

# STREET, STORM, DRAINAGE FOR WHISPERING WOOD 2ND PLAT CITY OF LEE'S SUMMIT JACKSON COUNTY, MISSOURI

### LEGAL DESCRIPTION

PROPERTY DESCRIPTION  
CONTAINING 234,887 SQUARE FEET OR 5.39 ACRES

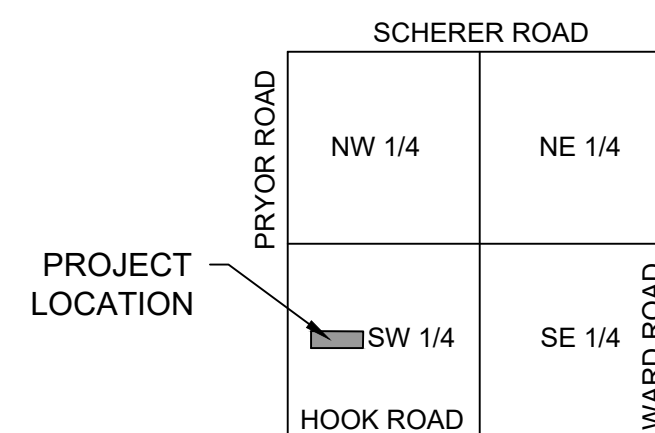
PART OF THE SOUTHWEST QUARTER OF SECTION 24, TOWNSHIP 47 NORTH, RANGE 32 WEST, LEE'S SUMMIT, JACKSON COUNTY, MISSOURI, BEING DESCRIBED AS FOLLOWS: COMMENCING AT THE SOUTHEAST CORNER OF THE NORTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SAID SECTION 24; THENCE N87°38'05"W, ALONG THE SOUTH LINE OF THE NORTH HALF OF SAID SOUTHWEST QUARTER, A DISTANCE OF 572.29 FEET TO THE POINT OF BEGINNING OF THE TRACT OF LAND TO BE HEREIN DESCRIBED; THENCE N87°38'05"W, CONTINUING ALONG SAID LINE, A DISTANCE OF 819.48 FEET TO THE SOUTHEAST CORNER OF TRACT D, WHISPERING WOODS FIRST PLAT, A SUBDIVISION IN SAID LEE'S SUMMIT, JACKSON COUNTY, MISSOURI; THENCE N02°21'55"E, ALONG THE EASTERLY LINE OF SAID PLAT OF WHISPERING WOODS FIRST PLAT, A DISTANCE OF 180.00 FEET; THENCE N87°38'05"W, CONTINUING ALONG SAID LINE, A DISTANCE OF 11.45 FEET; THENCE N02°21'55"E, CONTINUING ALONG SAID LINE, A DISTANCE OF 120.00 FEET TO THE NORTHEAST CORNER OF LOT 28, SAID PLAT OF WHISPERING WOODS FIRST PLAT; THENCE S87°38'05"E, A DISTANCE OF 677.89 FEET; THENCE S02°31'15"W, A DISTANCE OF 21.63 FEET; THENCE S87°40'43"E, A DISTANCE OF 60.00 FEET; THENCE S02°31'15"W, A DISTANCE OF 73.30 FEET; THENCE SOUTHEASTERLY, ALONG A CURVE TO THE LEFT BEING TANGENT TO THE LAST DESCRIBED COURSE, HAVING A RADIUS OF 25.00 FEET, AN ARC DISTANCE OF 39.36 FEET; THENCE S87°40'43"E, A DISTANCE OF 68.28 FEET; THENCE S02°21'55"W, A DISTANCE OF 180.09 FEET TO THE POINT OF BEGINNING.

### PROJECT BENCH MARK

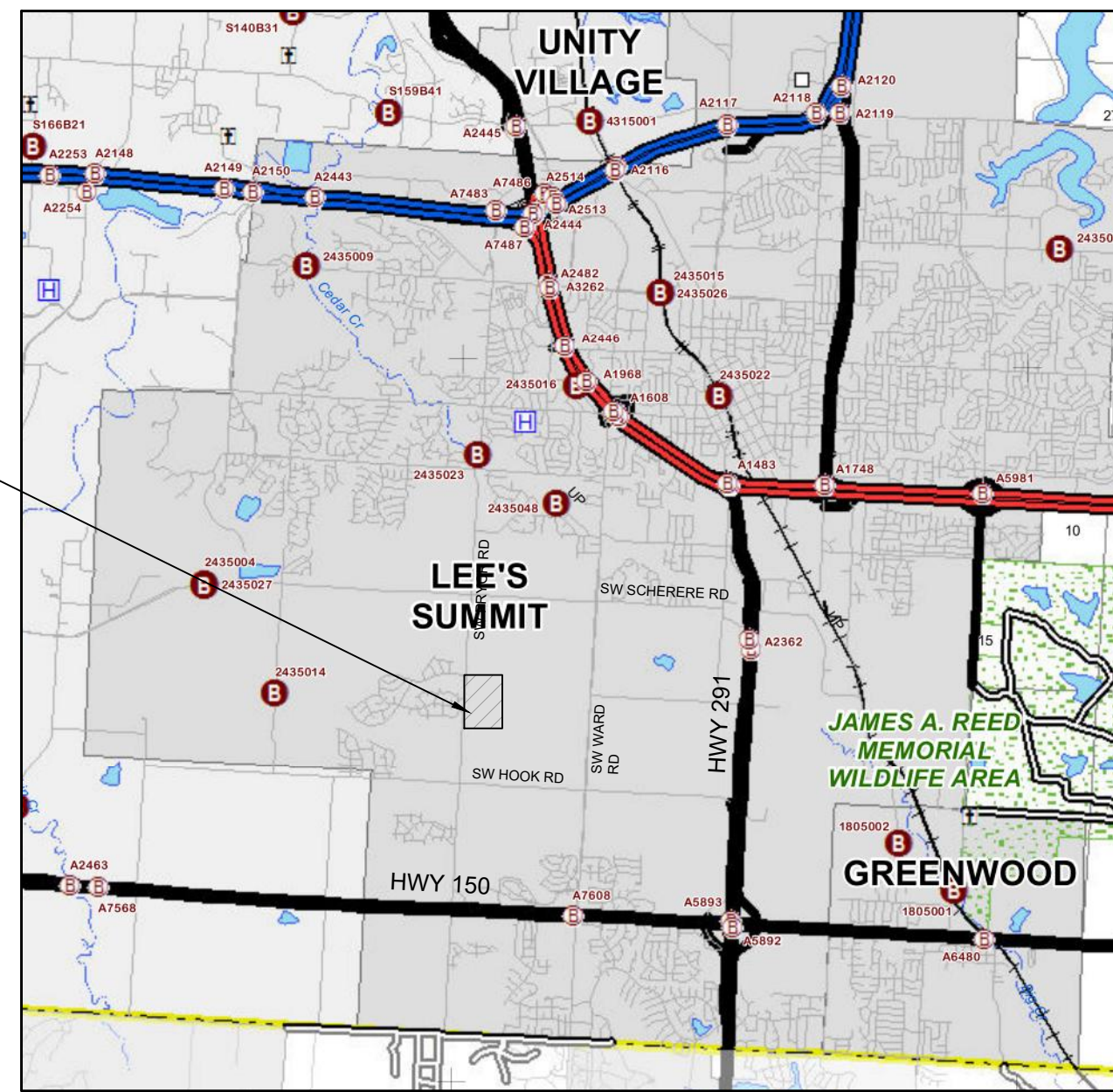
ELEV. 1006.89 (NAVD 1988 DATUM)

MISSOURI DEPARTMENT OF NATURAL RESOURCES GRS  
ALUMINUM DISK STAMPED "JA-47" LOCATED NEAR THE  
INTERSECTION OF HWY 150 WITH REGGATA DRIVE AND HWY 291

| UTILITY SERVICE NUMBERS     |              |
|-----------------------------|--------------|
| SPECTRUM                    | 886-874-2389 |
| EVERGY                      | 816-220-5213 |
| SPIRE GAS                   | 816-399-9633 |
| LEE'S SUMMIT PUBLIC WORKS   | 816-969-1800 |
| CITY PLANNING & DEVELOPMENT | 816-969-1600 |
| FIRE DEPARTMENT             | 816-969-1300 |



VICINITY MAP  
N.T.S.



PROJECT LOCATION

### SUMMARY OF QUANTITIES

| ITEM   | UNIT | PLAN   | AS-BUILT |
|--|------|--------|----------|
| Public Earthwork (CUT 10,115 CY / FILL 6,500 CY) | CY   | 10,115 |          |
| 2" Asphaltic Concrete Surface                    | SY   | 3,323  |          |
| 4" Type 5 Asphaltic Concrete Base                | SY   | 2,300  |          |
| 5.5" Type 5 Asphaltic Concrete Base              | SY   | 1,023  |          |
| CG-2 Curb & Gutter                               | LF   | 1,515  |          |
| CG-1 Curb & Gutter                               | LF   | 570    |          |
| 5'x3' Curb Inlet                                 | EA   | 9      |          |
| 4'x4' Field Inlet                                | EA   | 1      |          |
| 24" HDPE   | LF   | 334    |          |
| 18" HDPE   | LF   | 307    |          |
| 15" HDPE   | LF   | 366    |          |
| 15" RCP  | LF   | 250    |          |
| 15" F.E.S  | EA   | 1      |          |
| Rip-Rap  | SY   | 136    |          |
| ADA Curb Ramps                                   | EA   | 8      |          |
| Type IV Object Markers                           | EA   | 12     |          |
| R1-1 Stop Signs                                  | EA   | 2      |          |
| Street Name Signs                                | EA   | 2      |          |

Summary of Quantities as indicated above and any quantities as shown within the plans have been provided for permitting purposes only and are not intended for use in preparation of contract documents. Quantities intended for, but not limited to, the preparation of proposals and bid documents shall be independently evaluated by the estimating party based upon the contents of these plans.

### INDEX TO SHEETS

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NOT ASBUILT

APPROVED:

City Engineer

Date

DEVELOPER:

WHISPERING WOODS LAND, L.L.C.  
803 P.C.A. ROAD  
WARRENSBURG, MO 64093  
AGENT: RICK FRYE  
PHONE: 816.564.2230  
FAX: 660.429.1801



| MARK | REVISION                      | DATE     | BY |
|------|-------------------------------|----------|----|
| 2    | REVISED SUMMARY OF QUANTITIES | 10/14/20 | BY |
| 1    | REVISED SUMMARY OF QUANTITIES | 9/4/20   | BY |

| Engineer: | Checked By: | SD | Scale:  | 1"= N/A |
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| JS        | JS          |    | 7-28-20 |         |

| Technician: | Date: | Field Bk: | Pg: |
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|             |       |           | 1   |

Snyder & Associates Engineers & Planners, Inc.  
Missouri State Certificate of Authority #2006006544



SHAWN DUKE - ENGINEER  
MO PE#2013006489

WHISPERING WOODS 2ND PLAT  
STREET & STORM SEWER PLANS

TITLE SHEET

LEE'S SUMMIT, MO

802 FRANCIS STREET  
ST. JOSEPH, MO 64501  
816-364-5222

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Project No: 1200484.11  
Sheet 1

**EROSION CONTROL NOTES:**

A MISSOURI STATE OPERATING PERMIT FOR STORM WATER DISCHARGE IS REQUIRED IF CONSTRUCTION ACTIVITY DISTURBS ONE ACRE OR MORE IN ACCORDANCE WITH THE MISSOURI DEPARTMENT OF NATURAL RESOURCES' REGULATION (10 CSR 20-6.200). COMPLIANCE WITH THE STORMWATER POLLUTION PREVENTION PLAN IS REQUIRED IN THIS INSTANCE. A CONSTRUCTION PERMIT FOR LAND DISTURBANCE WILL BE SECURED FROM THE MISSOURI DEPARTMENT OF NATURAL RESOURCES AND PROVIDED TO THE CONTRACTOR.

SLOPES ARE TO BE LEFT IN A ROUGHENED CONDITION DURING GRADING.

CURB INLET SEDIMENTATION FILTERS ARE TO BE INSTALLED AROUND CURB INLETS WHERE SEDIMENTATION IS A CONCERN. (SEE SWPP FOR DETAILS)

INLET PROTECTION SHALL BE INSTALLED IMMEDIATELY FOLLOWING INSTALLATION OF STORM INLETS & REMAIN IN PLACE UNTIL GROUND COVER HAS BEEN ESTABLISHED.

EROSION CONTROL MEASURES SHALL BE CONSTRUCTED PRIOR TO BEGINNING GRADING OPERATIONS WHERE POSSIBLE. ALL REMAINING EROSION CONTROL MEASURES SHALL BE CONSTRUCTED IMMEDIATELY FOLLOWING GRADING OPERATIONS.

THE SITE IS TO BE SEEDED AND MULCHED AND TEMPORARY EROSION CONTROL MEASURES ARE TO REMAIN IN PLACE UNTIL GROUND COVER HAS BEEN ESTABLISHED.

SEDIMENT IS TO BE REMOVED FROM STORM WATER DRAINAGE SYSTEMS INCLUDING THE DETENTION BASIN.

ROCK LINING IS TO BE INSTALLED AT AREAS OF CONCENTRATED FLOW (I.E. CULVERT OUTLETS).

ROCK LINING SHALL BE TYPE 2 ROCK DITCH LINER ACCORDING TO MISSOURI STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION SEC. 609.60. ALL NECESSARY STEPS SHALL BE TAKEN TO PREVENT SEDIMENT AND SOIL EROSION FROM BEING TRANSPORTED ONTO ADJACENT PROPERTY AND INTO STREAMS, LAKES, PONDS, OR OTHER AREAS.

CONTRACTOR SHALL INSPECT EROSION CONTROL MEASURES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. ANY REQUIRED REPAIRS SHOULD BE MADE IMMEDIATELY.

ADDITIONAL EROSION CONTROL MEASURES MAY BE NEEDED IF UNFORESEEN EROSION PROBLEMS ARISE OR IF THE SUBMITTED PLAN DOES NOT FUNCTION AS INTENDED.

**A. EROSION PROTECTION**

1. CODE COMPLIANCE: THE CONTRACTOR SHALL COMPLY WITH SOIL EROSION CONTROL REQUIREMENTS OF THE MISSOURI CODE, THE MISSOURI DEPARTMENT OF NATURAL RESOURCES NPDES PERMIT, AND LOCAL ORDINANCE. THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASUREMENTS TO PROTECT AGAINST EROSION AND DUST POLLUTION ON THIS PROJECT SITE AND ALL OFF-SITE BORROW OR DEPOSIT AREAS DURING PERFORMANCE OR AS A RESULT OF PERFORMANCE.

2. DAMAGE CLAIMS: THE CONTRACTOR WILL HOLD THE OWNER, ARCHITECT AND ENGINEER HARMLESS FROM ANY AND ALL CLAIMS OF ANY TYPE WHATSOEVER RESULTING FROM DAMAGES TO ADJOINING PUBLIC OR PRIVATE PROPERTY, INCLUDING REASONABLE ATTORNEY FEES INCURRED TO OWNER. FURTHER, IF THE CONTRACTOR FAILS TO TAKE NECESSARY STEPS TO PROMPTLY REMOVE EARTH SEDIMENTATION OR DEBRIS WHICH COMES ONTO ADJOINING PUBLIC OR PRIVATE PROPERTY, THE OWNER MAY, BUT NEED NOT, REMOVE SUCH ITEMS AND DEDUCT THE COST THEREOF FROM AMOUNTS DUE TO THE CONTRACTOR.

3. ALL AREAS DISTURBED BY CONSTRUCTION ON THIS PROJECT WILL BE SUBJECT TO CURRENT REGULATORY REQUIREMENTS AND THESE STANDARDS.

**B. STORM WATER DISCHARGE PERMIT:**

1. THIS PROJECT REQUIRES A LAND DISTURBANCE PERMIT FROM THE MISSOURI DEPARTMENT OF NATURAL RESOURCES, AS REQUIRED BY THE ENVIRONMENTAL PROTECTION COMMISSION (EPC). THE OWNER SHALL OBTAIN THE PERMIT. THE GENERAL CONTRACTOR AND ALL SUBCONTRACTORS SHALL BE RESPONSIBLE FOR COMPLIANCE AND FULFILLING ALL REQUIREMENTS OF THE PERMIT INCLUDING THE STORM WATER POLLUTION PREVENTION PLAN.

2. ALL DOCUMENTS RELATED TO THE STORM WATER DISCHARGE PERMIT SHALL BE KEPT ON SITE AT ALL TIMES AND MUST BE PRESENTED TO THE MISSOURI DNR UPON REQUEST WHICH INCLUDE THE NOTICE OF INTENT, PROOF OF PUBLICATION, POLLUTION PREVENTION PLAN, PROJECT INSPECTION DIARY, AND OTHER ITEMS. FAILURE TO COMPLY WITH THE DISCHARGE REQUIREMENTS IS IN VIOLATION OF THE CLEAN WATER ACT AND THE CODE OF MISSOURI.

3. UPON FINAL STABILIZATION OF THE DISTURBED AREA, A "NOTICE OF DISCONTINUATION" MUST BE FILED BY THE OWNER WITH THE MISSOURI DNR. ALL PLANS, INSPECTION REPORTS, AND OTHER DOCUMENTS MUST BE RETAINED FOR A PERIOD OF THREE YEARS AFTER PROJECT COMPLETION. THE CONTRACTOR SHALL RETAIN RECORD COPY AND PROVIDE ORIGINAL DOCUMENTS TO THE OWNER UPON ISSUANCE OF THE NOTICE OF DISCONTINUATION.

**POLLUTION PREVENTION PLAN:**

1. SITE DESCRIPTION: THIS PROJECT IS FOR THE CONSTRUCTION OF ROUGH GRADING FOR COMMERCIAL DEVELOPMENT. THE ENTIRE PROJECT COVERS APPROXIMATELY 1.70 ACRES. THE ESTIMATED AVERAGE RUNOFF COEFFICIENT WILL BE 0.80 RUNOFF FROM THIS PROJECT SITE AND WILL BE ROUTED THROUGH THE EXISTING CITY STORM SEWER.

2. POTENTIAL SOURCES OF POLLUTION FOR THIS PROJECT RELATE TO SILTS, SEDIMENT, AND OTHER MATERIALS WHICH MAY BE TRANSPORTED FROM THE CONSTRUCTION SITE AS THE RESULT OF A STORM EVENT.

3. RESPONSIBILITY: THIS POLLUTION PREVENTION PLAN ILLUSTRATES GENERAL MEASURES TO BE TAKEN FOR COMPLIANCE WITH THE PERMIT. ALL MITIGATION MEASURES REQUIRED, AS A RESULT OF ACTIVITIES, ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL TAKE ALL ACTIONS NECESSARY FOR INSTALLATION OF CONTROL MEASURES FOR COMPLIANCE WITH PERMIT REQUIREMENTS.

4. CONTROLS: THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE AND FULFILLING ALL THE REQUIREMENTS OF THE GENERAL PERMIT INCLUDING, BUT NOT LIMITED TO, THE FOLLOWING:

a. THE CONTRACTOR SHALL PROTECT ADJOINING PROPERTY INCLUDING PUBLIC UTILITIES, SANITARY AND STORM DRAINAGE SYSTEMS, AND STREETS FROM ANY DAMAGE RESULTING FROM MOVEMENT OF EARTH OR OTHER DEBRIS FROM PROJECT SITE. REPAIR ANY DAMAGE IMMEDIATELY AT NO ADDITIONAL COST.

b. THE CONTRACTOR SHALL PREVENT ACCUMULATION OF EARTH, SILTATION, OR DEBRIS ON ADJOINING PUBLIC OR PRIVATE PROPERTY FROM PROJECT SITE. REMOVE ANY ACCUMULATION OF EARTH OR DEBRIS IMMEDIATELY AND TAKE REMEDIAL ACTIONS FOR PREVENTION.

c. PRIOR TO SITE CLEARING AND GRADING OPERATIONS, CONTRACTOR SHALL INSTALL SILT FENCE ALONG THE PERIMETER OF THE PROJECT DOWNSTREAM OF DISTURBING ACTIVITIES AS REQUIRED AND AS SHOWN ON THE PLANS.

d. THE CONTRACTOR SHALL PRESERVE EXISTING VEGETATION IN AREAS NOT NEEDED FOR CONSTRUCTION.

**GENERAL NOTES:**

1. REFER TO THE CURRENT VERSION OF THE CITY OF LEE'S SUMMIT DESIGN AND CONSTRUCTION (D&C) MANUAL FOR CONSTRUCTION OF THESE PLANS.

2. ALL WORKMANSHIP AND MATERIALS SHALL BE SUBJECT TO THE INSPECTION AND APPROVAL OF THE ENGINEERING DEPARTMENT OF THE CITY OF LEE'S SUMMIT, MISSOURI.

3. LINEAL FOOT MEASUREMENTS SHOWN ON THESE PLANS ARE HORIZONTAL MEASUREMENTS, NOT SLOPE MEASUREMENTS. ALL PAYMENTS SHALL BE MADE ON HORIZONTAL MEASUREMENTS.

4. NO GEOLOGICAL INVESTIGATION WAS PERFORMED ON THIS PROJECT.

5. THE UTILITY LOCATIONS SHOWN ON THESE PLANS ARE TAKEN FROM UTILITY COMPANY RECORDS AND ARE APPROXIMATE ONLY. THEY DO NOT CONSTITUTE ACTUAL FIELD LOCATIONS. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO CONSTRUCTION.

6. CLEARING AND GRUBBING OPERATIONS AND DISPOSAL OF ALL DEBRIS THEREFROM SHALL BE PERFORMED BY THE CONTRACTOR IN STRICT ACCORDANCE WITH ALL STATE AND LOCAL CODES AND ORDINANCES.

7. ALL WASTE MATERIAL SHALL BE DISPOSED OF AT A LOCATION TO BE SELECTED BY THE OWNER OR HIS AUTHORIZED REPRESENTATIVE, SUCH LOCATION TO BE ON THE SITE.

8. THE CONTRACTOR SHALL CONTROL THE EROSION AND SILTATION DURING ALL PHASES OF CONSTRUCTION, HE SHALL KEEP THE STREETS CLEAN OF MUD AND DEBRIS AND FOLLOW THE EROSION CONTROL PLAN PREPARED BY THE DESIGN ENGINEER.

9. ALL EXISTING MANHOLES, CATCH BASINS, UTILITY VALVES AND METER PITS TO BE ADJUSTED OR REBUILT TO GRADE AS REQUIRED.

10. SUBGRADE SOIL FOR ALL CONCRETE STRUCTURES, REGARDLESS OF THE TYPE OR LOCATION, SHALL BE FIRM, DENSE AND THOROUGHLY COMPACTED AND CONSOLIDATED; SHALL BE FROM MUCH AND MUD; AND SHALL BE SUFFICIENTLY STABLE TO REMAIN FIRM AND INTACT UNDER THE FEET OF THE WORKMAN OR MACHINERY ENGAGED IN SUBGRADE, LAYING REINFORCING STEEL, AND DEPOSITING CONCRETE THEREON. IN ALL CASES WHERE SUBSOIL IS MUCKY OR WORKS INTO MUD OR MUCK DURING SUCH OPERATION, A SEAL COURSE OF EITHER CONCRETE OR ROCK SHALL BE PLACED BELOW SUBGRADE TO PROVIDE A FIRM BASE FOR WORKING AND FOR PLACING THE FLOOR SLAB.

11. A MINIMUM HORIZONTAL DISTANCE OF TEN (10') SHALL BE MAINTAINED BETWEEN PARALLEL WATER AND SANITARY SEWER LINES. AT ANY POINT WHERE SANITARY SEWER LINES CROSS WATER MAIN, THE SANITARY SEWER SHALL BE CONSTRUCTED OF CAST IRON PIPE OR PIPE ENCASED IN CONCRETE FOR A DISTANCE OF TEN FEET (10') IN EACH DIRECTION FROM THE CROSSING UNLESS THE WATER IS A MINIMUM OF EIGHTEEN INCHES (18") ABOVE THE TOP OF THE SANITARY SEWER LINE.

12. CONTRACTOR SHALL PROVIDE TESTING AND INSPECTION PER SECTION 2200 - PAVING MAINS CITY OF LEE'S SUMMIT, MISSOURI STANDARD SPECIFICATIONS.

13. DEVELOPMENT PLANS ARE APPROVED INITIALLY FOR ONE (1) YEAR, AFTER WHICH THEY AUTOMATICALLY BECOME VOID AND MUST BE UPDATED AND APPROVED BY THE CITY ENGINEER BEFORE ANY CONSTRUCTION WILL BE PERMITTED.

14. ALL SANITARY SEWER STUBS SHALL BE SURVEYED AND STAKED ON SITE BEFORE THE CONSTRUCTION OF SANITARY SERVICE STUBS.

15. THE CITY OF LEE'S SUMMIT PLAN REVIEW IS ONLY FOR GENERAL CONFORMANCE WITH THE CITY OF LEE'S SUMMIT DESIGN CRITERIA AND THE CITY CODE. THE CITY IS NOT RESPONSIBLE FOR THE ACCURACY AND ADEQUACY OF THE DESIGN, OR DIMENSIONS AND ELEVATIONS WHICH SHALL BE CONFINED AND CORRELATED AT THE JOB SITE. THE CITY OF LEE'S SUMMIT THROUGH APPROVAL OF THIS DOCUMENT ASSUMES NO RESPONSIBILITY OTHER THAN AS STATED ABOVE FOR THE COMPLETENESS AND/OR ACCURACY OF THIS DOCUMENT.

16. THE CONTRACTOR SHALL HAVE ONE (1) SIGNED COPY OF THE PLANS (APPROVED BY THE CITY OF LEE'S SUMMIT) AND ONE (1) COPY OF THE APPROPRIATE CONSTRUCTION STANDARDS AND SPECIFICATIONS AT THE JOB SITE AT ALL TIMES.

17. CONSTRUCTION OF THE IMPROVEMENTS SHOWN OR IMPLIED BY THIS SET OF DRAWINGS SHALL NOT BE INITIATED OR ANY PART THEREOF UNDERTAKEN UNTIL THE CITY ENGINEER IS NOTIFIED OF SUCH INTENT AND ALL REQUIRED AND PROPERLY EXECUTED BONDS AND PERMIT FEES ARE RECEIVED AND APPROVED BY THE CITY ENGINEER.

18. ALL STUB LINES SHALL BE LAID ON 2.00% MINIMUM GRADE UNLESS APPROVED OTHERWISE.

19. CONTRACTOR SHALL NOT BE ALLOWED TO WORK ON SATURDAYS, SUNDAYS, OR HOLIDAYS WITHOUT PRIOR APPROVAL OF THE CITY ENGINEER.

20. RELOCATION OF ANY WATER LINE, SEWER LINE OR SERVICE LINE THEREOF REQUIRED FOR THE CONSTRUCTION OF THIS PROJECT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE AT HIS EXPENSE.

21. THE CONTRACTOR SHALL INSTALL AND PROPERLY MAINTAIN A MECHANICAL PLUG AT ALL CONNECTION POINTS WITH EXISTING LINES UNTIL SUCH TIME THAT THE NEW LINE IS TESTED AND APPROVED.

22. THE CONTRACTOR SHALL CONSTRUCT MANHOLES PLACING ECCENTRIC CONE SECTION IN SUCH A MANNER THAT MANHOLE COVERS ARE ADJACENT TO THE PROPOSED SIDEWALKS. IN LOCATIONS WHERE MANHOLES ARE NOT NEAR PROPOSED SIDEWALKS THE MANHOLE COVERS SHALL GENERALLY BE PLACED ON THE UPSTREAM SIDE OF THE MANHOLES WHENEVER POSSIBLE.

23. STUB LINES, LOCATIONS, AND MINIMUM BASEMENT FLOOR ELEVATIONS ARE LOCATED IN THE TABLE LABELED "TABLE OF SERVICE LOCATIONS".

24. CONSTRUCTION PERMITS WILL NOT BE ISSUED UNTIL THE CITY OF LEE'S SUMMIT RECEIVES A SEWER EXENTION PERMIT FROM MDNR.

25. ALL AREAS WHERE UTILITIES ARE TO BE INSTALLED IN FILL SHALL BE COMPACTED TO 95% TO 18 INCHES ABOVE THE LINE THEN EXCAVATED FOR CONSTRUCTION OF THE LINE.

26. THE CONTRACTOR WILL BE RESPONSIBLE FOR TESTING OF MANHOLES AND PIPES TO THE CITY OF LEE'S SUMMIT DESIGN & CONSTRUCTION MANUAL REQUIREMENTS.

27. THE DEVELOPER WILL BE RESPONSIBLE FOR PERFORMING PRESSURE TESTING ON EVERY SECTION OF THE SANITARY LINES, PRESSURE TESTING ON EVERY MANHOLE, AND RUNNING A MANDREL THROUGH EVERY SECTION OF SANITARY SEWER LINE TO TEST FOR ALIGNMENT. TESTING CRITERIA WILL BE IN ACCORDANCE WITH CITY OF LEE'S SUMMIT DESIGN & CONSTRUCTION MANUAL SPECIFICATIONS.

28. ALL UTILITY STREET CROSSINGS SHALL BE BACKFILLED WITH FLOWABLE FILL, OR AB-3. IF CONTRACTOR CHOOSES TO USE OTHER SUITABLE MATERIALS, EXTENSIVE SOIL TESTING REQUIREMENTS WILL BE REQUIRED.

29. THE SPECIAL FLOW HAZARD AREA (SFHA) AND REGULATORY FLOOD WAY DEPICTED IN THESE PLANS ARE PER FEMA'S NATURAL FLOOD HAZARD LAYER (NFHL) OBTAINED FROM WWW.FEMA.GOV. NFIP INFORMATION SHOWN ARE REPRESENTATIVE OF FEMA'S FLOOD INSURANCE RATE MAP (FIRM) MAP NUMBER 29095C0531G; EFFECTIVE DATE JANUARY 20, 2017.

30. NO FILL MATERIAL SHALL BE PLACED WITHIN THE FEMA IDENTIFIED FLOODWAY. NO CONSTRUCTION SHALL BE PERFORMED WITHIN THE FLOODWAY UNLESS DEPICTED ON THESE PLANS OR OTHER PLANS APPROVED BY THE CITY OF LEE'S SUMMIT, MO.

**PROJECT NOTES:**

1. GRADING CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTROL OF EROSION AND SILTATION DURING ALL PHASES OF CONSTRUCTION.

2. PRIOR TO ORDERING PRECAST STRUCTURES: SHOP DRAWINGS SHALL BE SUBMITTED TO THE DESIGN ENGINEER FOR APPROVAL. UPON APPROVAL THESE SHALL BE SUBMITTED TO THE CITY OF LEE'S SUMMIT FOR REVIEW.

3. MANHOLE TOP ELEVATIONS DESIGNATED AS "FIELD VERIFY" (F.V.) ARE LOCATED OUTSIDE THE STREET RIGHT-OF-WAY OR IN AREAS OF UNDETERMINED GRADING. CONTRACTORS ORDERING PRECAST MANHOLES SHALL BE RESPONSIBLE FOR ADJUSTMENT REQUIRED IN THE FIELD AT NO ADDITIONAL COST TO THE OWNER. THE CONTRACTOR SHALL FIELD VERIFY THE TOP ELEVATIONS PRIOR TO ORDERING PRECAST MANHOLES.

4. ALL WATER LINES, SANITARY SEWER LINES, AND STORM WATER DRAINAGE CROSSINGS SHALL BE IN PLACE OR A CASING PIPE PROVIDED FOR FUTURE INSTALLATION PRIOR TO BASE AND SURFACE ASPHALT COURSES.

5. SIDEWALKS ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY UNLESS OTHERWISE NOTES. HOWEVER, THE CONTRACTOR SHALL BE RESPONSIBLE FOR HANDICAP RAMP CONSTRUCTION IN CURBS.

6. SITE TOPOGRAPHY TAKEN FROM SURVEY COMPLETED BY R.L BUFORD & ASSOCIATES. CONTRACTOR TO VERIFY EXISTING CONDITIONS OF THE SITE THAT MAY NOT BE REPRESENTATIVE OF CONSTRUCTION PLANS.

**NOT ASBUILT**

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| MARK   | REVISION       | DATE           | BY      |
| Engineer: SD                                       | Checked By: SD | Scale: 1"= N/A |         |
| Technician: JS                                     | Date: 7-28-20  | Field Bk:      | Pg:     |
| Snyder & Associates Engineers & Planners, Inc.     |                |                | Sheet 2 |
| Missouri State Certificate of Authority #200606544 |                |                |         |

SHAWN DUKE - ENGINEER  
MO PE#2013006489

LEE'S SUMMIT, MO  
802 FRANCIS STREET  
ST. JOSEPH, MO 64501  
816-364-5222

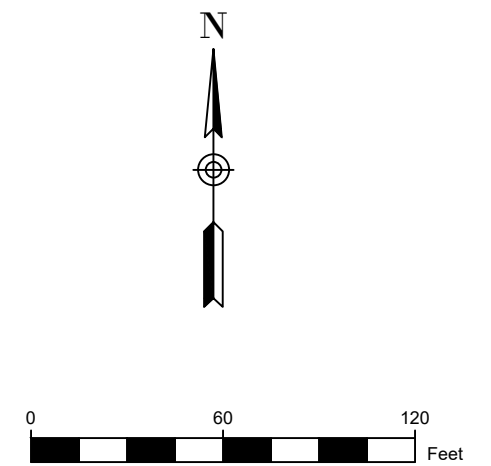
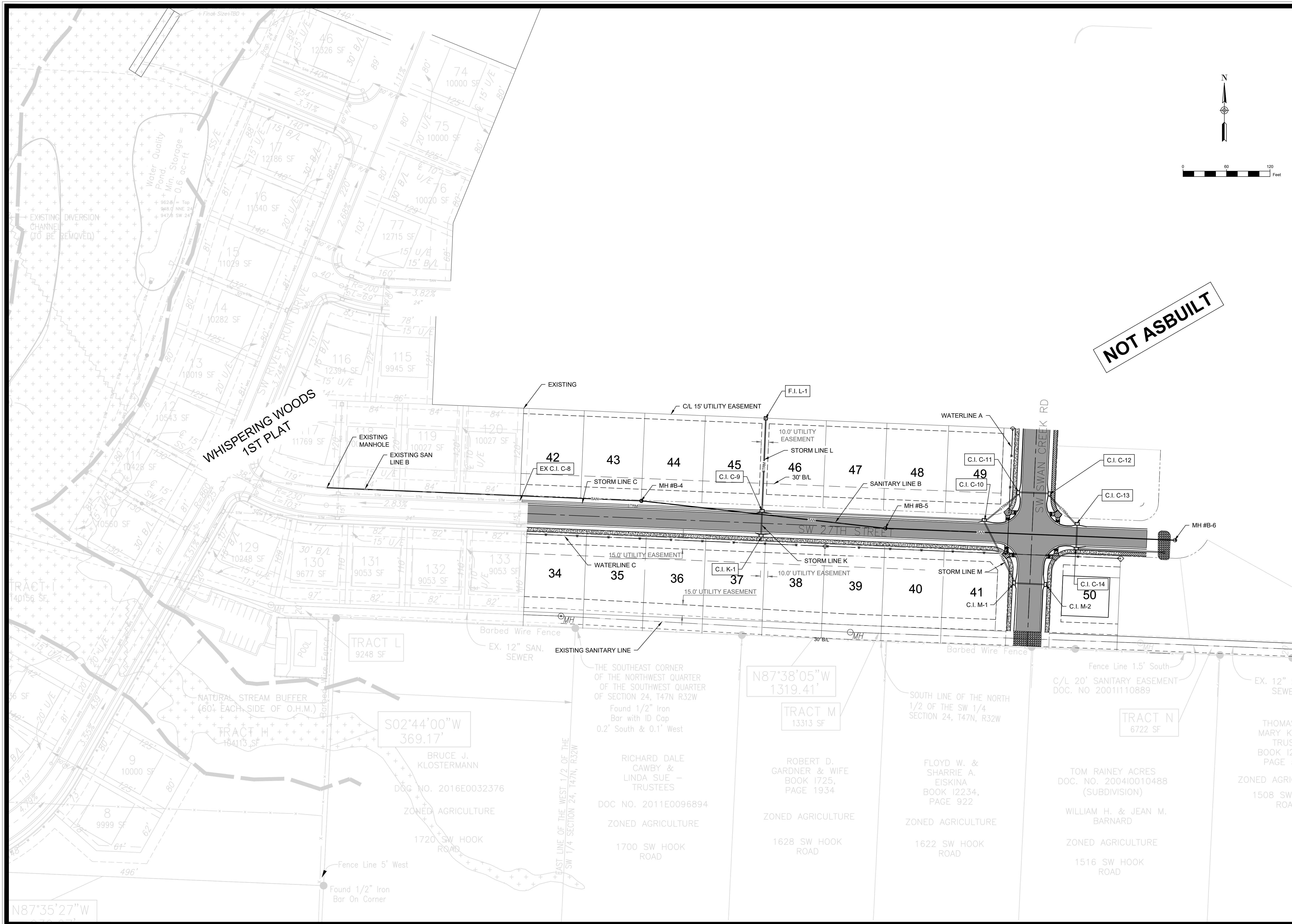
**GENERAL NOTES**

**WHISPERING WOODS 2ND PLAT STREET & STORM SEWER PLANS**

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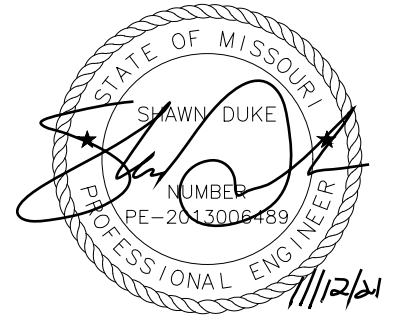
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| MARK           | REVISION       | DATE           | BY |
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| Technician: JS | Date: 7-28-20  | Field Bk:      |    |

Sheet **3**  
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MO PE#2013006489

LEE'S SUMMIT, MO  
802 FRANCIS STREET  
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816-364-5222

**WHISPERING WOODS 2ND PLAT  
STREET & STORM SEWER PLANS**  
SITE LAYOUT  
**SNYDER & ASSOCIATES**  
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Project No: 1200484.11  
Sheet **3**

# FINAL PLAT WHISPERING WOODS SECOND PLAT, LOTS 34-50

A SUBDIVISION IN THE SOUTHWEST QUARTER OF SECTION 24, TOWNSHIP 47 NORTH, RANGE 32 WEST,  
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

OWNER/DEVELOPER:  
WHISPERING WOODS LAND, LLC  
833 PCA ROAD  
WARRENSBURG, MO 64093

REVISIONS  
09/27/2020  
PER CITY COMMENTS



SHAWN DUKE - ENGINEER  
MO PE#2013006489

LEE'S SUMMIT, MO  
802 FRANCIS STREET  
ST. JOSEPH, MO 64501  
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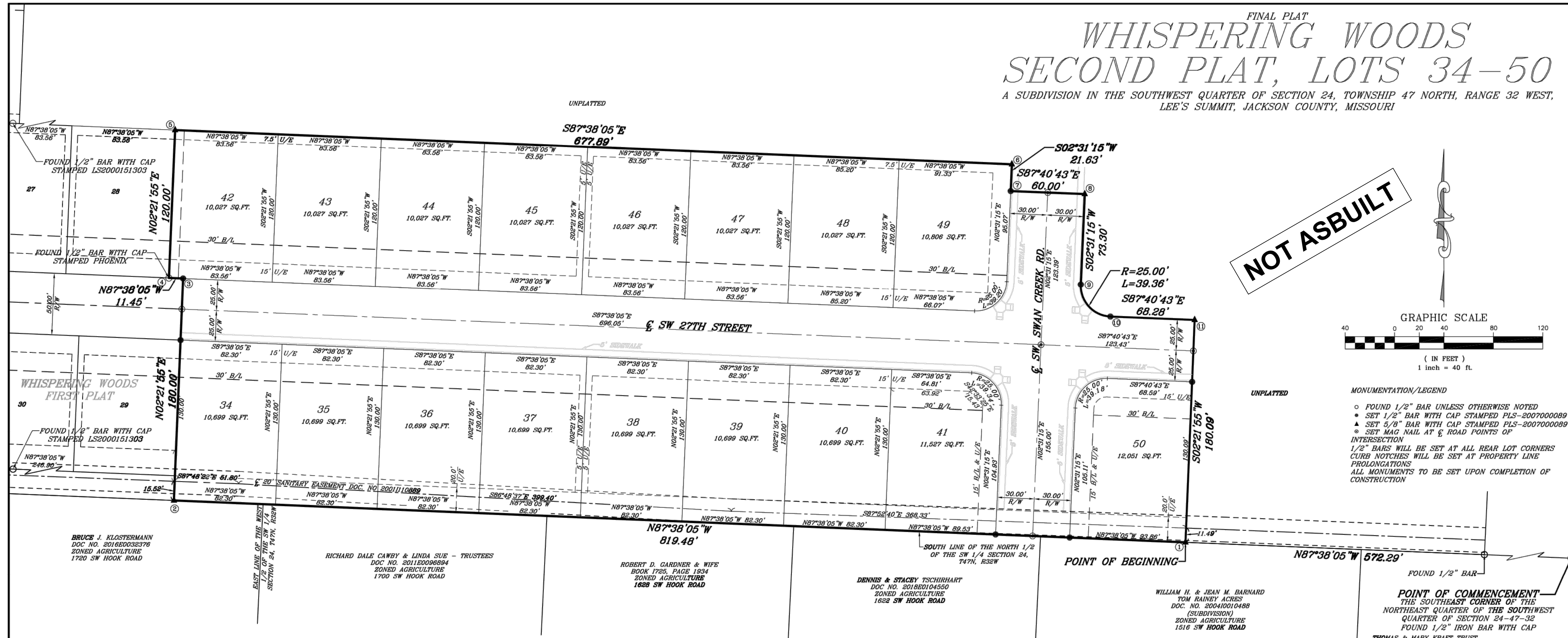
WHISPERING WOODS 2ND PLAT  
STREET & STORM SEWER PLANS  
PLAT (FOR REFERENCE ONLY)

**SNYDER & ASSOCIATES**  
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Project No: 1200484.11

Sheet 4



PLAT DEDICATION: THE UNDERSIGNED PROPRIETORS OF THE ABOVE DESCRIBED TRACT OF LAND HAVE CAUSED THE SAME TO BE SUBDIVIDED IN THE MANNER SHOWN ON THE ACCOMPANYING PLAT, WHICH SUBDIVISION SHALL BE HEREAFTER KNOWN AS WHISPERING WOODS SECOND PLAT, LOTS 34-50.

STREET DEDICATION: STREETS SHOWN HEREON AND NOT HERETOFORE DEDICATED FOR PUBLIC USE AS STREET RIGHT-OF-WAY ARE HEREBY DEDICATED.

EASEMENTS: AN EASEMENT OR LICENSE IS HEREBY GRANTED TO THE CITY OF LEE'S SUMMIT, MISSOURI, TO LOCATE, CONSTRUCT, AND MAINTAIN OR TO AUTHORIZE THE LOCATION, CONSTRUCTION, AND MAINTENANCE AND USE OF POLES, WIRES, ANCHORS, CONDUITS, AND/OR STRUCTURES FOR WATER, GAS, SANITARY SEWER, STORM SEWER, SURFACE DRAINAGE CHANNEL, ELECTRICITY, TELEPHONE, CABLE TELEVISION, OR ANY OTHER NECESSARY PUBLIC UTILITY OR SERVICE, ANY OR ALL OF THEM, UPON, OVER, OR UNDER THOSE AREAS OUTLINED OR DESIGNATED UPON THIS PLAT AS "UTILITY EASEMENT" (LABELED "U/E") OR WITHIN ANY STREET OR THOROUGHFARE DEDICATED TO PUBLIC USE ON THIS PLAT. GRANTOR, ON BEHALF OF THEMSELVES, THEIR HEIRS, ASSIGNS, AND SUCCESSORS IN INTEREST, HEREBY WAIVES, TO THE FULLEST EXTENT ALLOWED BY LAW, INCLUDING, WITHOUT LIMITATION, SECTION 527.168BRS MO (2006) ANY RIGHT TO REQUEST RESTORATION OF RIGHTS PREVIOUSLY TRANSFERRED AND VACATION OF THE EASEMENT HEREIN GRANTED.

BUILDING LINES: BUILDING LINES OR SETBACK LINES (LABELED "B/L") ARE HEREBY ESTABLISHED, AS SHOWN ON THE ACCOMPANYING PLAT, AND NO BUILDING OR PORTION THEREOF SHALL BE BUILT BETWEEN THIS LINE AND THE LOT LINE NEAREST THERETO. ALL LOTS SHALL HAVE A 20 FOOT REAR YARD SETBACK.

FLOODPLAIN: ACCORDING TO THE "FLOOD INSURANCE RATE MAP" COMMUNITY PANEL NO. 29095C0066C, PANEL 66 OF 625, MAP REVISED JANUARY 20, 2017, AND COMMUNITY PANEL NO. 29095C0068C, PANEL 66 OF 625, MAP REVISED JANUARY 20, 2017, AS PUBLISHED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY, THIS PROPERTY LIES WITHIN ZONE X, AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN.

DRAINAGE: INDIVIDUAL LOT OWNER(S) SHALL NOT CHANGE OR OBSTRUCT THE DRAINAGE FLOW LINES OR PATHS ON THE LOTS, AS SHOWN ON THE MASTER DRAINAGE PLAN, UNLESS SPECIFIC APPLICATION IS MADE AND APPROVED BY THE CITY ENGINEER.

ACCESS: LOTS 41, 49, AND 50 SHALL NOT HAVE DIRECT ACCESS TO SW SWAN CREEK ROAD.

IN TESTIMONY WHEREOF, RICHARD FRYE, MEMBER OF WHISPERING WOODS LAND, LLC, HAS CAUSED THESE PRESENTS TO BE EXECUTED THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, 2020.

RICHARD FRYE, MEMBER

- BOUNDARY SURVEY NOTES:
1. THE POSITION OF EXISTING MONUMENTATION AS INDICATED, IF NOT THE TRUE CORNER, IS BY DIFFERENCES IN COORDINATES OR AT RIGHT ANGLES TO THE PROPERTY LINE AT THE NOTED DISTANCE FROM THE NEAREST BOUNDARY CORNER.
  2. THIS SURVEY IS BASED UPON RECORD DOCUMENTS, LEGAL DESCRIPTIONS, AND OTHER INFORMATION FURNISHED BY THE CLIENT PLUS OTHER INFORMATION KNOWN TO THIS SURVEYOR. THIS SURVEYOR HAS NO KNOWLEDGE OF ANY OTHER RECORD DOCUMENTS WHICH AFFECT THE SUBJECT REAL ESTATE.
  3. THIS SURVEY MEETS OR EXCEEDS THE ACCURACY STANDARDS OF AN URBAN PROPERTY SURVEY AS DEFINED BY THE "MISSOURI MINIMUM STANDARDS FOR PROPERTY BOUNDARY SURVEYS".
  4. ACCORDING TO THE FLOOD INSURANCE RATE MAP OF THE FEDERAL EMERGENCY MANAGEMENT AGENCY, PANEL NUMBER 531 OF 625, MAP NUMBER 29095C0531G, MAP REVISED JANUARY 20, 2017, THE SUBJECT PROPERTY IS IN ZONE X, AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN.
  5. THERE WERE NO OIL OR GAS WELLS VISIBLE DURING THE TIME OF THE ORIGINAL SURVEY ON THE PROPERTY. THERE WAS NO EVIDENCE FOUND OF WELLS ON THE MISSOURI DEPARTMENT OF NATURAL RESOURCES OIL AND GAS WELL DATABASE.

APPROVALS:

THIS IS TO CERTIFY THAT THE WITHIN PLAT OF "WHISPERING WOODS SECOND PLAT, LOTS 34-50" WAS SUBMITTED TO AND DULY APPROVED BY THE MAYOR AND CITY COUNCIL OF THE CITY OF LEE'S SUMMIT, MISSOURI ON THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, 2020 BY ORDINANCE NO. \_\_\_\_\_

GEORGE M. BINGER III, P.E.  
CITY ENGINEER

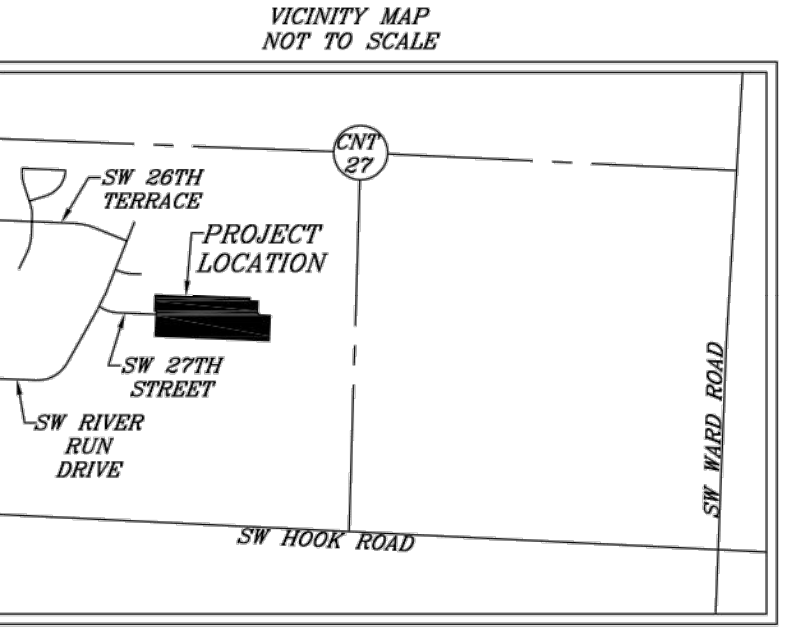
RYAN A. ELAM, P.E.  
DEVELOPMENT SERVICES

WILLIAM A. BAIRD, MAYOR

TRISHA FOWLER ARCURI, CITY CLERK

JOHN LOVELL  
PLANNING COMMISSION SECRETARY

APPROVED BY THE JACKSON COUNTY, MISSOURI GIS DEPARTMENT \_\_\_\_\_ DATE \_\_\_\_\_



COORDINATE TABLE  
BASED ON THE MISSOURI COORDINATE SYSTEM 1983, WESTERN ZONE, AT KANSAS CITY METRO CONTROL MONUMENT 14-50, GRID FACTOR=0.999911, COORDINATES IN METERS. COORDINATES OBTAINED BY GPS.

|                                  |                                  |
|----------------------------------|----------------------------------|
| ① N 300214.0163<br>E 857909.0391 | ⑦ N 300300.7080<br>E 857865.9210 |
| ② N 300224.3239<br>E 857659.4985 | ⑧ N 300299.9674<br>E 857884.1905 |
| ③ N 300279.1358<br>E 857661.7626 | ⑨ N 300277.6481<br>E 857883.2079 |
| ④ N 300279.2799<br>E 857658.2766 | ⑩ N 300292.2900<br>E 857890.5112 |
| ⑤ N 300315.8211<br>E 857659.7860 | ⑪ N 300268.8571<br>E 857911.3044 |
| ⑥ N 300307.2945<br>E 857866.2109 |                                  |

FOR WHISPERING WOODS LAND, LLC PLAT

R.L. Buford & Associates, LLC  
LAND SURVEYING - DEVELOPMENT CONSULTANTS  
P.O. BOX 14088, PARKVILLE, MO. 64112, (816) 741-6152  
LICENSE NO. 15-201001977  
R.L. AUTHORITY EXPIRES 12/31/2020

SEC.-TWP.-RGE. COUNTY FIELD NO.  
24-47-32 JACKSON J-20068

DATE 07/27/2020 FIELD BOOK

DRAWN BY R.E.V.

SURVEYOR'S CERTIFICATION  
I HEREBY CERTIFY THAT WE HAVE MADE A SURVEY OF THE PREMISES HEREIN DESCRIBED WHICH MEET OR EXCEED THE CURRENT MISSOURI MINIMUM STANDARDS FOR PROPERTY BOUNDARY SURVEYS' GOODYOT AND LAND SURVEY AND THE MISSOURI BOARD FOR ARCHITECTS, PROFESSIONAL ENGINEERS, PROFESSIONAL LAND SURVEYORS AND LANDSCAPE ARCHITECTS, AND THAT THE RESULTS OF SAID SURVEY ARE REPRESENTED ON THIS DRAWING TO THE BEST OF MY PROFESSIONAL KNOWLEDGE AND BELIEF.

ROBERT G. YOUNG, P.E. - 2007000089 REV. 9/29/2020



| MARK           | REVISION       | DATE           | BY   |
|----------------|----------------|----------------|--|
| Engineer: SD   | Checked By: SD | Scale: 1"= 60' |  |
| Technician: JS | Date: 7-28-20  | Field Bk:      | Pg:  |
|                |                |                | Sheet 4  |
|                |                |                | Snyder & Associates Engineers & Planners, Inc.<br>Missouri State Certificate of Authority #200600544 |

GRADING PLAN - GENERAL NOTES

- A. UTILITY WARNING:  
THE UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND/OR RECORDS OBTAINED. THE SURVEYOR MAKES NO GUARANTEE THAT THE UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEY FURTHER DOES NOT WARRANT THAT THE UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED.
- B. NOTIFY UTILITY OWNERS PRIOR TO BEGINNING ANY CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR DETERMINING EXISTENCE, EXACT LOCATION AND DEPTH OF ALL UTILITIES, AVOID DAMAGE TO UTILITIES AND SERVICES DURING CONSTRUCTION. ANY DAMAGE DUE TO THE CONTRACTOR'S CARELESSNESS SHALL BE CORRECTED AT THE CONTRACTOR'S EXPENSE. COORDINATE AND COOPERATE WITH UTILITY COMPANIES DURING CONSTRUCTION.
- C. ALL PROPOSED CONTOURS AND SPOT ELEVATIONS SHOWN ARE FINISHED GRADES AND/OR TOP OF PAVING SLAB (GUTTER), UNLESS OTHERWISE NOTED.
- D. ALL STORM SEWER PIPE LENGTHS ARE MEASURED FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE AND INCLUDE FLARED END SECTION.
- E. CONTRACTOR TO STRIP AND STOCKPILE TOPSOIL FROM ALL AREAS TO BE CUT OR FILLED. RE-SPREAD TO MINIMUM 8" DEPTH TO FINISH GRADES.
- F. THE CONTRACTOR IS RESPONSIBLE FOR CLEANING DIRT AND DEBRIS FROM STREETS, DRIVEWAYS, AND SIDEWALKS CAUSED BY CONSTRUCTION ACTIVITIES.
- G. CONTRACTOR TO VERIFY ALL UTILITY LOCATIONS AND DEPTH PRIOR TO WALL CONSTRUCTION TO DETERMINE ALL POSSIBLE CONFLICTS.

**LEGEND:**

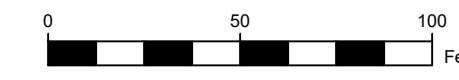
|     |                    |
|-----|--------------------|
| 716 | = EXISTING CONTOUR |
| 716 | = PROPOSED CONTOUR |
| PG  | = PROPOSED GRADE   |
| EG  | = EXISTING GRADE   |

**RECORD DRAWING**

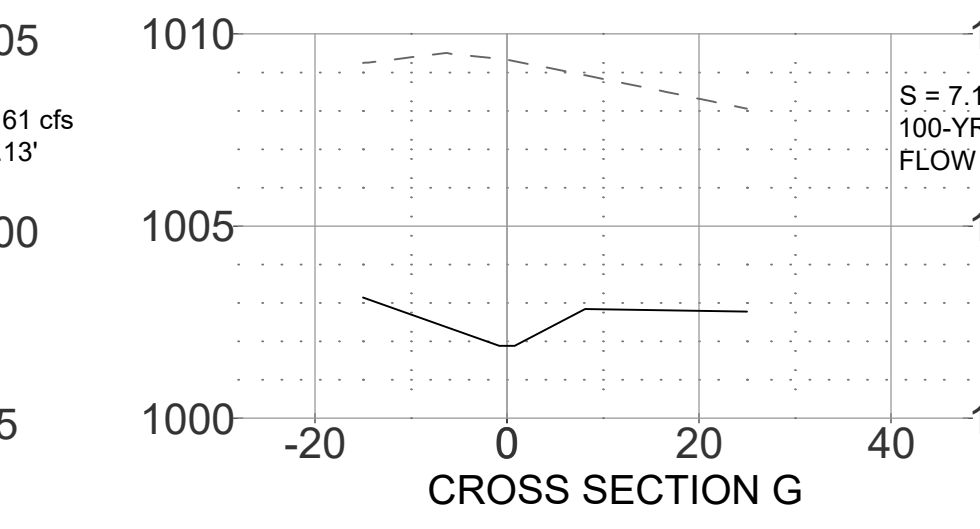
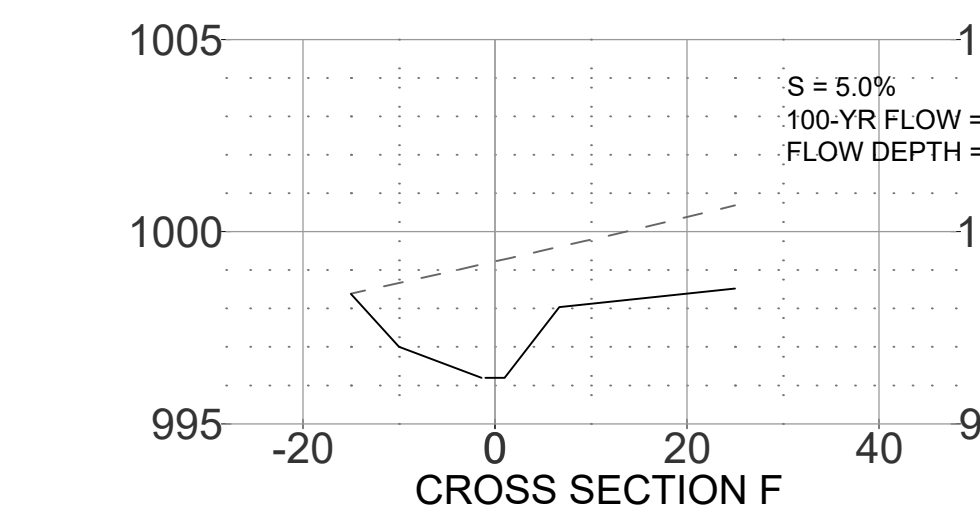
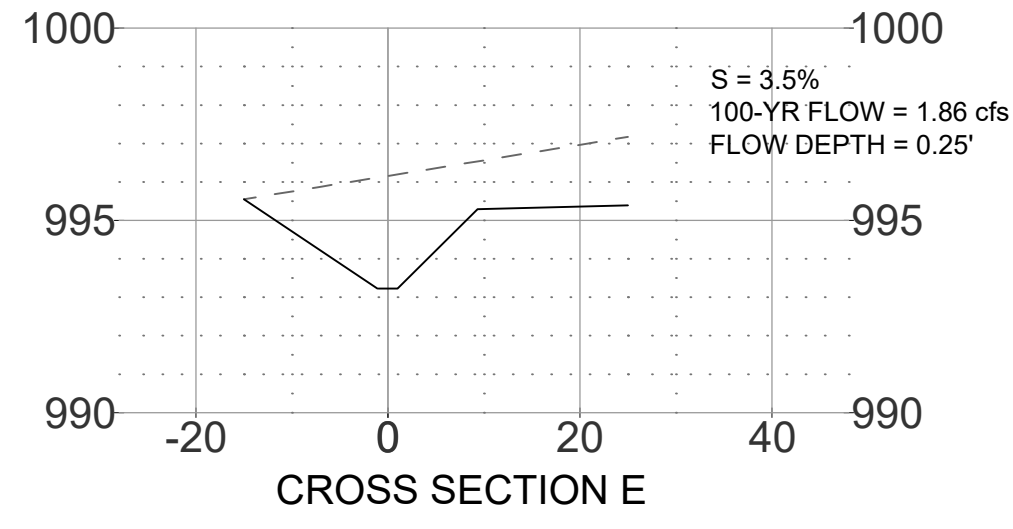
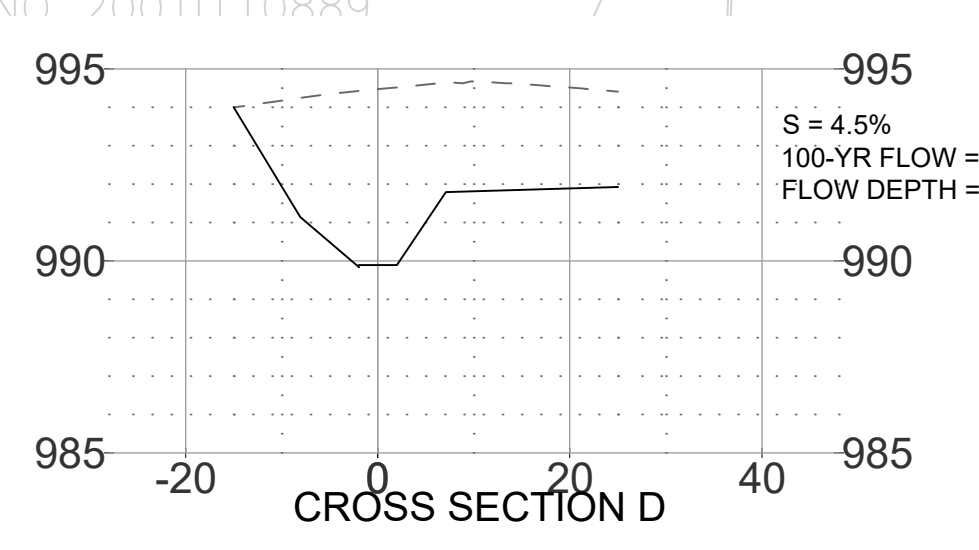
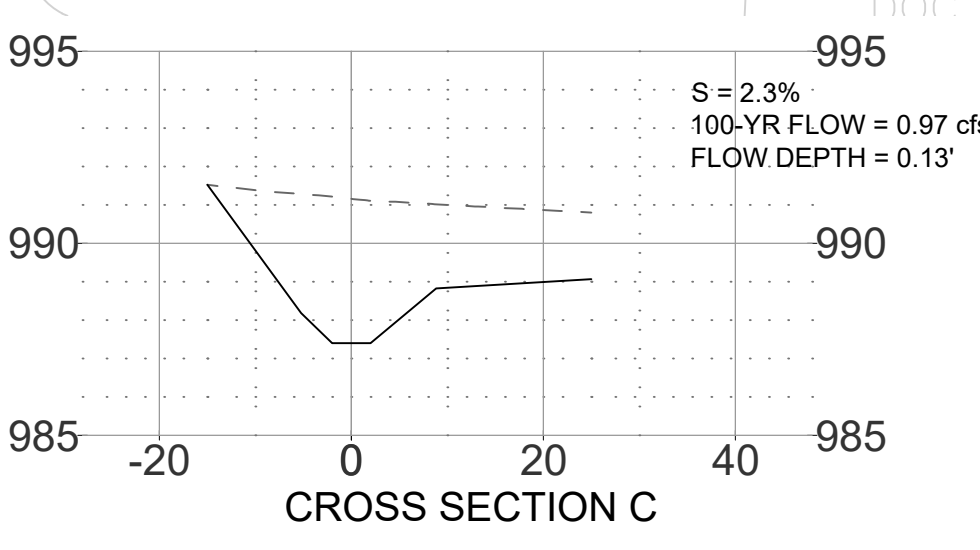
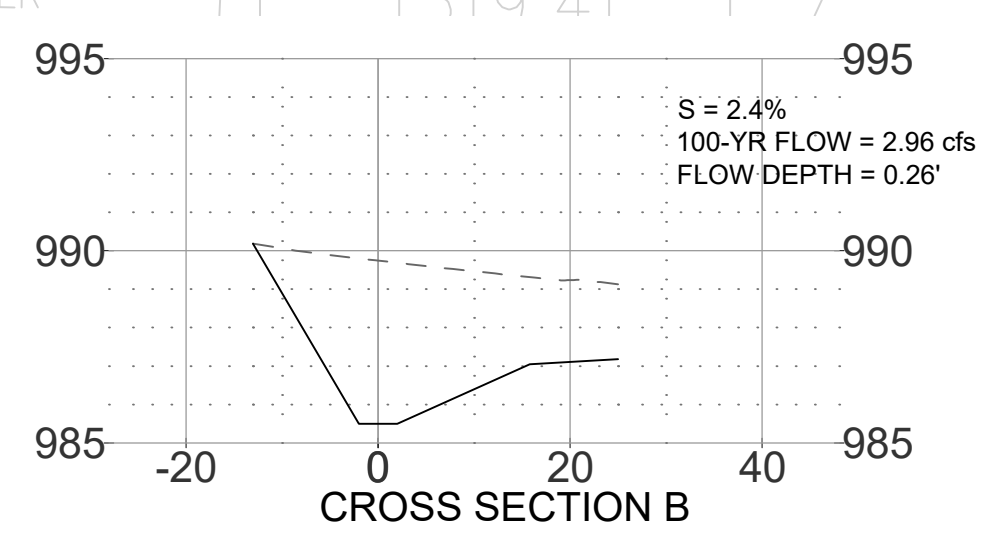
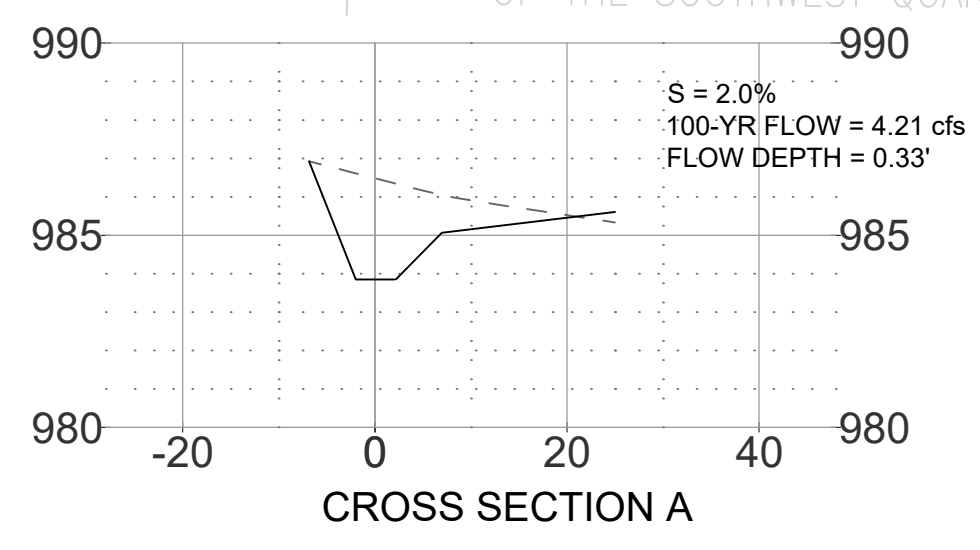
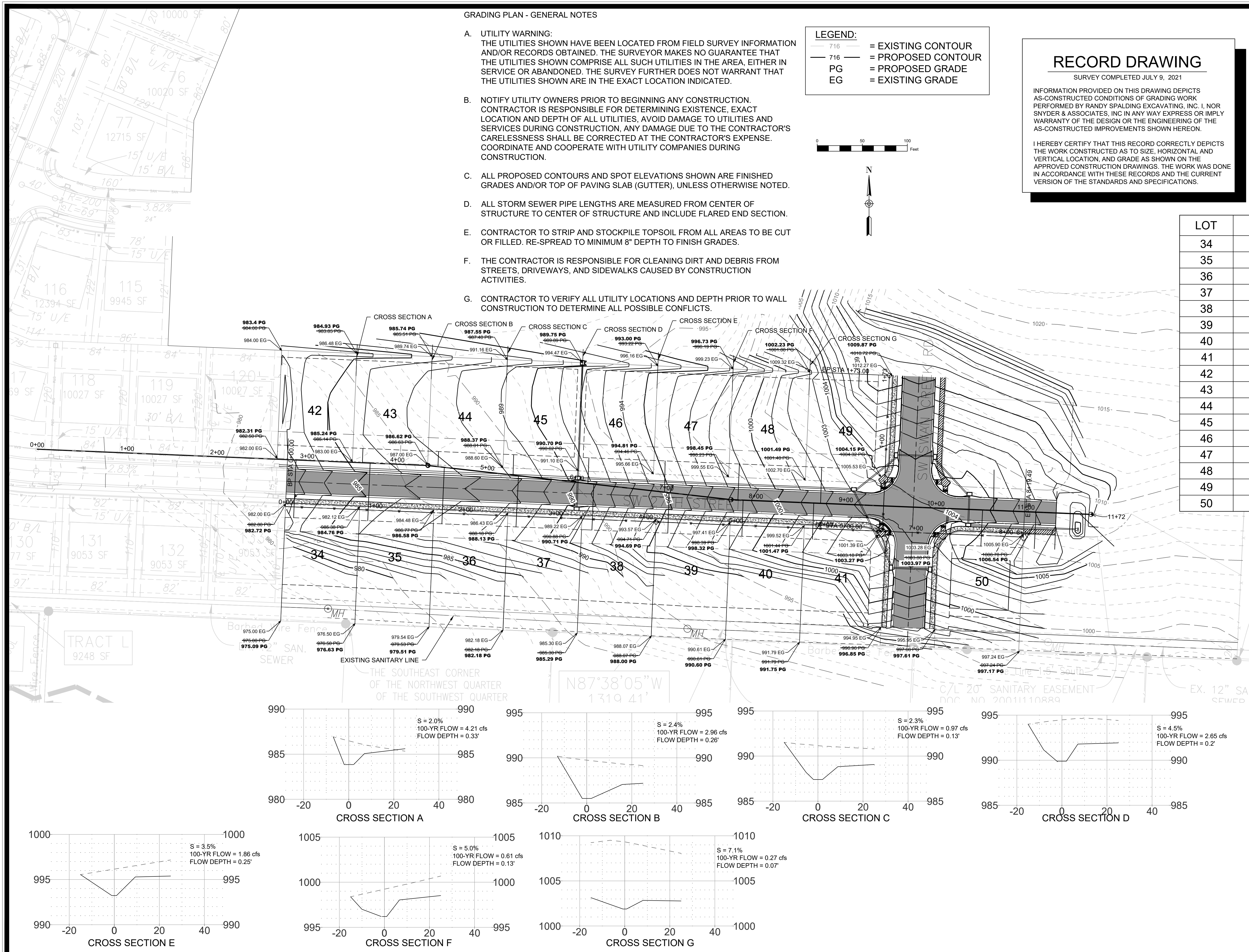
SURVEY COMPLETED JULY 9, 2021

INFORMATION PROVIDED ON THIS DRAWING DEPICTS AS-CONSTRUCTED CONDITIONS OF GRADING WORK PERFORMED BY RANDY SPALDING EXCAVATING, INC. I, NOR SNYDER & ASSOCIATES, INC IN ANY WAY EXPRESS OR IMPLY WARRANTY OF THE DESIGN OR THE ENGINEERING OF THE AS-CONSTRUCTED IMPROVEMENTS SHOWN HEREON.

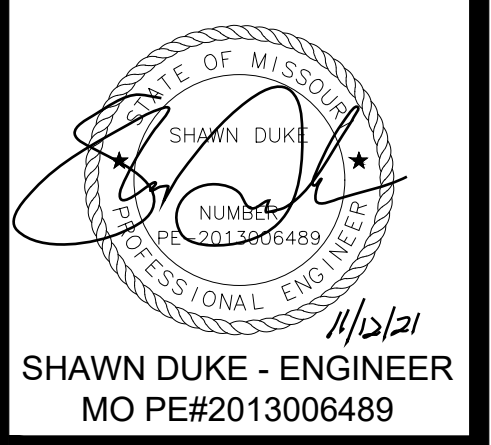
I HEREBY CERTIFY THAT THIS RECORD CORRECTLY DEPICTS THE WORK CONSTRUCTED AS TO SIZE, HORIZONTAL AND VERTICAL LOCATION, AND GRADE AS SHOWN ON THE APPROVED CONSTRUCTION DRAWINGS. THE WORK WAS DONE IN ACCORDANCE WITH THESE RECORDS AND THE CURRENT VERSION OF THE STANDARDS AND SPECIFICATIONS.



| LOT | LOT TYPE |
|-----|----------|
| 34  | W/O      |
| 35  | W/O      |
| 36  | W/O      |
| 37  | W/O      |
| 38  | W/O      |
| 39  | W/O      |
| 40  | W/O      |
| 41  | W/O      |
| 42  | STD      |
| 43  | STD      |
| 44  | STD      |
| 45  | STD      |
| 46  | STD      |
| 47  | STD      |
| 48  | STD      |
| 49  | STD      |
| 50  | W/O      |



|                   |          |    |   |      |          |           |          |
|-------------------|----------|----|---|------|----------|-----------|----------|
| ASBUILT           | 7/16/21  | SD | 1 | DATE | 11/12/21 | Scale:    | 1" = 80' |
| GRADING REVISIONS | 10/13/20 | SD | 1 | DATE | 11/12/21 | Field Bk: | 7-28-20  |
| ADDITION OF MBOE  | 09/08/20 | SD | 1 | DATE | 11/12/21 | Field Bk: | 7-28-20  |
| MARK              |          | SD | 1 | DATE | 11/12/21 | Field Bk: | 7-28-20  |
| REVISION          |          | SD | 1 | DATE | 11/12/21 | Field Bk: | 7-28-20  |
| Checked By:       | JS       | SD | 1 | DATE | 11/12/21 | Field Bk: | 7-28-20  |
| Engineer:         | JS       | SD | 1 | DATE | 11/12/21 | Field Bk: | 7-28-20  |
| Technician:       | JS       | SD | 1 | DATE | 11/12/21 | Field Bk: | 7-28-20  |

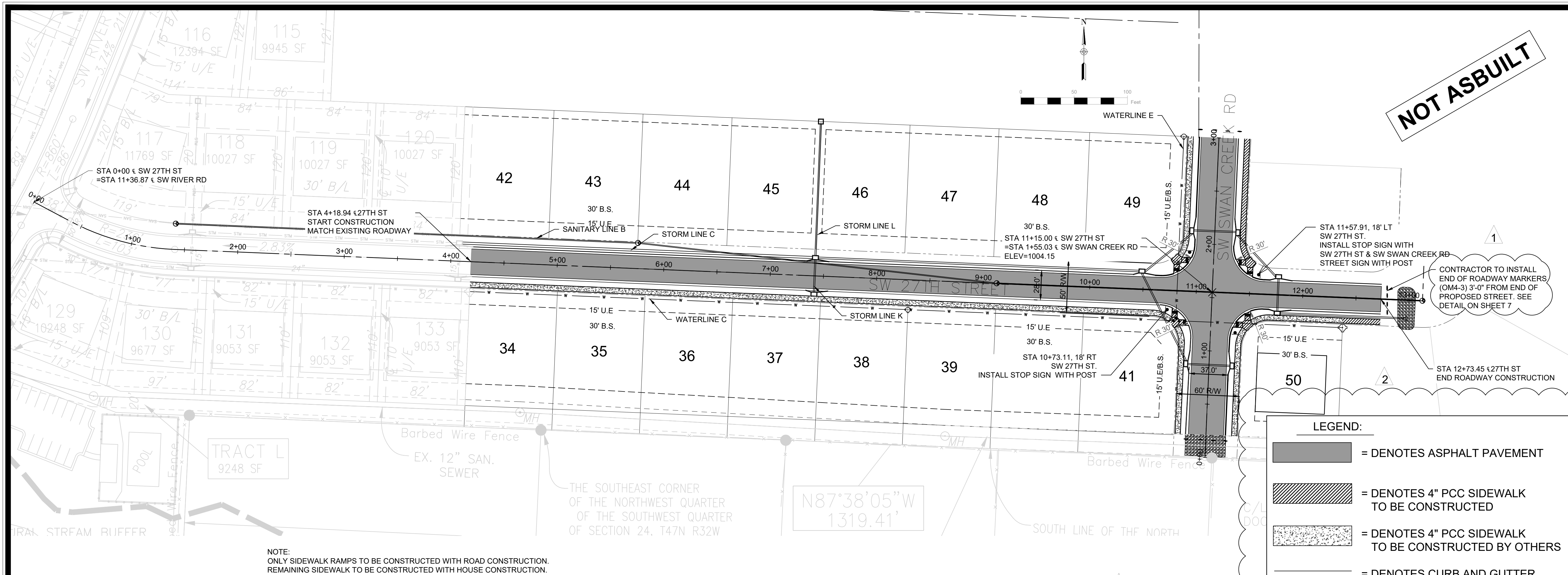


SHAWN DUKE - ENGINEER  
MO PE#2013006489

LEE'S SUMMIT, MO  
802 FRANCIS STREET  
ST. JOSEPH, MO 64501  
816-364-5222

WHISPERING WOODS 2ND PLAT  
STREET & STORM SEWER PLANS  
MASTER DRAINAGE PLAN  
**SNYDER & ASSOCIATES**  
ENGINEERS & PLANNERS, INC.  
www.snyder-associates.com

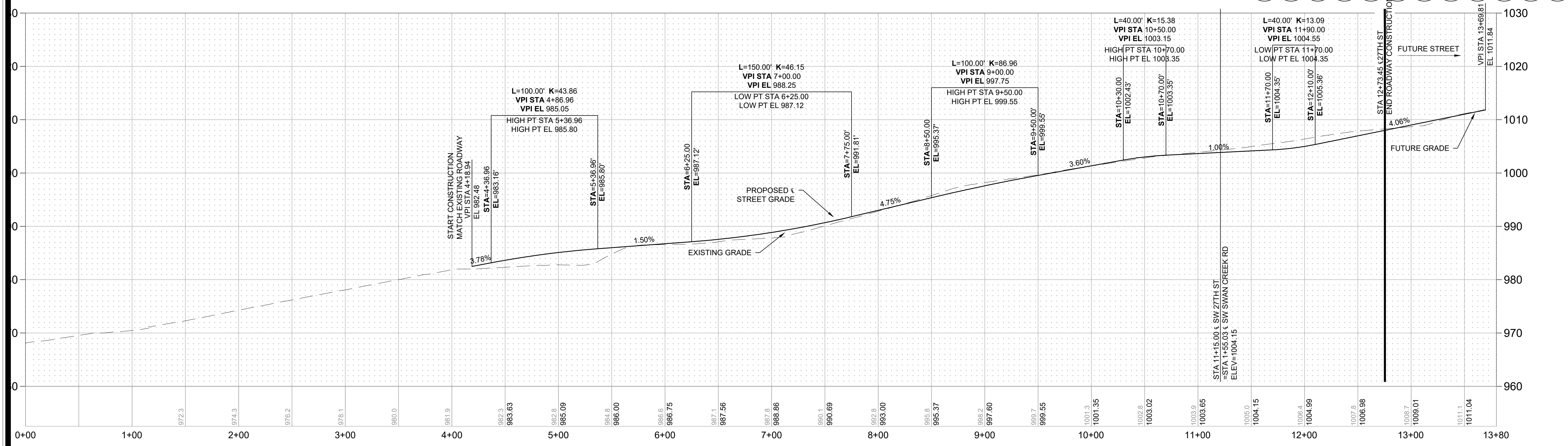




**LEGEND:**

- = DENOTES ASPHALT PAVEMENT
- = DENOTES 4" PCC SIDEWALK TO BE CONSTRUCTED
- = DENOTES 4" PCC SIDEWALK TO BE CONSTRUCTED BY OTHERS
- = DENOTES CURB AND GUTTER

NOTE:  
ONLY SIDEWALK RAMPS TO BE CONSTRUCTED WITH ROAD CONSTRUCTION.  
REMAINING SIDEWALK TO BE CONSTRUCTED WITH HOUSE CONSTRUCTION.



SW 27TH ST PROFILE  
(DESIGN SPEED=25MPH)

**NOT ASBUILT**

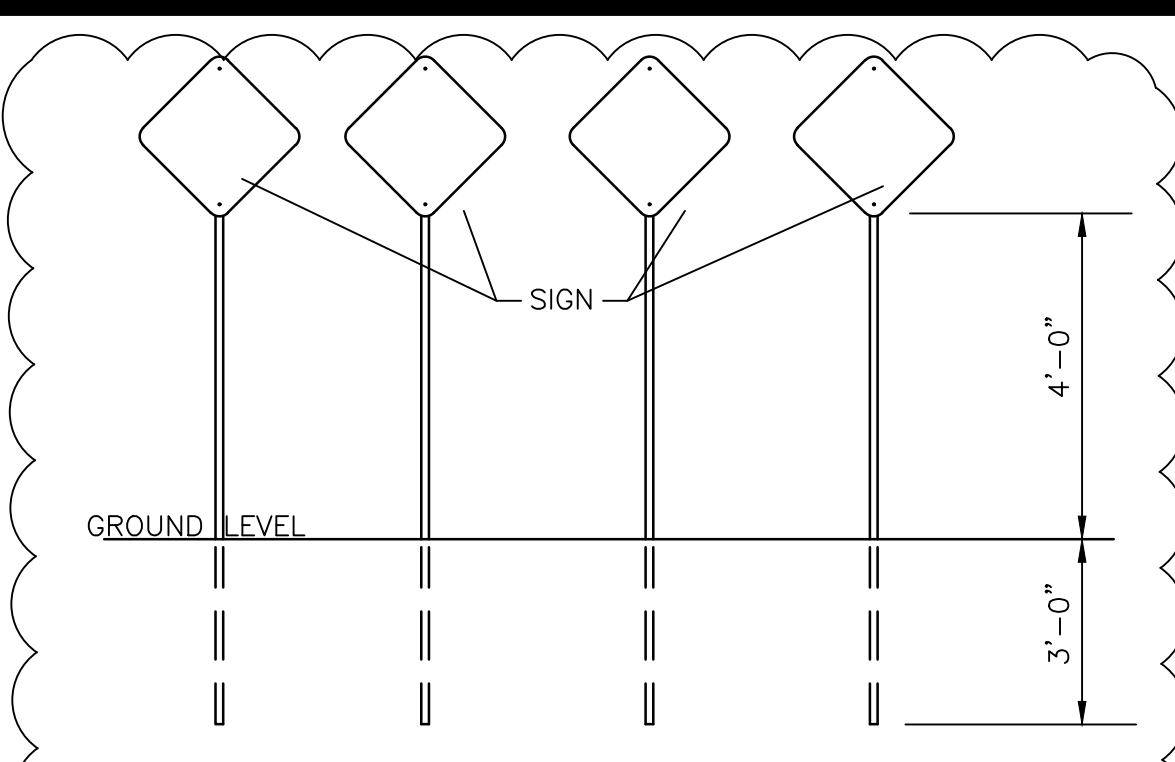
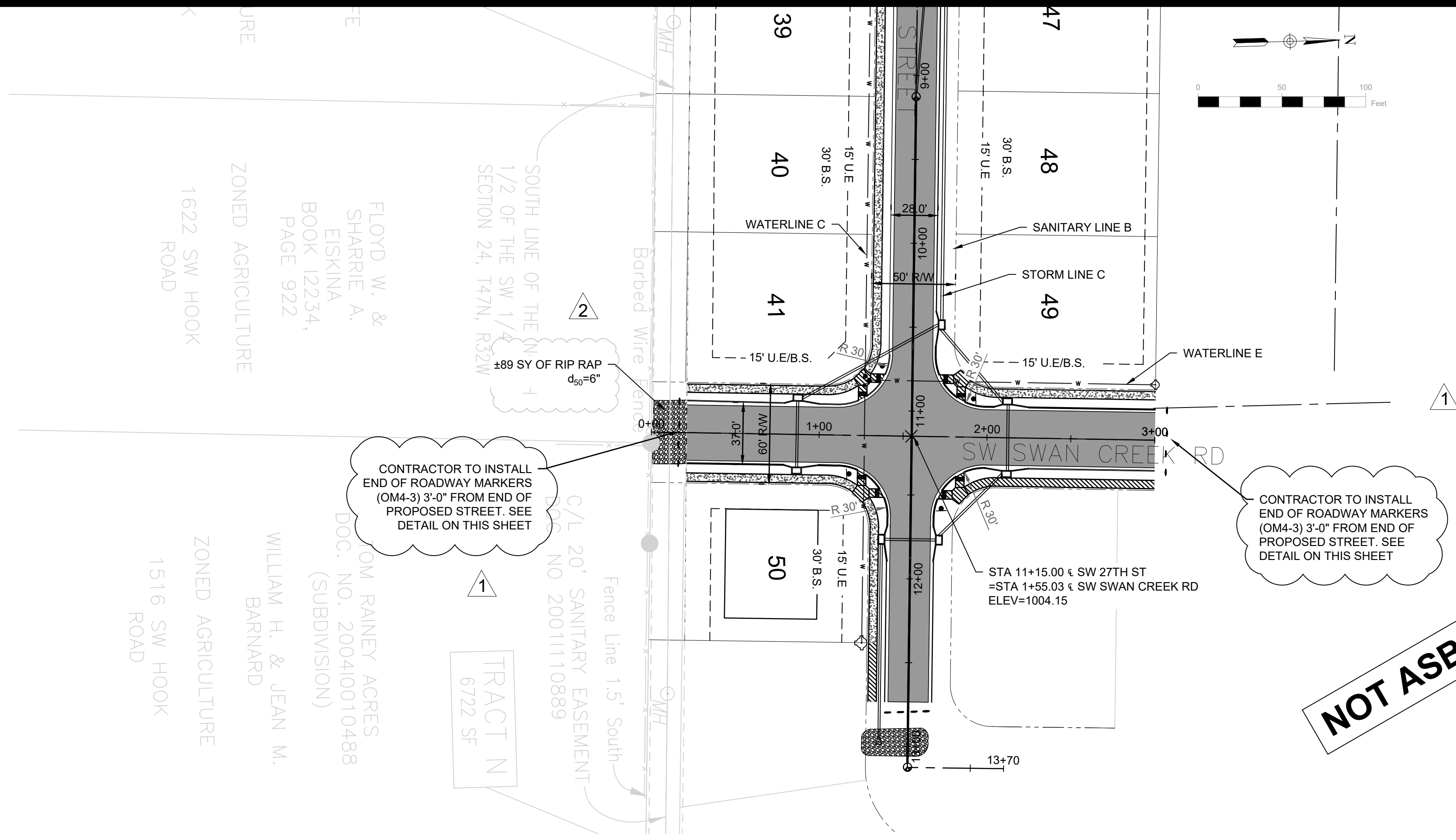
|                             |                |                |    |
|-----------------------------|----------------|----------------|----|
| REVISIONS TO SIDEWALK       | SD             | 10/08/20       | SD |
| REVISIONS PER CITY COMMENTS | SD             | 09/08/20       | SD |
| MARK                        | REVISION       | DATE           | BY |
| Engineer: SD                | Checked By: SD | Scale: 1"= 80' |    |
| Technician: JS              | Date: 7-28-20  | Field Bk:      |    |

Sheet **6**  
Snyder & Associates Engineers & Planners, Inc.  
Missouri State Certificate of Authority #2006006544

SHAWN DUKE - ENGINEER  
MO PE#2013006489

WHISPERING WOODS 2ND PLAT  
 STREET & STORM SEWER PLAN  
 STREET PLAN & PROFILE  
 LEE'S SUMMIT, MO  
 802 FRANCIS STREET  
 ST. JOSEPH, MO 64501  
 816-364-5222  
**SNYDER & ASSOCIATES**  
 ENGINEERS & PLANNERS, INC.  
 www.snyder-associates.com

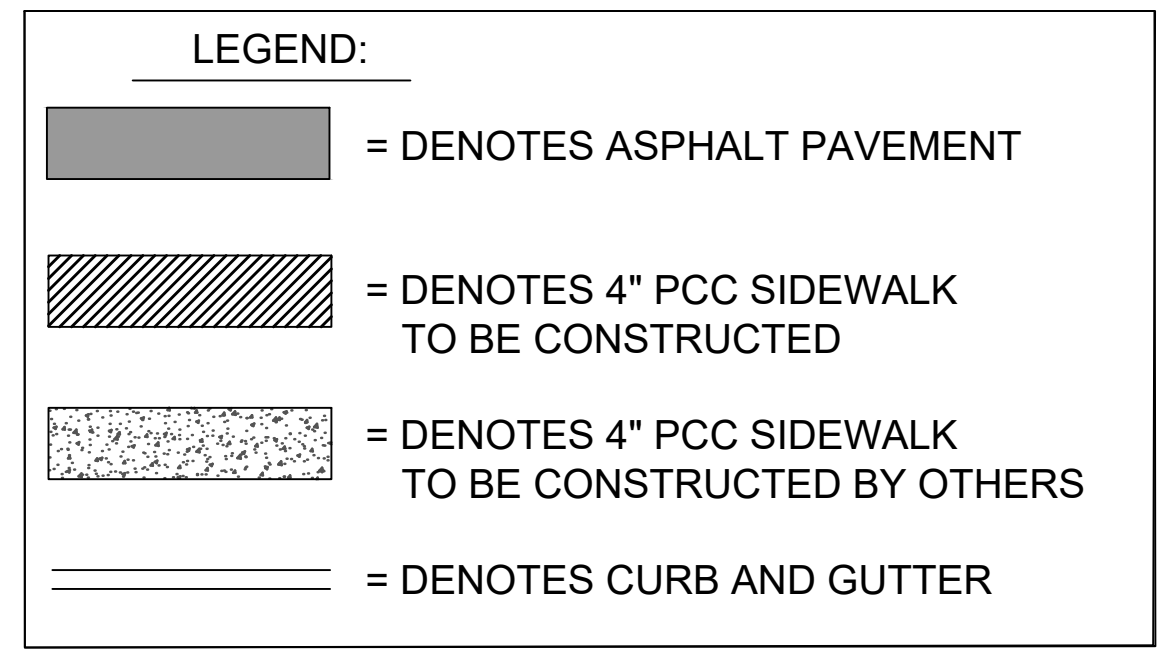
**SNYDER & ASSOCIATES**



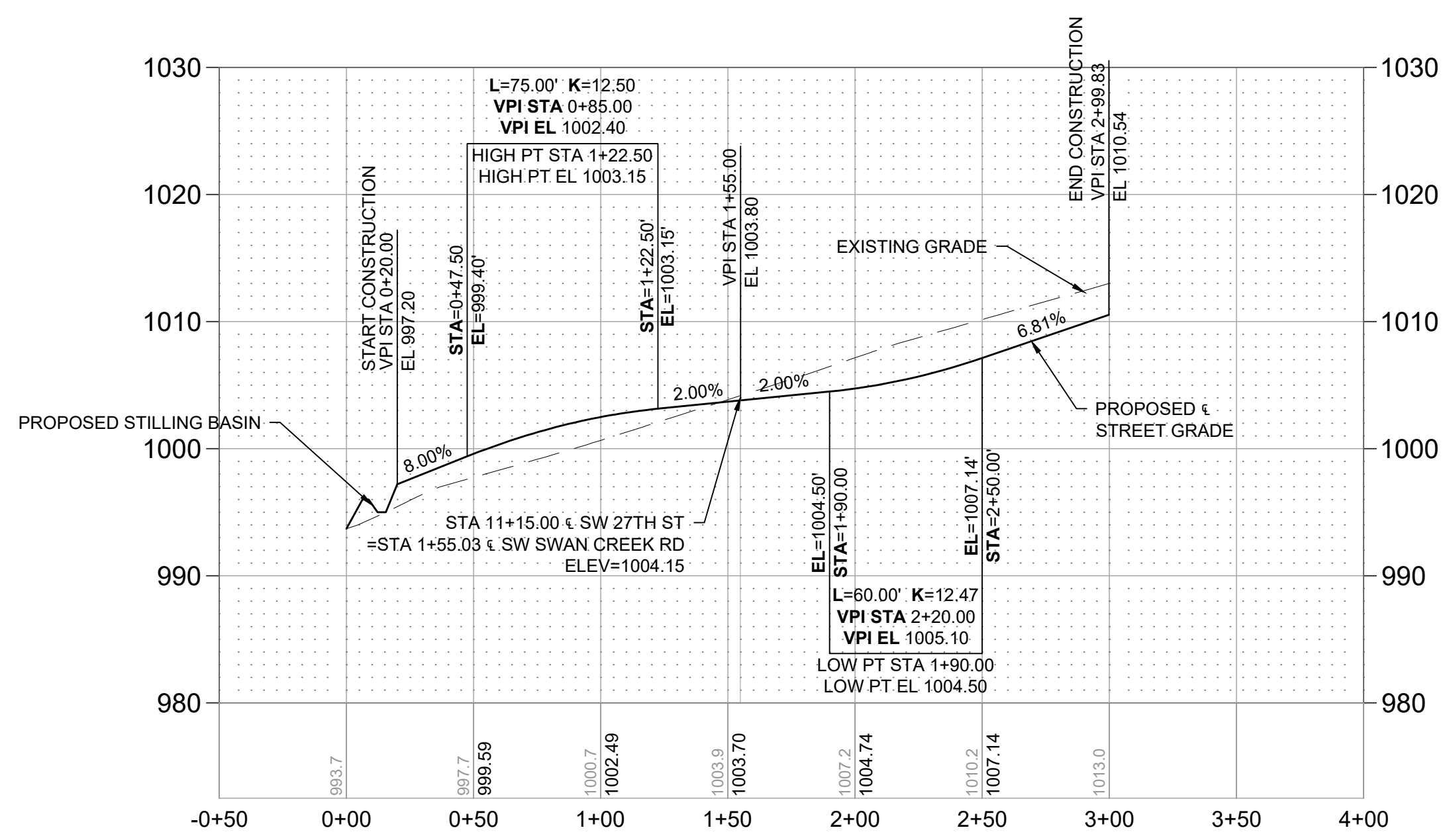
NOTES:  
THICKNESS OF FLAT SHEET FOR TYPE IV OBJECT MARKERS SHALL BE 0.063" ON RED BACKGROUND.  
4 REQUIRED AT 8' SPACING.

END OF ROAD SIGNAGE  
N.T.S.

**NOT ASBUILT**



NOTE:  
ONLY SIDEWALK RAMPS TO BE CONSTRUCTED WITH ROAD CONSTRUCTION.  
REMAINING SIDEWALK TO BE CONSTRUCTED WITH HOUSE CONSTRUCTION.



SW SWAN CREEK ROAD PROFILE

FLOYD W. & SHARRIE A. EISKINA BOOK 12234, PAGE 922  
ZONED AGRICULTURE  
1622 SW HOOK ROAD

WILLIAM H. & JEAN M. BARNARD  
ZONED AGRICULTURE  
1516 SW HOOK ROAD

DOM RAINY ACRES (SUBDIVISION)  
DOC. NO. 200410010488

TRACT N 6722 SF  
C/L 20' SANITARY EASEMENT  
NO. 20011110889

Barbed Wire  
Fence Line 1.5' South

±89 SY OF RIP RAP  $d_{50}=6"$   
SOUTH LINE OF THE 1/4 SECTION 24, 147N, R32W

15' U.E. 30' B.S.  
15' U.E. 30' B.S.  
15' U.E. 30' B.S.  
15' U.E. 30' B.S.  
15' U.E. 30' B.S.  
15' U.E. 30' B.S.

WATERLINE C  
SANITARY LINE B  
STORM LINE C  
WATERLINE E

30' B.S.  
30' B.S.  
30' B.S.  
30' B.S.  
30' B.S.  
30' B.S.

15' U.E. 30' B.S.  
15' U.E. 30' B.S.  
15' U.E. 30' B.S.  
15' U.E. 30' B.S.  
15' U.E. 30' B.S.  
15' U.E. 30' B.S.

28'-0"  
50' R.W.  
50' R.W.  
50' R.W.  
50' R.W.  
50' R.W.

11+00  
11+00  
11+00  
11+00  
11+00  
11+00

13+70

0+00 10+00 20+00 30+00

9+00 10+00 11+00 12+00 13+00 14+00 15+00 16+00 17+00 18+00 19+00 20+00 21+00 22+00 23+00 24+00 25+00 26+00 27+00 28+00 29+00 30+00

11+15.00  
11+55.03  
ELEV=1004.15

STA 11+15.00 @ SW 27TH ST  
=STA 11+55.03 @ SW SWAN CREEK RD  
ELEV=1004.15

|                             |          |             |         |                |
|-----------------------------|----------|-------------|---------|----------------|
| REVISIONS TO SIDEWALK       | SD       | 10/08/20    | SD      | 7              |
| REVISIONS PER CITY COMMENTS | SD       | 09/08/20    | SD      |                |
| MARK                        | REVISION | DATE        | BY      |                |
| Engineer:                   | SD       | Checked By: | SD      | Scale: 1"= 50' |
| Technician:                 | JS       | Date:       | 7-28-20 | Field Bk:      |

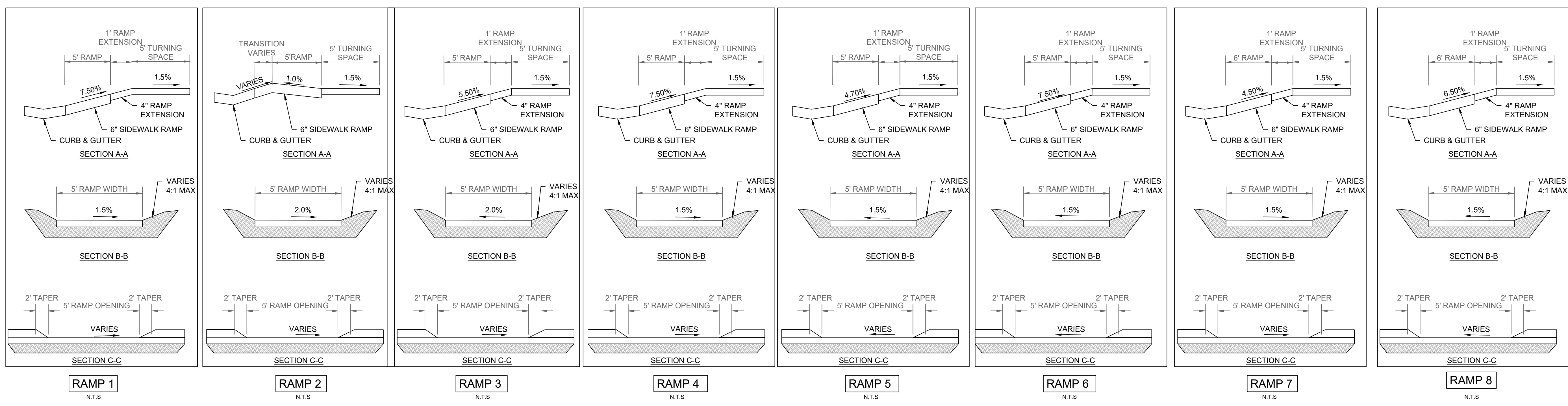
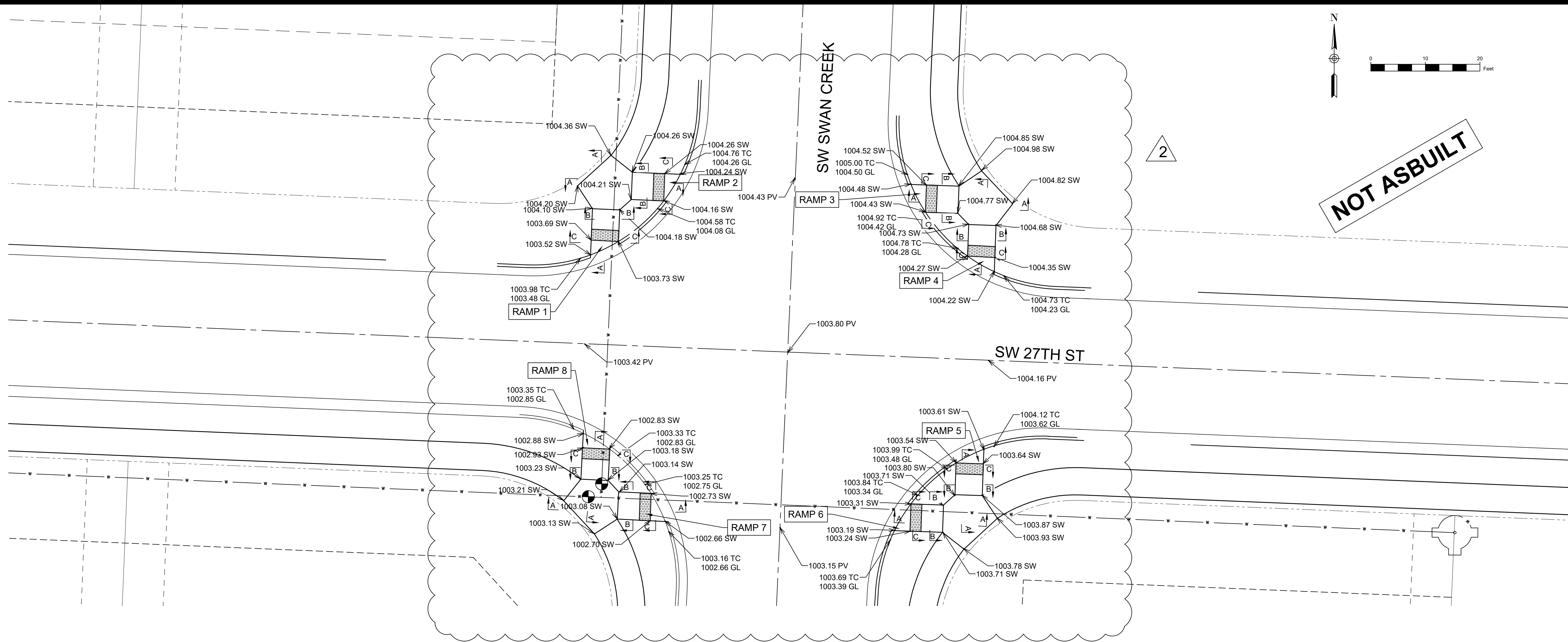
Snyder & Associates Engineers & Planners, Inc.  
Missouri State Certificate of Authority #200606544

SHAWN DUKE - ENGINEER  
MO PE#2013006489

LEE'S SUMMIT, MO  
802 FRANCIS STREET  
ST. JOSEPH, MO 64501  
816-364-5222

WHISPERING WOODS 2ND PLAT  
STREET & STORM SEWER PLAN  
STREET PLAN & PROFILE  
**SNYDER & ASSOCIATES**  
ENGINEERS & PLANNERS, INC.  
www.snyder-associates.com





|  |                |                 |
|--|----------------|-----------------|
| REVISION TO CURB WINGS                             | SD             | BY              |
| 10/14/20   | DATE           |                 |
| 2  | REVISION       |                 |
| Engineer: SD                                       | Checked By: SD | Scale: 1" = 10' |
| Technician: JS                                     | Date: 7-28-20  | Field Bk:       |
| Snyder & Associates Engineers & Planners, Inc.     |                | Sheet 8         |
| Missouri State Certificate of Authority #200606544 |                |                 |

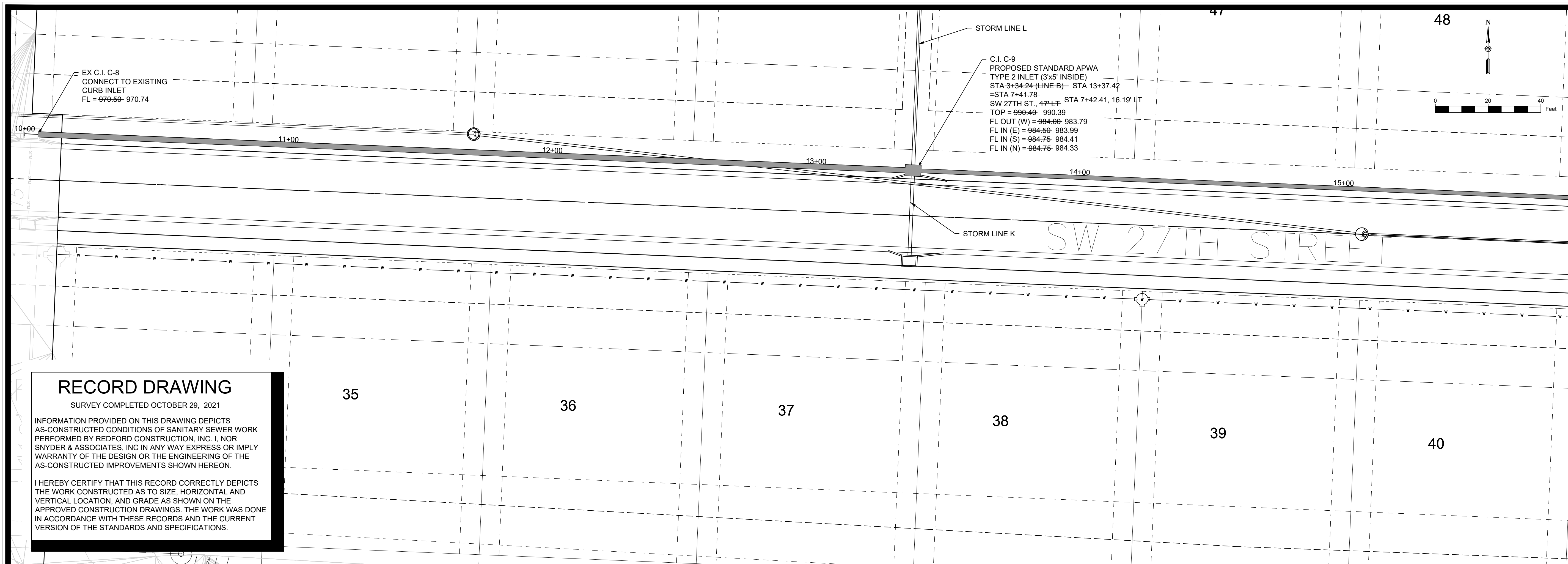
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WHISPERING WOODS 2ND PLAT  
 STREET & STORM SEWER PLANS  
 INTERSECTION DETAILS  
**SNYDER & ASSOCIATES**  
 ENGINEERS & PLANNERS, INC.







C.I. C-9  
 PROPOSED STANDARD APWA  
 TYPE 2 INLET (3'x5' INSIDE)  
 STA 3+34.24 (LINE B) - STA 13+37.42  
 = STA 7+41.78  
 SW 27TH ST., 17' LT STA 7+42.41, 16.19' LT  
 TOP = 990.40 990.39  
 FL OUT (W) = 984.00 983.79  
 FL IN (E) = 984.50 983.99  
 FL IN (S) = 984.75 984.41  
 FL IN (N) = 984.75 984.33

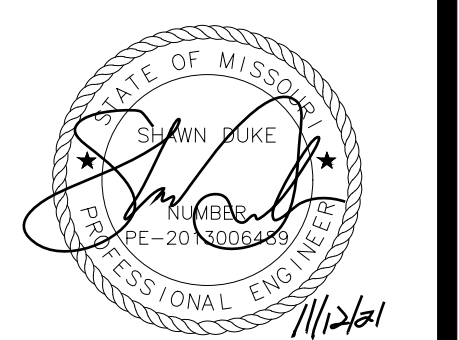
EX C.I. C-8  
 CONNECT TO EXISTING  
 CURB INLET  
 FL = 970.50- 970.74

### RECORD DRAWING

SURVEY COMPLETED OCTOBER 29, 2021

INFORMATION PROVIDED ON THIS DRAWING DEPICTS AS-CONSTRUCTED CONDITIONS OF SANITARY SEWER WORK PERFORMED BY REDFORD CONSTRUCTION, INC. I, NOR SNYDER & ASSOCIATES, INC IN ANY WAY EXPRESS OR IMPLY WARRANTY OF THE DESIGN OR THE ENGINEERING OF THE AS-CONSTRUCTED IMPROVEMENTS SHOWN HEREON.

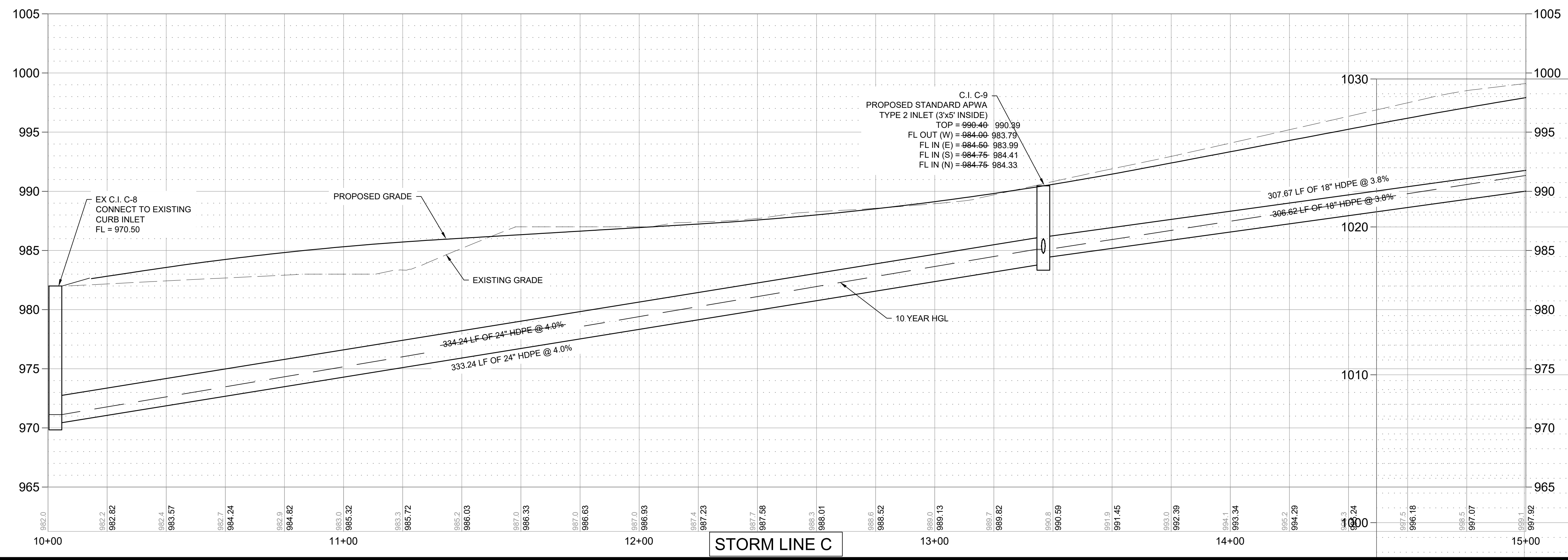
I HEREBY CERTIFY THAT THIS RECORD CORRECTLY DEPICTS THE WORK CONSTRUCTED AS TO SIZE, HORIZONTAL AND VERTICAL LOCATION, AND GRADE AS SHOWN ON THE APPROVED CONSTRUCTION DRAWINGS. THE WORK WAS DONE IN ACCORDANCE WITH THESE RECORDS AND THE CURRENT VERSION OF THE STANDARDS AND SPECIFICATIONS.



SHAWN DUKE - ENGINEER  
 MO PE#2013006489

LEE'S SUMMIT, MO  
 802 FRANCIS STREET  
 ST. JOSEPH, MO 64501  
 816-304-5222

WHISPERING WOODS 2ND PLAT  
 STREET & STORM SEWER PLANS  
 STORM PLAN & PROFILE  
**SNYDER & ASSOCIATES**  
 ENGINEERS & PLANNERS, INC.  
 www.snyder-associates.com



C.I. C-9  
 PROPOSED STANDARD APWA  
 TYPE 2 INLET (3'x5' INSIDE)  
 TOP = 990.40 990.39  
 FL OUT (W) = 984.00 983.79  
 FL IN (E) = 984.50 983.99  
 FL IN (S) = 984.75 984.41  
 FL IN (N) = 984.75 984.33

EX C.I. C-8  
 CONNECT TO EXISTING  
 CURB INLET  
 FL = 970.50

PROPOSED GRADE

EXISTING GRADE

334.24 LF OF 24" HDPE @ 4.0%

333.24 LF OF 24" HDPE @ 4.0%

10 YEAR HGL

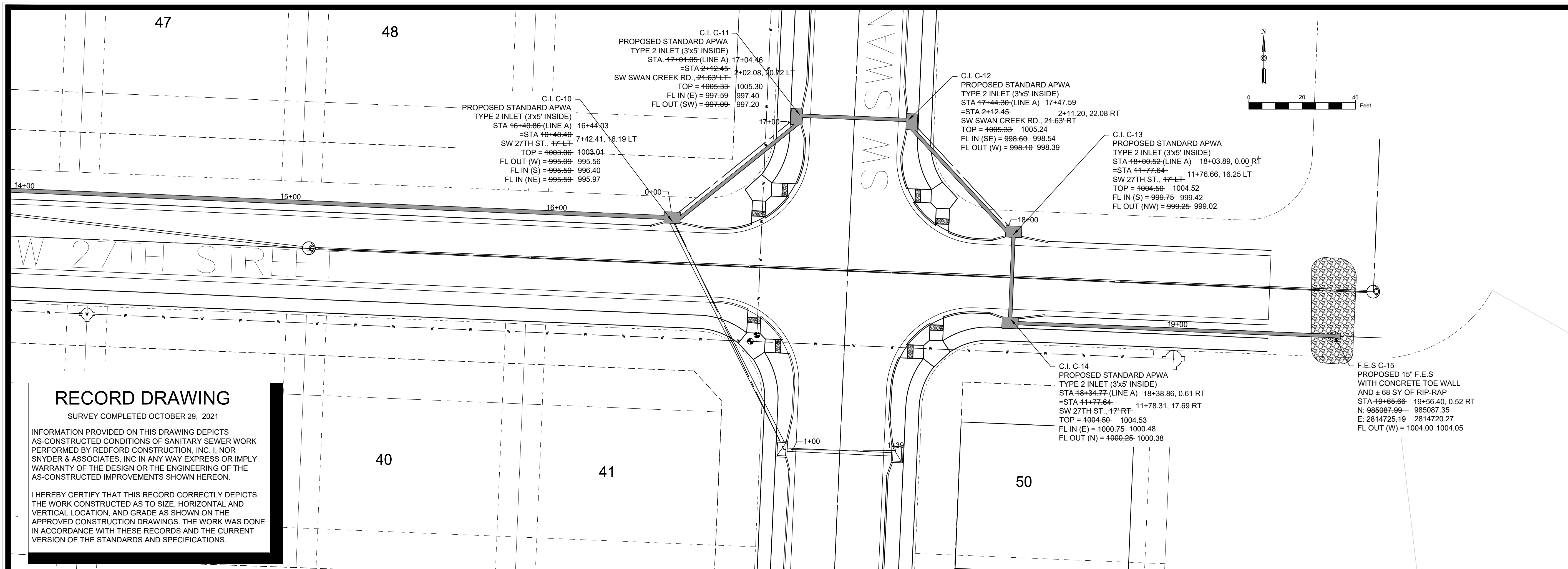
307.67 LF OF 18" HDPE @ 3.8%

306.62 LF OF 18" HDPE @ 3.8%

STORM LINE C

Project No: 1200484.11

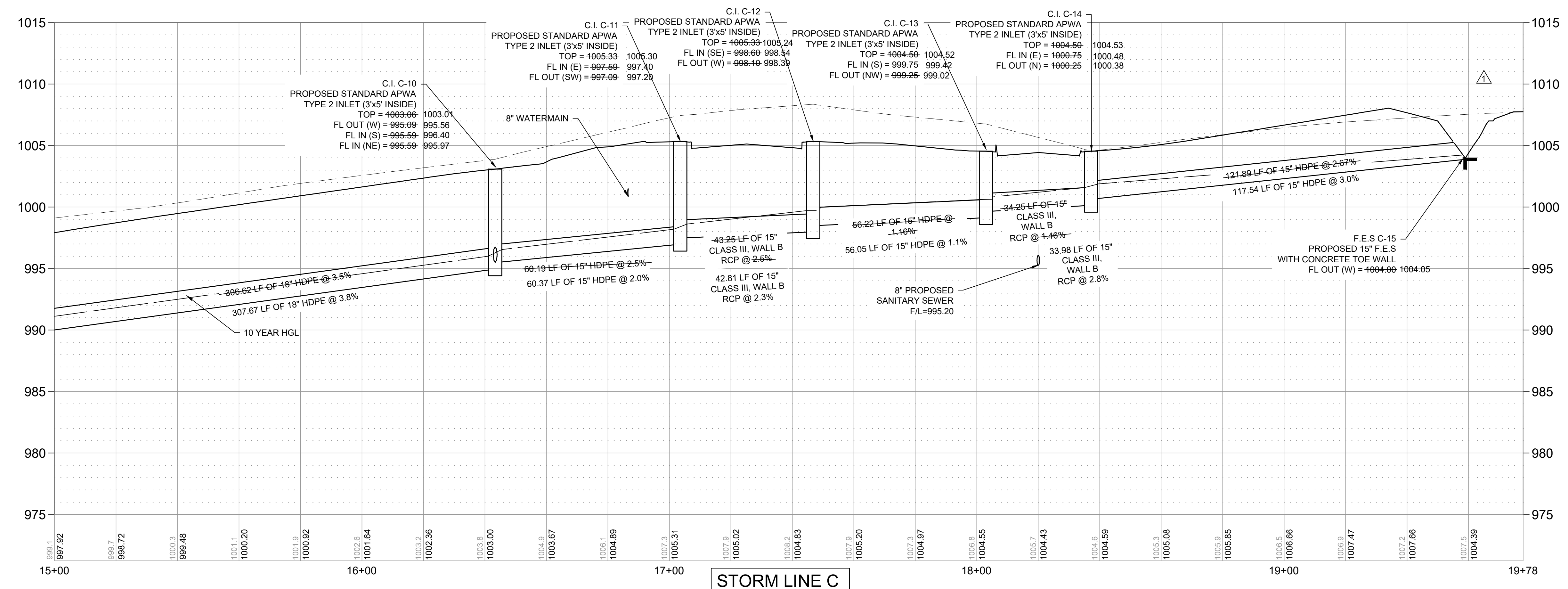
Sheet 9



**RECORD DRAWING**  
 SURVEY COMPLETED OCTOBER 29, 2021

INFORMATION PROVIDED ON THIS DRAWING DEPICTS AS-CONSTRUCTED CONDITIONS OF SANITARY SEWER WORK PERFORMED BY REDFORD CONSTRUCTION, INC. I, NOR SNYDER & ASSOCIATES, INC IN ANY WAY EXPRESS OR IMPLY WARRANTY OF THE DESIGN OR THE ENGINEERING OF THE AS-CONSTRUCTED IMPROVEMENTS SHOWN HEREON.

I HEREBY CERTIFY THAT THIS RECORD CORRECTLY DEPICTS THE WORK CONSTRUCTED AS TO SIZE, HORIZONTAL AND VERTICAL LOCATION, AND GRADE AS SHOWN ON THE APPROVED CONSTRUCTION DRAWINGS. THE WORK WAS DONE IN ACCORDANCE WITH THESE RECORDS AND THE CURRENT VERSION OF THE STANDARDS AND SPECIFICATIONS.



| MARK           | REVISION       | DATE            | BY |
|----------------|----------------|-----------------|----|
| Engineer: SD   | Checked By: SD | Scale: 1" = 20' |    |
| Technician: JS | Date: 7-28-20  | Field Bk:       |    |



SHAWN DUKE - ENGINEER  
 MO PE#2013006489

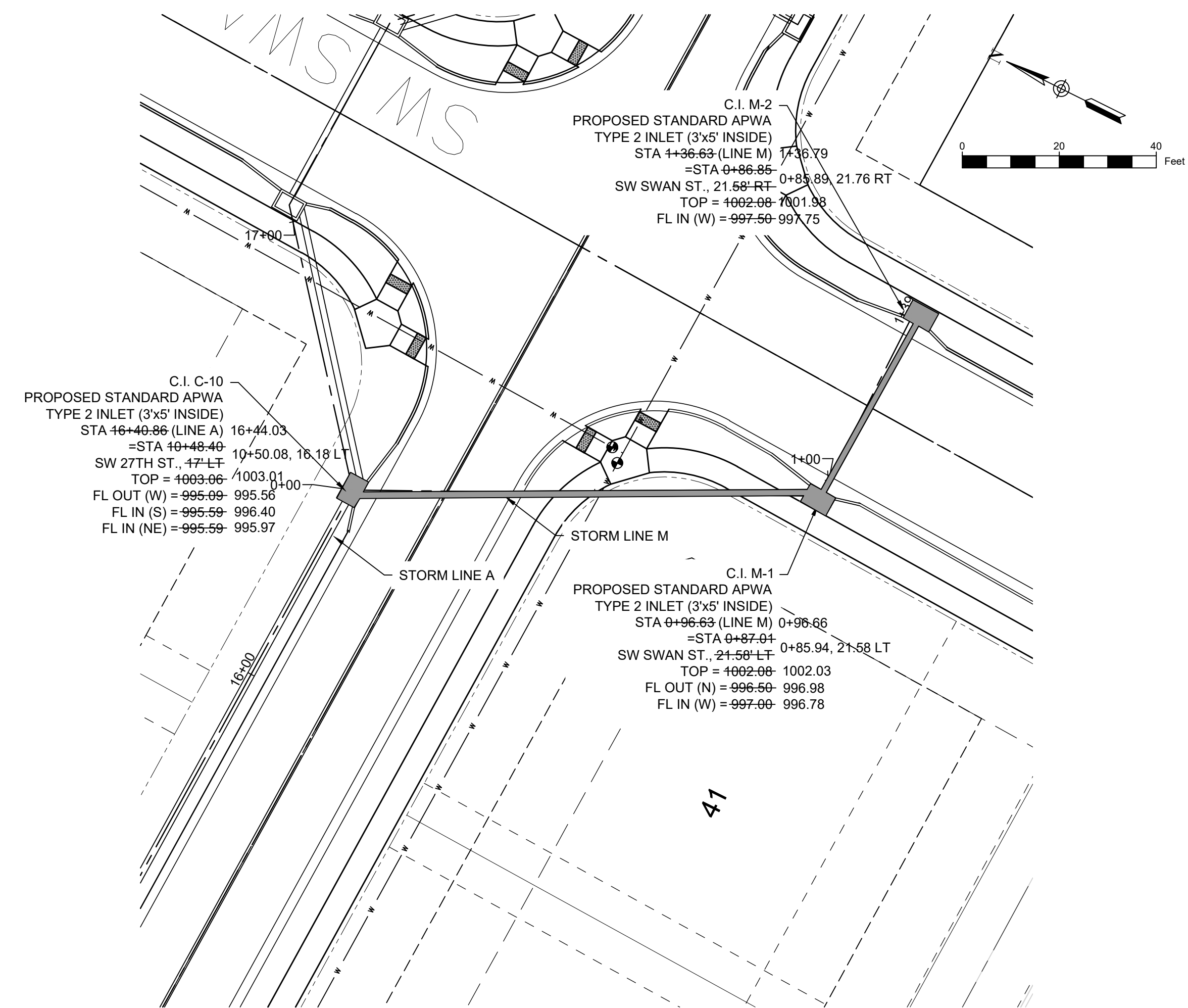
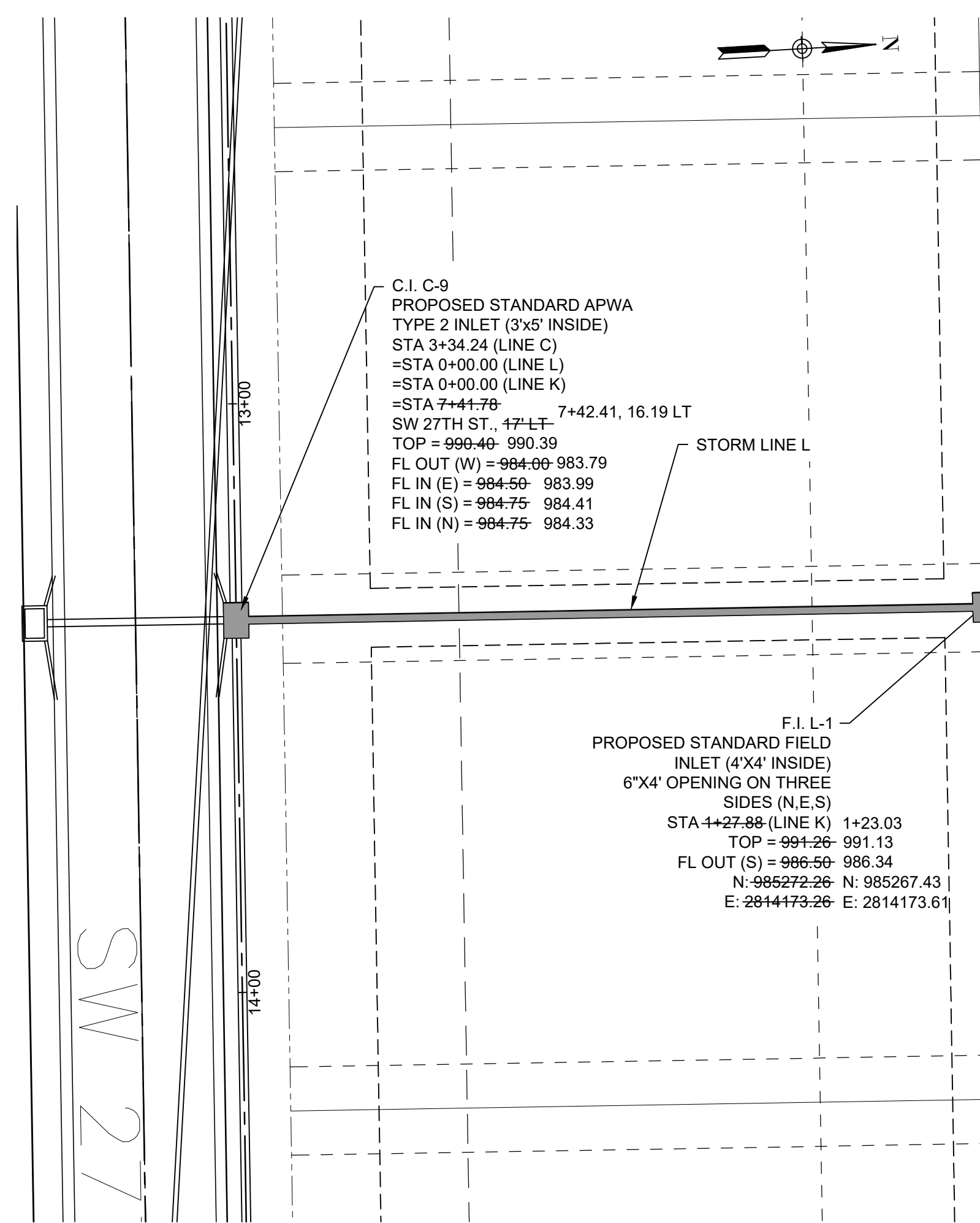
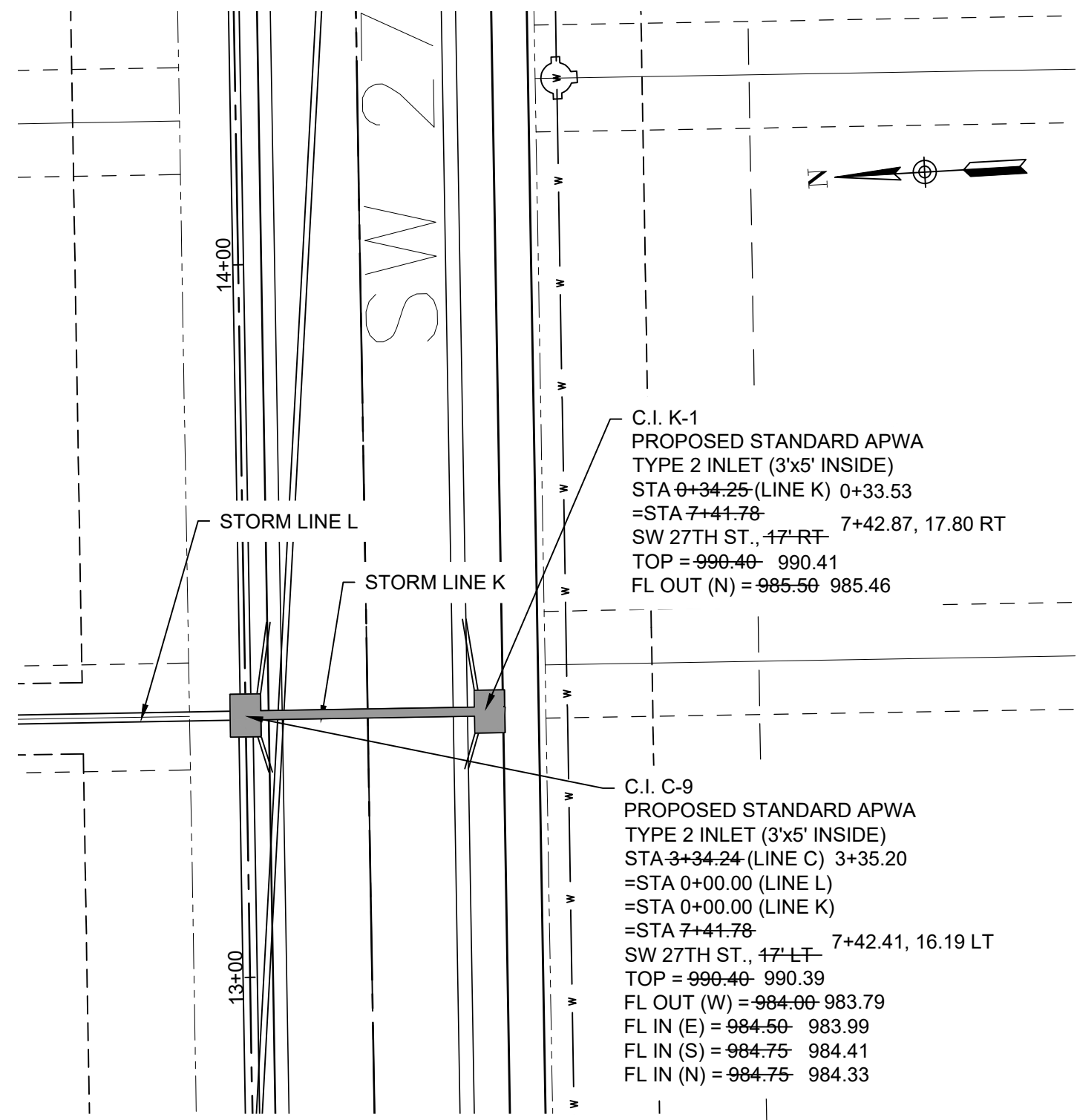
LEE'S SUMMIT, MO  
 802 FRANCIS STREET  
 ST. JOSEPH, MO 64501  
 816-364-5222

**WHISPERING WOODS 2ND PLAT  
 STREET & STORM SEWER PLANS**

**SNYDER & ASSOCIATES**  
 ENGINEERS & PLANNERS, INC.  
 www.snyder-associates.com



Project No: 1200484.11

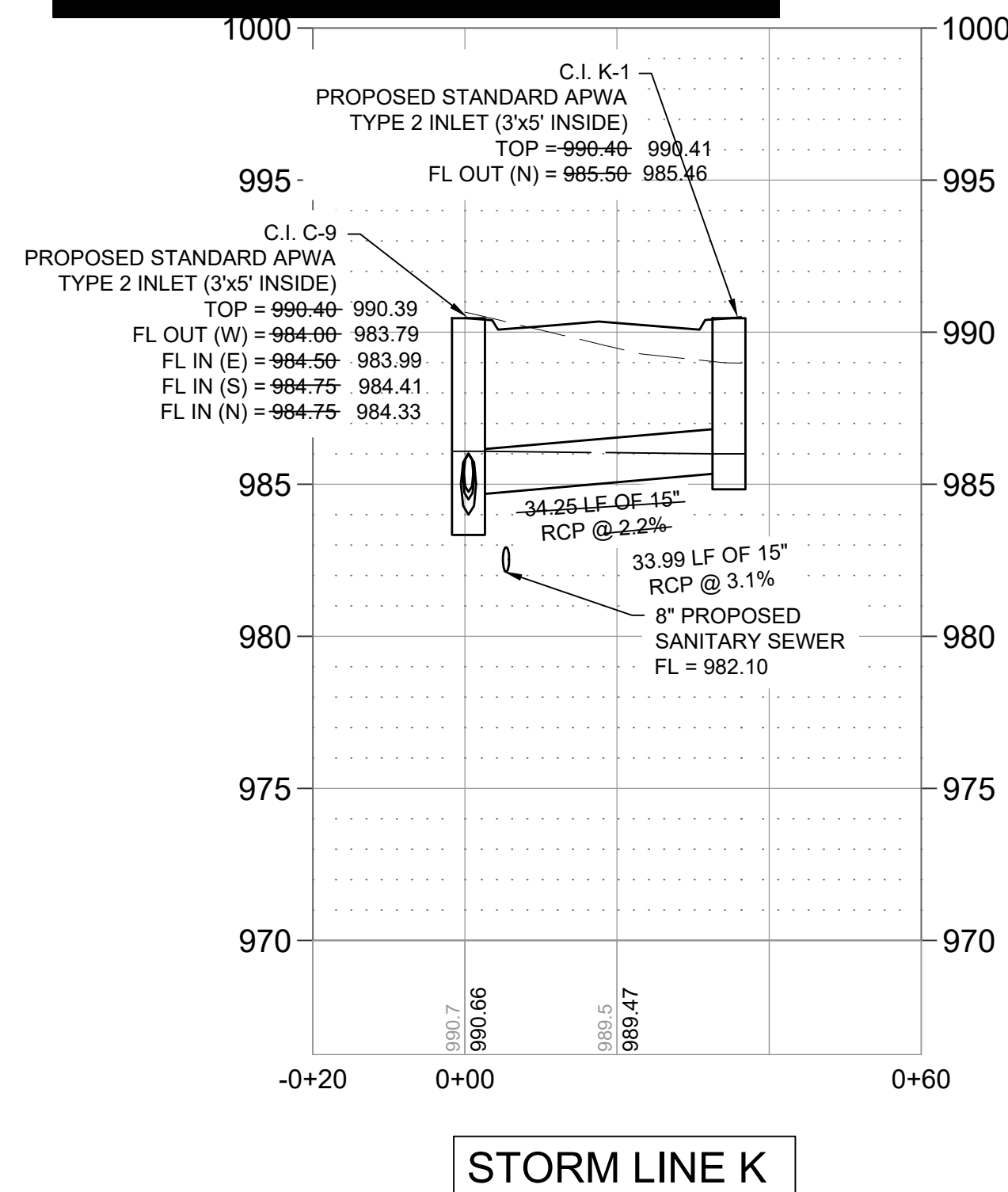


### RECORD DRAWING

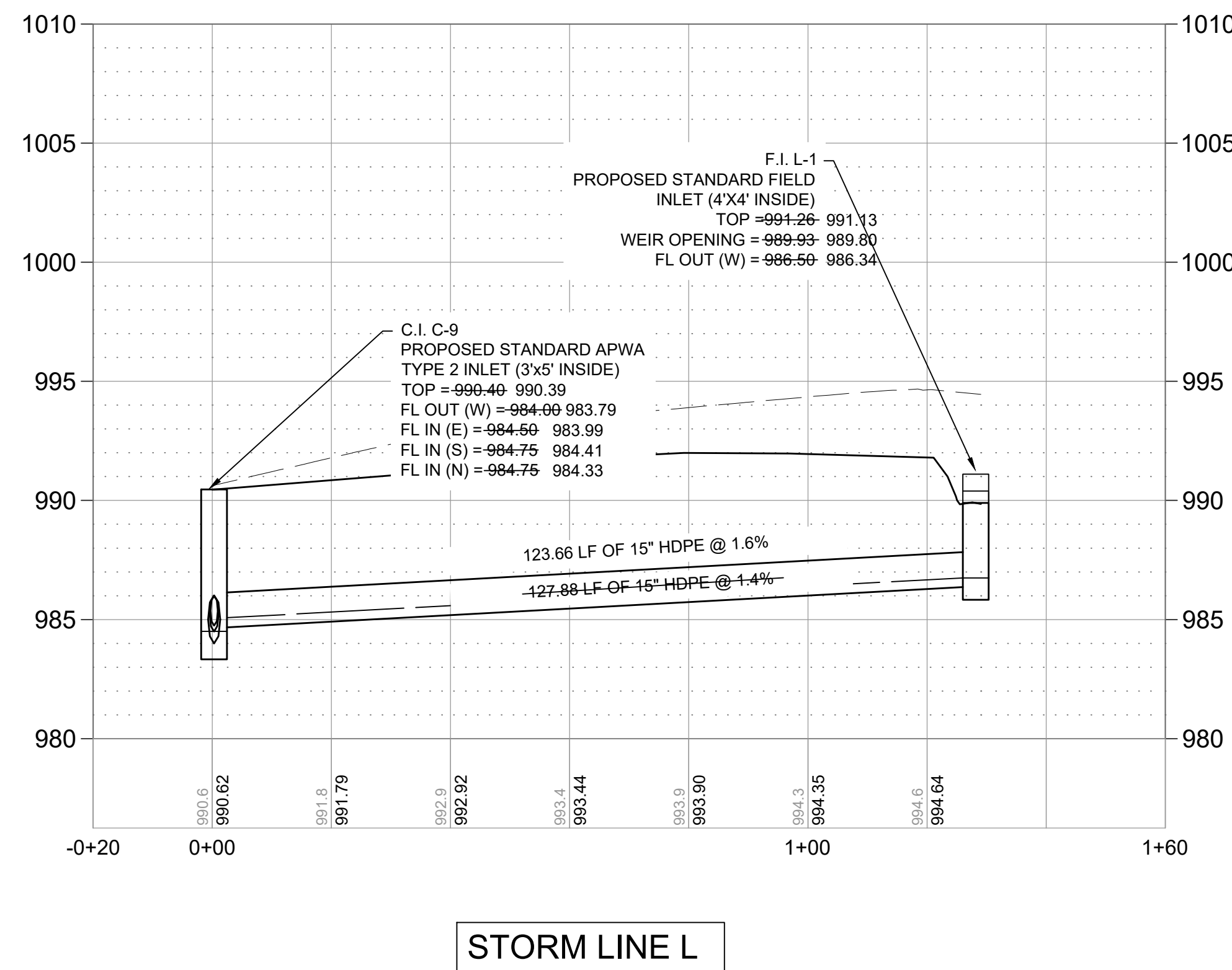
SURVEY COMPLETED OCTOBER 29, 2021

INFORMATION PROVIDED ON THIS DRAWING DEPICTS AS-CONSTRUCTED CONDITIONS OF SANITARY SEWER WORK PERFORMED BY REDFORD CONSTRUCTION, INC. I, NOR SNYDER & ASSOCIATES, INC IN ANY WAY EXPRESS OR IMPLY WARRANTY OF THE DESIGN OR THE ENGINEERING OF THE AS-CONSTRUCTED IMPROVEMENTS SHOWN HEREON.

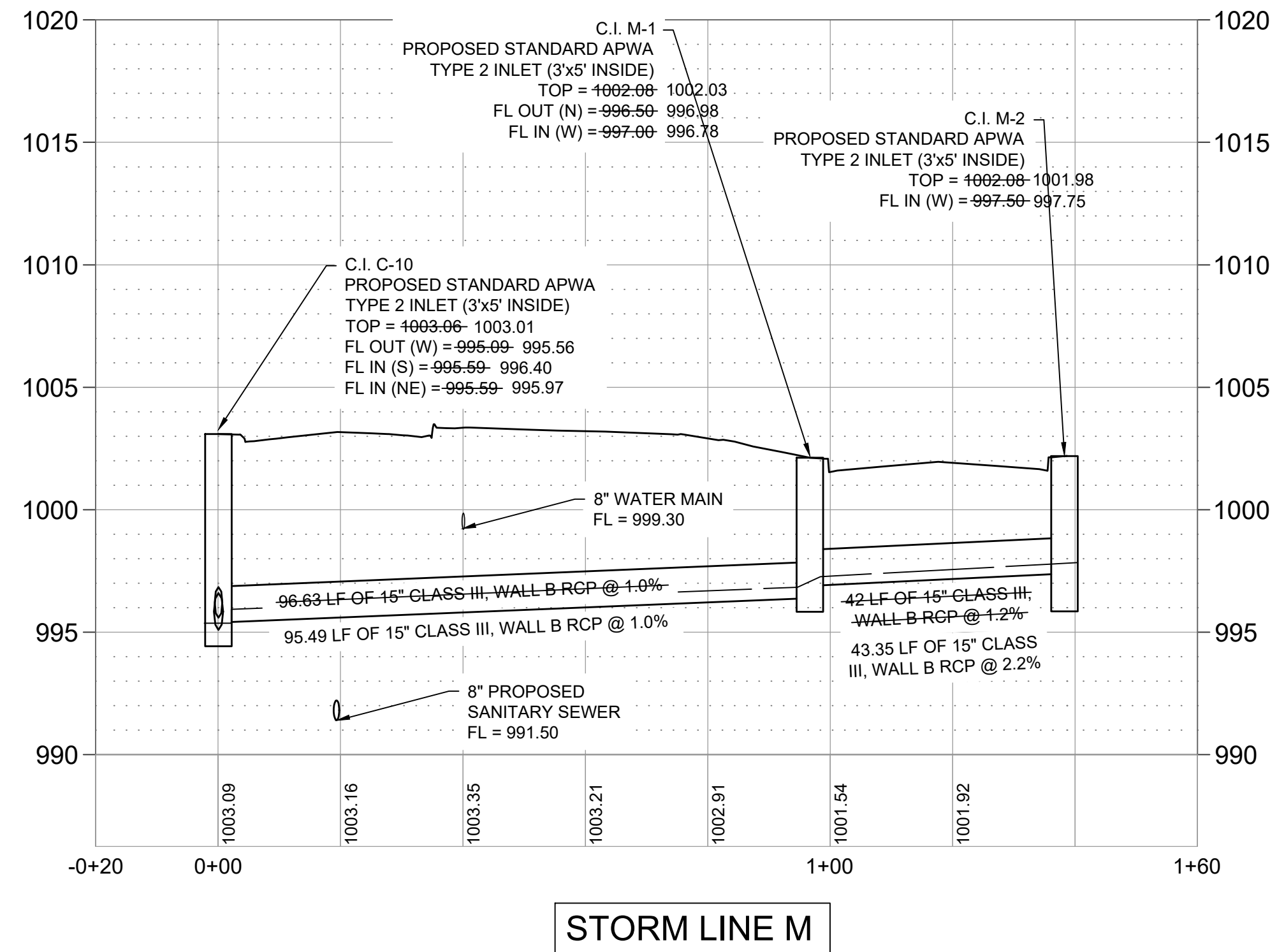
I HEREBY CERTIFY THAT THIS RECORD CORRECTLY DEPICTS THE WORK CONSTRUCTED AS TO SIZE, HORIZONTAL AND VERTICAL LOCATION, AND GRADE AS SHOWN ON THE APPROVED CONSTRUCTION DRAWINGS. THE WORK WAS DONE IN ACCORDANCE WITH THESE RECORDS AND THE CURRENT VERSION OF THE STANDARDS AND SPECIFICATIONS.



STORM LINE K



STORM LINE L



STORM LINE M

WHISPERING WOODS 2ND PLAT  
STREET & STORM SEWER PLANS

STORM PLAN & PROFILE

**SNYDER & ASSOCIATES**  
ENGINEERS & PLANNERS, INC.

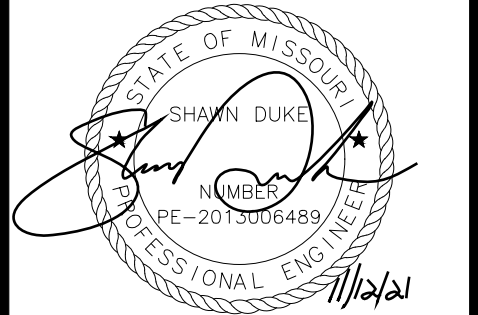


Project No: 1200484.11

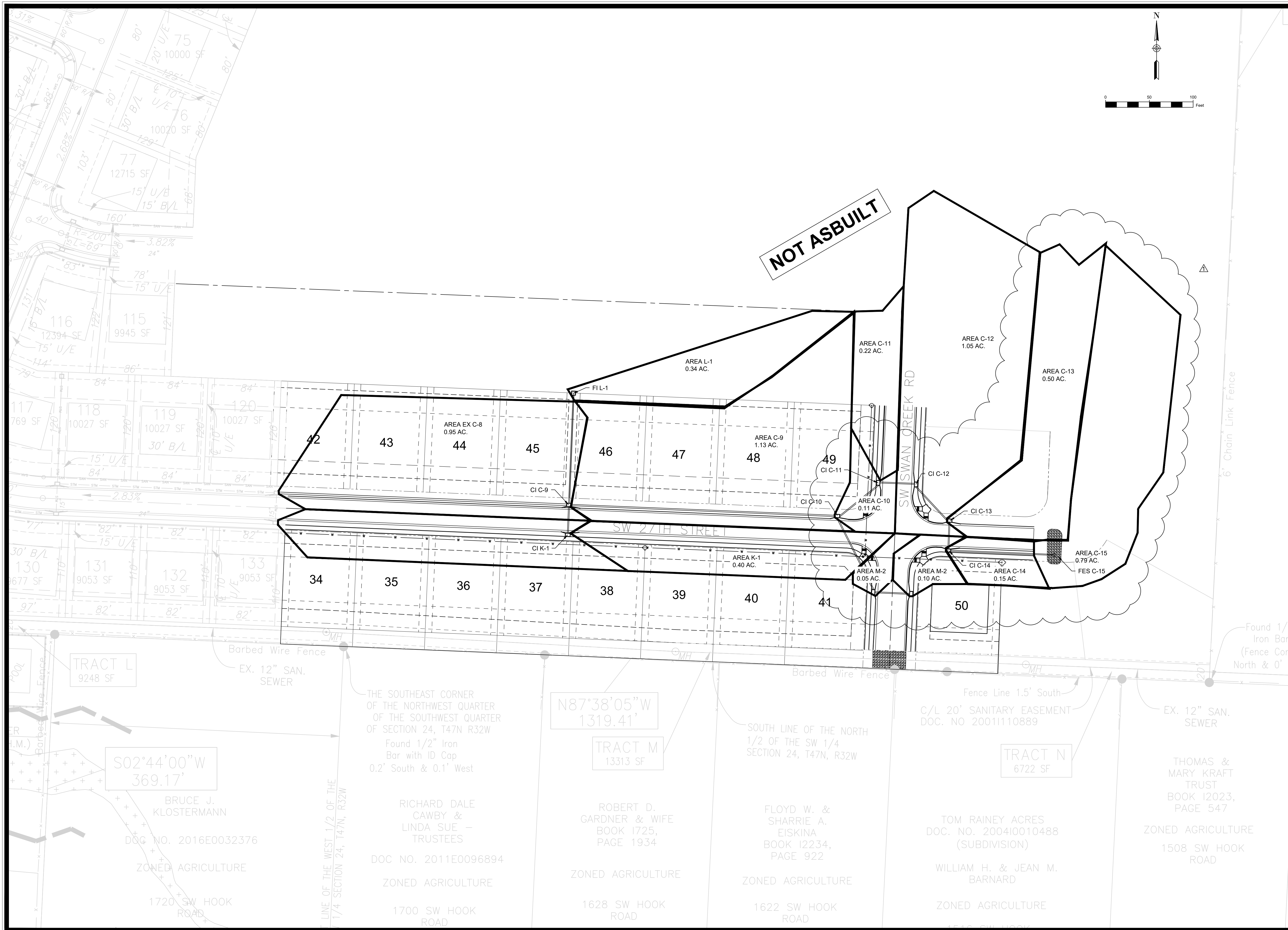
Sheet 11

LEE'S SUMMIT, MO  
802 FRANCIS STREET  
ST. JOSEPH, MO 64501  
816-304-5222

SHAWN DUKE - ENGINEER  
MO PE#2013006489



| MARK   | REVISION       | DATE            | BY       |
|--|----------------|-----------------|----------|
| Engineer: SD   | Checked By: SD | Scale: 1" = 20' |          |
| Technician: JS   | Date: 7-28-20  | Field Bk:       |          |
| Snyder & Associates Engineers & Planners, Inc.<br>Missouri State Certificate of Authority #200006544 |                |                 | Sheet 11 |



|          |        |    |
|----------|--------|----|
| REVISION | DATE   | BY |
| 1        | 9/4/20 | JS |
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SHAWN DUKE - ENGINEER  
 MO PE#2013006489

LEE'S SUMMIT, MO  
 802 FRANCIS STREET  
 ST. JOSEPH, MO 64501  
 816-364-5222

WHISPERING WOODS 2ND PHASE  
 SANITARY SEWER PLANS  
 DRAINAGE AREAS



Project No: 1200484.11  
 Sheet 12

10 YEAR STORM

| Label   | Start Node | Stop Node | Length (Unified) (ft) | System Intensity (in/h) | Upstream Inlet Area (acres) | Upstream Structure Flow (Total Surface) (cfs) | System CA (acres) | System Intensity (in/h) | System Rational Flow (cfs) | Flow (cfs) | Capacity (Full Flow) (cfs) | Velocity (ft/s) | Invert (Start) (ft) | Invert (Stop) (ft) | Slope (Calculated) (ft/ft) | Hydraulic Grade Line (In) (ft) |
|---------|------------|-----------|-----------------------|-------------------------|-----------------------------|---|-------------------|-------------------------|----------------------------|------------|----------------------------|-----------------|---------------------|--------------------|----------------------------|--------------------------------|
| C9-EXC8 | CI C-9     | CI C8     | 334.2                 | 6.957                   | 1.13                        | 4.29  | 2.018             | 6.957                   | 14.15                      | 14.15      | 49.25                      | 13.54           | 984                 | 970.5              | 0.04                       | 985.36                         |
| C10-C9  | CI C-10    | CI C-9    | 306.6                 | 7.111                   | 0.11                        | 0.42  | 1.112             | 7.111                   | 7.97                       | 7.97       | 21.15                      | 11.13           | 995.09              | 984.5              | 0.035                      | 996.18                         |
| C11-C10 | CI C-11    | CI C-10   | 60.2                  | 7.228                   | 0.22                        | 0.84  | 0.899             | 7.228                   | 6.55                       | 6.55       | 11.05                      | 9.38            | 997.09              | 995.59             | 0.025                      | 998.12                         |
| C12-C11 | CI C-12    | CI C-11   | 43.3                  | 7.273                   | 1.05                        | 3.99  | 0.787             | 7.273                   | 5.77                       | 5.77       | 7.01                       | 6.38            | 998.1               | 997.59             | 0.012                      | 999.07                         |
| C13-C12 | CI C-13    | CI C-12   | 56.2                  | 7.34                    | 0.5                         | 1.9   | 0.331             | 7.34                    | 2.45                       | 2.45       | 7.52                       | 5.48            | 999.25              | 998.6              | 0.012                      | 999.88                         |
| C14-C13 | CI C-14    | CI C-13   | 34.3                  | 7.392                   | 0.15                        | 0.57  | 0.076             | 7.392                   | 0.57                       | 0.57       | 7.8                        | 3.71            | 1000.25             | 999.75             | 0.015                      | 1000.54                        |
| C15-C14 | CI C-15    | CI C-14   | 119                   | 7.392                   | 0.79                        | 0   | 0                 | 7.392                   | 0                          | 0          | 11.56                      | 0               | 1004                | 1000.75            | 0.027                      | 1004                           |
| K1-C9   | CI K-1     | CI C-9    | 34.3                  | 7.392                   | 0.4                         | 1.52  | 0.204             | 7.392                   | 1.52                       | 1.52       | 9.56                       | 5.7             | 985.5               | 984.75             | 0.022                      | 985.99                         |
| L1-C9   | L-1        | CI C-9    | 127.9                 | 7.392                   | 0.34                        | 1.29  | 0.173             | 7.392                   | 1.29                       | 1.29       | 11.16                      | 6.07            | 988                 | 984.75             | 0.025                      | 988.45                         |
| M1-C10  | CI M-1     | CI C-10   | 96.6                  | 7.31                    | 0.05                        | 0.19  | 0.076             | 7.31                    | 0.56                       | 0.56       | 6.27                       | 3.17            | 996.5               | 995.59             | 0.009                      | 996.79                         |
| M2-M1   | CI M-2     | CI M-1    | 42                    | 7.392                   | 0.1                         | 0.38  | 0.051             | 7.392                   | 0.38                       | 0.38       | 7.05                       | 3.06            | 997.5               | 997                | 0.012                      | 997.74                         |

100 YEAR STORM

| Label   | Start Node | Stop Node | Length (Unified) (ft) | System Intensity (in/h) | Upstream Inlet Area (acres) | Upstream Structure Flow (Total Surface) (cfs) | System CA (acres) | System Intensity (in/h) | System Rational Flow (cfs) | Flow (cfs) | Capacity (Full Flow) (cfs) | Velocity (ft/s) | Invert (Start) (ft) | Invert (Stop) (ft) | Slope (Calculated) (ft/ft) | Hydraulic Grade Line (In) (ft) |
|---------|------------|-----------|-----------------------|-------------------------|-----------------------------|---|-------------------|-------------------------|----------------------------|------------|----------------------------|-----------------|---------------------|--------------------|----------------------------|--------------------------------|
| C9-EXC8 | CI C-9     | CI C8     | 334.2                 | 9.972                   | 1.13                        | 5.93  | 1.98              | 9.972                   | 19.91                      | 19.91      | 49.25                      | 14.84           | 984                 | 970.5              | 0.04                       | 985.6                          |
| C10-C9  | CI C-10    | CI C-9    | 306.6                 | 10.07                   | 0.11                        | 0.58  | 1.112             | 10.07                   | 11.29                      | 11.29      | 21.15                      | 12.16           | 995.09              | 984.5              | 0.035                      | 996.37                         |
| C11-C10 | CI C-11    | CI C-10   | 60.2                  | 10.121                  | 0.22                        | 1.15  | 0.861             | 10.121                  | 8.79                       | 8.79       | 11.05                      | 9.99            | 997.09              | 995.59             | 0.025                      | 998.24                         |
| C12-C11 | CI C-12    | CI C-11   | 43.3                  | 10.144                  | 1.05                        | 5.51  | 0.749             | 10.144                  | 7.66                       | 7.66       | 7.01                       | 6.24            | 998.1               | 997.59             | 0.012                      | 999.29                         |
| C13-C12 | CI C-13    | CI C-12   | 56.2                  | 10.176                  | 0.5                         | 2.62  | 0.331             | 10.176                  | 3.4                        | 3.4        | 7.52                       | 5.98            | 999.25              | 998.6              | 0.012                      | 999.99                         |
| C14-C13 | CI C-14    | CI C-13   | 34.3                  | 10.2                    | 0.15                        | 0.79  | 0.076             | 10.2                    | 0.79                       | 0.79       | 7.8                        | 4.08            | 1000.25             | 999.75             | 0.015                      | 1000.6                         |
| C15-C14 | CI C-15    | CI C-14   | 119                   | 10.2                    | 0.79                        | 0   | 0                 | 10.2                    | 0                          | 0          | 11.56                      | 0               | 1004                | 1000.75            | 0.027                      | 1004                           |
| K1-C9   | CI K-1     | CI C-9    | 34.3                  | 10.2                    | 0.4                         | 2.1   | 0.204             | 10.2                    | 2.1                        | 2.1        | 9.56                       | 6.24            | 985.5               | 984.75             | 0.022                      | 986.08                         |
| L1-C9   | L-1        | CI C-9    | 127.9                 | 10.2                    | 0.34                        | 1.78  | 0.173             | 10.2                    | 1.78                       | 1.78       | 11.16                      | 6.66            | 988                 | 984.75             | 0.025                      | 988.53                         |
| M1-C10  | CI M-1     | CI C-10   | 96.6                  | 10.162                  | 0.05                        | 0.26  | 0.076             | 10.162                  | 0.78                       | 0.78       | 6.27                       | 3.48            | 996.5               | 995.59             | 0.009                      | 996.85                         |
| M2-M1   | CI M-2     | CI M-1    | 42                    | 10.2                    | 0.1                         | 0.52  | 0.051             | 10.2                    | 0.52                       | 0.52       | 7.05                       | 3.37            | 997.5               | 997                | 0.012                      | 997.78                         |

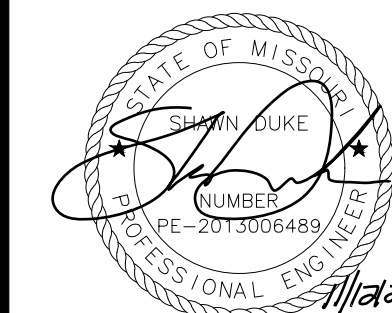
INLET SPREAD TABLE

| Inlet | Drainage Area (Ac) | Inlet C | Intensity (in/h) | Q (cfs) | Ku   | n     | SX (ft/ft) | SL (ft/ft) | T= Spread (ft) |
|-------|--------------------|---------|------------------|---------|------|-------|------------|------------|----------------|
| EXC-8 | 0.95               | 0.51    | 7.35             | 3.6     | 0.56 | 0.012 | 2          | 1.5        | 9.70           |
| C-9   | 1.13               | 0.51    | 7.35             | 4.2     | 0.56 | 0.012 | 2          | 3.9        | 8.66           |
| C-10  | 0.11               | 0.51    | 7.35             | 0.4     | 0.56 | 0.012 | 2          | 2          | 4.10           |
| C-11  | 0.22               | 0.51    | 7.35             | 0.8     | 0.56 | 0.012 | 2          | 5.3        | 4.42           |
| C-12  | 1.05               | 0.51    | 7.35             | 3.9     | 0.56 | 0.012 | 2          | 5.3        | 7.95           |
| C-13  | 0.50               | 0.51    | 7.35             | 1.9     | 0.56 | 0.012 | 2          | 1          | 8.23           |
| C-14  | 0.15               | 0.51    | 7.35             | 0.6     | 0.56 | 0.012 | 2          | 1          | 5.24           |
| K-1   | 0.40               | 0.51    | 7.35             | 1.5     | 0.56 | 0.012 | 2          | 5          | 5.60           |
| M-1   | 0.05               | 0.51    | 7.35             | 0.2     | 0.56 | 0.012 | 2          | 5          | 2.57           |
| M-2   | 0.10               | 0.51    | 7.35             | 0.4     | 0.56 | 0.012 | 2          | 5          | 3.33           |

**NOT ASBUILT**

1

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| 1 | MARK        | REVISIONS TO STORM SEWER | SD | BY             |
|   | Engineer:   | Checked By:              | SD | Scale: 1"= N/A |
|   | Technician: | Date:                    | JS | 7-28-20        |
|   |             | Field Bk:                |    | Pg: 13         |



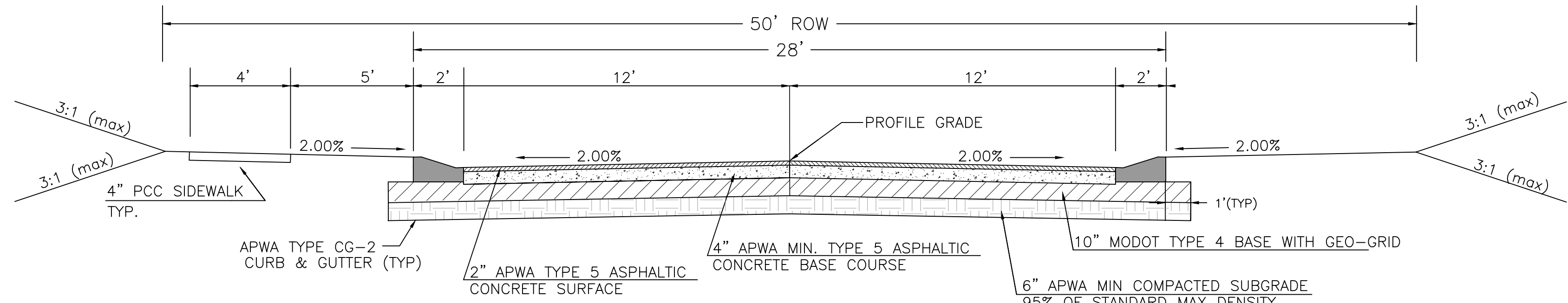
SHAWN DUKE - ENGINEER  
MO PE#2013006489

WHISPERING WOODS 2ND PLAT  
SANITARY SEWER PLANS  
DRAINAGE TABLES  
LEE'S SUMMIT, MO  
802 FRANCIS STREET  
ST. JOSEPH, MO 64501  
816-364-5222  
**SNYDER & ASSOCIATES**  
ENGINEERS & PLANNERS, INC.  
www.snyder-associates.com



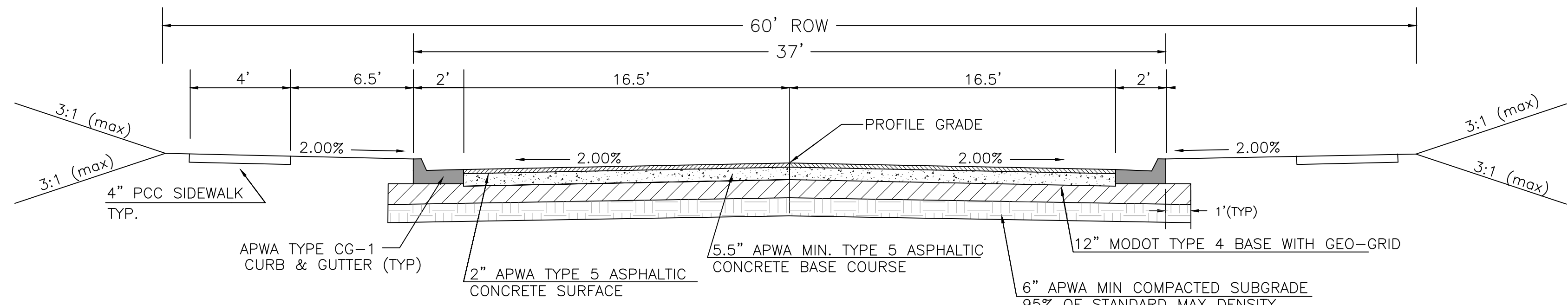
Project No: 1200484.11

Sheet 13



**TYPICAL SECTION RESIDENTIAL LOCAL ACCESS**

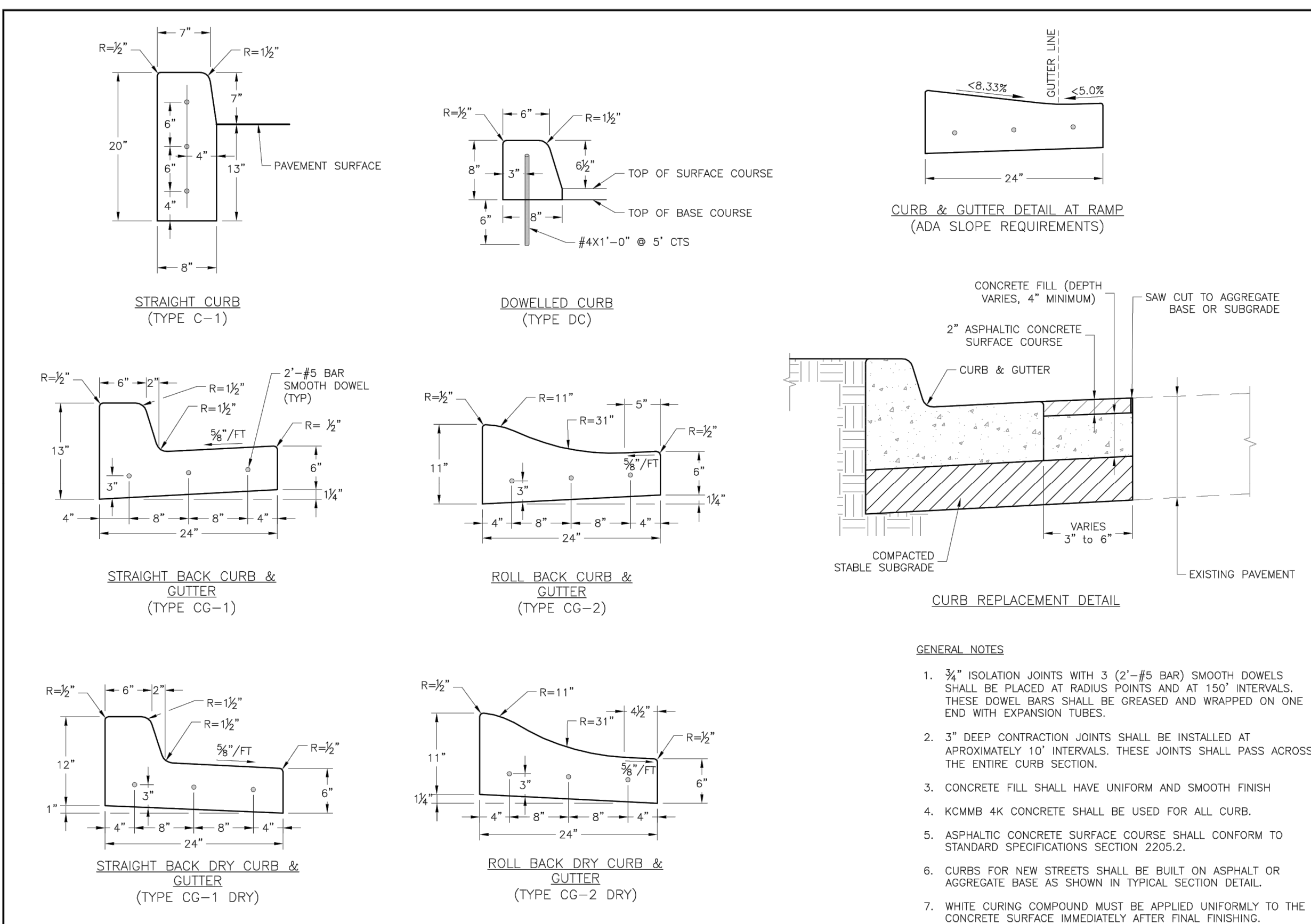
NOT TO SCALE  
SW 27TH STREET



**TYPICAL SECTION RESIDENTIAL COLLECTOR**

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SW SWAN CREEK RD

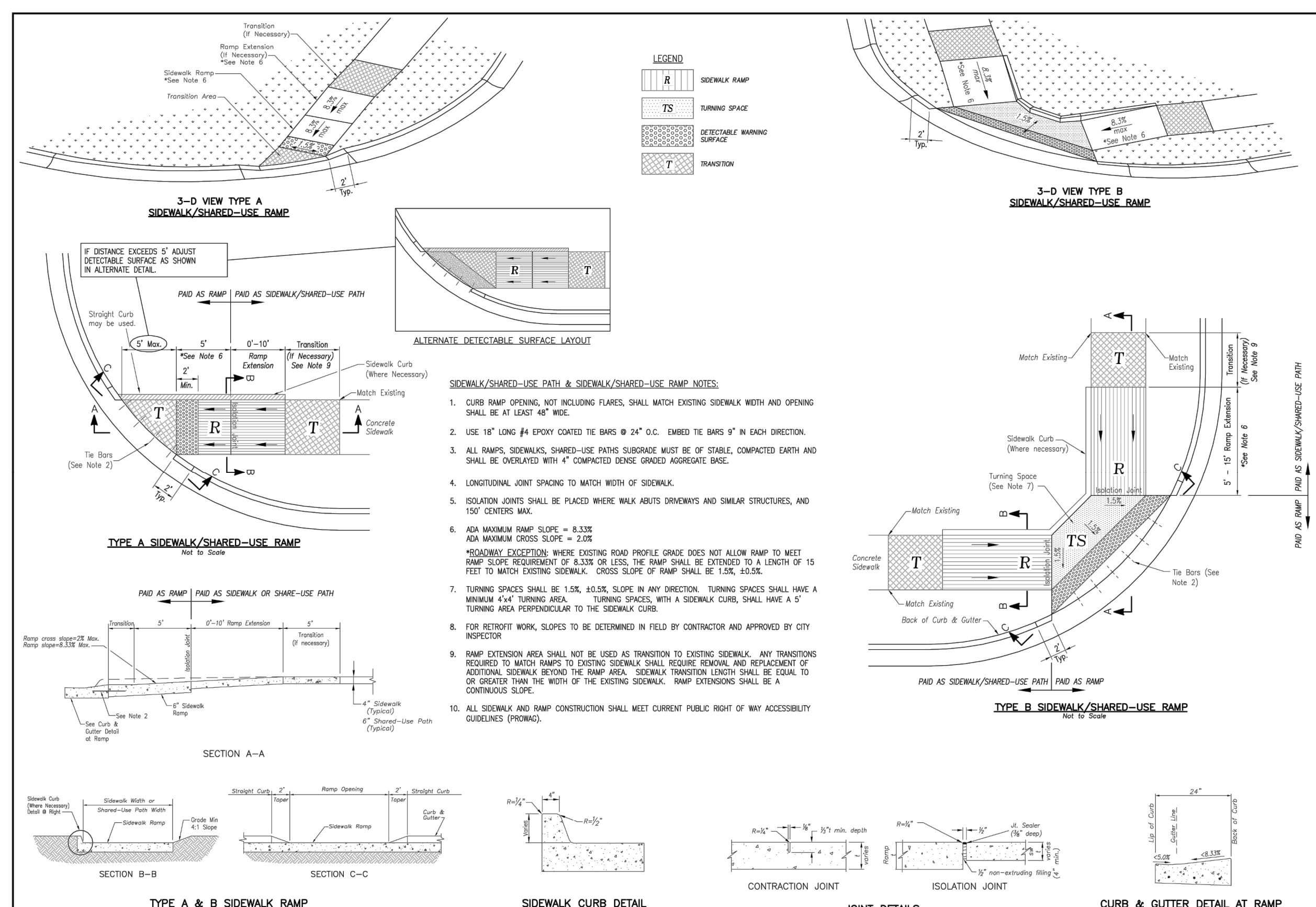
**NOT ASBUILT**



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

**LEE'S SUMMIT MISSOURI**  
PUBLIC WORKS ENGINEERING DIVISION | 2205 S. GREEN STREET | LEE'S SUMMIT, MO 64086

STANDARD DETAILS  
CITY OF LEE'S SUMMIT, MO  
LEE'S SUMMIT, JACKSON COUNTY, MO  
CURB & GUTTER DETAIL  
Drawn By: MJP  
Checked By: JLS  
Date: 04/17  
Proj #: GEN-4



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

**LEE'S SUMMIT MISSOURI**  
PUBLIC WORKS ENGINEERING DIVISION | 2205 S. GREEN STREET | LEE'S SUMMIT, MO 64086

STANDARD DETAILS  
CITY OF LEE'S SUMMIT, MO  
LEE'S SUMMIT, JACKSON COUNTY, MO  
ADA RAMP RETROFIT DETAIL  
Drawn By: MJP  
Checked By: JLS  
Date: 04/17  
Proj #: GEN-3A

**WHISPERING WOODS 2ND PLAT STREET & STORM SEWER PLANS**

**STREET & STORM DETAILS**

**SNYDER & ASSOCIATES ENGINEERS & PLANNERS, INC.**  
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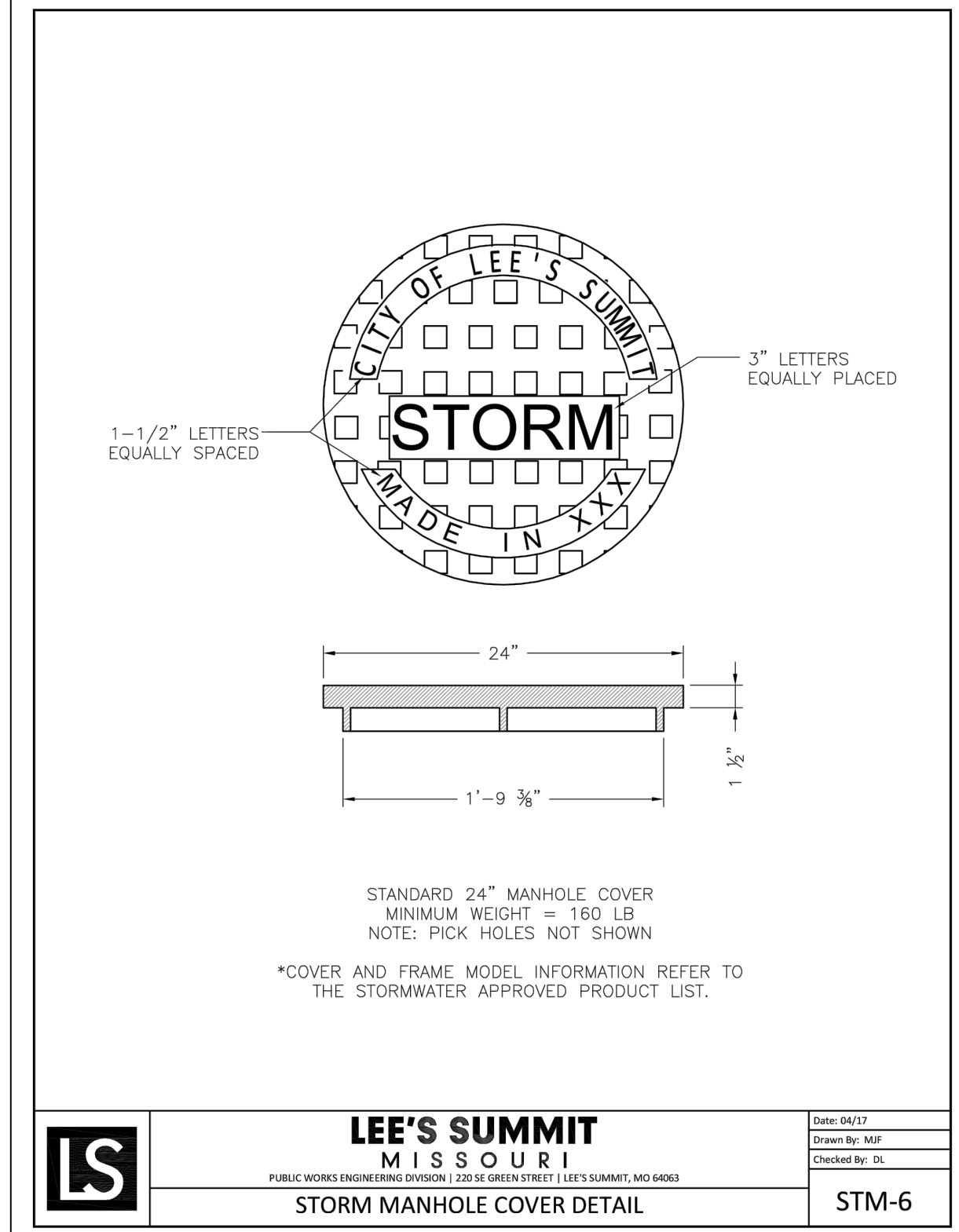
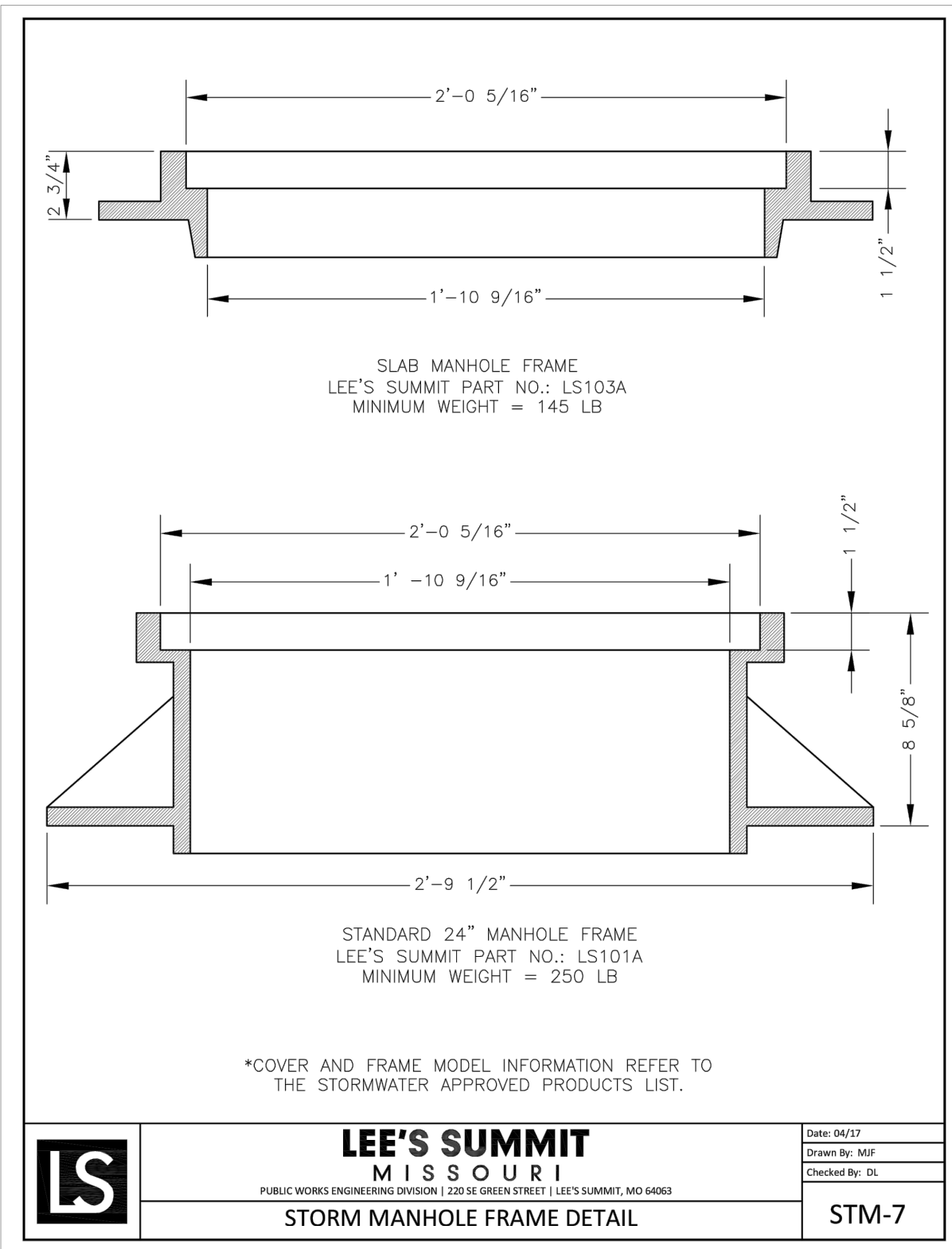


Project No: 1200484.11

|                              |                |                  |
|------------------------------|----------------|------------------|
| REVISION TO TYPICAL SECTIONS | DATE           | BY               |
| 1                            | 09/08/20       | SD               |
| MARK                         | REVISION       | DATE             |
| Engineer: SD                 | Checked By: SD | Scale: 1"= N/A   |
| Technician: JS               | Date: 7-28-20  | Field Bk: Pg: 14 |

Snyder & Associates Engineers & Planners, Inc.  
Missouri State Certificate of Authority #200606544

STATE OF MISSOURI  
SHAWN DUKE - ENGINEER  
MO PE#2013006489



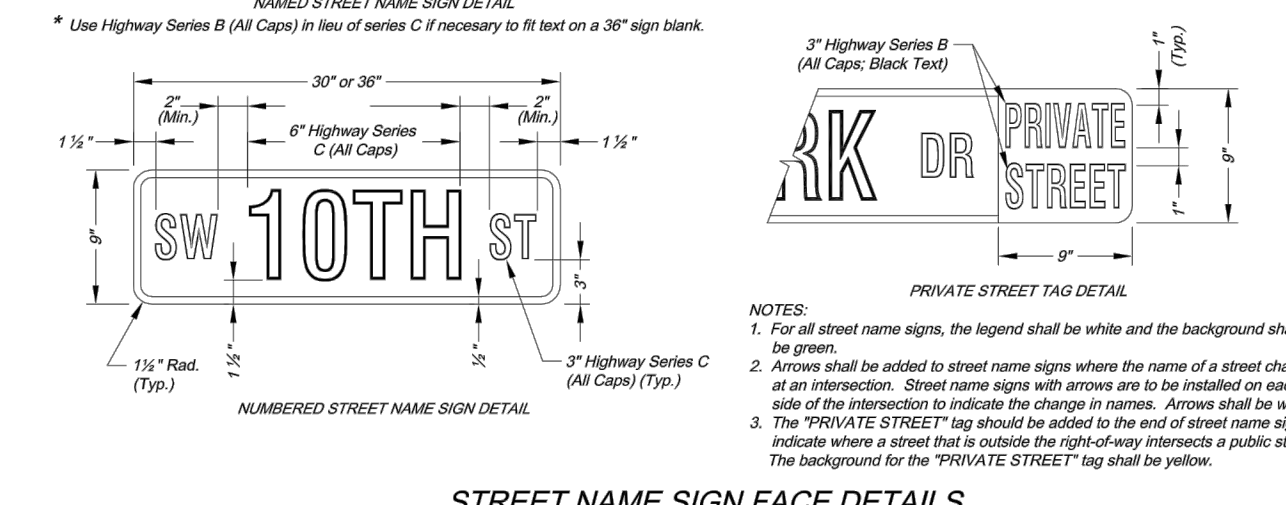
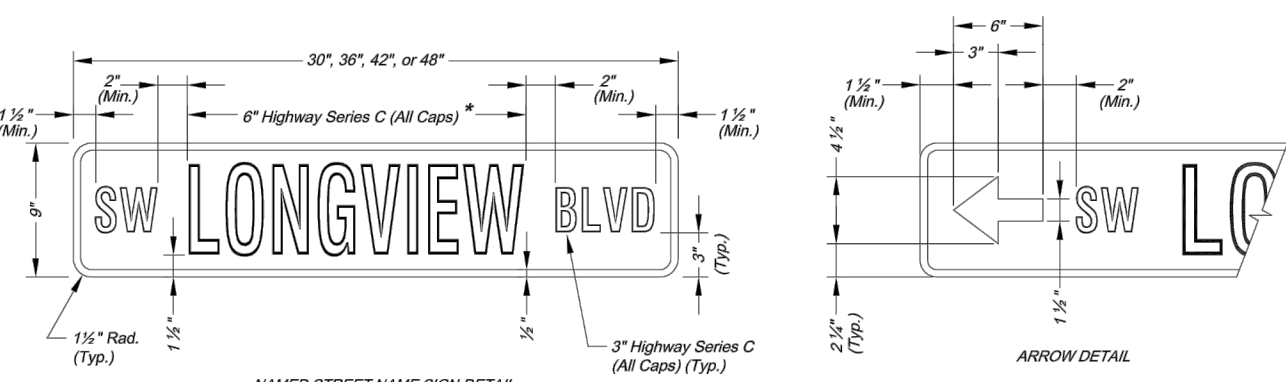
**STANDARD ABBREVIATION LISTS**

| Named Streets |          | Numbered Streets |    |
|---------------|----------|------------------|----|
| Avenue        | AVE      | First            | ST |
| Boulevard     | BLVD     | Second           | ND |
| Circle        | CR       | Third            | RD |
| Creek         | CR       | Fourth to Tenth  | TH |
| Court         | CT       |                  |    |
| Crossing      | CROSSING |                  |    |
| Drive         | DR       |                  |    |
| Highway       | HVY      |                  |    |
| Lane          | LN       |                  |    |
| Parkway       | PWAY     |                  |    |
| Place         | PL       |                  |    |
| Road          | RD       |                  |    |
| Street        | ST       |                  |    |
| Terrace       | TER      |                  |    |
| Trail         | TRL      |                  |    |
| Way           | WAY      |                  |    |

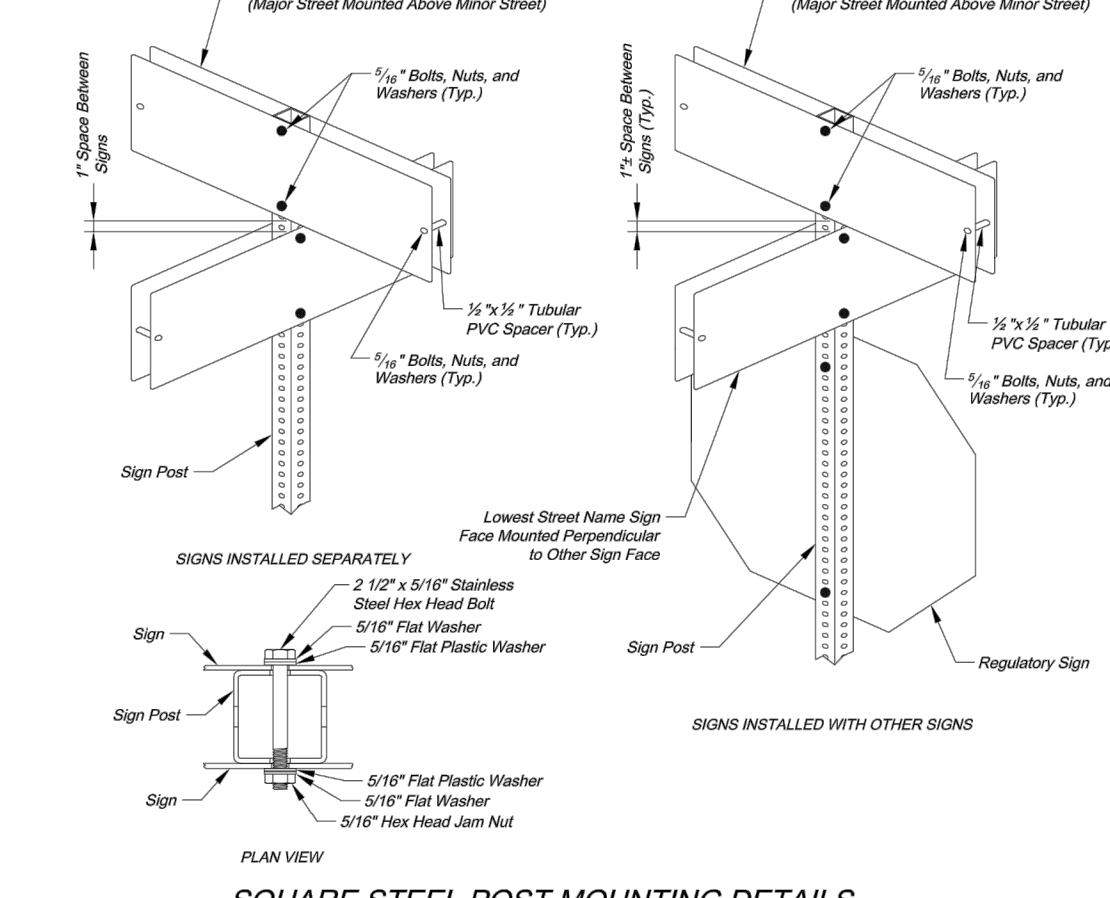
**STREET NAME SIGN QUANTITIES**

| Sign Designation | Sign Size | Sign Area (Sq. Ft.) | Number | Quantity (Sq. Ft.) |
|------------------|-----------|---------------------|--------|--------------------|
| D3-1 (SP-1)      | 8" x 8"   | Sq. Ft.             | 1      | 1                  |
| D3-1 (SP-2)      | 8" x 8"   | Sq. Ft.             | 1      | 1                  |
| D3-1 (SP-3)      | 8" x 8"   | Sq. Ft.             | 1      | 1                  |
| D3-1 (SP-4)      | 8" x 8"   | Sq. Ft.             | 1      | 1                  |
| D3-1 (SP-5)      | 8" x 8"   | Sq. Ft.             | 1      | 1                  |
| D3-1 (SP-6)      | 8" x 8"   | Sq. Ft.             | 1      | 1                  |

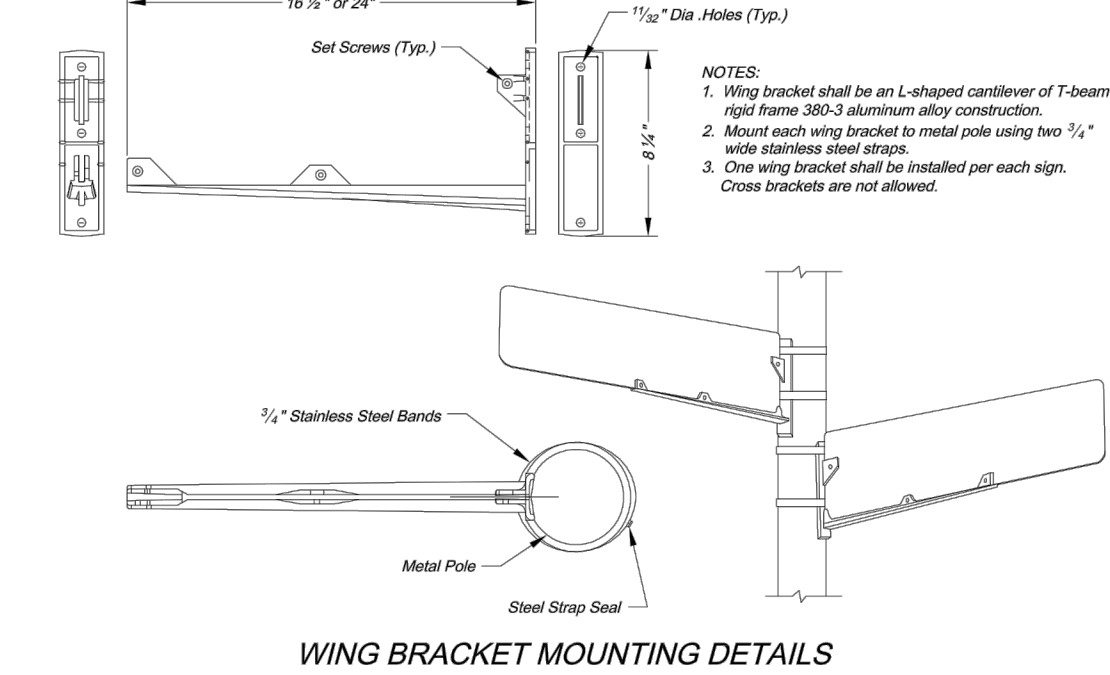
**PROJECT SIGN DETAILS**



**SQUARE STEEL POST MOUNTING DETAILS**



**WING BRACKET MOUNTING DETAILS**

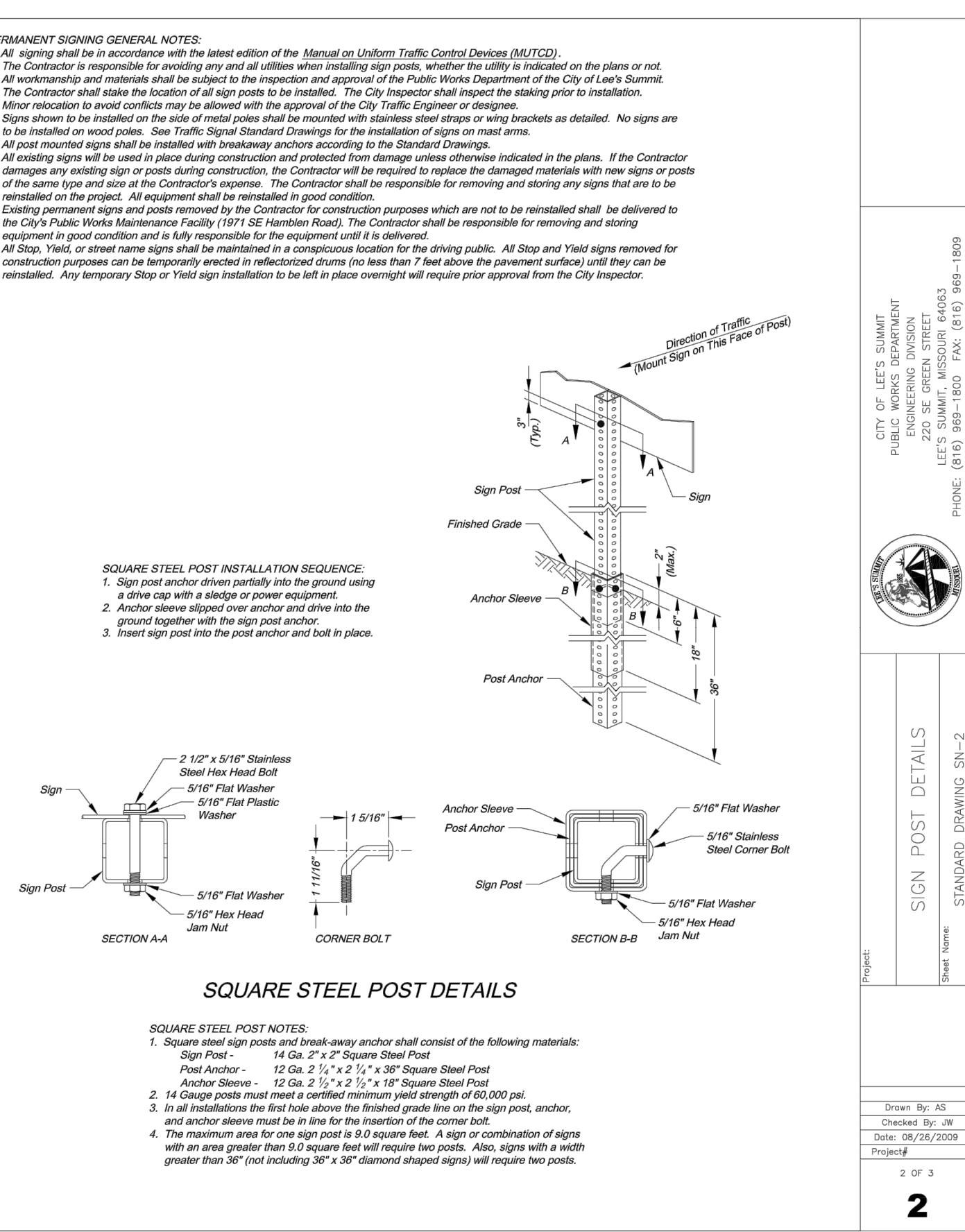
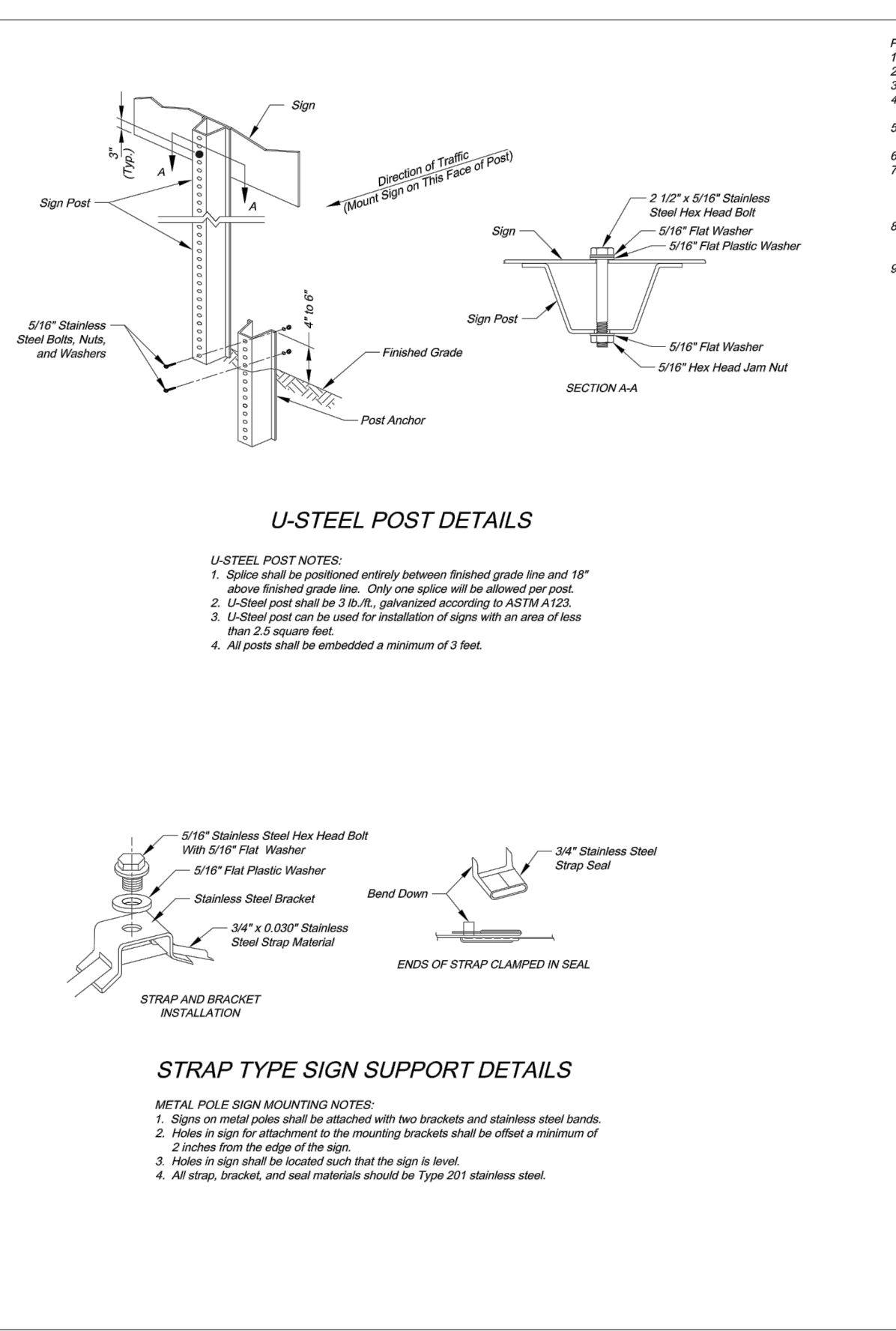


CITY OF LEE'S SUMMIT  
PUBLIC WORKS DEPARTMENT  
ENGINEERING DIVISION  
LEE'S SUMMIT, MISSOURI 64083  
PHONE: (816) 969-1800 FAX: (816) 969-1809

STREET NAME SIGN DETAILS  
Sheet Name: STANDARD DRAWING SN-3

DATE: 08/25/2009  
CHECKED BY: JH  
DRAWN BY: AS

3 OF 3  
**3**

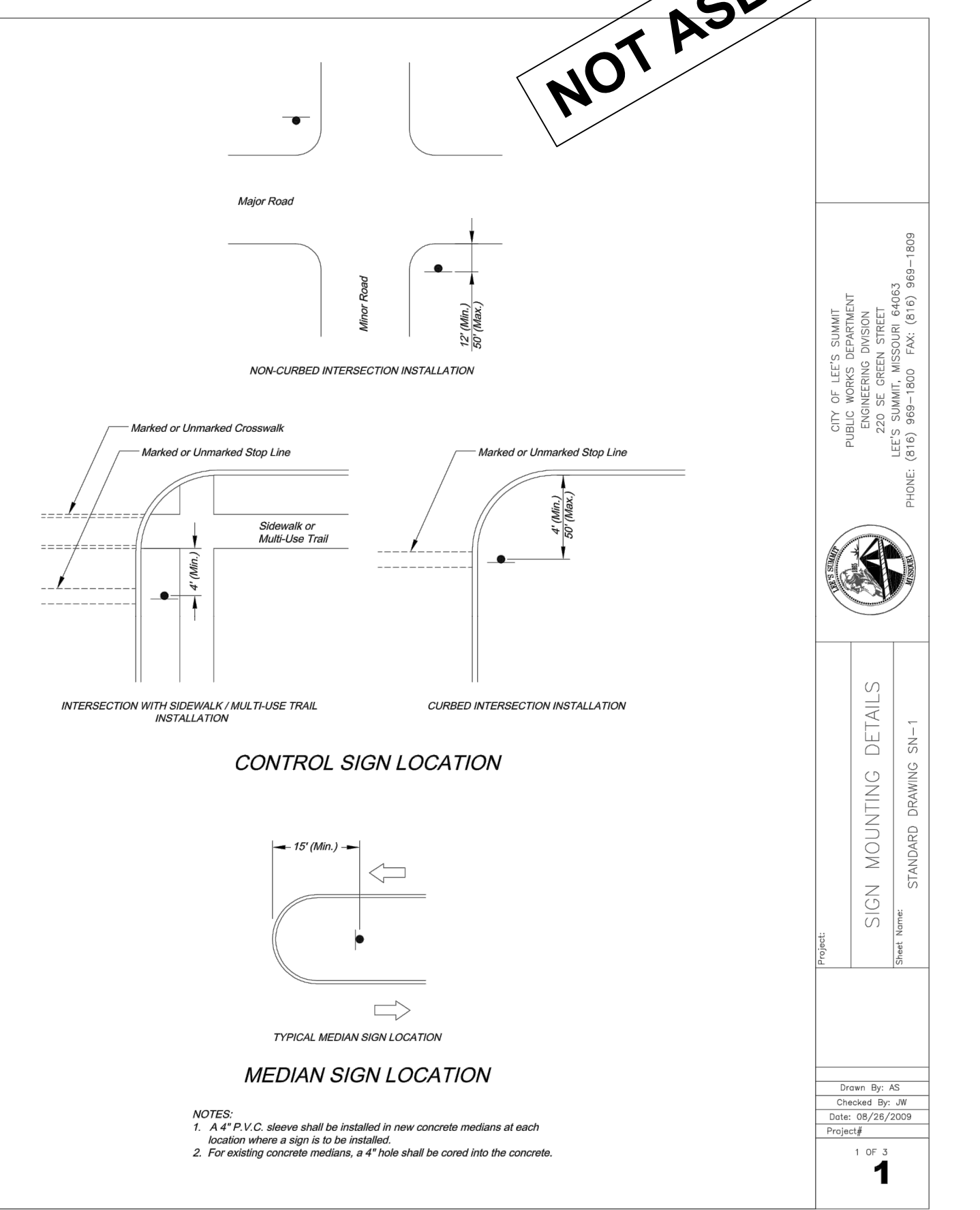
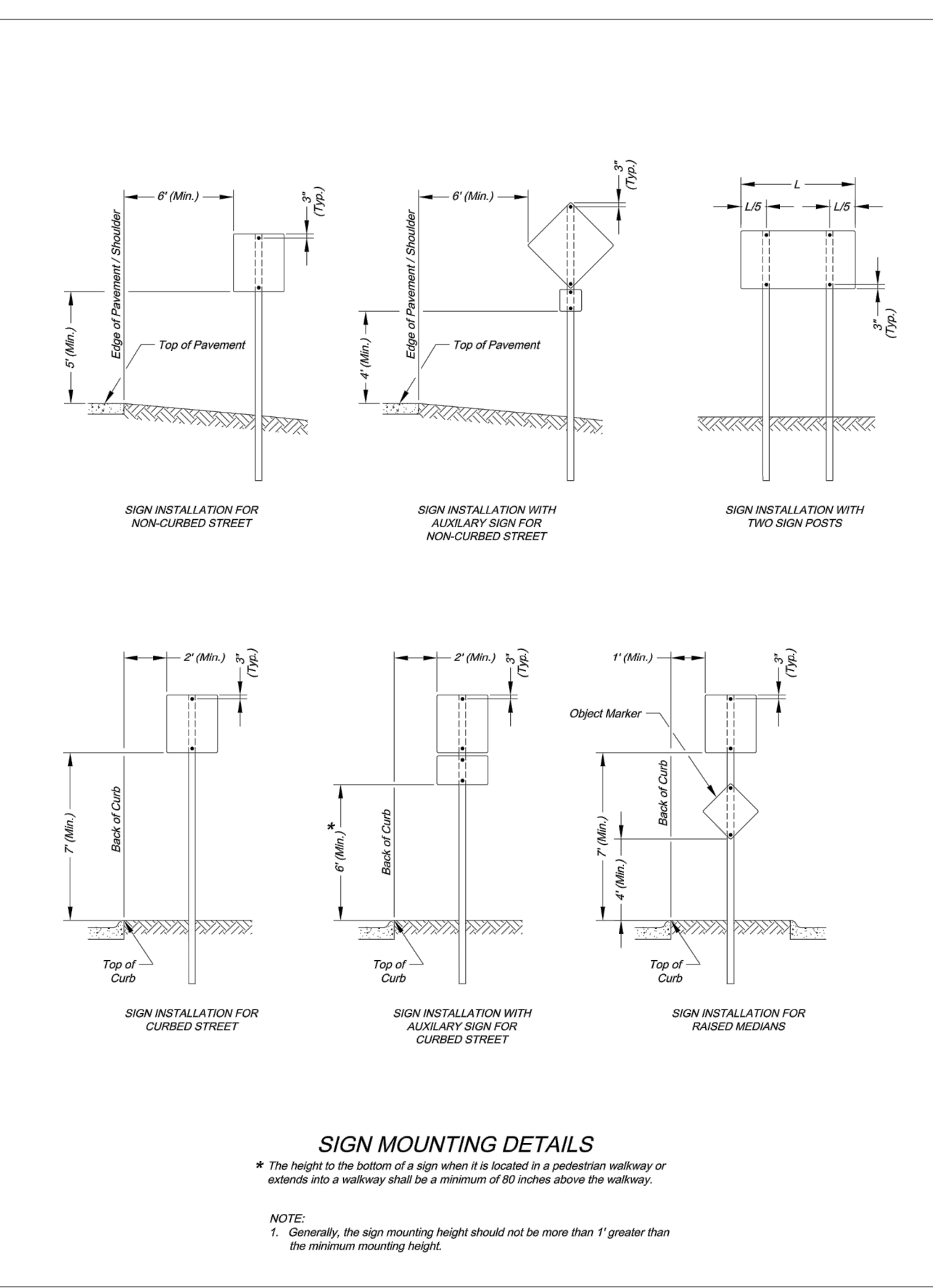


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LEE'S SUMMIT, MISSOURI 64083  
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SIGN POST DETAILS  
Sheet Name: STANDARD DRAWING SN-2

DATE: 08/25/2009  
CHECKED BY: JH  
DRAWN BY: AS

2 OF 3  
**2**



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ENGINEERING DIVISION  
LEE'S SUMMIT, MISSOURI 64083  
PHONE: (816) 969-1800 FAX: (816) 969-1809

SIGN MOUNTING DETAILS  
Sheet Name: STANDARD DRAWING SN-1

DATE: 08/25/2009  
CHECKED BY: JH  
DRAWN BY: AS

1 OF 3  
**1**

**WHISPERING WOODS 2ND PLAT  
STREET & STORM SEWER PLANS**

**STREET & STORM DETAILS**

**SNYDER & ASSOCIATES**  
ENGINEERS & PLANNERS, INC.  
www.snyder-associates.com

802 FRANCIS STREET  
ST. JOSEPH, MO 64501  
816-364-5222

Project No: 1200484.11  
Sheet 15

CITY OF LEE'S SUMMIT  
PUBLIC WORKS DEPARTMENT  
ENGINEERING DIVISION  
LEE'S SUMMIT, MISSOURI 64083  
PHONE: (816) 969-1800 FAX: (816) 969-1809

STREET NAME SIGN DETAILS  
Sheet Name: STANDARD DRAWING SN-3

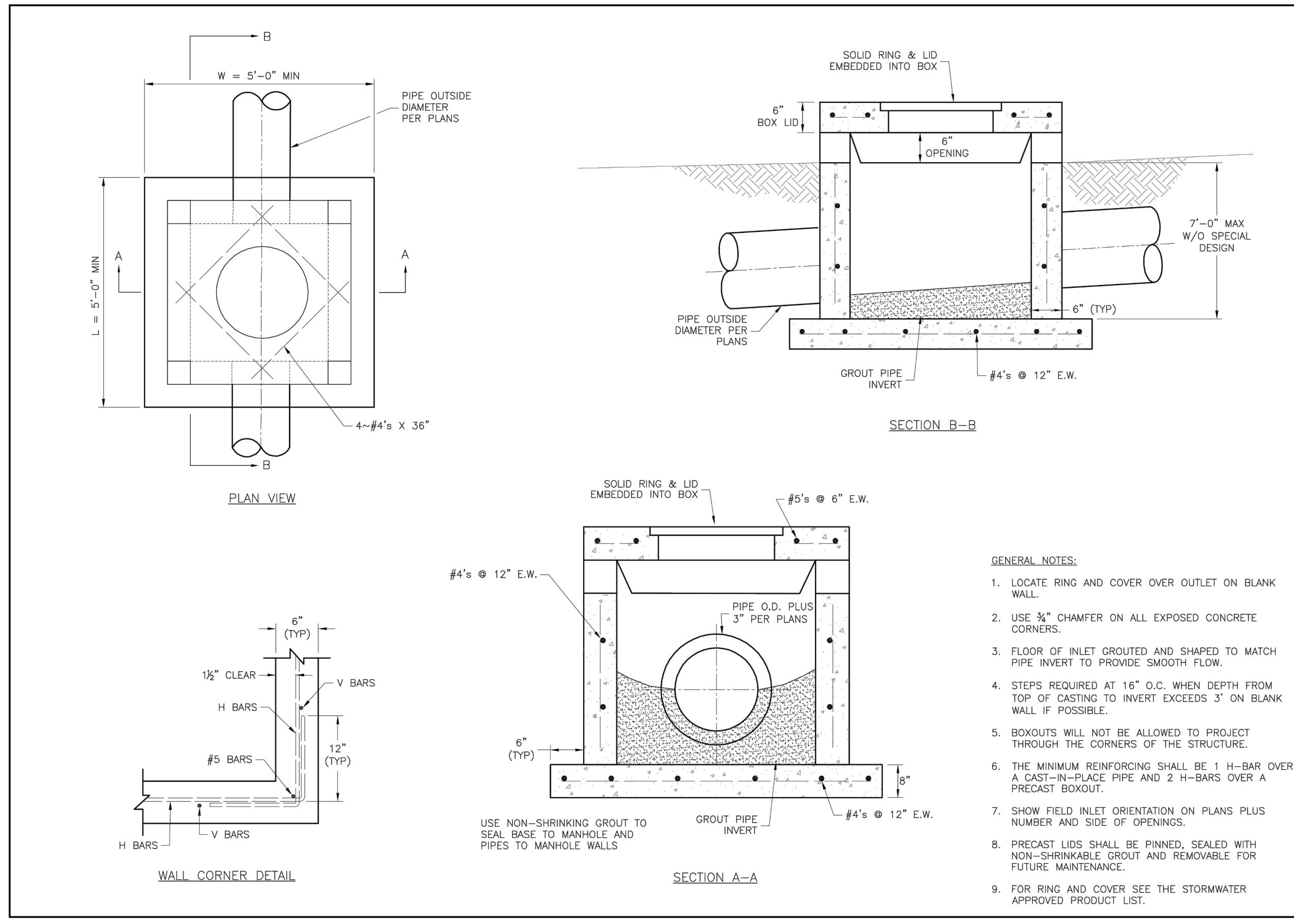
DATE: 08/25/2009  
CHECKED BY: JH  
DRAWN BY: AS

3 OF 3  
**3**

CITY OF MISSOURI  
SHAWN DUKE - ENGINEER  
MO PE#2013006489

LEE'S SUMMIT, MO  
802 FRANCIS STREET  
ST. JOSEPH, MO 64501  
816-364-5222

Project No: 1200484.11  
Sheet 15

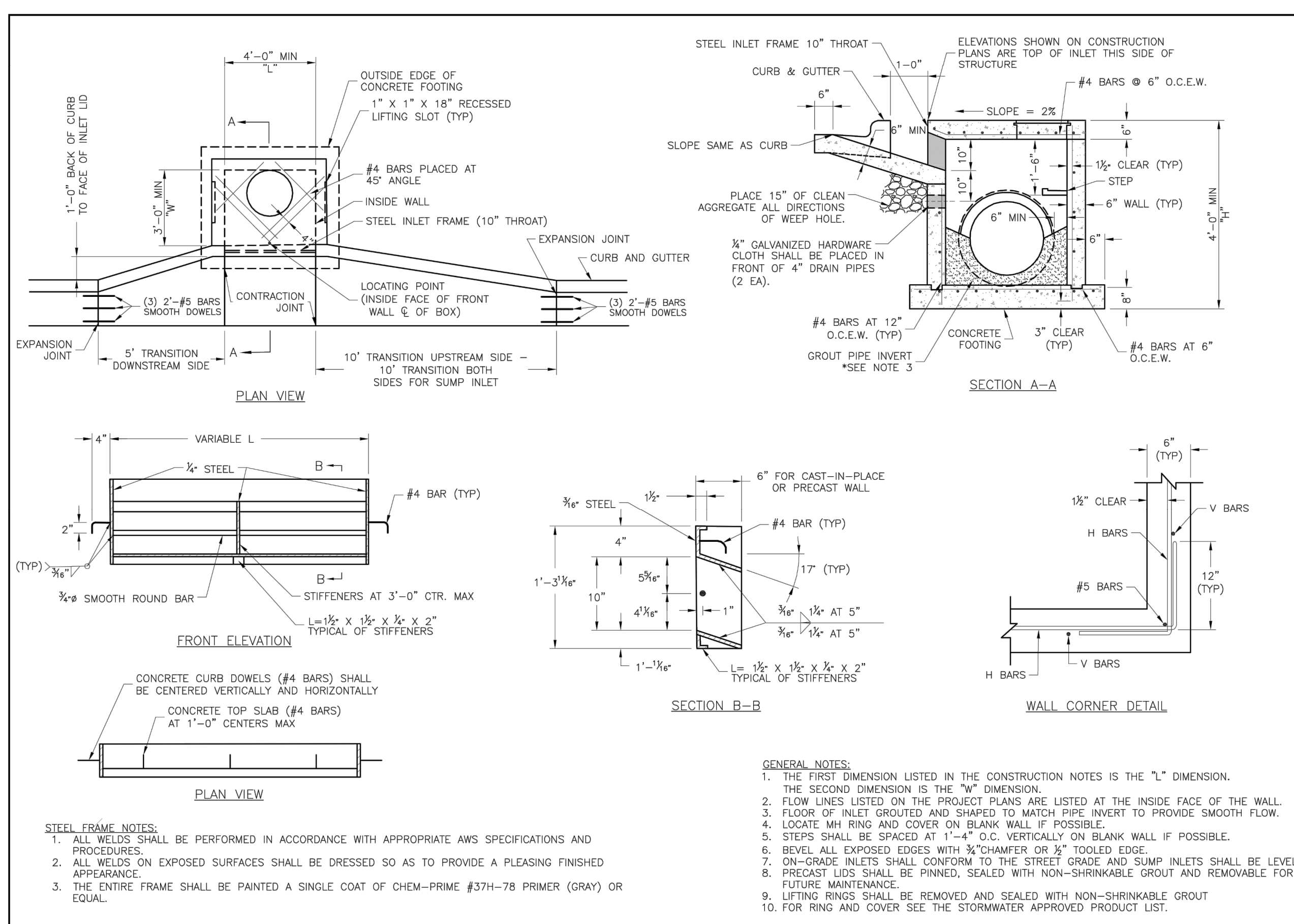


**LEE'S SUMMIT MISSOURI**  
 PUBLIC WORKS ENGINEERING DIVISION, 1202 DE GREEN STREET, LEE'S SUMMIT, MO 64083

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

FIELD INLET DETAIL

Drawn By: MAF  
 Checked By: SL  
 Date: 06/23  
 Pkg #: STM-2



**LEE'S SUMMIT MISSOURI**  
 PUBLIC WORKS ENGINEERING DIVISION, 1202 DE GREEN STREET, LEE'S SUMMIT, MO 64083

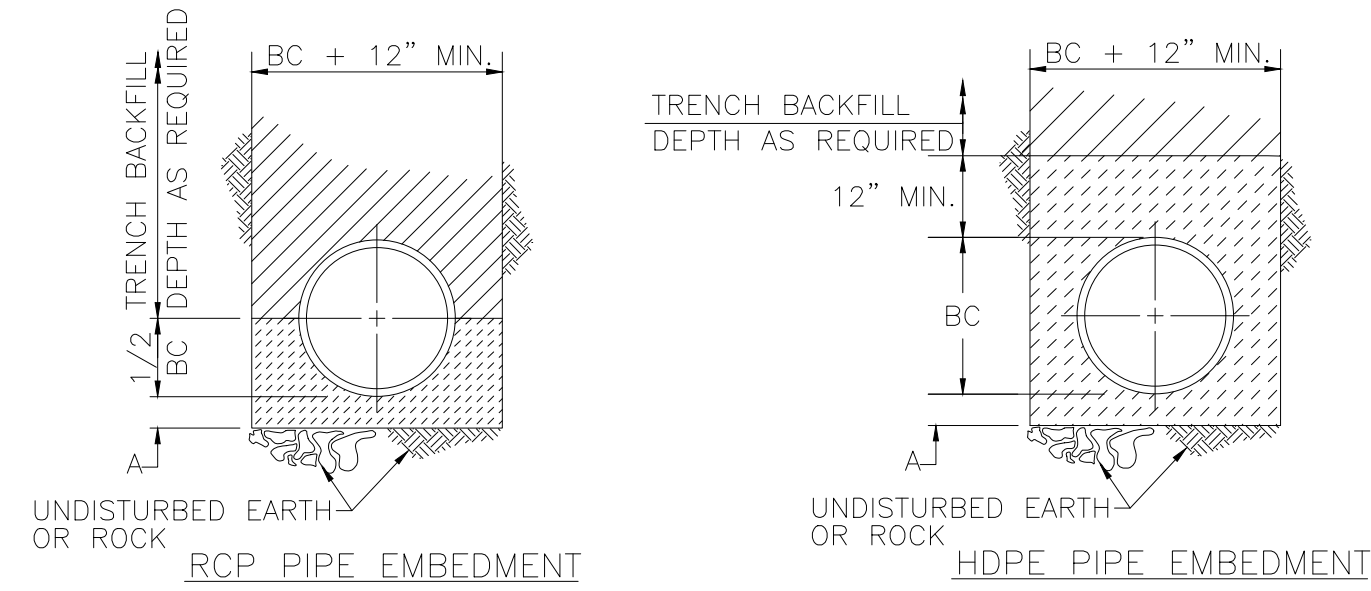
STANDARD DETAILS  
 CITY OF LEE'S SUMMIT, MO  
 LEE'S SUMMIT, JACKSON COUNTY, MO

CURB INLET DETAIL

Drawn By: MAF  
 Checked By: SL  
 Date: 06/23  
 Pkg #: STM-1

| TYPE OF PIPE       | MATERIAL                          | USE  | ALLOWABLE DEPTH OF FILL ABOVE TOP OF PIPE |  |            |                    |           |           |
|--------------------|-----------------------------------|--|---|--|------------|--------------------|-----------|-----------|
|                    |                                   |  | TYPE C EMBED.                             | TYPE B EMBED.                              | CSE EMBED. | TYPE A-1 EMBEDMENT |           |           |
| RIGID              | PIPE STIFFNESS >651 PSI           | RCP; ASTM C 76 CLASS III; 12"-24"          | UP TO 8'                                  | UP TO 10'                                  | UP TO 10'  | UP TO 10'          |           |           |
|                    |                                   | RCP; ASTM C 76 CLASS III; 27"-84"          | UP TO 10'                                 | UP TO 13'                                  | UP TO 13'  | UP TO 13'          |           |           |
|                    |                                   | RCP; ASTM C 76 CLASS IV; 12"-24"           | UP TO 12'                                 | UP TO 16'                                  | UP TO 16'  | UP TO 16'          |           |           |
|                    |                                   | RCP; ASTM C 76 CLASS IV; 24"-27"           | UP TO 16'                                 | UP TO 23'                                  | UP TO 23'  | UP TO 23'          |           |           |
|                    |                                   | RCP; ASTM C 76 CLASS V; 12"-21"            | UP TO 19'                                 | UP TO 25'                                  | UP TO 25'  | UP TO 25'          |           |           |
|                    |                                   | RCP; ASTM C 76 CLASS V; 24"-84"            | UP TO 30'                                 | UP TO 40'                                  | UP TO 40'  | UP TO 40'          |           |           |
|                    |                                   | DUCTILE IRON; AWWA C151 (CLASS 52); 8"-54" | UP TO 50', NO BEDDING REQUIRED            |  |            |                    |           |           |
|                    |                                   | DUCTILE IRON; AWWA C151 (CLASS 52); 4"-64" | UP TO 50', NO BEDDING REQUIRED            |  |            |                    |           |           |
|                    |                                   | EXTRA STRENGTH, VCP; ASTM C 700 8"-10"     | UP TO 16'                                 | UP TO 20'                                  | UP TO 24'  | UP TO 24'          |           |           |
|                    |                                   | EXTRA STRENGTH, VCP; ASTM C 700 12"-21"    | UP TO 12'                                 | UP TO 15'                                  | UP TO 18'  | UP TO 18'          |           |           |
| SEMI-RIGID         | PIPE STIFFNESS 151 PSI TO 650 PSI | PVC; ASTM C 76 CLASS V; 12"-21"            | UP TO 19'                                 | UP TO 25'                                  | UP TO 25'  | UP TO 25'          |           |           |
|                    |                                   | PVC; ASTM D 3034 (SDR 23.5); 8"-15"        |   |  | UP TO 30'  | UP TO 30'          |           |           |
|                    |                                   | PVC; ASTM D 2680 (TRUSS); 8"-15"           |   |  | UP TO 30'  | UP TO 30'          |           |           |
|                    |                                   | PVC; AWWA C900 (DR18); 4"-12"              | WATER UP TO 30', NO BEDDING REQUIRED      |  |            |                    |           |           |
|                    |                                   | PVC; AWWA C905 (DR18); 14"-24"             | UP TO 30', NO BEDDING REQUIRED            |  |            |                    |           |           |
|                    |                                   | FLEXIBLE                                   | PIPE STIFFNESS 46 PSI TO 150 PSI          | PVC; ASTM D 3034 (SDR 35 & 26); 8"-15"     |            |                    |           | UP TO 30' |
|                    |                                   |  |   | PVC; ASTM F 679 (T-1 WALL); 18"-27"        |            |                    |           | UP TO 30' |
|                    |                                   |  |   | PVC; ASTM F 949 ; 8"-36"                   |            |                    |           | UP TO 30' |
|                    |                                   |  |   | PVC; ASTM F 1803 (CLOSED PROFILE); 21"-36" |            |                    |           | UP TO 30' |
|                    |                                   |  |   | PVC; ASTM F 949 ; 12"-36"                  |            |                    | UP TO 30' | UP TO 30' |
| HDPE; AASHTO M 294 |                                   |  |   |  |            | UP TO 11'          |           |           |
|                    |                                   | HPSTORM; POLYPROPYLENE AASHTO M330         |   |  |            | UP TO 11'          |           |           |

**NOT ASBUILT**



LEGEND

|                         |                                   |
|-------------------------|-----------------------------------|
| BC                      | OUTSIDE DIA. OF PIPE              |
| D                       | NOMINAL PIPE SIZE                 |
| A                       | EMBEDMENT BELOW PIPE              |
| (Hatched pattern)       | TRENCH BACKFILL (TYPE 1)          |
| (Cross-hatched pattern) | TAMPED GRANULAR BACKFILL (TYPE 3) |
| (Dotted pattern)        | GRANULAR BEDDING                  |
| (Solid grey)            | CONCRETE                          |
| (Diagonal lines)        | CLEAN CRUSHED STONE               |

TABLE OF EMBEDMENT DEPTHS BELOW PIPE

| D       | A        |          |
|---------|----------|----------|
|         | MIN SOIL | MIN ROCK |
| 0"-27"  | 4"       | 6"       |
| 30"-60" | 6"       | 9"       |
| 66"-UP  | 8"       | 12"      |

- PIPE EMBEDMENT NOTES:
- GRANULAR BEDDING SHALL BE CRUSHED ROCK OR PEA GRAVEL WITH NOT LESS THAN 95% PASSING 3/4" (95% PASSING 1" FOR 30" AND LARGER PIPE) AND NOT LESS THAN 95% RETAINED ON A 3/8"; TO BE PLACED IN NOT MORE THAN 6" LAYERS AND COMPACTED BY SLICING WITH A SHOVEL OR VIBRATING.
  - TAMPED GRANULAR BACKFILL (TYPE 3) SHALL BE GRANULAR MATERIAL CONFORMING TO THE REQUIREMENTS OF SECTION 1007.3.1 OF THE LATEST ISSUE OF THE MISSOURI STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.
  - TRENCH BACKFILL (TYPE 1) SHALL BE FINELY DIVIDED MATERIAL FREE FROM DEBRIS AND STONES, COMPACTED TO 95% MAXIMUM DENSITY.
  - CLEAN CRUSHED STONE SHALL BE GRANULAR MATERIAL CONFORMING TO THE GRADATION REQUIREMENTS OF SECTION 1005.1.4.1 OF THE LATEST ISSUE OF THE MISSOURI STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.
  - WHEN PROPOSED MAIN IS UNDER PAVEMENT CONTRACTOR TO BACKFILL WITH COMPACTED AGGREGATE TO PAVEMENT SUBGRADE.

**STORM PIPE EMBEDMENT DETAILS**

|                |                |                |    |
|----------------|----------------|----------------|----|
| MARK           | REVISION       | DATE           | BY |
| Engineer: SD   | Checked By: SD | Scale: 1"= N/A |    |
| Technician: JS | Date: 7-28-20  | Field Bk:      |    |

Project No: 1200484.11

Sheet 16

Snyder & Associates Engineers & Planners, Inc.  
 Missouri State Certificate of Authority #20060544

**SHAWN DUKE - ENGINEER**  
 MO PE#2013006489

**LEE'S SUMMIT, MO**  
 802 FRANCIS STREET  
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**STREET & STORM DETAILS**

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