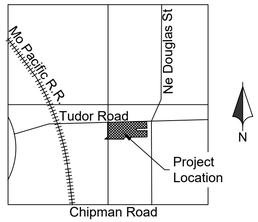
EVREN APARTMENTS

Lee's Summit, Jackson County, Missouri
Section 31, Township 48N, Range 31W

Public Water Extension Plans



LOCATION MAP
SECTION 31, T48N, R31W
Scale 1" = 2000'

Summary of Quantities

No.	Item	Unit	Qty
1	12" C900 PVC	LF	1236.62
2	12" Gate Valve	EA	17
3	10" Gate Valve	EA	2
4	12" Solid Sleeve	EA	3
5	12"x12" Tee w/ Backing Block	EA	3
6	12"x8" Tee w/ Backing Block	EA	2
7	12" 45deg. Bend w/ Backing Block	EA	6
8	12" 22.5deg. Bend w/ Backing Block	EA	1
9	12" 11.25deg. Bend w/ Backing Block	EA	2
10	Hydrant Assembly	EA	2
11	12"x6" Tee w/ Backing Block	EA	2
12	12"x8" Reducer	EA	1
13	8"x6" Tee w/ Backing Block	EA	1
14	Erosion Control	LS	1
15	Mobilization	LS	1

Legal Description:

Sheet List Table

Sheet Number	Sheet Title
01	Title Sheet
02	General Notes
03	Existing Conditions
04	Water Plan and Profile
05	Erosion Control Phase 1
06	Erosion Control Phase 2
07	Erosion Control Phase 3
08	Standard Details 1
09	Standard Details 2
10	Standard Details 3

UTILITIES

WATER & SANITARY SEWER
City of Lee's Summit Water Utilities
1200 SE Hamblen Road
Lee's Summit, MO
Phone:816.969.1900

ELECTRICITY
Kansas City Power and Light
Phone: 816.471.5275

GAS
Missouri Gas Energy
PO Box 219255
Kansas City, Missouri 64141
Phone: 816.756.5252

TELEPHONE
AT&T
Phone: 800.288.2020

Time Warner Cable
Phone: 816.222.5952

CABLE TV
Comcast
Phone: 816.795.1100

Time Warner Cable
Phone: 816.358.8833

FLOOD PLAIN NOTE

According to the FEMA Flood Insurance Rate Map Number 29095C0417G, revised January 20th 2017, this tract lie in: OTHER AREAS, ZONE X, defined as areas determined to be outside the 0.2% annual chance floodplain.

The information concerning locations of underground utilities shown hereon which are not visible from the surface, has been taken from the records and field locations of the various utility companies and has not been field verified by this company. These locations are not to be construed as accurate or exact.

Know what's below. Call before you dig.

LEGEND

Existing Section Line	Proposed Right-of-Way
Existing Right-of-Way Line	Proposed Property Line
Existing Lot Line	Proposed Lot Line
Existing Easement Line	Proposed Easement
Existing Curb & Gutter	Proposed Curb & Gutter
Existing Sidewalk	Proposed Sidewalk
Existing Storm Sewer	Proposed Storm Sewer
Existing Storm Structure	Proposed Storm Structure
Existing Waterline	Proposed Fire Hydrant
Existing Gas Main	Proposed Waterline
Existing Sanitary Sewer	Proposed Sanitary Sewer
Existing Sanitary Manhole	Proposed Sanitary Manhole
Existing Contour Major	Proposed Contour Major
Existing Contour Minor	Proposed Contour Minor
	Future Curb and Gutter
U/E Utility Easement	
SS/E Sanitary Sewer Easement	A/E Access Easement
D/E Drainage Easement	T/E Temporary Easement

NORTH
1"=200'
0 100' 200'

Consultant/Applicant:
Renaissance Infrastructure Consulting
Contact: Mick Slutter, P.E.
400 E, 17th Street
Kansas City, Mo. 64108
(816) 800-0950

Prepared For:
Cityscape Residential
Contact: Ryan Adams, VP
10000 College Blvd., Suite 120
Overland Park, KS 66227
radams@cityscaperesidential.com

Public Water Extension Plans
24-0166
EVREN APARTMENTS
Lee's Summit, Jackson County, Missouri

Title Sheet

NO.	DATE	REVISION
3	10/29/2024	PER CITY COMMENTS
2.	08/16/2024	City Submittal
1	08/01/2024	90% Plans

DRAWN BY TCD | CHECKED BY MES

Renaissance Infrastructure Consulting
816.800.0950
WWW.RIC-CONSULT.COM
400 E 17TH STREET
KANSAS CITY, MISSOURI 64108
MO Certificate of Authority: E-2010033630

STATE OF MISSOURI
MITCHELL E. SLUTTER
NUMBER PE-2002003418
PROFESSIONAL ENGINEER
10/29/25
MITCHELL E. SLUTTER PE-2002003418

Sheet
01 of 10

GENERAL NOTES

1. All work in public easements and right of way and all erosion control work must comply with the latest edition of the Technical Provisions & Standard Drawings for Roads and Sewers, of Lee's Summit, Jackson County, Missouri. If any general notes conflict with the Technical Provisions & Standard Drawings for Roads and Sewers, of Lee's Summit, Jackson County, Missouri, the Cities standards shall override.
2. The contractor shall provide evidence that his insurance meets the requirements of Lee's Summit, Missouri.
3. All traffic control shall be in conformance with the Manual of Uniform Traffic Control Devices (MUTCD).
4. The contractor is responsible for the protection of all property corners and section corners. Any property corners and/or section corners disturbed or damaged by construction activities shall be reset by a Registered Land Surveyor licensed in the State of Missouri, at the contractor's expense.
5. The contractor shall be responsible for the restoration of the right-of-way and for damaged improvements such as curbs, driveways, sidewalks, street light and traffic signal junction boxes, traffic signal loop lead ins, signal poles, irrigation systems, etc. Damaged improvements shall be repaired in conformance with the latest City standards and to the City's satisfaction.
6. The contractor is responsible for providing erosion and sediment control BMPs to prevent sediment from reaching paved areas, storm sewer systems, drainage courses and adjacent properties. In the event the prevention measures are not effective, the contractor shall remove any debris, silt, or mud and restore the right-of-way, or adjacent properties to original or better condition.
7. The contractor shall remove existing trees and shrubbery within the right-of-way adjacent to future thoroughfare improvements.
8. The contractor shall sod all disturbed areas within the public street right-of-way unless otherwise noted on the plans or if specific written approval is granted by the City.
9. All public street sidewalk ramps constructed will be required to comply with the Americans with Disabilities Act (ADA) and Lee's Summit, Missouri sidewalk details.
11. Excavation for utility work in public street right-of-way requires a Right-of-Way Work Permit from the Public Works Department, in addition to all other permits.
12. All work shall be confined within easements and/or construction limits as shown on the plans.
13. Curb stakes and hubs shall be provided at all high points, low points, ADA ramp openings, and on each side of all curb inlets when setting string line.
14. Any existing and/or temporary storm sewer pipes and box culverts to be abandoned in place shall be grouted using a slurry grout mixture meeting a 7-day compressive strength of 100-150 psi. The slurry grout mixture of fly ash, cement, fine aggregate, forming agents and water shall be approved by the City and shall possess adequate flow characteristics to fill all voids.
15. All existing utilities indicated on the drawings are according to the best information available to the engineer; however, all utilities actually existing may not be shown. The contractor shall be responsible for contacting all utility companies for an exact field location of each utility prior to any construction. All utilities, shown and un-shown, damaged through the negligence of the contractor shall be repaired or replaced by the contractor at his expense.
16. The contractor will be responsible for all damages to existing utilities, pavement, fences, structures, and other features not designated for removal. The contractor shall repair all damages at his expense.
17. By use of these construction documents the contractor hereby agrees that he shall be solely responsible for the safety of the construction workers and the public. The contractor agrees to hold the engineer and owner harmless for any and all injuries, claims, losses, or damages related to the project.
18. The contractor will be responsible for providing all signage, barricades, lighting, etc., as required for temporary traffic control during the construction of this project. Maintenance of the temporary traffic control devices will be the contractor's responsibility. All traffic control in conduction with construction in the right-of-way shall be in conformance with the City Traffic Control Requirements.
19. Geogrid, footings, or other elements of the retaining wall(s) cannot encroach into the right of way, public easements, or adjacent private property.
20. All building and life safety issues shall comply with the city of Lee's Summit, Missouri adopted edition of the International Fire Code and local amendments.
21. Contractor shall be responsible for obtaining all permits including land disturbance, right-of-way, hauling, etc., with Public Works prior to construction.
22. Contractor shall restore all disturbed right-of-way upon project completion.
23. Prior to construction, contractor shall install pre-construction erosion control measures.

EROSION CONTROL NOTES

1. All work in public easements and right-of-way and all erosion control work must comply with the latest edition of the Technical Provisions & Standard Drawings for Roads and Sewers, of Lee's Summit, Missouri. If any of the general notes conflict with the Technical Provisions & Standard Drawings for Roads and Sewers of Lee's Summit, Missouri. The Cities standards shall override.
2. The contractor shall provide all materials, tools, equipment, and labor as necessary to install and maintain adequate erosion control, keep the streets clean of mud and debris, and prevent soil from leaving the project site. The contractor's erosion control measures shall conform to Lee's Summit, Missouri Technical Provisions and Specifications.
3. Erosion control plan modifications shall be required if the plan fails to substantially control erosion and offsite sedimentation.
4. The contractor shall be responsible for maintaining erosion control devices and removing sediment until a minimum of 70% of permanent vegetation has become stabilized and established. Erosion control devices shall remain in place until the 70% established vegetation is met, or the duration of the project, whichever is the later date.
5. The contractor shall temporarily seed and mulch all disturbed areas if there has been no construction activity on them for a period of fourteen (14) calendar days.
6. Install "J" Hooks on silt fence every 100 LF
7. Contractor to install all Phase I erosion control devices prior to construction.
8. Contractor shall replace disturbed area with seed or sod, as indicated on the plans, and shall be installed within 14 days after paving completion and final topsoil grading.
9. Topsoil replacement shall be 6" thick.
10. Silt fence to be installed in accordance with Lee's Summit, Missouri Standard Details.
11. Refer to APWA 2150 for good housekeeping and spill measures.
12. The Contractor shall inspect erosion control devices every 7 days and within 24 hours of a storm of 0.5 inches or more. The Contractor shall repair damage, clean out sediment, and add additional erosion control devices as needed, as soon as practicable, after inspection. The Contractor shall also inspect and assure that all sediment control devices are in working condition prior to any forecasted rainfall.

WRITTEN SEQUENCING

1. Implement Pre-Construction Plan:
   All temporary structural BMP's shown on the BMP plan must be in place before any site disturbance. Clearing necessary to place temporary structural BMP's is the minimum required for installation. Coordinate clearing necessary to place temporary structural BMP's with local weather forecast so that clearing and placement may be completed within a forecast dry period. Stabilize all erosion control measures after installation. Temporary Barrier Fence shall be in Place, around areas not to be disturbed, prior to any construction activities. This area includes Stream Corridor.
2. Clear and Stabilize Work Areas:
   Grade contractor areas and place all-weather surface on contractor areas.
3. Clearing and Grubbing:
   After Phase I BMP's are installed, contractor may clear, grub, and demo required areas as necessary.

ADA ACCESSIBLE ROUTE NOTES

1. All Accessible route construction shall conform to the latest version of the ADA Standards for Accessible Design published by the Department of Justice and the Proposed Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way published by the United States Access Board.
2. Other than ramps and ramp runs, walking surfaces must have running slopes not steeper than 1:20.
3. The cross slope of walking surfaces shall not be steeper than 2%.
4. The minimum width for a linear segment of accessible route shall be 36 inches.
5. Where the accesible route makes a 180 degree turn around an element which is less than 48 inches wide, clear width shall be 42 inches minimum approaching the turn, 48 inches minimum at the turn and 42 inches leaving the turn.
6. An accessible route with a clear width less than 60 inches shall provide passing spaces at intervals of 200 feet maximum. Passing spaces shall be 60 inch by 60 inch minimum.
7. Ramp runs shall have a running slope not steeper than 1:12.
8. Ramp runs with a rise greater than 6 inches shall have handrails.
9. Ramp landings with a maximum slope of 1:48 shall be provided before and after ramp runs.
10. The maximum rise of a ramp run shall be 30 inches.
11. The maximum counter slope between the pavement and the curb at a curb ramp shall be 1:20.
12. Curb ramp landings with a maximum slope of 1:48 shall be provided at the top of curb ramps with a clear width of 60 inches.
13. Detectable warning surfaces complying with the latest ADA Standards shall be provided at pedestrian street crossings and refuge islands.
14. Passenger loading zones shall be provided adjacent to any ADA Accessible stall and have a 2% maximum slope in all directions.
15. Contractor to field verify existing site conditions and contact the engineer if field conditions do not match plan prior to construction.

Demolition Notes

1. Contractor shall be responsible for raising and removal of the existing structures, related utilities, paving, and any other existing improvements as noted.
2. Contractor is to remove and dispose of all debris, rubbish and other materials resulting from previous and current demolition operations. disposal will be in accordance with all local, state and/or federal regulations governing such operations.
3. All demolition work shall be performed in accordance with the owner's site work specifications.
4. Contractor is responsible for repairs of damage and adjustments due to conflicts or grading to any existing structures or undergrond utilities that are to remain in place.
5. All items designated to be demolished and removed from the site shall be disposed of in an appropriate location in accordance with state or local guidelines.
6. Public streets and sidewalks shall be kept clean and clear of trash and debris from demolition operations at all times.
7. The contractor shall be responsible for dust and erosion control during demolition operations.
8. The contractor shall coordinate with all applicable utility companies prior to removal or relocation of any utilities and to safely stop services and dismantle service lines prior to beginning demolition operations.
9. Contractor is to remove and re-use if applicable, but is not limited to sewer pipes, power poles and guy wires, water lines and meters, vegetation, asphalt, and other unsuitable debris or material shown or not shown within construction limits and where necessary to allow for construction activity, all material to be removed as unclassified excavation.
10. All cavities created by removal of existing facilities in the area of proposed construction shall be filled and compacted in accordance with the site work specifications to subgrade elevation.
11. The contractor shall exercise extreme caution when working in the vicinity of the existing overhead electrical power lines.
12. Existing utilities are shown as located and identified in the field by utility company representative. the owner and the engineer make no assurance of the actual location, depth, size or type of utility lines shown. the owner and the engineer makes no assurance that all of the existing utility lines on the site are shown.
13. All existing structures, curb, pavement, and vegetation within the construction limits shall be removed, unless otherwise noted on the plans.
14. Demolition shown on plans does not represent the full extent of what demolition may be required for completion of all proposed construction and are shown for informational purposes only. Contractor shall verify all required demo prior to site disturbance.

EARTHWORK NOTES:

1. CONTOURS AND ELEVATIONS: Existing and proposed contours are shown on plans at one feet (1') contour intervals, unless otherwise noted. Proposed contours and elevations shown represent approximate finish grade.
2. CLEARING AND GRUBBING: Prior to the start of grading and earthwork, the areas to be graded shall be stripped of all vegetation, organic matter, and topsoil, to a minimum depth of four inches (4") or as otherwise directed by the Geotechnical Engineer. Stripping materials shall not be incorporated into structural fills. Topsoil materials shall not be used in building and pavement areas.
3. TOPSOIL: Prior to the start of grading, the contractor shall strip all topsoil from areas to be graded and stockpile at a location on or adjacent to the site as directed by the owner. At completion of grading operations and related construction, the contractor will be responsible for redistribution of topsoil over all areas disturbed by the construction activities. Topsoil shall be placed to a minimum depth of six inches (6") and in accordance with specifications for landscaping. Subgrade below turf areas shall have a minimum 6" depth of soil free of rock larger than 3".
4. SUBGRADE PREPARATION: Prior to placement of new fill material, the existing subgrade shall be proof rolled and approved under the direction of the Geotechnical Engineer or his representative.
5. proof rolling: Prior to the placement of new fill material, the existing subgrade shall be proof rolled and approved under the direction of the Geotechnical Engineer. Unsuitable areas identified by the proof rolling areas shall be undercut and replaced with controlled structural fill or treated with fly ash per the Geotechnical report.
6. EARTHWORK:
   A. GEOTECHNICAL: All earthwork shall conform to the recommendations of the Geotechnical report.
   B. SURFACE WATER: Surface water shall be intercepted and diverted during the placement of fill.
   C. FILLS: All fills shall be considered controlled or structural fill and shall be free of vegetation, organic matter, topsoil, and debris. All fill required for project shall be provided by the Contractor. Material Shall be pre-approved by the Engineer prior to placement.
   D. EXISTING SLOPES: Where fill material is to be placed on existing slopes greater than 5:1 (horizontal to vertical), existing slope shall be benched providing a minimum vertical face of twelve inches (12"). Fill material shall be placed and compacted in horizontal lifts not exceeding nine inched (9") (loose fit measurement), unless otherwise approved by the Geotechnical Engineer.
   E. COMPACTION REQUIREMENTS: All compaction shall conform with the recommendation of the Geotechnical report.
7. TESTING AND INSPECTION: Testing and inspection services required to make tests required by the specifications and to observe the placement of fills and other work performed on this project shall be provided by a commercial testing laboratory (Geotechnical Engineer) selected by the owner. The cost of testing will be the owner's responsibility.
8. SEEDING: All areas disturbed by earthwork operations in the right-of-way shall be seeded.

GRADING NOTES

1. All construction shall conform to the City's minimum design standards.
2. Spot Grades shown herein shall govern over finished grades.
3. The contractor shall provide evidence that his insurance meets the requirements of the Project.
4. All traffic control shall be in conformance with the Manual of Uniform Traffic Control Devices (MUTCD).
5. The contractor is responsible for the protection of all property corners and section corners. Any property corners and/or section corners disturbed or damaged by construction activities shall be reset by a Registered Land Surveyor licensed in the State of Kansas, at the contractor's expense.
6. The contractor shall be responsible for the restoration of the right-of-way and for damaged improvements such as curbs, driveways, sidewalks, streetlight and traffic signal junction boxes, traffic signal loop lead ins, signal poles, irrigation systems, etc. Damaged improvements shall be repaired in conformance with the latest City standards and to the City's satisfaction.
7. The contractor is responsible for providing erosion and sediment control BMPs to prevent sediment from reaching paved areas, storm sewer systems, drainage courses and adjacent properties. In the event the prevention measures are not effective, the contractor shall remove any debris, silt, or mud and restore the right-of-way, or adjacent properties to original or better condition.
8. The contractor shall sod all disturbed areas within the public street right-of-way unless otherwise noted on the plans or if specific written approval is granted by the City.
9. All public street sidewalk ramps constructed will be required to comply with the Americans with Disabilities Act (ADA).
10. Excavation for utility work in public street right-of-way requires a Right-of-Way Work Permit from the Public Works Department, in addition to all other permits.
11. All work shall be confined within easements and/or construction limits as shown on the plans.
12. Curb stakes and hubs shall be provided at all high points, low points, ADA ramp openings, and on each side of all curb inlets when setting string line.
13. All National Pollution Discharge Elimination System (NPDES) standards shall be met.
14. Public and Private utility facilities shall be moved or adjusted as necessary by the owners to fit the new construction unless otherwise noted on the plans. The Contractor is responsible for the cost of utility relocations unless otherwise indicated on the plans.

LAYOUT & PAVING NOTES

1. All construction shall conform to the City of Lee's Summit minimum design standards.
2. Contractor shall keep a full set of City of Lee's Summit Standard Details onsite at all times.
3. The contractor shall check existing grades, dimensions, and inverts in the field and report any discrepancies to the architect/engineer prior to beginning work.
4. The contractor shall verify the exact location of all existing utilities, take care to protect utilities that are to remain, and repair contractor caused damage according to current local standards and at the contractor's expense. Coordinate all construction with the appropriate utility company.
5. The contractor shall comply with all local codes, obtain all permits, and pay all fees prior to beginning work.
6. Prior to installing, constructing, or performing any work in the public right of way or on the public storm sewer line (including concrete pavement or connecting private drainage systems to the storm sewer), contact City Public Works at ###.###.#### for inspection of the work. Contact must be made at least 24 hours prior to start of the work.
7. Provide a smooth transition between existing pavement and new pavement. Field adjustment of final grades may be necessary. Adjust all utilities prior to installation of pavement.
8. The contractor shall protect all trees to remain, in accordance with the specifications. Do not operate or store heavy equipment, nor handle, nor store materials within the drip lines of trees or outside the limit of grading.
9. Concrete walks and pads shall have a broom finish. All concrete shall be 4,000 p.s.i. KCMMB or approved equal, unless otherwise noted. Curb ramps, sidewalk slopes, and driveway ramps shall be constructed in accordance with all current local requirements. If applicable, the contractor shall request inspection of sidewalk and ramp forms prior to placement of concrete.
10. All damage to existing pavement to remain which results from new construction shall be replaced with like materials at contractor's expense. Concrete Pavement Shall be replaced to the nearest existing joint.
11. Dimensions are to the back of curb, or edge of concrete, unless otherwise noted.
12. Maintain one set of as-built drawings on the job site for distribution to the engineer upon completion.
13. For all asphalt pavement, the contractor shall have no more than 30% recycled material in the base course and no recycled material in the surface course.

SITE UTILITY NOTES

1. The contractor is specifically cautioned that the location and/or elevation of existing utilities as Shown on these plans is based on records of the various utility Companies, and where possible, measurements taken in the field. The information is not to be relied on as being exact or complete. The contractor must call the appropriate utility companies at least 48 hours before any excavation to request exact field location of utilities. It shall be the responsibility of the contractor to coordinate with and relocate and/or remove all existing utilities which conflict with the proposed improvements shown on the plans.
2. The construction of storm sewers on this project shall conform to the requirements of Jackson County, Lee's Summit Technical Specifications and Design Criteria.
3. The contractor shall field verify the exact location and elevation of the existing storm sewer locations and the existing elevations at locations where the proposed storm sewer collects or releases to existing ground. If discrepancies are encountered from the information shown on the plans. The contractor shall contact the design engineer. No pipes shall be laid until direction is received from the design engineer.
4. It will be the contractors responsibility to field adjust the top of all manholes and boxes as necessary to match the grade of the adjacent area. Tops of existing manholes shall be raised as necessary to be flush with proposed pavement elevations, and to be 6-inches above finished ground elevations in non-paved areas. No separate or additional compensation will be made to the contractor for making final adjustments to the manholes and boxes.
5. Inlet locations, horizontal pipe information and vertical pipe information is shown to the center of the structure. Deflection angles shown for storm sewer pipes are measured from the center of the curb inlets and manholes. The contractor shall adjust the horizontal location of the pipes to go to the face of the boxes. All roof drains shall be connected to storm sewer structures. Provide cleanouts on roof drain lines at 100' max. spacing and at all bend points. Do not connect roof drains directly to storm sewer pipes.
6. The contractor shall be responsible for furnishing and installing all fire and domestic water lines, meters, back flow devices, pits, valves and all other incidentals required for a complete operable fire protection and domestic water system, if not furnished or installed by the Board of Public Utilities. Coordinate with the Board of Public Utilities. All costs associated with the complete water system for the building shall be the responsibility of the contractor. All work shall conform to the requirements of Jackson County, Lee's Summit.
7. The contractor shall be responsible for furnishing and installing all sanitary sewer service lines from the building to the public line. The contractor shall refer to the architectural plans for specific locations and elevations of the service lines of the building connection. All work shall conform to the requirements of Lee's Summit.
8. The contractor is responsible for securing all permits, bonds and insurance required by the contract documents, Lee's Summit, and all other governing agencies (including local, county, state and federal authorities) having jurisdiction over the work proposed by the construction documents. The cost for all permit bonds and insurance shall be the contractors responsibility and shall be included in the bid for the work.
9. By the use of these construction documents the contractor hereby agrees that he/she shall be solely responsible for the safety of the construction workers and the public. The contractor agrees to hold the engineer and owner harmless for any and all injuries, claims, losses or damages related to the project.
10. The contractor shall be responsible for furnishing all materials, tools and equipment and installation of electrical power, telephone and gas service from a point of connection from the public utility lines to the building structure. This will include all conduits, service lines, meters, concrete pads and all other incidentals required for a complete and operational system as required by the owner and the public utilities. Refer to building plans for exact tie-in locations of all utilities. Contractor shall verify connection points prior to installation of utility line.
11. All fill material is to be in place, compacted, and consolidated before installation of proposed utilities. On-site geotechnical engineer shall provide written confirmation that this requirement has been met and that utilities may proceed in the fill areas. All utilities are to be placed in trench conditions.
12. Contractor shall notify the utility authorities inspectors 49 hours before connecting to any existing line.
13. Storm sewer roof drains(st) shall be as follows (unless otherwise shown on plans).
    -PVC SDR 35 per ASTM D3034, for pipes less than 12' deep.
    -PVC SDR 26 per ASTM D3034, for pipes 12' to 20' deep.
14. Waterlines shall be as follows (unless otherwise shown on plans):
    -for 8" and larger: ductile iron pipe per AWWA C150
    -between 2" and 6": copper tube Type "K" per ANSI 816.22 or ductile iron pipe per AWWA C150
    -For smaller than 2": copper tube Type "K" per ANSI 816.22
15. Fire line size is shown for reference only, fire protection engineer shall verify all sizes and fire flow demand prior to construction.
16. Minimum trench width shall be 2 feet.
17. Contractor shall maintain a minimum of 42" of cover on all waterlines. All water line joints are to be mechanical joints with thrust blocking as called out in specifications and construction plans. Water mains and service lines shall be constructed in accordance to the Board of Public Utilities specifications for commercial services.
18. All waterlines shall be kept ten feet (10') apart (parallel) from sanitary sewer lines or manholes. Or when crossing, an 18" vertical clearance (outside edge of pipe to outside edge of pipe) of the waterline above the sewer line is required.
19. Trench Drain shall be ACO S200K or approved equal.
20. Trench Drain shall be installed in accordance with the manufacturer's installation instructions and recommendations.
21. In the event of a vertical conflict between waterlines, sanitary lines, storm lines and gas lines (existing and proposed), the sanitary line shall be ductile iron pipe with mechanical joints at least 10 feet on both sides of the crossing (or encased in concrete the same distance), the waterline shall have mechanical joints with appropriate thrust blocking as required to provide a minimum of 18" clearance. Meeting requirements ANSI A21.10 or ANSI 21.11 (AWWA C151)(Class 50).
22. All underground storm, sanitary, water and other utility lines shall be installed, inspected and approved before backfilling. Failure to have inspection approval prior to backfill will constitute rejection of work.
23. All necessary inspections and/or certifications required by codes and/or utility service companies shall be performed prior to announced building possession and the final connection of service. Contractor shall coordinate with all utility companies for installation requirements and specifications.
24. refer to building plans for site lighting electrical plan, irrigation, parking lot security system and associated conduit requirements. Coordinate with Owner that all required conduits are in place and tested prior to paving.
25. When a building utility Connection from site utilities leading up to the building cannot be made immediately, temporarily mark all such utility terminations.

PAVEMENT MARKING AND SIGNAGE NOTES

1. Parking stall marking stripes shall be four inch (4") wide white stripes. Handicap stall marking shall be furnished at locations shown on plans.
2. Traffic control devices and pavement markings shall conform to the requirements of the "Manual of Uniform Traffic Control Devices."
3. Traffic control and pavement markings shall be painted with a white Sherwin Williams TM2125 HOTLINE Fast Dry or approved equal. The pavement marking shall be applied in accordance with manufacturers recommendations. Apply on a clean, dry surface and at a surface temperature of not less than 70°f and the ambient air temperature shall not be less than 60°f and rising. Two coats shall be applied.

Public Water Extension Plans

24-0166
EVREN APARTMENTS
Lee's Summit, Jackson County, Missouri

General Notes

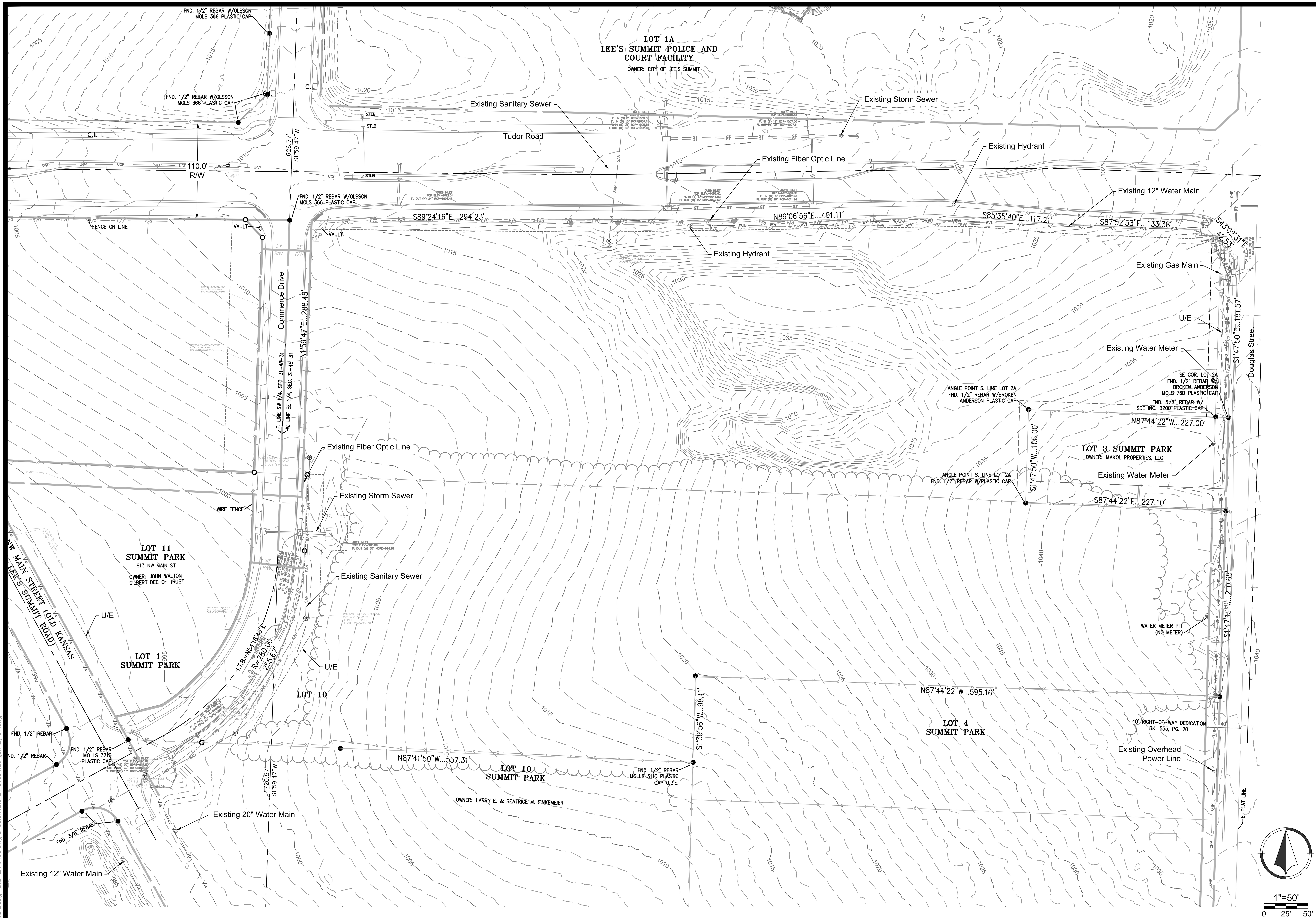
NO.	DATE	REVISION
3	10/29/2024	PER CITY COMMENTS
2	08/16/2024	City Submittal
1	08/01/2024	90% Plans

DRAWN BY TCD | CHECKED BY MES

Renaissance Infrastructure Consulting
816.800.0950
www.ric-consult.com
400 E. 17TH STREET
KANSAS CITY, MISSOURI 64108
MO Certificate of Authority: E-2010033830

STATE OF MISSOURI
MITCHELL BLUTTER
NUMBER PE-2002003418
PROFESSIONAL ENGINEER
12/5/25
MITCHELL E. BLUTTER PE-2002003418

Sheet
02 of 10



LOT 1A
LEE'S SUMMIT POLICE AND COURT FACILITY
OWNER: CITY OF LEE'S SUMMIT
FND. 1/2" REBAR W/OLSSON MOLS 366 PLASTIC CAP
Existing Sanitary Sewer
Existing Storm Sewer
Tudor Road
Existing Hydrant
Existing Fiber Optic Line
Existing 12" Water Main
110.0' R/W
626.77' S1°59'47"W
S89°24'16"E...294.23'
N89°06'56"E...401.11'
S85°35'40"E...117.21'
S87°52'53"E...133.38'
S43°02'31"E 42.53'
FENCE ON LINE
VAULT
Existing Gas Main
U/E
S1°47'50"E...181.57'
Existing Water Meter
Douglas Street
Commerce Drive
N1°59'47"E...288.45'
E. LINE SW 1/4, SEC. 31-48-31
W. LINE SE 1/4, SEC. 31-48-31
SE COR. LOT 2A FND. 1/2" REBAR W/ BROKEN ANDERSON MOLS 760 PLASTIC CAP
FND. 5/8" REBAR W/ SDE INC. 3200 PLASTIC CAP
ANGLE POINT S. LINE LOT 2A FND. 1/2" REBAR W/BROKEN ANDERSON PLASTIC CAP
N87°44'22"W...227.00'
S1°47'50"W...106.00'
LOT 3 SUMMIT PARK
OWNER: MAKOL PROPERTIES, LLC
ANGLE POINT S. LINE LOT 2A FND. 1/2" REBAR W/PLASTIC CAP
S87°44'22"E...227.10'
WIRE FENCE
LOT 11 SUMMIT PARK
813 NW MAIN ST.
OWNER: JOHN WALTON GILBERT DEC OF TRUST
NW MAIN STREET (OLD KANSAS LEE'S SUMMIT ROAD)
LOT 1 SUMMIT PARK
L.T.B.=N54°18'46"E
R=280.00
255.67'
LOT 10
S1°47'10"E...210.65'
WATER METER PIT (NO METER)
S1°39'56"W...98.11'
N87°44'22"W...595.16'
LOT 4 SUMMIT PARK
40' RIGHT-OF-WAY DEDICATION BK. 555, PG. 20
Existing Overhead Power Line
FND. 1/2" REBAR
FND. 1/2" REBAR MO LS 3710 PLASTIC CAP
N87°41'50"W...557.31'
LOT 10 SUMMIT PARK
OWNER: LARRY E. & BEATRICE M. FINKEMEIER
FND. 1/2" REBAR MO LS 3110 PLASTIC CAP 0.3'E.
1720.57' S1°59'47"W
FND. 5/8" REBAR
Existing 20" Water Main
Existing 12" Water Main
E. PLAT LINE
1"=50'
0 25' 50'

Public Water Extension Plans

24-0166
EVREN APARTMENTS
Lee's Summit, Jackson County, Missouri

Existing Conditions

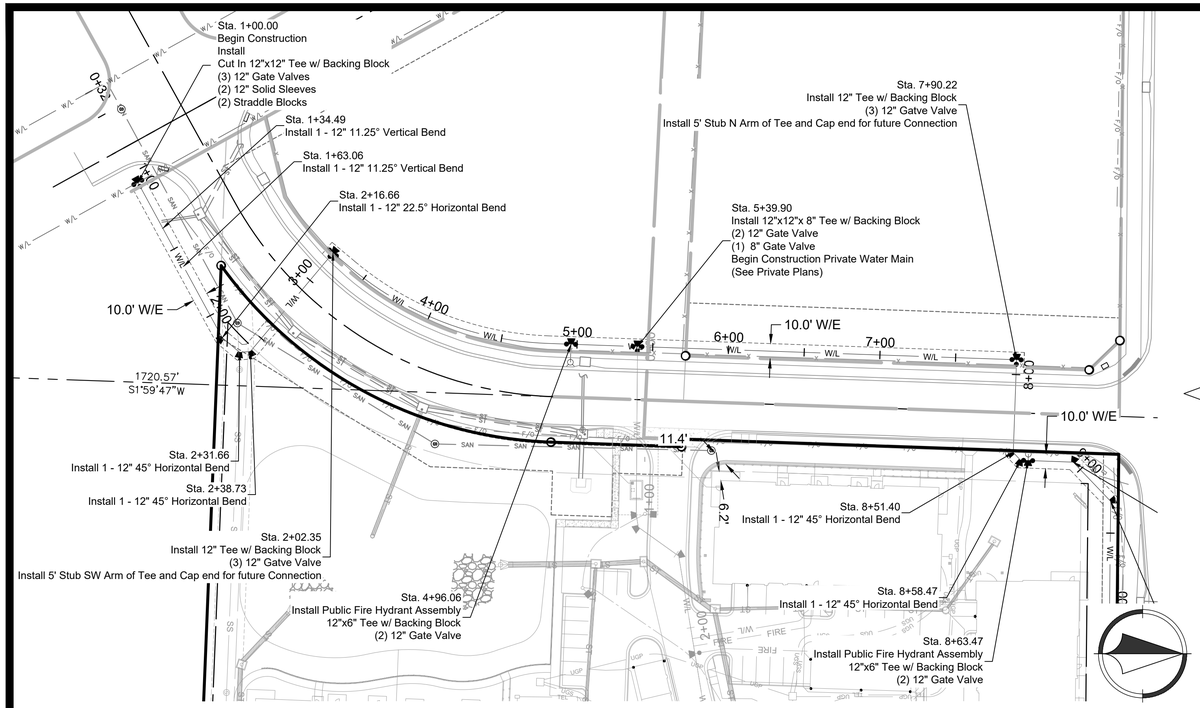
NO.	DATE	REVISION
3	10/29/2024	PER CITY COMMENTS
2	08/16/2024	City Submittal
1	08/01/2024	90% Plans

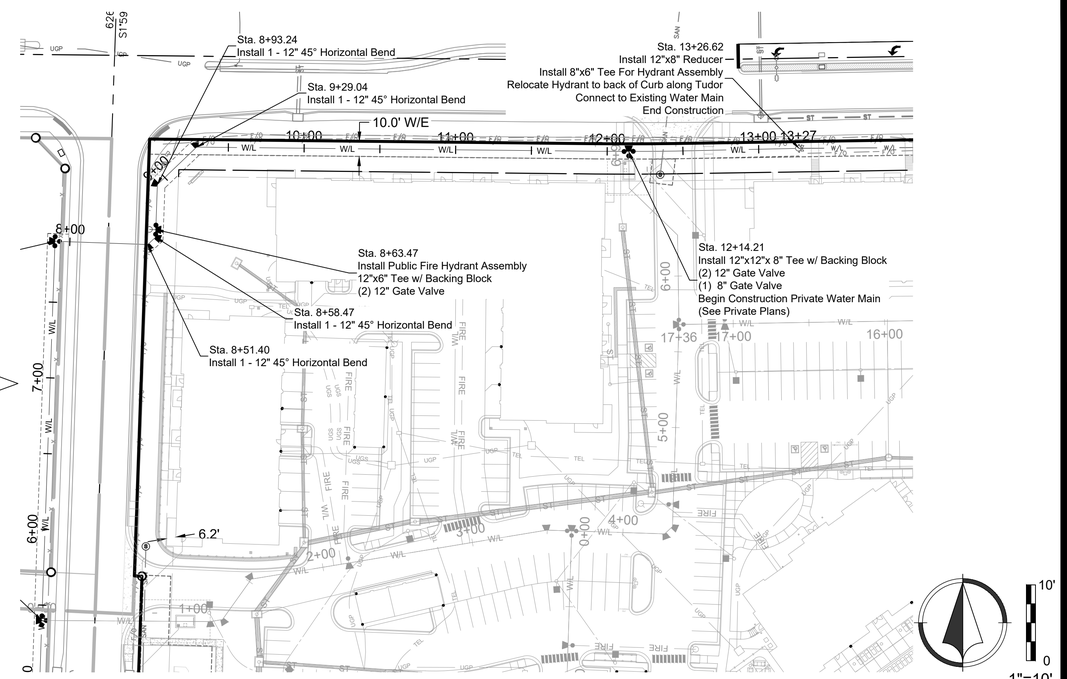
DRAWN BY	CHECKED BY
TCD	MES

Renaissance Infrastructure Consulting
400 E 17th Street
Kansas City, Missouri 64108
816.800.0950
www.ric-consult.com
MO Certificate of Authority: E-2010033630

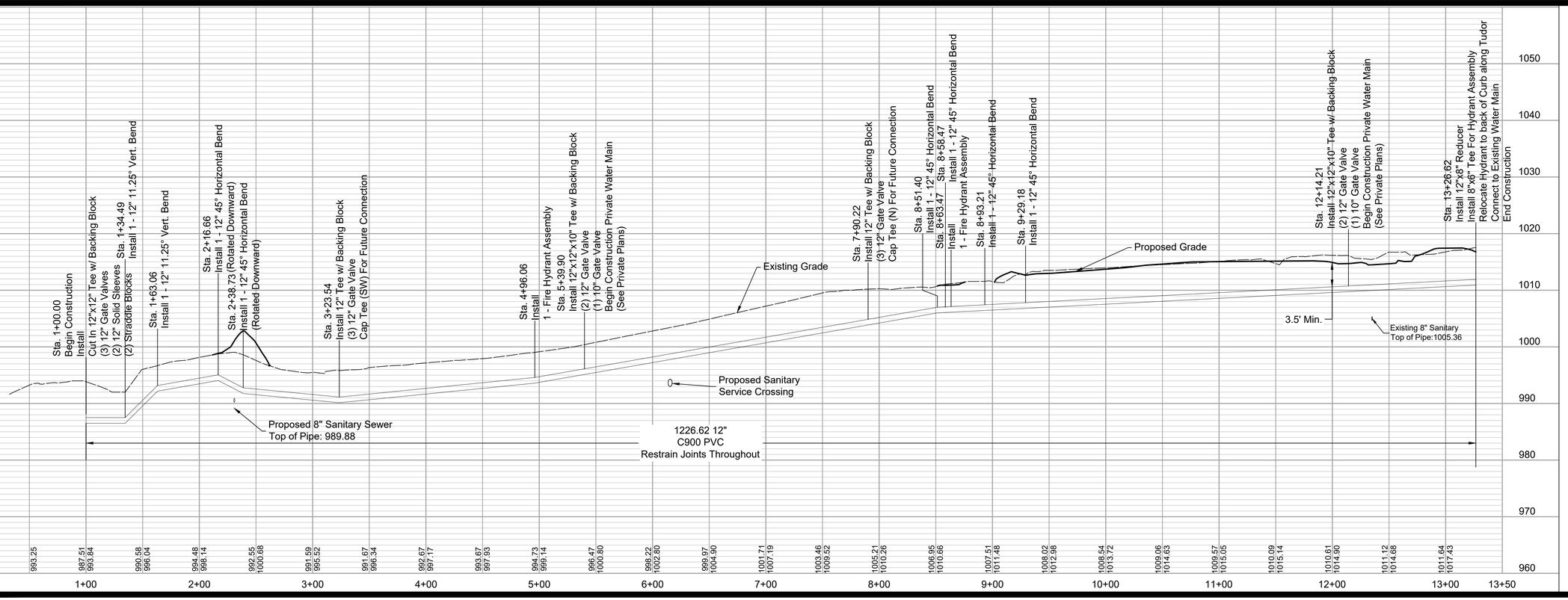
STATE OF MISSOURI
MITCHELL E. SLUTTER
NUMBER PE-2002003418
PROFESSIONAL ENGINEER
MITCHELL E. SLUTTER PE-2002003418

tdaniel
Jan 13, 2025-2:39pm
Z:\RIC Design\2024\24-0166\Dwg\Sheets\Water\24-0166 watr-gen-lay-01.dwg





Fill To Be Placed to 3' Above top of Proposed Pipe and Compacted Prior to Pipe Installation. Compacted to 95% of the Material's Maximum Dry Density.



Public Water Extension Plans

24-0166
EVREN APARTMENTS
Lee's Summit, Jackson County, Missouri

Water Plan And Profile

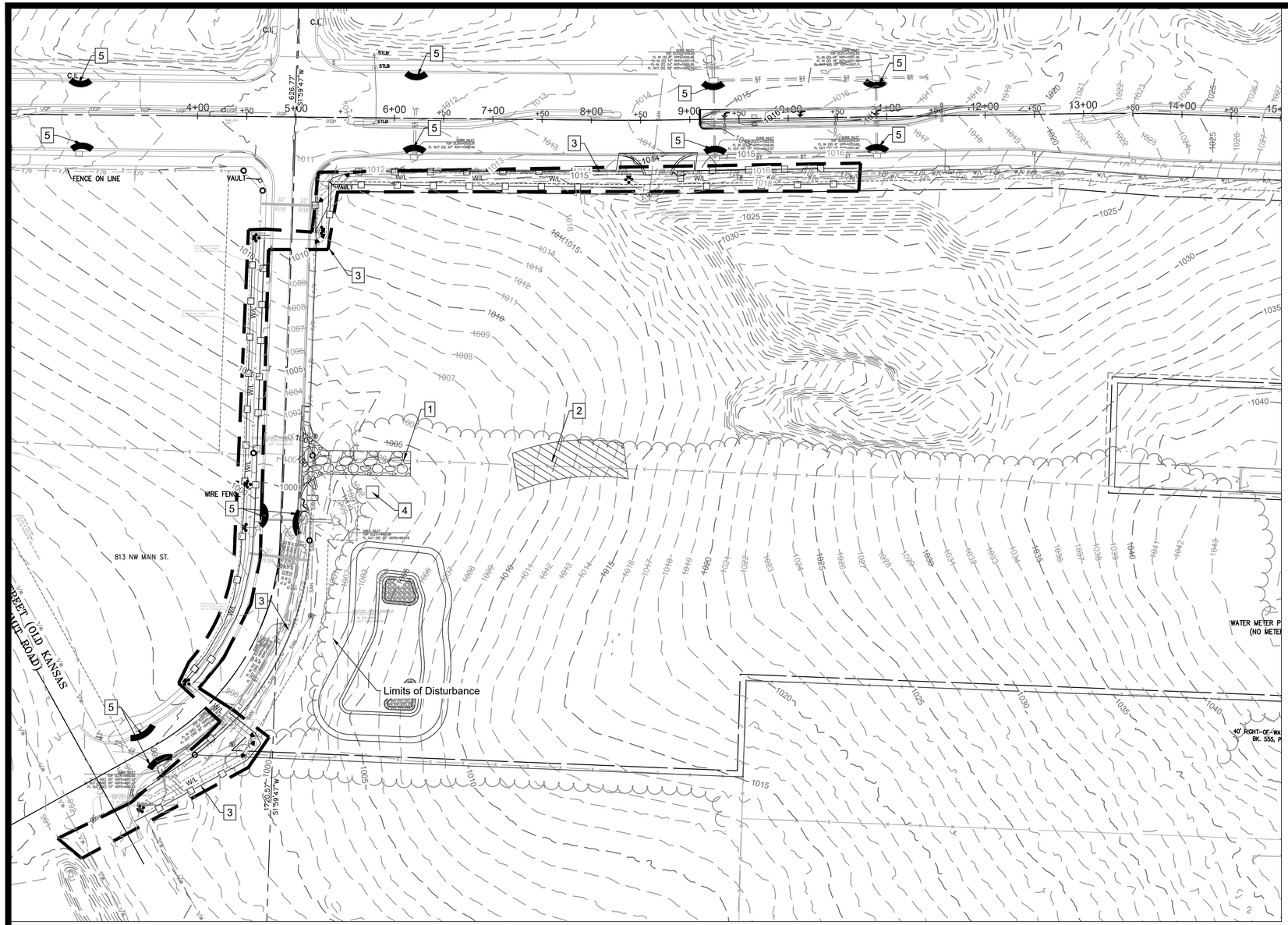
NO.	DATE	REVISION
3	10/29/2024	PER CITY COMMENTS
2.	08/16/2024	City Submittal
1	08/01/2024	90% Plans

DRAWN BY TCD | CHECKED BY MES

Renaissance Infrastructure Consulting
816.800.0950
WWW.RIC-CONSULT.COM
400 E. 17TH STREET
KANSAS CITY, MISSOURI 64108
MO Certificate of Authority: E-2010033630

STATE OF MISSOURI
MITCHELL E. SLUTTER
NUMBER PE-2002003418
PROFESSIONAL ENGINEER
12/3/25
MITCHELL E. SLUTTER PE-2002003418

Sheet
04 of 10



EROSION CONTROL NOTES

1. Erosion control plan modifications shall be required if the plan fails to substantially control erosion and offsite sedimentation.
2. The retention of access controls and sediment controls shall be required for areas where seed has not established 70% cover.
3. The contractor shall temporarily seed and mulch all disturbed areas if soil disturbing activities cease and will not resume for more than 14 days. Stabilization activities must also be completed within 14 days.
4. Install "J' Hooks on silt fence every 100 LF
5. Any location that is being accessed by vehicles needs to have a construction entrance.
6. Contractor must keep a broom on site in order to clean up mud tracked on to the streets immediately.
7. Any contractor parking that is in a disturbed area must be rocked to prevent tracking of mud.

WRITTEN SEQUENCING

1. Implement Pre-Clearing Plan:
   All temporary structural BMP's shown on the pre-clearing plan must be in place before the general clearing operations. Clearing necessary to place temporary structural BMP's is the minimum required for installation. Coordinate clearing necessary to place temporary structural BMP's with local weather forecast so that clearing and placement may be completed within a forecast dry period. Stabilize all erosion control measures after installation. Temporary Barrier Fence shall be in Place, around areas not to be disturbed, prior to any construction activities. This area includes Stream Corridor.
2. Clear and Stabilize Work Areas:
   Grade contractor areas and place all-weather surface on contractor areas.
3. Clearing and Grubbing:
   After Phase I BMP's are installed, contractor may clear, grub, and demo required areas as necessary.

EROSION CONTROL LEGEND

- Temporary Construction Entrance, per detail sheet C13
- Staging Area
- Concrete Washout, per ESC-01 Standard Drawing per APWA 2016
- Limits of Disturbance
- Perimeter Silt Fence
- Inlet Protection

	PROJECT STAGE	PLAN REFERENCE NUMBER	BMP DESCRIPTION	REMOVE AFTER PHASE	NOTES
Phase I	A-Prior to Construction	1	Construction Entrance	II	Install Construction Entrance
		2	Staging Area	II	Install Staging Area
		3	Perimeter Silt Fence	III	Install Silt Fence
		4	Concrete Washout	II	Install Concrete Washout as Shown on Plans Prior to Pouring Any Concrete
Phase II	B - During Land Disturbance & Storm Infrastructure Installation	5	Inlet Protection	III	Install Filter Bags to trap sediment and debris during construction
Phase III	C-Final Stabilization	6	Establish Perennial Vegetation	N/A	Redistribute Topsoil and Seed and Mulch all Disturbed Area. Stabilization Complete when 100% of Disturbed Area is Established with Perennial Vegetation with a Density of 70%

LEGEND
- Existing Major Contour
- Existing Minor Contour
- Proposed Major Contour
- Proposed Minor Contour

1"=60'
0 30' 60'

Public Water Extension Plans

24-0166
EVREN APARTMENTS
Lee's Summit, Jackson County, Missouri

Erosion Control Phase 1

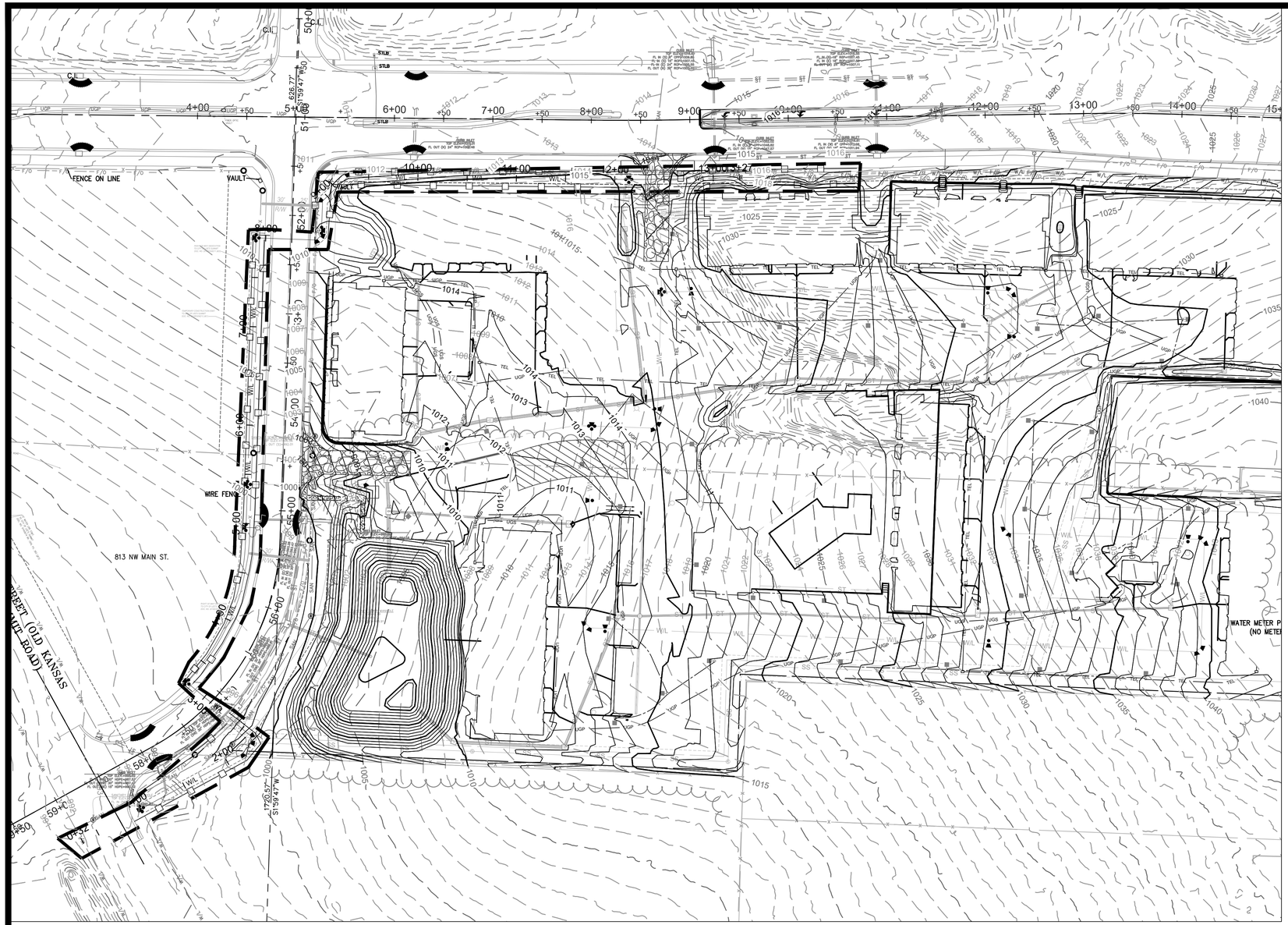
NO.	DATE	REVISION
3	10/29/2024	PER CITY COMMENTS
2	08/16/2024	City Submittal
1	08/01/2024	90% Plans

DRAWN BY TCD | CHECKED BY MES

Renaissance Infrastructure Consulting
816.800.0950
WWW.RIC-CONSULT.COM
400 E 17TH STREET
KANSAS CITY, MISSOURI 64108
MO Certificate of Authority: E-2010033630

STATE OF MISSOURI
MITCHELL K. SLUTTER
NUMBER PE-2002003418
PROFESSIONAL ENGINEER
12/23/25
MITCHELL E. SLUTTER PE-2002003418

Sheet
05 of 10



EROSION CONTROL NOTES

1. Erosion control plan modifications shall be required if the plan fails to substantially control erosion and offsite sedimentation.
2. The retention of access controls and sediment controls shall be required for areas where seed has not established 70% cover.
3. The contractor shall temporarily seed and mulch all disturbed areas if soil disturbing activities cease and will not resume for more than 14 days. Stabilization activities must also be completed within 14 days.
4. Install "J' Hooks on silt fence every 100 LF
5. Any location that is being accessed by vehicles needs to have a construction entrance.
6. Contractor must keep a broom on site in order to clean up mud tracked on to the streets immediately.
7. Any contractor parking that is in a disturbed area must be rocked to prevent tracking of mud.

WRITTEN SEQUENCING

1. Implement Pre-Clearing Plan:
   All temporary structural BMP's shown on the pre-clearing plan must be in place before the general clearing operations. Clearing necessary to place temporary structural BMP's is the minimum required for installation. Coordinate clearing necessary to place temporary structural BMP's with local weather forecast so that clearing and placement may be completed within a forecast dry period. Stabilize all erosion control measures after installation. Temporary Barrier Fence shall be in Place, around areas not to be disturbed, prior to any construction activities. This area includes Stream Corridor.
2. Clear and Stabilize Work Areas:
   Grade contractor areas and place all-weather surface on contractor areas.
3. Clearing and Grubbing:
   After Phase I BMP's are installed, contractor may clear, grub, and demo required areas as necessary.

EROSION CONTROL LEGEND

- Temporary Construction Entrance, per detail sheet C13
- Staging Area
- Concrete Washout, per ESC-01 Standard Drawing per APWA 2016
- Limits of Disturbance
- Perimeter Silt Fence
- Inlet Protection

	PROJECT STAGE	PLAN REFERENCE NUMBER	BMP DESCRIPTION	REMOVE AFTER PHASE	NOTES
Phase I	A-Prior to Construction	1	Construction Entrance	II	Install Construction Entrance
		2	Staging Area	II	Install Staging Area
		3	Perimeter Silt Fence	III	Install Silt Fence
		4	Concrete Washout	II	Install Concrete Washout as Shown on Plans Prior to Pouring Any Concrete
Phase II	B - During Land Disturbance & Storm Infrastructure Installation	5	Inlet Protection	III	Install Filter Bags to trap sediment and debris during construction
Phase III	C-Final Stabilization	6	Establish Perennial Vegetation	N/A	Redistribute Topsoil and Seed and Mulch all Disturbed Area. Stabilization Complete when 100% of Disturbed Area is Established with Perennial Vegetation with a Density of 70%

LEGEND

- Existing Major Contour
- Existing Minor Contour
- Proposed Major Contour
- Proposed Minor Contour

1"=20'
0 10' 20'

Public Water Extension Plans

24-0166
EVREN APARTMENTS
Lee's Summit, Jackson County, Missouri

Erosion Control Phase 2

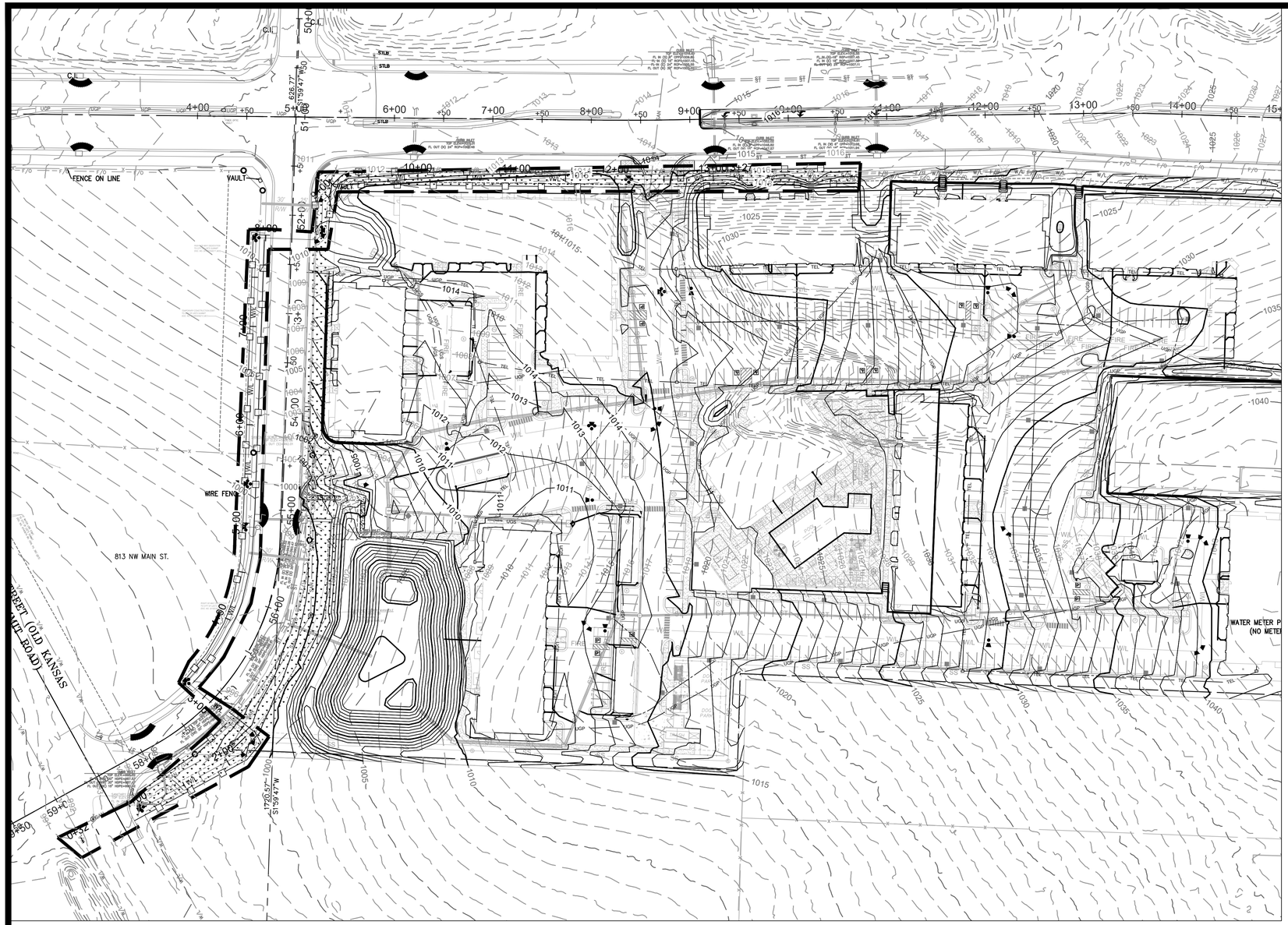
NO.	DATE	REVISION
3	10/29/2024	PER CITY COMMENTS
2	08/16/2024	City Submittal
1	08/01/2024	90% Plans

DRAWN BY TCD | CHECKED BY MES

Renaissance Infrastructure Consulting
816.800.0950
WWW.RIC-CONSULT.COM
400 E 17TH STREET
KANSAS CITY, MISSOURI 64108
MO Certificate of Authority: E-2010033630

STATE OF MISSOURI
MITCHELL E. SLUTTER
NUMBER PE-2002003418
PROFESSIONAL ENGINEER
12/23/25
MITCHELL E. SLUTTER PE-2002003418

Sheet
06 of 10



EROSION CONTROL NOTES

1. Erosion control plan modifications shall be required if the plan fails to substantially control erosion and offsite sedimentation.
2. The retention of access controls and sediment controls shall be required for areas where seed has not established 70% cover.
3. The contractor shall temporarily seed and mulch all disturbed areas if soil disturbing activities cease and will not resume for more than 14 days. Stabilization activities must also be completed within 14 days.
4. Install "J' Hooks on silt fence every 100 LF
5. Any location that is being accessed by vehicles needs to have a construction entrance.
6. Contractor must keep a broom on site in order to clean up mud tracked on to the streets immediately.
7. Any contractor parking that is in a disturbed area must be rocked to prevent tracking of mud.

WRITTEN SEQUENCING

1. Implement Pre-Clearing Plan:
   All temporary structural BMP's shown on the pre-clearing plan must be in place before the general clearing operations. Clearing necessary to place temporary structural BMP's is the minimum required for installation. Coordinate clearing necessary to place temporary structural BMP's with local weather forecast so that clearing and placement may be completed within a forecast dry period. Stabilize all erosion control measures after installation. Temporary Barrier Fence shall be in Place, around areas not to be disturbed, prior to any construction activities. This area includes Stream Corridor.
2. Clear and Stabilize Work Areas:
   Grade contractor areas and place all-weather surface on contractor areas.
3. Clearing and Grubbing:
   After Phase I BMP's are installed, contractor may clear, grub, and demo required areas as necessary.

EROSION CONTROL LEGEND

- Temporary Construction Entrance, per detail sheet C13
- Staging Area
- Concrete Washout, per ESC-01 Standard Drawing per APWA 2016
- Limits of Disturbance
- Perimeter Silt Fence
- Inlet Protection

	PROJECT STAGE	PLAN REFERENCE NUMBER	BMP DESCRIPTION	REMOVE AFTER PHASE	NOTES
Phase I	A-Prior to Construction	1	Construction Entrance	II	Install Construction Entrance
		2	Staging Area	II	Install Staging Area
		3	Perimeter Silt Fence	III	Install Silt Fence
		4	Concrete Washout	II	Install Concrete Washout as Shown on Plans Prior to Pouring Any Concrete
Phase II	B - During Land Disturbance & Storm Infrastructure Installation	5	Inlet Protection	III	Install Filter Bags to trap sediment and debris during construction
Phase III	C-Final Stabilization	6	Establish Perennial Vegetation	N/A	Redistribute Topsoil and Seed and Mulch all Disturbed Area. Stabilization Complete when 100% of Disturbed Area is Established with Perennial Vegetation with a Density of 70%

LEGEND
- Existing Major Contour
- Existing Minor Contour
- Proposed Major Contour
- Proposed Minor Contour

1"=20'
0 10' 20'

Public Water Extension Plans

24-0166
EVREN APARTMENTS
Lee's Summit, Jackson County, Missouri

Erosion Control Phase 3

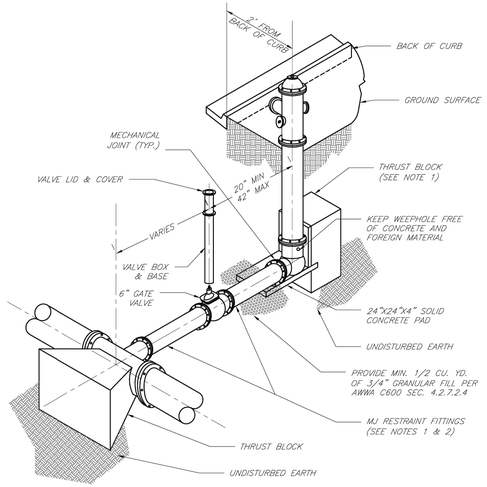
NO.	DATE	REVISION
3	10/29/2024	PER CITY COMMENTS
2.	08/16/2024	City Submittal
1	08/01/2024	90% Plans

DRAWN BY: TCD
CHECKED BY: MES

Renaissance Infrastructure Consulting
816.800.0950
WWW.RIC-CONSULT.COM
400 E 17TH STREET
KANSAS CITY, MISSOURI 64108
MO Certificate of Authority: E-2010033630

STATE OF MISSOURI
MITCHELL E. SLUTTER
NUMBER PE-2002003418
PROFESSIONAL ENGINEER
MITCHELL E. SLUTTER PE-2002003418

Sheet
07 of 10



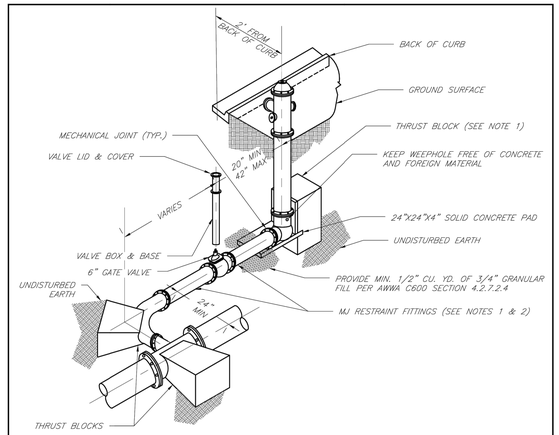
NOTES:

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

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

HYDRANT INSTALLATION – STRAIGHT SET

Date:	02/13
Drawn By:	JN
Checked By:	DL
FILE:	WAT-7
Rev:	1/14
Rev:	



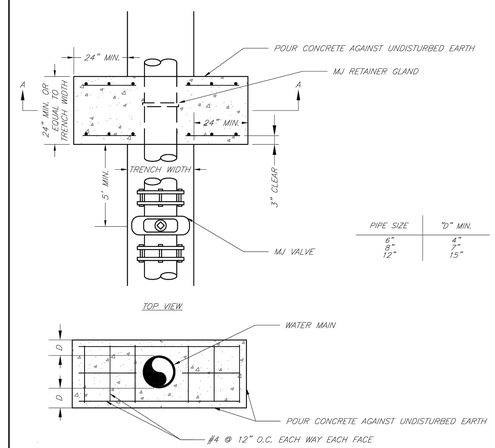
NOTES:

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

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

HYDRANT WITH 90 DEGREE BEND

Date:	02/13
Drawn By:	JN
Checked By:	DL
FILE:	WAT-8
Rev:	1/14
Rev:	



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

STRADDLE BLOCK

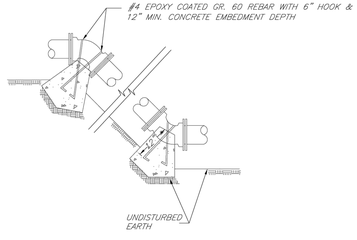
Date:	02/13
Drawn By:	JN
Checked By:	DL
FILE:	WAT-3
Rev:	1/14
Rev:	

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

VERTICAL THRUST BLOCKS

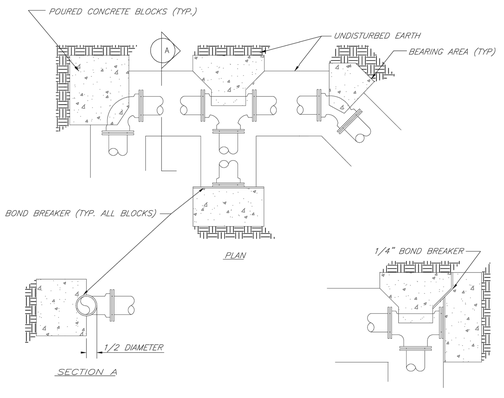
Date:	02/13
Drawn By:	JN
Checked By:	DL
FILE:	WAT-2
Rev:	1/14
Rev:	

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:

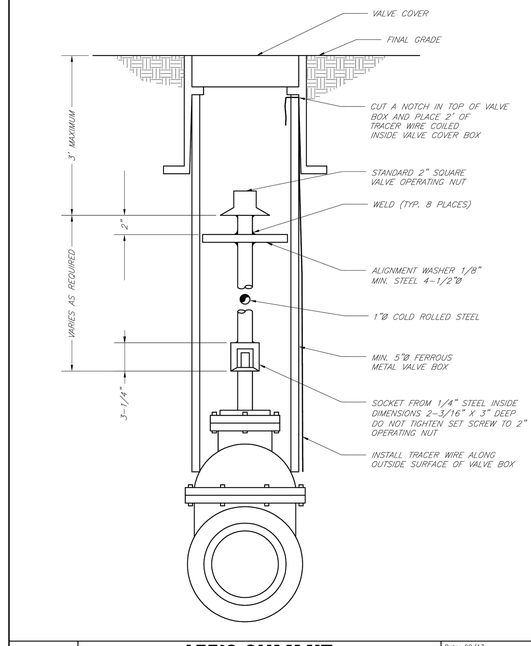
1. ALL BENDS WITHOUT RESTRAINED JOINTS SHALL HAVE CONCRETE THRUST BLOCKS INSTALLED FOR RESTRAINT.
2. MEGA LUGS MAY BE USED ONLY IN CONJUNCTION WITH CONCRETE THRUST BLOCKING.
3. BEARING AREA MUST BE AGAINST UNDISTURBED SOIL.
4. DO NOT COVER JOINTS OR BOLTS (WHERE APPLICABLE) WITH CONCRETE.



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

HORIZONTAL THRUST BLOCKS

Date:	02/13
Drawn By:	JN
Checked By:	DL
FILE:	WAT-1
Rev:	1/14
Rev:	



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

VALVE STEM EXTENSION AND VALVE BOX

Date:	02/13
Drawn By:	JN
Checked By:	DL
FILE:	WAT-9
Rev:	1/14
Rev:	

Public Water Extension Plans

24-0166
EVREN APARTMENTS
Lee's Summit, Jackson County, Missouri

Standard Details 1

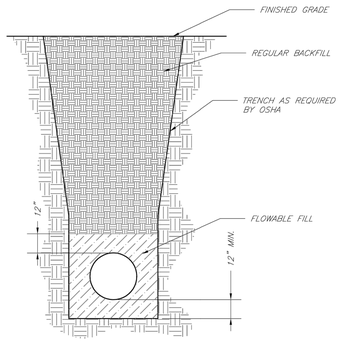
NO.	DATE	REVISION
3	10/29/2024	PER CITY COMMENTS
2.	08/16/2024	City Submittal
1	08/01/2024	90% Plans

DRAWN BY TCD | CHECKED BY MES

Renaissance Infrastructure Consulting
400 E. 17th Street
Kansas City, Missouri 64108
816.800.0950
www.ric-consult.com
MO Certificate of Authority: E-2010033630

STATE OF MISSOURI
MITCHELL E. SLUTTER
NUMBER PE-2002003418
PROFESSIONAL ENGINEER
12/3/25
MITCHELL E. SLUTTER PE-2002003418

Sheet
08 of 10



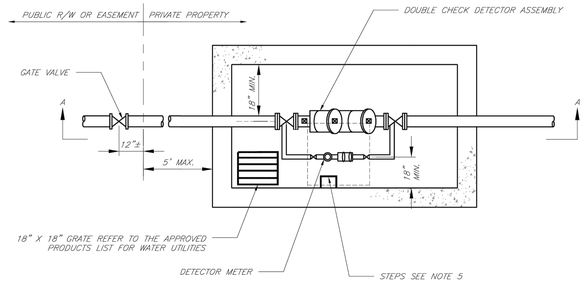
NOT TO SCALE

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".

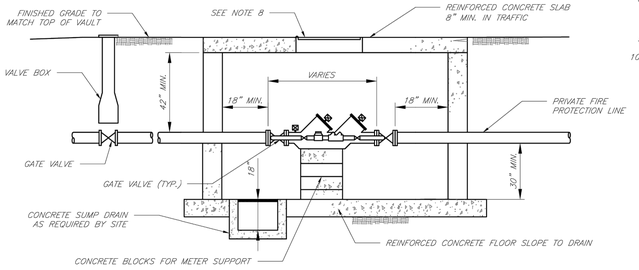
LEE'S SUMMIT
MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

TRENCH CHECK

Date: 02/13
Drawn By: JN
Checked By: DL
FILE: WAT-6
Rev: 1/14
Rev:



PLAN VIEW
NOT TO SCALE



SECTION A-A
NOT TO SCALE

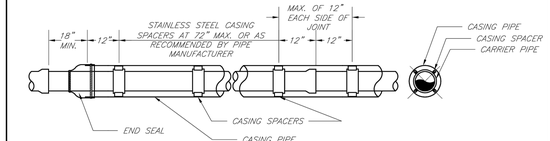
GENERAL NOTES:

1. METER VAULT WALLS TO BE POURED OR PRECAST CONCRETE. METER VAULT ROOF TO BE REINFORCED CONCRETE WITH OPENING CENTERED OVER DETECTOR METER. REINFORCED WALLS AND SLABS ARE TO BE DESIGNED BY THE OWNER'S ENGINEER OR PRECAST ENGINEER.
2. METER VAULT TO BE LOCATED, WHEN POSSIBLE, OUTSIDE TRAFFIC AREA AND WHERE SURFACE WATER WILL NOT DRAIN INTO IT. PROVIDE CONCRETE SUMP TO DRAIN TO AN ABOVE GROUND DISCHARGE POINT.
3. ALL PIPE AND FITTINGS FROM THE CITY WATER MAIN THROUGH THE VAULT SHALL BE PROVIDED WITH RESTRAINED JOINT FITTINGS.
4. ALL FITTINGS FOR THE DETECTOR METER TO BE BRASS.
5. STEPS SHALL BE IN ACCORDANCE WITH THE APPROVED PRODUCTS LIST FOR WATER UTILITIES AND SHALL BE ON 16" CENTERS.
6. A DEPARTMENT OF NATURAL RESOURCES APPROVED DOUBLE CHECK DETECTOR ASSEMBLY BACKFLOW PREVENTER MUST BE USED. FOR A COPY OF THE MISSOURI DEPARTMENT OF NATURAL RESOURCES APPROVED BACKFLOW PREVENTION ASSEMBLIES, CONTACT WATER UTILITIES AT 816-969-1900.
7. ALL VALVES SHALL HAVE RISING STEMS.
8. MANHOLE COVER SHALL BE A BILCO K-1 MODEL UNLESS IN A VEHICLE TRAFFIC AREA. SEE THE APPROVED PRODUCTS LIST FOR WATER UTILITIES FOR TRAFFIC CONDITIONS. THE COVER SHALL HAVE A 1-3/4" ø HOLE DRILLED FOR A TOUCH/READ DEVICE.
9. A MINIMUM OF 18" CLEARANCE SHALL BE PROVIDED AROUND ALL PIPING, VALVES, APPURTENANCES, ETC.
10. CONTACT PUBLIC WORKS ENGINEERING FOR VAULTS THAT INCLUDE A FIRE DEPARTMENT CONNECTION OR A 3" OR LARGER METER.

CITY OF LEE'S SUMMIT, MO
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
220 SE GREEN STREET
LEE'S SUMMIT, MO 64063

Project: STANDARD DRAWINGS
Description: VAULT FOR DOUBLE CHECK DETECTOR CHECK

Drawn By: AS
Checked By: DL
Date: 1/14
Rev: 1/14
of
WAT-12



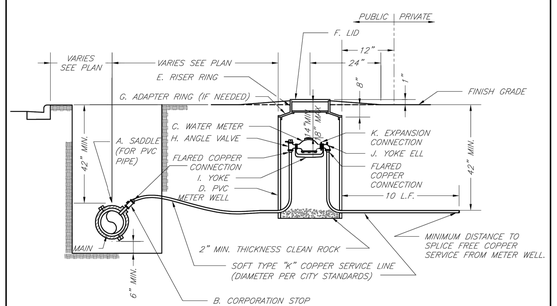
NOT TO SCALE

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

WATER CASING PIPE DETAIL

Date: 02/13
Drawn By: JN
Checked By: DL
FILE: WAT-5
Rev: 1/14
Rev:



TYPICAL METER INSTALLATION - 2" AND SMALLER
NOT TO SCALE

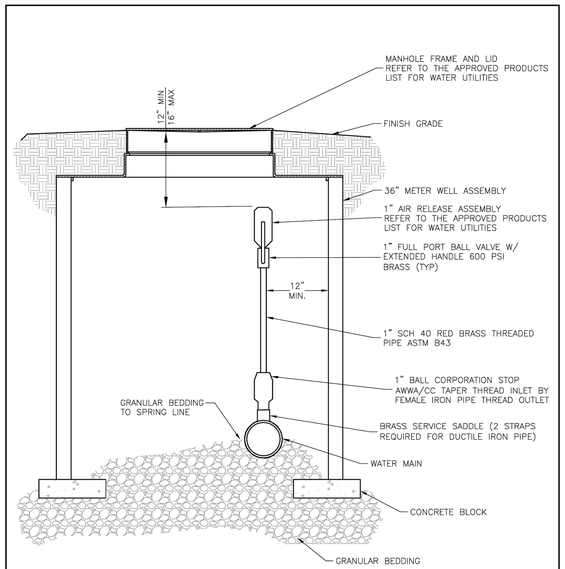
NOTES:

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 SERVICE LINES.
6. EXCAVATION FOR TAP TO EXPOSE 4 LINEAR FEET OF 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

SERVICE CONNECTION/METER WELL

Date: 02/13
Drawn By: JN
Checked By: DL
FILE: WAT-11
Rev: 1/14
Rev:



AIR RELEASE ASSEMBLY
NOT TO SCALE

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

AIR RELEASE ASSEMBLY

Date: 04/17
Drawn By: MJF
Checked By: DL

WAT-10

Public Water Extension Plans

24-0166
EVREN APARTMENTS
Lee's Summit, Jackson County, Missouri

Standard Details 2

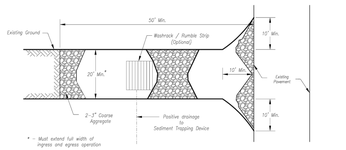
NO.	DATE	REVISION
3	10/29/2024	PER CITY COMMENTS
2	08/16/2024	City Submittal
1	08/01/2024	90% Plans

DRAWN BY: TCD
CHECKED BY: MES

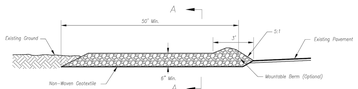
Renaissance Infrastructure Consulting
816.800.0950
WWW.RIC-CONSULT.COM
400 E 17TH STREET
KANSAS CITY, MISSOURI 64108
MO Certificate of Authority: E-2010033830

STATE OF MISSOURI
MITCHELL ELLIOTT SLUTTES
NUMBER PE-2002003418
PROFESSIONAL ENGINEER
12/5/2025
MITCHELL E. SLUTTES PE-2002003418

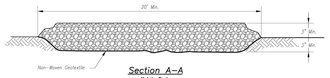
Sheet
09 of 10



Plan View
Not to Scale



Side Elevation
Not to Scale



Section A–A
Not to Scale

Notes for Construction Entrance:

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

Maintenance for Construction Entrance:

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

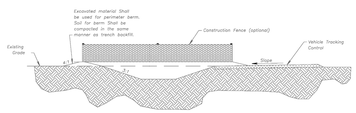
CONSTRUCTION ENTRANCE

Notes for Concrete Washout:

1. Concrete washout areas shall be installed prior to any concrete placement on site.
2. Concrete washout area shall include a flat subsurface pit sized relative to the amount of concrete to be placed on site. The slopes leading to the subsurface pit shall be no steeper than 2:1. Vehicle tracking pad shall be sloped towards the concrete washout area.
3. Vehicle tracking control is required at the access point to all concrete washout areas.
4. Signs shall be placed at the construction site entrance, washout area and elsewhere as necessary to clearly indicate the location(s) of the concrete washout area(s) to operators of concrete truck and pump rigs.
5. A one–piece impervious liner may be required along the bottom and sides of the subsurface pit in sandy or gravelly soils.

Maintenance for Concrete Washout:

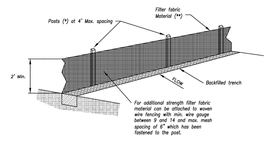
1. Concrete washout materials shall be removed once the materials have filled the washout to approximately 75% full.
2. Concrete washout areas shall be enlarged as necessary to maintain capacity for washed concrete.
3. Concrete washout water, washed pieces of concrete and all other debris in the subsurface pit shall be transported from the job site in a water–tight container and disposed of properly.
4. Concrete washout areas shall remain in place until all concrete for the project is placed.
5. When concrete washout areas are removed, excavations shall be filled with suitable compacted backfill and topsoil, any disturbed areas associated with the installation, maintenance, and/or removal of the concrete washout areas shall be stabilized.

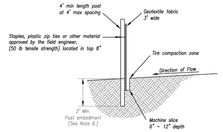


CONCRETE WASHOUT

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

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





(*) POSTS
– MIN. LENGTH 4'
– HARDWOOD 1 ½" x 1 ½"
– NO.2 SOUTHERN PINE 2 ⅛" x 2 ⅛"
– STEEL 1.33 LB/FT.

(**) – Geotextile Fabric shall meet the requirements of AASHTO M288

SILT FENCE DETAILS
Not to Scale

Notes:

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

Maintenance:

1. Remove and dispose of sediment deposits when the deposit approaches ½ the height of silt fence.
2. Repair as necessary to maintain function and structure.

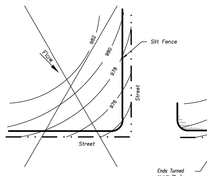
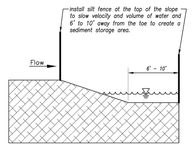
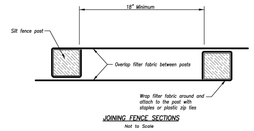


Figure A

SILT FENCE LAYOUT
Not to Scale

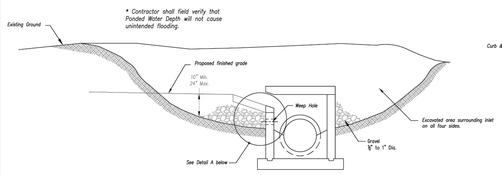


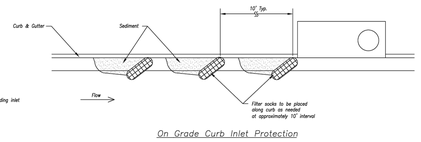


JOINING FENCE SECTIONS
Not to Scale

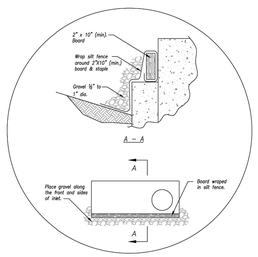
Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

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

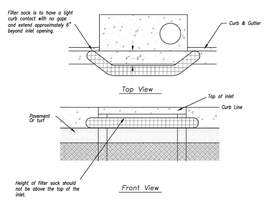




On Grade Curb Inlet Protection



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



Sump Inlet Sediment Filter

Notes:

1. Immediately following inlet construction and prior to construction of curb and inlet throat, protect inlet opening by installing 2" X 10" (min.) board wrapped in silt fence. Structures shall have excavated storage area on all four sides to allow settling of sediment (Early Stage Curb Inlet).
2. When inlet is completed and curb poured, filter socks or approved equal should be used (Late Stage Curb Inlet). Straw wattles are not approved for curb inlet use.
3. Contractor to field verify ponding water shall not create a traffic hazard.

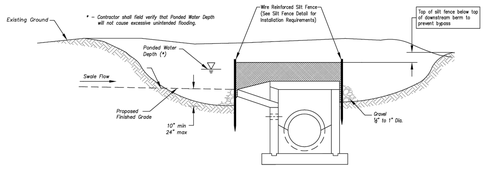
Maintenance:

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

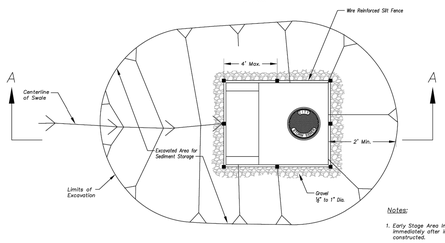
LATE STAGE CURB INLET
(After Pouring Curb and Inlet Throat)

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

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



Section A–A
Not to Scale

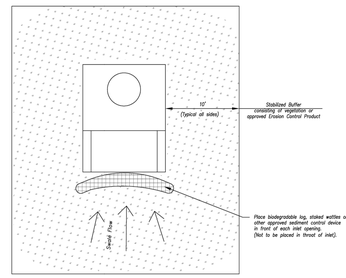


Plan
Not to Scale

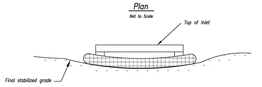
EARLY STAGE AREA INLET
(All open boxes and inlets not at final grade)

Notes:

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



Plan
Not to Scale



Front View

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

Maintenance:

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

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

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

Public Water Extension Plans

24-0166
EVREN APARTMENTS
Lee's Summit, Jackson County, Missouri

Standard Details 3

NO.	DATE	REVISION
3	10/29/2024	PER CITY COMMENTS
2.	08/16/2024	City Submittal
1	08/01/2024	90% Plans

DRAWN BY TCD | CHECKED BY MES

Renaissance Infrastructure Consulting
816.800.0950
WWW.RIC-CONSULT.COM
400 E. 17TH STREET
KANSAS CITY, MISSOURI 64108
MO Certificate of Authority: E-2010033630

STATE OF MISSOURI
MICHELL
KLUTTER
NUMBER
PE-2002003418
PROFESSIONAL ENGINEER
12/31/25

Sheet
10 of 10