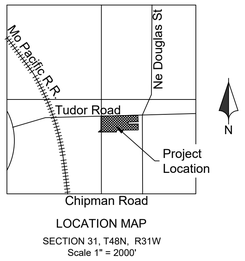
TUDOR MULTIFAMILY

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

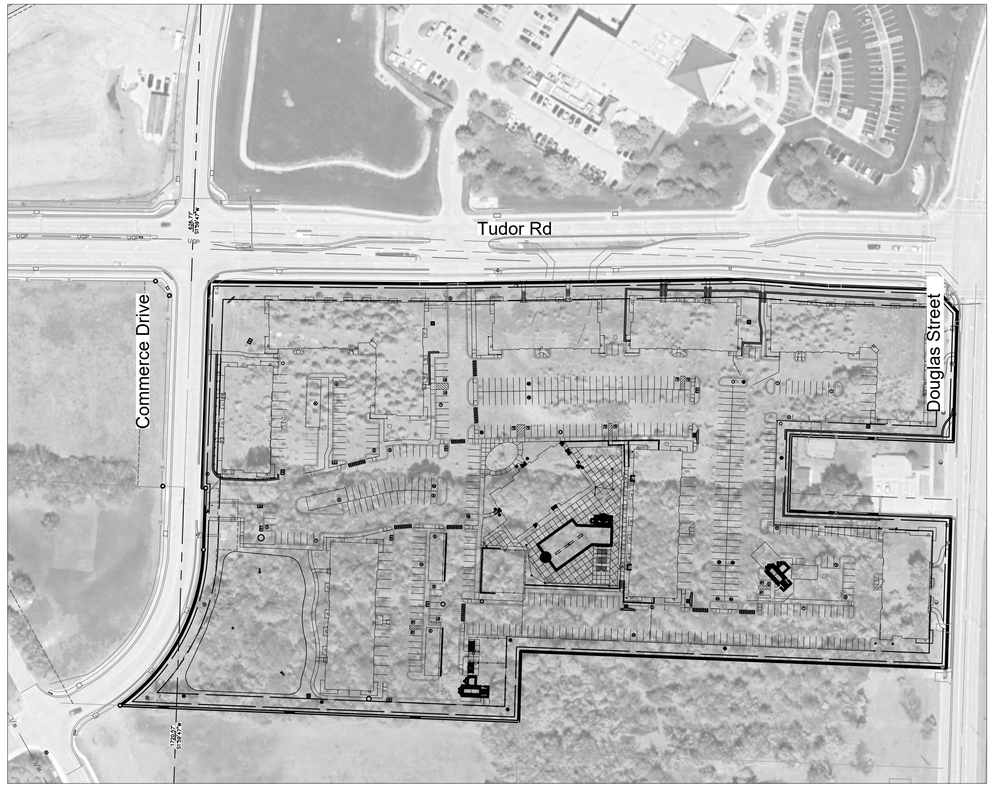
Final Development Plans



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

Legal Description:

All that part of the Southeast Quarter of Section 31, Township 48 North, Range 31 West, in the City of Lee's Summit, Jackson County, Missouri, being more particularly described as follows: Beginning at the Southeast Corner of Lot 2A, New Lee's Summit Police and Court Facility, a subdivision of land in the City of Lee's Summit, Jackson County, Missouri; thence N 87°44'22" W, a distance of 227.00 feet; thence S 01°47'50" W, a distance of 106.00 feet; thence S 87°44'22" E, a distance of 227.10 feet, to a point on the West right-of-way line of NE Douglas Street, as now established,; thence S 01°47'13" W, along said west right-of-way line, a distance of 210.65 feet; thence N 87°44'22" W, a distance of 595.16 feet; thence S 01°39'56" W, a distance of 98.11 feet; thence N 87°41'50" W a distance of 557.31 feet, to a point on the East right-of-way line of NW Commerce Drive, as now established; thence along said East right-of-way line for the following four (4) courses; thence Northeasterly on a curve to the left, said curve having an initial tangent bearing of N 54°18'46" E, and a radius of 280.00 feet, an arc distance of 255.67 feet; thence N 01°59'41" E, a distance of 86.24 feet; thence n 87° 44'32" w, a distance of 5.00 feet; thence N 01°59'47" E, a distance of 288.45 feet, to a point on the South right-of-way line of NE Tudor Road, as now established; thence along said South right-of-way line for the following seven (7) courses ; thence S 89°24'16" E, a distance of 294.23 feet,; thence Easterly on a curve to the left, said curve having an initial tangent bearing of S 89°24'46" E, and a radius of 2055.00 feet, an arc distance of 53.07 feet; thence N 89°06'56" E, a distance of 401.11 feet; thence S 85°35'40" E, a distance of 117.21 feet; thence Easterly on a curve to the left, said curve having an initial tangent bearing of S 88°24'34" E and a radius of 1936.00 feet, an arc distance of 17.84 feet; thence S 87°52'53" E, a distance of 133.38 feet; thence S 43°02'31" E, a distance of 42.53 feet, to a point on the West right-of-way line of NE Douglas Street, as now established; thence S 01°47'50" W, along said West right-of-way, a distance of 181.57 feet; to the Point of Beginning, containing 567,567 square feet or 13.0295 acres, more or less, of unplatted land.



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.

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

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

LEGEND

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

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

Prepared For:
LSMO Tudor Apartments, LLC
Contact: Ryan Adams, VP
10000 College Blvd Overland Park, Kansas
radams@cityscaperesidential.com

Final Development Plans

24-0166
TUDOR MULTIFAMILY
Lee's Summit, Jackson County, Missouri

Title Sheet

NO.	DATE	REVISION
1	08/16/2024	FDP Submittal

DRAWN BY TUA | CHECKED BY CMP

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 L. SLUTTER NUMBER PE-2010030418 PROFESSIONAL ENGINEER 8/16/24
MITCHELL E. SLUTTER PE-2010030418

Sheet C01

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Final Development Plans

24-0166
TUDOR MULTIFAMILY
Lee's Summit, Jackson County, Missouri

Existing Conditions

NO.	DATE	REVISION
1	08/16/2024	FDP Submittal

DRAWN BY: TUA
CHECKED BY: CMP

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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
12/2/24
MITCHELL E. SLUTTER PE-2002003418

Sheet
C02

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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 accessible 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.

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 816-969-1800 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. 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 asphalt pavement to remain which results from new construction shall be replaced with like materials at contractor's expense.
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.

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.

WETLAND NOTES

1. Wetland areas have been identified on the site.
2. These areas are not to be disturbed.
3. Orange construction fencing to be put in place as a barricade to protect the wetlands from construction activities.

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.

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.

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: Earth fill material shall be placed and compacted to a minimum density of ninety five percent (95%) of the material's maximum dry density as determined by ASTM D698 (standard proctor compaction). The moisture content at the time of placement and compaction shall be within a range of -2% to 3% above the optimum moisture content as defined by the standard proctor compaction procedure. The moisture contents shall be maintained within this range until completion of the work. Where compaction of earth fill by a large roller is impractical or undesirable, the earth fill shall be hand compacted with small vibrating rollers or mechanical tampers.
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.

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, und 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.

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 2012 International Fire Code and local amendments as adopted by Lee's Summit, Missouri
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.

Final Development Plans

24-0166
TUDOR MULTIFAMILY
Lee's Summit, Jackson County, Missouri

General Notes

NO.	DATE	REVISION
1	08/16/2024	FDP Submittal

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Renaissance Infrastructure Consulting
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Kansas City, Missouri 64108

STATE OF MISSOURI
MITCHELL E. SLUTTER
NUMBER PE-2002003418
PROFESSIONAL ENGINEER
7/2/24
MITCHELL E. SLUTTER PE-2002003418

MO Certificate of Authority: E-2010033830

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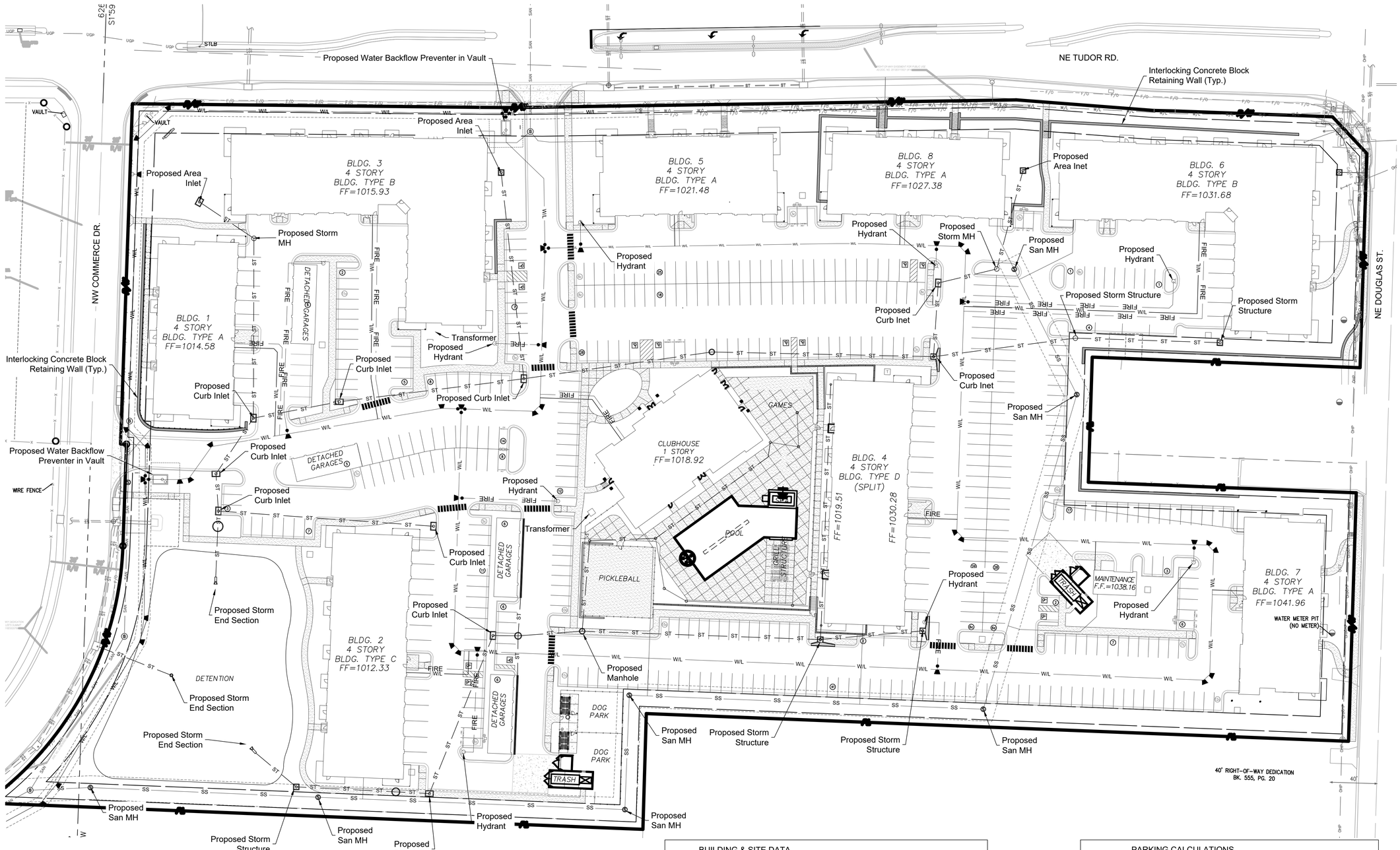

BUILDING & SITE DATA

Lot Area	13.03 AC/ 567,567 Sq Ft
Proposed Zoning	RP-4
Number of Units	358 Units
Density (Units / Acre)	27.47 DU / AC
Total Building Sq. Footage	399,133 SF
Building Type A (38,552 SF Per Building)	154,208 SF
Building Type B (79,582 SF Per Building)	159,164 SF
Building Type C (54,124 SF Per Building)	54,124 SF
Building Type C(Split) (62,018 SF Per Building)	62,018 SF
Floor Area Raio (Far) (438,334 SF / 567,567 SF)	0.77
% Impervious (388,685 SF / 567,567 SF)	68.5%

PARKING CALCULATIONS

Parking Calculations (City Standards)

Required Parking	716 Spaces
1 BDR. 211 x 1.50 =	314
2 BDR. 147 x 1.50 =	221
Visitor 358 x 0.50 =	179
PROVIDED TOTAL PAKING	622 Spaces*
Standard	347
Compact	157
Garage (Attached)	95
Garage (Detached)	23
REQUIRED ADA PARKING	
ADA Parking Stalls 622*.02	13
PROVIDED ADA PARKING	
ADA Parking Stalls	13
Surface	11
Garage	2
TOTAL	13

* Reduction to 622 spaces from 716 approved by Planning Comission in re-zoning and PDP process. refer to Lee's Summit Ordinance No. 9539.

NORTH

1"=40'

0 20' 40'

Final Development Plans

24-0166
TUDOR MULTIFAMILY
Lee's Summit, Jackson County, Missouri

General Layout

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Final Development Plans

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TUDOR MULTIFAMILY
Lee's Summit, Jackson County, Missouri

Dimension Plan

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MITCHELL E. SLUTTER PE-2002003418

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Sheet C06 | Sheet C07 | Sheet C08 | Sheet C09
Sheet C10 | Sheet C11 | Sheet C12 | Sheet C13

NE TUDOR RD.
NW COMMERCE DR.
NE DOUGLAS ST.
T LINE
E. LINE SW 1/4, SEC. 31-48-31
W. LINE SE 1/4, SEC. 31-48-31
626.77' S1°59'47"W
1720.57' S1°59'47"W
I.T.B.=S89°24'46"E
I.T.B.=S88°24'34"E
I.T.B.=N54°18'46"E
R=2055.00...
R=1936.00...17.84'
R=280.00
255.67'
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
42.33'
S1°47'50"E...181.57'
S1°47'50"W...106.00'
S87°44'22"E...227.10'
N87°44'22"W...227.00'
S1°47'13"W...210.65'
S1°39'56"W...98.11'
N87°44'22"W...595.16'
N87°41'50"W...557.31'
N87°44'32"W...5.00'
N1°59'41"E...86.24'
N1°59'47"E...288.45'
30' R/W
25' R/W
FND. 1/2" REBAR W/OLSSON MOLS 366 PLASTIC CAP
FND. 1/2" REBAR W/ OLSSON MOLS 366 PLASTIC CAP
FND. 1/2" REBAR W/ OLSSON MOLS 366 PLASTIC CAP
FND. 1/2" REBAR MO LS 310D PLASTIC CAP 0.3'E.
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
ANGLE POINT S. LINE LOT 2A FND. 1/2" REBAR W/PLASTIC CAP
CLOSET COR. LOT 2A FND. PIPE 0.6'S. & 0.6'W.
LOT 3 SUMMIT PARK
OWNER: MAKOL PROPERTIES, LLC
LOT 4 SUMMIT PARK
LOT 10 SUMMIT PARK
OWNER: LARRY E. & BEATRICE M. FINKEMEIER
40' RIGHT-OF-WAY DEDICATION BK. 555, PG. 20
RIGHT-OF-WAY DEDICATION TO CITY OF LEE'S SUMMIT DOC. NO. 2018E0056210 (@C)
PERMANENT CONSTRUCTION EASEMENT TO CITY OF LEE'S SUMMIT DOC. NO. 2018E0056212 (@C)
RIGHT-OF-WAY DEDICATION TO CITY OF LEE'S SUMMIT DOC. NO. 2018E0056210
BLDG. 1 4 STORY BLDG. TYPE A FF=1014.58
BLDG. 2 4 STORY BLDG. TYPE C FF=1012.33
BLDG. 3 4 STORY BLDG. TYPE B FF=1015.93
BLDG. 4 4 STORY BLDG. TYPE D (SPLIT) FF=1030.28 FF=1019.51
BLDG. 5 4 STORY BLDG. TYPE A FF=1021.48
BLDG. 6 4 STORY BLDG. TYPE B FF=1031.68
BLDG. 7 4 STORY BLDG. TYPE A FF=1041.96
BLDG. 8 4 STORY BLDG. TYPE A FF=1027.38
CLUBHOUSE 1 STORY FF=1018.92
MAINTENANCE F.F.=1038.16
WATER METER PIT (NO METER)
DETACHED GARAGES
DETENTION
POOL
PICKLEBALL
GAMES
DOG PARK
DOG PARK
TRASH
SANITARY SEWER MANHOLE TOP ELEV.=1007.89 FL OUT (N)=1004.39
SANITARY SEWER MANHOLE TOP ELEV.=992.79 FL OUT (S)=992.01
SANITARY SEWER MANHOLE TOP ELEV.=998.33 FL IN (NW)=987.61 FL OUT (SW)=987.42
VAULT
FIBER OPTIC VAULT
STLB
UGP
OHP
SS
ST
W/L
F/O
FIRE
WIRE FENCE
NORTH
1"=40'
0 20' 40'

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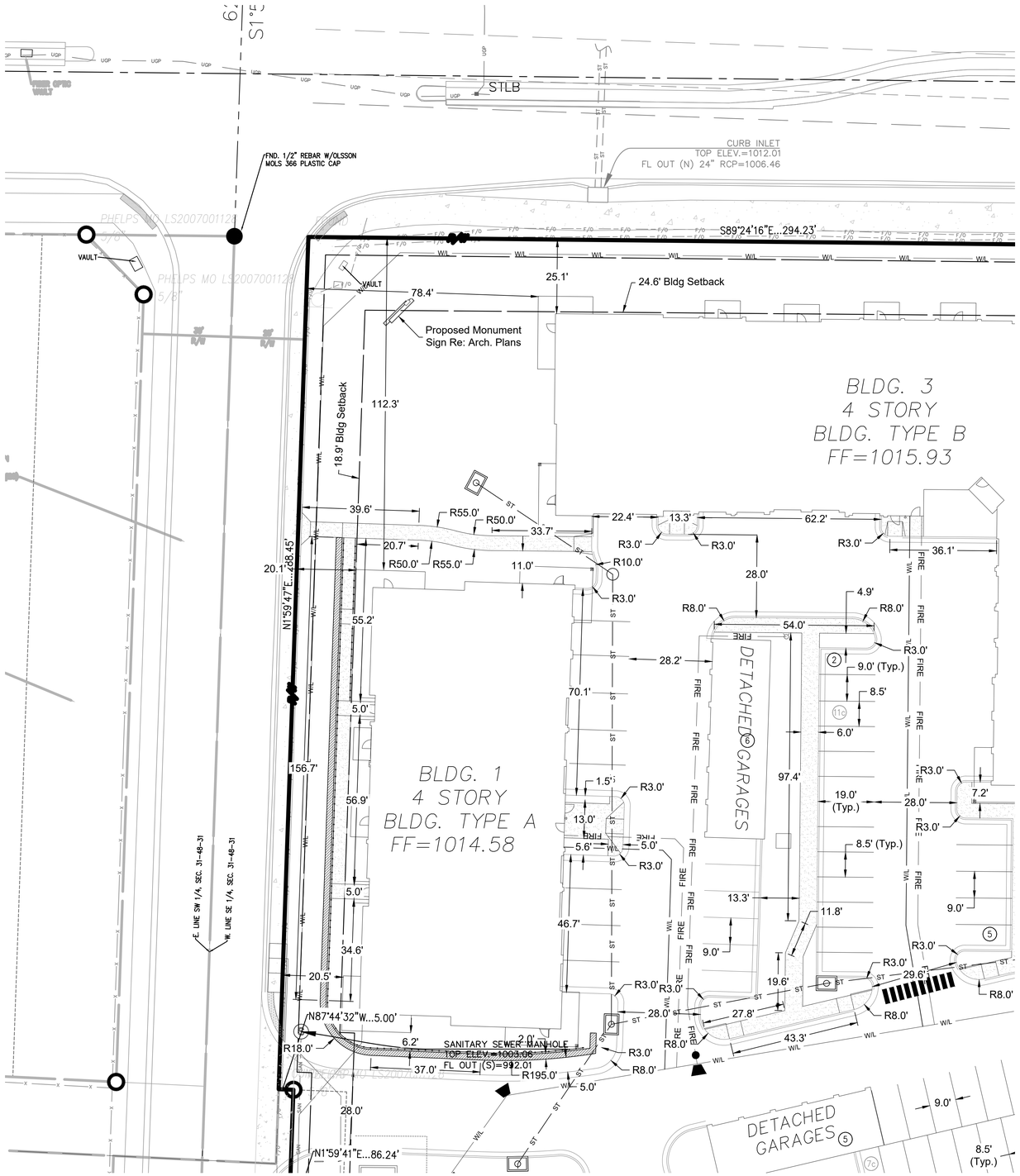

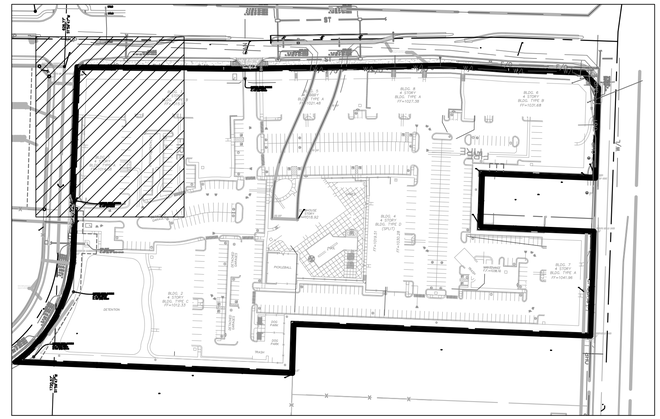

VICINITY MAP
n.t.s

Final Development Plans

24-0166
TUDOR MULTIFAMILY
Lee's Summit, Jackson County, Missouri

Dim Plan North_1

NO.	DATE	REVISION
1	08/16/2024	FDP Submittal

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CHECKED BY: CMP

Renaissance Infrastructure Consulting
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STATE OF MISSOURI
MITCHELL E. SLUTTER
NUMBER PE-2002003418
PROFESSIONAL ENGINEER
8/16/24
MITCHELL E. SLUTTER PE-2002003418

NORTH
1"=20'
0 10' 20'

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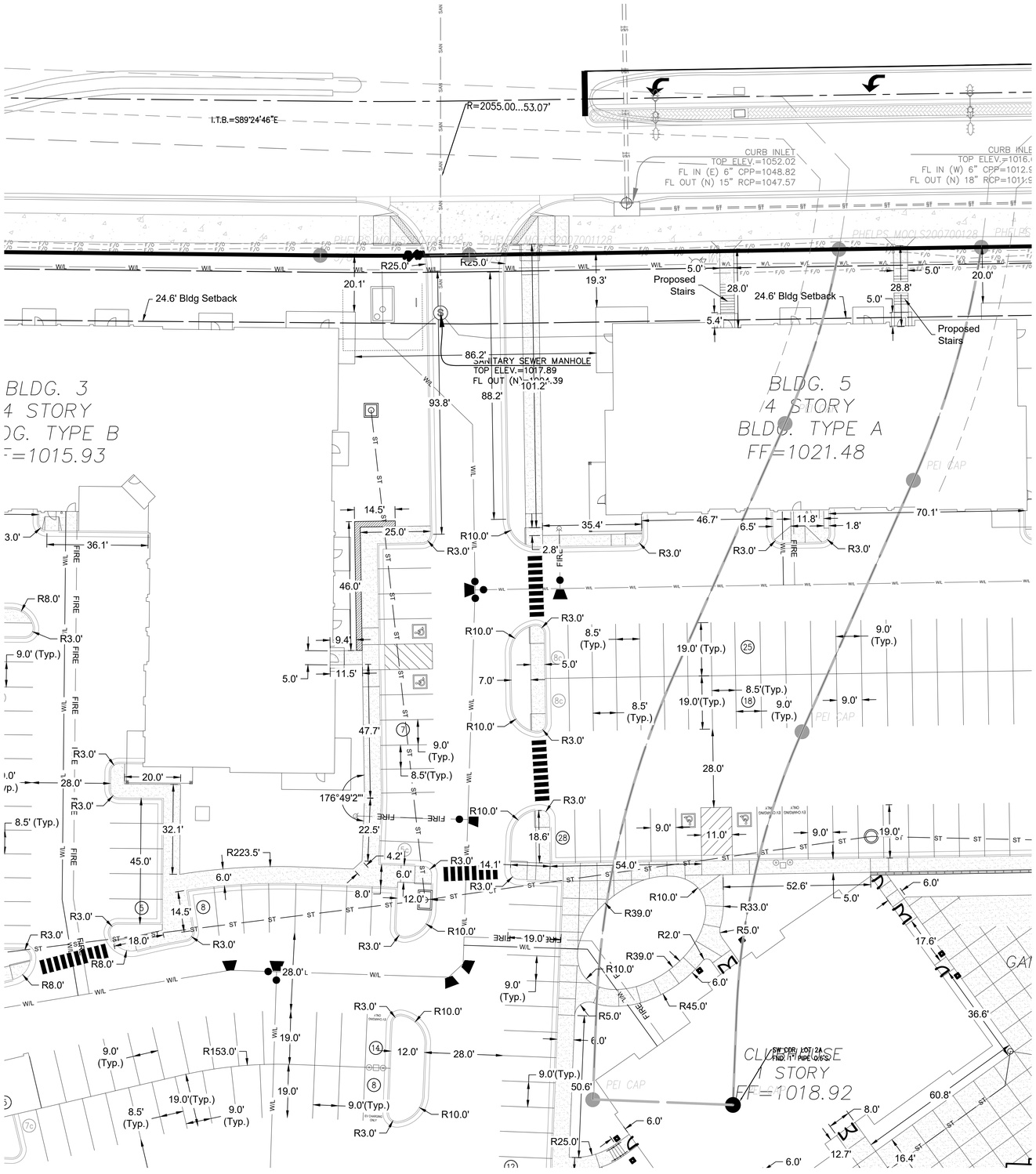

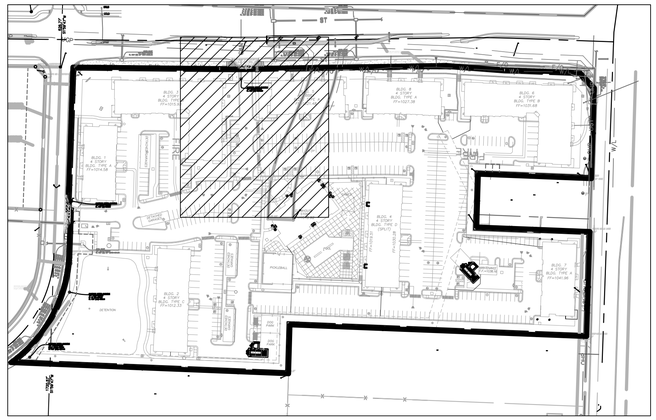

VICINITY MAP
n.t.s

Final Development Plans

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Lee's Summit, Jackson County, Missouri

Dim Plan North_2

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NORTH
1"=20'
0 10' 20'

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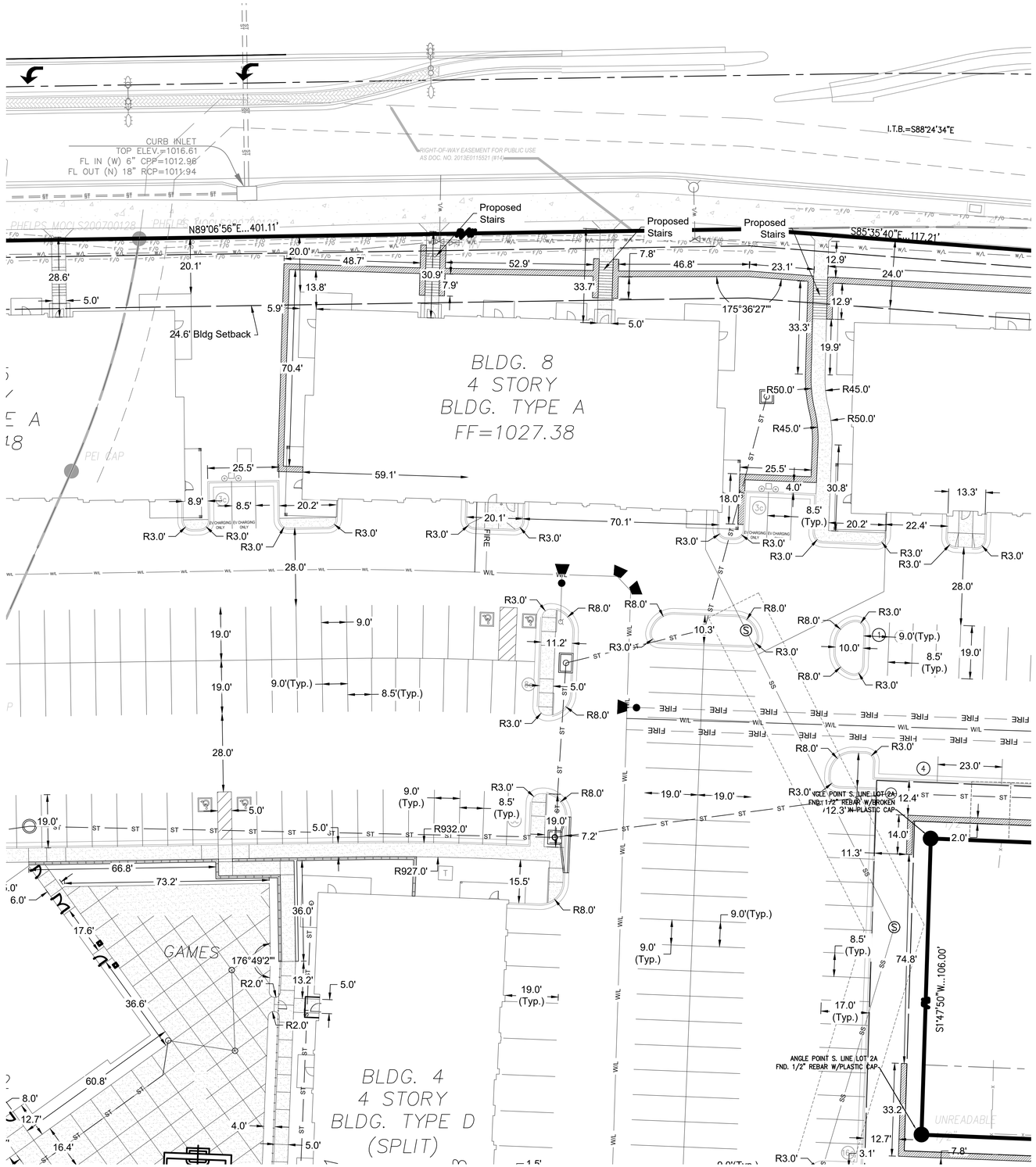

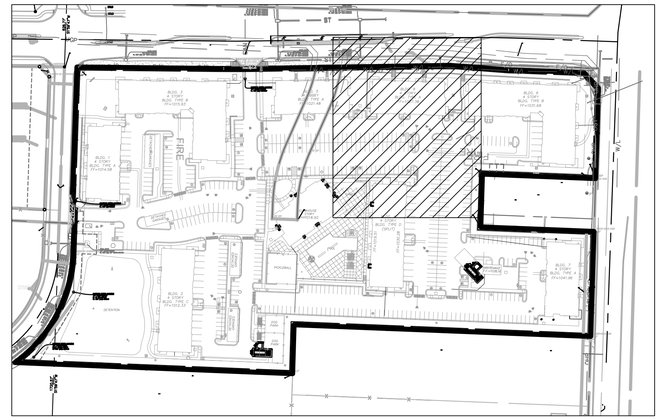

VICINITY MAP
n.t.s

N O R T H

1"=20'
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Final Development Plans

24-0166
TUDOR MULTIFAMILY
Lee's Summit, Jackson County, Missouri

Dim Plan North _3

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MITCHELL ALLEN SLUTTER
NUMBER PE-2002003418
PROFESSIONAL ENGINEER
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MITCHELL E. SLUTTER PE-2002003418

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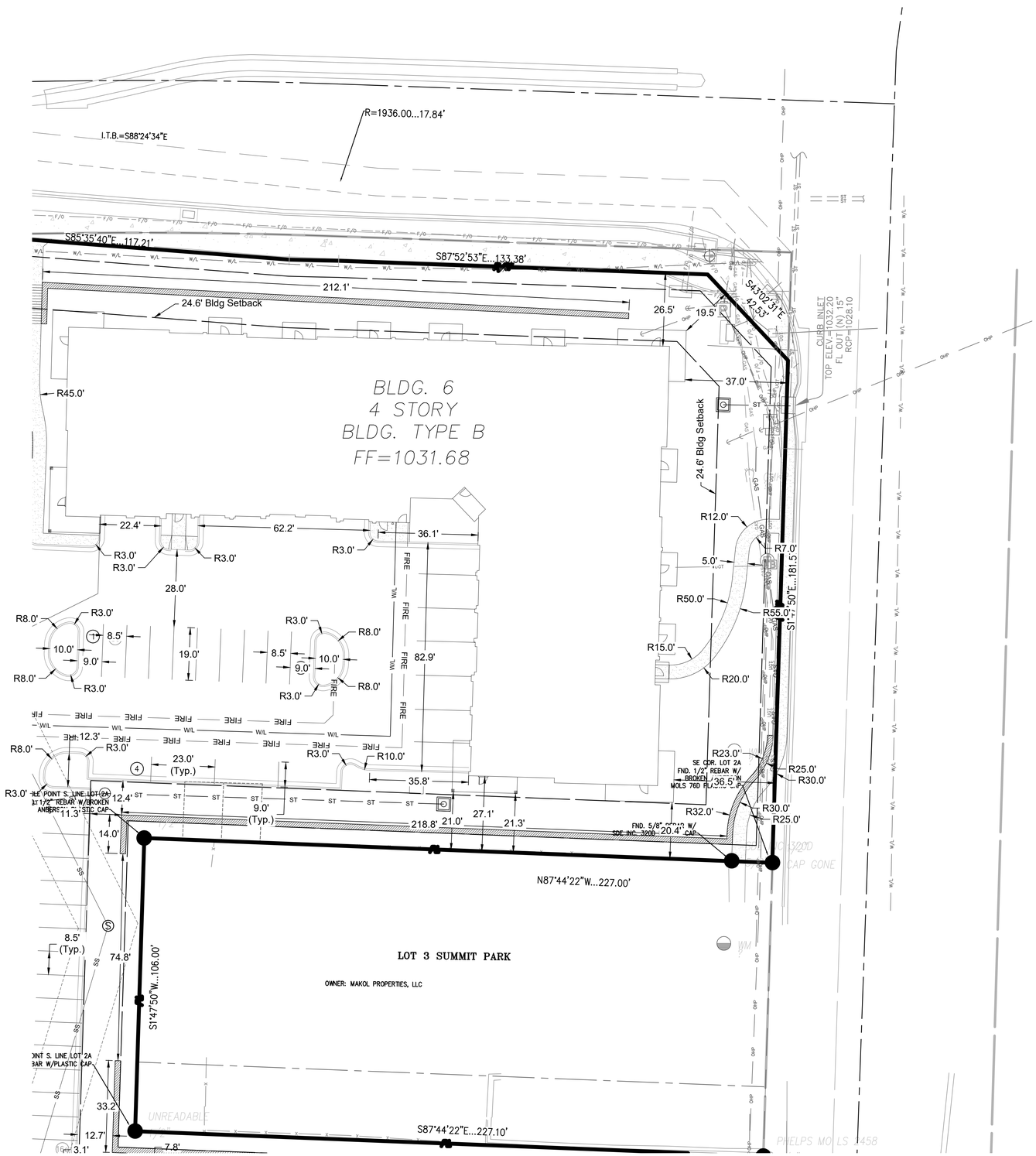

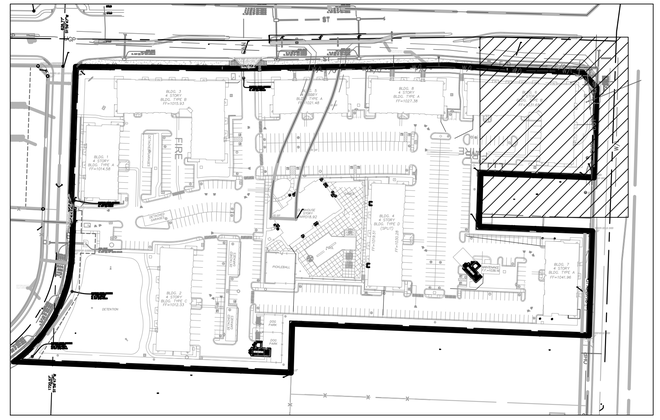

VICINITY MAP
n.t.s

N O R T H
1"=20'
0 10' 20'

Final Development Plans

24-0166
TUDOR MULTIFAMILY
Lee's Summit, Jackson County, Missouri

Dim Plan North _4

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MITCHELL E. SLUTTER PE-2002003418

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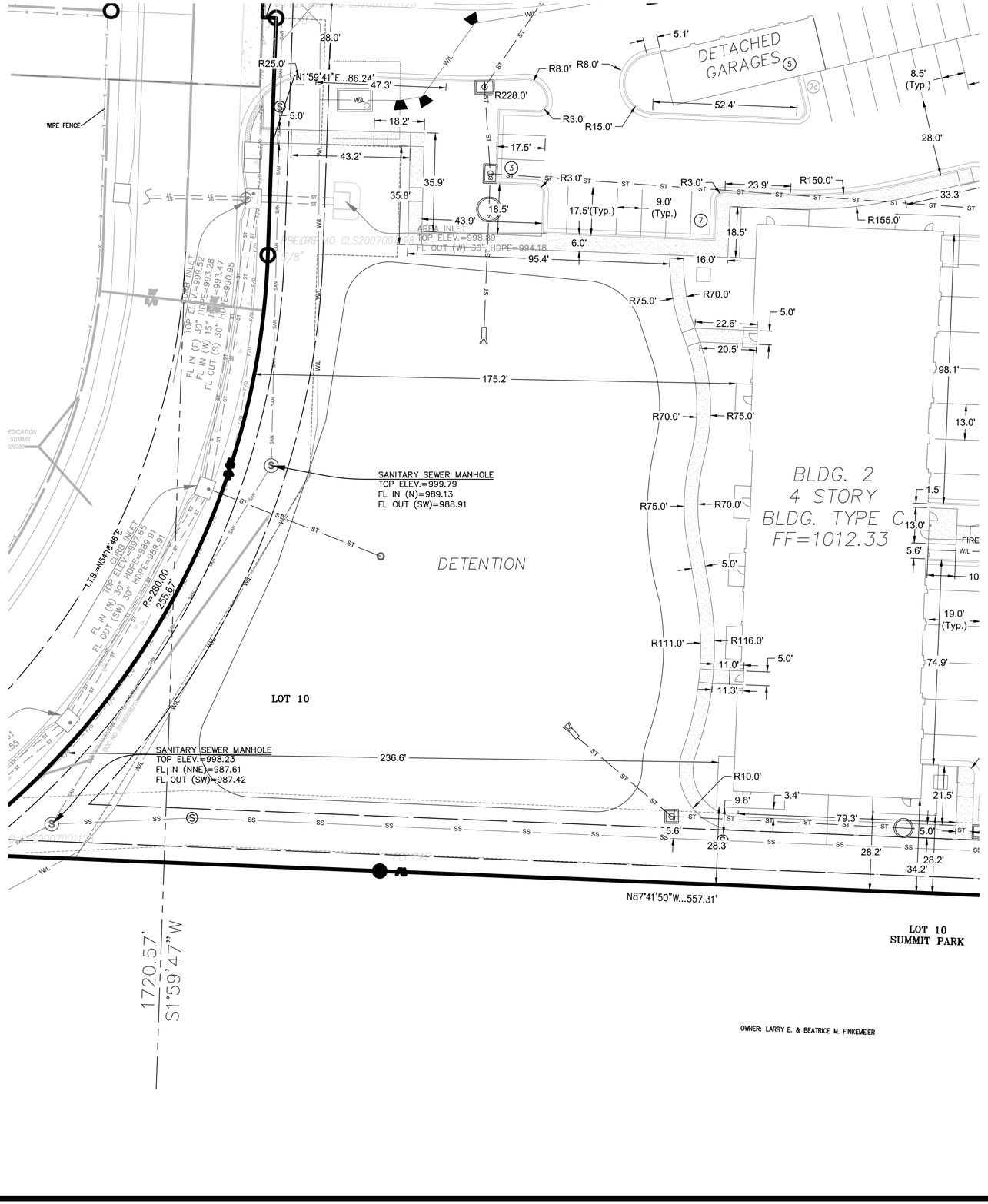

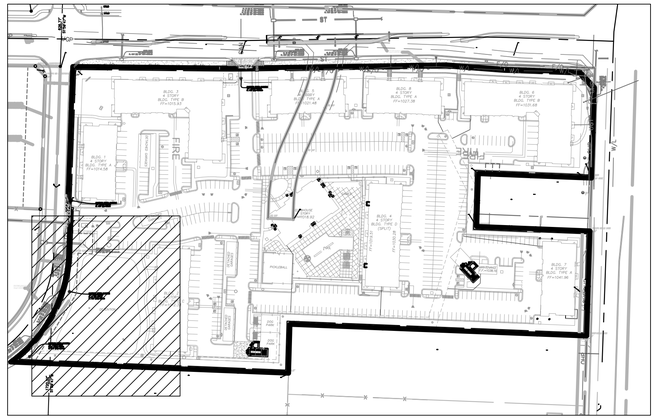

VICINITY MAP
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N O R T H
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Final Development Plans

24-0166
TUDOR MULTIFAMILY
Lee's Summit, Jackson County, Missouri

Dim Plan South_1

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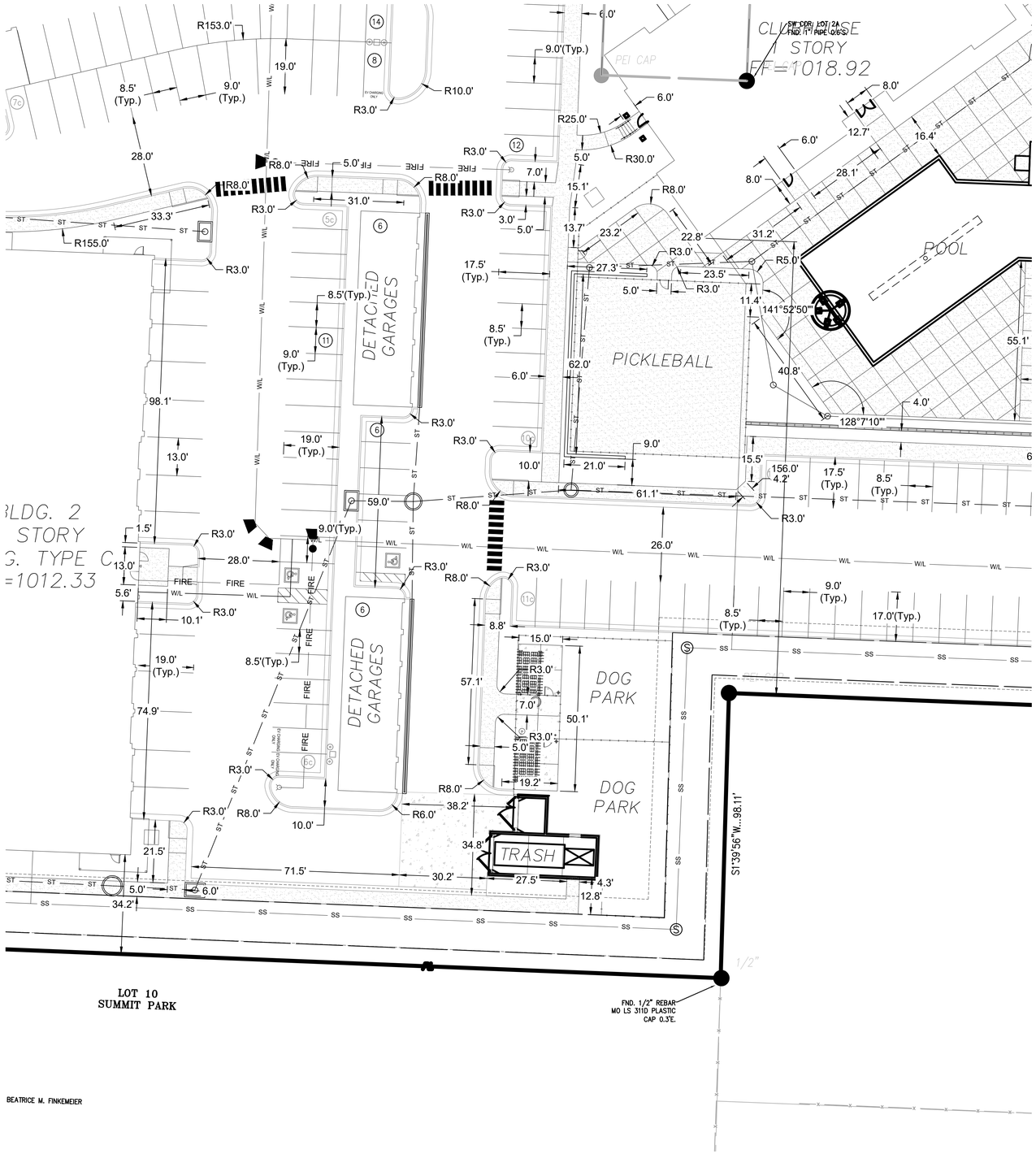

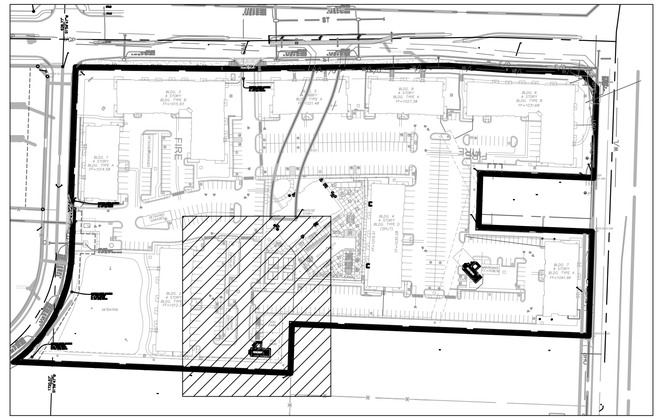

VICINITY MAP
n.t.s

NORTH
1"=20'
0 10' 20'

Final Development Plans

24-0166
TUDOR MULTIFAMILY
Lee's Summit, Jackson County, Missouri

Dim Plan South_2

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MITCHELL E. SLUTTER PE-2002003418

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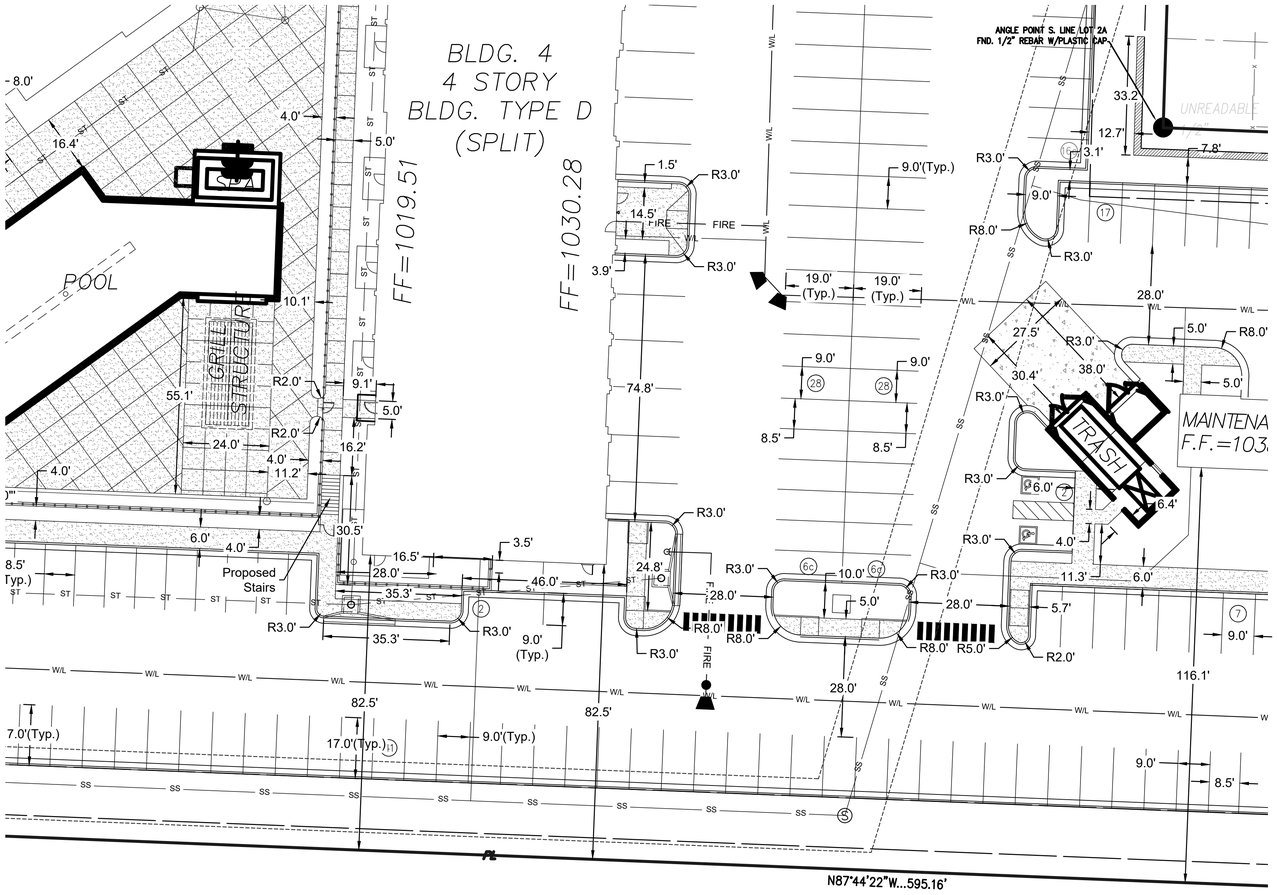
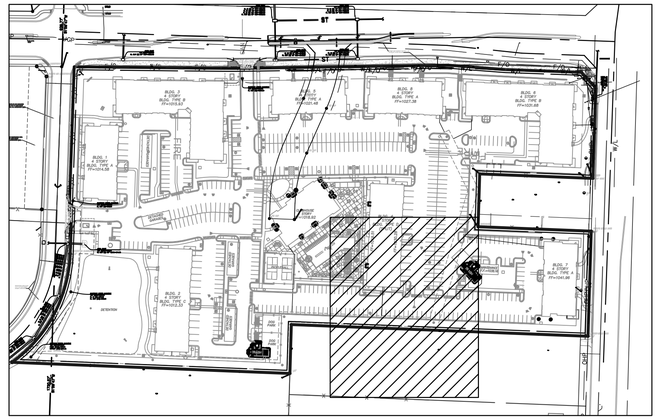


LOT 4
SUMMIT PARK



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Final Development Plans

24-0166
TUDOR MULTIFAMILY
Lee's Summit, Jackson County, Missouri

Dim Plan South_3

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STATE OF MISSOURI
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MITCHELL E. SLUTTER PE-2002003418

NORTH
1"=20'
0 10' 20'

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VICINITY MAP
n.t.s

N O R T H

1"=20'

0 10' 20'

Final Development Plans

24-0166
TUDOR MULTIFAMILY
Lee's Summit, Jackson County, Missouri

Dim Plan South_4

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NUMBER PE-2002003418
PROFESSIONAL ENGINEER
08/16/24
MITCHELL E. SLUTTER PE-2002003418

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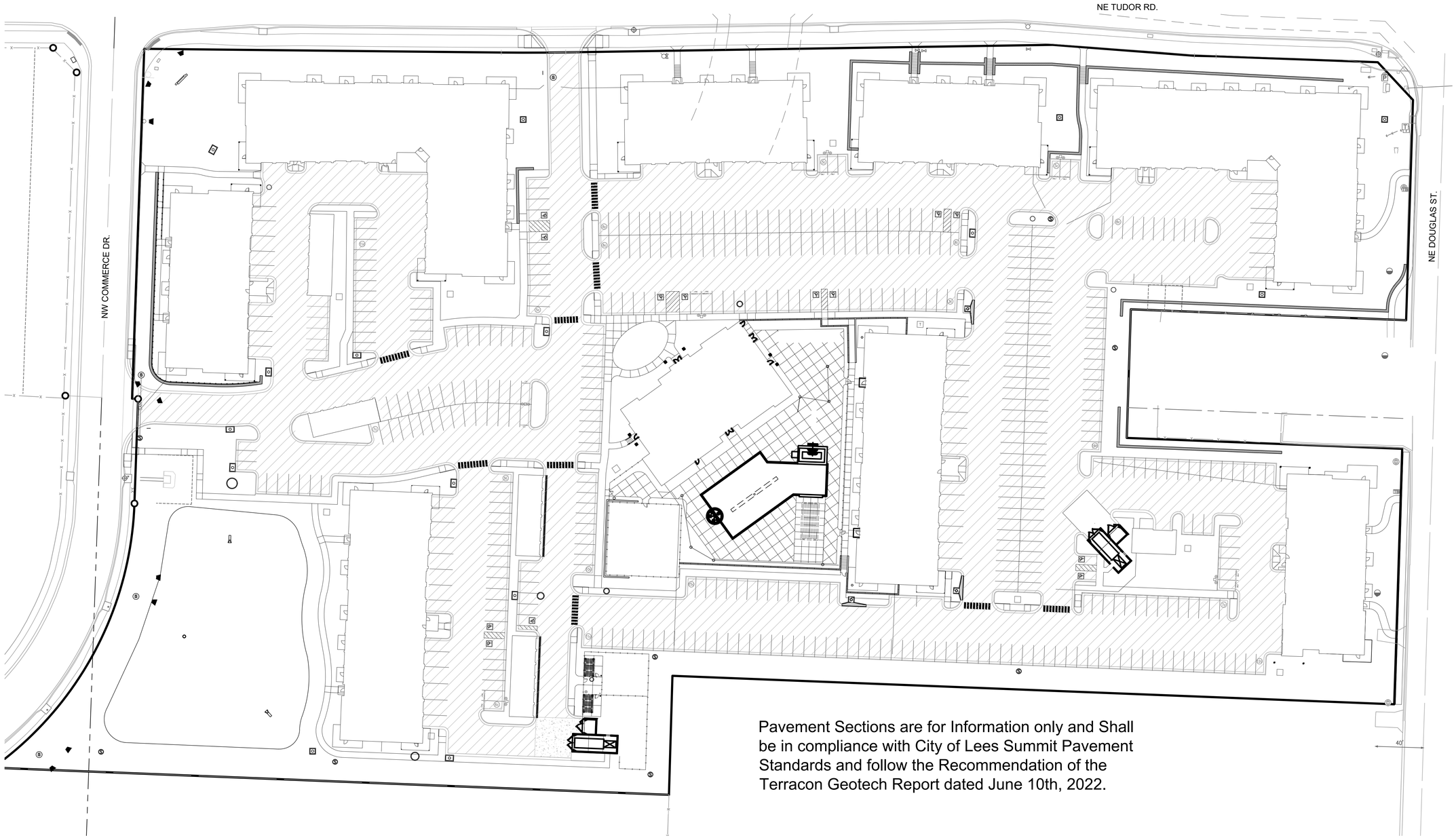
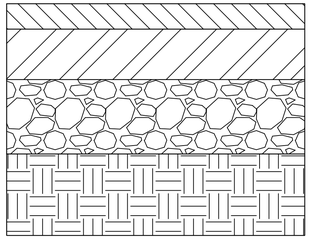


Pavement Sections are for Information only and Shall be in compliance with City of Lees Summit Pavement Standards and follow the Recommendation of the Terracon Geotech Report dated June 10th, 2022.



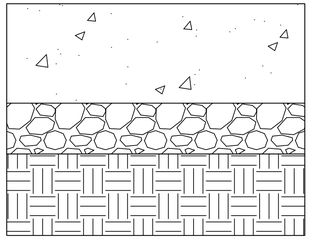
2" AC Surface Course

4" AC Base Course

6" Compacted Aggregate Base w/ Geogrid MoDOT Type 5 or similar

Compacted Subgrade

Asphalt Pavement Section

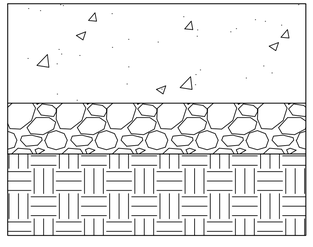


7" PCC

4" Compacted Aggregate Base (ASTM C33 Size No. 57 or similar)

Compacted Subgrade

Trash Enclosure Pavement



4" PCC

4" Compacted Aggregate Base

Compacted Subgrade

Sidewalk Pavement

NORTH

1"=40'

0 20' 40'

Final Development Plans

24-0166
TUDOR MULTIFAMILY
Lee's Summit, Jackson County, Missouri

Pavement Plan

NO.	DATE	REVISION
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MITCHELL E. SLUTTER
NUMBER PE-2002003418
PROFESSIONAL ENGINEER
8/16/24
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NE TUDOR RD.

NW COMMERCE DR.

NE DOUGLAS ST.

40'

Dry Curb

Wet Curb

Ribbon Curb

NORTH

1"=40'

0 20' 40'

Final Development Plans

24-0166
TUDOR MULTIFAMILY
Lee's Summit, Jackson County, Missouri

Curb Schedule

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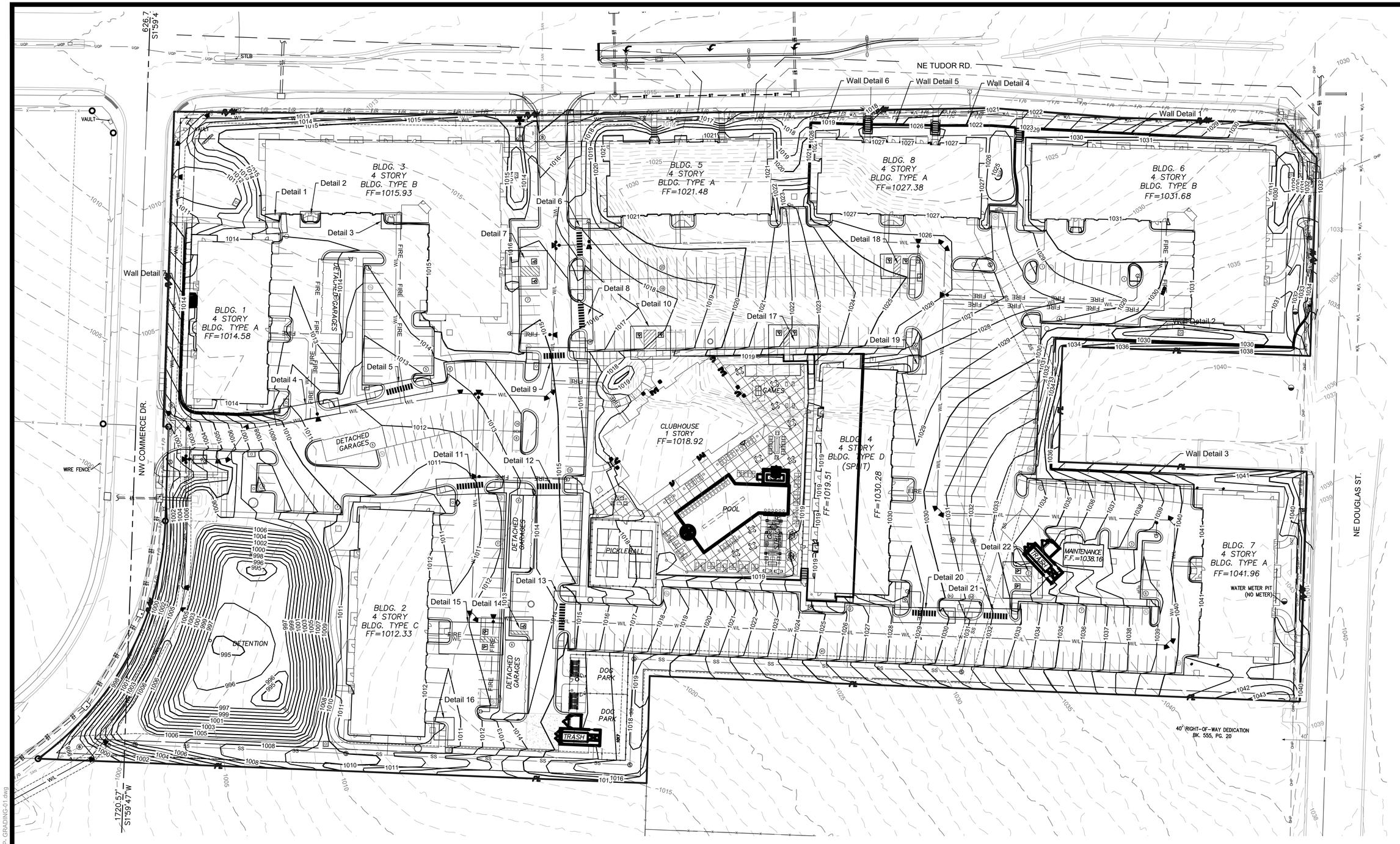

Final Development Plans

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TUDOR MULTIFAMILY
Lee's Summit, Jackson County, Missouri

Grading Plan

NO.	DATE	REVISION
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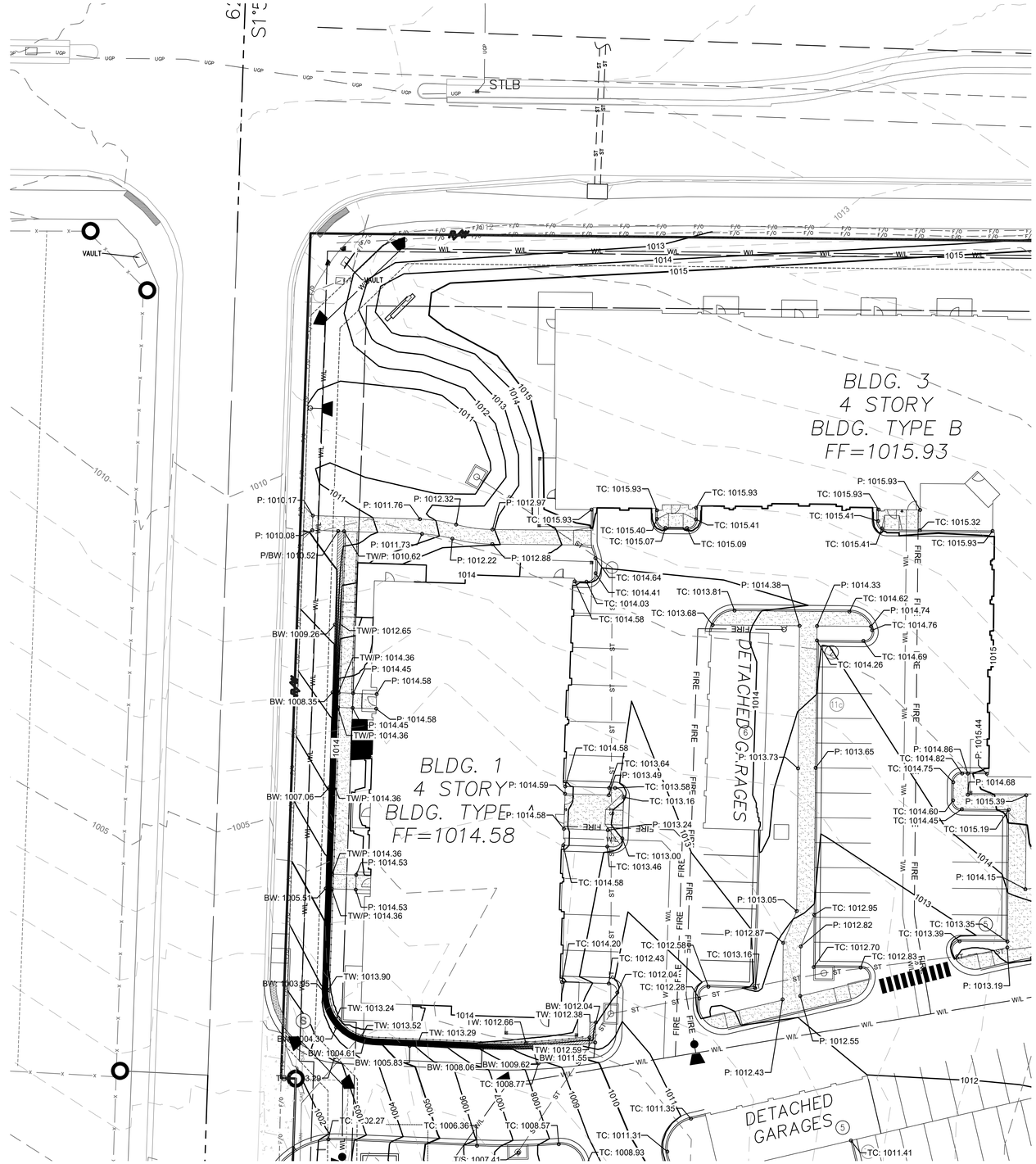

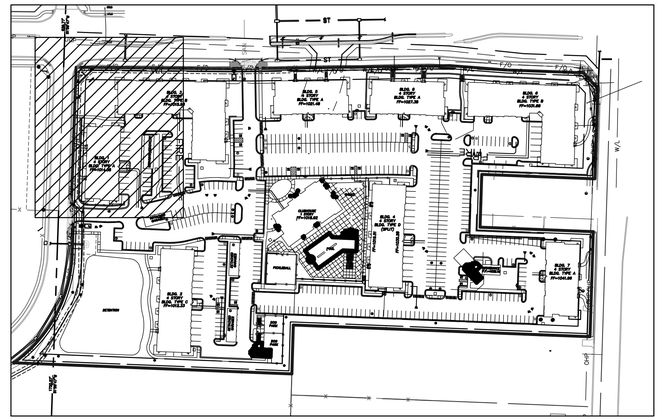

VICINITY MAP
n.t.s

LEGEND

TC:	Top of Curb
P:	Pavement
T/S:	Top of Structure
F/L:	Flowline of Pipe
G:	Ground
(HP)	High Point
(LP)	Low Point
TW:	Top of Wall
BW:	Bottom of Wall

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

NORTH
1"=20'
0 10' 20'

Final Development Plans

24-0166
TUDOR MULTIFAMILY
Lee's Summit, Jackson County, Missouri

Spot Grading North_1

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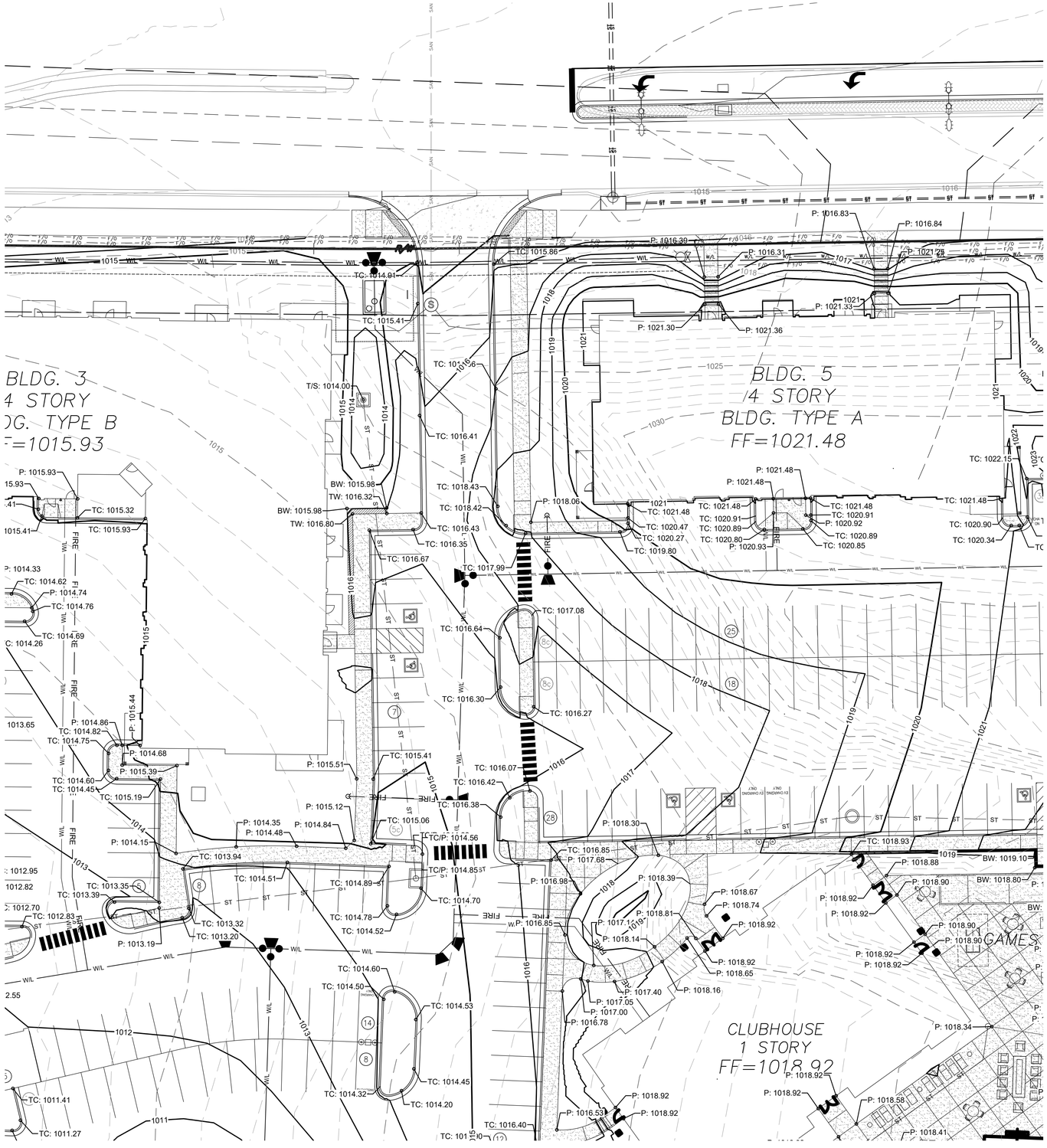

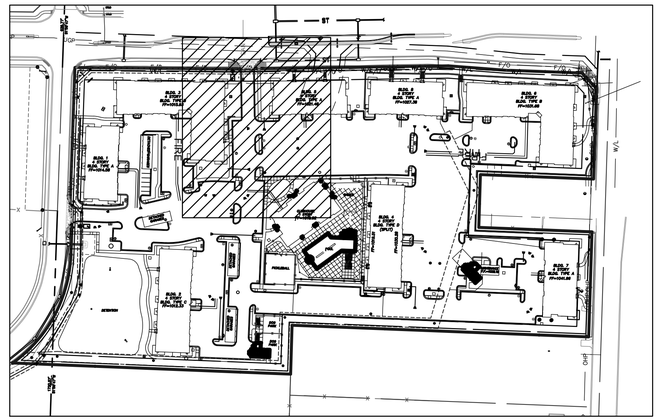

VICINTY MAP
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Existing Major Contour
Existing Minor Contour
Proposed Major Contour
Proposed Minor Contour

NORTH
1"=20'
0 10' 20'

Final Development Plans

24-0166
TUDOR MULTIFAMILY
Lee's Summit, Jackson County, Missouri

Spot Grading North_2

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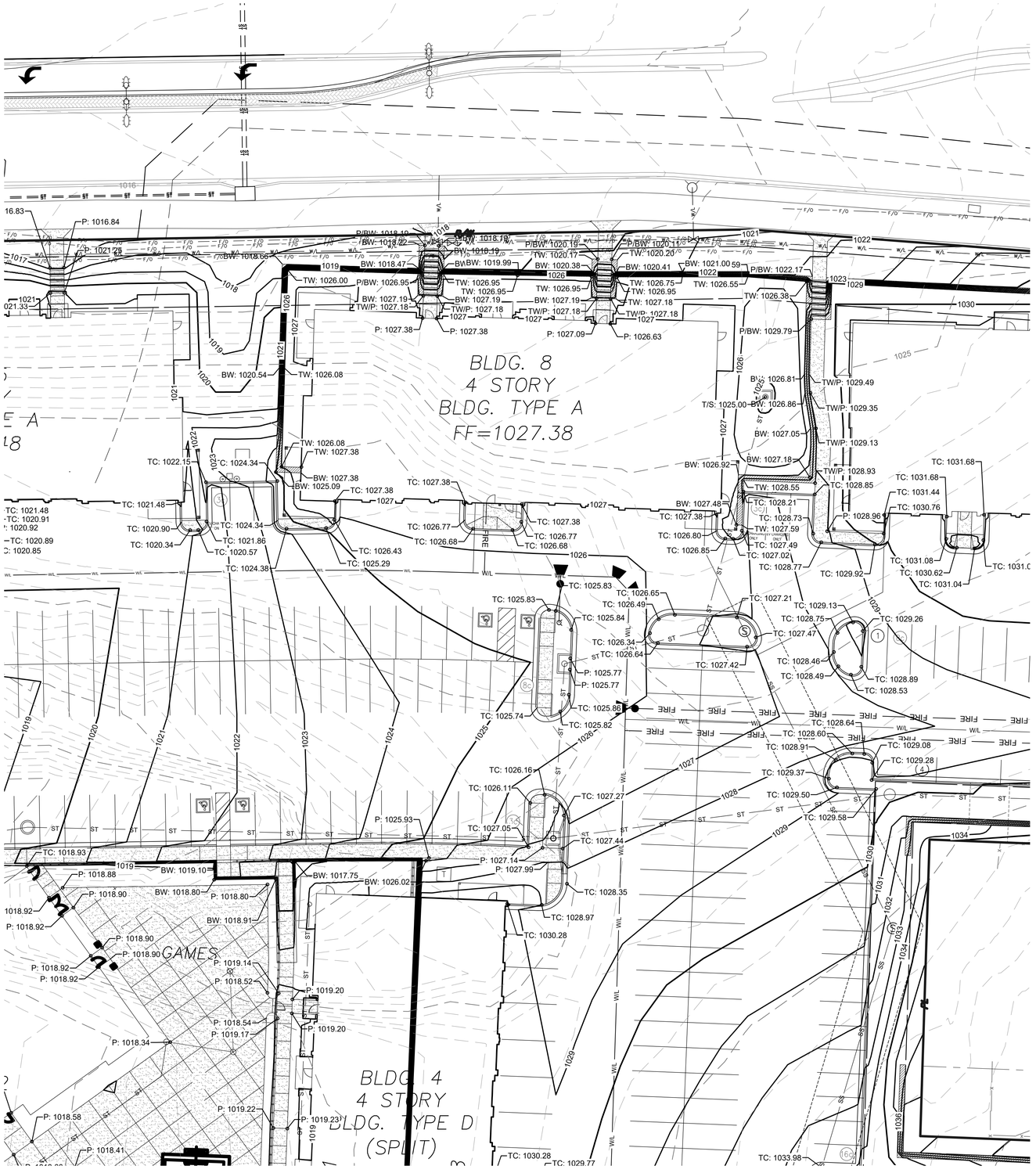

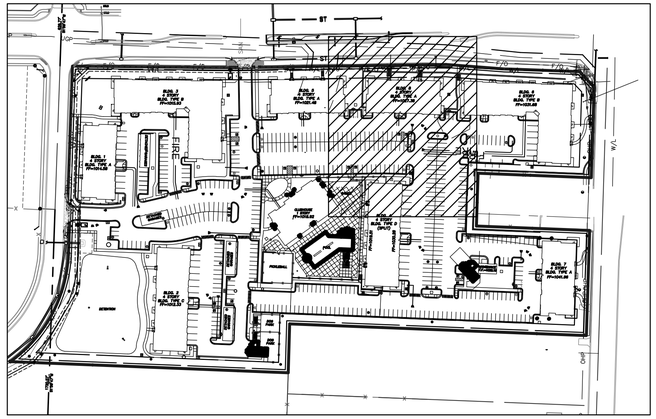

VICINITY MAP
n.t.s

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

NORTH
1"=20'
0 10' 20'

Final Development Plans

24-0166
TUDOR MULTIFAMILY
Lee's Summit, Jackson County, Missouri

Spot Grading North_3

NO.	DATE	REVISION
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PROFESSIONAL ENGINEER
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MITCHELL E. SLUTTER PE-2002003418

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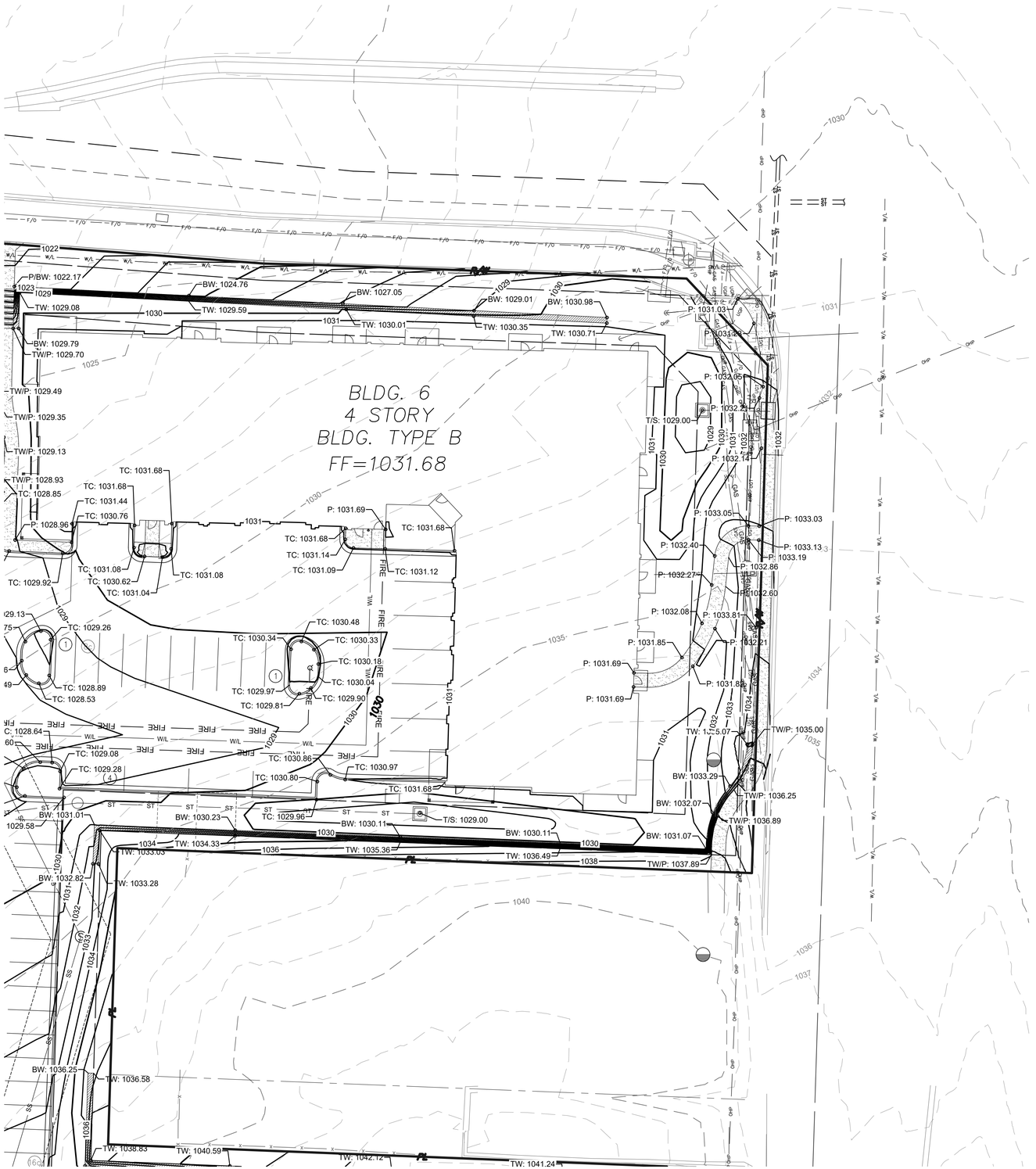

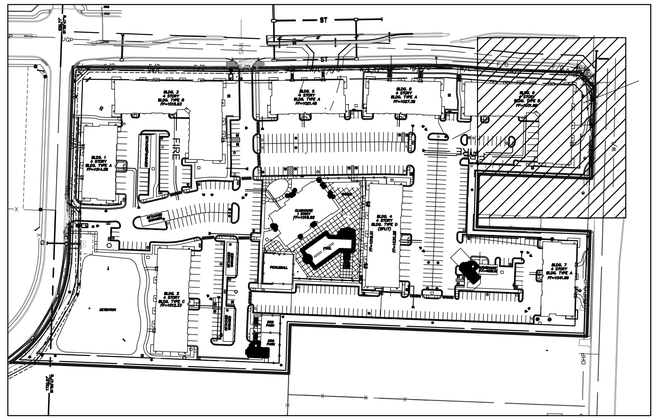

VICINITY MAP
n.t.s

LEGEND

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P:	Pavement
T/S:	Top of Structure
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BW:	Bottom of Wall

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

NORTH
1"=20'
0 10' 20'

Final Development Plans

24-0166
TUDOR MULTIFAMILY
Lee's Summit, Jackson County, Missouri

Spot Grading North_4

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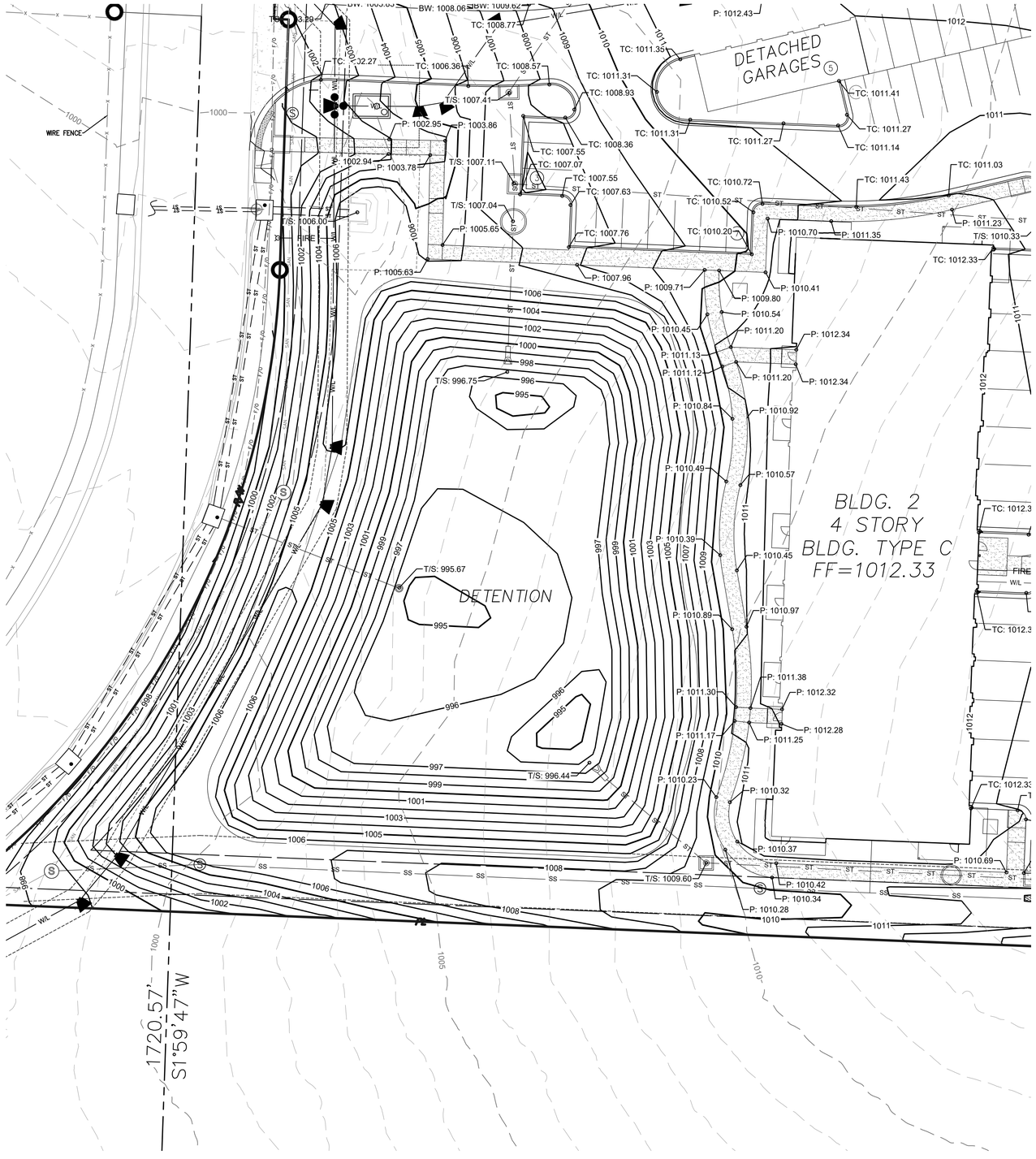

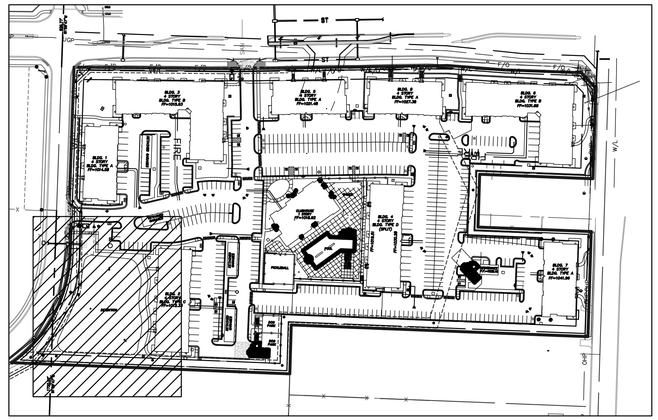

VICINITY MAP
n.t.s

LEGEND

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BW:	Bottom of Wall

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

NORTH

1"=20'
0 10' 20'

Final Development Plans

24-0166
TUDOR MULTIFAMILY
Lee's Summit, Jackson County, Missouri

Spot Grading South_1

NO.	DATE	REVISION
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MITCHELL E. SLUTTER PE-2002003418

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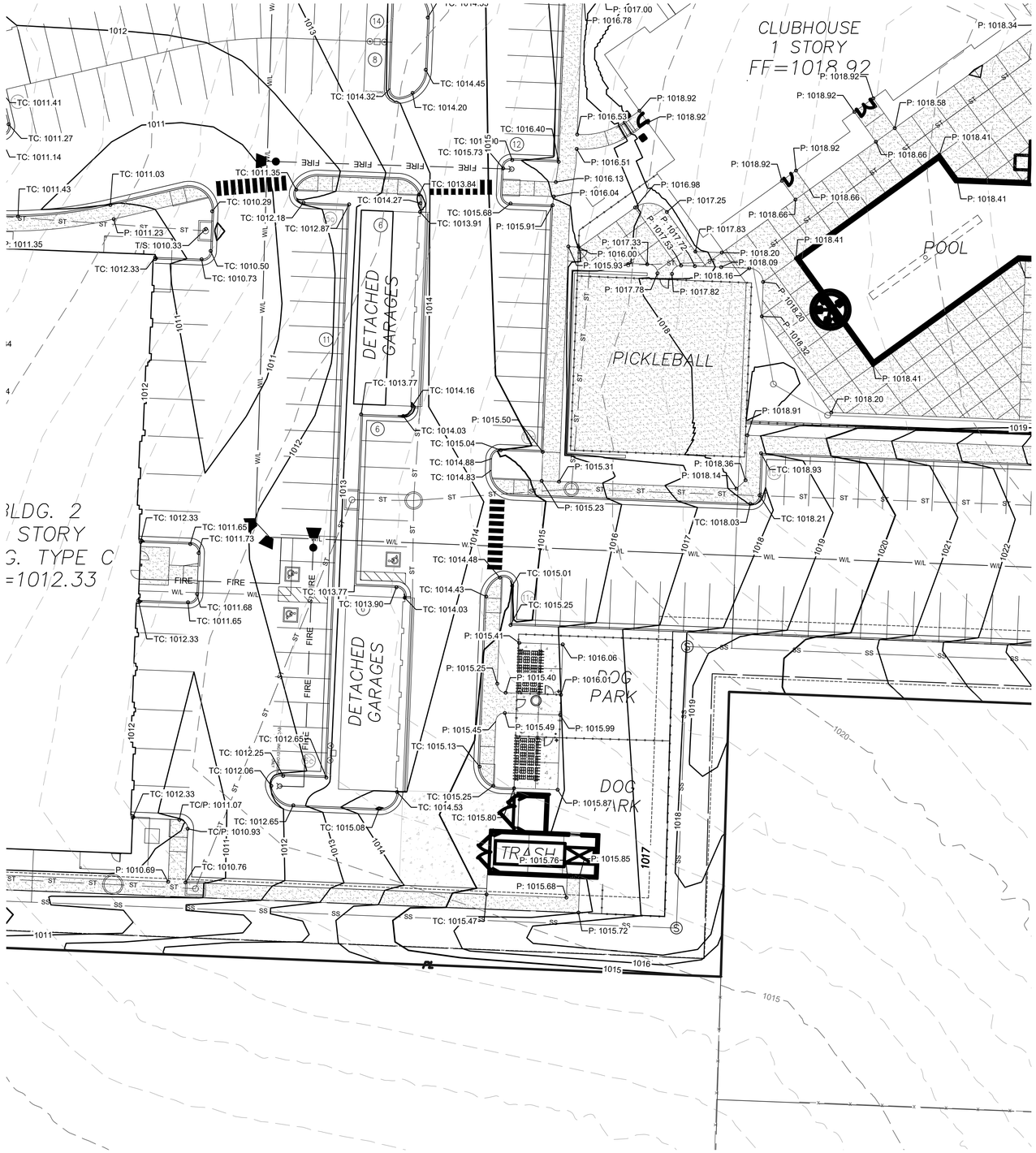

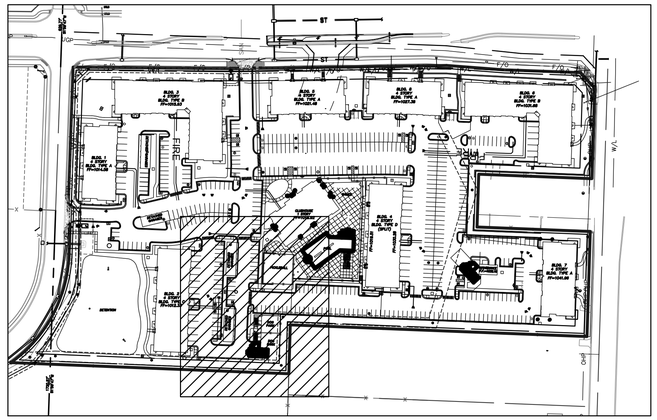

VICINTY MAP
n.t.s

LEGEND

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BW:	Bottom of Wall

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

NORTH
1"=20'
0 10' 20'

Final Development Plans

24-0166
TUDOR MULTIFAMILY
Lee's Summit, Jackson County, Missouri

Spot Grading South_2

NO.	DATE	REVISION
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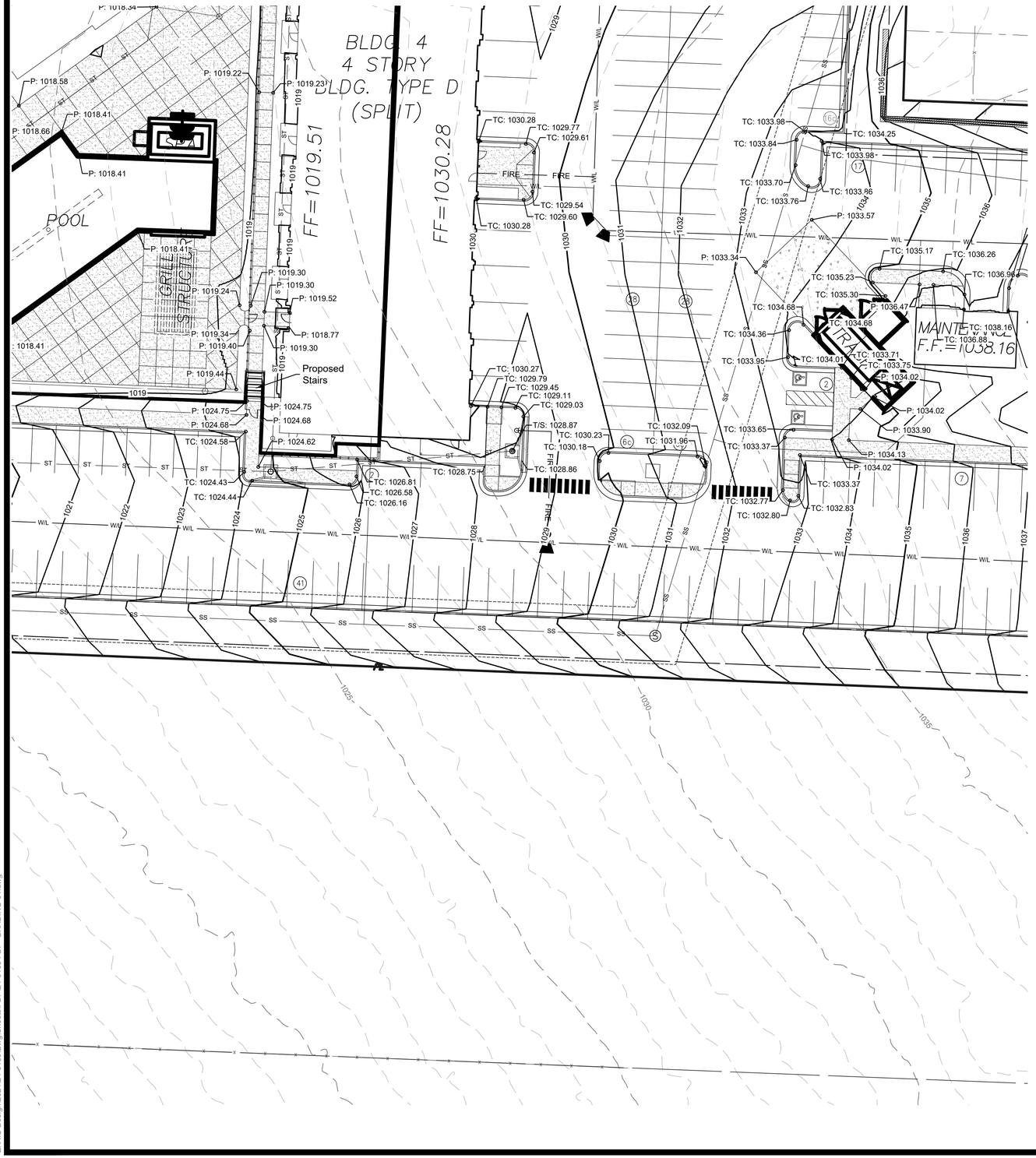

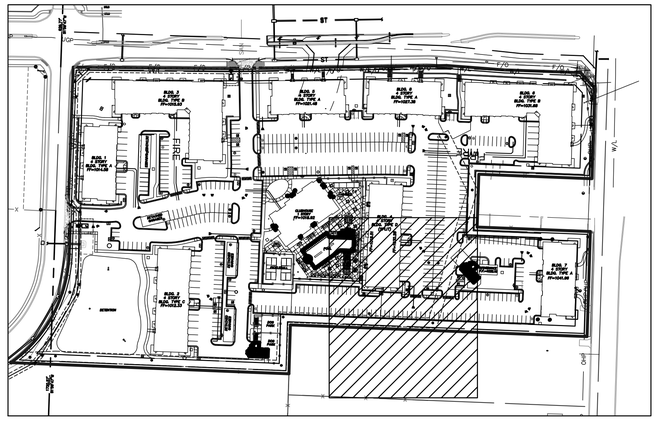

VICINITY MAP
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- Existing Major Contour
- Existing Minor Contour
- Proposed Major Contour
- Proposed Minor Contour

NORTH
1"=20'
0 10' 20'

Final Development Plans

24-0166
TUDOR MULTIFAMILY
Lee's Summit, Jackson County, Missouri

Spot Grading South_3

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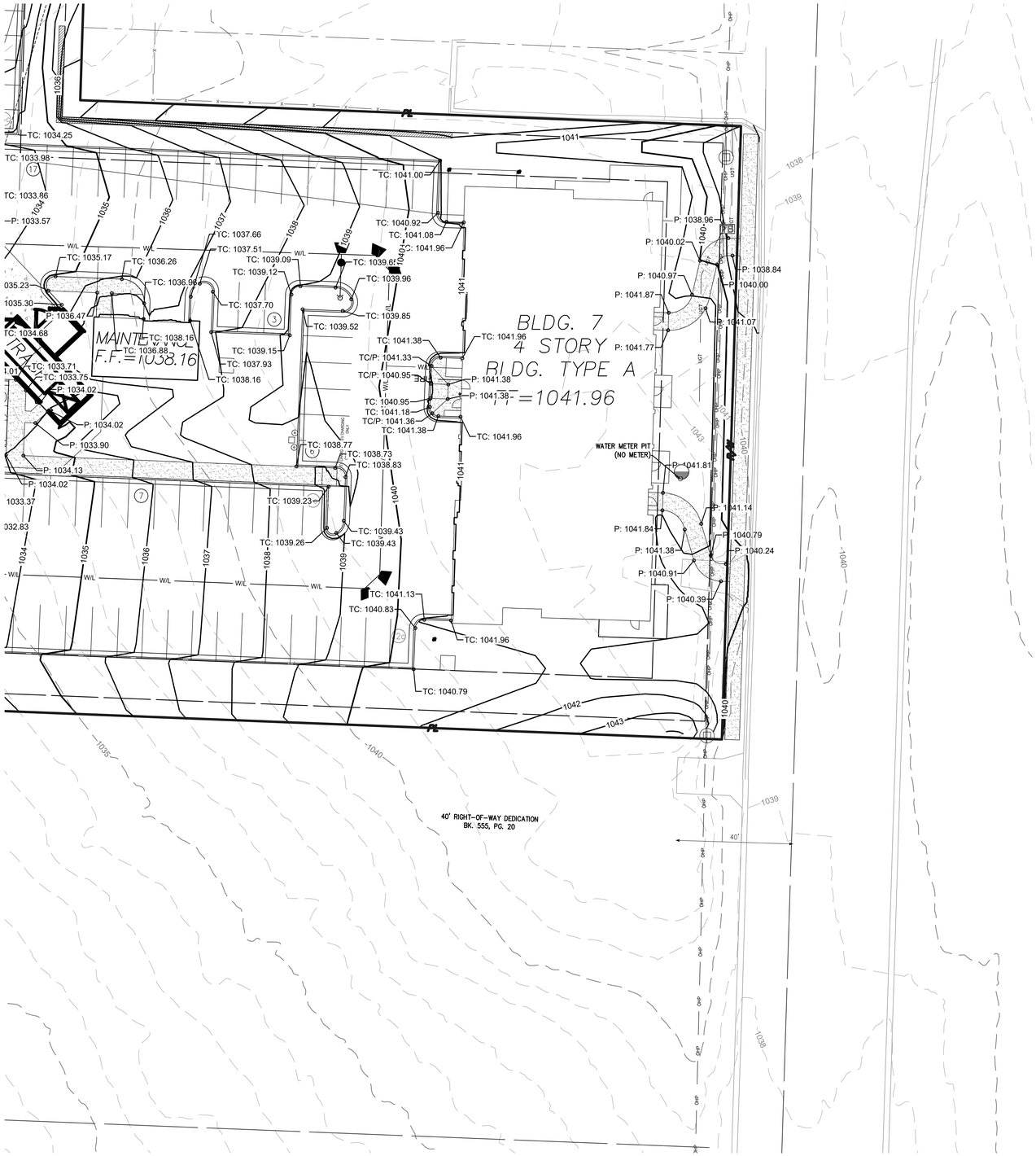

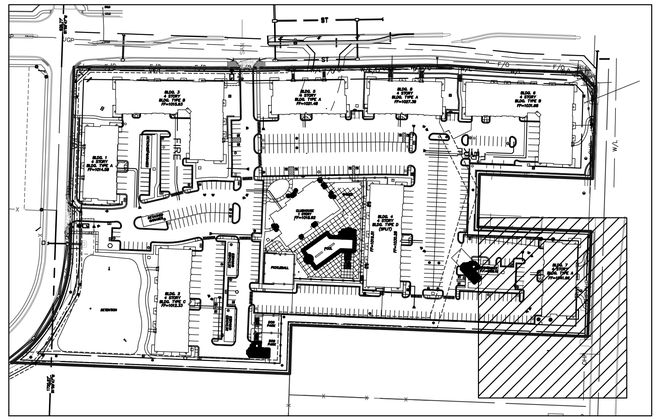

VICINITY MAP
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LEGEND

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BW:	Bottom of Wall

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

NORTH
1"=20'
0 10' 20'

Final Development Plans

24-0166
TUDOR MULTIFAMILY
Lee's Summit, Jackson County, Missouri

Spot Grading South_4

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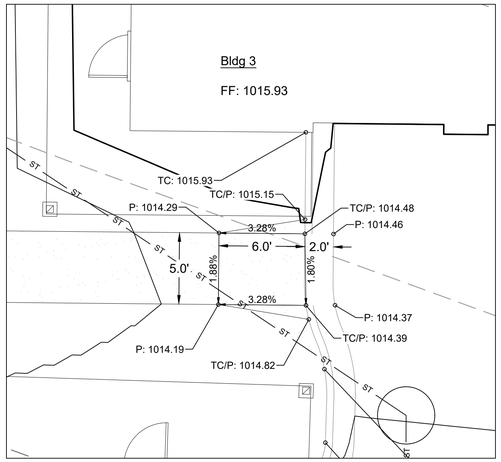

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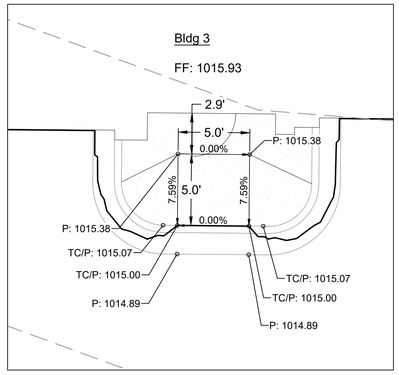

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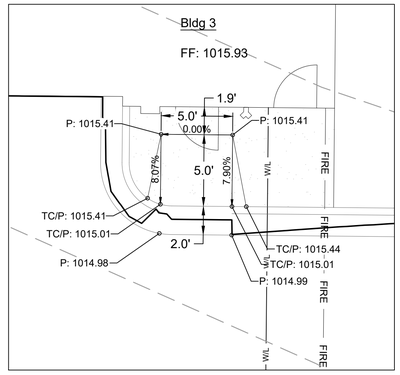

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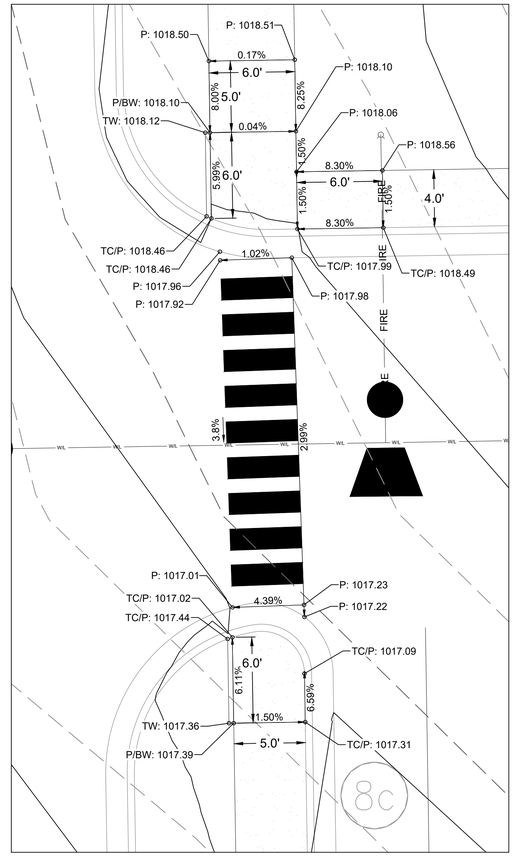

Detail 6

LEGEND

TC:	Top of Curb
P:	Pavement
T/S:	Top of Structure
F/L:	Flowline of Pipe
G:	Ground
(HP)	High Point
(LP)	Low Point
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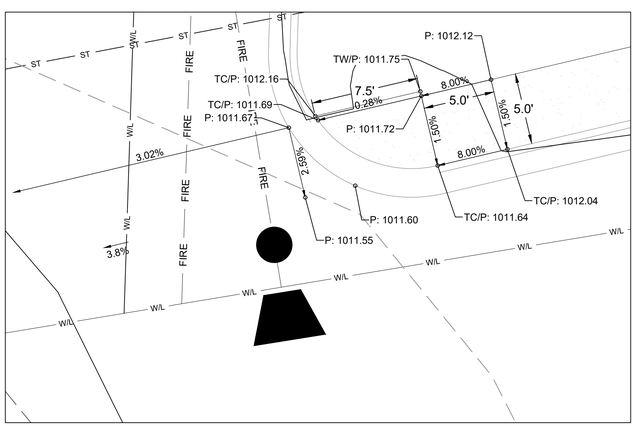
BW:	Bottom of Wall

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



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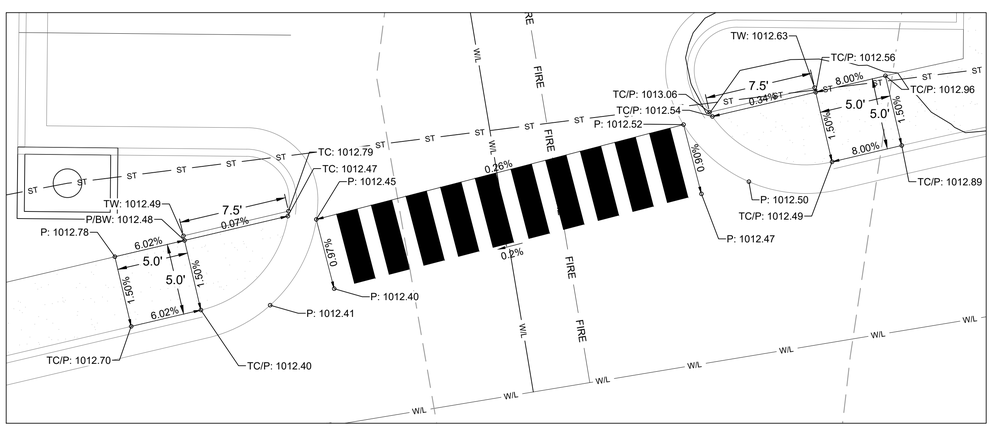

Detail 5

1"=5'
0 5'

Final Development Plans

24-0166
TUDOR MULTIFAMILY
Lee's Summit, Jackson County, Missouri

Grading Details_1

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MITCHELL E. SLUTTER PE-2002003418

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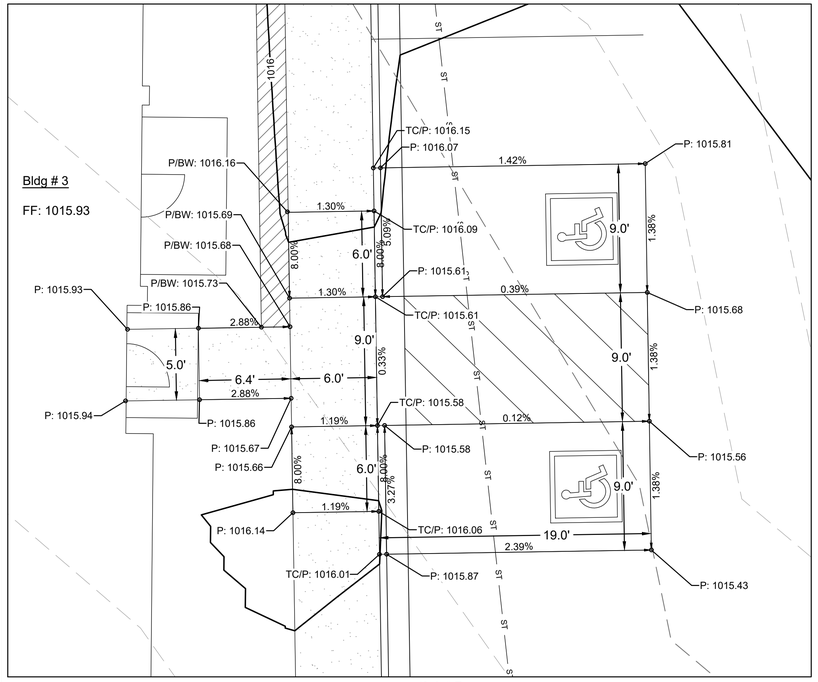

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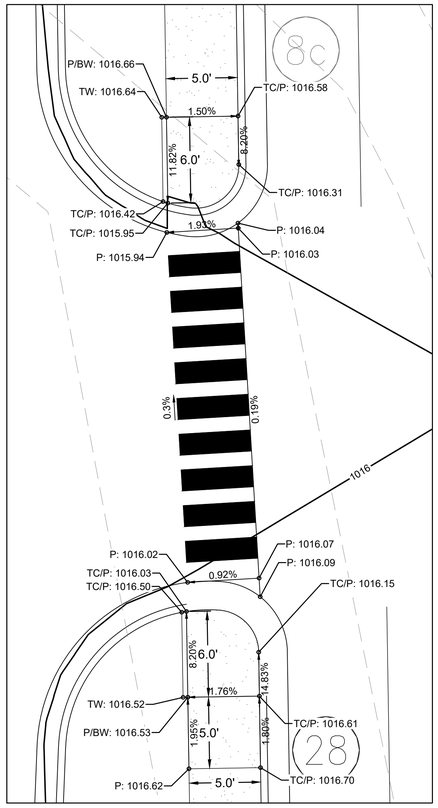
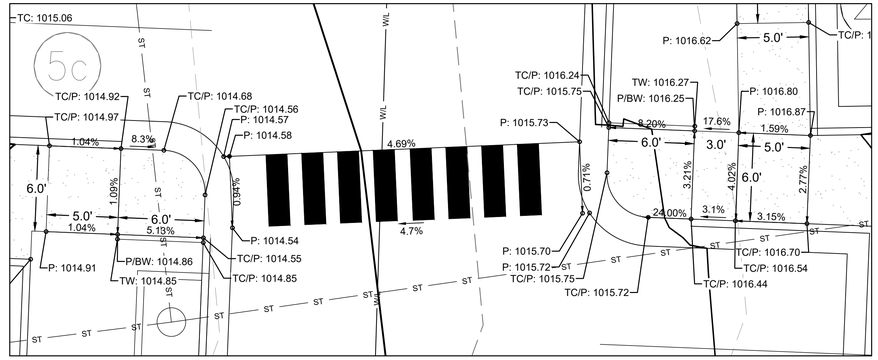


Detail 8



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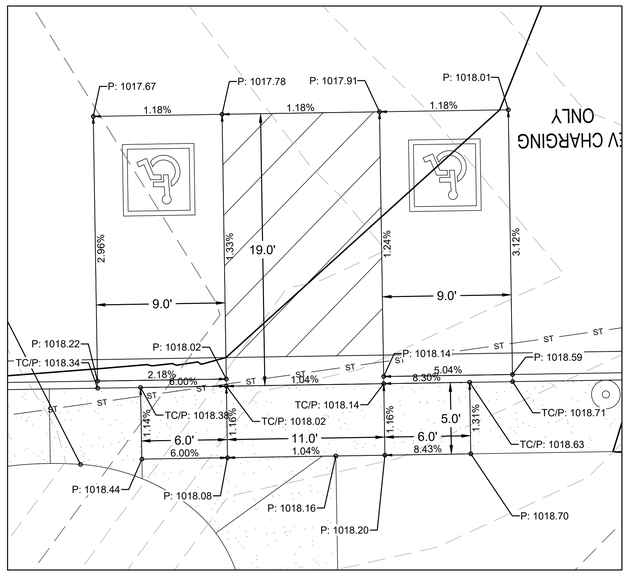

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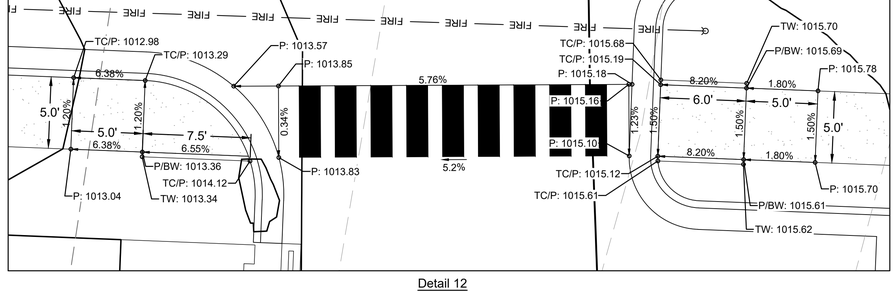

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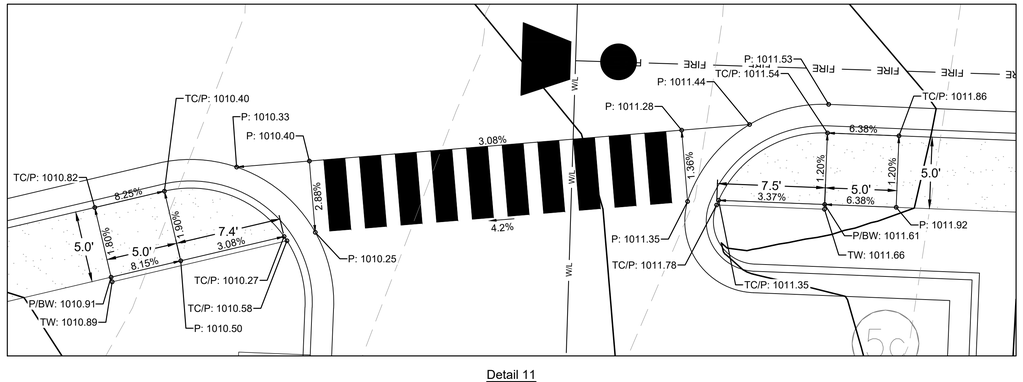

Detail 11

LEGEND

TC:	Top of Curb
P:	Pavement
T/S:	Top of Structure
F/L:	Flowline of Pipe
G:	Ground
(HP)	High Point
(LP)	Low Point
TW:	Top of Wall
BW:	Bottom of Wall

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

NORTH
1"=5'
0 5'

Final Development Plans

24-0166
TUDOR MULTIFAMILY
Lee's Summit, Jackson County, Missouri

Grading Details_2

NO.	DATE	REVISION
1	08/16/2024	FDP Submittal

DRAWN BY: TUA
CHECKED BY: CMP

Renaissance Infrastructure Consulting
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400 E 17TH STREET
KANSAS CITY, MISSOURI 64108
MO Certificate of Authority: E-2010033630

STATE OF MISSOURI
MITCHELL SLUTTER
NUMBER PE-2002003418
PROFESSIONAL ENGINEER
8/16/24
MITCHELL E. SLUTTER PE-2002003418

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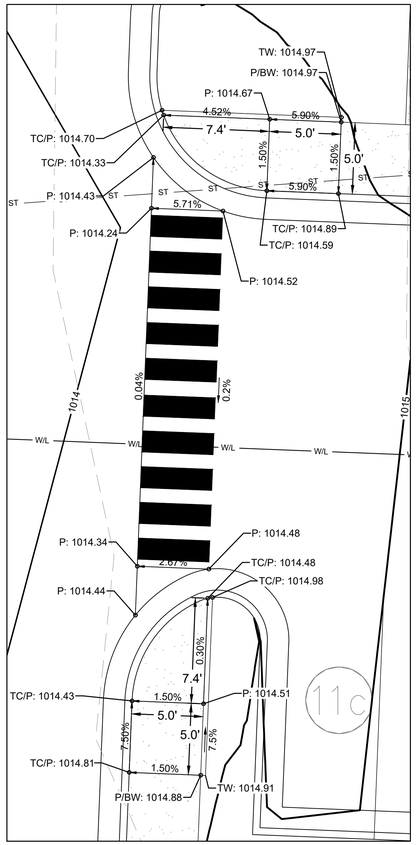

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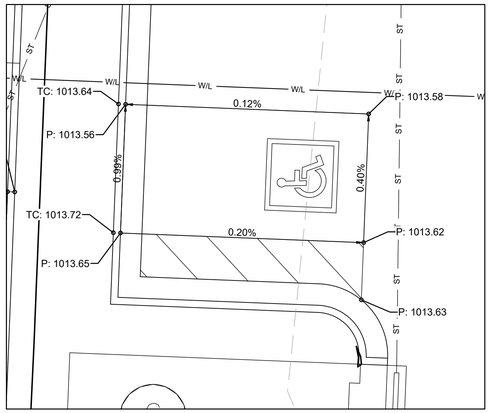

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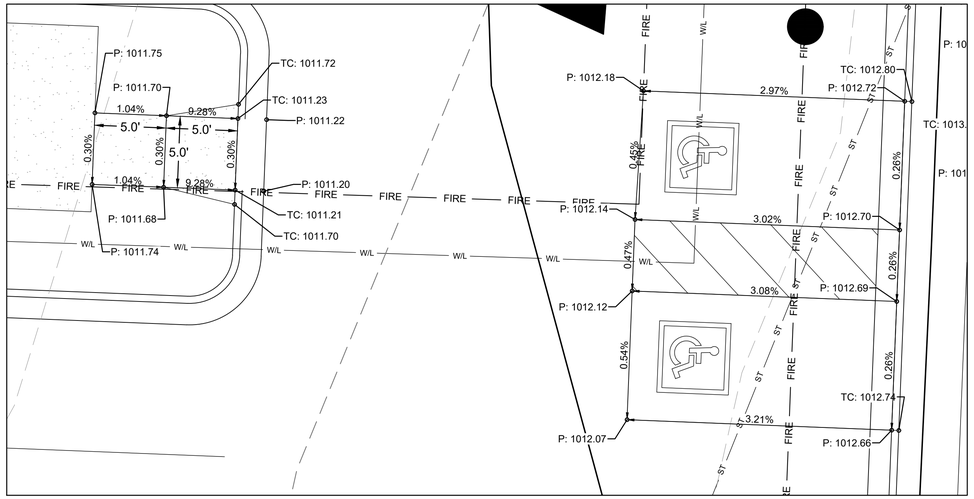
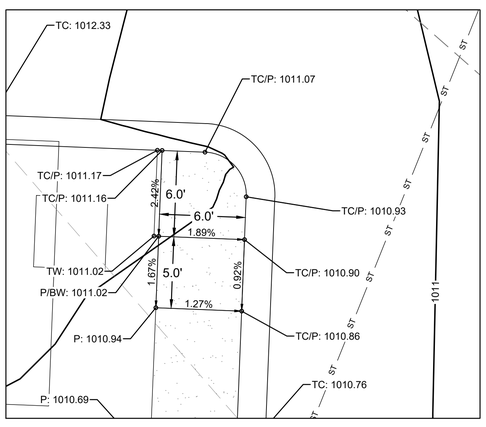
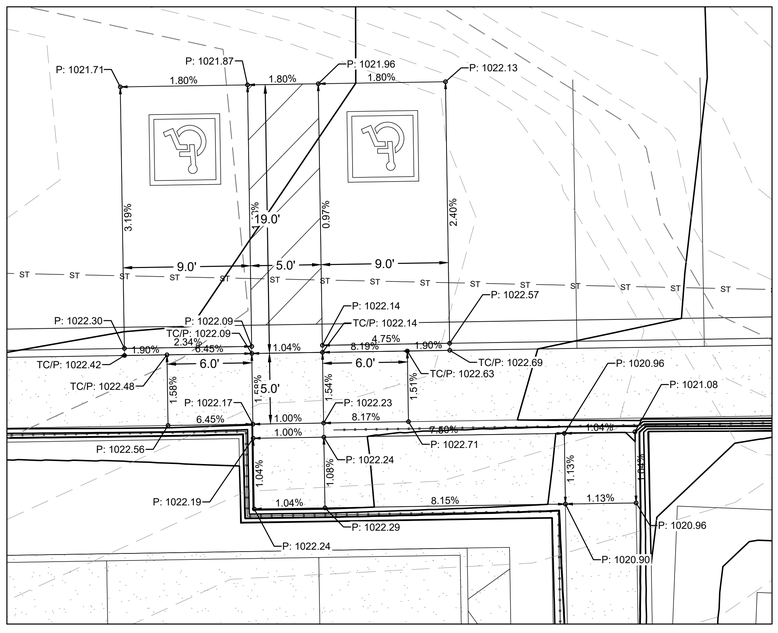


Detail 15

Detail 18



Detail 16



Detail 17

LEGEND

TC:	Top of Curb
P:	Pavement
T/S:	Top of Structure
F/L:	Flowline of Pipe
G:	Ground
(HP)	High Point
(LP)	Low Point
TW:	Top of Wall
BW:	Bottom of Wall

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

NORTH
1"=5'
0 5'

Final Development Plans

24-0166
TUDOR MULTIFAMILY
Lee's Summit, Jackson County, Missouri

Grading Details_3

NO.	DATE	REVISION
1	08/16/2024	FDP Submittal

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Renaissance Infrastructure Consulting
400 E 17th Street
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MO Certificate of Authority: E-2010033630

STATE OF MISSOURI
MITCHELL SLUTTER
NUMBER PE-2002003418
PROFESSIONAL ENGINEER
08/16/24
MITCHELL E. SLUTTER PE-2002003418

Sheet
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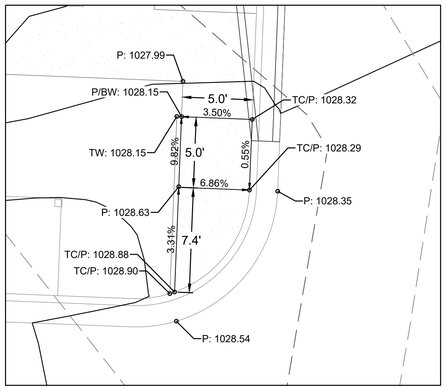

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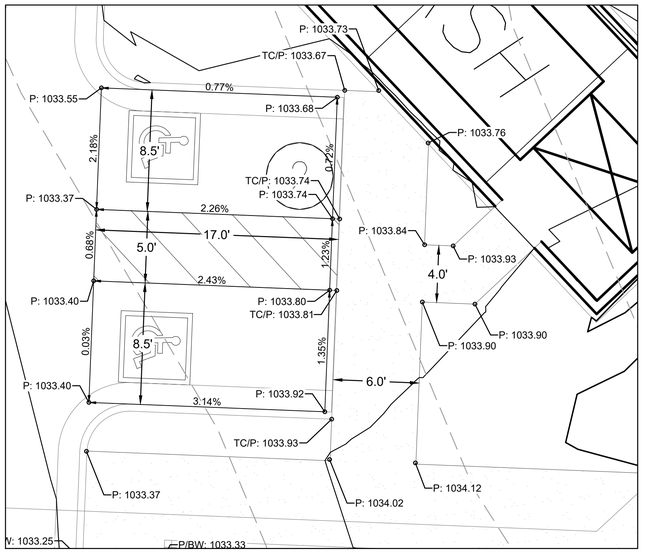

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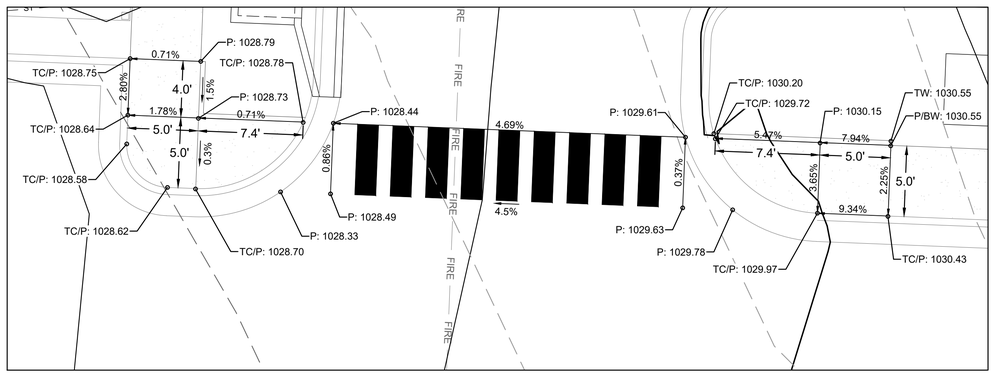

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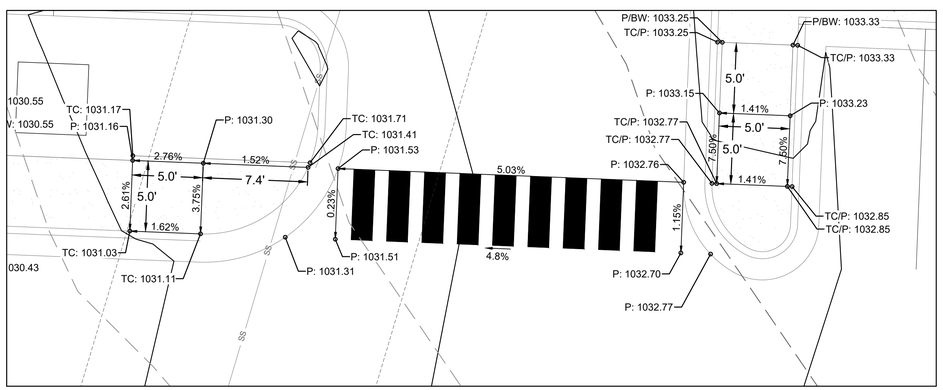

Detail 21

LEGEND

TC:	Top of Curb
P:	Pavement
T/S:	Top of Structure
F/L:	Flowline of Pipe
G:	Ground
(HP)	High Point
(LP)	Low Point
TW:	Top of Wall
BW:	Bottom of Wall

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

NORTH

1"=5'

0 5'

Final Development Plans

24-0166
TUDOR MULTIFAMILY
Lee's Summit, Jackson County, Missouri

Grading Details_4

NO.	DATE	REVISION
1	08/16/2024	FDP Submittal

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Renaissance Infrastructure Consulting
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KANSAS CITY, MISSOURI 64108
MO Certificate of Authority: E-2010033830

STATE OF MISSOURI
MITCHELL E. SLUTTER
NUMBER PE-2002003418
PROFESSIONAL ENGINEER
8/6/24
MITCHELL E. SLUTTER PE-2002003418

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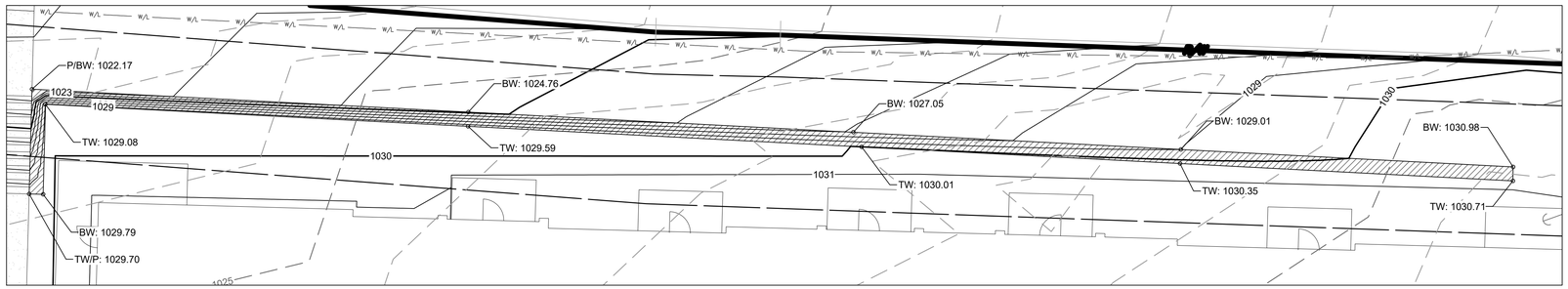
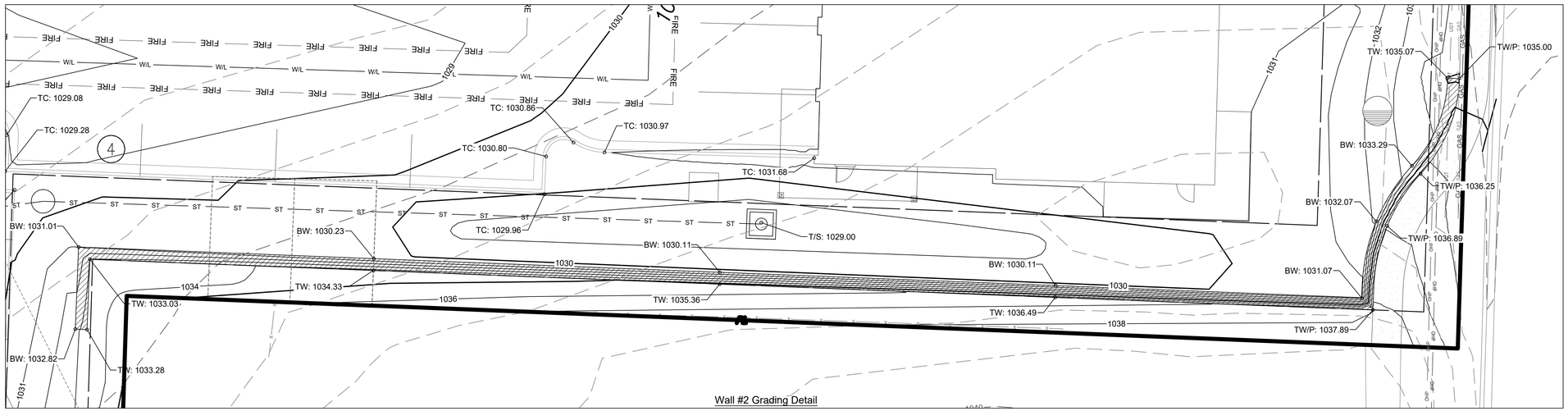
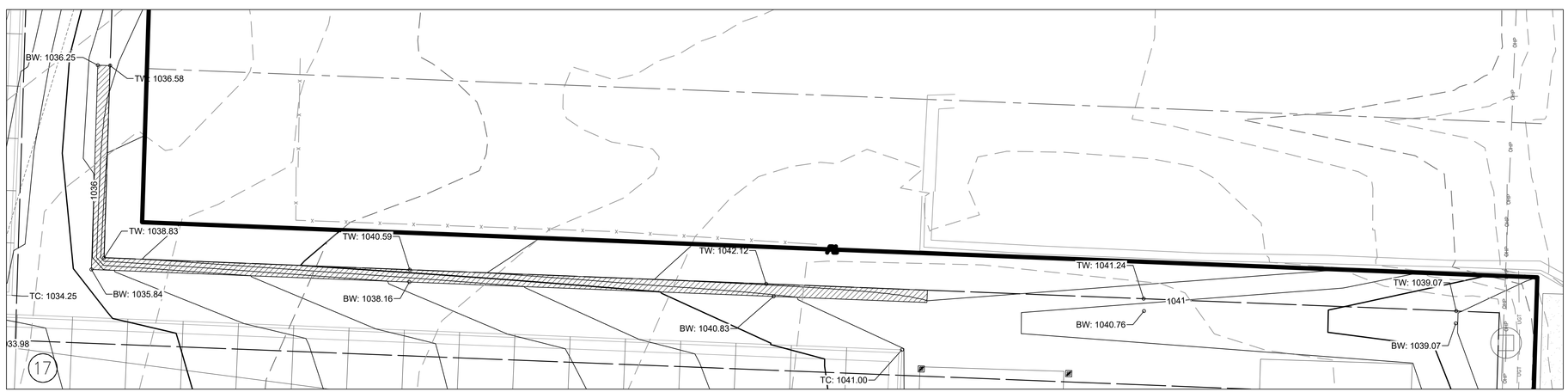


Wall #1 Grading Detail



Wall #2 Grading Detail



Wall #3 Grading Detail

LEGEND

TC:	Top of Curb
P:	Pavement
T/S:	Top of Structure
F/L:	Flowline of Pipe
G:	Ground
(HP)	High Point
(LP)	Low Point
TW:	Top of Wall
BW:	Bottom of Wall

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

NORTH

1"=10'

0 5' 10'

Final Development Plans

24-0166
TUDOR MULTIFAMILY
Lee's Summit, Jackson County, Missouri

Wall Grading Details_1

NO.	DATE	REVISION
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STATE OF MISSOURI
MITCHELL ELLIOTT SLUTTER
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MITCHELL E. SLUTTER PE-2002003418

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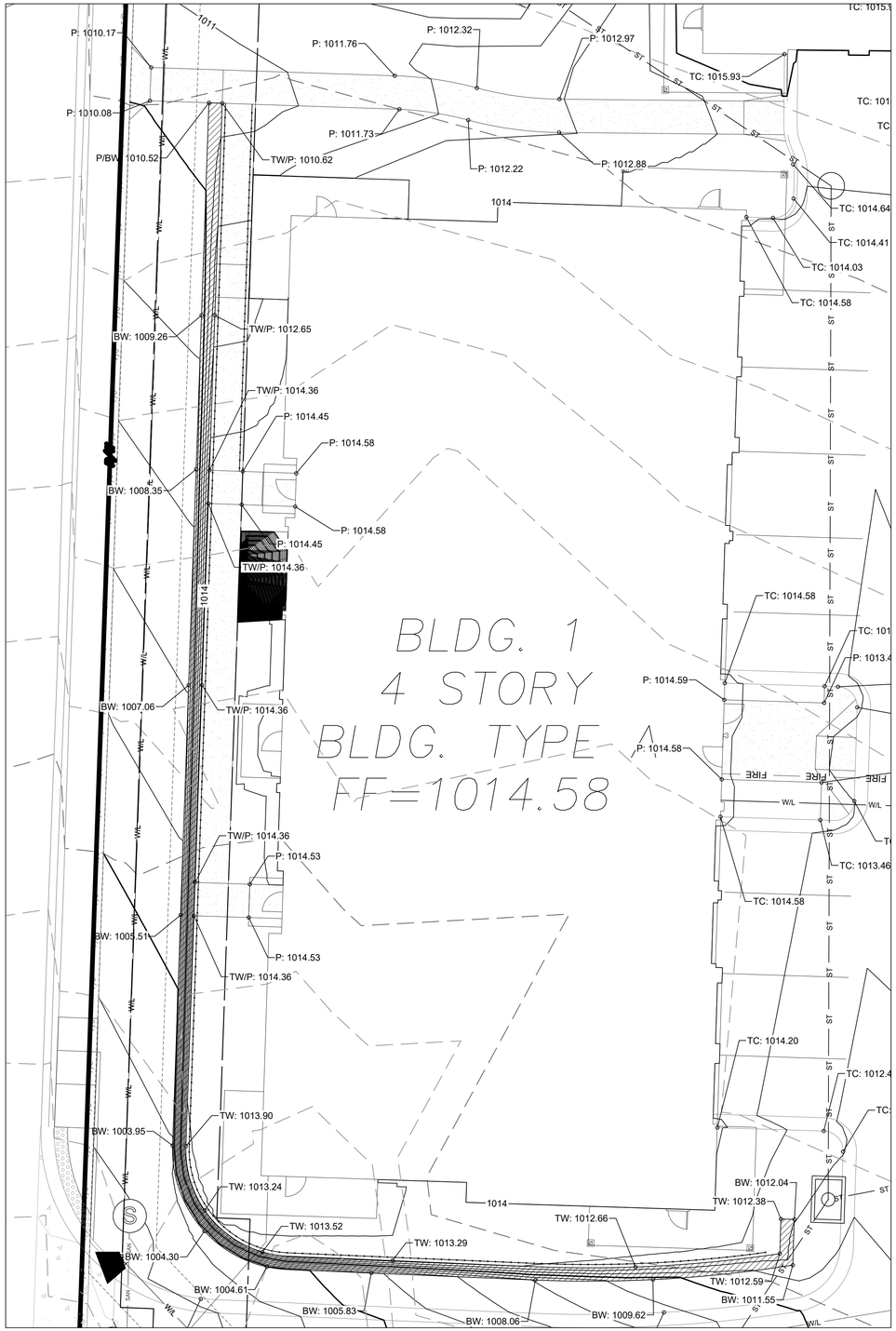
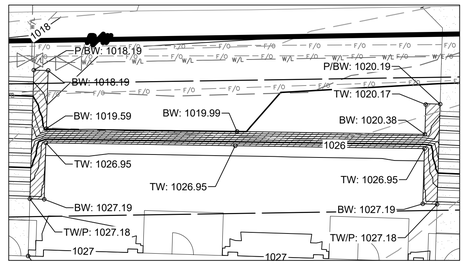
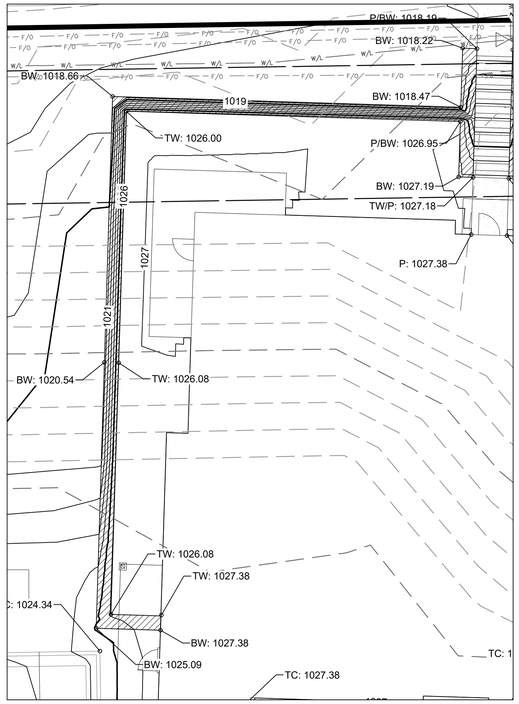


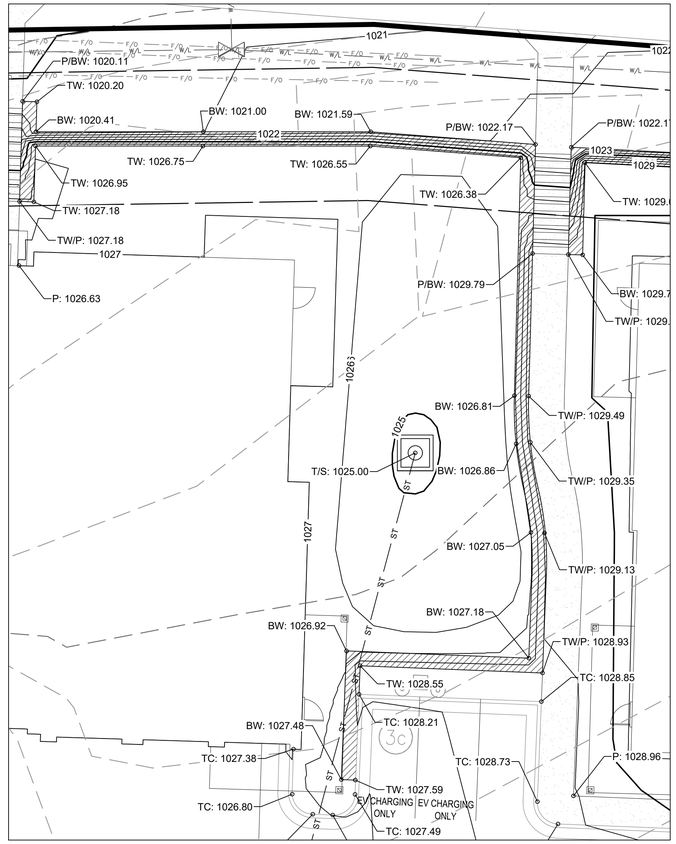
Wall #7 Grading Detail



Wall #5 Grading Detail



Wall #6 Grading Detail



Wall #4 Grading Detail

LEGEND

TC:	Top of Curb
P:	Pavement
T/S:	Top of Structure
F/L:	Flowline of Pipe
G:	Ground
(HP)	High Point
(LP)	Low Point
TW:	Top of Wall
BW:	Bottom of Wall

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

NORTH

1"=10'
0 5' 10'

Final Development Plans

24-0166
TUDOR MULTIFAMILY
Lee's Summit, Jackson County, Missouri

Wall Grading Details_2

NO.	DATE	REVISION
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CHECKED BY: CMP

Renaissance Infrastructure Consulting
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Kansas City, Missouri 64108
MO Certificate of Authority: E-2010033630

STATE OF MISSOURI
MITCHELL E. SLUTTER
NUMBER PE-2002003418
PROFESSIONAL ENGINEER
08/16/24
MITCHELL E. SLUTTER PE-2002003418

Sheet
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Sta. 0+95.59, Storm Line 1
4' x 6' Curb Inlet (1C)
Top: 1007.40

Sta. 0+64.00, Storm Line 1
6' x 4' Curb Inlet (1B)
Top: 1007.11

Sta. 0+51.00, Storm Line 1
8' Dia. NDS Barracuda Max S8 (1A)
Top: 1007.04

Sta. 0+00.00, Storm Line 1
Flared End Section w/ Toe Wall (1End)

Sta. 1+52.45, Storm Line 1
4' x 6' Curb Inlet (1D)
Top: 1011.79

Sta. 2+07.81, Storm Line 3
6' x 4' Area Inlet (3B)
Top: 1010.99

Sta. 1+52.23, Storm Line 3
48" Dia. Drain Basin
w/ Traffic Rate Solid Lid (3A)
Top: 1013.98

Sta. 2+26.50, Storm Line 1
6' x 4' Curb Inlet (1E)
Top: 1012.72

Sta. 3+84.00, Storm Line 1
6' x 4' Curb Inlet (1F)
Top: 1014.78

Sta. 1+75.74, Storm Line 4
4' x 4' Area Inlet (4A)
Top: 1014.00

Sta. 0+62.52, Storm Line 5
6' x 4' Curb Inlet (5A)
Top: 1025.72

Sta. 1+99.72, Storm Line 5
4' x 4' Area Inlet (5C)
Top: 1025.00

Sta. 1+13.44, Storm Line 5
48" Dia. Std. Manhole (5B)
Top: 1026.97

Sta. 9+76.22, Storm Line 1
4' x 4' Area Inlet (1J)
Top: 1029.00

Sta. 8+53.76, Storm Line 1
48" Dia. Std. Manhole (1I)
Top: 1029.78

Sta. 7+32.60, Storm Line 1
4' x 4' Setback Curb Inlet (1H)
Top: 1027.92

Sta. 1+82.63, Storm Line 6
6' x 4' Curb Inlet (6A)
Top: 1010.32

Sta. 3+07.97, Storm Line 2
6' x 4' Curb Inlet (2D)
Top: 1013.30

Sta. 3+83.64, Storm Line 2
48" Dia. Drain Basin w/
Traffic Rated Solid Lid (2F)
Top: 1015.50

Sta. 3+29.21, Storm Line 2
48" Dia. Drain Basin w/
Traffic Rated Solid Lid (2E)
Top: 1013.53

Sta. 6+72.44, Storm Line 2
4' x 4' Setback Curb Inlet (2H)
Top: 1028.87

Sta. 5+85.43, Storm Line 2
4' x 4' Setback Curb Inlet (2G)
Top: 1024.88

Sta. 0+00.00, Storm Line 2
Flared End Section w/ Toe Wall (2End)

Sta. 0+50.75, Storm Line 2
4' x 4' Area Inlet (2A)
Top: 1009.60

Sta. 1+35.17, Storm Line 2
6' Dia. NDS Barracuda Max S6 (2B)
Top: 1010.59

Sta. 1+63.65, Storm Line 2
6' x 4' Area Inlet (2C)
Top: 1010.88

0.14 3B
0.26 1E
0.95 1D
0.16 1C
1.13 6A
0.18 1B
0.14 2E
0.05 4A
2.00 1F
0.08 5C
0.58 5A
0.56 1I
0.72 1G
0.63 7
0.48 2H
0.69 2D
0.70 2G
0.48 2C
0.18 2E

XX
XX
Drainage Area
Storm Structure

NORTH
1"=40'
0 20' 40'

WATER METER PIT (NO METER)

40' RIGHT-OF-WAY DEDICATION BK. 555, PG. 28

RIGHT-OF-WAY DEDICATION TO CITY OF LEE'S SUMMIT DOC. NO. 2018E0092012 (pt)

TEMPORARY CONSTRUCTION ESMT. TO CITY OF LEE'S SUMMIT DOC. NO. 2018E0092012 (pt)

RIGHT-OF-WAY DEDICATION TO CITY OF LEE'S SUMMIT DOC. NO. 2018E0091991

RIGHT-OF-WAY EASEMENT FOR PUBLIC USE DOC. NO. 2018E0091991 (PP)

626.77' S1°59'47"W

1720.57' S1°59'47"W

Final Development Plans

24-0166
TUDOR MULTIFAMILY
Lee's Summit, Jackson County, Missouri

Drainage Area Map

NO.	DATE	REVISION
1	08/16/2024	FDP Submittal

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CHECKED BY CMP

Renaissance Infrastructure Consulting
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KANSAS CITY, MISSOURI 64108
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MO Certificate of Authority: E-2010033830

STATE OF MISSOURI
MITCHELL E. SLUTTER
NUMBER PE-2002003418
PROFESSIONAL ENGINEER
8/6/24
MITCHELL E. SLUTTER PE-2002003418

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	Overland Flow								System Flow						Pipe Design																		Structure Design			
Line	Point	Trib. Area (Ac.)	"C" Value	Design Storm	"K" Value	Time of Conc. (min.)	Intensity i (in./hr.)	Total Runoff (cfs)	Total Area (Ac.)	Weighted "C" Value	Total (K*A*C)	Time of Conc. (min.)	Intensity i (in./hr.)	System Discharge (cfs)	U/S Node	D/S Node	Pipe Type	Pipe Shape	Pipe Diameter (in.)	Pipe Length (ft.)	Mannings "n" value	Pipe Slope (%)	Design Flow (cfs)	Pipe Capacity (cfs)	Full Flow Velocity (fps)	Design Flow Velocity (fps)	Depth of Flow (in.)	Flow Time (min.)	U/S Invert El.	U/S Crown El.	D/S Invert El.	D/S Crown El.	U/S Depth of Cover (ft.)	D/S Depth of Cover (ft.)	Headwater Inlet Elev. (EGL)	Headwater Outlet Elev. (EGL)	Inlet/Outlet Control	Top Elevation
1	1J	0.56	0.80	10	1	5.00	7.35	3.29	0.56	0.80	0.45	5.00	7.35	3.29	1J	1I	HDPE	Round	15	122.46	0.012	1.02	3.29	7.04	5.74	5.64	7.2	0.36	1021.50	1022.75	1020.25	1021.50	6.25	8.28	1022.19	1021.34	I	1029.00
				100	1.25		10.32	5.78			0.56		10.32	5.78									5.78			6.38	10.2	0.32										
	1I	0.00	0.90	10	1	5.00	7.35	0.00	0.56	0.80	0.45	5.36	7.24	3.24	1I	1G	HDPE	Round	15	121.16	0.012	1.03	3.24	7.08	5.77	5.62	7.1	0.36	1020.05	1021.30	1018.80	1020.05	8.48	-0.55	1020.73	1019.88	I	1029.78
				100	1.25		10.32	0.00			0.56		10.17	5.70									5.70			6.39	10.1	0.32										
	1H	0.72	0.85	10	1	5.00	7.35	4.50	1.94	0.82	1.59	5.92	7.08	11.27	1H	1G	HDPE	Round	18	187.83	0.012	3.09	11.27	19.93	11.28	11.55	9.5	0.27	1018.05	1019.55	1012.25	1013.75	8.37	5.75	1019.00	1015.12	I	1027.92
				100	1.25		10.32	7.43			1.94		9.95	19.31									19.31			12.85	14.2	0.24										
	1G	0.00	0.85	10	1	5.00	7.35	0.00	1.94	0.82	1.59	6.19	7.00	11.15	1G	1F	HDPE	Round	24	160.77	0.012	1.96	11.15	34.23	10.89	9.71	9.4	0.28	1011.90	1013.90	1008.75	1010.75	5.60	4.03	1012.73	1010.99	I	1019.50
				100	1.25		10.32	0.00			1.94		9.85	19.11									19.11			11.16	12.7	0.24										
	1F	2.00	0.87	10	1	5.00	7.35	12.79	3.99	0.84	3.35	6.77	6.84	22.92	1F	1E	HDPE	Round	30	142.46	0.012	0.81	22.92	39.86	8.12	8.38	16.2	0.28	1007.65	1010.15	1006.50	1009.00	4.63	3.72	1009.04	1008.94	I	1014.78
				100	1.25		10.32	20.65			3.99		9.63	38.44									38.44			9.24	23.4	0.26										
	1E	0.26	0.85	10	1	5.00	7.35	1.63	4.25	0.84	3.57	7.06	6.77	24.17	1E	1D	HDPE	Round	30	74.05	0.012	1.35	24.17	51.56	10.50	10.32	14.4	0.12	1006.00	1008.50	1005.00	1007.50	4.22	4.29	1007.24	1007.85	O	1012.72
				100	1.25		10.32	2.68			4.25		9.53	40.51									40.51			11.59	19.8	0.11										
	1D	0.95	0.87	10	1	5.00	7.35	6.08	6.29	0.84	5.25	7.18	6.74	35.40	1D	1C	HDPE	Round	30	56.86	0.012	4.92	35.40	98.45	20.06	18.31	12.3	0.05	1004.50	1007.00	1001.70	1004.20	4.79	3.20	1005.59	1007.93	O	1011.79
				100	1.25		10.32	9.81			6.29		9.49	59.69									59.69			20.99	16.8	0.05										
	1C	0.16	0.87	10	1	5.00	7.35	1.02	6.45	0.84	5.39	7.23	6.72	36.26	1C	1A	HDPE	Round	36	31.58	0.012	1.27	36.26	81.24	11.49	11.08	16.6	0.05	1001.20	1004.20	1000.80	1003.80	3.20	3.20	1002.61	1004.09	O	1007.40
				100	1.25		10.32	1.65			6.45		9.47	61.09									61.09			12.58	23.0	0.04										
	1B	0.18	0.85	10	1	5.00	7.35	1.13	7.76	0.84	6.51	7.28	6.71	43.67	1B	1A	HDPE	Round	36	13.00	0.012	1.54	43.67	89.54	12.67	12.56	17.6	0.02	1000.30	1003.30	1000.10	1003.10	3.81	3.90	1001.81	1004.02	O	1007.11
				100	1.25		10.32	1.86			7.76		9.45	73.37									73.37			14.09	24.5	0.02										
	1A	0.00	0.85	10	1	5.00	7.35	0.00	7.76	0.84	6.51	7.29	6.71	43.64	1A	1End	HDPE	Round	36	51.00	0.012	1.47	43.64	87.54	12.38	12.28	17.6	0.07	997.75	1000.75	997.00	1000.00	6.25	0.00	999.26	1000.81	O	1007.00
				100	1.25		10.32	0.00			7.76		9.45	73.32									73.32			13.87	25.2	0.06										
	1End																																					1000.00
2	2H	0.48	0.87	10	1	5.00	7.35	3.07	0.48	0.87	0.42	5.00	7.35	3.07	2H	2G	HDPE	Round	15	86.19	0.012	4.70	3.07	15.11	12.31	9.56	4.5	0.15	1024.30	1025.55	1020.25	1021.50	3.32	3.38	1024.75	1022.04	I	1028.87
				100	1.25		10.32	4.95			0.48		10.32	4.95									4.95			10.97	5.9	0.13										
	2G	0.70	0.85	10	1	5.00	7.35	4.38	1.18	0.86	1.01	5.15	7.31	7.40	2G	2F	HDPE	Round	15	201.79	0.012	4.46	7.40	14.72	12.00	12.00	7.5	0.28	1019.75	1021.00	1010.75	1012.00	3.88	3.50	1020.57	1013.61	I	1024.88
				100	1.25		10.32	7.23			1.18		10.26	12.11									12.11			13.39	10.4	0.25										
8A	2F	0.00	0.90	10	1	5.00	7.35	0.00	1.79	0.86	1.53	5.43	7.22	11.06	2F	2E	HDPE	Round	18	54.43	0.012	2.76	11.06	18.83	10.66	11.07	9.9	0.08	1010.25	1011.75	1008.75	1010.25	3.75	3.26	1011.22	1011.48	O	1015.50
				100	1.25		10.32	0.00			1.79		10.15	18.16									18.16			12.13	14.0	0.07										
7A	2E	0.32	0.80	10	1	5.00	7.35	1.88	2.11	0.85	1.79	5.51	7.20	12.86	2E	2D	HDPE	Round	18	21.24	0.012	3.77	12.86	22.01	12.46	12.85	9.7	0.03	1008.25	1009.75	1007.45	1008.95	3.76	4.35	1009.23	1010.83	O	1013.51
				100	1.25		10.32	3.30			2.11		10.11	21.34									21.34			14.19	14.2	0.02										
	2D	0.69	0.85	10	1	5.00	7.35	4.31	2.80	0.85	2.37	5.54	7.19	17.07	2D	2C	HDPE	Round	24	144.32	0.012	1.35	17.07	28.42	9.05	9.40	13.2	0.26	1006.95	1008.95	1005.00	1007.00	4.35	3.88	1008.12	1007.47	I	1013.30
				100	1.25		10.32	7.12			2.80		10.10	28.29									28.29			10.31	19.4	0.23										
	2C	0.48	0.85	10	1	5.00	7.35	3.00	3.28	0.85	2.78	5.80	7.12	19.79	2C	2A	HDPE	Round	30	28.48	0.012	0.70	19.79	37.18	7.57	7.64	15.3	0.06	1004.50	1007.00	1004.30	1006.80	3.88	2.80	1005.81	1006.48	O	1010.88
				100	1.25		10.32	4.95			3.28		10.00	32.81									32.81			8.53	21.6	0.06										
	2B	0.00	0.90	10	1	5.00	7.35	0.00	3.28	0.85	2.78	5.86	7.10	19.74	2B	2A	HDPE	Round	30	84.42	0.012	0.71	19.74	37.40	7.62	7.68	15.3	0.18	1004.10	1006.60	1003.50	1006.00	4.03	3.60	1005.41	1005.69	O	1010.63
				100	1.25		10.32	0.00			3.28		9.98	32.73									32.73			8.58	21.6	0.16										
	2A	0.00	0.90	10	1	5.00	7.35	0.00	3.28	0.85	2.78	6.04	7.04	19.60	2A	2End	HDPE	Round	30	50.75	0.012	0.99	19.60	44.04	8.97	8.65	13.8	0.10	997.50	1000.00	997.00	999.50	9.60	0.00	998.68	999.31	O	1009.60
				100	1.25		10.32	0.00			3.28		9.91	32.49									32.49			9.77	18.9	0.09										
	2End																																					999.50
3	3B	0.14	0.35	10	1	5.00	7.35	0.36	0.14	0.35	0.05	5.00	7.35	0.36	3B	3A	HDPE	Round	15	55.58	0.012	0.36	0.36	4.18	3.41	2.03	2.9	0.46	1007.30	1008.55	1007.10	1008.35	2.44	5.63	1007.55	1007.40	I	1010.99
				100	1.25		10.32	0.63			0.06		10.32	0.63									0.63			2.44	3.9	0.38										
	3A	0.95	0.85	10	1	5.00	7.35	5.94	1.09	0.79	0.86	5.46	7.21	6.18	3A	1D	HDPE	Round	18	152.23	0.012	0.92	6.18	10.88	6.16	6.31	9.5	0.40	1006.90	1008.40	1005.50	1007.00	5.58	4.79	1007.78	1006.91	I	1013.98
				100	1.25		10.32	9.81			1.07		10.14	10.85									10.85			7.02	14.6	0.36										
	1D																																					1011.79
4	4A	0.05	0.35	10	1	5.00	7.35	0.13	0.05	0.35	0.02	5.00	7.35	0.13	4A	1F	HDPE	Round	15	158.47	0.012	0.38	0.13	4.29	3.50	1.49	1.7	1.77	1009.50	1010.75	1008.90	1010.15	3.25	4.63	1009.64	1009.07	I	1014.00
				100	1.25		10.32	0.23			0.02		10.32	0.23									0.23			1.81	2.3	1.46										
	1F																																					1014.78
5	5C	0.08	0.35	10	1	5.00	7.35	0.21	0.08	0.35	0.03	5.00	7.35	0.21	5C	5B	HDPE	Round	15	86.29	0.012	1.04	0.21	7.12	5.80	2.47	1.7	0.58	1021.25	1022.50	1020.35	1021.60	2.50	5.37	1021.39	1020.58	I	1025.00
				100	1.25		10.32	0.36			0.04		10.32	0.36									0.36			3.00	2.3	0.48										
	5B	0.00	0.90	10	1	5.00	7.35	0.00	0.08	0.35	0.03	5.58	7.18	0.20	5B	5A	HDPE	Round	15	50.92	0.012	1.08	0.20	7.24	5.90	2.52	1.7	0.34	1020.05	1021.30	1019.50	1020.75	5.67	4.97	1020.19	1019.74	I	1026.97
				100	1.25		10.32	0.00			0.04		10.09	0.35									0.35			3.05	2.3	0.28										
	5A	0.58	0.87	10	1	5.00	7.35	3.71	0.66	0.81	0.53	5.92	7.08	3.77	5A	1G	HDPE	Round	15	62.52	0.012	1.04	3.77	7.11	5.79	5.84	7.7	0.18	1019.20	1020.45	1018.55	1019.80	5.27	-0.30	1019.94	1019.72	I	1025.72
				100	1.25		10.32	5.99			0.66		9.95	6.57									6.57			6.57	11.3	0.16										
	1G																																					1019.50
6	6A	1.13	0.85	10	1	5.00	7.35	7.06	1.13	0.85	0.96	5.00	7.35	7.06	6A	1B	PVC	Round	18	182.63	0.011	2.22	7.06	18.43	10.43	9.63	7.6	0.32	1005.85	1007.35	1001.80	1003.30	2.98	3.81	1006.57	1003.87	I	1010.33
				100	1.25		10.32	11.66			1.13		10.32	11.66									11.66			10.98	10.3	0.28										
	1B																																					1007.11

Final Development Plans

24-0166
TUDOR MULTIFAMILY
Lee's Summit, Jackson County, Missouri

Drainage Calculations

NO.	DATE	REVISION
1	08/16/2024	FDP Submittal

DRAWN BY: TUA
CHECKED BY: CMP

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
8/16/24
MITCHELL E. SLUTTER PE-2002003418

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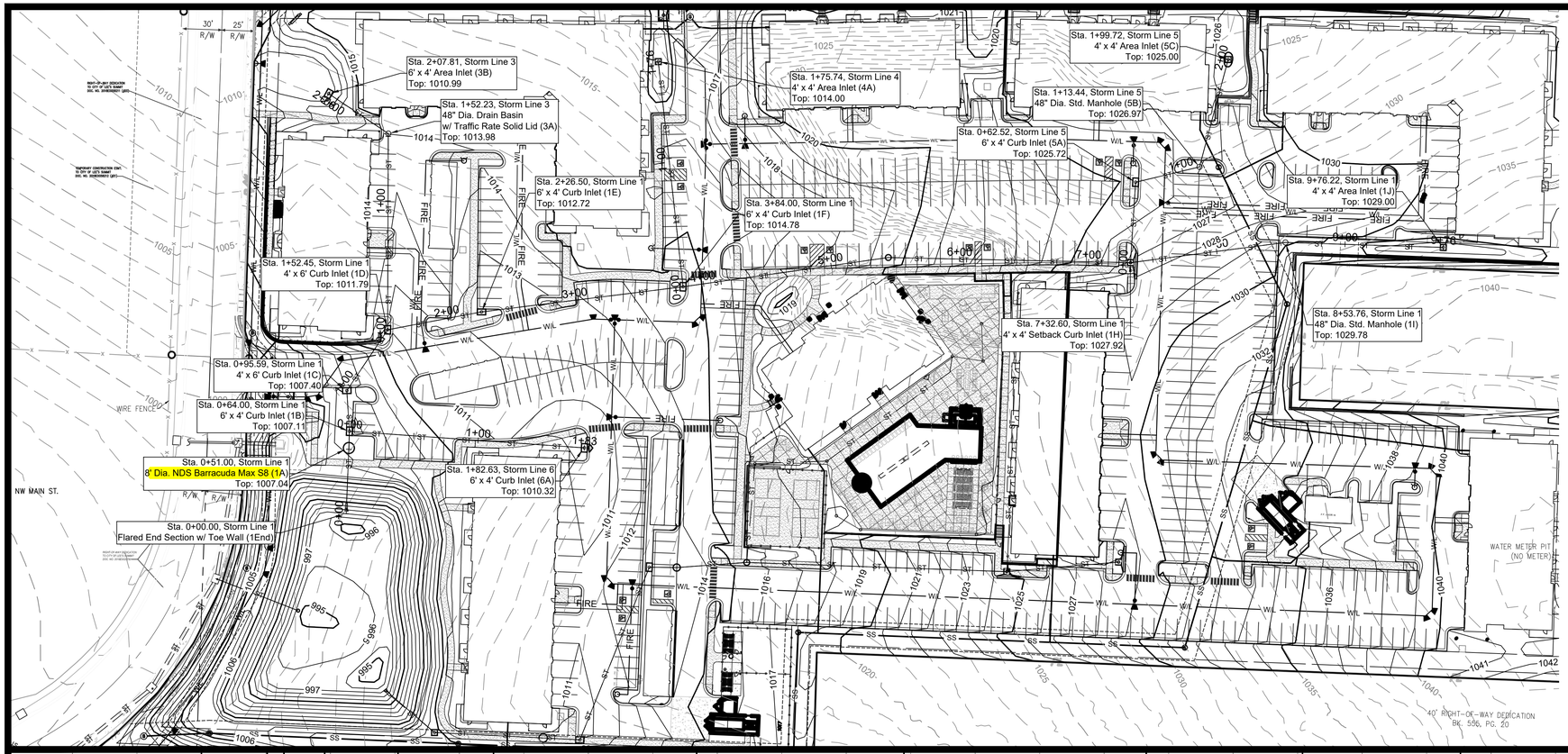

Fill to be Placed to 3' Above top of Proposed Pipe and Compacted Prior to Pipe Installation. Compacted to 95% of the Material's Maximum Dry Density per Site Geo-Tech Report.

Final Development Plans

24-0166
TUDOR MULTIFAMILY
Lee's Summit, Jackson County, Missouri

Storm Plan & Profile 1

NORTH
1"=50'
0 25' 50'
10'
0
1"=10'

NO.	DATE	REVISION
1	08/16/2024	FDP Submittal

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Renaissance Infrastructure Consulting
400 E 17th Street Kansas City, Missouri 64108
816.800.0950
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STATE OF MISSOURI
MITCHELL E. SLUTTER
NUMBER PE-2002003418
PROFESSIONAL ENGINEER
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MITCHELL E. SLUTTER PE-2002003418

Sheet
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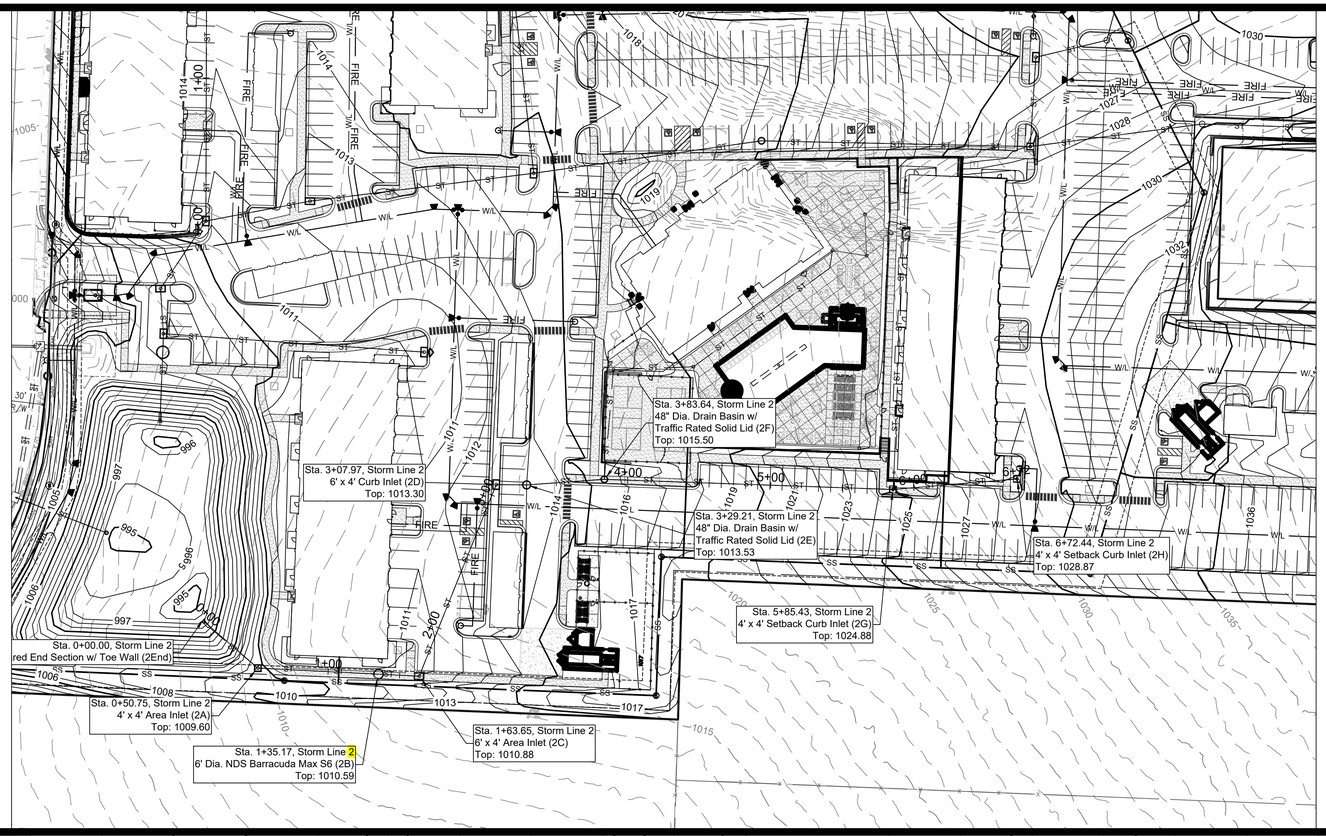

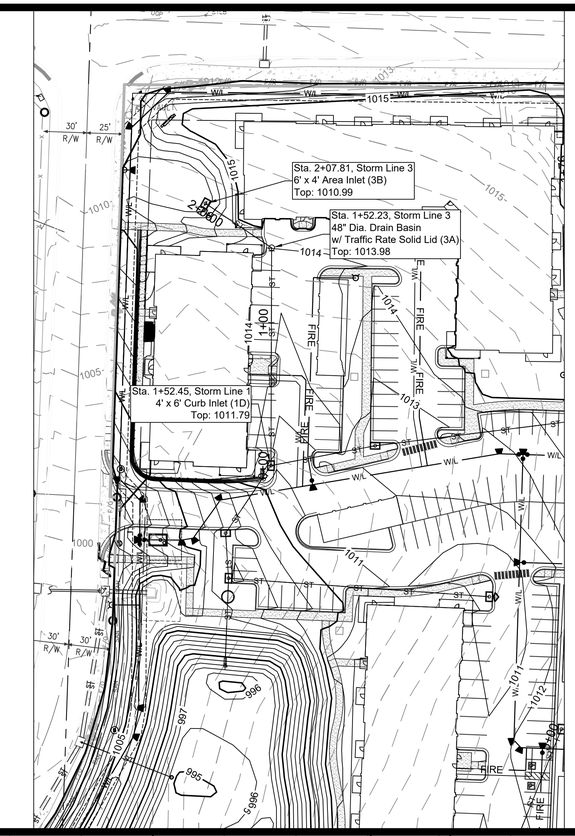

Fill to be Placed to 3' Above top of Proposed Pipe and Compacted Prior to Pipe Installation. Compacted to 95% of the Material's Maximum Dry Density per site GeoTech Report

Final Development Plans

24-0166
TUDOR MULTIFAMILY
Lee's Summit, Jackson County, Missouri

Storm Plan & Profile 2

NORTH
1"=50'
0 25' 50'
10'
0
1"=10'

NO.	DATE	REVISION
1	08/16/2024	FDP Submittal

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Renaissance Infrastructure Consulting
400 E 17th Street Kansas City, Missouri 64108
816.800.0950
www.RIC-consult.com

STATE OF MISSOURI
MITCHELL E. SLUTTER
NUMBER PE-2002003418
PROFESSIONAL ENGINEER
MITCHELL E. SLUTTER PE-2002003418
8/16/24

MO Certificate of Authority: E-2010033630

Sheet
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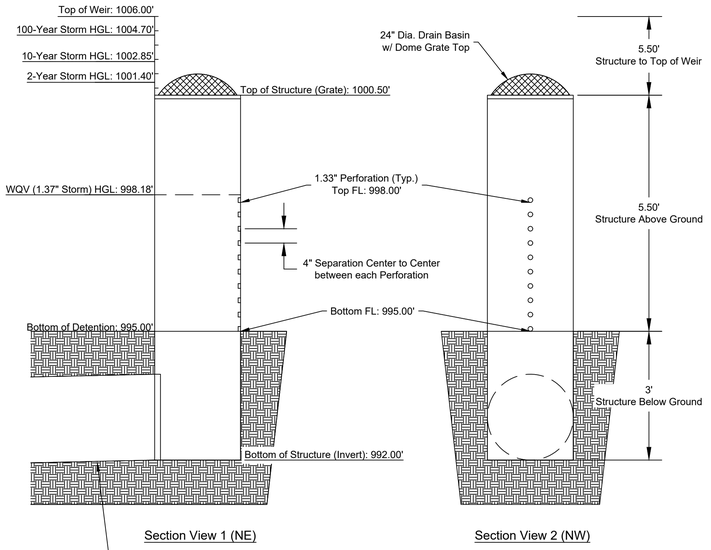
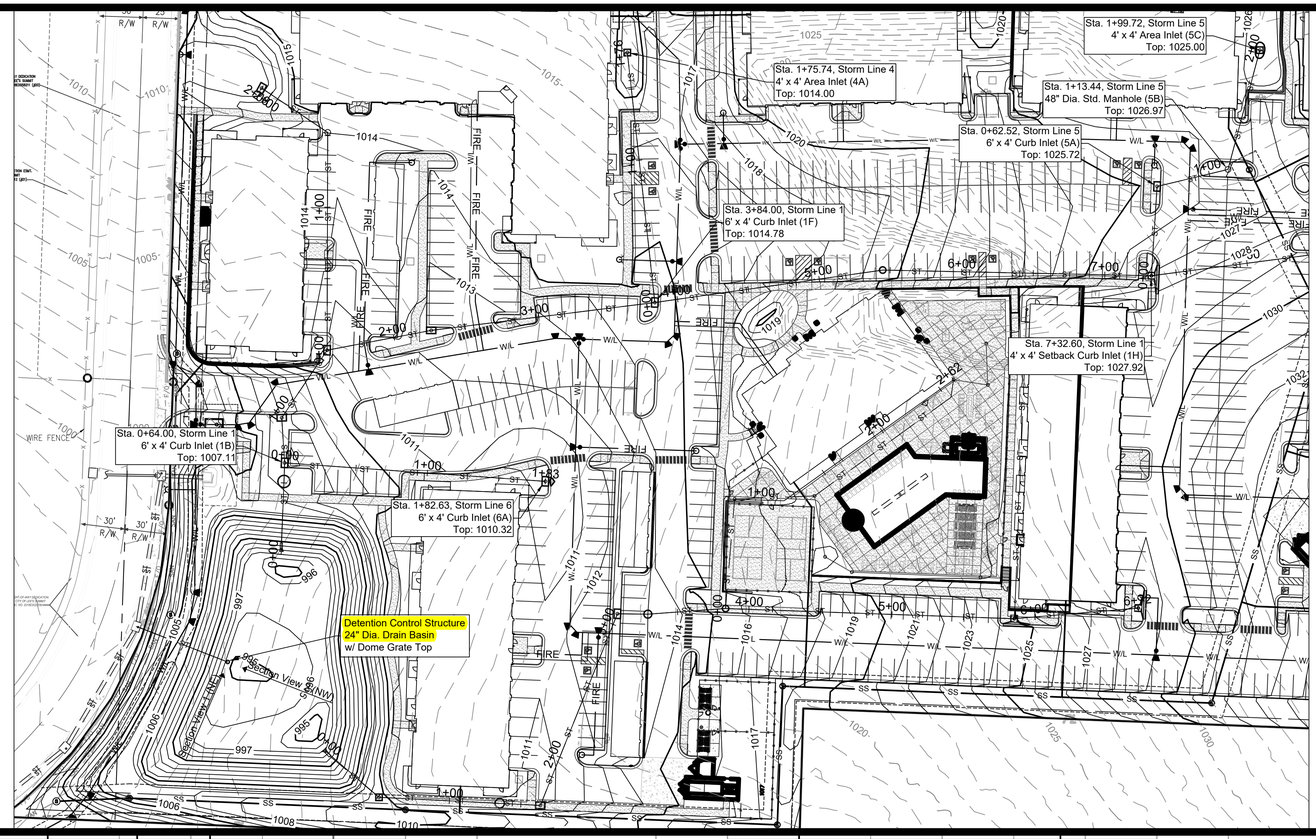
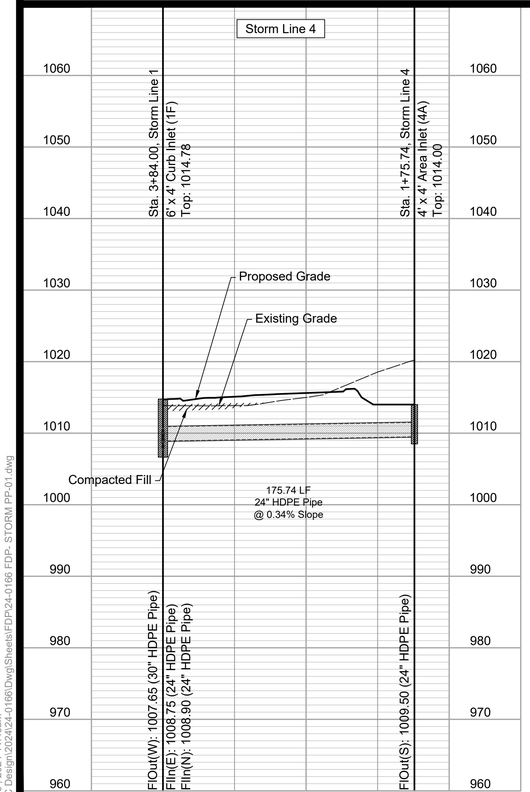
Detention Control Structure

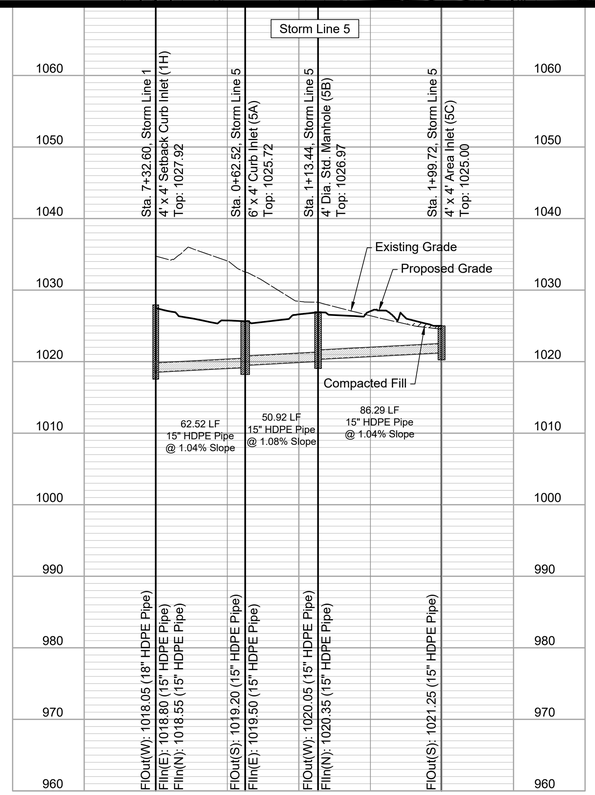


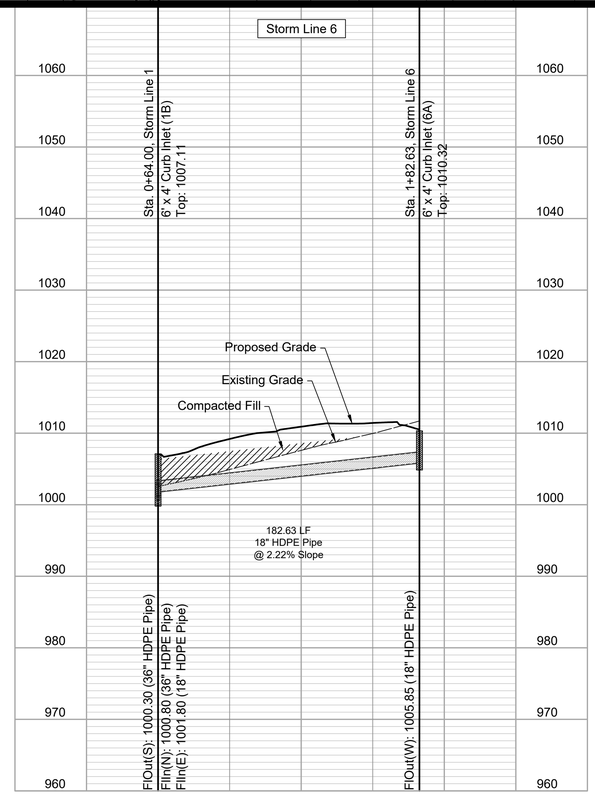
Exit Pipe: Proposed 24" HDPE (68.50 LF)
FL Upstream: 992.00'
FL Downstream: 990.50'

*Orifices, pipes, and structures not to scale to emphasize locations.









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 per site GeoTech Report

Final Development Plans

24-0166
TUDOR MULTIFAMILY
Lee's Summit, Jackson County, Missouri

Storm Plan & Profile 3

NO.	DATE	REVISION
1	08/16/2024	FDP Submittal

DRAWN BY: TUA
CHECKED BY: CMP

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 E. SLUTTER
NUMBER PE-2002003418
PROFESSIONAL ENGINEER
8/16/24
MITCHELL E. SLUTTER PE-2002003418

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Public Waterline A
See Public Plans

Sta. 6+13.82, Waterline A
Connect To Existing Water Main at Proposed Public Tee (See Public Plans)
End Construction
Sta. 11+96.94, Waterline 1

Sta. 5+89.53, Waterline A
Install 1 - 8" 45° Horizontal Bend

626.77'
S1°59'47"W

NW COMMERCE DR.

NE TUDOR RD.

NE DOUGLAS ST.

Caution Storm Crossing
Install 4 - 8" 45° Vertical Bends
From Sta. 0+79.20
to Sta. 1+07.02
Water Top of Pipe: 1001.7
Storm Fl: 1003.20
Vertical Clearance: 1.5'

Sta. 0+00.00, Waterline A
Begin Construction
Install
613.82 LF 8" C900 PVC Water Main
Install Combination Water Meter & Backflow Valve Vault
Connect to Public Water Main at Proposed Tee
(See Public Plans)
Sta. 5+81.86, Waterline 1

Sta. 0+70.16, Waterline A
Install 1 - 8" 45° Horizontal Bend

Sta. 0+37.39, Waterline A
Install 1 - 8" 45° Horizontal Bend

Sta. 0+29.17, Waterline A
Install 1 - 8" 11.25° Horizontal Bend

Sta. 0+75.47, Waterline B
Install
8"x6" Tee w/ Backing Block
1 - Hydrant Assembly
1 - 6" Gate Valve
X LF 6" C900 PVC Fire Line

Sta. 1+99.75, Waterline B
Install 1 - 8" 45° Horizontal Bend

Sta. 2+06.85, Waterline B
Install 1 - 8" 45° Horizontal Bend

Sta. 2+21.94, Waterline B
Install
8"x6" Tee w/ Backing Block
1 - Hydrant Assembly
1 - 6" Gate Valve
94 LF 6" C900 PVC Fire Line

Sta. 17+65.90, Waterline B
Install
8"x8" Tee w/ Backing Block
3 - 8" Gate Valves
End Construction Line B
Sta. 4+86.13, Waterline A

Sta. 0+00.00, Waterline B
Begin Construction Line B
Install
8"x8" Tee w/ Backing Block
3 - 8" Gate Valves
1765.90 LF 8" C900 PVC Water Main
Sta. 2+84.24, Waterline A

Sta. 1+35.37, Waterline A
Install
8"x6" Tee w/ Backing Block
1 - Hydrant Assembly
1 - 6" Gate Valve
175 LF 6" C900 PVC Fire Line

Sta. 2+67.68, Waterline A
Install 1 - 8" 11.25° Horizontal Bend

Caution Storm Crossing
Install 4 - 8" 45° Vertical Bends
From Sta. 3+77.36
to Sta. 4+05.00
Water Top of Pipe: 1008.02
Storm Fl: 1009.52
Vertical Clearance: 1.5'

Sta. 5+45.14, Waterline A
Install 1 - 8" 45° Horizontal Bend

Sta. 17+35.57, Waterline B
Install
8"x6" Tee w/ Backing Block
1 - Hydrant Assembly
1 - 6" Gate Valve
23 LF 6" C900 PVC Fire Line

Sta. 2+66.27, Waterline B
Install
8"x6" Tee w/ Backing Block
1 - Hydrant Assembly
1 - 6" Gate Valve
40 LF 6" C900 PVC Fire Line

Sta. 13+65.70, Waterline B
Install
8"x6" Tee w/ Backing Block
1 - Hydrant Assembly
1 - 6" Gate Valve
198 LF 6" C900 PVC Fire Line

Sta. 11+72.30, Waterline B
Install 1 - 8" 45° Horizontal Bend

Sta. 11+64.02, Waterline B
Install 1 - 8" 45° Horizontal Bend

Sta. 14+14.45, Waterline B
Install 1 - 8" 45° Horizontal Bend

Sta. 14+07.38, Waterline B
Install 1 - 8" 45° Horizontal Bend

Caution Storm Crossing
Install 4 - 8" 45° Vertical Bends
From Sta. 13+70.36
to Sta. 14+00.90
Water Top of Pipe: 1018.19
Storm Fl: 1019.69
Vertical Clearance: 1.5'

Caution Storm Crossing
Install 4 - 8" 45° Vertical Bends
From Sta. 12+95.88
to Sta. 13+39.91
Water Top of Pipe: 1017.50
Storm Fl: 1019.00
Vertical Clearance: 1.5'

Sta. 11+03.65
Caution Sanitary
Sewer Crossing
San Top of Pipe: 1021.14
Water Fl: 1029.13
Vertical Clearance: 7.99'

Sta. 9+56.08, Waterline B
Install 1 - 8" 45° Horizontal Be

Sta. 9+49.01, Waterline B
Install 1 - 8" 45° Horizontal Bend

Sta. 9+67.72, Waterline B
Install
8"x6" Tee w/ Backing Block
1 - Hydrant Assembly
1 - 6" Gate Valve
15 LF 6" C900 PVC Fire Line

Sta. 8+44.56, Waterline B
Install 1 - 8" 45° Horizontal Bend

Sta. 8+37.51, Waterline B
Install 1 - 8" 45° Horizontal Bend

Sta. 6+60.13
Caution Sanitary
Sewer Crossing
San Top of Pipe: 1019.93
Water Fl: 1027.02
Vertical Clearance: 7.09'

Sta. 6+11.80, Waterline B
Install
8"x6" Tee w/ Backing Block
1 - Hydrant Assembly
1 - 6" Gate Valve
53 LF 6" C900 PVC Fire Line

Sta. 3+67.29
Caution Sanitary
Sewer Crossing
Install 4 - 45° Vertical Bends From
Sta. 3+55.29 to Sta. 3+85.29
Crossing Pipe Info:
San FL: 1012.79
Water Top of Pipe: 1011.29
Vertical Clearance: 1.5'

Caution Storm Crossing
Install 4 - 8" 45° Vertical Bends
From Sta. 2+14.62
to Sta. 2+44.62
Water Top of Pipe: 1005.17
Storm Fl: 1006.67
Vertical Clearance: 1.5'

1720.57'
S1°59'47"W

BLDG. 1
4 STORY
BLDG. TYPE A
FF=1014.58

BLDG. 2
4 STORY
BLDG. TYPE C
FF=1027.38

BLDG. 8
4 STORY
BLDG. TYPE A
FF=1027.38

BLDG. 4
4 STORY
BLDG. TYPE D
(SPLIT)
FF=1030.28
FF=1019.51

BLDG. 7
4 STORY
BLDG. TYPE A
FF=1041.96

DETACHED GARAGES

DETENTION

POOL

PICKLEBALL

DOG PARK

DOG PARK

TRASH

Waterline A

Waterline B

In Areas of fill within the trench for the waterline Fill shall be compacted to 95% Maximum Dry Density per site Geotech Report.

NORTH
1"=50'
0 25' 50'

Final Development Plans

24-0166
TUDOR MULTIFAMILY
Lee's Summit, Jackson County, Missouri

Water Line Plan

NO.	DATE	REVISION
1	08/16/2024	FDP Submittal

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CHECKED BY: CMP

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

STATE OF MISSOURI
MITCHELL E. SLUTTER
NUMBER PE-2002003418
PROFESSIONAL ENGINEER
8/16/24
MITCHELL E. SLUTTER PE-2002003418

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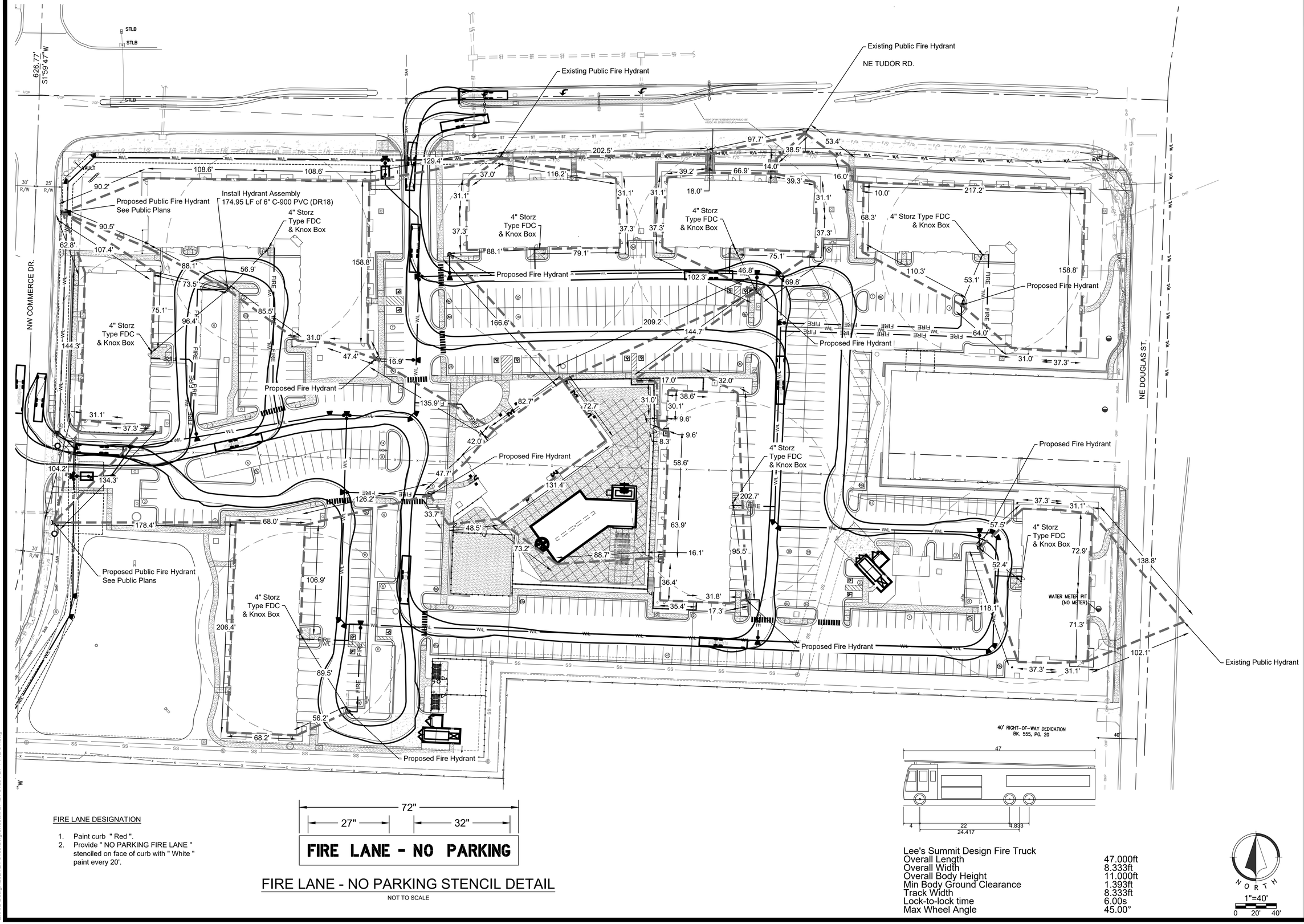

FIRE LANE DESIGNATION

1. Paint curb " Red ".
2. Provide " NO PARKING FIRE LANE " stenciled on face of curb with " White " paint every 20'.

FIRE LANE - NO PARKING STENCIL DETAIL

NOT TO SCALE

Lee's Summit Design Fire Truck	
Overall Length	47.000ft
Overall Width	8.333ft
Overall Body Height	11.000ft
Min Body Ground Clearance	1.393ft
Track Width	8.333ft
Lock-to-lock time	6.00s
Max Wheel Angle	45.00°

NORTH

1"=40'

0 20' 40'

Final Development Plans

24-0166
TUDOR MULTIFAMILY
Lee's Summit, Jackson County, Missouri

Fire Protection Plan

NO.	DATE	REVISION
1	08/16/2024	FDP Submittal

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STATE OF MISSOURI
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PROFESSIONAL ENGINEER
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NW COMMERCE DR.

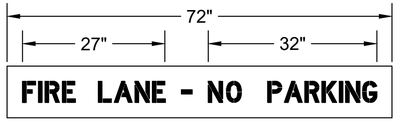
626.77'
S1°59'47"W

30' R/W

25' R/W

FIRE LANE DESIGNATION

1. Paint curb " Red ".
2. Provide " NO PARKING FIRE LANE " stenciled on face of curb with " White " paint every 20'.



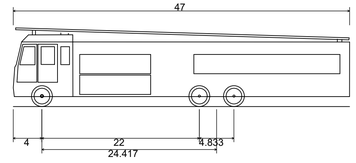
FIRE LANE - NO PARKING STENCIL DETAIL

NOT TO SCALE

Fire Lane Locations

WATER METER PIT (NO METER)

40' RIGHT-OF-WAY DEDICATION BK. 555, PG. 20



Lee's Summit Design Fire Truck	
Overall Length	47.000ft
Overall Width	8.333ft
Overall Body Height	11.000ft
Min Body Ground Clearance	1.393ft
Track Width	8.333ft
Lock-to-lock time	6.00s
Max Wheel Angle	45.00°

NORTH

1"=40'

0 20' 40'

Final Development Plans

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TUDOR MULTIFAMILY
Lee's Summit, Jackson County, Missouri

Fire Lane Plan

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BLDG. 3
4 STORY
BLDG. TYPE B
FF=1015.93

BLDG. 1
4 STORY
BLDG. TYPE A
FF=1014.58

DETACHED GARAGES

NW COMMERCE DR.

Install Fire Line
116.00 LF of
4" C-900 PVC (DR18)

Proposed FDC with Knox Box (Typ.)

Install 108.79 LF of
2 1/2 " Type K Copper
Domestic Water Line

Install Transformer
Contractor Shall coordinate
location and services per MEP
plans and service provider.

Sanitary Sewer Service
Connect 4" SDR 26 PVC
to Building, See MEP Plans
FI: ******* (Verify)

Install DCDA & Vault
Contractor is responsible
for verifyng vault dimensions
prior to construction.

Sta. 2+16.69, Waterline A
Connect 4" Fire Line to
8" Proposed Main
Contractor to verify
connection type with
Water Company.

Sta. 1+35.37, Waterline A
Connect 4" Fire Line to
8" Proposed Main
Contractor to verify
connection type with
Water Company.

Sta. 2+12.69, Waterline A
Connect 2 1/2 " Domestic Water
Line to 8" Proposed Main
Contractor to verify connection
type with Water Company.

Sta. 1+28.32, Waterline A
Connect 4" Fire Line to
8" Proposed Main
Contractor to verify
connection type with
Water Company.

Sta. 1+24.24, Waterline A
Connect 2 1/2 " Domestic Water
Line to 8" Proposed Main
Contractor to verify connection
type with Water Company.

Sta. 0+75.47, Waterline B
Connect 4" Fire Line to
8" Proposed Main
Contractor to verify
connection type with
Water Company

2+00
1+00
0+00

NORTH
1"=20'
0 10' 20'

Final Development Plans

24-0166
TUDOR MULTIFAMILY
Lee's Summit, Jackson County, Missouri

Utility Plan Bldg 1

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STATE OF MISSOURI
MITCHELL ELLIOTT SLUTTER
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PROFESSIONAL ENGINEER
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Install DCDA & Vault
Contractor is responsible
for verifyng vault dimensions
prior to construction.

Sta. 1+24.24, Waterline A
Connect 2 1/2 " Domestic Water
Line to 8" Proposed Main
Contractor to verify connection
type with Water Company.

Sta. 1+28.32, Waterline A
Connect 4" Fire Line to
8" Proposed Main
Contractor to verify
connection type with
Water Company.

Sta. 1+35.37, Waterline A
Connect 4" Fire Line to
8" Proposed Main
Contractor to verify
connection type with
Water Company.

Sta. 2+12.69, Waterline A
Connect 2 1/2 " Domestic Water
Line to 8" Proposed Main
Contractor to verify connection
type with Water Company.

Sta. 0+75.47, Waterline B
Connect 4" Fire Line to
8" Proposed Main
Contractor to verify
connection type with
Water Company

Install Transformer
Contractor Shall coordinate
location and services per MEP
plans and service provider.

Proposed FDC with Knox Box (Typ.)

Sta. 2+10.85
Connect 4" Fire Line to
8" Proposed Main
Contractor to verify
connection type with
Water Company

Sta. 2+14.85
Connect 2 1/2 " Domestic Water
Line to 8" Proposed Main
Contractor to verify connection
type with Water Company.

Install Fire Line
64.16 LF of
4" C-900 PVC (DR18)

Sta. 2+21.94
Connect to 8" Water Main
Contractor to verify connection
type with Water Company

Install 72.10 LF of
2 1/2" Type K Copper
Connect to Building
Domestic Water Line

Sanitary Sewer Service
Connect 4" SDR26 PVC to Building,
Install 18.10 LF. See MEP Plans,
FI: ***** (Verify)

BLDG. 2
4 STORY
BLDG. TYPE C
FF=1012.33

DETACHED GARAGES

DETACHED GARAGES

DETENTION

DOG PARK

DOG PARK

TRASH

PICKLEBA

1+00 2+00 3+00 4+00 5+00 6+00

NORTH
1"=20'
0 10' 20'

Final Development Plans

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TUDOR MULTIFAMILY
Lee's Summit, Jackson County, Missouri

Utility Plan Bldg 2

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

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NE TUDOR RD.

BLDG. 3
4 STORY
BLDG. TYPE B
FF=1015.93

BLDG. 1
4 STORY
BLDG. TYPE A
FF=1014.58

DETACHED GARAGES

Connect 4" SDR 26 PVC to Building, Install 39.70 LF See MEP Plans. FI: *****

Install 173.16 LF of 2 1/2" Type K Copper Connect to Building Domestic Water Line

Install Fire Line 172.46 LF of 4" C-900 PVC (DR18)

Proposed FDC with Knox Box (Typ.)

Install Transformer Contractor Shall coordinate location and services per MEP plans and service provider.

Install DCDA & Vault Contractor is responsible for verifyng vault dimensions prior to construction.

Sta. 1+24.24, Waterline A Connect 2 1/2 " Domestic Water Line to 8" Proposed Main Contractor to verify connection type with Water Company.

Sta. 1+28.32, Waterline A Connect 4" Fire Line to 8" Proposed Main Contractor to verify connection type with Water Company.

Sta. 1+35.37, Waterline A Connect 4" Fire Line to 8" Proposed Main Contractor to verify connection type with Water Company.

Sta. 2+12.69, Waterline A Connect 2 1/2 " Domestic Water Line to 8" Proposed Main Contractor to verify connection type with Water Company.

Sta. 2+16.69, Waterline A Connect 4" Fire Line to 8" Proposed Main Contractor to verify connection type with Water Company.

Sta. 0+75.47, Waterline B Connect 4" Fire Line to 8" Proposed Main Contractor to verify connection type with

Sta. 3+59.29 Connect to 8" Water Main Contractor to verify connection type with Water Company

Sta. 3+62.29 Connect to 8" Water Main Contractor to verify connection type with Water Company

Sta. 4+04.18 Connect 4" Fire Li 8" Proposed Main Contractor to verify connection type wi Water Company.

NORTH
1"=20'
0 10' 20'

Final Development Plans

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TUDOR MULTIFAMILY
Lee's Summit, Jackson County, Missouri

Utility Plan Bldg 3

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STATE OF MISSOURI
MITCHELL E. SLUTTER
NUMBER PE-2002003418
PROFESSIONAL ENGINEER
08/16/24
MITCHELL E. SLUTTER PE-2002003418

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Connect 2 1/2 " Domestic Water Line to 8" Proposed Main Contractor to verify connection type with Water Company.

Connect to Water Main Contractor to verify connection type with Water Company.

Sta. 13+57.70
Connect 4" Fire Line to 8" Proposed Main Contractor to verify connection type with Water Company.

Sta. 13+61.70
Connect 2 1/2 " Domestic Water Line to 8" Proposed Main Contractor to verify connection type with Water Company.

CLUBHOUSE
1 STORY
FF=1018.92

GAMES

POOL

BLDG. 4
4 STORY
BLDG. TYPE D
(SPLIT)

FF=1019.51

FF=1030.28

Proposed FDC with Knox Box (Typ.)

Install Fire Line
41.94 LF of
4" C-900 PVC (DR18)

Sta. 11+85.26
Connect 4" Fire Line to 8" Proposed Main Contractor to verify connection type with Water Company.

Sta. 11+81.26
Connect 2 1/2 " Domestic Water Line to 8" Proposed Main Contractor to verify connection type with Water Company.

Install 41.94 LF of
2 1/2 " Type K Copper
Connect to Building
Domestic Water Line

Sanitary Sewer Service
Connect 4" SDR26 PVC to Building,
Install 92.16 LF See MEP Plans,
FI: ***** (Verify)

TRASH

MAINTENANC
F.F.=1038.

Install Transformer
Contractor Shall coordinate location and services per MEP plans and service provider.

Sta. 6+11.80
Connect 4" Fire Line to 8" Proposed Main Contractor to verify connection type with Water Company.

13+00
12+00
11+00
10+00
9+00
7+00
6+00
5+00
4+00

NORTH
1"=20'
0 10' 20'

Final Development Plans

24-0166
TUDOR MULTIFAMILY
Lee's Summit, Jackson County, Missouri

Utility Plan Bldg 4

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STATE OF MISSOURI
MITCHELL E. SLUTTER
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PROFESSIONAL ENGINEER
08/16/24
MITCHELL E. SLUTTER PE-2002003418

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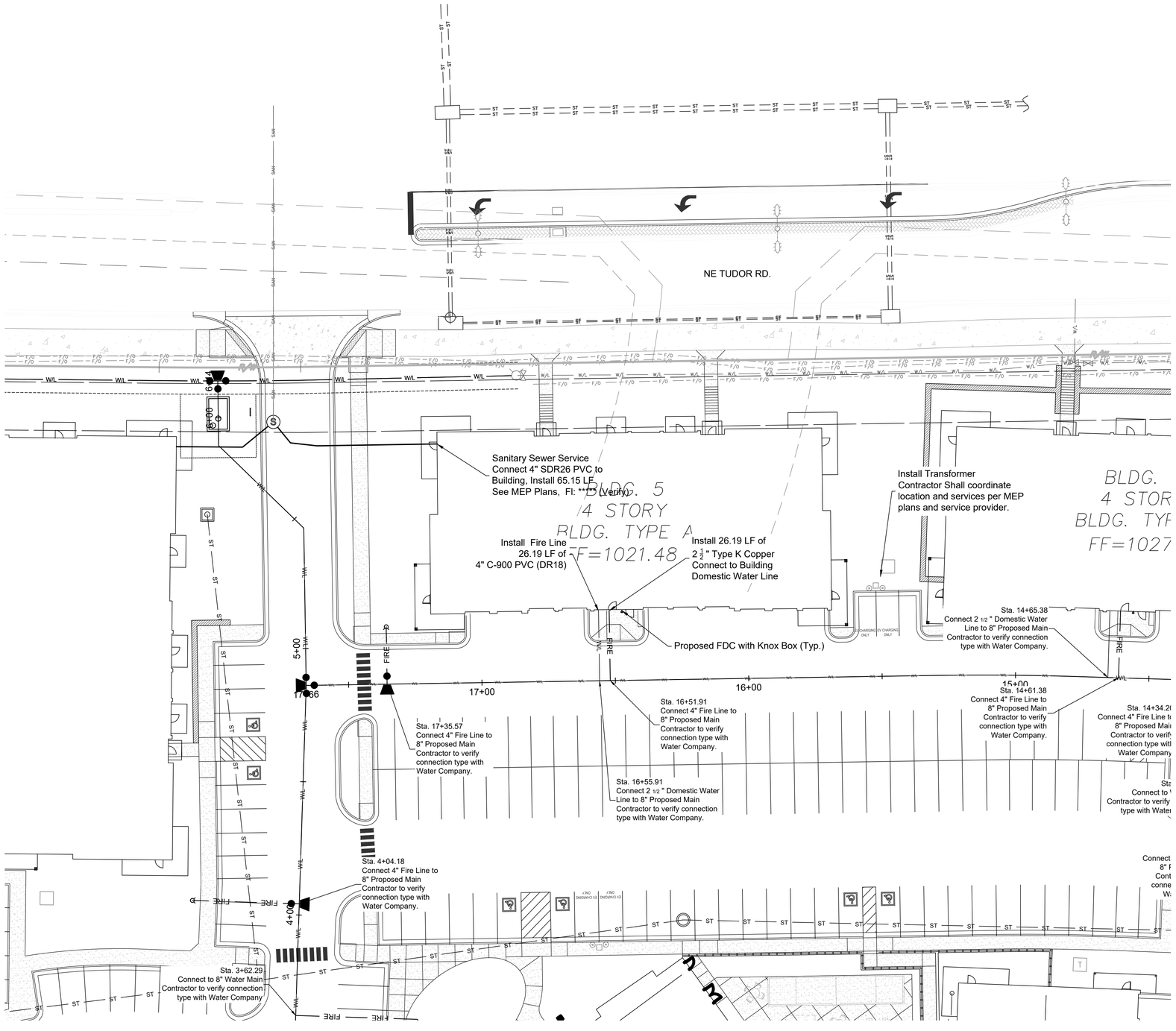

Final Development Plans

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TUDOR MULTIFAMILY
Lee's Summit, Jackson County, Missouri

Utility Plan Bldg 5

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STATE OF MISSOURI
MITCHELL ELMER SLUTTER
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PROFESSIONAL ENGINEER
8/16/24
MITCHELL E. SLUTTER PE-2002003418

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NE TUDOR RD.

BLDG. 8
4 STORY
BLDG. TYPE A
FF=1027.38

BLDG. 6
4 STORY
BLDG. TYPE B
FF=1031.6(

Sanitary Sewer Service
Connect 4" SDR26 PVC to Building,
Install 47.34 LF See MEP Plans,
FI: ***** (Verify)

Sanitary Sewer Service
Connect 4" SDR26 PVC to
Building, Install 79.12 LF
See MEP Plans, FI: ***** (Verify)

Install Fire Line
275.00 LF of
4" C-900 PVC (DR18)

Install 283.34 LF of
2 1/2" Type K Copper
Connect to Building
Domestic Water Line

Proposed FDC with Knox Box (Typ.)

Install Transformer
Contractor Shall coordinate
location and services per MEP
plans and service provider.

Sta. 14+34.20
Connect 4" Fire Line to
8" Proposed Main
Contractor to verify
connection type with
Water Company.

Sta. 13+65.70
Connect to Water Main
Contractor to verify connection
type with Water Company.

Sta. 13+61.70
Connect 2 1/2 " Domestic Water
Line to 8" Proposed Main
Contractor to verify connection
type with Water Company.

Sta. 13+57.70
Connect 4" Fire Line to
8" Proposed Main
Contractor to verify
connection type with
Water Company.

NE DOUGLAS ST.

N O R T H
1"=20'
0 10' 20'

Final Development Plans

24-0166
TUDOR MULTIFAMILY
Lee's Summit, Jackson County, Missouri

Utility Plan Bldg 6

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STATE OF MISSOURI
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Sta. 11+85.26
Connect 4" Fire Line to
8" Proposed Main
Contractor to verify
connection type with
Water Company.

Sta. 9+67.72
Connect 4" Fire Line to
8" Proposed Main
Contractor to verify
connection type with
Water Company.

Sanitary Sewer Service
Connect 4" SDR26 PVC to
Building, See MEP Plans,
Fl: ***** (Verify)

Sanitary Sewer Service
Connect 4" SDR26 PVC to Building,
Install 90.03 LF See MEP Plans,
Fl: ***** (Verify)

Sta. 11+81.26
Connect 2 1/2 " Domestic Water
Line to 8" Proposed Main
Contractor to verify connection
type with Water Company.

Sta. 9+16.17
Connect 2 1/2 " Domestic Water
Line to 8" Proposed Main
Contractor to verify connection
type with Water Company

Install Fire Line
26.00 LF of
4" C-900 PVC (DR18)

4 STORY
BLDG. TYPE A
FF=1041.96

MAINTENANCE
F.F.=1038.16

TRASH

Sta. 9+12.17
Connect 4" Fire Line to
8" Proposed Main
Contractor to verify
connection type with
Water Company.

Install 26.00 LF of
2 1/2 " Type K Copper
Connect to Building
Domestic Water Line

Install Transformer
Contractor Shall coordinate
location and services per MEP
plans and service provider.

Proposed FDC with Knox Box (Typ.)

NE DOUGLAS ST.

40'

NORTH

1"=20'

0 10' 20'

Final Development Plans

24-0166
TUDOR MULTIFAMILY
Lee's Summit, Jackson County, Missouri

Utility Plan Bldg 7

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STATE OF MISSOURI
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NE TUDOR RD.

BLDG. 5
4 STORY
BLDG. TYPE A
FF=1021.48

BLDG. 8
4 STORY
BLDG. TYPE A
FF=1027.

Install Transformer
Contractor Shall coordinate location and services per MEP plans and service provider.

Sanitary Sewer Service
Connect 4" SDR26 PVC to Building, Install 47.34 LF See MEP Plans, Fl: ***** (Verify)

Install Fire Line
25.00 LF of
4" C-900 PVC (DR18)

Install 25.00 LF of
2 1/2 " Type K Copper
Connect to Building
Domestic Water Line

Sanitary Sewer Service
Connect 4" SDR26 PVC to Building, Install 79.12 LF
See MEP Plans, Fl: ***** (Verify)

Sta. 14+65.38
Connect 2 1/2 " Domestic Water Line to 8" Proposed Main
Contractor to verify connection type with Water Company.

Proposed FDC with Knox Box (Typ.)

Sta. 16+51.91
Connect 4" Fire Line to 8" Proposed Main
Contractor to verify connection type with Water Company.

Sta. 14+61.38
Connect 4" Fire Line to 8" Proposed Main
Contractor to verify connection type with Water Company.

Sta. 14+34.20
Connect 4" Fire Line to 8" Proposed Main
Contractor to verify connection type with Water Company.

Sta. 16+55.91
Connect 2 1/2 " Domestic Water Line to 8" Proposed Main
Contractor to verify connection type with Water Company.

Sta. 13+65.70
Connect to Water Main
Contractor to verify connection type with Water Company.

Sta. 13+61.70
Connect 2 1/2 " Domestic Water Line to 8" Proposed Main
Contractor to verify connection type with Water Company.

Sta. 13+57.70
Connect 4" Fire Line to 8" Proposed Main
Contractor to verify connection type with Water Company.

16+00
15+00
14+00
13+00
12+00
13+25

NORTH
1"=20'
0 10' 20'

Final Development Plans

24-0166
TUDOR MULTIFAMILY
Lee's Summit, Jackson County, Missouri

Utility Plan Bldg 8

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STATE OF MISSOURI
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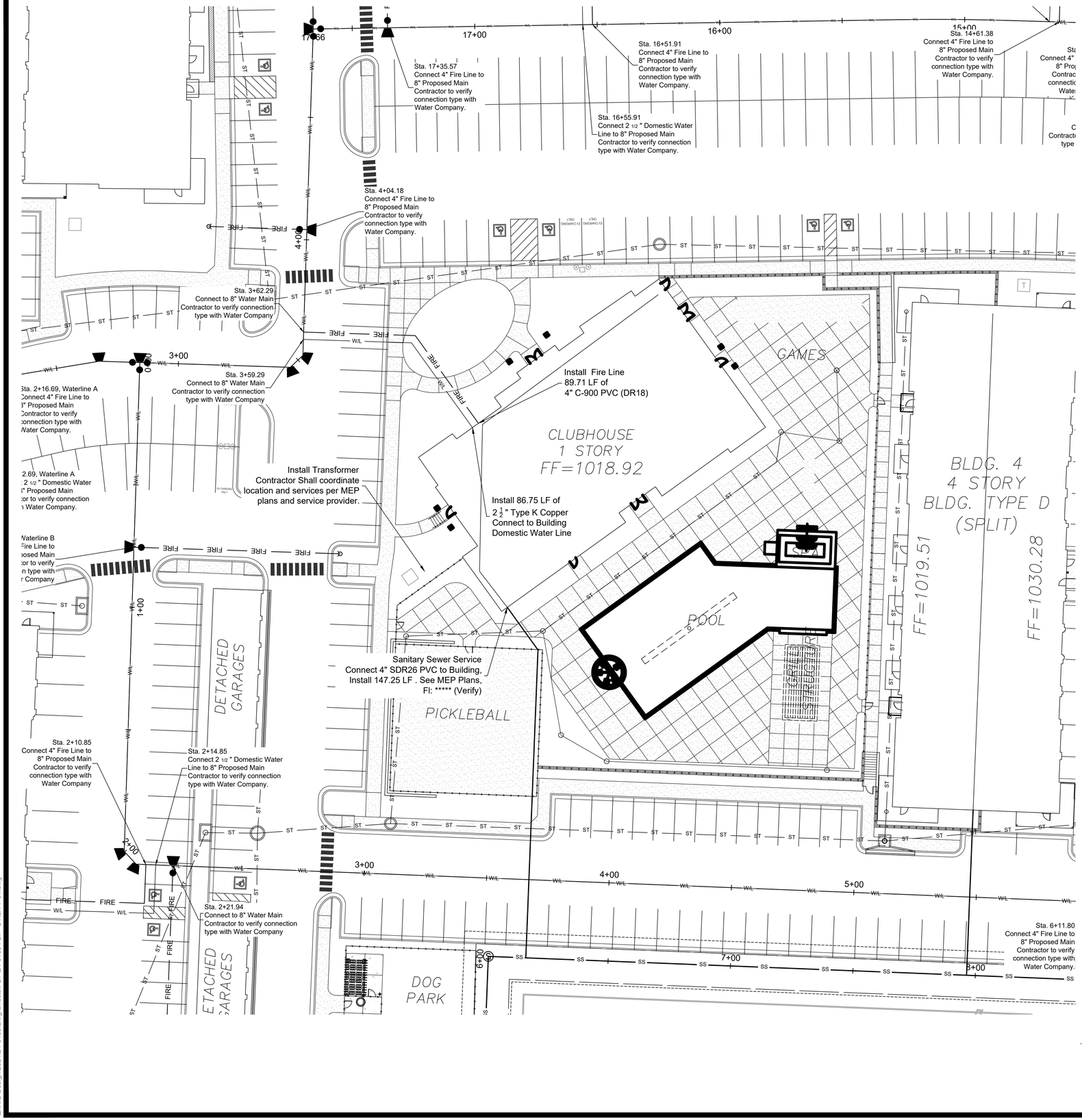

Final Development Plans

24-0166
TUDOR MULTIFAMILY
Lee's Summit, Jackson County, Missouri

Utility Plan Club House

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TUA	CMP

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STATE OF MISSOURI
MITCHELL SLUTTER
NUMBER PE-2002003418
PROFESSIONAL ENGINEER
8/16/24
MITCHELL E. SLUTTER PE-2002003418

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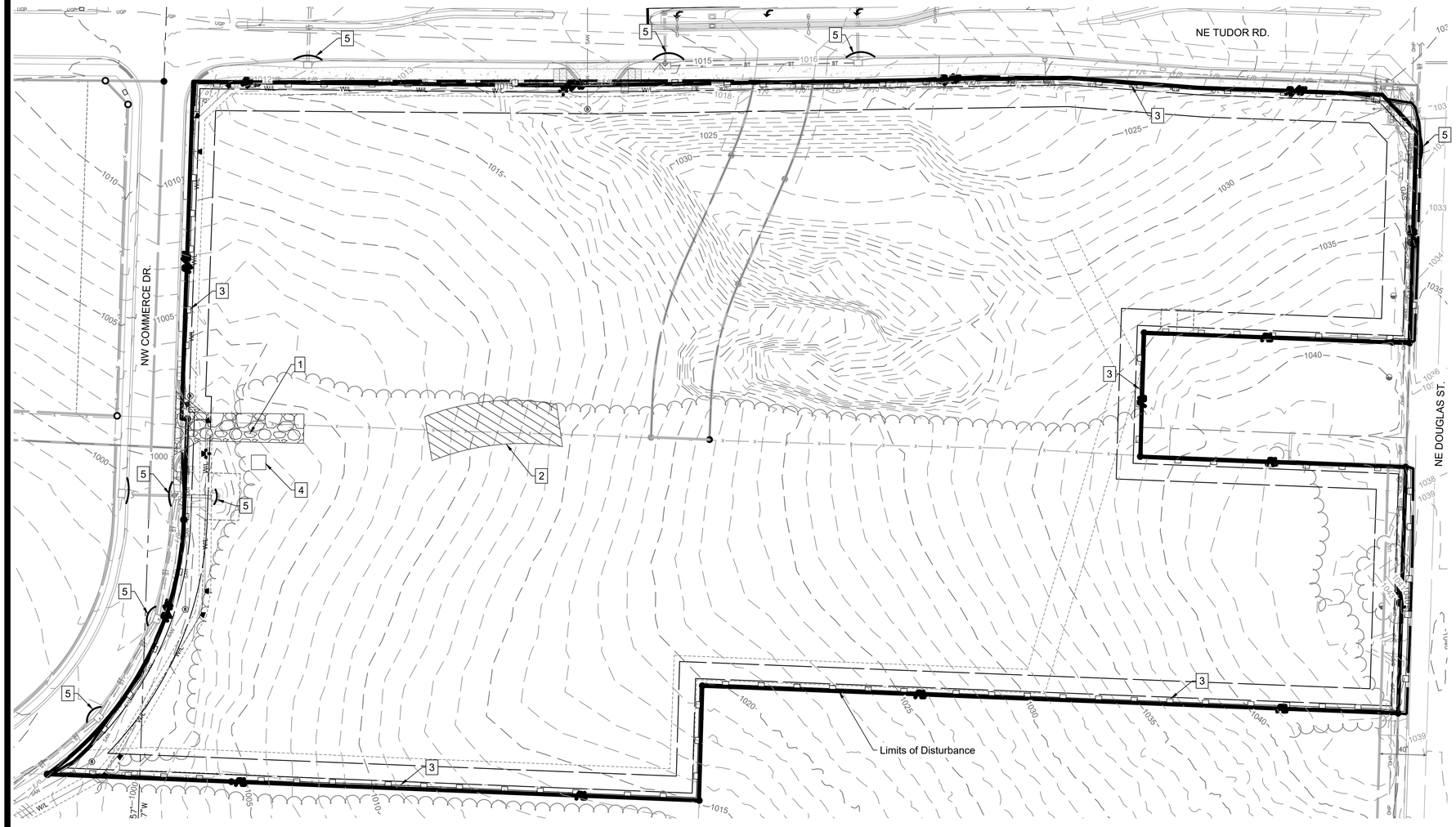

EROSION CONTROL NOTES

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

NORTH

1"=50'

0 25' 50'

Final Development Plans

24-0166
TUDOR MULTIFAMILY
Lee's Summit, Jackson County, Missouri

Erosion Control Plan I

NO.	DATE	REVISION
1	08/16/2024	FDP Submittal

DRAWN BY: TUA
CHECKED BY: CMP

Renaissance Infrastructure Consulting
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KANSAS CITY, MISSOURI 64108
MO Certificate of Authority: E-2010033830

STATE OF MISSOURI
MITCHELL E. SLUTTER
NUMBER PE-2002003418
PROFESSIONAL ENGINEER
08/16/24
MITCHELL E. SLUTTER PE-2002003418

Sheet
C48

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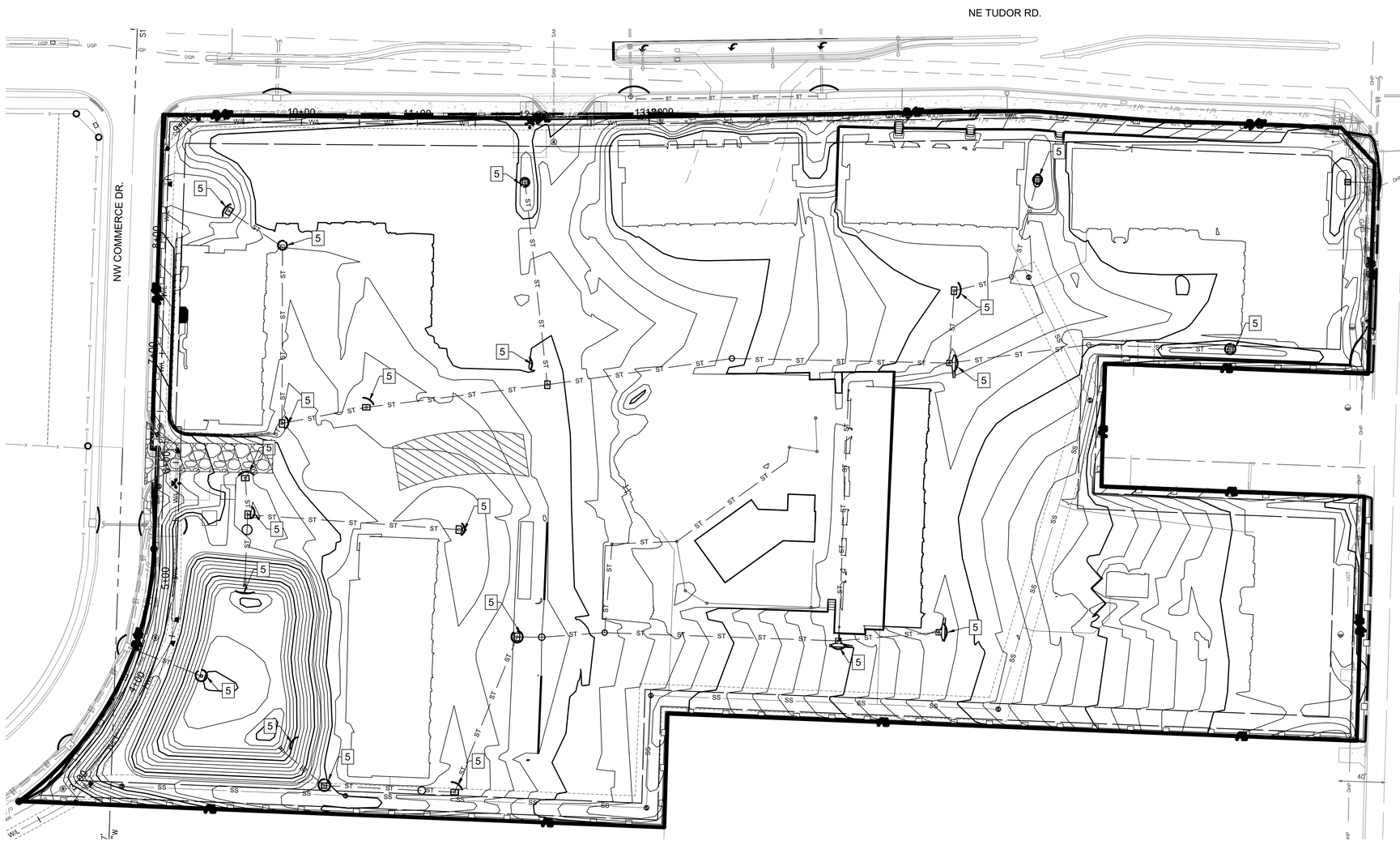

EROSION CONTROL NOTES

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
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LEGEND

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

NORTH

1"=50'

0 25' 50'

Final Development Plans

24-0166
TUDOR MULTIFAMILY
Lee's Summit, Jackson County, Missouri

Erosion Control Plan II

NO.	DATE	REVISION
1	08/16/2024	FDP Submittal

DRAWN BY: TUA
CHECKED BY: CMP

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STATE OF MISSOURI
MITCHELL SLUTTER
NUMBER PE-2002003418
PROFESSIONAL ENGINEER
8/16/24
MITCHELL E. SLUTTER PE-2002003418

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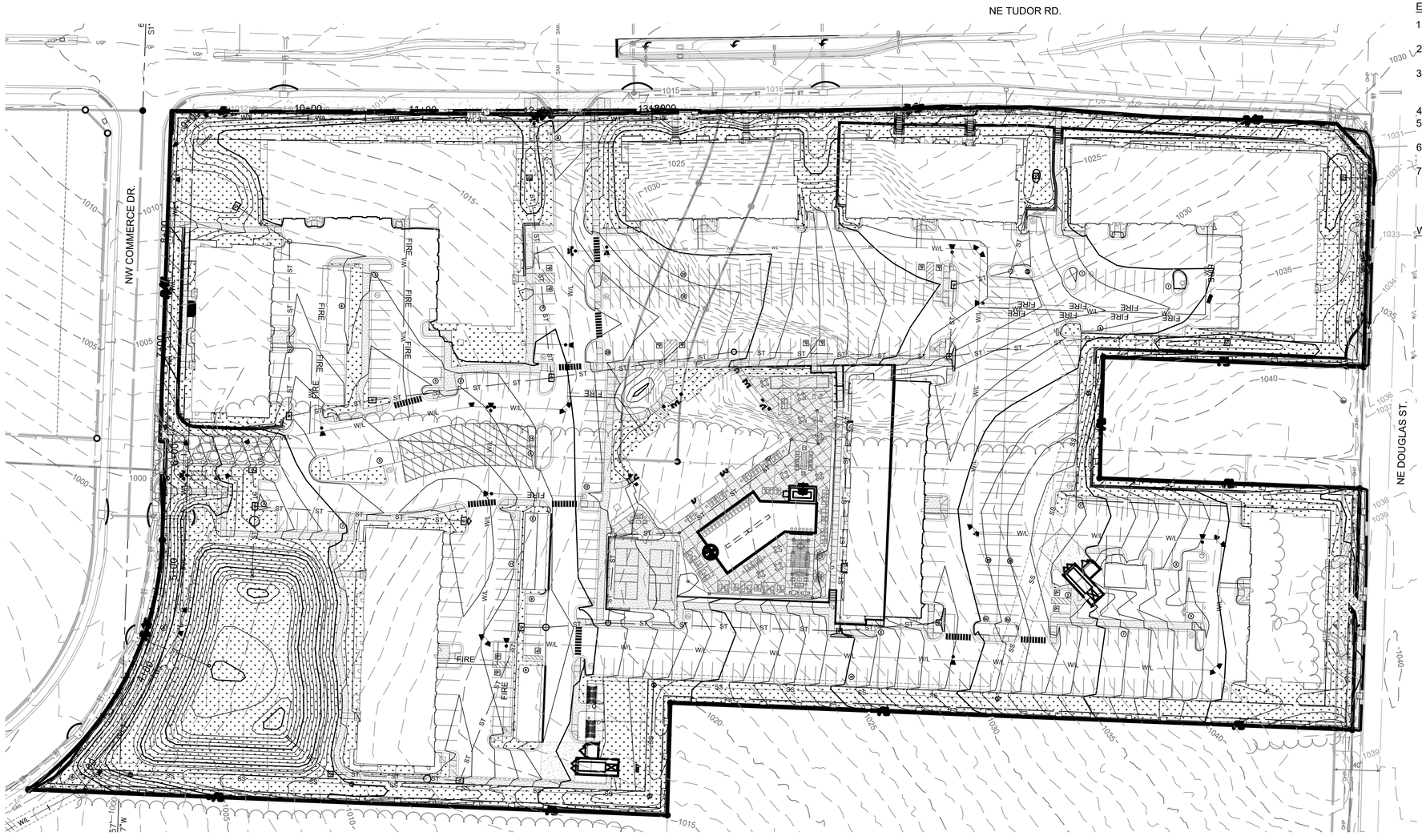

EROSION CONTROL NOTES

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

NORTH
1"=50'
0 25' 50'

Final Development Plans

24-0166
TUDOR MULTIFAMILY
Lee's Summit, Jackson County, Missouri

Erosion Control Plan III

NO.	DATE	REVISION
1	08/16/2024	FDP Submittal

DRAWN BY: TUA
CHECKED BY: CMP

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STATE OF MISSOURI
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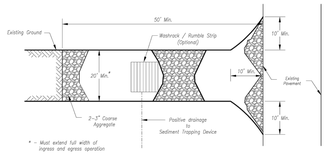
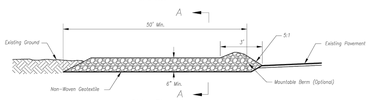


Plan View
Not to Scale



Side Elevation
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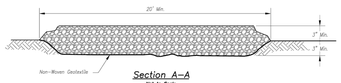


Section A–A
Not to Scale

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.

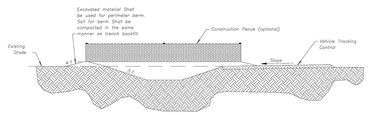
CONSTRUCTION ENTRANCE

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 out of the subsurface pit shall be 3:1. The vehicle tracking pad shall be sloped towards the concrete washout area.
3. Vehicle tracking control is required at the access point to all concrete washout areas.
4. Signs shall be placed at the construction site entrance, washout area and elsewhere as necessary to clearly indicate the location(s) of the concrete washout area(s) to operators of concrete truck and pump rigs.
5. A one–piece impervious liner may be required along the bottom and sides of the subsurface pit in sandy or gravelly soils.

Maintenance for Concrete Washout:

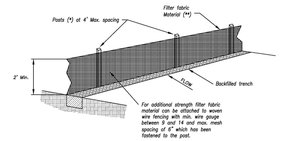
1. Concrete washout materials shall be removed once the materials have filled the washout to approximately 75% full.
2. Concrete washout areas shall be enlarged as necessary to maintain capacity for washed concrete.
3. Concrete washout water, wasted pieces of concrete and all other debris in the subsurface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

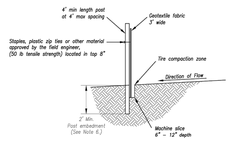


CONCRETE WASHOUT

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





(*) POSTS
– MIN. LENGTH 4'
– HARDWOOD 1 ¾" × 1 ¾"
– NO.2 SOUTHERN PINE 2 ¾" × 2 ¾"
– 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.

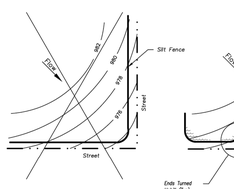
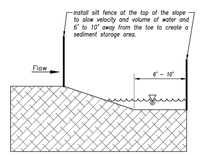
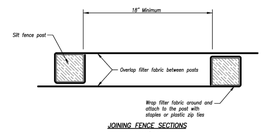


Figure A

SILT FENCE LAYOUT
Not to Scale

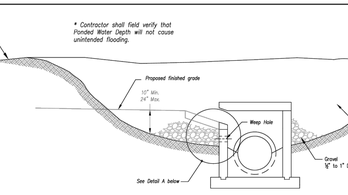


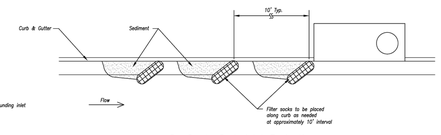


JOINING FENCE SECTIONS
Not to Scale

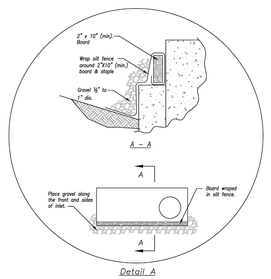
Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

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





On Grade Curb Inlet Protection



Detail A

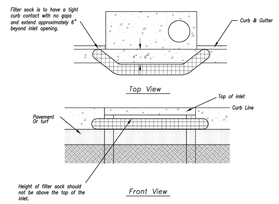
EARLY STAGE CURB INLET
(Open Box and Prior to Pouring Curb and Inlet Throat)

Notes:

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

Maintenance:

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

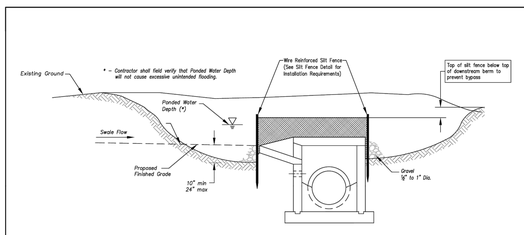


Sump Inlet Sediment Filter

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

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

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



Section A–A
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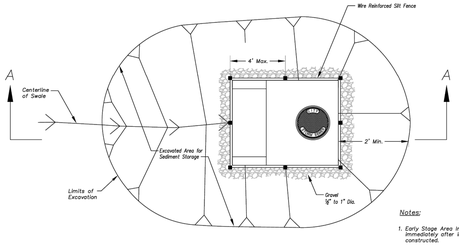
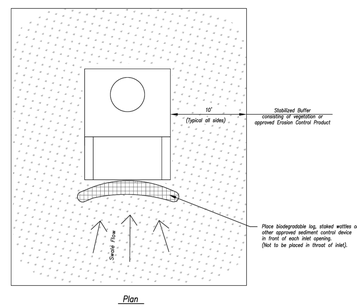


Plan
Not to Scale

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
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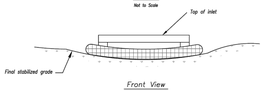

Front View

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

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

Final Development Plans

24-0166
TUDOR MULTIFAMILY
Lee's Summit, Jackson County, Missouri

Erosion Control Details

NO.	DATE	REVISION
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DRAWN BY: TUA
CHECKED BY: CMP

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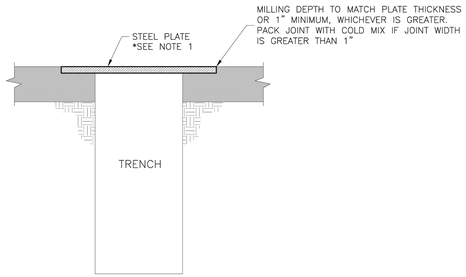
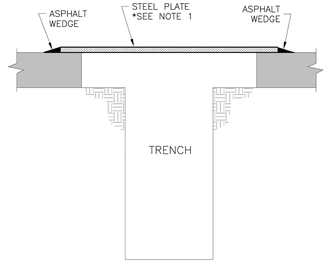


TYPE "A" PLATING
NOT TO SCALE

(CITY POSTED SPEEDS OF 35 MPH AND GREATER)



TYPE "B" PLATING
NOT TO SCALE

(CITY POSTED SPEEDS OF 30 MPH OR LESS)

GENERAL NOTES:

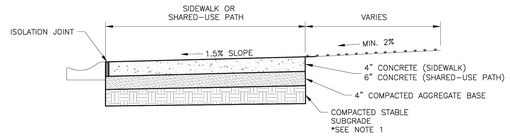
1. THE CONTRACTOR SHALL PROVIDE ADEQUATE OVERLAP OF PLATE ON ASPHALT TO ASSURE NO SLIPPAGE OF PLATE AND NO COLLAPSING OF TRENCH.
2. ALL PLATES SHALL BE ANCHORED SO PLATES DO NOT MOVE OR SHIFT UNDER TRAFFIC.

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

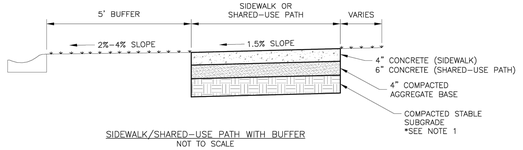
TRENCHING PLATE DETAIL

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

GEN-6



SIDEWALK/SHARED-USE PATH WITHOUT BUFFER
NOT TO SCALE



SIDEWALK/SHARED-USE PATH WITH BUFFER
NOT TO SCALE

GENERAL NOTES:

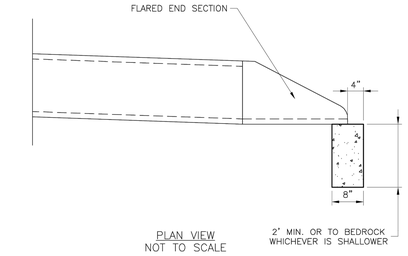
1. SUBGRADE MUST BE OF STABLE, COMPACTED EARTH AND SHALL BE OVERLAYED WITH 4" COMPACTED DENSE GRADED AGGREGATE BASE.
2. 1.5% CROSS SLOPE MUST BE MAINTAINED THROUGH DRIVEWAYS.
3. KCMMB 4K CONCRETE MIX SHALL BE REQUIRED FOR ALL SIDEWALKS AND SHARED-USE PATHS OR AS APPROVED BY THE CITY INSPECTOR.
4. ALL SIDEWALKS SHALL MEET CURRENT PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG).
5. AN EXPANSION JOINT SHALL BE PLACED AT A MAXIMUM OF 150 FT. CONSTRUCTION JOINTS SHALL BE PLACED THE SAME WIDTH OF SIDEWALK, BUT NO GREATER THAN 10 FT.
6. SHARED-USE PATH WIDTH SHALL BE 10 FT. WIDE.
7. SIDEWALK FINISHING (NO PICTURE FRAMING) AS DIRECTED BY CITY INSPECTOR.
8. WHITE CURING COMPOUND MUST BE APPLIED UNIFORMLY TO THE CONCRETE SURFACE IMMEDIATELY AFTER FINAL FINISHING.

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

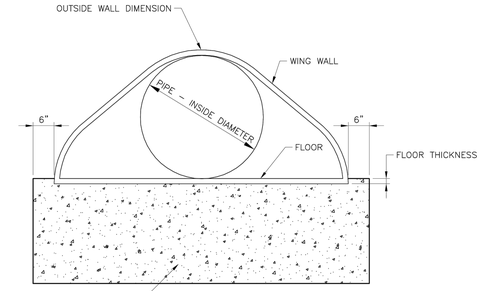
SIDEWALK/SHARED-USE PATH DETAIL

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

GEN-2



PLAN VIEW
NOT TO SCALE



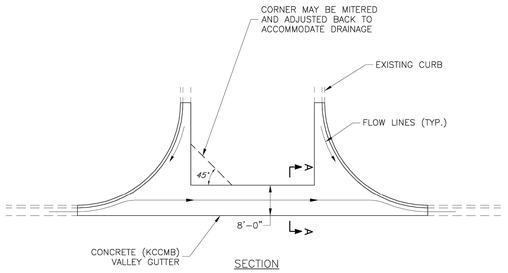
END VIEW
NOT TO SCALE

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

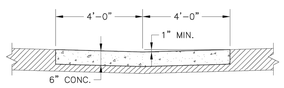
FLARED END SECTION SUPPORT DETAIL

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

STM-5



SECTION



SECTION
Scale: 1" = 1'-0"

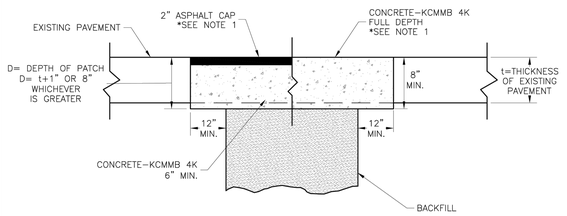
VALLEY GUTTER DETAIL
Intersection of Two Public Streets

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

VALLEY GUTTER DETAIL

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

GEN-7



TRENCHING/PATCHING DETAIL
NOT TO SCALE

NOTE:

1. ASPHALT CAP OR FULL DEPTH CONCRETE SHALL BE DETERMINED BY CITY INSPECTOR.

LEE'S SUMMIT
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TRENCHING/PATCHING ROADWAYS DETAIL

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

GEN-5

STANDARD 24" MANHOLE COVER
MINIMUM WEIGHT = 160 LB
NOTE: PICK HOLES NOT SHOWN

*COVER AND FRAME MODEL INFORMATION REFER TO THE STORMWATER APPROVED PRODUCT LIST.

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

STORM MANHOLE COVER DETAIL

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

STM-6

Final Development Plans

24-0166
TUDOR MULTIFAMILY
Lee's Summit, Jackson County, Missouri

Standard Details I

NO.	DATE	REVISION
1	08/16/2024	FDP Submittal

DRAWN BY: TUA
CHECKED BY: CMP

Renaissance Infrastructure Consulting
816.800.0950
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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
8/16/24
MITCHELL E. SLUTTER PE-2002003418

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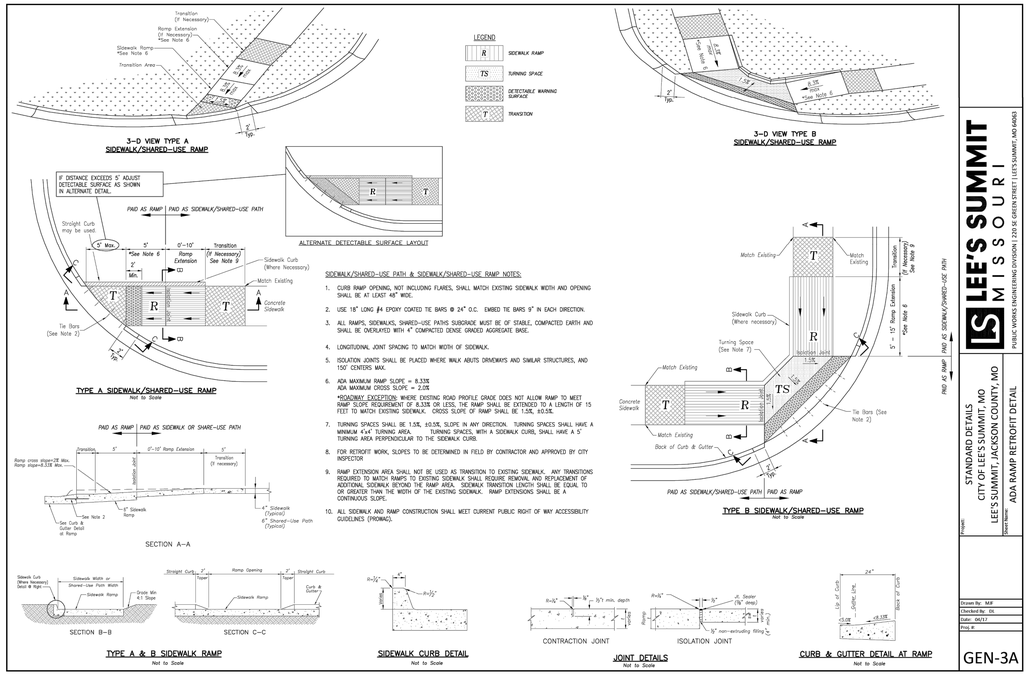
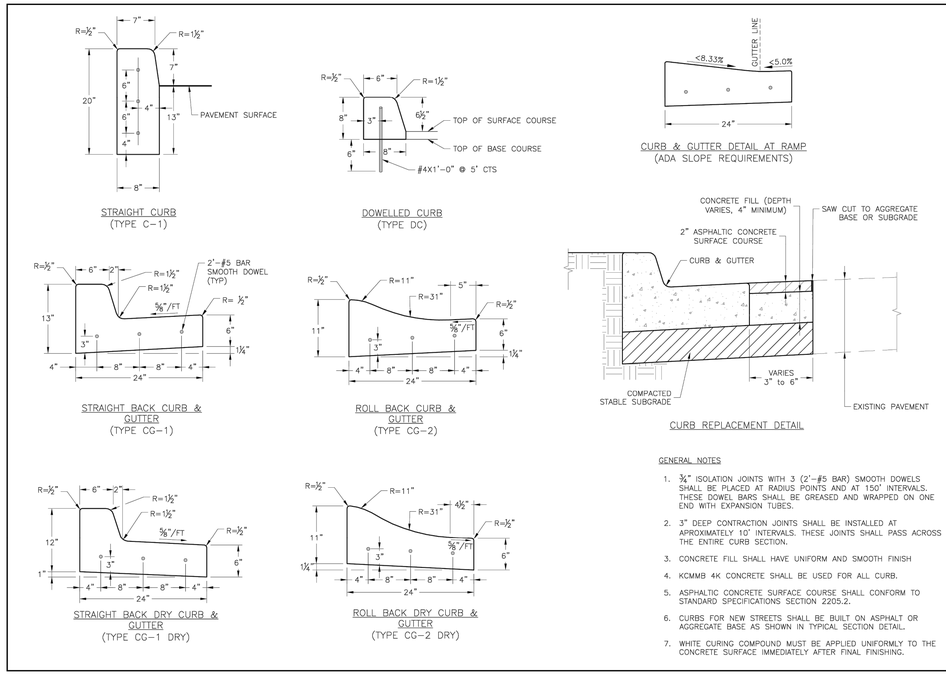


LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO
Sheet Name: ADA RAMP RETROFIT DETAIL

Drawn By: MJF
Checked By: DS
Date: 06/17
Proj. #:

GEN-3A



GENERAL NOTES

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

LEE'S SUMMIT MISSOURI
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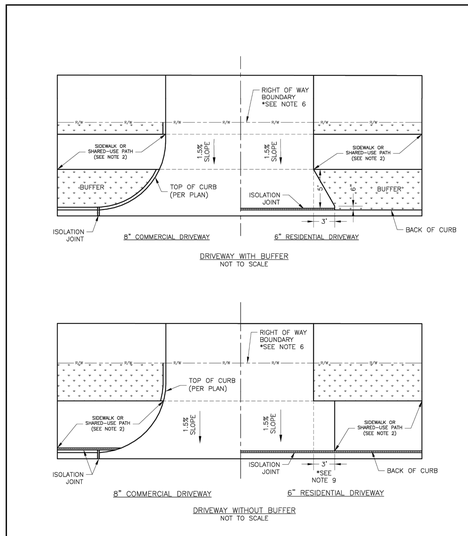
STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO
Sheet Name: CURB & GUTTER DETAIL

Drawn By: MJF
Checked By: DS
Date: 06/17
Proj. #:

GEN-4



GENERAL NOTES

1. SUBGRADE SHALL BE STABLE, COMPACTED EARTH AND SHALL BE OVERLAYED WITH 4" COMPACTED DENSE GRADED AGGREGATE BASE.
2. ALL DRIVE APPROACHES SHALL MEET CURRENT PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG) FOR SLOPE REQUIREMENTS WHEN SIDEWALK IS REQUIRED (SEE ADA RAMP RETROFIT DETAIL).
3. JOINT AT BACK OF CURB LINE SHALL BE AN ISOLATION JOINT FOR RESIDENTIAL DRIVEWAYS.
4. KCMMB 4K CONCRETE MIX IS REQUIRED FOR ALL CURBS.
5. COMMERCIAL DRIVEWAYS AND DRIVEWAY APPROACHES, IN THE PUBLIC RIGHT OF WAY, SHALL BE KCMMB 4K CONCRETE MIX.
6. A JOINT MUST BE INSTALLED AT THE RIGHT OF WAY BOUNDARY FOR PROPERTY DELINEATION.
7. WHITE CURING COMPOUND MUST BE APPLIED UNIFORMLY TO THE CONCRETE SURFACE IMMEDIATELY AFTER FINAL FINISHING.
8. ¾" FROM TOP OF CURB TO FLOWLINE AT DRIVEWAY (TYPE CG-1 CURB ONLY). MUST MAINTAIN ORIGINAL FLOWLINE OF CURB.
9. SIDEWALK ADJOINING CURB SHALL BE 6" THICK, EXTENDING 3' FROM THE DRIVEWAY.
10. THE MAXIMUM WIDTH OF A RESIDENTIAL DRIVEWAY IS 36 FEET WITHIN THE RIGHT OF WAY.

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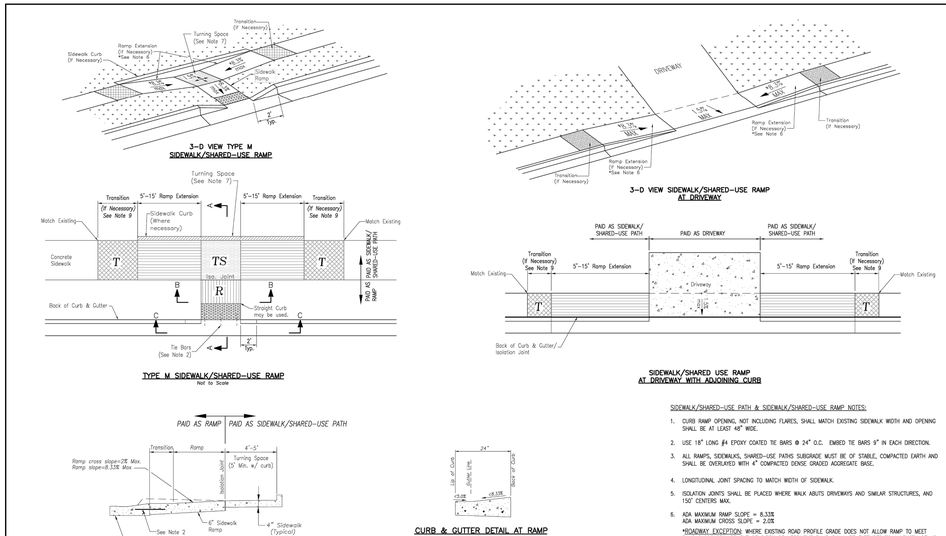
STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO
Sheet Name: DRIVEWAY DETAIL

Drawn By: MJF
Checked By: DS
Date: 06/17
Proj. #:

GEN-1



SIDEWALK/SHARED-USE PATH & SIDEWALK/SHARED-USE RAMP NOTES:

1. CURB RAMP OPENING, NOT INCLUDING FLARES, SHALL MATCH EXISTING SIDEWALK WIDTH AND OPENING SHALL BE AT LEAST 48" WIDE.
2. USE 18" LONG #4 EPOXY COATED TIE BARS @ 24" O.C. EMBED TIE BARS 9" IN EACH DIRECTION.
3. ALL RAMPS, SIDEWALKS, SHARED-USE PATHS SUBGRADE MUST BE OF STABLE, COMPACTED EARTH AND SHALL BE OVERLAYED WITH 4" COMPACTED DENSE GRADED AGGREGATE BASE.
4. LONGITUDINAL JOINT SPACING TO MATCH WIDTH OF SIDEWALK.
5. ISOLATION JOINTS SHALL BE PLACED WHERE WALK ABUTS DRIVEWAYS AND SIMILAR STRUCTURES, AND 150' CENTERS MAX.
6. ADA MAXIMUM RAMP SLOPE = 8.33%
ADA MAXIMUM CROSS SLOPE = 2.0%
*ROADWAY EXCEPTION: WHERE EXISTING ROAD PROFILE GRADE DOES NOT ALLOW RAMP TO MEET RAMP SLOPE REQUIREMENT OF 8.33% OR LESS, THE RAMP SHALL BE EXTENDED TO A LENGTH OF 15 FEET TO MATCH EXISTING SIDEWALK. CROSS SLOPE OF RAMP SHALL BE 1.5%, ±0.5%.
7. TURNING SPACES SHALL BE 1.5%, ±0.5% SLOPE IN ANY DIRECTION. TURNING SPACES SHALL HAVE A MINIMUM 4'x4' TURNING AREA. TURNING SPACES, WITH A SIDEWALK CURB, SHALL HAVE A 5' TURNING AREA PERPENDICULAR TO THE SIDEWALK CURB.
8. FOR RETROFIT WORK, SLOPES TO BE DETERMINED IN FIELD BY CONTRACTOR AND APPROVED BY CITY INSPECTOR
9. RAMP EXTENSION AREA SHALL NOT BE USED AS TRANSITION TO EXISTING SIDEWALK. ANY TRANSITIONS REQUIRED TO MATCH RAMPS TO EXISTING SIDEWALK SHALL REQUIRE REMOVAL AND REPLACEMENT OF ADDITIONAL SIDEWALK BEYOND THE RAMP AREA. SIDEWALK TRANSITION LENGTH SHALL BE EQUAL TO OR GREATER THAN THE WIDTH OF THE EXISTING SIDEWALK. RAMP EXTENSIONS SHALL BE A CONTINUOUS SLOPE.
10. ALL SIDEWALK AND RAMP CONSTRUCTION SHALL MEET CURRENT PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG).

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

STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO
Sheet Name: ADA RAMP RETROFIT DETAIL

Drawn By: MJF
Checked By: DS
Date: 06/17
Proj. #:

GEN-3B

Final Development Plans

24-0166
TUDOR MULTIFAMILY
Lee's Summit, Jackson County, Missouri

Standard Details II

NO.	DATE	REVISION
1	08/16/2024	FDP Submittal

DRAWN BY: TUA
CHECKED BY: CMP

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KANSAS CITY, Missouri 64108
MO Certificate of Authority: E-2010033630

STATE OF MISSOURI
MITCHELL E. SLUTTER
NUMBER PE-2002003418
PROFESSIONAL ENGINEER
16/24
MITCHELL E. SLUTTER PE-2002003418

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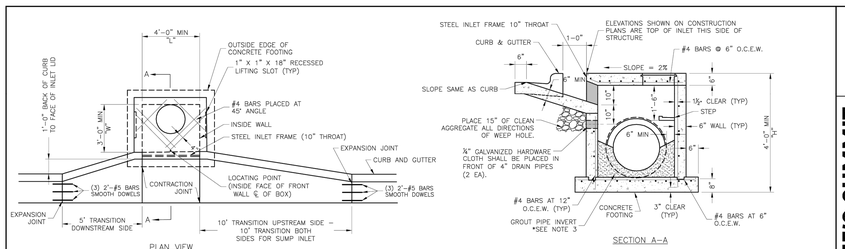

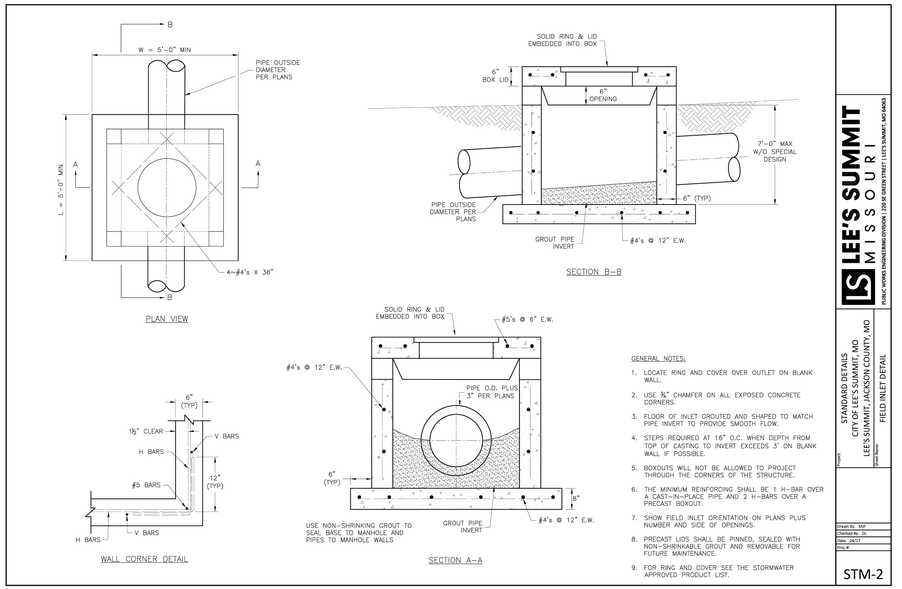

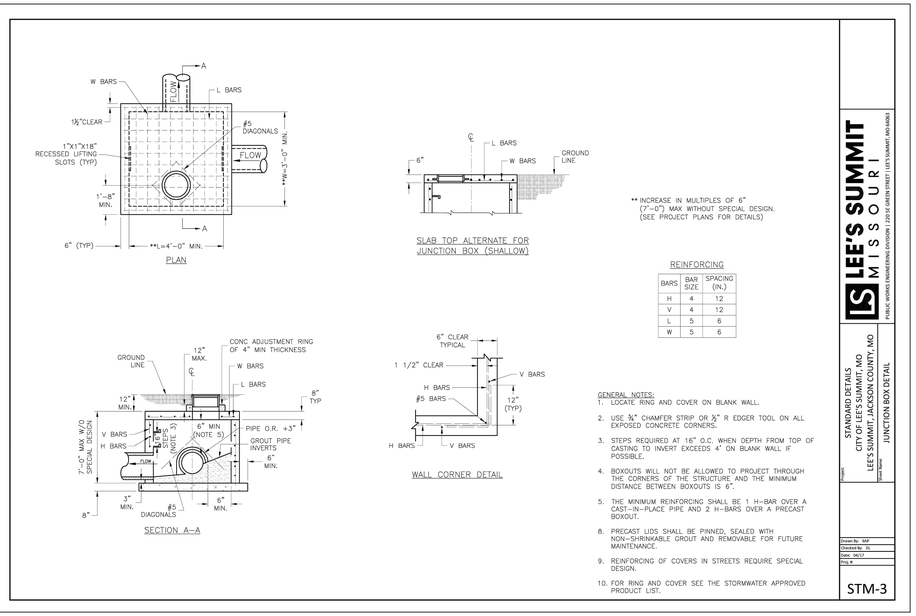

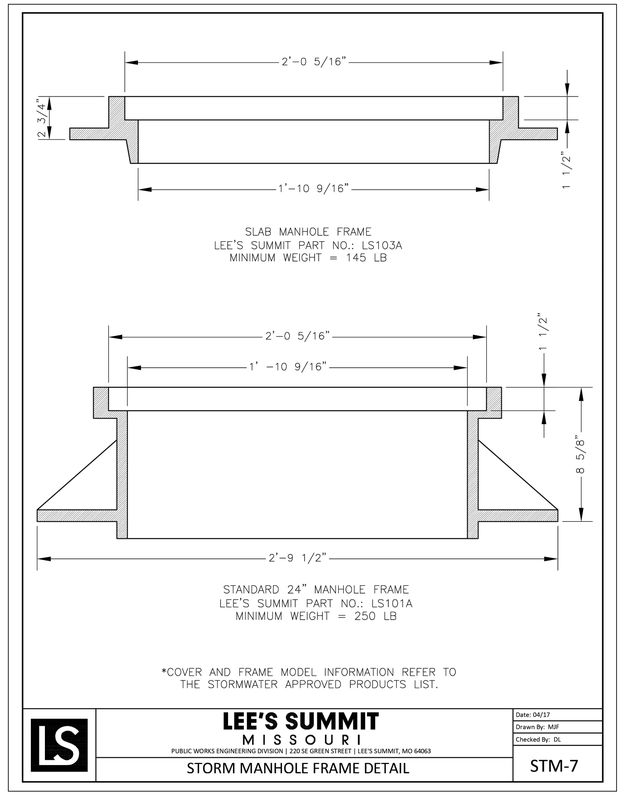

Final Development Plans

24-0166

TUDOR MULTIFAMILY

Lee's Summit, Jackson County, Missouri

Standard Details III

NO.	DATE	REVISION
1	08/16/2024	FDP Submittal

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400 E 17th STREET
KANSAS CITY, MISSOURI 64108
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STATE OF MISSOURI
MITCHELL ELLIOTT SLUTTER
NUMBER PE-2002003418
PROFESSIONAL ENGINEER
08/16/24
MITCHELL E. SLUTTER PE-2002003418

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