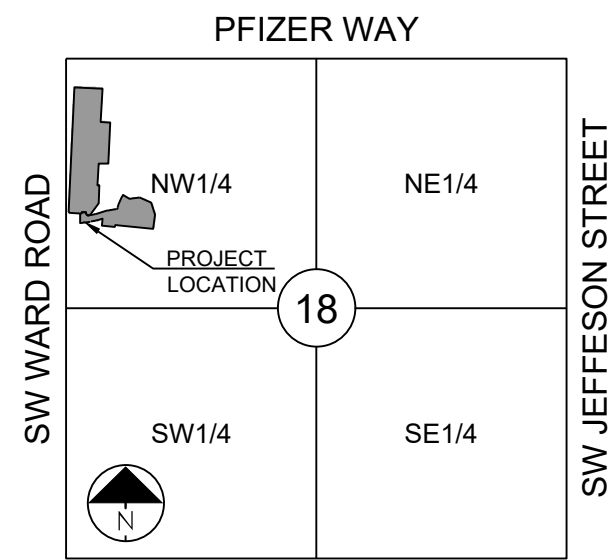


**LEGEND:**

- 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
- S/W - 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
- TREE LINE
- EXISTING LOT AND R/W LINES
- EXISTING PLAT LINES
- P/L PROPERTY LINES
- ROW RIGHT-OF-WAY
- SANITARY SEWER MAIN
- SANITARY SEWER MAIN - EXIST.
- STO STORM SEWER
- STORM SEWER - EXISTING
- CATV<sub>x</sub> CABLE TV - EXISTING
- FOC<sub>x</sub> FIBER OPTIC CABLE - EXISTING
- T<sub>x</sub> TELEPHONE LINE - EXIST.
- E<sub>x</sub> ELECTRIC LINE - EXISTING
- OHP<sub>x</sub> OVERHEAD POWER LINE - EXIST.
- UGE<sub>x</sub> UNDERGROUND ELECTRIC - EX.
- G<sub>x</sub> GAS LINE - EXISTING
- W<sub>x</sub> WATERLINE - EXISTING
- LIGHT - EXISTING
- EXISTING MANHOLE
- CLEANOUT
- EXISTING SANITARY MANHOLE
- PROPOSED SANITARY MANHOLE
- AI EXISTING AREA INLET
- CI EXISTING CURB INLET
- GI EXISTING GRATE INLET
- JB EXISTING JUNCTION BOX
- EXISTING STORM MANHOLE



SECTION 18-47N-31W  
**LOCATION MAP**  
 SCALE 1" = 2000'

**UTILITY CONTACTS:**

**MISSOURI DEPARTMENT OF TRANSPORTATION (MODOT)**

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

**MISSOURI GAS ENERGY (MGE)**

Brent Jones  
 3025 SE Clover Drive  
 Lee's Summit, MO 64082  
 (816) 399-9633  
 brent.jones@spireenergy.com

**KANSAS CITY POWER & LIGHT COMPANY (KCP&L)**

Ron Dejarrette  
 1300 SE Hamblin Road  
 Lee's Summit, MO 64081  
 Office: (816) 347-4316  
 Cell: (816) 810-5234  
 ron.dejarrette@kcp.com

**CITY OF LEES 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. 8th Street, Room 370  
 Kansas City, MO 64108  
 (816) 275-2341 or (816) 275-1550

**COMCAST CABLE**

Barbara Brown  
 3400 W. Duncan Road  
 Blue Springs, MO 64015  
 (816) 795-2255

**PUBLIC WATER SUPPLY DISTRICT**

Mark Schaufier  
 220 SE Green Street  
 Lee's Summit, MO 64063  
 (816) 969-1900

# SANITARY SEWER MAIN EXTENSION FOR WOODLAND GLEN

## IN THE CITY OF LEE'S SUMMIT JACKSON COUNTY, MISSOURI

**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 PHASED 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: 816-969-1800 TO OBTAIN A DEVELOPMENT SERVICES CONSTRUCTION PERMIT. A MINIMUM 48 HOUR NOTICE SHALL BE GIVEN PRIOR TO PERMIT ISSUANCE.
- THE CONTRACTOR SHALL CONTACT THE CITY'S EROSION CONTROL SPECIALIST AT: 816-969-1800 PRIOR TO ANY LAND DISTURBANCE.
- 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).

**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 AND STORM SEWER LINES. IF MINIMUM SEPARATIONS CAN NOT BE OBTAINED, CONCRETE ENCASEMENT OF THE SANITARY OR STORM SEWER 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 OF OFFSITE. MATERIALS MAY BE WASTED ONSITE AT THE DIRECTION OF THE OWNER OR HIS APPOINTED REPRESENTATIVE.

| SUMMARY OF QUANTITIES |                               |          |       |
|-----------------------|-------------------------------|----------|-------|
|                       | ITEM                          | QUANTITY | UNITS |
| 1                     | CONNECT TO EXISTING MANHOLE   | 2        | EA    |
| 2                     | CONNECT TO EXISTING MAIN      | 1        | EA    |
| 3                     | STANDARD 4' DIA. MANHOLE      | 13       | EA    |
| 4                     | 8" PVC SDR-26                 | 2160     | LF    |
| 5                     | 6" PVC SDR-26                 | 1618     | LF    |
| 6                     | 8" X 6" WYE CONNECTION        | 48       | EA    |
| 7                     | EXTRA DEPTH IN MANHOLE        | 85       | VF    |
| 8                     | CLEANOUT                      | 1        | EA    |
| 9                     | EROSION CONTROL               | 1        | LS    |
| 10                    | BONDS                         | 1        | LS    |
| 11                    | ROCK EXCAVATION (ESTIMATION)  | 500      | CY    |
| 12                    | CLEAR AND GRUB                | 1        | LS    |
| 13                    | COMPACTION TESTING            | 1        | LS    |
| 14                    | PREBLAST SURVEY (IF REQUIRED) | 1        | LS    |

| Sheet List Table |                           |
|------------------|---------------------------|
| Sheet Number     | Sheet Title               |
| 1                | COVER                     |
| 2                | GENERAL LAYOUT            |
| 3                | GRADING PLAN              |
| 4                | LINE A PLAN AND PROFILE   |
| 5                | LINE B PLAN AND PROFILE   |
| 6                | LINE C-D PLAN AND PROFILE |
| 7                | SANITARY DETAILS          |
| 8                | SANITARY DETAILS          |

**PREPARED AND SUBMITTED BY:**

SCHLAGEL & ASSOCIATES, P.A.

**APPROVED BY:**

CITY ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_  
 APPROVED FOR ONE YEAR FROM THIS DATE

**OWNER/DEVELOPER:**

ABP FUNDING, LLC  
 JOHN  
 9101 W. 110TH STREET, SUITE 200  
 OVERLAND PARK, KANSAS 66210  
 p 913-208-2283  
 f -

**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  
 #E2002003606P #LAC201005237 #LS200200899F

**WOODLAND GLEN  
 SANITARY SEWER MAIN EXTENSION  
 WARD ROAD AND WINTHROP DRIVE  
 LEE'S SUMMIT, MISSOURI**

| REVISION DATE | DESCRIPTION |
|---------------|-------------|
| 1             |             |
| 2             |             |
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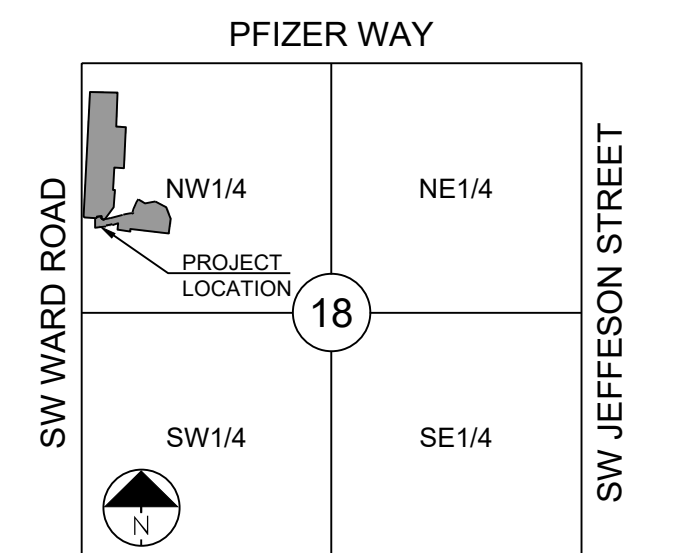
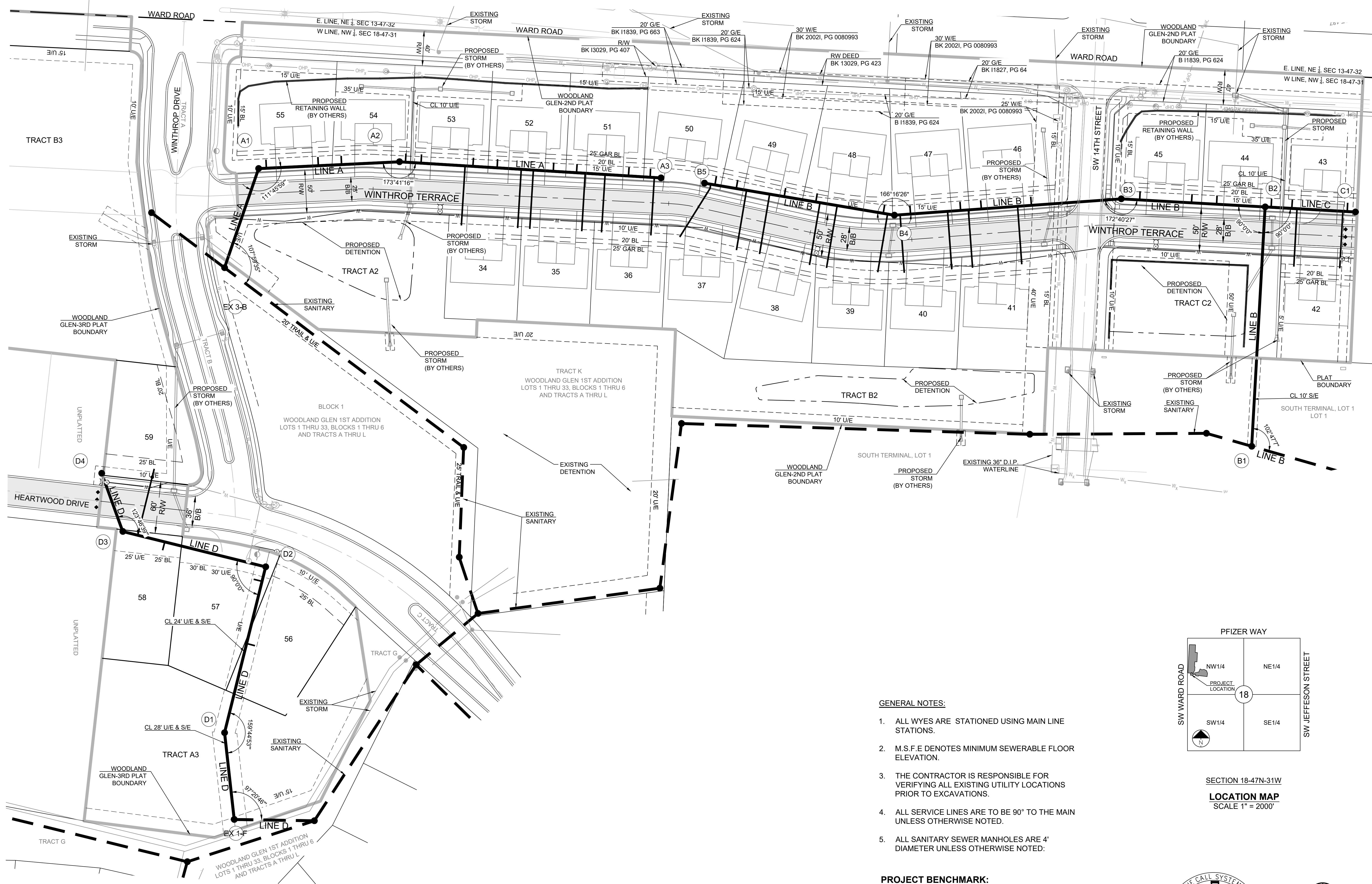
COVER

SHEET  
**1**

**NOTE:**  
 TRENCH CHECKS TO BE INSTALL ON ALL SANITARY SEWER SERVICE LINES IN ACCORDANCE WITH CITY OF LEES SUMMIT STANDARDS.

**PROJECT BENCHMARK:**

SW CORNER NW 1/4 SEC. 18-47N-31W, JACKSON COUNTY, MO.  
 3" DIAMETER ALUMINUM DISK IN MONUMENT BOX  
 M.D.N.R. DOC. NO. 600-65374  
 ELEV. 1036.41



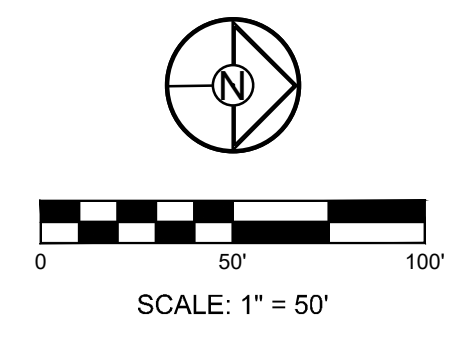
SECTION 18-47N-31W  
 LOCATION MAP  
 SCALE 1" = 2000'

**GENERAL NOTES:**

1. ALL WYES ARE STATIONED USING MAIN LINE STATIONS.
2. M.S.F.E DENOTES MINIMUM SEWERABLE FLOOR ELEVATION.
3. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITY LOCATIONS PRIOR TO EXCAVATIONS.
4. ALL SERVICE LINES ARE TO BE 90° TO THE MAIN UNLESS OTHERWISE NOTED.
5. ALL SANITARY SEWER MANHOLES ARE 4' DIAMETER UNLESS OTHERWISE NOTED.

**PROJECT BENCHMARK:**

SW CORNER NW 1/4 SEC. 18-47N-31W, JACKSON COUNTY, MO.  
 3" DIAMETER ALUMINUM DISK IN MONUMENT BOX  
 M.D.N.R. DOC. NO. 600-65374  
 ELEV. 1036.41



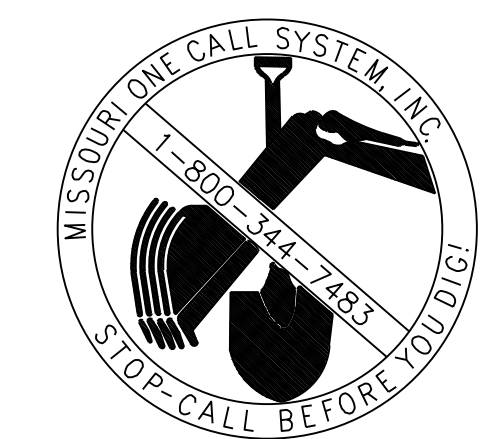
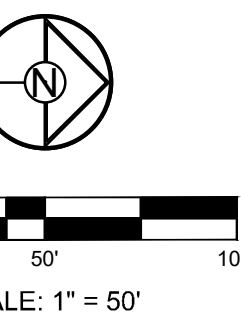
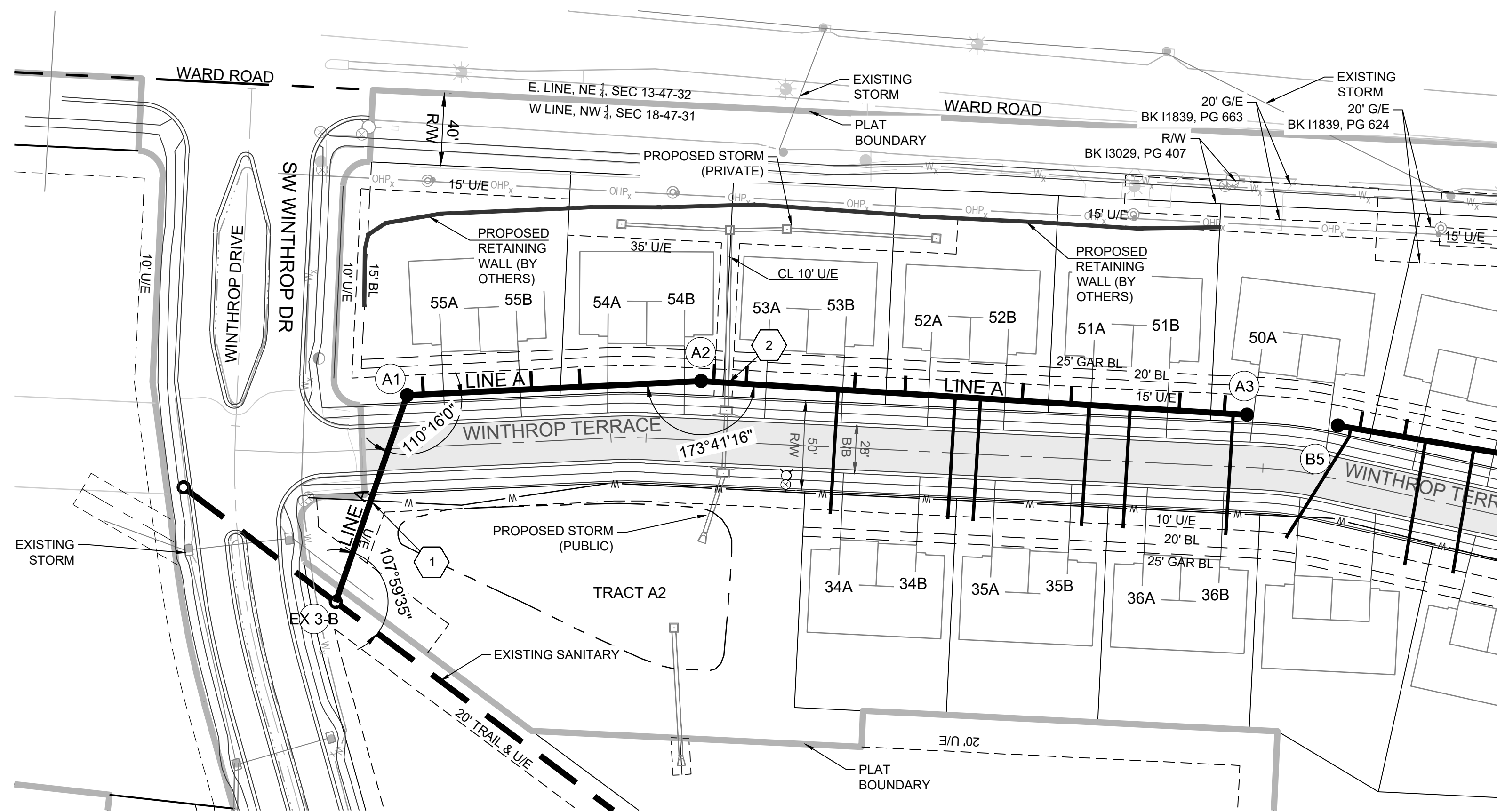
**WOODLAND GLEN  
 SANITARY SEWER MAIN EXTENSION  
 WARD ROAD AND WINTHROP DRIVE  
 LEE'S SUMMIT, MISSOURI**

| REVISION DATE | DESCRIPTION |
|---------------|-------------|
| 1             |             |
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| 7             |             |
| 8             |             |
| 9             |             |
| 10            |             |



| Lot No. | WYE STA | Stub Length (L.F.) | Stub Slope (%) | Riser Length (L.F.) | EOS Elev | MSFE Elev | Cleanout |
|---------|---------|--------------------|----------------|---------------------|----------|-----------|----------|
| 34A     | 359.84  | 69                 | 1.30           | 0.00                | 984.72   | 987.72    | NO       |
| 34B     | 424.84  | 68                 | 1.30           | 0.00                | 985.29   | 988.29    | NO       |
| 35A     | 438.84  | 68                 | 1.30           | 0.00                | 985.42   | 988.42    | NO       |
| 35B     | 498.84  | 67                 | 1.30           | 0.00                | 985.95   | 988.95    | NO       |
| 36A     | 521.84  | 67                 | 1.30           | 0.00                | 986.15   | 989.15    | NO       |
| 36B     | 578.84  | 67                 | 1.30           | 0.00                | 986.67   | 989.67    | NO       |
| 50A     | 573.84  | 10                 | 1.30           | 0.00                | 985.88   | 988.88    | NO       |
| 51B     | 548.84  | 10                 | 1.30           | 0.00                | 985.66   | 988.66    | NO       |
| 51A     | 488.84  | 10                 | 1.30           | 0.00                | 985.12   | 988.12    | NO       |
| 52A     | 461.84  | 10                 | 1.30           | 0.00                | 984.87   | 987.87    | NO       |
| 52B     | 396.84  | 10                 | 1.30           | 0.00                | 984.29   | 987.29    | NO       |
| 53B     | 368.84  | 10                 | 1.30           | 0.00                | 984.04   | 987.04    | NO       |
| 53A     | 308.84  | 10                 | 1.30           | 0.00                | 983.50   | 986.50    | NO       |
| 54B     | 290.84  | 10                 | 1.30           | 0.00                | 983.33   | 986.33    | NO       |
| 54A     | 217.03  | 9                  | 1.30           | 1.00                | 983.07   | 986.07    | NO       |
| 55B     | 190.03  | 9                  | 1.30           | 2.00                | 983.49   | 986.49    | NO       |
| 55A     | 130.03  | 6                  | 1.30           | 6.00                | 985.66   | 988.66    | NO       |

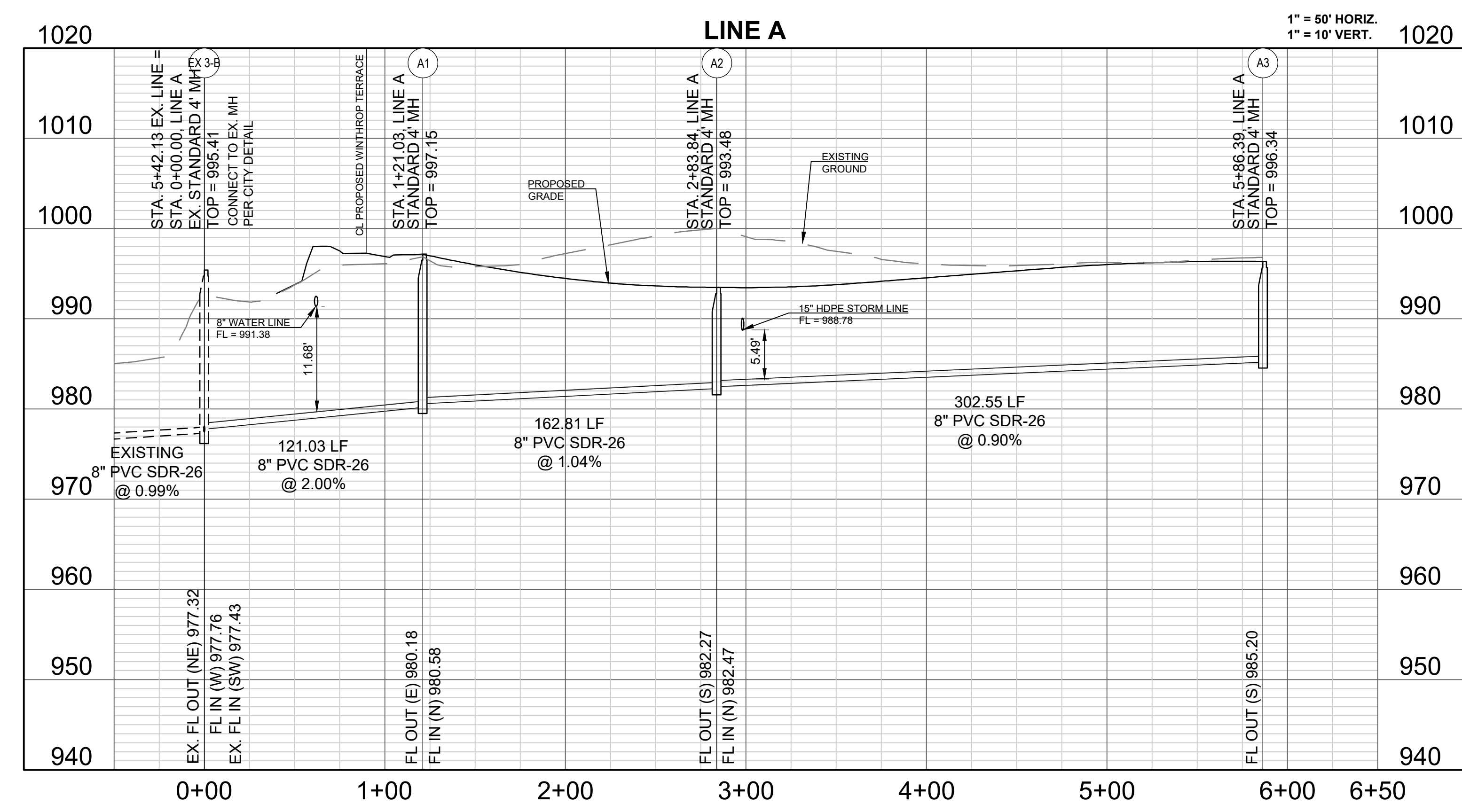
| ID | SAN ELEV. | STORM/WATER ELEV. | SAN SIZE | STORM/WATER SIZE | VERTICAL SEPARATION | RCE/CRCE REQUIRED? |
|----|-----------|-------------------|----------|------------------|---------------------|--------------------|
| 1  | 978.97    | 991.38            | 8" PCV   | 8" PVC           | 11.68               | NO                 |
| 2  | 982.58    | 988.78            | 8" PCV   | 15" HDPE         | 5.49                | NO                 |



- GENERAL NOTES:**
- ALL WYES ARE STATIONED USING MAIN LINE STATIONS.
  - M.S.F.E DENOTES MINIMUM SEWERABLE FLOOR ELEVATION.
  - THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITY LOCATIONS PRIOR TO EXCAVATIONS.
  - ALL SERVICE LINES ARE TO BE 90° TO THE MAIN UNLESS OTHERWISE NOTED.
  - ALL SANITARY SEWER MANHOLES ARE 4' DIAMETER UNLESS OTHERWISE NOTED.

**PROJECT BENCHMARK:**  
 SW. CORNER NW 1/4 SEC. 18-47N-31W, JACKSON COUNTY, MO.  
 3" DIAMETER ALUMINUM DISK IN MONUMENT BOX  
 M.D.N.R. DOC. NO. 600-65374  
 ELEV. 1036.41

| Structure Name | Structure Northing | Structure Easting |
|----------------|--------------------|-------------------|
| A1             | 992504.4316        | 2818397.8530      |
| A2             | 992667.0525        | 2818389.9810      |
| A3             | 992969.0240        | 2818408.6667      |
| EX 3-B         | 992465.0382        | 2818512.2921      |

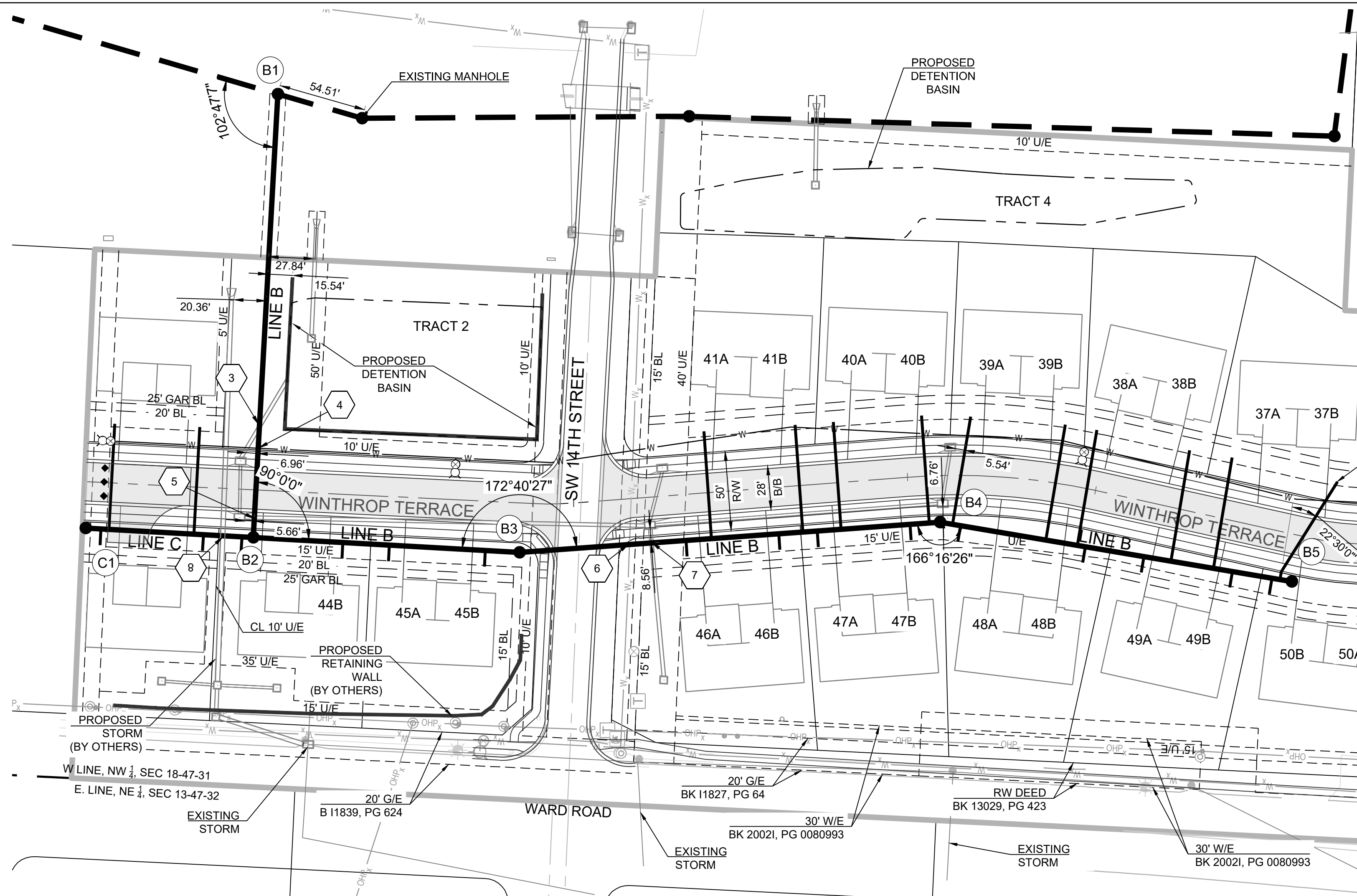


| REVISION DATE | DESCRIPTION |
|---------------|-------------|
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| 8             |             |

LINE A PLAN AND PROFILE

| Lot No. | WYE STA | Stub Length (L.F.) | Stub Slope (%) | Riser Length (L.F.) | EOS Elev | MSFE Elev | Cleanout |
|---------|---------|--------------------|----------------|---------------------|----------|-----------|----------|
| 37B     | 920.89  | 70                 | 1.30           | 1.00                | 984.42   | 987.42    | NO       |
| 37A     | 878.89  | 69                 | 1.30           | 2.00                | 983.85   | 986.85    | NO       |
| 38B     | 851.89  | 68                 | 1.30           | 3.00                | 983.73   | 986.73    | NO       |
| 38A     | 792.89  | 71                 | 1.30           | 3.00                | 982.00   | 985.00    | NO       |
| 39B     | 772.89  | 73                 | 1.30           | 0.00                | 979.31   | 982.31    | NO       |
| 39A     | 713.89  | 67                 | 1.30           | 2.00                | 978.87   | 981.87    | NO       |
| 40B     | 699.18  | 65                 | 1.30           | 3.00                | 978.95   | 981.95    | NO       |
| 40A     | 844.18  | 66                 | 1.30           | 2.00                | 977.70   | 980.70    | NO       |
| 41B     | 620.18  | 67                 | 1.30           | 0.00                | 976.06   | 979.06    | NO       |
| 41A     | 563.18  | 67                 | 1.30           | 0.00                | 975.49   | 978.49    | NO       |
| 44B     | 332.84  | 10                 | 1.30           | 0.00                | 969.34   | 972.34    | NO       |
| 45A     | 361.84  | 10                 | 1.30           | 0.00                | 970.37   | 973.37    | NO       |
| 45B     | 421.84  | 10                 | 1.30           | 0.00                | 972.50   | 975.50    | NO       |
| 46A     | 547.18  | 10                 | 1.30           | 0.00                | 974.59   | 977.59    | NO       |
| 46B     | 605.18  | 9                  | 1.30           | 2.00                | 976.57   | 979.57    | NO       |
| 47A     | 629.18  | 7                  | 1.30           | 4.00                | 978.20   | 981.20    | NO       |
| 47B     | 687.18  | 7                  | 1.30           | 4.00                | 978.78   | 981.78    | NO       |
| 48A     | 718.89  | 6                  | 1.30           | 5.00                | 980.36   | 983.36    | NO       |
| 48B     | 797.89  | 6                  | 1.30           | 5.00                | 982.73   | 985.73    | NO       |
| 49A     | 834.89  | 6                  | 1.30           | 5.00                | 983.84   | 986.84    | NO       |
| 49B     | 890.89  | 7                  | 1.30           | 4.00                | 984.82   | 987.82    | NO       |
| 50B     | 915.89  | 8                  | 1.30           | 3.00                | 984.87   | 987.87    | NO       |

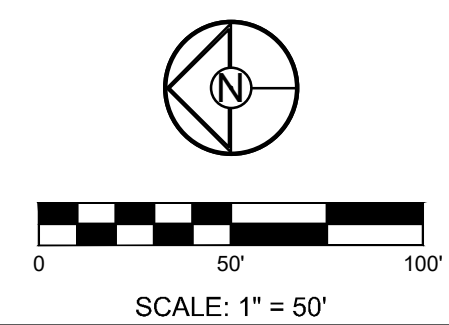
| SANITARY CROSSING TABLE |           |                   |          |                  |                     |                    |
|-------------------------|-----------|-------------------|----------|------------------|---------------------|--------------------|
| ID                      | SAN ELEV. | STORM/WATER ELEV. | SAN SIZE | STORM/WATER SIZE | VERTICAL SEPARATION | RCE/CRCE REQUIRED? |
| 3                       | 964.33    | 970.18            | 8" PCV   | 24" HDPE         | 5.14                | NO                 |
| 4                       | 964.67    | 974.85            | 8" PCV   | 8" PVC           | 9.46                | NO                 |
| 5                       | 965.88    | 971.53            | 8" PCV   | 18" HDPE         | 4.94                | NO                 |
| 6                       | 973.42    | 978.16            | 8" PCV   | 36" DIP          | 4.03                | NO                 |
| 7                       | 973.56    | 978.65            | 8" PCV   | 15" HDPE         | 4.38                | NO                 |



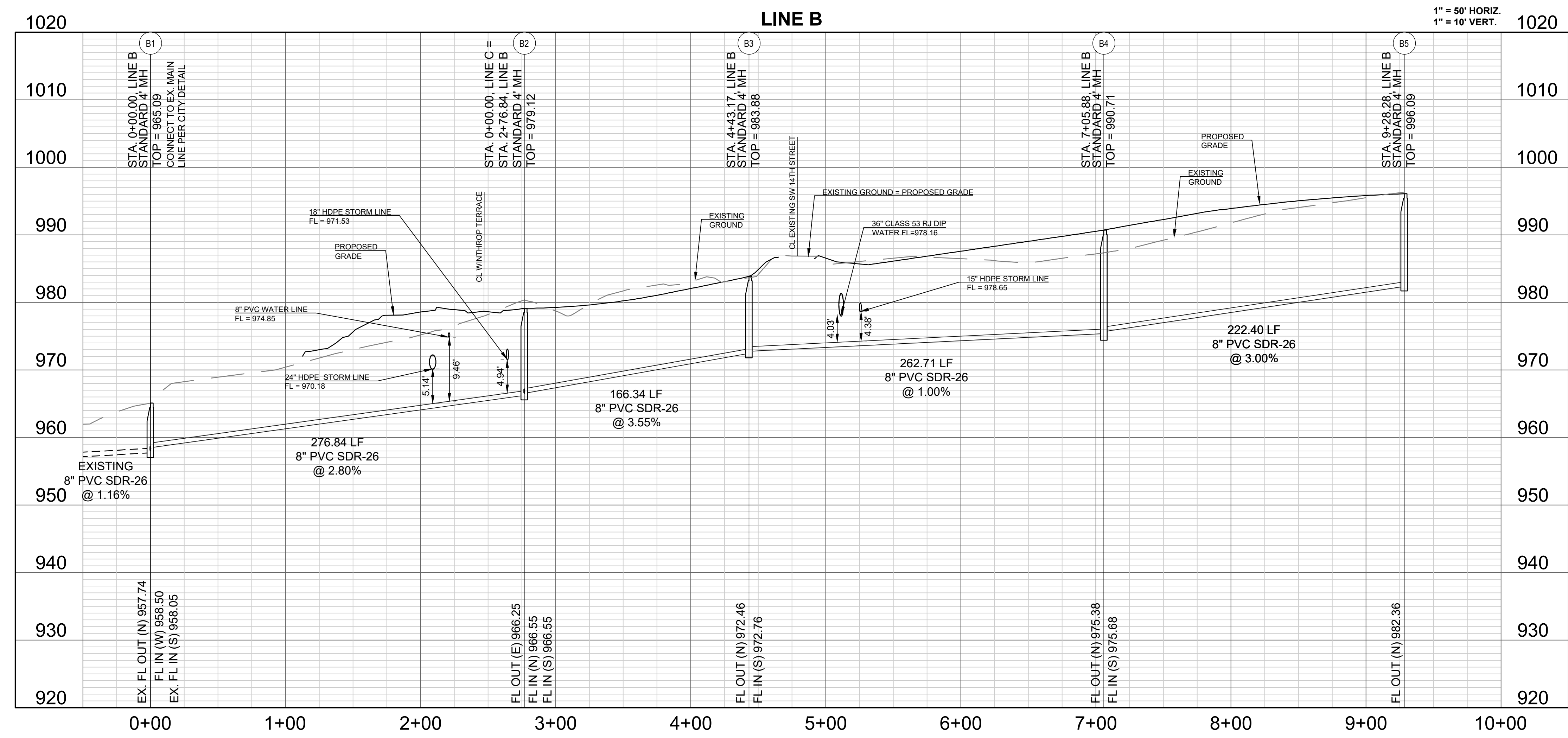
**PROJECT BENCHMARK:**  
 SW CORNER NW 1/4 SEC. 18-47N-31W, JACKSON COUNTY, MO.  
 3" DIAMETER ALUMINUM DISK IN MONUMENT BOX  
 M.D.N.R. DOC. NO. 600-65374  
 ELEV. 1036.41

- GENERAL NOTES:**
- ALL WYES ARE STATIONED USING MAIN LINE STATIONS.
  - M.S.F.E DENOTES MINIMUM SEWERABLE FLOOR ELEVATION.
  - THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITY LOCATIONS PRIOR TO EXCAVATIONS.
  - ALL SERVICE LINES ARE TO BE 90° TO THE MAIN UNLESS OTHERWISE NOTED.
  - ALL SANITARY SEWER MANHOLES ARE 4' DIAMETER UNLESS OTHERWISE NOTED.

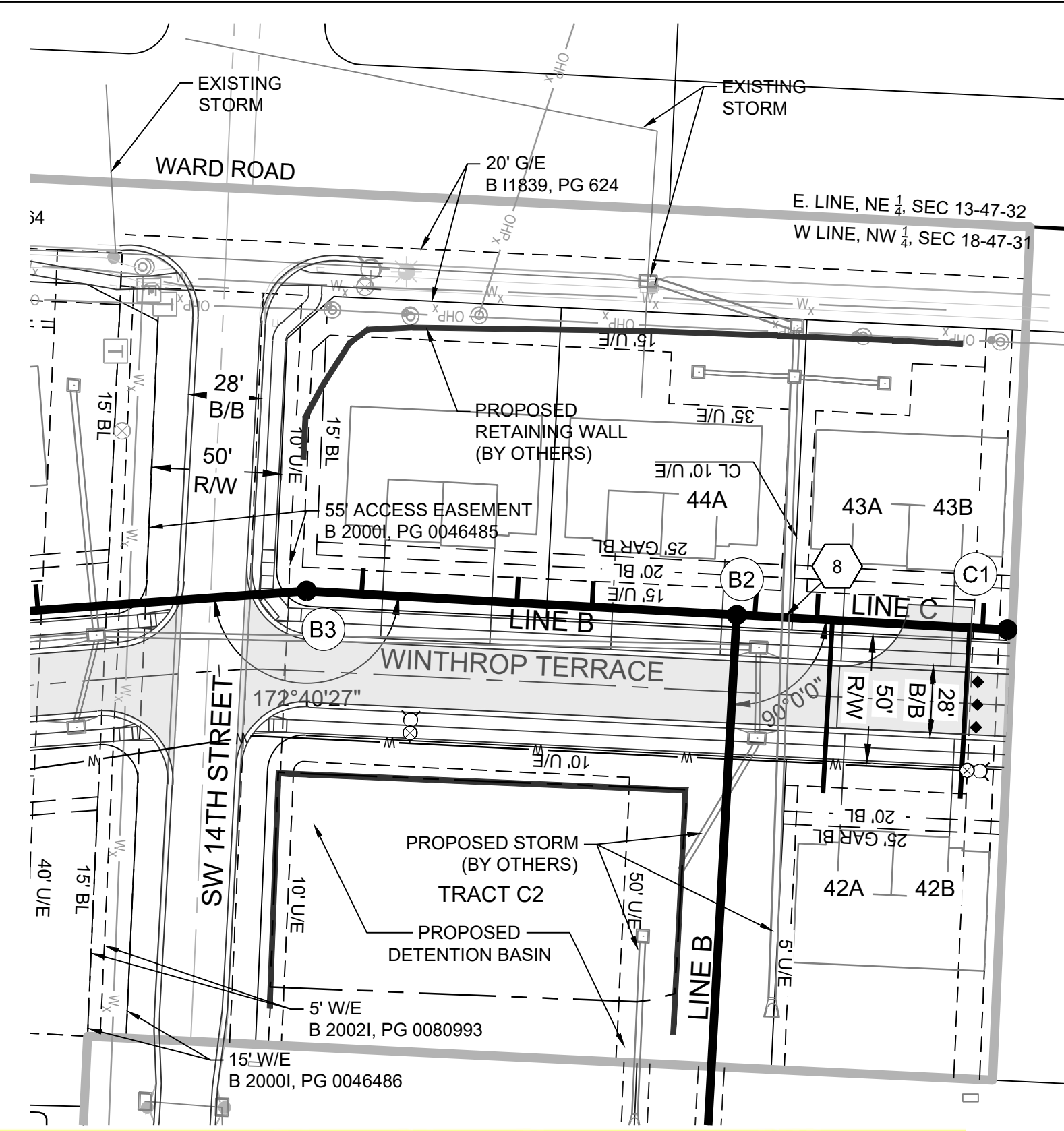
INSTALL 5 L.F. OF 6" PVC THEN 6" 22.5° BEND THEN 65 L.F. OF 6" PVC



| Structure Table |                    |                   |
|-----------------|--------------------|-------------------|
| Structure Name  | Structure Northing | Structure Easting |
| B1              | 993651.2313        | 2818718.4949      |
| B2              | 993666.6637        | 2818442.0890      |
| B3              | 993500.5868        | 2818432.8165      |
| B4              | 993238.5614        | 2818451.7377      |
| B5              | 993019.2687        | 2818414.6635      |

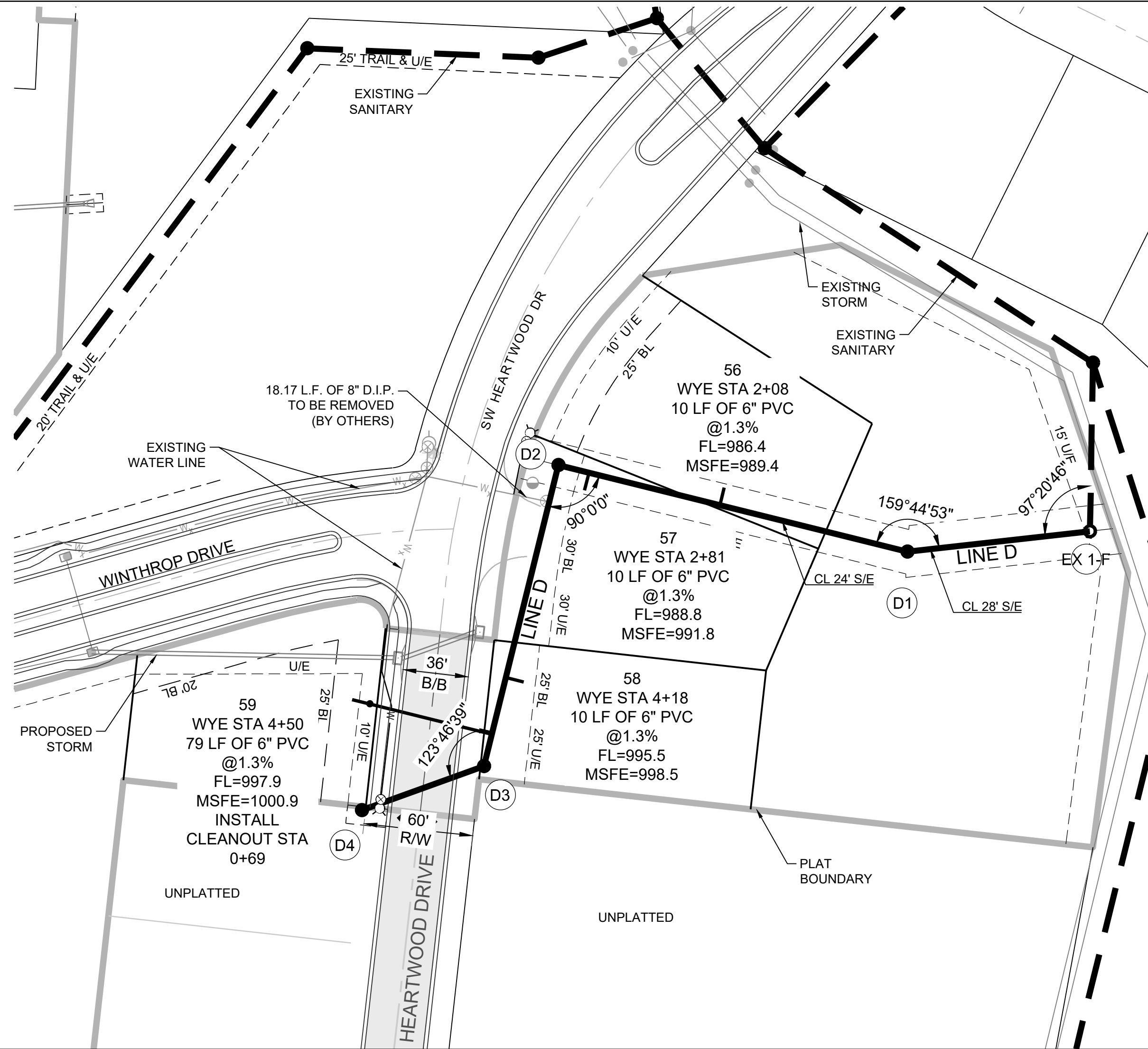
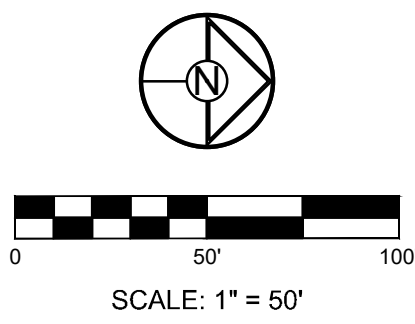


| REVISION DATE | DESCRIPTION |
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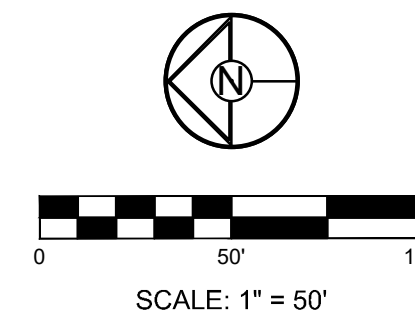
| Lot No. | WYE STA | Stub Length (L.F.) | Stub Slope (%) | Riser Length (L.F.) | EOS Elev | MSFE Elev | Cleanout |
|---------|---------|--------------------|----------------|---------------------|----------|-----------|----------|
| 42A     | 37.00   | 67                 | 1.30           | 0.00                | 968.46   | 971.46    | NO       |
| 42B     | 90.00   | 66                 | 1.30           | 0.00                | 968.97   | 971.97    | NO       |
| 43B     | 95.00   | 10                 | 1.30           | 0.00                | 968.30   | 971.30    | NO       |
| 43A     | 31.00   | 10                 | 1.30           | 0.00                | 967.66   | 970.66    | NO       |
| 44A     | 7.00    | 10                 | 1.30           | 0.00                | 967.42   | 970.42    | NO       |

| ID | SAN ELEV. | STORM/WATER ELEV. | STORM/WATER SAN SIZE | STORM/WATER SIZE | VERTICAL SEPARATION | RCE/CRCE REQUIRED? |
|----|-----------|-------------------|----------------------|------------------|---------------------|--------------------|
| 8  | 966.71    | 971.97            | 8" PCV               | 30" HDPE         | 4.54                | NO                 |



- GENERAL NOTES:**
- ALL WYES ARE STATIONED USING MAIN LINE STATIONS.
  - M.S.F.E DENOTES MINIMUM SEWERABLE FLOOR ELEVATION.
  - THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITY LOCATIONS PRIOR TO EXCAVATIONS.
  - ALL SERVICE LINES ARE TO BE 90° TO THE MAIN UNLESS OTHERWISE NOTED.
  - ALL SANITARY SEWER MANHOLES ARE 4' DIAMETER UNLESS OTHERWISE NOTED.

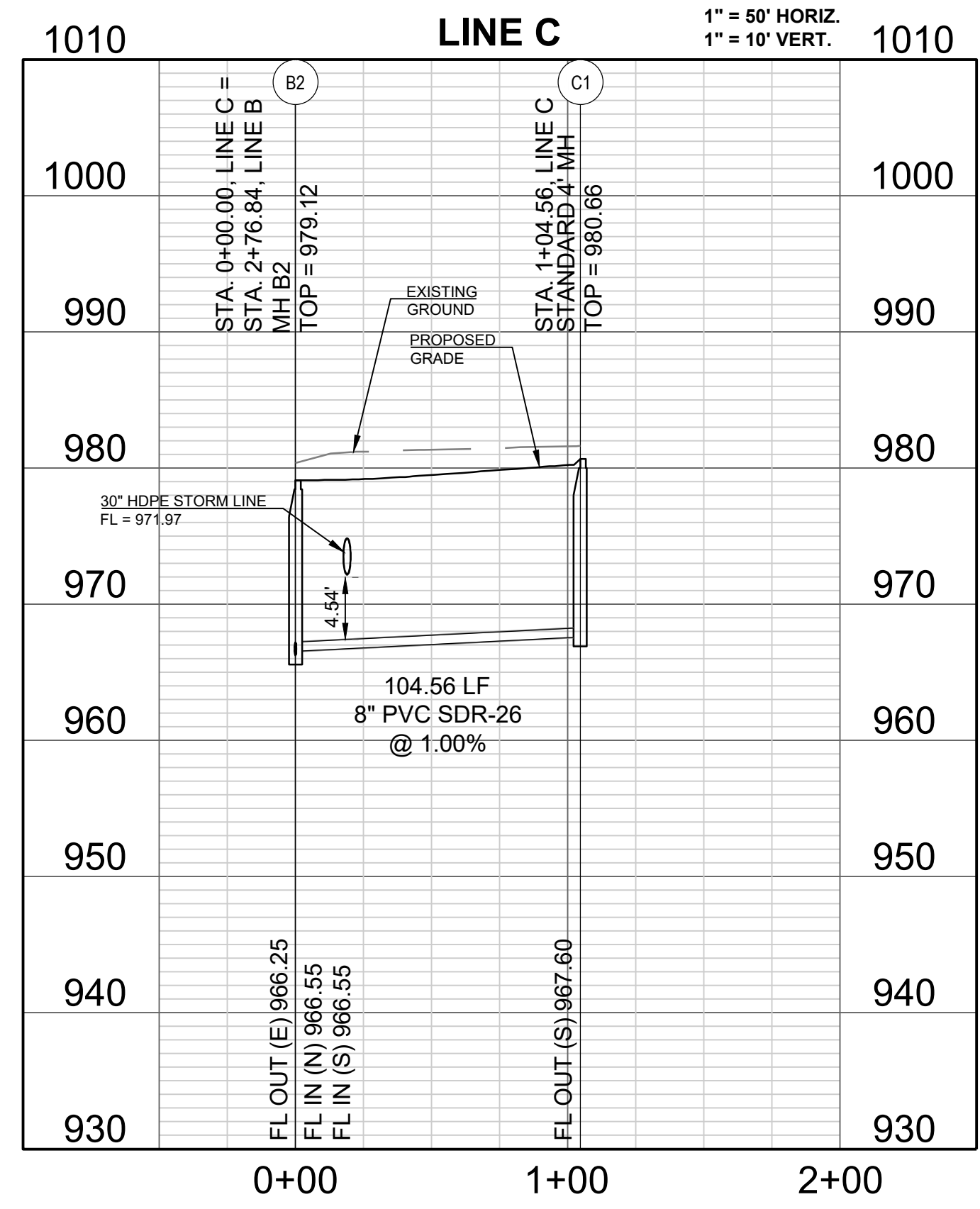
**PROJECT BENCHMARK:**  
 SW CORNER NW 1/4 SEC. 18-47N-31W, JACKSON COUNTY, MO.  
 3" DIAMETER ALUMINUM DISK IN MONUMENT BOX  
 M.D.N.R. DOC. NO. 600-65374  
 ELEV. 1036.41



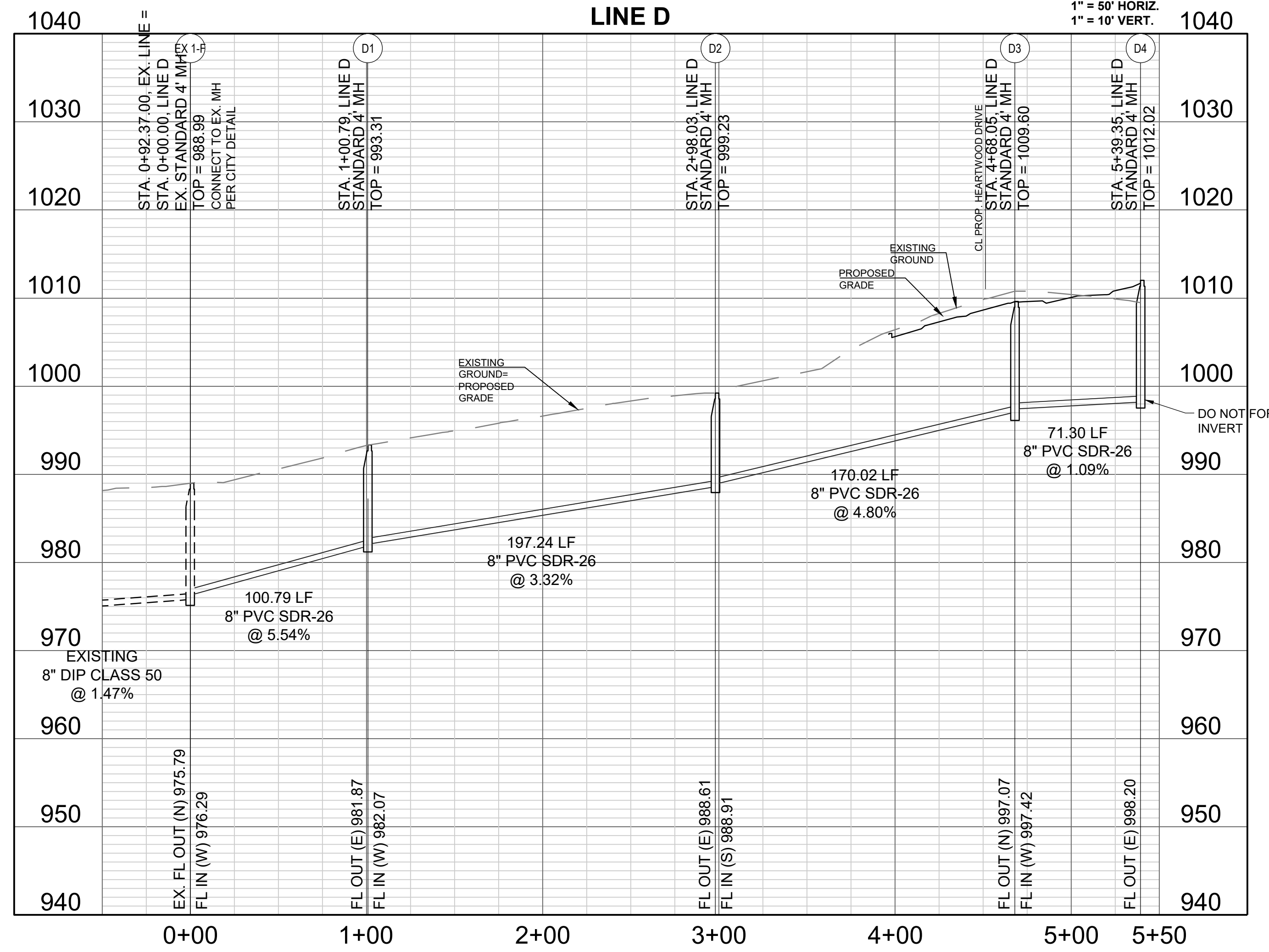
**SCHLAGEL**  
 ENGINEERS PLANNERS SURVEYORS LANDSCAPE ARCHITECTS  
 14920 West 107th Street • Lenexa, Kansas 66215  
 (913) 492-5158 • Fax: (913) 492-8400  
 WWW.SCHLAGELASSOCIATES.COM  
 Missouri State Certificate of Authority  
 #E2002003860F #LAC201005237 #S200200895F

WOODLAND GLEN  
 SANITARY SEWER MAIN EXTENSION  
 WARD ROAD AND WINTHROP DRIVE  
 LEE'S SUMMIT, MISSOURI

| Structure Name | Structure Northing | Structure Easting |
|----------------|--------------------|-------------------|
| B2             | 993666.6637        | 2818442.0890      |
| C1             | 993771.0575        | 2818447.9175      |



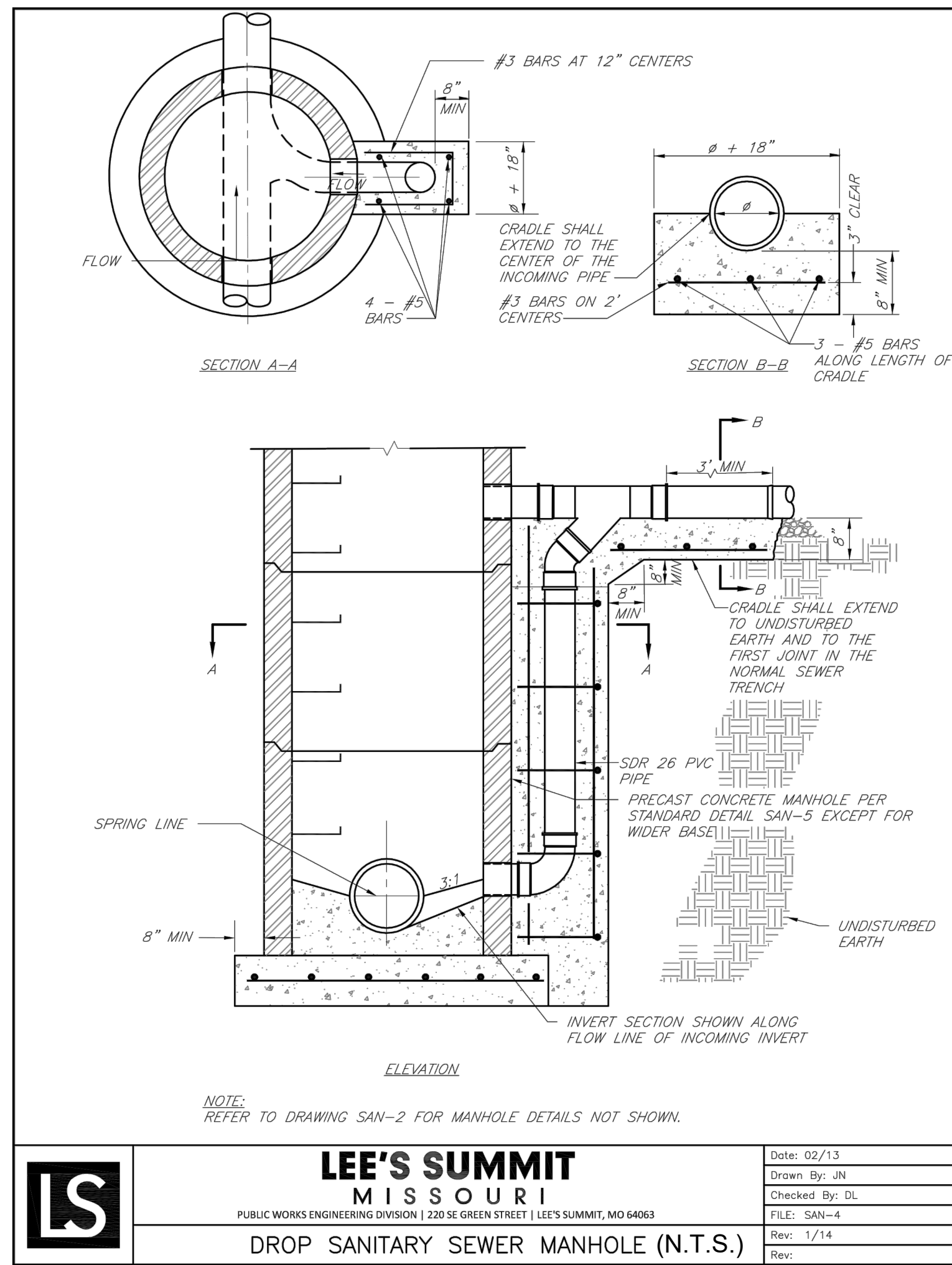
| Structure Name | Structure Northing | Structure Easting |
|----------------|--------------------|-------------------|
| D1             | 992465.1668        | 2819049.0765      |
| D2             | 992512.5490        | 2818857.6124      |
| D3             | 992347.5106        | 2818816.7699      |
| D4             | 992323.2667        | 2818749.7146      |
| EX 1-F         | 992476.3180        | 2819149.2468      |



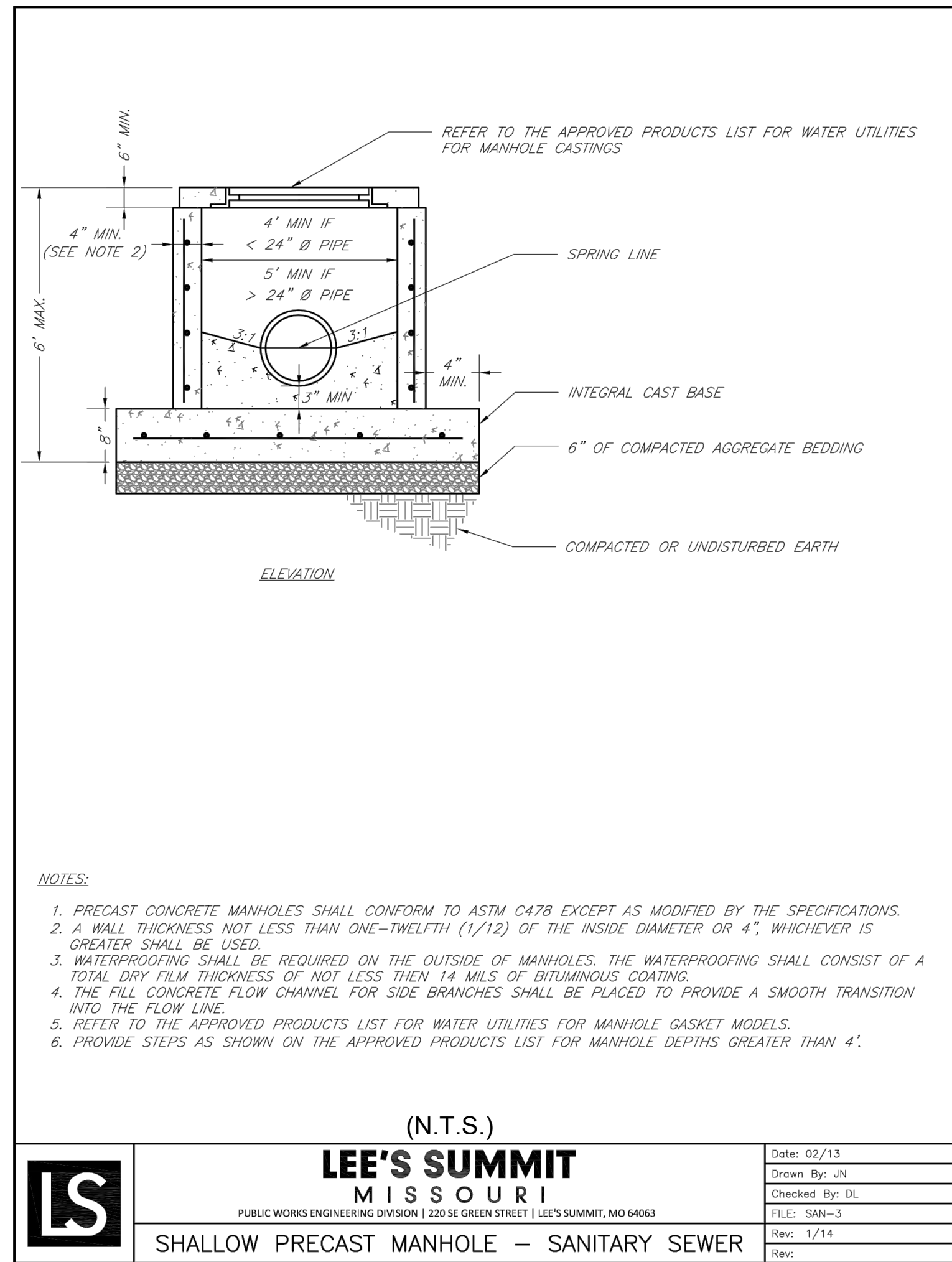
| REVISION DATE | DESCRIPTION |
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LINE C-D PLAN AND PROFILE

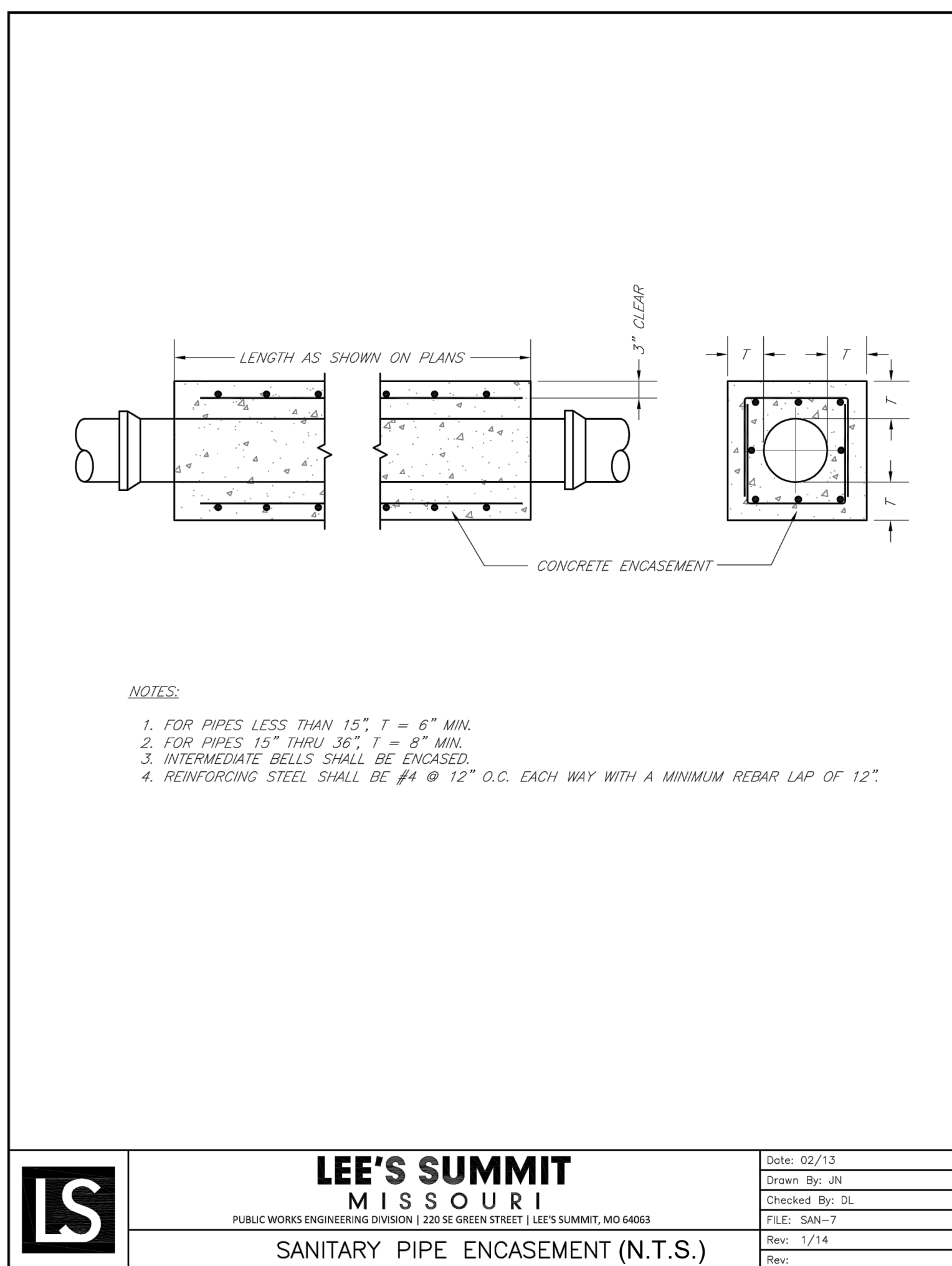
SHEET



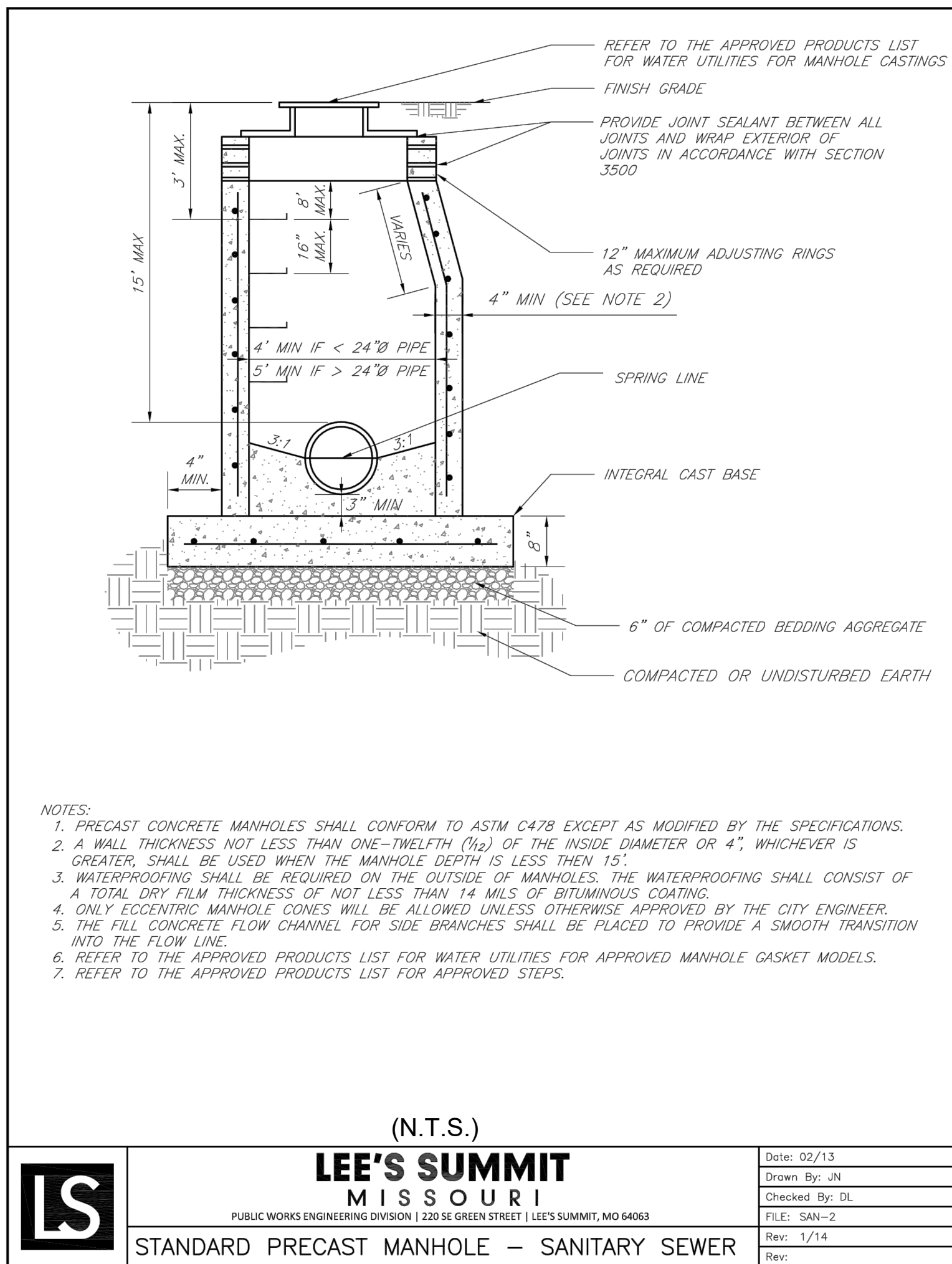
|           |  |                |
|-----------|--|----------------|
| <b>LS</b> | <b>LEE'S SUMMIT MISSOURI</b>   | Date: 02/13    |
|           | PUBLIC WORKS ENGINEERING DIVISION   220 SE GREEN STREET   LEE'S SUMMIT, MO 64063 | Drawn By: JN   |
|           | DROP SANITARY SEWER MANHOLE (N.T.S.)   | Checked By: DL |
|           |  | FILE: SAN-4    |
|           |  | Rev: 1/14      |



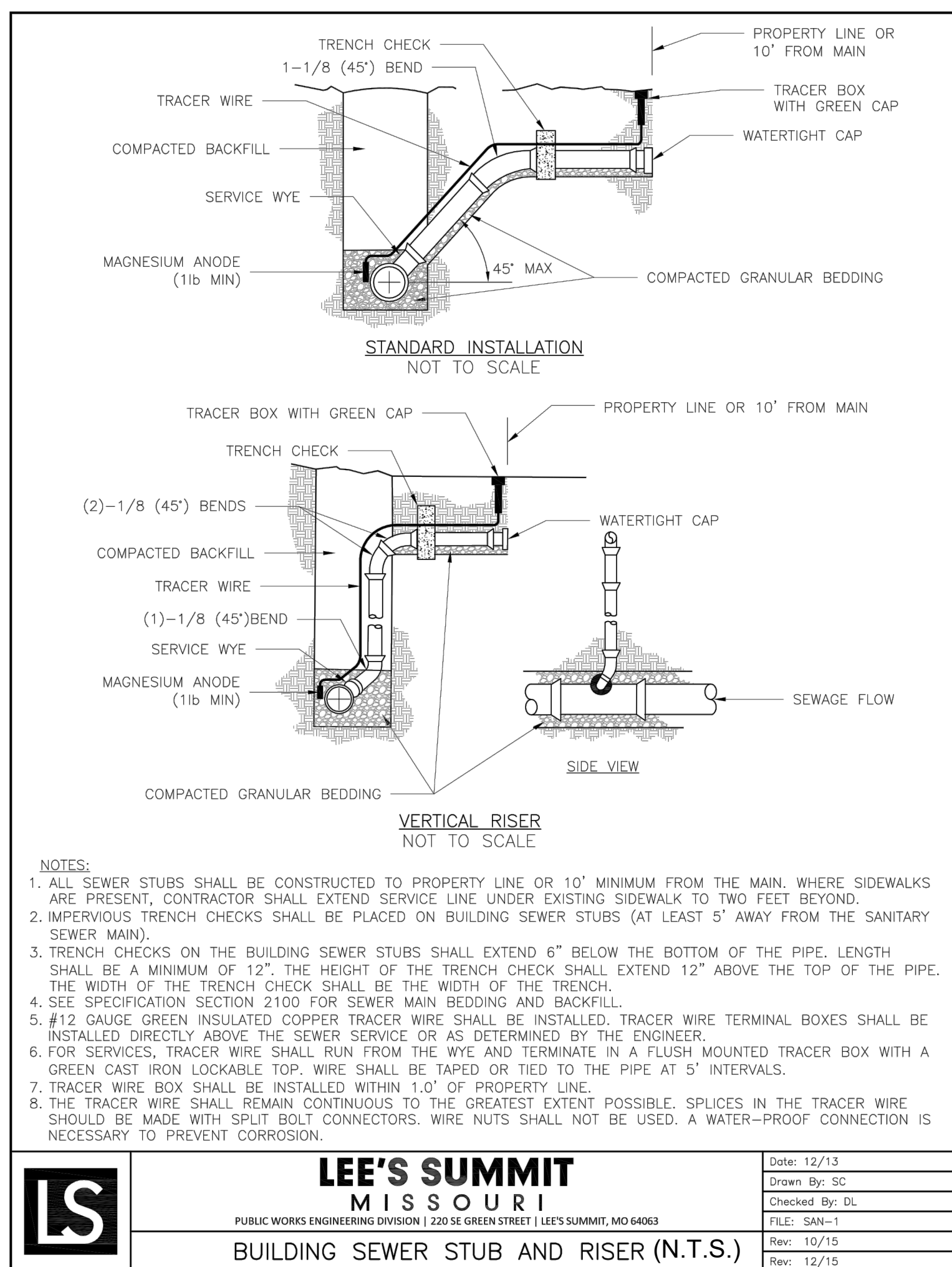
|           |  |                |
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| <b>LS</b> | (N.T.S.)   | Date: 02/13    |
|           | <b>LEE'S SUMMIT MISSOURI</b>   | Drawn By: JN   |
|           | PUBLIC WORKS ENGINEERING DIVISION   220 SE GREEN STREET   LEE'S SUMMIT, MO 64063 | Checked By: DL |
|           | SHALLOW PRECAST MANHOLE - SANITARY SEWER   | FILE: SAN-3    |
|           |  | Rev: 1/14      |



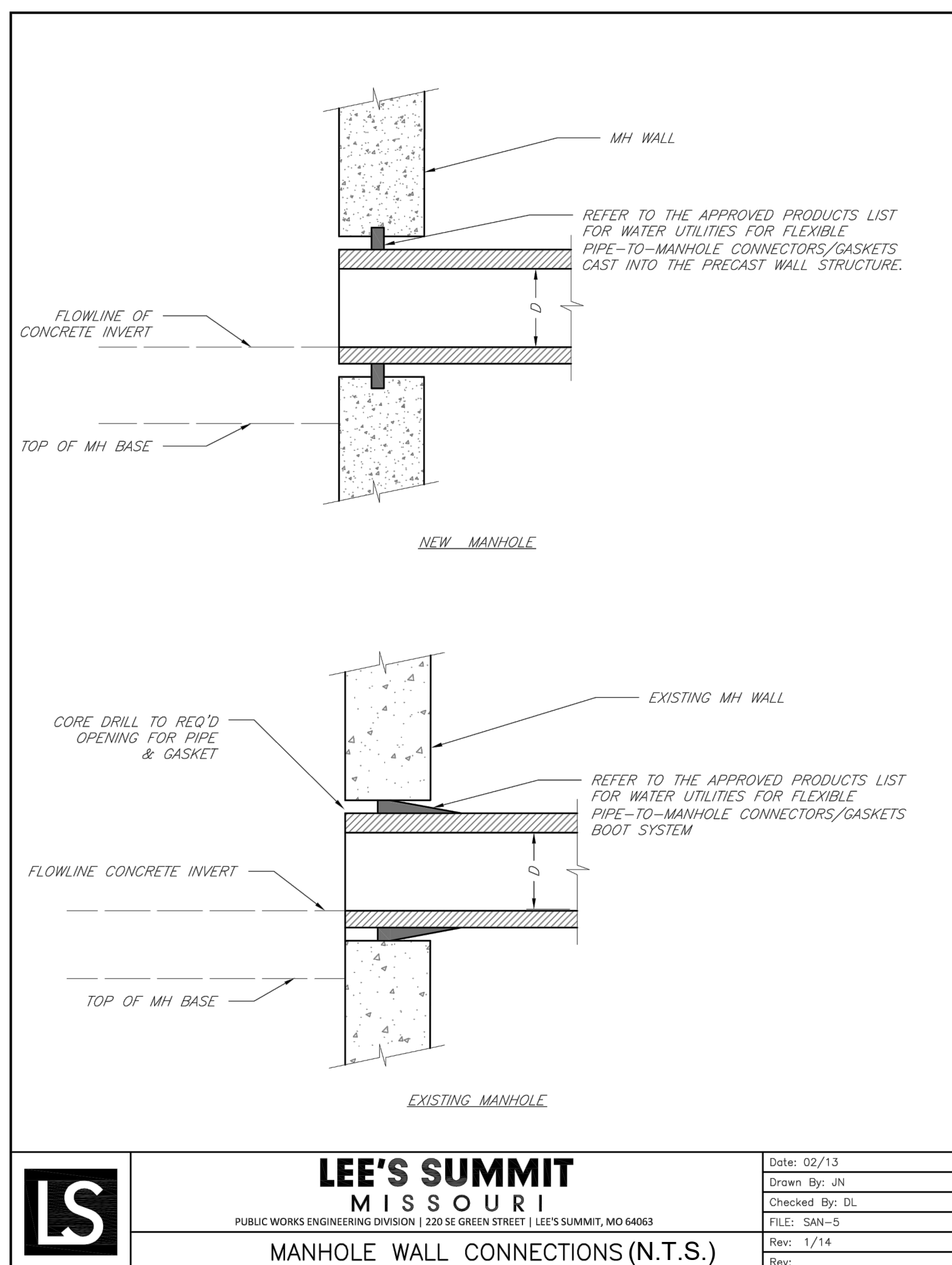
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| <b>LS</b> | <b>LEE'S SUMMIT MISSOURI</b>   | Date: 02/13    |
|           | PUBLIC WORKS ENGINEERING DIVISION   220 SE GREEN STREET   LEE'S SUMMIT, MO 64063 | Drawn By: JN   |
|           | SANITARY PIPE ENCASEMENT (N.T.S.)  | Checked By: DL |
|           |  | FILE: SAN-7    |
|           |  | Rev: 1/14      |



|           |  |                |
|-----------|--|----------------|
| <b>LS</b> | (N.T.S.)   | Date: 02/13    |
|           | <b>LEE'S SUMMIT MISSOURI</b>   | Drawn By: JN   |
|           | PUBLIC WORKS ENGINEERING DIVISION   220 SE GREEN STREET   LEE'S SUMMIT, MO 64063 | Checked By: DL |
|           | STANDARD PRECAST MANHOLE - SANITARY SEWER  | FILE: SAN-2    |
|           |  | Rev: 1/14      |



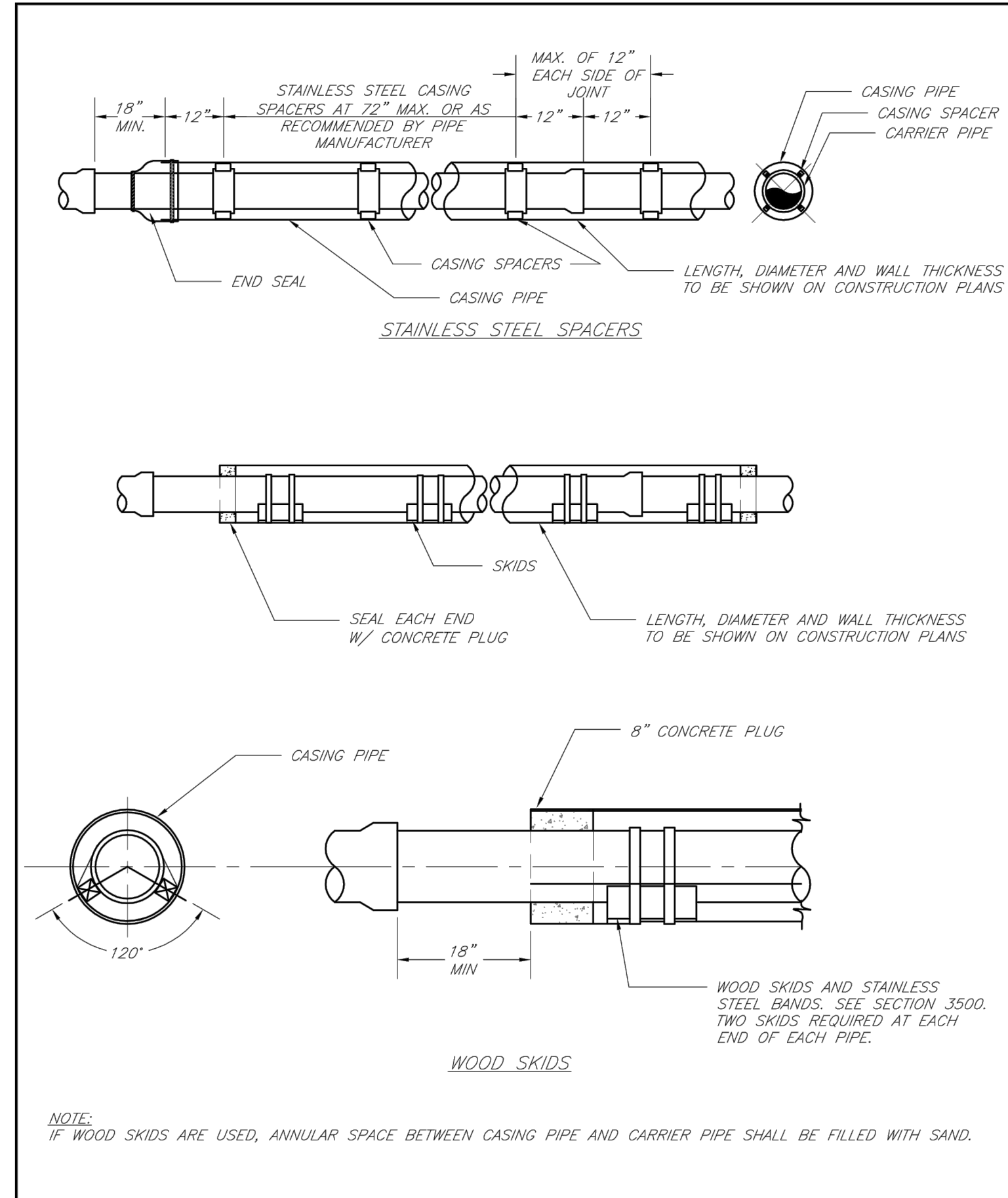
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| <b>LS</b> | <b>LEE'S SUMMIT MISSOURI</b>   | Date: 12/13    |
|           | PUBLIC WORKS ENGINEERING DIVISION   220 SE GREEN STREET   LEE'S SUMMIT, MO 64063 | Drawn By: SS   |
|           | BUILDING SEWER STUB AND RISER (N.T.S.)   | Checked By: DL |
|           |  | FILE: SAN-1    |
|           |  | Rev: 10/15     |



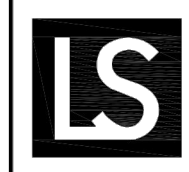
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| <b>LS</b> | (N.T.S.)   | Date: 02/13    |
|           | <b>LEE'S SUMMIT MISSOURI</b>   | Drawn By: JN   |
|           | PUBLIC WORKS ENGINEERING DIVISION   220 SE GREEN STREET   LEE'S SUMMIT, MO 64063 | Checked By: DL |
|           | MANHOLE WALL CONNECTIONS (N.T.S.)  | FILE: SAN-5    |
|           |  | Rev: 1/14      |

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|-------------------------|-----------------|--------------------------|----------------------|
| DRAWN BY: JN            | CHECKED BY: MAB | DATE PREPARED: 2-20-2010 | PROJ. NUMBER: 18-017 |
| <b>SANITARY DETAILS</b> |                 |                          |                      |
| SHEET                   |                 |                          |                      |



NOTE:  
IF WOOD SKIDS ARE USED, ANNULAR SPACE BETWEEN CASING PIPE AND CARRIER PIPE SHALL BE FILLED WITH SAND.



**LEE'S SUMMIT**  
**MISSOURI**  
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063  
**CASING PIPE DETAIL (N.T.S.)**

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

WOODLAND GLEN  
SANITARY SEWER MAIN EXTENSION  
WARD ROAD AND WINTHROP DRIVE  
LEE'S SUMMIT, MISSOURI

| REVISION DATE | DESCRIPTION |
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DRAWN BY: BAL  
CHECKED BY: MAB  
DATE PREPARED: 2-20-2020  
PROJ. NUMBER: 18-017

SANITARY DETAILS  
SHEET  
**8**