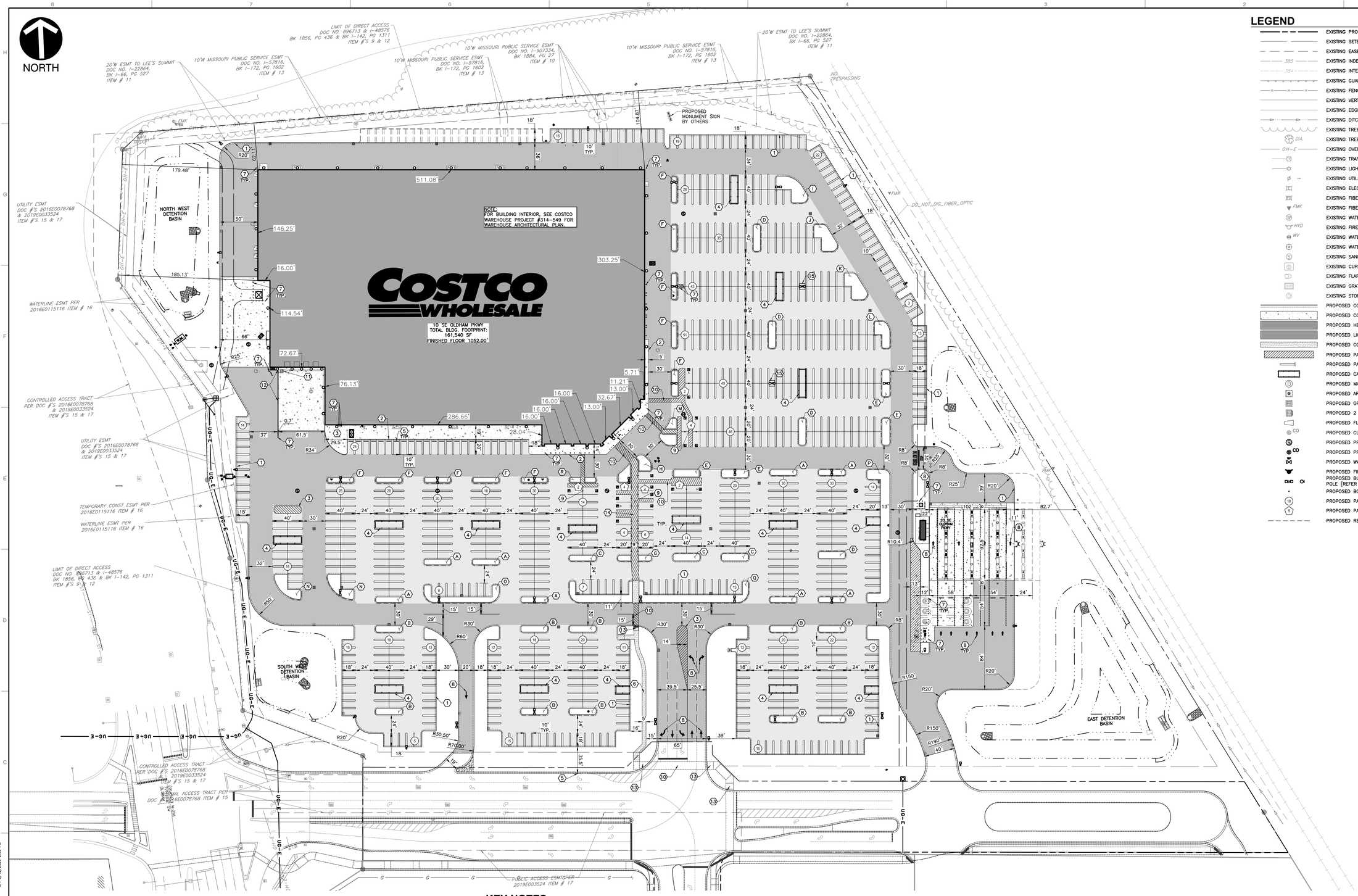
COSTCO LEES SUMMIT
CONSTRUCTION DOCUMENTS
EXISTING CONDITIONS
REVIEW SET - NOT FOR CONSTRUCTION
DECEMBER 22, 2025

DRAWN BY:	MK
CHECKED BY:	KAS
DWG SCALE:	1" = 50'
PROJECT NO:	353-308.0002
APPROVED BY:	*DRK

DRAWING NO.: C100

SHEET 02 OF 31

J:\353-0001\353-308\1-CADD\Dwg\civil\civil\353308-CIVIL-C100.dwg 3/13/2026 2:52 PM - kschoenike - LR: 3/13/2026 2:52 PM



LEGEND

- EXISTING PROPERTY LINE
- EXISTING SETBACK
- EXISTING EASEMENT
- EXISTING INDEX (MAJOR) CONTOUR
- EXISTING INTERMEDIATE (MINOR) CONTOUR
- EXISTING GUARD RAIL
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- EXISTING VERTICAL CONCRETE CURB
- EXISTING EDGE OF PAVEMENT
- EXISTING DITCH FLOW LINE
- EXISTING TREE LINE
- EXISTING TREE WITH TRUNK SIZE
- EXISTING OVERHEAD ELECTRIC
- EXISTING TRAFFIC POLE WITH ARM
- EXISTING LIGHT POLE WITH ARM
- EXISTING UTILITY POLE AND GUY WIRE
- EXISTING ELECTRIC PULL BOX
- EXISTING FIBER OPTIC PULL BOX
- EXISTING FIBER MARKER
- EXISTING WATER MANHOLE
- EXISTING FIRE HYDRANT
- EXISTING WATER VALVE
- EXISTING WATER METER
- EXISTING SANITARY MANHOLE
- EXISTING CURB INLET
- EXISTING FLARED END SECTION (F.E.S.)
- EXISTING GRATED CATCH BASIN
- EXISTING STORMWATER MANHOLE
- PROPOSED CONCRETE CURB AND GUTTER
- PROPOSED CONCRETE PAVEMENT
- PROPOSED HEAVY DUTY PAVEMENT
- PROPOSED LIGHT DUTY PAVEMENT
- PROPOSED CONCRETE SIDEWALK
- PROPOSED PAINTED 2' O.C. DIAGONAL STRIPING
- PROPOSED PAINTED PARKING DIVIDER
- PROPOSED CART CORRAL
- PROPOSED MANHOLE – SOLID COVER
- PROPOSED AREA INLET – 3-WAY
- PROPOSED GRATE INLET
- PROPOSED 2 GRATE INLET W/ SIDE INTAKE
- PROPOSED FLARED END SECTION (F.E.S.)
- PROPOSED CLEAN OUT
- PROPOSED PRIVATE SANITARY MANHOLE
- PROPOSED PRIVATE SANITARY CLEANOUT
- PROPOSED WATER VALVE
- PROPOSED FIRE HYDRANT
- PROPOSED BUILDING MOUNTED LIGHT AND LIGHT POLE [REFER TO LIGHTING PLAN BY OTHERS]
- PROPOSED BOLLARD
- PROPOSED PARKING STALL COUNT
- PROPOSED PARKING STALL COUNT (ADA)
- PROPOSED REVERSE CURB

SITE LAYOUT NOTES

1. ALL SITE WORK SHOWN HEREON SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT'S SPECIFICATIONS, THE CURRENT EDITION OF LEE'S SUMMIT STANDARD SPECIFICATIONS AND ALL APPLICABLE FEDERAL, STATE AND LOCAL BUILDING CODES AND ORDINANCES.
2. THE CONTRACTOR SHALL CHECK EXISTING GRADES, DIMENSIONS, AND INVERTS IN THE FIELD AND REPORT ANY DISCREPANCIES TO THE OWNER'S REPRESENTATIVE PRIOR TO BEGINNING WORK.
3. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL EXISTING UTILITIES AND PROTECT UTILITIES THAT ARE TO REMAIN. RELOCATE EXISTING UTILITIES AS INDICATED, OR AS NECESSARY FOR CONSTRUCTION.
4. PROVIDE A SMOOTH TRANSITION BETWEEN EXISTING PAVEMENT AND NEW PAVEMENT. FIELD ADJUSTMENT OF FINAL GRADES MAY BE NECESSARY. INSTALL ALL UTILITIES, INCLUDING IRRIGATION SLEEVES, PRIOR TO INSTALLATION OF PAVED SURFACES.
5. ALL DAMAGE TO EXISTING PAVEMENT TO REMAIN WHICH RESULTS FROM THE CONTRACTOR'S OPERATIONS SHALL BE REPLACED WITH LIKE MATERIALS AT THE CONTRACTOR'S EXPENSE.
6. SITE DIMENSIONS AND/OR COORDINATES SHOWN ARE TO THE FACE OF CURB, EDGE OF PAVEMENT, EXTERIOR BUILDING WALL, CENTER OF MANHOLE, CENTER AT FACE OF CURB FOR DRAIN INLETS AND CENTERLINE OF PIPE OR FITTING, UNLESS OTHERWISE NOTED. DISTANCES SHOWN ON PIPING ARE HORIZONTAL DISTANCES FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE, UNLESS OTHERWISE NOTED.
7. REFER TO THE ARCHITECTURAL DRAWINGS FOR EXACT BUILDING DIMENSIONS AND LOCATIONS OF UTILITY SERVICE ENTRANCES, BUILDING DRAINS, ROOF DRAINS, DOORS AND EXIT FEATURES.
8. CONTRACTOR SHALL MAINTAIN VEHICLE AND PEDESTRIAN ACCESS ON ADJACENT ROADWAYS AND DRIVES TO THE MAXIMUM EXTENT FEASIBLE THROUGHOUT THE DURATION OF THE PROJECT – COORDINATE WITH NEIGHBORING BUSINESSES AND WITH PUBLIC STREET AUTHORITIES HAVING JURISDICTION. PROVIDE TEMPORARY TRAFFIC CONTROL MEASURES TO MAINTAIN WORK SITE SAFETY AND TO PROTECT THE TRAVELING PUBLIC IN ACCORDANCE WITH APPLICABLE PROVISIONS OF THE CURRENT EDITION OF MISSOURI MUTCD, MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

KEY NOTES

1. 1'-7" CONCRETE CURB AND GUTTER. SEE DETAIL 18/C801.
2. FLUSH CURB AT PAVEMENT. SEE DETAIL 19/C801.
3. PAINTED STRIPING. SEE DETAIL 36/C802.
4. CART STORAGE. SEE DETAILS 09/C801 & 10/C801.
5. PROPOSED RIGHT OF WAY LINE.
6. 5' WIDE CONCRETE SIDEWALK. SEE DETAIL 27/C802 FOR ON-SITE (PRIVATE) SIDEWALK SECTION.
7. BOLLARDS. SEE DETAILS 25/C802, 31/C802, & 34/C802.
8. STOP BAR, PAVEMENT ARROWS, AND STOP SIGN. SEE ARCH. PLANS FOR DETAILS.
9. ACCESSIBLE PARKING STALLS. SEE DETAILS 32/C802, 33/C802, & 35/C802.
10. PAINTED CROSSWALK. MATCH ADA STRIPING ON DETAIL 33/C802.
11. LOADING DOCK TRENCH DRAIN. SEE DETAIL 11/C801.
12. LOADING DOCK WALL. SEE ARCHITECTURAL PLANS FOR DETAILS.
13. ADA RAMP PER CITY OF LEE'S SUMMIT. SEE DETAILS 03/C800 AND 04/C800
14. ASPHALT ADA PATHWAY.
15. PROPOSED LIGHT POLE ISLAND SEE DETAIL 13/C801

REFERENCE

EXISTING TOPOGRAPHIC DATA AND FEATURES ARE A COMBINATION OF THE FOLLOWING:
1. ALTA SURVEY DATED 08-20-2025 BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC.
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SCALE IN FEET
0 50 100

STATE OF MISSOURI
KARL A. SCHOENIKE
PE-2003015039
03/13/2026
PROFESSIONAL ENGINEER

KARL A. SCHOENIKE, PE
(MO PE# 2003015039)

REVISION RECORD

NO	DATE	DESCRIPTION
	01/30/2026	BID SET ADDENDUM 2
	02/03/2026	FUEL BID SET
	02/20/2026	REVISED PER REVIEW AND COMMENTS
	03/13/2026	Revised per Approved Final Development Plans

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1450 Beale Street
Suite 305
St. Charles, MO 63303
Ph: 314.656.4566
www.cecinc.com

Civil & Environmental Consultants, Inc.

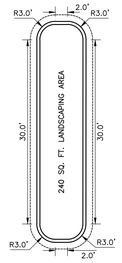
COSTCO WHOLESALE
LEE'S SUMMIT, MISSOURI

COSTCO LEES SUMMIT
CONSTRUCTION DOCUMENTS
SITE PLAN
REVIEW SET - NOT FOR CONSTRUCTION

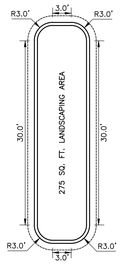
DATE:	DECEMBER 22, 2025
DRAWN BY:	MK
CHECKED BY:	KAS
DWG SCALE:	1" = 50'
PROJECT NO:	353-308.0002
APPROVED BY:	*DRK

DRAWING NO.: **C200**
SHEET 03 OF 31

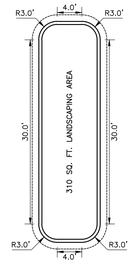
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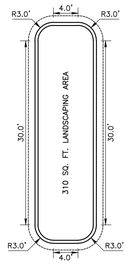
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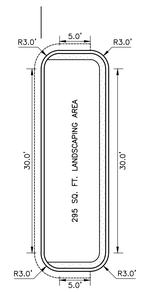
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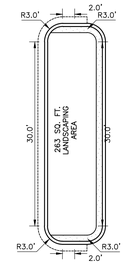
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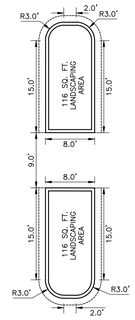
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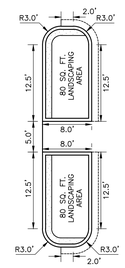
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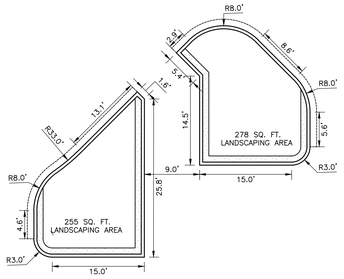
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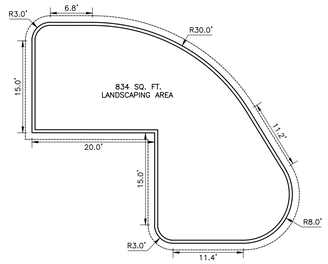
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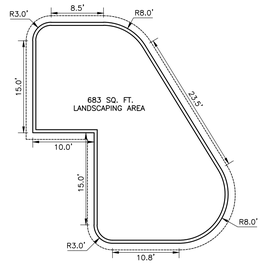
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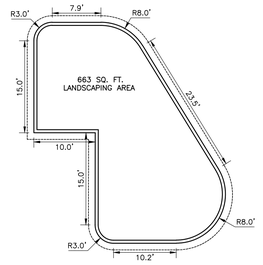
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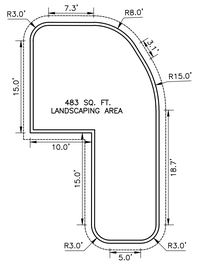
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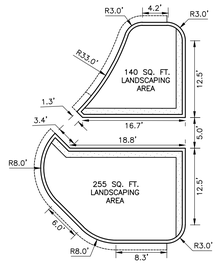
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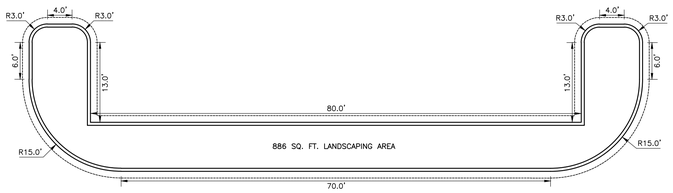


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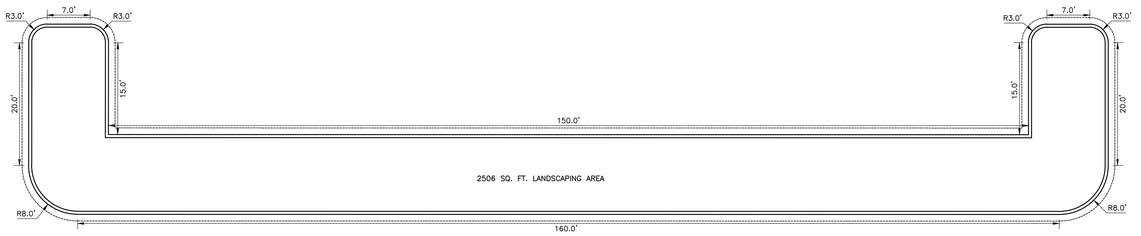


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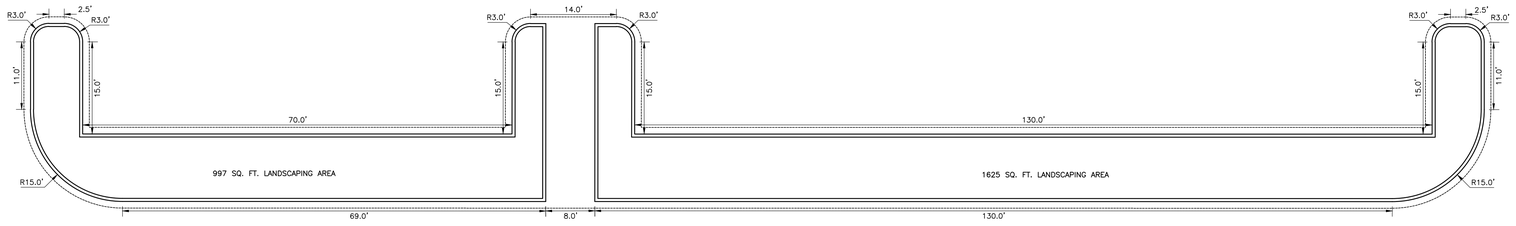
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SCALE: 1"=10'



TYPE-O ISLAND
SCALE: 1"=10'



TYPE-P ISLAND
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TYPE-Q ISLAND
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SCALE IN FEET
0 10 20

STATE OF MISSOURI
KARL A. SCHOENIKE
NUMBER PE-2003015039
PROFESSIONAL ENGINEER
03/13/2026

KARL A. SCHOENIKE, PE
(MO PE# 2003015039)

REVISION RECORD

NO	DATE	DESCRIPTION
	01/30/2026	BID SET ADDENDUM 2
	02/03/2026	FUEL BID SET
	02/20/2026	REVISED PER REVIEW AND COMMENTS
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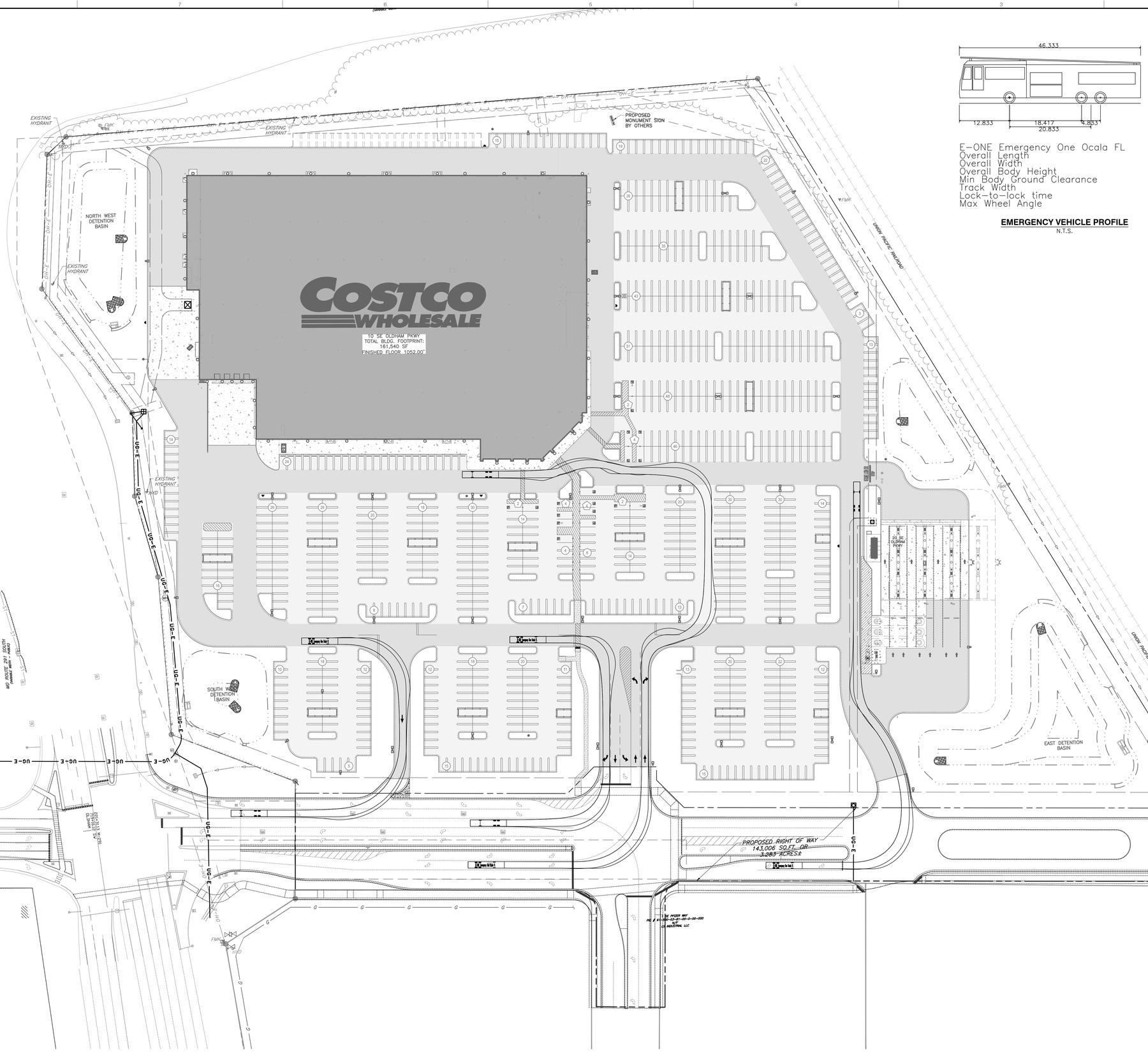
COSTCO WHOLESALE
LEE'S SUMMIT, MISSOURI

COSTCO LEES SUMMIT
CONSTRUCTION DOCUMENTS
CURB ISLAND DIMENSION PLAN
REVIEW SET - NOT FOR CONSTRUCTION
DECEMBER 22, 2025 | DRAWN BY: MK | CHECKED BY: KAS | DWG SCALE: 1" = 10' | PROJECT NO: 353-308.0002 | APPROVED BY: *DRK

DRAWING NO.: **C201**
SHEET 04 OF 31

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NORTH



E-ONE Emergency One Ocala FL

Overall Length	46.333ft
Overall Width	8.333ft
Overall Body Height	11.833ft
Min Body Ground Clearance	1.393ft
Track Width	8.333ft
Lock-to-lock time	6.00s
Max Wheel Angle	45.00°

EMERGENCY VEHICLE PROFILE
N.T.S.

LEGEND

- EXISTING PROPERTY LINE
- EXISTING SETBACK
- EXISTING EASEMENT
- EXISTING INDEX (MAJOR) CONTOUR
- EXISTING INTERMEDIATE (MINOR) CONTOUR
- EXISTING GUARD RAIL
- EXISTING FENCE
- EXISTING VERTICAL CONCRETE CURB
- EXISTING EDGE OF PAVEMENT
- EXISTING DITCH FLOW LINE
- EXISTING TREE LINE
- EXISTING TREE WITH TRUNK SIZE
- EXISTING OVERHEAD ELECTRIC
- EXISTING TRAFFIC POLE WITH ARM
- EXISTING LIGHT POLE WITH ARM
- EXISTING UTILITY POLE AND GUY WIRE
- EXISTING ELECTRIC PULL BOX
- EXISTING FIBER OPTIC PULL BOX
- EXISTING FIBER MARKER
- EXISTING WATER MANHOLE
- EXISTING FIRE HYDRANT
- EXISTING WATER VALVE
- EXISTING WATER METER
- EXISTING SANITARY MANHOLE
- EXISTING CURB INLET
- EXISTING FLARED END SECTION (F.E.S.)
- EXISTING GRATED CATCH BASIN
- EXISTING STORMWATER MANHOLE
- PROPOSED CONCRETE CURB AND GUTTER
- PROPOSED CONCRETE PAVEMENT
- PROPOSED HEAVY DUTY PAVEMENT
- PROPOSED LIGHT DUTY PAVEMENT
- PROPOSED CONCRETE SIDEWALK
- PROPOSED PAINTED 2' O.C. DIAGONAL STRIPING
- PROPOSED PAINTED PARKING DIVIDER
- PROPOSED CART CORRAL
- PROPOSED MANHOLE – SOLID COVER
- PROPOSED AREA INLET – 3-WAY
- PROPOSED GRATE INLET
- PROPOSED 2 GRATE INLET W/ SIDE INTAKE
- PROPOSED FLARED END SECTION (F.E.S.)
- PROPOSED CLEAN OUT
- PROPOSED PRIVATE SANITARY MANHOLE
- PROPOSED PRIVATE SANITARY CLEANOUT
- PROPOSED WATER VALVE
- PROPOSED FIRE HYDRANT
- PROPOSED BUILDING MOUNTED LIGHT AND LIGHT POLE [REFER TO LIGHTING PLAN BY OTHERS]
- PROPOSED BOLLARD
- PROPOSED PARKING STALL COUNT

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Civil & Environmental Consultants, Inc.

COSTCO WHOLESALE
LEE'S SUMMIT, MISSOURI

COSTCO LEES SUMMIT
CONSTRUCTION DOCUMENTS
FIRE APPARATUS TURNING
REVIEW SET - NOT FOR CONSTRUCTION
DECEMBER 22, 2025 | DRAWN BY: MK
DATE: | CHECKED BY: KAS
DWG SCALE: 1"= 50' | PROJECT NO: 353-308.0002
APPROVED BY: *DRK

DRAWING NO.:
C202
SHEET 05 OF 31

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KARL A. SCHOENIKE, PE (MO PE# 2003015039)

STATE OF MISSOURI
KARL A. SCHOENIKE
NUMBER PE-2003015039
03/13/2026
PROFESSIONAL ENGINEER

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NORTH

LEGEND

- EXISTING PROPERTY LINE
- EXISTING SETBACK
- EXISTING EASEMENT
- EXISTING INDEX (MAJOR) CONTOUR
- EXISTING INTERMEDIATE (MINOR) CONTOUR
- EXISTING GUARD RAIL
- EXISTING FENCE
- EXISTING VERTICAL CONCRETE CURB
- EXISTING EDGE OF PAVEMENT
- EXISTING DITCH FLOW LINE
- EXISTING TREE LINE
- EXISTING TREE WITH TRUNK SIZE
- EXISTING OVERHEAD ELECTRIC
- EXISTING UNDERGROUND ELECTRIC
- EXISTING FIBER OPTIC LINE
- EXISTING WATER LINE
- EXISTING SANITARY SEWER LINE
- EXISTING STORM DRAIN
- EXISTING TRAFFIC POLE WITH ARM
- EXISTING LIGHT POLE WITH ARM
- EXISTING UTILITY POLE AND GUY WIRE
- EXISTING ELECTRIC PULL BOX
- EXISTING FIBER OPTIC PULL BOX
- EXISTING FIBER MARKER
- EXISTING WATER MANHOLE
- EXISTING FIRE HYDRANT
- EXISTING WATER VALVE
- EXISTING WATER METER
- EXISTING SANITARY MANHOLE
- EXISTING CURB INLET
- EXISTING FLARED END SECTION (F.E.S.)
- EXISTING GRATED CATCH BASIN
- EXISTING STORMWATER MANHOLE
- PROPOSED CONCRETE CURB AND GUTTER
- PROPOSED CONCRETE PAVEMENT
- PROPOSED CONCRETE SIDEWALK
- PROPOSED PAINTED 2' O.C. DIAGONAL STRIPING
- PROPOSED PAINTED PARKING DIVIDER
- PROPOSED CART CORRAL
- PROPOSED STORM PIPE
- PROPOSED UNDERDRAIN
- PROPOSED PRIVATE SANITARY SEWER
- PROPOSED PRIVATE WATER LINE (SIZE DENOTED)
- PROPOSED UNDERGROUND ELECTRIC
- PROPOSED DATA LINE
- PROPOSED MANHOLE – SOLID COVER
- PROPOSED AREA INLET – 3-WAY
- PROPOSED GRATE INLET
- PROPOSED 2 GRATE INLET W/ SIDE INTAKE
- PROPOSED FLARED END SECTION (F.E.S.)
- PROPOSED CLEAN OUT
- PROPOSED PRIVATE SANITARY MANHOLE
- PROPOSED PRIVATE SANITARY CLEANOUT
- PROPOSED WATER VALVE
- PROPOSED FIRE HYDRANT
- PROPOSED BUILDING MOUNTED LIGHT AND LIGHT POLE [REFER TO LIGHTING PLAN BY OTHERS]
- PROPOSED BOLLARD
- PROPOSED REVERSE CURB

GRADING NOTES

1. ALL PROPOSED GRADES SHOWN ARE FINAL GRADES, TOP OF GROUND LEVEL, OR TOP OF PAVEMENT, OR GRATE ELEVATION AT THE DRAWDOWN POINT, UNLESS INDICATED OTHERWISE. FOR PROPOSED TOP OF CURB ELEVATION, SEE SITE PLAN FOR CURB TYPE AND DETAIL FOR DIMENSIONS.
2. WHERE NOT EXPLICITLY DEFINED BY A SPOT ELEVATION, PAVEMENT AND CURB ELEVATIONS SHALL PRODUCE THE PROPOSED SLOPES AS SHOWN AND PROVIDE POSITIVE DRAINAGE TO INLETS.
3. REFER TO AND FOLLOW THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT PREPARED FOR THIS PROJECT BY TERRACON INC.
4. ALL SITE WORK SHOWN HEREON SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT'S SPECIFICATIONS AND ALL APPLICABLE FEDERAL, STATE AND LOCAL BUILDING CODES AND ORDINANCES.
5. CONTRACTOR SHALL STRICTLY ADHERE TO THE EROSION CONTROL PLAN PREPARED FOR THIS PROJECT. ALL AREAS NOT PAVED SHALL BE STABILIZED IN ACCORDANCE WITH THE EROSION CONTROL PLAN, AND THE LANDSCAPE PLAN, UNLESS NOTED OTHERWISE.
6. EARTHWORK SHALL INCLUDE, STRIPPING AND STOCKPILING AND/OR DISPOSING OF TOPSOIL AND/OR VEGETATED SURFACE SOILS, GRADING, EXCAVATION, FILLING, UNDERCUT AND REPLACEMENT, IF REQUIRED, AND COMPACTION.
7. CONTRACTOR TO REFILL UNDERCUT AREAS WITH SUITABLE MATERIAL AND COMPACTION AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER.
8. PLACE TOPSOIL OVER THE SUBGRADE OF UNPAVED, DISTURBED AREAS TO DEPTH(S) INDICATED ON THE LANDSCAPE DRAWINGS.
9. FINAL PAVEMENT SLOPES SHALL BE MINIMUM 1% AND MAXIMUM 2% UNLESS INDICATED OTHERWISE. FINAL PAVEMENT SLOPES ACROSS HANDICAP PARKING STALLS AND ADJOINING ACCESS AISLES SHALL BE MAXIMUM 2%.
10. ALL UNPAVED SURFACE SLOPES SHALL BE 3:1 (HORIZONTAL:VERTICAL) MAXIMUM UNLESS INDICATED OTHERWISE.
11. ALL EXCESS SOIL MATERIALS SHALL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE INDICATED AND SHALL BE REMOVED BY THE CONTRACTOR AND DISPOSED OF OFFSITE AT NO ADDITIONAL COST TO THE OWNER IN ACCORDANCE WITH ALL LOCAL AND STATE CODES AND PERMIT REQUIREMENTS.
12. SOFT OR OTHERWISE UNSUITABLE SOILS IN THE BOTTOMS AND BANKS OF ANY SEDIMENT BASINS OR TRAPS SHALL BE REMOVED, SPREAD OUT AND DRIED SUFFICIENTLY TO BE USED AS FILL, SUBJECT TO THE GEOTECHNICAL ENGINEER'S APPROVAL.
13. ALL SIDEWALKS SHALL BE CONSTRUCTED TO MEET ADA STANDARDS.

10 SE OLDHAM PKWY
TOTAL BLDG. FOOTPRINT:
161,540 SF
FINISHED FLOOR 1052.00'

REFERENCE

EXISTING TOPOGRAPHIC DATA AND FEATURES ARE A COMBINATION OF THE FOLLOWING:
1. ALTA SURVEY DATED 08-20-2025 BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC.
2. DEVELOPMENT PLANS FOR OLDHAM VILLAGE (BY OTHER)
3. SITE DEVELOPMENT PLANS DATED 12-22-2025 BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC.

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MISSOURI 811
811 or 1-800-344-7483
https://missouri-811.org

NOTES:
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SCALE IN FEET
0 40 80

STATE OF MISSOURI
KARL A. SCHOENIKE
PE-2003015039
03/13/2026
PROFESSIONAL ENGINEER

KARL A. SCHOENIKE, PE
(MO PE# 2003015039)

REVISION RECORD

NO	DATE	DESCRIPTION
1	01/30/2026	BID SET ADDENDUM 2
2	02/03/2026	FUEL BID SET
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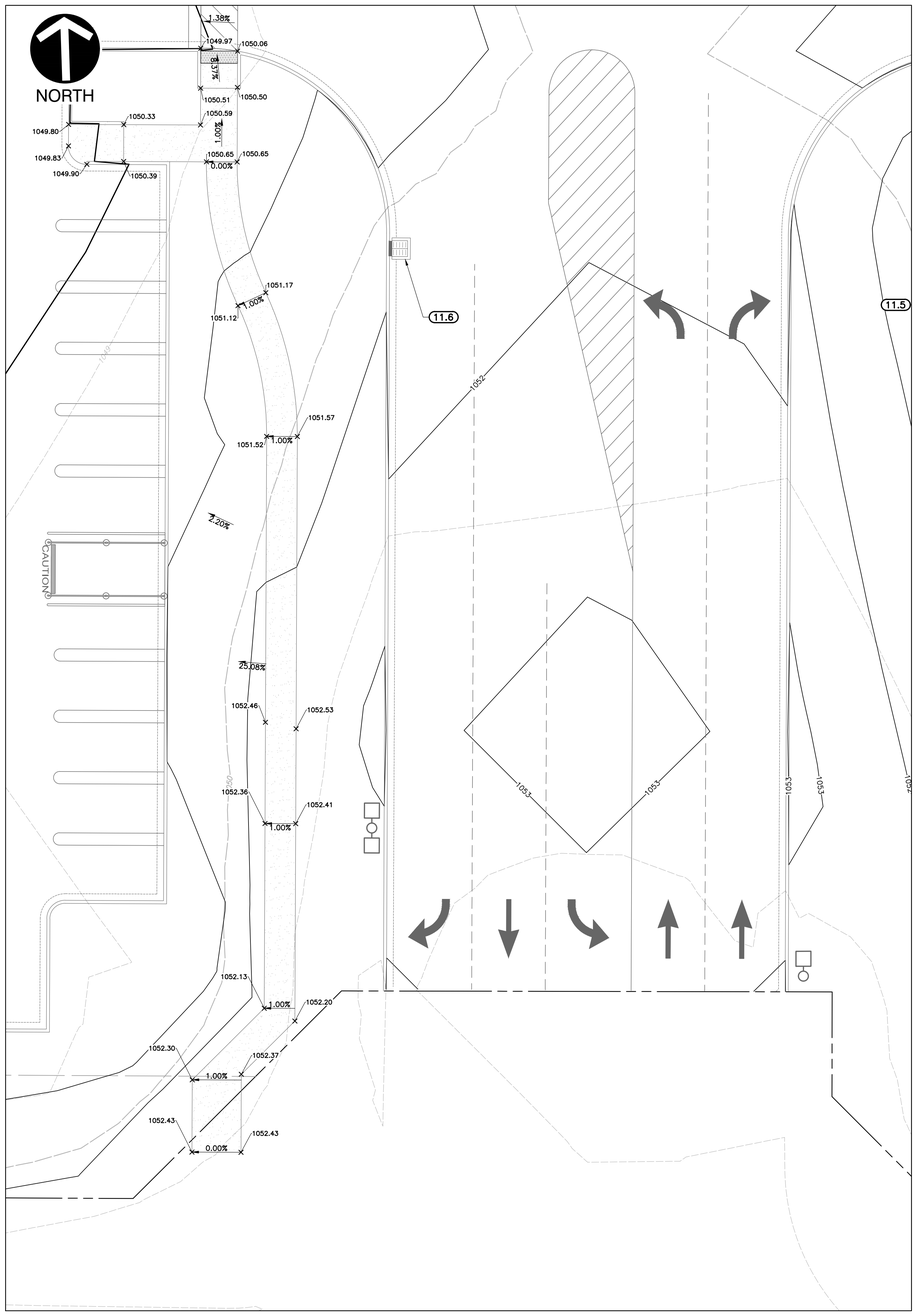
Civil & Environmental Consultants, Inc.
1450 Beale Street
Suite 305
St. Charles, MO 63303
Ph: 314.656.4566
www.cecinc.com

COSTCO WHOLESALE
LEE'S SUMMIT, MISSOURI

COSTCO LEES SUMMIT
CONSTRUCTION DOCUMENTS
GRADING PLAN
REVIEW SET - NOT FOR CONSTRUCTION
DECEMBER 22, 2025

DRAWN BY:	MK
CHECKED BY:	KAS
PROJECT NO:	353-308.0002
APPROVED BY:	*DRK
DATE:	
DWG SCALE:	1" = 40'

DRAWING NO.: **C300**
SHEET 06 OF 31

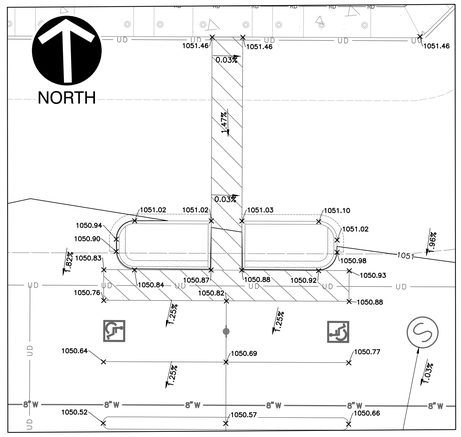


ADA PATH ENLARGEMENT

SCALE: 1"=10'

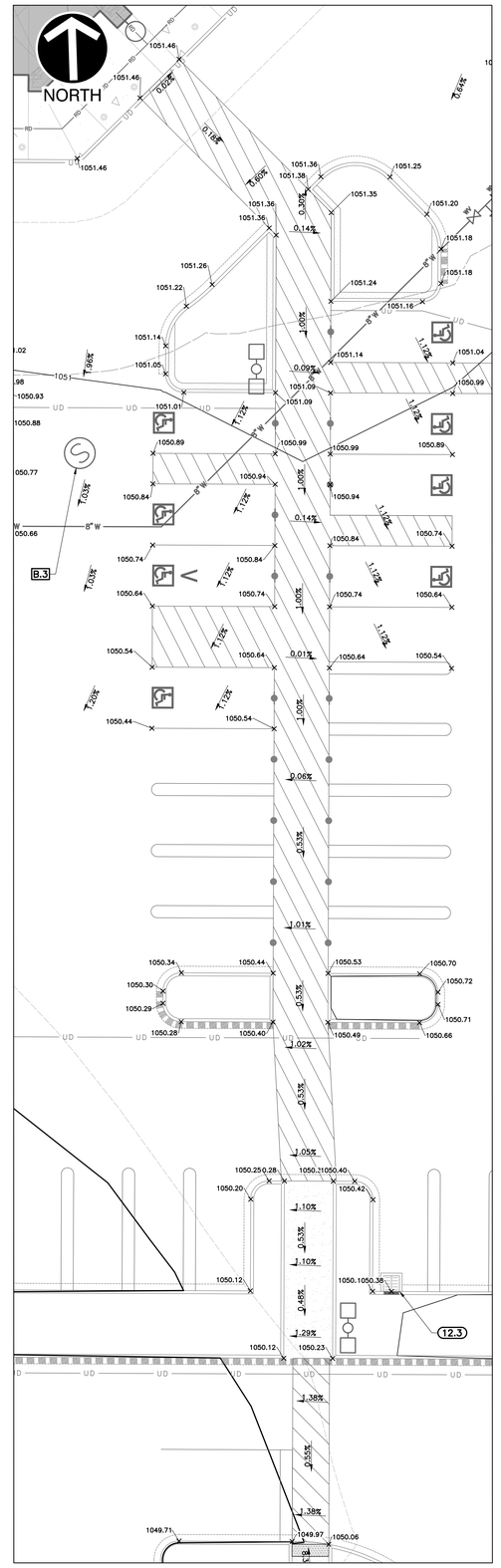
LEGEND

- EXISTING PROPERTY LINE
- EXISTING SETBACK
- EXISTING EASEMENT
- EXISTING INDEX (MAJOR) CONTOUR
- EXISTING INTERMEDIATE (MINOR) CONTOUR
- EXISTING GUARD RAIL
- EXISTING FENCE
- EXISTING VERTICAL CONCRETE CURB
- EXISTING EDGE OF PAVEMENT
- EXISTING DITCH FLOW LINE
- EXISTING TREE LINE
- EXISTING TREE WITH TRUNK SIZE
- EXISTING OVERHEAD ELECTRIC
- EXISTING UNDERGROUND ELECTRIC
- EXISTING FIBER OPTIC LINE
- EXISTING WATER LINE
- EXISTING SANITARY SEWER LINE
- EXISTING STORM DRAIN
- EXISTING TRAFFIC POLE WITH ARM
- EXISTING LIGHT POLE WITH ARM
- EXISTING UTILITY POLE AND GUY WIRE
- EXISTING ELECTRIC PULL BOX
- EXISTING FIBER OPTIC PULL BOX
- EXISTING FIBER MARKER
- EXISTING WATER MANHOLE
- EXISTING FIRE HYDRANT
- EXISTING WATER VALVE
- EXISTING WATER METER
- EXISTING SANITARY MANHOLE
- EXISTING CURB INLET
- EXISTING FLARED END SECTION (F.E.S.)
- EXISTING GRATED CATCH BASIN
- EXISTING STORMWATER MANHOLE
- PROPOSED CONCRETE CURB AND GUTTER
- PROPOSED CONCRETE PAVEMENT
- PROPOSED CONCRETE SIDEWALK
- PROPOSED PAINTED 2' O.C. DIAGONAL STRIPING
- PROPOSED PAINTED PARKING DIVIDER
- PROPOSED CART CORRAL
- PROPOSED STORM PIPE
- PROPOSED UNDERDRAIN
- PROPOSED PRIVATE SANITARY SEWER
- PROPOSED PRIVATE WATER LINE (SIZE DENOTED)
- PROPOSED UNDERGROUND ELECTRIC
- PROPOSED DATA LINE
- PROPOSED MANHOLE – SOLID COVER
- PROPOSED AREA INLET – 3-WAY
- PROPOSED GRATE INLET
- PROPOSED 2 GRATE INLET W/ SIDE INTAKE
- PROPOSED FLARED END SECTION (F.E.S.)
- PROPOSED CLEAN OUT
- PROPOSED PRIVATE SANITARY MANHOLE
- PROPOSED PRIVATE SANITARY CLEANOUT
- PROPOSED WATER VALVE
- PROPOSED FIRE HYDRANT
- PROPOSED BUILDING MOUNTED LIGHT AND LIGHT POLE [REFER TO LIGHTING PLAN BY OTHERS]
- PROPOSED BOLLARD
- PROPOSED REVERSE CURB



ADA PARKING ENLARGEMENT

SCALE: 1"=10'


NORTH
1051.46
1051.46
0.03%
0.18%
3.60%
0.30%
0.14%
1051.36
1051.38
1051.36
1051.36
1051.25
1051.35
1051.20
1051.18
1051.18
1051.26
1051.22
1051.24
1051.16
1051.14
1051.14
1051.05
1051.04
0.09%
1051.09
1051.09
1050.99
1050.93
1050.88
1050.89
1050.99
1050.99
1050.89
1050.77
1050.84
1050.94
1050.66
1050.84
1050.74
1050.74
1050.84
1050.64
1050.74
1050.74
1050.64
1050.54
1050.64
1050.64
1050.54
1050.44
1050.54
0.06%
0.53%
1.01%
1050.34
1050.44
1050.53
1050.70
1050.72
1050.30
1050.29
1050.28
1050.40
1050.49
1050.66
1050.71
1.02%
0.53%
1.05%
1050.25
0.28
1050.21050.40
1050.20
1050.42
1.10%
0.53%
1.10%
1050.12
1050.1050.38
0.48%
0.29%
1050.12
1050.23
1.38%
0.53%
1.38%
1049.71
1049.97
1050.06
B.3
12.3
8" W
7.98%
7.03%
7.12%
7.12%
7.12

NORTH

LEGEND

- EXISTING PROPERTY LINE
- EXISTING SETBACK
- EXISTING EASEMENT
- 385 EXISTING INDEX (MAJOR) CONTOUR
- 384 EXISTING INTERMEDIATE (MINOR) CONTOUR
- EXISTING GUARD RAIL
- EXISTING FENCE
- EXISTING VERTICAL CONCRETE CURB
- EXISTING EDGE OF PAVEMENT
- EXISTING DITCH FLOW LINE
- EXISTING TREE LINE
- DIA. EXISTING TREE WITH TRUNK SIZE
- OH-E EXISTING OVERHEAD ELECTRIC
- UG-E EXISTING UNDERGROUND ELECTRIC
- FO EXISTING FIBER OPTIC LINE
- W EXISTING WATER LINE
- SAN EXISTING SANITARY SEWER LINE
- EXISTING STORM DRAIN
- EXISTING TRAFFIC POLE WITH ARM
- EXISTING LIGHT POLE WITH ARM
- EXISTING UTILITY POLE AND GUY WIRE
- EXISTING ELECTRIC PULL BOX
- EXISTING FIBER OPTIC PULL BOX
- FMK EXISTING FIBER MARKER
- EXISTING WATER MANHOLE
- HYD EXISTING FIRE HYDRANT
- WV EXISTING WATER VALVE
- EXISTING WATER METER
- EXISTING SANITARY MANHOLE
- EXISTING CURB INLET
- EXISTING FLARED END SECTION (F.E.S.)
- EXISTING GRATED CATCH BASIN
- EXISTING STORMWATER MANHOLE
- PROPOSED CONCRETE CURB AND GUTTER
- PROPOSED CONCRETE PAVEMENT
- PROPOSED HEAVY DUTY PAVEMENT
- PROPOSED LIGHT DUTY PAVEMENT
- PROPOSED CONCRETE SIDEWALK
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- PROPOSED PAINTED PARKING DIVIDER
- PROPOSED CART CORRAL
- PROPOSED STORM PIPE
- UD PROPOSED UNDERDRAIN
- SAN PROPOSED PRIVATE SANITARY SEWER
- W PROPOSED PRIVATE WATER LINE (SIZE DENOTED)
- UG-E PROPOSED UNDERGROUND ELECTRIC
- DATA PROPOSED DATA LINE
- PROPOSED MANHOLE – SOLID COVER
- PROPOSED AREA INLET – 3-WAY
- PROPOSED GRATE INLET
- PROPOSED 2 GRATE INLET W/ SIDE INTAKE
- PROPOSED FLARED END SECTION (F.E.S.)
- CO PROPOSED CLEAN OUT
- PROPOSED PRIVATE SANITARY MANHOLE
- CO PROPOSED PRIVATE SANITARY CLEANOUT
- PROPOSED WATER VALVE
- PROPOSED FIRE HYDRANT
- PROPOSED BUILDING MOUNTED LIGHT AND LIGHT POLE [REFER TO LIGHTING PLAN BY OTHERS]

STORM DRAINAGE NOTES

1. DISTANCES SHOWN ON PIPING ARE HORIZONTAL DISTANCES FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE, UNLESS OTHERWISE NOTED.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH THE INSTALLATION, INSPECTION, TESTING AND FINAL ACCEPTANCE OF ALL NEW STORMWATER MANAGEMENT FACILITIES CONSTRUCTION. CONTRACTOR SHALL COORDINATE WITH ALL APPLICABLE REGULATING AGENCIES CONCERNING INSTALLATION, INSPECTION AND APPROVAL OF THE STORM DRAINAGE SYSTEM CONSTRUCTION.
3. ALL STORMWATER MANAGEMENT FACILITIES, INCLUDING COLLECTION AND CONVEYANCE STRUCTURES SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE LOCAL AND STATE CODES AND REGULATIONS.
4. ALL CATCH BASINS IN THE PAVEMENT OR CURB ARE TO HAVE A MINIMUM OF ONE, 4" PERFORATED UNDERDRAIN EXTENDING 10 LF FROM THE CATCH BASIN IN THE UPHILL DIRECTION. SEE DETAIL 24 ON SHEET C801.
5. ANY FIELD TILE CUT IN EXCAVATION, WHICH DRAINS AN OFFSITE AREA, MUST BE TIED INTO THE STORM DRAINAGE SYSTEM.
6. FOR EXACT LOCATION OF DOWN SPOUTS & ROOF DRAINS, CONTRACTOR IS TO COORDINATE WITH ARCHITECTURAL AND PLUMBING DRAWINGS.
7. ALL PROPOSED STORM SEWERS, SURFACE OR OTHER DRAINAGE FACILITIES ARE TO BE PRIVATE AND MAINTAINED BY THE OWNER.
8. THE CONTRACTOR IS TO CONSTRUCT CURBS, CATCH BASINS, DOWNSPOUTS, PIPING AND CONNECTION ETC. AS REQUIRED TO CONVEY THE ROOF AND PAVED SURFACE DRAINAGE TO THE DETENTION BASIN.
9. ALL CATCH BASINS AND MANHOLES WITH A DEPTH GREATER THAN 2' SHALL BE PROVIDED WITH STEPS.
10. STORM SEWER PIPE LABELED "STM" SHALL BE ONE OF THE FOLLOWING: POLYVINYL CHLORIDE SDR-35 "PVC", HIGH DENSITY POLYETHYLENE "HDPE", POLYPROPYLENE "PP" OR REINFORCED CONCRETE PIPE "RCP".

SEWER ABBREVIATIONS:

2G.I. W/S.I.	2 GRATE INLET WITH SIDE INTAKE
C.I.	GRATE INLET
A.I.	AREA INLET
Y.D.	YARD DRAIN
C.O.	CLEANOUT
T.S.	TOP OF SURFACE
F.F.	FINISHED FLOOR
R.D	ROOF DRAIN
D.S.	DOWNSPOUT
T.D.	TRENCH DRAIN
E.O.P.	END OF PIPE
INV.	INVERT
HGL	HYDRAULIC GRADE LINE
HDPE	HIGH DENSITY POLYETHYLENE
P.P.	POLYPROPYLENE
W.S.	WATER SURFACE
LFB	LOW FLOW BLOCKED
UG	UNDERGROUND
UD	UNDER DRAIN

REFERENCE

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SCALE IN FEET
0 50 100

KARL A. SCHOENIKE, PE
(MO PE# 2003015039)

STATE OF MISSOURI — KARL A. SCHOENIKE — NUMBER PE-2003015039 — 03/13/2026 — PROFESSIONAL ENGINEER

REVISION RECORD

NO.	DATE	DESCRIPTION
1	01/30/2026	BID SET ADDENDUM 2
2	02/03/2026	FUEL BID SET
3	02/23/2026	REVISED PER REVIEW AND COMMENTS
4	03/13/2026	Revised per Approved Final Development Plans

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Civil & Environmental Consultants, Inc.
1450 Beale Street
Suite 305
St. Charles, MO 63303
Ph: 314.656.4566
www.cecinc.com

COSTCO WHOLESALE
LEE'S SUMMIT, MISSOURI

COSTCO LEES SUMMIT
CONSTRUCTION DOCUMENTS
STORM SEWER PLAN
REVIEW SET - NOT FOR CONSTRUCTION

DATE:	DECEMBER 22, 2025
DRAWN BY:	MK
CHECKED BY:	KAS
DWG SCALE:	1" = 50'
PROJECT NO:	353-308.0002
APPROVED BY:	*DRK

DRAWING NO.:
C400
SHEET 08 OF 31

NORTH

US 50
(PUBLIC RIGHT-OF-WAY)

U.S. 50 HIGHWAY
(VARIABLE WIDTH - PUBLIC)

US 50
(PUBLIC RIGHT-OF-WAY)

N 87°33'20" E 887.39'

N 49°12'39" E
33.02'

N 04°23'25" E 171.94'

1.40 ACRES
PRE DEVELOPED NORTH
Tc = 8.7 MIN
Q10 = 5.67 CFS

1001 S M 291 HWY
PID # 61-500-03-80-00-0-00-000
N/F
OLDHAM EAST INVESTORS LLC
1,039,464.23 SQ.FT.
OR 23.863 ACRES±

MO ROUTE 291 SOUTH
(VARIABLE WIDTH - PUBLIC)

N 33°52'45" W 196.34'

15.76 ACRES
PRE DEVELOPED WEST
TYc = 14.3 MIN
Q10 = 53.68 CFS

S.R. 291
(PUBLIC RIGHT-OF-WAY)

N 00°32'07" E
106.12'

N 13°54'36" W
91.51'

S.R. 291
(PUBLIC RIGHT-OF-WAY)
MO. ROUTE 291 SOUTH
(VARIABLE WIDTH - PUBLIC)

N 02°39'57" W 202.03'

N 57°09'14" W 169.76'

N 02°09'09" E
74.99'

2°09'09" E 74.96'

S 69°07'50" E 105.91'

RAILROAD
UNION PACIFIC RAILROAD

S 29°26'49" E 1142.34'

18.40 ACRES
PRE DEVELOPED EAST
Tc = 19.8 MIN
Q10 = 53.82 CFS

RAILROAD
UNION PACIFIC RAILROAD

N 87°49'33" W 1190.17'

1 SE PFIZER WAY
PID # 61-500-03-81-00-0-00-000
N/F
LS INDUSTRIAL LLC

SANITARY MANHOLE
RIM= 1044.69
INV.(E)= 1038.23 (10" PVC)
INV.(W)= (10" PVC)

RECESSED CURB INLET
TOP= 1039.33
INV.(SW)= 1037.08 (30" HDPE)

RECESSED CURB INLET
TOP= 1039.21
INV.(S)= 1035.46 (12" HDPE)

RECESSED CURB INLET
TOP= 1038.34
INV.(N)= 1034.14 (12" HDPE)
INV.(S)= 1033.99 (12" HDPE)

RECESSED CURB INLET
TOP= 1037.74
INV.(N)= 1032.65 (12" HDPE)
INV.(E)= 1033.00 (12" HDPE)
TOP= 1037.53
INV.(N)= 1031.73 (12" HDPE)
INV.(S)= 1028.93 (30" HDPE)
INV.(W)= 1028.43 (30" HDPE)

RECESSED CURB INLET
TOP= 1037.41
INV.(N)= 1031.67 (36" HDPE)
INV.(E)= 1027.67 (36" HDPE)
INV. OUT (SW)= 1026.38 (36" HDPE)

RECESSED CURB INLET
TOP= 1037.83
INV.(SE)= 1029.33 (30" HDPE)
INV.(N)= 1029.13 (30" HDPE)

GCS.S.T. CATCH BASIN
TOP= 1040.61
INV.(SW)= 1035.86 (18" HDPE)

STORM MANHOLE
TOP= 1037.85
INV.(NE)= 1034.30 (18" HDPE)
INV.(E)= 1030.00 (30" HDPE)
INV.(NW)= 1029.80 (30" HDPE)

RECESSED CURB INLET
TOP= 1036.79
INV.(S)= 1030.74 (24" HDPE)
INV.(N)= 1030.24 (30" HDPE)

RECESSED CURB INLET
TOP= 1037.37
INV.(S)= 1031.27 (24" HDPE)
INV.(N)= 1031.12 (24" HDPE)

CONCRETE WASTE
PILES OF TRASH

POLE WITH TRANSFORMER

CUT UTILITY POLE

6' CHAIN LINK FENCE

DOWNED WIRES

REFERENCE

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MISSOURI 811
811 or 1-800-344-7483
https://missouri-811.org

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SCALE IN FEET
0 50 100

STATE OF MISSOURI
KARL A. SCHOENIKE
NUMBER PE-2003015039
PROFESSIONAL ENGINEER
03/13/2026

KARL A. SCHOENIKE, PE
(MO PE# 2003015039)

REVISION RECORD

NO	DATE	DESCRIPTION
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	02/20/2026	REVISED PER REVIEW AND COMMENTS
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www.cecinc.com

Civil & Environmental Consultants, Inc.

COSTCO WHOLESALE

LEE'S SUMMIT, MISSOURI

COSTCO LEES SUMMIT
CONSTRUCTION DOCUMENTS
EXISTING DRAINAGE AREA MAP
REVIEW SET - NOT FOR CONSTRUCTION
DECEMBER 22, 2025

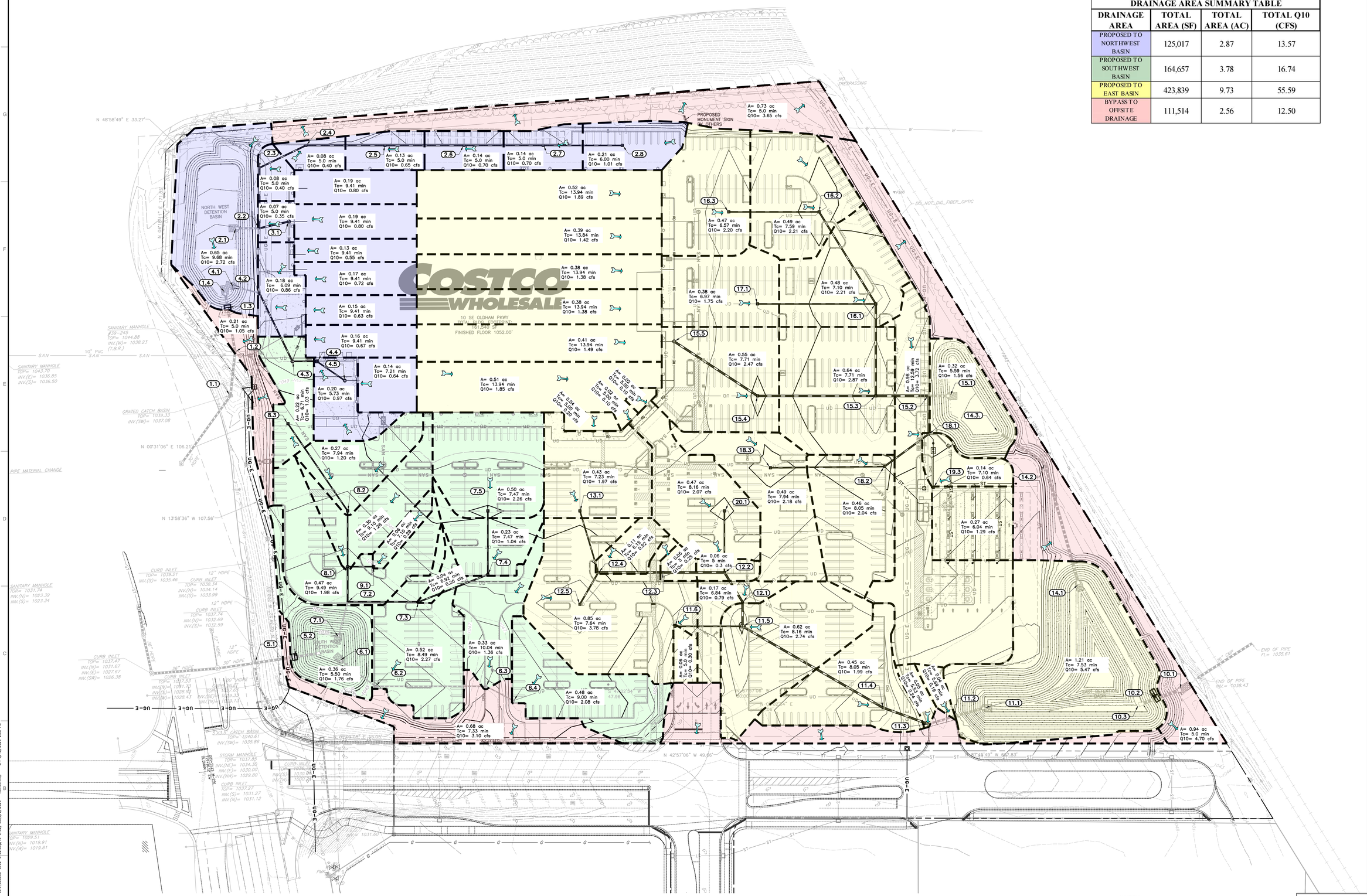
DRAWN BY:	MK
CHECKED BY:	KAS
PROJECT NO:	353-309.0002
APPROVED BY:	*DRK

DRAWING NO.:
C401
SHEET 09 OF 31

p:\353-309\353-309 - C401.dwg\xd2-ref\353309-CVSD-C401.dwg@8 C401(13/13/2026 - matthewk) - 13: 3/12/2026 2:07 PM

NORTH

DRAINAGE AREA SUMMARY TABLE			
DRAINAGE AREA	TOTAL AREA (SF)	TOTAL AREA (AC)	TOTAL Q10 (CFS)
PROPOSED TO NORTHWEST BASIN	125,017	2.87	13.57
PROPOSED TO SOUTHWEST BASIN	164,657	3.78	16.74
PROPOSED TO EAST BASIN	423,839	9.73	55.59
BYPASS TO OFFSITE DRAINAGE	111,514	2.56	12.50



REFERENCE

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MISSOURI 811
811 or 1-800-344-7483
https://missouri-811.org

THIS SHEET IS NOT FOR CONSTRUCTION.
FOR DRAINAGE PURPOSES ONLY

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SCALE IN FEET
0 50 100

STATE OF MISSOURI
KARL A. SCHOENIKE
NUMBER PE-2003015039
PROFESSIONAL ENGINEER
03/13/2026
KARL A. SCHOENIKE, PE (MO PE# 2003015039)

REVISION RECORD

NO	DATE	DESCRIPTION
1	01/30/2026	BID SET ADDENDUM 2
2	02/03/2026	FUEL BID SET
3	02/20/2026	REVISED PER REVIEW AND COMMENTS
4	03/13/2026	Revised per Approved Final Development Plans

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1450 Beale Street
Suite 305
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Ph: 314.656.4566
www.cecinc.com

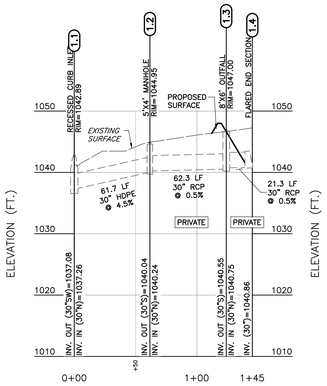
COSTCO WHOLESALE
LEE'S SUMMIT, MISSOURI

COSTCO LEES SUMMIT
CONSTRUCTION DOCUMENTS
PROPOSED DRAINAGE AREA MAP
REVIEW SET - NOT FOR CONSTRUCTION

DATE:	DECEMBER 22, 2025
DWG SCALE:	1" = 50'
PROJECT NO:	353-308.0002
DRAWN BY:	MK
CHECKED BY:	KAS
APPROVED BY:	*DRK

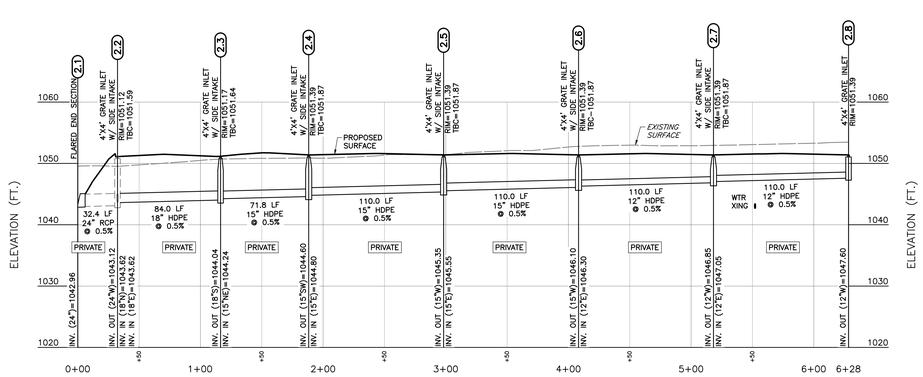
DRAWING NO.:
C402
SHEET 10 OF 31

P:\353-0001_353-308\c402\dwg\civil\c402-sht\353308-civil2-c402.dwg[10 C402] LS[3/13/2026 - mschoenike] - LP: 3/13/2026 2:08 PM



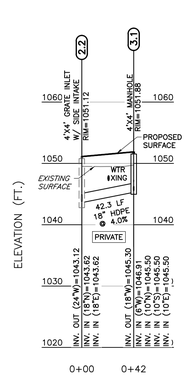
353308 - STORM 1 PROFILE

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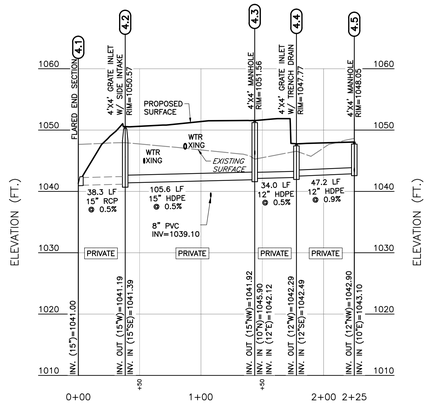
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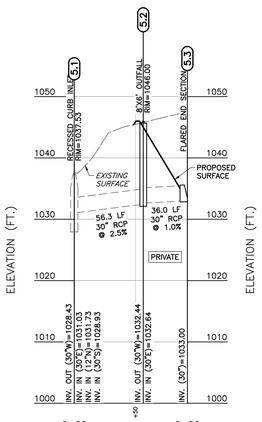
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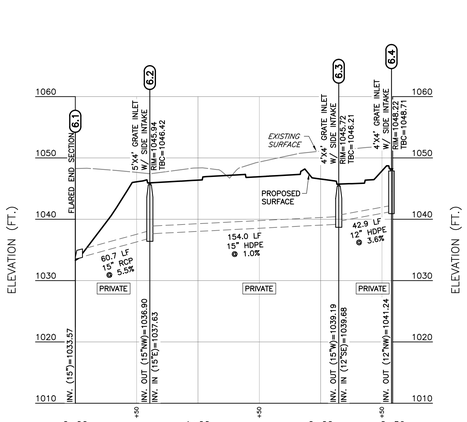
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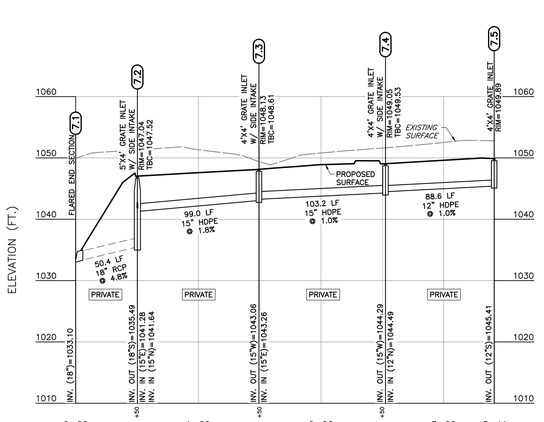
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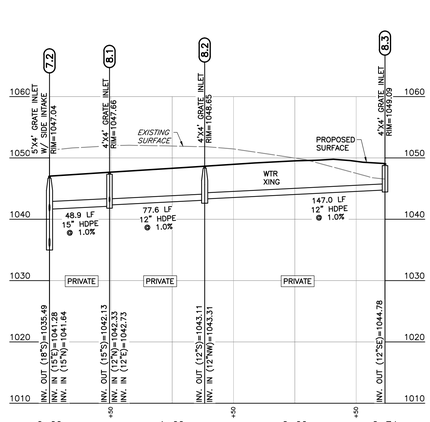
353308 - STORM 6 PROFILE

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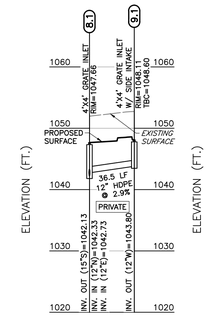
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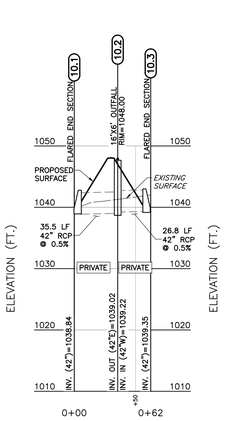
353308 - STORM 8 PROFILE

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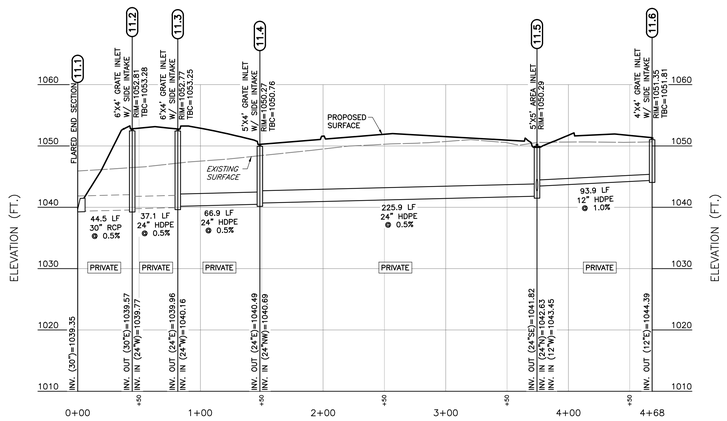
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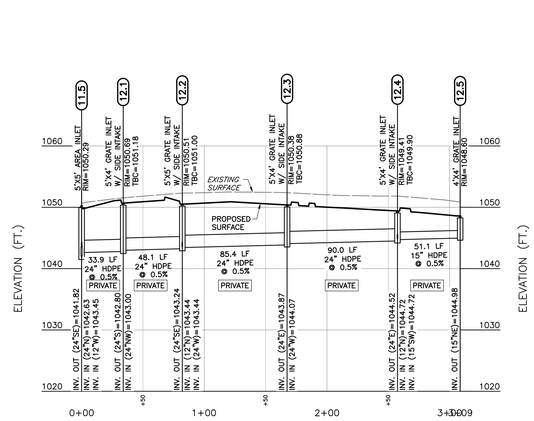
353308 - STORM 10 PROFILE

SCALE H:1"=50'; V:1"=10'



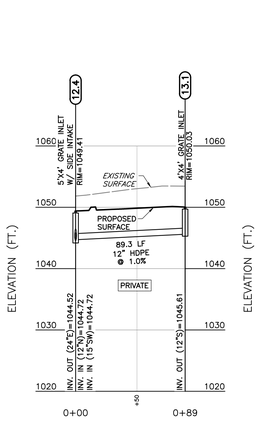
353308 - STORM 11 PROFILE

SCALE H:1"=50'; V:1"=10'



353308 - STORM 12 PROFILE

SCALE H:1"=50'; V:1"=10'



353308 -STORM 13 PROFILE

SCALE H:1"=50'; V:1"=10'

SEWER ABBREVIATIONS:

2G.I. W/S.I.	2 GRATE INLET WITH SIDE INTAKE
G.I.	GRATE INLET
A.I.	AREA INLET
Y.D.	YARD DRAIN
C.O.	CLEANOUT
T.S.	TOP OF SURFACE
F.F.	FINISHED FLOOR
R.D	ROOF DRAIN
D.S.	DOWNSPOUT
T.D.	TRENCH DRAIN
E.O.P.	END OF PIPE
INV.	INVERT
HGL	HYDRAULIC GRADE LINE
HDPE	HIGH DENSITY POLYETHYLENE
P.P.	POLYPROPYLENE
W.S.	WATER SURFACE
LFB	LOW FLOW BLOCKED
UG	UNDERGROUND
UD	UNDER DRAIN

REFERENCE

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SCALE IN FEET (HORIZONTAL)
0 50 100

SCALE IN FEET (VERTICAL)
0 10 20

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KARL A. SCHOENIKE, PE
(MO PE# 2003015039)

STATE OF MISSOURI
KARL A. SCHOENIKE
NUMBER PE-2003015039
03/13/2026
PROFESSIONAL ENGINEER

REVISION RECORD

NO.	DATE	DESCRIPTION
	01/30/2026	BID SET ADDENDA # 2
	02/03/2026	PLAT 2 BID SET
	02/03/2026	REVISED PER REVIEW AND COMMENTS
	03/13/2026	Revised per Approved Final Development Plans

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COSTCO WHOLESALE
LEE'S SUMMIT, MISSOURI

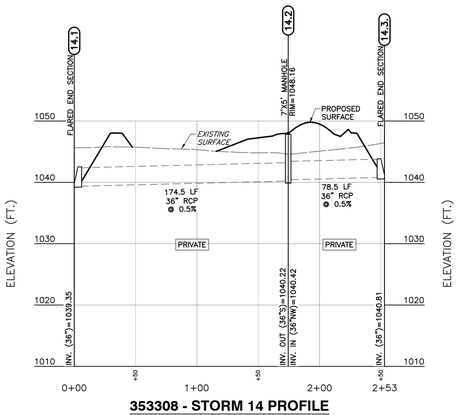
COSTCO LEES SUMMIT
CONSTRUCTION DOCUMENTS
STORM SEWER PROFILES
REVIEW SET - NOT FOR CONSTRUCTION
DECEMBER 22, 2025

DRAWN BY:	MK
CHECKED BY:	KAS
1" = 50'	353-308.0002
	*DRK

DATE:
DWG SCALE:
PROJECT NO:
APPROVED BY:

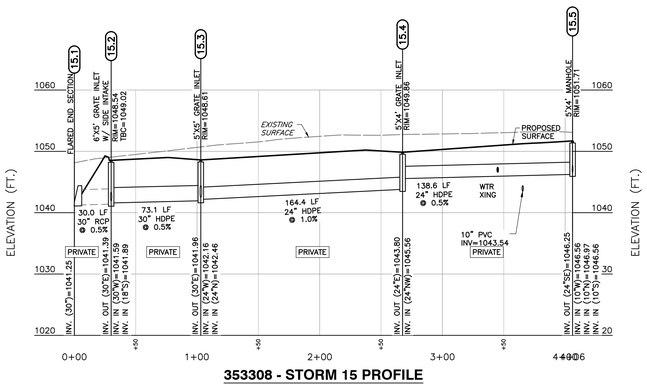
DRAWING NO.:
C403
SHEET 11 OF 31

P:\350-0001\353-3081 - OLDHAM\dwg\civil\sht\353308-0002-C403.dwg[11 C403] 3/13/2026 - mschoenike - LM 3/12/2026 2:08 PM



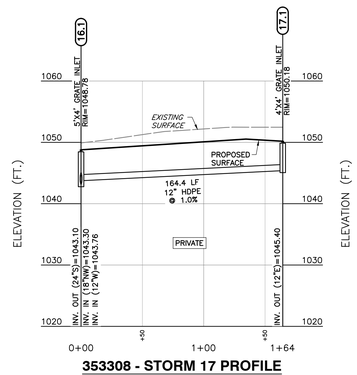
353308 - STORM 14 PROFILE

SCALE H:1"=50'; V:1"=10'



353308 - STORM 15 PROFILE

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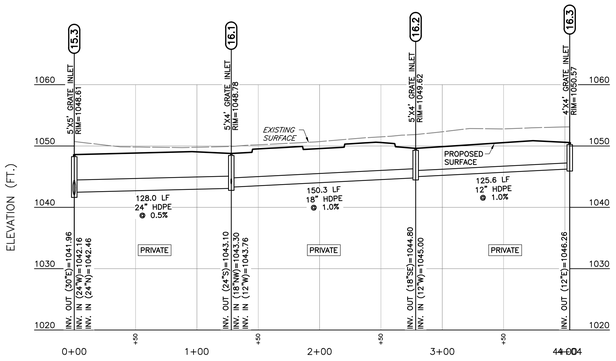


353308 - STORM 17 PROFILE

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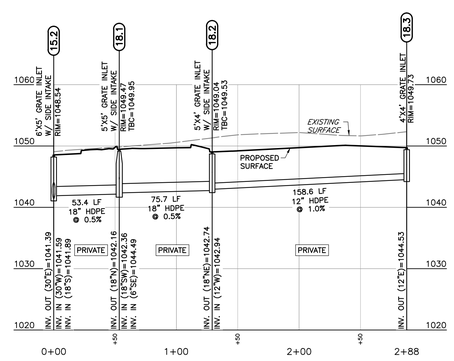
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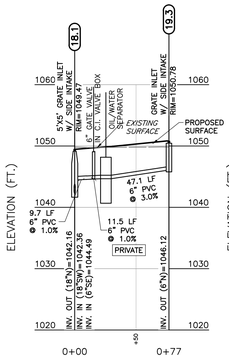
353308 - STORM 16 PROFILE

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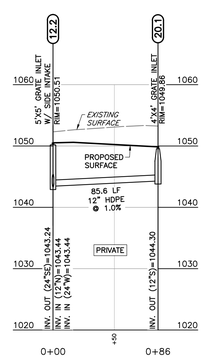
353308 - STORM 18 PROFILE

SCALE H:1"=50'; V:1"=10'



353308 - STORM 19 PROFILE

SCALE H:1"=50'; V:1"=10'



353308 - STORM 20 PROFILE

SCALE H:1"=50'; V:1"=10'

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SCALE IN FEET (VERTICAL)
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(MO PE# 2003015039)

STATE OF MISSOURI
KARL A. SCHOENIKE
NUMBER PE-2003015039
03/13/2026
PROFESSIONAL ENGINEER

REVISION RECORD

NO.	DATE	DESCRIPTION
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COSTCO WHOLESALE
LEE'S SUMMIT, MISSOURI

COSTCO LEES SUMMIT
CONSTRUCTION DOCUMENTS
STORM SEWER PROFILES
REVIEW SET - NOT FOR CONSTRUCTION
DECEMBER 22, 2025

DRAWN BY:	MK
CHECKED BY:	KAS
PROJECT NO:	353-308.0002
APPROVED BY:	*DRK

DRAWING NO.:
C404
SHEET 12 OF 31

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353-308 COSTCO LEES SUMMIT 10 YEAR STORM EVENT

LineNo.	LineID	Line Length (ft)	Line Size (in)	Line Slope (%)	Defl. Angle (Deg)	Inver Up (ft)	Invert Dn (ft)	Grnd/RimElev Up (ft)	Grnd/RimElev Dn (ft)	HGL Up (ft)	HGL Dn (ft)	Rim-Hw (ft)	Flow Rate (cfs)	CapacityFull (cfs)	VelDn (ft/s)	Energy Loss (ft)	Minor Loss (ft)	n-value Pipe
1	2.2-2.1	32.43	24	0.49	2.14	1043.12	1042.96	1051.12	1045.34	1044.06	1043.90	7.06	7.08	15.89	4.91	0.00	0.37	0.013
2	2.3-2.2	84.00	18	0.50	-89.96	1044.04	1043.62	1051.17	1051.12	1044.81	1044.39	6.11	3.86	7.43	4.24	0.42	0.26	0.013
3	2.4-2.3	71.85	15	0.50	64.25	1044.60	1044.24	1051.39	1051.17	1045.41	1045.07	5.85	3.46	4.57	4.03	0.36	0.13	0.013
4	2.5-2.4	110.01	15	0.50	25.75	1045.35	1044.80	1051.39	1051.39	1046.10	1045.55	5.25	3.06	4.57	3.99	0.55	0.04	0.013
5	2.6-2.5	110.01	15	0.50	0.00	1046.10	1045.55	1051.39	1051.39	1046.75	1046.20	4.61	2.41	4.57	3.77	0.55	0.03	0.013
6	2.7-2.6	110.01	12	0.50	0.00	1046.85	1046.30	1051.39	1051.39	1047.46	1046.90	3.91	1.71	2.52	3.45	0.55	0.03	0.013
7	2.8-2.7	110.01	12	0.50	0.00	1047.60	1047.05	1051.39	1051.39	1048.04	1047.49	3.21	1.01	2.52	3.03	0.55	0.14	0.013
8	3.1-2.2	42.30	18	3.97	-12.70	1045.30	1043.62	1051.88	1051.12	1045.94	1044.06	5.94	2.87	20.93	6.56	0.00	0.24	0.013
9	15.2-15.1	29.96	30	0.47	-177.68	1041.39	1041.25	1048.54	1044.77	1043.95	1043.75	3.88	33.19	28.04	6.76	0.20	0.71	0.013
10	15.3-15.2	73.10	30	0.51	-0.14	1041.96	1041.59	1048.61	1048.54	1044.89	1044.66	3.37	23.32	29.18	4.75	0.24	0.35	0.013
11	15.4-15.3	164.45	24	1.00	0.00	1043.80	1042.16	1049.86	1048.61	1045.67	1045.25	4.04	12.08	22.59	3.85	0.44	0.15	0.013
12	15.5-15.4	138.58	24	0.50	33.16	1046.25	1045.56	1051.71	1049.86	1047.37	1046.68	3.90	9.61	15.96	5.31	0.69	0.44	0.013
13	16.1-15.3	128.00	24	0.50	90.00	1043.10	1042.46	1048.78	1048.61	1045.42	1045.25	3.25	8.37	15.99	2.66	0.18	0.11	0.013
14	16.2-16.1	150.32	18	1.00	-31.62	1044.80	1043.30	1049.62	1048.78	1045.79	1045.53	3.66	4.41	10.49	2.50	0.36	0.18	0.013
15	16.3-16.2	125.64	12	1.00	-58.38	1046.26	1045.00	1050.57	1049.62	1046.89	1045.96	3.68	2.20	3.57	2.84	0.00	n/a	0.013
16	17.1-16.1	164.45	12	1.00	-90.00	1045.40	1043.76	1050.18	1048.78	1046.02	1045.53	3.98	1.75	3.56	2.23	0.60	0.18	0.013
17	18.1-15.2	53.41	18	0.51	-90.15	1042.16	1041.89	1049.47	1048.54	1044.84	1044.66	4.47	6.15	7.47	3.48	0.18	0.16	0.013
18	18.2-18.1	75.69	18	0.50	53.69	1042.74	1042.36	1049.04	1049.47	1045.12	1045.00	3.86	4.22	7.44	2.39	0.12	0.06	0.013
19	18.3-18.2	158.58	12	1.00	35.68	1044.53	1042.94	1049.73	1049.04	1045.77	1045.18	3.84	2.18	3.57	2.78	0.59	0.12	0.013
20	11.2-11.1	44.48	30	0.49	166.52	1039.57	1039.35	1052.81	1041.73	1040.88	1040.64	11.93	15.14	28.84	5.94	0.00	n/a	0.013
21	11.3-11.2	37.10	24	0.51	-0.92	1039.96	1039.77	1052.78	1052.81	1041.48	1041.29	10.96	14.95	16.18	5.85	0.19	0.35	0.013
22	11.4-11.3	66.95	24	0.51	36.42	1040.50	1040.16	1050.27	1052.78	1042.06	1041.82	8.11	14.71	16.12	5.27	0.29	0.10	0.013
23	11.5-11.4	225.88	24	0.50	10.26	1041.82	1040.69	1050.29	1050.27	1043.11	1042.16	6.69	12.72	16.00	5.13	1.09	n/a	0.013
24	12.1-11.5	33.92	24	0.50	59.89	1042.80	1042.63	1050.69	1050.29	1043.92	1043.75	6.51	9.68	16.01	5.34	0.17	0.26	0.013
25	12.2-12.1	48.11	24	0.50	-31.47	1043.24	1043.00	1050.51	1050.69	1044.31	1044.18	5.83	8.89	15.97	4.62	0.21	n/a	0.013
26	12.3-12.2	85.42	24	0.50	-58.52	1043.87	1043.44	1050.38	1050.51	1044.77	1044.68	5.61	6.52	16.05	3.19	0.00	n/a	0.013
27	12.4-12.3	90.00	24	0.50	0.00	1044.52	1044.07	1049.41	1050.38	1045.41	1044.94	4.00	6.27	15.99	4.78	0.00	0.33	0.013
28	12.5-12.4	51.12	15	0.51	-59.97	1044.98	1044.72	1048.60	1049.41	1045.84	1045.58	2.49	3.78	4.61	4.19	0.26	0.27	0.013
29	13.1-12.4	89.29	12	1.00	73.35	1045.61	1044.72	1050.03	1049.41	1046.21	1045.41	3.82	1.97	3.56	3.43	0.00	n/a	0.013
30	11.6-11.5	93.88	12	1.00	-30.11	1044.39	1043.45	1051.35	1050.29	1044.62	1043.65	6.73	0.30	3.56	3.11	0.00	0.08	0.013
31	20.1-12.2	85.55	12	1.01	31.48	1044.30	1043.44	1049.86	1050.51	1044.96	1044.68	4.68	2.07	3.57	2.64	0.39	0.22	0.013
32	7.2-7.1	50.36	18	4.75	-73.19	1035.49	1033.10	1047.04	1034.90	1036.67	1033.77	10.37	9.27	22.88	12.26	0.00	n/a	0.013
33	7.3-7.2	99.05	15	1.80	75.37	1043.06	1041.28	1048.13	1047.04	1043.82	1041.83	4.32	3.50	8.66	6.68	0.00	0.13	0.013
34	7.4-7.3	103.20	15	1.00	-21.60	1044.29	1043.26	1049.05	1048.13	1045.02	1043.89	4.03	3.30	6.45	5.29	0.00	n/a	0.013
35	7.5-7.4	88.55	12	1.04	-68.40	1045.41	1044.49	1049.89	1049.05	1046.05	1045.06	3.84	2.26	3.63	4.87	0.00	0.28	0.013
36	8.1-7.2	48.92	15	1.00	-14.63	1042.13	1041.64	1047.66	1047.04	1042.92	1042.33	4.74	3.79	6.46	5.47	0.00	n/a	0.013
37	8.2-8.1	77.64	12	1.00	0.00	1043.11	1042.33	1048.65	1047.66	1043.75	1042.92	4.90	2.23	3.57	4.66	0.00	0.17	0.013
38	8.3-8.2	147.00	12	1.00	-34.37	1044.78	1043.31	1049.09	1048.65	1045.21	1043.75	3.88	1.03	3.56	3.11	0.00	n/a	0.013
39	9.1-8.1	36.49	12	2.93	90.00	1043.80	1042.73	1048.11	1047.66	1044.02	1042.92	4.09	0.28	6.10	2.77	0.00	n/a	0.013
40	4.2-4.1	38.26	15	0.50	16.46	1041.19	1041.00	1050.57	1042.44	1042.06	1041.87	8.30	3.77	4.55	4.14	0.19	0.21	0.013
41	4.3-4.2	105.59	15	0.50	49.91	1041.92	1041.39	1051.56	1050.57	1042.61	1042.27	8.70	2.91	4.58	3.15	0.46	0.25	0.013
42	4.4-4.3	33.99	12	0.50	-64.20	1042.29	1042.12	1047.77	1051.56	1042.93	1042.86	4.75	1.61	2.52	2.58	0.11	0.09	0.013
43	4.5-4.4	47.18	12	0.87	34.53	1042.90	1042.49	1048.06	1047.77	1043.23	1043.02	4.83	0.64	3.32	1.53	0.00	n/a	0.013
44	1.2-1.1	61.70	30	4.51	-81.84	1040.04	1037.26	1044.95	1042.89	1041.28	1037.93	3.67	13.57	87.05	12.89	0.00	0.16	0.013
45	1.3-1.2	62.26	30	0.50	-15.55	1040.55	1040.24	1047.00	1044.95	1041.79	1041.44	5.21	13.57	28.94	5.80	0.00	0.07	0.013
46	1.4-1.3	21.26	30	0.52	0.00	1040.86	1040.75	1043.80	1047.00	1042.10	1041.94	1.70	13.57	29.49	5.88	0.00	0.49	0.013
47	14.2-14.1	174.46	36	0.50	-103.47	1040.22	1039.35	1048.16	1042.87	1042.15	1041.26	5.44	34.98	47.10	7.38	0.87	0.57	0.013
48	14.3-14.2	78.51	36	0.50	-40.26	1040.81	1040.42	1044.33	1048.16	1042.84	1042.72	0.76	34.98	47.01	6.02	0.29	0.74	0.013
49	10.2-10.1	35.49	42	0.51	162.68	1039.02	1038.84	1048.00	1042.93	1041.35	1041.16	6.65	55.59	71.66	8.23	0.00	n/a	0.013
50	10.3-10.2	26.84	42	0.48	0.00	1039.35	1039.22	1043.44	1048.00	1041.71	1041.58	0.72	55.59	70.02	8.07	0.13	1.01	0.013

353-308 COSTCO LEES SUMMIT 10 YEAR STORM EVENT

LineNo.	LineID	Line Length (ft)	Line Size (in)	Line Slope (%)	Defl. Angle (Deg)	Inver Up (ft)	Invert Dn (ft)	Grnd/RimElev Up (ft)	Grnd/RimElev Dn (ft)	HGL Up (ft)	HGL Dn (ft)	Rim-Hw (ft)	Flow Rate (cfs)	CapacityFull (cfs)	VelDn (ft/s)	Energy Loss (ft)	Minor Loss (ft)	n-value Pipe
51	6.2-6.1	60.75	15	5.48	39.08	1036.90	1033.57	1045.94	1035.09	1037.87	1034.10	8.07	5.71	15.12	11.45	0.00	n/a	0.013
52	6.3-6.2	154.00	15	1.01	-36.91	1039.19	1037.63	1045.72	1045.94	1039.94	1038.28	5.78	3.44	6.50	5.37	0.00	0.16	0.013
53	6.4-6.3	42.94	12	3.66	27.76	1041.25	1039.68	1048.22	1045.72	1041.87	1040.06	6.35	2.08	6.81	7.61	0.00	n/a	0.013
54	5.2-5.1	56.29	30	2.50	-6.58	1032.44	1031.03	1046.00	1037.53	1033.82	1031.90	12.18	16.74	64.90	11.08	0.00	n/a	0.013
55	5.3-5.2	35.98	30	1.00	0.00	1033.00	1032.64	1035.95	1046.00	1034.38	1033.82	1.57	16.74	41.02	7.33	0.00	n/a	0.013
Notes: j-Line contains hyd. jump																		

10 YEAR STORM INTENSITY CALCULATIONS

i = 175 / (Tc + 18.8)

INLET TIME CALCULATIONS

Tc = 1.8 * (1 − C) * ((D^½) / (S^⅓))

C = RATIONAL METHOD RUNOFF COEFFICIENT
D = OVERLAND FLOW DISTANCE (FT)
S = SLOPE (%)

Q = C * i * A

A = DRAINAGE AREA (ACRES)

353-308 COSTCO LEES SUMMIT 100 YEAR STORM EVENT

LineNo.	LineID	Line Length (ft)	Line Size (in)	Line Slope (%)	Defl. Angle (Deg)	Inver Up (ft)	Invert Dn (ft)	Grnd/RimElev Up (ft)	Grnd/RimElev Dn (ft)	HGL Up (ft)	HGL Dn (ft)	Rim-Hw (ft)	Flow Rate (cfs)	CapacityFull (cfs)	VelDn (ft/s)	Energy Loss (ft)	Minor Loss (ft)	n-value Pipe
1	2.2-2.1	32.43	24	0.49	2.14	1043.12	1042.96	1051.12	1045.34	1044.27	1044.11	6.41	9.95	15.89	5.34	0.16	0.44	0.013
2	2.3-2.2	84	18	0.5	-89.96	1044.04	1043.62	1051.17	1051.12	1044.98	1044.71	5.88	5.41	7.43	3.93	0.364	0.31	0.013
3	2.4-2.3	71.85	15	0.5	64.25	1044.6	1044.24	1051.39	1051.17	1045.71	1045.35	5.54	4.85	4.57	4.2	0.36	0.13	0.013
4	2.5-2.4	110.01	15	0.5	25.75	1045.35	1044.8	1051.39	1051.39	1046.31	1045.85	5.03	4.29	4.57	3.91	0.508	0.04	0.013
5	2.6-2.5	110.01	15	0.5	0	1046.1	1045.55	1051.39	1051.39	1046.9	1046.36	4.45	3.38	4.57	4.04	0.547	0.04	0.013
6	2.7-2.6	110.01	12	0.5	0	1046.85	1046.3	1051.39	1051.39	1047.63	1047.08	3.73	2.4	2.52	3.65	0.55	0.03	0.013
7	2.8-2.7	110.01	12	0.5	0	1047.6	1047.05	1051.39	1051.39	1048.11	1047.66	3.09	1.42	2.52	2.82	0.517	0.2	0.013
8	3.1-2.2	42.3	18	3.97	-12.7	1045.3	1043.62	1051.88	1051.12	1046.07	1044.71	5.81	4.05	20.93	2.94	0	n/a	0.013
9	15.2-15.1	29.96	30	0.47	-177.68	1041.39	1041.25	1048.54	1044.77	1044.12	1043.75	3.09	45.39	28.04	9.25	0.367	1.33	0.013
10	15.3-15.2	73.1	30	0.51	-0.14	1041.96	1041.59	1048.61	1048.54	1045.93	1045.45	1.97	33.25	29.18	6.77	0.481	0.71	0.013
11	15.4-15.3	164.45	24	1	0	1043.8	1042.16	1049.86	1048.61	1047.62	1046.64	1.96	17.41	22.59	5.54	0.975	0.29	0.013
12	15.5-15.4	138.58	24	0.5	33.16	1046.25	1045.56	1051.71	1049.86	1048.43	1047.9	2.98	13.93	15.96	4.43	0.526	0.31	0.013
13	16.1-15.3	128	24	0.5	90	1043.1	1042.46	1048.78	1048.61	1046.99	1046.64	1.57	11.79	15.99	3.75	0.348	0.22	0.013
14	16.2-16.1	150.32	18	1	-31.62	1044.8	1043.3	1049.62	1048.78	1047.73	1047.21	1.72	6.21	10.49	3.51	0.526	0.17	0.013
15	16.3-16.2	125.64	12	1	-58.38	1046.26	1045	1050.57	1049.62	1048.86	1047.9	1.47	3.1	3.57	3.95	0.952	0.24	0.013
16	17.1-16.1	164.45	12	1	-90	1045.4	1043.76	1050.18	1048.78	1048	1047.21	2.03	2.47	3.56	3.15	0.791	0.15	0.013
17	18.1-15.2	53.41	18	0.51	-90.15	1042.16	1041.89	1049.47	1048.54	1045.68	1045.45	3.6	6.87	7.47	3.89	0.229	0.2	0.013
18	18.2-18.1	75.69	18	0.5	53.69	1042.74	1042.36	1049.04	1049.47	1046.12	1045.87	2.81	5.96	7.44	3.37	0.244	0.11	0.013
19	18.3-18.2	158.58	12	1	35.68	1044.53	1042.94	1049.73	1049.04	1047.42	1046.23	2.07	3.08	3.57	3.92	1.186	0.24	0.013
20	11.2-11.1	44.48	30	0.49	166.52	1039.57	1039.35	1052.81	1041.73	1041.17	1040.95	11.54	21.35	28.84	6.43	0.22	0.1	0.013
21	11.3-11.2	37.1	24	0.51	-0.92	1039.96	1039.77	1052.78	1052.81	1042.09	1041.77	10.23	21.08	16.18	6.71	0.322	0.45	0.013
22	11.4-11.3	66.95	24	0.51	36.42	1040.5	1040.16	1050.27	1052.78	1043.11	1042.55	7.02	20.74	16.12	6.6	0.563	0.14	0.013
23	11.5-11.4	225.88	24	0.5	10.26	1041.82	1040.69	1050.29	1050.27	1044.67	1043.25	5.17	17.93	16	5.71	1.42	0.45	0.013
24	12.1-11.5	33.92	24	0.5	59.89	1042.8	1042.63	1050.69	1050.29	1045.25	1045.12	5.27	13.65	16.01	4.35	0.124	0.17	0.013
25	12.2-12.1	48.11	24	0.5	-31.47	1043.24	1043	1050.51	1050.69	1045.57	1045.42	4.73	12.54	15.97	3.99	0.148	0.22	0.013
26	12.3-12.2	85.42	24	0.5	-58.52	1043.87	1043.44	1050.38	1050.51	1045.93	1045.78	4.43	9.19	16.05	2.93	0.141	0.02	0.013
27	12.4-12.3	90	24	0.5	0	1044.52	1044.07	1049.41	1050.38	1046.03	1045.95	3.2	8.84	15.99	2.89	0.141	0.18	0.013
28	12.5-12.4	51.12	15	0.51	-59.97	1044.98	1044.72	1048.6	1049.41	1046.56	1046.21	1.75	5.33	4.61	4.34	0.348	0.29	0.013
29	13.1-12.4	89.29	12	1	73.35	1045.61	1044.72	1050.03	1049.41	1046.75	1046.21	3.09	2.77	3.56	3.53	0.54	0.19	0.013
30	11.6-11.5	93.88	12	1	-30.11	1044.39	1043.45	1051.35	1050.29	1044.14	1043.12	6.21	0.42	3.56	0.53	0.015	0.01	0.013
31	20.1-12.2	85.55	12	1.01	31.48	1044.3	1043.44	1049.86	1050.51	1046.36	1045.78	3.28	2.93	3.57	3.73	0.579	0.22	0.013
32	7.2-7.1	50.36	18	4.75	-73.19	1035.49	1033.1	1047.04	1034.9	1036.84	1033.91	10.2	13.09	22.88	13.38	0	n/a	0.013
33	7.3-7.2	99.05	15	1.8	75.37	1043.06	1041.28	1048.13	1047.04	1043.96	1041.96	4.17	4.97	8.66	7.3	0	n/a	0.013
34	7.4-7.3	103.2	15	1	-21.6	1044.29	1043.26	1049.05	1048.13	1045.17	1044.05	3.88	4.71	6.45	5.74	0	n/a	0.013
35	7.5-7.4	88.55	12	1.04	-68.4	1045.41	1044.49	1049.89	1049.05	1046.17	1045.22	3.72	3.19	3.63	5.21	0	0.38	0.013
36	8.1-7.2	48.92	15	1	-14.63	1042.13	1041.64	1047.66	1047.04	1043.07	1042.51	4.59	5.33	6.46	5.88	0	n/a	0.013
37	8.2-8.1	77.64	12	1	0	1043.11	1042.33	1048.65	1047.66	1043.87	1043.07	4.78	3.13	3.57	5.06	0	n/a	0.013
38	8.3-8.2	147	12	1	-34.37	1044.78	1043.31	1049.09	1048.65	1045.29	1043.87	3.8	1.44	3.56	3.2	0	n/a	0.013
39	9.1-8.1	36.49	12	2.93	90	1043.8	1042.73	1048.11	1047.66	1044.06	1043.07	4.05	0.39	6.1	1.69	0	n/a	0.013
40	4.2-4.1	38.26	15	0.5	16.46	1041.19	1041	1050.57	1042.44	1042.51	1042.25	7.83	5.31	4.55	4.33	0.259	0.23	0.013
41	4.3-4.2	105.59	15	0.5	49.91	1041.92	1041.39	1051.56	1050.57	1043.14	1042.74	8.26	4.1	4.58	3.34	0.403	0.16	0.013
42	4.4-4.3	33.99	12	0.5	-64.2	1042.29	1042.12	1047.77	1051.56	1043.44	1043.3	4.25	2.26	2.52	2.88	0.137	0.08	0.013
43	4.5-4.4	47.18	12	0.87	34.53	1042.9	1042.49	1048.06	1047.77	1043.54	1043.52	4.48	0.9	3.32	1.15	0.043	0.04	0.013
44	1.2-1.1	61.7	30	4.51	-81.84	1040.04	1037.26	1044.95	1042.89	1041.52	1038.06	3.43	19.12	87.05	14.2	0	n/a	0.013
45	1.3-1.2	62.26	30	0.5	-15.55	1040.55	1040.24	1047	1044.95	1042.04	1041.72	4.87	19.12	28.94	6.3	0.309	0.09	0.013
46	1.4-1.3	21.26	30	0.52	0	1040.86	1040.75	1043.8	1047	1042.34	1042.22	1.46	19.12	29.49	6.39	0	n/a	0.013
47	14.2-14.1	174.46	36	0.5	-103.47	1040.22	1039.35	1048.16	1042.87	1042.84	1041.97	4.71	49.39	47.1	7.55	0.87	0.61	0.013
48	14.3-14.2	78.51	36	0.5	-40.26	1040.81	1040.42	1044.33	1048.16	1043.88	1043.45	-0.31	49.39	47.01	6.99	0.431	0.76	0.013
49	10.2-10.1	35.49	42	0.51	162.68	1039.02	1038.84	1048	1042.93	1042.52	1042.34	5.33	78.46	71.66	8.16	0.214	0.16	0.013
50	10.3-10.2	26.84	42	0.48	0	1039.35	1039.22	1043.44	1048	1042.85	1042.72	-0.44	78.46	70.02	8.16	0.162	1.03	0.013

353-308 COSTCO LEES SUMMIT 100 YEAR STORM EVENT

LineNo.	LineID	Line Length (ft)	Line Size (in)	Line Slope (%)	Defl. Angle (Deg)	Inver Up (ft)	Invert Dn (ft)	Grnd/RimElev Up (ft)	Grnd/RimElev Dn (ft)	HGL Up (ft)	HGL Dn (ft)	Rim-Hw (ft)	Flow Rate (cfs)	CapacityFull (cfs)	VelDn (ft/s)	Energy Loss (ft)	Minor Loss (ft)	n-value Pipe
51	6.2-6.1	60.75	15	5.48	39.08	1036.9	1033.57	1045.94	1035.09	1038.02	1034.22	7.92	8.03	15.12	12.5	0	0.49	0.013
52	6.3-6.2	154	15	1.01	-36.91	1039.19	1037.63	1045.72	1045.94	1040.08	1038.43	5.64	4.83	6.5	5.8	0	0.22	0.013
53	6.4-6.3	42.94	12	3.66	27.76	1041.25	1039.68	1048.22	1045.72	1041.98	1040.14	6.24	2.9	6.81	8.32	0	n/a	0.013
54	5.2-5.1	56.29	30	2.5	-6.58	1032.44	1031.03	1046	1037.53	1034.09	1032.07	11.91	23.6	64.9	12.17	0	n/a	0.013
55	5.3-5.2	35.98	30	1	0	1033	1032.64	1035.95	1046	1034.65	1034.09	1.3	23.6	41.02	7.98	0	n/a	0.013

Notes: j-Line contains hyd. jump

100 YEAR STORM INTENSITY CALCULATIONS

i = 256 / (Tc + 19.8)

INLET TIME CALCULATIONS

Tc = 1.8 * (1 − C) * ((D^½) / (S^⅓))

C = RATIONAL METHOD RUNOFF COEFFICIENT
D = OVERLAND FLOW DISTANCE (FT)
S = SLOPE (%)

Q = C * i * A

A = DRAINAGE AREA (ACRES)

REFERENCE

EXISTING TOPOGRAPHIC DATA AND FEATURES ARE A COMBINATION OF THE FOLLOWING:
1. ALTA SURVEY DATED 08-20-2025 BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC.
2. DEVELOPMENT PLANS FOR OLDHAM VILLAGE (BY OTHER)
3. SITE DEVELOPMENT PLANS DATED 12-22-2025 BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC.

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MISSOURI 811

811 or 1-800-344-7483
https://missouri-811.org

NOTES:

1. CONTRACTOR SHALL REFER TO OTHER PLANS WITHIN THIS CONSTRUCTION SET FOR OTHER PERTINENT INFORMATION. IT IS NOT THE ENGINEER'S INTENT THAT ANY SINGLE PLAN SHEET IN THIS SET OF DOCUMENTS FULLY DEPICT ALL WORK ASSOCIATED WITH THIS PROJECT.

KARL A. SCHOENIKE, PE
(MO PE# 2003015039)

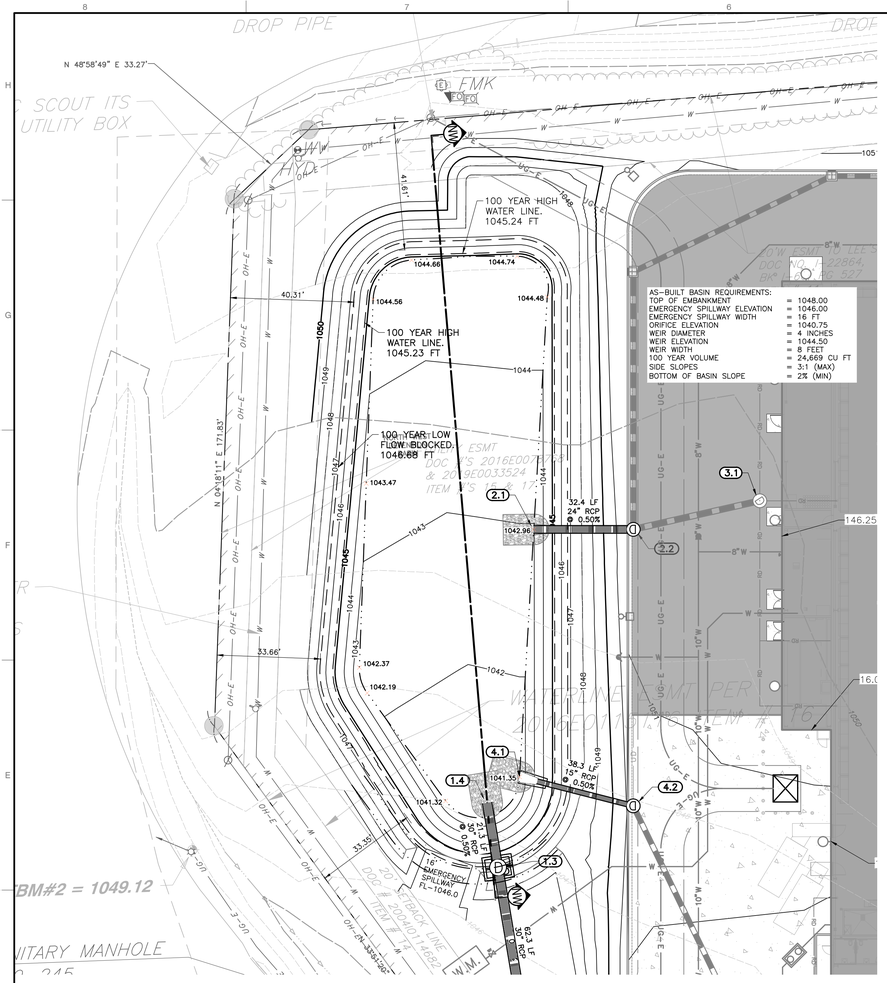
STATE OF MISSOURI
KARL A. SCHOENIKE
NUMBER PE-2003015039
03/13/2026
PROFESSIONAL ENGINEER

REVISION RECORD

NO	DATE	DESCRIPTION
1	01/09/2026	BID SET #1/CHICAGO 2
2	02/03/2026	FUEL BID SET
3	03/03/2026	REVISED PER REVIEW AND COMMENTS
4	03/13/2026	Revised per Approved Final Development Plans

DRAWINGS, SURVEYING, AND LANDSCAPE ARCHITECTURE IN THE STATE OF NORTH CAROLINA WILL BE PROVIDED BY CEC SURVEYING AND LANDSCAPE ARCHITECTURE OF NC, PLLC. ALL OTHER DRAWINGS WILL BE PROVIDED BY CEC ENGINEERS & CONSULTANTS, LLC. LANDSCAPE ARCHITECTURE SERVICES IN THE STATE OF OHIO WILL BE PROVIDED BY CEC LANDSCAPE ARCHITECT, LLC.

Civil & Environmental Consultants, Inc.
| 1450 Beale Street
Suite 305
St. Charles,

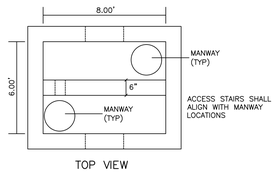


NORTH

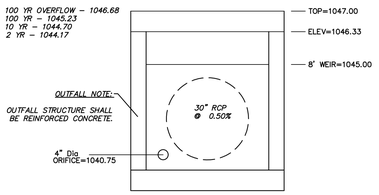
SCALE IN FEET
0 20 40

NORTHWEST DETENTION BASIN

NOTES:
1. THE BASIN SHALL BE CONSTRUCTED WITH EROSION AND SEDIMENT CONTROL MEASURES.
2. AN AS-BUILT DETENTION BASIN PLAN SHALL BE SUBMITTED AND ACCEPTED PRIOR TO ISSUANCE OF A CERTIFICATE OF SUBSTANTIAL COMPLETION, WITH AS-BUILT VERSUS PROPOSED STORAGE.
3. TURF REINFORCEMENT MAT SHALL BE NORTH AMERICAN GREEN ERONET OR APPROVED EQUAL. TRM TO BE VEGETATED.
4. TRASH RACK TO BE INSTALLED AT EACH LOW FLOW ORIFICE. (SEE DETAIL)
5. OUTFALL PIPES SHALL BE RCP



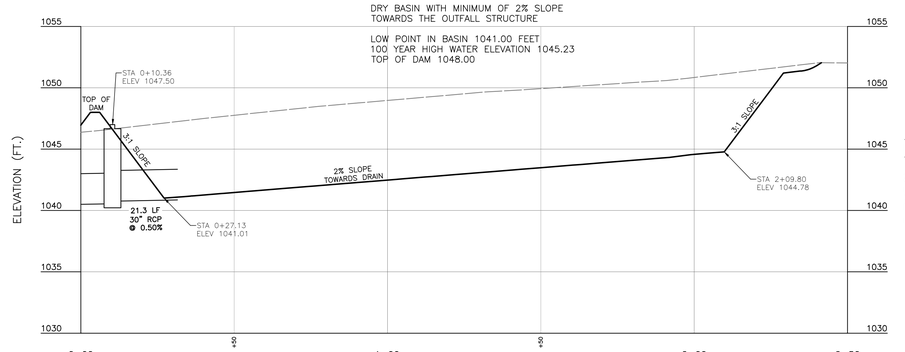
TOP VIEW



OUTFALL STRUCTURE 1.3
8'x6' BOX STRUCTURE

CONTROL STRUCTURE NOTES

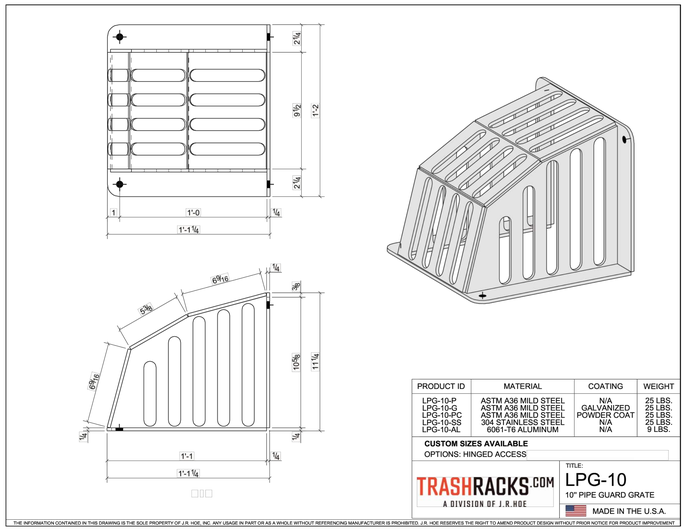
1. CONTROL STRUCTURE TO BE 8'x6' PRECAST BOX
2. INSTALL TRASH RACK PER MANUFACTURERS SPECIFICATIONS



NW BASIN PROFILE

SCALE H:1"=20'; V:1"=5'

SCALE IN FEET (HORIZONTAL)
0 20 40
SCALE IN FEET (VERTICAL)
0 5 10



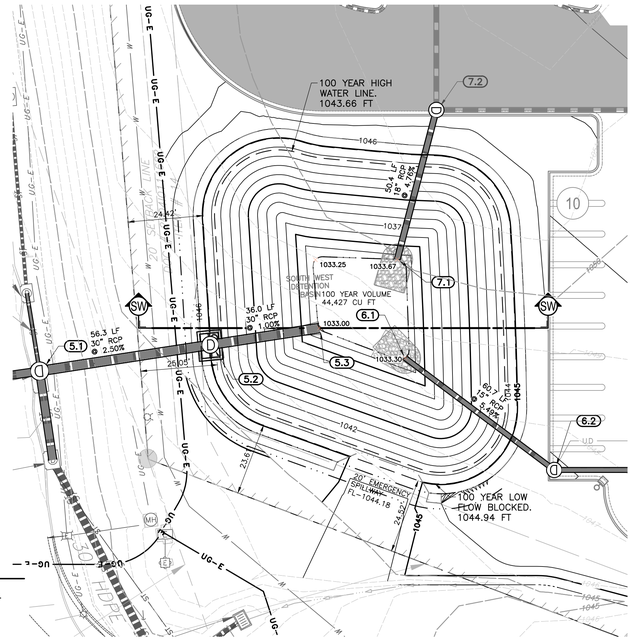
PRODUCT ID	MATERIAL	COATING	WEIGHT
LPG-10-P	ASTM A36 MILD STEEL	N/A	25 LBS.
LPG-10-G	ASTM A36 MILD STEEL	GALVANIZED	25 LBS.
LPG-10-PC	ASTM A36 MILD STEEL	POWDER COAT	25 LBS.
LPG-10-SS	304 STAINLESS STEEL	N/A	25 LBS.
LPG-10-AL	6061-T6 ALUMINUM	N/A	9 LBS.

CUSTOM SIZES AVAILABLE
OPTIONS: HINGED ACCESS

TRASHRACKS.COM
A DIVISION OF J.R. HOE

TITLE: LPG-10
10" PIPE GUARD GRATE
MADE IN THE U.S.A.

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF J.R. HOE, INC. ANY USAGE IN PART OR AS A WHOLE WITHOUT REFERENCING MANUFACTURER IS PROHIBITED. J.R. HOE RESERVES THE RIGHT TO AMEND PRODUCT DESIGN WITHOUT PRIOR NOTICE FOR PRODUCT IMPROVEMENT



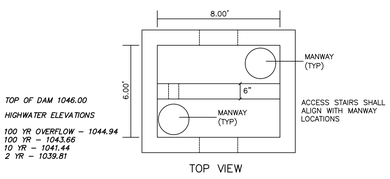
AS-BUILT BASIN REQUIREMENTS:
TOP OF EMBANKMENT = 1046.00
EMERGENCY SPILLWAY ELEVATION = 1044.18
EMERGENCY SPILLWAY WIDTH = 20 FT
ORIFICE ELEVATION = 1032.64
WEIR DIAMETER = 4 INCHES
WEIR ELEVATION = 1043.50
WEIR WIDTH = 8 FEET
100 YEAR VOLUME = 44,427 CU FT
SIDE SLOPES = 3:1 (MAX)
BOTTOM OF BASIN SLOPE = 2% (MIN)

NOTES:
1. THE BASIN SHALL BE CONSTRUCTED WITH EROSION AND SEDIMENT CONTROL MEASURES.
2. AN AS-BUILT DETENTION BASIN PLAN SHALL BE SUBMITTED AND ACCEPTED PRIOR TO ISSUANCE OF A CERTIFICATE OF SUBSTANTIAL COMPLETION, WITH AS-BUILT VERSUS PROPOSED STORAGE.
3. TURF REINFORCEMENT MAT SHALL BE NORTH AMERICAN GREEN ERONET OR APPROVED EQUAL. TRM TO BE VEGETATED.
4. TRASH RACK TO BE INSTALLED AT EACH LOW FLOW ORIFICE. (SEE DETAIL)
5. OUTFALL PIPES SHALL BE RCP

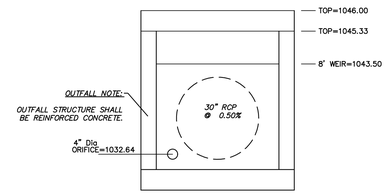
NORTH

SCALE IN FEET
0 20 40

SOUTHWEST DETENTION BASIN



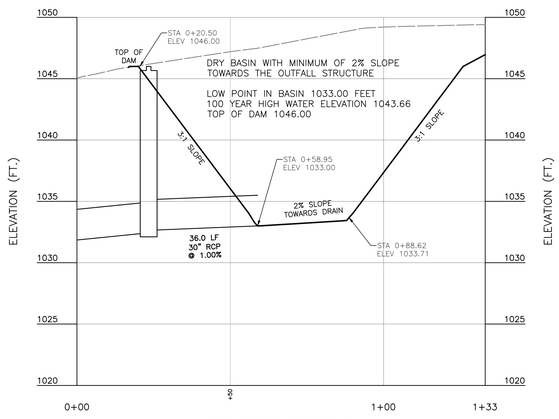
TOP VIEW



OUTFALL STRUCTURE 5.2
8'x6' BOX STRUCTURE

CONTROL STRUCTURE NOTES

1. CONTROL STRUCTURE TO BE 8'x6' PRECAST BOX
2. INSTALL TRASH RACK PER MANUFACTURERS SPECIFICATIONS



SW BASIN PROFILE

SCALE H:1"=20'; V:1"=5'

NOTES:
CONTRACTOR SHALL REFER TO OTHER PLANS WITHIN THIS CONSTRUCTION SET FOR OTHER PERTINENT INFORMATION. IT IS NOT THE ENGINEER'S INTENT THAT ANY SINGLE PLAN SHEET IN THIS SET OF DOCUMENTS FULLY DEPICT ALL WORK ASSOCIATED WITH THIS PROJECT.

SCALE IN FEET (HORIZONTAL)
0 20 40
SCALE IN FEET (VERTICAL)
0 5 10

REFERENCE

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2. DEVELOPMENT PLANS FOR OLDHAM VILLAGE (BY OTHER)
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MISSOURI 811
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https://missouri-811.org

KARL A. SCHOENIKE, PE
(MO PE# 2003015039)

STATE OF MISSOURI
KARL A. SCHOENIKE
PE NUMBER
PE-2003015039
03/13/2026
PROFESSIONAL ENGINEER

REVISION RECORD

NO.	DATE	DESCRIPTION
1	01/30/2026	BID SET ADDENDUM 2
2	02/03/2026	FUEL BID SET
3	02/25/2026	REVISED PER REVIEW AND COMMENTS
4	03/13/2026	Revised per Approved Final Development Plans

ENGINEERING, SURVEYING, AND LANDSCAPE ARCHITECTURE IN THE STATE OF NORTH CAROLINA WILL BE PROVIDED BY CEC SURVEYING AND LANDSCAPE ARCHITECTS OF MO, PLLC AND ENGINEERING IN THE STATE OF MISSOURI WILL BE PROVIDED BY CEC ENGINEERS & CONSULTANTS, LLC. LANDSCAPE ARCHITECTURE SERVICES IN THE STATE OF OHIO WILL BE PROVIDED BY CEC ENGINEERS & CONSULTANTS, LLC. ARCHITECT IN TN, LLC

1450 Beale Street
Suite 305
St. Charles, MO 63303
Ph: 314.656.4566
www.cecinc.com
Civil & Environmental Consultants, Inc.

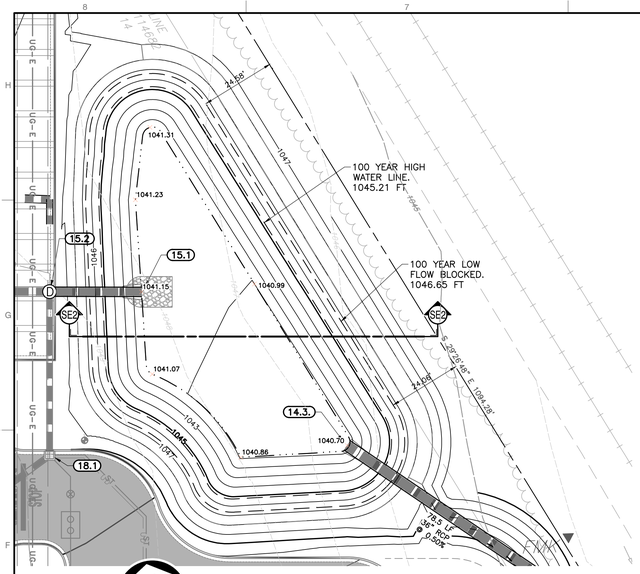
COSTCO WHOLESALE
LEE'S SUMMIT, MISSOURI

COSTCO LEES SUMMIT
CONSTRUCTION DOCUMENTS
STORMWATER MANAGEMENT
BASIN
REVIEW SET - NOT FOR CONSTRUCTION

DATE:	DECEMBER 22, 2025
DRAWN BY:	MK
CHECKED BY:	KAS
DWG SCALE:	AS NOTED
PROJECT NO:	353-308.0002
APPROVED BY:	*DRK

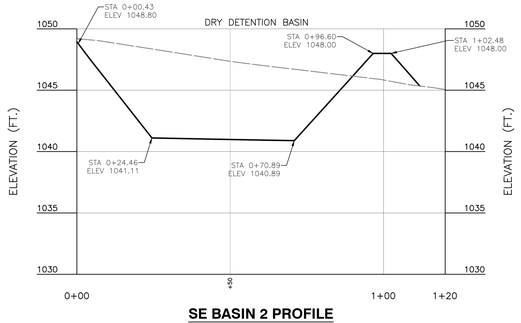
DRAWING NO.: C406
SHEET 14 OF 31

J:\353-000\353-308\~CAD\Dwg\civil\c406\353308-CIVIL-C404.dwg[C400 STORM WATER DETENTION] (3/12/26/2026 - mschmeltz) - LM, 3/12/2026 2:59 PM



NORTH

SCALE IN FEET
0 20 40

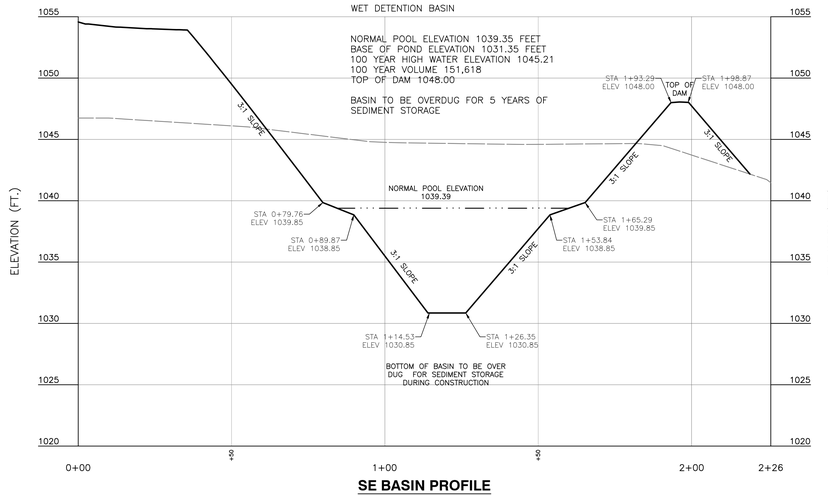


SE BASIN 2 PROFILE
SCALE H:1"=20'; V:1"=5'

SCALE IN FEET (HORIZONTAL)
0 20 40
SCALE IN FEET (VERTICAL)
0 5 10

EAST DETENTION BASIN

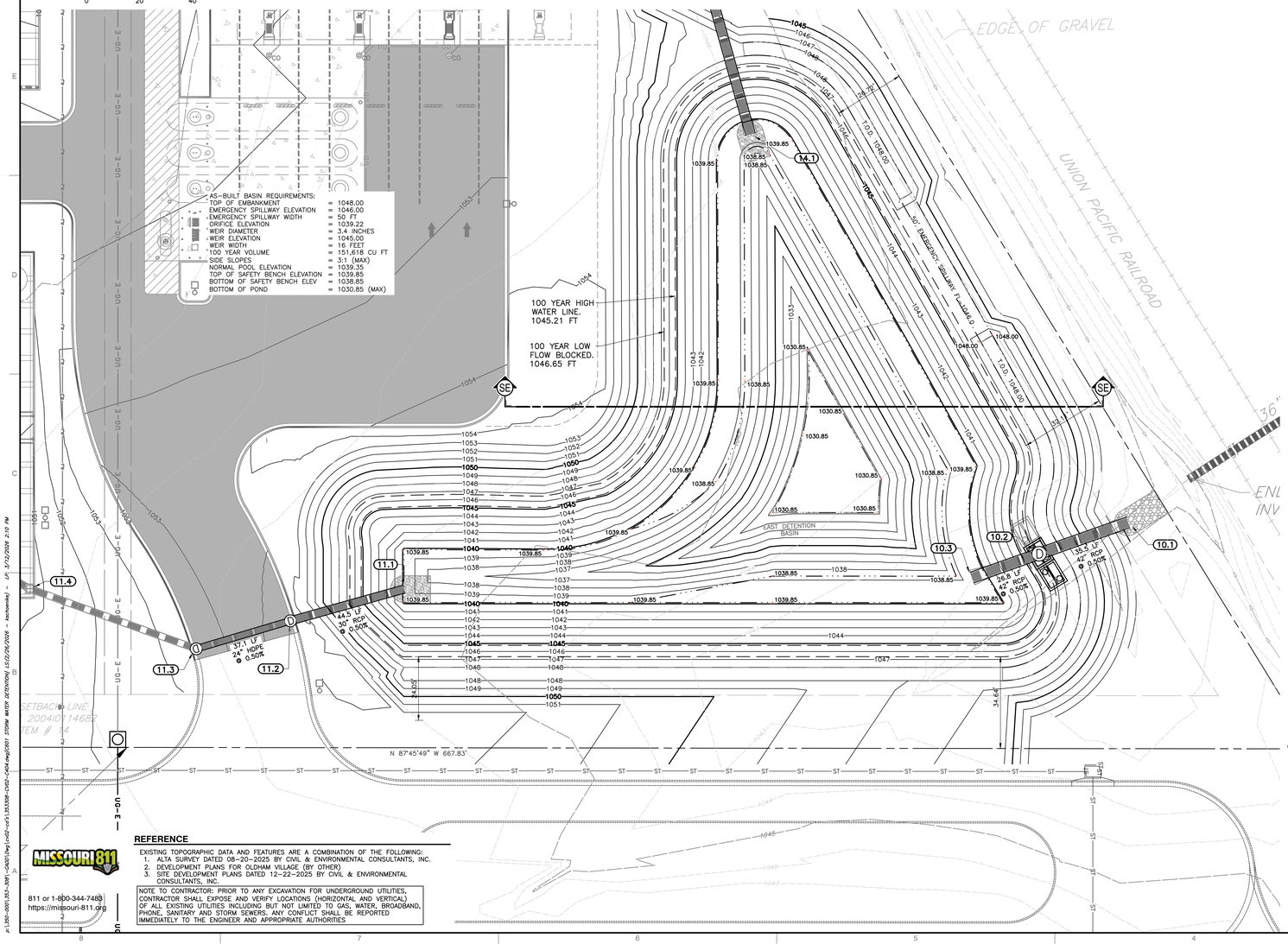
NOTES:
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3. TURF REINFORCEMENT MAT SHALL BE NORTH AMERICAN GREEN ERONET OR APPROVED EQUAL. TRM TO BE VEGETATED. NO MAT REQUIRED BELOW NORMAL POOL ELEVATION.
4. TRASH RACK TO BE INSTALLED AT EACH LOW FLOW ORIFICE. (SEE DETAIL)
5. OUTFALL PIPES SHALL BE RCP.

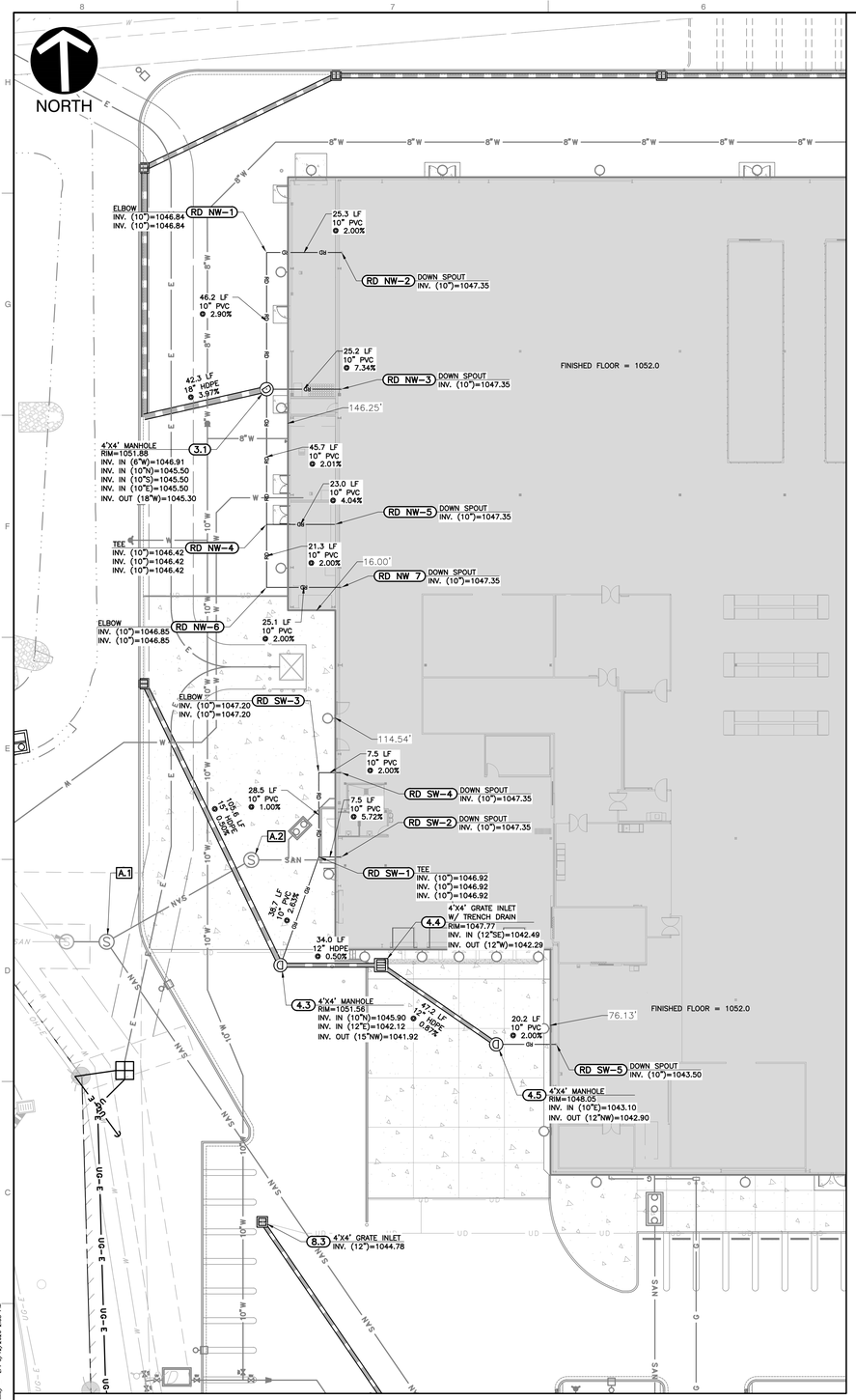


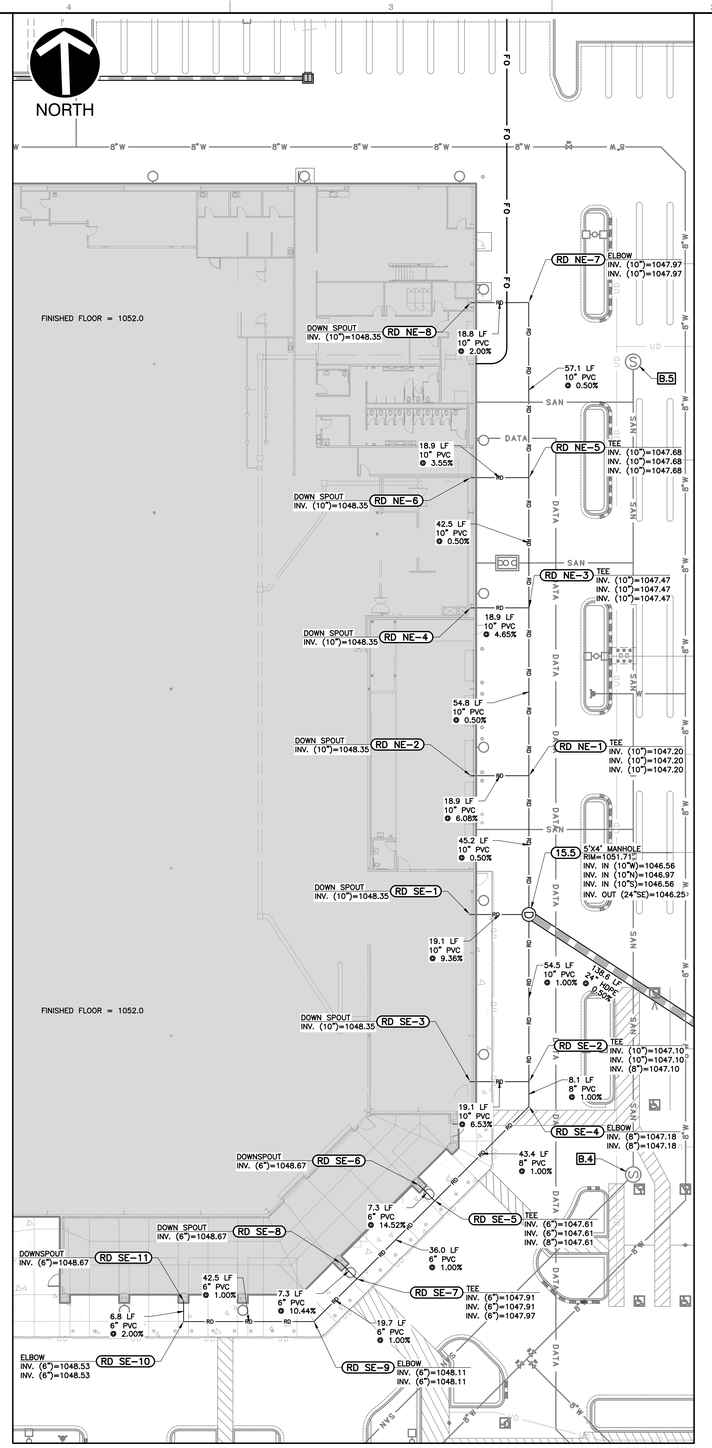
SE BASIN PROFILE
SCALE H:1"=20'; V:1"=5'

SCALE IN FEET (HORIZONTAL)
0 20 40
SCALE IN FEET (VERTICAL)
0 5 10

EAST DETENTION BASIN


AS-BUILT BASIN REQUIREMENTS:
TOP OF EMBANKMENT = 1048.00
EMERGENCY SPILLWAY ELEVATION = 1046.00
EMERGENCY SPILLWAY WIDTH = 50 FT
ORIFICE ELEVATION = 1039.22
WEIR DIAMETER = 3.4 INCHES
WEIR ELEVATION = 1045.00
WEIR WIDTH = 16 FEET
100 YEAR VOLUME = 151,618 CU FT
SIDE SLOPES = 3:1 (MAX)
NORMAL POOL ELEVATION = 1039.35
TOP OF SAFETY BENCH ELEVATION = 1039.85
BOTTOM OF SAFETY BENCH ELEV = 1038.85
BOTTOM OF POND = 1030.85 (MAX)
100 YEAR HIGH
WATER LINE.
1045.21 FT
100 YEAR LOW
FLOW BLOCKED.
1046.65 FT
50' EMERGENCY SPILLWAY TYP.
EDGE OF GRAVEL
UNION PACIFIC RAILROAD
EAST DETENTION
BASIN
14.1
10.3
10.2
10.1
11.1
11.2
11.3
11.4
44.5 LF
30" RCP
@ 0.50%
37.1 LF
24" HDPE
@ 0.50%
26.8 LF
42" RCP
@ 0.50%
35.5 LF
42" RCP
@ 0.50%
SETBACK LINE
20040011468Z
EM # 14
N 87°45'49" W 667.83'
24.82'
34.64'
SE
SE
D
1039.85
1038.85
1030.85
1038.85
1039.85
1030.85
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1039





LEGEND

- EXISTING PROPERTY LINE
- EXISTING SETBACK
- EXISTING EASEMENT
- EXISTING INDEX (MAJOR) CONTOUR
- EXISTING INTERMEDIATE (MINOR) CONTOUR
- EXISTING GUARD RAIL
- EXISTING FENCE
- EXISTING VERTICAL CONCRETE CURB
- EXISTING EDGE OF PAVEMENT
- EXISTING DITCH FLOW LINE
- EXISTING TREE LINE
- EXISTING TREE WITH TRUNK SIZE
- EXISTING OVERHEAD ELECTRIC
- EXISTING UNDERGROUND ELECTRIC
- EXISTING FIBER OPTIC LINE
- EXISTING WATER LINE
- EXISTING SANITARY SEWER LINE
- EXISTING STORM DRAIN
- EXISTING TRAFFIC POLE WITH ARM
- EXISTING LIGHT POLE WITH ARM
- EXISTING UTILITY POLE AND GUY WIRE
- EXISTING ELECTRIC PULL BOX
- EXISTING FIBER OPTIC PULL BOX
- EXISTING FIBER MARKER
- EXISTING WATER MANHOLE
- EXISTING FIRE HYDRANT
- EXISTING WATER VALVE
- EXISTING WATER METER
- EXISTING SANITARY MANHOLE
- EXISTING CURB INLET
- EXISTING FLARED END SECTION (F.E.S.)
- EXISTING GRATED CATCH BASIN
- EXISTING STORMWATER MANHOLE
- PROPOSED CONCRETE CURB AND GUTTER
- PROPOSED CONCRETE PAVEMENT
- PROPOSED HEAVY DUTY PAVEMENT
- PROPOSED LIGHT DUTY PAVEMENT
- PROPOSED CONCRETE SIDEWALK
- PROPOSED PAINTED 2' O.C. DIAGONAL STRIPING
- PROPOSED PAINTED PARKING DIVIDER
- PROPOSED CART CORRAL
- PROPOSED STORM PIPE
- PROPOSED UNDERDRAIN
- PROPOSED PRIVATE SANITARY SEWER
- PROPOSED PRIVATE WATER LINE (SIZE DENOTED)
- PROPOSED UNDERGROUND ELECTRIC
- PROPOSED DATA LINE
- PROPOSED MANHOLE – SOLID COVER
- PROPOSED AREA INLET – 3-WAY
- PROPOSED GRATE INLET
- PROPOSED 2 GRATE INLET W/ SIDE INTAKE
- PROPOSED FLARED END SECTION (F.E.S.)
- PROPOSED CLEAN OUT
- PROPOSED PRIVATE SANITARY MANHOLE
- PROPOSED PRIVATE SANITARY CLEANOUT
- PROPOSED WATER VALVE
- PROPOSED FIRE HYDRANT
- PROPOSED BUILDING MOUNTED LIGHT AND LIGHT POLE [REFER TO LIGHTING PLAN BY OTHERS]

STORM DRAINAGE NOTES

1. DISTANCES SHOWN ON PIPING ARE HORIZONTAL DISTANCES FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE, UNLESS OTHERWISE NOTED.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH THE INSTALLATION, INSPECTION, TESTING AND FINAL ACCEPTANCE OF ALL NEW STORMWATER MANAGEMENT FACILITIES CONSTRUCTION. CONTRACTOR SHALL COORDINATE WITH ALL APPLICABLE REGULATING AGENCIES CONCERNING INSTALLATION, INSPECTION AND APPROVAL OF THE STORM DRAINAGE SYSTEM CONSTRUCTION.
3. ALL STORMWATER MANAGEMENT FACILITIES, INCLUDING COLLECTION AND CONVEYANCE STRUCTURES SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE LOCAL AND STATE CODES AND REGULATIONS.
4. ALL CATCH BASINS IN THE PAVEMENT OR CURB ARE TO HAVE A MINIMUM OF ONE, 4" PERFORATED UNDERDRAIN EXTENDING 10 LF FROM THE CATCH BASIN IN THE UPHILL DIRECTION. SEE DETAIL ON SHEET C800.
5. ANY FIELD TILE CUT IN EXCAVATION, WHICH DRAINS AN OFFSITE AREA, MUST BE TIED INTO THE STORM DRAINAGE SYSTEM.
6. FOR EXACT LOCATION OF DOWN SPOUTS & ROOF DRAINS, CONTRACTOR IS TO COORDINATE WITH ARCHITECTURAL AND PLUMBING DRAWINGS.
7. ALL PROPOSED STORM SEWERS, SURFACE OR OTHER DRAINAGE FACILITIES ARE TO BE PRIVATE AND MAINTAINED BY THE OWNER.
8. THE CONTRACTOR IS TO CONSTRUCT CURBS, CATCH BASINS, DOWNSPOUTS, PIPING AND CONNECTION ETC. AS REQUIRED TO CONVEY THE ROOF AND PAVED SURFACE DRAINAGE TO THE DETENTION BASIN.
9. ALL CATCH BASINS AND MANHOLES WITH A DEPTH GREATER THAN 2' SHALL BE PROVIDED WITH STEPS.
10. STORM SEWER PIPE LABELED "STM" SHALL BE ONE OF THE FOLLOWING: POLYVINYL CHLORIDE SDR-35 "PVC", HIGH DENSITY POLYETHYLENE "HDPE", OR REINFORCED CONCRETE PIPE "RCP".

SEWER ABBREVIATIONS:

2G.I. W/S.I.	2 GRATE INLET WITH SIDE INTAKE
G.I.	GRATE INLET
A.I.	AREA INLET
Y.D.	YARD DRAIN
C.O.	CLEANOUT
T.S.	TOP OF SURFACE
F.F.	FINISHED FLOOR
R.D	ROOF DRAIN
D.S.	DOWNSPOUT
T.D.	TRENCH DRAIN
E.O.P.	END OF PIPE
INV.	INVERT
HGL	HYDRAULIC GRADE LINE
HDPE	HIGH DENSITY POLYETHYLENE
P.P.	POLYPROPYLENE
W.S.	WATER SURFACE
LFB	LOW FLOW BLOCKED
UC	UNDERGROUND
UD	UNDER DRAIN

REFERENCE

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3. SITE DEVELOPMENT PLANS DATED 12-22-2025 BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC.

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SCALE IN FEET
0 20 40

KARL A. SCHOENIKE, PE
(MO PE# 2003015039)

STATE OF MISSOURI
KARL A. SCHOENIKE
NUMBER PE-2003015039
03/13/2026
PROFESSIONAL ENGINEER

REVISION RECORD

NO.	DATE	DESCRIPTION
	01/30/2026	BID SET ADDENDUM 2
	02/03/2026	FUEL BID SET
	02/20/2026	REVISED PER REVIEW AND COMMENTS
	03/13/2026	Revised per Approved Final Development Plans

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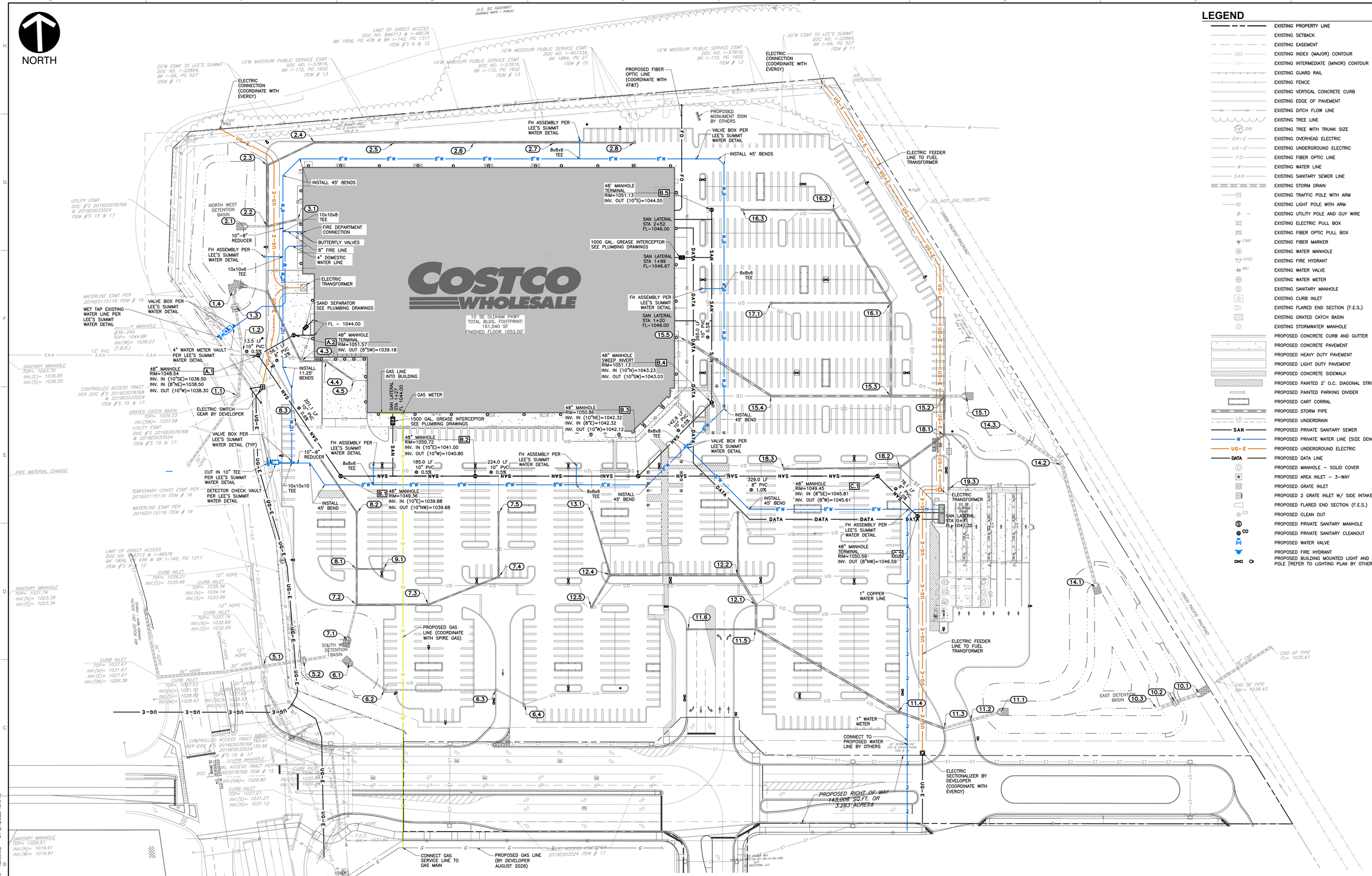
COSTCO WHOLESALE
LEE'S SUMMIT, MISSOURI

COSTCO LEES SUMMIT
CONSTRUCTION DOCUMENTS
ROOF DRAIN PLAN
REVIEW SET - NOT FOR CONSTRUCTION

DATE:	DECEMBER 22, 2025
DWG SCALE:	1" = 20'
PROJECT NO:	353-308.0002
DRAWN BY:	MK
CHECKED BY:	KAS
APPROVED BY:	DRK

DRAWING NO.:
C408
SHEET 16 OF 31

P:\350-001\353-308\~DWG\wip\civil\353308-CIVIL-C408.dwg[16 CA08] 12/22/2025 - mschonsky - LP: 3/12/2026 2:38 PM



LEGEND

- EXISTING PROPERTY LINE
- EXISTING SETBACK
- EXISTING EASEMENT
- EXISTING INDEX (MAJOR) CONTOUR
- EXISTING INTERMEDIATE (MINOR) CONTOUR
- EXISTING GUARD RAIL
- EXISTING FENCE
- EXISTING VERTICAL CONCRETE CURB
- EXISTING EDGE OF PAVEMENT
- EXISTING DITCH FLOW LINE
- EXISTING TREE LINE
- EXISTING TREE WITH TRUNK SIZE
- EXISTING OVERHEAD ELECTRIC
- EXISTING UNDERGROUND ELECTRIC
- EXISTING FIBER OPTIC LINE
- EXISTING WATER LINE
- EXISTING SANITARY SEWER LINE
- EXISTING STORM DRAIN
- EXISTING TRAFFIC POLE WITH ARM
- EXISTING LIGHT POLE WITH ARM
- EXISTING UTILITY POLE AND GUY WIRE
- EXISTING ELECTRIC PULL BOX
- EXISTING FIBER OPTIC PULL BOX
- EXISTING FIBER MARKER
- EXISTING WATER MANHOLE
- EXISTING FIRE HYDRANT
- EXISTING WATER VALVE
- EXISTING WATER METER
- EXISTING SANITARY MANHOLE
- EXISTING CURB INLET
- EXISTING FLARED END SECTION (F.E.S.)
- EXISTING GRATED CATCH BASIN
- EXISTING STORMWATER MANHOLE
- PROPOSED CONCRETE CURB AND GUTTER
- PROPOSED CONCRETE PAVEMENT
- PROPOSED HEAVY DUTY PAVEMENT
- PROPOSED LIGHT DUTY PAVEMENT
- PROPOSED CONCRETE SIDEWALK
- PROPOSED PAINTED 2' O.C. DIAGONAL STRIPING
- PROPOSED PAINTED PARKING DIVIDER
- PROPOSED CART CORRAL
- PROPOSED STORM PIPE
- PROPOSED UNDERDRAIN
- PROPOSED PRIVATE SANITARY SEWER
- PROPOSED PRIVATE WATER LINE (SIZE DENOTED)
- PROPOSED UNDERGROUND ELECTRIC
- PROPOSED DATA LINE
- PROPOSED MANHOLE – SOLID COVER
- PROPOSED AREA INLET – 3–WAY
- PROPOSED GRATE INLET
- PROPOSED 2 GRATE INLET W/ SIDE INTAKE
- PROPOSED FLARED END SECTION (F.E.S.)
- PROPOSED CLEAN OUT
- PROPOSED PRIVATE SANITARY MANHOLE
- PROPOSED PRIVATE SANITARY CLEANOUT
- PROPOSED WATER VALVE
- PROPOSED FIRE HYDRANT
- PROPOSED BUILDING MOUNTED LIGHT AND LIGHT POLE [REFER TO LIGHTING PLAN BY OTHERS]

UTILITY NOTES

1. ALL PROPOSED UTILITY LINES AND EXTENSIONS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE UTILITY AGENCY / DISTRICT / MUNICIPALITY / COMPANY REQUIREMENTS. CONTRACTOR SHALL COORDINATE UTILITY DISCONNECTIONS, IF APPLICABLE, WITH THE APPROPRIATE AGENCY.
2. ALL SEWER CONSTRUCTION AND MATERIALS SHALL CONFORM TO AND BE IN ACCORDANCE WITH PROJECT SPECIFICATIONS AND ALL APPLICABLE LOCAL AND STATE CODES AND REGULATIONS.
3. BEFORE INSTALLATION OF STORM OR SANITARY SEWER, OR OTHER UTILITY, THE CONTRACTOR SHALL VERIFY ALL CROSSINGS, BY EXCAVATION WHERE NECESSARY, AND INFORM THE OWNER'S REPRESENTATIVE OF ANY CONFLICTS OR UNCHARTED EXISTING UTILITIES ENCOUNTERED. SUBMIT NOTIFICATION SO AS TO ALLOW DESIGN ADJUSTMENTS THAT MAY BE REQUIRED TO AVOID CONFLICTS. THE ENGINEER WILL BE HELD HARMLESS IN THE EVENT HE IS NOT NOTIFIED OF DESIGN CONFLICTS PRIOR TO CONSTRUCTION.
4. THE CONTRACTOR SHALL CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION AND REQUEST FIELD VERIFICATION OF UTILITY LOCATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO RELOCATE EXISTING UTILITIES CONFLICTING WITH IMPROVEMENTS SHOWN HEREON IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS GOVERNING SUCH OPERATIONS.
5. THE CONTRACTOR SHALL OBTAIN ALL APPLICABLE REQUIRED PERMITS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
6. MAINTAIN A MINIMUM OF 10 FEET HORIZONTAL AND A MINIMUM OF 18 INCHES VERTICAL SEPARATION BETWEEN SANITARY SEWER OR STORM SEWER AND WATER SUPPLY PIPING, UNLESS OTHERWISE INDICATED.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE SEQUENCING OF CONSTRUCTION FOR ALL UTILITY LINES SO THAT WATER LINES, GAS LINES, AND UNDERGROUND ELECTRIC DO NOT CONFLICT WITH SANITARY SEWERS OR STORM SEWERS. INSTALL UTILITIES PRIOR TO PAVEMENT CONSTRUCTION.
8. ALL UTILITY TRENCH EXCAVATION SPOILS SHALL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE INDICATED AND, IF REQUIRED, SHALL BE REMOVED BY THE CONTRACTOR AND DISPOSED OF OFFSITE AT NO ADDITIONAL COST TO THE OWNER IN ACCORDANCE WITH ALL LOCAL AND STATE CODES AND PERMIT REQUIREMENTS.
9. ADJUST ALL EXISTING UTILITY SURFACE FEATURES INCLUDING BUT NOT LIMITED TO CASTINGS, VALVE BOXES, PEDESTALS, CLEANOUTS, ETC. TO MATCH PROPOSED FINISHED GRADES, UNLESS OTHERWISE INDICATED.
10. SITE DIMENSIONS AND/OR COORDINATES SHOWN ARE TO THE FACE OF CURB, EDGE OF PAVEMENT, EXTERIOR BUILDING WALL, CENTER OF MANHOLE, CENTER AT FACE OF CURB FOR DRAIN INLETS AND CENTERLINE OF PIPE OR FITTING, UNLESS OTHERWISE NOTED. DISTANCES SHOWN ON PIPING ARE HORIZONTAL DISTANCES FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE, UNLESS OTHERWISE NOTED.
11. REFER TO THE ARCHITECTURAL DRAWINGS FOR EXACT BUILDING DIMENSIONS AND LOCATIONS OF UTILITY SERVICE ENTRANCES, BUILDING DRAINS, ROOF DRAINS, DOORS AND EXIT FEATURES.
12. TERMINATE UTILITY SERVICES AND DOWNSPOUT LEADER PIPING 5 FEET FROM BUILDING EXTERIOR WALL UNLESS INDICATED OTHERWISE. INSTALL DETECTABLE UTILITY WARNING TAPE ABOVE ALL UTILITY PIPING OR CONDUITS, 12 INCHES BELOW FINISHED GRADE, EXCEPT 6 INCHES BELOW SUBGRADE UNDER PAVEMENTS AND SLABS.
13. SANITARY SEWER SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH PROJECT SPECIFICATIONS AND LOCAL REQUIREMENTS. SANITARY SEWER SYSTEM SHALL BE VACUUM AND PRESSURE TESTED PER LOCAL REQUIREMENTS. SANITARY BUILDING SEWER SERVICE PIPE SHALL BE POLYVINYL CHLORIDE PIPE, ASTM D3034, SDR 26, FOR GASKETED JOINTS; OR DUCTILE IRON SEWER PIPE, ASTM A 746, AWWA C110, AWWA C111, AWWA C150, AWWA C151, AWWA C 153, FOR PUSH–ON JOINTS; IN ACCORDANCE WITH THE REQUIREMENTS OF THE UTILITY COMPANY.
14. ALL SANITARY AND STORM SEWER OUTSIDE THE RIGHT–OF–WAY AND NOT IN AN EASEMENT WILL REMAIN PRIVATE AND WILL BE MAINTAINED PRIVATELY BY COSTCO.
15. PUBLIC WATER MAIN PIPES, FITTINGS, RESTRAINTS, VALVES/VALVE BOXES, FIRE HYDRANTS, ETC. SHALL BE INSTALLED IN ACCORDANCE TO LEE'S SUMMIT WATER.
16. PUBLIC WATER MAIN PIPE MATERIAL SHALL BE POLYVINYL CHLORIDE (PVC) PRESSURE PIPE IN FULL ACCORDANCE WITH AWWA C909. PIPE MUST BE STAMPED WITH "NSF – pw" OR "ANSI/NSF 14 & 61" SHOWING IT CONFORMS TO NSF 14 AND 61 FOR POTABLE WATER PIPE.
17. PUBLIC WATER MAIN FITTINGS SHALL BE DUCTILE IRON, MECHANICAL JOINT IN ACCORDANCE WITH ASA 21.10–98 OR AWWA C110, WITH ANSI/AWWA C104/A21.4–95 STANDARD THICKNESS CEMENT MORTAR LINING SUITABLE FOR USE WITH CLASS 50 DUCTILE IRON PIPE.
18. FIRE SERVICE PIPING SHALL BE AWWA C600, THICKNESS CLASS 50, DUCTILE IRON PIPE WITH AWWA C104 CEMENT MORTAR LINING, DUCTILE IRON COMPACT FITTINGS AND PUSH–ON OR MECHANICAL JOINTS, AND POLYETHYLENE TUBING FOR CORROSION PROTECTION MEETING AWWA C105; OR AWWA C900, CLASS 150, DR18, POLY VINYL CHLORIDE PLASTIC PIPE, ELASTOMERIC JOINTS, WITH AWWA C110 OR AWWA C153 DUCTILE IRON FITTINGS. PER NFPA 24, FIRE SERVICE PIPING UNDERNEATH BUILDING SHALL BE DUCTILE IRON PIPE.
19. DOMESTIC AND IRRIGATION WATER PIPING LARGER THAN 2–INCHES SHALL BE AWWA C150, CLASS 52, DUCTILE IRON PIPE WITH AWWA C104 CEMENT MORTAR LINING, INCLUDING ANY OF THE FOLLOWING AWWA C111 TYPE JOINTS; MECHANICAL JOINTS WITH PLAIN RUBBER GASKETS WITH MEGALUGS AT ALL FITTINGS, SINGLE RUBBER GASKET JOINTS KNOWN AS BELL–TITE JOINTS WITH BRONZE WEDGES FOR EACH JOINT, OR SINGLE RUBBER GASKET JOINTS KNOWN AS TYTON JOINTS WITH BRONZE WEDGES FOR EACH JOINT. DOMESTIC AND IRRIGATION PIPING OF 2–INCH AND SMALLER SHALL BE COPPER TUBE ASTM B88, TYPE K, SEAMLESS WATER TUBE WITH ASME B16.18 CAST COPPER ALLOY OR B16.22 WROUGHT COPPER SOLDER–JOINT PRESSURE TYPE FITTINGS.
20. CONTRACTOR TO INSTALL CONDUIT SYSTEMS FOR UNDERGROUND ELECTRIC AND TELEPHONE SERVICES IN ACCORDANCE WITH UTILITY COMPANIES' REQUIREMENTS, INCLUDING PULL CORDS INSIDE CONDUITS AND HIGHWAY LOAD–BEARING PULL BOXES AND MANHOLES.
21. CONTRACTOR SHALL INSTALL THE COSTCO SWITCH, TRANSFORMER, CONCRETE PADS, CONDUITS, AND WIRING FOR UNDERGROUND PRIMARY ELECTRIC SERVICE FROM THE NEW METER TO THE COSTCO TRANSFORMER IN ACCORDANCE WITH UTILITY COMPANY REQUIREMENTS.
22. CONTRACTOR SHALL PROVIDE AND INSTALL 2 – 5" DIAMETER SCHEDULE 80 PVC CONDUITS AND WIRING FOR PRIMARY ELECTRIC SERVICE IN ACCORDANCE WITH UTILITY COMPANY'S REQUIREMENTS.
23. CONTRACTOR SHALL PROVIDE AND INSTALL 4 – 4" DIAMETER SCHEDULE 40 PVC CONDUITS FOR TELEPHONE SERVICE CONDUITS IN ACCORDANCE WITH THE REQUIREMENTS OF THE UTILITY COMPANY. TELEPHONE SERVICE CONDUITS SHALL BE RIGID, NONMETALLIC CONDUITS NEMA TC 2, SCHEDULE 40 PVC; AND/OR IN ACCORDANCE WITH THE REQUIREMENTS OF THE UTILITY COMPANY. INSTALL INSULATED WIRE WITH CONDUITS TO FACILITATE LOCATION AFTER CONSTRUCTION.
24. GAS UTILITY COMPANY WILL INSTALL GAS SERVICE PIPING TO BUILDING AND METER SETTING. IF TIMING DICTATES, CONTRACTOR TO PROVIDE TRENCH AND A 4" DIAMETER SCHEDULE 40 PVC CONDUIT AS NECESSARY FOR INSTALLATION OF SERVICE PIPING. CONTRACTOR TO COORDINATE INSTALLATION SCHEDULE WITH UTILITY COMPANY.

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SCALE IN FEET
0 50 100

KARL A. SCHOENIKE, PE (MO PE# 2003015039)

STATE OF MISSOURI KARL A. SCHOENIKE NUMBER PE-2003015039 03/13/2026 PROFESSIONAL ENGINEER

REFERENCE

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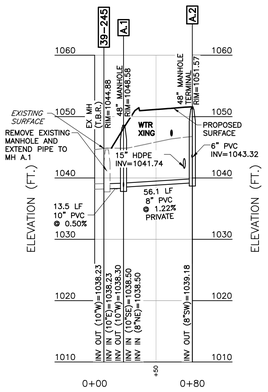
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COSTCO WHOLESALE
LEE'S SUMMIT, MISSOURI

COSTCO LEES SUMMIT
CONSTRUCTION DOCUMENTS
UTILITY PLAN
REVIEW SET - NOT FOR CONSTRUCTION

DATE:	DECEMBER 22, 2025
DRAWN BY:	MK
DWG SCALE:	1" = 50'
CHECKED BY:	KAS
PROJECT NO.	353-308.0002
APPROVED BY:	*DRK

DRAWING NO.: C500
SHEET 17 OF 31



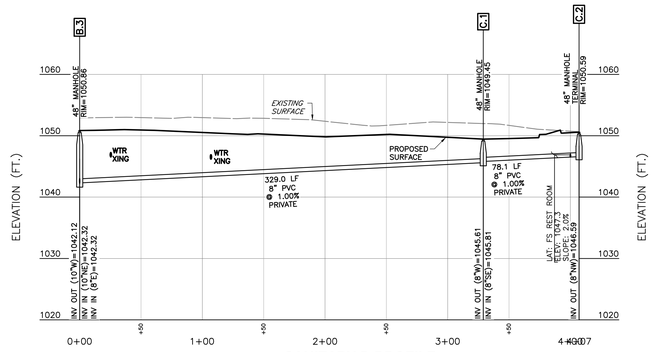
353308 - SANITARY A PROFILE

SCALE H:1"=50'; V:1"=10'



353308 - SANITARY B PROFILE

SCALE H:1"=50'; V:1"=10'



353308 - SANITARY D PROFILE

SCALE H:1"=50'; V:1"=10'

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SCALE IN FEET (HORIZONTAL)
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SCALE IN FEET (VERTICAL)
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(MO PE# 2003015039)

STATE OF MISSOURI
KARL A. SCHOENIKE
NUMBER
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03/13/2026
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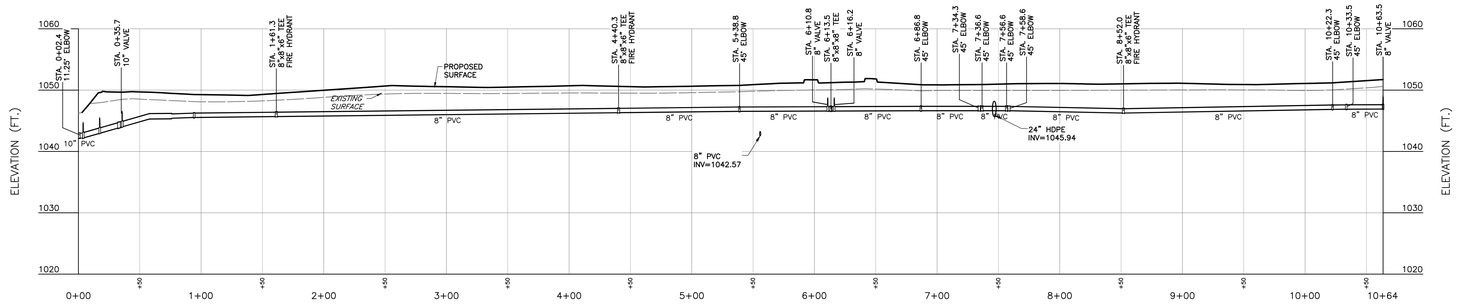
LEE'S SUMMIT, MISSOURI

COSTCO LEES SUMMIT
CONSTRUCTION DOCUMENTS
SANITARY PROFILES
REVIEW SET - NOT FOR CONSTRUCTION
DECEMBER 22, 2025 | DRAWN BY: MK
1" = 50' | CHECKED BY: KAS
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DWG SCALE:
PROJECT NO: 353-308.0002
APPROVED BY: *DRK

DRAWING NO.: **C501**

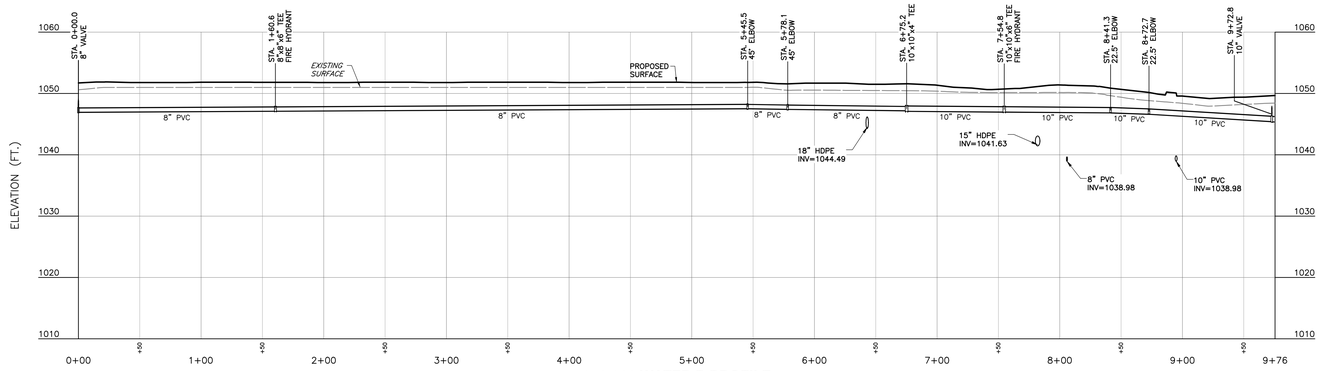
SHEET 18 OF 31

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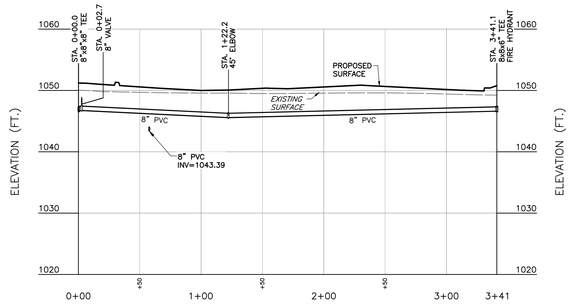
353-308 WATER A PROFILE

SCALE H:1"=50'; V:1"=10'



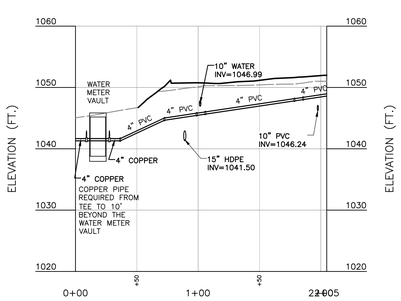
353-308 WATER B PROFILE

SCALE H:1"=50'; V:1"=10'



353-308 WATER C PROFILE

SCALE H:1"=50'; V:1"=10'



DOMESTIC WATER LINE PROFILE

SCALE H:1"=50'; V:1"=10'

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KARL A. SCHOENIKE
NUMBER PE-2003015039
03/13/2026
PROFESSIONAL ENGINEER

KARL A. SCHOENIKE, PE
(MO PE# 2003015039)

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REVIEW SET - NOT FOR CONSTRUCTION
DECEMBER 22, 2025

DRAWN BY:	MK
CHECKED BY:	KAS
PROJECT NO:	353-308.0002
APPROVED BY:	*DRK
DWG SCALE:	1" = 50'

DRAWING NO.:
C502
SHEET 19 OF 31

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VICINITY MAP



SITE VICINITY MAP SCALE: 1" = 2000'

USGS US TOPO 7.5-MINUTE MAP FOR LEE'S SUMMIT & LAKE JACOMO, MO 2025
USGS MAP COURTESY OF THE NATIONAL MAP ❹
https://topobuilder.nationalmap.gov/ ACCESSED ON 12/04/2025

REGIONAL MAP



USGS TOPO MAP SCALE: 1" = 5000'

USGS US TOPO 7.5-MINUTE MAP FOR LEE'S SUMMIT & LAKE JACOMO, MO 2025
USGS MAP COURTESY OF THE NATIONAL MAP ❹
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SITE LAYOUT NOTES

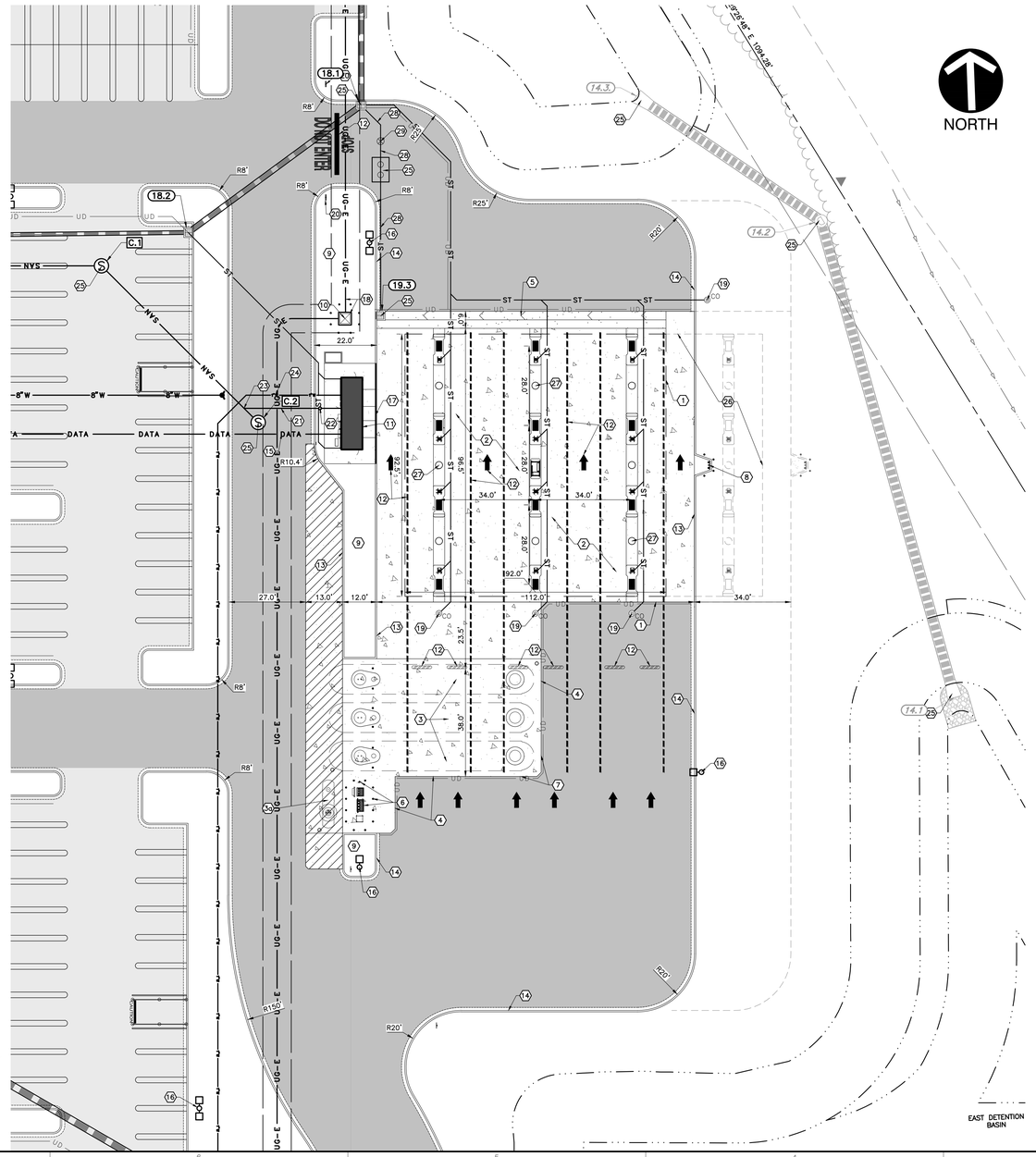
1. ALL SITE WORK SHOWN HEREON SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT'S SPECIFICATIONS, THE CURRENT EDITION OF THE JACKSON COUNTY STANDARD SPECIFICATIONS AND ALL APPLICABLE FEDERAL, STATE AND LOCAL BUILDING CODES AND ORDINANCES.
2. THE CONTRACTOR SHALL CHECK EXISTING GRADES, DIMENSIONS, AND INVERTS IN THE FIELD AND REPORT ANY DISCREPANCIES TO THE OWNER'S REPRESENTATIVE PRIOR TO BEGINNING WORK.
3. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL EXISTING UTILITIES AND PROTECT UTILITIES THAT ARE TO REMAIN. RELOCATE EXISTING UTILITIES AS INDICATED, OR AS NECESSARY FOR CONSTRUCTION.
4. PROVIDE A SMOOTH TRANSITION BETWEEN EXISTING PAVEMENT AND NEW PAVEMENT. FIELD ADJUSTMENT OF FINAL GRADES MAY BE NECESSARY. INSTALL ALL UTILITIES, INCLUDING IRRIGATION SLEEVES, PRIOR TO INSTALLATION OF PAVED SURFACES.
5. ALL DAMAGE TO EXISTING PAVEMENT TO REMAIN WHICH RESULTS FROM THE CONTRACTOR'S OPERATIONS SHALL BE REPLACED WITH LIKE MATERIALS AT THE CONTRACTOR'S EXPENSE.
6. SITE DIMENSIONS AND/OR COORDINATES SHOWN ARE TO THE FACE OF CURB, EDGE OF PAVEMENT, EXTERIOR BUILDING WALL, CENTER OF MANHOLE, CENTER AT FACE OF CURB FOR DRAIN INLETS AND CENTERLINE OF PIPE OR FITTING, UNLESS OTHERWISE NOTED. DISTANCES SHOWN ON PIPING ARE HORIZONTAL DISTANCES FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE, UNLESS OTHERWISE NOTED.
7. REFER TO THE ARCHITECTURAL DRAWINGS FOR EXACT BUILDING DIMENSIONS AND LOCATIONS OF UTILITY SERVICE ENTRANCES, BUILDING DRAINS, ROOF DRAINS, DOORS AND EXIT FEATURES.
8. CONTRACTOR SHALL MAINTAIN VEHICLE AND PEDESTRIAN ACCESS ON ADJACENT ROADWAYS AND DRIVES TO THE MAXIMUM EXTENT FEASIBLE THROUGHOUT THE DURATION OF THE PROJECT – COORDINATE WITH NEIGHBORING BUSINESSES AND WITH PUBLIC STREET AUTHORITIES HAVING JURISDICTION. PROVIDE TEMPORARY TRAFFIC CONTROL MEASURES TO MAINTAIN WORK SITE SAFETY AND TO PROTECT THE TRAVELING PUBLIC IN ACCORDANCE WITH APPLICABLE PROVISIONS OF THE CURRENT EDITION OF MISSOURI MUTCD, MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

LEGEND

- EXISTING PROPERTY LINE
- EXISTING SETBACK
- EXISTING EASEMENT
- 385 EXISTING INDEX (MAJOR) CONTOUR
- 384 EXISTING INTERMEDIATE (MINOR) CONTOUR
- EXISTING GUARD RAIL
- EXISTING FENCE
- EXISTING VERTICAL CONCRETE CURB
- EXISTING EDGE OF PAVEMENT
- EXISTING DITCH FLOW LINE
- EXISTING TREE LINE
- DIA. EXISTING TREE WITH TRUNK SIZE
- OH-E EXISTING OVERHEAD ELECTRIC
- UG-E EXISTING UNDERGROUND ELECTRIC
- FO EXISTING FIBER OPTIC LINE
- W EXISTING WATER LINE
- SAN EXISTING SANITARY SEWER LINE
- EXISTING STORM DRAIN
- EXISTING TRAFFIC POLE WITH ARM
- EXISTING LIGHT POLE WITH ARM
- EXISTING UTILITY POLE AND GUY WIRE
- EXISTING ELECTRIC PULL BOX
- EXISTING FIBER OPTIC PULL BOX
- FMK EXISTING FIBER MARKER
- EXISTING WATER MANHOLE
- HYD EXISTING FIRE HYDRANT
- WV EXISTING WATER VALVE
- EXISTING WATER METER
- EXISTING SANITARY MANHOLE
- EXISTING CURB INLET
- EXISTING FLARED END SECTION (F.E.S.)
- EXISTING GRATED CATCH BASIN
- EXISTING STORMWATER MANHOLE
- PROPOSED CONCRETE CURB AND GUTTER
- PROPOSED CONCRETE PAVEMENT
- PROPOSED HEAVY DUTY PAVEMENT
- PROPOSED LIGHT DUTY PAVEMENT
- PROPOSED CONCRETE SIDEWALK
- PROPOSED PAINTED 2' O.C. DIAGONAL STRIPING
- PROPOSED PAINTED PARKING DIVIDER
- PROPOSED CART CORRAL
- PROPOSED STORM PIPE
- UD PROPOSED UNDERDRAIN
- SAN PROPOSED PRIVATE SANITARY SEWER
- W PROPOSED PRIVATE WATER LINE (SIZE DENOTED)
- UG-E PROPOSED UNDERGROUND ELECTRIC
- DATA PROPOSED DATA LINE
- PROPOSED 2 GRATE INLET W/ SIDE INTAKE
- CO PROPOSED CLEAN OUT
- PROPOSED PRIVATE SANITARY MANHOLE
- CO PROPOSED PRIVATE SANITARY CLEANOUT
- PROPOSED WATER VALVE
- PROPOSED FIRE HYDRANT
- PROPOSED BUILDING MOUNTED LIGHT AND LIGHT POLE [REFER TO LIGHTING PLAN BY OTHERS]
- PROPOSED BOLLARD

FUEL FACILITY SHEET INDEX

NO.	TITLE
C700	FUEL FACILITY SITE PLAN
C701	FUEL FACILITY GRADING PLAN
C702	FUEL FACILITY DETAILS SECTIONS & NOTES



KEY NOTES

1. 92.5'x92.0' PUMP ISLAND CANOPY WITH 12 MPD'S (PER CANOPY PLANS).
2. 112' WIDE REINFORCED CONCRETE DRIVE, INCLUDING 3' CONCRETE PAVED CHANNEL SLAB. (SEE ARCHITECTURAL DRAWINGS FOR DETAILS).
3. (3) 40,000 GALLON UNDERGROUND GASOLINE STORAGE TANKS PER TANK PLANS.
   a. (1) 1,500 GALLON UNDERGROUND FUEL ADDITIVE STORAGE TANK PER TANK PLANS.
4. 7" REINFORCED CONCRETE DRIVE SLAB ABOVE UNDERGROUND GASOLINE STORAGE TANK. SEE DETAIL SHEET C702. REFER TO SOILS REPORT FOR TANK HOLE EXCAVATION NOTES/REQUIREMENTS AND MFGS INSTALLATION GUIDELINES.
5. CONCRETE GUTTER SWALE (SEE ARCHITECTURAL PLANS FOR DETAIL).
6. NEW STORAGE TANK VENT STACK WITH VTS GREEN MACHINE AND BOLLARDS PER TANK DRAWINGS.
7. SEE SHEET C701 GRADING PLAN FOR SLAB GRADES AND UTILITY INFORMATION.
8. EMERGENCY SHUTOFF (ESO) SWITCH AND BOLLARDS (SEE ARCHITECTURAL PLANS FOR DETAIL). CONCRETE TO MATCH FUEL SLAB SECTION.
9. LANDSCAPED AREA. SEE LANDSCAPE PLANS BY OTHERS.
10. CONTRACTOR TO INSTALL WALL MOUNTED ELECTRIC METER PER ELECTRIC UTILITY COMPANY REQUIREMENTS.
11. EMERGENCY SHUTOFF (ESO) SWITCH, MOUNTED ON CONTROLLER ENCLOSURE (SEE ARCHITECTURAL PLANS).
12. PAVEMENT MARKINGS (SEE ARCHITECTURAL PLANS).
13. CAST-IN-PLACE CONCRETE CURB, SEE DETAIL 06/C702. (UNDER FUEL FACILITY CONTRACT.
14. CONCRETE CURB AND GUTTER, SEE DETAIL 05/C702. (UNDER WAREHOUSE CONTRACT)
15. 4 COMMUNICATION CONDUITS (1-2" TELEPHONE, 1-1" FIBER OPTICS, 1-2" SPARE, AND 1-1" ESO (ALARM) CONDUIT) TO BUILDING. SEE ARCHITECTURAL PLANS FOR DETAIL. (UNDER WAREHOUSE CONTRACT)
16. LIGHT POLE, SEE LIGHTING PLAN BY OTHERS.
17. PROVIDE DEPRESSED CURB AT RAMP TO ENCLOSURE SIDEWALK. SEE GRADING PLAN DETAIL ON SHEET C701.
18. NEW TRANSFORMER AND UNDERGROUND ELECTRIC BY ELECTRIC UTILITY PROVIDER. CONNECTED TO EXISTING ELECTRIC STUB. CONTRACTOR SHALL INSTALL 2-5" SCHEDULE 80 PVC UNDERGROUND CONDUITS FOR UTILITY PROVIDER. (UNDER WAREHOUSE CONTRACT)
19. STORM SEWER CLEANOUT.
20. STOP AND DO NOT ENTER SIGNAGE.
21. 6" PVC SANITARY SEWER LATERAL CONNECTION TO FUEL FACILITY AT 1.04% MINIMUM AND 10% MAXIMUM SLOPE.
22. SANITARY SEWER LATERAL CLEANOUT.
23. SANITARY LATERAL WYE CONNECTION TO NEW SANITARY SEWER.
24. 1" DOMESTIC WATER SERVICE WITH METER & BACKFLOW PREVENTER INSIDE THE KIOSK. COORDINATE WITH PLUMBING PLANS BY OTHERS.
25. STORM AND SANITARY SEWER IMPROVEMENTS. (UNDER WAREHOUSE CONTRACT)
26. FUTURE CANOPY AND PUMP EXPANSIONS.
27. WARMING HUT.
28. 6" HDPE STORM SEWER.
29. 6" GATE VALVE IN C.I. VALVE BOX
30. PAINTED TRAFFIC CONTROL STRIPPING. SEE ARCHITECTURAL PLANS FOR DETAILS.
31. HEAVY-DUTY CONCRETE FUEL SLAB AND HEAVY-DUTY CONCRETE FUEL TRUCK OFFLOAD AREA. SEE DETAIL 7/C702.
32. SURFACE MOUNTED BOLLARD. SEE 13B-AG-6 ON ARCHITECTURAL PLANS.
33. 8'-8"x27'-4" CONTROLLER ENCLOSURE AND CONCRETE PAD PER ARCHITECTURAL PLANS. SEE LANDSCAPE PLANS/DETAILS FOR PLANTING AT ENCLOSURE. FFE=902.76.

NOTES:

1. CONTRACTOR SHALL REFER TO OTHER PLANS WITHIN THIS CONSTRUCTION SET FOR OTHER PERTINENT INFORMATION. IT IS NOT THE ENGINEER'S INTENT THAT ANY SINGLE PLAN SHEET IN THIS SET OF DOCUMENTS FULLY DEPICT ALL WORK ASSOCIATED WITH THIS PROJECT.

SCALE IN FEET 0 20 40

KARL A. SCHOENIKE, PE (MO PE# 2003015039)

STATE OF MISSOURI KARL A. SCHOENIKE NUMBER PE-2003015039 03/13/2026 PROFESSIONAL ENGINEER

OWNER:
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730 LAKE DRIVE
ISSAQUAH, WASHINGTON 98027
(425) 313-8100

ENGINEER:
CIVIL & ENVIRONMENTAL CONSULTANTS, INC.
3000 LITTLE HILLS EXPWY, SUITE 102
CONTACT: DAN R. KOZIATEK, P.E.
(314) 656-4566
(314) 656-4588 (direct)
dkoziatek@cecinc.com

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MG2
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SEATTLE, WASHINGTON 98101
CONTACT: WILLIE MAK
(206) 962-6500
(206) 962-6679 (direct)
willie.mak@MG2.com

811 or 1-800-344-7483
https://missouri-811.org

REFERENCE

EXISTING TOPOGRAPHIC DATA AND FEATURES ARE A COMBINATION OF THE FOLLOWING:
1. ALTA SURVEY DATED 08-20-2025 BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC.
2. DEVELOPMENT PLANS FOR OLDHAM VILLAGE (BY OTHER)
3. SITE DEVELOPMENT PLANS DATED 12-22-2025 BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC.

NOTE TO CONTRACTOR: PRIOR TO ANY EXCAVATION FOR UNDERGROUND UTILITIES, CONTRACTOR SHALL EXPOSE AND VERIFY LOCATIONS (HORIZONTAL AND VERTICAL) OF ALL EXISTING UTILITIES INCLUDING BUT NOT LIMITED TO GAS, WATER, BROADBAND, PHONE, SANITARY AND STORM SEWERS. ANY CONFLICT SHALL BE REPORTED IMMEDIATELY TO THE ENGINEER AND APPROPRIATE AUTHORITIES

REVISION RECORD

NO.	DATE	DESCRIPTION
1	01/30/2026	BID SET ADDENDUM 2
2	02/13/2026	FUEL BID SET
3	02/23/2026	REVISED PER REVIEW AND COMMENTS
4	03/13/2026	Revised per Approved Final Development Plans

CIVIL ENGINEERING, SURVEYING AND LANDSCAPE ARCHITECTURE IN THE STATE OF NORTH CAROLINA WILL BE PROVIDED BY CEC SURVEYING AND LANDSCAPE ARCHITECTS OF NC, PLLC. CIVIL ENGINEERING IN THE STATE OF KANSAS WILL BE PROVIDED BY CEC ENGINEERS & CONSULTANTS, LLC. LANDSCAPE ARCHITECTURE SERVICES IN THE STATE OF OHIO WILL BE PROVIDED BY CEC KAUFLIN, LPA. MEP/FP SERVICES BY CEC MEP/FP, LLC.

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Suite 305
St. Charles, MO 63303
Ph: 314.656.4566
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Civil & Environmental Consultants, Inc.

COSTCO WHOLESALE
LEE'S SUMMIT, MISSOURI

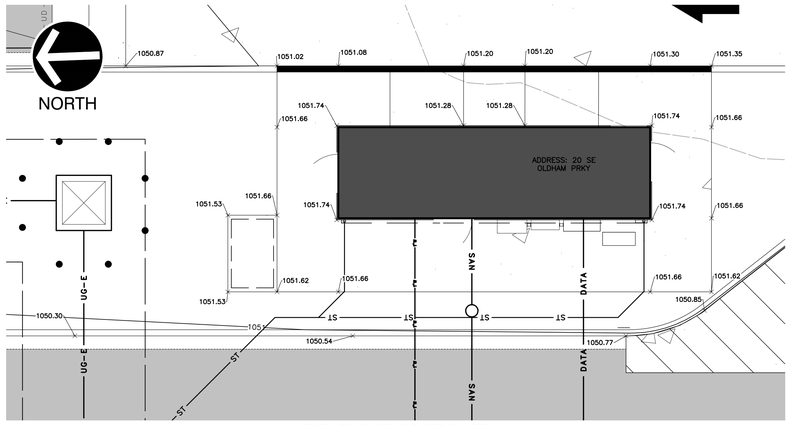
COSTCO LEES SUMMIT
CONSTRUCTION DOCUMENTS
FUEL FACILITY SITE PLAN
REVIEW SET - NOT FOR CONSTRUCTION

DATE:	DECEMBER 22, 2025
DRAWN BY:	MK
CHECKED BY:	KAS
DWG SCALE:	1" = 20'
PROJECT NO:	353-308.0002
APPROVED BY:	*DRK

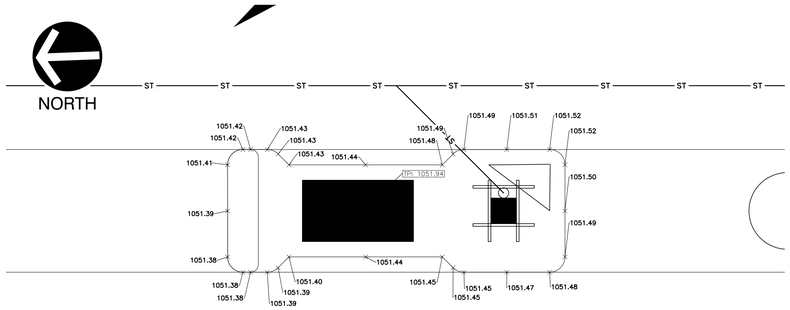
DRAWING NO.: **C700**

SHEET 20 OF 31

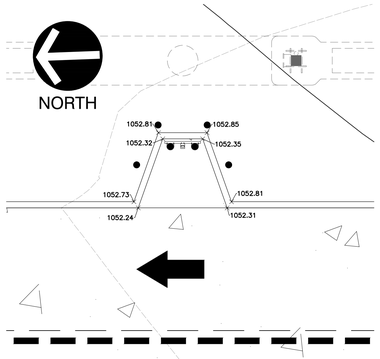
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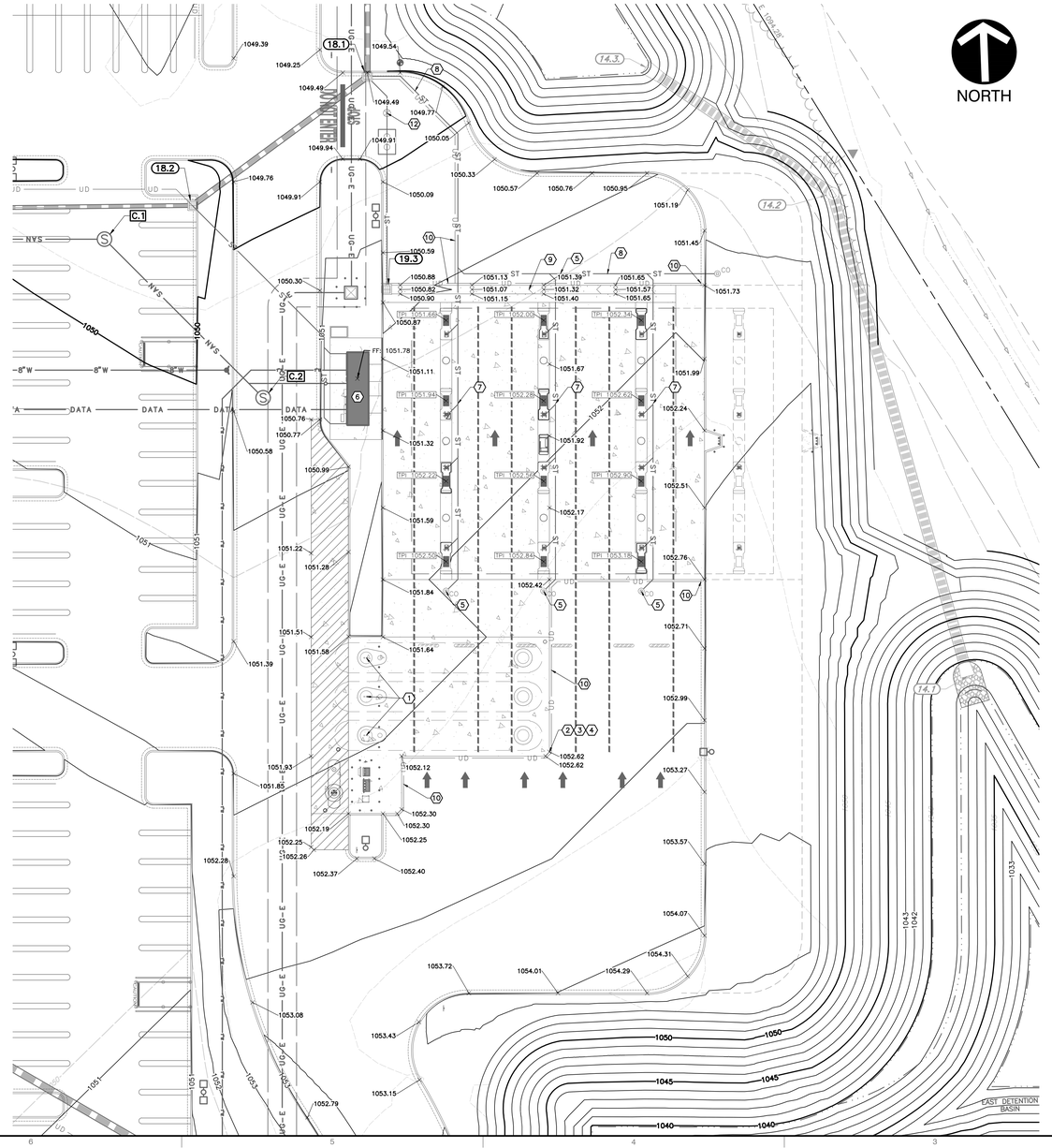
FUEL FACILITY CONTROLLER ENCLOSURE ENLARGEMENT
SCALE: 1"=5'



TYPICAL PUMP ISLAND GRADING ENLARGEMENT
SCALE: 1"=2'



EMERGENCY SHUT-OFF SWITCH ENLARGEMENT
SCALE: 1"=5'



LEGEND

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- PROPOSED FIRE HYDRANT
- PROPOSED BUILDING MOUNTED LIGHT AND LIGHT POLE [REFER TO LIGHTING PLAN BY OTHERS]
- PROPOSED BOLLARD

GRADING NOTES

1. ALL PROPOSED GRADES SHOWN ARE FINAL GRADES. TOP OF GROUND LEVEL, OR TOP OF PAVEMENT, OR GRATE ELEVATION AT THE DRAWDOWN POINT, UNLESS INDICATED OTHERWISE. FOR PROPOSED TOP OF CURB ELEVATION, SEE SITE PLAN FOR CURB TYPE AND DETAIL FOR DIMENSIONS.
2. WHERE NOT EXPLICITLY DEFINED BY A SPOT ELEVATION, PAVEMENT AND CURB ELEVATIONS SHALL PRODUCE THE PROPOSED SLOPES AS SHOWN AND PROVIDE POSITIVE DRAINAGE TO INLETS.
3. REFER TO AND FOLLOW THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT PREPARED FOR THIS PROJECT BY TERRACON INC.
4. ALL SITE WORK SHOWN HEREON SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT'S SPECIFICATIONS AND ALL APPLICABLE FEDERAL, STATE AND LOCAL BUILDING CODES AND ORDINANCES.
5. CONTRACTOR SHALL STRICTLY ADHERE TO THE EROSION CONTROL PLAN PREPARED FOR THIS PROJECT. ALL AREAS NOT PAVED SHALL BE STABILIZED IN ACCORDANCE WITH THE EROSION CONTROL PLAN, AND THE LANDSCAPE PLAN, UNLESS NOTED OTHERWISE.
6. EARTHWORK SHALL INCLUDE, STRIPPING AND STOCKPILING AND/OR DISPOSING OF TOPSOIL AND/OR VEGETATED SURFACE SOILS, GRADING, EXCAVATION, FILLING, UNDERCUT AND REPLACEMENT, IF REQUIRED, AND COMPACTION.
7. CONTRACTOR TO REFILL UNDERCUT AREAS WITH SUITABLE MATERIAL AND COMPACTION AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER.
8. PLACE TOPSOIL OVER THE SUBGRADE OF UNPAVED, DISTURBED AREAS TO DEPTH(S) INDICATED ON THE LANDSCAPE DRAWINGS.
9. FINAL PAVEMENT SLOPES SHALL BE MINIMUM 1% AND MAXIMUM 2% UNLESS INDICATED OTHERWISE. FINAL PAVEMENT SLOPES ACROSS HANDICAP PARKING STALLS AND ADJOINING ACCESS AISLES SHALL BE MAXIMUM 2%.
10. ALL UNPAVED SURFACE SLOPES SHALL BE 3:1 (HORIZONTAL:VERTICAL) MAXIMUM UNLESS INDICATED OTHERWISE.
11. ALL EXCESS SOIL MATERIALS SHALL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE INDICATED AND SHALL BE REMOVED BY THE CONTRACTOR AND DISPOSED OF OFFSITE AT NO ADDITIONAL COST TO THE OWNER IN ACCORDANCE WITH ALL LOCAL AND STATE CODES AND PERMIT REQUIREMENTS.
12. SOFT OR OTHERWISE UNSUITABLE SOILS IN THE BOTTOMS AND BANKS OF ANY SEDIMENT BASINS OR TRAPS SHALL BE REMOVED, SPREAD OUT AND DRIED SUFFICIENTLY TO BE USED AS FILL, SUBJECT TO THE GEOTECHNICAL ENGINEER'S APPROVAL.
13. ALL SIDEWALKS SHALL BE CONSTRUCTED TO MEET ADA STANDARDS.

KEY NOTES

1. ELEVATE CONCRETE SLAB AT MANWAY OPENINGS (SEE TANK PLANS FOR DETAIL)
2. COMPACT BOTTOM SURFACE OF TANK HOLE TO 90% MAX. DENSITY. SEE SOILS REPORT FOR ALL REQUIREMENTS/RECOMMENDATIONS ON TANK HOLE EXCAVATION, SLOPING, DEWATERING, ETC.
3. TANK EXCAVATION AND MFRS INSTALLATION WITH SIDE SLOPES PER SOILS ENGINEER RECOMMENDATIONS.
4. CONTRACTOR TO INSTALL SHORING OF TANK HOLE EXCAVATION PER SOILS REPORT. EXACT LIMITS/EXTENT OF SHORING TO BE DETERMINED BY SOILS ENGINEER GUIDELINES.
5. CLEAN OUT. SEE DETAIL 08/C702.
6. 7'-5"x25'-5" CONTROLLER ENCLOSURE AND CONCRETE PAD PER ARCHITECTURAL PLANS. SEE LANDSCAPE PLAN/DETAILS FOR PLANTING AT ENCLOSURE.
7. 6" PVC @ 1.00% MIN. FOR ROOF DRAIN CONNECTION. CONNECT TO NEW 8" STORM LINE.
8. 8" PVC @ 1.00% CONNECT TO NEW STORM CURB INLET NO. 108.
9. CONCRETE GUTTER SWALE (SEE ARCHITECTURAL PLANS FOR DETAIL).
10. 4" PERFORATED UNDERDRAIN PER DETAIL 07/C702.
11. 4" PAVEMENT UNDERDRAIN PER DETAIL 05/C702.
12. 6" GATE VALVE IN C.I. VLAVE BOX FLUSH WITH GRADE. VALVE SHALL BE HAND OPERABLE. LID OF BOX SHALL BE BRIGHTLY COLORED. DESIGNED FOR H20 LOADING.

REFERENCE

EXISTING TOPOGRAPHIC DATA AND FEATURES ARE A COMBINATION OF THE FOLLOWING:
1. ALTA SURVEY DATED 08-20-2025 BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC.
2. DEVELOPMENT PLANS FOR OLDHAM VILLAGE (BY OTHER)
3. SITE DEVELOPMENT PLANS DATED 12-22-2025 BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC.

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MISSOURI 811
811 or 1-800-344-7483
https://missouri-811.org

NOTES:
1. CONTRACTOR SHALL REFER TO OTHER PLANS WITHIN THIS CONSTRUCTION SET FOR OTHER PERTINENT INFORMATION. IT IS NOT THE ENGINEER'S INTENT THAT ANY SINGLE PLAN SHEET IN THIS SET OF DOCUMENTS FULLY DEPICT ALL WORK ASSOCIATED WITH THIS PROJECT.

SCALE IN FEET
0 20 40
KARL A. SCHOENIKE, PE (MO PE# 2003015039)

STATE OF MISSOURI — KARL A. SCHOENIKE — NUMBER PE-2003015039 — 03/13/2026 — PROFESSIONAL ENGINEER

REVISION RECORD

NO	DATE	DESCRIPTION
	01/30/2026	BID SET ADDENDUM 2
	02/03/2026	FUEL BID SET
	02/23/2026	REVISED PER REVIEW AND COMMENTS
	03/13/2026	Revised per Approved Final Development Plans

ENGINEERING, SURVEYING AND LANDSCAPE ARCHITECTURE IN THE STATE OF NORTH CAROLINA WILL BE PROVIDED BY CEC SURVEYING AND LANDSCAPE ARCHITECTS OF NC, PLLC. ENGINEERING AND LANDSCAPE ARCHITECTURE IN THE STATE OF MISSOURI WILL BE PROVIDED BY CEC ENGINEERS & CONSULTANTS, LLC. LANDSCAPE ARCHITECTURE SERVICES IN THE STATE OF OHIO WILL BE PROVIDED BY CEC EARLES JAE, MD+A PROJECT, LLC.

1450 Beale Street
Suite 305
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www.cecinc.com

Civil & Environmental Consultants, Inc.

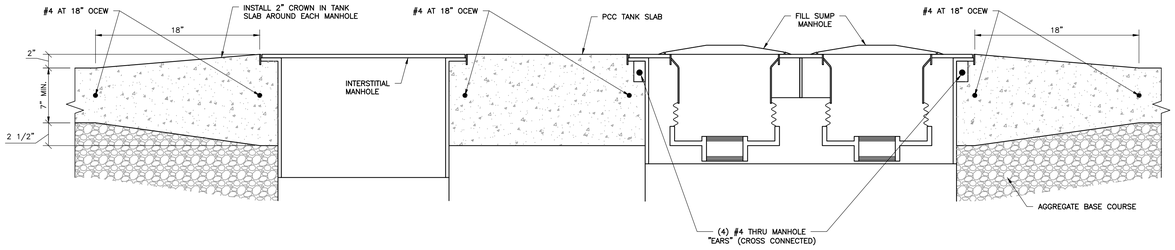
COSTCO WHOLESALE
LEE'S SUMMIT, MISSOURI

COSTCO LEES SUMMIT
CONSTRUCTION DOCUMENTS
FUEL FACILITY GRADING PLAN
REVIEW SET - NOT FOR CONSTRUCTION

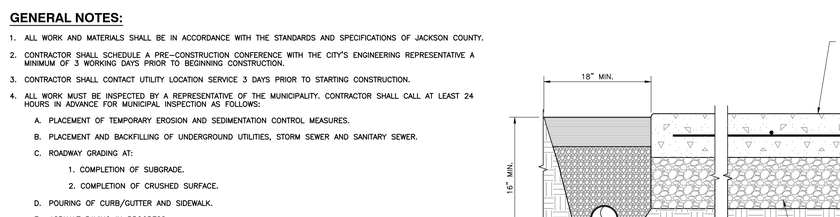
DATE: DECEMBER 22, 2025 | DRAWN BY: MK | CHECKED BY: KAS
DWG SCALE: AS NOTED | PROJECT NO: 383-308.0002
APPROVED BY: *DRK

DRAWING NO.: **C701**
SHEET 21 OF 31

A:\383-308\383-308_GN01\Dwg\civil\C701.dwg[21 C701] LS[2/24/2026 - matthewb] - LM: 3/12/2026 2:12 PM



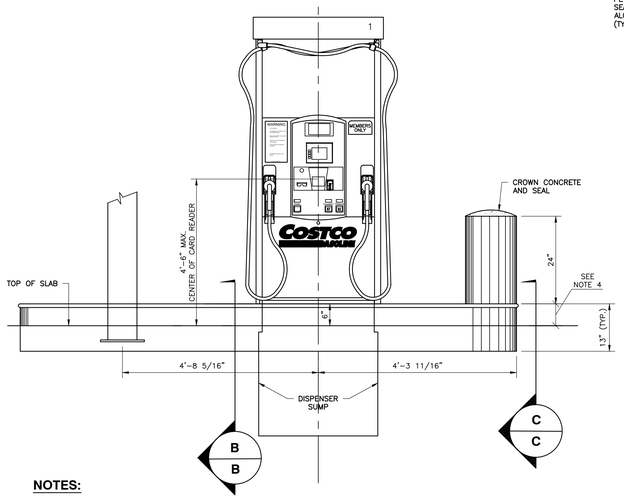
DETAIL #01
SECTION OF FILL COLLAR DETAIL
N.T.S.



DETAIL #02
SECTION OF TURBINE COLLAR DETAIL
N.T.S.

SLAB CONCRETE SPECIFICATIONS:

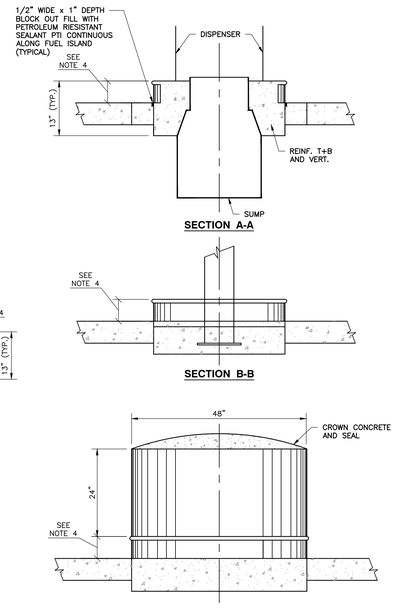
1. UNLESS OTHERWISE NOTED ON THESE DRAWINGS:
   a. CONCRETE – REGULAR WEIGHT HARD ROCK CONCRETE (150 LBS/CU FT)
   b. CEMENT – TYPE II, SULFATE RESISTANT
   c. AGGREGATES – ASTM C33, (MAXIMUM SIZE ¾ INCHES)
   d. 28 DAY CONCRETE STRENGTH (fc): 4,000 PSI – SLAB (DESIGN BASED ON 2,000 PSI NO SPECIAL INSPECTION REQUIRED)
   e. SLUMP – 3"+1" = 4" MAXIMUM AT POINT OF PLACEMENT
   f. SHRINKAGE – 0.05% MAXIMUM
   g. ENTRAINED AIR RANGE 4%–6%.
2. CONCRETE SHALL BE NORMAL WEIGHT WITH A MIX OF 1: 2 ½ : 3 ½, WITH A MAXIMUM 7 ¼ GALLONS OF WATER PER SACK.
3. REINFORCING STEEL FOR TANK SLABS BE #4 BARS @ 18" O.C. EACH WAY. SUMP CAGES SHALL BE #3 REBAR TOP AND BOTTOM.
4. MAINTAIN CONCRETE IN A MOIST CONDITION FOR AT LEAST 7 DAYS AFTER PLACEMENT.
5. PLACE CONCRETE DIRECTLY FROM TRUCK INTO FORMS. DO NOT PUMP CONCRETE UNLESS SPECIAL INSPECTION, BY CONCRETE TESTING SERVICE, IS PROVIDED.
6. SUBMIT MIX DESIGNS, WITH STRENGTH AND SHRINKAGE TEST RESULTS, TO OWNER'S ENGINEER AT LEAST 7 DAYS BEFORE PLACING CONCRETE.
7. CONSOLIDATE CONCRETE IN PLACE USING A MECHANICAL VIBRATOR.
8. BEFORE PLACING CONCRETE, SECURE REINFORCING STEEL, ANCHOR BOLTS, DOWELS, AND OTHER INSERTS IN POSITION TO PREVENT MOVEMENT.
9. MATERIALS AND WORKMANSHIP SHALL CONFORM TO A.C.I. – 318 (SPECIFICATIONS OF THE DESIGN AND PLACEMENT OF CONCRETE)



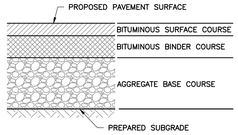
NOTES:

1. THE HIGHEST OPERABLE PART OF EACH PRIMARY OR ALTERNATE CARD READER SHALL BE NO MORE THAN 54" (1372mm) MEASURED FROM THE BASE OF THE FUEL DISPENSER. WHERE CARD READERS ARE LOCATED ON FREE STANDING PEDESTALS, THE CARD READING CONTROL FUNCTION SHALL BE NO MORE THAN 54" (1372mm) ABOVE AN ACCESSIBLE LEVEL AREA WHICH IS SERVED BY AN ACCESSIBLE PATH OF TRAVEL.
2. AN ACCESSIBLE PATH OF TRAVEL SHALL BE PROVIDED TO THE BASE OF ALL FUEL DISPENSERS REQUIRED TO MEET THE PROVISIONS OF THIS SECTION. SUCH FUEL DISPENSERS SHALL BE MOUNTED ON THE ACCESSIBLE LEVEL AREA.
3. AN ACCESSIBLE LEVEL AREA SHALL BE PROVIDED WHICH IS MINIMALLY 30" BY 48" (762mm BY 1219mm) LEVEL AND CLEAR. THIS AREA SHALL BE PROVIDED WITHIN 10"(254mm) IN PLAN VIEW OF THE FACE OF THE CONTROLS AND SHALL BE UNOBSTRUCTED BY ANY FEATURES, EXCEPT PUMP NOZZLES AND HOSES, WITH THE LONG SIDE OF THIS SPACE PARALLEL TO AND CENTERED [PLUS OR MINUS 9"(229mm)] WITH THE FACE OF THE CARD–READER CONTROLS.
4. 6" FROM TOP OF ISLAND TO TOP OF DRIVE SLAB AT CENTERLINE OF DISPENSER WIDTH. TOP OF ISLANDS TO BE LEVEL.

DETAIL #03
TYPICAL ISLAND ELEVATION
N.T.S.



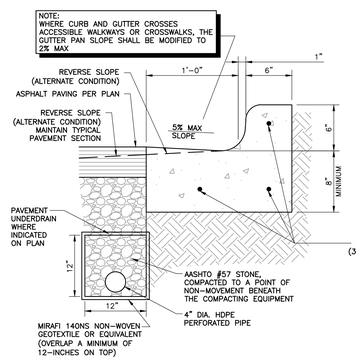
ITEM	MATERIAL REFERENCE	HEAVY DUTY PAVEMENT SECTION DEPTH	LIGHT DUTY PAVEMENT SECTION DEPTH
BITUMINOUS SURFACE COURSE	SUPERPAVE SURFACE – PG64–22	2"	2"
BITUMINOUS BINDER COURSE	SUPERPAVE SURFACE – PG64–22	4"	2"
AGGREGATE BASE COURSE	MODOT TYPE 5	8"	8"



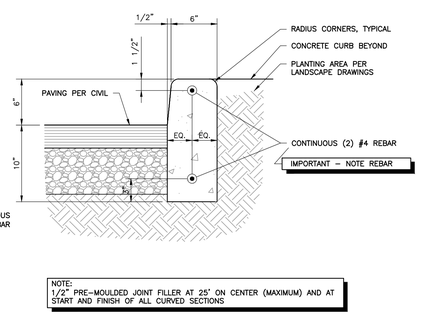
NOTES:

1. THE PAVEMENT SUBGRADE SHALL BE PREPARED AS FOLLOWS:
   A. APPROVED FILL FOR THE SUBGRADE SHALL BE PLACED WHERE REQUIRED IN MAXIMUM 10" THICK, LOOSE LIFTS AND COMPACTED TO AT LEAST 95% OF ITS MODIFIED PROCTOR MAXIMUM DRY DENSITY PER ASTM D–1557.
   B. THE SUBGRADE SHALL BE PROOFROLLED WITH A MINIMUM 10 TON ROLLER. ANY SOFT AND YIELDING AREAS SHALL BE OVEREXCAVATED TO A FIRM AND COMPETENT MATERIAL AND BACKFILLED AS DESCRIBED ABOVE.
   C. AFTER PROOFROLLING, THE SUBGRADE SHALL BE GRADED AND SHAPED AS REQUIRED TO CONSTRUCT THE PAVEMENT AREAS IN CONFORMANCE WITH THE GRADES, LINES AND THICKNESSES SHOWN ON THE DRAWINGS. THE SUBGRADE SHALL PROVIDE A FIRM AND UNYIELDING FOUNDATION WITH NO SUDDEN, SHARP OR ABRUPT CHANGES OR BREAKS IN GRADES. NO STANDING WATER OR EXCESS MOISTURE SHALL BE PRESENT. ALL SOFT AND YIELDING AREAS SHALL BE OVEREXCAVATED TO A FIRM AND COMPETENT MATERIAL, AND BACKFILLED AS DESCRIBED IN SPECIFICATIONS.
2. PLACE & COMPACT AGGREGATE BASE COURSE IN ACCORDANCE WITH TECHNICAL SPECIFICATIONS.
3. THE BITUMINOUS COURSES SHALL BE COMPACTED TO MINIMUM DENSITY ACCORDING TO ASTM D 2041, AS INDICATED IN TECHNICAL SPECIFICATIONS. STATE DEPARTMENT OF TRANSPORTATION PAVEMENT DESIGN MIXES ARE TO BE MODIFIED TO PROVIDE THE BITUMINOUS COURSE CHARACTERISTICS INDICATED IN THE TECHNICAL SPECIFICATIONS.
4. THE FINAL ASPHALT PAVEMENT SECTION DESIGN IS CONTINGENT UPON THE RECOMMENDATION OF THE FINAL GEOTECHNICAL REPORT PREPARED BY TERRACON INC.
5. STABILIZE GROUND WHEREVER THE EXPOSED SUBGRADE SHOWS SIGNS OF MINOR RUTTING OR DEFLECTION IN ACCORDANCE WITH RECOMMENDATION OF THE GEOTECHNICAL ENGINEER.
6. TYPICAL BUTT JOINT AT PAVEMENT RESTORATION LOCATIONS, WHERE APPLICABLE: APPLY BITUMINOUS TACK COAT TO EX. VERTICAL PAVEMENT SAWCUT FACES PRIOR TO ASPHALT RESTORATION PAVING. APPLY 4" W. BITUMINOUS SEALANT AT SURFACE JOINT.
7. BITUMINOUS BINDER COURSE SHALL MEET THE SAME TECHNICAL SPECIFICATION AS THE BITUMINOUS SURFACE COURSE.

DETAIL #04
ASPHALT PAVEMENT SECTION
N.T.S.



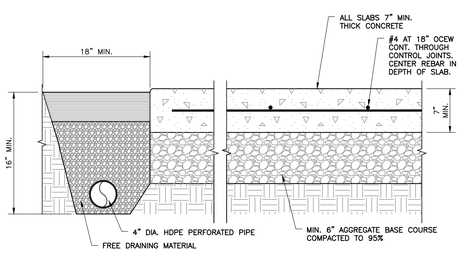
DETAIL #05
CONCRETE CURB AND GUTTER
N.T.S.



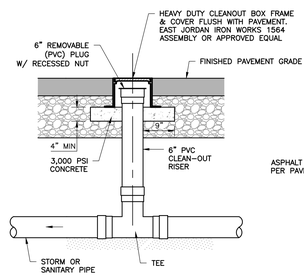
DETAIL #06
CAST-IN-PLACE CONCRETE CURB
N.T.S.

GENERAL NOTES:

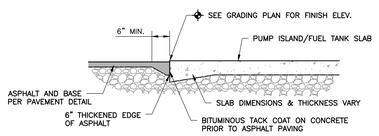
1. ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF JACKSON COUNTY.
2. CONTRACTOR SHALL SCHEDULE A PRE–CONSTRUCTION CONFERENCE WITH THE CITY'S ENGINEERING REPRESENTATIVE A MINIMUM OF 3 WORKING DAYS PRIOR TO BEGINNING CONSTRUCTION.
3. CONTRACTOR SHALL CONTACT UTILITY LOCATION SERVICE 3 DAYS PRIOR TO STARTING CONSTRUCTION.
4. ALL WORK MUST BE INSPECTED BY A REPRESENTATIVE OF THE MUNICIPALITY. CONTRACTOR SHALL CALL AT LEAST 24 HOURS IN ADVANCE FOR MUNICIPAL INSPECTION AS FOLLOWS:
   A. PLACEMENT OF TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES.
   B. PLACEMENT AND BACKFILLING OF UNDERGROUND UTILITIES, STORM SEWER AND SANITARY SEWER.
   C. ROADWAY GRADING AT:
      1. COMPLETION OF SUBGRADE.
      2. COMPLETION OF CRUSHED SURFACE.
   D. POURING OF CURB/GUTTER AND SIDEWALK.
   E. ASPHALT PAVING IN PROGRESS.
   F. OVERALL INSPECTION FOR FINISHED WORK
5. ALL TESTING REQUIRED FOR THE IMPROVEMENTS SHALL BE THE RESPONSIBILITY OF THE OWNER AND SHALL BE IN CONFORMANCE WITH THE MUNICIPAL DEVELOPMENT STANDARDS.
6. CONTRACTOR SHALL RESTORE ALL PRIVATE AND PUBLIC PROPERTY DISRUPTED BY THE PROJECT IMMEDIATELY AFTER CONSTRUCTION.
7. THE CONTRACTOR SHALL INFORM THE ENGINEER AND OBTAIN APPROVAL FROM AUTHORITIES HAVING JURISDICTION OF ANY PROPOSED CHANGES IN PLAN PRIOR TO CONSTRUCTION OF THAT CHANGE. THE CONTRACTOR SHALL KEEP RECORD OF DEVIATIONS AND FORWARD TO THE ENGINEER.
8. TRAFFIC CONTROL TO BE MAINTAINED IN ACCORDANCE WITH JACKSON COUNTY AND LOCAL JURISDICTION REQUIREMENTS.
9. A COPY OF THESE APPROVED PLANS MUST BE ON THE JOB SITE WHENEVER CONSTRUCTION IS IN PROGRESS.



DETAIL #07
CONCRETE SLAB SECTION AT FUEL FACILITY
N.T.S.



DETAIL #08
TYPICAL CLEANOUT DETAIL
N.T.S.



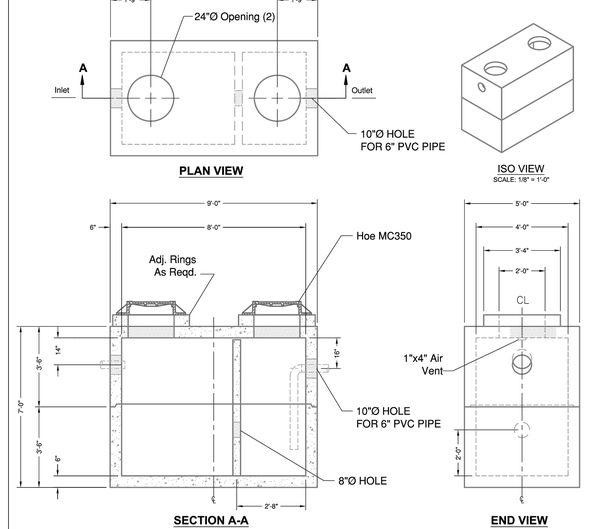
DETAIL #09
TYPICAL JOINT SECTION AT CONCRETE AND ASPHALT PAVEMENT
N.T.S.

Oldcastle Precast

WATER

5'-0" x 9'-0" x 7'-0" O.D.
1000 GAL OIL/WATER SEPARATOR
MODEL #: 1000 OWS-KY

WEIGHTS	
SECTION	WEIGHT
TOTAL	19,200 LBS



SPECIFICATIONS:
1. Concrete minimum compression strength: F'c=5,000 PSI @ 28 days.
2. Reinforcing steel: ASTM A615, Fy=60,000 PSI

ITEMS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

Oldcastle Precast
Tri-State Region

For more information about our products please visit us on the web at:
oldcastleprecast.com/plant/lexington/
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Lexington, KY
859-259-1484

DETAIL #10
OIL & WATER SEPARATOR
N.T.S.

NOTES:

1. CONTRACTOR SHALL REFER TO OTHER PLANS WITHIN THIS CONSTRUCTION SET FOR OTHER PERTINENT INFORMATION. IT IS NOT THE ENGINEER'S INTENT THAT ANY SINGLE PLAN SHEET IN THIS SET OF DOCUMENTS FULLY DEPICT ALL WORK ASSOCIATED WITH THIS PROJECT.

REFERENCE

EXISTING TOPOGRAPHIC DATA AND FEATURES ARE A COMBINATION OF THE FOLLOWING:
1. ALTA SURVEY DATED 08–20–2025 BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC.
2. DEVELOPMENT PLANS FOR OLDHAM VILLAGE (BY OTHER)
3. SITE DEVELOPMENT PLANS DATED 12–22–2025 BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC.

NOTE TO CONTRACTOR: PRIOR TO ANY EXCAVATION FOR UNDERGROUND UTILITIES, CONTRACTOR SHALL EXPOSE AND VERIFY LOCATIONS (HORIZONTAL AND VERTICAL) OF ALL EXISTING UTILITIES INCLUDING BUT NOT LIMITED TO GAS, WATER, BROADBAND, PHONE, SANITARY AND STORM SEWERS. ANY CONFLICT SHALL BE REPORTED IMMEDIATELY TO THE ENGINEER AND APPROPRIATE AUTHORITIES

MISSOURI 811
811 or 1-800-344-7483
https://missouri-811.org

KARL A. SCHOENIKE
NUMBER PE-2003015039
03/13/2026
STATE OF MISSOURI
PROFESSIONAL ENGINEER
KARL A. SCHOENIKE, PE
(MO PE# 2003015039)

REVISION RECORD

NO	DATE	DESCRIPTION
	01/30/2026	BID SET ADDENDUM 2
	02/03/2026	FUEL BID SET
	02/23/2026	REVISED PER REVIEW AND COMMENTS
	03/13/2026	Revised per Approved Final Development Plans

ENGINEERING, SURVEYING AND LANDSCAPE ARCHITECTURE IN THE STATE OF NORTH CAROLINA WILL BE PROVIDED BY CEC SURVEYING AND LANDSCAPE ARCHITECTS OF NC, PLLC. ENGINEERING AND LANDSCAPE ARCHITECTURE IN THE STATE OF MISSOURI WILL BE PROVIDED BY CEC ENGINEERS & CONSULTANTS, LLC. LANDSCAPE ARCHITECTURE SERVICES IN THE STATE OF OHIO WILL BE PROVIDED BY CEC EXPLORE ARCHITECTS, LLC.

1450 Beale Street
Suite 305
St. Charles, MO 63303
Ph: 314.656.4566
www.cecinc.com

Civil & Environmental Consultants, Inc.

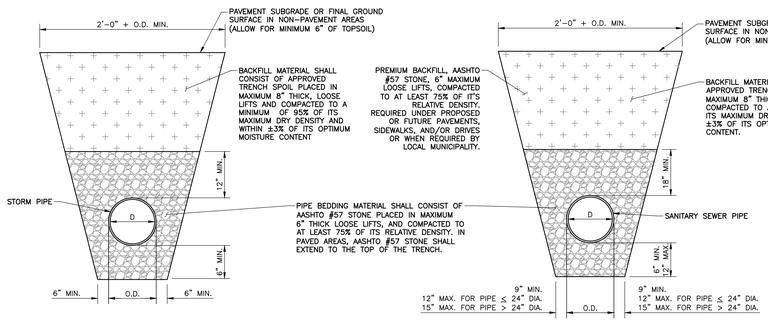
COSTCO WHOLESALE
LEE'S SUMMIT, MISSOURI

COSTCO LEES SUMMIT
CONSTRUCTION DOCUMENTS
FUEL FACILITY DETAILS
SECTIONS & NOTES
REVISION & ADDITION

DATE:	DECEMBER 22, 2025
DWG SCALE:	N.T.S.
PROJECT NO:	353-308.0002
DRAWN BY:	KAS
CHECKED BY:	MK
APPROVED BY:	*DRK

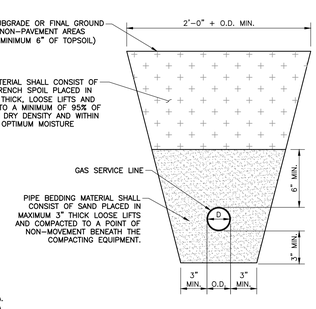
DRAWING NO.:
C702
SHEET 22 OF 31

J:\353-0001\353-308\cadd\dwg\civil-cad\353308-0002-C700.dwg[22 C702 LEGEND] 3/12/2026 2:12 PM - matthewb - LPL 3/12/2026 2:12 PM

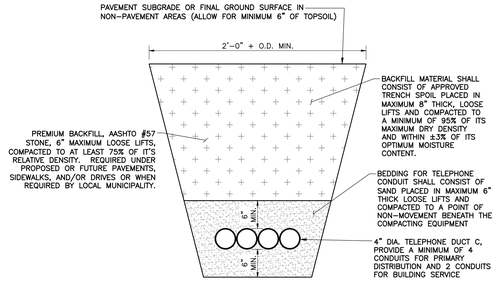


STORM PIPE

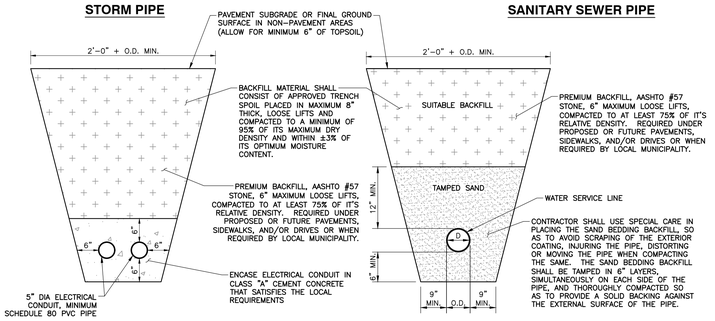
SANITARY SEWER PIPE



GAS SERVICE LINE



TELEPHONE SERVICE LINE



ELECTRIC SERVICE LINE

WATER SERVICE LINE

ABBREVIATIONS
D = INSIDE DIAMETER
O.D. = OUTSIDE DIAMETER
MIN. = MINIMUM

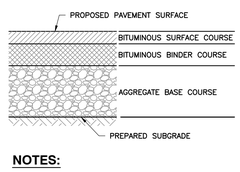
COVER REQUIREMENTS

UTILITY	MINIMUM COVER REQUIRED*
STORM SEWER	1.5 FT.
SANITARY SEWER	4.0 FT. for 8-Inch; 3.0 FT. for 6-Inch
WATER PIPING	3.5 FT.
GAS LINE	3.0 FT.
TELEPHONE LINE	3.0 FT.
ELECTRIC LINE	3.0 FT.

*DEPTH AS MEASURED FROM TOP OF PIPE TO FINAL GROUND SURFACE, UNLESS INDICATED OTHERWISE

NOTES:

1. ALL MATERIALS EXCAVATED FROM THE UTILITY TRENCH SHALL BE STOCKPILED A MINIMUM SUFFICIENT DISTANCE FROM ALL TRENCHES TO PREVENT SLIDES OR CAVE-INS.
2. ALL BACKFILL MATERIALS SHALL BE APPROVED BY THE OWNER OR HIS REPRESENTATIVE BEFORE BEING PLACED.
3. THE AASHTO #57 STONE AND SAND SHALL SATISFY THE REQUIREMENTS OF ST. LOUIS COUNTY CONSTRUCTION AND MATERIALS SPECIFICATIONS.
4. THE MAXIMUM DRY DENSITY AND OPTIMUM MOISTURE CONTENT FOR THE BACKFILL MATERIALS SHALL BE DETERMINED BY ASTM D1557.
5. THE CONTRACTOR SHALL CONSTRUCT THE UTILITY TRENCHES AND PROVIDE ADEQUATE SHORING (WHERE NECESSARY) IN CONFORMANCE WITH THE LATEST REQUIREMENTS FOR CONSTRUCTION STANDARD FOR EXCAVATIONS (29 CFR PART 1926.650-.652 SUBPART P) PROMULGATED BY OSHA.
6. THE TELEPHONE AND ELECTRIC CONDUIT WILL NOT SHARE THE SAME UTILITY TRENCH WHERE THEY ARE SEPARATED AT THE MANHOLE/VAULT LOCATIONS.
7. REFER TO UTILITY AGENCY STANDARD DETAILS AND NOTES FOR ADDITIONAL REQUIREMENTS. IN THE EVENT TRENCH REQUIREMENTS OF THE UTILITY AGENCY DIFFER FROM THOSE SHOWN ABOVE, USE THE MORE RESTRICTIVE OF THE CONFLICTING CRITERIA.
8. MINIMUM COMPACTION FOR ALL SAND BEDDING BACKFILL, BACKFILL AND PREMIUM BACKFILL SHALL BE 95% STANDARD PROCTOR.

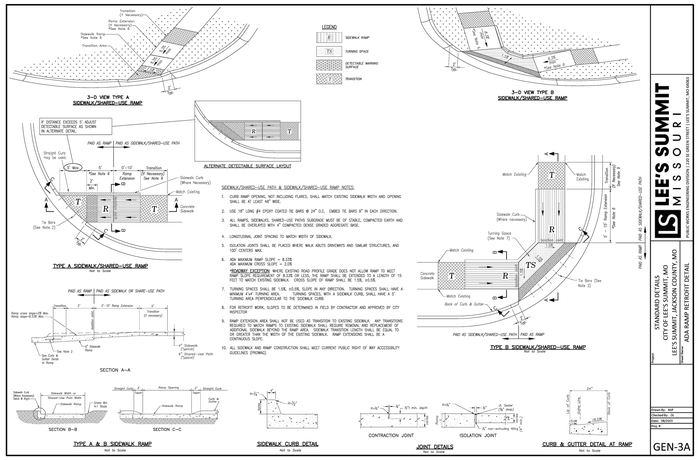


ITEM	MATERIAL REFERENCE	HEAVY DUTY PAVEMENT SECTION DEPTH	LIGHT DUTY PAVEMENT SECTION DEPTH
BITUMINOUS SURFACE COURSE	SUPERPAVE SURFACE – PG64-22	2"	2"
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AGGREGATE BASE COURSE	MODOT TYPE 5	8"	8"

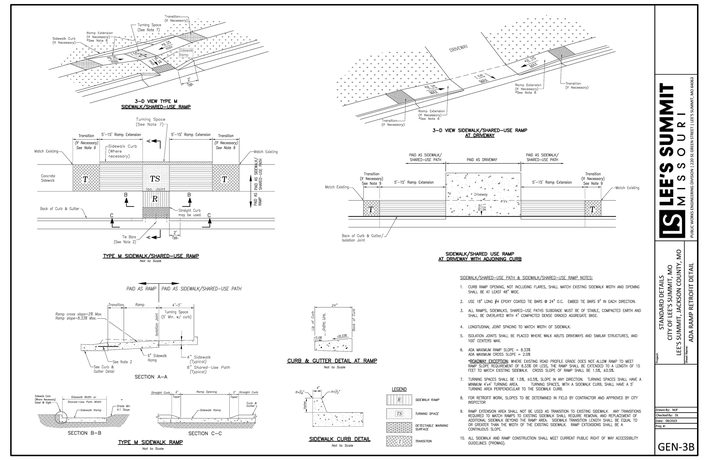
NOTES:

1. THE PAVEMENT SUBGRADE SHALL BE PREPARED AS FOLLOWS:
   - A. APPROVED FILL FOR THE SUBGRADE SHALL BE PLACED WHERE REQUIRED IN MAXIMUM 10" THICK, LOOSE LIFTS AND COMPACTED TO AT LEAST 95% OF ITS MODIFIED PROCTOR MAXIMUM DRY DENSITY PER ASTM D-1557.
   - B. THE SUBGRADE SHALL BE PROOFROLLED WITH A MINIMUM 10 TON ROLLER. ANY SOFT AND YIELDING AREAS SHALL BE OVEREXCAVATED TO A FIRM AND COMPETENT MATERIAL AND BACKFILLED AS DESCRIBED ABOVE.
   - C. AFTER PROOFROLLING, THE SUBGRADE SHALL BE GRADED AND SHAPED AS REQUIRED TO CONSTRUCT THE PAVEMENT AREAS IN CONFORMANCE WITH THE GRADES, LINES AND THICKNESSES SHOWN ON THE DRAWINGS. THE SUBGRADE SHALL PROVIDE A FIRM AND UNYIELDING FOUNDATION WITH NO SUDDEN, SHARP OR ABRUPT CHANGES OR BREAKS IN GRADES. NO STANDING WATER OR EXCESS MOISTURE SHALL BE PRESENT. ALL SOFT AND YIELDING AREAS SHALL BE OVEREXCAVATED TO A FIRM AND COMPETENT MATERIAL, AND BACKFILLED AS DESCRIBED IN SPECIFICATIONS.
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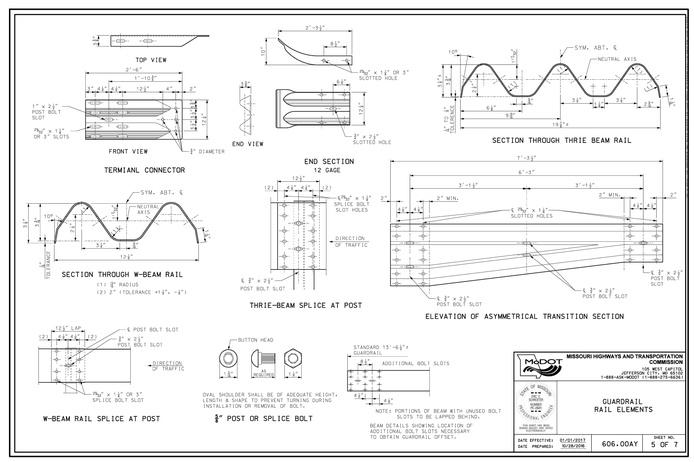
DETAIL #02
ASPHALT PAVEMENT SECTION
N.T.S.



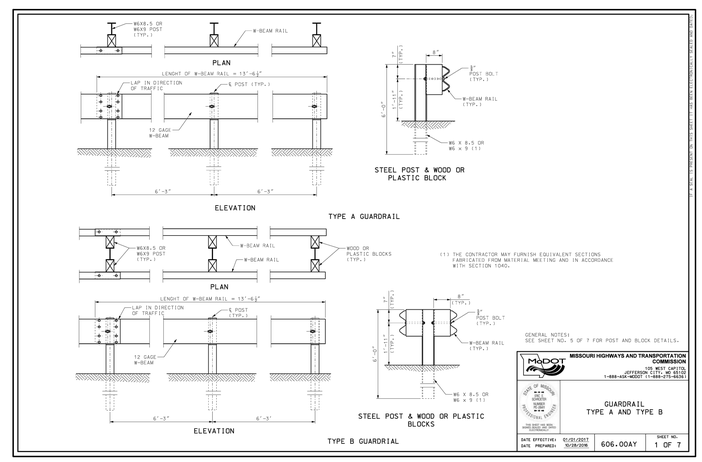
DETAIL #03
TYPE B CURB RAMP
N.T.S.



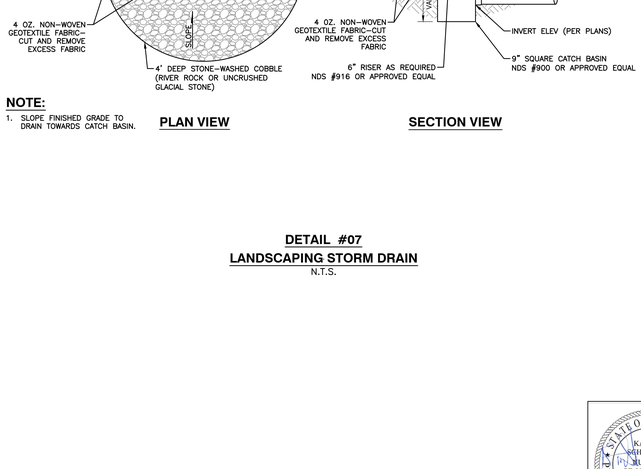
DETAIL #04
TYPE M CURB RAMP
N.T.S.



DETAIL #05
GUARDRAIL ELEMENTS
N.T.S.



DETAIL #06
GUARDRAIL TYPE A & B
N.T.S.



NOTE:

1. SLOPE FINISHED GRADE TO DRAIN TOWARDS CATCH BASIN.

DETAIL #07
LANDSCAPING STORM DRAIN
N.T.S.

REVISION RECORD

NO.	DATE	DESCRIPTION
	01/30/2026	BID SET ADDENDUM 2
	02/03/2026	FUEL BID SET
	02/03/2026	REVISED PER REVIEW AND COMMENTS
	03/13/2026	Revised per Approved Final Development Plans

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COSTCO WHOLESALE
LEE'S SUMMIT, MISSOURI

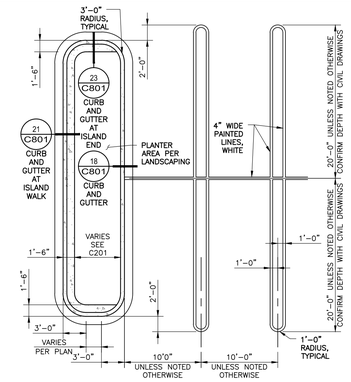
COSTCO LEES SUMMIT
CONSTRUCTION DOCUMENTS
SITE DETAILS
REVIEW SET - NOT FOR CONSTRUCTION
DECEMBER 22, 2025
DRAWN BY: MK
CHECKED BY: KAS
DWG SCALE: N.T.S.
PROJECT NO: 353-308.0002
DATE:
APPROVED BY: *DRK



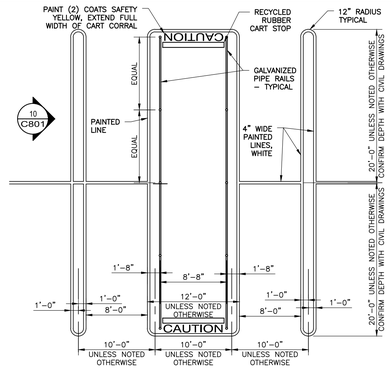
KARL A. SCHOENIKE, PE
(MO PE# 2003015039)

DRAWING NO.:
C800
SHEET 23 OF 31

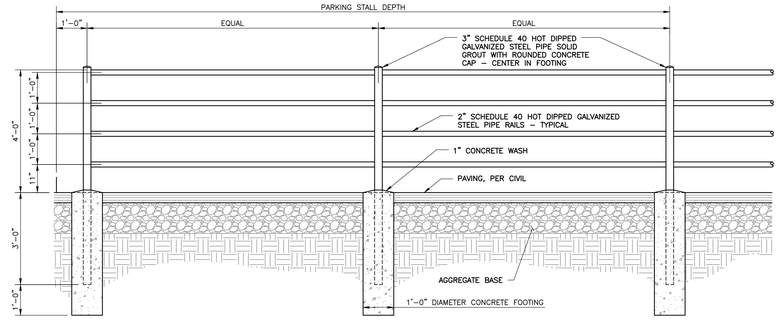
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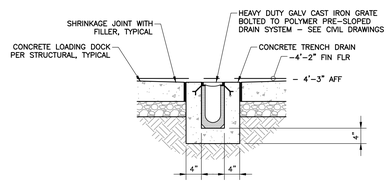
DETAIL #08
END ISLAND CURBS
N.T.S.



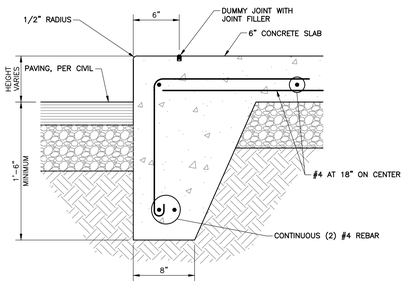
DETAIL #09
CART CORRAL AND TYPICAL PARKING STALL
N.T.S.



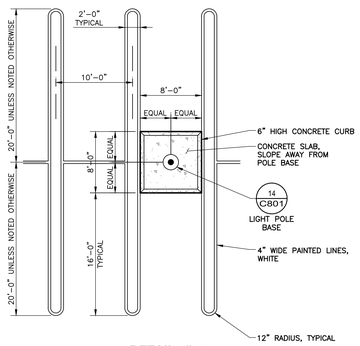
DETAIL #10
CART STORAGE
N.T.S.



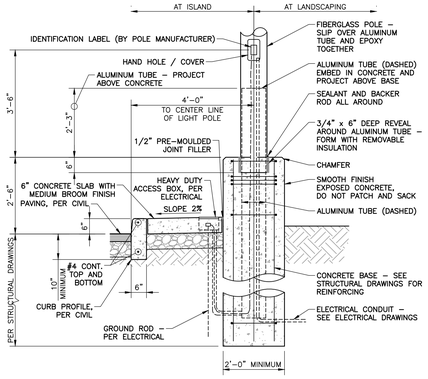
DETAIL #11
LOADING DOCK TRENCH DRAIN
N.T.S.



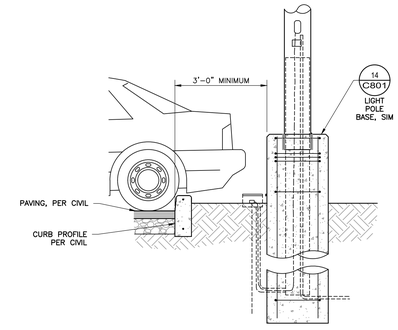
DETAIL #12
INTEGRATED CURB & SIDEWALK
N.T.S.



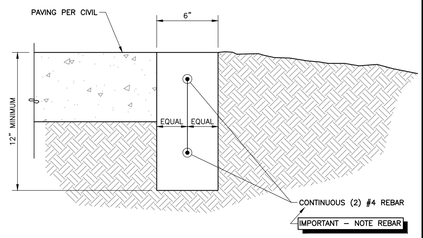
DETAIL #13
ISLAND AT LIGHT POLE BASE
N.T.S.



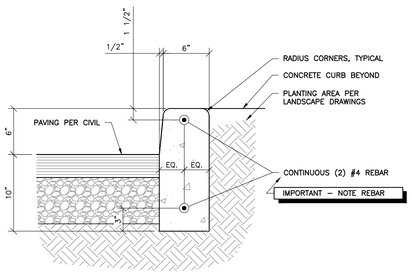
DETAIL #14
LIGHT POLE BASE AT CONCRETE ISLAND-LANDSCAPING
N.T.S.



DETAIL #15
LIGHT POLE LOCATION WHERE PARKING OCCURS
N.T.S.

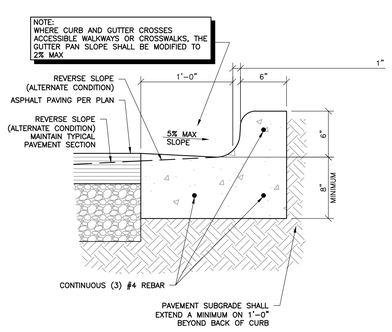


DETAIL #16
FLUSH TERMINATION CURB
N.T.S.

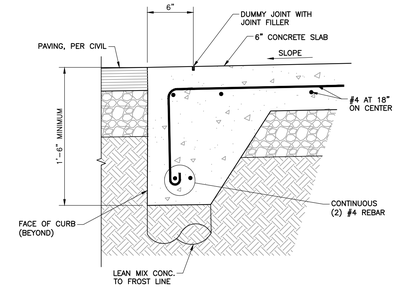


NOTE:
1/2" PRE-MOULDED JOINT FILLER AT 25' ON CENTER (MAXIMUM) AND AT START AND FINISH OF ALL CURVED SECTIONS

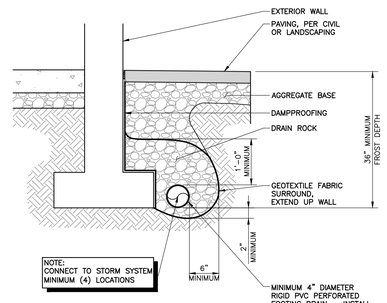
DETAIL #17
CAST-IN-PLACE CONCRETE CURB
N.T.S.



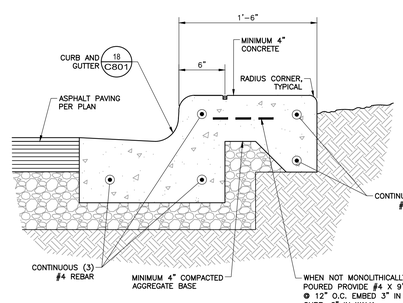
DETAIL #18
CONCRETE CURB AND GUTTER
N.T.S.



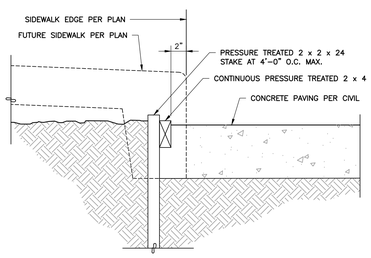
DETAIL #19
FLUSH CURB AT PAVEMENT
N.T.S.



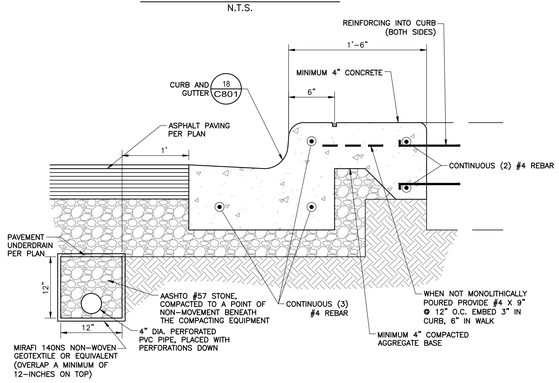
DETAIL #20
FOOTING DRAIN
N.T.S.



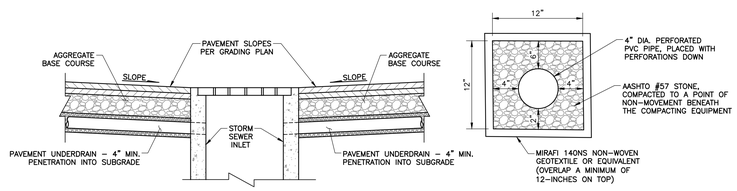
DETAIL #21
CURB AND GUTTER AT ISLAND WALK
N.T.S.



DETAIL #22
TEMPORARY EDGE OF PAVEMENT
N.T.S.



DETAIL #23
CURB AND GUTTER AT ISLAND END
N.T.S.



SECTION

PAVEMENT UNDERDRAIN DETAIL

NOTES:
1. PAVEMENT UNDERDRAINS SHALL EXTEND OUT A MINIMUM OF 10 FEET FROM ALL SIDES OF INLETS BELOW PAVEMENT.
2. THE AASHTO #57 STONE SHALL SATISFY THE REQUIREMENTS OF THE STATE DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS.

DETAIL #24
DRAINAGE REQUIREMENTS AT INLETS
N.T.S.

KARL A. SCHOENIKE, PE
(MO PE# 2003015039)

STATE OF MISSOURI
KARL A. SCHOENIKE
PE NUMBER
PE-2003015039
03/13/2026
PROFESSIONAL ENGINEER

REVISION RECORD

NO	DATE	DESCRIPTION
	01/30/2026	BID SET ADDENDUM 2
	02/03/2026	FUEL BID SET
	02/23/2026	REVISED PER REVIEW AND COMMENTS
	03/13/2026	Revised per Approved Final Development Plans

CIVIL, SURVEYING, AND LANDSCAPE ARCHITECTURE IN THE STATE OF NORTH CAROLINA WILL BE PROVIDED BY CEC SURVEYING AND LANDSCAPE ARCHITECTS OF MO, PLLC. CIVIL ENGINEERING IN THE STATE OF NORTH CAROLINA WILL BE PROVIDED BY CEC ENGINEERS & CONSULTANTS, LLC. LANDSCAPE ARCHITECTURE SERVICES IN THE STATE OF OHIO WILL BE PROVIDED BY CEC EXPLORE ARC WITH PETTY & LEE.

1450 Beale Street
Suite 305
St. Charles, MO 63303
Ph: 314.656.4566
www.cecinc.com
Civil & Environmental Consultants, Inc.

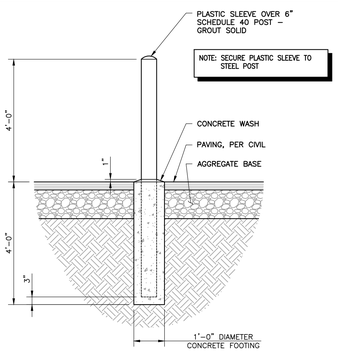
COSTCO WHOLESALE
LEE'S SUMMIT, MISSOURI

COSTCO LEES SUMMIT
CONSTRUCTION DOCUMENTS
SITE DETAILS
REVIEW SET - NOT FOR CONSTRUCTION
DECEMBER 22, 2025

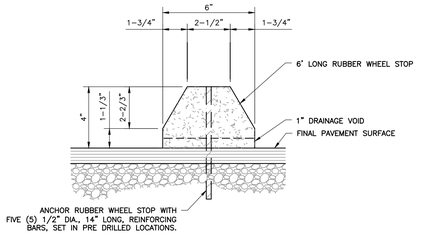
DRAWN BY:	MK
CHECKED BY:	KAS
DATE:	
DWG SCALE:	N.T.S.
PROJECT NO:	353-308.0002
APPROVED BY:	*DRK

DRAWING NO.: **C801**
SHEET 24 OF 31

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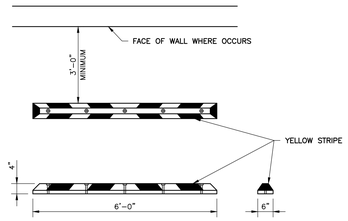


DETAIL #25
TYPICAL EXTERIOR BOLLARD
N.T.S.



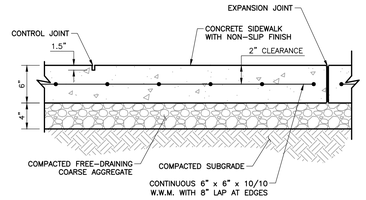
NOTES:
1. OTHER EQUIVALENT RUBBER WHEEL STOP DESIGNS MAY BE USED IF APPROVED BY THE OWNER.

DETAIL #26
RUBBER WHEEL STOP
N.T.S.

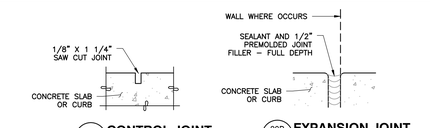


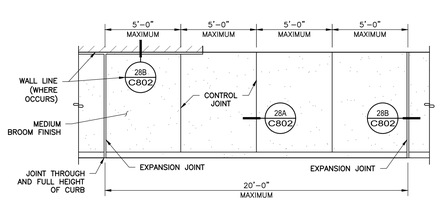
NOTE:
1. CENTER IN WIDTH OF PARK STALL
2. SEE SPECS FOR MATERIAL

DETAIL #27
TYPICAL CONCRETE SIDEWALK
N.T.S.



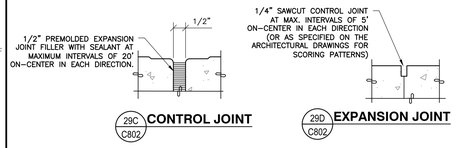
NOTES:
1. PROVIDE 1/2" EXPANSION JOINT FILLER WITH SEALANT WHERE THE CONCRETE SIDEWALK ABUTS THE BUILDING.
2. REFER TO THE ARCHITECTURAL SPECIFICATIONS FOR SPECIAL FINISHES, AGGREGATE TREATMENT, COLORS, PATTERN FINISHES, ETC.

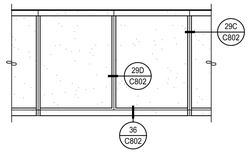




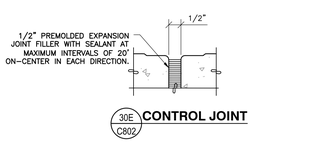
PLAN

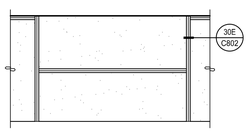
DETAIL #28
ON-SITE WALKS (EXCEPT AT CANOPY ENTRY)
N.T.S.



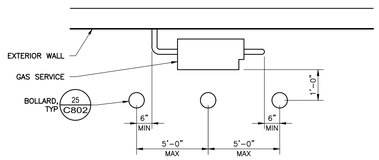


DETAIL #29
SIDEWALK JOINT
N.T.S.



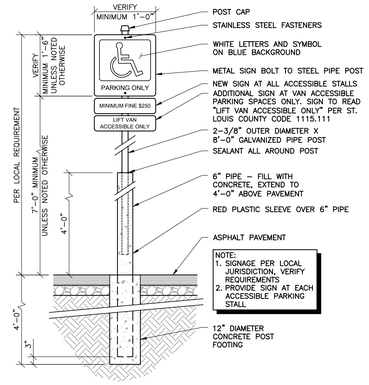


DETAIL #30
SIDEWALK JOINT AT EGRESS DOORS
N.T.S.



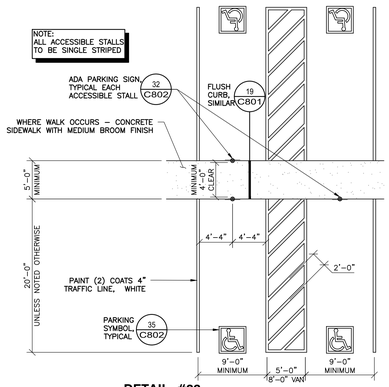
NOTE:
CONFIRM BOLLARD REQUIREMENTS WITH UTILITY COMPANY.

DETAIL #31
BOLLARDS AT GAS SERVICE
N.T.S.

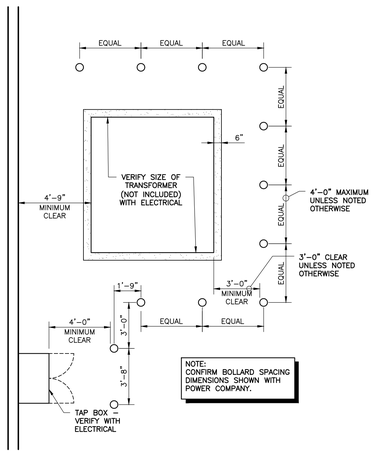


NOTE:
1. SIGNAGE PER LOCAL JURISDICTION, VERIFY REQUIREMENTS
2. PROVIDE SIGN AT EACH ACCESSIBLE PARKING STALL

DETAIL #32
ADA PARKING SIGN
N.T.S.

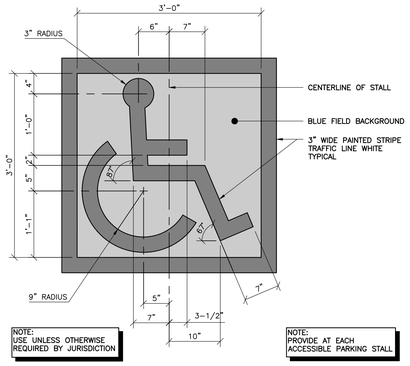


DETAIL #33
ACCESSIBLE PARKING STALLS
N.T.S.



NOTE:
CONFIRM BOLLARD SPACING DIMENSIONS SHOWN WITH POWER COMPANY.

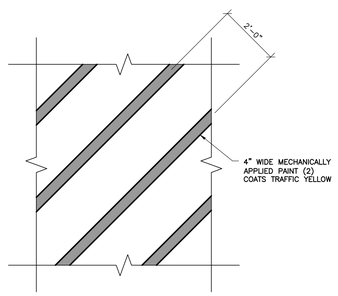
DETAIL #34
BOLLARDS AT TRANSFORMER
N.T.S.



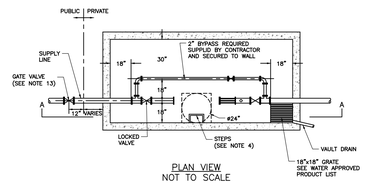
NOTE:
USE UNLESS OTHERWISE REQUIRED BY JURISDICTION

NOTE:
PROVIDE AT EACH ACCESSIBLE PARKING STALL

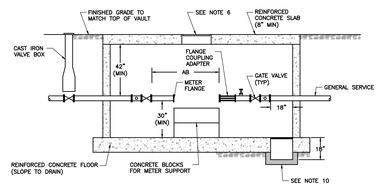
DETAIL #35
ACCESSIBLE PARKING SYMBOL
N.T.S.



DETAIL #36
PAINTED STRIPE
N.T.S.



PLAN VIEW
NOT TO SCALE



SECTION A–A
NOT TO SCALE

TYPICAL DIMENSIONS

GENERAL SERVICE			NOTES
SIZE	BY PASS SIZE	AB	
4"	2"	54–3/4"	INCLUDE STRAINER

GENERAL NOTES:

1. METER VAULT WILL BE POURED CONCRETE OF PRECAST REINFORCED CONCRETE. A CONCRETE FLOOR SHALL BE REQUIRED. THE FLOOR SHALL BE SLOPED TO A GRATE–COVERED DRAIN SUMP.
2. METER VAULT ROOF TO BE REINFORCED CONCRETE.
3. METER VAULT TO BE LOCATED, WHEN POSSIBLE, OUTSIDE OF TRAFFIC AREA AND WHERE SURFACE WATER WILL NOT DRAIN INTO IT.
4. STEPS TO BE IN ACCORDANCE WITH WATER UTILITIES LIST OF ACCEPTABLE MANUFACTURERS AND MODELS AND SHALL BE 16" CENTERS.
5. VALVES MUST HAVE FLANGED ENDS, BE IN ALIGNMENT, AND BE ADEQUATELY SECURED TO WITHSTAND THRUST WITH METER REMOVAL.
6. FOR MANHOLE COVERS, SELECT A MANHOLE CASTING FOUND ON THE WASTER UTILITIES LIST OF ACCEPTABLE MANUFACTURERS AND MODELS. THE CASTING SHALL HAVE A 1–3/4" ø HOLE DRILLED FOR TOUCH/READ DEVICE.
7. ALL PIPE SHALL BE DUCTILE IRON CLASS 50. ALL PIPE AND FITTINGS FROM THE CITY WATER MAIN THROUGH THE VAULT SHALL BE PROVIDED WITH RESTRAINED JOINT FITTINGS.
8. IF HIGHER CONTINUOUS RATE OF FLOW IS REQUIRED, A LARGER BY–PASS MAY BE PERMITTED, BUT NOT LARGER THAN PRIMARY DOMESTIC SERVICE.
9. ALL VALVES SHALL BE RISING STEM VALVES.
10. PROVIDE THE CONCRETE SUMP AS A MINIMUM. WHERE PRACTICAL, PROVIDE A 2" PIPE DRAIN WITH AN ABOVE GROUND DISCHARGE POINT. PROJECT OWNER MAY DESIRE A PERMANENTLY INSTALLED SUMP PUMP.
11. A MINIMUM OF 18" CLEARANCE SHALL BE PROVIDED AROUND ALL PIPING, VALVES APPURTENANCES, ECT.
12. METER SHALL BE OWNED AND MAINTAINED BY THE WATER UTILITIES DEPARTMENT.
13. IF PUBLIC WATER IS LOCATED ON THE OPPOSITE SIDE OF THE STREET, THEN THE PUBLIC WATER MAIN RESPONSIBILITY OF THE WATER UTILITIES DEPARTMENT ENDS AT THE GATE VALVE NEAREST THE VAULT.

DETAIL #37
4 IN WATER METER VAULT
N.T.S.

REVISION RECORD

NO.	DATE	DESCRIPTION
	01/30/2026	BID SET ADDENDUM 2
	02/03/2026	FUEL BID SET
	02/03/2026	REVISED PER REVIEW AND COMMENTS
	05/13/2026	Revised per Approved Final Development Plans

ENGINEERING, SURVEYING, AND LANDSCAPE ARCHITECTURE IN THE STATE OF NORTH CAROLINA WILL BE PROVIDED BY CEC SURVEYING AND LANDSCAPE ARCHITECTURE OF NC, PLLC. CEC ENGINEERING AND SURVEYING IN THE STATE OF MISSOURI WILL BE PROVIDED BY CEC ENGINEERS & CONSULTANTS, LLC. LANDSCAPE ARCHITECTURE SERVICES IN THE STATE OF MISSOURI WILL BE PROVIDED BY CEC LANDSCAPE ARCHITECTS, LLC.

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St. Charles, MO 63303
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Civil & Environmental Consultants, Inc.

COSTCO WHOLESALE
LEE'S SUMMIT, MISSOURI

COSTCO LEES SUMMIT
CONSTRUCTION DOCUMENTS
SITE DETAILS
REVIEW SET - NOT FOR CONSTRUCTION
DECEMBER 22, 2025

DRAWN BY:	MK
CHECKED BY:	KAS
DATE:	
DWG SCALE:	N.T.S.
PROJECT NO:	353-308.0002
APPROVED BY:	*DRK

STATE OF MISSOURI
KARL A. SCHOENIKE
PE-2003015039
03/13/2026
PROFESSIONAL ENGINEER

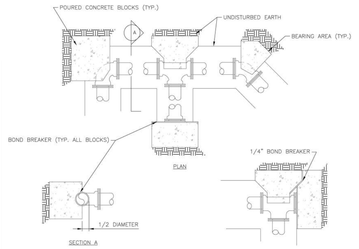
KARL A. SCHOENIKE, PE
(MO PE# 2003015039)

DRAWING NO.:
C802
SHEET 25 OF 31

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REQUIRED CONCRETE BEARING AREA (SQUARE FEET – SF)

NOM. DIA. (INCHES)	180 TEE, PLUG	90 BEND	45 BEND	22.5 BEND	11.25 BEND
6	4.7	6.7	4.0	4.0	4.0
8	8.4	11.8	6.4	4.0	4.0
10	13.1	18.5	10.0	5.1	4.0
12	18.8	26.7	14.4	7.4	4.0
14	25.7	36.3	19.6	10.0	5.0
16	33.5	47.4	25.6	13.1	6.6
18	42.4	REST. JT.	32.5	16.5	8.3
20	REST. JT.	REST. JT.	40.1	20.4	10.3
24	REST. JT.	REST. JT.	REST. JT.	29.4	14.8



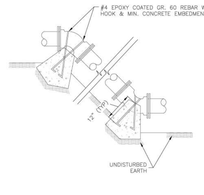
NOTES:
1. ALL BENDS WITHOUT RESTRAINED JOINTS SHALL HAVE CONCRETE THRUST BLOCKS INSTALLED FOR RESTRAINT.
2. MEGA LUGS MAY BE USED ONLY IN CONJUNCTION WITH CONCRETE THRUST BLOCKING.
3. BEARING AREA MUST BE AGAINST UNDISTURBED SOIL.
4. DO NOT COVER JOINTS OR BOLTS (WHERE APPLICABLE) WITH CONCRETE.

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: KJY
HORIZONTAL THRUST BLOCK | WAT-1

DETAIL #38
HORIZONTAL THRUST BLOCK
N.T.S.

REQUIRED CONCRETE VOLUME (CUBIC FEET – CF)

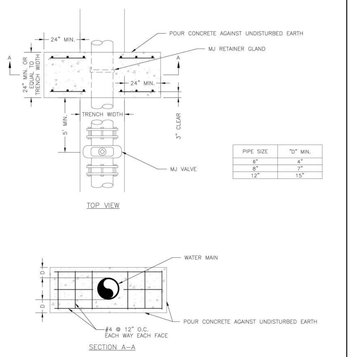
NOM. DIA. (INCHES)	180 TEE, PLUG	90 BEND	45 BEND	22.5 BEND	11.25 BEND
6	50.5	71.4	38.6	19.7	9.9
8	89.8	126.9	68.7	35.0	17.6
10	140.2	198.3	107.3	54.7	27.5
12	202.0	REST. JT.	154.6	78.8	39.6
14	REST. JT.	REST. JT.	210.4	107.3	53.9
16	REST. JT.	REST. JT.	REST. JT.	140.1	70.4
18	REST. JT.	REST. JT.	REST. JT.	177.3	89.1
20	REST. JT.	REST. JT.	REST. JT.	REST. JT.	110.0
24	REST. JT.	REST. JT.	REST. JT.	REST. JT.	158.4



NOTES:
1. ALL BENDS WITHOUT RESTRAINED JOINTS SHALL HAVE CONCRETE THRUST BLOCKS INSTALLED FOR RESTRAINT.
2. MEGA LUGS MAY BE USED ONLY IN CONJUNCTION WITH CONCRETE THRUST BLOCKING.
3. BEARING MUST BE AGAINST UNDISTURBED SOIL.
4. DO NOT COVER JOINTS OR BOLTS (WHERE APPLICABLE) WITH CONCRETE.

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: KJY
VERTICAL THRUST BLOCK | WAT-2

DETAIL #39
VERTICAL THRUST BLOCK
N.T.S.

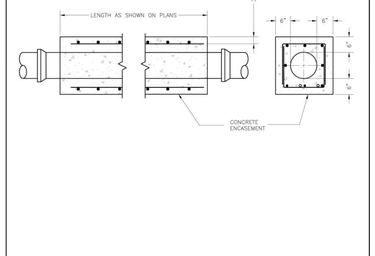


PIPE SIZE	"D" MIN.
6"	4"
8"	7"
12"	15"

NOTE:
THIS DETAIL NOT TO BE USED FOR PIPE GREATER THAN 12"

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: KJY
STRADDLE BLOCK | WAT-3

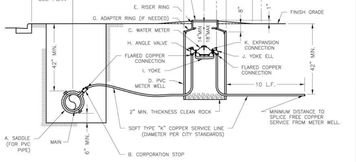
DETAIL #40
STRADDLE BLOCK
N.T.S.



NOTES:
1. INTERMEDIATE BELLS SHALL BE ENCASED.
2. REINFORCING STEEL SHALL BE #4 @ 12" O.C. EACH WAY WITH A MINIMUM REBAR LAP OF 12".
3. THIS DETAIL IS FOR PIPES 12" AND SMALLER.

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: KJY
WATER PIPE ENCASEMENT | WAT-4

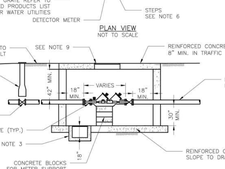
DETAIL #41
WATER PIPE ENCASEMENT
N.T.S.



NOTES:
1. REFER TO SPECIFICATION SECTION 3900 FOR ADDITIONAL INFORMATION.
2. LENGTH, DIAMETER, AND WALL THICKNESS TO BE SHOWN ON CONSTRUCTION PLANS.

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: KJY
WATER CASING PIPE DETAIL | WAT-5

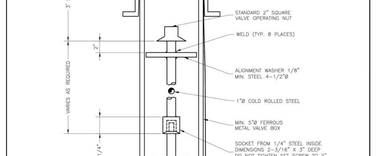
DETAIL #42
WATER CASING PIPE DETAIL
N.T.S.



NOTES:
1. FLOWABLE FILL SHALL MEET THE REQUIREMENTS OF THE CITY OF LEE'S SUMMIT DESIGN AND CONSTRUCTION MANUAL.
2. REGULAR BACKFILL ABOVE THE TRENCH CHECK SHALL BE FREE OF DEBRIS, ORGANIC MATTER, AND STONES > 6" IN ANY DIMENSION.
3. TOP OF FLOWABLE BACKFILL SHALL EXTEND 12" ABOVE THE TOP OF THE PIPE.
4. LENGTH OF TRENCH CHECK SHALL BE A MINIMUM OF 12'.

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: KJY
WATER TRENCH CHECK DETAIL | WAT-6

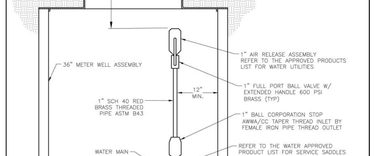
DETAIL #43
WATER TRENCH CHECK
N.T.S.



NOTES:
1. WHEN RETAINER GLANDS ARE USED IN LIEU OF ANCHOR 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
Date: 08/2023 | Drawn By: MJF | Checked By: KJY
HYDRANT - STRAIGHT SET | WAT-7

DETAIL #44
HYDRANT - STRAIGHT SET
N.T.S.



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
Date: 08/2023 | Drawn By: MJF | Checked By: KJY
HYDRANT WITH 90 DEGREE BEND | WAT-8

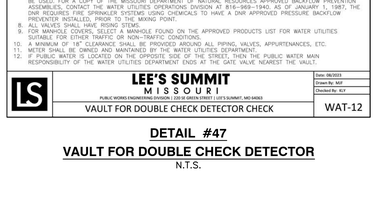
DETAIL #45
HYDRANT WITH 90 DEGREE BEND
N.T.S.



NOTES:
1. METER INSTALLATION SHALL NOT BE LOCATED IN AREAS SUBJECT TO VEHICULAR TRAFFIC OR IN CONCRETE PAVEMENT WITHOUT CITY APPROVAL.
2. IF METER IS TO BE LOCATED OTHER THAN IN FRONT OF PROPERTY LINE, CITY APPROVAL SHALL BE OBTAINED.
3. CITY TO FURNISH ITEMS A–K.
4. NO OTHER EQUIPMENT SHALL BE INSTALLED IN THIS PIT.
5. 42" MINIMUM (BURY DEPTH) FOR ALL SERVICES.
6. CONTRACTOR SHALL INSTALL 10' SERVICE LINE AT MAIN.
7. NO SPLICES ALLOWED BETWEEN METER AND MAIN.
8. SERVICE CONNECTION TAP AT APPROXIMATELY 45 DEGREES.
9. LID AND RISER RING SHALL BE SET SO THAT GROUND WATER WILL DRAIN AWAY FROM THE WELL.
10. CONTACT WATER UTILITIES, 816-969-1900, FOR REQUIREMENTS OF A METER LARGER THAN 2".

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: KJY
SERVICE CONNECTION WITH METER WELL | WAT-11

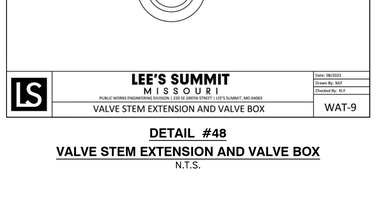
DETAIL #46
SERVICE CONNECTION WITH METER WELL
N.T.S.



GENERAL NOTES:
1. METER VAULT WALLS TO BE POURED OR PRECAST CONCRETE.
2. METER VAULT ROOF TO BE REINFORCED CONCRETE OPENING CENTERED OVER DETECTOR METER.
3. METER VAULT TO BE LOCATED, WHEN POSSIBLE, OUTSIDE TRAFFIC AREA WHERE SURFACE WATER WILL NOT DRAIN INTO IT. VAULT MUST BE KEPT FREE OF WATER. PROVIDE CONCRETE SUMP AS A MINIMUM. WHERE PRACTICAL, PROVIDE A 2" PIPE DRAIN WITH AN ABOVE-GROUND DISCHARGE POINT. PROJECT OWNER MAY DESIRE A PERMANENTLY INSTALLED SUMP PUMP.
4. ALL PIPE SHALL BE DUCTILE IRON CLASS 50. ALL PIPE FITTINGS FROM THE CITY WATER MAIN THROUGH THE VAULT SHALL BE PROVIDED WITH RESTRAINED JOINT FITTINGS.
5. ALL FITTINGS TO BE BRASS.
6. STEPS SHALL BE IN ACCORDANCE WITH THE APPROVED PRODUCTS LIST FOR WATER UTILITIES AND SHALL BE ON 16" CENTERS.
7. A DEPARTMENT OF NATURAL RESOURCES APPROVED DOUBLE CHECK DETECTOR CHECK BACKFLOW PREVENTER MUST BE USED. FOR A COPY OF THE MISSOURI DEPARTMENT OF NATURAL RESOURCES APPROVED BACKFLOW PREVENTION ASSEMBLIES, CONTACT THE WATER UTILITIES OPERATIONS DIVISION AT 816-969-1940. AS OF JANUARY 1, 1987, THE DNR REQUIRES FIRE SPRINKLER SYSTEMS USING CHEMICALS TO HAVE A DNR APPROVED PRESSURE BACKFLOW PREVENTER INSTALLED, PRIOR TO THE MIXING POINT.
8. ALL VALVES SHALL HAVE RESTRAINED JOINTS.
9. ALL VALVES SHALL BE LOCATED IN MANHOLE FOUND ON THE APPROVED PRODUCTS LIST FOR WATER UTILITIES SUITABLE FOR OTHER TRAFFIC OR NON-TRAFFIC CONDITIONS.
10. A MINIMUM OF 18" CLEARANCE SHALL BE PROVIDED AROUND ALL PIPING, VALVES, APPURTENANCES, ETC.
11. METER SHALL BE OWNED AND MAINTAINED BY THE WATER UTILITIES DEPARTMENT.
12. IF PUBLIC WATER IS LOCATED ON THE OPPOSITE SIDE OF THE STREET, THEN THE PUBLIC WATER MAIN RESPONSIBILITY OF THE WATER UTILITIES DEPARTMENT ENDS AT THE GATE VALVE NEAREST THE VAULT.

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: KJY
VAULT FOR DOUBLE CHECK DETECTOR CHECK | WAT-12

DETAIL #47
VAULT FOR DOUBLE CHECK DETECTOR
N.T.S.



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: KJY
VALVE STEM EXTENSION AND VALVE BOX | WAT-9

DETAIL #48
VALVE STEM EXTENSION AND VALVE BOX
N.T.S.



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: KJY
AIR RELEASE ASSEMBLY | WAT-10

DETAIL #48
AIR RELEASE ASSEMBLY
N.T.S.

KARL A. SCHOENIKE, PE
(MO PE# 2003015039)

REVISION RECORD

NO.	DATE	DESCRIPTION
	01/30/2024	BID SET ADDENDUM 2
	02/02/2024	PLAT/ BID SET
	03/25/2024	REVISED PER REVIEW AND COMMENTS
	05/13/2026	Revised per Approved Final Development Plans

ENGINEERING, SURVEYING, AND LANDSCAPE ARCHITECTURE IN THE STATE OF NORTH CAROLINA WILL BE PROVIDED BY CEC SURVEYING AND LANDSCAPE ARCHITECTS OF MO, PLLC. CEC ENGINEERING IN THE STATE OF MISSOURI WILL BE PROVIDED BY CEC ENGINEERS & CONSULTANTS, LLC. LANDSCAPE ARCHITECTURE SERVICES IN THE STATE OF MISSOURI WILL BE PROVIDED BY CEC LANDSCAPE ARCHITECTS, LLC.

1450 Beale Street
Suite 305
St. Charles, MO 63303
Ph: 314.656.4566
www.cecinc.com
Civil & Environmental Consultants, Inc.

COSTCO WHOLESALE
LEE'S SUMMIT, MISSOURI

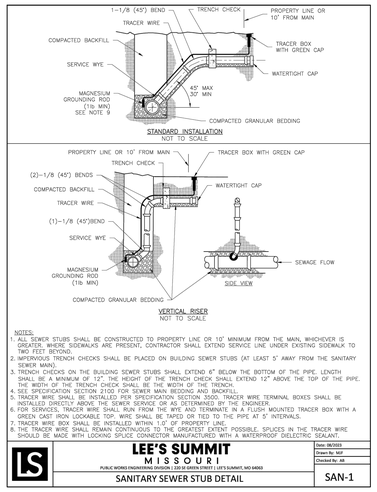
COSTCO LEES SUMMIT
CONSTRUCTION DOCUMENTS
LOCAL UTILITY DETAILS
REVIEW SET - NOT FOR CONSTRUCTION
DECEMBER 22, 2025

DRAWN BY:	MK
CHECKED BY:	KAS
DATE:	
DWG SCALE:	N.T.S.
PROJECT NO:	353-308.0002
APPROVED BY:	*DRK

STATE OF MISSOURI
KARL A. SCHOENIKE
PE NUMBER
PE-2003015039
03/13/2026
PROFESSIONAL ENGINEER

DRAWING NO.:
C803
SHEET 26 OF 31

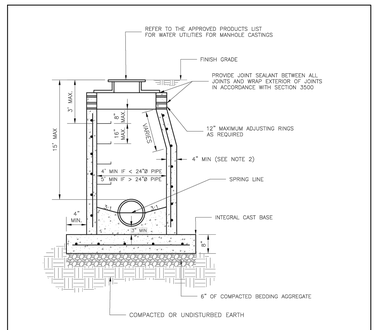
J:\353-000\353-308\-2400\dwg\civil\sht\353308-CIVIL-2400.dwg[WAT DETAILS 12/12/2025 - mattmundy] - LY: 5/12/2026 2:13 PM



NOTES:
1. ALL SEWER STUBS SHALL BE CONSTRUCTED TO PROPERTY LINE OR 10' MINIMUM FROM THE MAIN, WHICHEVER IS GREATER, WHERE SIDEWALKS ARE PRESENT, CONTRACTOR SHALL EXTEND SERVICE LINE UNDER EXISTING SIDEWALK TO TWO FEET BEYOND.
2. IMPERVIOUS TRENCH CHECKS SHALL BE PLACED ON BUILDING SEWER STUBS (AT LEAST 5' AWAY FROM THE SANITARY SEWER MAIN).
3. TRENCH CHECKS ON THE BUILDING SEWER STUBS SHALL EXTEND 6" BELOW THE BOTTOM OF THE PIPE. LENGTH SHALL BE A MINIMUM OF 12". THE HEIGHT OF THE TRENCH CHECK SHALL EXTEND 12" ABOVE THE TOP OF THE PIPE. THE WIDTH OF THE TRENCH CHECK SHALL BE THE WIDTH OF THE TRENCH.
4. TRACER WIRE SHALL BE INSTALLED ON ALL SEWER PIPE EXCEPT SDR 26 PVC PIPE.
5. TRACER WIRE SHALL BE INSTALLED PER SPECIFICATION SECTION 33620. TRACER WIRE TERMINAL BOXES SHALL BE INSTALLED DIRECTLY ABOVE THE SEWER SERVICE OR AS DETERMINED BY THE ENGINEER.
6. FOR SERVICES, TRACER WIRE SHALL RUN FROM THE WYE AND TERMINATE IN A FLUSH MOUNTED TRACER BOX WITH A GREEN CAST IRON LOCKABLE TOP. WIRE SHALL BE TAPED OR TIED TO THE PIPE AT 5' INTERVALS.
7. TRACER WIRE BOX SHALL BE INSTALLED WITHIN 1.0' OF PROPERTY LINE.
8. THE TRACER WIRE SHALL REMAIN CONTINUOUS TO THE GREATEST EXTENT POSSIBLE. SPLICES IN THE TRACER WIRE SHOULD BE MADE WITH LOCKING SPLICE CONNECTOR MANUFACTURED WITH A WATERPROOF DIELECTRIC SEALANT.

LEE'S SUMMIT MISSOURI PUBLIC WORKS ENGINEERING DIVISION	220 SE GREEN STREET	LEE'S SUMMIT, MO 64063	Date: 06/2023 Drawn By: MJF Checked By: AB
SANITARY SEWER STUB DETAIL			SAN-1

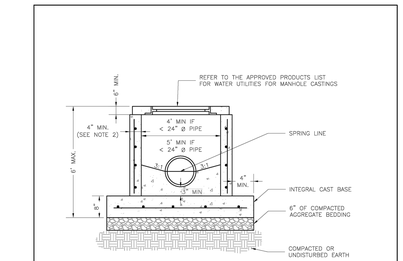
DETAIL #50
SANITARY SEWER STUB
N.T.S.



NOTES:
1. PRECAST CONCRETE MANHOLES SHALL CONFORM TO ASTM C478 EXCEPT AS MODIFIED BY THE SPECIFICATIONS.
2. A WALL THICKNESS NOT LESS THAN ONE-TWELFTH (1/12) OF THE INSIDE DIAMETER OR 4", WHICHEVER IS GREATER, SHALL BE USED WHEN THE MANHOLE DEPTH IS LESS THEN 15'.
3. WATERPROOFING SHALL BE REQUIRED ON THE OUTSIDE OF MANHOLES. THE WATERPROOFING SHALL CONSIST OF A TOTAL DRY FILM THICKNESS OF NOT LESS THAN 14 MILS OF BITUMINOUS COATING.
4. ONLY ECCENTRIC MANHOLE CONES WILL BE ALLOWED UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
5. THE FILL CONCRETE FLOW CHANNEL FOR SIDE BRANCHES SHALL BE PLACED TO PROVIDE A SMOOTH TRANSITION INTO THE FLOW LINE.
6. REFER TO THE APPROVED PRODUCTS LIST FOR WATER UTILITIES FOR APPROVED MANHOLE GASKET MODELS.
7. REFER TO THE APPROVED PRODUCTS LIST FOR APPROVED STEPS.

LEE'S SUMMIT MISSOURI PUBLIC WORKS ENGINEERING DIVISION	220 SE GREEN STREET	LEE'S SUMMIT, MO 64063	Date: 06/2023 Drawn By: MJF Checked By: AB
STANDARD SANITARY PRECAST MANHOLE			SAN-2

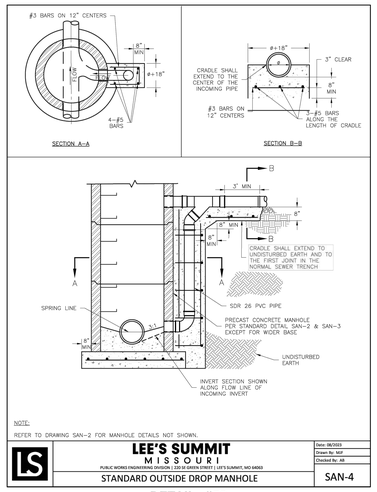
DETAIL #51
STANDARD SANITARY PRECAST MANHOLE
N.T.S.



NOTES:
1. PRECAST CONCRETE MANHOLES SHALL CONFORM TO ASTM C478 EXCEPT AS MODIFIED BY THE SPECIFICATIONS.
2. A WALL THICKNESS NOT LESS THAN ONE-TWELFTH (1/12) OF THE INSIDE DIAMETER OR 4", WHICHEVER IS GREATER SHALL BE USED.
3. WATERPROOFING SHALL BE REQUIRED ON THE OUTSIDE OF MANHOLES. THE WATERPROOFING SHALL CONSIST OF A TOTAL DRY FILM THICKNESS OF NOT LESS THEN 14 MILS OF BITUMINOUS COATING.
4. THE FILL CONCRETE FLOW CHANNEL FOR SIDE BRANCHES SHALL BE PLACED TO PROVIDE A SMOOTH TRANSITION INTO THE FLOW LINE.
5. REFER TO THE APPROVED PRODUCTS LIST FOR WATER UTILITIES FOR MANHOLE GASKET MODELS.
6. PROVIDE STEPS AS SHOWN ON THE APPROVED PRODUCTS LIST FOR MANHOLE DEPTHS GREATER THAN 4'.

LEE'S SUMMIT MISSOURI PUBLIC WORKS ENGINEERING DIVISION	220 SE GREEN STREET	LEE'S SUMMIT, MO 64063	Date: 06/2023 Drawn By: MJF Checked By: AB
STANDARD SHALLOW SANITARY PRECAST MANHOLE			SAN-3

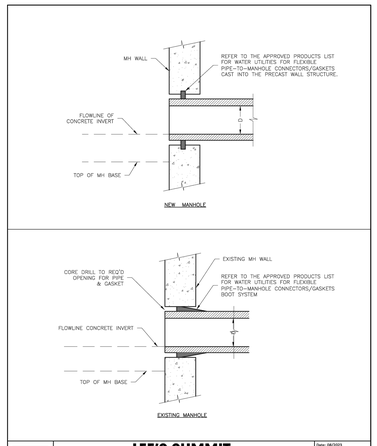
DETAIL #52
STD. SHALLOW SANITARY PRECAST MANHOLE
N.T.S.



NOTE:
REFER TO DRAWING SAN-2 FOR MANHOLE DETAILS NOT SHOWN.

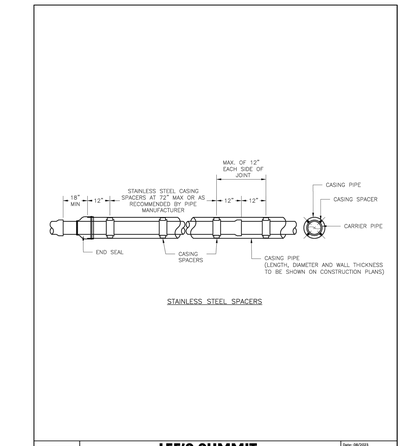
LEE'S SUMMIT MISSOURI PUBLIC WORKS ENGINEERING DIVISION	220 SE GREEN STREET	LEE'S SUMMIT, MO 64063	Date: 06/2023 Drawn By: MF Checked By: AB
STANDARD OUTSIDE DROP MANHOLE			SAN-4

DETAIL #53
STANDARD OUTSIDE DROP MANHOLE
N.T.S.



LEE'S SUMMIT MISSOURI PUBLIC WORKS ENGINEERING DIVISION	220 SE GREEN STREET	LEE'S SUMMIT, MO 64063	Date: 06/2023 Drawn By: MJF Checked By: AB
MANHOLE WALL CONNECTION			SAN-5

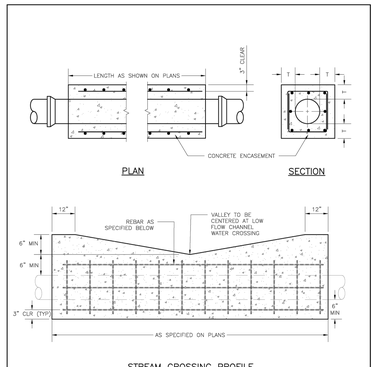
DETAIL #54
MANHOLE WALL CONNECTION
N.T.S.



STAINLESS STEEL SPACERS

LEE'S SUMMIT MISSOURI PUBLIC WORKS ENGINEERING DIVISION	220 SE GREEN STREET	LEE'S SUMMIT, MO 64063	Date: 06/2023 Drawn By: MJF Checked By: AB
CASING PIPE DETAILS			SAN-6

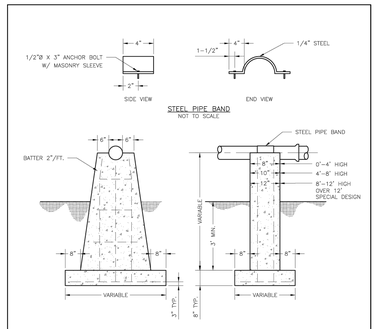
DETAIL #55
CASING PIPE DETAILS
N.T.S.



NOTES:
1. FOR PIPES LESS THAN 15", T = 6" MIN.
2. FOR PIPES 15" THRU 36", T = 8" MIN.
3. INTERMEDIATE BELLS SHALL BE ENCASED.
4. REINFORCING STEEL SHALL BE #4 @ 12" O.C. EACH WAY WITH A MINIMUM REBAR LAP OF 12".

LEE'S SUMMIT MISSOURI PUBLIC WORKS ENGINEERING DIVISION	220 SE GREEN STREET	LEE'S SUMMIT, MO 64063	Date: 06/2023 Drawn By: MF Checked By: AB
PIPE ENCASEMENT DETAIL			SAN-7

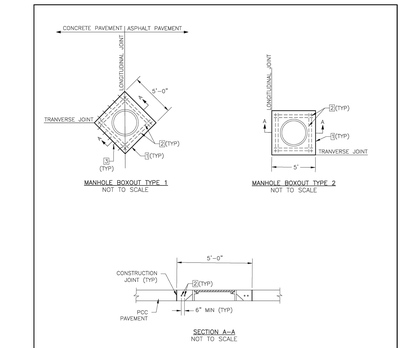
DETAIL #56
PIPE ENCASEMENT DETAIL
N.T.S.



NOTES:
1. REINFORCING BARS SIZE AND SPACING CONTROLLED BY SIZE AND HEIGHT OF PIERS.
2. CYLINDRICAL PIER ACCEPTABLE WITH EQUIVALENT CROSS-SECTIONAL AREA AND REINFORCING. DESIGN SHALL BE APPROVED BY CITY ENGINEER.
3. CONCRETE SHALL BE 4000 PSI.

LEE'S SUMMIT MISSOURI PUBLIC WORKS ENGINEERING DIVISION	220 SE GREEN STREET	LEE'S SUMMIT, MO 64063	Date: 06/2023 Drawn By: MF Checked By: AB
PIPE SUPPORT PIER GUIDANCE DETAIL			SAN-8

DETAIL #57
PIPE SUPPORT PIER GUIDANCE
N.T.S.



NOTES:
1. MINIMUM 3" CLEAR ON REINFORCEMENT. CENTER CASTING WITHIN BOXOUT AREA.
2. CONCRETE SHALL BE f'c=4MPA 4K MIX.
3. ALL STEEL SHALL BE EPOXY COATED.
4. FOR CONSTRUCTION JOINT DETAIL, SEE DETAIL 2 ON SHEET GEN-10, TYPICAL PAVEMENT JOINT DETAILS.

1 CONSTRUCTION JOINT.
2 4'-8"(TYP) #4 BAR, PLACE AT MID-SLAB.
3 #4 DOWELS @ 12" O.C. INTO CONCRETE PAVEMENT MIN. LENGTH 12".

LEE'S SUMMIT MISSOURI PUBLIC WORKS ENGINEERING DIVISION	220 SE GREEN STREET	LEE'S SUMMIT, MO 64063	Date: 06/2023 Drawn By: MJF Checked By: AB
MANHOLE BOXOUT IN PAVEMENT DETAIL			SAN-9

DETAIL #58
MANHOLE BOXOUT IN PAVEMENT
N.T.S.

KARL A. SCHOENIKE, PE
(MO PE# 2003015039)

STATE OF MISSOURI
KARL A. SCHOENIKE
NUMBER PE-2003015039
03/13/2026
PROFESSIONAL ENGINEER

REVISION RECORD

NO.	DATE	DESCRIPTION
1	01/30/2024	BID SET ADDENDUM 2
2	02/23/2024	FUEL BID SET
3	03/25/2024	REVISED PER REVIEW AND COMMENTS
4	05/13/2024	Revised per Approved Final Development Plans

CEC
Civil & Environmental Consultants, Inc.
1450 Beale Street
Suite 305
St. Charles, MO 63303
Ph: 314.656.4566
www.cecinc.com

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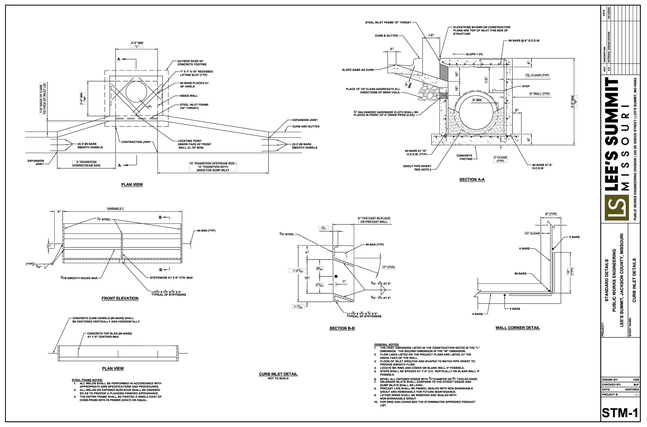
COSTCO WHOLESALE
LEE'S SUMMIT, MISSOURI

COSTCO LEES SUMMIT
CONSTRUCTION DOCUMENTS
LOCAL UTILITY DETAILS
REVIEW SET - NOT FOR CONSTRUCTION
DECEMBER 22, 2023

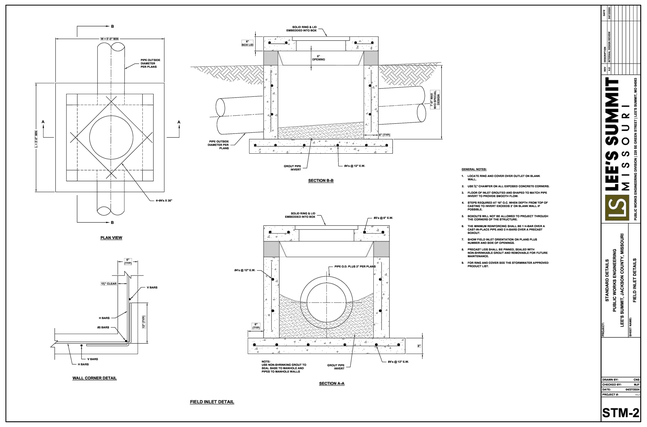
DRAWN BY:	MK
CHECKED BY:	KAS
N.T.S.	
PROJECT NO:	353-308.0002
APPROVED BY:	*DRK
DWG SCALE:	
DATE:	

DRAWING NO.: **C804**
SHEET 27 OF 31

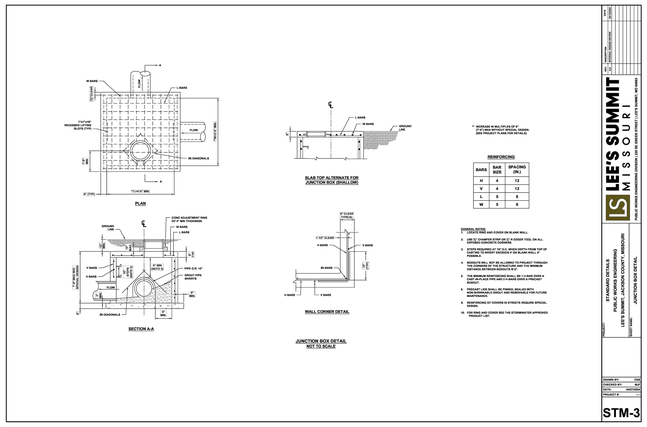
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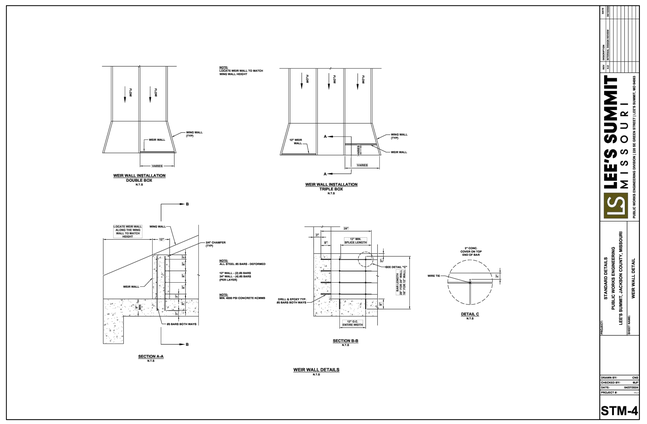
DETAIL #59
CURB INLET
N.T.S.



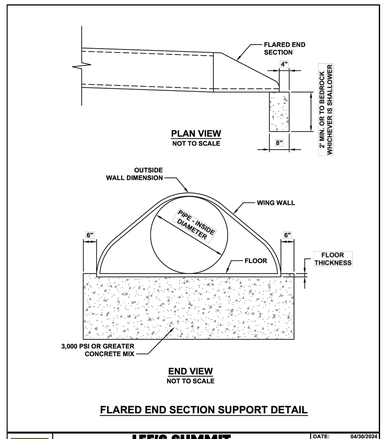
DETAIL #60
FIELD INLET
N.T.S.



DETAIL #61
JUNCTION BOX
N.T.S.

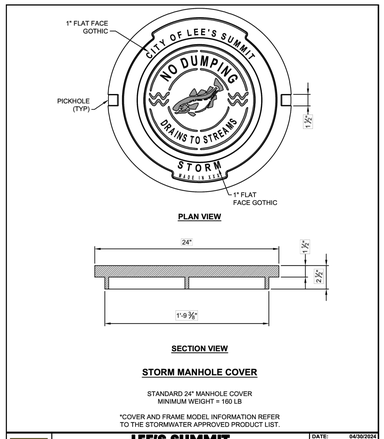


DETAIL #62
WEIR WALL
N.T.S.



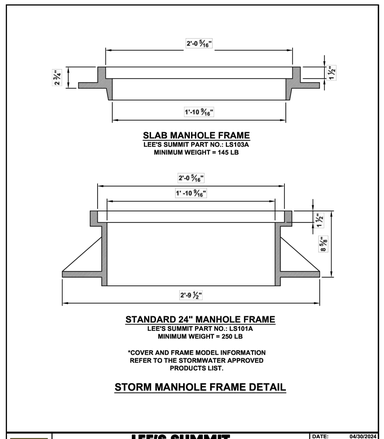
LEE'S SUMMIT MISSOURI	DATE:	04/30/2024
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063	DRAWN BY:	CNS
	CHECKED BY:	MJF
FLARED END SECTION SUPPORT DETAIL	DWG No.	STM-5

DETAIL #63
FLARED END SECTION SUPPORT
N.T.S.



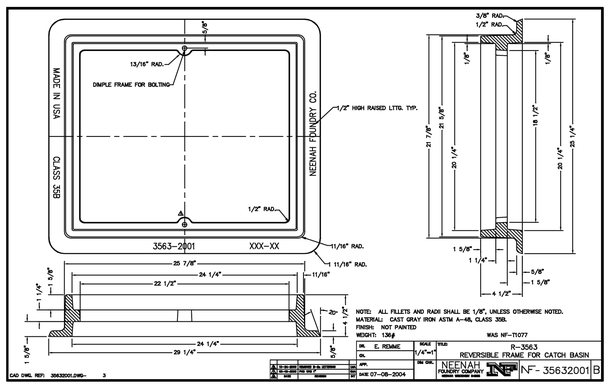
LEE'S SUMMIT MISSOURI	DATE:	04/30/2024
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063	DRAWN BY:	CNS
	CHECKED BY:	MJF
STORM MANHOLE COVER	DWG No.	STM-6

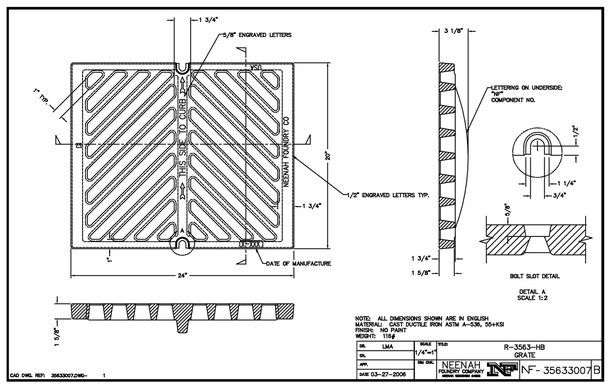
DETAIL #64
STORM MANHOLE COVER
N.T.S.



LEE'S SUMMIT MISSOURI	DATE:	04/30/2024
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063	DRAWN BY:	CNS
	CHECKED BY:	MJF
STORM MANHOLE FRAME DETAIL	DWG No.	STM-7

DETAIL #65
STORM MANHOLE FRAME
N.T.S.





NO.	DATE	DESCRIPTION
	01/30/2024	BID SET ADDENDUM 2
	02/15/2024	FUEL BID SET
	03/15/2024	Revised per Approved Final Development Plans
	05/13/2026	

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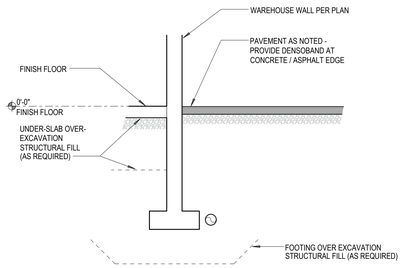
COSTCO LEES SUMMIT
CONSTRUCTION DOCUMENTS
LOCAL UTILITY DETAILS
REVIEW SET - NOT FOR CONSTRUCTION
DECEMBER 22, 2025

DRAWN BY:	MK
CHECKED BY:	KAS
DWG SCALE:	N.T.S.
PROJECT NO:	353-308.0002
APPROVED BY:	*DRK

KARL A. SCHOENIKE
NOTARY PUBLIC
STATE OF MISSOURI
PE-2003015039
03/13/2026
KARL A. SCHOENIKE, PE
(MO PE# 2003015039)

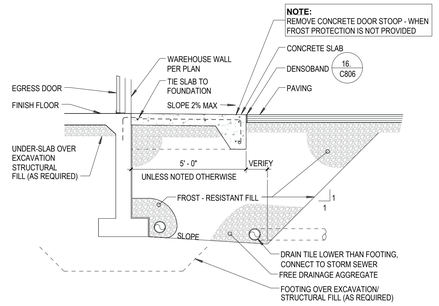
DRAWING NO.:
C805
SHEET 28 OF 31

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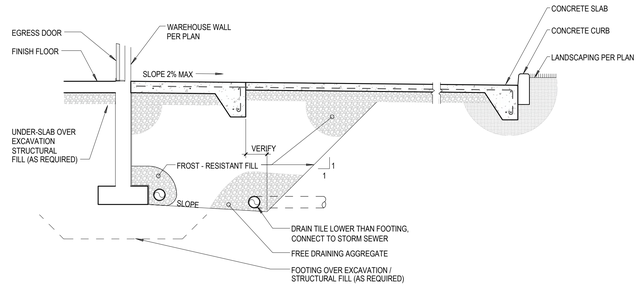
1 ALONG WALL

SCALE: 3/8" = 1'-0" 0520



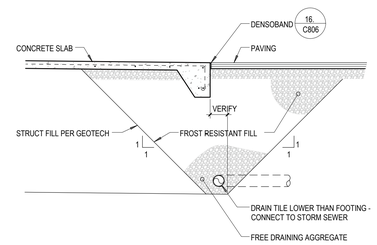
2 AT EGRESS DOOR WITH STOOP

SCALE: 3/8" = 1'-0" 1221 FOR COLD CLIMATE ONLY



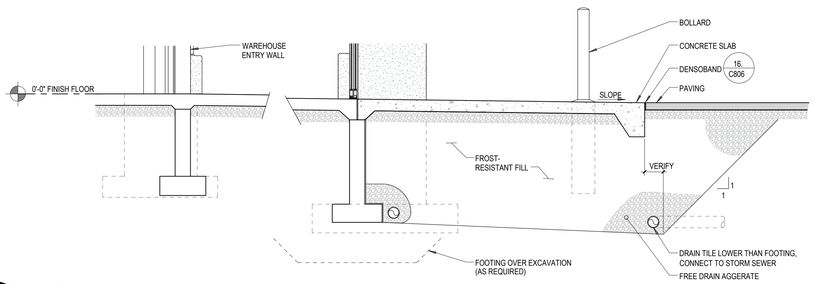
3 AT RECEIVING DOOR

SCALE: 3/8" = 1'-0" 0623



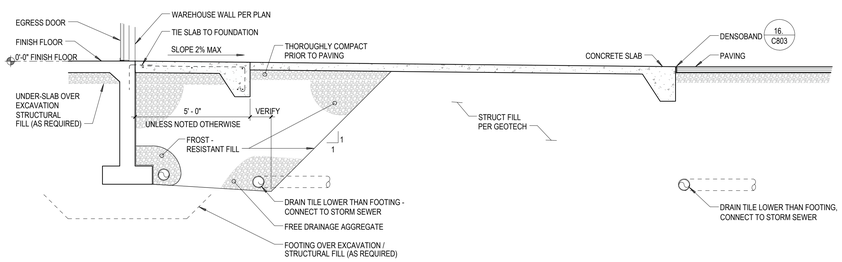
7 FROST PROTECTION WEDGE

SCALE: 3/8" = 1'-0" 0520



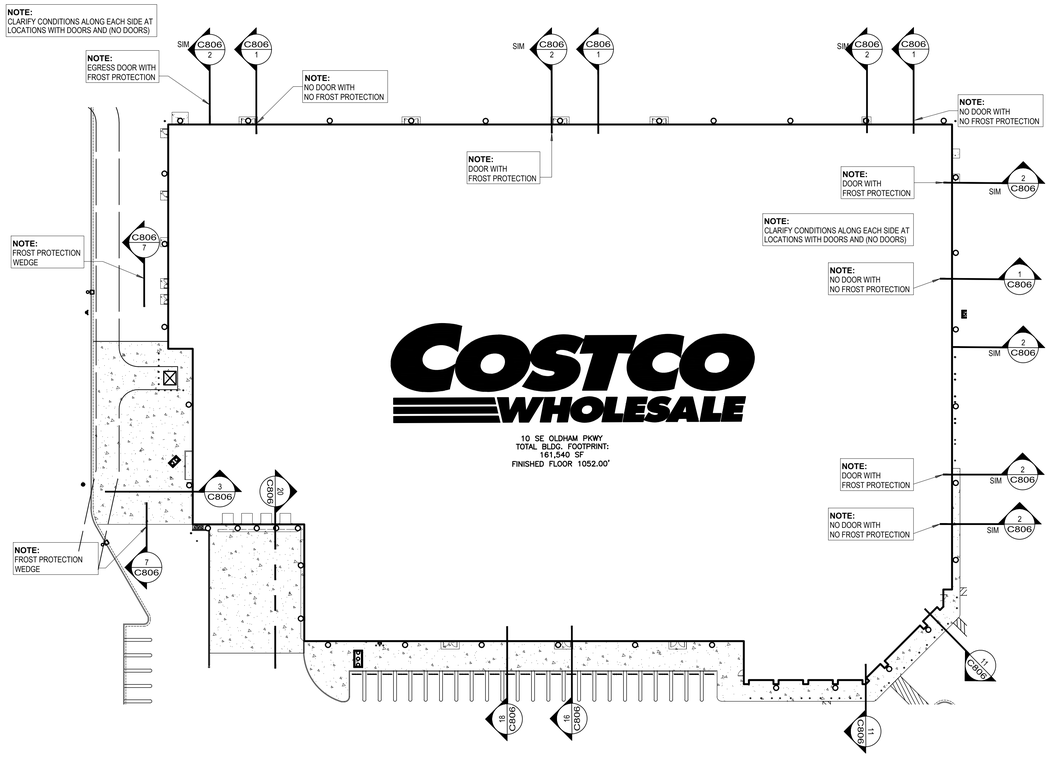
11 AT CANOPY

SCALE: 3/8" = 1'-0" 0623



16 AT EGRESS DOOR WITH WALKWAY

SCALE: 3/8" = 1'-0" 0821

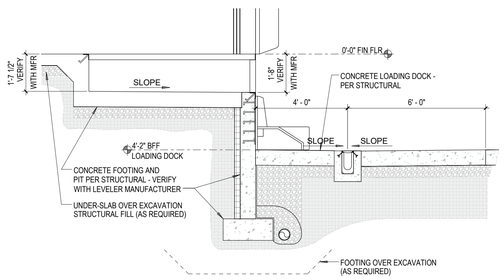


14 SITE PLAN - KEY

SCALE: 1" = 40'-0"

18 WALKWAY AT PARKING

SCALE: 3/8" = 1'-0" 0821



20 AT LOADING DOCK

SCALE: 3/8" = 1'-0" 0523

KARL A. SCHOENIKE, PE
(MO PE# 2003015039)

REVISION RECORD

NO	DATE	DESCRIPTION
	01/30/2026	BID SET ADDENDUM 2
	02/03/2026	FUEL BID SET
	02/03/2026	REVISED PER REVIEW AND COMMENTS
	03/13/2026	Revised per Approved Final Development Plans

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Suite 305
St. Charles, MO 63303
Ph: 314.656.4566
www.cecinc.com

Civil & Environmental Consultants, Inc.

COSTCO WHOLESALE
LEE'S SUMMIT, MISSOURI

COSTCO LEES SUMMIT
CONSTRUCTION DOCUMENTS
SUB-SURFACE BUILDING PAD DETAILS
REVIEW SET - NOT FOR CONSTRUCTION
DECEMBER 22, 2025

DRAWN BY:	MK
CHECKED BY:	KAS
DWG SCALE:	N.T.S.
PROJECT NO:	353-308.0002
APPROVED BY:	*DRK

STATE OF MISSOURI
KARL A. SCHOENIKE
NUMBER PE-2003015039
03/13/2026
PROFESSIONAL ENGINEER

DRAWING NO.: C806
SHEET 29 OF 31

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NORTH

LEGEND

- EXISTING PROPERTY LINE
- EXISTING SETBACK
- EXISTING EASEMENT
- EXISTING INDEX (MAJOR) CONTOUR
- EXISTING INTERMEDIATE (MINOR) CONTOUR
- EXISTING GUARD RAIL
- EXISTING FENCE
- EXISTING VERTICAL CONCRETE CURB
- EXISTING EDGE OF PAVEMENT
- EXISTING DITCH FLOW LINE
- EXISTING TREE LINE
- EXISTING TREE WITH TRUNK SIZE
- EXISTING OVERHEAD ELECTRIC
- EXISTING UNDERGROUND ELECTRIC
- EXISTING FIBER OPTIC LINE
- EXISTING WATER LINE
- EXISTING SANITARY SEWER LINE
- EXISTING STORM DRAIN
- EXISTING TRAFFIC POLE WITH ARM
- EXISTING LIGHT POLE WITH ARM
- EXISTING UTILITY POLE AND GUY WIRE
- EXISTING ELECTRIC PULL BOX
- EXISTING FIBER OPTIC PULL BOX
- EXISTING FIBER MARKER
- EXISTING WATER MANHOLE
- EXISTING FIRE HYDRANT
- EXISTING WATER VALVE
- EXISTING WATER METER
- EXISTING SANITARY MANHOLE
- EXISTING CURB INLET
- EXISTING FLARED END SECTION (F.E.S.)
- EXISTING GRATED CATCH BASIN
- EXISTING STORMWATER MANHOLE
- PROPOSED CONCRETE CURB AND GUTTER
- PROPOSED CONCRETE PAVEMENT
- PROPOSED HEAVY DUTY PAVEMENT
- PROPOSED LIGHT DUTY PAVEMENT
- PROPOSED CONCRETE SIDEWALK
- PROPOSED PAINTED 2' O.C. DIAGONAL STRIPING
- PROPOSED PAINTED PARKING DIVIDER
- PROPOSED CART CORRAL
- PROPOSED STORM PIPE
- PROPOSED UNDERDRAIN
- PROPOSED PRIVATE SANITARY SEWER
- PROPOSED PRIVATE WATER LINE (SIZE DENOTED)
- PROPOSED UNDERGROUND ELECTRIC
- PROPOSED DATA LINE
- PROPOSED MANHOLE – SOLID COVER
- PROPOSED AREA INLET – 3-WAY
- PROPOSED GRATE INLET
- PROPOSED 2 GRATE INLET W/ SIDE INTAKE
- PROPOSED FLARED END SECTION (F.E.S.)
- PROPOSED CLEAN OUT
- PROPOSED PRIVATE SANITARY MANHOLE
- PROPOSED PRIVATE SANITARY CLEANOUT
- PROPOSED WATER VALVE
- PROPOSED FIRE HYDRANT
- PROPOSED BUILDING MOUNTED LIGHT AND LIGHT POLE [REFER TO LIGHTING PLAN BY OTHERS]
- PROPOSED LIMITS OF DISTURBANCE
- PROPOSED SILT FENCE
- PROPOSED INLET PROTECTION
- PROPOSED CONSTRUCTION ENTRANCE
- PROPOSED CONSTRUCTION ROAD

KEY NOTES

1. PROPOSED PERIMETER PROTECTION. REFER TO APWA SILT FENCE DETAIL #02 ON SHEET C901.
2. PROPOSED INLET PROTECTION. REFER TO APWA DETAIL #03 ON SHEET 901.
3. PROPOSED CONSTRUCTION ENTRANCE AND WASHOUT STATION. REFER TO APWA DETAIL #04 ON SHEET 901.
4. PROPOSED LIMITS OF DISTURBANCE.

THIS PLAN SHALL BE UPDATED AS CONSTRUCTION OCCURS TO INCLUDE ONSITE STORAGE OF POTENTIAL SOURCES OF POLLUTION AND ANY CHANGES OR ADDITIONS TO THE BMPS UTILIZED TO PREVENT POTENTIAL POLLUTANTS FROM DISCHARGE DURING LAND DISTURBANCE ACTIVITIES.

THE SWPPP, AS AMENDED THROUGHOUT CONSTRUCTION, AND THE STATE AND COUNTY LAND DISTURBANCE PERMITS SHALL BE RETAINED ONSITE BY THE SUPERINTENDENT AT ALL TIMES AND BE AVAILABLE UPON REQUEST. THE SUPERINTENDENT IS RESPONSIBLE FOR THE LOCATION, PROTECTION, AND ACCESSIBILITY OF THESE DOCUMENTS AT ALL TIMES.

COSTCO WHOLESALE
10 SE OLDHAM PKWY
TOTAL BLDG. FOOTPRINT: 161,540 SF
FINISHED FLOOR 1052.00'

24,000 SQ. FT. ONSITE STAGING AREA

60'x192' TEMPORARY PARKING AREA

24,000 SQ. FT. ONSITE STAGING AREA

84.0 LF 18" HDPE @ 0.5%

REVISION RECORD

NO	DATE	DESCRIPTION
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4	03/13/2026	Revised per Approved Final Development Plans

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St. Charles, MO 63303
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COSTCO WHOLESALE
LEE'S SUMMIT, MISSOURI

COSTCO LEES SUMMIT
CONSTRUCTION DOCUMENTS
EROSION CONTROL PLAN
REVIEW SET - NOT FOR CONSTRUCTION
DECEMBER 22, 2025

DRAWN BY:	MK
CHECKED BY:	KAS
PROJECT NO:	353-308.0002
APPROVED BY:	*DRK
DWG SCALE:	1" = 40'
DATE:	

DRAWING NO.: **C900**
SHEET 30 OF 31

REFERENCE

EXISTING TOPOGRAPHIC DATA AND FEATURES ARE A COMBINATION OF THE FOLLOWING:
1. ALTA SURVEY DATED 08-20-2025 BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC.
2. DEVELOPMENT PLANS FOR OLDHAM VILLAGE (BY OTHER).
3. SITE DEVELOPMENT PLANS DATED 12-22-2025 BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC.

NOTE TO CONTRACTOR: PRIOR TO ANY EXCAVATION FOR UNDERGROUND UTILITIES, CONTRACTOR SHALL EXPOSE AND VERIFY LOCATIONS (HORIZONTAL AND VERTICAL) OF ALL EXISTING UTILITIES INCLUDING BUT NOT LIMITED TO GAS, WATER, BROADBAND, PHONE, SANITARY AND STORM SEWERS. ANY CONFLICT SHALL BE REPORTED IMMEDIATELY TO THE ENGINEER AND APPROPRIATE AUTHORITIES

MISSOURI 811
811 or 1-800-344-7483
https://missouri-811.org

NOTES:

1. CONTRACTOR SHALL REFER TO OTHER PLANS WITHIN THIS CONSTRUCTION SET FOR OTHER PERTINENT INFORMATION. IT IS NOT THE ENGINEER'S INTENT THAT ANY SINGLE PLAN SHEET IN THIS SET OF DOCUMENTS FULLY DEPICT ALL WORK ASSOCIATED WITH THIS PROJECT.

SCALE IN FEET
0 40 80

STATE OF MISSOURI
KARL A. SCHOENIKE
PE NUMBER
PE-2003015039
03/13/2026
PROFESSIONAL ENGINEER

KARL A. SCHOENIKE, PE
(MO PE# 2003015039)

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The seeded/sodded area shall be kept free of traffic until accepted. If at any time before acceptance of the completed contract, any portion of the seeded surface becomes gullied or otherwise damaged, or the seeding has been damaged or destroyed, the affected portion shall be repaired to re-establish the specified condition prior to the acceptance of the work.

2400.6 Acceptance of Seeding and Sodding

A. Acceptance: Acceptance by the Owner will occur when areas seeded and/or sodded are determined to be established turf areas ready for mowing. Gross areas in excess of one (1) square foot that are dead or in poor condition regarding color and quality shall be replaced at the Contractor's expense prior to the initiation of the Maintenance Period.

B. Sod Watering: Throughout the Maintenance Period, the Contractor shall be responsible for watering the installed sod until it is established and ready for mowing. In the absence of rainfall, watering shall be performed daily during the first week and shall be sufficient to maintain moist soil to a depth of at least 4 inches. Soil on sod pads shall be kept moist at all times. Watering may be done during the heat of the day to help prevent wilting. After the second week, the Contractor shall water the sod as required to maintain adequate moisture in the upper 4 inches of topsoil necessary for the promotion of deep root growth until final acceptance as established turf areas ready for mowing.

C. Seed Watering: The Contractor shall be responsible for watering seeded areas, keeping all areas moist throughout the germination period, following the substantial germination of the seed, and during the occurrence of a dry or drought period. Continued watering will be required until final acceptance as established turf areas ready for mowing.

D. Acceptance Notification: After acceptance of the seeded or sodded area by the Owner, the Contractor shall by door hangers or other approved methods, notify all affected property owners that the maintenance of the grassed areas is now their responsibility.

2400.7 Clean-up

During the progress of this work and upon completion, thoroughly clean the project area, remove and properly dispose of all resultant dirt, debris and other waste materials.

2400.8 Guarantee

The Contractor shall guarantee all work and materials for a period of one full growing season (Spring to Fall) after the date of final acceptance of the project. During the guarantee period, all turf which dies or exhibits weed growth or undesirable grasses, free of eroded areas, bare spots, diseases and insects, shall be replaced with like material at the expense of the Contractor. Contractor to replace as originally specified areas which have failed to survive, as often as required, to establish the seeded/sodded lawn area until accepted, at no additional compensation. Contractor to repair and replace to original condition all damages to property resultant from the sodding operation and all damages as a result from the remedying of these defects, without additional compensation.

SECTION 2401 SEEDING

2401.1 Scope

This section governs furnishing all labor, materials and equipment necessary for complete installation of seeding in

accordance with the Standard Drawings, the specifications and Special Provisions. The Contractor shall furnish all plants and materials and perform all operations in connection with the preparation, fertilizing, placing, watering, firming and establishment, of seeding areas, complete and in strict accordance with these specifications and applicable Plans, and subject to the terms and conditions of the Contract. The Contractor shall seed disturbed areas where shown on the Plans or by field inspection and as required by the Storm Water Pollution Prevention Plan. The Contractor shall be responsible for establishment of grass.

2401.2 Materials

A. Seed: Seed shall be labeled in accordance with U.S. Department of Agriculture Rules and Regulations under Federal Seed Act. All seed shall be furnished in sealed standard containers unless exception is granted in writing by the Owner. Seed shall be free from noxious weeds and reclaimed "Grade A" recent crop seed treated with appropriate fungicide at time of mixing. Seed which has become wet, moldy, or otherwise damaged in transit or in storage will not be acceptable. Seed mix to be used will be identified prior to sowing. The minimum percentage by weight of pure live seed in each lot of seed shall be as follows:

1. Seeding – Mix #1 (Turf Areas)

   Festuca arundinacea, Fineleaf Tall Fescue. Varieties- Houndog V. Rebel Jr., Rebel III, Rebel 3D, Barlexas, Millennium, Southern Choice, Tar Heel, Wolf Pack, Bonsai 2000, Shortstop II Coyote, or other pre-approved substitutes..... 62.5%

   Poa pratensis, Kentucky Bluegrass. Varieties- Baran, Nassau, Ram I, Nublue, Rugby II, Award, Blacksburg, Challenger, Eagleton, Limousine, Livingston, Midnight, Nuglade, Preakness, Princeton 105, Quantum Leap, 1757 or other approved substitutes 25.0%

   Lolium multiflorum – annual ryegrass..... 12.5%

2. Seeding – Mix #2 (Low Use Areas)

   Festuca ovina, Sheeps Fescue. Varieties- Azay, Big Horn, or other pre-approved substitutes 15.0%

   Fescura rubra subsp. Commutata, Chewings Fescue, Varieties-James town II, Victory, Tiffany, or other approved substitutes 20.0%

   Festuca longifolia, Hard Fescue. Varieties- Spartan, Tournament, Warwick, Discovery, Waldina, Aurora, 4 AG Attila, Reliant II, Scaldis, or other pre-approved substitutes 35.0%

   Fescuca ruba subp. Ruba, Creeping Red Fescue. Varieties- Shademaster II, Jasper, Cindy, Pennlawn, or other pre-approved substitutes..... 30.0%

3. Seeding Rate: Seed mixture shall be sown at the minimum rate of 10 pounds per 1000 square feet for new seeding. See Section 2408.3.E.1 for overseeding rates.

B. Inorganic Fertilizer: Inorganic fertilizer shall be composed of a formula 12-12-12, 13-13-13 or other approved substitute, and shall conform to the applicable State fertilizer laws. Fertilizer shall be of a type that can be uniformly distributed by the application equipment. Fertilizer may be furnished in a dry (granulated) or liquid form. When applied dry, the fertilizer shall be a granular, non-burning chemically combined product composed of not less than 50% organic slow acting, guaranteed analysis professional fertilizer. Granular or

pellet form shall be uniform in composition, dry and free flowing and shall be delivered to the site in the original unopened containers each bearing the manufacturer's guaranteed analysis. Any fertilizer which becomes caked or otherwise damaged, making it unsuitable for use, will not be accepted. When applied in a liquid form, fertilizer may be chemically combined or may be furnished as separate ingredients.

C. Mulch: Mulch shall be the vegetative type, or wood cellulose fiber type, whichever is specified in the Special Provisions, or as approved by the Owner.

1. Vegetative Type: The vegetative type shall be the cereal straw from stalks of oats, rye, wheat or barley and shall be free of prohibited and noxious weed seeds.

2. Wood Cellulose Fiber Mulch: Wood cellulose fiber shall contain no germination or growth inhibiting ingredients, and shall be dyed an appropriate color to aid in visual metering in its application. It shall be easily and evenly dispersed and suspended when agitated in water, and when sprayed uniformly on the soil surface, shall form a blotter-like cover, which readily absorbs the water and allows infiltration to the underlying soil. The mulch material shall be supplied in packages of not more than 100 pounds gross weight, and shall be marked by the manufacturer to show the air dry weight content (air dry weight shall contain no more than 10 percent moisture).

D. Water: Water, hose and other watering equipment required for the work shall be furnished by the Contractor.

E. Other Materials: Other materials not specifically described but required for a complete and proper planting installation, shall be as selected by the Contractor subject to the approval by the Owner.

F. Equipment: The seeding operation shall be accomplished with equipment suitable for preparing the seed bed, sowing the seed, fertilizing, spreading the vegetative type mulch, or spreading the wood cellulose fiber mulch in accordance with the applicable requirements of the following sub-section entitled "Construction".

G. Top Soil: The Contractor shall make every reasonable effort to stockpile existing top soil prior to excavation and reuse it in the same general locations. No payment will be made for topsoil furnishing and placement necessary due to excessive hauling off of existing top soil on the project site.

H. Qualifications of Workman: Provide at least one person, who shall be present at all times during the execution of this work, who is thoroughly familiar with all materials and installation procedures included in the Sodding and Seeding operations as specified herein.

I. Delivery Containers: Deliver all items to the site in their original containers with all labels intact and legible at time of Owner inspection.

J. Protection: Use all means necessary to protect all materials before, during and after installation, and to protect the installed work and materials of all other trades.

K. Replacements: In the event of damage or rejection, immediately make all repairs and replacements to the approval of the Owner and at no additional cost to the Owner.

L. Weather Conditions: All sodding and seeding shall be performed during favorable weather conditions and only during normal and acceptable planting seasons when satisfactory growing conditions exist. The planting operations shall not be performed during times of extreme drought, when ground is frozen or during times of other unfavorable climatic conditions unless otherwise approved by Owner. The Contractor assumes full and complete responsibility for all such plantings and operations.

M. Planting Dates: Recommended dates for all seeding and planting shall be March 15 through October 15 unless otherwise approved by the Owner.

N. Pre-planting Inspection: Prior to the work of this section, the Contractor shall carefully inspect the installed work of all other trades and verify that all such work is complete to the point where installation may properly commence.

O. Discrepancies: Do not proceed with installation in areas of discrepancy until all such discrepancies have been fully resolved.

2401.3 Construction

A. All equipment used in the project and all workmanship shall meet the approval of the Owner.

B. All areas to be seeded shall be tilled or disked to a depth of 3-4 inches and raked or smoothed to remove debris, clods, surface stone, 2-inches diameter or larger and weeds. Grades on the areas to be sodded or seeded shall be maintained in true, even and compacted conditions to prevent the formations of depressions. Areas overseeded, to be seeded that have washed or eroded shall be brought to grade and compacted thoroughly by the Contractor prior to placing the seeding or overseeding. No grading shall be done when the soils are in a muddy or frozen condition.

C. Steel Edging: The finish sub-grade of areas to be planted shall be 2" below top of steel edging, if present, for grass sod and flush with top of steel edging for seeding.

D. Other Edges: The finished sub-grade next to curbs, sidewalk and drive approaches shall allow for the seed to be placed level with the improvement. The sub-grade shall be finished level with the improvement for seeding.

E. Fertilizer Application: For areas to be seeded, fertilizer shall be applied when area receives final grading and tillage.

F. Application of Fertilizer: The Contractor has the option to obtain soil tests from a recognized testing laboratory, approved by Owner, to determine soil pH, nitrogen, phosphorus and potassium requirements and organic matter content. A pH or 5.8 to 7.0 and phosphorus and potassium levels of medium or higher range for the particular test used is required. Soils falling below these test levels must be supplemented with the appropriate materials to meet such test levels. If the above soil test is not performed a 13-13-13 fertilizer shall be applied at the rate of 400 pounds per acre.

G. Acceptance of Plant Bed: Acceptance of the plant bed for seeding shall be obtained from the Owner for each section of area as indicated on the Plans. The Contractor shall be responsible for maintaining the accepted areas until the effective date for planting.

H. Sowing shall be accomplished by use of an approved mechanical seeder or drill (hand spreader can be used in small areas), making sure that successive seed strips overlap to provide uniform coverage. Seed should be drilled to a depth of 1/2 inch.

1. Seed mixed in proportions shown in Section 2405.2 may be broadcast by approved sowing equipment. The seed shall be uniformly distributed over the designated areas. The seed shall be covered to an average depth of ½ inch by means of a brush harrow, spike-tooth harrow, chain

harrow, cultipacker or other approved device.

2. Areas to be seeded shall be fertilized at rates specified in Section 2401.3.F. The seedbed shall be free of any irregularities in the surface, and shall be corrected in order to prevent formation of water pockets. All seeded areas are to be completely covered with hydromulch or with straw anchored to the soil a minimum depth of 3 inches by a disc harrow set nearly straight, to properly maintain soil moisture and to provide shade for the newly germinated chutes.

3. Promptly after mulching, wet the seedbed thoroughly, keeping all areas moist throughout the germination period. Protect all turf areas by erecting temporary fences, barriers, signs, etc. as necessary to prevent trampling and disturbance.

4. When delays in operations carry the work beyond the most favorable planting season for the grasses designated, or when conditions are such, by reason of drought, high winds, excessive moisture, or other factors that satisfactory results are not likely to be obtained, the seeding operation shall be stopped and work shall be resumed only when conditions are favorable again or when approved alternative or corrective measures and procedures have been put into effect. If inspection during seeding operations or after indicate there are areas which have been skipped, the sowing of additional seed on these areas will be required.

5. The seeded areas will be inspected for acceptable grass coverage and will be acceptable when grasses designated are growing and are in good condition and no area more than ½ of one percent of the total areas shall be bare, of which no single area shall be more than one foot square in area. Any bare area larger than this will not be acceptable and shall be reseeded.

I. Compaction: Immediately following the completion of seeding operations, the entire area shall be compacted by means of a roller weighing at least 60 but not more than 90 pounds per linear foot of roller.

J. Maintenance Period: The Contractor shall be responsible for maintaining the installed grass seed and sod until all areas are complete and accepted by the Owner.

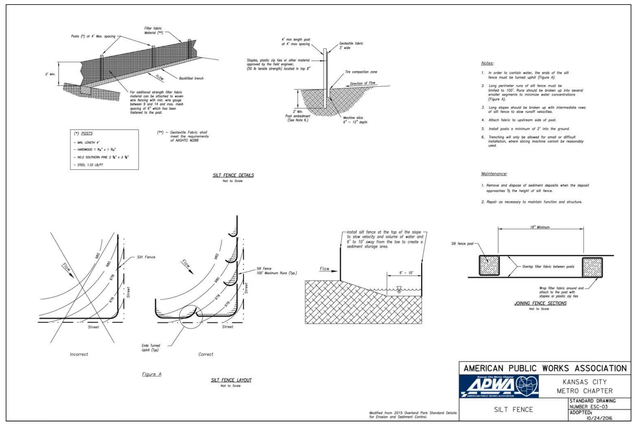
K. Mulching: Mulching shall be done within 24 hours following the seeding operation except in the case of wood cellulose fiber type mulch.

1. Vegetative Type Mulch: After compacting the surface, mulch shall be uniformly spread at the rate of 1.5 tons per acre by means of a mechanical spreader or other approved means. As soon as the mulch is spread it shall be anchored to the soil a minimum depth of 3 inches by use of a heavy disc harrow, set nearly straight, or a similar approved tool. Discs of the anchoring tool shall be set approximately 9 inches apart. Anchoring shall be accomplished by not more than two passes of the tool.

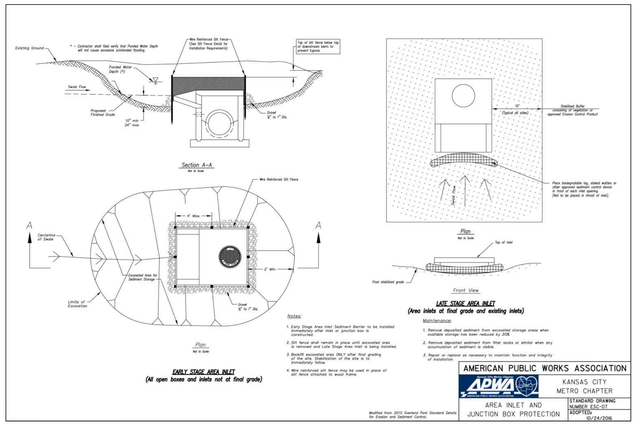
2. Wood Cellulose Fiber Type: Wood cellulose fiber mulch shall be added to the hydraulic seeder after the proportionate amounts of seed, fertilizer and water, and other approved materials are added. These ingredients shall be mixed to form a slurry which shall be applied at the rate of 1,000 pounds per acre. The mulch shall make a uniform coverage of the soil surface that will be satisfactory to the Owner.

SECTION 2402 SODDING

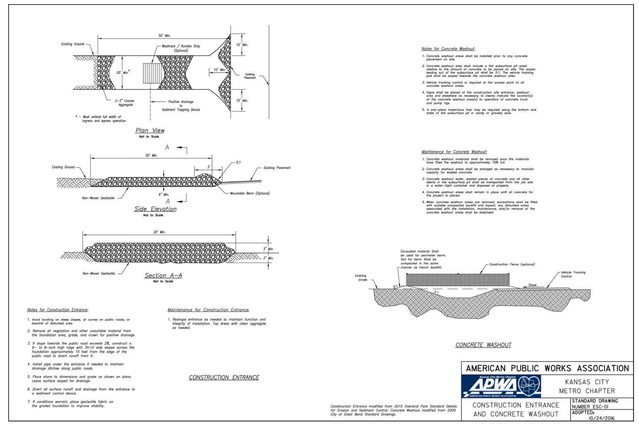
2402.1 Scope



DETAIL #02
SILT FENCE
N.T.S.



DETAIL #03
INLET PROTECTION
N.T.S.



DETAIL #04
CONSTRUCTION ENTRANCE AND WASHOUT STATION
N.T.S.

SWPPP GENERAL NOTES

1. SEDIMENT AND EROSION CONTROL SHALL NOT BE LIMITED TO THE MEASURES SHOWN ON THE PLANS. THE CONTRACTOR, WITH THE APPROVAL OF JACKSON COUNTY SHALL UTILIZE BEST MANAGEMENT PRACTICES TO PREVENT SEDIMENT FROM ENTERING ADJACENT PROPERTIES, ROADWAYS, STORM SEWERS, AND DRAINAGE WAYS.
2. ALL SILTATION CONTROL DEVICES SHALL BE INSPECTED BY THE CONTRACTOR WEEKLY AND WITHIN 48 HOURS AFTER EACH RAINFALL EVENT. ANY APPRECIABLE ACCUMULATION OF MUD TO BE REMOVED AND SILTATION MEASURES REPAIRED WHERE NECESSARY.
3. SEDIMENT AND EROSION CONTROL PLANS FOR SITES THAT EXCEED 20,000 SQUARE FEET OF GRADING SHALL PROVIDE FOR SEDIMENT OR DEBRIS BASINS, SILT TRAPS OR FILTERS, OR OTHER APPROVED MEASURES TO REMOVE SEDIMENT FROM RUN-OFF WATERS. THE DESIGN TO BE APPROVED BY THE DESIGNATED OFFICIAL. TEMPORARY SILTATION CONTROL MEASURES (STRUCTURAL) SHALL BE MAINTAINED UNTIL VEGETATIVE COVER IS ESTABLISHED AT A SUFFICIENT DENSITY TO PROVIDE EROSION CONTROL ON THE SITE.
4. WHERE NATURAL VEGETATION IS REMOVED DURING GRADING, VEGETATION SHALL BE RE-ESTABLISHED IN SUCH A DENSITY AS TO PREVENT EROSION. PERMANENT TYPE GRASSES SHALL BE ESTABLISHED AS SOON AS POSSIBLE DURING THE NEXT SEEDING PERIOD AFTER GRADING HAS BEEN COMPLETED.
5. WHEN GRADING OPERATIONS ARE COMPLETED OR SUSPENDED FOR MORE THAN 14 DAYS PERMANENT GRASS MUST BE ESTABLISHED AT SUFFICIENT DENSITY TO PROVIDE EROSION CONTROL ON THE SITE, BETWEEN PERMANENT GRASS SEEDING PERIODS, TEMPORARY COVER SHALL BE PROVIDED ACCORDING TO JACKSON COUNTY RECOMMENDATIONS. ALL FINISHED GRADES (AREAS NOT TO BE DISTURBED BY FUTURE IMPROVEMENT) IN EXCESS OF 20% SLOPES (5:1) SHALL BE MULCHED AND TACKED AT THE RATE OF 100 POUNDS PER 1,000 SQUARE FEET WHEN SEEDED.
6. PROVISIONS SHALL BE MADE TO ACCOMMODATE THE INCREASED RUNOFF CAUSED BY CHANGED SOILS AND SURFACE CONDITIONS DURING AND AFTER GRADING. UNVEGETATED OPEN CHANNELS SHALL BE DESIGNED SO THAT GRADIENTS RESULT IN VELOCITIES OF 2 FPS (FEET PER SECOND) OR LESS. OPEN CHANNELS WITH VELOCITIES MORE THAN 2 FPS AND LESS THAT 5 FPS SHALL BE ESTABLISHED IN PERMANENT VEGETATION BY USE OF COMMERCIAL EROSION CONTROL BLANKETS OR LINED WITH ROCK RIP RAP OR CONCRETE OR OTHER SUITABLE MATERIALS AS APPROVED BY THE COUNTY ENGINEER. DETENTION BASINS, DIVERSIONS, OR OTHER APPROPRIATE STRUCTURES SHALL BE CONSTRUCTED TO PREVENT VELOCITIES ABOVE 5 FPS.
7. THE ADJOINING GROUND TO DEVELOPMENT SITES (LOTS) SHALL BE PROVIDED WITH PROTECTION FROM ACCELERATED AND INCREASED SURFACE WATER, SILT FROM EROSION, AND ANY OTHER CONSEQUENCE OF EROSION. RUN-OFF WATER FROM DEVELOPED AREAS (PARKING LOTS, PAVED SITES AND BUILDINGS) ABOVE THE AREA TO BE DEVELOPED SHALL BE DIRECTED TO DIVERSIONS, DETENTION BASINS, CONCRETE GUTTERS AND/OR UNDERGROUND OUTLET SYSTEMS. SUFFICIENTLY ANCHORED STRAW BALES MAY BE TEMPORARILY SUBSTITUTED WITH THE APPROVAL OF THE COUNTY ENGINEER.
8. UPON COMPLETION OF STORM SEWERS, SILTATION CONTROL SHALL BE PROVIDED AROUND ALL OPEN SEWER INLETS AND SHALL REMAIN UNTIL THE DISTURBED DRAINAGE AREAS HAVE BEEN PROPERLY STABILIZED.
9. SEDIMENT SHALL BE WASHED FROM ALL VEHICLES AT WASH DOWN STATION PRIOR TO LEAVING THE SITE. NO TRACKING OF MUD ONTO PUBLIC ROADS SHALL BE ALLOWED.
10. ALL TRASH AND DEBRIS ON-SITE, EITHER EXISTING OR FROM CONSTRUCTION, MUST BE REMOVED AND PROPERLY DISPOSED OF OFF-SITE.
11. SILTATION CONTROL MEASURES SHALL BE INSTALLED BEFORE GRADING ACTIVITIES BEGIN AND SHALL BE MAINTAINED UNTIL ALL SITEWORK THAT COULD GENERATE SILT IS COMPLETED.
12. ALL FEDERAL, STATE AND LOCAL PERMITS AND BMP INSPECTION REPORTS ARE TO BE LOCATED AT THE JOB TRAILER FOR VIEWING AT ALL TIMES.
13. THE PROJECT WILL NOT EMPLOY THE USE OF TEMPORARY, ON SITE, CONCRETE OR ASPHALT BATCH PLANTS.
14. THIS SITE DOES NOT REQUIRE 404/401 PERMITTING.
15. NO DEWATERING METHODS ARE ANTICIPATED OR PROPOSED FOR THIS PROJECT.
16. NO CONSTRUCTION WASTE OR POTENTIAL POLLUTION SOURCES ARE PROPOSED TO BE STORED ON SITE DURING CONSTRUCTION OR LAND DISTURBANCES.
17. NO SINKHOLES, SPRINGS, SEEPS, OR KARST FEATURES ARE LOCATED ON THE SITE.
18. PRIOR TO ANY MAJOR LAND DISTURBANCE ACTIVITY, A LAND DISTURBANCE PERMIT FROM THE STATE OF MISSOURI DEPARTMENT ON NATURAL RESOURCES WILL BE REQUIRED. CONTRACTOR SHALL ADHERE TO THE REQUIREMENTS OF SAID PERMIT.
19. THE LOSS OF ANY CONTAINED SEDIMENT OR OTHER POLLUTANT REQUIRES IMMEDIATE ACTION WHICH MUST BE DOCUMENTED AND REPORTED TO JACKSON COUNTY.
20. ROUTINE INSPECTIONS SHALL OCCUR WEEKLY AND NO LATER THAN 48 HOURS AFTER RUNOFF PRODUCING RAINFALL EVENT TO ENSURE THAT ALL BMPS ARE CONTINUALLY IMPLEMENTED AND ARE EFFECTIVE.
21. PROPOSED POST CONSTRUCTION SURFACE BMPS SHALL BE CONSTRUCTED AFTER SUBSTANTIAL COMPLETION OF LAND DISTURBANCE ACTIVITIES. ALL POST CONSTRUCTION BMPS ARE TO BE PROTECTED FROM RUNOFF, SEDIMENT, AND DAMAGE DURING CONSTRUCTION ACTIVITIES.
22. EPA ALLOWABLE NON-STORM WATER DISCHARGES:

    WATERLINE FLUSHING
    LANDSCAPE IRRIGATION
    DIVERTED STREAM FLOWS
    RISING GROUND WATERS
    UNCONTAMINATED GROUND WATER INFILTRATION
    UNCONTAMINATED PUMPED GROUND WATER
    FOUNDATION DRAINS
    DISCHARGE FROM POTABLE WATER SOURCES
    AIR CONDITIONING CONDENSATION
    IRRIGATION WATER, SPRINGS
    WATER FROM CRAWL SPACE PUMPS
    FOOTING DRAINS
    LAWN WATERING
    INDIVIDUAL RESIDENT CAR WASHING
    FLOWS FROM RIPARIAN HABITATS AND WETLANDS
    DE-CLORINATED SWIMMING POOL DISCHARGES
    STREET WASH WATER
    RESIDENTIAL BUILDING WASH WATERS, WITHOUT DETERGENTS
    DISCHARGES FROM EMERGENCY FIRE FIGHTING ACTIVITIES

SWPPP Certification
I certify under penalty of law that this Storm Water Pollution Prevention Plan has been prepared in accordance with the requirements and regulations of the Missouri Department of Natural Resources and the approval of the local governing agency. Additionally, this plan has been prepared to substantially comply with the General Permit Requirements of the United States Environmental Protection Agency. To the best of my knowledge and belief, the information contained in this plan is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for known violations.

Signature: _____ Date: _____

NOTES:
1. CONTRACTOR SHALL REFER TO OTHER PLANS WITHIN THIS CONSTRUCTION SET FOR OTHER PERTINENT INFORMATION. IT IS NOT THE ENGINEER'S INTENT THAT ANY SINGLE PLAN SHEET IN THIS SET OF DOCUMENTS FULLY DEPICT ALL WORK ASSOCIATED WITH THIS PROJECT.

KARL A. SCHOENIKE, PE
(MO PE# 2003015039)

STATE OF MISSOURI
KARL A. SCHOENIKE
NUMBER PE-2003015039
03/13/2026
REGISTERED PROFESSIONAL ENGINEER

REFERENCE

EXISTING TOPOGRAPHIC DATA AND FEATURES ARE A COMBINATION OF THE FOLLOWING:
1. ALTA SURVEY DATED 08-20-2025 BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC.
2. DEVELOPMENT PLANS FOR OLDHAM VILLAGE (BY OTHER)
3. SITE DEVELOPMENT PLANS DATED 12-22-2025 BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC.

NOTE TO CONTRACTOR: PRIOR TO ANY EXCAVATION FOR UNDERGROUND UTILITIES, CONTRACTOR SHALL EXPOSE AND VERIFY LOCATIONS (HORIZONTAL AND VERTICAL) OF ALL EXISTING UTILITIES INCLUDING BUT NOT LIMITED TO GAS, WATER, BROADBAND, PHONE, SANITARY AND STORM SEWERS. ANY CONFLICT SHALL BE REPORTED IMMEDIATELY TO THE ENGINEER AND APPROPRIATE AUTHORITIES

811 or 1-800-344-7483
https://missouri-811.org

REVISION RECORD

NO.	DATE	DESCRIPTION
	01/30/2026	BID SET ADDENDUM 2
	02/03/2026	PLAT BID SET
	03/03/2026	REVISED PER REVIEW AND COMMENTS
	03/13/2026	Revised per Approved Final Development Plans

ENGINEERING, SURVEYING, AND LANDSCAPE ARCHITECTURE IN THE STATE OF NORTH CAROLINA WILL BE PROVIDED BY CEC SURVEYING, PLLC. ENGINEERING, SURVEYING, AND LANDSCAPE ARCHITECTURE IN THE STATE OF MISSOURI WILL BE PROVIDED BY CEC ENGINEERS & CONSULTANTS, LLC. LANDSCAPE ARCHITECTURE SERVICES IN THE STATE OF OHIO WILL BE PROVIDED BY CEC EXPLORE ARC, PRO-TECT, LLC.

CEC Civil & Environmental Consultants, Inc.
1450 Beale Street
Suite 305
St. Charles, MO 63303
Ph: 314.656.4566
www.cecinc.com

COSTCO WHOLESALE
LEE'S SUMMIT, MISSOURI

COSTCO LEES SUMMIT
CONSTRUCTION DOCUMENTS
E&S DETAILS
REVIEW SET - NOT FOR CONSTRUCTION
DECEMBER 22, 2025

DRAWN BY:	MK
CHECKED BY:	KAS
PROJECT NO:	353-308.0002
APPROVED BY:	*DRK
DWG SCALE:	
DATE:	

DRAWING NO.:
C901
SHEET 31 OF 31

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