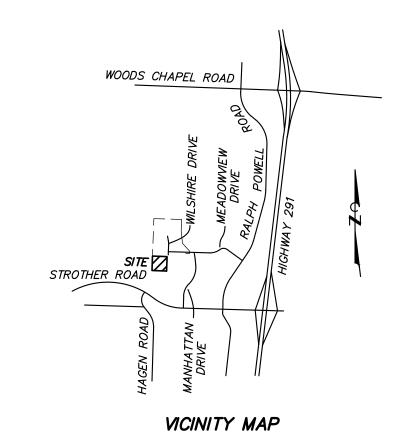
WILSHIRE HILLS PHASE III

LEE'S SUMMIT, JACKSON COUNTY, MISSOURI SITE PLAN JUNE 30, 2023

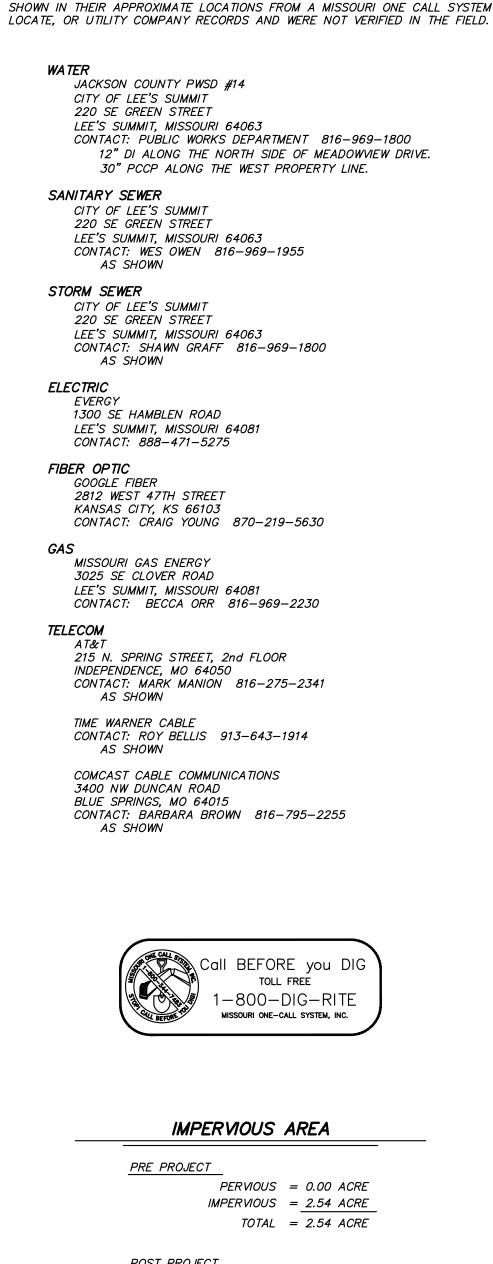
ENTERPRISE GREEN COMMUNITIES NOTE



NOT TO SCALE

LEGEND PROPERTY LINE UNDERGROUND ELECTRIC UNDERGROUND TELECOMMUNICATIONS LINE UNDERGROUND FIBER OPTIC LINE SANITARY SEWER LINE STORM SEWER LINE GAS LINE WATER LINE FFNCF TREE & BRUSH LINE ______ DRAINAGE SWALE ----EXISTING CONTOUR ANCHOR TEST BORING CONTROL POINT ∴ CP# ELECTRIC METER ЕМ FLARED END SECTION FES FIRE HYDRANT FLOW LINE HDPE HIGH DENSITY POLYETHYLENE PIPE PRESTRESSED CONCRETE CYLINDER PIPE PCCPPVCPOLYVINYL CHLORIDE PIPE TOP OF WALL UTILITY POLE WATER METER WATER VALVE YARD LIGHT SILT FENCE TEMPORARY DIVERSION DIKE TREE PRESERVATION BARRIER FINISH CONTOUR TOP OF CURB ELEVATION TOP OF PAVEMENT ELEVATION FINISH GRADE ELEVATION PROPOSED SANITARY SEWER LINE PROPOSED WATER LINE PROPOSED UNDERGROUND ELECTRIC PROPOSED UNDERGROUND TELECOMMUNICATIONS PROPOSED STORM SEWER PROPOSED WATER VALVE PROPOSED FIRE HYDRANT & VALVE THRUST BLOCK THRUST COLLAR STANDARD DUTY CONCRETE

HEAVY DUTY CONCRETE



UTILITY NOTES

INDICATED ON THE PLAT, NOT VISIBLE OR APPARENT FROM THE SURFACE, ARE

THE LOCATIONS, SIZES, AND MATERIAL TYPES OF UNDERGROUND UTILITIES

POST PROJECT

PERVIOUS = 1.29 ACRE IMPERVIOUS = 1.25 ACRE TOTAL = 2.54 ACRE

PARKING NOTE

REQUIRED PARKING

1 SPACE PER UNIT @ 50 UNITS = 50 SPACES 1 SPACE PER EMPLOYEE @ 2 EMPLOYEES = 2 SPACES TOTAL REQUIRED = 52 SPACES

STANDARD **ACCESSIBLE**

= 52 SPACES = 11 SPACES TOTAL PROVIDED = 63 SPACES

1. INTEGRATIVE DESIGN 1.1 - PROJECT PRIORITIES SURVEY 1.2 CHARRETTES AND COORDINATION MEETINGS 1.3 DOCUMENTATION 1.4 CONSTRUCTION MANAGEMENT 2 LOCATION AND NEIGHBORHOOD FABRIC 2.1 SENSITIVE SITE PROTECTION 2.1.1 THERE IS EXISTING 100-YEAR FLOODPLAIN EXISTS TO THE NORTH OF THE SITE. HOWEVER, THE NEW DEVELOPMENT HAS BEEN PROPOSED OUTSIDE THE FLOODPLAIN. 2.1.2 NO AQUATIC ECOSYSTEMS ARE KNOWN TO EXIST ONSITE (I.E. WETLANDS OR

DEEPWATER HABITATS) 2.1.3 NO ENDANGERED SPECIES ARE KNOWN TO EXIST ONSITE (NO ENDANGERED SPECIES ONSITE AND THUS NO DESTRUCTION OF HABITAT) 2.1.4 THE SITE HAS BEEN PREVIOUSLY GRADED SO NO LONGER CONTAINS AGRICULTURAL SOILS ONSITE.

2.2 CONNECTIONS TO EXISTING DEVELOPMENT AND INFRASTRUCTURE 2.2.1 >25% OF THE SURROUNDING SITE IS DEVELOPED AND HAS ACCESS TO EXISTING ROAD, WATER, AND SEWER. THIS WILL BE EXTENDED AS A PART OF PHASE I OF THE PLAN. 2.2.2 NEW DRIVEWAYS AND SIDEWALKS WERE PROVIDED TO GIVE ACCESS TO THE

EXISTING PEDESTRIAN NETWORKS ALONG WILSHIRE DRIVE AND STROTHER 2.2.3 N/A SITE LESS THAN 5 ACRES 2.2.4 N/A NO PLANNED BIKE PATHS IN THIS AREA

2.3 COMPACT DEVELOPMENT 2.3.1 50UNITS/2.54 AC = 19.68 UNITS/AC > 3.88 HOUSEHOLDS PER ACRE (PER CENTER FOR NEIGHBORHOOD TECHNOLOGY "RESIDENTIAL DENSITY OF A LOCATION" CALCULATOR) 2.3.2 19.68 UNITS/AC > MINIMUM 15 UNITS PER ACRE FOR MULTI-FAMILY BUILDINGS

GREATER THAN 2 STORIES 2.5 PROXIMITY TO SERVICES AND COMMUNITY RESOURCES 2.5.1 GREATER THAN FOUR SERVICES AND/OR COMMUNITY RESOURCES ARE LOCATED WITHIN A HALF MILE OF THE PROJECT SITE.

2.6 PRESERVATION OF AND ACCESS TO OPEN SPACE FOR RURAL/TRIBAL/SMALL TOWN 2.6.1 GREATER THAN 10% OF THE PROJECT ACREAGE HAS BEEN SET ASIDE AS ACCESSIBLE OPEN SPACE FOR ALL RESIDENTS TO USE. 2.8 ACCESS TO TRANSIT

2.8.1 THE PROJECT IS LOCATED WITHIN 0.5 MILES WALKING DISTANCE OF TRANSIT

2.15 ACCESS TO BROADBAND: BROADBAND READY 2.15.1 SITE WILL HAVE BROADBAND INFRASTRUCTURE INSTALLED AND INTERNET SERVICE WILL BE PROVIDED THROUGHOUT THE BUILDING.

3.1 ENVIRONMENTAL REMEDIATION 3.1.1 NO HAZARDOUS MATERIAL IS FOUND ON THE SITE. IT HAS BEEN MASS GRADED AND PAD READY BEFORE CONSTRUCTION. 3.2 MINIMIZATION OF DISTURBANCE DURING STAGING AND CONSTRUCTION 3.2.1 SWPPP AND ESC PLANS WERE CREATED TO BE IMPLEMENTED DURING THE

CONSTRUCTION PHASE PROCESS OF THIS PROJECT. 3.3 ECOSYSTEM SERVICES/LANDSCAPE 3.3.1 NO INVASIVE PLANT SPECIES WERE USED IN THE LANDSCAPE PLAN. ALL PLANT SPECIES ARE SUSCEPTIBLE TO THE PLANTING REGION AND SHALL BE WELL

SUITED WITHIN THE ENVIRONMENT. ALL DISTURBED AREAS WILL BE PLANTED, SEEDED, OR XERISCAPED. 3.4 SURFACE STORMWATER MANAGEMENT

3.4.1 ONSITE RUNOFF HAS BEEN TREATED FOR THE 60TH PERCENTILE PRECIPITATION STORM EVENT USING AN OFFSITE REGIONAL DETENTION BASIN. 3.6 EFFICIENT IRRIGATION AND WATER REUSE

4 WATER 4.1 WATER-CONSERVING FIXTURES 4.3 WATER QUALITY 5 OPERATING ENERGY

5.1 BUILDING PERFORMANCE STANDARD 5.6 SIZING OF HEATING AND COOLING EQUIPMENT 5.7 ENERGY STAR APPLIANCES 5.8 LIGHTING 6 MATERIALS

6.4 HEALTHIER MATERIAL SELECTION 6.6 BATH, KITCHEN, LAUNDRY SURFACES 6.8 MANAGING MOISTURE: FOUNDATIONS 6.9 MANAGING MOISTURE: ROOFING AND WALL SYSTEMS 6.10 CONSTRUCTION WASTE MANAGEMENT

7 HEALTHY LIVING ENVIRONMENT 7.1 RADON MITIGATION 7.3 COMBUSTION EQUIPMENT 7.4 GARAGE ISOLATION 7.5 INTEGRATED PEST MANAGEMENT 7.6 SMOKE-FREE POLICY

7.7 VENTILATION

7.8 DEHUMIDIFICATION 8 OPERATIONS, MAINTENANCE, AND RESIDENT ENGAGEMENT 8.3 BUILDING OPERATIONS & MAINTENANCE MANUAL AND PLAN 8.4 EMERGENCY MANAGEMENT MANUAL

8.5 RESIDENT MANUAL 8.6 WALK-THROUGHS AND ORIENTATIONS TO PROPERTY OPERATION 8.7 ENERGY AND WATER DATA COLLECTION AND MONITORING

SURVEY CONTROL POINTS

MODIFIED STATE PLANE COORDINATES NAD 83, MISSOURI CENTRAL ZONE, NAVD 88, U.S. SURVEY FEET

POINT #	<u>NORTH</u>	<u>EAST</u>	<u>ELEVATION</u>	<u>DESCRIPTION</u>
CP1	1021333.86	2826648.68	929.50	PK
CP176	1021358.38	2827317.26	923.23	DH
CP177	1020927.07	2826507.36	951.74	IR
CP178	1021669.21	2826691.72	922.55	IR
CP179	1021367.58	2826896.04	922.38	IR
CP500	1021193.58	2826970.42	921.04	IR
CP501	1020639.36	2827222.04	<i>925.57</i>	DH

MDNR PERMIT

MDNR PERMIT NO. XXXX XXXXX

PROPERTY DESCRIPTION

PROPOSED LOT 5 OF WILSHIRE HILLS - 5TH PLAT

BENCH MARK

BM - MISSOURI DEPARTMENT OF TRANSPORTATION VRS NETWORK.

PROPERTY OWNER

JEFFREY E. SMITH INVESTMENT CO, LLC 206 PEACH WAY

ZONING NOTE

THIS PROPERTY IS ZONED "P-MIX" PLANNED MIXED USE DISTRICT

FLOODPLAIN NOTE

THIS PROPERTY IS LOCATED IN ZONE X "AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD" AS SHOWN BY FIRM COMMUNITY PANEL NUMBER 29095C0430G, DATED JANUARY 20, 2017.

SHEET INDEX

CO.01 COVFR CO.02 GENERAL NOTES BOUNDARY & TOPOGRAPHIC SURVEY V1.01-V1.02 C1.01 OVERALL PLAN C2.01-C2.02 SITE PLAN GRADING & DRAINAGE PLAN C3.01-C3.02 STORM SEWER PLAN C4.01 STORM SEWER PROFILES C5.01 C6.01 UTILITY PLAN & PROFILE C7.01-C7.03 ACCESSIBILITY PLAN C8.01 INITIAL EROSION CONTROL PLAN C8.02 C9.01-C9.03 C10.01-C10.02 C11.01 C12.01 C13.01-C13.03 C14.01

FINAL EROSION CONTROL PLAN SITE DETAILS STORM SEWER DETAILS SANITARY SEWER DETAILS WATER DETAILS EROSION CONTROL DETAILS STORM SEWER DRAINAGE AREA MAP

WILSHIRE HILLS PHASE III

& Services DELIVERING YOUR VISION ™ 1113 Fay Street, Columbia, MO 65201

02 El Dorado Drive, Jefferson City, MO 65 1775 West Main Street, Sedalia, MO 6530 www.ess-inc.com MO Engineering Corp. # 2004005018

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6/30/2023 MATTHEW AARON KRIETE NUMBER PE-2007002811

MATTHEW A. KRIETE PROFESSIONAL ENGINEER PE-2007002811

AUTHENTICATION IS NOT PRESENT TH MEDIA SHOULD NOT BE CONSIDERED. CERTIFIED DOCUMENT.

IF ORIGINAL SIGNATURE OR DIGITAL

JUNE 30, 2023

Revised

Design: ST Drawn: MJS

COVER

2. DETERMINE ALL UTILITY FIELD LOCATES AS NECESSARY.

3. CONSTRUCT TEMPORARY CONSTRUCTION ENTRANCE AND CONCRETE WASH OUT. INSTALL ALL PERIMETER EROSION AND SEDIMENT CONTROL PER PLAN.

4. COMMENCE ALL CLEARING AND GRUBBING PER PLAN. CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS.

5. STRIP TOPSOIL IN GRADING AREAS AND STOCKPILE IN AREAS AS SHOWN ON PLAN.

6. COMMENCE SITE GRADING. FILL ACTIVITIES SHALL MEET THE REQUIREMENTS OF THE GEOTECHNICAL REPORT.

7. CONSTRUCT RETAINING WALL AND FENCE.

8. INSTALL STORM SEWERS PER PLAN. INSTALL INLET PROTECTION IMMEDIATELY UPON COMPLETION OF EACH STORM STRUCTURE.

9. UTILIZE ONSITE FILL MATERIALS FOR OVER EXCAVATED AREAS. FOLLOW GEOTECHNICAL REPORT REQUIREMENTS FOR FILL MATERIAL.

10. INSTALL SITE UTILITIES AS GRADING ALLOWS.

11. FINALIZE BUILDING SUBGRADE PREPARATION IN ACCORDANCE WITH THE PROJECT GEOTECHNICAL REPORT.

12. BEGIN BUILDING CONSTRUCTION.

13. FINALIZE PAVEMENT SUBGRADE PREPARATION. INSTALL BASE MATERIAL AS REQUIRED FOR PAVED AREAS. REMOVE INLET PROTECTION AROUND INLETS NO MORE THAN 48 HOURS PRIOR TO PLACING STABILIZED BASE COURSE.

14. COMMENCE PAVEMENT AND SIDEWALK CONSTRUCTION. REMOVE TEMPORARY CONSTRUCTION ENTRANCE ONLY PRIOR TO PAVEMENT CONSTRUCTION IN THAT AREA (PAVE THIS AREA

15. COMPLETE FINISH GRADING, TOPSOIL, PLACEMENT, SEED/SOD, AND MULCH ALL DISTURBED AREAS. EXCESS TOPSOIL SHALL BE MOVED TO NEIGHBORING SITE.

16. INSTALL LANDSCAPING.

17. REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROL WHEN ALL DISTURBED AREAS ARE STABILIZED.

CONSTRUCTION NOTES

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

2. CONSTRUCTION SHALL COMPLY WITH ALL APPLICABLE GOVERNING CODES AND BE

3. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT ALL IDENTIFIED PROPERTY CORNERS, LAND SURVEY CORNERS, AND ACCESSORIES, THE CONTRACTOR SHALL CAUSE THE CORNERS AND ACCESSORIES TO BE REFERENCED BY A LICENSED LAND SURVEYOR, AND ANY SUCH CORNER OR ACCESSORIES DISTURBED OR DESTROYED DURING CONSTRUCTION SHALL BE RESET BY THE SURVEYOR AT THE ORIGINAL LOCATION, AND FILE THE RESTORATIONS AND MONUMENT DOCUMENTS AS THE LAW REQUIRES.

1. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO ENGINEERING SURVEYS AND SERVICES FOR REVIEW AND APPROVAL FOR ALL MATERIALS BEFORE ORDERING.

5. ALL DIMENSIONS ARE TO BACK OF CURB, FACE OF SIDEWALK, OR EDGE OF PAVEMENT, UNLESS OTHERWISE NOTED.

6. CONCRETE DRIVEWAY APRONS SHALL BE CONSTRUCTED AS PER CITY OF LEE'S SUMMIT SPECIFICATIONS. CONTRACTOR SHALL OBTAIN PERMIT FROM CITY TO WORK WITHIN STREET

7. ALL STRIPING SHALL BE 4" WIDE WHITE LINES, ACCESSIBLE SPACES SHALL BE 4" WIDE BLUE LINES AND ALL STRIPING SHALL BE A MINIMUM OF 2 COATS.

8. CONTRACTOR SHALL ADJUST AND/OR CUT EXISTING PAVEMENT AS NECESSARY TO ASSURE A SMOOTH FIT AND CONTINUOUS GRADE.

9. STANDARD DUTY AND HEAVY DUTY PAVEMENT MAY BE CONCRETE OR ASPHALT UNLESS OTHERWISE NOTED. INTEGRAL CURB MAY BE USED FOR CONCRETE PAVEMENT.

10. ALL TRAFFIC CONTROL SHALL BE PER CURRENT MUTCD REQUIREMENTS AND SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. A TRAFFIC CONTROL PLAN WILL BE REQUIRED FOR

11. CONTRACTOR SHALL NOTIFY ADJACENT PROPERTY OWNERS IN WRITING 30 DAYS PRIOR TO CONSTRUCTION.

12. IF A CONFLICT EXISTS BETWEEN THE CIVIL PLANS AND CIVIL SPECIFICATIONS, THE CIVIL PLANS SHALL GOVERN.

13. CONTRACTOR IS RESPONSIBLE FOR NOTIFYING THE BUILDING AND SITE DEVELOPMENT RIGHT-OF-WAY TECHNICIAN (874-7474) IMMEDIATELY PRIOR TO CLOSURE OF STREET, DURING CONSTRUCTION FOR INSPECTIONS AND AGAIN WHEN WORK IS COMPLETE AND

14. FOR A MINIMUM OF 3 MONTHS AFTER PLANTING, ALL TREES AND SHRUBS SHALL BE WATERED ONCE A WEEK A MINIMUM OF 15 GALLONS BY A SLOW RELEASE WATERING DEVICE SIMILAR TO TREEGATOR, OR APPROVED EQUAL. IF 1" OR MORE OF RAIN FALLS ON THE SITE WITHIN 7 DAYS OF THE PREVIOUS WATERING, WATERING CAN BE SUSPENDED FOR 7 DAYS AFTER THE RAIN EVENT.

15. ALL INCIDENTAL ITEMS INCLUDING BUT NOT LIMITED TO SIGNS, PAVEMENT MARKING, PAVEMENT, CURBS, TRUNCATED DOMES, FENCING, LANDSCAPING, IRRIGATION, ETC. EITHER DAMAGED OR REMOVED DURING CONSTRUCTION SHALL BE RETURNED TO ORIGINAL CONDITIONS BY THE CONTRACTOR.

RETAINING WALL NOTES

1. ALL RETAINING WALLS SHALL BE SEGMENTAL BLOCK <REINFORCED CONCRETE>.

2. ALL REQUIRED WALL PLAN APPROVALS/PERMITS FROM GOVERNING AUTHORITIES SHALL BE OBTAINED BY THE CONTRACTOR.

3. WALL PLANS SHALL BE APPROVED BY THE OWNER/ARCHITECT PRIOR TO SUBMITTING TO ANY REGULATING AUTHORITIES OR STARTING WALL CONSTRUCTION.

4. WALLS MORE THAN 4 FEET IN HEIGHT REQUIRE DETAILED PLAN AND CALCULATION APPROVAL BY THE CITY OF COLUMBIA PRIOR TO THE START OF WALL CONSTRUCTION.

5. ALL WALL PLANS, PROFILES, CROSS-SECTIONS, AND CALCULATIONS REQUIRING REGULATORY

APPROVAL SHALL BE PREPARED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF MISSOURI.

6. PRIOR TO STARTING WALL CONSTRUCTION, CONTRACTOR SHALL ARRANGE FOR WALL

CONSTRUCTION INSPECTION AS REQUIRED IN THE NOTE BELOW. 7. FOLLOWING WALL CONSTRUCTION THE CONTRACTOR SHALL SUBMIT A "CERTIFICATION OF CONFORMANCE" INDICATING THAT THE BACKFILL AND FOUNDATION MATERIAL USED MET THE REQUIREMENTS OF THE ORIGINAL DESIGN. THIS CERTIFICATE MUST BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE THE STATE OF MISSOURI AND, AT A

MINIMUM, INDICATE THE WALL WAS INSPECTED AT THE FOLLOWING SPECIFIC MILESTONES:

FOR CONCRETE WALLS: a. FOOTINGS PRIOR TO POURING WITH REBAR IN PLACE b. WALLS PRIOR TO POURING WITH REBAR IN PLACE c. AT THE BEGINNING OF THE BACKFILL OPERATION

d. FOLLOWING COMPLETION OF THE WALL FOR MODULAR BLOCK WALLS:

a. FOOTING OR BEARING PAD b. DURING BACKFILL OPERATION AND FOR FIRST LAYER OF SOIL REINFORCEMENT c. FOLLOWING COMPLETION OF THE WALL

9. RETAINING WALLS IN EXCESS OF THIRTY (30) INCHES (MEASURED VERTICALLY TO THE FLOOR OR GRADE BELOW) ARE REQUIRED TO HAVE A FENCE OR GUARDRAIL PROTECTING THE PUBLIC FROM INJURY. THE GUARD MUST MEET ALL THE REQUIREMENTS OF THE 2018 INTERNATIONAL BUILDING CODE.

GRADING AND STORM SEWER CONSTRUCTION NOTES

1. ALL STORM SEWER PIPES AND INLETS SHALL MEET HEAVY DUTY TRAFFIC (HS20) LOADING AND BE

2. CONCRETE STORM SEWER INLETS & JUNCTION BOXES SHALL BE INSTALLED PER THE CITY OF LEE'S SUMMIT SPECIFICATIONS AND AS DETAILED IN THESE PLANS.

3. REINFORCED CONCRETE PIPE (RCP) SHALL BE INSTALLED PER THE "EMBEDMENT OF RCP STORM SEWER PIPE" DETAIL. PIPE CLASS SHALL BE APPROPRIATE TO DEPTH AND BEDDING MATERIAL AS

4. ALL RCP PIPE JOINTS SHALL BE SOIL TIGHT PER CURRENT MODOT SPECIFICATIONS SECTION 726.3.1.

5. ALL HDPE PIPE SHALL BE ADS N-12 ST SOIL TIGHT, SMOOTH INTERIOR PIPE OR APPROVED EQUAL. INSTALLATION SHALL FOLLOW THE "EMBEDMENT OF PLASTIC STORM SEWER PIPE" DETAIL.

6. PVC PIPE MAY BE USED IN LIEU OF HDPE FOR DIAMETERS LESS THAN 15". PVC PIPE SHALL BE SDR 35 OR GREATER, AS REQUIRED BY DEPTH OR AS NOTED IN THESE PLANS.

7. INLINE DRAIN AND DRAIN BASINS SHALL BE NYLOPLAST, HARCO, OR APPROVED EQUAL AND SHALL BE PVC CONFORMING TO ASTM D1784 CELL CLASS 12454. JOINTS SHALL BE WATER TIGHT FLEXIBLE ELASTOMERIC SEALS CONFORMING TO ASTM D3212. INLINE DRAIN AND DRAIN BASIN GRATES AND FRAMES SHALL BE DUCTILE IRON CONFORMING TO ASTM A536 GRADE 70-50-05, OR

8. CONTRACTOR SHALL ADJUST ALL GRATES, MANHOLES, VALVE BOXES, ETC. TO MATCH FINISH GRADES, AS REQUIRED.

9. ALL STRUCTURE CONNECTIONS SHALL BE WATERTIGHT.

10. ALL CONCRETE STORM STRUCTURES SHALL HAVE A SMOOTH UNIFORM POURED CONCRETE INVERT FROM INVERT IN TO INVERT OUT.

11. ALL STORM SEWER MANHOLES IN PAVED AREAS SHALL BE FLUSH WITH PAVEMENT, AND SHALL HAVE TRAFFIC BEARING RING & COVERS. MANHOLES IN UNPAVED AREAS SHALL BE FLUSH WITH FINISH GRADE. LIDS SHALL BE LABELED "STORM SEWER". TOP OF BOXES SHALL BE SLOPED TO MATCH PAVEMENT GRADE.

12. PIPE LENGTHS ARE GIVEN FROM CENTER OF STRUCTURE OR DOWNSTREAM END OF FLARED END

13. ALL FLARED END SECTIONS FOR CONCRETE PIPE SHALL BE REINFORCED PRECAST CONCRETE. ALI FLARED END SECTIONS FOR PLASTIC PIPE SHALL BE GALVANIZED METAL UNLESS OTHERWISE NOTED.

14. ALL SITES USED FOR IMPORTING OR EXPORTING OF FILL MATERIAL SHALL HAVE AN ACTIVE MISSOURI DEPARTMENT OF NATURAL RESOURCES LAND DISTURBANCE PERMIT, AS REQUIRED.

15. CONTRACTOR SHALL REMOVE ALL TRASH AND DEBRIS, TREES AND BRUSH, AND OTHER MATERIAL CREATED AS A RESULT OF CONSTRUCTION. MATERIAL SHALL BE DISPOSED OF IN COMPLIANCE WITH ALL APPLICABLE LAWS AND REGULATIONS. BURNING ON SITE SHALL BE ALLOWED BY PERMIT ONLY.

16. CONTRACTOR SHALL REMOVE ALL STUMPS BY EXCAVATING TO INCLUDE REMOVAL OF ASSOCIATED

17. CONTRACTOR SHALL NOT ADVANCE TRENCH EXCAVATION BEYOND AMOUNT THAT CAN ACCOMMODATE PIPE INSTALLATION AND BACKFILLING AT THE END OF EACH DAY.

18. ENGINEERED FILL SHOULD BE FREE OF FROZEN SOIL, ORGANICS, RUBBISH, LARGE ROCKS, WOOD, OR OTHER DELETERIOUS MATERIAL. COHESIVE FILLS SHOULD BE UNIFORMLY COMPACTED TO AT LEAST 95 PERCENT OF THE "STANDARD" MAXIMUM DRY DENSITY AND BE WITHIN -2 TO +4 PERCENT OF OPTIMUM MOISTURE CONTENT AS DESCRIBED BY ASTM D698. GRANULAR FILLS SHOULD BE UNIFORMLY COMPACTED TO AT LEAST 95 PERCENT OF THE "STANDARD" MAXIMUM DRY DENSITY. THE MOISTURE CONTENT SHOULD BE HIGH ENOUGH TO PROVIDE FOR PROPER COMPACTION BUT LOW ENOUGH TO PREVENT UNDUE PUMPING. PLACE FILL MATERIAL IN LOOSE LIFTS NOT TO EXCEED

19. ROCKS AND STONES THAT EXCEED THE THICKNESS OF THE LOOSE LIFT FILL LAYER SHOULD BE REMOVED AND DISPOSED OF OFF THE IMMEDIATE CONSTRUCTION AREA.

20. IMPORTED SOILS PROPOSED FOR USE AS FILL OR BACKFILL SHOULD BE REVIEWED AND ANALYZED BY THE GEOTECHNICAL ENGINEER PRIOR TO USE ON SITE. SOIL CLASSIFIED AS MH, OH, OL, OR PI (HIGH PLASTICITY SOILS AND ORGANIC SOILS) BY THE UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM . D2487) SHOULD NOT BE IMPORTED FOR USE AS ENGINEERED FILL. SUITABLE IMPORTED MATERIALS FOR CENERAL SITE FILL ARE THOSE THAT CLASSIEY AS GW CM CO WITH ASTM D 2487. MATERIALS CLASSIFIED AS CH SHOULD BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO THEIR IMPORTATION AND ONLY USED OUTSIDE THE BUILDING PAD AT DEPTHS BELOW THE UPPER 2 FEET OF SUBGRADE. SUBJECT TO FINAL DESIGN REQUIREMENTS FOR WALL BACKFILL, SUITABLE IMPORTED MATERIALS FOR WALL AND TRENCH BACKFILL ARE THOSE THAT CLASSIFY AS GW, GP, GM, GC, SM, SW, SP, SC, AND CL IN ACCORDANCE WITH ASTM D2487.

21. FILLS PLACED IN AREAS WHERE THE NATURAL SLOPE IS GREATER THAN 5H: 1V (HORIZONTAL TO VERTICAL) SHOULD BE BENCHED INTO THE EXISTING GRADE TO REDUCE THE POTENTIAL FOR SLIPPAGÉ BETWEEN EXISTING SLOPES AND ENGINEERED FILL. BENCHES SHOULD BE LEVEL AND WIDE ENOUGH TO ACCOMMODATE COMPACTION AND EARTH MOVING EQUIPMENT.

22. FILL AND SUBGRADE CONSTRUCTION SHOULD NOT BE STARTED ON FOUNDATION SOIL, PARTIALLY COMPLETED FILL, OR SUBGRADES THAT CONTAIN FROST OR ICE. FILL SHOULD NOT BE CONSTRUCTED USING FROZEN SOIL. FROZEN SOIL SHOULD BE REMOVED PRIOR TO PLACING FILL

23. AFTER STRIPPING AND GRUBBING OPERATIONS ARE COMPLETED AND PRIOR TO FILL PLACEMENT, AREAS TO BE FILLED SHALL BE PROOF ROLLED USING A LOADED TANDEM AXLE DUMP TRUCK TO IDENTIFY SOFT AND UNSUITABLE AREAS. SOFT MATERIAL MAY BE MOISTURE CONDITIONED AND REUSED AS ENGINEERED FILL, UNSUITABLE AND DELETERIOUS MATERIAL SHALL BE REMOVED FROM

24. ALL NEW UTILITY TRENCHES SHOULD BE BACKFILLED IN ACCORDANCE WITH APPROPRIATE CONTROLLED ENGINEERED FILL SPECIFICATIONS.

25. FIELD DENSITY TESTS SHOULD BE CONDUCTED IN ACCORDANCE WITH ASTM D6938 (NUCLEAR METHODS) OR ASTM D 1556 (SAND CONE METHOD). FIELD DENSITY TESTS SHOULD BE PERFORMED AT THE RATE OF ONE TEST PER 2,500 SQUARE FEET PER LIFT WITHIN THE BUILDING AND 10,000 SQUARE FEET PER LIFT BENEATH PAVEMENTS, SIDEWALKS, AND OTHER POTENTIAL STRUCTURAL AREAS WITH A MINIMUM OF 3 TESTS PER LIFT AND ONE TEST PER 150 LINEAL FEET PER LIFT FOR FOUNDATION. TRENCH AND WALL BACKFILL.

26. BUILDING PAD AND PARKING AREAS SHALL BE PROOF-ROLLED WITH A FULLY LOADED TANDEM AXLE DUMP TRUCK TO IDENTIFY ANY SOFT OR UNSUITABLE AREAS, PRIOR TO BASE ROCK PLACEMENT. THE PROOF-ROLL SHALL BE OBSERVED BY THE PROJECT GEOTECHNICAL ENGINEER. AREAS IDENTIFIED AS UNSUITABLE SHALL BE OVER EXCAVATED AND RECONSTRUCTED WITH

27. CONTRACTOR SHALL ASSURE POSITIVE DRAINAGE AWAY FROM ALL BUILDINGS FOR ALL LANDSCAPED AND PAVED AREAS.

28. CONTRACTOR SHALL PLACE STOCKPILED TOPSOIL FROM SITE IN ALL LANDSCAPE AREAS TO A MINIMUM DEPTH OF OF 6", UNLESS NOTED OTHERWISE IN PROJECT SPECIFICATIONS. ANY EXCESS TOPSOIL SHALL BE DISPOSED OF ONSITE PER OWNER.

HAZARDOUS SUBSTANCE NOTE

1. SUBSTANCES REGULATED BY FEDERAL LAW UNDER THE RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) OR THE COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY ACT (CERCLA) WHICH ARE TRANSPORTED, STORED OR USED FOR MAINTENANCE, CLEANING OR REPAIRS SHALL BE MANAGED ACCORDING TO THE PROVISIONS OF RCRA AND CERCLA.

2. ALL PAINTS, SOLVENTS, PETROLEUM PRODUCTS AND PETROLEUM WASTE PRODUCTS (EXCEPT FUELS) AND STORAGE CONTAINERS (SUCH AS DRUMS, CANS OR CARTONS) SHALL BE STORED SUCH THAT THESE MATERIALS ARE NOT EXPOSED TO STORM WATER. SUFFICIENT PRACTICES OF SPILL PREVENTION, CONTROL AND/OR MANAGEMENT SHALL BE PROVIDED TO PREVENT ANY SPILLS OF THESE POLLUTANTS FROM ENTERING A WATER OF THE STATE. ANY CONTAINMENT SYSTEM USED TO IMPLEMENT THIS REQUIREMENT SHALL BE CONSTRUCTED OF MATERIALS COMPATIBLE WITH THE SUBSTANCES CONTAINED AND SHALL ALSO PREVENT THE CONTAMINATION OF GROUNDWATER.

3. THE APPLICANT SHALL NOTIFY BY TELEPHONE AND IN WRITING THE DEPARTMENT OF NATURAL RESOURCES, WATER POLLUTION CONTROL PROGRAM, POST OFFICE BOX 176, JEFFERSON CITY, MO 65102, 1-800-361-4827, OF ANY OIL SPILLS OR IF HAZARDOUS SUBSTANCES ARE FOUND DURING THE PROSECUTION OF WORK UNDER THIS PERMIT.

SUBSTITUTION AND ALTERNATIVE MATERIALS NOTE

1. THE FOLLOWING MATERIALS WILL BE CONSIDERED ACCEPTABLE AS ALTERNATIVE/SUBSTITUTE MATERIAL.

a. STANDARD DUTY CONCRETE CAN BE SUBSTITUTED WITH STANDARD DUTY ASPHALT IN PARKING STALLS AND HEAVY-DUTY ASPHALT IN DRIVE AISLES. THE DUMPSTER PAD AND DRIVEWAY APPROACH SHALL BE CONCRETE. ACCESSIBLE PARKING STALLS SHALL REMAIN STANDARD DUTY CONCRETE.

b. WATER MAIN, SERVICE FITTINGS, AND PIPES MAY BE SUBSTITUTED WITH EQUIVALENT ALTERNATIVE MATERIAL. ACCEPTABLE MATERIALS, SELECTED AS APPROPRIATE FOR PIPE SIZE, INCLUDE:

i 280 PSI PRESSURE RATED, GASKETED BELL AND JOINT PVC

ii DUCTILE IRON (BAGGED)

iii SMALL DIAMETER TUBING: PEX-A, PEX-B, SDR9 PVC

c. STORM: HDPE CAN BE SUBSTITUTED WITH RCP AND CMP (ALUMINIZED/SMOOTH WALL). CMP MUST BE INSTALLED UNDER MANUFACTURERS OBSERVATION. RCP MAY NOT BE SUBSTITUTED.

ALL SUBSTITUTIONS MUST BE NOTED IN THE BID PROVIDING A DEDUCTED ALTERNATIVE VALUE VERSUS THE AS DESIGNATED MATERIALS. ALL SUBSTITUTIONS MUST BE APPROVED BY THE ENGINEER AND OWNER PRIOR TO USE.

WATER NOTES

1. ALL WATER LINE CONSTRUCTION SHALL BE PER CURRENT CITY OF LEE'S SUMMIT WATER UTILITY STANDARDS AND SPECIFICATIONS UNLESS NOTED OTHERWISE.

2. SITE CONTRACTOR SHALL FURNISH AND INSTALL: a. ALL WATER MAINS AND FIRE HYDRANTS

b. DOMESTIC LINES TO WITHIN 5' OF BUILDING

d. BACKFLOW PREVENTERS e. ALL VALVES

f. FIRE RISER

CONDUCTOR

CONNECTIONS

BY THE SWPPP ON A MONTHLY BASIS.

PER PLANS AND/OR SPECIFICATIONS.

REINFORCEMENT MAT OR APPROVED EQUAL.

STABILIZATION.

3. BUILDING CONTRACTOR SHALL CONNECT TO DOMESTIC WITHIN 5' OF BUILDING.

4. SITE CONTRACTOR SHALL INSTALL FIRE RISERS IN BUILDINGS TURN AND CAP 18 INCHES ABOVE FINISH FLOOR (SEE MEP PLANS FOR EXACT LOCATION).

5. ALL VALVES, TEES, CROSSES, BENDS AND REDUCERS SHALL BE RESTRAINED.

6. WATER METER BOXES SHALL BE PLACED INTERNAL TO BUILDING.

7. ALL WATER MAINS SHALL BE DISINFECTED IN ACCORDANCE WITH AWWA STANDARD C651 LATEST EDITION.

ELECTRIC NOTES

SITE CONTRACTOR SHALL CONTACT EVERYGY TO COORDINATE INSTALLATION OF ELECTRIC SERVICES. RESPONSIBILITY OF INSTALLATION SHALL BE AS FOLLOWS.

<u>INSTALLED BY:</u> <u>SUPPLIED BY:</u> SECONDARY CONDUIT **CONTRACTOR** CONTRACTOR CONDUCTOR **EVERGY FVFRGY** CONNECTIONS *FVFRGY* TRANSFORMER **EVERGY EVERGY** TRANSFORMER PAD **CONTRACTOR** CONTRACTOR CONDUIT, CONNECTORS, ETC. CONTRACTOR CONTRACTOR

APPROVAL HAS BEEN RECEIVED FROM ALL GOVERNING AUTHORITIES.

PRECAUTIONS TO PREVENT SOIL SEDIMENT FROM LEAVING THE SITE.

CAN BE MOWED OVER WITHOUT GETTING TANGLED IN THE MOWER.

14. ALL PERIMETER LANDSCAPED AREAS SHALL BE GRASS COVERED.

WILL REMOVE THE PROJECT FROM ITS INSPECTION SCHEDULE.

17. SOIL STOCKPILES SHALL COMPLY WITH THE CITY OF LEE'S SUMMIT.

RESPONSIBLE FOR THE PROJECT UNTIL THE NPDES PERMIT IS TERMINATED.

8. CONTRACTOR SHALL COMPLY WITH ALL STATE AND LOCAL ORDINANCES THAT APPLY.

EVERGY

EVERGY

STORM WATER POLLUTION PREVENTION PLAN NOTES

1. CONTRACTOR SHALL FOLLOW THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) AND ADHERE TO ALL TERMS &

CONSTRUCTION ACTIVITIES. A COPY OF THIS PLAN, SWPPP, AND ALL PERMITS SHALL REMAIN ON SITE THROUGHOUT

2. CONTRACTORS ARE REQUIRED TO SUBMIT TO CITY INSPECTION STAFF COPIES OF THEIR INSPECTION REPORTS REQUIRED

3. NO LAND CLEARING OR GRADING SHALL BEGIN UNTIL ALL EROSION CONTROL MEASURES HAVE BEEN INSTALLED AND

4. IMMEDIATELY UPON COMPLETION OF FINISH GRADING IN EACH AREA, ALL LANDSCAPING AREAS SHALL BE STABILIZED

5. SHOULD CONSTRUCTION STOP FOR LONGER THAN 14 DAYS, THE SITE SHALL BE SEEDED AS SPECIFIED IN THE SWPPP.

INCHES OR GREATER. REGULARLY SCHEDULED INSPECTION SHALL BE A MINIMUM OF ONCE EVERY 7 CALENDAR DAYS.

6. SITE INSPECTION SHOULD OCCUR ON A REGULAR SCHEDULE AND WITHIN 24 HOURS OF A STORM EVENT OF 0.25

7. THIS PLAN SHALL NOT BE CONSIDERED ALL INCLUSIVE AS THE CONTRACTOR SHALL TAKE ALL NECESSARY

ANY DEFICIENCIES SHALL BE NOTED IN A WEEKLY REPORT OF THE INSPECTION AND CORRECTED WITHIN SEVEN

9. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED IF DEEMED NECESSARY BY ON SITE

10. CONTRACTOR SHALL BE RESPONSIBLE TO TAKE WHATEVER MEANS NECESSARY TO ESTABLISH PERMANENT SOIL

11. ALL SLOPES GREATER THAN 3:1 SHALL BE REINFORCED BY NORTH AMERICAN GREEN P300 PERMANENT TURF

12. ALL ROLLED EROSION CONTROL MATS, BIONETS, BLANKETS, ETC. SHALL BE INSTALLED PER MANUFACTURER'

THE CONSTRUCTION WORK AND THE SITE SHALL BE RETURNED TO ITS ORIGINAL CONDITION.

REQUIREMENTS. INSTALLATION SHALL RESULT IN A PRODUCT THAT IS TIGHTLY SECURED TO THE GROUND THAT FORCES

IT WILL GROW THRU THE BLANKET. ALL ASPECTS OF THE PRODUCT SHALL BE FIRMLY SECURED TO THE GROUND SO IT

RUNOFF TO DRAIN OVER, NOT UNDER, THE PRODUCT. GRASS SHALL BE PLANTED PRIOR TO PRODUCT PLACEMENT SC

13. CONTRACTOR SHALL REMOVE ALL TRASH, DEBRIS, TREES & BRUSH AND OTHER MATERIAL CREATED AS A RESULT OF

15. IN ORDER TO TERMINATE A MISSOURI DEPARTMENT OF NATURAL RESOURCES (MDNR) STATE OPERATING PERMIT, THE

CONTRACTOR SHALL SUBMIT A REQUEST FOR TERMINATION OF OPERATING PERMIT FORM TO MDNR. A PERMIT IS

16. THE SITE CONTRACTOR SHALL INCLUDE MAINTENANCE OF ALL BMP'S AS PART OF THEIR CONTRACT AND SHALL BE

ELIGIBLE FOR TERMINATION WHEN EITHER PERENNIAL VEGETATION, PAVEMENT, BUILDINGS, OR STRUCTURES USING

PERMANENT MATERIALS COVER ALL AREAS THAT HAVE BEEN DISTURBED. VEGETATIVE COVER SHOULD BE AT LEAST

TERMINATION OF OPERATING PERMIT FORM SHALL BE SUBMITTED TO THE CITY OF COLUMBIA AT WHICH TIME THE CITY

70% OF FULLY ESTABLISHED PLANT DENSITY OVER 100% OF THE DISTURBED AREA. A COPY OF THE REQUEST FOR

CONDITIONS AS OUTLINED IN THE GENERAL N.P.D.E.S. PERMIT FOR STORM WATER DISCHARGE ASSOCIATED WITH

GENERAL SITE CONSTRUCTION NOTES

PARKING SUMMARY

a. REQUIRED PARKING: b. PROVIDED PARKING

52 STANDARD SPACES

ii. 11 ACCESSIBLE SPACES iii. 63 TOTAL SPACES

2. SITE PAVEMENT SHALL BE PLACE AS FOLLOWS:

i. STANDARD DUTY SHALL BE A MINIMUM OF 6-INCHES THICK REINFORCED CONCRETE WITH A MINIMUM 4" OF CRUSHED STONE BASE (SEE DETAIL SHEET

ii. HEAVY DUTY SHALL BE A MINIMUM 8-INCHES THICK REINFORCED CONCRETE WITH A MINIMUM 6-INCHES OF CRUSHED STONE BASE (SEE DETAIL SHEET

GENERAL CONSTRUCTION NOTES

MONUMENT SIGN

7. MAINTENANCE BUILDING

FLAG POLE

b. SIGN SHALL HAVE A 4' BY 8' SIGN FACE WITH 2' X 2' COLUMNS EACH END.

b. MAINTENANCE BUILDING SHALL BE BRICK WAINSCOT AND SIDING.

b. FLAG POLE SHALL BE PROVIDED WITH AN ACCESSIBLE PATH.

a. SEE ARCHITECTURAL PLANS FOR LOCATION AND DETAIL OF FLAG POLE

9. SANITARY SEWER SERVICES SHALL BE TIED NEAR THE MIDDLE OF SLAB TO REDUCE DEPTH

b. COORDINATION OF WITH UTILITY PROVIDER FOR THE WATER MAIN TAP

c. THE STANDARD SERVICE CONNECTION OR NEW MANHOLE LOCATION

d. A MINIMUM 2" PVC CONDUIT SHALL BE EXTENDED FROM THE HOUSE PANEL TO THE

a. PROVIDE A MINIMUM 2" PVC CONDUIT FROM THE HOUSE PANEL FOR ELECTRICAL

c. ALL LIGHTING SHALL BE GROUND MOUNTED, SEE MEP PLANS FOR LIGHTING DESIGN.

d. A MINIMUM 2" PVC CONDUIT SHALL BE EXTENDED FROM THE HOUSE PANEL TO THE

BELOW SLAB WHEN BUILDING IS OVER 150FT LONG. SEWER INVERT TO BE MINIMUM 5' BELOW

a. COORDINATION OF THE INSTALLATION OF THE WATER METER WITH THE UTILITY.

d. INSTALLATION OF THE FIRE RISER FOR WATER SERVICE INTO THE BUILDING, STUBBED

a. INSTALLATION THE CONNECTION OF THE SITE SEWER SERVICE TO THE MAIN INCLUDING

ALL MATERIALS AND LABOR. THE CONTRACTOR SHALL PROVIDE TWENTY-FOUR (24)

HOURS' NOTICE TO THE DEPARTMENT FOR CONNECTION. NONE OF THE BUILDING

SEWER OR PLUMBING OR SANITARY DRAINAGE SYSTEM SHALL BE COVERED OR

ENCLOSED UNTIL INSPECTED, HYDRAULICALLY TESTED, AND APPROVED BY THE

a. PLANTS SHALL BE PROPERLY SELECTED TO FOR SITE CONDITION CONDITIONS SUCH AS:

i. BETWEEN THE BUILDING/PARKING LOT AND DISTURBED SITE FRONTAGE.

iv. A MINIMUM 15-FEET BEYOND EDGE OF SIDEWALK, PARKING LOT, AND SITE

g. TURF REINFORCEMENT MATS AND EROSION CONTROL BLANKETS SHALL BE PLACED AS

c. IRRIGATION METER AND BACKFLOW PREVENT SHALL BE PLACED PER PLAN.

BACKFLOW PREVENTOR SHALL BE PROPERLY PROTECTED FROM FROST.

IRRIGATION DESIGN DRAWINGS ARE TO BE SUBMITTED FOR APPROVAL

f. IRRIGATION BACKFLOW PREVENTOR SHALL BE PLACED ABOVE GROUND WITHIN A

g. IRRIGATION SHALL BE ZONED. ALL PLANTING BEDS AND TURF SHALL BE SEPARATELY

h. CONSTRUCTOR SHALL SUBMIT IRRIGATION PLANS TO THE OWNER A MINIMUM OF 30

DAYS PRIOR TO PROPOSED INSTALLATION FOR APPROVAL. SHOW NOTE THAT

LOCKABLE HOUSING CONSTRUCTED OR POWDER COATED STEEL FRAME AND MESH.

d. IRRIGATION METER SHALL BE INSTALLED PER LOCAL JURISDICTION.

12. THE SITE CONTACTOR SHALL PERFORM A SITE SURVEY AFTER CLEARING & GRUBBING IN ORDER

13. ALL 3-STORY OR TALLER BUILDINGS SHALL HAVE A LIGHTNING ROD (SEE ARCHITECTURAL).

b. SHADE TREES SHALL BE MINIMUM 2" CALIPER, UNLESS NOTED OTHERWISE.

e. SOD SHALL BE PLACE ON ALL DISTURBED AREAS AND AT A MINIMUM

ii. BETWEEN THE PARKING LOT AND BUILDING(S).

iii. BETWEEN PARKING LOT AND SIDEWALKS.

f. ALL AREAS NOT SODDED SHALL BE HYDROSEEDED.

b. ALL HYDROSEEDED LAWN AREAS SHALL BE IRRIGATED.

e. IRRIGATION CONTROLLER SHALL BE PLACED PER PLAN

a. ALL SODDED AREA SHALL BE IRRIGATED

TO CONFIRM TOPO ON PLANS IS ACCURATE PRIOR TO MASS GRADING

ii. WELL DRAINED OR POORLY DRAINED SOILS

iii. SUITABLE FOR USDA PLANT HARDINESS ZONE

SHADE, PARTIAL SHADE, FULL SUN

c. EVERGREEN TREES SHALL BE AT LEAST 6-FOOT TALL.

d. SHRUBS SHALL BE 3-5 GALLON

NOTED ON PLAN

15. IRRIGATION SYSTEM NOTES

c. ALL LIGHTING SHALL BE GROUND MOUNTED

MONUMENT SIGN FOR POWER.

FFE IN ORDER TO COME OUT BELOW THE FOOTING.

10. SITE CONTRACTOR SHALL BE RESPONSIBLE FOR

18" ABOVE FINISH FLOOP

11. SITE CONTRACTOR SHALL BE RESPONSIBLE FOR

c. SEE ARCHITECTURAL PLANS.

b. ASPHALT PAVING (DELETE WHEN REQUIRED STANDARD DUTY ASPHALT IS 4" OR

 STANDARD DUTY ASPHALT SHALL BE CONSTRUCTED PER DETAIL ON C9.01. ii. HEAVY DUTY ASPHALT SHALL BE CONSTRUCTED PER DETAIL ON C9.01. iii. ALL ASPHALT PAVING SHALL HAVE A SEPARATE BINDER AND SURFACE COARSE.

BIDDER SHALL BE SUITABLE TO SUPPORT CONSTRUCTION TRAFFIC DURING

FRAMING, ROOFING, ETC c. CONCRETE CURB (SEE DETAIL ON SHEET C9.01)

i. ALL CURB SHALL BE 24-INCHES WIDE FROM BACK OF CURB TO EDGE OF GUTTER

ii. CURB SHALL HAVE A MINIMUM 4-INCH OF CRUSHED STONE BASE.

iii. ALL ACCESSIBLE CONCRETE PAVING SHALL BE DOWELED TO CURB. d. SIDEWALKS (SEE DETAIL ON SHEET C9.01-C9.03)

i. TO BE FOUR INCH (4") THICK CONCRETE.

ii. ALL SIDEWALK AT BACK OF CURB SHALL BE DOWELED TO CURB (SEE DETAIL ON iii. SIDEWALKS SHALL NOT BE POURED UNTIL BUILDING EXTERIOR FINISHES ARE

SUBSTANTIALLY COMPLETE. ANY PLACEMENT OF SIDEWALK PRIOR, WITHOUT OWNER'S APPROVAL, SHALL BE AT THE PAVING CONTRACTOR'S SOLE RISK.

i. CONCRETE PARKING LOT PAVING AND SIDEWALK SHALL BE PROVIDED JOINTS

FOR PER THE JOINT PLAN AND PER DETAIL ON SHEET C9.01 ii. EXPANSION JOINTS SHOULD BE PLACED EVERY 100 LINEAL FEET FOR PARKING LOT PAVEMENT AND EVERY 50 LINEAL FEET FOR SIDEWALK, MINIMUM

iii. PAVING JOINTS SHALL BE CONTINUOUS THRU CURB AND GUTTER iv. PAVING JOINTS FOR SIDEWALK AT BACK OF CURB SHALL ALIGN WITH CURB AND

f. STANDARD DUTY CONCRETE PAVEMENT SHALL BE USED BELOW THE PORTE COCHERE.

g. ALL STREET APPROACHES SHALL BE HEAVY DUTY CONCRETE, UNLESS SPECIFIED OTHERWISE BY LOCAL JURISDICTION (ALREADY BUILT VIA PHASE 1). h. ALL DUMPSTER PADS AND APPROACHES SHALL BE HEAVY DUTY CONCRETE PAVEMENT.

3. SITE ACCESSIBILITY a. ALL ACCESSIBLE PARKING STALLS, CROSSWALKS, AND OTHER ACCESSIBLE ROUTES WITHIN THE PARKING AREA SHALL BE STANDARD DUTY CONCRETE, UNLESS NOTED

OTHERWIS b. ACCESSIBLE CONCRETE PARKING SHALL HAVE A MAXIMUM SLOPE OF 1.7% IN ALL DIRECTIONS

c. ALL SIDEWALKS SHALL BE CONSTRUCTED AS FOLLOWS: 1.7% MAXIMUM CROSS SLOPE

ii. 4.7% MAXIMUM RUNNING SLOPE LANDINGS AT 1.7% MAX SLOPE IN ALL DIRECTIONS.

RAMPS SHALL BE CONSTRUCTED AS FOLLOWS: 7.5% MAXIMUM RUNNING SLOPE

ii. MAXIMUM RISE 6-INCHES iii. MAXIMUM CROSS SLOPE OF 1.7%

e. LANDINGS SHALL BE PROVIDED AS THE INTERSECTION OF ALL SIDEWALKS AND AT THE TOP AND BOTTOM OF ALL RAMPS.

f. ALL SIDEWALKS SHALL BE CONSIDERED ACCESSIBLE, UNLESS NOTED OTHERWISE. g. ALL SITE AMENITIES SHALL BE ACCESSIBLE

h. ALL DUMPSTERS SHALL BE ACCESSIBLE. i. NO ELEMENTS SHALL PROJECT MORE THAN 4" INTO AN ACCESSIBLE ROUTE.

a. ALL FENCING ABOVE RETAINING WALL SHALL BE 4' STEEL 5. DUMPSTER ENCLOSURE

a. ALL ENCLOSURES SHALL BE BLOCK WITH BRICK VENEER. b. ALL GATES SHALL BE STEEL FRAME AND VINYL SLATS.

c. SEE ARCHITECTURAL PLANS FOR DETAILS.

UTILITY CONSTRUCTION NOTES

2. EXISTING UTILITIES SHALL BE VERIFIED IN FIELD PRIOR TO INSTALLATION OF ANY NEW LINES.

AND SEWER LINES, RESPECTIVELY.

1. LOCATION OF SITE UTILITIES SHALL BE VERIFIED BY CONTRACTOR AND THE PROPER UTILITY COMPANY PROVIDING SERVICE PRIOR TO THE START OF CONSTRUCTION.

3. UTILITY TIE-INS ARE SHOWN IN APPROXIMATE LOCATIONS. REFER TO MEP PLANS FOR EXACT TIE-IN OF ALL UTILITIES. 4. SITE CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES FOR INSTALLATION REQUIREMENTS AND SPECIFICATIONS. CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH THE SPECIFICATIONS OF LEE'S SUMMIT WATER

5. SITE CONTRACTOR WILL BE RESPONSIBLE FOR ALL TAP AND TIE ON FEES REQUIRED, AS WELL AS COST OF UNDERGROUND SERVICE CONNECTIONS TO THE BUILDING.

DEPARTMENT AND CITY OF LEE'S SUMMIT PUBLIC WORKS WITH REGARDS TO MATERIALS AND INSTALLATION OF THE WATER

6. ALL WATER AND SANITARY LEADS TO BUILDING SHALL END 5' OUTSIDE THE BUILDING LIMITS AS SHOWN ON PLAN AND SHALL BE PROVIDED WITH A TEMPORARY PLUG AT END, VISIBLE ABOVE FINISHED GRADE.

7. ALL TRENCHING, PIPE LAYING, AND BACKFILLING SHALL BE IN ACCORDANCE WITH FEDERAL OSHA REGULATIONS, BACKFILL OF TRENCHES THROUGH ANY IMPROVED AREAS, SUCH AS STREET, DRIVES OR PARKING LOTS SHALL BE COMPACTED TO MINIMUM 95% STANDARD PROCTOR DENSITY (ASTM D-698).

8. PROPOSED ELECTRIC, TELEPHONE, TELEVISION, AND GAS LINES ARE SHOWN FOR COORDINATION PURPOSES ONLY. SYSTEM DESIGN PREPARED BY EACH RESPECTIVE AGENCY. REFER TO MEP PLANS FOR CONDUIT REQUIREMENTS.

9. ALL UNDERGROUND UTILITY CONDUITS SHALL BE PLACED 48" BELOW FINISH GRADE UNLESS NOTED OTHERWISE.

10. WATER MAINS SHALL BE LAID AT LEAST 10 FEET HORIZONTALLY, MEASURED EDGE TO EDGE, FROM ANY EXISTING OR PROPOSED SANITARY SEWER. WATER MAINS CROSSING SANITARY SEWERS SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL CLEAR DISTANCE OF 18 INCHES BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF THE SANITARY SEWER. CENTER A FULL LENGTH OF WATER MAIN OVER OR UNDER THE SEWER SO BOTH WATER MAIN JOINTS ARE AS FAR FROM THE SEWER AS POSSIBLE. AT SANITARY SEWER CROSSINGS, PLACE COMPACTED CLAY SOIL BACKFILL 18 INCHES ABOVE OR BELOW THE WATER MAIN FOR A DISTANCE OF AT LEAST 10 FEET ON EITHER SIDE OF THE SANITARY SEWER. CONTRACTOR SHALL NOTIFY ENGINEER IF HORIZONTAL AND VERTICAL SEPARATION CANNOT BE

11. ALL UNDERGROUND LINES SHALL BE INSTALLED, INSPECTED AND APPROVED BEFORE BACKFILLING.

12. TOPS OF EXISTING ELECTRIC, SANITARY, STORM, WATER, TELECOMMUNICATION, GAS, IRRIGATION, CHILLED WATER, AND STEAM STRUCTURES SHALL BE RAISED AS NECESSARY TO BE FLUSH WITH PROPOSED FINISHED ELEVATIONS.

14. ALL NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRED BY CODE AND/OR UTILITY SERVICE COMPANIES SHALL

13. ALL CONCRETE FOR ENCASEMENTS SHALL HAVE A MINIMUM 28 DAY COMPRESSION STRENGTH OF 3000 P.S.I.

BE PERFORMED PRIOR TO ANNOUNCED BUILDING POSSESSION AND THE FINAL CONNECTION OF SERVICE. 15. REFER TO ARCHITECTURAL <MEP> PLANS FOR SITE LIGHTING PLAN.

16. PVC CONDUIT SHALL BE SCHEDULE 40 PVC WITH LONG SWEEPS ONLY (36" MINIMUM RADIUS) AND CONTAIN PULLTAPE, UNLESS OTHERWISE NOTED.

18. SITE CONTRACTOR SHALL CONTACT EVERGY TO COORDINATE INSTALLATION OF NEW TRANSFORMERS.

19. A MINIMUM 18" OF VERTICAL SEPARATION SHALL BE MAINTAINED BETWEEN THE OUTSIDE OF THE ELECTRIC CONDUIT AND THE OUTSIDE OF THE WATER, STORM SEWER, SANITARY SEWER, OR GAS PIPE AT ALL CROSSINGS.

17. SITE CONTRACTOR SHALL PROVIDE AND INSTALL THE CONCRETE PAD FOR THE TRANSFORMER PER THE ELECTRIC COMPANY

20. STUBS FOR FUTURE UTILITIES SHOULD BE CLEARLY MARKED AND ES&S CONTACTED FOR DATA COLLECTION.

Engineering Surveys a. SHALL BE BLOCK AND BRICK VENEER CONSTRUCTION. & Services

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6/30/202 MATTHEW AARON KRIETE NUMBER PE-2007002811

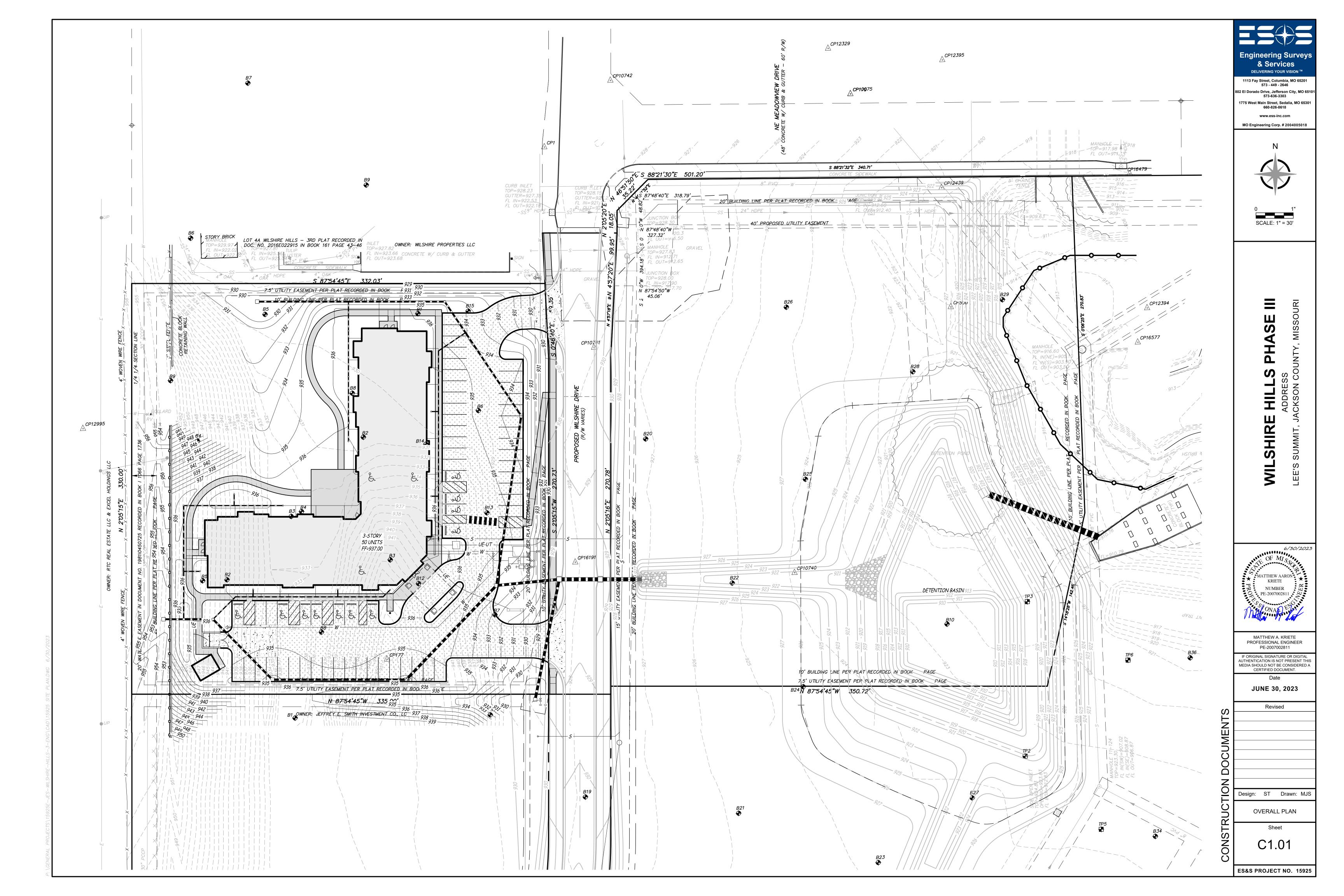
MATTHEW A. KRIETE PROFESSIONAL ENGINEER

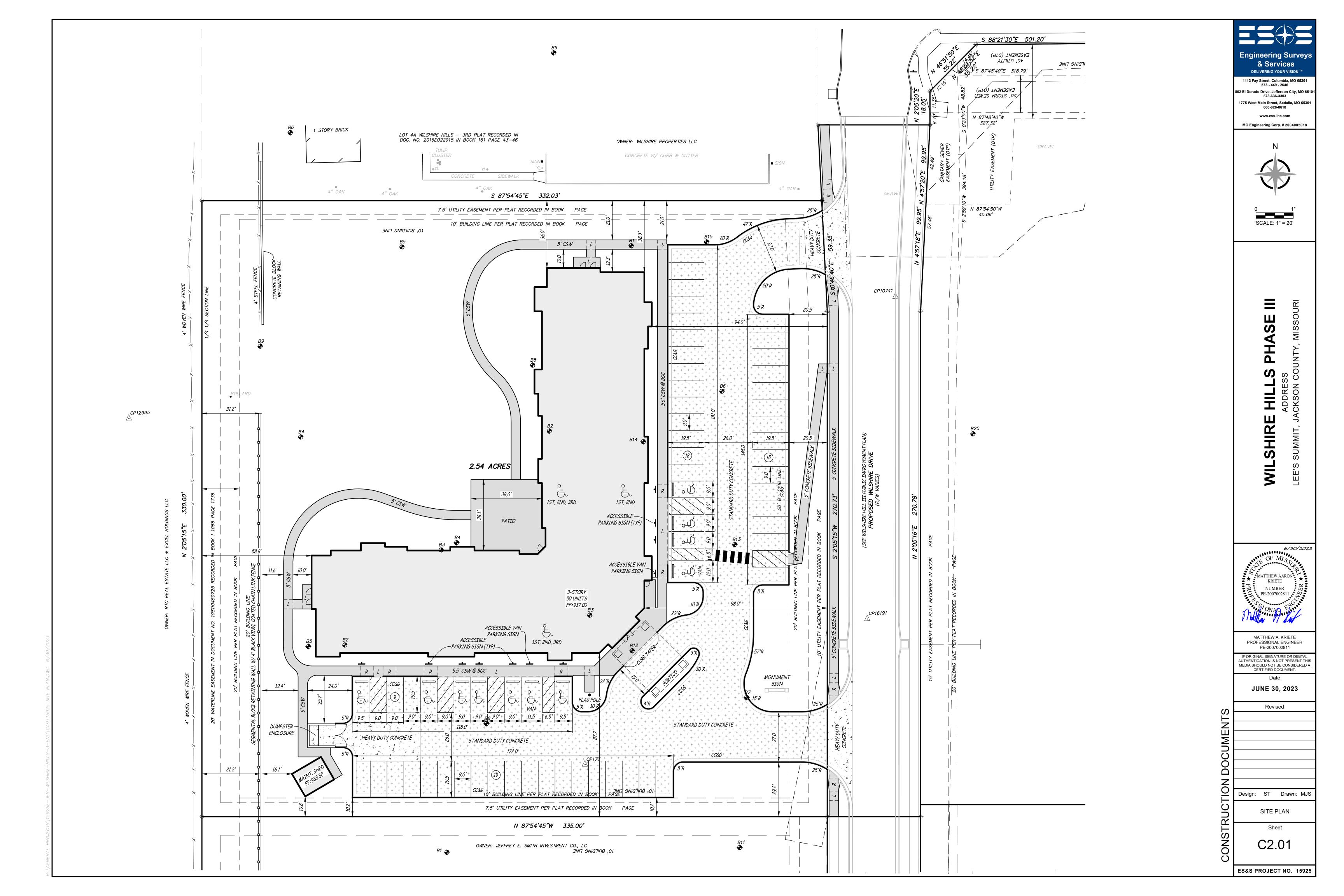
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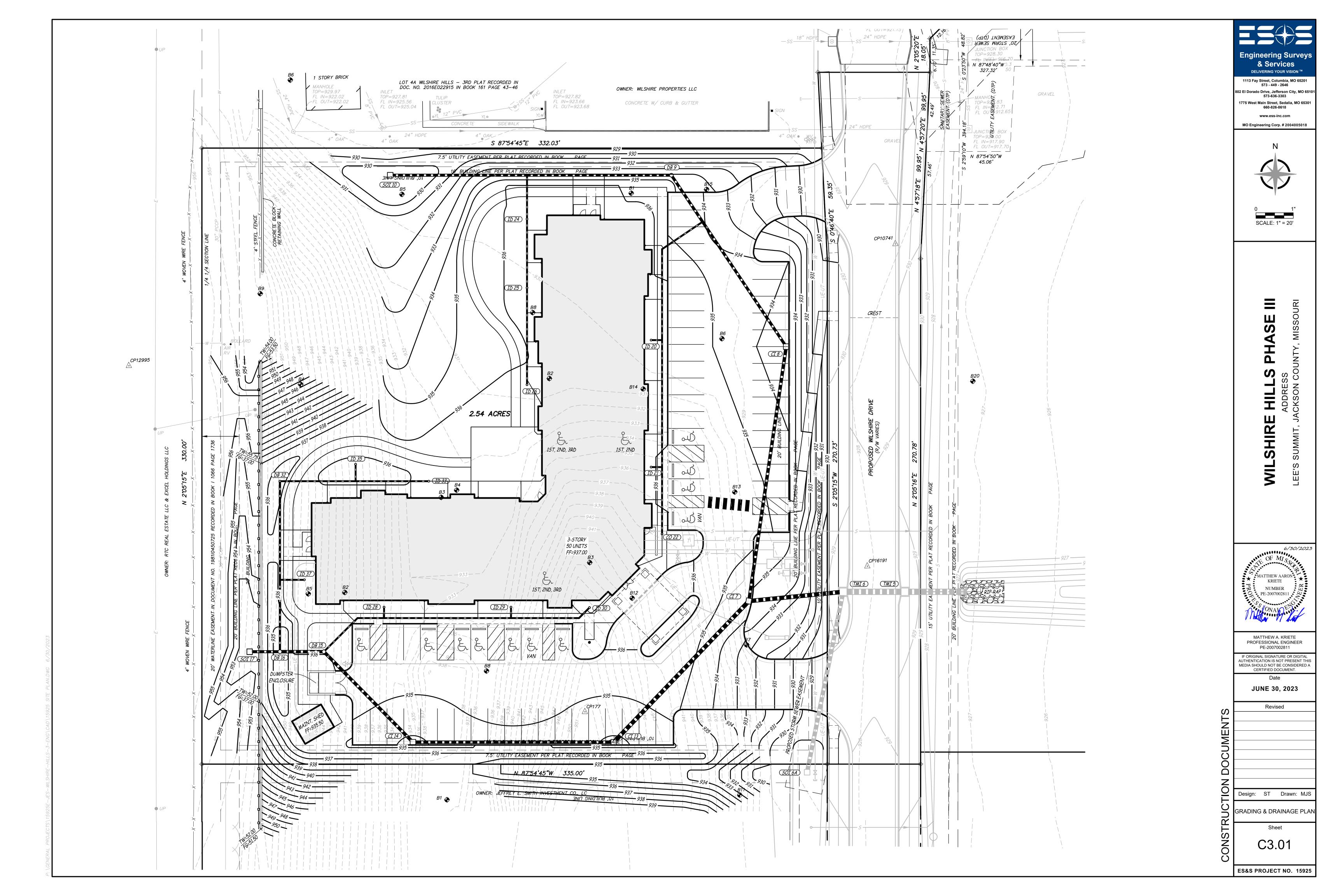
GENERAL NOTES

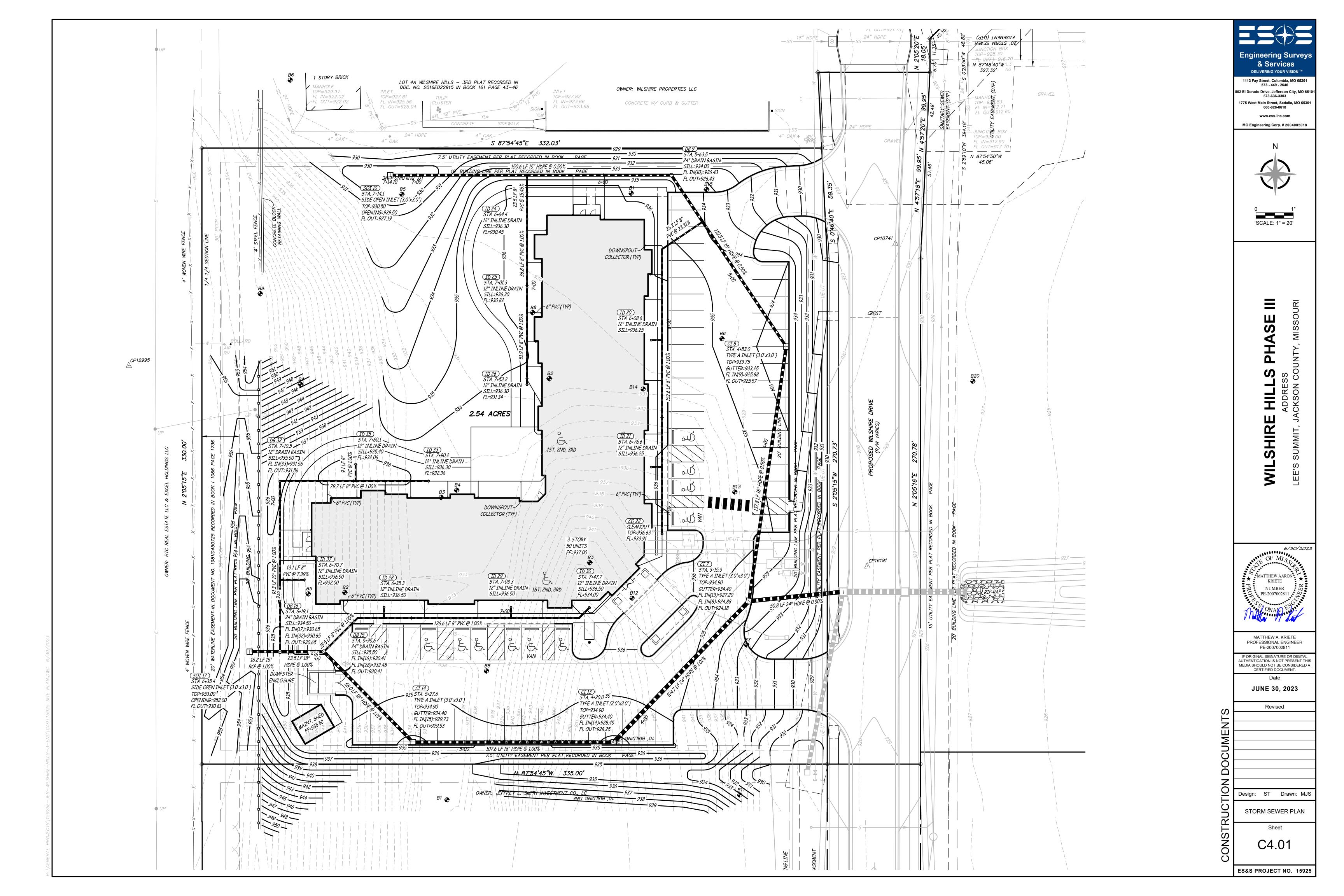
PE-2007002811 AUTHENTICATION IS NOT PRESENT TH MEDIA SHOULD NOT BE CONSIDERED. CERTIFIED DOCUMENT. **JUNE 30, 2023**

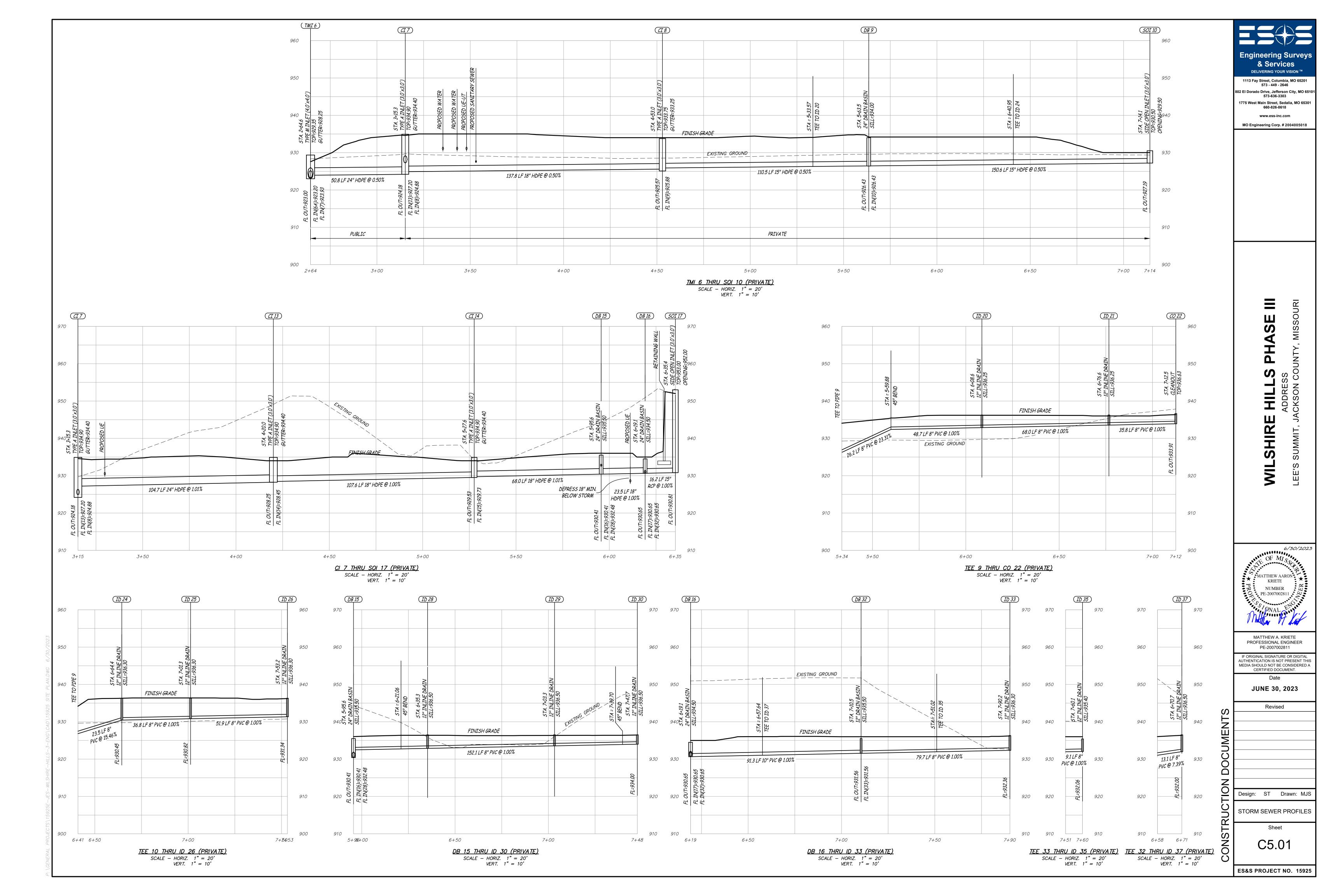
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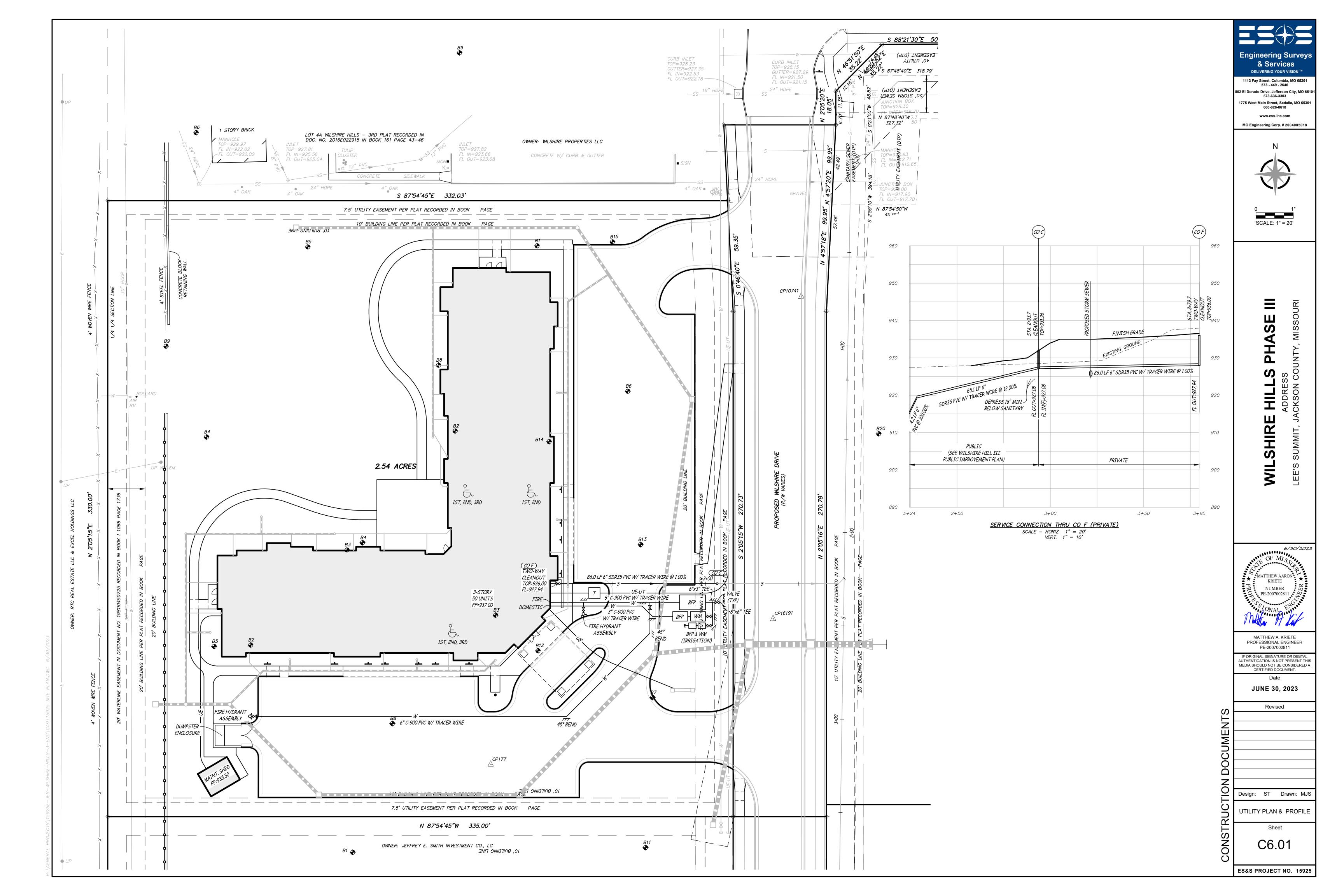


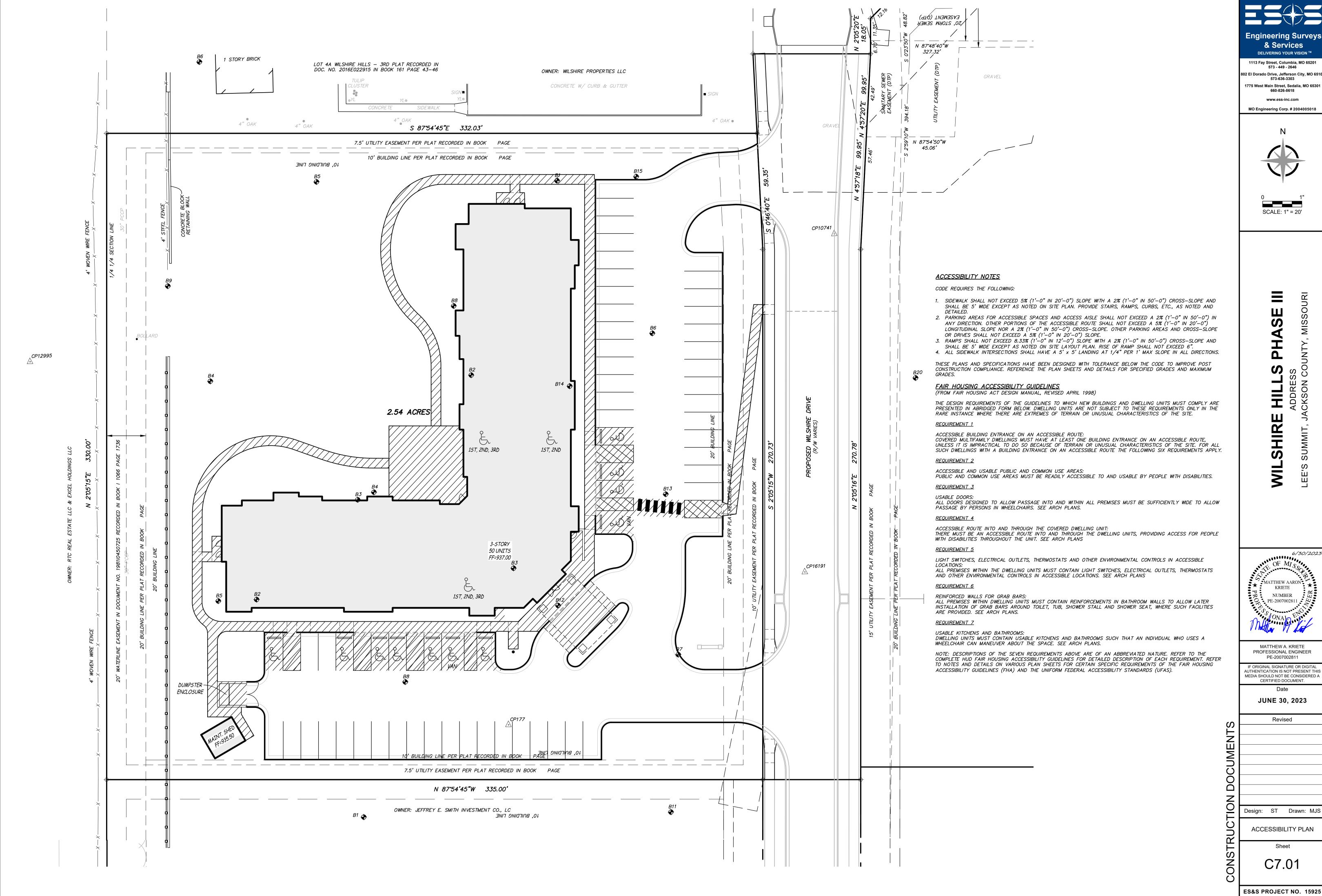


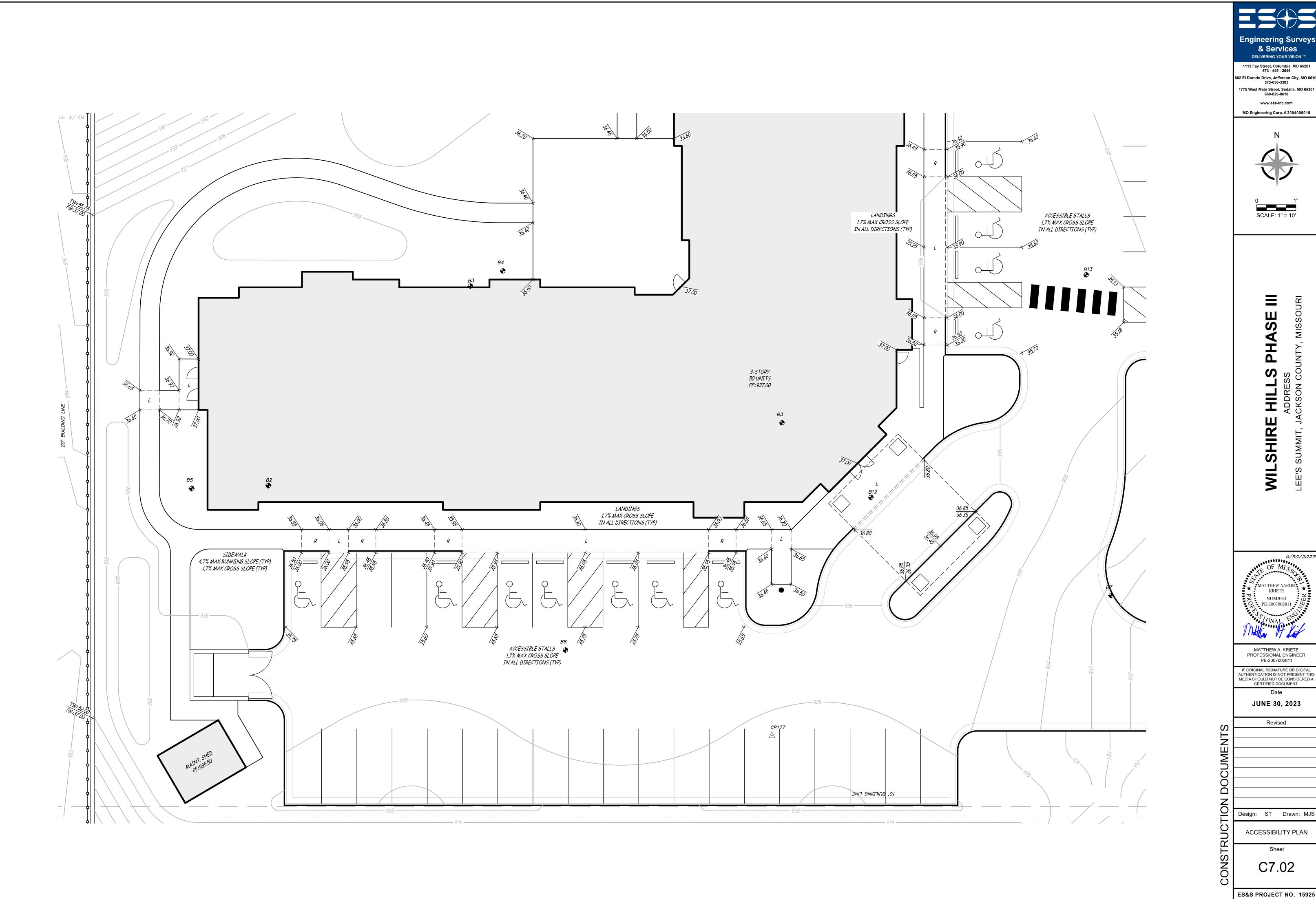




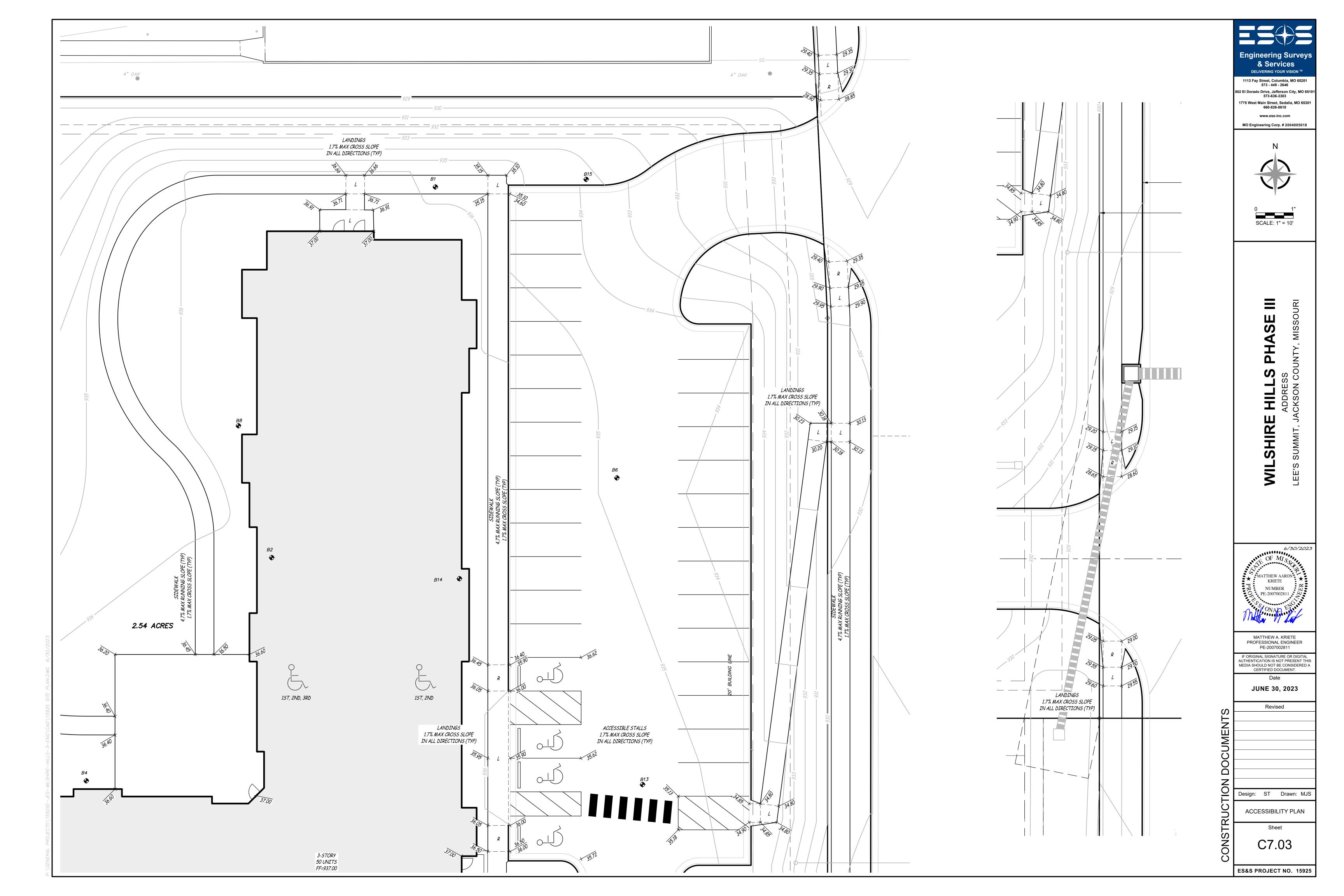


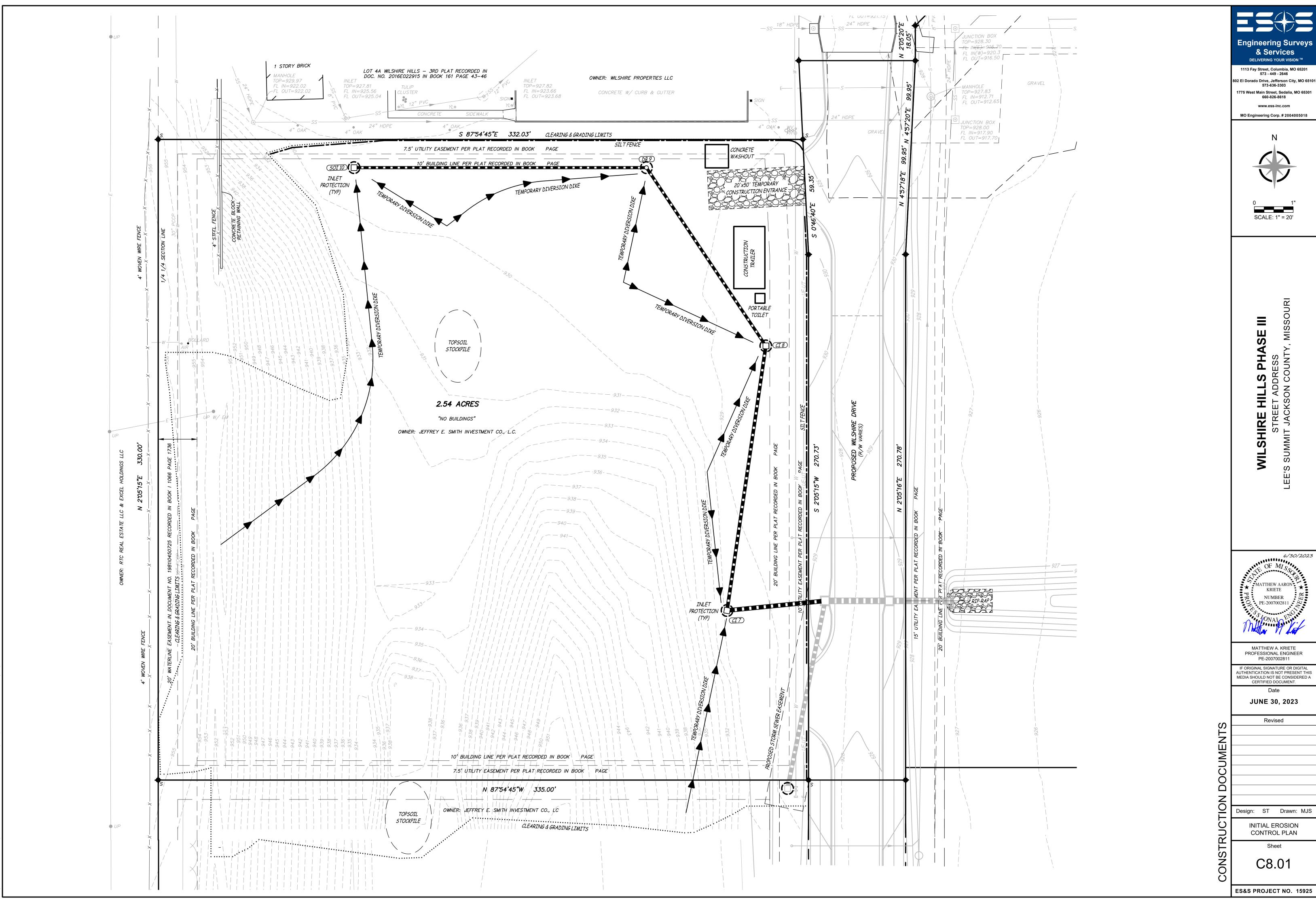


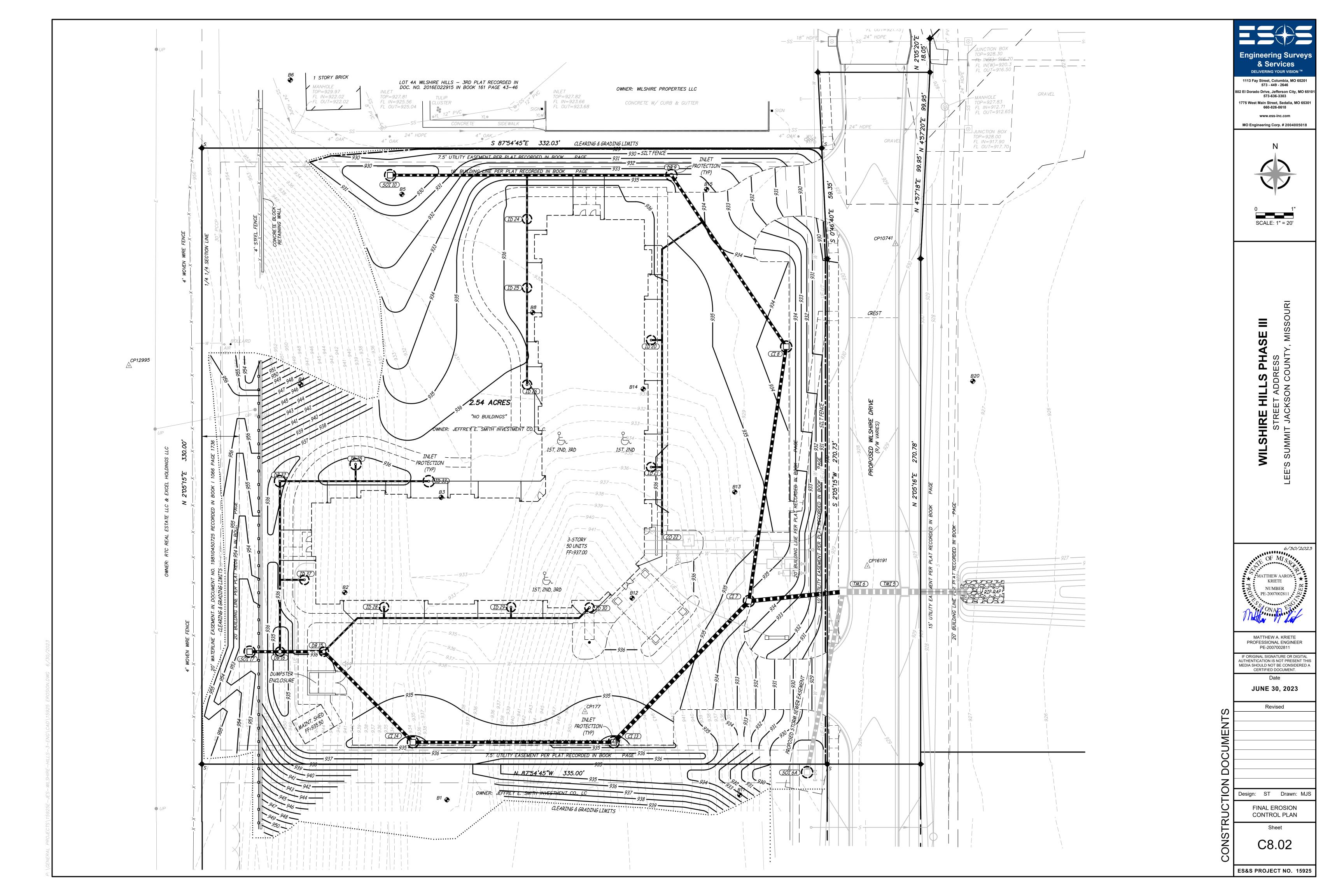


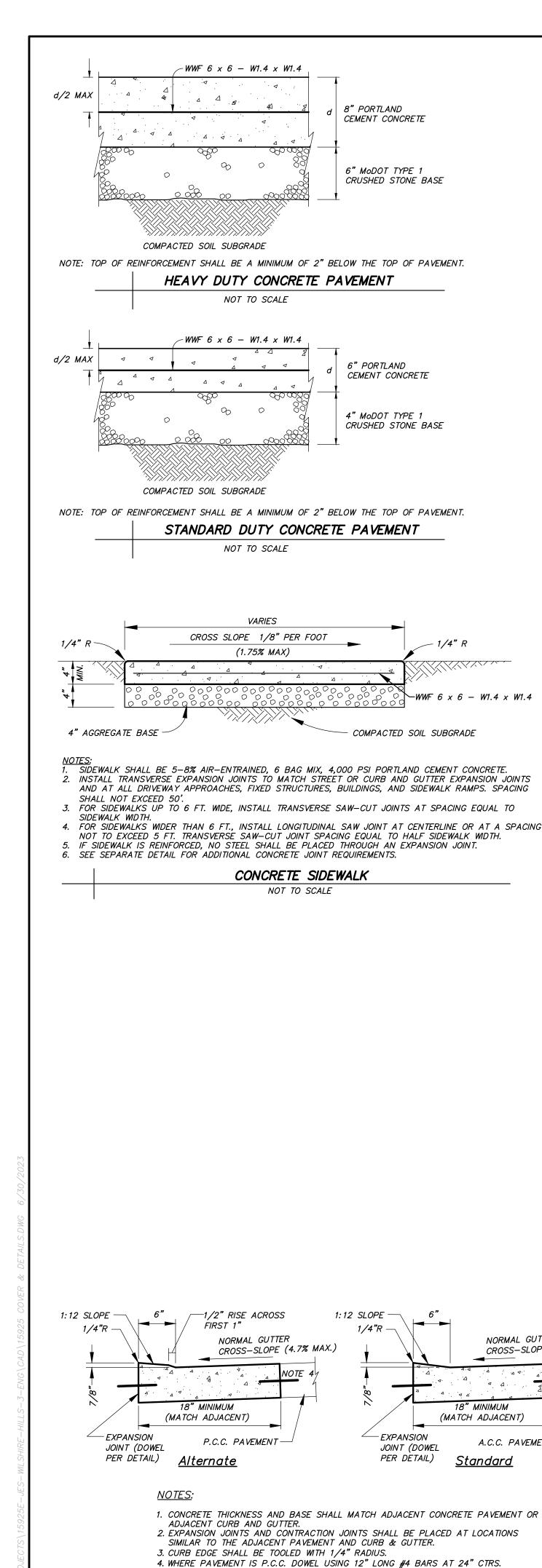


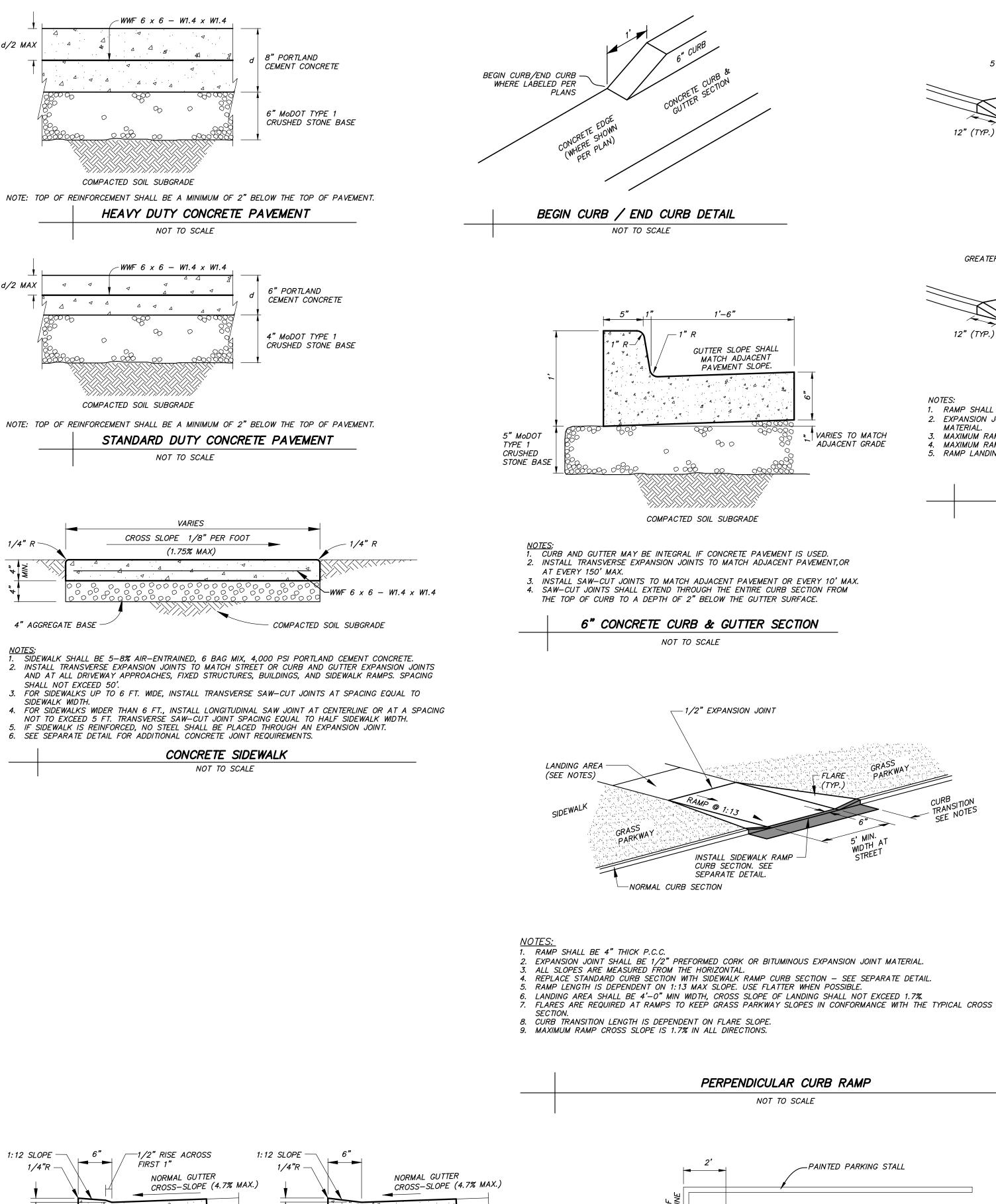
6/30/2023











3" MINIMUM

A.C.C. PAVEMENT —

(MATCH ADJACENT)

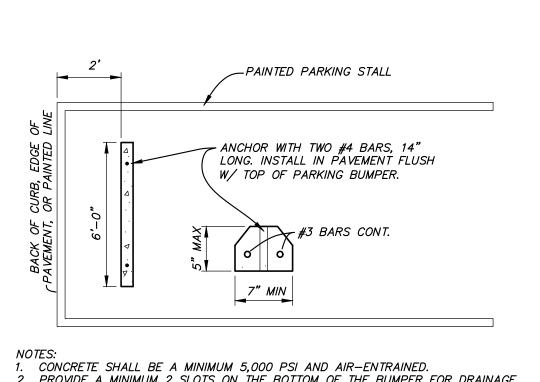
— EXPANSION

SIDEWALK RAMP CURB

NOT TO SCALE

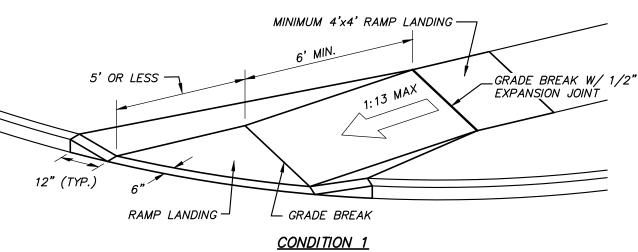
JOINT (DOWEL

PER DETAIL)



2. PROVIDE A MINIMUM 2 SLOTS ON THE BOTTOM OF THE BUMPER FOR DRAINAGE.

CONCRETE PARKING BUMPER NOT TO SCALE



MINIMUM 4'x4' RAMP LANDING -RAMP LANDING _GRADE BREAK WITH 1/2" GREATER THAN 5 EXPANSION JOINT - GRADE

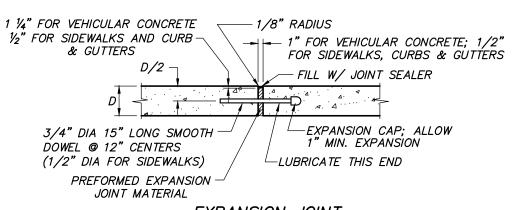
CONDITION 2

1. RAMP SHALL BE 4" THICK PORTLAND CEMENT CONCRETE - SEE SPECS. 2. EXPANSION JOINTS SHALL BE 1/2" PREFORMED CORK OR BITUMINOUS EXPANSION JOINT MATERIAL.

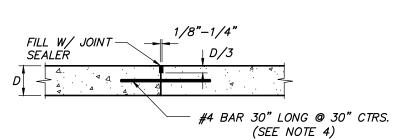
3. MAXIMUM RAMP CROSS SLOPE IS 1.7% 4. MAXIMUM RAMP LONGITUDINAL SLOPE IS 1:13. USE A FLATTER RAMP SLOPE WHEN POSSIBLE. 5. RAMP LANDING SLOPE SHALL NOT EXCEED 1.7% IN ALL DIRECTIONS.

SKEW / RADIAL CURB RAMPS

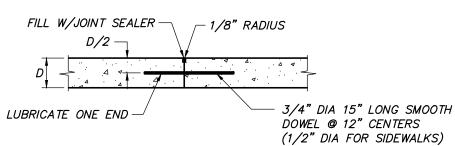
NOT TO SCALE



EXPANSION JOINT



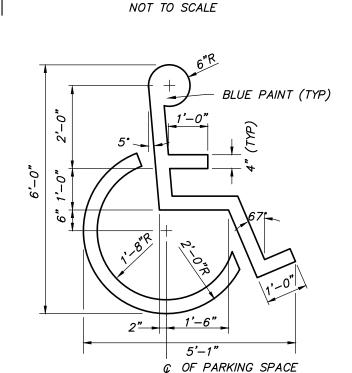
<u>SAW-CUT JOINT</u>



CONSTRUCTION JOINT

- 1. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL SUBMIT A PAVEMENT JOINT PLAN OF ALL CONCRETE PAVEMENT FOR APPROVAL
- 2. CONCRETE PAVEMENT SHALL HAVE SAW—CUT OR CONSTRUCTION JOINTS EVERY 10 FEET FOR 4
 INCH THICK PAVEMENT, 12 FEET FOR 5 INCH THICK PAVEMENT, AND 15 FEET FOR 6 INCH THICK
 PAVEMENT OR GREATER. PANELS SHALL BE CUT SUCH THAT PANELS ARE NEARLY SQUARE AND DO NOT EXCEED 100 SQUARE FEET IN AREA OR 1.4 LENGTH TO WIDTH RATIO. EXPANSION JOINTS SHALL BE PROVIDED AT ALL FIXED STRUCTURES, SUCH AS: LIGHT STANDARD FOUNDATIONS, SEWER STRUCTURES, BUILDINGS, WALLS, BOTTOM OF STAIRS, ROOF DRAINS, ETC., AND EVERY 100 FEET MAXIMUM. DOWEL BARS SHALL BE PROVIDED AT TRANSVERSE JOINTS IN ALL HEAVY DUTY PAVEMENT DRIVE AISLES.
- 3. THIS DETAIL APPLIES TO ALL CONCRETE PAVEMENT FOR PARKING LOTS, DRIVE/ACCESS AISLES, CURBS & GUTTERS, AND SIDEWALKS.
- 4. INCLUDE BAR WITH TRANSVERSE SAW—CUT JOINTS FOR HEAVY DUTY PAVEMENT. OMIT BAR WITH SAW—CUT JOINTS FOR STANDARD DUTY PAVEMENT AND SIDEWALKS.
- 5. PROVIDE CONSTRUCTION JOINT AT END OF DAYS WORK OR IF CONCRETE PLACEMENT IS SUSPENDED FOR MORE THAN 30 MINUTES.
- 6. SAW-CUT JOINTS SHALL BE CUT WITHIN 12 HOURS OF INITIAL SET OF CONCRETE. RAVELED JOINTS WILL NOT BE ACCEPTED.
- 7. ELASTOMERIC POLYURETHANE OR SILICONE JOINT SEALANT IS REQUIRED FOR ALL JOINTS AND SHALL BE LIGHT GRAY IN COLOR.
- 8. OMIT DOWEL BARS FOR EXPANSION JOINTS AT BUILDINGS, LIGHT STANDARDS, AND ROOF DRAINS.

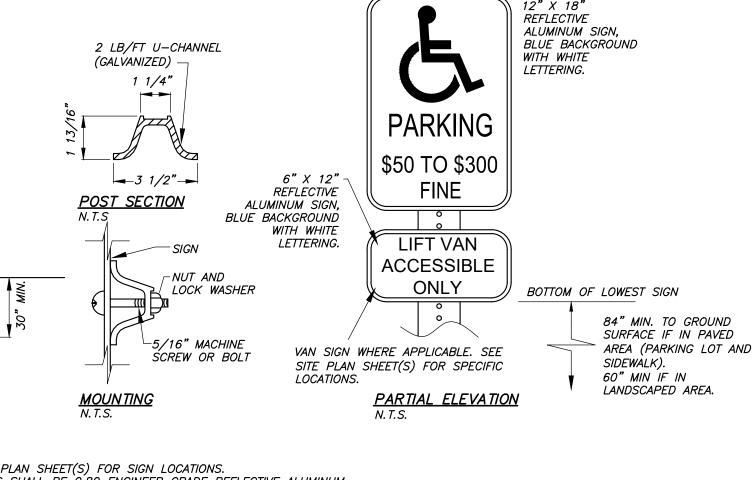
CONCRETE PAVEMENT JOINTS



ACCESSIBLE SYMBOL FOR PARKING SPACES

NO SCALE





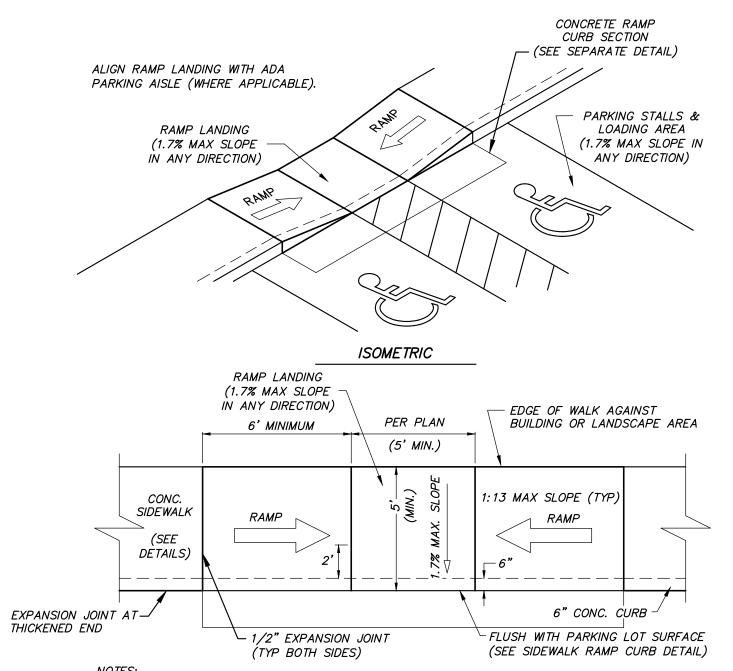
SEE SITE PLAN SHEET(S) FOR SIGN LOCATIONS. 2. ALL SIGNS SHALL BE O.80 ENGINEER GRADE REFLECTIVE ALUMINUM.

SIDEWALK

OR FINISH

GRADE

ACCESSIBLE PARKING STALL SIGNAGE NOT TO SCALE



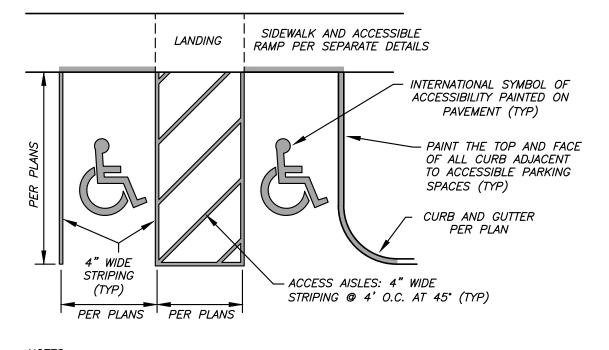
1. RAMP SHALL BE 4" THICK PORTLAND CEMENT CONCRETE — SEE SPECS. 2. EXPANSION JOINT SHALL BE 1/2" PREFORMED CORK OR BITUMINOUS EXPANSION JOINT MATERIAL. MAXIMUM RAMP CROSS SLOPÉ IS 1.7%. 4. MAXIMUM RAMP LONGITUDINAL SLOPE IS 1:13. USE A FLATTER RAMP SLOPE WHEN POSSIBLE.

5. RAMP LANDING SLOPE SHALL NOT EXCEED 1.7% IN ALL DIRECTIONS.

PARALLEL CURB RAMP

NOT TO SCALE

ACCESSIBLE PARKING SIGNS PER SEPARATE DETAIL



1. ALL ACCESSIBLE STRIPING SHALL BE BLUE RETROREFLECTIVE. 2. ALL PAVEMENT WITHIN ACCESSIBLE PARKING AREAS SHALL BE AT 1.7% OR LESS SLOPE

> ACCESSIBLE PARKING STALL STRIPING (MISSOURI) NOT TO SCALE

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PROFESSIONAL ENGINEER PE-2007002811

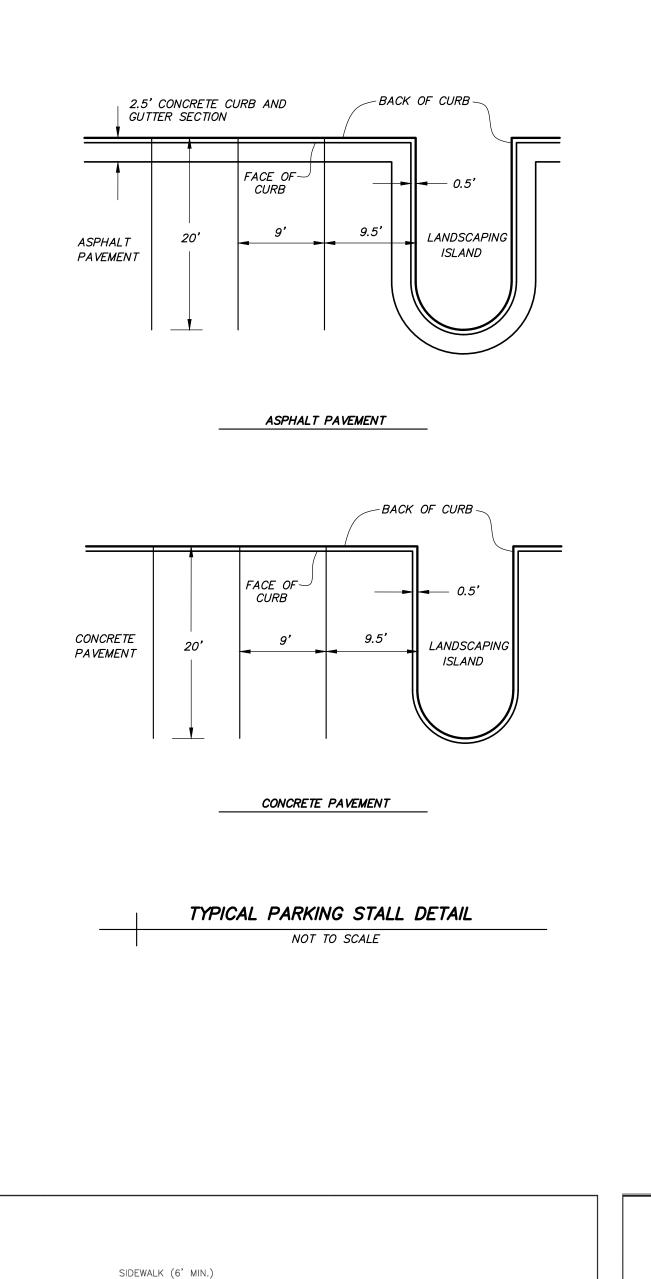
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SITE DETAILS



VARIES

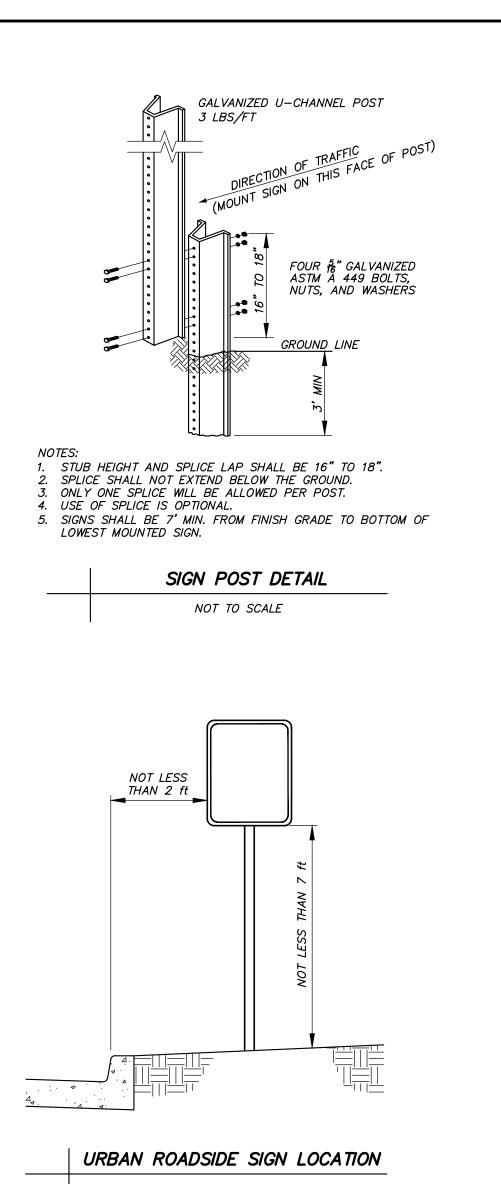
4" CONCRETE (SIDEWALK) 6" CONCRETE (SHARED-ÚSE PATH)

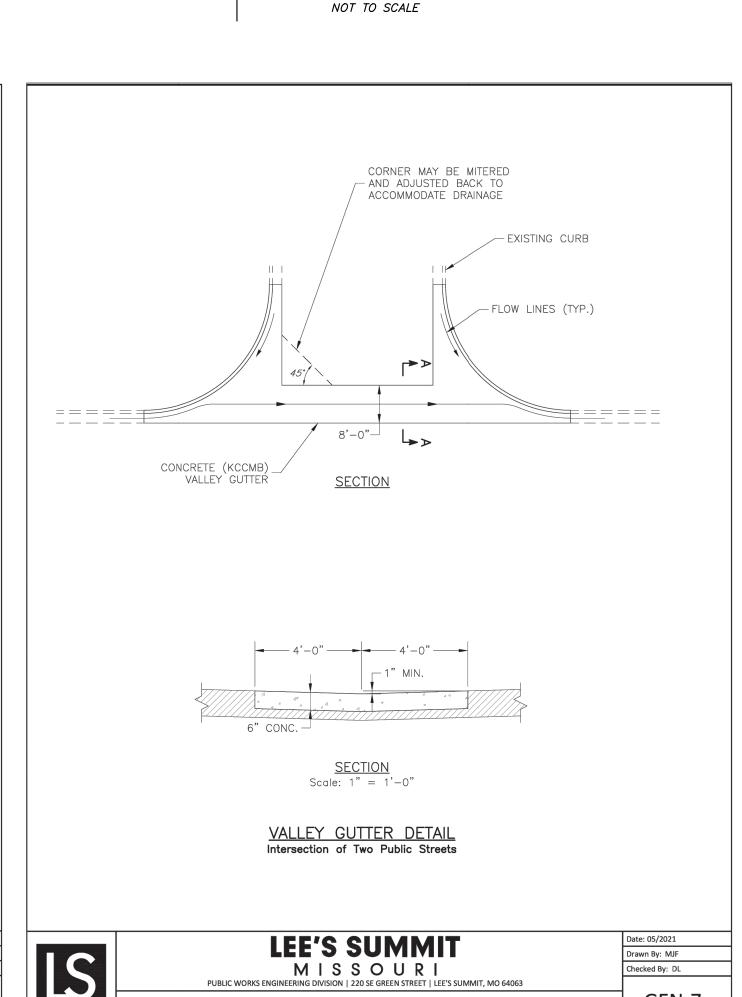
— 4" COMPACTED AGGREGATE BASE

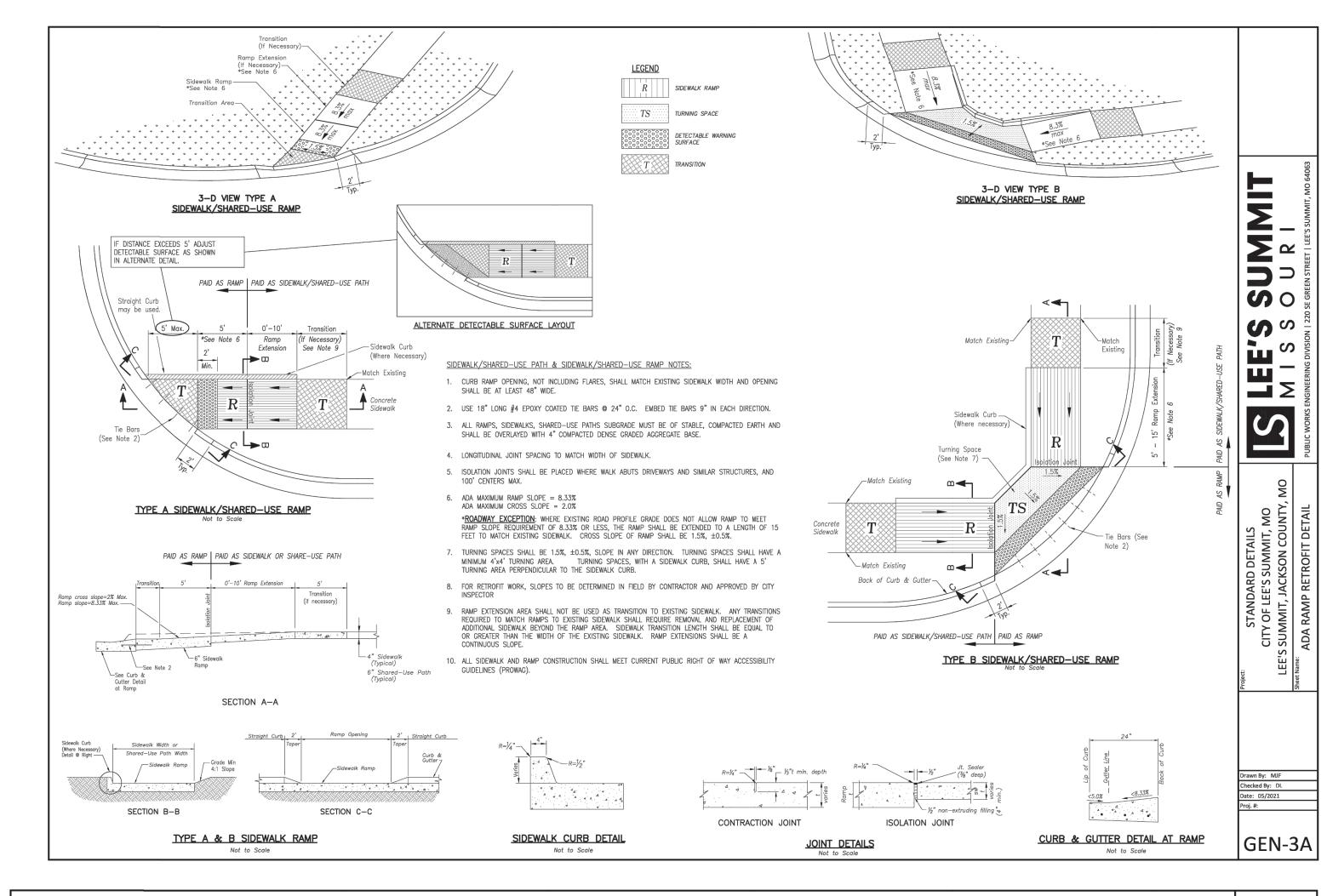
GEN-2

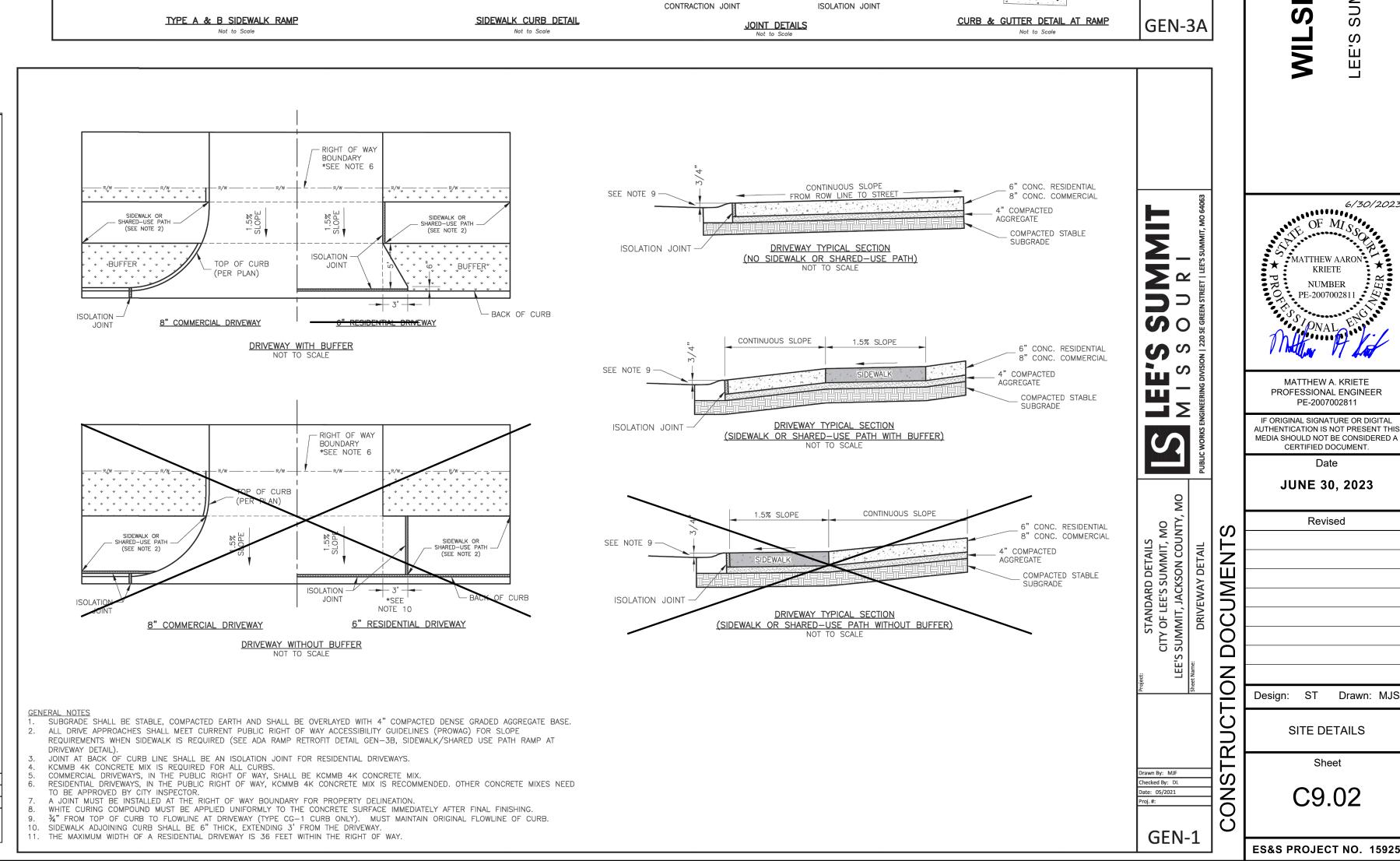
→ MIN. 2%

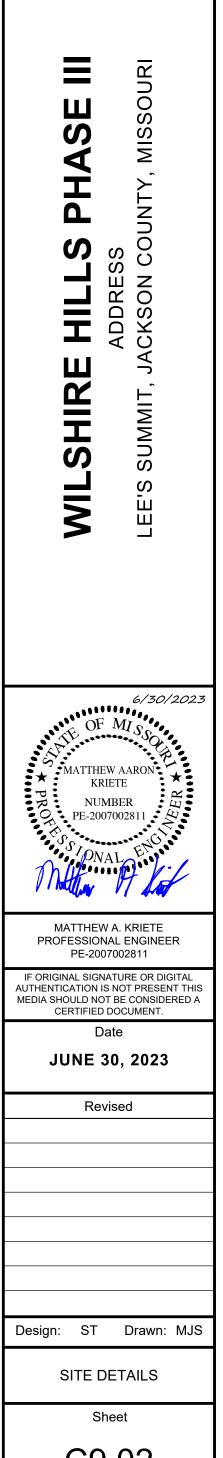
- COMPACTED STABLE











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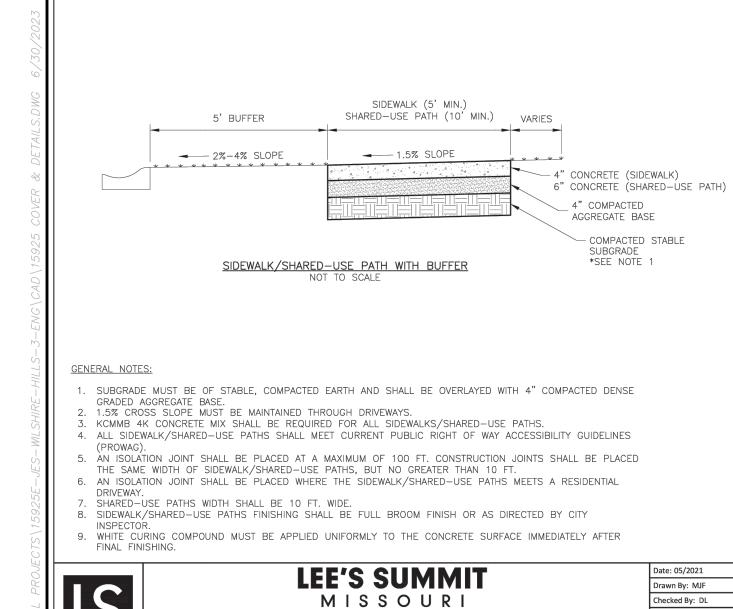
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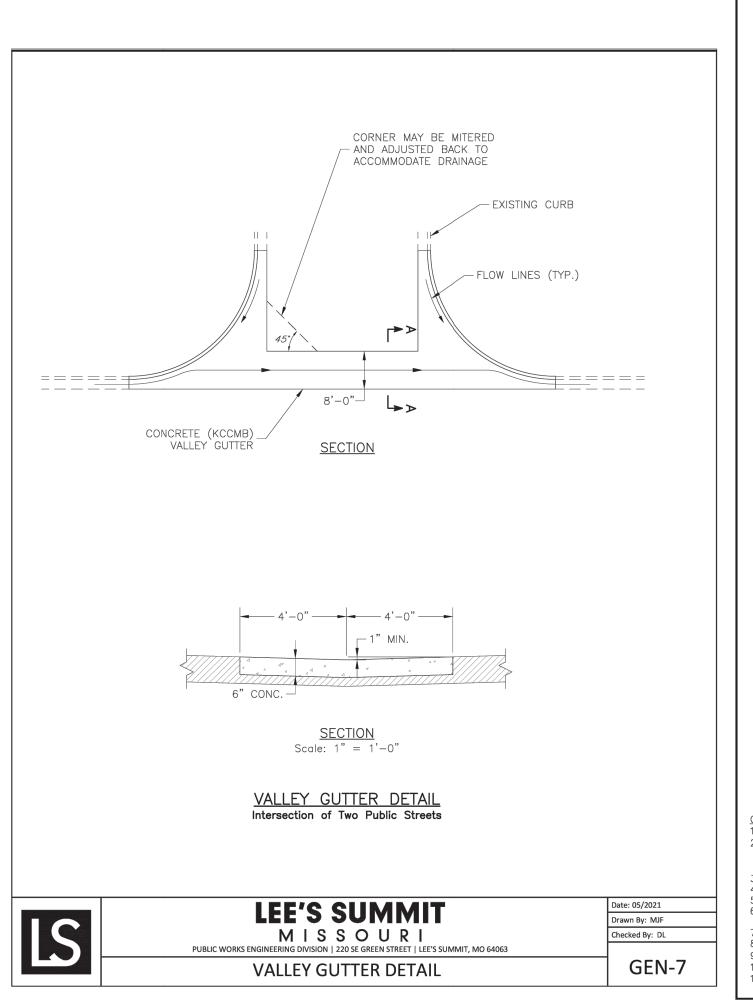
SIDEWALK/SHARED-USE PATH DETAIL

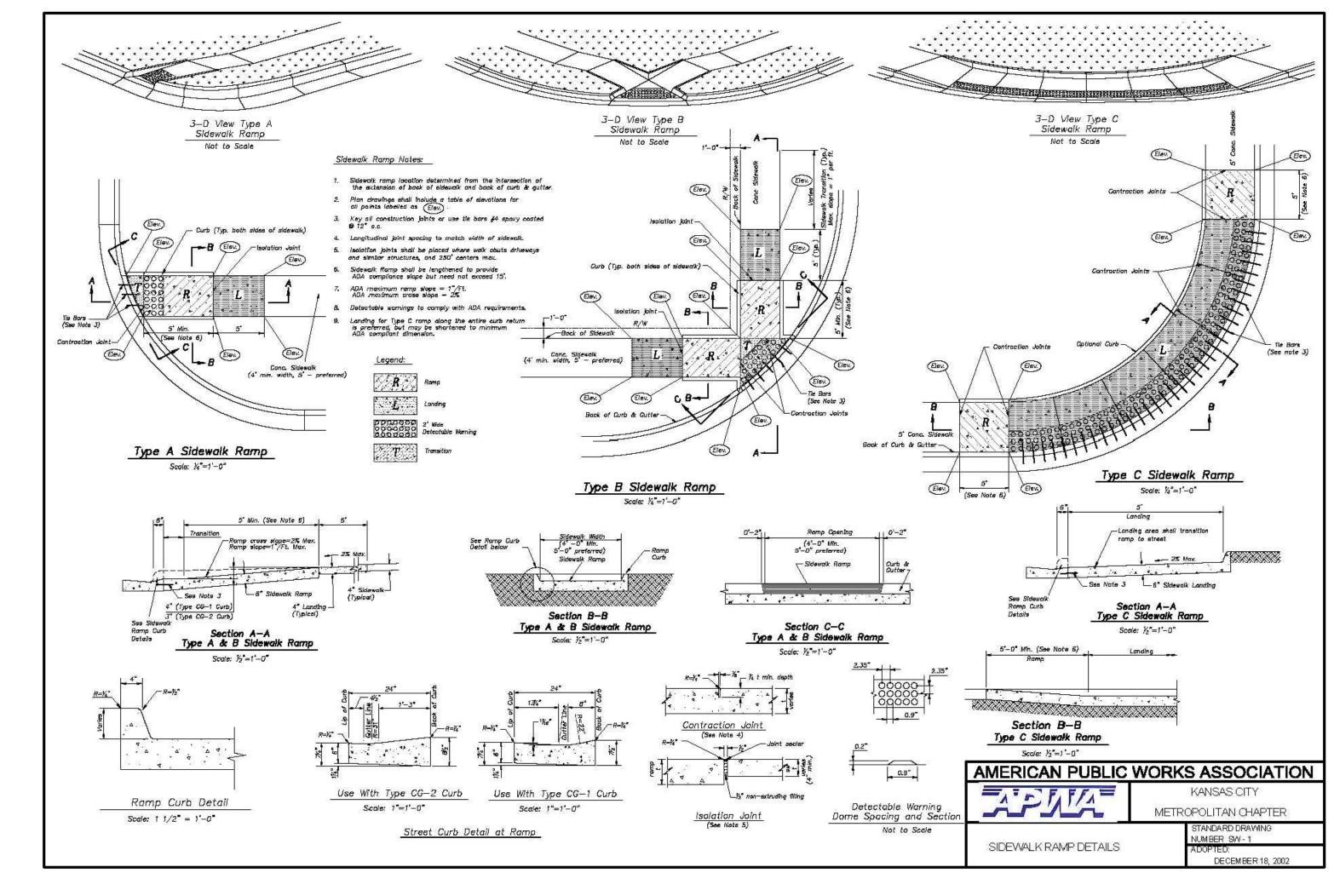
SHARED-USE PATH (10' MIN.)

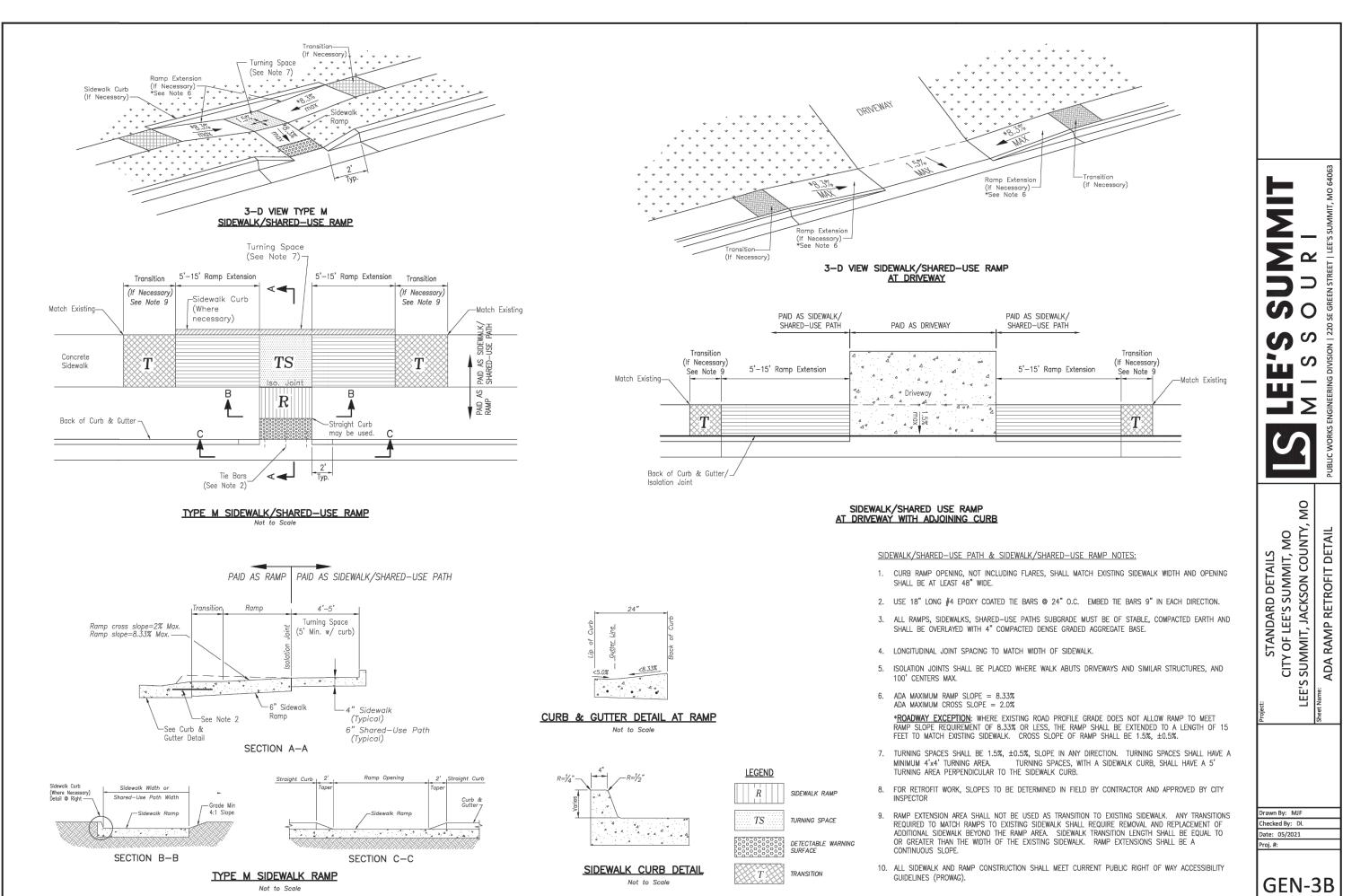
1 5% SLOPE

SIDEWALK/SHARED-USE PATH WITHOUT BUFFER NOT TO SCALE

ISOLATION JOINT -









S **D** 불 SHIR \leq

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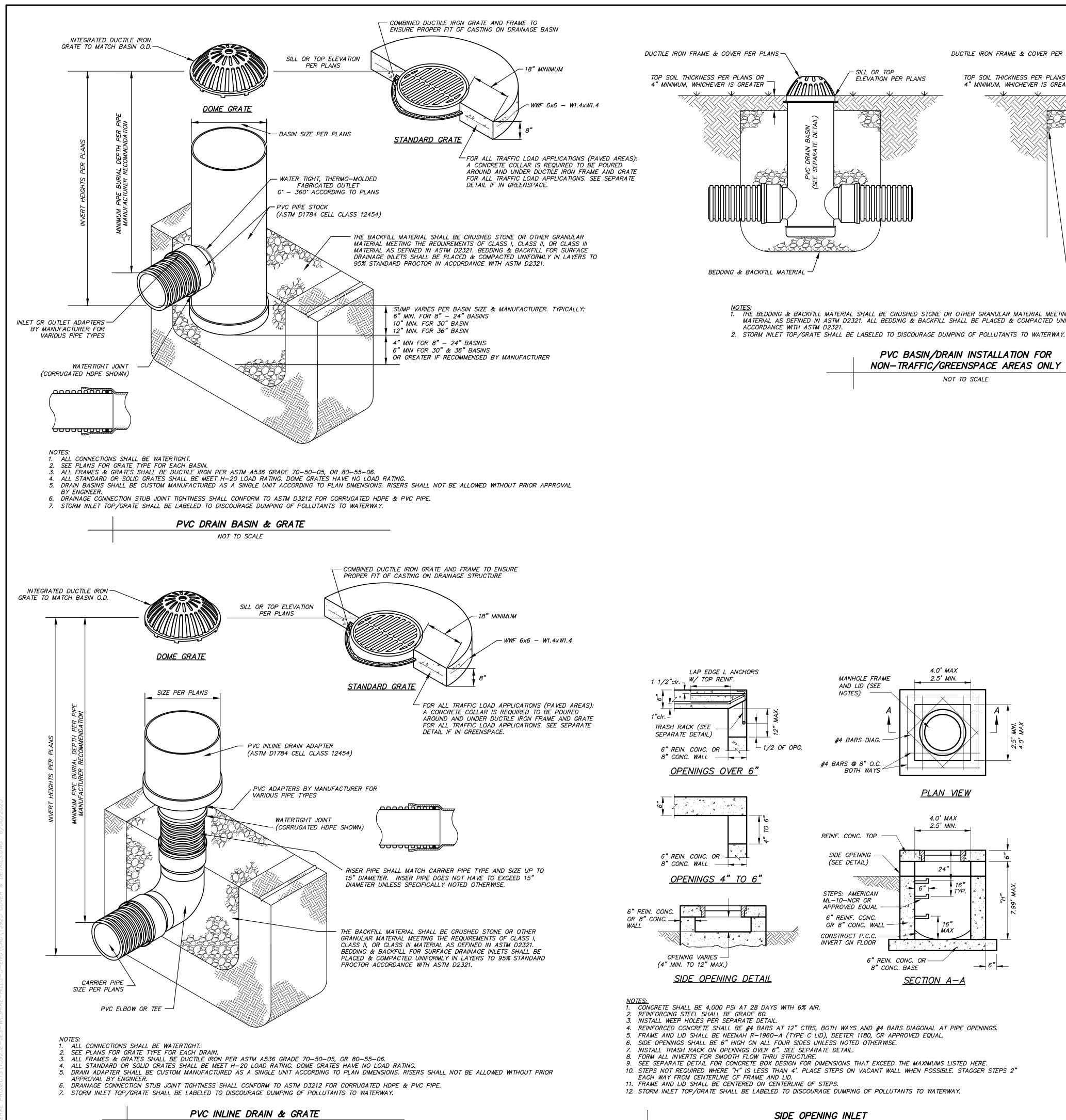
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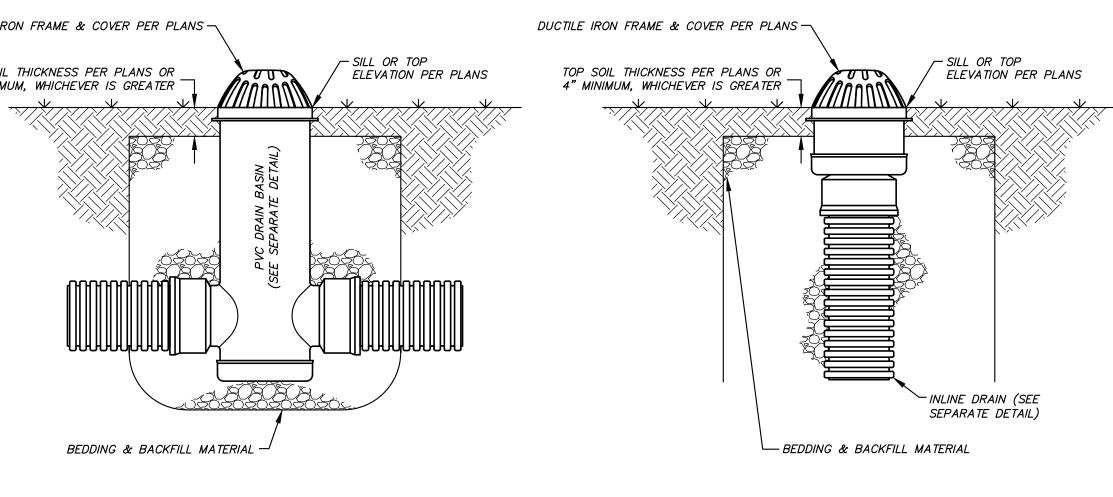
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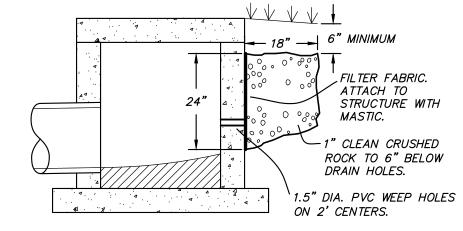
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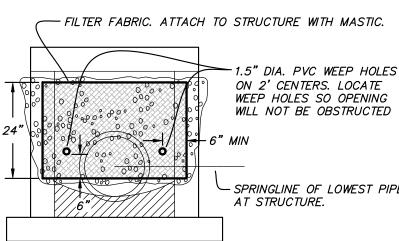
THE BEDDING & BACKFILL MATERIAL SHALL BE CRUSHED STONE OR OTHER GRANULAR MATERIAL MEETING THE REQUIREMENTS OF CLASS I, CLASS II, OR CLASS III MATERIAL AS DEFINED IN ASTM D2321. ALL BEDDING & BACKFILL SHALL BE PLACED & COMPACTED UNIFORMLY IN LIFTS TO 95% STANDARD PROCTOR IN

NON-TRAFFIC/GREENSPACE AREAS ONLY

NOT TO SCALE



CROSS SECTION



1. PLACE WEEP HOLES ON UPSTREAM FACE OF ALL STRUCTURES AND ALSO ON PAVEMENT FACE OF CURB INLET STRUCTURES. 2. WEEP HOLE FILTER FABRIC SHALL CONSIST OF A NON WOVEN,

WEEP HOLES

-2-#4 BARS (EXTENDS 2' BEYOND C.I.) 4'-0" MAX (SEE NOTE 7) <u>SECTION A-A</u> ALTERNATE ablaDEPRESS PAV'T. TOP OF GRATE STEPS: AMERICAN - ML-10-NCR OR APPROVED EQUAL - -4'-0" MAX (SEE NOTE 7)

SECTION A-A

<u>NOTES:</u> 1. CONCRETE SHALL BE 4,000 PSI AT 28 DAYS WITH 6% AIR.

6" REINF. CONC. ♦ -- -

6" 3'-0" MIN.

SECTION B-B

DEPRESSED GUTTER SECTION.

TRANSITION 5 FT FROM INLET

USE EXPANSION JOINTS IF ADJACENT PAVEMENT IS P.C.C.

- TOP ELEVATION PER PLAN

4'-0" MAX (SEE NOTE 7)

<u>PLAN – SINGLE</u>

C.I. FRAME & GRATE NEENAH R-3246 OR APPROVED EQUAL. SEE

NOTES BELOW FOR GRATE TYPE.

- 2. INSTALL WEEP HOLES PER SEPARATE DETAIL. 3. REINFORCED CONCRETE SHALL BE #4 BARS AT 12" CTRS, BOTH WAYS AND #4 BARS DIAGONAL AT PIPE OPENINGS FOR BOXES UP TO 4.0'
- WIDTH AND <8' HEIGHT. SEE SEPARATE DETAIL FOR CONCRETE BOX DESIGN FOR DIMENSIONS THAT EXCEED THESE MAXIMUMS. 4. FORM ALL INVERTS FOR SMOOTH FLOW THRU STRUCTURE WITH NON SHRINK GROUT.

6" REINF. CONC.

- 5. STEPS NOT REQUIRED WHERE "H" IS LESS THAN 4' PLACE STEPS ON VACANT WALL WHEN POSSIBLE. STAGGER STEPS 2" FROM CENTERLINE OF FRAME AND GRATE. TOP STEP SHALL BE 24" BELOW GRATE. STEP SPACING SHALL BE 16" TO BOTTOM OF STRUCTURE. 6. GRATE SHALL BE NEENAH TYPE C IF AT LOW POINT (SUMP) OR TYPE L BICYCLE VANE GRATE WHEN INLET IS SET ON GRADE (NOT IN SUMP).
- 7. FOR STRUCTURES LARGER THAN 3'x2' FOR SINGLE INLETS, OR 6'-2"x2' FOR DOUBLE INLETS, INSTALL REINFORCED CONCRETE TOP WITH 3'x2' OR 6'-2*x2' OPENING. 8. FOR BOXES <4' WIDE AND <8' TALL TOP REINFORCEMENT SHALL BE #4 BARS @ 8" E.W. WITH #4 BARS DIAGONAL AT OPENING. BOXES >4'
- WIDE AND >8' TALL REINFORCEMENT SHALL BE PER SEPARATE DETAIL. 9. TOP ELEVATION SHOWN ON THE PLAN SHALL BE THE CENTER OF THE CURB RETURN OF THE CASTING.
- 10. SLOPE THE TOP TO MATCH ADJACENT GRADE IF NOT LOCATED AT LOW POINT. MAINTAIN WATERTIGHTNESS. 11. STORM INLET TOP/GRATE SHALL BE LABELED TO DISCOURAGE DUMPING OF POLLUTANTS TO WATERWAY.

TYPE "A" INLET (CURB INLET)

NOT TO SCALE

ES&S PROJECT NO. 15925

1.5" DIA. PVC WEEP HOLES SPRINGLINE OF LOWEST PIPE <u>ELEVATION</u> POLYPROPYLENE TYPE FABRIC SUCH AS: TENCATE MIRAFI 180N, GEOTEX 801, OR APPROVED EQUAL. FOR CONCRETE STORM SEWER STRUCTURES NOT TO SCALE

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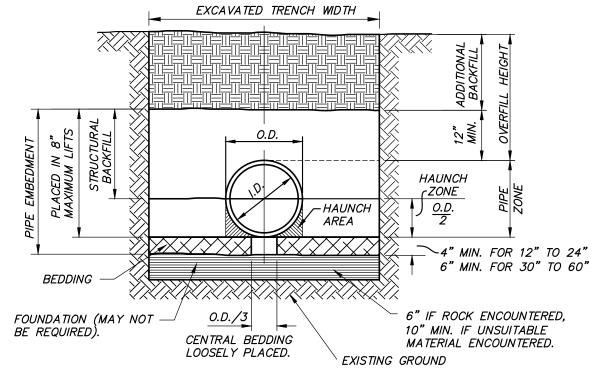
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STORM SEWER DETAILS



TYPICAL TRENCH DETAIL

BACKFILL NOTES:

1. BEDDING, HAUNCH, AND STRUCTURAL BACKFILL SHALL BE IN CONFORMANCE WITH AASHTO M145 A1 OR A-3 COMPACTED TO A MINIMUM OF 95% OF THE MAXIMUM DRY DENSITY AS DEFINED BY ASTM D698.

- 2. ALL PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND ASTM D2321 LATEST ADDITION.
- 3. HAUNCH, STRUCTURAL, AND ADDITIONAL BACKFILL SHALL BE PLACED IN LIFTS NOT TO EXCEED 8 INCHES AND COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY AS DEFINED BY ASTM D698.

	7	TABLE II		
MINIMUI	M COVER I	FOR CONST	TRUCTION L	OADS
PIPE DIA. (IN.)	MINIMUM C	COVER (FT) FO (THOUSANDS	OR INDICATED A	AXLE LOADS
	18–50	50-75	75–110	110–150
12-36	2.0	2.5	3.0	3.0
42-48	3.0	3.0	3.5	4.0

THE CONTRACTOR SHALL PROVIDE MINIMUM COVER PLUS ANY ADDITIONAL COVER REQUIRED TO AVOID DAMAGE TO THE PIPE. IN UNPAVED SITUATIONS, THE SURFACE MUST BE MAINTAINED TO A LEVEL AND NON-RUTTED CONDITION.

LEGEND

- I.D. = NORMAL INSIDE DIAMETER OF PIPE. O.D. = OUTSIDE DIAMETER OF PIPE. H = FILL COVER HEIGHT OVER PIPE (FEET).
- $M/N_{\bullet} = M/N/MUM$

MAX = MAXIMUM= UNDISTURBED SOIL

CONSTRUCTION SEQUENCE: 1. PLACE BEDDING MATERIAL TO GRADE.

COMPACT BEDDING OUTSIDE THE MIDDLE THIRD OF THE PIPE. INSTALL PIPE TO GRADE. 4. PLACE AND COMPACT THE HAUNCH AREA UP TO THE SPRINGLINE.

5. COMPLETE BACKFILL ACCORDING TO SPECIFICATIONS.

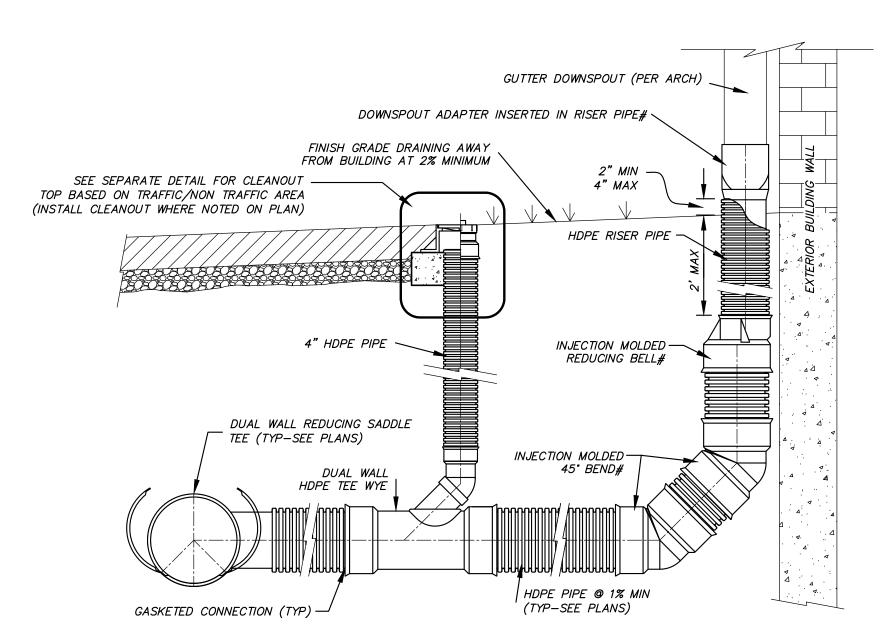
					T45	N = 1					
		0.4	2004404			BLE I			2.05		
		<i>C</i> ()RRUGA II	ED HDPE	AND POL	LYVINYL C	CHLORIDE C	IRCULAR I	PIPE		
SPECIFIED DIA OF PIPE (IN.)	MIN OVERFILL HEIGHT (FT)	HDPE MAX OVERFILL HEIGHT* (FT)	POLYVINYL MAX O' HEIGH1	VERFILL		RESIN (AASH RFILL HEIGHT		ENGINEEREI ASTM F264	D COMPOUND 8) OVERFILL H	(RECYCLED, HEIGHT* (FT)	TRENCH WIDTH
/ // L (//\dots)		. ,	SDR 35#	SDR 26#	CLASS 1**	CLASS 2**	CLASS 3**	CLASS 1**	CLASS 2**	CLASS 3**	(IN.)
12	2	26	15	30	43	29	21	27	19	12	34
15	2	28	15	30	45	<i>30</i>	22	27	20	13	39
18	2	24	15	30	40	27	19	25	18	11	44
24	2	20	15	30	36	25	17	22	16	12	55
30	2.5	17	N/A	N/A	29	21	15	16	12	6	67
36	2.5	19	N/A	N/A	34	23	16	21	15	10	76
42	2.5	19	N/A	N/A	31	23	16	17	13	7	84
48	2.5	17	N/A	N/A	30	20	14	18	13	10	95
54	2.5	9	N/A	N/A	33	22	<i>15</i>	N/A	N/A	N/A	104
60	2.5	9	N/A	N/A	33	22	15	20	15	10	113

- TABLE ASSUMES STANDARD PROCTOR DENSITY OF 95% * MAXIMUM OVERFILL MEASURED FROM THE TOP OF PIPE TO SURFACE
- ** CLASS 1 CRUSHED ROCK, ANGULAR; AASHTO M43 5, 6, 56, 57, 67
- ** CLASS 2 CLEAN, COURSE GRAINED SOILS TO BORDERLINE CLEAN FINES; AASHTO M43 5, 6, 56, 57, 67; AASHTO M145 A1, A3

 ** CLASS 3 COURSE GRAINED SOILS WITH FINES AND INORGANIC FINE—GRAINED SOILS; AASHTO M43 GRAVEL AND SAND WITH <10% FINES;
- AASHTO M145 A-2-4, A-2-5, A-2-6, A-4, OR A-6 WITH >30% RETAINED ON #200 SIEVE ** REFER TO CURRENT ADS INC. DRAINAGE HANDBOOK FOR A COMPLETE LISTING OF SUITABLE MATERIALS
- # PER ASTM D-3034 FOR PIPE UP TO 15" AND ASTM F679 OVER 15"

EMBEDMENT OF PLASTIC STORM SEWER PIPE

NOT TO SCALE



OR APPROVED EQUAL

1. SEE PLANS TO DETERMINE IF FITTINGS AND JOINTS ARE SOIL TIGHT (ST) OR WATER TIGHT (WT).

- INSTALL ALL PIPING PER SEPARATE DETAIL OR MANUFACTURER'S WRITTEN INSTRUCTIONS. THIS DETAIL IS FOR GENERAL LAYOUT PURPOSES ONLY. ADDITIONAL COUPLERS, GASKETS, FITTINGS, ETC. MAY BE
- NECESSARY PER MANUFACTURER'S REQUIREMENTS. 4. IF GUTTER DOWNSPOUT SIZE EXCEEDS THE LARGEST AVAILABLE MANUFACTURER DOWNSPOUT ADAPTER, THE HDPE PIPE SIZE SHALL BE INCREASED TO ACCOMMODATE THE DOWNSPOUT AND THE DOWNSPOUT ADAPTER SHALL BE REPLACED WITH AN HDPE END CAP PREFABRICATED OR CUT TO FIT THE DOWNSPOUT GUTTER AND UPSIZED HDPE PIPE. CAP/PIPE
- SHALL BE INSTALLED SO CAP IS 2" ABOVE FINISHED GRADE, MINIMUM. 5. SDR35 PVC PIPE MAY BE SUBSTITUTED FOR ANY HDPE PIPE AND/OR FITTING UP TO 15" IN DIAMETER.

GUTTER DOWNSPOUT CONNECTION

NOT TO SCALE

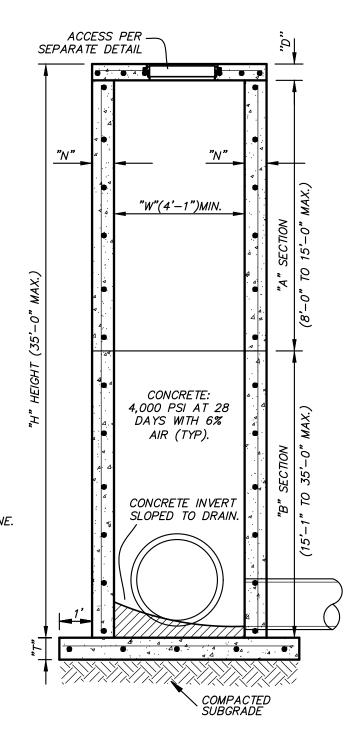


	TABLE OF "T"	& "N" DIMENSIONS		
ECTION	WIDTH ("W")	"T"	″N″	"D"
	BETWEEN 4' & 7'	6" + PIPE THICKNESS	8"	6"
"A"	GREATER THAN 7'	6" + PIPE THICKNESS	8"	8"
	4'-1"	6" + PIPE THICKNESS	8"	8"
<i>"B"</i>	BETWEEN 4' & 7'	6" + PIPE THICKNESS	10"	8"
			•	
	REINFORCEMENT	SCHEDULE, TOP		
DUATAG	COMO	CDCO(A)		247

REINFORCE	MENT SCHEDULE, TO)P
DIMENSIONS	STEEL	SPECIAL PATTERN
W1 = 7' OR LESS	#4's @ 8" E.W.	DIAGONAL @ COVER
W2 = 7' OR LESS	#4's @ 8" E.W.	DIAGONAL @ COVER
W1 = 7' OR LESS	#4's @ 8" E.W.	DIAGONAL @ COVER
W2 = GREATER THAN 7'	l "	DIAGONAL @ COVER
W1 = GREATER THAN 7'		DIAGONAL @ COVER
W2 = GREATER THAN 7'	#4's @ 6" E.W.	DIAGONAL @ COVER

	REINFORCEMENT SCH	EDULE, WALLS	
SECTION	WIDTH ("W")	HOR.	VERT.
	4'-1"	#4's @ 9"	#4's @ 10"
"A "	BETWEEN 4' & 7'	#6's @ 9"	#4's @ 10"
	GREATER THAN 7'	#5's @ 4 1/2"	#4's @ 10"
<i>"B"</i>	4'-1"	#4's @ 6"	#4's @ 10"
	BETWEEN 4' & 7'	#6's @ 6"	#4's @ 10"

REINFORCEN	MENT SCHEDULE, BASE
SECTION	
"A" ONLY	#4's @ 6" E.W.
"A" & "B"	#6's @ 6" E.W.

SEE PLANS FOR CURB INLET, JUNCTION BOX, CATCH BASIN, ETC. DESIGNATION. SEE CORRESPONDING DETAILS FOR ACCESS FRAME AND GRATE/LID REQUIREMENTS.

- 2. ALL EXPOSED CORNERS SHALL HAVE 3/4" CHAMFERS. 3. ALL #4 & #5 REINFORCING BARS SHALL HAVE 1-1/2" MINIMUM
- COVÉR. LARGER BAR SIZES SHALL HAVE 2" MINIMÚM COVER. 4. PIPES SHALL CONNECT TO THE FLAT FACES OF THE STRUCTURE.
- CONNECTIONS SHALL NOT BE MADE AT CORNERS OF STRUCTURE. 5. ALL REINFORCING BARS SHALL BE GRADE 60.
- 6. INSTALL WEEP HOLES AND STEPS PER SEPARATE DETAILS.

STORM SEWER LARGE CONCRETE BOX REINFORCEMENT

(WIDTH GREATER THAN 4'; HEIGHT 8' AND GREATER)

NOT TO SCALE



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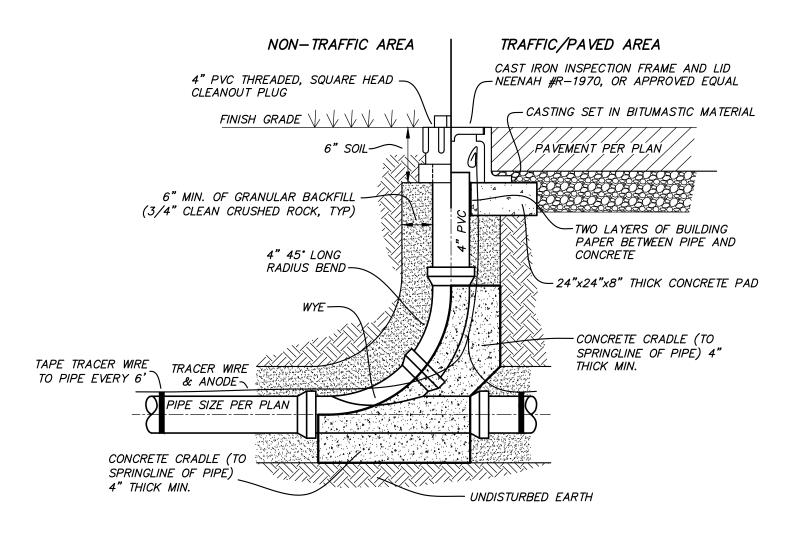
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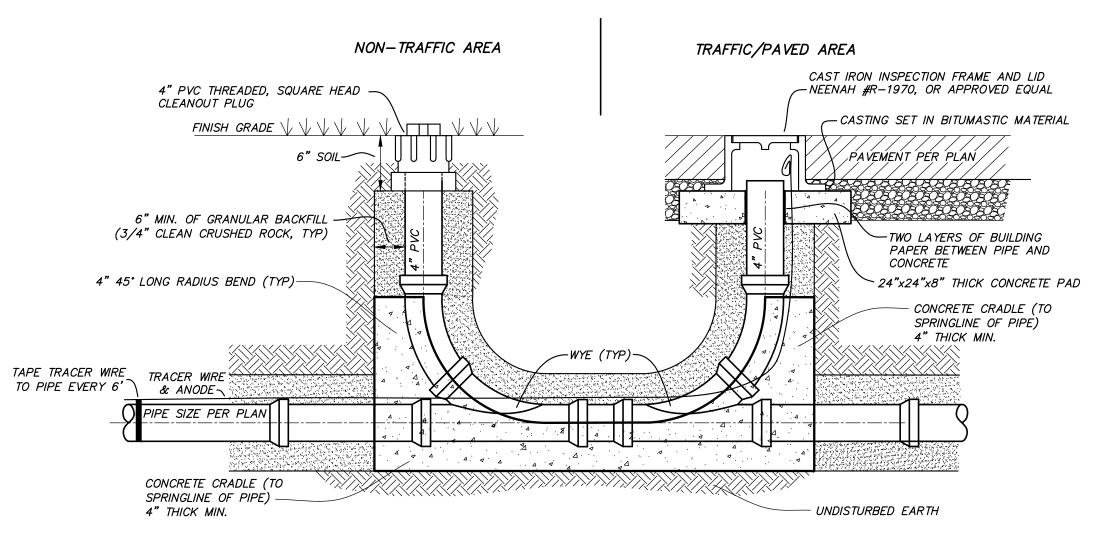
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STORM SEWER DETAILS



- 1. ALL PIPE & FITTINGS SHALL BE WATER TIGHT, GASKETED, SDR35 PVC. 2. INSTALL ALL PIPING PER SEPARATE DETAIL OR MANUFACTURER'S WRITTEN
- INSTRUCTIONS. 3. THIS DETAIL IS FOR GENERAL LAYOUT PURPOSES ONLY. ADDITIONAL COUPLERS, GASKETS, FITTINGS, ETC. MAY BE NECESSARY PER MANUFACTURER'S REQUIREMENTS
 4. TOP SHALL BE SET FLUSH WITH FINISH GRADE.
- 5. INSTALL IN THE DIRECTION OF FLOW AS SHOWN UNLESS OTHERWISE INDICATED IN

IN-LINE SANITARY SEWER CLEANOUT W/ TRACER WIRE NOT TO SCALE



1. ALL PIPE & FITTINGS SHALL BE WATER TIGHT, GASKETED, SDR35 PVC.

- 2. INSTALL ALL PIPING PER SEPARATE DETAIL OR MANUFACTURER'S WRITTEN INSTRUCTIONS.
 3. THIS DETAIL IS FOR GENERAL LAYOUT PURPOSES ONLY. ADDITIONAL COUPLERS,
- GASKETS, FITTINGS, ETC. MAY BE NECESSARY PER MANUFACTURER'S REQUIREMENTS 4. TOP SHALL BE SET FLUSH WITH FINISH GRADE.
- 5. INSTALL IN THE DIRECTION OF FLOW AS SHOWN UNLESS OTHERWISE INDICATED IN

TWO WAY SANITARY CLEANOUT W/ TRACER WIRE

NOT TO SCALE

				4
	≤ 6 "	PIPE DIA. + 1	<i>8"</i>	
	8"-10"	PIPE DIA. + 1	0"	
	12"-36"	PIPE DIA. + 1	2"	
FINAL BACKFILL COMPACTED - IN MAX. 8" LOOSE LIFTS		= PIPE DIA.+24"	FINISH GRA	2,-e, MIN.
INITIAL BACKFILL: COMPACTED 3/4" CLEAN GRANULAR BACKFILL, PLACED IN MAX. 8 LOOSE LIFTS.			CA CC SF	EDDING SHALL BE AREFULLY PLACED TO DMPLETELY FILL PACE UNDER SIDES OF PE.
UNDISTURBED EA	RTH D,	73 T UN	DOSELY PLA NCOMPACTE AUNCH MAT	TD

MIN. TRENCH WIDTH

EMBEDMENT OF PVC SANITARY SEWER PIPE

NOT TO SCALE

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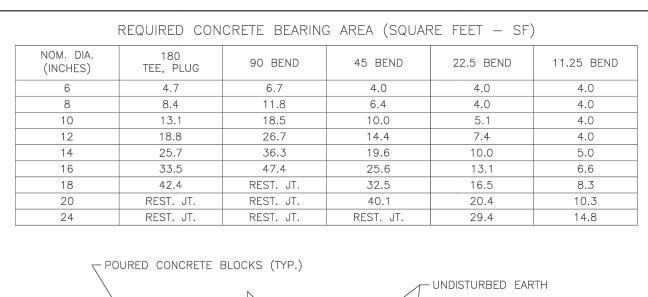
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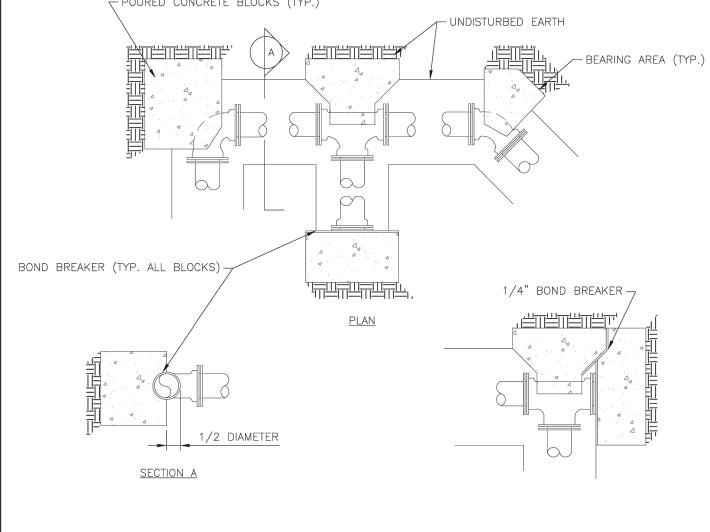
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SANITARY SEWER DETAILS





	LEE'S SUMMIT	Date: 01/2016 Drawn By: JN
S	M I S S O U R I PUBLIC WORKS ENGINEERING DIVISION 220 SE GREEN STREET LEE'S SUMMIT, MO 64063	Checked By: DL
	HORIZONTAL THRUST BLOCK	WAT-1

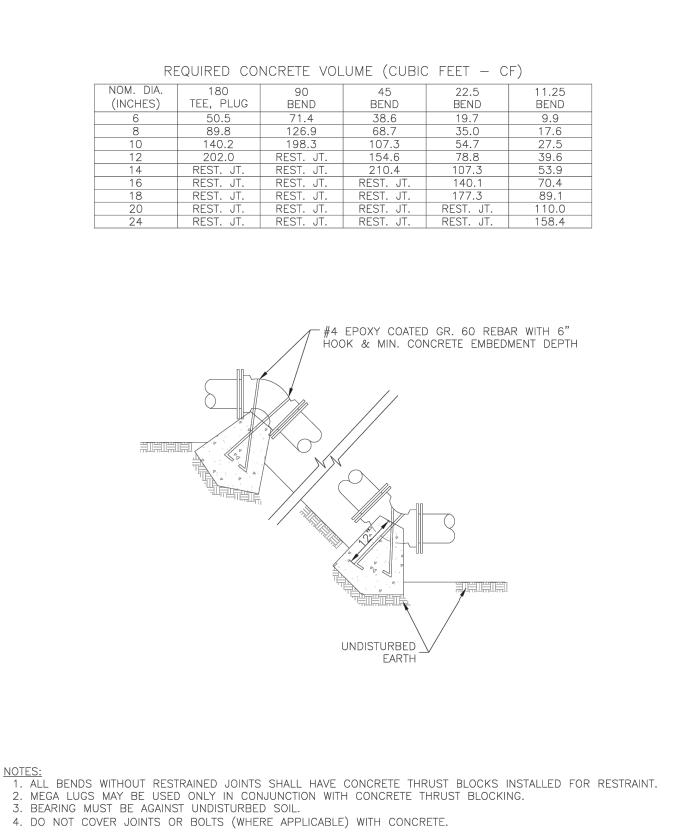
NOTES:

1. ALL BENDS WITHOUT RESTRAINED JOINTS SHALL HAVE CONCRETE THRUST BLOCKS INSTALLED FOR RESTRAINT.

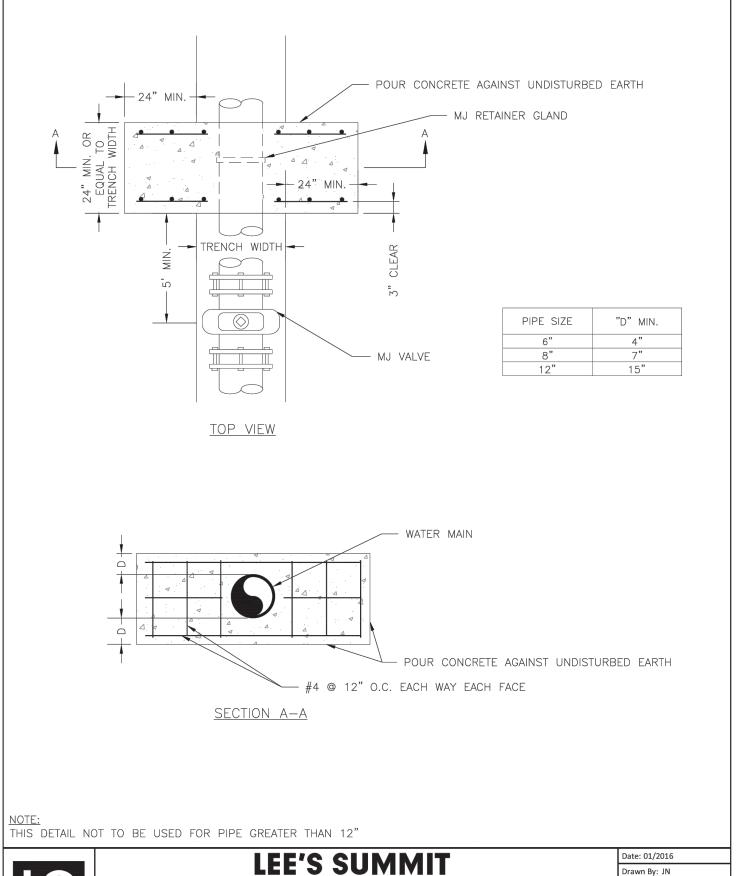
. MEGA LUGS MAY BE USED ONLY IN CONJUNCTION WITH CONCRETE THRUST BLOCKING.

4. DO NOT COVER JOINTS OR BOLTS (WHERE APPLICABLE) WITH CONCRETE.

3. BEARING AREA MUST BE AGAINST UNDISTURBED SOIL.

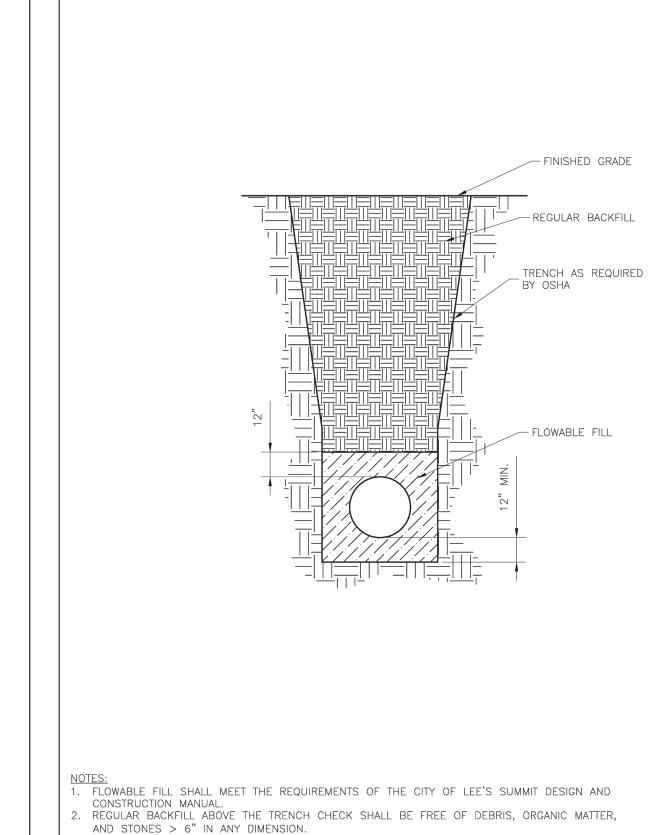


LEE'S SUMMIT	Date: WAT-2
ree 2 20 IAIIAII I	Drawn By: JN
MISSOURI	Checked By: DL
PUBLIC WORKS ENGINEERING DIVISION 220 SE GREEN STREET LEE'S SUMMIT, MO 64063	
VERTICAL THRUST BLOCK	WAT-2

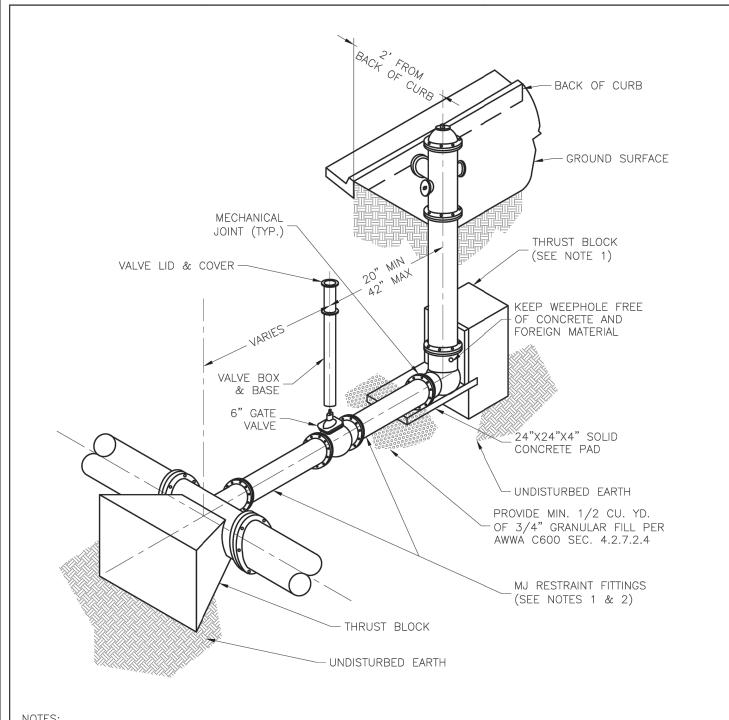


MISSOURI

STRADDLE BLOCK

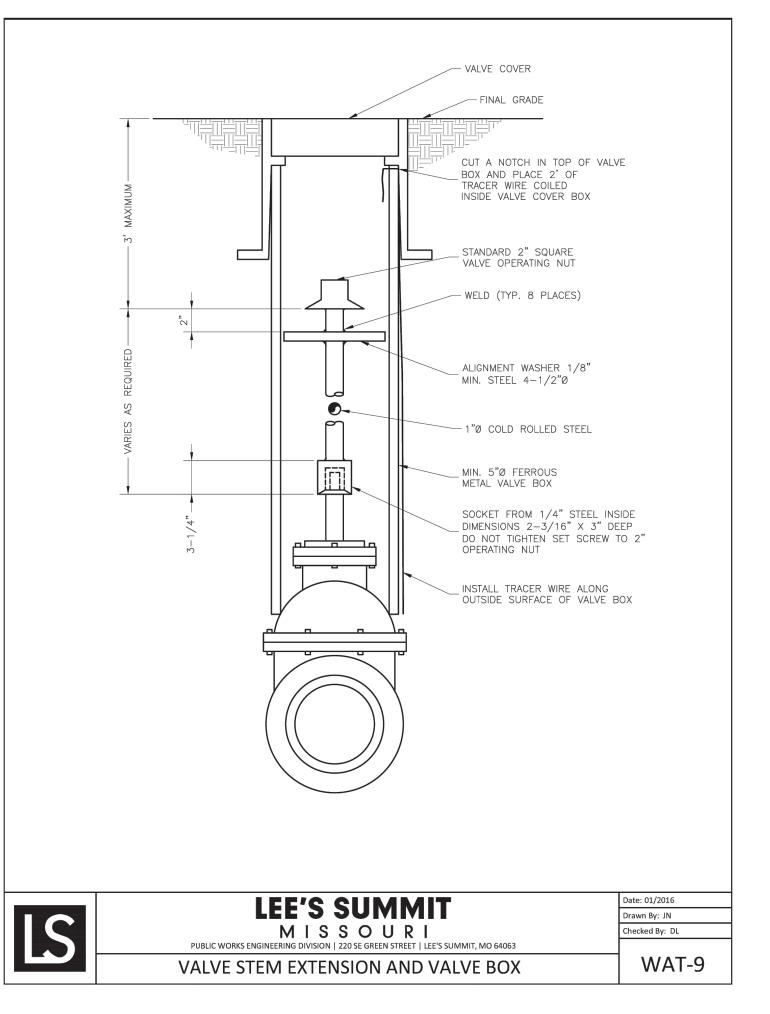


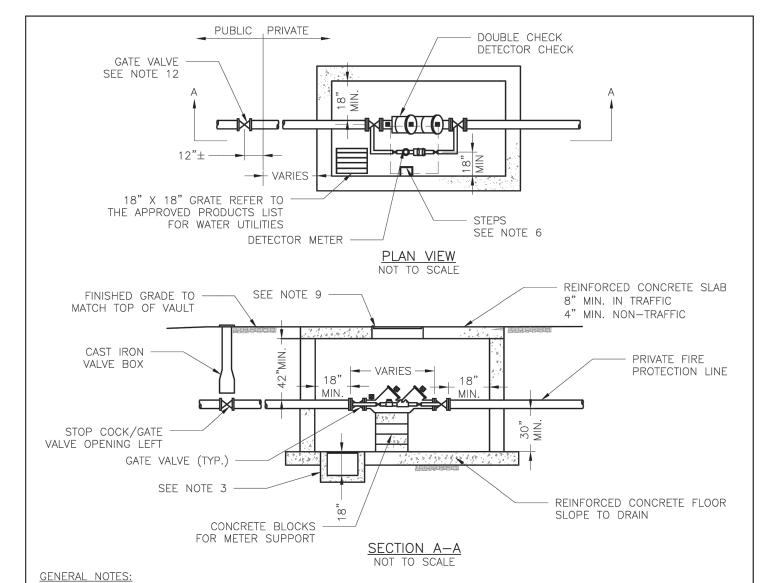




NOTES: 1. WHEN RETAINER GLANDS ARE USED IN LIEU OF MECHANICAL JOINT (MJ) RESTRAINT FITTINGS, HORIZONTAL THRUST BLOCKS ARE REQUIRED. 2. GATE VALVE MAY BE BOLTED DIRECTLY TO MJ RESTRAINT TEE. 3. SEE APPROVED PRODUCTS LIST FOR WATER UTILITIES FOR FIRE HYDRANT, VALVES, VALVE BOX LID, 4. BOTTOM HYDRANT FLANGE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

IEE'C CHMMIT	Date: 01/2016
LEE'S SUMMIT	Drawn By: JN
MISSOURI	Checked By: DL
PUBLIC WORKS ENGINEERING DIVISION 220 SE GREEN STREET LEE'S SUMMIT, MO 64063	
HYDRANT - STRAIGHT SET	WAT-7





Drawn By: JN

cked By: DL

WAT-3

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

LEE'S SUMMIT	Date: 02/2016
LEE 3 30 IVIIVII I	Drawn By: JN
MISSOURI	Checked By: DL
PUBLIC WORKS ENGINEERING DIVISION 220 SE GREEN STREET LEE'S SUMMIT, MO 64063	
VAULT FOR DOUBLE CHECK DETECTOR CHECK	WAT-12



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6/30/2023 MATTHEW AARON KRIETE NUMBER PE-2007002811

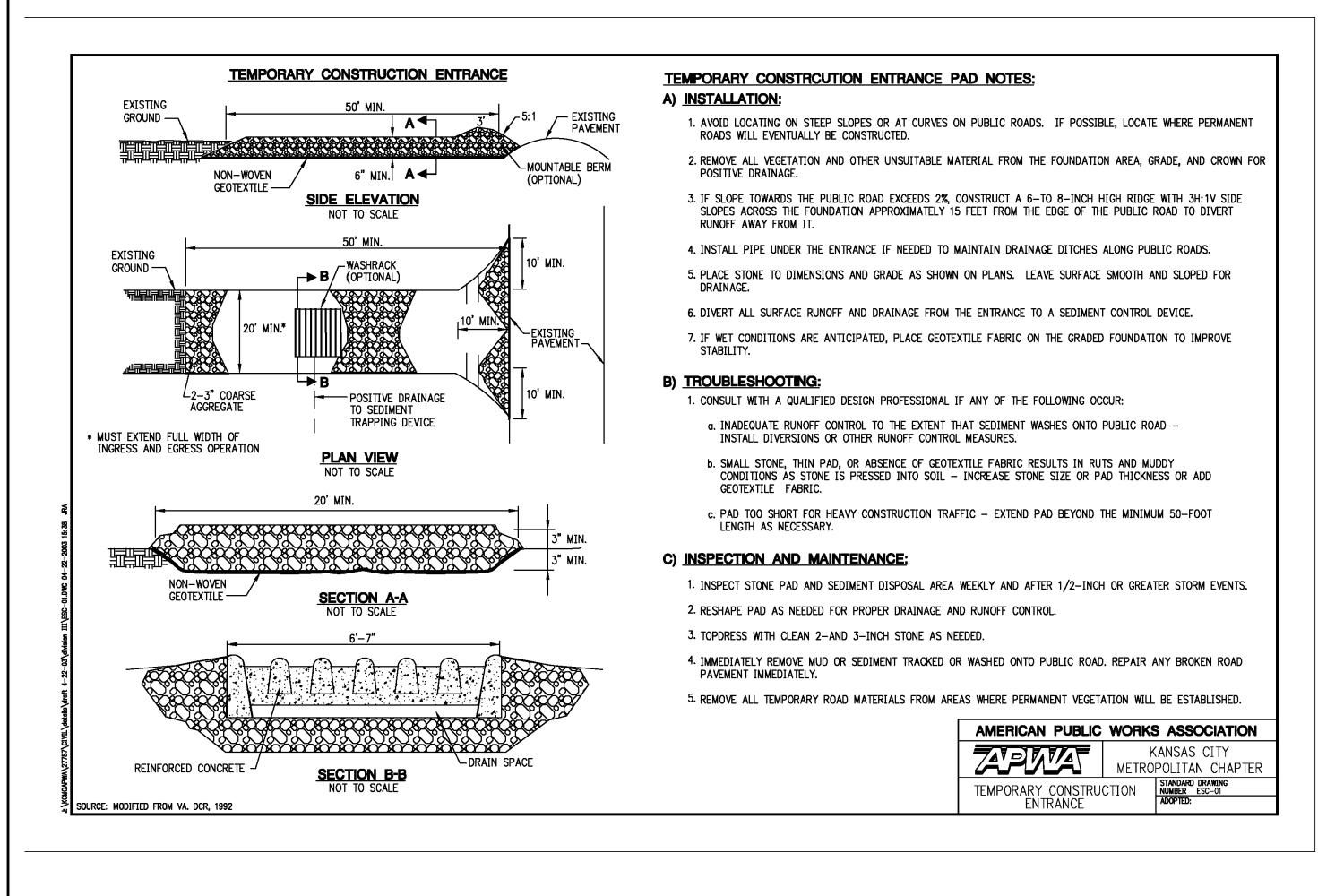
MATTHEW A. KRIETE PROFESSIONAL ENGINEER PE-2007002811

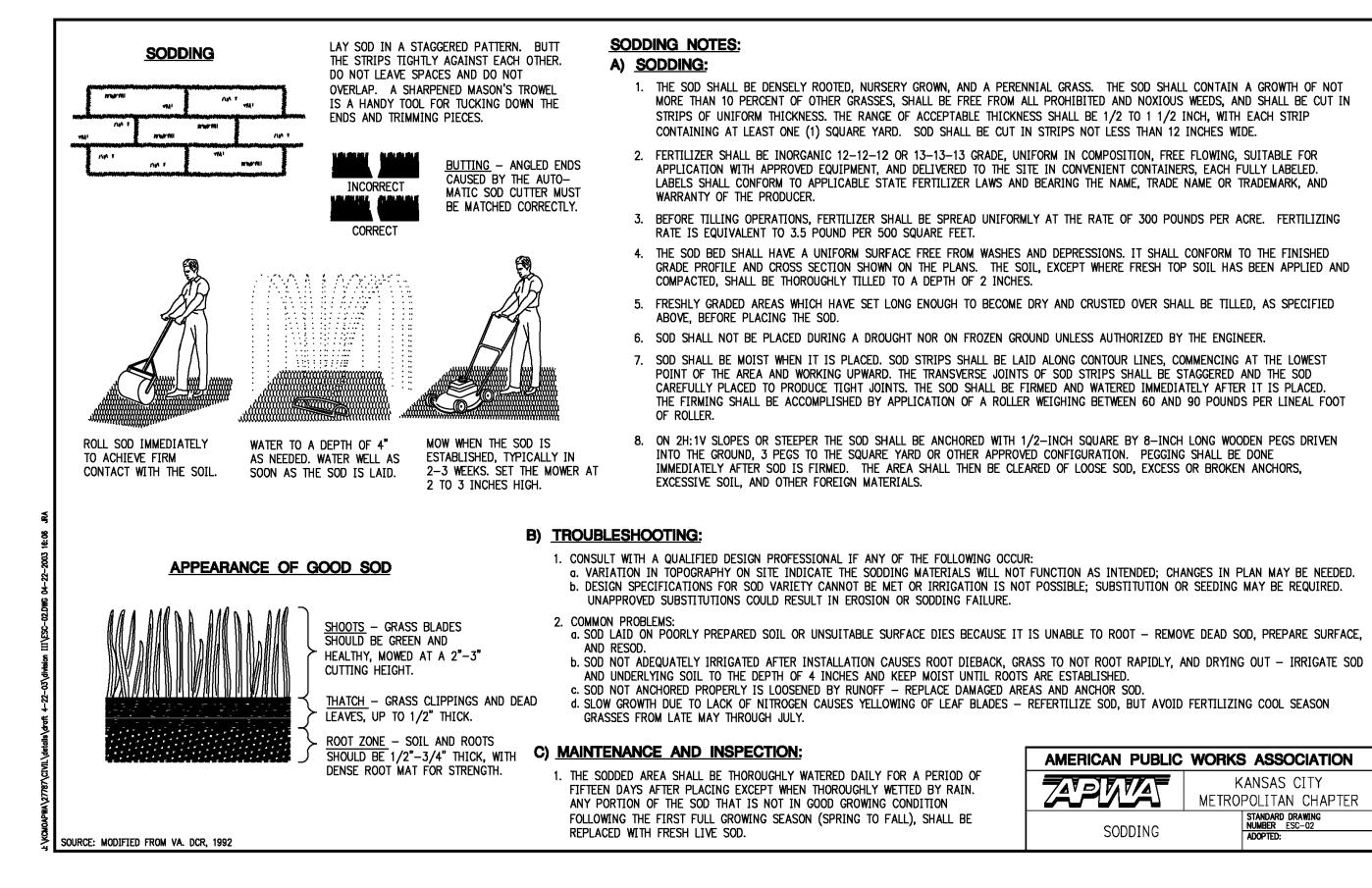
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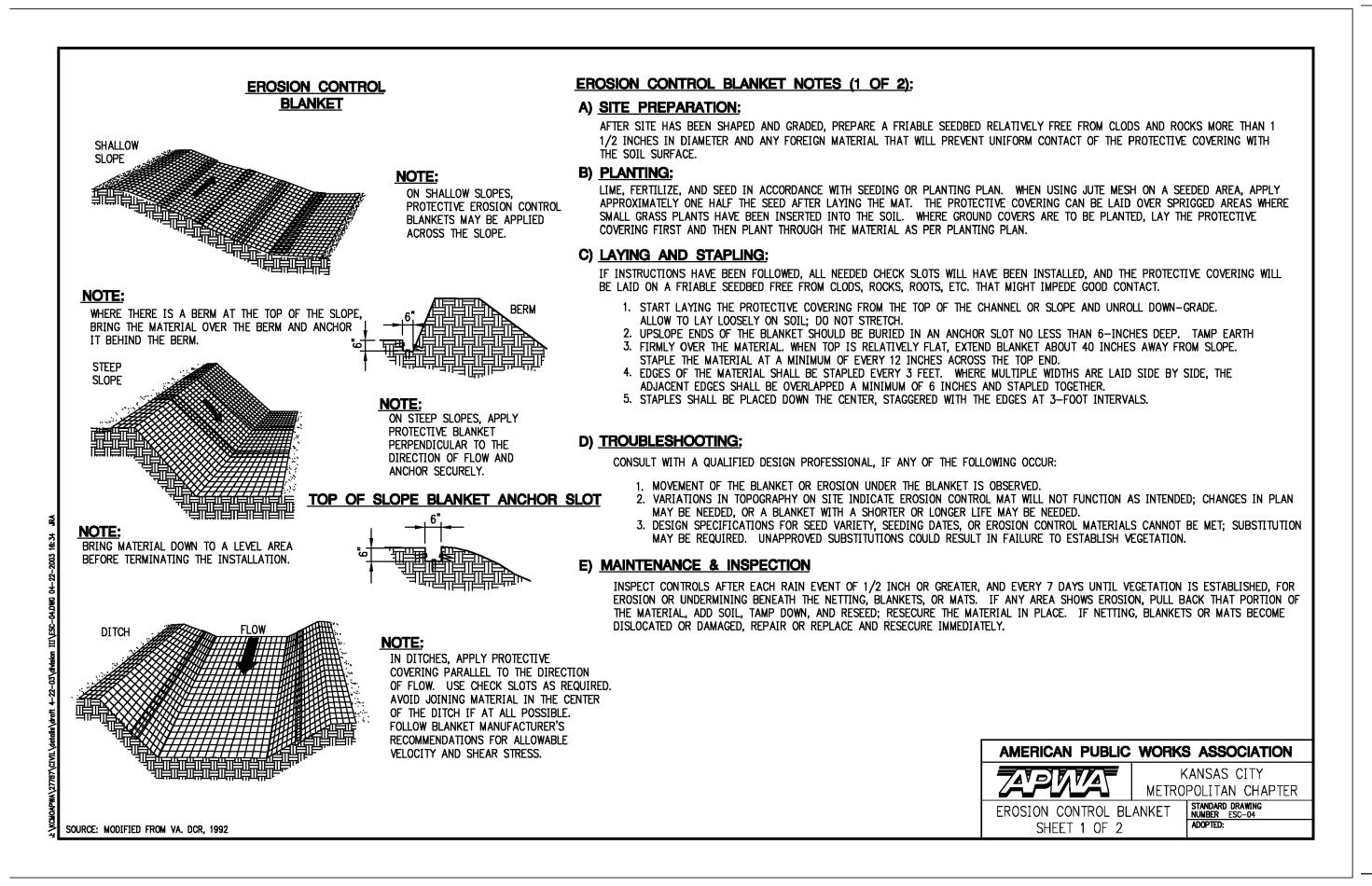
JUNE 30, 2023 Revised

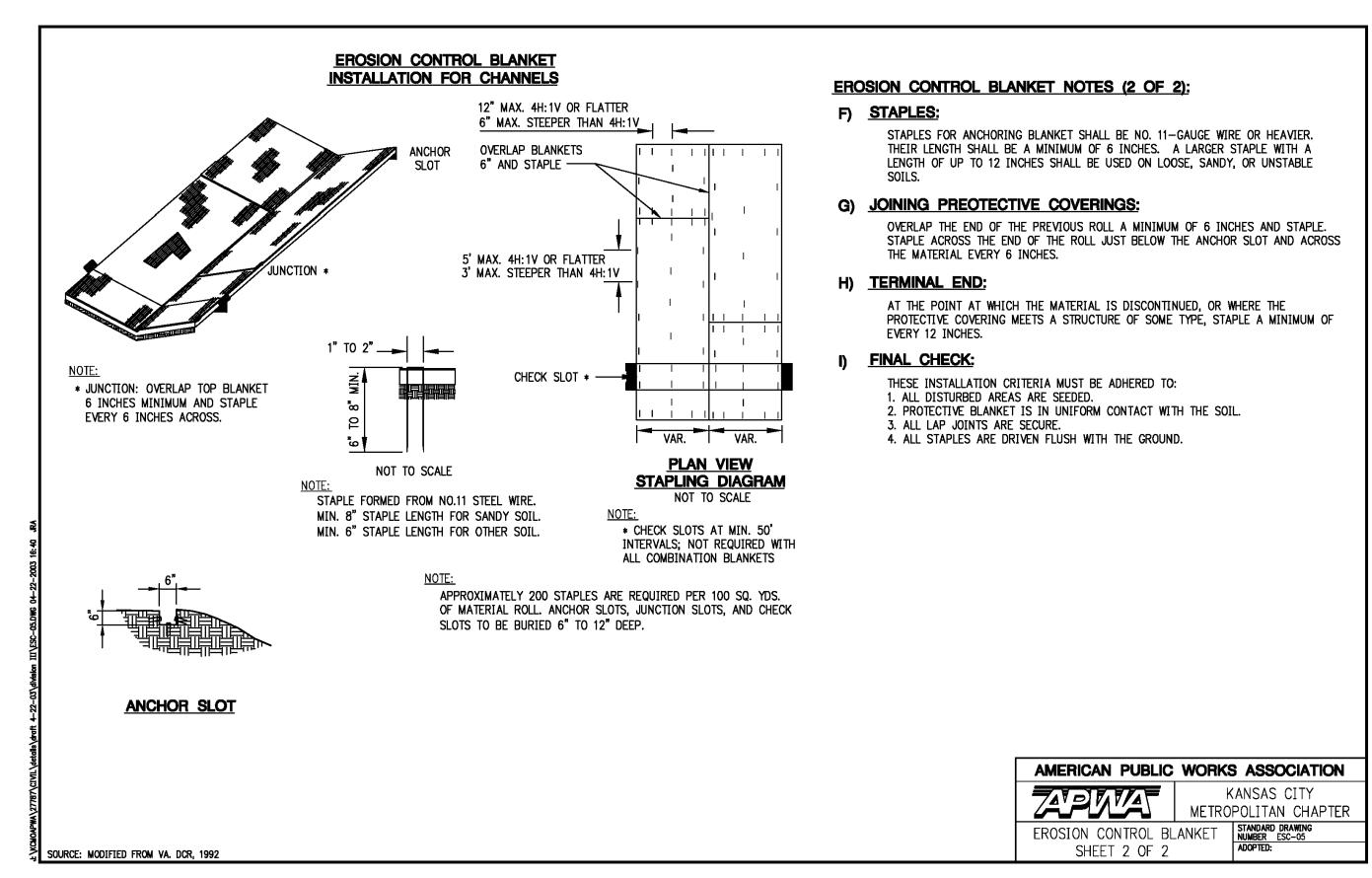
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WATER DETAILS









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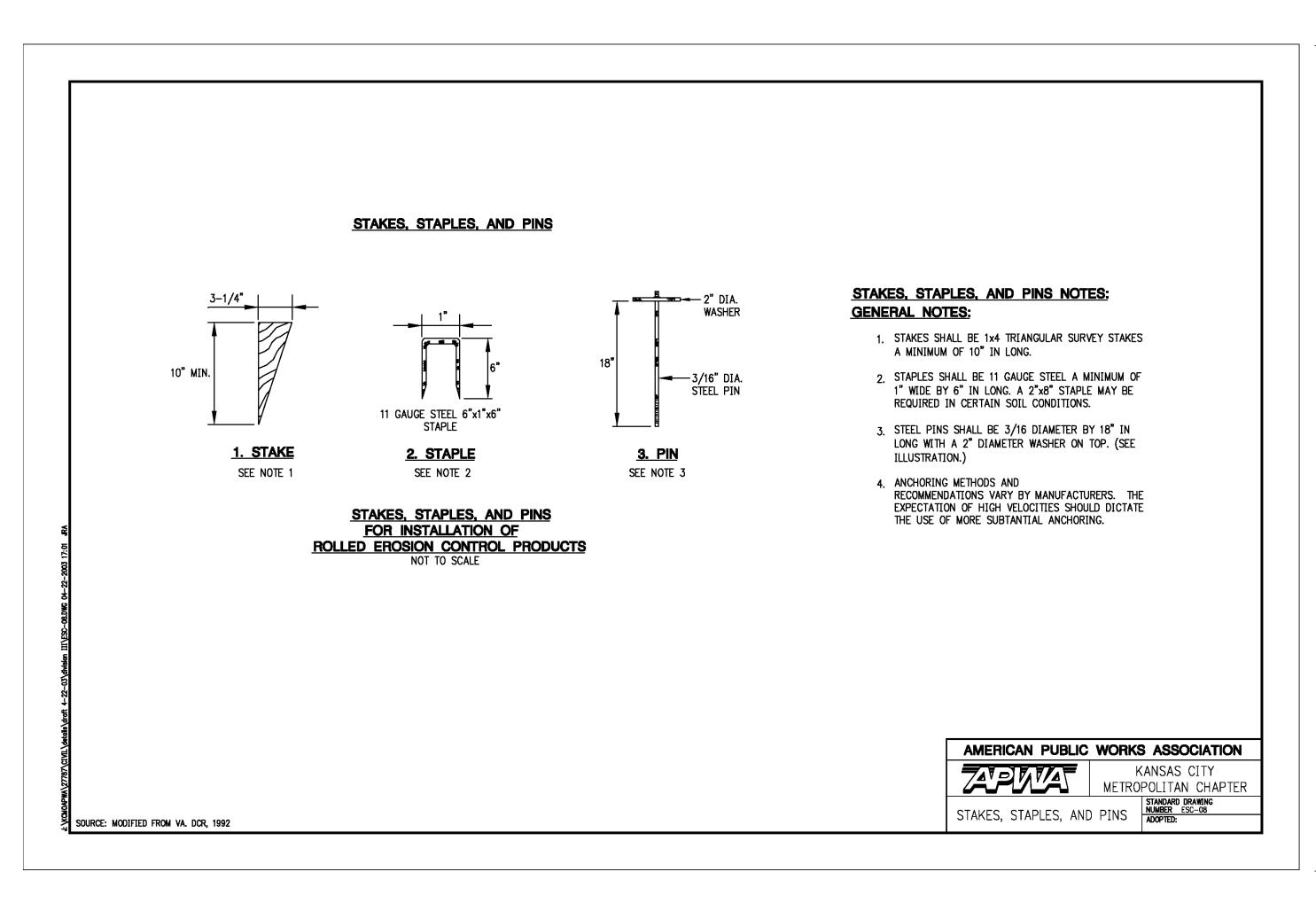
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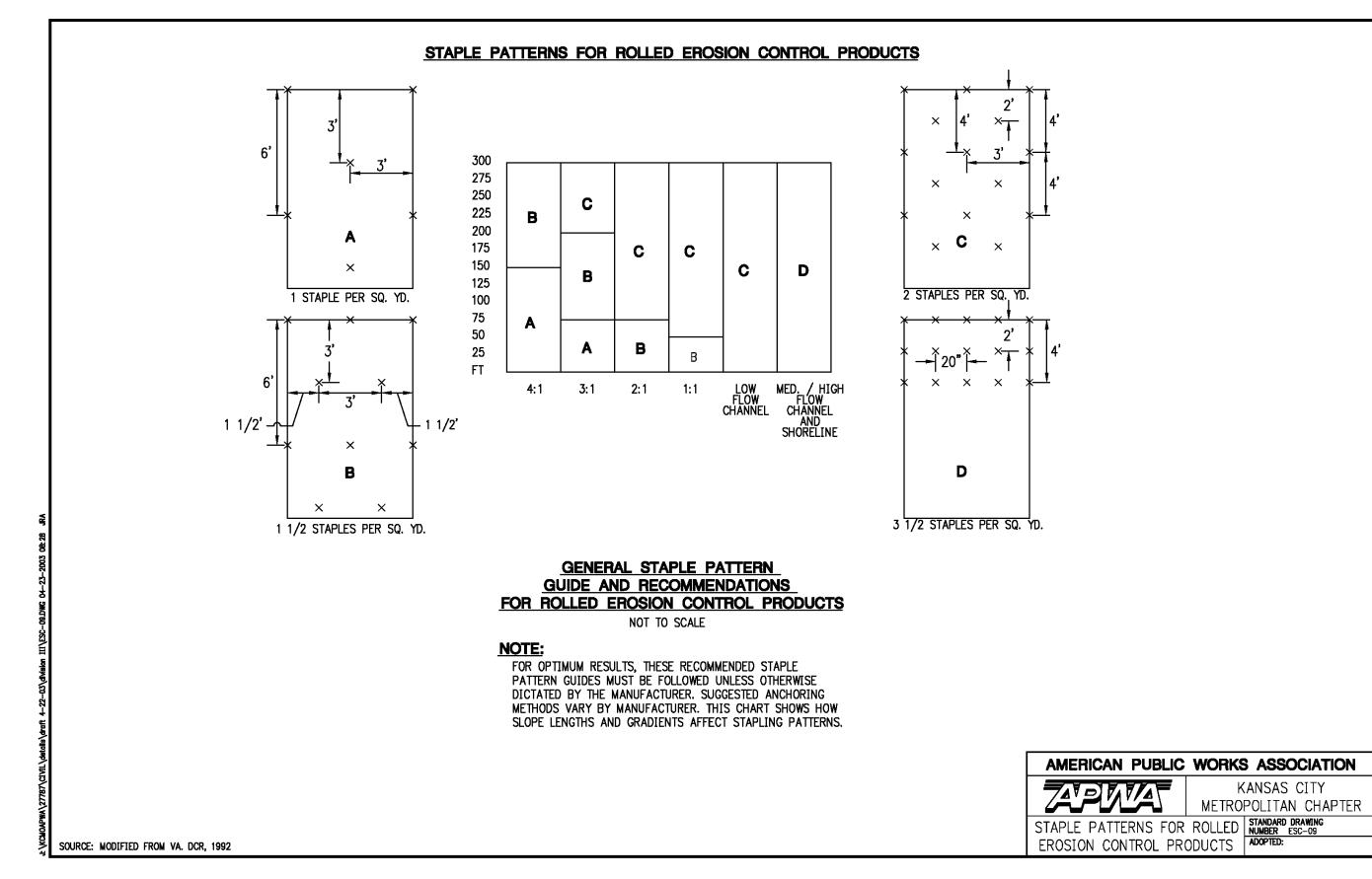
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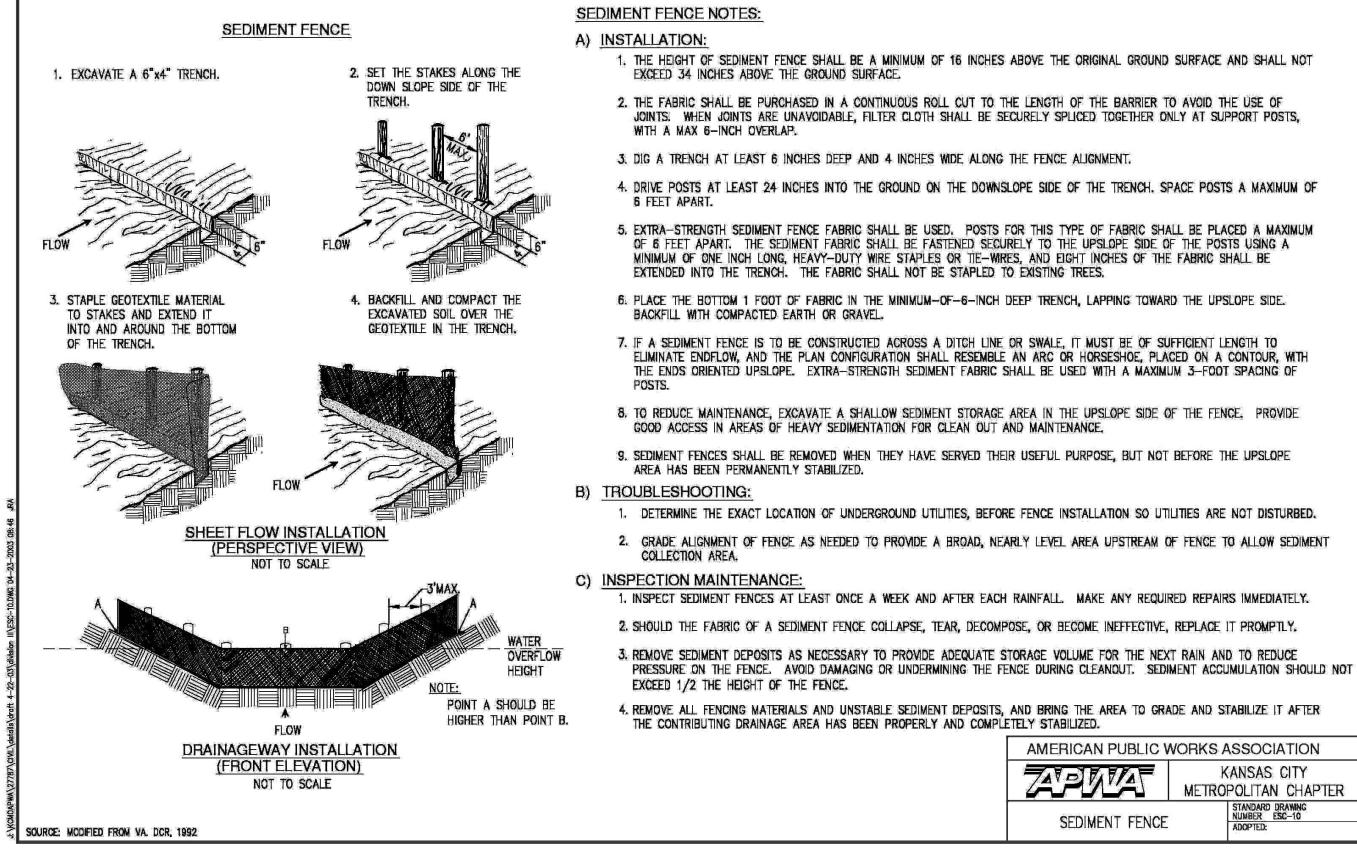
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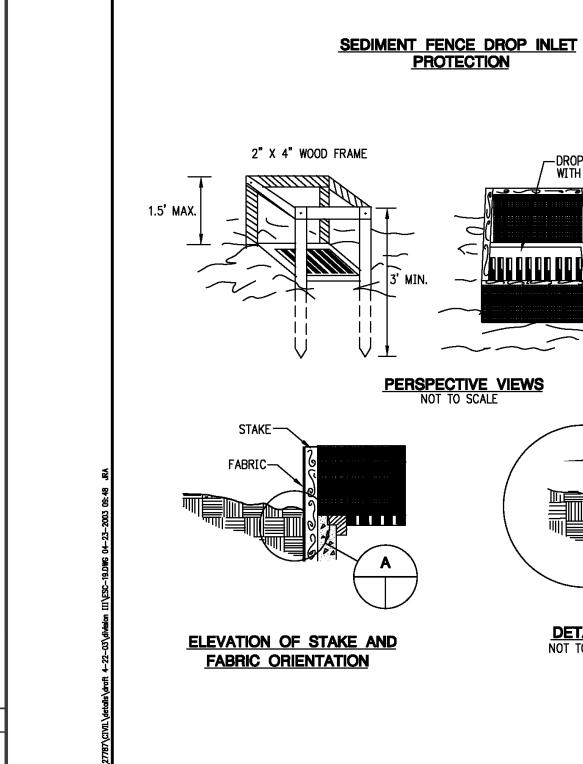
EROSION CONTROL DETAILS

Sheet









SOURCE: MODIFIED FROM VA. DCR, 1992

SEDIMENT FENCE DROP INLET PROTECTION NOTES:

A) CONSTRUCTION SPECIFICATIONS:

 SEDIMENT FENCE SHALL CONFORM TO THE CONSTRUCTION SPECIFICATIONS FOR EXTRA STRENGTH FOUND IN THE TABLE BELOW AND SHALL BE CUT FROM A CONTINUOUS ROLL TO AVOID JOINTS.

PHYSICAL PROPERTIES OF FABRIC IN SEDIMENT FENCE: PHYSICAL PROPERTY TEST REQUIREMENTS ASTM 5141 FILTERING EFFICIENCY TENSILE STRENGTH AT 20% ASTM 4632 EXTRA STRENGTH -(MAX.) ELONGATION∗ AASHTO 50 LBS./LINEAR INCH M288-96 ASTM 5141 0.2 GAL./SQ.FT/ FLOW RATE MINUTE** ULTRAVIOLET RADIATION ASTM D 4355 STABILITY %

- * REQUIREMENTS REDUCED BY 50% AFTER SIX MONTHS OF INSTALLATION.

 ** HIGH POROSITY FABRIC MADE BY BETTER SUITED FOR THIS DEVICE.

 2. FOR STAKES, USE 2X4 WOOD OR EQUIVALENT METAL WITH A MINIMUM LENGTH OF 3 FEET.
- 3. SPACE STAKES EVENLY AROUND THE PERIMETER OF THE INLET A MAXIMUM OF 3 FEET APART, AND
- SECURELY DRIVE THEM INTO THE GROUND, APPROXIMATELY 18 INCHES DEEP.
- 4. TO PROVIDE NEEDED STABILITY TO THE INSTALLATION, FRAME WITH 2X4 WOOD STRIPS AROUND THE CREST OF THE OVERFLOW AREA AT A MAXIMUM OF 1.5 FEET ABOVE THE DROP INLET CREST.
- 5. PLACE THE BOTTOM 12 INCHES OF THE FABRIC IN A TRENCH AND BACKFILL THE TRENCH WITH 12-INCHES OF COMPACTED SOIL.
- 6. FASTEN FABRIC SECURELY BY STAPLES, OR WIRE IT TO THE STAKES AND FRAME. JOINTS MUST BE
- OVERLAPPED TO THE NEXT STAKE.
- 7. IT MAY BE NECESSARY TO BUILD A TEMPORARY DIKE ON THE DOWNSLOPE SIDE OF THE STRUCTURE TO PREVENT BYPASS FLOW.

B) <u>INSPECTION AND MAINTENANCE:</u>

DETAIL ANOT TO SCALE

- THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN EVENT OF 1/2 INCH OR GREATER AND REPAIRS MADE AS NEEDED.
- 2. SEDIMENT SHALL BE REMOVED AND THE TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ONE HALF THE DESIGN DEPTH OF THE TRAP. REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.
- 3. STRUCTURES SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE REMAINING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

 AMFRICAN PUBLIC WORKS ASSOCIATION

AMERICAN FOBLIC	WORKS ASSOCIATION
TAPINIAT	KANSAS CITY METROPOLITAN CHAPTER
SEDIMENT FENCE DROP	INLET STANDARD DRAWING NUMBER ESC-19
PROTECTION	ADOPTED:

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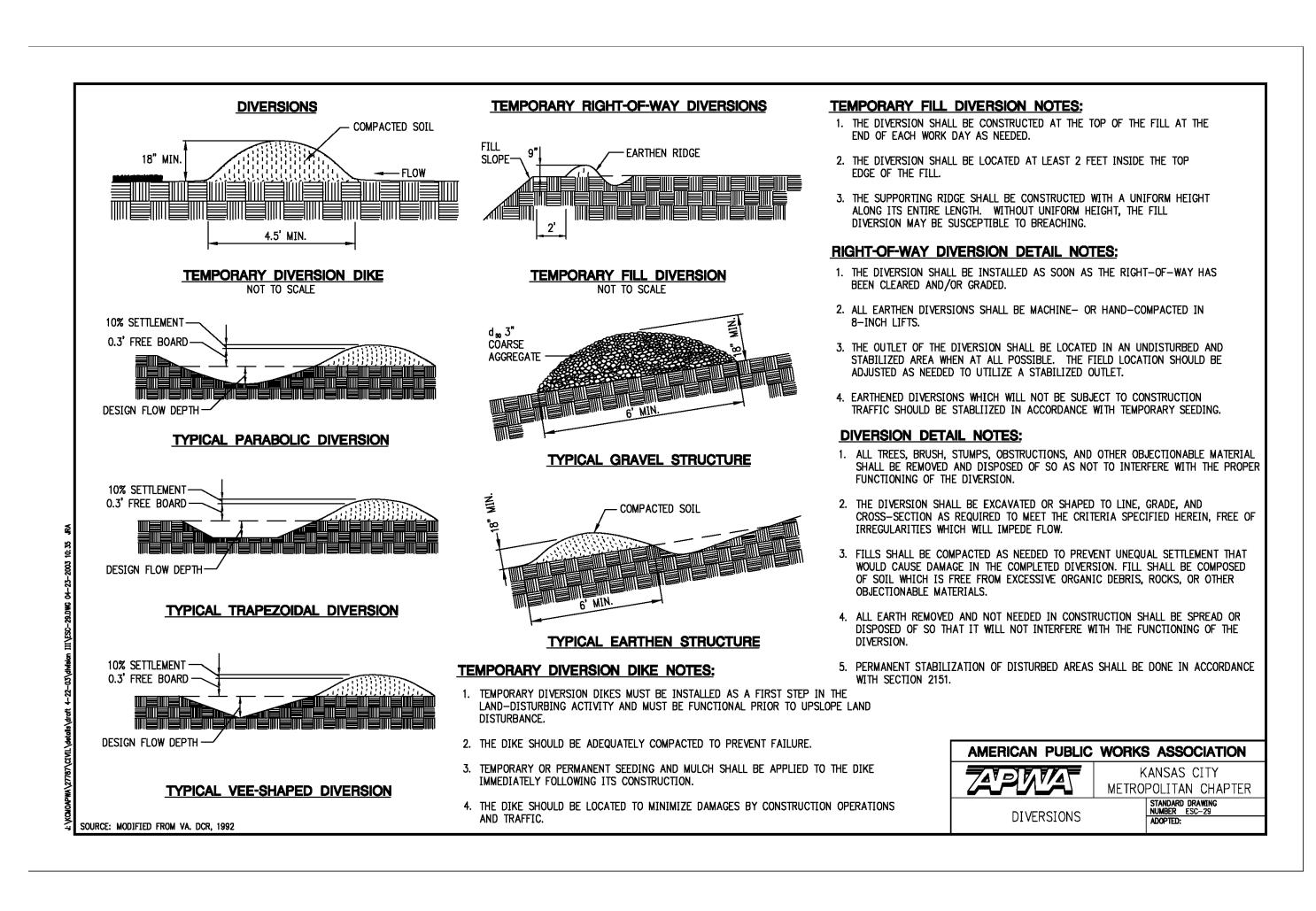
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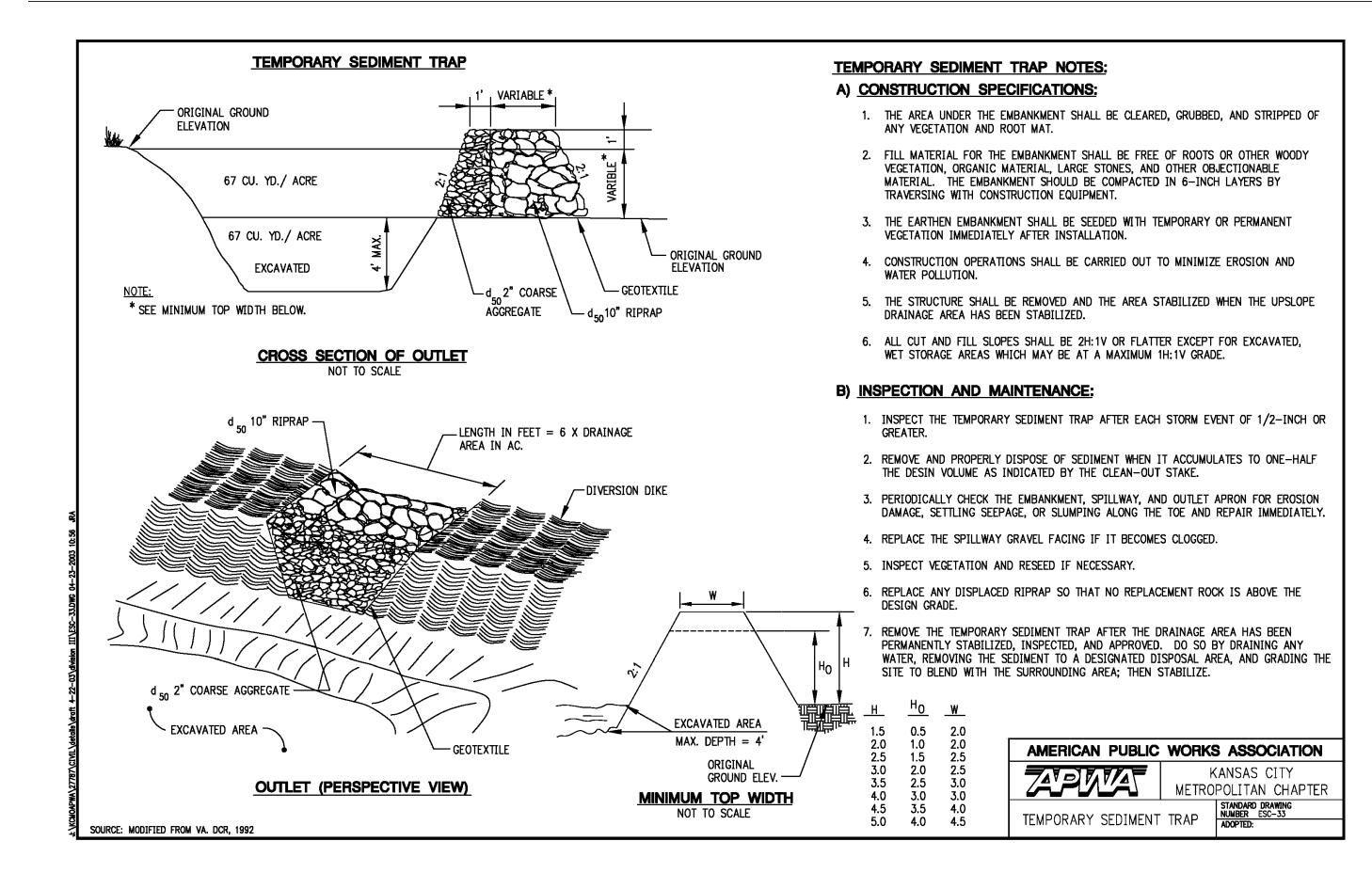
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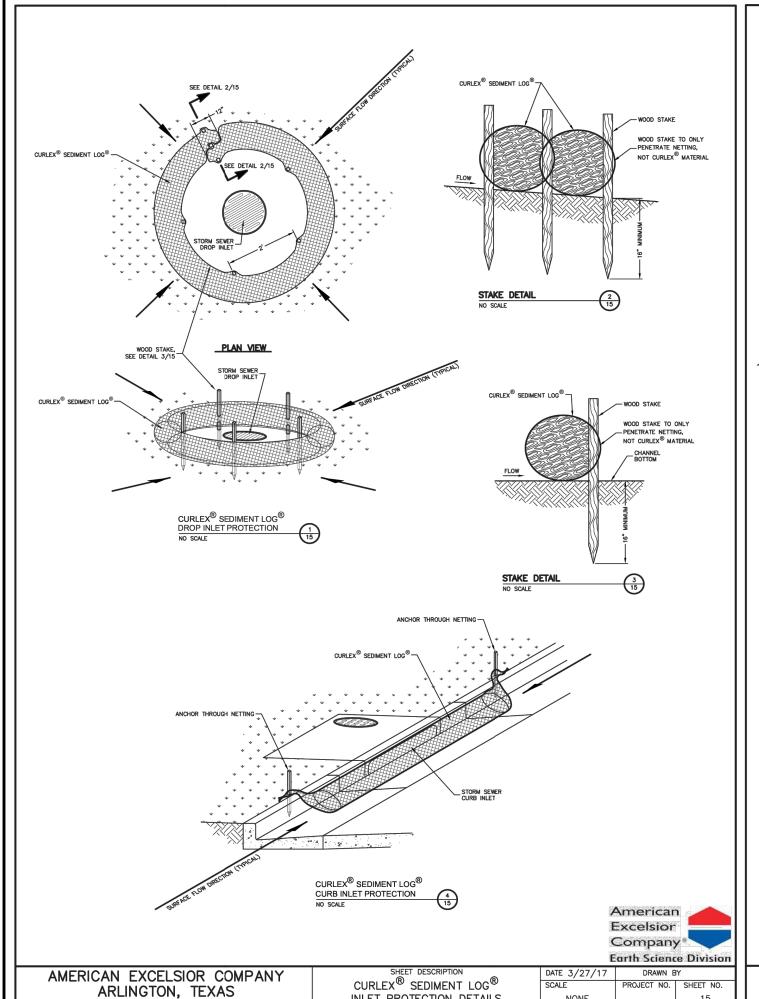
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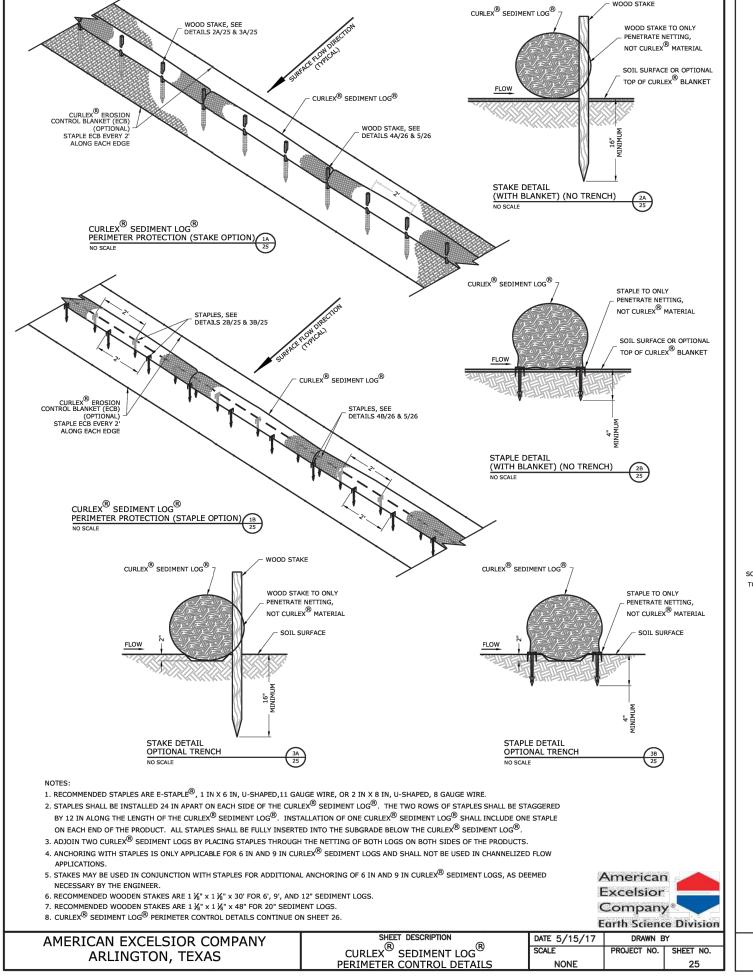
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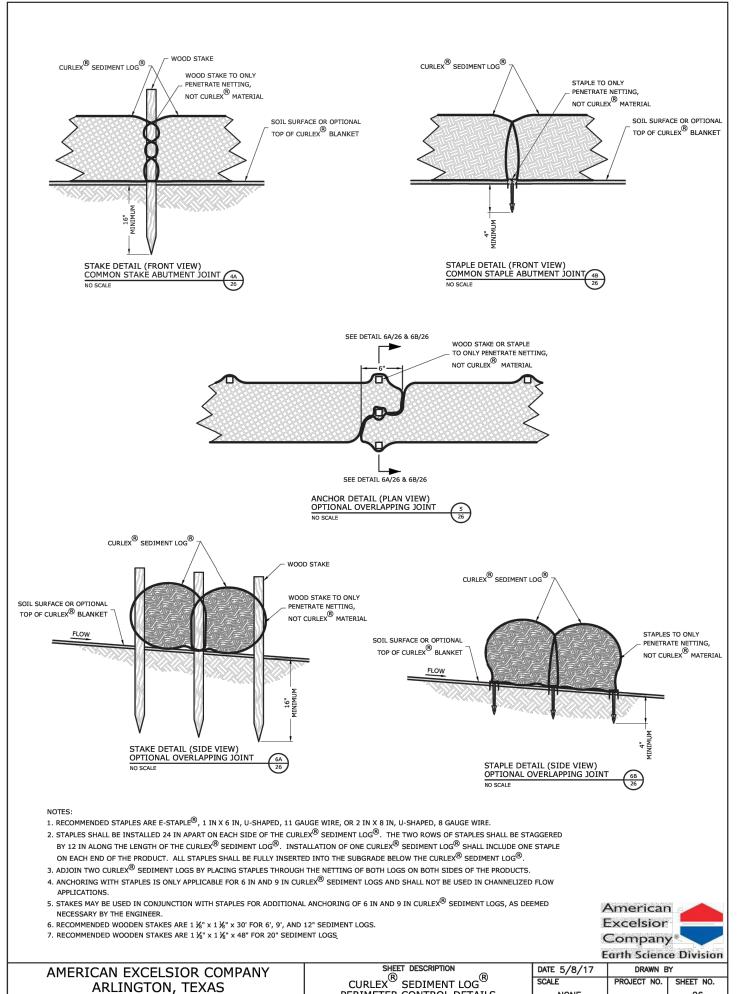
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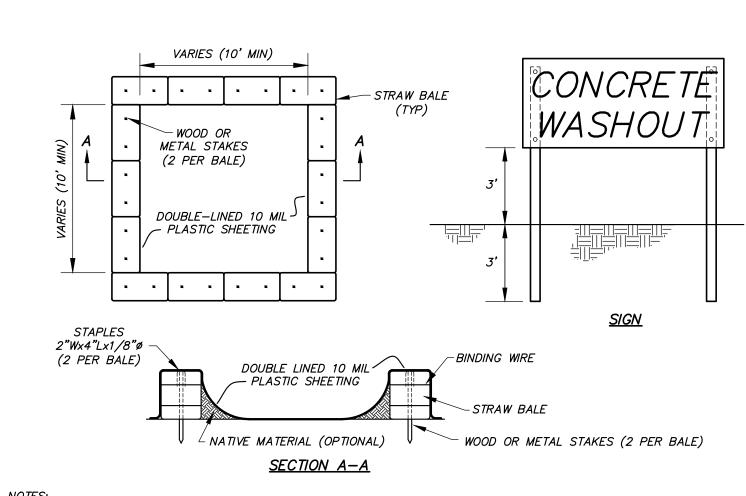












NOTES: 1. ALL CONCRETE WASTE MATERIAL, INCLUDING WASHOUT WATER, SHALL BE TOTALLY CONTAINED. 2. SEE SWPPP FOR MORE DETAILS.

3. UPON PROJECT COMPLETION CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL CONCRETE WASTE FROM THE OWNER'S PROPERTY PER ALL APPLICABLE SOLID WASTE REGULATIONS.
4. CONSTRUCT SIGN OF WEATHER PROOF MATERIALS OF A SIZE EASILY READABLE BY CONCRETE TRUCK DRIVERS. PLACE

SIGN WITHIN 10' OF WASHOUT. 5. CONTRACTOR SHALL CONTAIN WASHOUT WATERS AT ALL TIMES.

CONCRETE WASHOUT AREA

NOT TO SCALE

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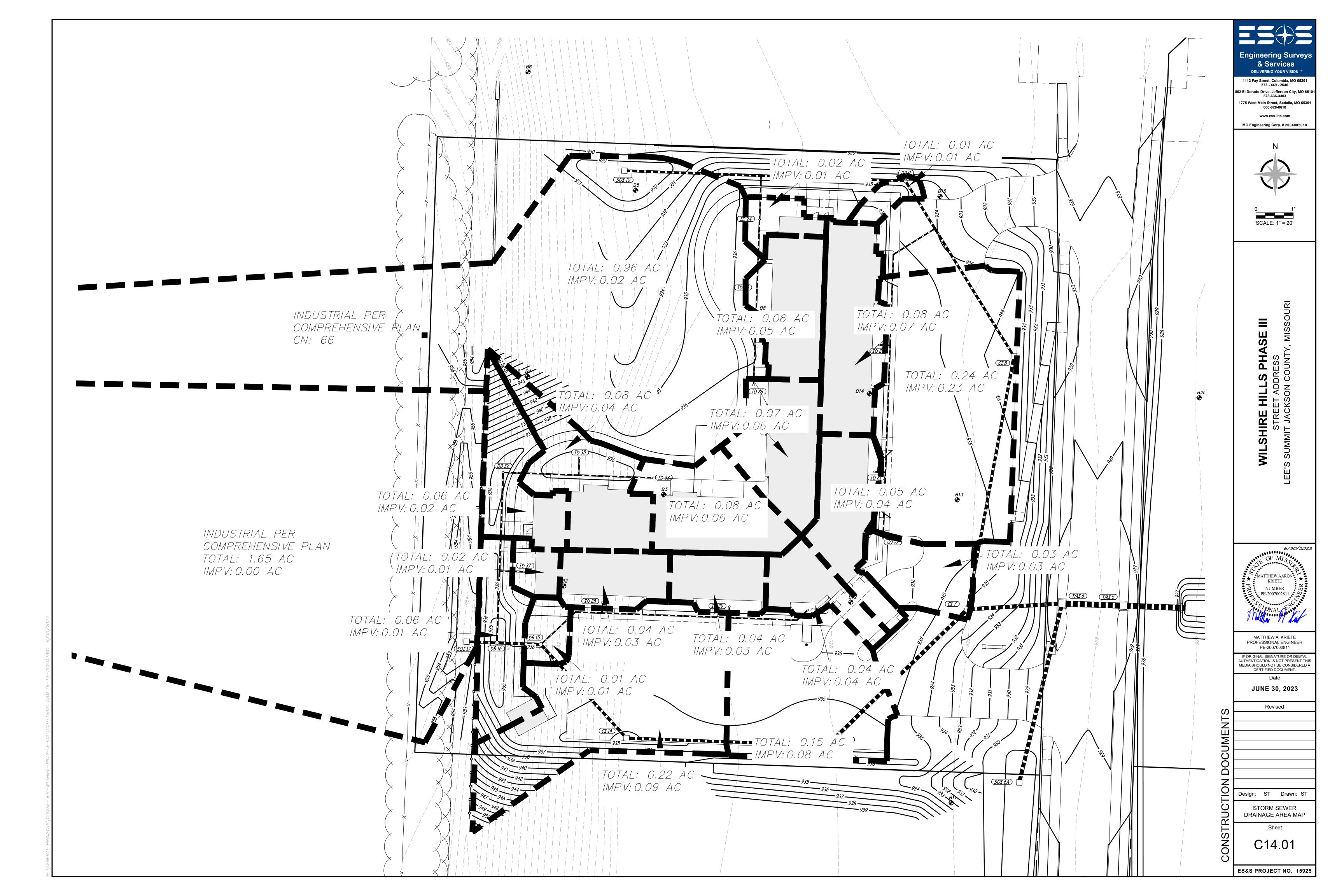
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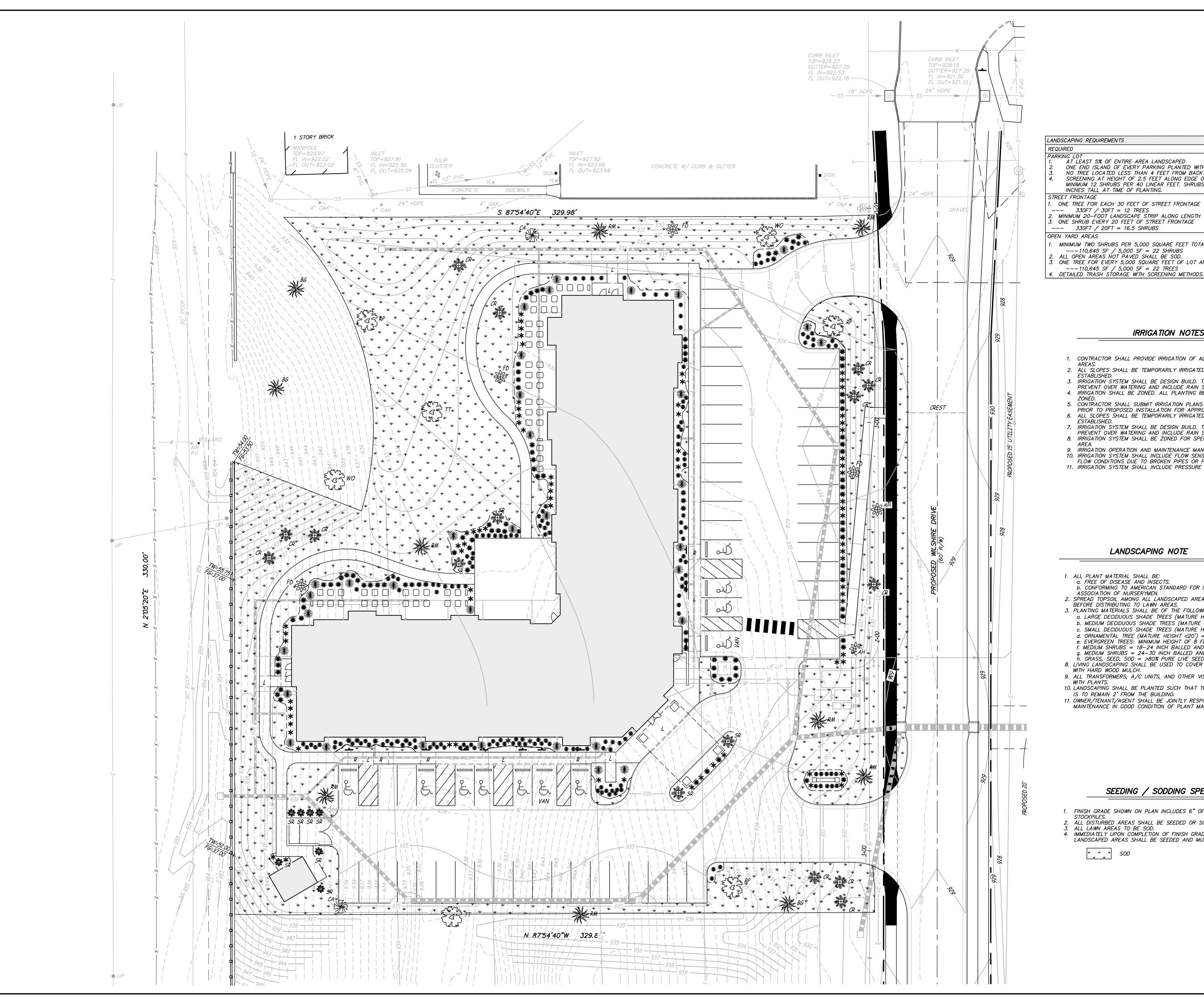
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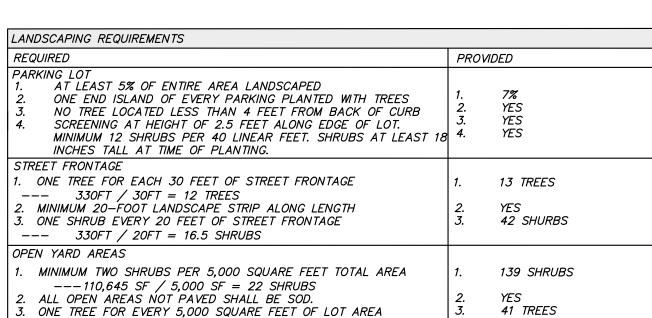
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EROSION CONTROL DETAILS

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YES

IRRIGATION NOTES

- 1. CONTRACTOR SHALL PROVIDE IRRIGATION OF ALL PLANTING BEDS AND SODDED LAWN
- 2. ALL SLOPES SHALL BE TEMPORARILY IRRIGATED UNTIL VEGETATION IS FULLY
- ESTABLISHED.
- 3. IRRIGATION SYSTEM SHALL BE DESIGN BUILD. THE SYSTEM SHALL BE DESIGNED TO PREVENT OVER WATERING AND INCLUDE RAIN SHUT—OFF DEVICES. 4. IRRIGATION SHALL BE ZONED. ALL PLANTING BENDS AND TURF SHALL BE SEPARATELY
- 5. CONTRACTOR SHALL SUBMIT IRRIGATION PLANS TO THE OWNER A MINIMUM OF 30 DAYS PRIOR TO PROPOSED INSTALLATION FOR APPROVAL.
- 6. ALL SLOPES SHALL BE TEMPORARILY IRRIGATED UNTIL VEGETATION IS FULLY ESTABLISHED.
- 7. IRRIGATION SYSTEM SHALL BE DESIGN BUILD. THE SYSTEM SHALL BE DESIGNED TO PREVENT OVER WATERING AND INCLUDE RAIN SHUT-OFF DEVICES.
- 8. IRRIGATION SYSTEM SHALL BE ZONED FOR SPECIFIC WATER NEEDS IN EACH PLANTING
- 9. IRRIGATION OPERATION AND MAINTENANCE MANUAL TO BE SUPPLIED BY CONTRACTOR. 10. IRRIGATION SYSTEM SHALL INCLUDE FLOW SENSOR THAT DETECTS & REPORTS HIGH
- FLOW CONDITIONS DUE TO BROKEN PIPES OR POPPED SPRINKLER HEADS. 11. IRRIGATION SYSTEM SHALL INCLUDE PRESSURE REGULATOR & MASTER SHUT-OFF VALVE.

LANDSCAPING NOTE

- 1. ALL PLANT MATERIAL SHALL BE:
- a. FREE OF DISEASE AND INSECTS. b. CONFORMING TO AMERICAN STANDARD FOR NURSERY STOCK OF THE AMERICAN ASSOCIATION OF NURSERYMEN.
- 2. SPREAD TOPSOIL AMONG ALL LANDSCAPED AREAS. FOCUS ON PLANTING BEDS BEFORE DISTRIBUTING TO LAWN AREAS.
- 3. PLANTING MATERIALS SHALL BE OF THE FOLLOWING MINIMUM SIZE a. LARGE DECIDUOUS SHADE TREES (MATURE HEIGHT >45') = 3" DHB
- b. MEDIUM DECIDUOUS SHADE TREES (MATURE HEIGHT 30'-45') = 3" DHB
- c. SMALL DECIDUOUS SHADE TREES (MATURE HEIGHT 20'-30') = 2" DHB d. ORNAMENTAL TREE (MATURE HEIGHT <20') = 2" DHB
- e. EVERGREEN TREES: MINIMUM HEIGHT OF & FEET AT PLANTING. f. MEDIUM SHRUBS = 18-24 INCH BALLED AND BURLAPPED OR 2-GAL CONTAINER g. MEDIUM SHRUBS = 24-30 INCH BALLED AND BURLAPPED OR 5-GAL CONTAINER
- h. GRASS, SEED, SOD = >80% PURE LIVE SEED, 99% WEED FREE 8. LIVING LANDSCAPING SHALL BE USED TO COVER ALL OPEN GROUND SUPPLEMENTED WITH HARD WOOD MULCH.
- 9. ALL TRANSFORMERS, A/C UNITS, AND OTHER VISIBLE UTILITIES TO BE SCREENED
- 10. LANDSCAPING SHALL BE PLANTED SUCH THAT THE MATURE SPREAD OF THE PLANT
- IS TO REMAIN 2' FROM THE BUILDING. 11. OWNER/TENANT/AGENT SHALL BE JOINTLY RESPONSIBLE FOR THE MAINTENANCE IN GOOD CONDITION OF PLANT MATERIAL.

SEEDING / SODDING SPECIFICATIONS

- 1. FINISH GRADE SHOWN ON PLAN INCLUDES 6" OF TOPSOIL RESPREAD FROM STOCKPILES. 2. ALL DISTURBED AREAS SHALL BE SEEDED OR SODDED PER SPECIFICATIONS.
- 3. ALL LAWN AREAS TO BE SOD.
- 4. IMMEDIATELY UPON COMPLETION OF FINISH GRADING IN EACH AREA, ALL LANDSCAPED AREAS SHALL BE SEEDED AND MULCHED.

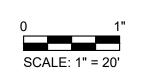
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*MATTHEW AARON KRIETE NUMBER PE-2007002811

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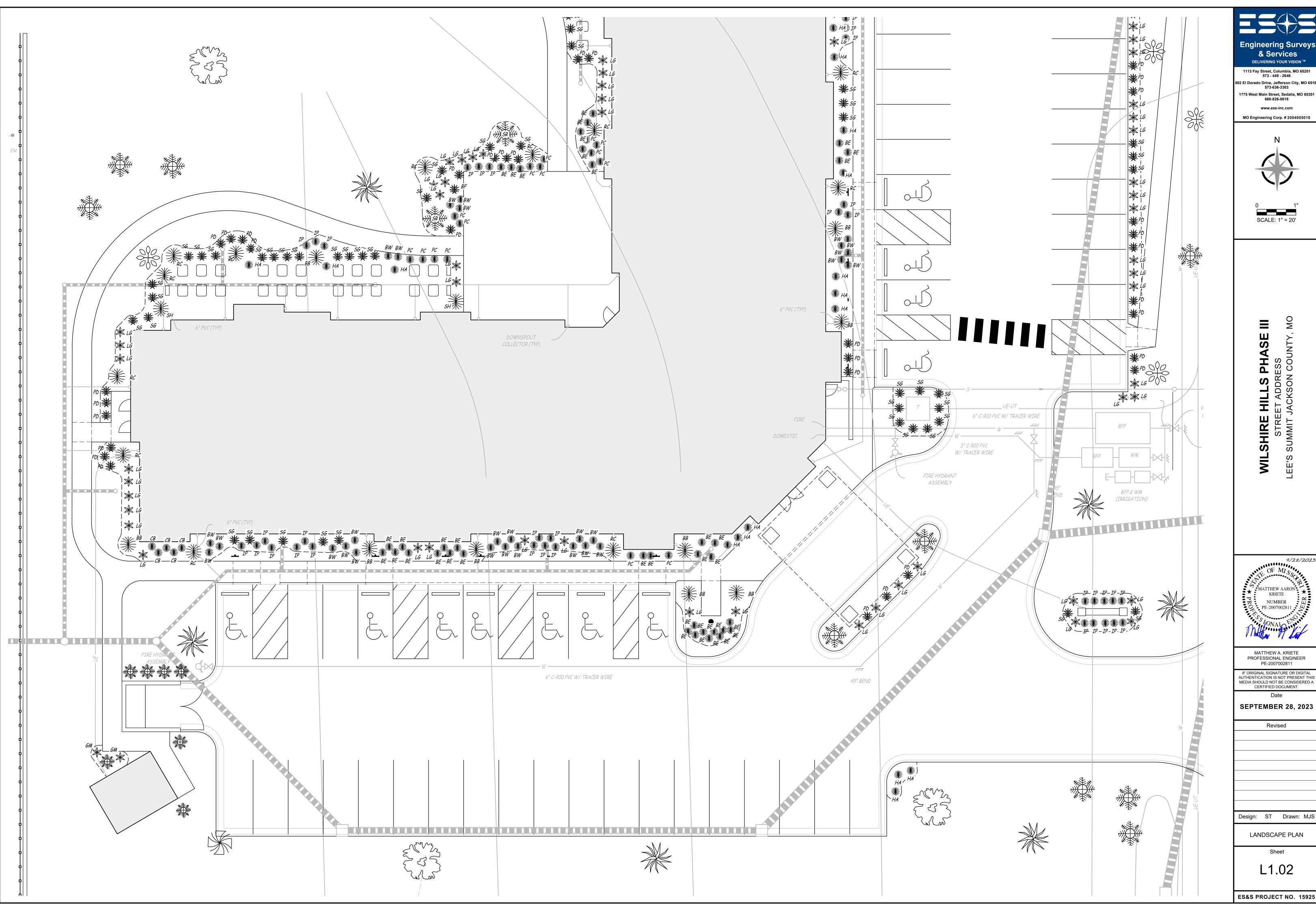
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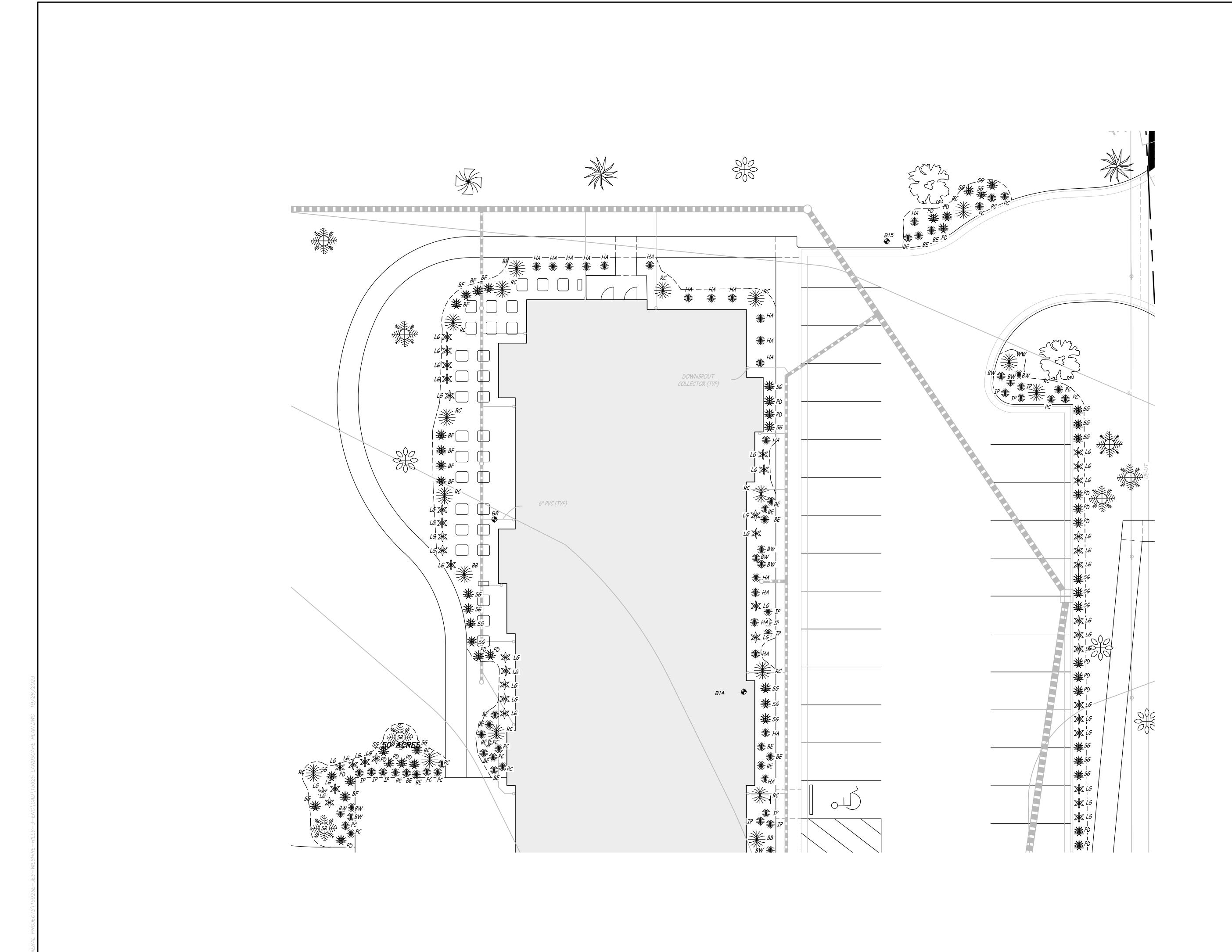
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LANDSCAPE PLAN



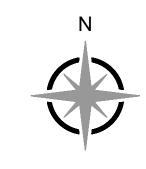


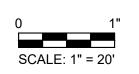


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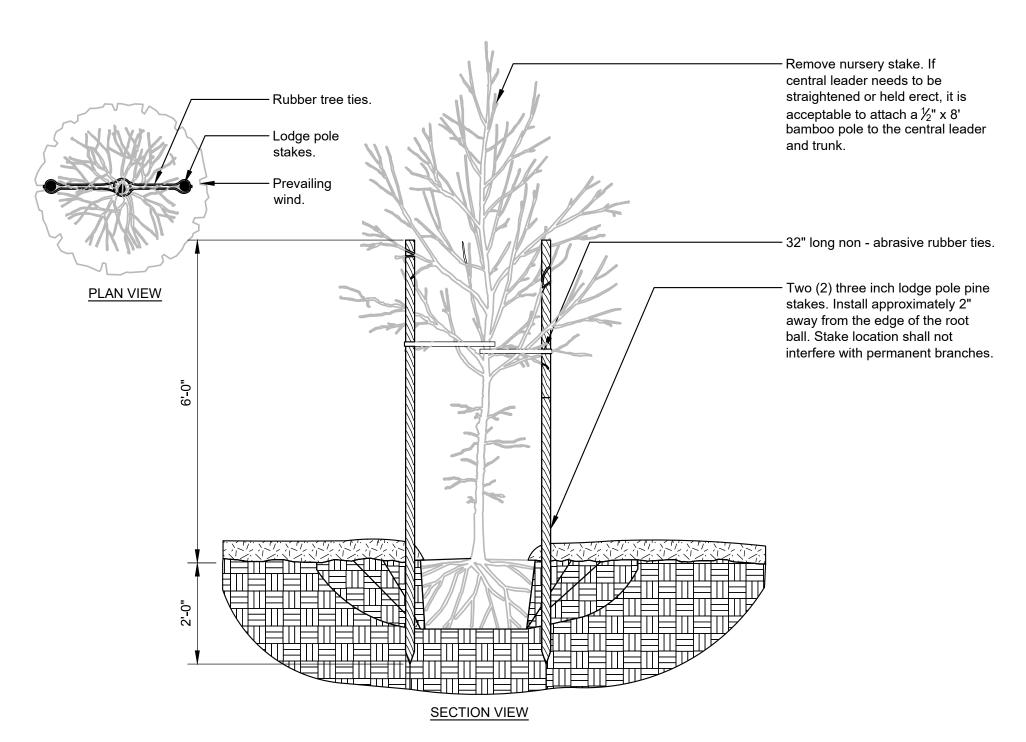
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LANDSCAPE PLAN

ES&S PROJECT NO. 15925

L1.03



TREE STAKING - LODGE POLES (2)

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	PLANT SCHEDULE									
SYMBOL	LARGE	LARGE DECIDUOUS SHADE TREES								
- Low	LABEL	QTY	COMMON NAME	BOTANICAL NAME	MATURE HEIGHT (FT)	MATURE SPREAD (FT)	SHADE/SUN	ZONE	FLOWERING	NATIVE REGION
रिस्ट्र	TT	2	TULIP TREE	LIRIODENDRON TULIPIFERA	60-90	30-50	FULL SUN	4–9	YES, MAY-JUNE	EASTERN U.S.
ZarCast	WO	2	WHITE OAK	QUERCUS ALBA	50-80	50-80	FULL SUN	3–9	NA	EASTERN U.S.
	RP	3	RED MAPLE	ACER RUBRUM	40-70	30–50	FULL SUN-PART SHADE	3–9	YES, MARCH-APRIL	CENTRAL & EASTERN U.S.

SYMBOL	MEDI	MEDIUM DECIDUOUS SHADE TREES									
- M.	LABE	ZL Q	QTY	COMMON NAME	BOTANICAL NAME	MATURE HEIGHT (FT)	MATURE SPREAD (FT)	SHADE/SUN	ZONE	FLOWERING	NATIVE REGION
*	RM	'	7	RED SUNSET RED MAPLE	ACER RUBRUM 'RED SUNSET'	40-50	30-40	FULL SUN-PART SHADE	3–9	YES, MARCH	CENTRAL & EASTERN U.S.
7/(BG		3	BLACK GUM	NYSSA SYLVATICA 'WILDFIRE'	<i>30–50</i>	20-30	FULL SUN-PART SHADE	3–9	NA	CENTRAL & EASTERN U.S.

SYMBOL	SMALL DECIDUOUS SHADE TREES											
- 0 -	LABEL	QTY	COMMON NAME	BOTANICAL NAME	MATURE HEIGHT (FT)	MATURE SPREAD (FT)	SHADE/SUN	ZONE	FLOWERING	NATIVE REGION		
	AH	2	AMERICAN HORNBEAM	CARPINUS CAROLINIANA	20-35	20-35	PART SHADE-FULL SUN	3–9	NA	CENTRAL & EASTERN U.S.		
200	FD	4	FLOWERING DOGWOOD	CORNUS FLORIDA	15-30	15-30	FULL SUN-PART SHADE	5-9	YES, APRIL-MAY	CENTRAL & EASTERN U.S.		

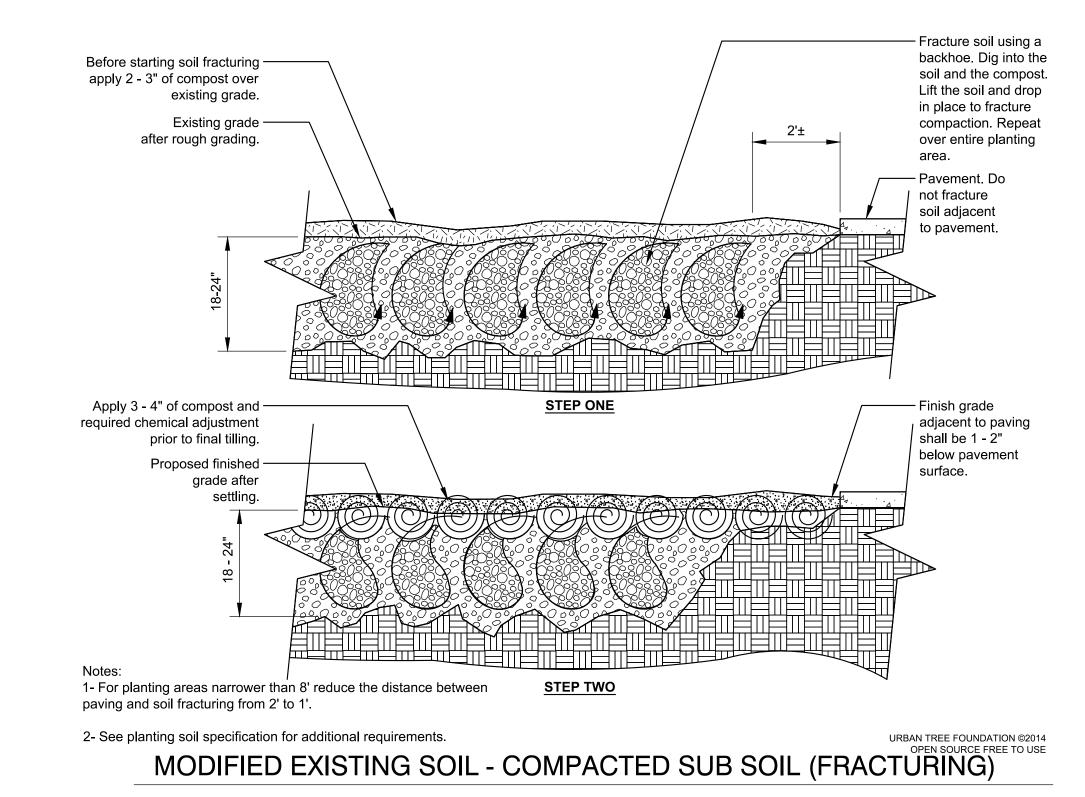
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	SYMBOL	ORNAN	<i>MENTAL</i>	DECIDUOUS SHADE TREES							
		LABEL	QTY	COMMON NAME	BOTANICAL NAME	MATURE HEIGHT (FT)	MATURE SPREAD (FT)	SHADE/SUN	ZONE	FLOWERING	NATIVE REGION
		CA	2	PRAIRIFIRE CRABAPPLE	MALUS 'PRAIRIFIRE'	15-20	15–20	FULL SUN	4-8	YES, APRIL-MAY	U.S
	- Z_1\										

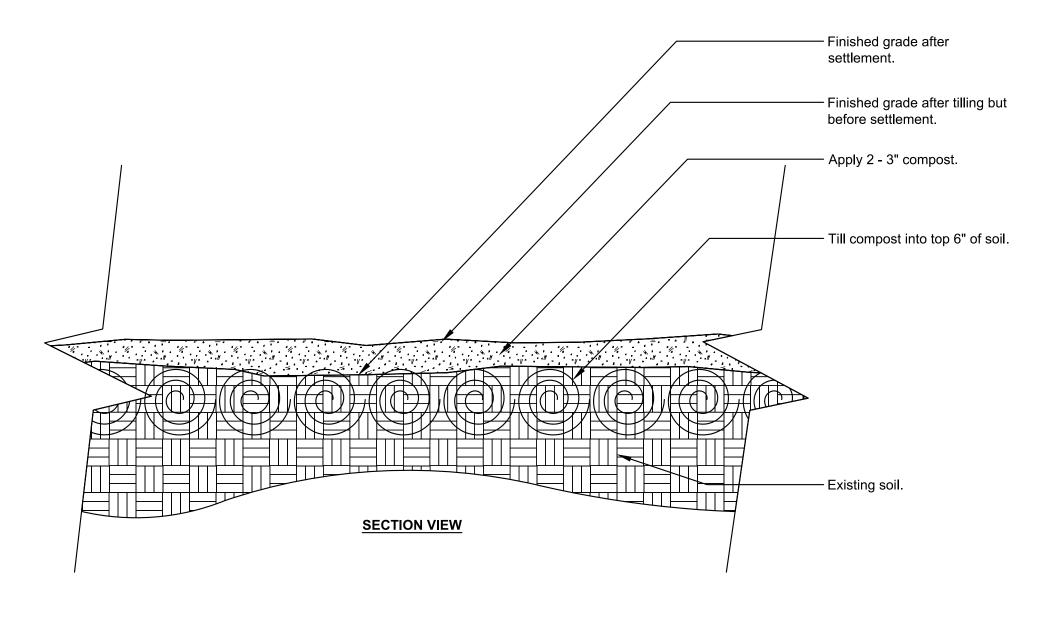
SYN	MBOL	CONIFE	CONIFERS OR EVERGREEN TREES									
	¥	LABEL	QTY	COMMON NAME	BOTANICAL NAME	MATURE HEIGHT (FT)	MATURE SPREAD (FT)	SHADE/SUN	ZONE	FLOWERING	NATIVE REGION	
※		SR	11	JUNIPER 'SKYROCKET'	JUNIPERUS SCOPULORUM 'SKYROCKET'	15-20	2-3	FULL SUN	4–9	NA	WESTERN U.S.	
•	* "	CR	12	CANAERTH RED CEDAR	JUNIPERUS VIRGINIANA "CANAERTH"	20-35	8–15	FULL SUN	3–9	NA	CENTRAL & EASTERN U.S.	

SYMBOL	EVERG	REEN S	HRUBS							
	LABEL	QTY	COMMON NAME	BOTANICAL NAME	MATURE HEIGHT (FT)	MATURE SPREAD (FT)	SHADE/SUN	ZONE	FLOWERING	NATIVE REGION
**	LG	74	LITTLE GIANT DWARF ARBORVITAE'	THUJA OCCIDENTALS LITTLE GIANT	3-4	3–4	FULL SUN- PART SHADE	3-8	NA	EASTERN U.S.

SYMBOL	DECID	uous s	HRUBS							
	LABEL	QTY	COMMON NAME	BOTANICAL NAME	MATURE HEIGHT (FT)	MATURE SPREAD (FT)	SHADE/SUN	ZONE	FLOWERING	NATIVE REGION
│	RC	21	RED CHOKEBERRY	ARONIA ARBUTIFOLIA 'BRILLIANTISSIMA'	6–8	3–4	FULL SUN-PART SHADE	4–9	YES, APRIL	CENTRAL & EASTERN U.S.
	HA	33	SMOOTH HYDRANGEA	HYDRANGEA ARBORESCENS 'ANNABELLE'	3–5	4-6	PART SHADE	3–9	YES, JUNE-SEPTEMBER	CENTRAL & EASTERN U.S.
	BB	11	BUTTON BUSH 'SUGAR SHACK'	CEPHALANTHUS OCCIDENTALIS 'SMCOSS' SUGAR SHACK	3-4	3-4	FULL SUN-PART SHADE	4-10	YES, JUNE-JULY	CENTRAL & EASTERN U.S.
	IP	37	INDIAN PAINTBRUSH	CASTILLEJA COCCINEA	1-2	1-1.5	FULL SUN-PART SHADE	4-8	YES, SPRING-SUMMER	EASTERN U.S.
	BW	33	BUTTERFLY WEED	ASCLEPIAS TUBEROSA	1-2.5	1-2	FULL SUN	3–9	YES, JUNE-AUGUST	U.S.
	BE	43	BLACK-EYED SUSANS "GOLDSTURMM"	RUDBECKIA FULGIDA	2-3	1.5–2	FULL SUN-PART SHADE	3–9	YES, JUNE-AUGUST	U.S.
	PC	21	PURPLE CONEFLOWER	ECHINACEA PURPUREA	2-5	1-2	FULL SUN-PART SHADE	3–8	YES, JUNE-AUGUST	U.S.

SYMI	MBOL ORNAMENTAL GRASSES											
		LABEL	QTY	COMMON NAME	BOTANICAL NAME	MATURE HEIGHT (FT)	MATURE SPREAD (FT)	SHADE/SUN	ZONE	FLOWERING	NATIVE REGION	
*		SG	46	SWITCH GRASS	PANICUM VIRGATUM	3–6	2-3	FULL SUN	3–9	YES, AUGUST-SEPTEMBER	U.S. AND CANADA	
	`	PD	41	PRAIRIE DROPSEED	SPOROBOLUS HETEROLEPIS	2-3	2-3	FULL SUN	3–9	YES, AUGUST-OCTOBER	U.S.	





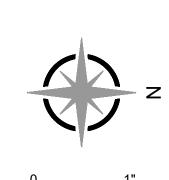
1- See planting soil specifications for additional requirements.

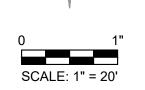
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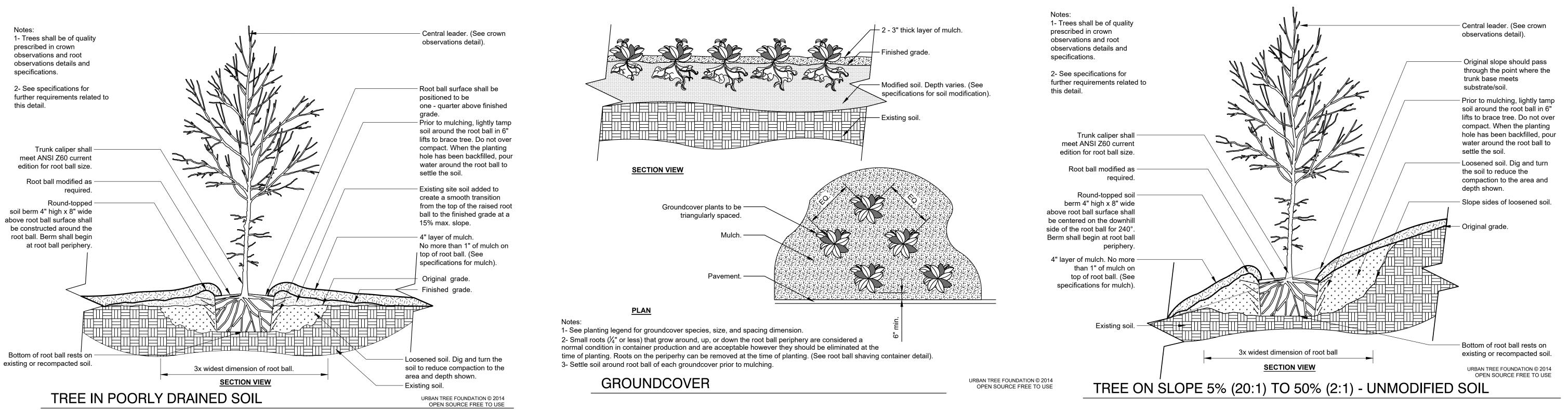
SEPTEMBER 28, 2023

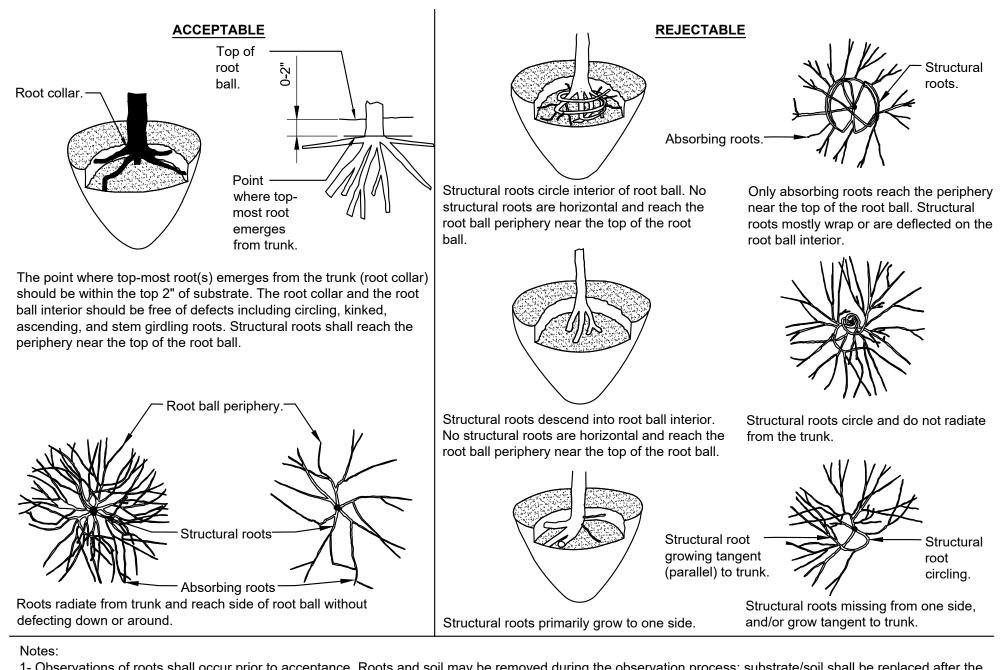
Revised

Design: ST Drawn: MJS

LANDSCAPE PLAN

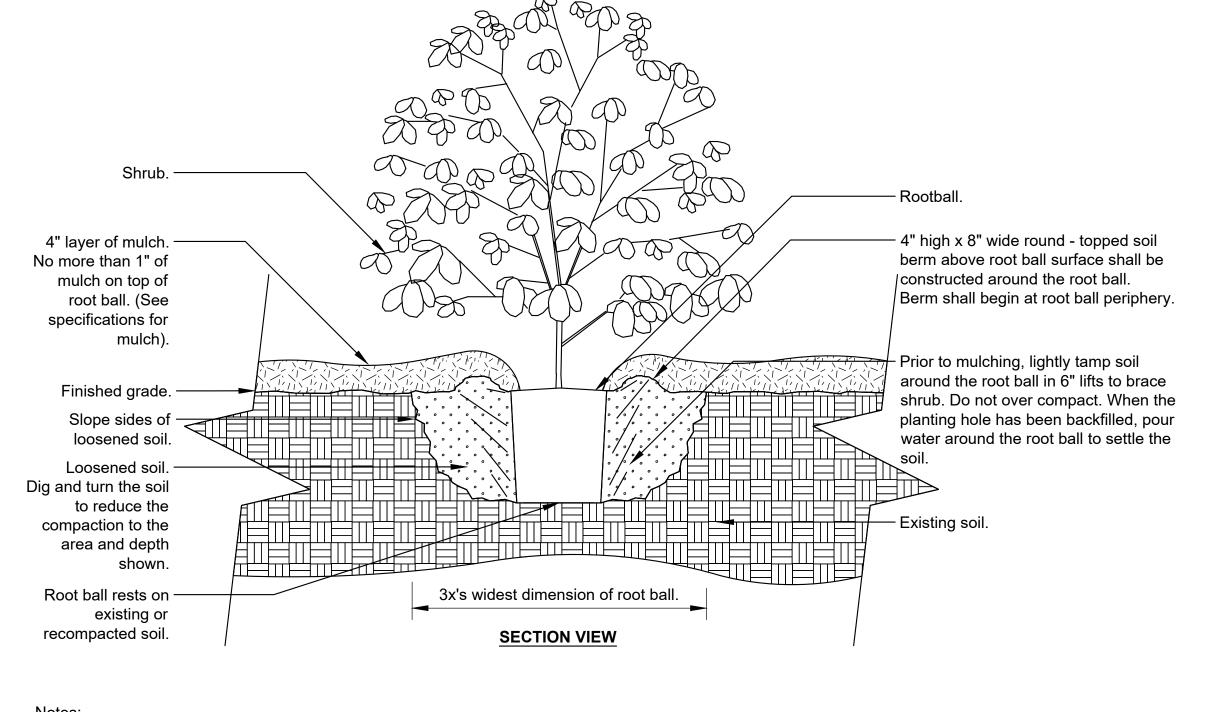
L1.04





1- Observations of roots shall occur prior to acceptance. Roots and soil may be removed during the observation process; substrate/soil shall be replaced after the observations have been completed.

URBAN TREE FOUNDATION © 2014 2- See specifications for observation process and requirements. OPEN SOURCE FREE TO USE ROOT OBSERVATIONS DETAIL - BALLED AND BURLAPPED



1- Shrubs shall be of quality prescribed in the root observations detail and specifications.

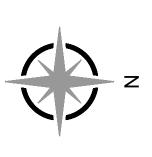
2- See specifications for further requirements related to this detail.

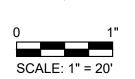
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LANDSCAPE PLAN

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