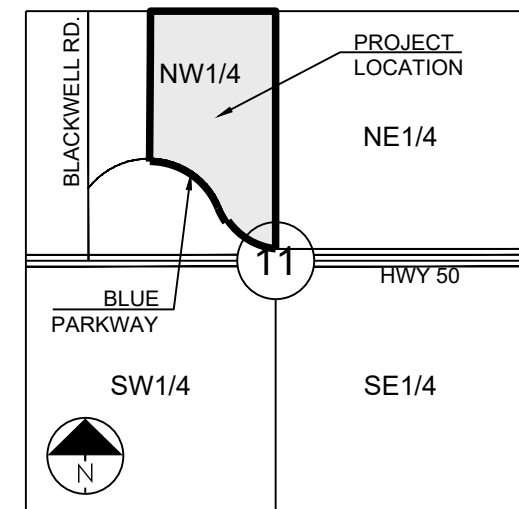


STREET, STORMWATER AND EROSION & SEDIMENT CONTROL FOR RESIDENCES AT BLACKWELL IN THE CITY OF LEE'S SUMMIT JACKSON COUNTY, MO



SECTION 11-47-31

LOCATION MAP
SCALE 1" = 2000'

LEGEND:

- A/E - ACCESS EASEMENT
- BC - BACK OF CURB
- B/B - BACK TO BACK
- BM - BENCHMARK
- BL or B.L. - BUILDING LINE
- CO - CLEANOUT
- TJB - TELEPHONE JUNCTION BOX
- C&G - CURB AND GUTTER
- D/E - DRAINAGE EASEMENT
- E/E - ELECTRICAL EASEMENT
- EL - ELEVATION
- FL - FLOW LINE
- G/E - GAS LINE EASEMENT
- HDPE - HIGH-DENSITY POLYETHYLENE
- L/E - LANDSCAPE EASEMENT
- MSFE - MINIMUM SERVICEABLE FLOOR ELEVATION
- PVC - POLYVINYL CHLORIDE
- P/L - PROPERTY LINE
- PUB/E - PUBLIC EASEMENT
- RCP - REINFORCED CONCRETE PIPE
- ROW or RW - RIGHT-OF-WAY
- S/E - SANITARY SEWER EASEMENT
- SL - SERVICE LINE
- SW - SIDEWALK
- TE - TOP ELEVATION
- U/E - UTILITY EASEMENT
- WSE - WATER SURFACE ELEVATION
- W/E - WATERLINE EASEMENT

- ASPHALT PAVEMENT - EXISTING
- ASPHALT PAVEMENT - PROPOSED
- CONCRETE PAVEMENT - EXISTING
- CONCRETE PAVEMENT - PROPOSED
- CONCRETE SIDEWALK - EXISTING
- CONCRETE SIDEWALK - PROPOSED
- CURB & GUTTER
- CURB & GUTTER - EXISTING
- TREELINE
- EXISTING LOT AND R/W LINES
- EXISTING PLAT LINES
- P/L - PROPERTY LINES
- R/W - RIGHT-OF-WAY
- SANITARY SEWER MAIN - EXIST.
- STORM SEWER
- STORM SEWER - EXISTING
- CABLE TV - EXISTING
- FIBER OPTIC CABLE - EXISTING
- TELEPHONE LINE - EXIST.
- ELECTRIC LINE - EXISTING
- OVERHEAD POWER LINE - EXIST.
- UNDERGROUND ELECTRIC - EX.
- GAS LINE - EXISTING
- WATERLINE - EXISTING
- LIGHT - EXISTING
- EXISTING MANHOLE
- CLEANOUT
- EXISTING SANITARY MANHOLE
- PROPOSED SANITARY MANHOLE
- EXISTING AREA INLET
- EXISTING CURB INLET
- EXISTING GRATE INLET
- EXISTING JUNCTION BOX
- EXISTING STORM MANHOLE

UTILITY CONTACTS:

MISSOURI DEPARTMENT OF TRANSPORTATION (MODOT)

Steve Holloway
600 NE Colbern Road
Lee's Summit, MO 64086
(816) 607-2186

SPIRE

Brent Jones
3025 SE Clover Drive
Lee's Summit, MO 64082
(816) 399-0663/brent.jones@spireenergy.com

EVERGY

Philip Ingram
1300 SE Hamblin Road
Lee's Summit, MO 64081
Office: (816) 347-3439
philip.ingram@evergy.com

CITY OF LEE'S SUMMIT PUBLIC WORKS

Dena Mezger
220 SE Green Street
Lee's Summit, MO 64063
(816) 969-1800

AT&T

Mark Manion or Marty Loper
500 E. 9th Street, Room 370
Kansas City, MO 64106
(816) 275-2341 or (816) 275-1550

COMCAST CABLE

John Meadows
4700 Little Blue Parkway
Independence, MO 64057
(816) 795-2257

CITY OF LEE'S SUMMIT WATER UTILITIES

Mark Schaulter
1200 SE Hamblin Road
Lee's Summit, MO 64081
(816) 969-1900



811 or
1-800-344-7483
mo1call.com

GENERAL NOTES:

- ALL CONSTRUCTION TO FOLLOW THE CITY OF LEE'S SUMMIT DESIGN AND CONSTRUCTION MANUAL AS ADOPTED BY ORDINANCE 5813.
- ALL WORKMANSHIP AND MATERIALS SHALL BE SUBJECT TO THE INSPECTION AND APPROVAL OF THE ENGINEERING DEPARTMENT OF THE CITY OF LEE'S SUMMIT, MISSOURI.
- LINEAL FOOT MEASUREMENTS SHOWN ON THE PLANS ARE HORIZONTAL MEASUREMENTS, NOT SLOPE MEASUREMENTS. ALL PAYMENTS SHALL BE MADE ON HORIZONTAL MEASUREMENTS.
- NO GEOLOGICAL INVESTIGATION HAS BEEN PERFORMED ON THE SITE.
- THE UTILITY LOCATIONS SHOWN ON THESE PLANS ARE TAKEN FROM UTILITY COMPANY RECORDS AND APPARENT FIELD LOCATIONS. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL ADHERE TO THE PROVISIONS OF THE SENATE BILL NUMBER 583, 78TH GENERAL ASSEMBLY OF THE STATE OF MISSOURI. THE BILL REQUIRES THAT ANY PERSON OR FIRM DOING EXCAVATION ON PUBLIC RIGHT OF WAY DO SO ONLY AFTER GIVING NOTICE TO, AND OBTAINING INFORMATION FROM, UTILITY COMPANIES. STATE LAW REQUIRES 48 HOURS ADVANCE NOTICE. THE CONTRACTOR MAY ALSO UTILIZE THE FOLLOWING TOLL FREE PHONE NUMBER PROVIDED BY "MISSOURI ONE CALL SYSTEM, INC.": 1-800-DIG-RITE. THIS PHONE NUMBER IS APPLICABLE ANYWHERE WITHIN THE STATE OF MISSOURI. PRIOR TO COMMENCEMENT OF WORK, THE CONTRACTOR SHALL NOTIFY ALL THOSE COMPANIES WHICH HAVE FACILITIES IN THE NEAR VICINITY OF THE CONSTRUCTION TO BE PERFORMED.
- PRIOR TO ORDERING PRECAST STRUCTURES, SHOP DRAWING SHALL BE SUBMITTED TO THE DESIGN ENGINEER FOR APPROVAL. AFTER APPROVAL OF THE SHOP DRAWINGS, A COPY OF THE APPROVED AND SIGNED SHOP DRAWINGS SHALL BE PROVIDED TO THE CITY INSPECTOR UPON REQUEST.
- THE CONTRACTOR SHALL PROTECT ALL MAJOR TREES FROM DAMAGE. NO TREE SHALL BE REMOVED WITHOUT PERMISSION OF THE OWNER, UNLESS SHOWN OTHERWISE.
- CLEARING AND GRUBBING OPERATIONS AND DISPOSAL OF ALL DEBRIS THEREFROM SHALL BE PERFORMED BY THE CONTRACTOR IN STRICT ACCORDANCE WITH ALL LOCAL CODES AND ORDINANCES.
- ALL WASTE MATERIAL RESULTING FROM THE PROJECT SHALL BE DISPOSED OF OFF-SITE BY THE CONTRACTOR, OR AS DIRECTED BY THE OWNER.
- ALL EXCAVATIONS SHALL BE UNCLASSIFIED. NO SEPARATE PAYMENT WILL BE MADE FOR ROCK EXCAVATION.
- THE CONTRACTOR SHALL CONTROL THE EROSION AND SILTATION DURING ALL PHASES OF CONSTRUCTION, AND SHALL KEEP THE STREETS CLEAN OF MUD AND DEBRIS.
- ALL MANHOLES, CATCH BASINS, UTILITY VALVES AND METER PITS TO BE ADJUSTED OR REBUILT TO GRADE AS REQUIRED.
- THE CONTRACTOR SHALL CONTACT DEVELOPMENT SERVICES INSPECTIONS AT: 816-969-1200 TO OBTAIN A DEVELOPMENT SERVICES CONSTRUCTION PERMIT. A MINIMUM 48 HOUR NOTICE SHALL BE GIVEN PRIOR TO PERMIT ISSUANCE.
- THE CONTRACTOR SHALL CONTACT THE RIGHT OF WAY INSPECTOR AT 816-969-1800 PRIOR TO ANY LAND DISTURBANCE ACTIVITIES WITHIN THE RIGHT OF WAY. THESE ACTIVITIES MAY REQUIRE A PERMIT. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ALL TRAFFIC HANDLING MEASURES NECESSARY TO ENSURE THAT THE GENERAL PUBLIC IS PROTECTED AT ALL TIMES. TRAFFIC CONTROL SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD-LATEST EDITION).

EARTHWORK:

- IT IS RECOMMENDED THAT A GEOTECHNICAL ENGINEER OBSERVE AND DOCUMENT ALL EARTHWORK ACTIVITIES.
- CONTOURS HAVE BEEN SHOWN AT 1-FOOT OR 2-FOOT INTERVALS, AS INDICATED. GRADING SHALL CONSIST OF COMPLETING THE EARTHWORK REQUIRED TO BRING THE PHYSICAL GROUND ELEVATIONS OF THE EXISTING SITE TO THE FINISHED GRADE (OR SUB-GRADE) ELEVATIONS PROVIDED ON THE PLANS AS SPOT GRADES. CONTOURS OR OTHERS MEANS AS INDICATED ON THE PLANS.
- THE EXISTING SITE TOPOGRAPHY DEPICTED ON THE PLANS BY CONTOURING HAS BEEN ESTABLISHED BY AERIAL PHOTOGRAPHY AND FIELD VERIFIED BY G.P.S. OBSERVATION NEAR 11/11/2021. THE CONTOUR ELEVATIONS PROVIDED MAY NOT BE EXACT GROUND ELEVATIONS, BUT RATHER INTERPRETATIONS OF SUCH. ACCURACY SHALL BE CONSIDERED TO BE SUCH THAT NOT MORE THAN 10 PERCENT OF SPOT ELEVATION CHECKS SHALL BE IN ERROR BY MORE THAN ONE-HALF THE CONTOUR INTERVAL PROVIDED, AS DEFINED BY THE NATIONAL MAP ACCURACY STANDARDS. ANY QUANTITIES PROVIDED FOR EARTHWORK VOLUMES ARE ESTABLISHED USING THIS TOPOGRAPHY CONTOUR ACCURACY, AND THEREFORE THE INHERENT ACCURACY OF ANY EARTHWORK QUANTITY IS ASSUMED FROM THE TOPOGRAPHY ACCURACY.
- PROPOSED CONTOURS ARE TO APPROXIMATE FINISHED GRADE.
- UNLESS OTHERWISE NOTED, PAYMENT FOR EARTHWORK SHALL INCLUDE BACKFILLING OF THE CURB AND GUTTER, SIDEWALK AND FURTHER MANIPULATION OF UTILITY TRENCH SPOILS. THE SITE SHALL BE LEFT IN A MOWABLE CONDITION AND POSITIVE DRAINAGE MAINTAINED THROUGHOUT.
- UNLESS OTHERWISE NOTED, ALL EARTHWORK IS CONSIDERED UNCLASSIFIED. NO ADDITIONAL COMPENSATION WILL BE PROVIDED FOR ROCK OR SHALE EXCAVATION, UNLESS SPECIFICALLY STATED OTHERWISE.
- PRIOR TO EARTHWORK ACTIVITIES, PRE-DISTURBANCE EROSION AND SEDIMENT CONTROL DEVICES SHALL BE IN PLACE PER THE STORM WATER POLLUTION PREVENTION PLAN AND/OR THE EROSION AND SEDIMENT CONTROL PLAN PREPARED FOR THIS SITE.
- ALL TOPSOIL SHALL BE STRIPPED FROM ALL AREAS TO BE GRADED AND STOCKPILED ADJACENT TO THE SITE AT AN AREA SPECIFIED BY THE PROJECT OWNER OR HIS APPOINTED REPRESENTATIVE. VEGETATION, TRASH, TREES, BRUSH, TREE ROOTS AND LIMBS, ROCK FRAGMENTS GREATER THAN 6-INCHES AND OTHER DELETERIOUS MATERIALS SHALL BE REMOVED AND PROPERLY DISPOSED OF OFFSITE OR AS DIRECTED BY THE OWNER OR HIS APPOINTED REPRESENTATIVE.
- UNLESS OTHERWISE SPECIFIED IN THE GEOTECHNICAL REPORT, ALL FILLS SHALL BE PLACED IN MAXIMUM 6-INCH LIFTS AND COMPACTED TO 95-PERCENT OF MAXIMUM DENSITY AS DEFINED USING A STANDARD PROCTOR TEST (AASHTO T99/ASTM 698).
- SUBGRADE FOR PAVEMENTS SHALL BE PROOF-ROLLED PRIOR TO PAVING OPERATIONS UTILIZING A FULLY LOADED TANDEM AXLE DUMP TRUCK. ALL AREAS EXHIBITING EXCESSIVE PUMPING AND HEAVING SHALL BE REMOVED, FILLED AND COMPACTED WITH SUITABLE MATERIALS AND RETESTED UNTIL ACCEPTABLE RESULTS ARE ACHIEVED AND FINAL APPROVAL HAS BEEN OBTAINED FROM THE GEOTECHNICAL ENGINEER. SUBGRADE FOR BUILDING PAD SHALL INCLUDE A MINIMUM OF 18-INCHES OF LOW VOLUME CHANGE (LVC) MATERIAL, OR AS IDENTIFIED IN THE SITE SPECIFIC GEOTECHNICAL REPORT.
- FILL MATERIALS SHALL BE PER GEOTECHNICAL REPORT AND SHALL NOT INCLUDE ORGANIC MATTER, DEBRIS OR TOPSOIL. ALL FILLS PLACED ON SLOPES GREATER THAN 6:1 SHALL BE BENCHED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR REDISTRIBUTING THE TOPSOIL OVER PROPOSED TURF AND LANDSCAPED AREAS TO A MINIMUM DEPTH OF 6-INCHES BELOW FINAL GRADE.
- ALL AREAS SHALL BE GRADED FOR POSITIVE DRAINAGE, UNLESS NOTED OTHERWISE THE FOLLOWING GRADES SHALL APPLY:
 - TURF AREAS - 2.5% MINIMUM, 4H:1V MAXIMUM
 - PAVED AREAS - 1.2% MINIMUM, 5% MAXIMUM
- A.D.A. PARKING STALLS SHALL NOT BE SLOPED GREATER THEN 2% IN ANY DIRECTION AND CONSTRUCTED PER A.D.A. REQUIREMENTS.
- ALL DISTURBED AREAS SHALL BE FERTILIZED, SEEDED AND MULCHED IMMEDIATELY AFTER EARTHWORK ACTIVITIES HAVE CEASED. SEEDING SHALL BE PER THE EROSION AND SEDIMENT CONTROL PLAN AND/OR LANDSCAPE PLAN. IF NOT SPECIFIED SEEDING SHALL BE PER APWA SECTION 2400, LATEST EDITION. UNLESS OTHERWISE NOTED, SEEDING SHALL BE SUBSIDIARY TO THE CONTRACT PRICE FOR EARTHWORK AND GRADING ACTIVITIES.
- ALL DISTURBED AREAS IN THE RIGHT-OF-WAY SHALL BE SODDED.
- UNDERDRAINS ARE RECOMMENDED FOR ALL PAVED AREAS ADJACENT TO IRRIGATED TURF AND LANDSCAPED BEDS.
- CONTRACTOR SHALL ADHERE TO THE REPORTING REQUIREMENTS OUTLINED IN THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) PREPARED FOR THIS PROJECT. EROSION AND SEDIMENT CONTROL DEVICES SHALL BE PROPERLY MAINTAINED AND KEPT CLEAN OF SILT AND DEBRIS AND IN GOOD WORKING ORDER. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED AS REQUIRED.

UTILITIES:

- EXISTING UTILITIES HAVE BEEN SHOWN TO THE GREATEST EXTENT POSSIBLE BASED UPON INFORMATION PROVIDED TO THE ENGINEER. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE RESPECTIVE UTILITY COMPANIES AND FIELD LOCATING UTILITIES PRIOR TO CONSTRUCTION AND IDENTIFYING ANY POTENTIAL CONFLICTS. ALL CONFLICTS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ANY REQUIRED UTILITY RELOCATIONS. UTILITIES DAMAGED THROUGH THE NEGLIGENCE OF THE CONTRACTOR SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
- CONTRACTOR SHALL VERIFY FLOW-LINES AND STRUCTURE TOPS PRIOR TO CONSTRUCTION, AND SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES. PROVIDE SHOP DRAWINGS FOR ALL PRECAST AND MANUFACTURED UTILITY STRUCTURES FOR REVIEW BY THE ENGINEER PRIOR TO CONSTRUCTION OF THE STRUCTURES.
- UTILITY SEPARATION: WATERLINES SHALL HAVE A MINIMUM OF 10 FEET HORIZONTAL AND 2 FEET VERTICAL SEPARATION FROM ALL SANITARY SEWER LINES, MANHOLES, AND SANITARY SEWER SERVICE LATERALS, AS MEASURED FROM EDGE TO EDGE. IF MINIMUM SEPARATIONS CAN NOT BE OBTAINED, CONCRETE ENCASEMENT OF THE SANITARY LINE SHALL BE REQUIRED 10 FEET IN EACH DIRECTION OF THE CONFLICT. PAYMENT FOR TRENCHING, BACKFILLING, PIPE EMBEDMENT, FLOWABLE FILL, BACKFILL MATERIALS, CLEAN UP, SEEDING, SODDING AND ANY OTHER ITEMS NECESSARY FOR THE CONSTRUCTION OF THE UTILITY LINE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE UTILITY INSTALLATION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING RESPECTIVE UTILITY COMPANIES 48-HOURS IN ADVANCE FOR THE INSPECTION OF ANY PROPOSED UTILITY MAIN EXTENSION OR SERVICE LINE OR SERVICE CONNECTION TO ANY EXISTING MAIN.
- TRENCH SPOILS SHALL BE NEATLY PLACED ONSITE ADJACENT TO THE TRENCH, AND COMPACTED TO PREVENT SATURATION AND EXCESS SEDIMENT RUNOFF. UNSUITABLE MATERIALS, EXCESS ROCK AND SHALE, ASPHALT, CONCRETE, TREES, BRUSH ETC. SHALL BE PROPERLY DISPOSED OFFSITE. MATERIALS MAY BE WASTED ONSITE AT THE DIRECTION OF THE OWNER OR HIS APPOINTED REPRESENTATIVE.
- ALL EXCAVATION IS CONSIDERED UNCLASSIFIED, UNLESS NOTED OTHERWISE. UNCLASSIFIED EXCAVATION FOR UTILITY TRENCHING IS SUBSIDIARY TO THE UNIT PRICE PROVIDED FOR THE PIPE. ANY QUANTITY PROVIDED FOR ROCK EXCAVATION IS ESTIMATED BASED ON THE BEST INFORMATION PROVIDED TO THE PROJECT ENGINEER. THE ENGINEER HAS THE AUTHORITY TO IDENTIFY AND DEFINE THE PHYSICAL CHARACTERISTICS TO DETERMINE THE CLASSIFICATION. UNIT PRICE QUANTITIES FOR ROCK EXCAVATION WILL BE PAID AT A TRENCH WIDTH OF THE NOMINAL PIPE DIAMETER OF THE INSTALLED MAIN PLUS 18 INCHES. CONTRACTOR IS REQUIRED TO DISPOSE OF EXCESS ROCK FROM THEIR TRENCHES BY DISPOSING IT IN AREAS AS SPECIFIED BY THE PROJECT ENGINEER.

STREET NOTES:

- ALL STREET CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE CITY OF LEE'S SUMMIT DESIGN AND CONSTRUCTION MANUAL. ALL APPLICABLE AASHTO STANDARDS HAVE BEEN MET.
- THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITY LOCATIONS PRIOR TO EXCAVATION.
- ALL INSPECTION OF STREET CONSTRUCTION TO BE PERFORMED BY THE CITY OF LEE'S SUMMIT DEVELOPMENT ENGINEERING.
- CURB RETURN RADII SHALL BE 30' AT BACK OF CURB UNLESS OTHERWISE NOTED.
- SUBGRADE TO BE COMPACTED TO 95% STANDARD PROCTOR DENSITY.
- ASSUMED DESIGN SPEED = 30 MPH (RESIDENTIAL COLLECTOR).
- MINIMUM STOPPING SIGHT DISTANCE = 200 FEET.
- MINIMUM K, SAG CURVE = 37 (20 WITH LIGHTING), CREST CURVE = 19.
- GRADE INTERSECTIONS TO DRAIN AS SHOWN.
- SSD = STOPPING SIGHT DISTANCE.
- ALL ADA SIDEWALK RAMPS SHALL BE CONSTRUCTED BY THE DEVELOPER WITH THE PUBLIC INFRASTRUCTURE.

DESIGN SPEED = 30 MPH

POSTED SPEED = 25 MPH

| SUMMARY OF QUANTITIES | | |
|-----------------------|---|----------|
| ITEM | QUANTITY | UNITS |
| 1 | INSTALL 2" TYPE 5 OR 6 ASPHALT PAVEMENT | 3,910 SY |
| 2 | INSTALL 5.5" TYPE 5 ASPHALT PAVEMENT | 3,910 SY |
| 3 | INSTALL 6" TYPE 5 BASE | 4,603 SY |
| 4 | INSTALL 9" SUBGRADE STABILIZATION | 4,603 SY |
| 5 | INSTALL CONCRETE COMMERCIAL DRIVE | 312 SY |
| 6 | INSTALL TYPE CG-1 CURB AND GUTTER | 1,965 LF |
| 7 | INSTALL 5" CONCRETE SIDEWALK | 1697 LF |
| 8 | INSTALL TYPE A SIDEWALK RAMPS | 7 EA |
| 9 | INSTALL TYPE B SIDEWALK RAMPS | 3 EA |
| 10 | INSTALL "END OF ROAD" MARKERS (5 LOCATIONS) | 15 EA |
| 11 | INSTALL 6" X 4" CURB INLET | 10 EA |
| 12 | INSTALL 18" HDPE STORM SEWER PIPE | 43 LF |
| 13 | INSTALL 15" HDPE STORM SEWER PIPE | 534 LF |
| 14 | TRENCHING UNDER FUTURE STREET | 204 LF |
| 15 | CLEARING, GRUBBING & DISPOSAL | 1 LS |
| 16 | EARTHWORK (FINAL GRADING) | 1 LS |
| 17 | EROSION CONTROL (MAINTENANCE & REMOVAL) | 2,490 LF |
| 19 | SEED & MULCH DISTURBED AREAS | 1 LS |
| 20 | STRIPING & SIGNAGE | 1 LS |

| Sheet List Table | |
|------------------|--|
| Sheet Number | Sheet Title |
| 1 | COVER SHEET |
| 2 | GENERAL LAYOUT - OVERALL |
| 3 | GENERAL LAYOUT - SHENANDOAH DRIVE |
| 4 | OVERALL GRADING PLAN |
| 5 | OVERALL DRAINAGE MAP |
| 6 | SHENANDOAH DRIVE - DRAINAGE MAP |
| 7 | PRE-CONSTRUCTION EROSION CONTROL PLAN |
| 8 | EROSION CONTROL PLAN |
| 9 | POST-CONSTRUCTION EROSION CONTROL PLAN |
| 10 | EROSION CONTROL DETAILS |
| 11 | SHENANDOAH DRIVE - PLAN & PROFILE |
| 12 | INTERSECTION DETAILS |
| 13 | INTERSECTION DETAILS |
| 14 | STORM PLAN |
| 15 | STORM CALCS |
| 16 | STORM PROFILES |
| 17 | STREET DETAILS |
| 18 | STREET DETAILS |
| 19 | STORM DETAILS |
| 20 | STORM DETAILS |
| 21 | STREET SIGN & PAVEMENT MARKING PLAN |
| 22 | STREET SIGN & PAVEMENT MARKING DETAILS |

PREPARED BY:



01/24/2024

SCHLAGEL & ASSOCIATES, P.A.

APPROVED BY:

CITY ENGINEER
APPROVED FOR ONE YEAR FROM THIS DATE

DATE

OWNER/DEVELOPER:

GRIFFIN RILEY PROPERTY GROUP
JAKE LOVELESS, VICE PRESIDENT
21 SE 29TH TERRACE
LEE'S SUMMIT
p 816-366-7900
JAKE@GRIFFINRILEY.COM

RESIDENCES AT BLACKWELL
STREET, STORMWATER AND EROSION &
SEDIMENT CONTROL
SE SHENANDOAH DRIVE LEE'S SUMMIT, MO

| REVISION DATE | DESCRIPTION |
|---------------|-----------------------|
| 01/23/2023 | PER CITY COMMENTS |
| 03/24/2023 | PER CITY COMMENTS |
| 11/29/2023 | STORM SEWER REVISIONS |
| 01/17/2024 | PER CITY COMMENTS |

DRAWN BY: TRC
CHECKED BY: MAB
DATE PREPARED: 11/30/2022
PROJ. NUMBER: 22-102

COVER SHEET

SHEET

1

MO GRS BENCHMARK:

STATION NAME - JA-90

KC METRO ALUMINUM GRS DISK SET IN CONCRETE STAMPED "JA-90, 1988" LOCATED NEAR THE INTERSECTION OF LANGSFORD ROAD AND OLD LANGSFORD ROAD, 43 FEET SOUTHEAST OF THE CENTER OF LANGSFORD ROAD AND 32 FEET NORTH OF THE CENTER OF OLD LANGSFORD ROAD. N:1001052.8503, E:2845604.8272

ELEV. 997.045

PROJECT BENCHMARK:

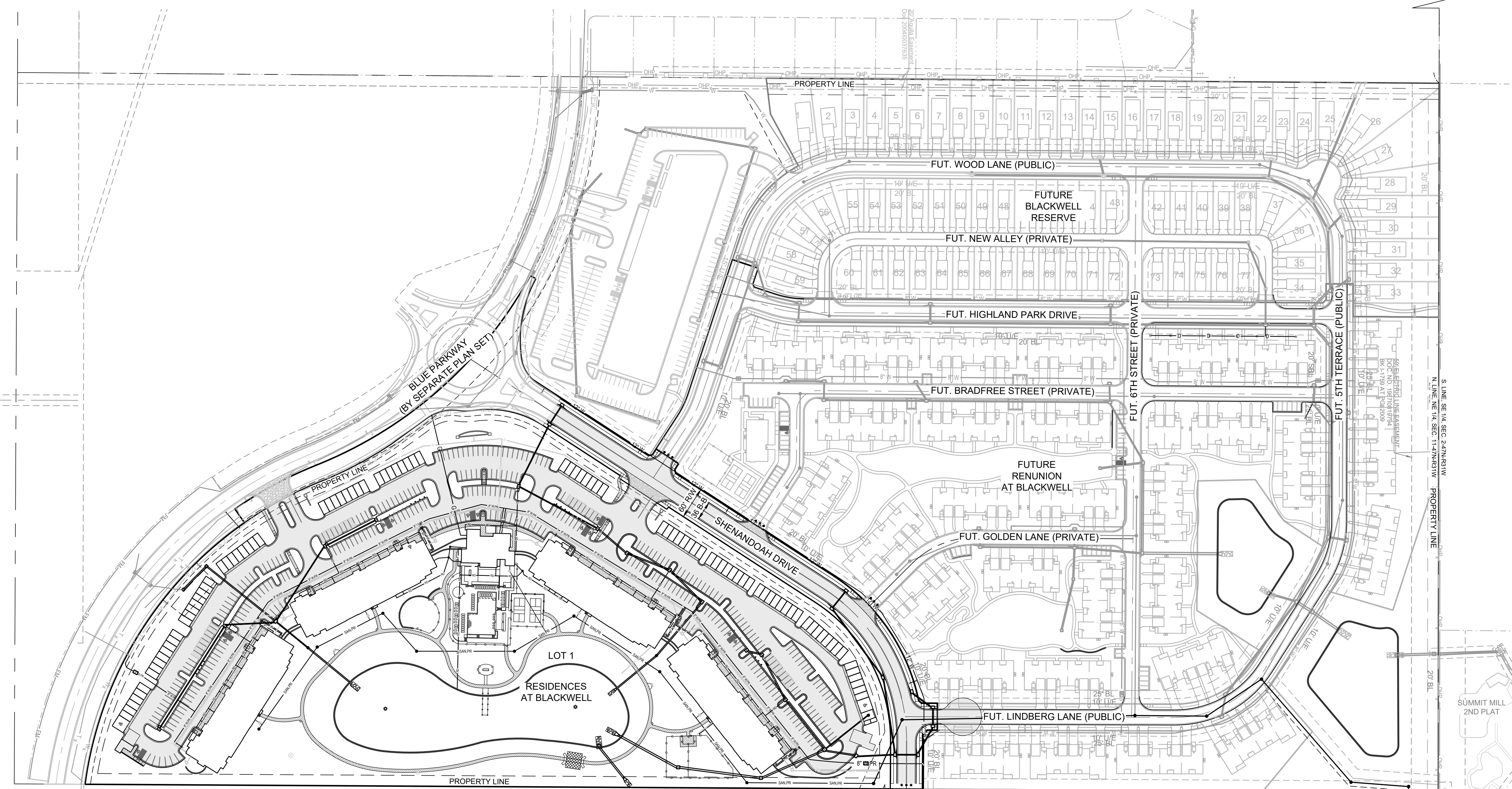
"SQUARE" CUT IN TOP OF CONCRETE STORM MANHOLE STORM MANHOLE IS LOCATED APPROX. 130 FEET EAST OF THE INTERSECTION OF SE JOEL AVE & BLUE PARKWAY AND 26 FEET SOUTH OF THE CENTERLINE OF BLUE PARKWAY. N:996874.9690, E:2840937.1365

ELEV. 1005.719

NW CORNER, NW 1/4
SEC. 11-47-31
W. LINE, NW 1/4, SEC. 11-47-31

S87°56'11"E 1316.24'

NE CORNER, NW 1/4
SEC. 11-47-31



UNPLATTED
PARCEL #
60-500-01-02-02-0-00-000
FURRY, MICHAEL E
PIERSON, ARMINDA K
FURRY, BLAKE
WEST 1/2, WEST 1/2, NE 1/4

STREET NOTES:

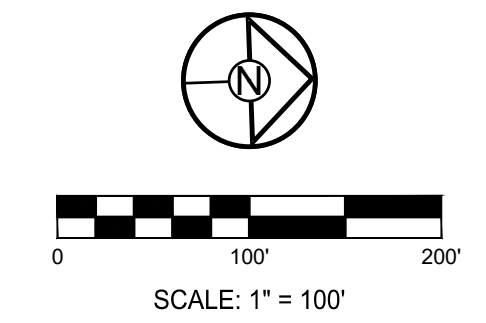
- ALL STREET CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE CITY OF LEE'S SUMMIT DESIGN AND CONSTRUCTION MANUAL. ALL APPLICABLE AASHTO STANDARDS HAVE BEEN MET.
- THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITY LOCATIONS PRIOR TO EXCAVATION.
- ALL INSPECTION OF STREET CONSTRUCTION TO BE PERFORMED BY THE CITY OF LEE'S SUMMIT DEVELOPMENT ENGINEERING.
- CURB RETURN RADII SHALL BE 30' AT BACK OF CURB UNLESS OTHERWISE NOTED.
- SUBGRADE TO BE COMPACTED TO 95% STANDARD PROCTOR DENSITY.
- ASSUMED DESIGN SPEED = 30 MPH (RESIDENTIAL COLLECTOR).
- MINIMUM STOPPING SIGHT DISTANCE = 200 FEET.
- MINIMUM K, SAG CURVE = 37 (20 WITH LIGHTING), CREST CURVE = 19.
- GRADE INTERSECTIONS TO DRAIN AS SHOWN.
- SSD = STOPPING SIGHT DISTANCE.
- ALL ADA SIDEWALK RAMPS SHALL BE CONSTRUCTED BY THE DEVELOPER WITH THE PUBLIC INFRASTRUCTURE.

MO GRS BENCHMARK:

STATION NAME - JA-90
KC METRO ALUMINUM GRS DISK SET IN CONCRETE STAMPED "JA-90, 1988" LOCATED NEAR THE INTERSECTION OF LANGSFORD ROAD AND OLD LANGSFORD ROAD, 43 FEET SOUTHEAST OF THE CENTER OF LANGSFORD ROAD AND 32 FEET NORTH OF THE CENTER OF OLD LANGSFORD ROAD.
N:1001052.8503, E:2845604.8272
ELEV. 997.045

PROJECT BENCHMARK:

"SQUARE" CUT IN TOP OF CONCRETE STORM MANHOLE STORM MANHOLE IS LOCATED APPROX. 130 FEET EAST OF THE INTERSECTION OF SE JOEL AVE & BLUE PARKWAY AND 26 FEET SOUTH OF THE CENTERLINE OF BLUE PARKWAY.
N:996874.9690, E:2840937.1365
ELEV. 1005.719



SCHLAGEL
ENGINEERS PLANNERS SURVEYORS LANDSCAPE ARCHITECTS
14920 West 107th Street • Lenexa, Kansas 66215
(913) 492-5158 • Fax: (913) 492-8400
WWW.SCHLAGELASSOCIATES.COM
Missouri State Certificate of Authority #E200200360P-F #LA2001005237 #LS200200869F

PREPARED BY:

01/24/2024

SCHLAGEL & ASSOCIATES, P.A.

**RESIDENCES AT BLACKWELL
STREET, STORMWATER AND EROSION &
SEDIMENT CONTROL
SE SHENANDOAH DRIVE LEE'S SUMMIT, MO**

| REVISION DATE | DESCRIPTION |
|---------------|-----------------------|
| 01/23/2023 | PER CITY COMMENTS |
| 03/24/2023 | PER CITY COMMENTS |
| 11/29/2023 | STORM SEWER REVISIONS |
| 01/11/2024 | PER CITY COMMENTS |

GENERAL LAYOUT - OVERALL
SHEET
2

RESIDENCES AT BLACKWELL STREET, STORMWATER AND EROSION & SEDIMENT CONTROL SE SHENANDOAH DRIVE LEE'S SUMMIT, MO

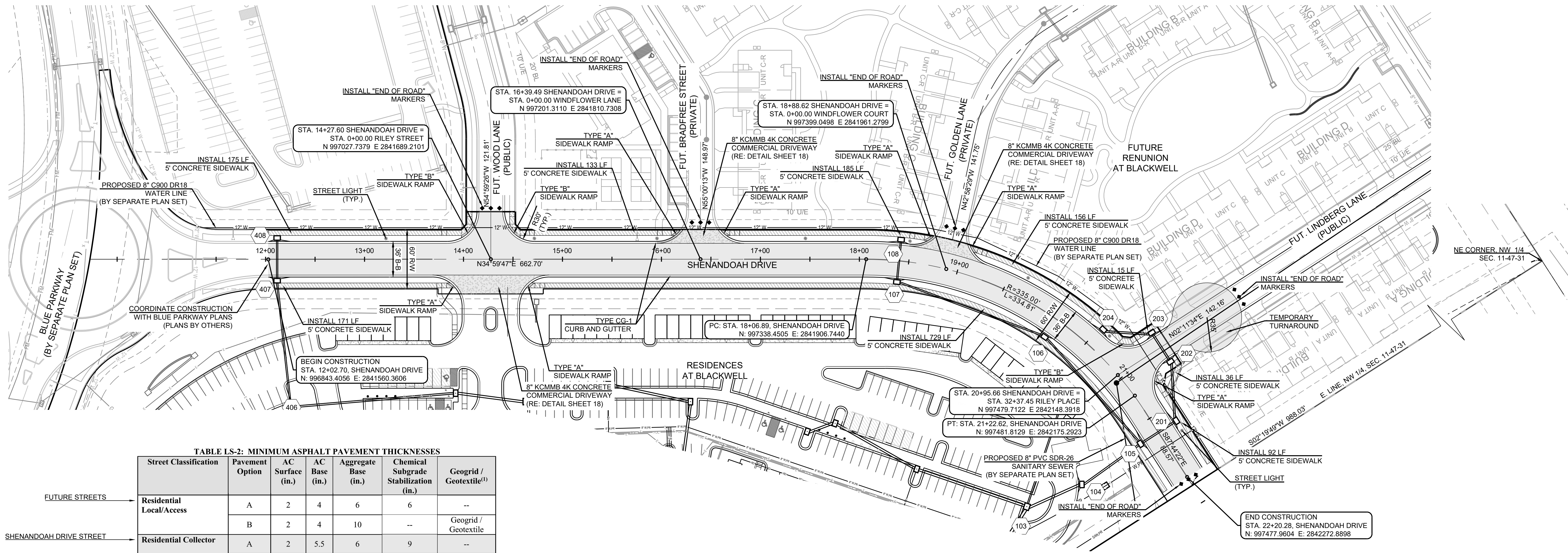


TABLE LS-2: MINIMUM ASPHALT PAVEMENT THICKNESSES

| Street Classification | Pavement Option | AC Surface (in.) | AC Base (in.) | Aggregate Base (in.) | Chemical Subgrade Stabilization (in.) | Geogrid / Geotextile ⁽¹⁾ |
|--|-----------------|------------------|---------------|----------------------|---------------------------------------|-------------------------------------|
| FUTURE STREETS Residential Local/Access | A | 2 | 4 | 6 | 6 | -- |
| | B | 2 | 4 | 10 | -- | Geogrid / Geotextile |
| SHENANDOAH DRIVE STREET Residential Collector | A | 2 | 5.5 | 6 | 9 | -- |
| | B | 2 | 5.5 | 12 | -- | Geogrid / Geotextile |
| Commercial Industrial Local/Collector | A | 2 | 7.5 | 6 | 9 | -- |
| | B | 2 | 7.5 | 12 | -- | Geogrid / Geotextile |

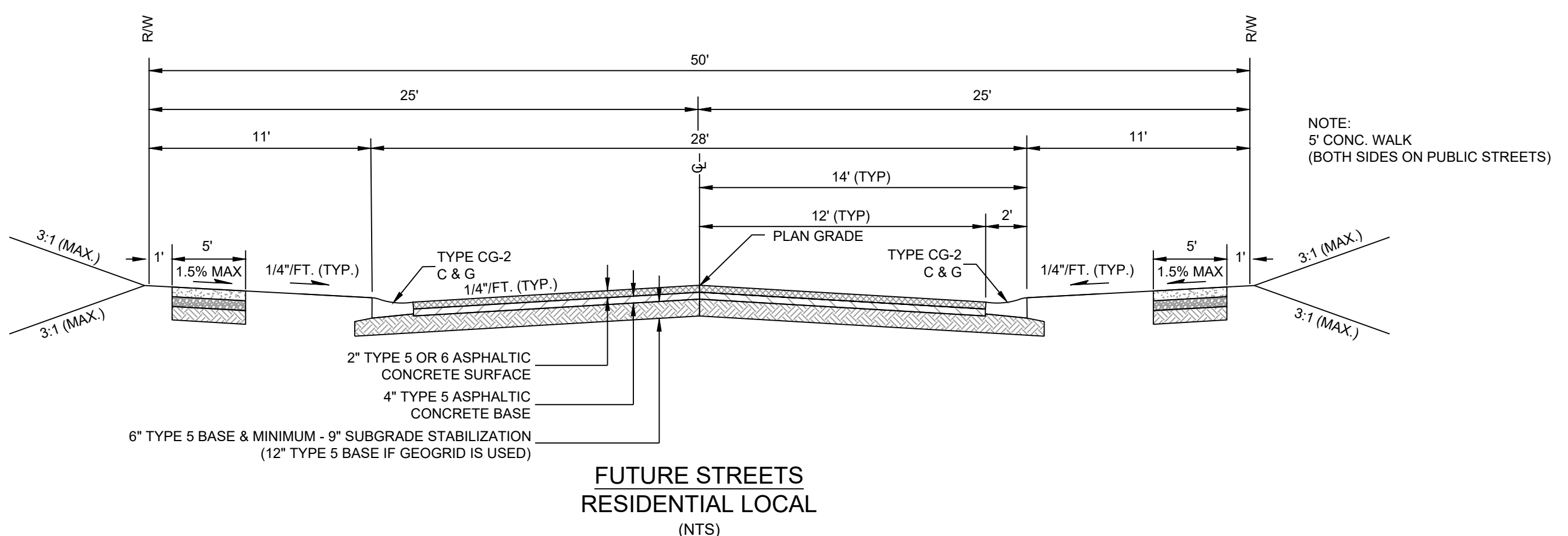
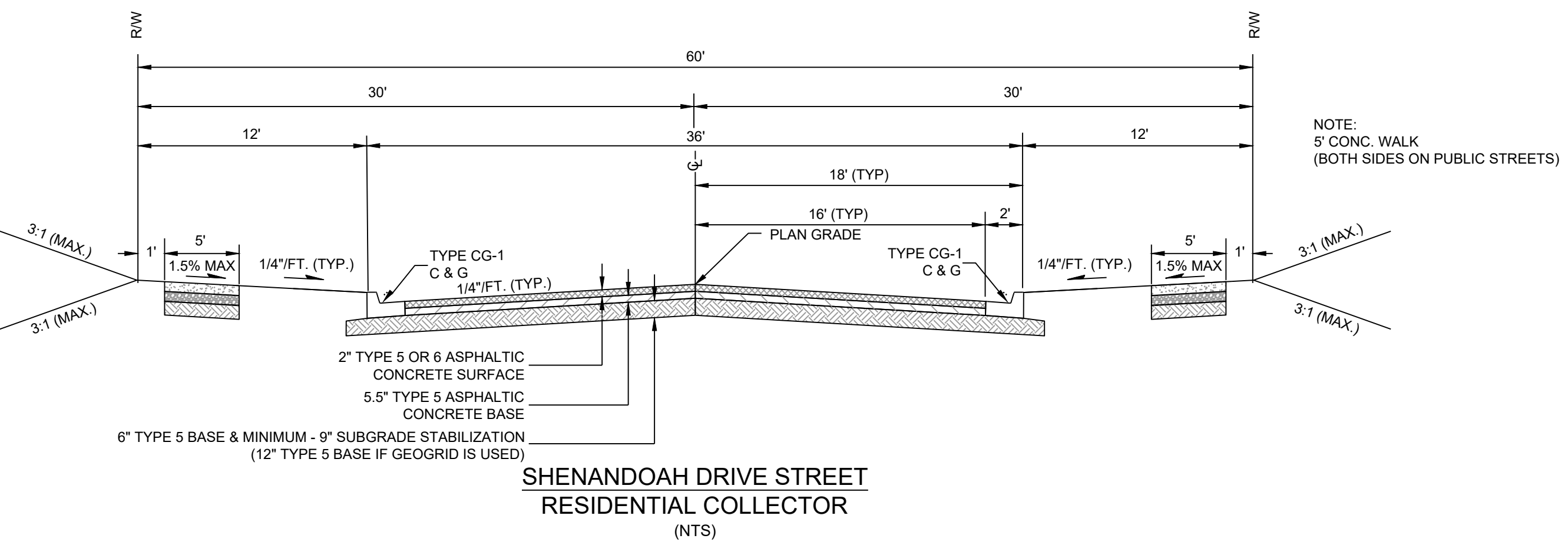
Notes:
 (1) Geogrid shall be polypropylene material and Geotextile shall be woven, polypropylene as shown in the City's Approved Products List

| Asphalt location | Mix Type | Recycled Mix Allowed? | Upper PG Limit | Lower PG limit |
|---|----------|-----------------------|----------------|----------------|
| Industrial/Arterial surface | 5 or 6 | no | 70 or greater | -22 or less |
| Base courses greater than 2 inches below the surface on industrial and arterial streets | 5 | yes | 64 or greater | -22 or less |
| Local and Collector surface | 5 or 6 | no | 64 or greater | -22 or less |
| Base courses greater than 2 inches below the surface on local and collector streets | 5 | yes | 64 or greater | -22 or less |

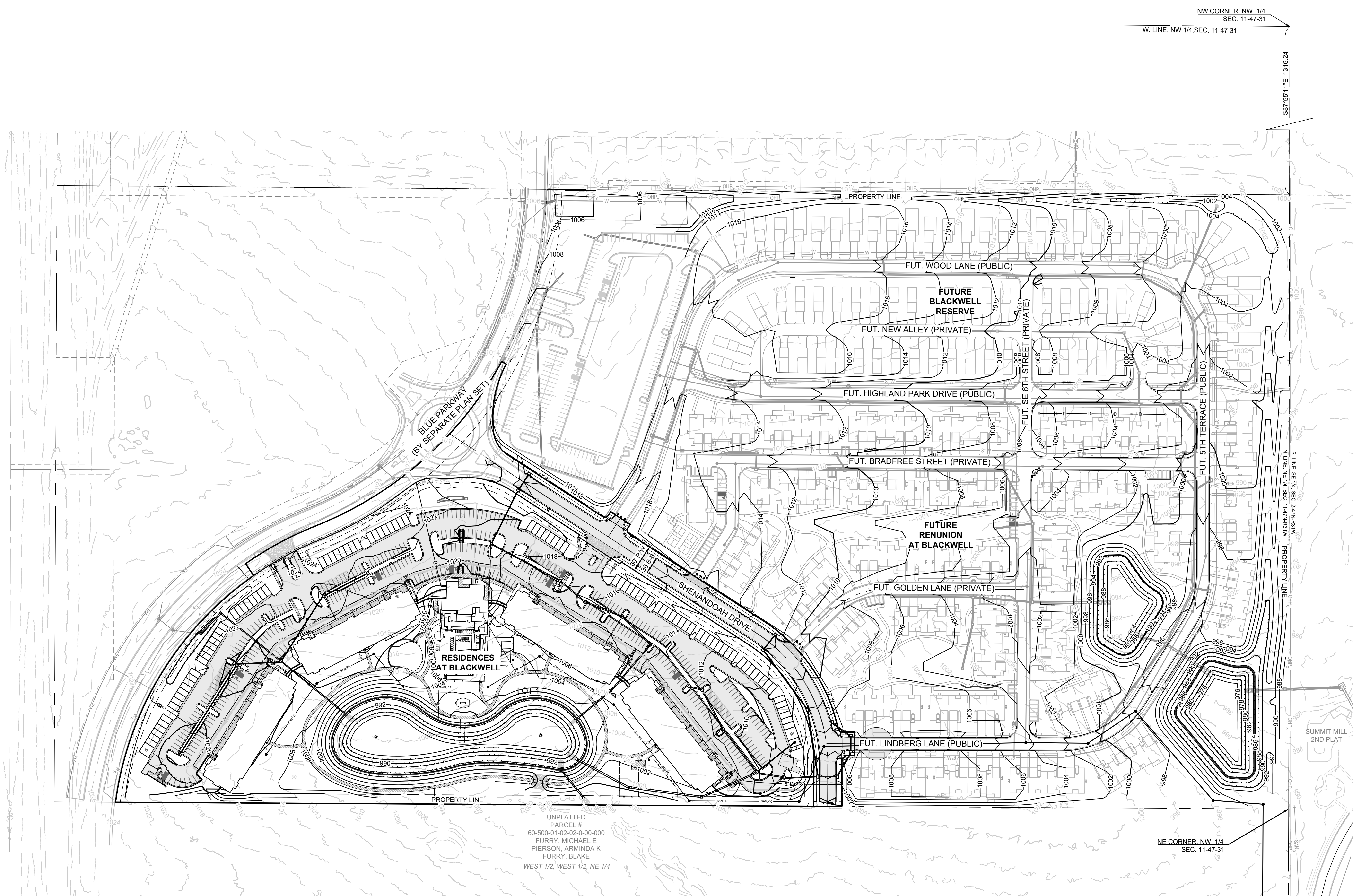
- STREET NOTES:**
- ALL STREET CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE CITY OF LEE'S SUMMIT DESIGN AND CONSTRUCTION MANUAL. ALL APPLICABLE AASHTO STANDARDS HAVE BEEN MET.
 - THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITY LOCATIONS PRIOR TO EXCAVATION.
 - ALL INSPECTION OF STREET CONSTRUCTION TO BE PERFORMED BY THE CITY OF LEE'S SUMMIT DEVELOPMENT ENGINEERING.
 - CURB RETURN RADII SHALL BE 30' AT BACK OF CURB UNLESS OTHERWISE NOTED.
 - SUBGRADE TO BE COMPACTED TO 95% STANDARD PROCTOR DENSITY.
 - ASSUMED DESIGN SPEED = 30 MPH (RESIDENTIAL COLLECTOR).
 - MINIMUM STOPPING SIGHT DISTANCE = 200 FEET.
 - MINIMUM K. SAG CURVE = 37 (20 WITH LIGHTING), CREST CURVE = 19.
 - GRADE INTERSECTIONS TO DRAIN AS SHOWN.
 - SSD = STOPPING SIGHT DISTANCE.
 - ALL ADA SIDEWALK RAMP SHALL BE CONSTRUCTED BY THE DEVELOPER WITH THE PUBLIC INFRASTRUCTURE.

MO GRS BENCHMARK:
 STATION NAME - JA-90
 KC METRO ALUMINUM GRS DISK SET IN CONCRETE STAMPED "JA-90, 1988" LOCATED NEAR THE INTERSECTION OF LANGSFORD ROAD AND OLD LANGSFORD ROAD, 43 FEET SOUTHEAST OF THE CENTER OF LANGSFORD ROAD AND 32 FEET NORTH OF THE CENTER OF OLD LANGSFORD ROAD. N:1001052.8503, E:2845604.8272
 ELEV. 997.045

PROJECT BENCHMARK:
 "SQUARE" CUT IN TOP OF CONCRETE STORM MANHOLE STORM MANHOLE IS LOCATED APPROX. 130 FEET EAST OF THE INTERSECTION OF SE JOEL AVE & BLUE PARKWAY AND 26 FEET SOUTH OF THE CENTERLINE OF BLUE PARKWAY. N:996874.9690, E:2840937.1365
 ELEV. 1005.719



| REVISION DATE | DESCRIPTION |
|---------------|-----------------------|
| 01/23/2023 | PER CITY COMMENTS |
| 03/24/2023 | PER CITY COMMENTS |
| 11/29/2023 | STORM SEWER REVISIONS |
| 01/11/2024 | PER CITY COMMENTS |



UNPLATTED
PARCEL #
60-500-01-02-02-0-00-000
FURRY, MICHAEL E
PIERSON, ARMINDA K
FURRY, BLAKE
WEST 1/2, WEST 1/2, NE 1/4

GRADING LEGEND:
 - - - 1000 - - - EXISTING CONTOUR
 ——— 1000 ——— PROPOSED CONTOUR
 (FINISHED GRADE)

NOTES:

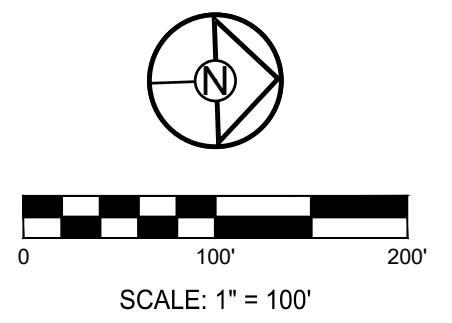
1. ALL CONSTRUCTION ON THIS PROJECT SHALL CONFORM TO THE CITY OF LEE'S SUMMIT TECHNICAL SPECIFICATIONS.
2. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITY LOCATIONS PRIOR TO EXCAVATION.

MO GRS BENCHMARK:

STATION NAME - JA-90
 KC METRO ALUMINUM GRS DISK SET IN CONCRETE STAMPED "JA-90, 1988" LOCATED NEAR THE INTERSECTION OF LANGSFORD ROAD AND OLD LANGSFORD ROAD, 43 FEET SOUTHEAST OF THE CENTER OF LANGSFORD ROAD AND 32 FEET NORTH OF THE CENTER OF OLD LANGSFORD ROAD.
 N:1001052.8503, E:2845604.8272
 ELEV. 997.045

PROJECT BENCHMARK:

"SQUARE" CUT IN TOP OF CONCRETE STORM MANHOLE STORM MANHOLE IS LOCATED APPROX. 130 FEET EAST OF THE INTERSECTION OF SE JOEL AVE & BLUE PARKWAY AND 26 FEET SOUTH OF THE CENTERLINE OF BLUE PARKWAY.
 N:996874.9690, E:2840937.1365
 ELEV. 1005.719

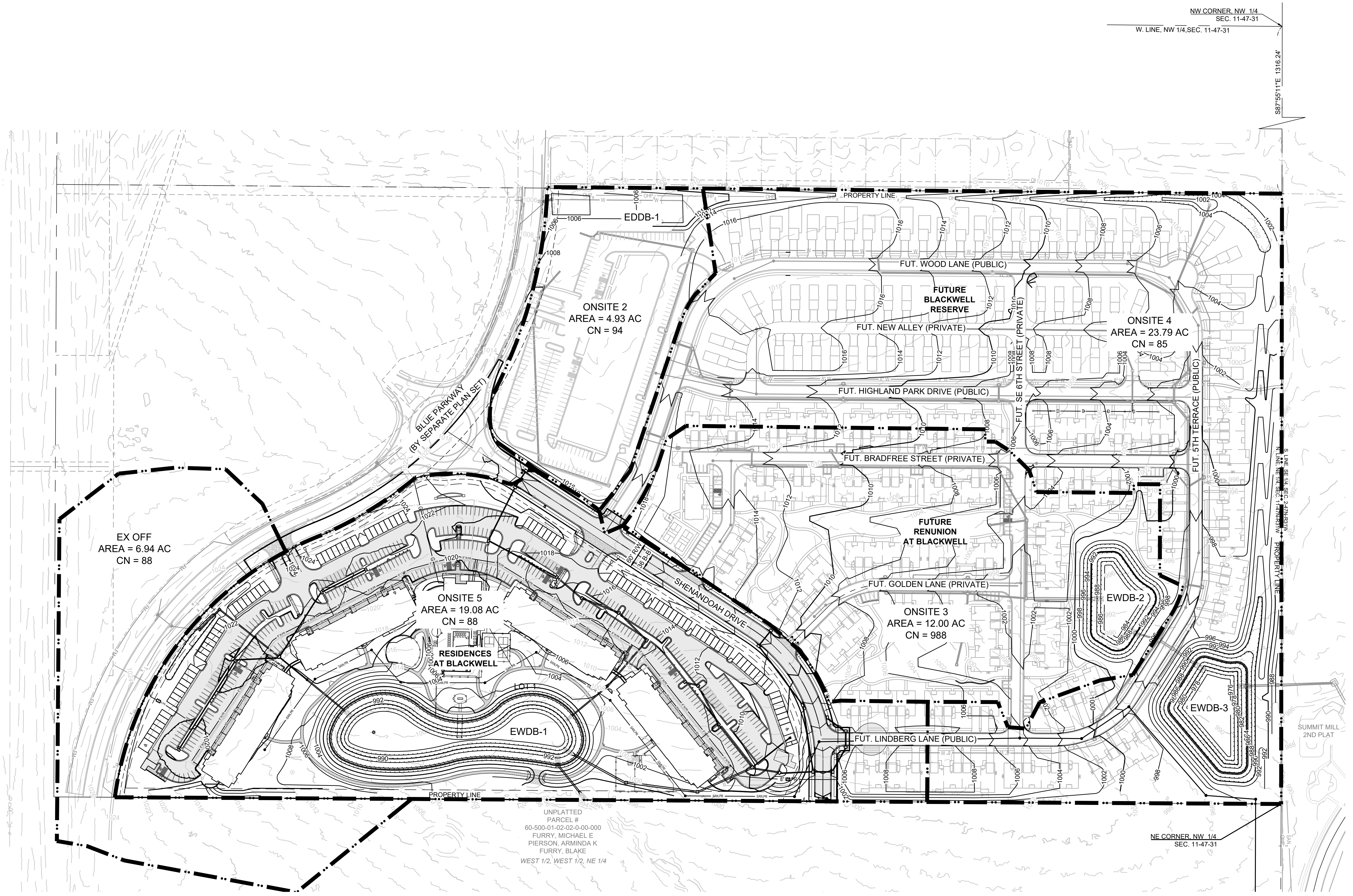


**RESIDENCES AT BLACKWELL
 STREET, STORMWATER AND EROSION &
 SEDIMENT CONTROL
 SE SHENANDOAH DRIVE LEE'S SUMMIT, MO**

| REVISION DATE | DESCRIPTION |
|---------------|-----------------------|
| 01/23/2023 | PER CITY COMMENTS |
| 03/24/2023 | PER CITY COMMENTS |
| 11/29/2023 | STORM SEWER REVISIONS |
| 01/17/2024 | PER CITY COMMENTS |
| 01/24/2024 | PER CITY COMMENTS |

DRAWN BY: ###
 CHECKED BY: ###
 DATE PREPARED: 1/23/2024
 PROJ. NUMBER: 22-102

OVERALL GRADING PLAN



EX OFF
AREA = 6.94 AC
CN = 88

ON SITE 5
AREA = 19.08 AC
CN = 88
RESIDENCES
AT BLACKWELL

ON SITE 2
AREA = 4.93 AC
CN = 94

ON SITE 3
AREA = 12.00 AC
CN = 988

ON SITE 4
AREA = 23.79 AC
CN = 85

UNPLATTED
PARCEL #
60-500-01-02-02-0-00-000
FURRY, MICHAEL E
PIERSON, ARMINDA K
FURRY, BLAKE
WEST 1/2, WEST 1/2, NE 1/4

GRADING LEGEND:
--- 1000 --- EXISTING CONTOUR
—— 1000 —— PROPOSED CONTOUR
(FINISHED GRADE)

NOTES:

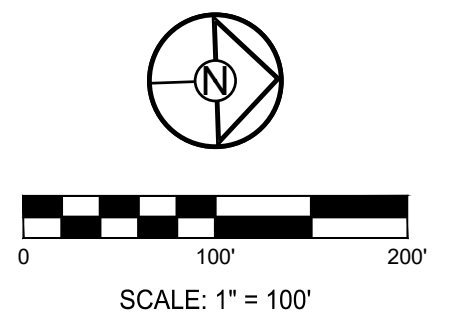
1. ALL CONSTRUCTION ON THIS PROJECT SHALL CONFORM TO THE CITY OF LEE'S SUMMIT TECHNICAL SPECIFICATIONS.
2. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITY LOCATIONS PRIOR TO EXCAVATION.

MO GRS BENCHMARK:

STATION NAME - JA-90
KC METRO ALUMINUM GRS DISK SET IN CONCRETE STAMPED "JA-90, 1988" LOCATED NEAR THE INTERSECTION OF LANGSFORD ROAD AND OLD LANGSFORD ROAD, 43 FEET SOUTHEAST OF THE CENTER OF LANGSFORD ROAD AND 32 FEET NORTH OF THE CENTER OF OLD LANGSFORD ROAD.
N:1001052.8503, E:2845604.8272
ELEV. 997.045

PROJECT BENCHMARK:

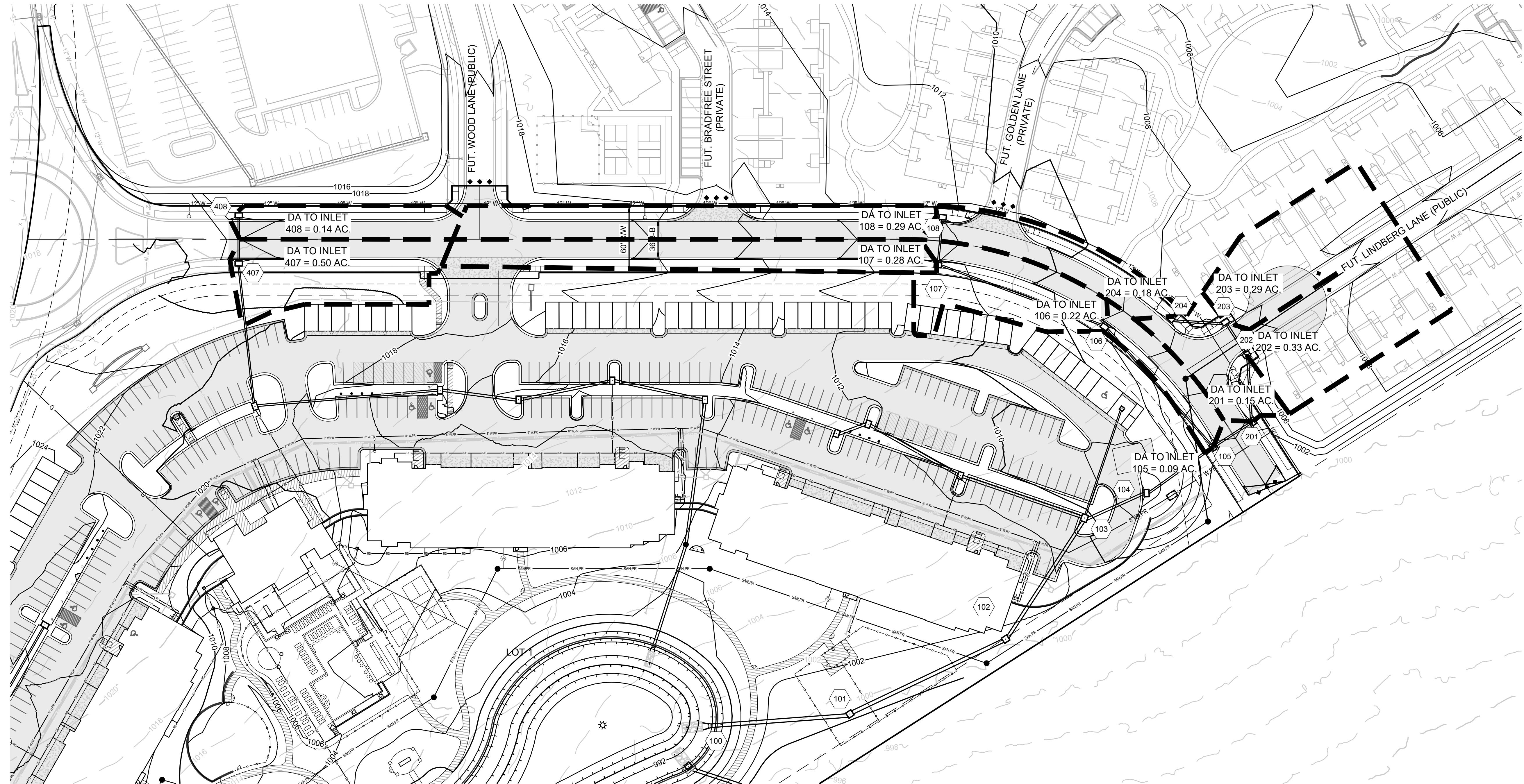
"SQUARE" CUT IN TOP OF CONCRETE STORM MANHOLE STORM MANHOLE IS LOCATED APPROX. 130 FEET EAST OF THE INTERSECTION OF SE JOEL AVE & BLUE PARKWAY AND 26 FEET SOUTH OF THE CENTERLINE OF BLUE PARKWAY.
N:996874.9690, E:2840937.1365
ELEV. 1005.719



RESIDENCES AT BLACKWELL
STREET, STORMWATER AND EROSION &
SEDIMENT CONTROL
SE SHENANDOAH DRIVE LEE'S SUMMIT, MO

| REVISION DATE | DESCRIPTION |
|---------------|-----------------------|
| 01/23/2023 | PER CITY COMMENTS |
| 03/24/2023 | PER CITY COMMENTS |
| 11/29/2023 | STORM SEWER REVISIONS |
| 01/17/2024 | PER CITY COMMENTS |
| 01/24/2024 | PER CITY COMMENTS |

OVERALL DRAINAGE MAP



GRADING LEGEND:
 --- 1000 --- EXISTING CONTOUR
 ——— 1000 ——— PROPOSED CONTOUR (FINISHED GRADE)

NOTES:

1. ALL CONSTRUCTION ON THIS PROJECT SHALL CONFORM TO THE CITY OF LEE'S SUMMIT TECHNICAL SPECIFICATIONS.
2. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITY LOCATIONS PRIOR TO EXCAVATION.

MO GRS BENCHMARK:

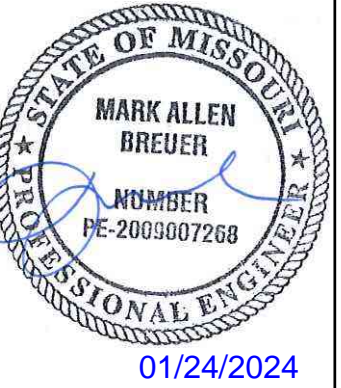
STATION NAME - JA-90
 KC METRO ALUMINUM GRS DISK SET IN CONCRETE STAMPED "JA-90, 1988" LOCATED NEAR THE INTERSECTION OF LANGSFORD ROAD AND OLD LANGSFORD ROAD, 43 FEET SOUTHEAST OF THE CENTER OF LANGSFORD ROAD AND 32 FEET NORTH OF THE CENTER OF OLD LANGSFORD ROAD.
 N:1001052.8503, E:2845604.8272
 ELEV. 997.045

PROJECT BENCHMARK:

"SQUARE" CUT IN TOP OF CONCRETE STORM MANHOLE STORM MANHOLE IS LOCATED APPROX. 130 FEET EAST OF THE INTERSECTION OF SE JOEL AVE & BLUE PARKWAY AND 26 FEET SOUTH OF THE CENTERLINE OF BLUE PARKWAY.
 N:996874.9690, E:2840937.1365
 ELEV. 1005.719



PREPARED BY:



SCHLAGEL & ASSOCIATES, P.A.

RESIDENCES AT BLACKWELL STREET, STORMWATER AND EROSION & SEDIMENT CONTROL
 SE SHENANDOAH DRIVE LEE'S SUMMIT, MO

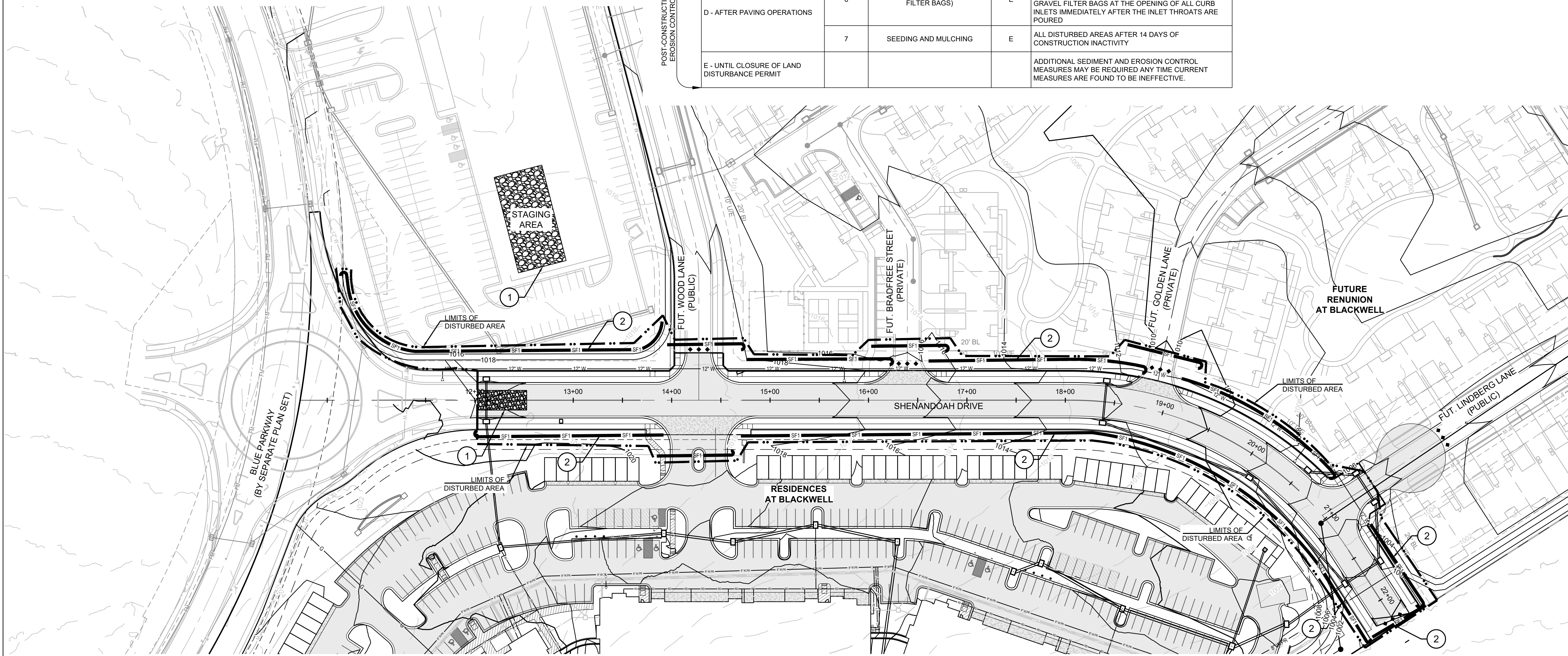
| REVISION DATE | DESCRIPTION |
|---------------|-----------------------|
| 01/23/2023 | PER CITY COMMENTS |
| 03/24/2023 | PER CITY COMMENTS |
| 11/29/2023 | STORM SEWER REVISIONS |
| 01/17/2024 | PER CITY COMMENTS |

SHENANDOAH DRIVE - DRAINAGE MAP

SHEET

| EROSION AND SEDIMENT CONTROL STAGING CHART | | | | | |
|--|--|-------------------------------|---------------------------------------|--|--|
| | PROJECT STAGE | BMP PLAN REF. NO | BMP DESCRIPTION | REMOVE AFTER STAGE | NOTES: |
| PRE-CONSTRUCTION EROSION CONTROL | A - PRIOR TO LAND DISTURBANCE | 1 | CONSTRUCTION ENTRANCE & STAGING AREA | D | MAINTAIN, REPAIR, OR REPLACE AS NECESSARY |
| | | 2 | SILT FENCE (PRIOR TO CONSTRUCTION) | E | PLACE WHERE INDICATED. REPAIR OR REPLACE AS NECESSARY AND REMOVE ONLY WHEN GRADED AREAS HAVE SUFFICIENT GROUND COVER ESTABLISHED |
| EROSION CONTROL | B - MASS GRADING | 3 | SILT FENCE (DURING CONSTRUCTION) | E | PLACE WHERE INDICATED. REPAIR OR REPLACE AS NECESSARY AND REMOVE ONLY WHEN GRADED AREAS HAVE SUFFICIENT GROUND COVER ESTABLISHED |
| | C - UTILITY CONSTRUCTION | 4 | CONCRETE WASHOUT AREA | E | MAINTAIN, REPAIR, OR REPLACE AS NECESSARY |
| 5 | | INLET PROTECTION (SILT FENCE) | D/E | PLACE SILT FENCE AROUND ALL STORM SEWER STRUCTURES / YARD AREA STORM STRUCTURES TO HAVE SILT FENCE REMOVED ONLY WHEN GRADED AREAS HAVE SUFFICIENT GROUND COVER ESTABLISHED | |
| POST-CONSTRUCTION EROSION CONTROL | D - AFTER PAVING OPERATIONS | 6 | INLET PROTECTION (GRAVEL FILTER BAGS) | E | BOARDS SHALL BE PLACED IN FRONT OF INLET OPENING FROM THE TIME SILT FENCE IS REMOVED UNTIL SUCH TIME THAT THE CURB / THROAT IS POURED. PLACE GRAVEL FILTER BAGS AT THE OPENING OF ALL CURB INLETS IMMEDIATELY AFTER THE INLET THROATS ARE POURED |
| | | 7 | SEEDING AND MULCHING | E | ALL DISTURBED AREAS AFTER 14 DAYS OF CONSTRUCTION INACTIVITY |
| | E - UNTIL CLOSURE OF LAND DISTURBANCE PERMIT | | | | ADDITIONAL SEDIMENT AND EROSION CONTROL MEASURES MAY BE REQUIRED ANY TIME CURRENT MEASURES ARE FOUND TO BE INEFFECTIVE. |

| LEGEND | |
|--------|---|
| | TEMP. CONSTRUCTION ENTRANCE AND STAGING AREA |
| | CONCRETE WASHOUT AREA |
| | SILT FOAM DIKE - STAKED & INSTALL PER MFR'S RECOMMENDATIONS |
| | BMP PLAN REF. NO. |
| | SILT FENCE FOR INLET PROTECTION PRIOR TO STRUCTURE TOP |
| | SUPER SEDIMENT SILT FENCE (PRIOR TO LAND DISTURBANCE) |
| | SILT FENCE (PRIOR TO LAND DISTURBANCE) |
| | SILT FENCE (DURING CONSTRUCTION) |
| | LIMITS OF DISTURBANCE |
| | EXISTING CONTOURS |
| | PROPOSED CONTOURS |
| | GRAVEL FILTER FOR STORM SEWER STRUCTURES ONLY |



DISTURBED AREA = 2.37 A.C.

SITE SPECIFIC NOTES:

- THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITY LOCATIONS PRIOR TO EXCAVATION.
- THERE ARE NO WETLANDS, NATURAL OR ARTIFICIAL WATER STORAGE DETENTION AREAS IN THE PROJECT AREA.
- NO PART OF THE PROJECT LIES WITHIN THE 100 YEAR FLOOD PLAIN PER FEMA FLOOD INSURANCE RATE MAP NUMBERS 29095C0441G, 29095C0445G, 29095C0437G AND 29095C0439G DATED JANUARY 20TH, 2017.
- ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE IMPLEMENTED ACCORDING TO THE BMP STAGING CHART.

- ADDITIONAL EROSION CONTROL MAY BE REQUIRED BY THE CITY ENGINEER AT ANY TIME EXISTING MEASURES ARE FOUND TO BE INEFFECTIVE OR PROBLEMATIC AREAS ARE NOTED IN THE FIELD.
- STABILIZATION OF DISTURBED AREAS MUST, AT A MINIMUM, BE INITIATED IMMEDIATELY WHENEVER ANY CLEARING, GRADING, EXCAVATING, OR OTHER SOIL DISTURBING ACTIVITIES HAVE PERMANENTLY CEASED ON ANY PORTION OF THE SITE, OR TEMPORARILY CEASED ON ANY PORTION OF THE SITE AND WILL NOT RESUME FOR A PERIOD EXCEEDING 14 CALENDAR DAYS. THE DISTURBED AREAS SHALL BE PROTECTED FROM EROSION BY STABILIZING THE AREA WITH MULCH OR OTHER SIMILARLY EFFECTIVE SOIL STABILIZING BMPs. INITIAL STABILIZATION ACTIVITIES MUST BE COMPLETED WITHIN 14 DAYS AFTER SOIL DISTURBING ACTIVITIES CEASE.

- ALL PERIMETER SILT FENCE, EARTH DIKES, SEDIMENT BASINS, AND ROCK CONSTRUCTION ENTRANCES WILL BE INSTALLED BEFORE GRADING OPERATIONS BEGIN.
- SILT FENCE AND EARTH DIKES THAT ARE PLACED BEFORE GRADING BEGINS WILL BE MAINTAINED BY THE GRADING CONTRACTOR.
- AREAS WITHIN PUBLIC RIGHT-OF-WAY SHALL BE SODED IMMEDIATELY AFTER CONSTRUCTION IS COMPLETE.

GRADING LEGEND:

- 1000 --- EXISTING CONTOUR
- 1000 — PROPOSED CONTOUR (FINISHED GRADE)

NOTES:

- ALL CONSTRUCTION ON THIS PROJECT SHALL CONFORM TO THE CITY OF LEE'S SUMMIT TECHNICAL SPECIFICATIONS.
- THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITY LOCATIONS PRIOR TO EXCAVATION.

MO GRS BENCHMARK:

STATION NAME - JA-90
 KC METRO ALUMINUM GRS DISK SET IN CONCRETE STAMPED "JA-90, 1988" LOCATED NEAR THE INTERSECTION OF LANGSFORD ROAD AND OLD LANGSFORD ROAD, 43 FEET SOUTHEAST OF THE CENTER OF LANGSFORD ROAD AND 32 FEET NORTH OF THE CENTER OF OLD LANGSFORD ROAD. N:1001052.8503, E:2845604.8272
 ELEV. 997.045

PROJECT BENCHMARK:

"SQUARE" CUT IN TOP OF CONCRETE STORM MANHOLE STORM MANHOLE IS LOCATED APPROX. 130 FEET EAST OF THE INTERSECTION OF SE JOEL AVE & BLUE PARKWAY AND 26 FEET SOUTH OF THE CENTERLINE OF BLUE PARKWAY. N:996874.9690, E:2840937.1365
 ELEV. 1005.719



SCHLAGEL
 ENGINEERS PLANNERS SURVEYORS LANDSCAPE ARCHITECTS
 14920 West 107th Street • Lenexa, Kansas 66215
 (913) 492-5158 • Fax: (913) 492-8400
 WWW.SCHLAGELASSOCIATES.COM
 Missouri State Certificate of Authority
 #E2002003690F #LAC201005237 #LS2002008695F

PREPARED BY:

 01/24/2024

SCHLAGEL & ASSOCIATES, P.A.

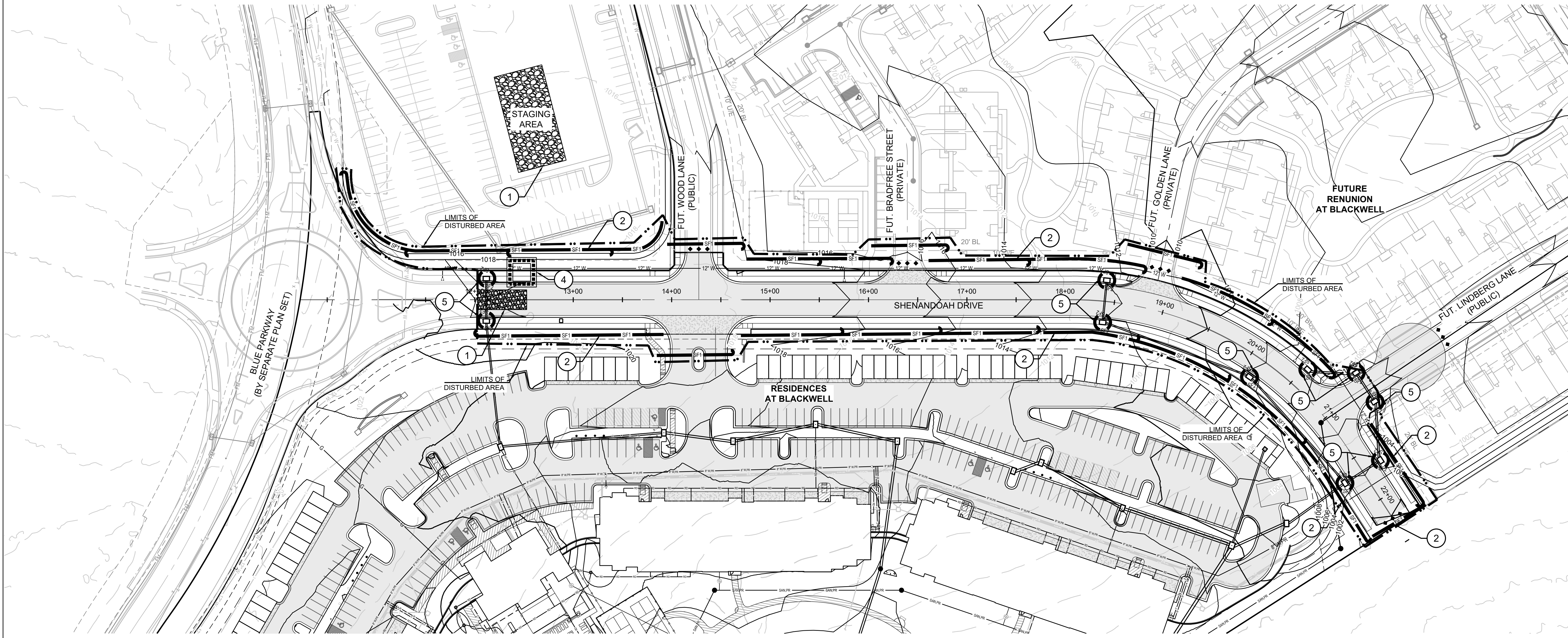
RESIDENCES AT BLACKWELL STREET, STORMWATER AND EROSION & SEDIMENT CONTROL
 SE SHENANDOAH DRIVE LEE'S SUMMIT, MO

| REVISION DATE | DESCRIPTION |
|---------------|-----------------------|
| 01/23/2023 | PER CITY COMMENTS |
| 03/24/2023 | PER CITY COMMENTS |
| 11/29/2023 | STORM SEWER REVISIONS |
| 01/17/2024 | PER CITY COMMENTS |
| 01/24/2024 | PER CITY COMMENTS |

DRAWN BY: TRC
 CHECKED BY: MAB
 DATE PREPARED: 1/23/2022
 PROJ. NUMBER: 22-102

PRE-CONSTRUCTION EROSION CONTROL PLAN

SHEET
7



GRADING LEGEND:
 --- 1000 --- EXISTING CONTOUR
 ——— 1000 ——— PROPOSED CONTOUR (FINISHED GRADE)

EROSION CONTROL NOTE:
 1. SEE SHEET 7 FOR EROSION AND SEDIMENT LEGEND, NOTES AND STAGING CHART.

MO GRS BENCHMARK:
 STATION NAME - JA-90
 KC METRO ALUMINUM GRS DISK SET IN CONCRETE STAMPED "JA-90, 1988" LOCATED NEAR THE INTERSECTION OF LANGSFORD ROAD AND OLD LANGSFORD ROAD, 43 FEET SOUTHEAST OF THE CENTER OF LANGSFORD ROAD AND 32 FEET NORTH OF THE CENTER OF OLD LANGSFORD ROAD. N:1001052.8503, E:2845604.8272
 ELEV. 997.045

PROJECT BENCHMARK:
 "SQUARE" CUT IN TOP OF CONCRETE STORM MANHOLE STORM MANHOLE IS LOCATED APPROX. 130 FEET EAST OF THE INTERSECTION OF SE JOEL AVE & BLUE PARKWAY AND 26 FEET SOUTH OF THE CENTERLINE OF BLUE PARKWAY.
 N:996874.9690, E:2840937.1365
 ELEV. 1005.719

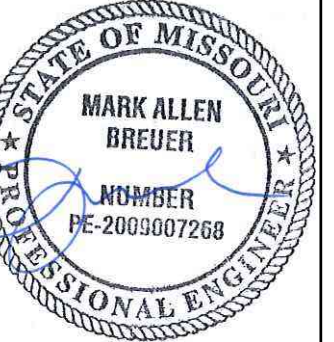


**RESIDENCES AT BLACKWELL
 STREET, STORMWATER AND EROSION &
 SEDIMENT CONTROL
 SE SHENANDOAH DRIVE LEE'S SUMMIT, MO**

| REVISION DATE | DESCRIPTION |
|---------------|-----------------------|
| 01/23/2023 | PER CITY COMMENTS |
| 03/24/2023 | PER CITY COMMENTS |
| 11/29/2023 | STORM SEWER REVISIONS |
| 01/17/2024 | PER CITY COMMENTS |

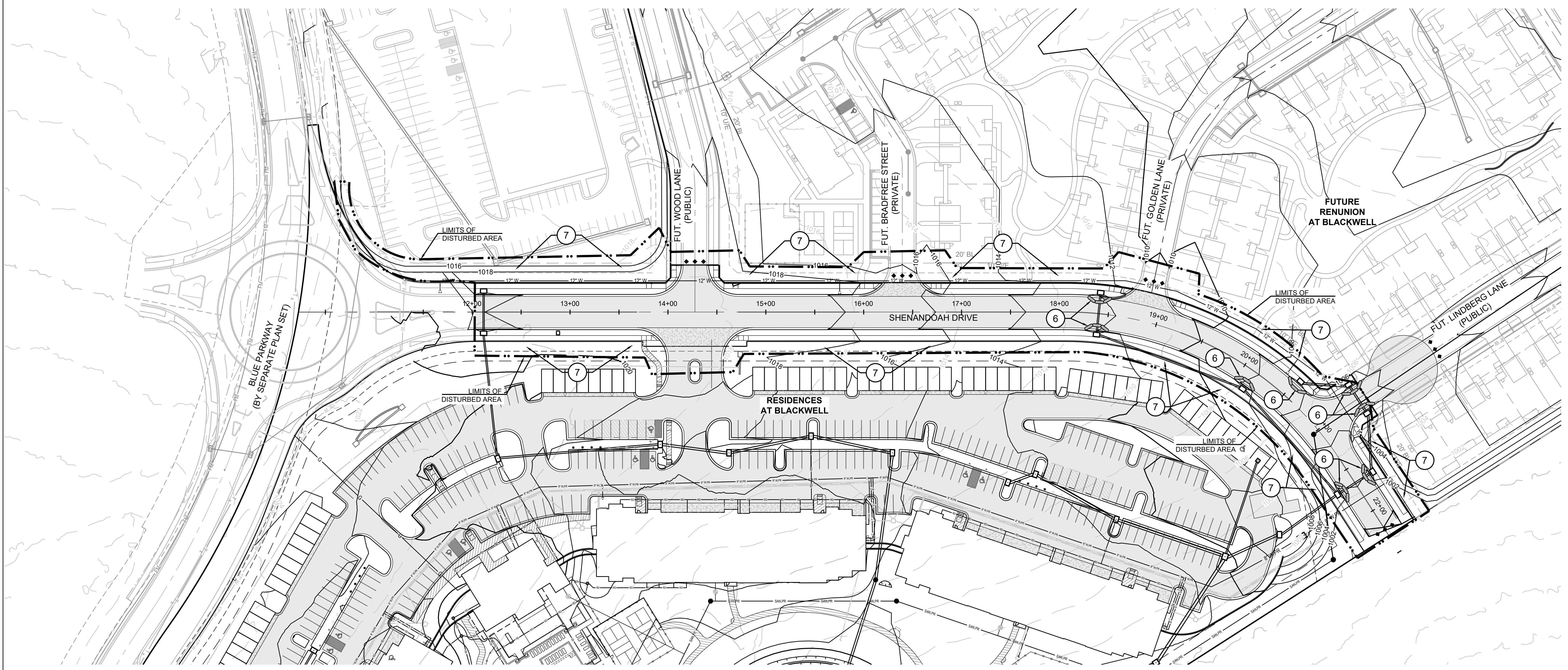
| | |
|----------------|------------|
| DRAWN BY: | TRC |
| CHECKED BY: | MAB |
| DATE PREPARED: | 11/30/2022 |
| PROJ. NUMBER: | 22-102 |

PREPARED BY:



SCHLAGEL & ASSOCIATES, P.A.

**RESIDENCES AT BLACKWELL
 STREET, STORMWATER AND EROSION &
 SEDIMENT CONTROL
 SE SHENANDOAH DRIVE LEE'S SUMMIT, MO**

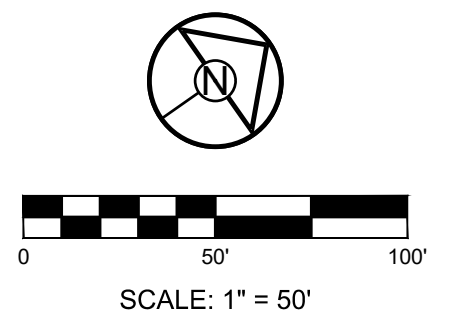


GRADING LEGEND:
 - - - 1000 - - - EXISTING CONTOUR
 ——— 1000 ——— PROPOSED CONTOUR (FINISHED GRADE)

EROSION CONTROL NOTE:
 1. SEE SHEET 7 FOR EROSION AND SEDIMENT LEGEND, NOTES AND STAGING CHART.

MO GRS BENCHMARK:
 STATION NAME - JA-90
 KC METRO ALUMINUM GRS DISK SET IN CONCRETE STAMPED "JA-90, 1988"
 LOCATED NEAR THE INTERSECTION OF LANGSFORD ROAD AND OLD LANGSFORD ROAD, 43 FEET SOUTHEAST OF THE CENTER OF LANGSFORD ROAD AND 32 FEET NORTH OF THE CENTER OF OLD LANGSFORD ROAD.
 N:1001052.8503, E:2845604.8272
 ELEV. 997.045

PROJECT BENCHMARK:
 "SQUARE" CUT IN TOP OF CONCRETE STORM MANHOLE
 STORM MANHOLE IS LOCATED APPROX. 130 FEET EAST OF THE INTERSECTION OF SE JOEL AVE & BLUE PARKWAY AND 26 FEET SOUTH OF THE CENTERLINE OF BLUE PARKWAY.
 N:996874.9690, E:2840937.1365
 ELEV. 1005.719

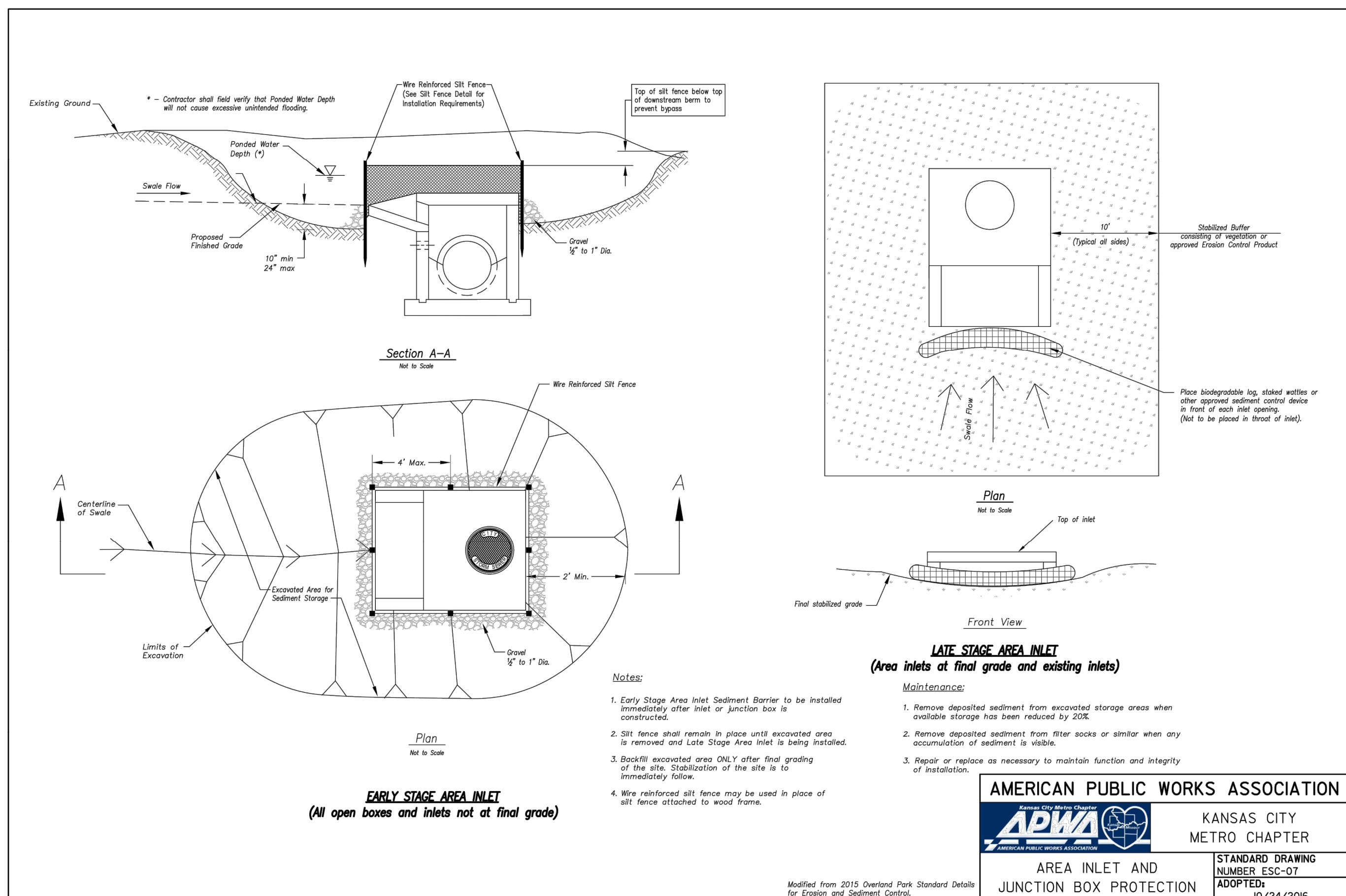
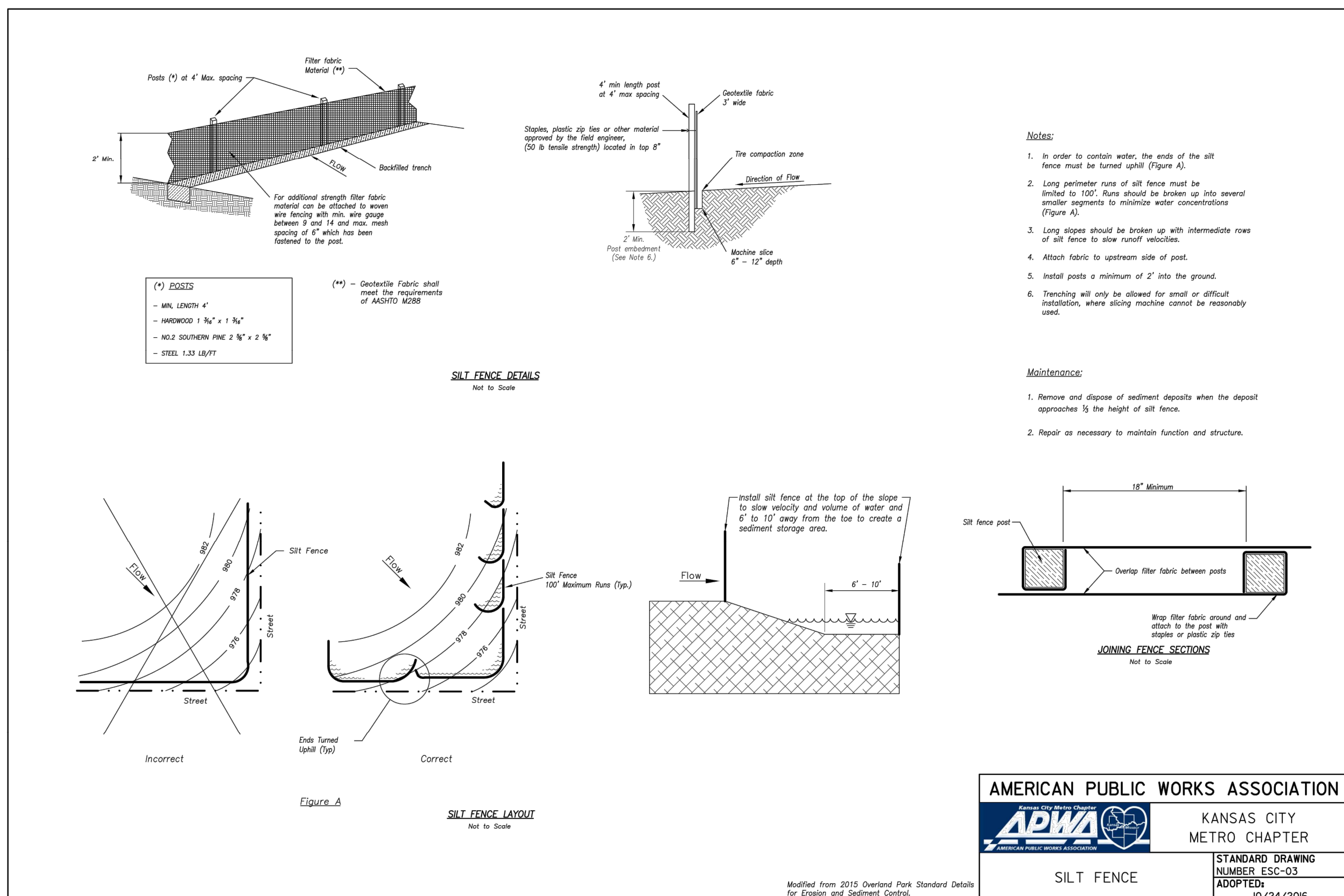
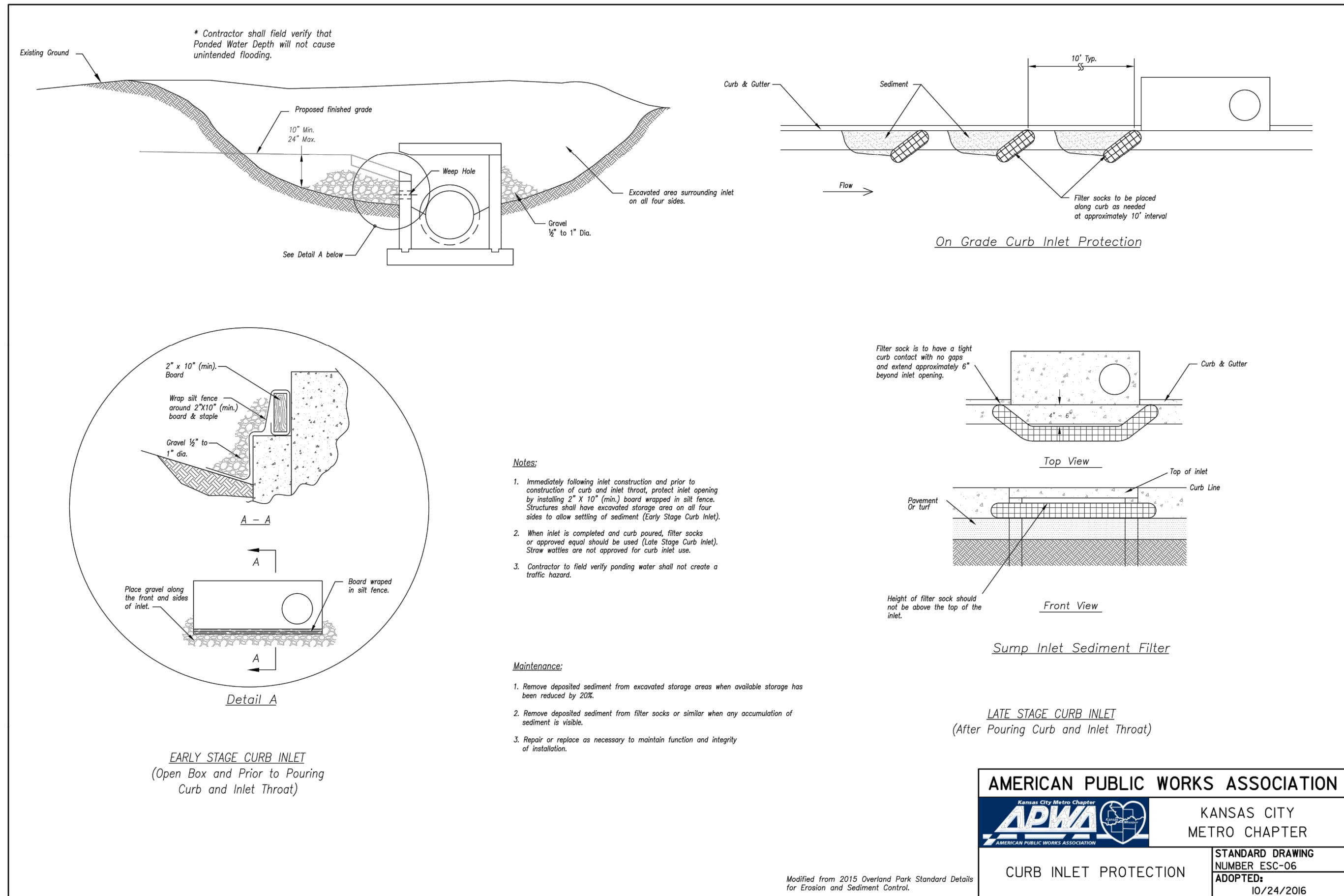
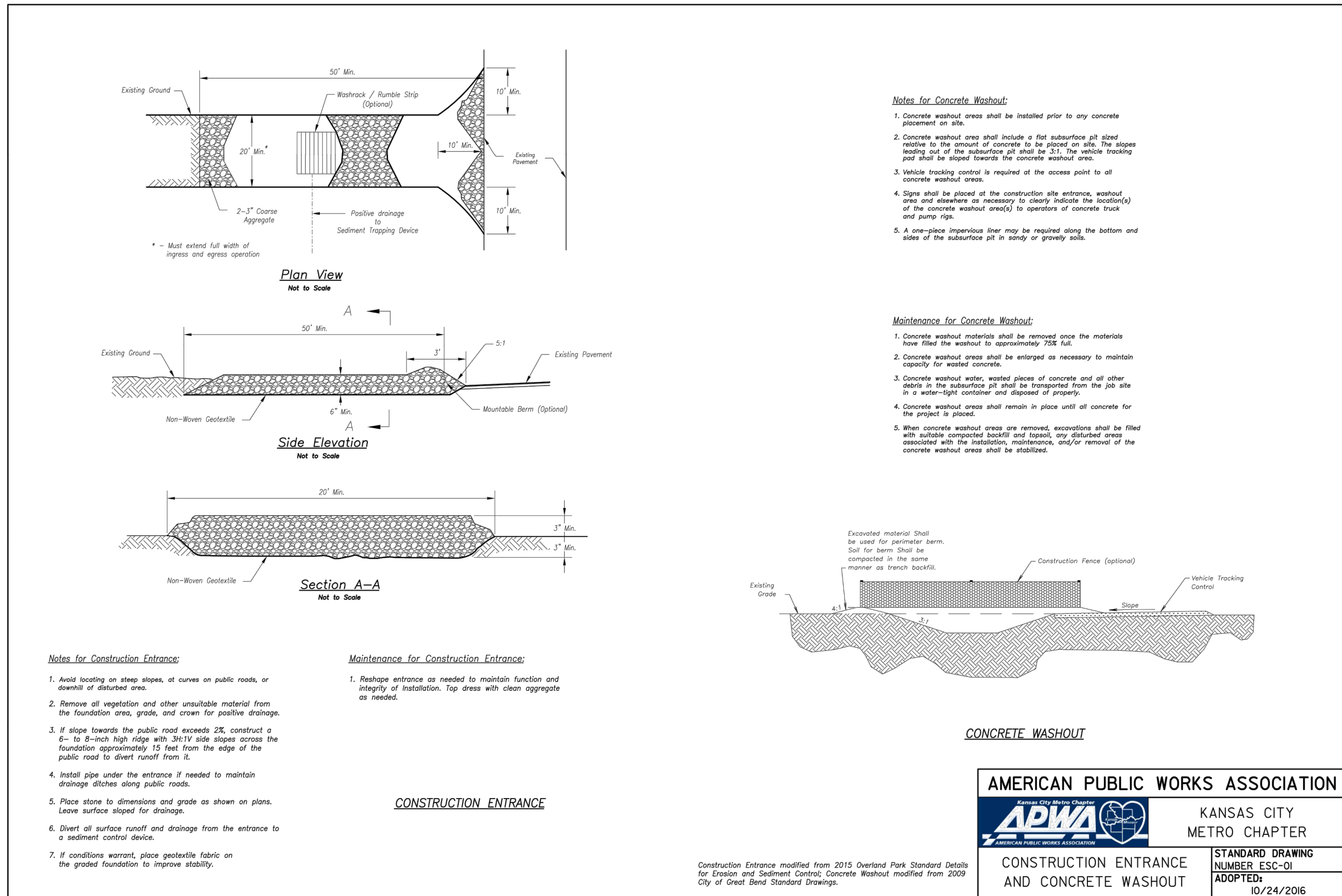


| REVISION DATE | DESCRIPTION |
|---------------|-----------------------|
| 01/23/2023 | PER CITY COMMENTS |
| 03/24/2023 | PER CITY COMMENTS |
| 11/29/2023 | STORM SEWER REVISIONS |
| 01/17/2024 | PER CITY COMMENTS |

| | |
|----------------|------------|
| DRAWN BY: | TRC |
| CHECKED BY: | MAB |
| DATE PREPARED: | 11/30/2022 |
| PROJ. NUMBER: | 22-102 |

POST-CONSTRUCTION
 EROSION
 CONTROL PLAN

SHEET
9

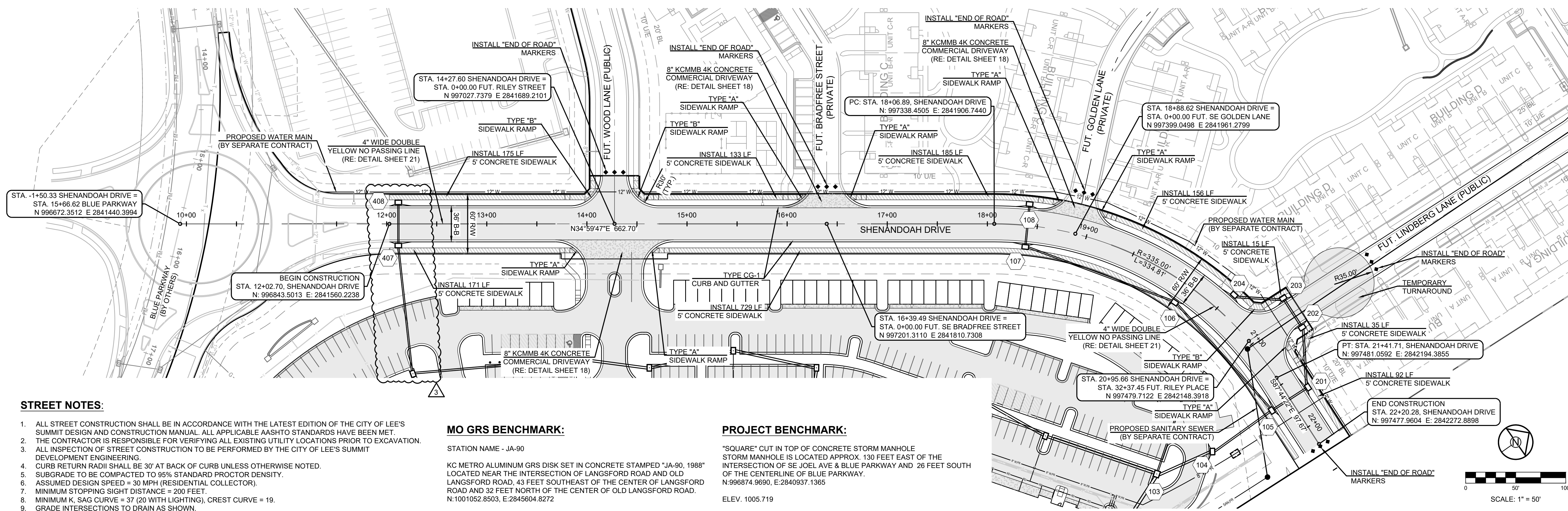


| REVISION DATE | DESCRIPTION |
|---------------|-----------------------|
| 01/23/2023 | PER CITY COMMENTS |
| 03/24/2023 | PER CITY COMMENTS |
| 11/29/2023 | STORM SEWER REVISIONS |
| 01/17/2024 | PER CITY COMMENTS |
| 01/17/2024 | PER CITY COMMENTS |
| 11/30/2022 | PER CITY COMMENTS |
| 22-102 | PROJECT NUMBER |

| REVISION DATE | DESCRIPTION |
|---------------|-----------------------|
| 01/23/2023 | PER CITY COMMENTS |
| 03/24/2023 | PER CITY COMMENTS |
| 11/29/2023 | STORM SEWER REVISIONS |
| 01/17/2024 | PER CITY COMMENTS |
| 01/17/2024 | PER CITY COMMENTS |
| 11/30/2023 | PER CITY COMMENTS |
| 11/30/2023 | PER CITY COMMENTS |

DRAWN BY: ###
 CHECKED BY: ###
 DATE PREPARED: 11/30/2023
 PROJ. NUMBER: 22-102

SHENANDOAH DRIVE - PLAN & PROFILE
 SHEET 11



STREET NOTES:

1. ALL STREET CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE CITY OF LEE'S SUMMIT DESIGN AND CONSTRUCTION MANUAL. ALL APPLICABLE AASHTO STANDARDS HAVE BEEN MET.
2. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITY LOCATIONS PRIOR TO EXCAVATION.
3. ALL INSPECTION OF STREET CONSTRUCTION TO BE PERFORMED BY THE CITY OF LEE'S SUMMIT DEVELOPMENT ENGINEERING.
4. CURB RETURN RADII SHALL BE 30' AT BACK OF CURB UNLESS OTHERWISE NOTED.
5. SUBGRADE TO BE COMPACTED TO 95% STANDARD PROCTOR DENSITY.
6. ASSUMED DESIGN SPEED = 30 MPH (RESIDENTIAL COLLECTOR).
7. MINIMUM STOPPING SIGHT DISTANCE = 200 FEET.
8. MINIMUM K, SAG CURVE = 37 (20 WITH LIGHTING), CREST CURVE = 19.
9. GRADE INTERSECTIONS TO DRAIN AS SHOWN.
10. SSD = STOPPING SIGHT DISTANCE.
11. ALL ADA SIDEWALK RAMPS SHALL BE CONSTRUCTED BY THE DEVELOPER WITH THE PUBLIC INFRASTRUCTURE.

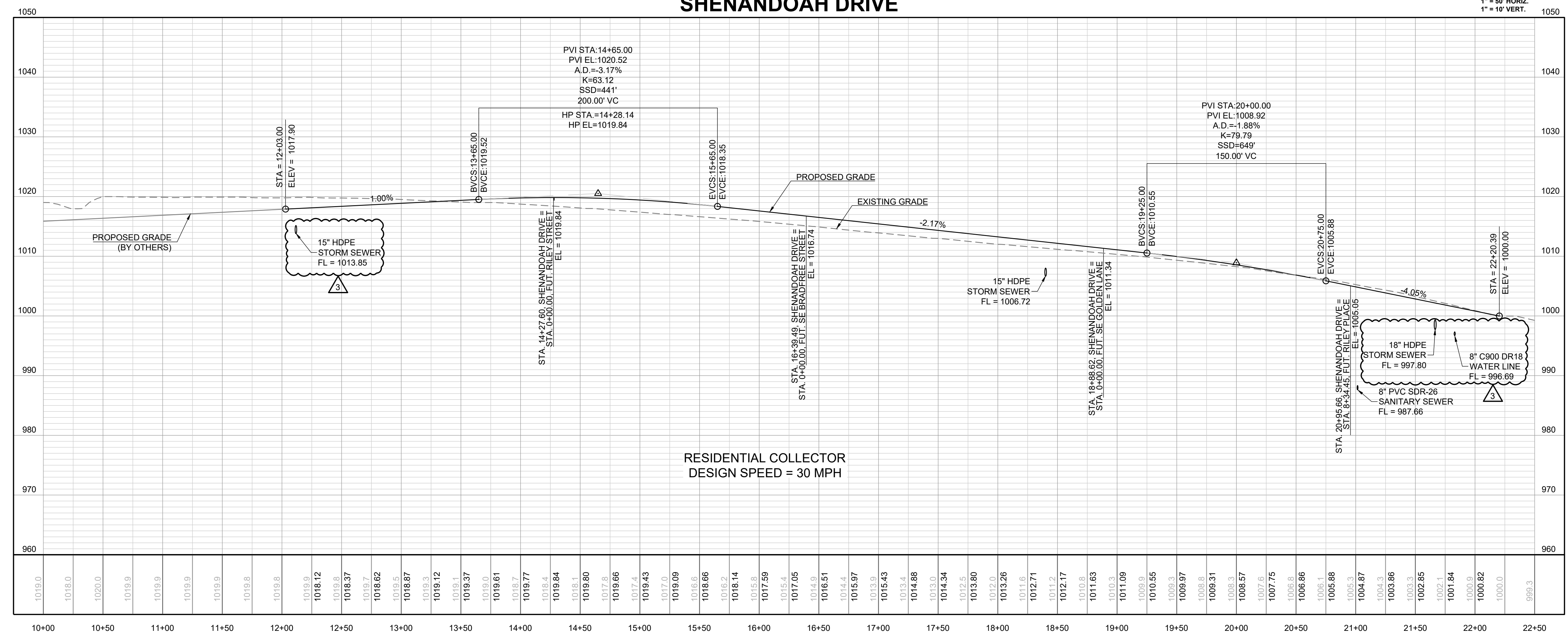
MO GRS BENCHMARK:

STATION NAME - JA-90
 KC METRO ALUMINUM GRS DISK SET IN CONCRETE STAMPED "JA-90, 1988" LOCATED NEAR THE INTERSECTION OF LANGSFORD ROAD AND OLD LANGSFORD ROAD, 43 FEET SOUTHEAST OF THE CENTER OF LANGSFORD ROAD AND 32 FEET NORTH OF THE CENTER OF OLD LANGSFORD ROAD.
 N:1001052.8503, E:2845604.8272
 ELEV. 997.045

PROJECT BENCHMARK:

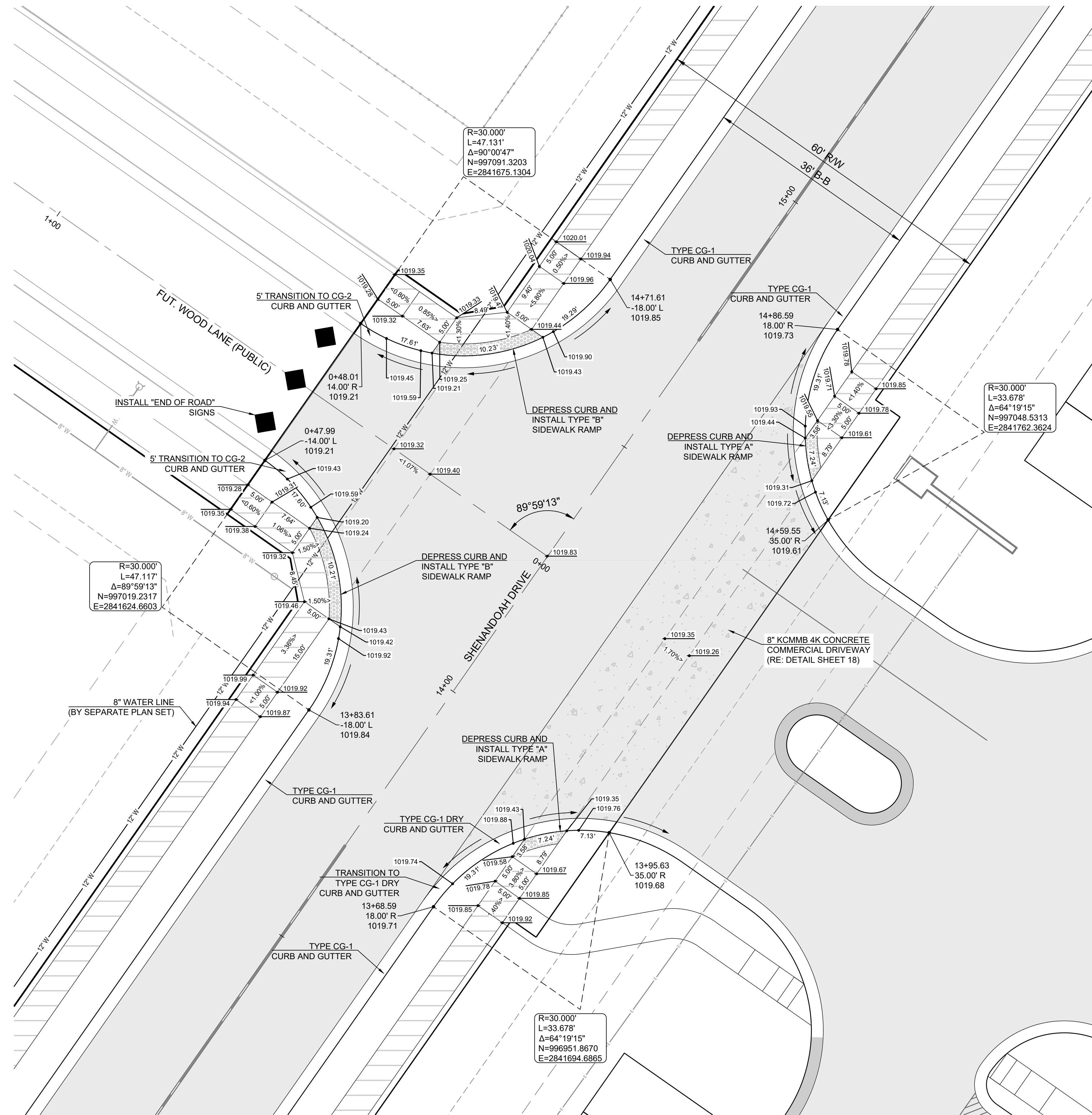
"SQUARE" CUT IN TOP OF CONCRETE STORM MANHOLE STORM MANHOLE IS LOCATED APPROX. 130 FEET EAST OF THE INTERSECTION OF SE JOEL AVE & BLUE PARKWAY AND 26 FEET SOUTH OF THE CENTERLINE OF BLUE PARKWAY.
 N:996874.9690, E:2840937.1365
 ELEV. 1005.719

SHENANDOAH DRIVE

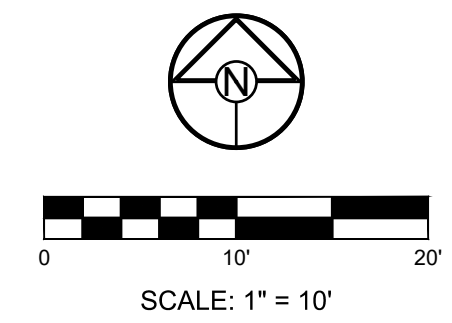


RESIDENTIAL COLLECTOR
 DESIGN SPEED = 30 MPH

1" = 50' HORIZ.
 1" = 10' VERT.



SHENANDOAH DRIVE & FUT. WOOD LANE



PREPARED BY:



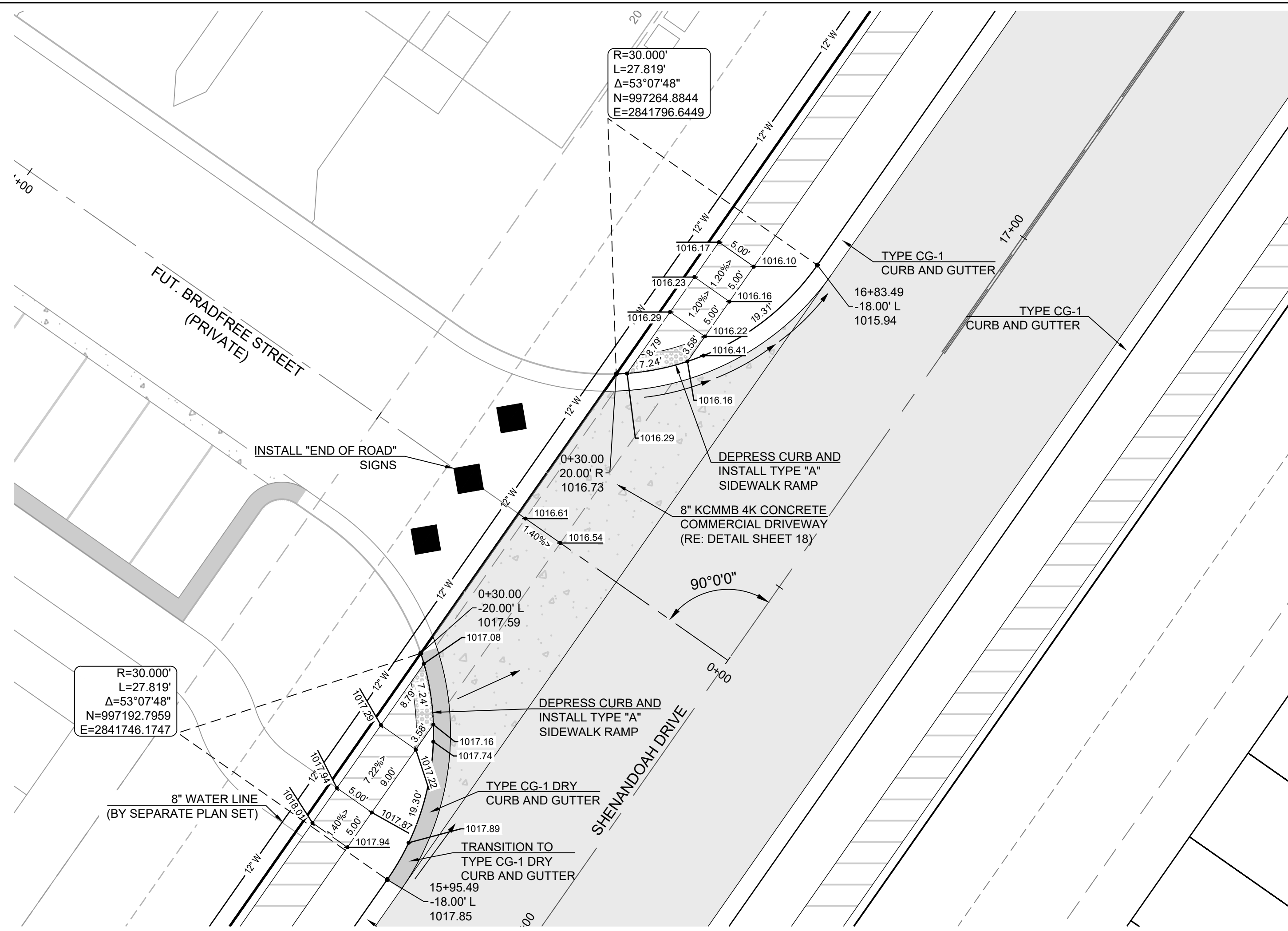
SCHLAGEL & ASSOCIATES, P.A.

RESIDENCES AT BLACKWELL
 STREET, STORMWATER AND EROSION &
 SEDIMENT CONTROL
 SE SHENANDOAH DRIVE LEE'S SUMMIT, MO

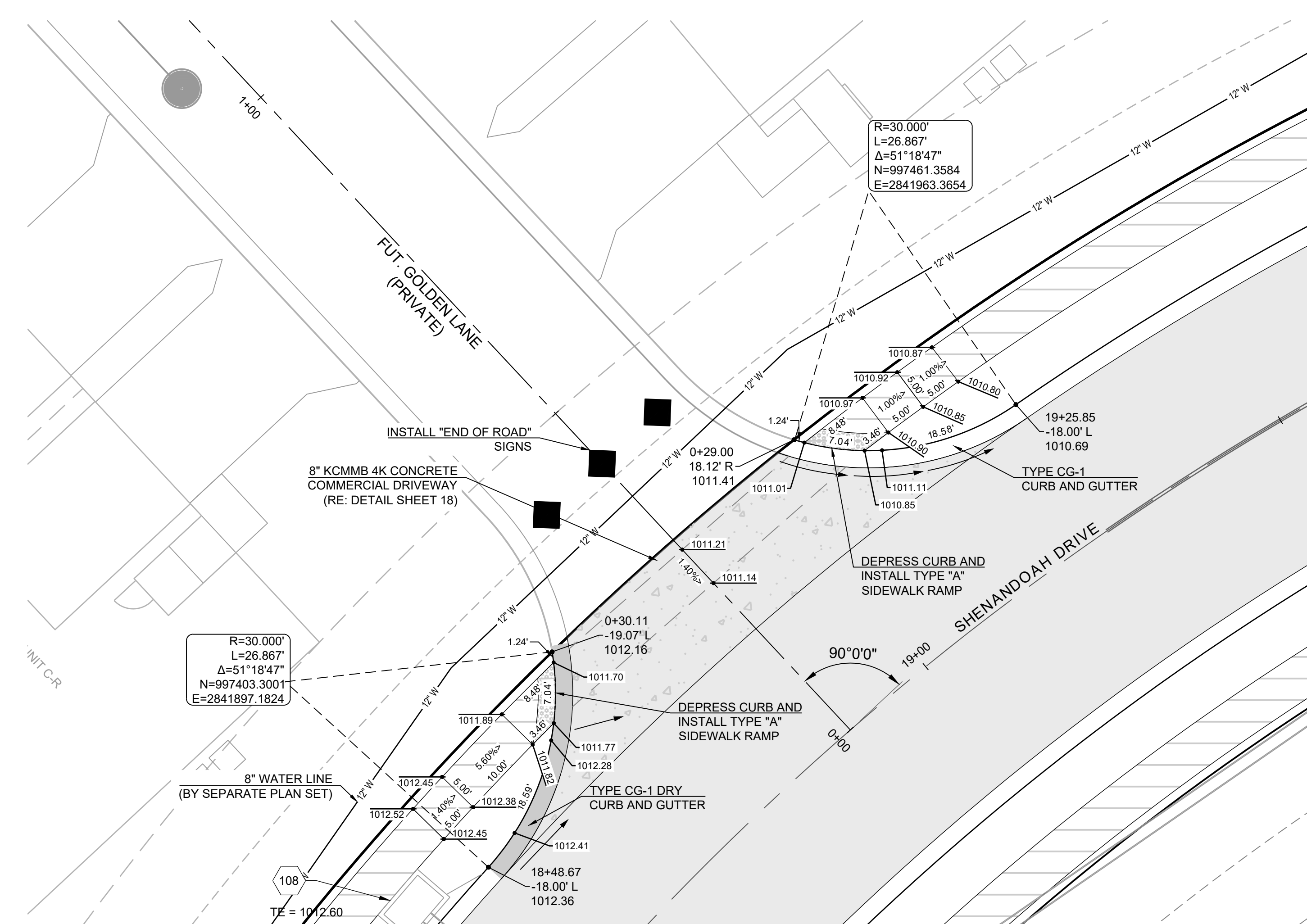
| REVISION DATE | DESCRIPTION |
|---------------|-----------------------|
| 01/23/2023 | PER CITY COMMENTS |
| 03/24/2023 | PER CITY COMMENTS |
| 11/29/2023 | STORM SEWER REVISIONS |
| 01/17/2024 | PER CITY COMMENTS |

| | |
|----------------|------------|
| DRAWN BY: | TRC |
| CHECKED BY: | MAB |
| DATE PREPARED: | 11/30/2022 |
| PROJ. NUMBER: | 22-102 |

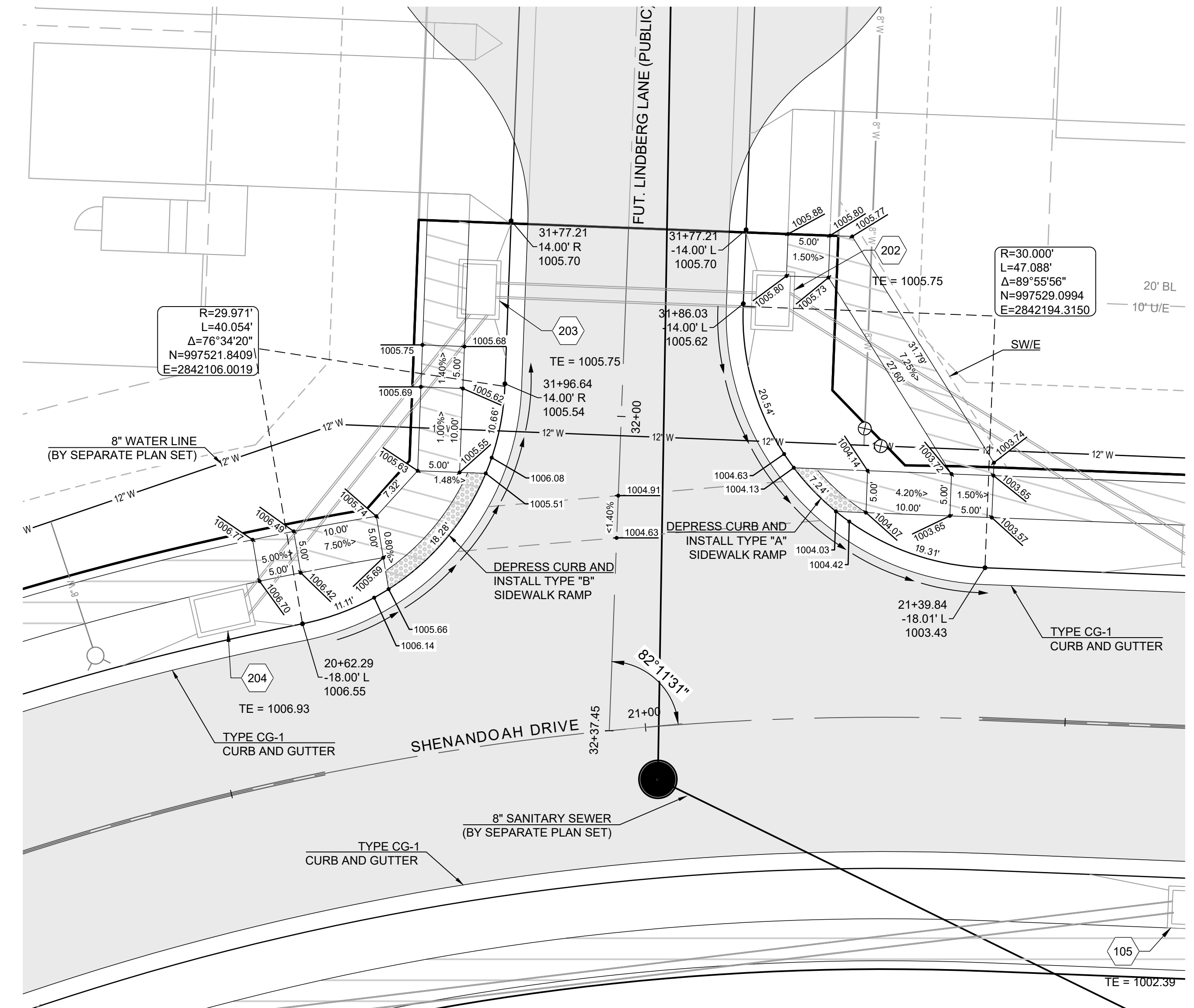
INTERSECTION
 DETAILS



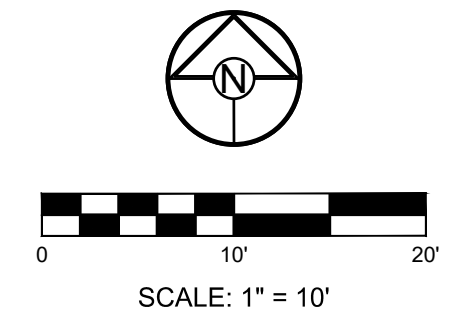
SHENANDOAH DRIVE & FUT. BRADFREET STREET



SHENANDOAH DRIVE & FUT. GOLDEN LANE



SHENANDOAH DRIVE & FUT. LINDBERG LANE

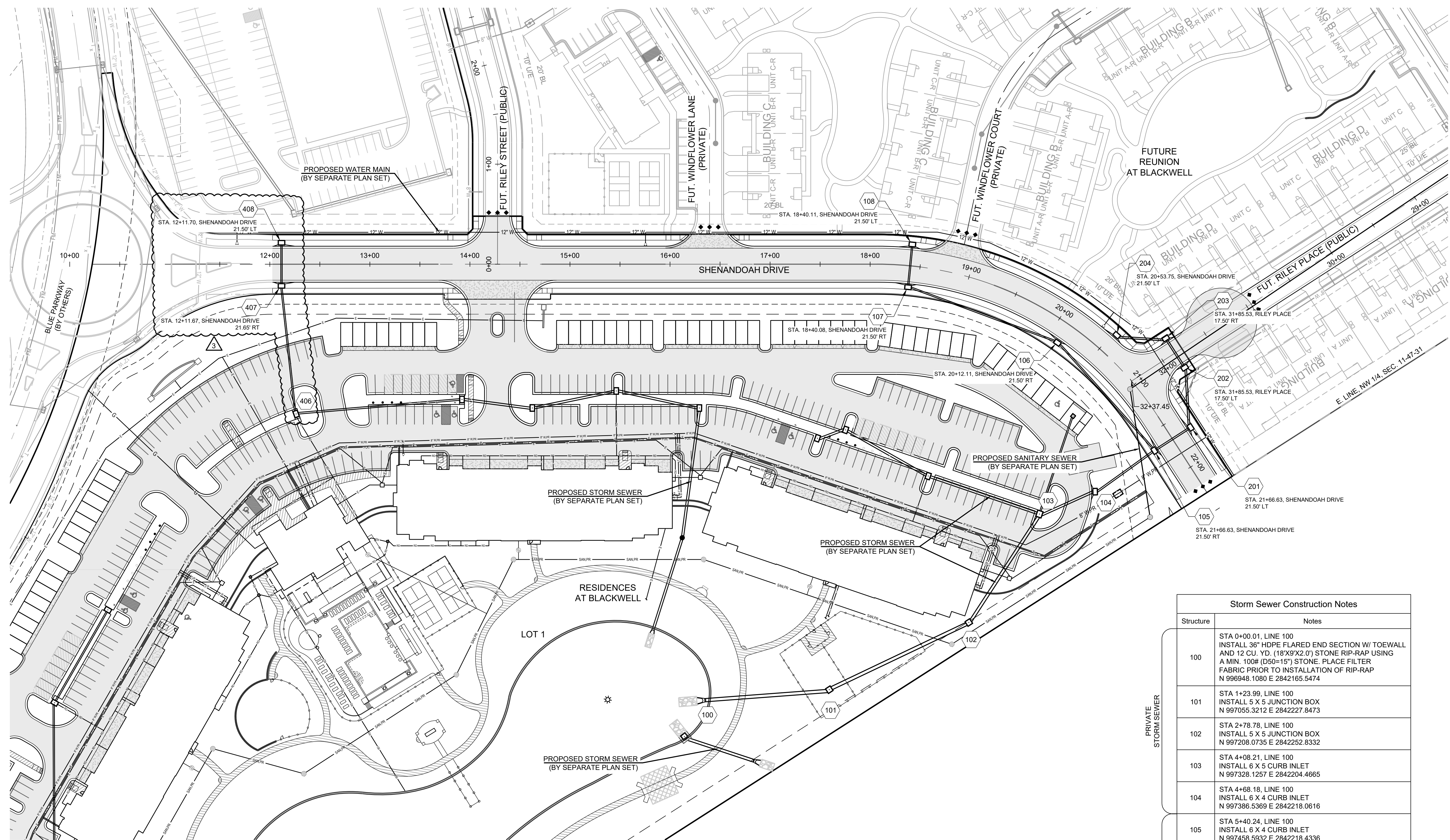


RESIDENCES AT BLACKWELL STREET, STORMWATER AND EROSION & SEDIMENT CONTROL
 SE SHENANDOAH DRIVE LEE'S SUMMIT, MO

| REVISION DATE | DESCRIPTION |
|---------------|-----------------------|
| 01/23/2023 | PER CITY COMMENTS |
| 03/24/2023 | PER CITY COMMENTS |
| 11/29/2023 | STORM SEWER REVISIONS |
| 01/11/2024 | PER CITY COMMENTS |

DRAWN BY: TRC
 CHECKED BY: MAB
 DATE PREPARED: 11/30/2022
 PROJ. NUMBER: 22-102

INTERSECTION DETAILS



- NOTES:**
- ALL CONSTRUCTION ON THIS PROJECT SHALL CONFORM TO THE CITY OF LEE'S SUMMIT TECHNICAL SPECIFICATIONS.
 - THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITY LOCATIONS PRIOR TO EXCAVATION.

MO GRS BENCHMARK:
 STATION NAME - JA-90
 KC METRO ALUMINUM GRS DISK SET IN CONCRETE STAMPED "JA-90, 1988" LOCATED NEAR THE INTERSECTION OF LANGSFORD ROAD AND OLD LANGSFORD ROAD, 43 FEET SOUTHEAST OF THE CENTER OF LANGSFORD ROAD AND 32 FEET NORTH OF THE CENTER OF OLD LANGSFORD ROAD.
 N:1001052.8503, E:2845604.8272
 ELEV. 997.045

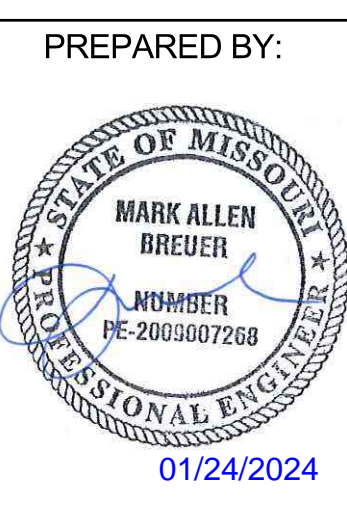
PROJECT BENCHMARK:
 "SQUARE" CUT IN TOP OF CONCRETE STORM MANHOLE STORM MANHOLE IS LOCATED APPROX. 130 FEET EAST OF THE INTERSECTION OF SE JOEL AVE & BLUE PARKWAY AND 26 FEET SOUTH OF THE CENTERLINE OF BLUE PARKWAY.
 N:996874.9690, E:2840937.1365
 ELEV. 1005.719

| Storm Sewer Construction Notes | |
|--------------------------------|--|
| Structure | Notes |
| 100 | STA 0+00.01, LINE 100 INSTALL 36" HDPE FLARED END SECTION W/ TOEWALL AND 12 CU. YD. (18'X9'X2.0') STONE RIP-RAP USING A MIN. 100# (D50=15") STONE. PLACE FILTER FABRIC PRIOR TO INSTALLATION OF RIP-RAP N 996948.1080 E 2842165.5474 |
| 101 | STA 1+23.99, LINE 100 INSTALL 5 X 5 JUNCTION BOX N 997055.3212 E 2842227.8473 |
| 102 | STA 2+78.78, LINE 100 INSTALL 5 X 5 JUNCTION BOX N 997208.0735 E 2842252.8332 |
| 103 | STA 4+08.21, LINE 100 INSTALL 6 X 5 CURB INLET N 997328.1257 E 2842204.4665 |
| 104 | STA 4+68.18, LINE 100 INSTALL 6 X 4 CURB INLET N 997386.5369 E 2842218.0616 |
| 105 | STA 5+40.24, LINE 100 INSTALL 6 X 4 CURB INLET N 997458.5932 E 2842218.4336 |
| 106 | STA 6+85.29, LINE 100 INSTALL 6 X 4 CURB INLET N 997441.0920 E 2842074.4403 |
| 107 | STA 8+44.52, LINE 100 INSTALL 6 X 4 CURB INLET N 997350.6401 E 2841943.3993 |
| 108 | STA 8+87.52, LINE 100 INSTALL 6 X 4 CURB INLET N 997376.6818 E 2841910.8017 |
| 201 | STA 0+43.00, LINE 200 - PUBLIC INSTALL 6 X 4 CURB INLET N 997501.5598 E 2842220.1297 |
| 202 | STA 1+02.95, LINE 200 - PUBLIC INSTALL 6 X 4 CURB INLET N 997530.9285 E 2842167.8656 |
| 203 | STA 1+37.95, LINE 200 - PUBLIC INSTALL 6 X 4 CURB INLET N 997532.2676 E 2842132.8913 |
| 204 | STA 1+86.96, LINE 200 - PUBLIC INSTALL 6 X 4 CURB INLET N 997493.9804 E 2842102.2912 |
| 407 | STA 7+62.31, LINE 400 INSTALL 6 X 4 CURB INLET N 996838.4352 E 2841583.1060 |
| 408 | STA 8+05.46, LINE 400 INSTALL 6 X 4 CURB INLET N 996863.2048 E 2841547.7730 |



**RESIDENCES AT BLACKWELL
 STREET, STORMWATER AND EROSION &
 SEDIMENT CONTROL
 SE SHENANDOAH DRIVE LEE'S SUMMIT, MO**

| REVISION DATE | DESCRIPTION |
|---------------|-----------------------|
| 01/23/2023 | PER CITY COMMENTS |
| 03/24/2023 | PER CITY COMMENTS |
| 11/29/2023 | STORM SEWER REVISIONS |
| 01/17/2024 | PER CITY COMMENTS |



PREPARED BY:
 SCHLAGEL & ASSOCIATES, P.A.

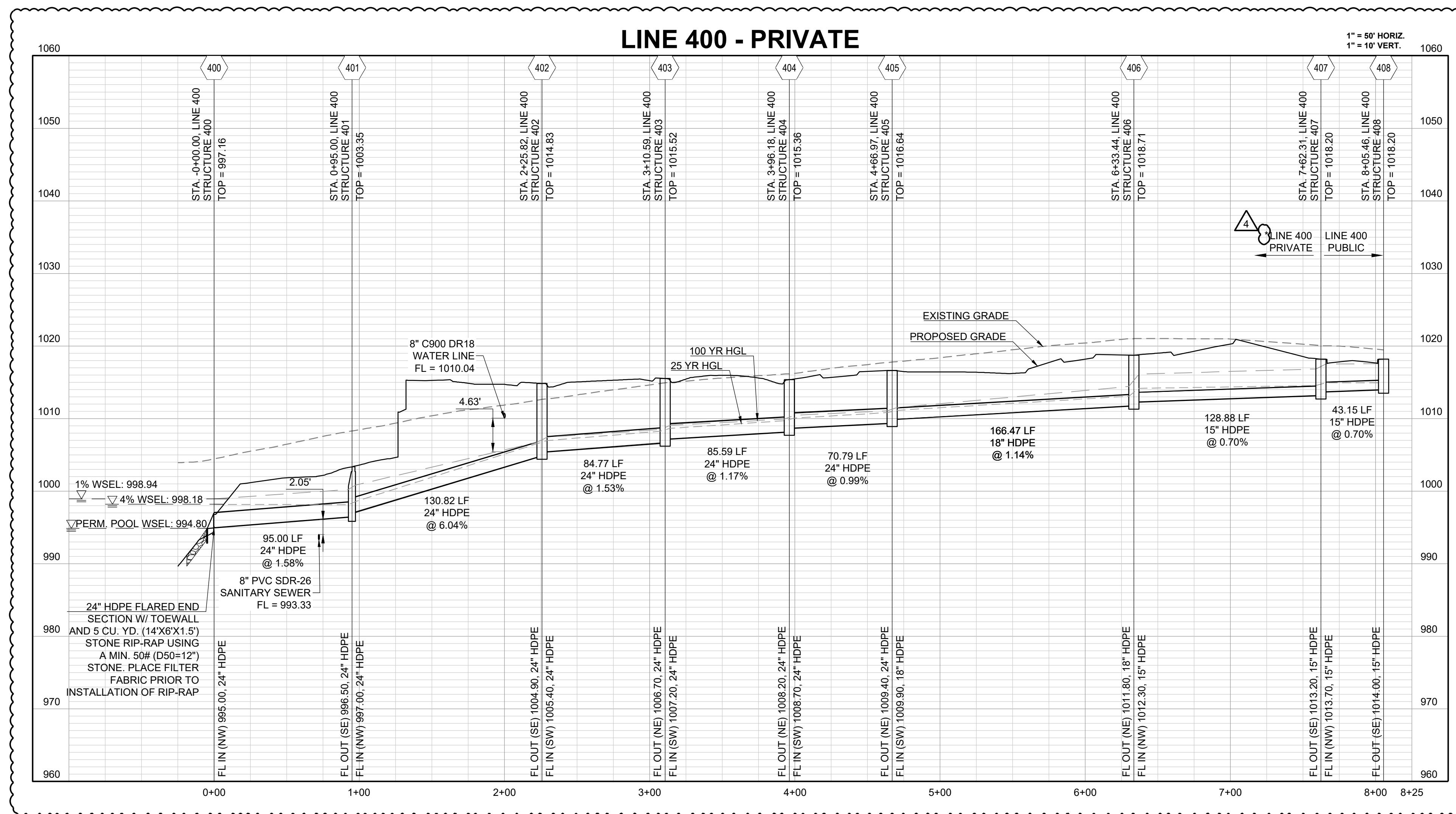
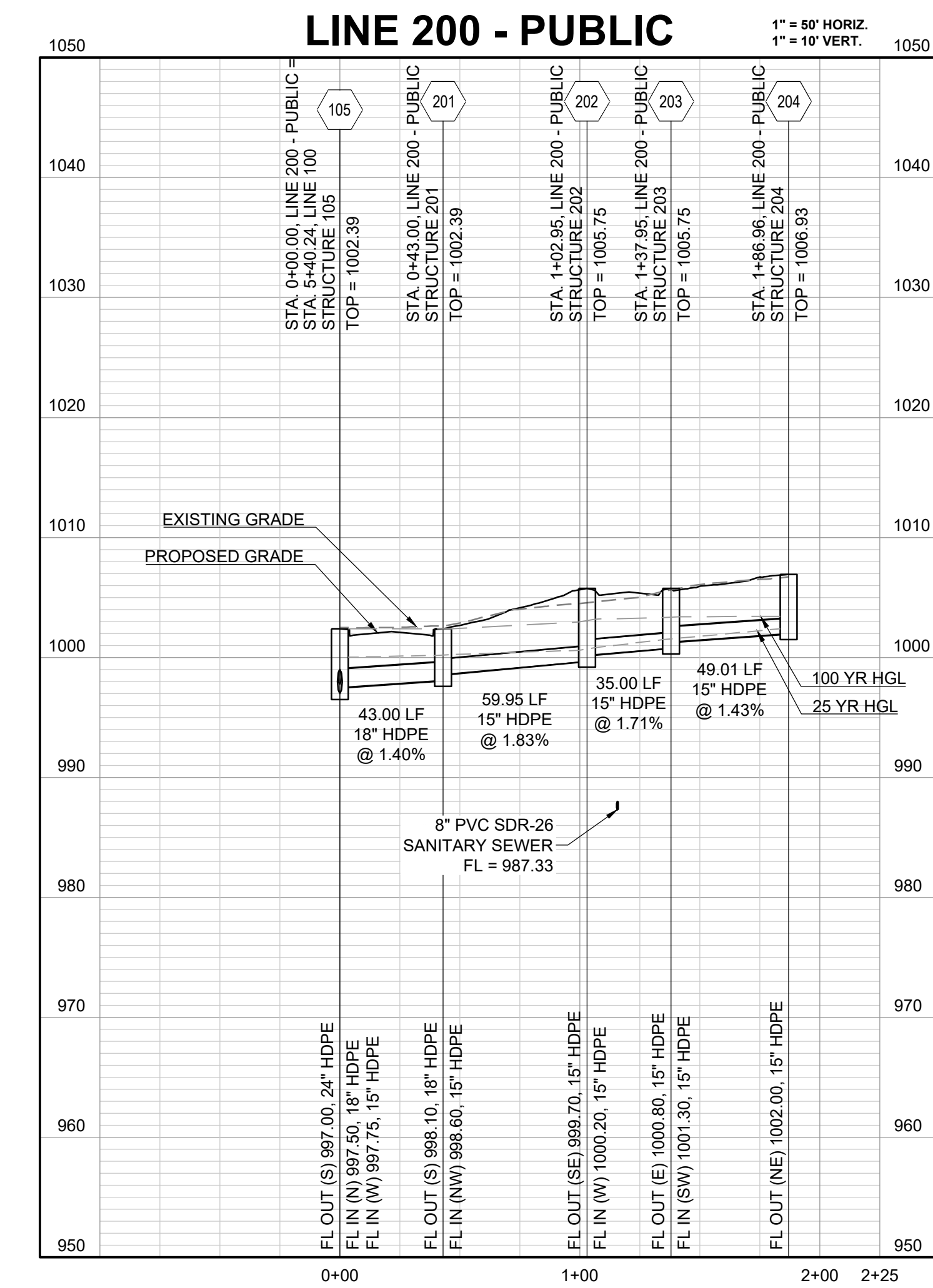
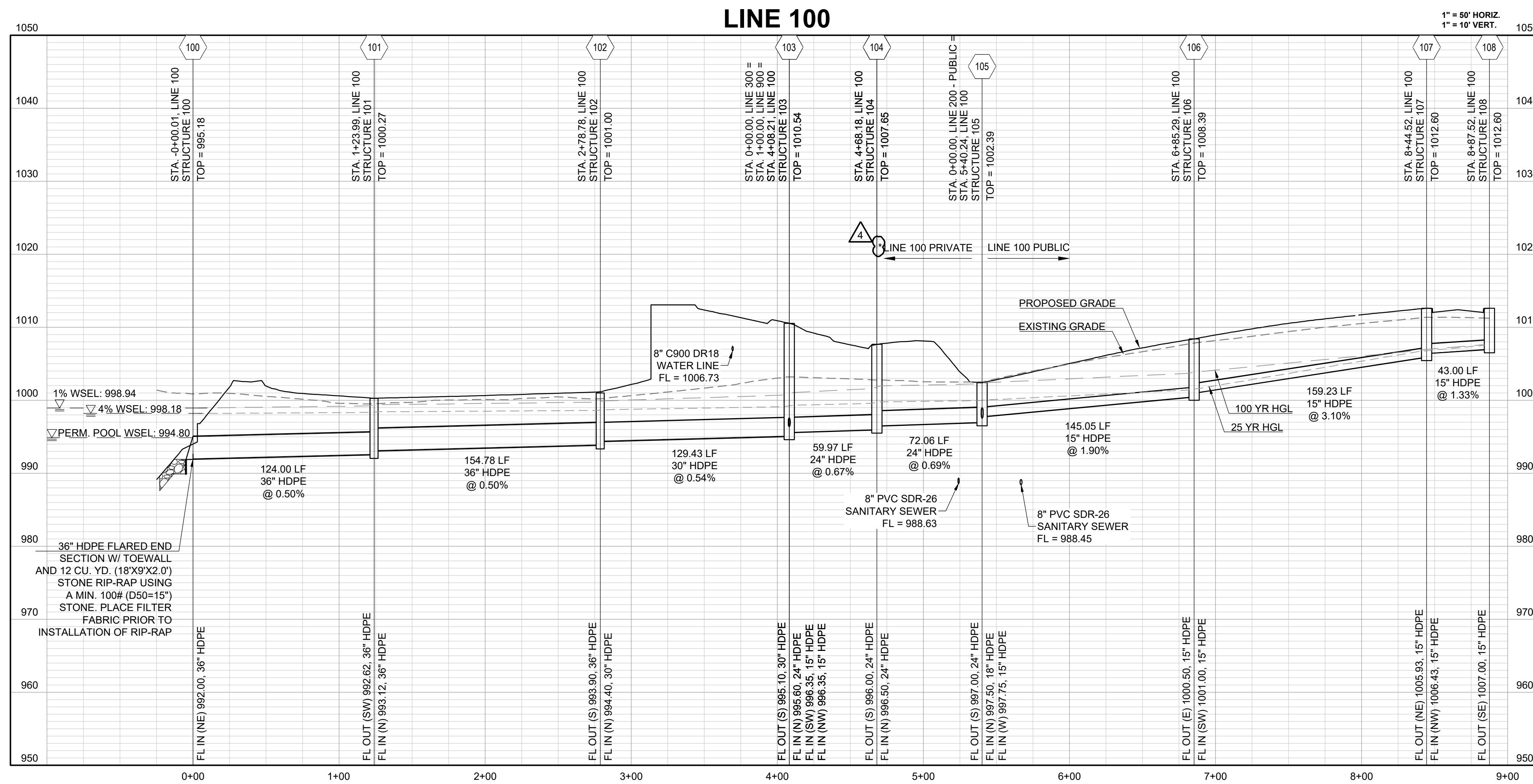
RESIDENCES AT BLACKWELL STREET, STORMWATER AND EROSION & SEDIMENT CONTROL
 SE SHENANDOAH DRIVE LEE'S SUMMIT, MO

| REVISION DATE | DESCRIPTION |
|---------------|-----------------------|
| 01/23/2023 | PER CITY COMMENTS |
| 03/24/2023 | PER CITY COMMENTS |
| 11/29/2023 | STORM SEWER REVISIONS |
| 01/17/2024 | PER CITY COMMENTS |
| 11/30/2022 | DATE PREPARED |
| 22-102 | PROJ. NUMBER |

STORM CALCUS

| Runoff Calculations | | | | | | | | | | | | | | | Pipe Properties | | | | | | | | | | | | | | |
|--------------------------------|--------------|-----------|-------------------|----------|-----|-----------|-----------------|-------------|-----------|-----------|------------------|------------------|-----------------|--------|-----------------|------------|-----------|-----------|-----------|--------|---------|---------------|---------|---------|-----------|-----------|--|--|--|
| Inlet # | Area (acres) | "C" Value | Cum. Area (acres) | Cum. CxA | To | Intensity | Runoff To Inlet | Cum. Runoff | Pipe Cap. | Pipe Vel. | Up Piped Inlet 1 | Up Piped Inlet 2 | Up Area (acres) | Up CxA | Up Inlet | Down Inlet | Pipe Type | "n" Value | Pipe Size | Length | Slope % | Drop In Inlet | FL Up | FL Down | Inlet Top | HGL Elev. | | | |
| Design Storm: 25 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| "K" Value: 1.10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| "F" Factor: 1.00 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DS TAILWATER @ STR #100 998.18 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 101 | 0.00 | 0.66 | 3.81 | 2.81 | 6.9 | 7.89 | 0.00 | 24.38 | 51.09 | 7.23 | | | 0.00 | 0.00 | 101 | 100 | HDPE | 0.012 | 36 | 124.00 | 0.50 | 0.50 | 992.62 | 992.00 | 1000.27 | 998.42 | | | |
| 102 | 0.00 | 0.66 | 3.81 | 2.81 | 6.6 | 8.00 | 0.00 | 24.72 | 51.09 | 7.23 | | | 0.00 | 0.00 | 102 | 101 | HDPE | 0.012 | 36 | 154.78 | 0.50 | 0.50 | 993.89 | 993.12 | 1001.00 | 998.70 | | | |
| 103 | 0.27 | 0.66 | 3.81 | 2.81 | 6.3 | 8.10 | 1.59 | 25.04 | 32.65 | 6.65 | 301 | 901 | 1.28 | 0.83 | 103 | 102 | HDPE | 0.012 | 30 | 129.43 | 0.54 | 0.50 | 995.09 | 994.39 | 1010.59 | 999.31 | | | |
| 104 | 0.09 | 0.66 | 2.26 | 1.80 | 6.1 | 8.15 | 5.33 | 16.16 | 20.06 | 6.39 | | | 0.00 | 0.00 | 104 | 103 | HDPE | 0.012 | 24 | 59.97 | 0.67 | 0.50 | 995.99 | 995.59 | 1007.66 | 999.78 | | | |
| 105 | 0.09 | 0.66 | 1.36 | 1.21 | 5.9 | 8.21 | 0.54 | 10.91 | 20.36 | 6.48 | 201 | | 0.48 | 0.63 | 105 | 104 | HDPE | 0.012 | 24 | 72.06 | 0.69 | 0.75 | 996.99 | 996.49 | 1002.39 | 1000.02 | | | |
| 106 | 0.22 | 0.66 | 0.79 | 0.52 | 5.6 | 8.32 | 1.33 | 4.77 | 9.63 | 7.85 | | | 0.00 | 0.00 | 106 | 105 | HDPE | 0.012 | 15 | 145.05 | 1.90 | 0.50 | 1000.49 | 997.74 | 1008.39 | 1001.58 | | | |
| 107 | 0.29 | 0.66 | 0.57 | 0.38 | 5.3 | 8.41 | 1.77 | 3.48 | 12.31 | 10.03 | | | 0.00 | 0.00 | 107 | 106 | HDPE | 0.012 | 15 | 159.23 | 3.10 | 0.50 | 1005.92 | 1000.99 | 1012.60 | 1006.83 | | | |
| 108 | 0.28 | 0.66 | 0.28 | 0.18 | 5.2 | 8.45 | 1.72 | 1.72 | 8.07 | 6.58 | | | 0.00 | 0.00 | 108 | 107 | HDPE | 0.012 | 15 | 43.00 | 1.33 | N/A | 1006.99 | 1006.42 | 1012.60 | 1007.60 | | | |
| Drop in Inlet 105 0.50 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 201 | 0.15 | 0.66 | 0.48 | 0.63 | 5.1 | 8.48 | 0.92 | 5.85 | 12.43 | 7.03 | | | 0.00 | 0.00 | 201 | 105 | RCP | 0.013 | 18 | 43.00 | 1.40 | 0.50 | 998.09 | 997.49 | 1002.39 | 1000.24 | | | |
| 202 | 0.33 | 0.66 | 0.33 | 0.53 | 5.0 | 8.53 | 2.04 | 4.95 | 9.47 | 7.71 | | | 0.00 | 0.00 | 202 | 201 | HDPE | 0.012 | 15 | 59.95 | 1.83 | 0.50 | 999.69 | 998.59 | 1005.75 | 1000.81 | | | |
| 203 | 0.29 | 0.66 | 0.29 | 0.31 | 5.0 | 8.53 | 1.80 | 2.91 | 9.15 | 7.46 | | | 0.00 | 0.00 | 203 | 202 | HDPE | 0.012 | 15 | 35.00 | 1.71 | 0.50 | 1000.79 | 1000.19 | 1005.75 | 1001.61 | | | |
| 204 | 0.18 | 0.66 | 0.18 | 0.12 | 5.3 | 8.41 | 1.10 | 1.10 | 8.37 | 6.82 | | | 0.00 | 0.00 | 204 | 203 | HDPE | 0.012 | 15 | 49.01 | 1.43 | N/A | 1001.99 | 1001.29 | 1006.93 | 1002.47 | | | |
| Drop in Inlet 103 1.25 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 301 | 0.29 | 0.66 | 1.18 | 0.78 | 5.2 | 8.47 | 1.78 | 7.25 | 14.65 | 11.93 | | | 0.00 | 0.00 | 301 | 103 | HDPE | 0.012 | 15 | 117.50 | 4.38 | 0.50 | 1001.49 | 996.34 | 1011.97 | 1002.89 | | | |
| 302 | 0.60 | 0.66 | 0.89 | 0.59 | 5.0 | 8.51 | 3.71 | 5.50 | 14.39 | 11.73 | | | 0.00 | 0.00 | 302 | 301 | HDPE | 0.012 | 15 | 94.54 | 4.23 | 0.50 | 1005.99 | 1001.99 | 1012.47 | 1007.17 | | | |
| 303 | 0.29 | 0.66 | 0.29 | 0.19 | 5.0 | 8.53 | 1.80 | 1.80 | 14.14 | 11.52 | | | 0.00 | 0.00 | 303 | 302 | HDPE | 0.012 | 15 | 29.41 | 4.08 | N/A | 1007.69 | 1006.49 | 1013.19 | 1008.32 | | | |
| Drop in Inlet 103 1.25 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 401 | 0.00 | 0.66 | 3.66 | 2.42 | 7.6 | 7.70 | 0.00 | 20.47 | 30.81 | 9.81 | | | 0.00 | 0.00 | 401 | 400 | HDPE | 0.012 | 24 | 95.00 | 1.58 | 0.50 | 996.50 | 995.00 | 1003.35 | 999.18 | | | |
| 402 | 0.39 | 0.66 | 3.66 | 2.42 | 7.4 | 7.74 | 2.19 | 20.56 | 60.23 | 19.17 | | | 0.00 | 0.00 | 402 | 401 | HDPE | 0.012 | 24 | 130.82 | 6.04 | 0.50 | 1004.90 | 997.00 | 1014.83 | 1006.97 | | | |
| 403 | 0.24 | 0.66 | 3.27 | 2.16 | 7.3 | 7.88 | 1.36 | 18.47 | 30.31 | 9.65 | | | 0.00 | 0.00 | 403 | 402 | HDPE | 0.012 | 24 | 84.77 | 1.53 | 0.50 | 1006.70 | 1005.40 | 1015.55 | 1008.64 | | | |
| 404 | 0.34 | 0.66 | 3.03 | 2.00 | 7.1 | 7.83 | 1.93 | 17.23 | 26.51 | 8.44 | | | 0.00 | 0.00 | 404 | 403 | HDPE | 0.012 | 24 | 85.59 | 1.17 | 0.50 | 1008.20 | 1007.20 | 1015.36 | 1010.06 | | | |
| 405 | 0.81 | 0.66 | 2.69 | 1.78 | 7.0 | 7.88 | 4.63 | 15.38 | 24.38 | 7.76 | | | 0.00 | 0.00 | 405 | 404 | HDPE | 0.012 | 24 | 70.79 | 0.99 | 0.50 | 1009.40 | 1008.70 | 1016.46 | 1011.14 | | | |
| 406 | 1.24 | 0.66 | 1.88 | 1.24 | 6.6 | 8.00 | 7.20 | 10.92 | 12.15 | 6.88 | | | 0.00 | 0.00 | 406 | 405 | HDPE | 0.012 | 18 | 166.47 | 1.14 | 0.50 | 1011.80 | 1009.90 | 1018.71 | 1016.12 | | | |
| 407 | 0.50 | 0.66 | 0.64 | 0.42 | 6.1 | 8.15 | 2.96 | 3.79 | 5.86 | 4.77 | | | 0.00 | 0.00 | 407 | 406 | HDPE | 0.012 | 15 | 128.88 | 0.70 | 0.50 | 1013.20 | 1012.30 | 1018.46 | 1014.91 | | | |
| 408 | 0.14 | 0.66 | 0.14 | 0.09 | 6.0 | 8.20 | 0.83 | 0.83 | 5.86 | 4.77 | | | 0.00 | 0.00 | 408 | 407 | HDPE | 0.012 | 15 | 43.15 | 0.70 | 0.50 | 1014.00 | 1013.70 | 1018.71 | 1014.92 | | | |
| Drop in Inlet 502 3.00 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 601 | 0.58 | 0.66 | 1.21 | 0.80 | 5.2 | 8.45 | 3.56 | 7.42 | 13.93 | 11.35 | | | 0.00 | 0.00 | 601 | 502 | HDPE | 0.012 | 15 | 166.79 | 3.96 | 0.50 | 1015.00 | 1008.40 | 1021.46 | 1016.42 | | | |
| 602 | 0.63 | 0.66 | 0.63 | 0.42 | 5.0 | 8.53 | 3.90 | 3.90 | 9.57 | 7.80 | | | 0.00 | 0.00 | 602 | 601 | HDPE | 0.012 | 15 | 107.00 | 1.87 | N/A | 1017.51 | 1015.50 | 1021.34 | 1018.48 | | | |
| Drop in Inlet 502 3.00 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 701 | 0.12 | 0.66 | 5.35 | 3.53 | 5.1 | 8.50 | 0.74 | 33.02 | 62.21 | 12.67 | | | 0.00 | 0.00 | 701 | 502 | HDPE | 0.012 | 30 | 163.48 | 1.96 | 0.50 | 1011.60 | 1008.40 | 1020.82 | 1014.06 | | | |
| 702 | 5.23 | 0.66 | 5.23 | 3.45 | 5.0 | 8.53 | 32.39 | 32.39 | 62.21 | 12.67 | | | 0.00 | 0.00 | 702 | 701 | HDPE | 0.012 | 30 | 61.13 | 1.96 | N/A | 1013.30 | 1012.10 | 1019.00 | 1015.73 | | | |
| Drop in Inlet 103 1.25 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 901 | 0.10 | 0.51 | 0.10 | 0.05 | 5.0 | 8.53 | 0.48 | 0.48 | 19.02 | 15.50 | | | 0.00 | 0.00 | 901 | 103 | HDPE | 0.012 | 15 | 103.55 | 7.39 | N/A | 1004.00 | 996.34 | 1008.68 | 1004.31 | | | |

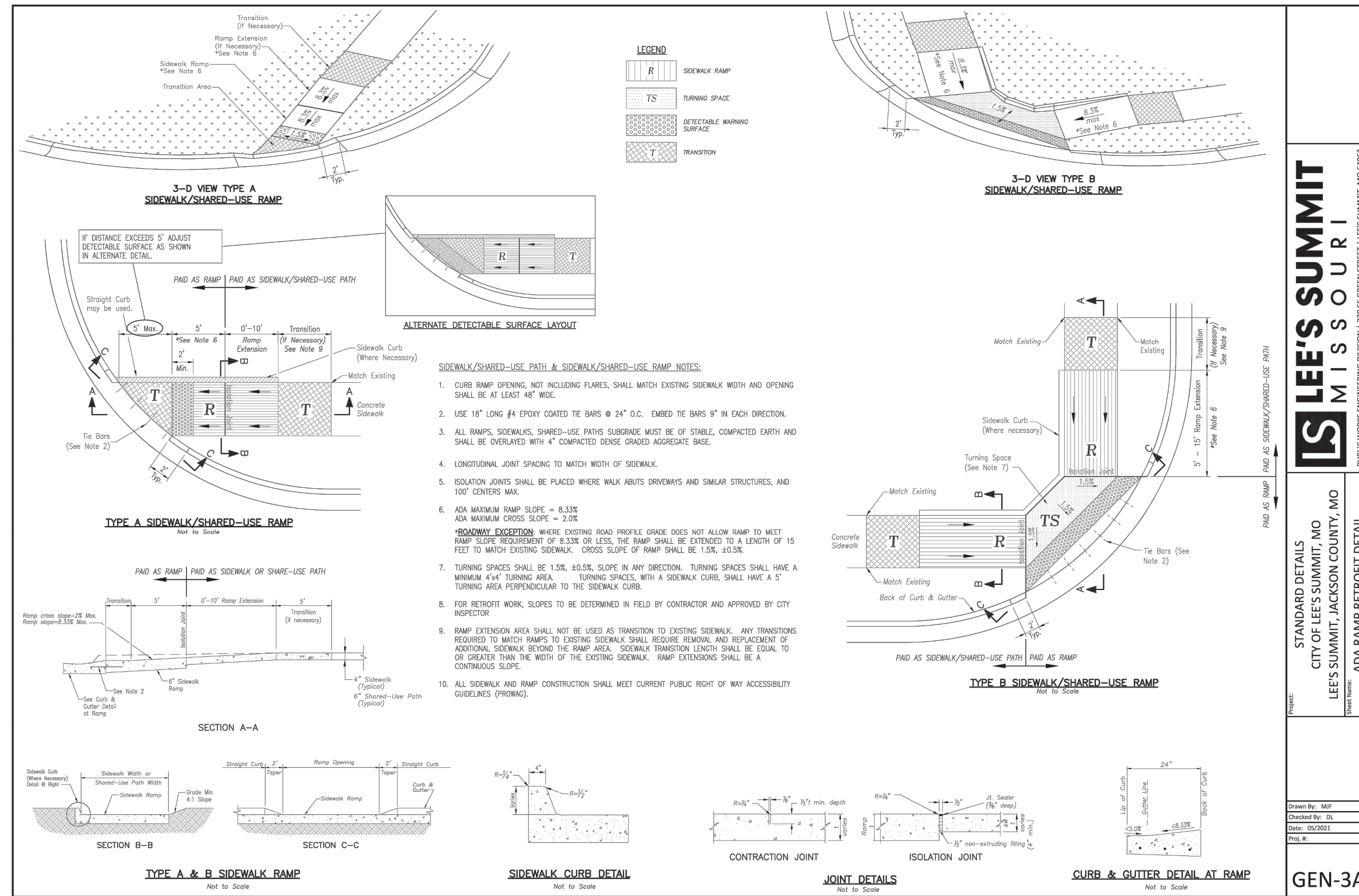
| Runoff Calculations | | | | | | | | | | | | | | | Pipe Properties | | | | | | | | | | | | | | |
|--------------------------------|--------------|-----------|-------------------|----------|-----|-----------|-----------------|-------------|-----------|-----------|------------------|------------------|-----------------|--------|-----------------|------------|-----------|-----------|-----------|--------|---------|---------------|---------|---------|-----------|-----------|--|--|--|
| Inlet # | Area (acres) | "C" Value | Cum. Area (acres) | Cum. CxA | To | Intensity | Runoff To Inlet | Cum. Runoff | Pipe Cap. | Pipe Vel. | Up Piped Inlet 1 | Up Piped Inlet 2 | Up Area (acres) | Up CxA | Up Inlet | Down Inlet | Pipe Type | "n" Value | Pipe Size | Length | Slope % | Drop In Inlet | FL Up | FL Down | Inlet Top | HGL Elev. | | | |
| Design Storm: 100 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| "K" Value: 1.25 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| "F" Factor: 1.00 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DS TAILWATER @ STR #100 998.94 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 101 | 0.00 | 0.66 | 3.81 | 2.81 | 6.9 | 9.58 | 0.00 | 33.63 | 51.09 | 7.23 | | | 0.00 | 0.00 | 101 | 100 | HDPE | 0.012 | 36 | 124.00 | 0.50 | 0.50 | 992.62 | 992.00 | 1000.27 | 999.39 | | | |
| 102 | 0.00 | 0.66 | 3.81 | 2.81 | 6.6 | 9.70 | 0.00 | 34.09 | 51.09 | 7.23 | | | 0.00 | 0.00 | 102 | 101 | HDPE | 0.012 | 36 | 154.78 | 0.50 | 0.50 | 993.89 | 993.12 | 1001.00 | 999.92 | | | |
| 103 | 0.27 | 0.66 | 3.81 | 2.81 | 6.3 | 9.83 | 2.19 | 34.51 | 32.65 | 6.65 | 301 | 901 | 1.28 | 0.83 | 103 | 102 | HDPE | 0.012 | 30 | 129.43 | 0.54 | 0.50 | 995.09 | 994.39 | 1010.59 | 1001.08 | | | |
| 104 | 0.09 | 0.66 | 2.26 | 1.80 | 6.1 | 9.88 | 7.34 | 22.26 | 20.06 | 6.39 | | | 0.00 | 0.00 | 104 | 103 | HDPE | 0.012 | 24 | 59.97 | 0.67 | 0.50 | 995.99 | 995.59 | 1007.66 | 1001.97 | | | |
| 105 | 0.09 | 0.66 | 1.36 | 1.21 | 5.9 | 9.96 | 0.74 | 15.03 | 20.36 | 6.48 | 201 | | 0.48 | 0.63 | 105 | 104 | HDPE | 0.012 | 24 | 72.06 | 0.69 | 0.75 | 996.99 | 996.49 | 1002.39 | 1002.42 | | | |
| 106 | 0.22 | 0.66 | 0.79 | 0.52 | 5.6 | 10.08 | 1.83 | 6.57 | 9.63 | 7.85 | | | 0.00 | 0.00 | 106 | 105 | HDPE | 0.012 | 15 | 145.05 | 1.90 | 0.50 | 1000.49 | 997.74 | 1008.39 | 1003.89 | | | |
| 107 | 0.29 | 0.66 | 0.57 | 0.38 | 5.3 | 10.18 | 2.44 | 4.79 | 12.31 | 10.03 | | | 0.00 | 0.00 | 107 | 106 | HDPE | 0.012 | 15 | 159.23 | 3.10 | 0.50 | 1005.92 | 1000.99 | 1012.60 | 1007.01 | | | |
| 108 | 0.28 | 0.66 | 0.28 | 0.18 | 5.2 | 10.23 | 2.36 | 2.36 | 8.07 | 6.58 | | | 0.00 | 0.00 | 108 | 107 | HDPE | 0.012 | 15 | 43.00 | 1.33 | N/A | 1006.99 | 1006.42 | 1012.60 | 1007.73 | | | |
| Drop in Inlet 105 0.50 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 201 | 0.15 | 0.66 | 0.48 | 0.63 | 5.1 | 10.27 | 1.27 | 8.05 | 12.43 | 7.03 | | | 0.00 | 0.00 | 201 | 105 | RCP | 0.013 | 18 | 43.00 | 1.40 | 0.50 | 998.09 | 997.49 | 1002.39 | 1002.80 | | | |
| 202 | 0.33 | 0.66 | 0.33 | 0.53 | 5.0 | 10.32 | 2.81 | 6.81 | 9.47 | 7.71 | | | 0.00 | 0.00 | 202 | 201 | HDPE | 0.012 | 15 | 59.95 | 1.83 | 0.50 | 999.69 | 998.59 | 1005.75 | 1003.20 | | | |
| 203 | 0.29 | 0.66 | 0.29 | 0.31 | 5.0 | 10.32 | 2.47 | 4.00 | | | | | | | | | | | | | | | | | | | | | |



TO BE CONSTRUCTED BY OTHERS IN THE FINAL DEVELOPMENT PLAN

| REVISION DATE | DESCRIPTION |
|---------------|-----------------------|
| 01/23/2023 | PER CITY COMMENTS |
| 03/24/2023 | PER CITY COMMENTS |
| 11/29/2023 | STORM SEWER REVISIONS |
| 01/11/2024 | PER CITY COMMENTS |
| 11/30/2022 | DATE PREPARED |
| 22-102 | PROJ. NUMBER |

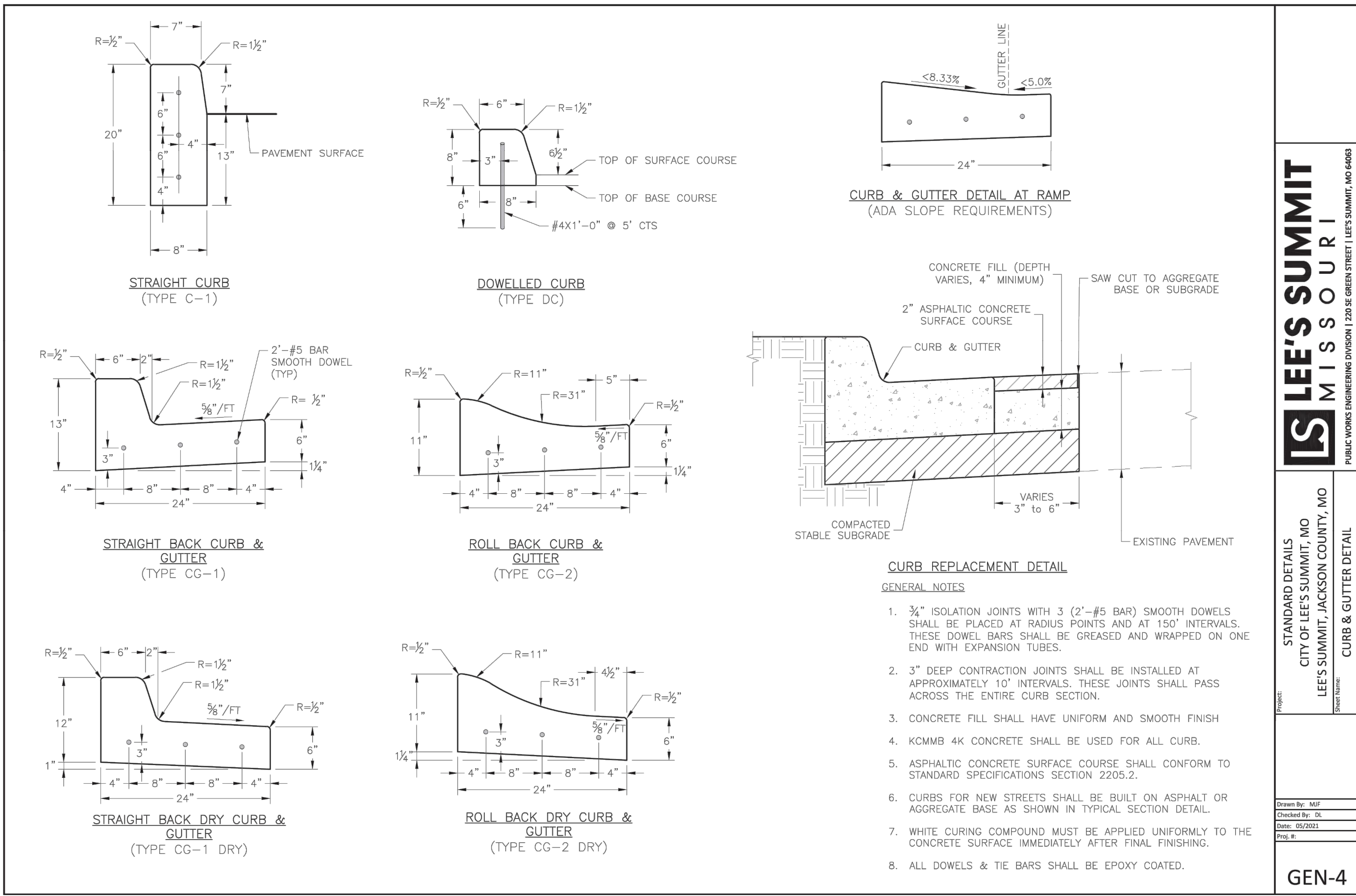
STORM PROFILES



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
PROJECT NAME: ADA RAMP RETROFIT DETAIL

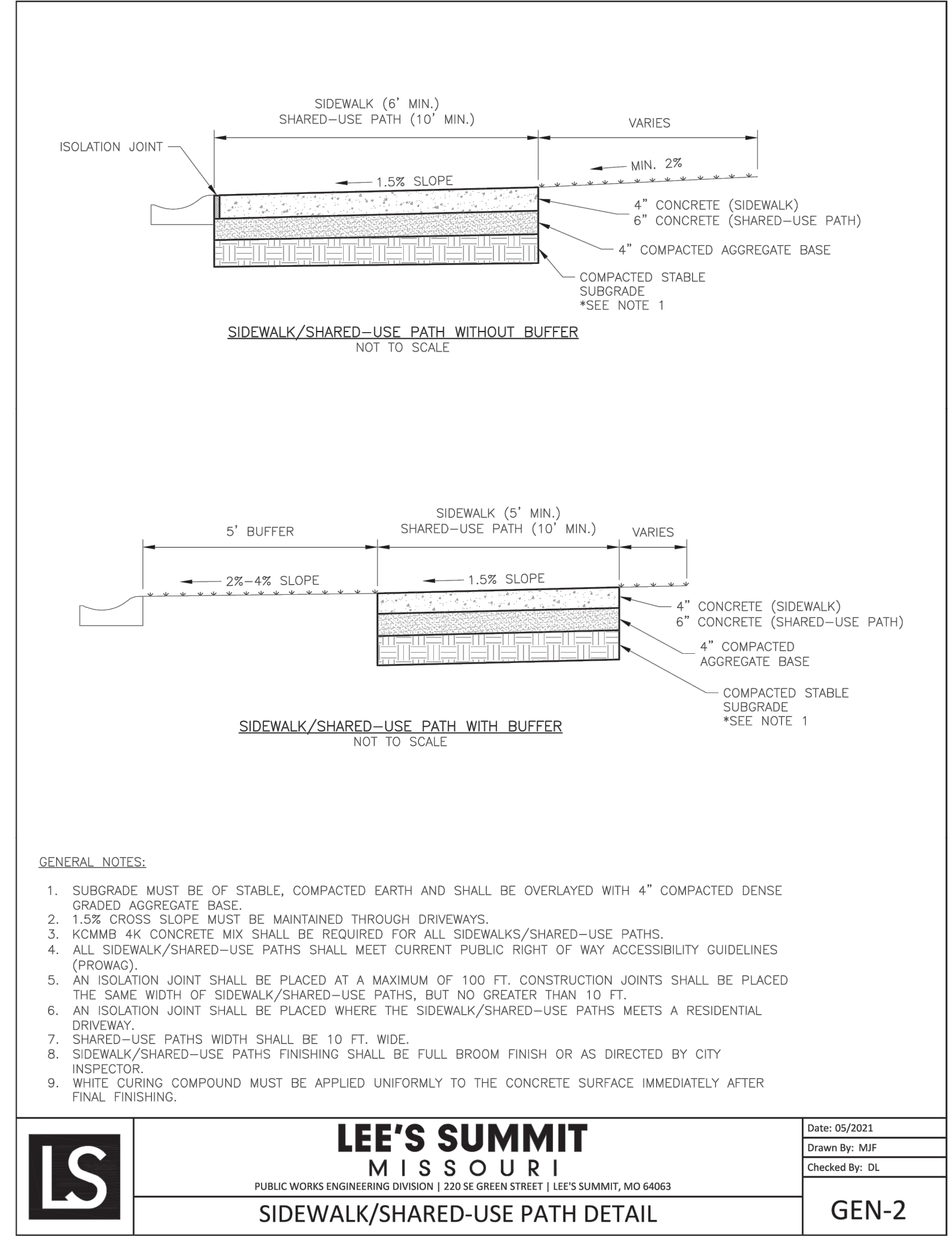
Drawn By: MJF
Checked By: DJL
Date: 05/2021
Proj #: GEN-3A



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
PROJECT NAME: CURB & GUTTER DETAIL

Drawn By: MJF
Checked By: DJL
Date: 05/2021
Proj #: GEN-4



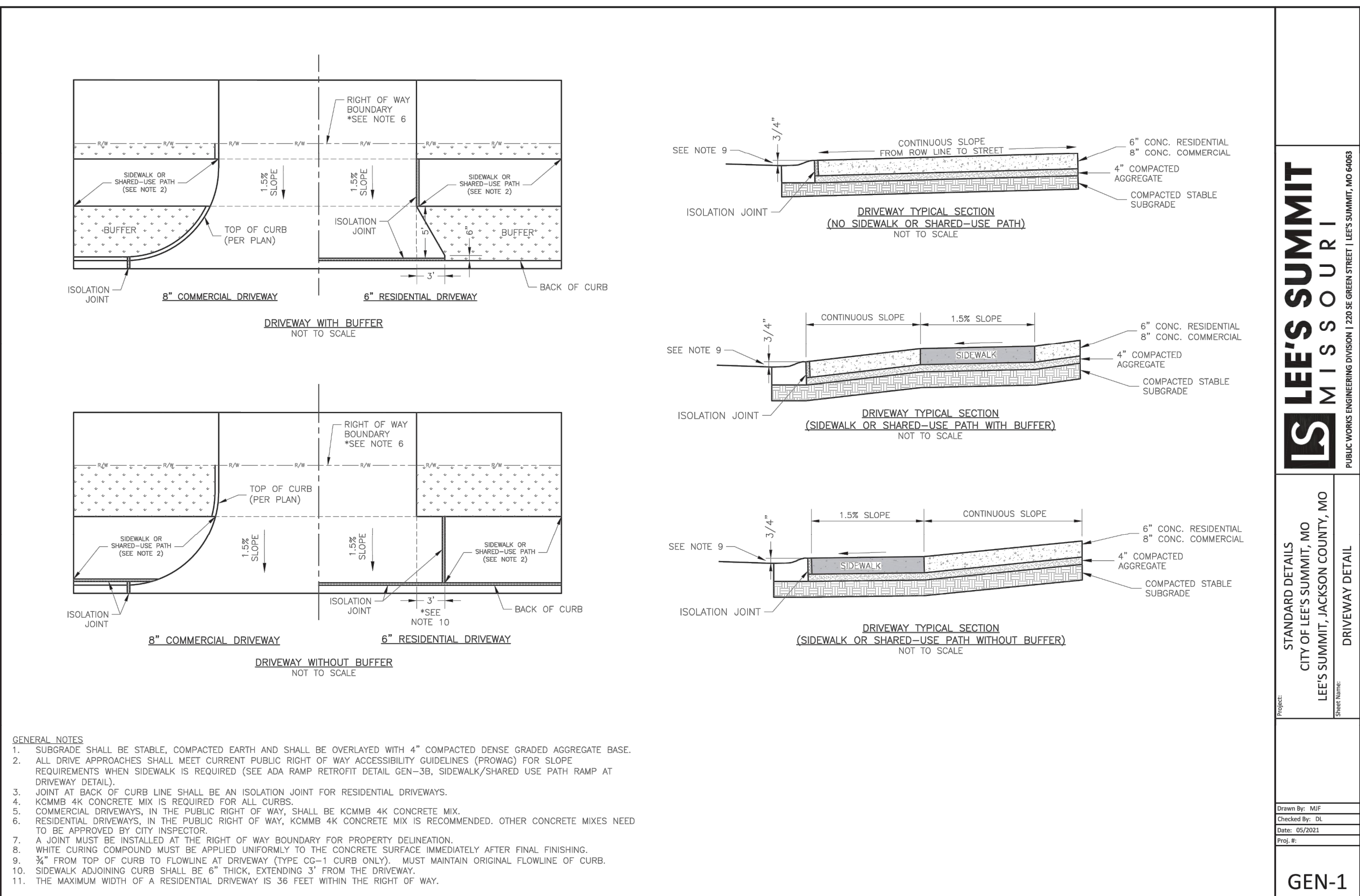
LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

Drawn By: MJF
Checked By: DJL
Date: 05/2021
Proj #: GEN-2

RESIDENCES AT BLACKWELL STREET, STORMWATER AND EROSION & SEDIMENT CONTROL
SE SHENANDOAH DRIVE LEE'S SUMMIT, MO

| REVISION DATE | DESCRIPTION |
|---------------|-----------------------|
| 01/23/2023 | PER CITY COMMENTS |
| 03/24/2023 | PER CITY COMMENTS |
| 11/29/2023 | STORM SEWER REVISIONS |
| 01/17/2024 | PER CITY COMMENTS |

DRAWN BY: TRC
CHECKED BY: MAB
DATE PREPARED: 11/30/2022
PROJ. NUMBER: 22-102

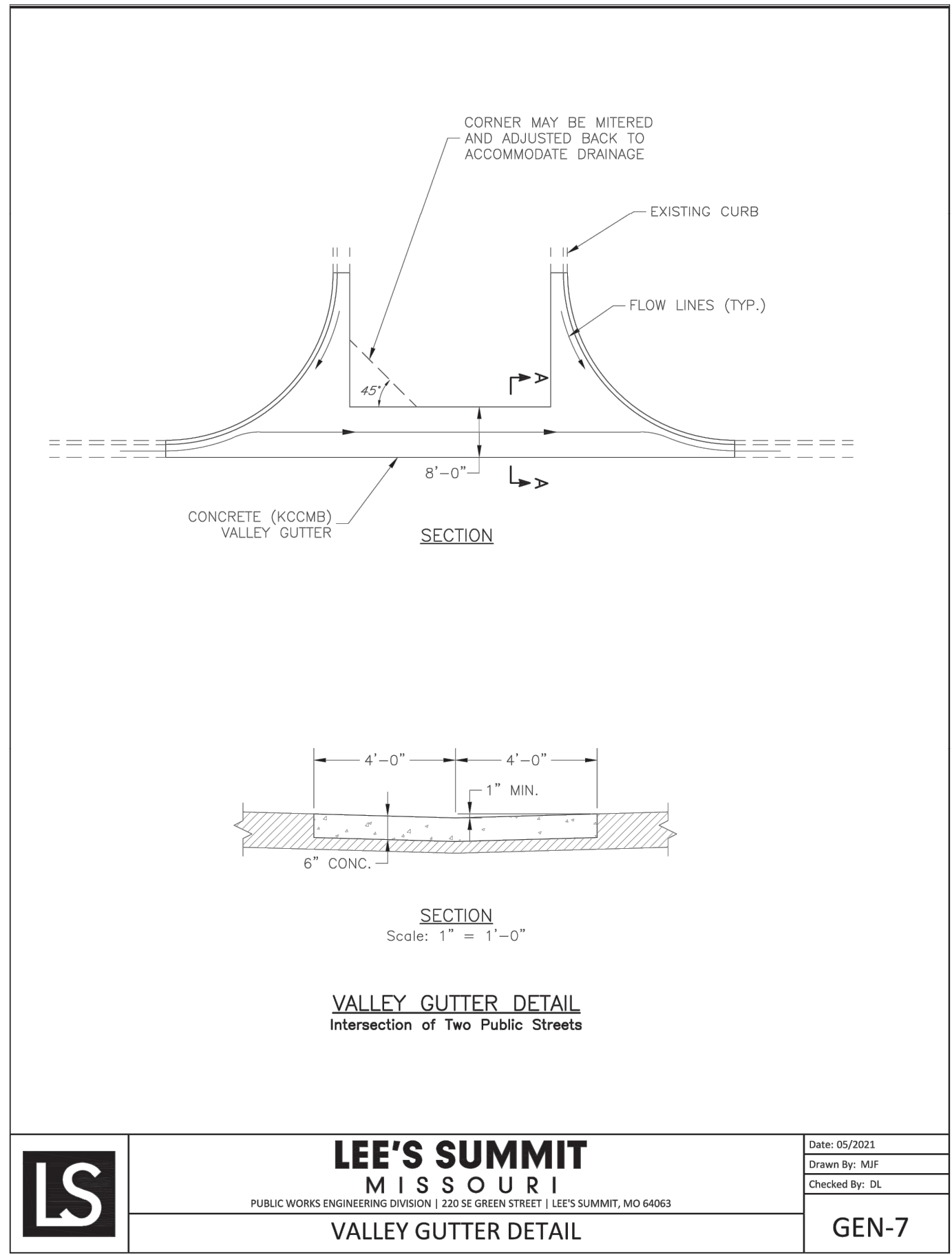


LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 225 SE GREEN STREET | LEE'S SUMMIT, MO 64663

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

Drawn By: MAF
Checked By: DK
Date: 05/2021

GEN-1



LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 225 SE GREEN STREET | LEE'S SUMMIT, MO 64663

Date: 05/2021
Drawn By: MAF
Checked By: DK

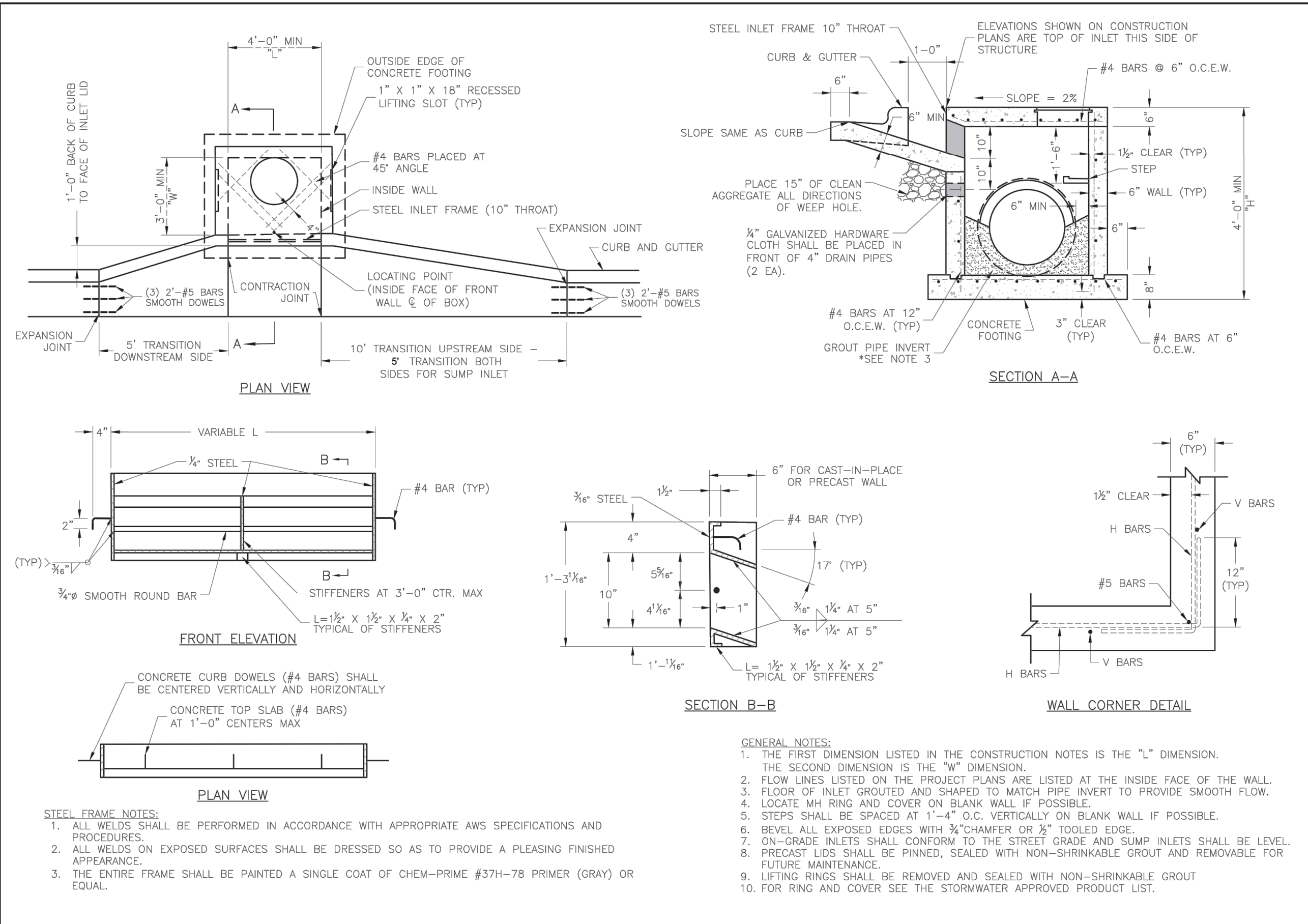
GEN-7

RESIDENCES AT BLACKWELL STREET, STORMWATER AND EROSION & SEDIMENT CONTROL
SE SHENANDOAH DRIVE LEE'S SUMMIT, MO

| REVISION DATE | DESCRIPTION |
|---------------|-----------------------|
| 01/23/2023 | PER CITY COMMENTS |
| 03/24/2023 | PER CITY COMMENTS |
| 11/29/2023 | STORM SEWER REVISIONS |
| 01/17/2024 | PER CITY COMMENTS |

DRAWN BY: TRC
CHECKED BY: MAB
DATE PREPARED: 11/30/2022
PROJ. NUMBER: 22-102

STREET DETAILS

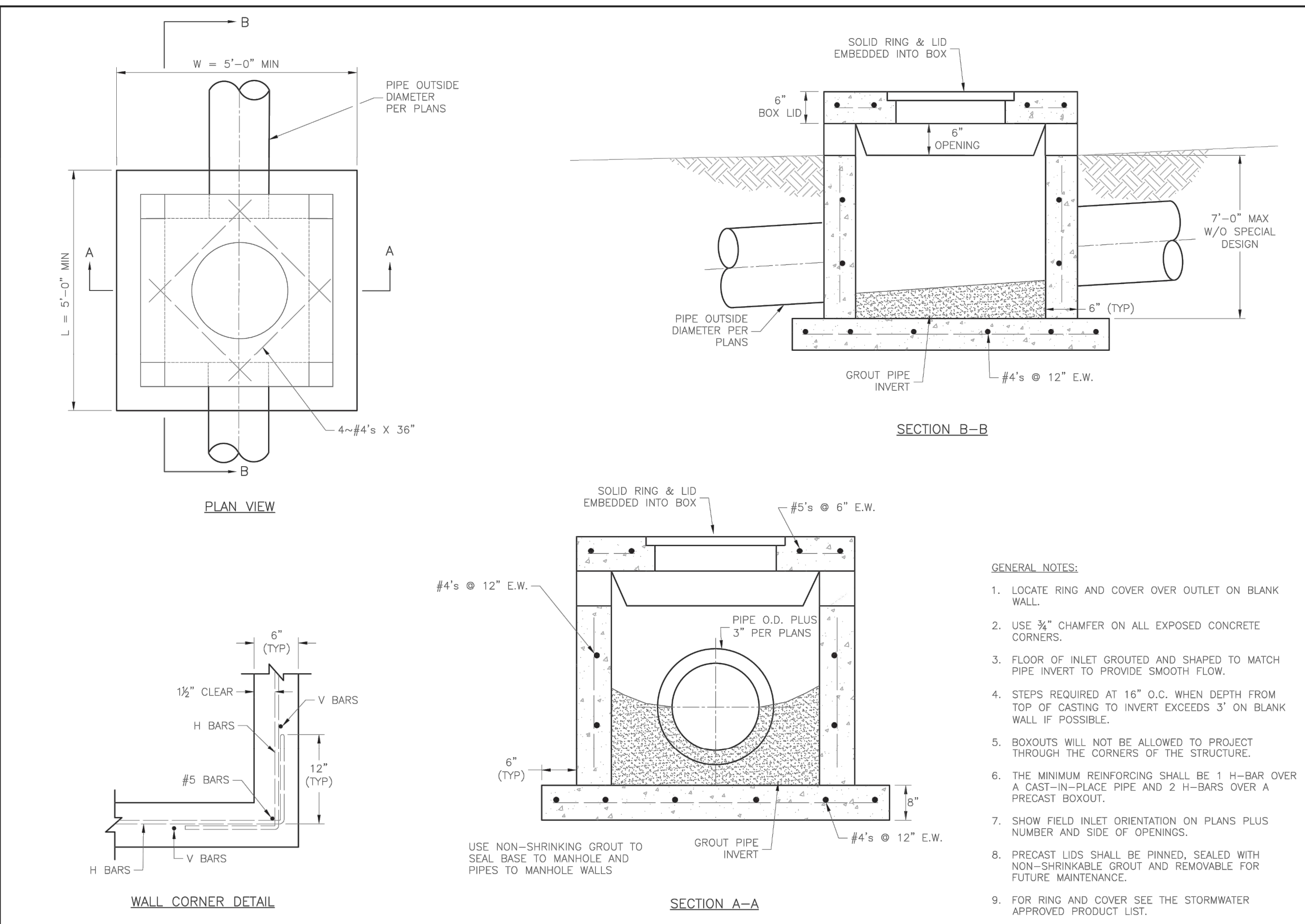


- STEEL FRAME NOTES:**
1. ALL WELDS SHALL BE PERFORMED IN ACCORDANCE WITH APPROPRIATE AWS SPECIFICATIONS AND PROCEDURES.
 2. ALL WELDS ON EXPOSED SURFACES SHALL BE DRESSED SO AS TO PROVIDE A PLEASING FINISHED APPEARANCE.
 3. THE ENTIRE FRAME SHALL BE PAINTED A SINGLE COAT OF CHEM-PRIME #37H-78 PRIMER (GRAY) OR EQUAL.

- GENERAL NOTES:**
1. THE FIRST DIMENSION LISTED IN THE CONSTRUCTION NOTES IS THE "L" DIMENSION. THE SECOND DIMENSION IS THE "W" DIMENSION.
 2. FLOW LINES LISTED ON THE PROJECT PLANS ARE LISTED AT THE INSIDE FACE OF THE WALL.
 3. FLOOR OF INLET GROUDED AND SHAPED TO MATCH PIPE INVERT TO PROVIDE SMOOTH FLOW.
 4. LOCATE MH RING AND COVER ON BLANK WALL IF POSSIBLE.
 5. STEPS SHALL BE SPACED AT 1'-4" O.C. VERTICALLY ON BLANK WALL IF POSSIBLE.
 6. BEVEL ALL EXPOSED EDGES WITH 3/4" CHAMFER OR 1/2" TOOLED EDGE.
 7. ON-GRADE INLETS SHALL CONFORM TO THE STREET GRADE AND SUMP INLETS SHALL BE LEVEL.
 8. PRECAST LIDS SHALL BE PINNED, SEALED WITH NON-SHRINKABLE GROUT AND REMOVABLE FOR FUTURE MAINTENANCE.
 9. LIFTING RINGS SHALL BE REMOVED AND SEALED WITH NON-SHRINKABLE GROUT.
 10. FOR RING AND COVER SEE THE STORMWATER APPROVED PRODUCT LIST.

LEE'S SUMMIT MISSOURI
 PUBLIC WORKS ENGINEERING DIVISION 1228 E CENTER STREET, LEE'S SUMMIT, MO 64086

STANDARD DETAILS
 CITY OF LEE'S SUMMIT, MO
 LEE'S SUMMIT, JACKSON COUNTY, MO
 CURB INLET DETAIL
 STM-1



- GENERAL NOTES:**
1. LOCATE RING AND COVER OVER OUTLET ON BLANK WALL.
 2. USE 3/4" CHAMFER ON ALL EXPOSED CONCRETE CORNERS.
 3. FLOOR OF INLET GROUDED AND SHAPED TO MATCH PIPE INVERT TO PROVIDE SMOOTH FLOW.
 4. STEPS REQUIRED AT 16" O.C. WHEN DEPTH FROM TOP OF CASTING TO INVERT EXCEEDS 3' ON BLANK WALL IF POSSIBLE.
 5. BOXOUTS WILL NOT BE ALLOWED TO PROJECT THROUGH THE CORNERS OF THE STRUCTURE.
 6. THE MINIMUM REINFORCING SHALL BE 1 H-BAR OVER A CAST-IN-PLACE PIPE AND 2 H-BARS OVER A PRECAST BOXOUT.
 7. SHOW FIELD INLET ORIENTATION ON PLANS PLUS NUMBER AND SIDE OF OPENINGS.
 8. PRECAST LIDS SHALL BE PINNED, SEALED WITH NON-SHRINKABLE GROUT AND REMOVABLE FOR FUTURE MAINTENANCE.
 9. FOR RING AND COVER SEE THE STORMWATER APPROVED PRODUCT LIST.

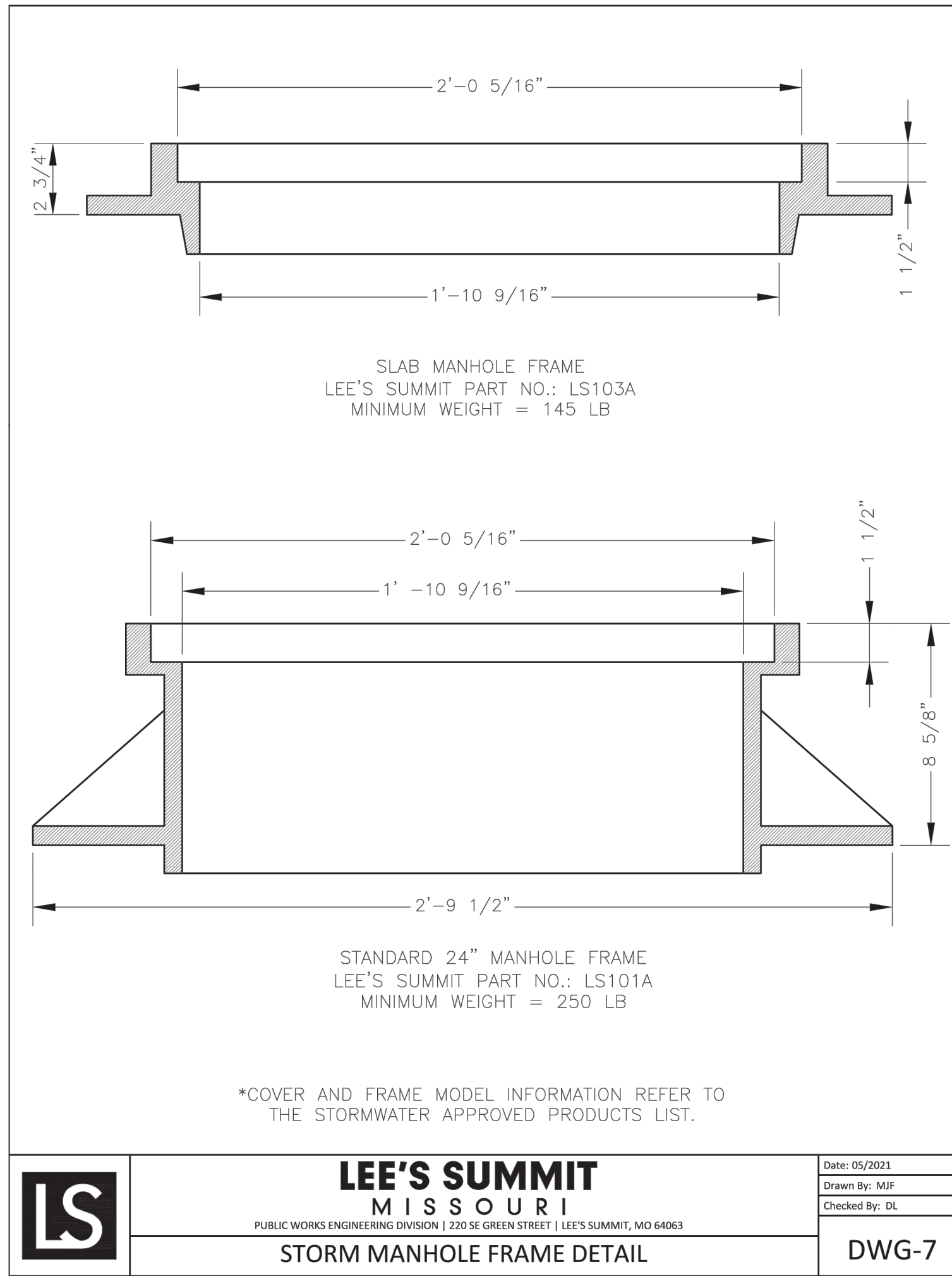
LEE'S SUMMIT MISSOURI
 PUBLIC WORKS ENGINEERING DIVISION 1228 E CENTER STREET, LEE'S SUMMIT, MO 64086

STANDARD DETAILS
 CITY OF LEE'S SUMMIT, MO
 LEE'S SUMMIT, JACKSON COUNTY, MO
 FIELD INLET DETAIL
 STM-2

RESIDENCES AT BLACKWELL STREET, STORMWATER AND EROSION & SEDIMENT CONTROL
 SE SHENANDOAH DRIVE LEE'S SUMMIT, MO

| REVISION DATE | DESCRIPTION |
|---------------|-----------------------|
| 01/23/2023 | PER CITY COMMENTS |
| 03/24/2023 | PER CITY COMMENTS |
| 11/29/2023 | STORM SEWER REVISIONS |
| 01/17/2024 | PER CITY COMMENTS |

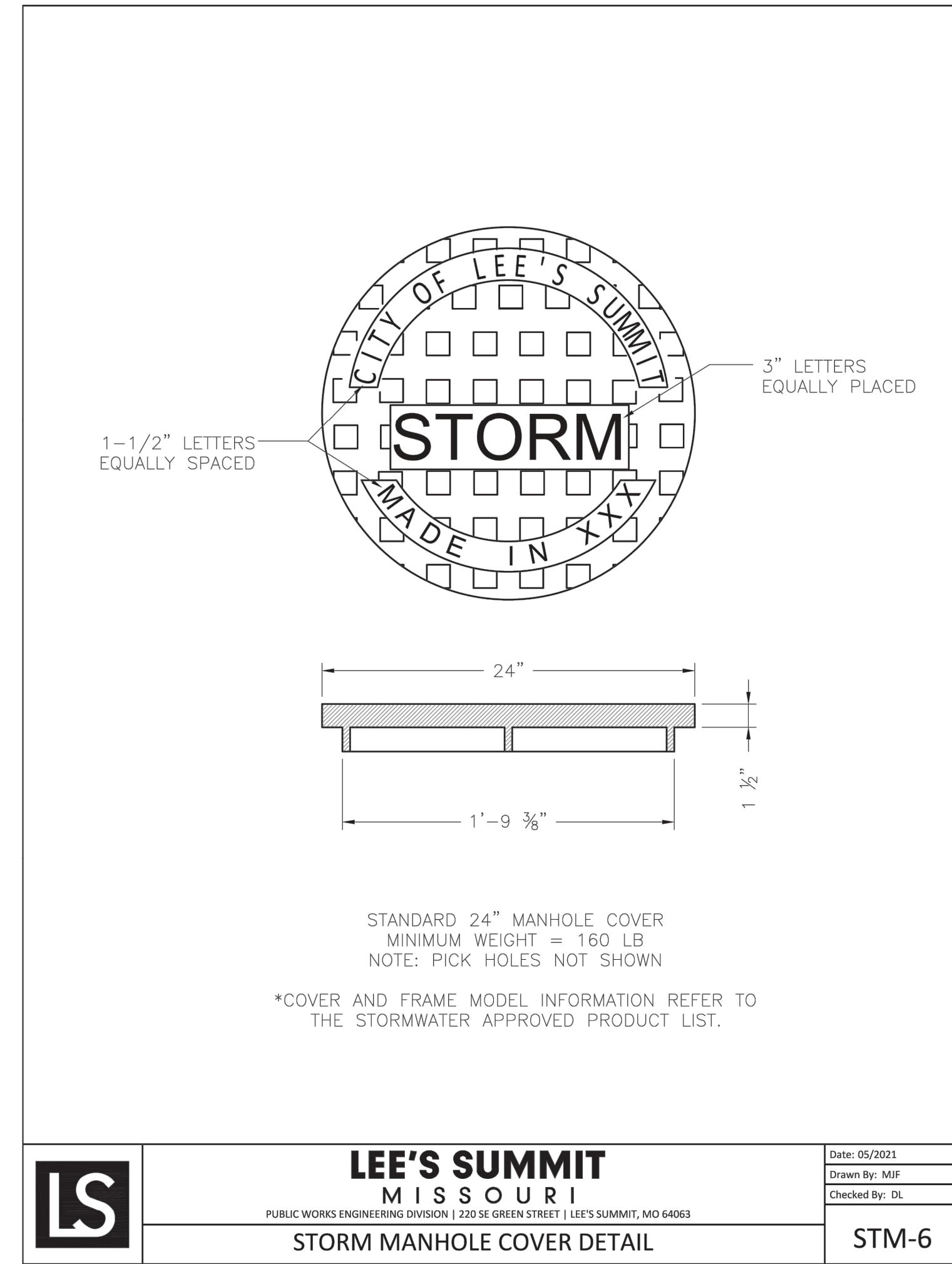
| | | | |
|---------------|-----------------|--------------------------|----------------------|
| DRAWN BY: TRC | CHECKED BY: MAB | DATE PREPARED: 1/30/2022 | PROJ. NUMBER: 22-102 |
|---------------|-----------------|--------------------------|----------------------|



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

LS DWG-7

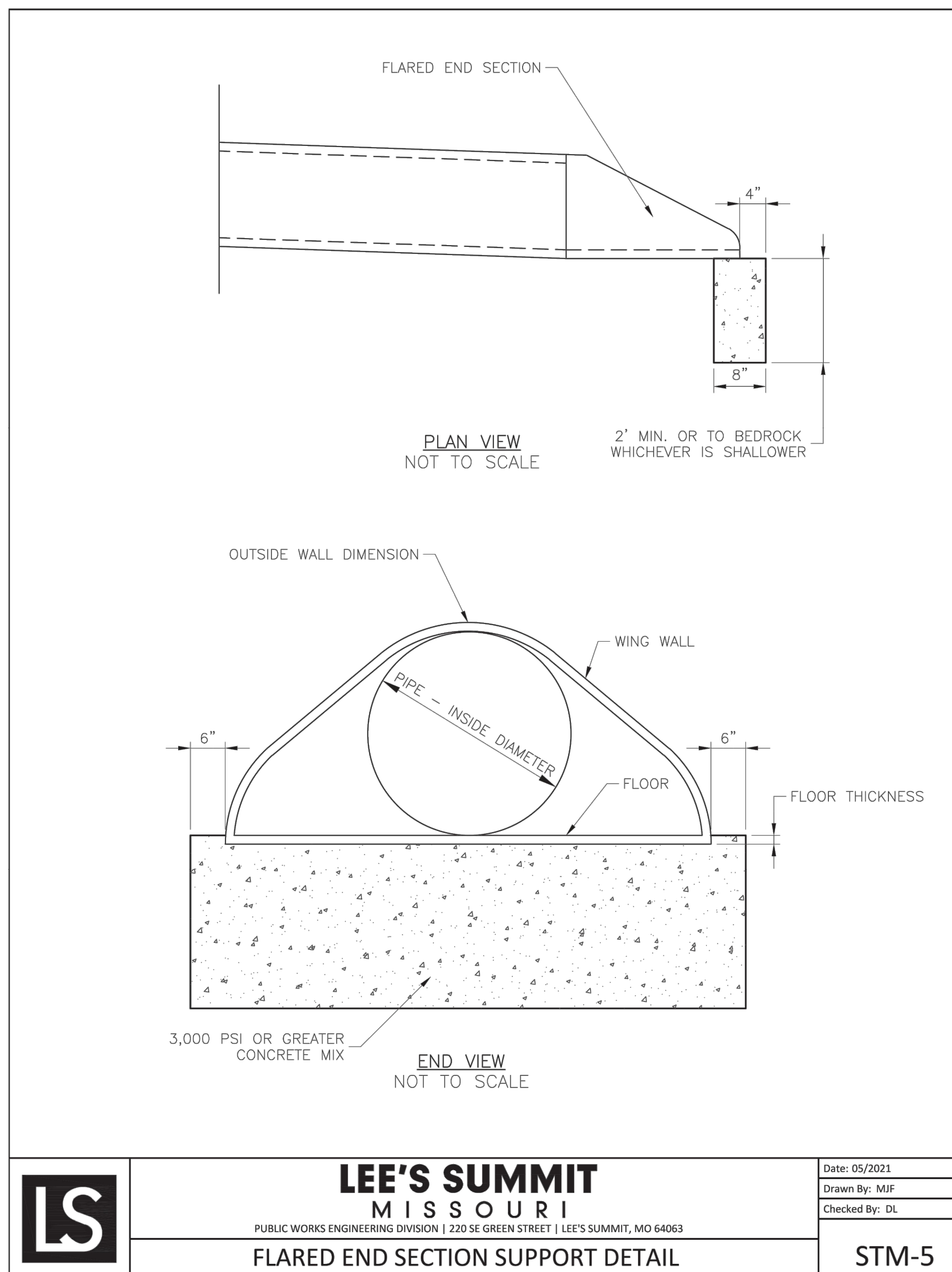
Date: 05/2021
Drawn By: MIF
Checked By: DL



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

LS STM-6

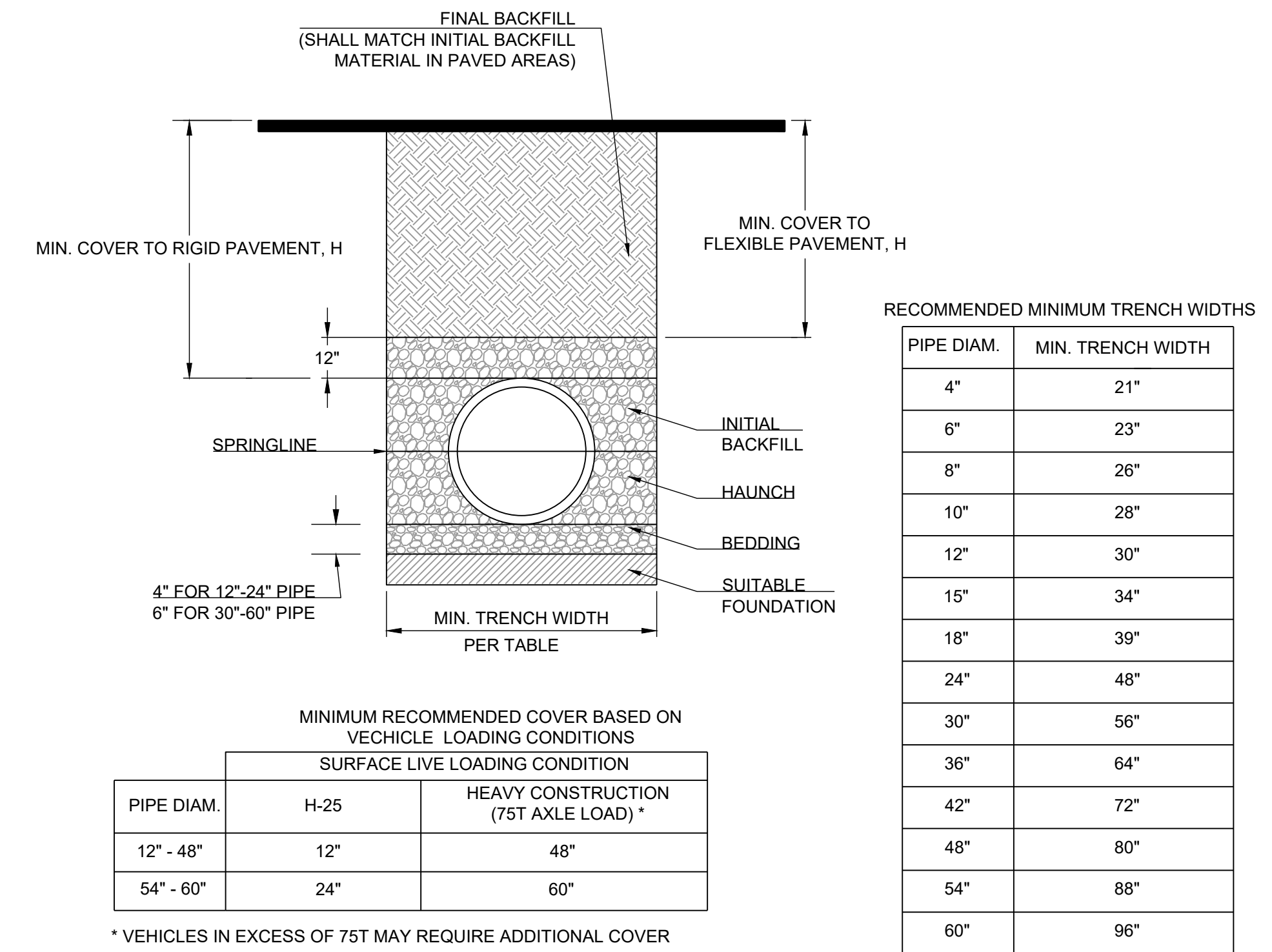
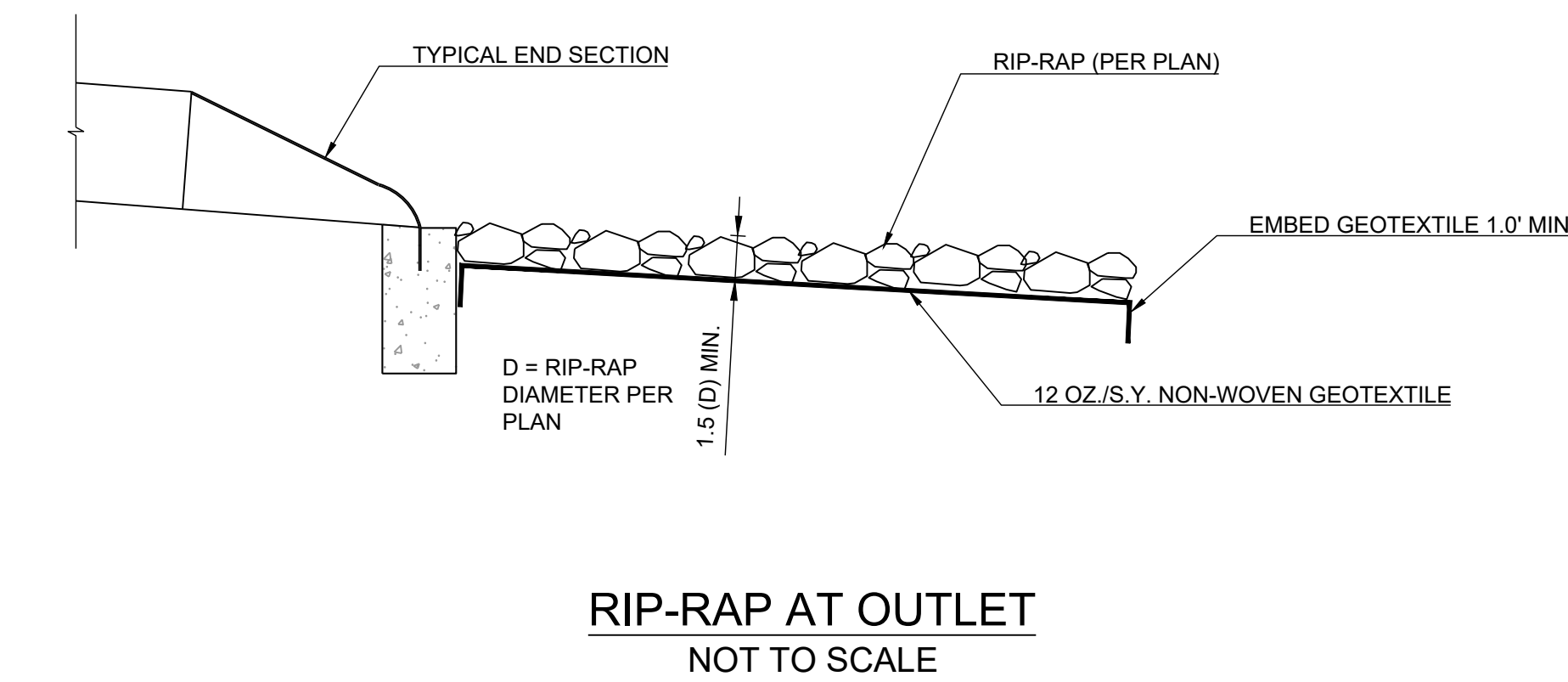
Date: 05/2021
Drawn By: MIF
Checked By: DL



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

LS STM-5

Date: 05/2021
Drawn By: MIF
Checked By: DL

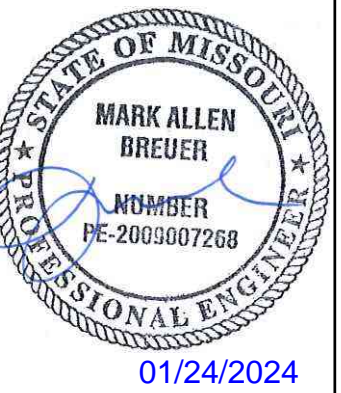


NOTES:

- ALL PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST EDITION
- MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL, WHEN REQUIRED.
- FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER. AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.
- BEDDING: SUITABLE MATERIAL SHALL BE CLASS I, II OR III. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. UNLESS OTHERWISE NOTED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm) FOR 4"-24" (100mm-600mm); 6" (150mm) FOR 30"-60" (750mm-900mm).
- INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I, II OR III IN THE PIPE ZONE EXTENDING NOT LESS THAN 6" ABOVE CROWN OF PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.
- MINIMUM COVER: MINIMUM COVER, H, IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" FROM THE TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOATION. FOR TRAFFIC APPLICATIONS, MINIMUM COVER, H, IS 12" UP TO 48" DIAMETER PIPE AND 24" OF COVER FOR 54"-60" DIAMETER PIPE, MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT.
- TESTING: CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF ALL MATERIAL TESTING REQUIRED FOR THEIR WORK. THIS INCLUDES SCHEDULING OF TESTS, COORDINATING AND PROVIDING ACCESS TO SAMPLE LOCATIONS, AND SATISFYING ALL TEST RESULT REPORTING REQUIREMENTS.

PIPE EMBEDMENT NOT TO SCALE

PREPARED BY:



SCHLAGEL & ASSOCIATES, P.A.

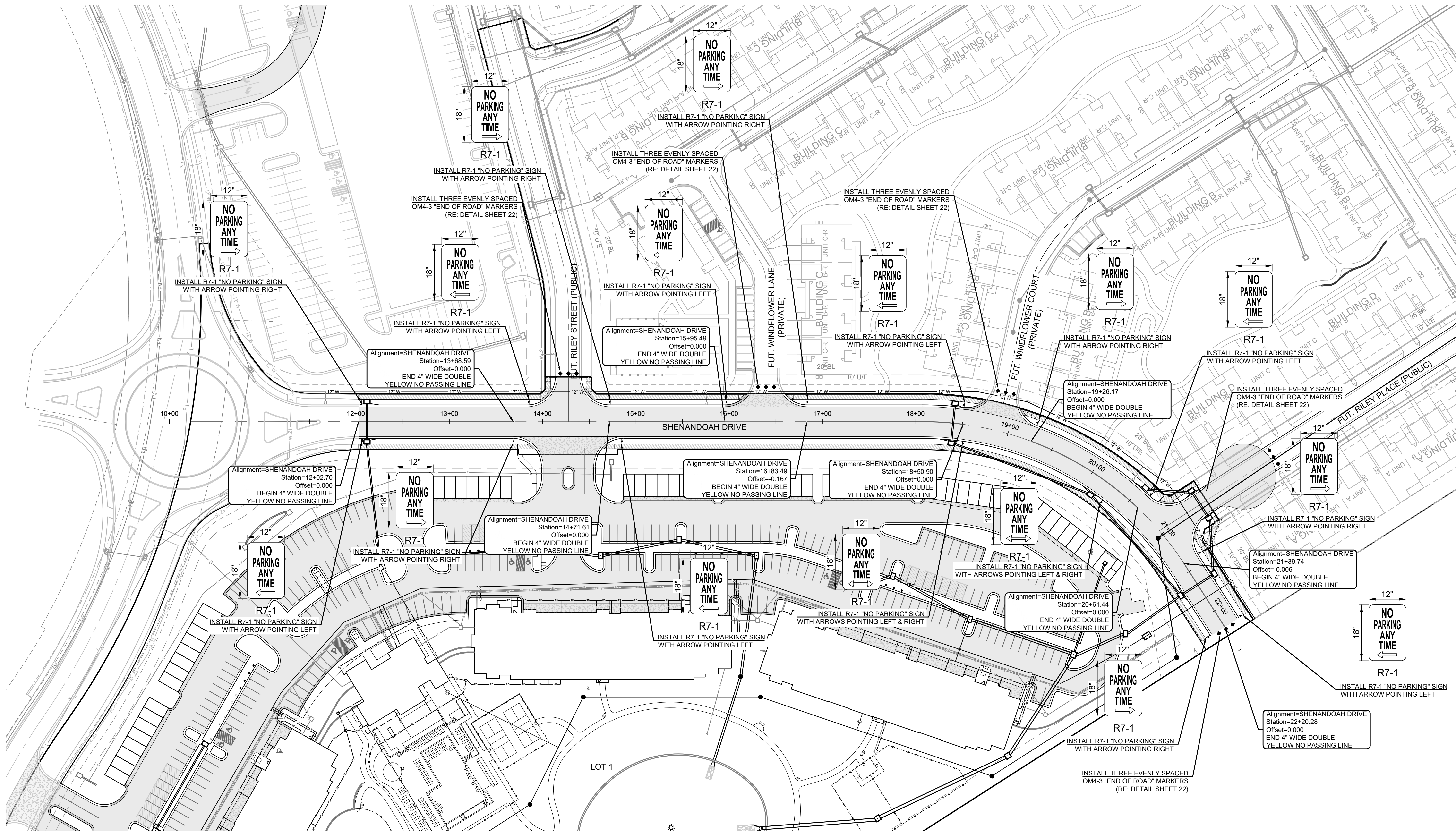
RESIDENCES AT BLACKWELL STREET, STORMWATER AND EROSION & SEDIMENT CONTROL SE SHENANDOAH DRIVE LEE'S SUMMIT, MO

| REVISION DATE | DESCRIPTION |
|---------------|-----------------------|
| 01/23/2023 | PER CITY COMMENTS |
| 03/24/2023 | PER CITY COMMENTS |
| 11/29/2023 | STORM SEWER REVISIONS |
| 01/17/2024 | PER CITY COMMENTS |

DRAWN BY: TRC
CHECKED BY: MAB
DATE PREPARED: 11/30/2022
PROJ. NUMBER: 22-102

STORM DETAILS

SHEET

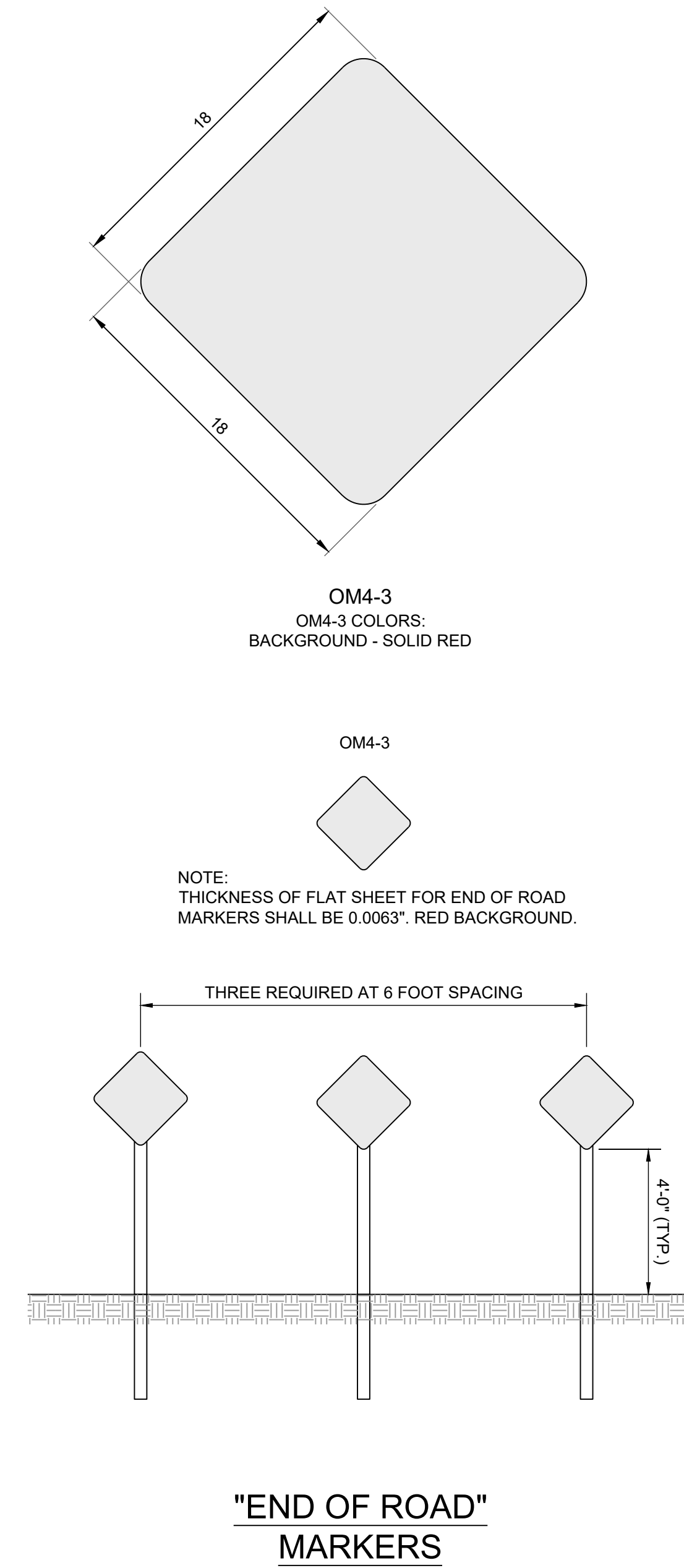
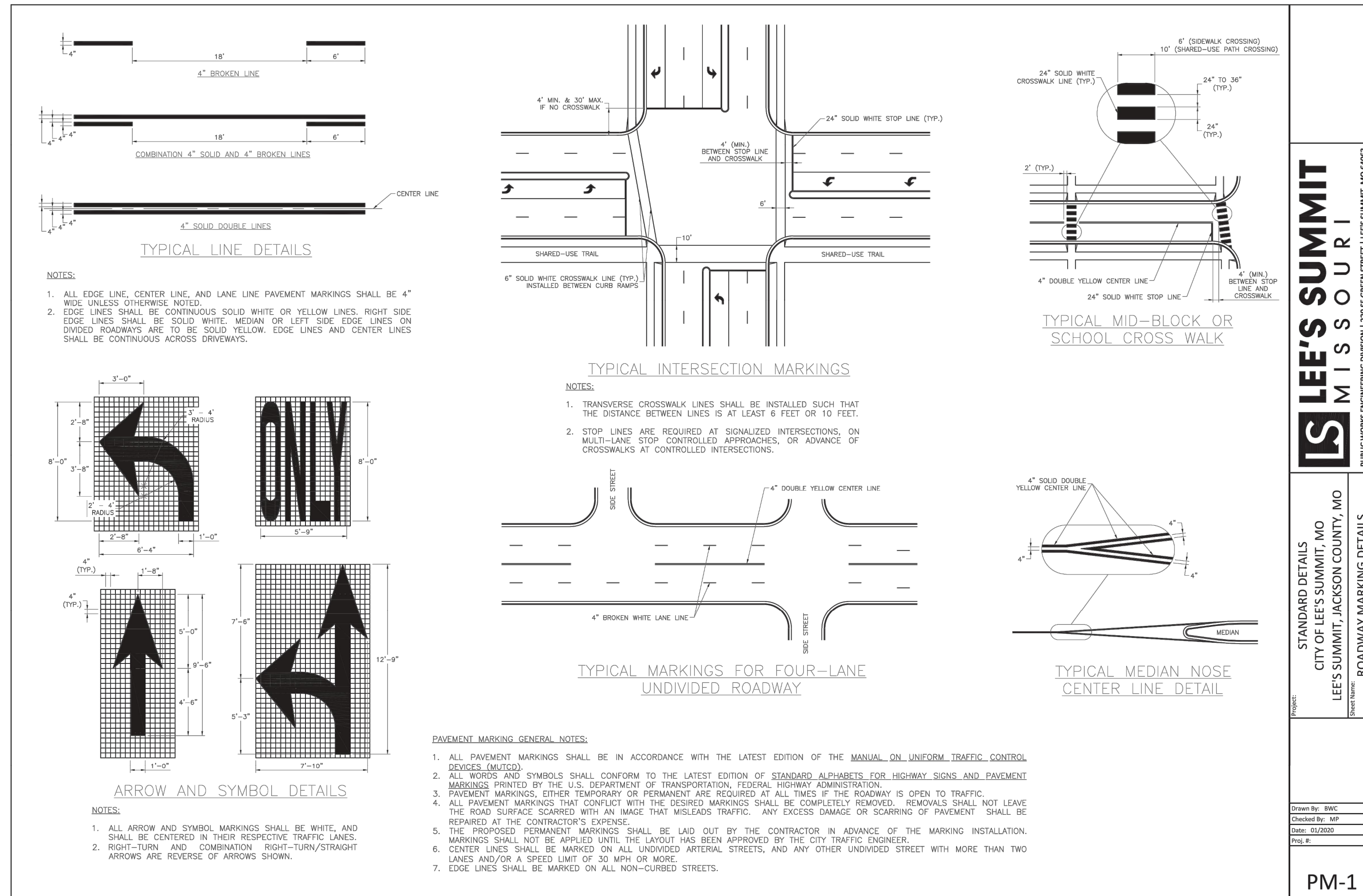


RESIDENCES AT BLACKWELL
 STREET, STORMWATER AND EROSION &
 SEDIMENT CONTROL
 SE SHENANDOAH DRIVE LEE'S SUMMIT, MO

| REVISION DATE | DESCRIPTION |
|---------------|-----------------------|
| 01/23/2023 | PER CITY COMMENTS |
| 03/24/2023 | PER CITY COMMENTS |
| 11/29/2023 | STORM SEWER REVISIONS |
| 01/17/2024 | PER CITY COMMENTS |
| 11/30/2022 | |

STREET SIGN &
 PAVEMENT
 MARKING PLAN





| REVISION DATE | DESCRIPTION |
|---------------|-----------------------|
| 01/23/2023 | PER CITY COMMENTS |
| 03/24/2023 | PER CITY COMMENTS |
| 11/29/2023 | STORM SEWER REVISIONS |
| 01/17/2024 | PER CITY COMMENTS |

DRAWN BY: TRC
CHECKED BY: MAB
DATE PREPARED: 1/30/2022
PROJ. NUMBER: 22-102