

WESTWOOD AREA RECONSTRUCTION

FOR CITY OF HILLSDALE

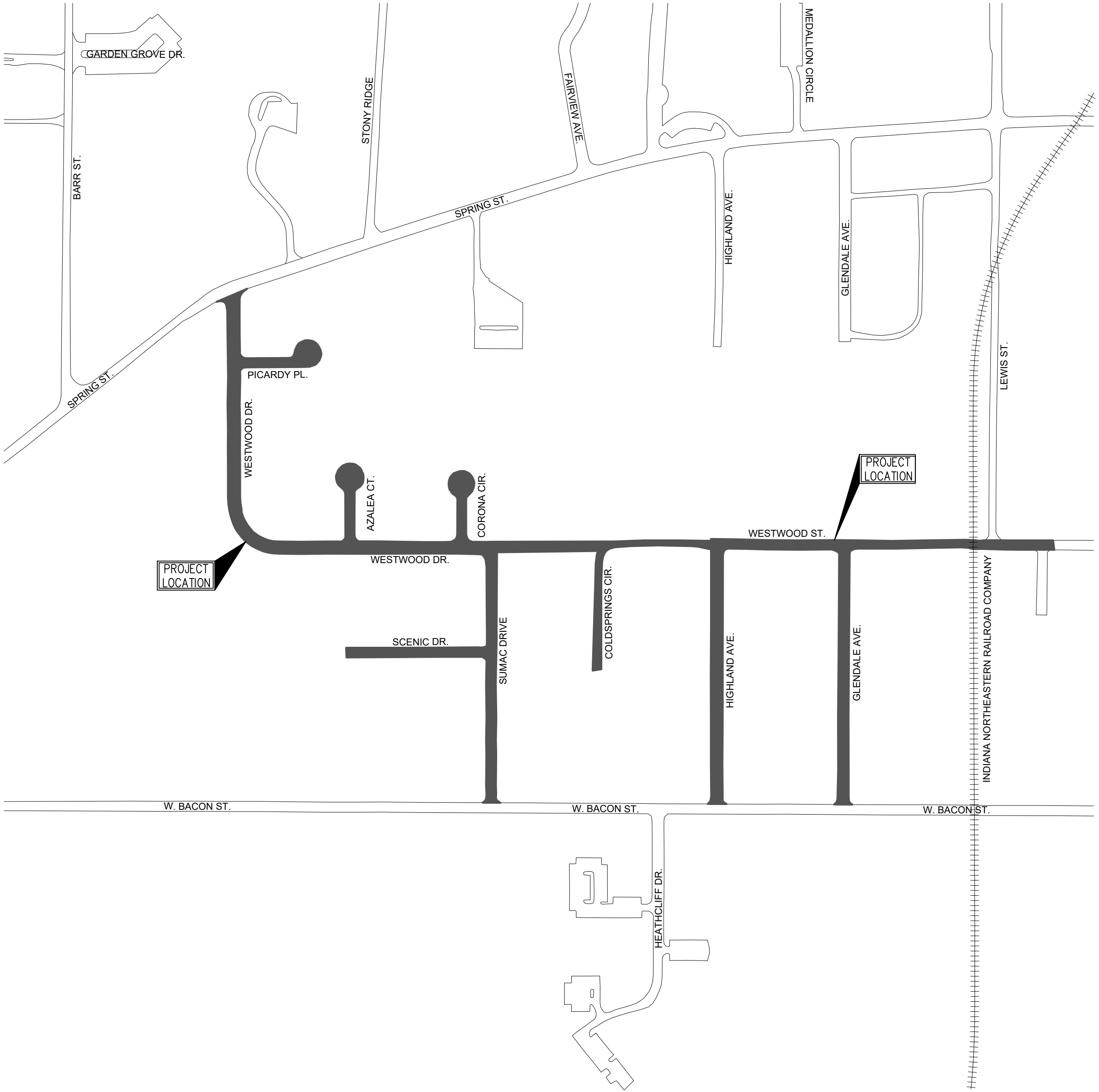
HILLSDALE COUNTY MICHIGAN



COUNTY KEY

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CITY OF HILLSDALE
97 N BROAD STREET
HILLSDALE, MICHIGAN 49242
(517) 437-6440

MAYOR.....ADAM STOCKFORD
CITY MANAGER.....DAVID MACKIE
ENGINEER.....KRISTIN BAUER
CLERK.....KATY PRICE
TREASURER.....PETER MERRITT
COUNCIL MEMBER.....GREG STUCHELL
COUNCIL MEMBER.....TONY VEAR
COUNCIL MEMBER.....WILL MORRISEY
COUNCIL MEMBER.....CINDY PRATT
COUNCIL MEMBER.....BRUCE SHARP
COUNCIL MEMBER.....JOSH PALADINO
COUNCIL MEMBER.....ROBERT SOCHA
COUNCIL MEMBER.....GARY WOLFRAM

STANDARD PLANS

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| UNDERDRAINS AND UNDERDRAIN DETAILS - ADA COMPLIANT - ALTERNATE - ALTERNATE - ALTERNATE - ALTERNATE - ALTERNATE - ALTERNATE - ALTERNATE - ALTERNATE - ALTERNATE - ALTERNATE - ALTERNATE - ALTERNATE - ALTERNATE - ALTERNATE - ALTERNATE - ALTERNATE - ALTERNATE - ALTERNATE | 7-125 |

LOCATION MAP
SCALE: N.T.S.

SPECIFICATIONS

EXCEPT WHERE OTHERWISE INDICATED ON THESE PLANS OR IN THE PROPOSAL, ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT) 2012 STANDARD SPECIFICATIONS FOR CONSTRUCTION AND THE CITY OF HILLSDALE.

ALL TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE APPLICABLE SECTIONS OF THE 2011 MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL (MMUTC) FOR STREETS AND HIGHWAYS.

INDIANA NORTHEASTERN RAILROAD COMPANY
CROSSING NUMBER: 509915S; MP: 55.87

CONTRACT FOR:
1.24 MILES OF ROAD RECONSTRUCTION, CONCRETE CURB AND GUTTER, SIDEWALK REPLACEMENT, ADA RAMP REPLACEMENT, CONCRETE DRIVE APPROACHES, SITE RESTORATION, REPLACEMENT OF 6,590 LFT OF 8" WATER MAIN, REPLACEMENT OF 2,583 LFT OF 8" SANITARY SEWER, THE INSTALLATION OF 1,103 FT OF STORM SEWER ALONG SUMAC DRIVE, WESTWOOD DRIVE, SCENIC DRIVE, CORONA COURT, AZALEA COURT, PICARDY PLACE, COLD SPRINGS CIRCLE, WESTWOOD STREET, HIGHLAND AVENUE, AND GLENDALE AVENUE IN THE CITY OF HILLSDALE, HILLSDALE COUNTY, MICHIGAN.

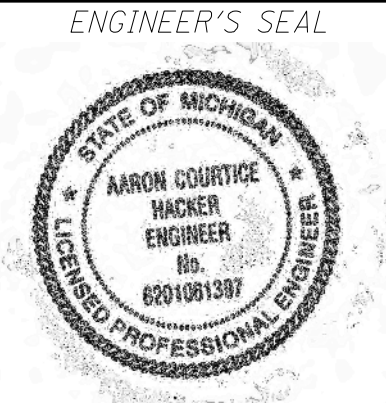
APPROVALS

APPROVED: _____ DATE: _____
CITY OF HILLSDALE

APPROVED: *A. C. Hale* DATE: 3/8/2023
REGISTERED PROFESSIONAL ENGINEER



2193 ASSOCIATION DRIVE
SUITE 2000
OKEMOS, MI 48864
TEL: (517) 316-9292
FAX: (517) 316-9233



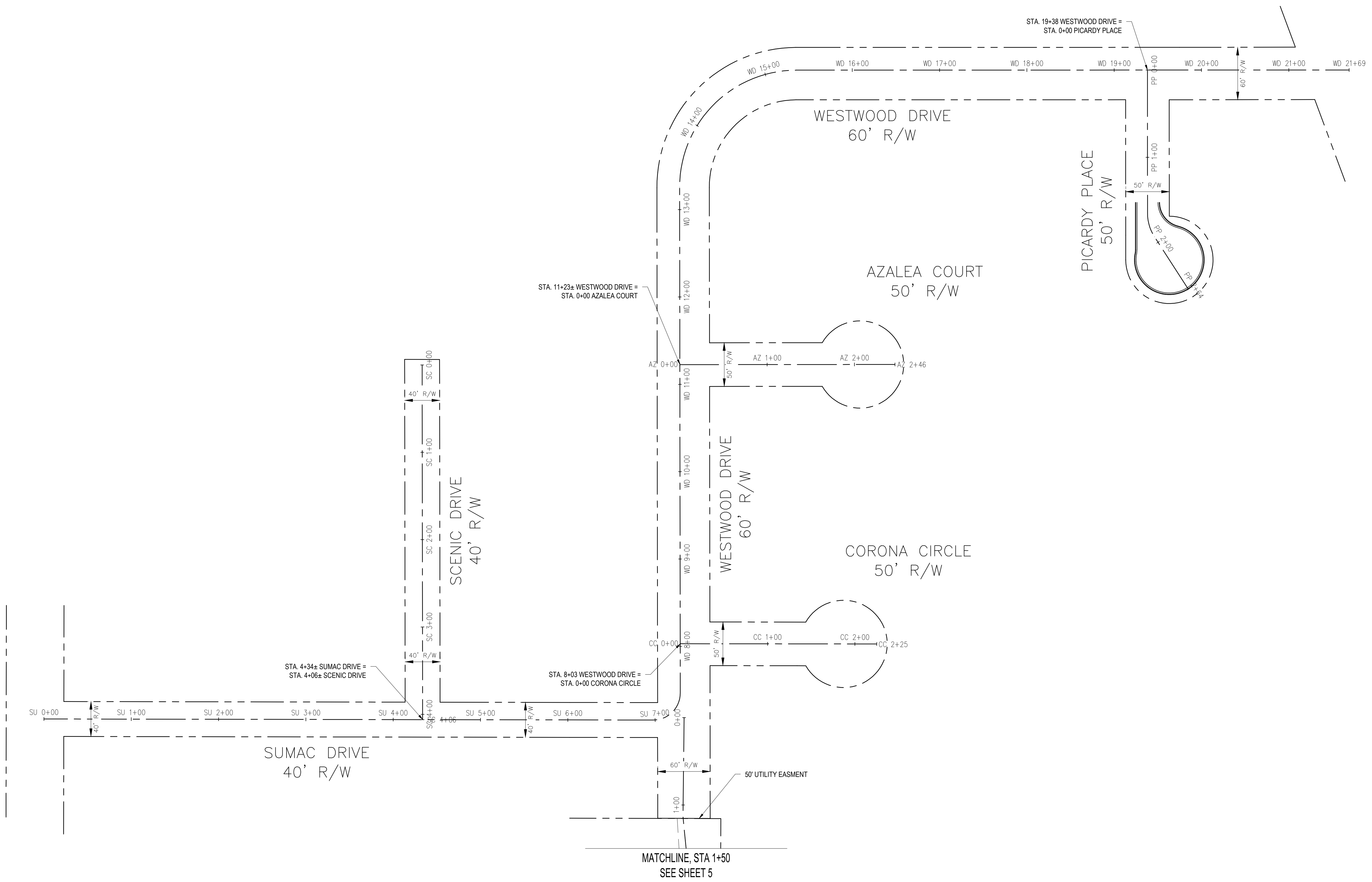
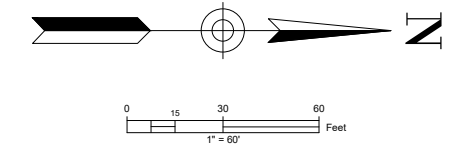
PREPARED FOR:
CITY OF HILLSDALE
97 BROAD STREET
HILLSDALE, MI 49242

WESTWOOD AREA RECONSTRUCTION
WESTWOOD AREA

TITLE SHEET

| NO | DATE | BY | DESCRIPTION |
|----|------------|-----|-----------------------------|
| 1 | 8/12/2022 | ACH | PRELIMINARY DESIGN PLANS |
| 2 | 12/12/2022 | ACH | CONSTRUCTION PLANS |
| 3 | 03/08/2023 | ACH | CONSTRUCTION PLANS |
| 4 | 03/08/2023 | ACH | REISSUED CONSTRUCTION PLANS |

| PROJECT NO.: | PROJECT DATE: | PROJECT NO.: | PROJECT DATE: |
|--|---------------|--------------|---------------|
| 237 NORTH MAIN STREET ADRIAN, MI 49211 TEL: 517.283.4515 | 03/08/2023 | H486002 | JPP |
| | | | ACH |



MATCHLINE, STA 1+50
SEE SHEET 5

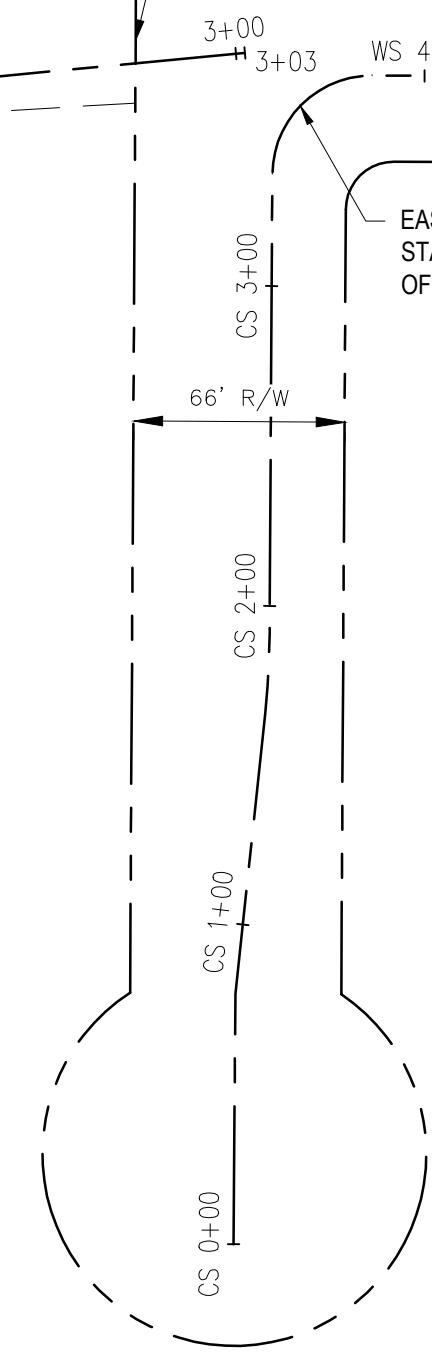
W:\paper\plans\1448002\24\CONSTRUCTION\RECONSTRUCTION_ALIGNMENT_Plan.dwg 03/02/2023 10:46 AM

| | | |
|--|---|--------------------------------|
| NO. | DATE | DESCRIPTION |
| | 03/02/2023 | PRELIMINARY CONSTRUCTION PLANS |
| 2 | 03/02/2023 | REVISED CONSTRUCTION PLANS |
| BY | DATE | DESCRIPTION |
| JCH | | |
| YCH | | |
| 237 NORTH MAIN STREET ADRIAN, MI 49221 TEL: 517.263.4515 | | |
| PROJECT NO.: H468002 | | |
| PROJECT DATE: 03/02/2023 | | |
| DRAWN BY: JPP | | |
| CHECKED BY: ACH | | |
| Mannik Smith GROUP www.MannikSmithGroup.com | | |
| TECHNICAL SKILL: CREATIVE SPIRIT. | | |
| PREPARED FOR: | CITY OF HILLSDALE 97 BOARD STREET HILLSDALE, MI 49242 | |
| WESTWOOD AREA RECONSTRUCTION WESTWOOD SUBDIVISIONS | | |
| ALIGNMENT PLAN | | |
| 4 | 52 | |

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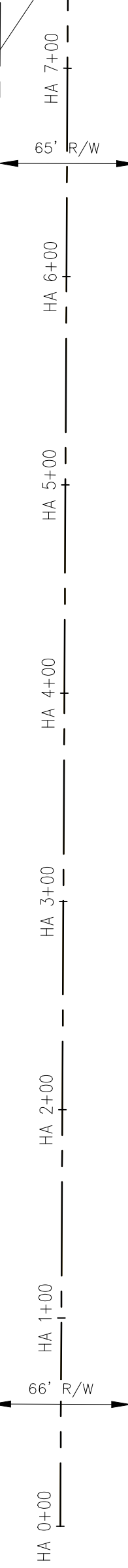
MATCHLINE STA 1+50
SEE SHEET 4

COLD SPRINGS CIRCLE
66' R/W



WEST BACON RD.

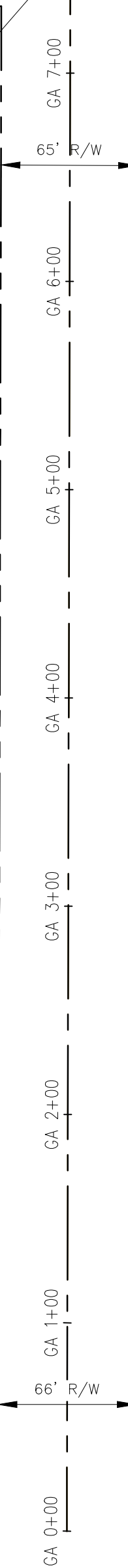
HIGHLAND AVENUE
66' R/W



WESTWOOD STREET
57.75' R/W

STA. 6+92± WESTWOOD STREET =
STA. 7+58± HIGHLAND AVENUE

GLENDALE AVENUE
66' R/W

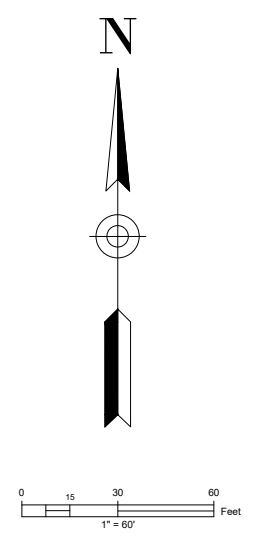


WESTWOOD STREET
57.75' R/W

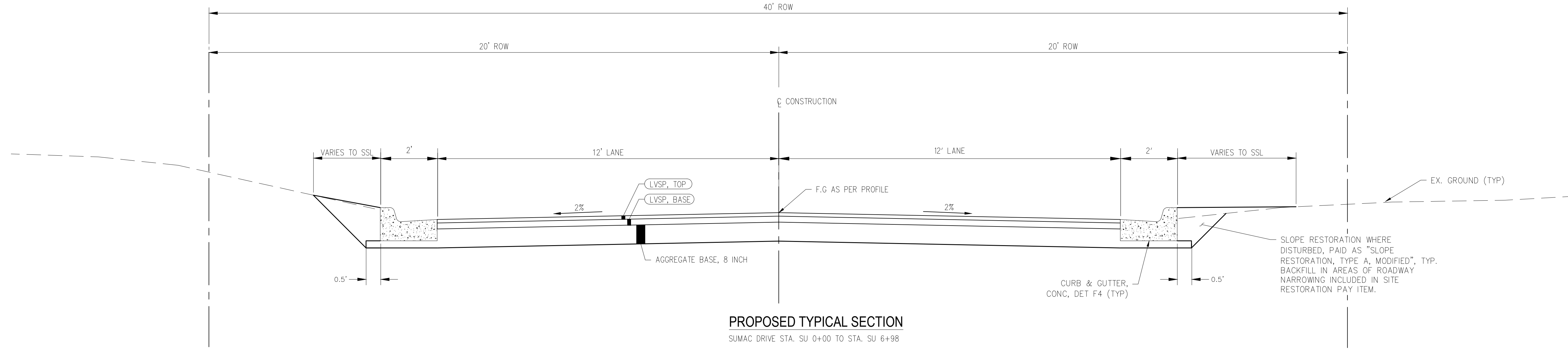
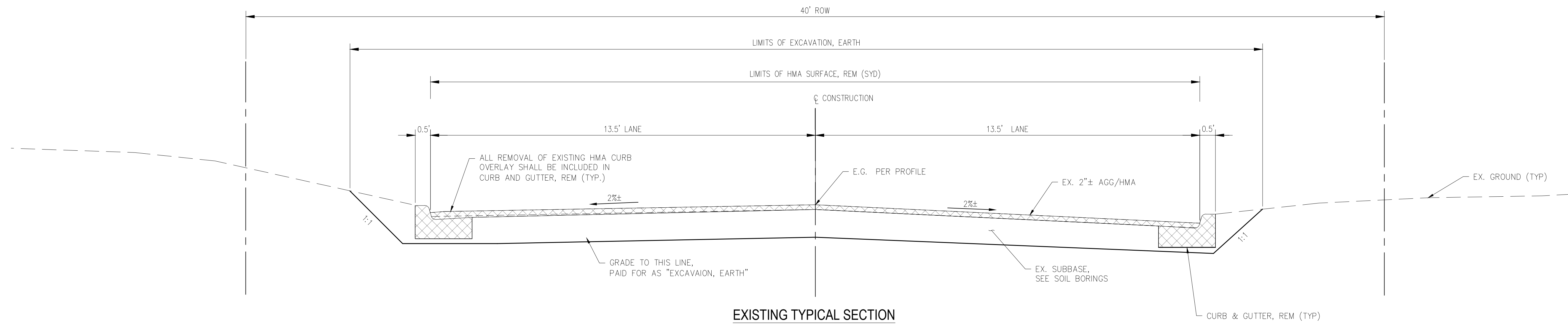
STA. 10+54± WESTWOOD STREET =
STA. 7+59± GLENDALE AVENUE

MDOT RAILROAD
R/W VARIES

WEST BACON RD.



| | | | |
|--|--|-----|--------------------------------|
| NO. | DATE | BY | DESCRIPTION |
| | 03/08/2023 | ACH | PRELIMINARY CONSTRUCTION PLANS |
| 2 | 03/08/2023 | ACH | REVISED CONSTRUCTION PLANS |
| 237 NORTH MAIN STREET ADRIAN, MI 49221 TEL: 517.263.4515 | | | |
| PROJECT NO.: H460002 | | | |
| PROJECT DATE: 03/08/2023 | | | |
| DRAWN BY: JPP | | | |
| CHECKED BY: ACH | | | |
| | | | |
| PREPARED FOR: | CITY OF HILLSDALE | | |
| | 97 BOARD STREET HILLSDALE, MI 49242 | | |
| WESTWOOD AREA RECONSTRUCTION WESTWOOD SUBDIVISIONS | | | |
| ALIGNMENT PLAN | | | |
| 5 | 52 | | |



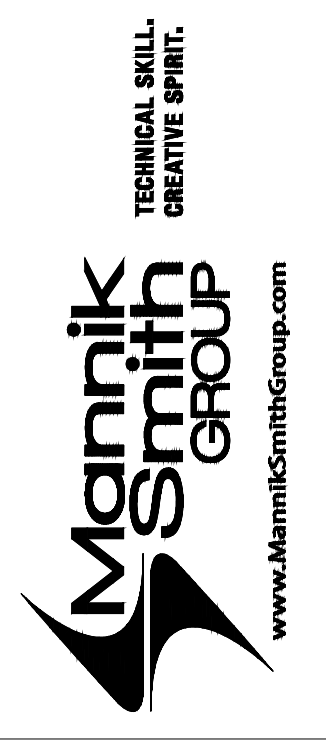
| HMA APPLICATION TABLE | | | | |
|-----------------------|-----------|------------------|-------------------|--|
| IDENT NO. | ITEM | RATE LBS PER SYD | PERFORMANCE GRADE | REMARKS |
| LVSP, TOP | HMA, LVSP | 165 | PG 58-28 | TOP COURSE (AWI=260 MIN., TARGET AIR VOIDS 3.0%) |
| LVSP, BASE | HMA, LVSP | 275 | PG 58-28 | BASE COURSE |
| | BOND COAT | 0.05-0.15 GAL | | SS-AH (FOR INFORMATION ONLY) |

*FOR INFORMATION ONLY

| | | | |
|-----|------------|-----|-----------------------------|
| NO. | DATE | BY | DESCRIPTION |
| 1 | 03/08/2023 | ACH | 90% REVISIONS |
| 2 | 07/27/2023 | ACH | CONSTRUCTION PLANS |
| 3 | 03/08/2023 | VOM | REISSUED CONSTRUCTION PLANS |

237 NORTH MAIN STREET
ADRIAN, MI 49221
TEL: 517.263.4515

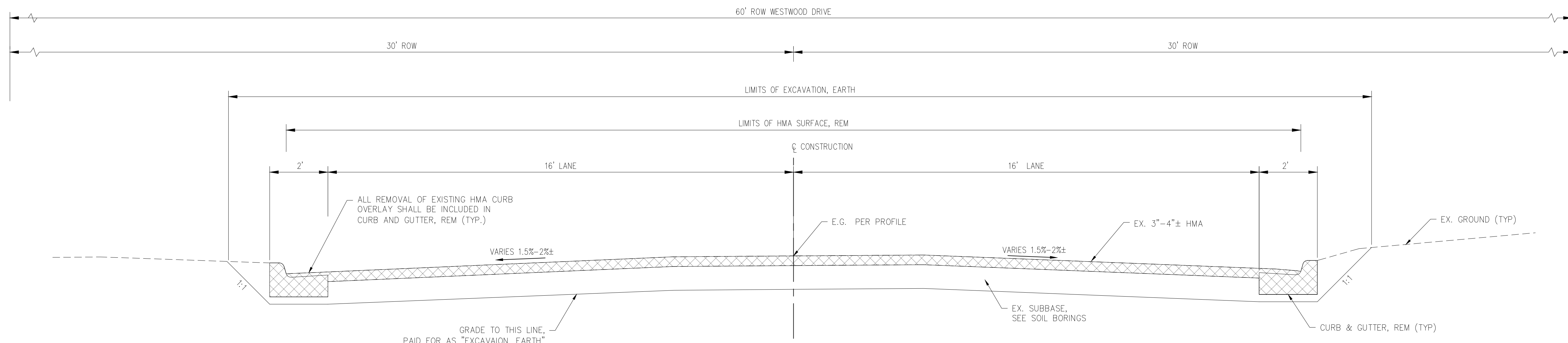
PROJECT DATE: 03/08/2023
PROJECT NO.: H480002
DRAWN BY: JPP
CHECKED BY: ACH



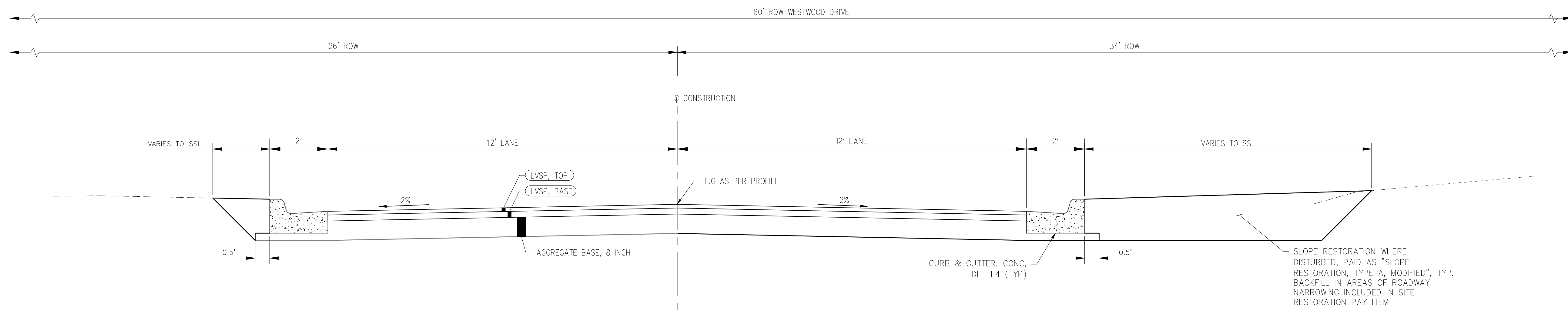
PREPARED FOR:
CITY OF HILLSDALE
97 BOARD STREET
HILLSDALE, MI 49242

WESTWOOD AREA
RECONSTRUCTION
WESTWOOD SUBDIVISIONS

TYPICAL SECTIONS
SUMAC DRIVE



EXISTING TYPICAL SECTION
 WESTWOOD DRIVE STA. WD 6+98 TO STA. WD 21+34
 (SUMAC TO SPRING)



PROPOSED TYPICAL SECTION
 WESTWOOD DRIVE STA. WD 6+98 TO STA. WD 21+34
 (SUMAC TO SPRING)

| HMA APPLICATION TABLE | | | | |
|-----------------------|-----------|------------------|-------------------|--|
| IDENT NO. | ITEM | RATE LBS PER SYD | PERFORMANCE GRADE | REMARKS |
| LVSP, TOP | HMA, LVSP | 165 | PG 58-28 | TOP COURSE (AWI=260 MIN., TARGET AIR VOIDS 3.0%) |
| LVSP, BASE | HMA, LVSP | 275 | PG 58-28 | BASE COURSE |
| | BOND COAT | 0.05-0.15 GAL | | SS-AH (FOR INFORMATION ONLY) |

*FOR INFORMATION ONLY

| | | | |
|-----|------------|-----|--|
| NO. | DATE | BY | DESCRIPTION |
| 1 | 07/27/2023 | ACH | 90% PERMISSIVE CITY CONSTRUCTION PLANS |
| 2 | 07/27/2023 | ACH | REISSUED CONSTRUCTION PLANS |
| 3 | 03/08/2023 | VOM | REISSUED CONSTRUCTION PLANS |

237 NORTH MAIN STREET
 ADRIAN, MI 49221
 TEL: 517.263.4515

PROJECT DATE: 03/08/2023
 PROJECT NO.: H480002
 DRAWN BY: JPP
 CHECKED BY: ACH

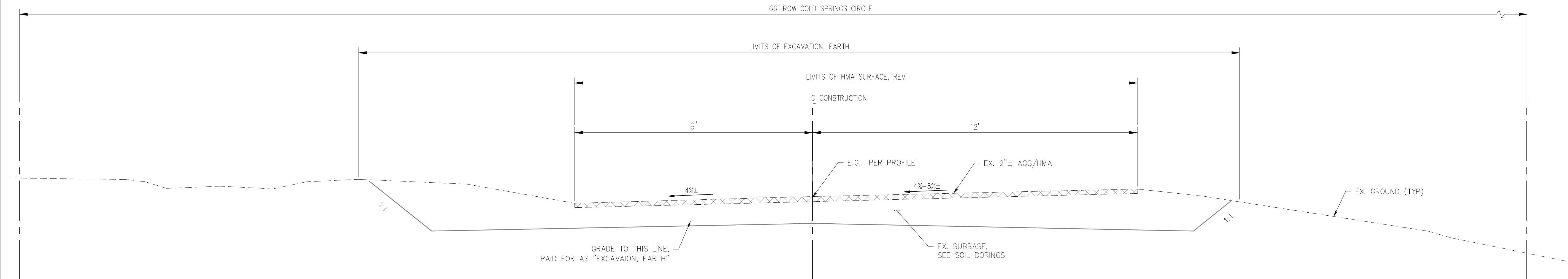
TECHNICAL SKILL:
Creative Spirit

Mannik Smith GROUP
 www.MannikSmithGroup.com

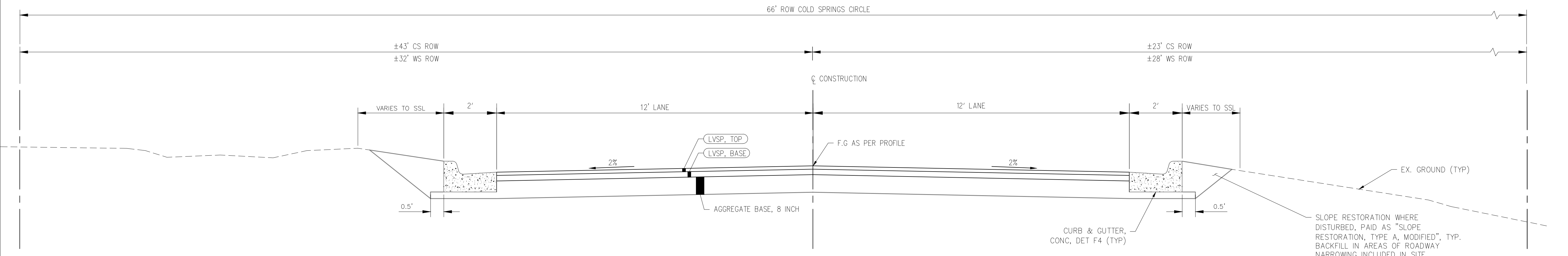
PREPARED FOR:
CITY OF HILLSDALE
 97 BOARD STREET
 HILLSDALE, MI 49242

WESTWOOD AREA RECONSTRUCTION
 WESTWOOD SUBDIVISIONS

TYPICAL SECTIONS
 WESTWOOD DRIVE
 SUMAC TO SPRING



EXISTING TYPICAL SECTION
 COLD SPRINGS CIRCLE STA. CO 0+00 TO STA. CO 3+35
 WESTWOOD STREET STA. WS 3+35 TO STA. WS 6+65



PROPOSED TYPICAL SECTION
 COLD SPRINGS CIRCLE STA. CS 0+00 TO STA. CS 3+35
 WESTWOOD STREET STA. WS 3+35 TO STA. WS 6+65

| HMA APPLICATION TABLE | | | | |
|-----------------------|-----------|------------------|-------------------|--|
| IDENT NO. | ITEM | RATE LBS PER SYD | PERFORMANCE GRADE | REMARKS |
| LVSP, TOP | HMA, LVSP | 165 | PG 58-28 | TOP COURSE (AWI=260 MIN., TARGET AIR VOIDS 3.0%) |
| LVSP, BASE | HMA, LVSP | 275 | PG 58-28 | BASE COURSE |
| | BOND COAT | 0.05-0.15 GAL | | SS-AH (FOR INFORMATION ONLY) |

*FOR INFORMATION ONLY

| | | | |
|-----|------------|-----|-----------------------------|
| NO. | DATE | BY | DESCRIPTION |
| 1 | 07/27/2023 | JPP | 90% REVISIONS |
| 2 | 10/27/2023 | ACH | CONSTRUCTION PLANS |
| 3 | 03/09/2024 | VOM | REISSUED CONSTRUCTION PLANS |

237 NORTH MAIN STREET
 ADRIAN, MI 49221
 TEL: 517.263.4515

PROJECT DATE: 03/09/2023
 PROJECT NO.: H480002
 DRAWN BY: JPP
 CHECKED BY: ACH

TECHNICAL SKILL
CREATIVE SPIRIT.

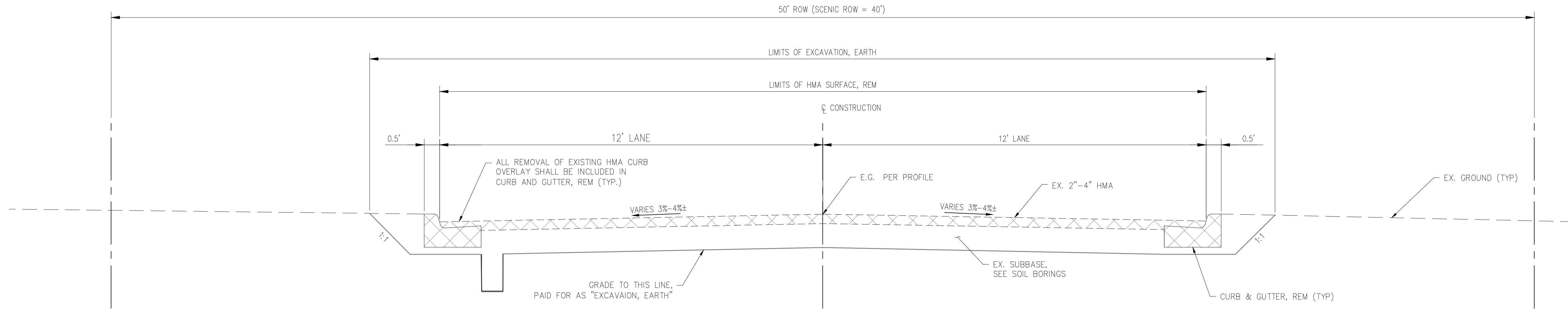
Mannik Smith GROUP
 www.MannikSmithGroup.com

PREPARED FOR:
CITY OF HILLSDALE
 97 BOARD STREET
 HILLSDALE, MI 49242

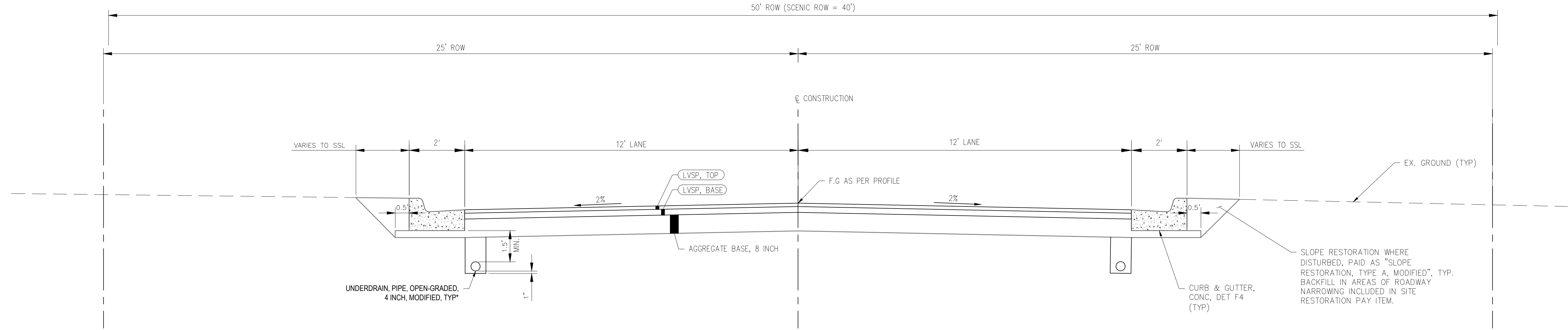
WESTWOOD AREA RECONSTRUCTION
 WESTWOOD SUBDIVISIONS

TYPICAL SECTIONS
 COLD SPRINGS CIRCLE

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EXISTING TYPICAL SECTION
 PICARDY PLACE STA. PI 0+12 TO STA. PI 2+64
 CORONA CIRCLE STA. CO 0+12 TO STA. CO 2+25
 AZALEA COURT STA. AZ 0+12 TO STA. AZ 2+46
 SCENIC DRIVE STA. SC 0+12 TO STA. SC 4+06



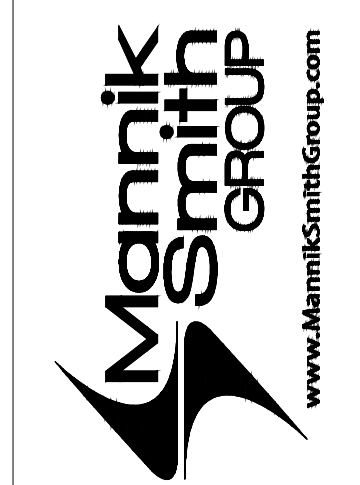
PROPOSED TYPICAL SECTION
 PICARDY PLACE STA. PI 0+12 TO STA. PI 2+64
 CORONA CIRCLE STA. CO 0+12 TO STA. CO 2+25
 AZALEA COURT STA. AZ 0+12 TO STA. AZ 2+46 *W/UNDERDRAIN
 SCENIC DRIVE STA. SC 0+12 TO STA. SC 4+06 *W/UNDERDRAIN

| HMA APPLICATION TABLE | | | | |
|-----------------------|-----------|------------------|-------------------|--|
| IDENT NO. | ITEM | RATE LBS PER SYD | PERFORMANCE GRADE | REMARKS |
| LVSP, TOP | HMA, LVSP | 165 | PG 58-28 | TOP COURSE (AWI=260 MIN., TARGET AIR VOIDS 3.0%) |
| LVSP, BASE | HMA, LVSP | 275 | PG 58-28 | BASE COURSE |
| | BOND COAT | 0.05-0.15 GAL | | SS-AH (FOR INFORMATION ONLY) |

*FOR INFORMATION ONLY

| | | | |
|-----|------------|-----|------------------------------------|
| NO. | DATE | BY | DESCRIPTION |
| 1 | 03/08/2023 | ACH | 90% HMA SURFACE CONSTRUCTION PLANS |
| 2 | 03/08/2023 | ACH | CONSTRUCTION PLANS |
| 3 | 03/08/2023 | VOM | REISSUED CONSTRUCTION PLANS |

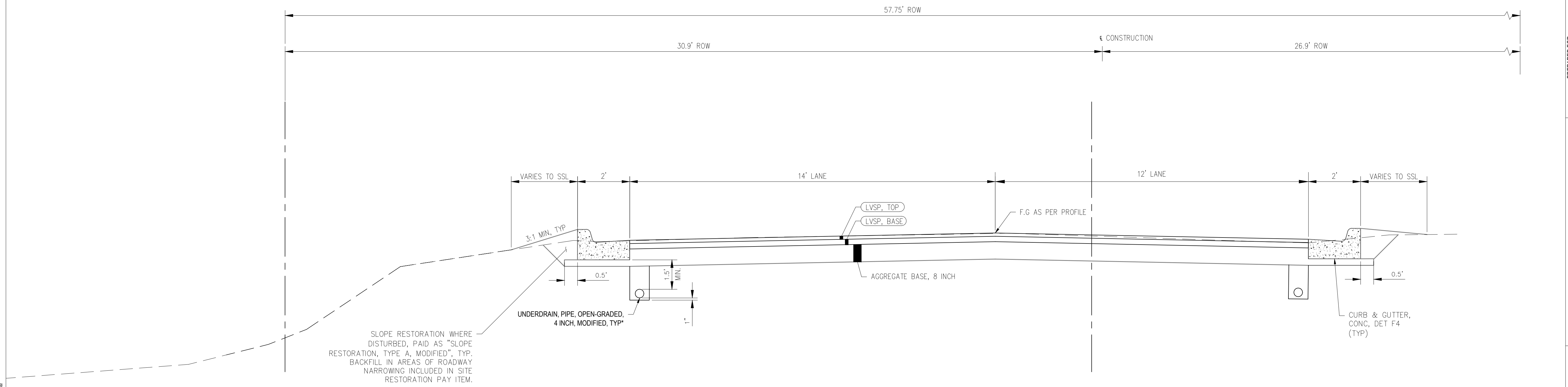
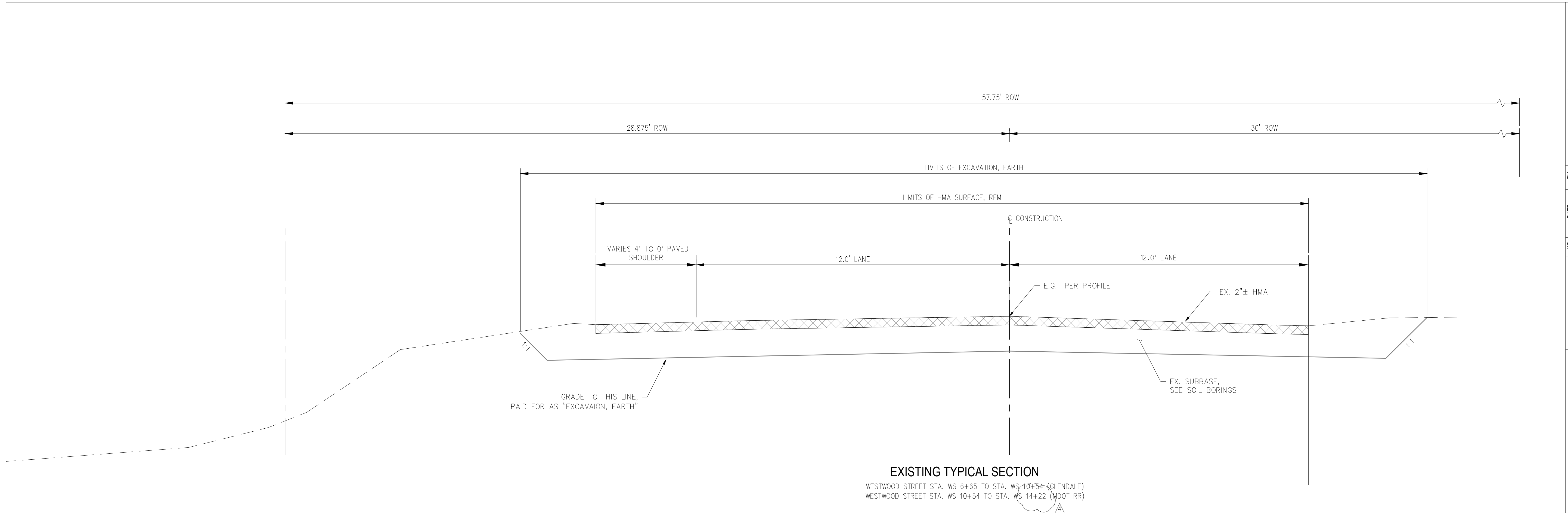
237 NORTH MAIN STREET
 ADRIAN, MI 49221
 TEL: 517.263.4515



PREPARED FOR:
CITY OF HILLSDALE
 97 BOARD STREET
 HILLSDALE, MI 49242

WESTWOOD AREA RECONSTRUCTION
 WESTWOOD SUBDIVISIONS

TYPICAL SECTIONS
 PICARDY PLACE,
 AZALEA COURT,
 CORONA CIRCLE,
 SCENIC DRIVE



HMA APPLICATION TABLE

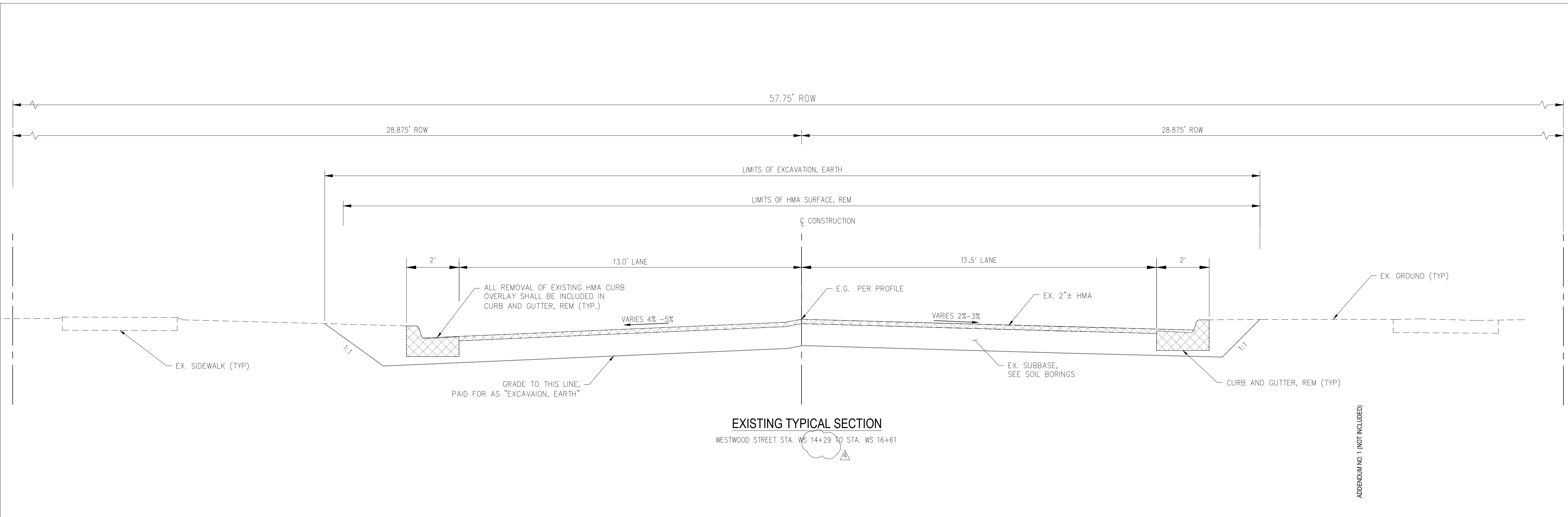
| IDENT NO. | ITEM | RATE LBS PER SYD | PERFORMANCE GRADE | REMARKS |
|------------|-----------|------------------|-------------------|--|
| LVSP, TOP | HMA, LVSP | 165 | PG 58-28 | TOP COURSE (AWI=260 MIN., TARGET AIR VOIDS 3.0%) |
| LVSP, BASE | HMA, LVSP | 275 | PG 58-28 | BASE COURSE |
| | BOND COAT | 0.05-0.15 GAL | | SS-AH (FOR INFORMATION ONLY) |

*FOR INFORMATION ONLY

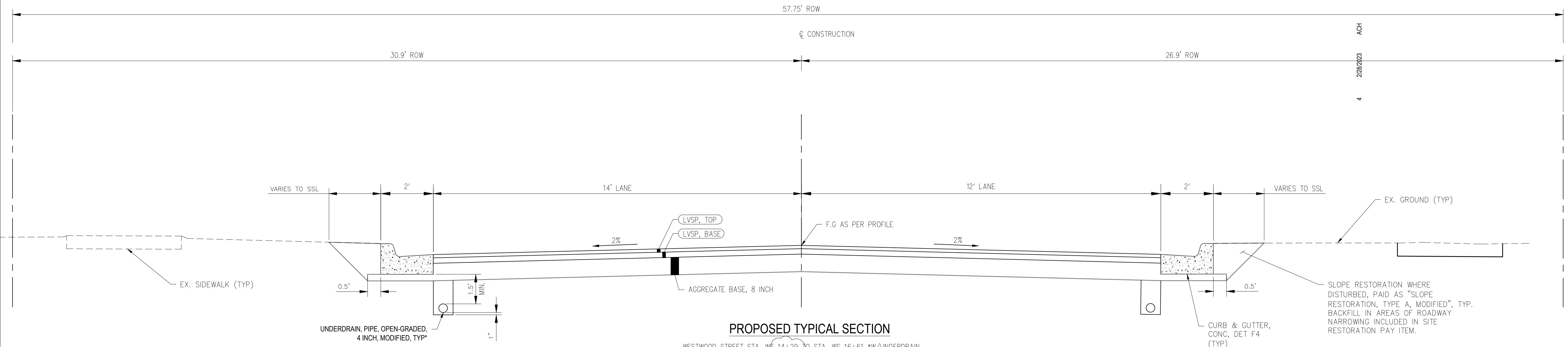
PROPOSED TYPICAL SECTION
 WESTWOOD STREET STA. WS 6+65 TO STA. WS 10+54 (GLENDALE)
 WESTWOOD STREET STA. WS 10+54 TO STA. WS 14+22 (MDOT RR) *W/UNDERDRAIN

NOTE:
 1. CONTRACTOR SHALL COORDINATE PAVING LIMITS AT RAILROAD WITH CITY AND MDOT RAILROAD.

| | |
|--|---|
| <p>DESCRIPTION: 90% RECONSTRUCTION, 10% RECONSTRUCTION PLANS, REISSUED CONSTRUCTION PLANS</p> <p>BY: ACH</p> <p>DATE: 03/09/2023</p> <p>NO. 1, 2, 3</p> <p>237 NORTH MAIN STREET ADRIAN, MI 49221 TEL: 517.263.4515</p> <p>PROJECT DATE: 03/09/2023 PROJECT NO.: H480002 DRAWN BY: JPP CHECKED BY: ACH</p> <p>TECHNICAL SKILL: CREATIVE SPIRIT.</p> <p>Mannik Smith GROUP www.MannikSmithGroup.com</p> | <p>PREPARED FOR: CITY OF HILLSDALE 97 BOARD STREET HILLSDALE, MI 49242</p> <p>WESTWOOD AREA RECONSTRUCTION WESTWOOD SUBDIVISIONS</p> <p>TYPICAL SECTIONS WESTWOOD STREET</p> |
| 10 | 52 |



EXISTING TYPICAL SECTION
WESTWOOD STREET STA. WS 14+29 TO STA. WS 16+61



PROPOSED TYPICAL SECTION
WESTWOOD STREET STA. WS 14+29 TO STA. WS 16+61 *W/UNDERDRAIN

NOTE:
1. CONTRACTOR SHALL COORDINATE PAVING LIMITS AT RAILROAD WITH CITY AND MDOT RAILROAD.

| HMA APPLICATION TABLE | | | | |
|-----------------------|-----------|------------------|-------------------|--|
| IDENT NO. | ITEM | RATE LBS PER SYD | PERFORMANCE GRADE | REMARKS |
| LVSP, TOP | HMA, LVSP | 165 | PG 58-28 | TOP COURSE (AWI=260 MIN., TARGET AIR VOIDS 3.0%) |
| LVSP, BASE | HMA, LVSP | 275 | PG 58-28 | BASE COURSE |
| | BOND COAT | 0.05-0.15 GAL | | SS-AH (FOR INFORMATION ONLY) |

*FOR INFORMATION ONLY

| | |
|--------------|--------------------|
| DESCRIPTION | 90% RECONSTRUCTION |
| BY | ACH |
| DATE | 03/08/2023 |
| NO. | 3 |
| PROJECT NO. | H480002 |
| PROJECT DATE | 03/08/2023 |
| DRAWN BY | JPP |
| CHECKED BY | ACH |

237 NORTH MAIN STREET
ADRIAN, MI 49221
TEL: 517.263.4515

TECHNICAL SKILL:
CREATIVE SPIRIT.

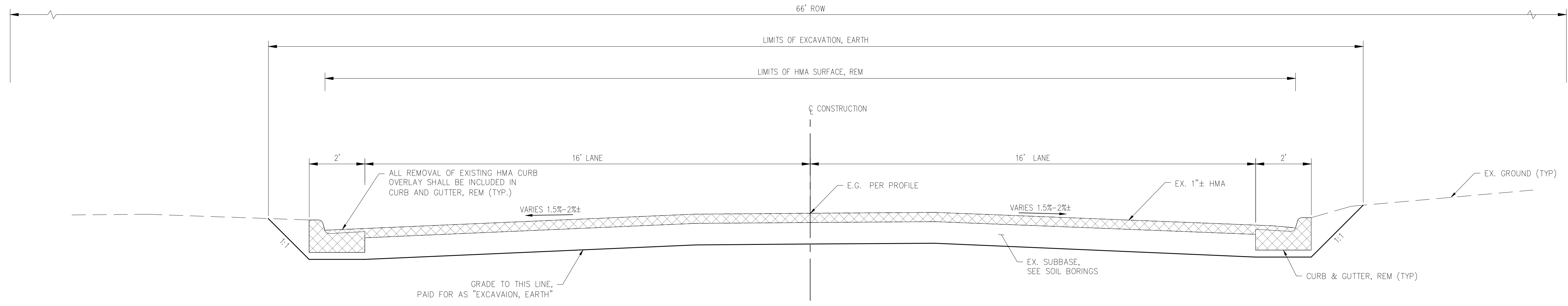
Mannik Smith GROUP
www.MannikSmithGroup.com

PREPARED FOR:
CITY OF HILLSDALE
97 BOARD STREET
HILLSDALE, MI 49242

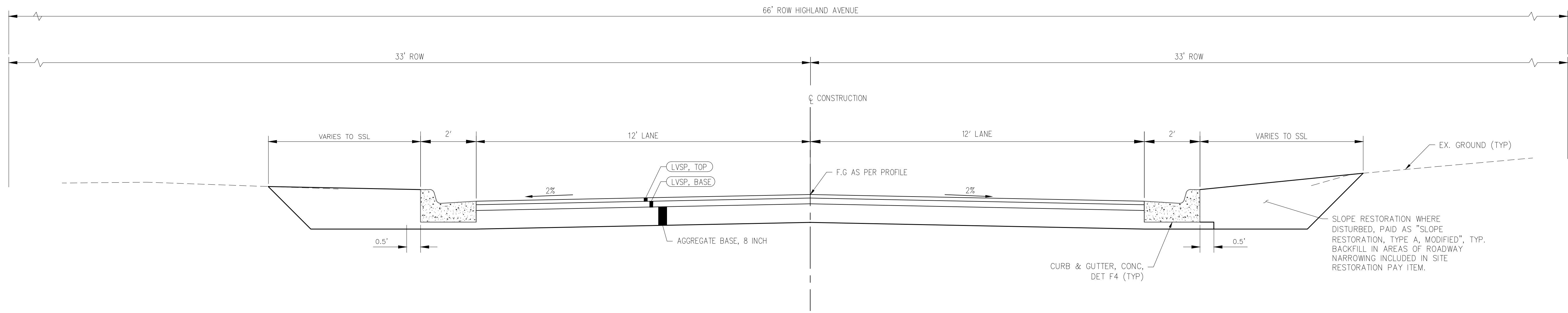
WESTWOOD AREA RECONSTRUCTION
WESTWOOD SUBDIVISIONS

TYPICAL SECTIONS
WESTWOOD STREET

11 52



EXISTING TYPICAL SECTION
HIGHLAND AVENUE STA. HI 0+13 TO STA. HI 7+46



PROPOSED TYPICAL SECTION
HIGHLAND AVENUE STA. HI 0+13 TO STA. HI 7+46

| HMA APPLICATION TABLE | | | | |
|-----------------------|-----------|------------------|-------------------|--|
| IDENT NO. | ITEM | RATE LBS PER SYD | PERFORMANCE GRADE | REMARKS |
| LVSP, TOP | HMA, LVSP | 165 | PG 58-28 | TOP COURSE (AWI=260 MIN., TARGET AIR VOIDS 3.0%) |
| LVSP, BASE | HMA, LVSP | 275 | PG 58-28 | BASE COURSE |
| | BOND COAT | 0.05-0.15 GAL | | SS-AH (FOR INFORMATION ONLY) |

*FOR INFORMATION ONLY

| | | | |
|-----|------------|-----|---|
| NO. | DATE | BY | DESCRIPTION |
| 1 | 01/27/2023 | JPP | 90% HMA SURFACE, 10% CONSTRUCTION PLANS |
| 2 | 02/27/2023 | ACH | REISSUED CONSTRUCTION PLANS |
| 3 | 03/09/2023 | VOM | REISSUED CONSTRUCTION PLANS |

237 NORTH MAIN STREET
ADRIAN, MI 49221
TEL: 517.263.4515

PROJECT DATE: 03/09/2023
PROJECT NO.: H480002
DRAWN BY: JPP
CHECKED BY: ACH

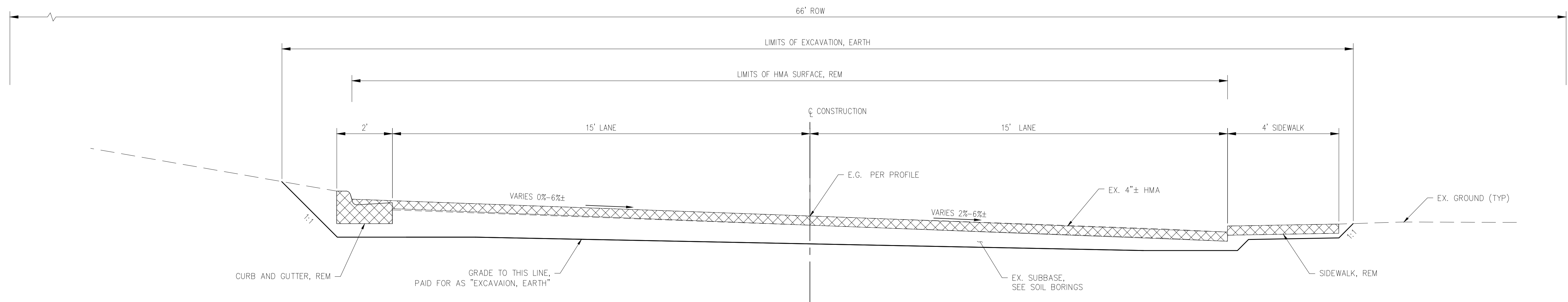


PREPARED FOR:
CITY OF HILLSDALE
97 BOARD STREET
HILLSDALE, MI 49242

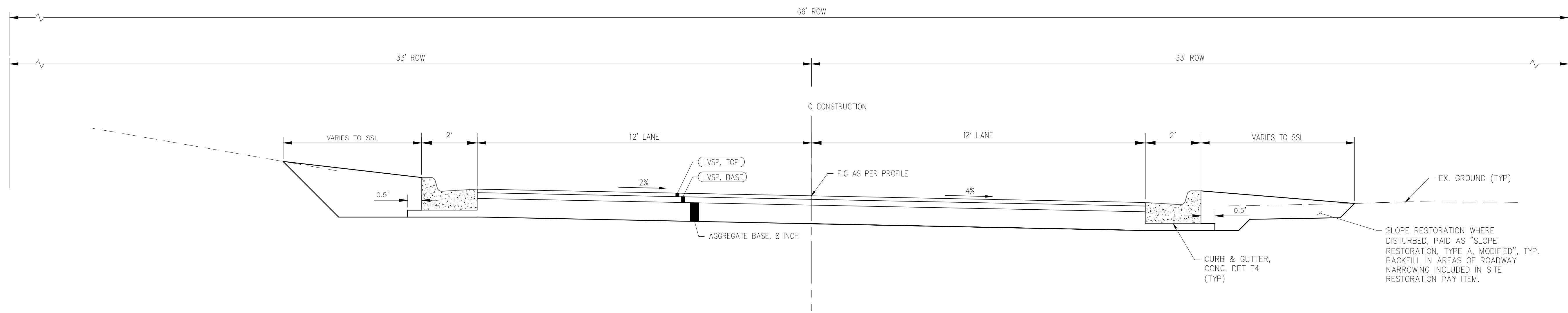
WESTWOOD AREA RECONSTRUCTION
WESTWOOD SUBDIVISIONS

TYPICAL SECTIONS
HIGHLAND AVENUE

W:\Projects\12480002\02\Construction\02\ET\H480002_0101.dwg - 1:48:48 PM 03/09/2023 14:44



EXISTING TYPICAL SECTION
 GLENDALE AVENUE STA. GL 0+00 TO STA. GL 7+47



PROPOSED TYPICAL SECTION
 GLENDALE AVENUE STA. GL 0+00 TO STA. GL 7+47

| HMA APPLICATION TABLE | | | | |
|-----------------------|-----------|------------------|-------------------|--|
| IDENT NO. | ITEM | RATE LBS PER SYD | PERFORMANCE GRADE | REMARKS |
| LVSP, TOP | HMA, LVSP | 165 | PG 58-28 | TOP COURSE (AWI=260 MIN., TARGET AIR VOIDS 3.0%) |
| LVSP, BASE | HMA, LVSP | 275 | PG 58-28 | BASE COURSE |
| | BOND COAT | 0.05-0.15 GAL | | SS-AH (FOR INFORMATION ONLY) |

*FOR INFORMATION ONLY

| | | | |
|-----|------------|-----|-----------------------------|
| NO. | DATE | BY | DESCRIPTION |
| 1 | 03/08/2023 | ACH | 90% REVISIONS |
| 2 | 03/08/2023 | ACH | CONSTRUCTION PLANS |
| 3 | 03/08/2023 | VOM | REISSUED CONSTRUCTION PLANS |

237 NORTH MAIN STREET
 ADRIAN, MI 49221
 TEL: 517.263.4515

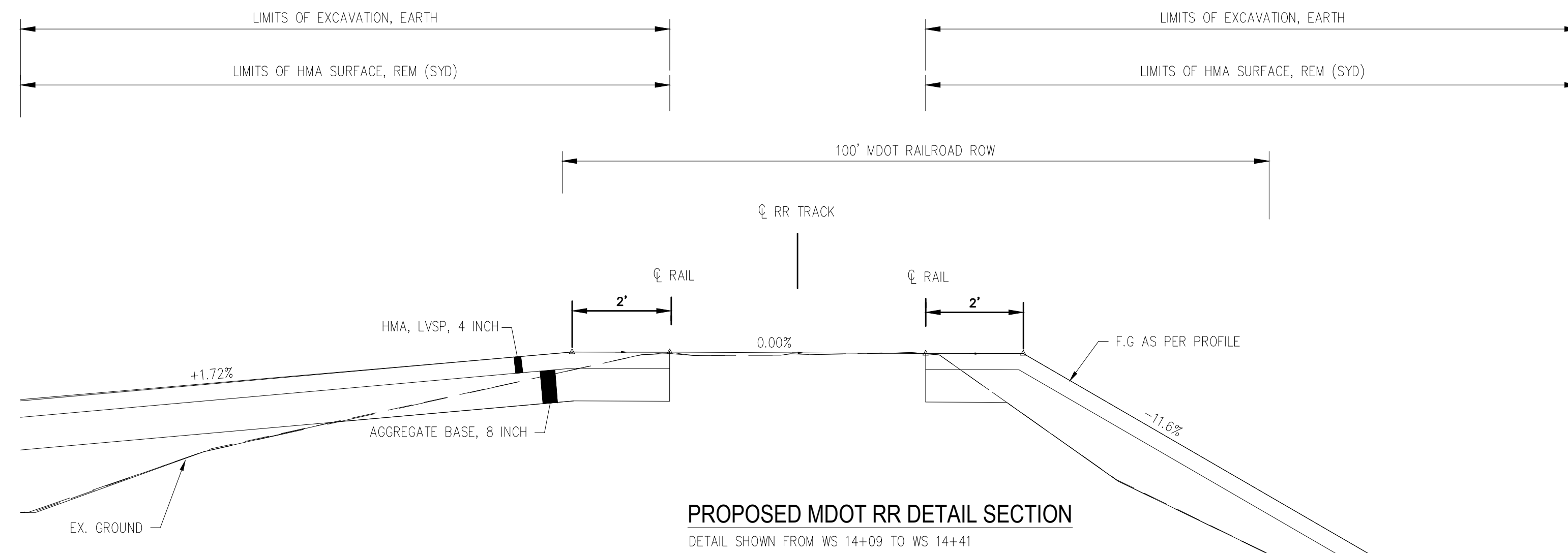
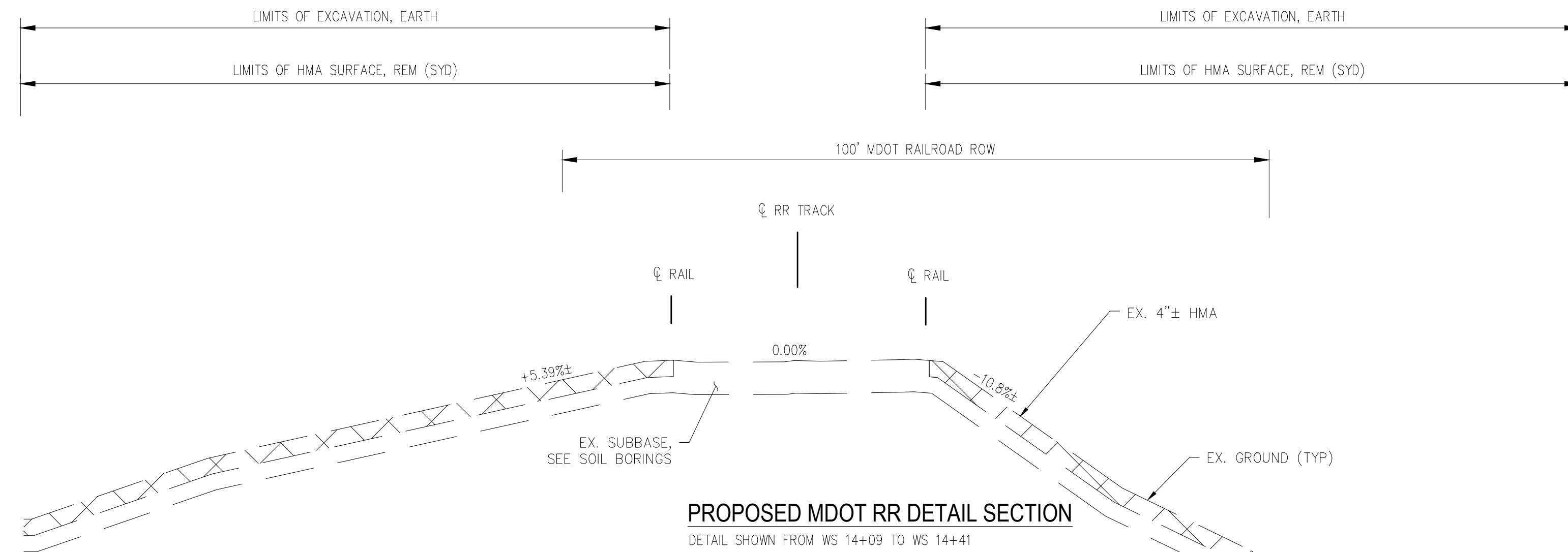
PROJECT NO.: H480002
 DRAWN BY: JPP
 CHECKED BY: ACH



PREPARED FOR:
CITY OF HILLSDALE
 97 BOARD STREET
 HILLSDALE, MI 49242

WESTWOOD AREA RECONSTRUCTION
 WESTWOOD SUBDIVISIONS

TYPICAL SECTIONS
 GLENDALE AVE



| HMA APPLICATION TABLE | | | | |
|-----------------------|-----------|------------------|-------------------|--|
| IDENT NO. | ITEM | RATE LBS PER SYD | PERFORMANCE GRADE | REMARKS |
| LVSP, TOP | HMA, LVSP | 165 | PG 58-28 | TOP COURSE (AWI=260 MIN., TARGET AIR VOIDS 3.0%) |
| LVSP, BASE | HMA, LVSP | 275 | PG 58-28 | BASE COURSE |
| | BOND COAT | 0.05-0.15 GAL | | SS-AH (FOR INFORMATION ONLY) |

*FOR INFORMATION ONLY

| | | | |
|-----|------------|-----|-----------------------------------|
| NO. | DATE | BY | DESCRIPTION |
| 2 | 03/02/2023 | JPP | MDOT PROJECT SUBMISSION REVISIONS |
| | | JPP | |
| | | ACH | |

237 NORTH MAIN STREET
ADRIAN, MI 49221
TEL: 517.263.4515

PROJECT DATE: 03/02/2023
PROJECT NO.: H480002
DRAWN BY: JPP
CHECKED BY: ACH

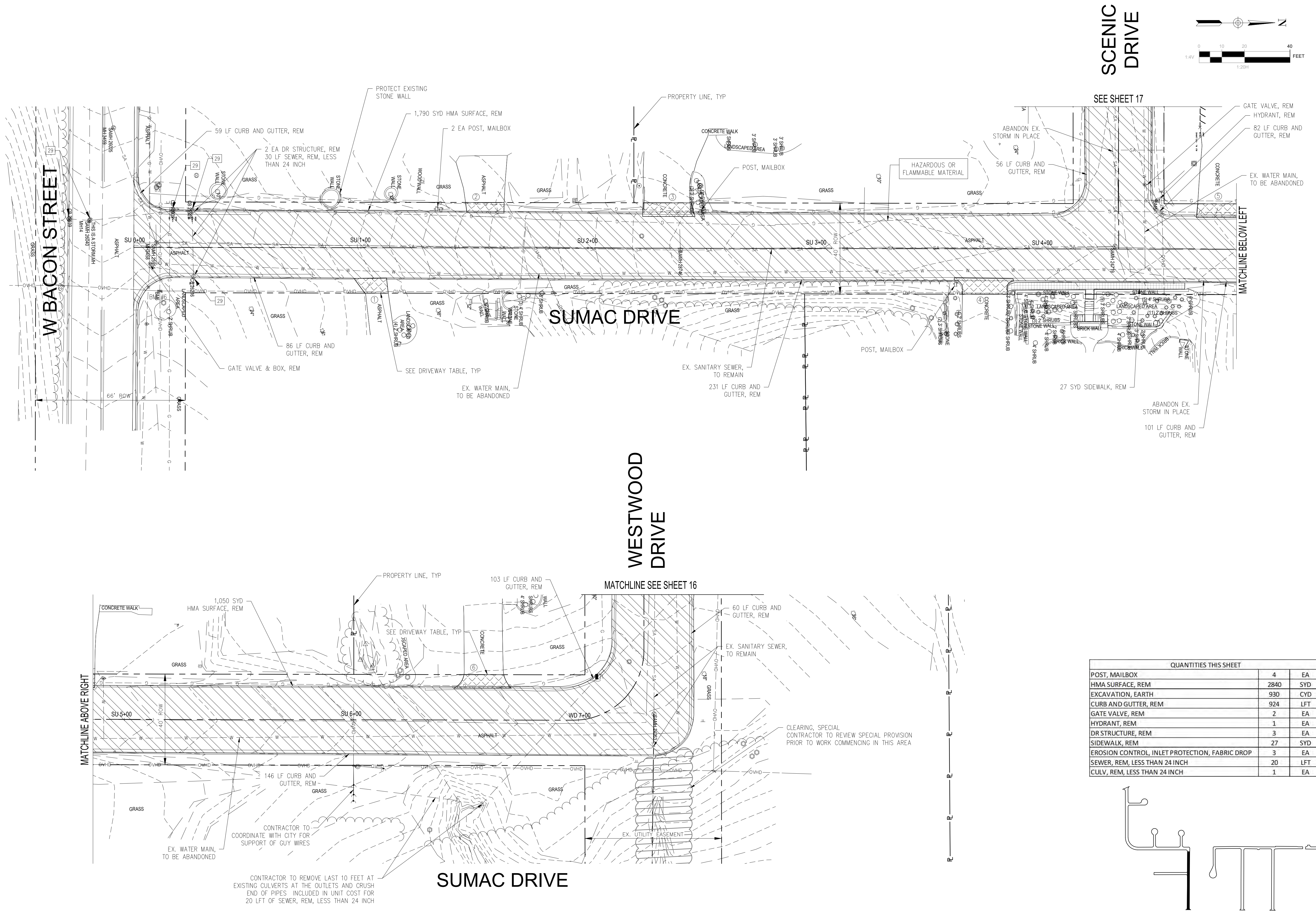


PREPARED FOR:
CITY OF HILLSDALE
97 BOARD STREET
HILLSDALE, MI 49242

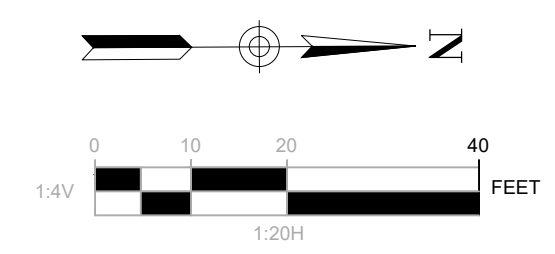
WESTWOOD AREA
RECONSTRUCTION
WESTWOOD SUBDIVISIONS

TYPICAL SECTIONS
MDOT RAILROAD

W:\Projects\1524\1524002\1524002.dwg (1524002) 03/08/2023 10:48 AM



SCENIC DRIVE



SEE SHEET 17

MATCHLINE BELOW LEFT

WESTWOOD DRIVE

MATCHLINE SEE SHEET 16

| QUANTITIES THIS SHEET | | |
|--|------|-----|
| POST, MAILBOX | 4 | EA |
| HMA SURFACE, REM | 2840 | SYD |
| EXCAVATION, EARTH | 930 | CYD |
| CURB AND GUTTER, REM | 924 | LFT |
| GATE VALVE, REM | 2 | EA |
| HYDRANT, REM | 1 | EA |
| DR STRUCTURE, REM | 3 | EA |
| SIDEWALK, REM | 27 | SYD |
| EROSION CONTROL, INLET PROTECTION, FABRIC DROP | 3 | EA |
| SEWER, REM, LESS THAN 24 INCH | 20 | LFT |
| CULV, REM, LESS THAN 24 INCH | 1 | EA |

CONTRACTOR TO REMOVE LAST 10 FEET AT EXISTING CULVERTS AT THE OUTLETS AND CRUSH END OF PIPES INCLUDED IN UNIT COST FOR 20 LFT OF SEWER, REM, LESS THAN 24 INCH

CLEARING, SPECIAL CONTRACTOR TO REVIEW SPECIAL PROVISION PRIOR TO WORK COMMENCING IN THIS AREA

MATCHLINE ABOVE RIGHT

| | | | |
|-----|------------|-----|-----------------------------|
| NO. | DATE | BY | DESCRIPTION |
| 1 | 12/15/22 | ACH | REVISION |
| 2 | 1/27/2023 | ACH | CONSTRUCTION PLANS |
| 3 | 03/08/2023 | DOM | REISSUED CONSTRUCTION PLANS |

| | | | |
|-----|------------|-----|-------------|
| NO. | DATE | BY | DESCRIPTION |
| 1 | 03/08/2023 | KWH | ACH |
| 2 | 03/08/2023 | KWH | ACH |

237 NORTH MAIN STREET
ADRIAN, MI 49221
TEL: 517.263.4515

PROJECT DATE: 03/08/2023
PROJECT NO.: H4890002
DRAWN BY: KWH
CHECKED BY: ACH

TECHNICAL SKILL:
CREATIVE SPIRIT.

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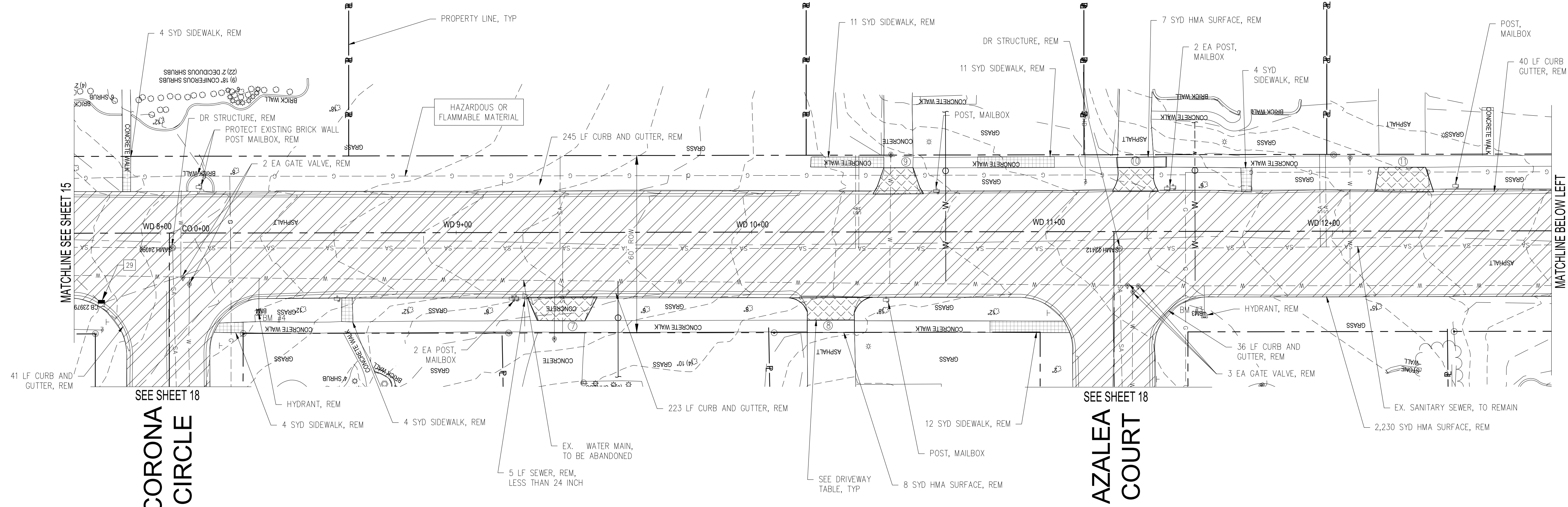
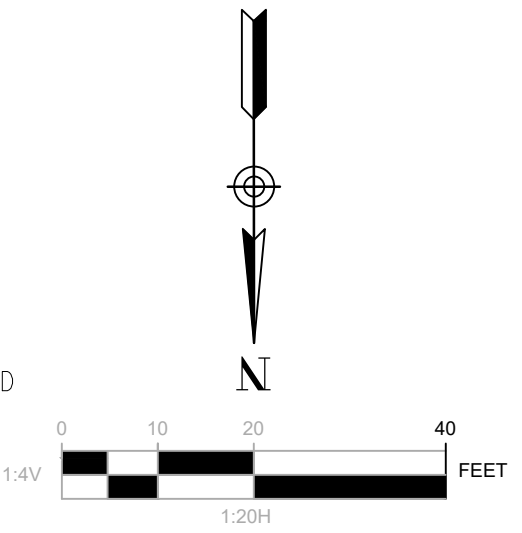
PREPARED FOR:
CITY OF HILLSDALE
97 BROAD STREET
HILLSDALE, MI 49242

WESTWOOD AREA
RECONSTRUCTION
WESTWOOD AREA

SUMAC DRIVE
REMOVAL

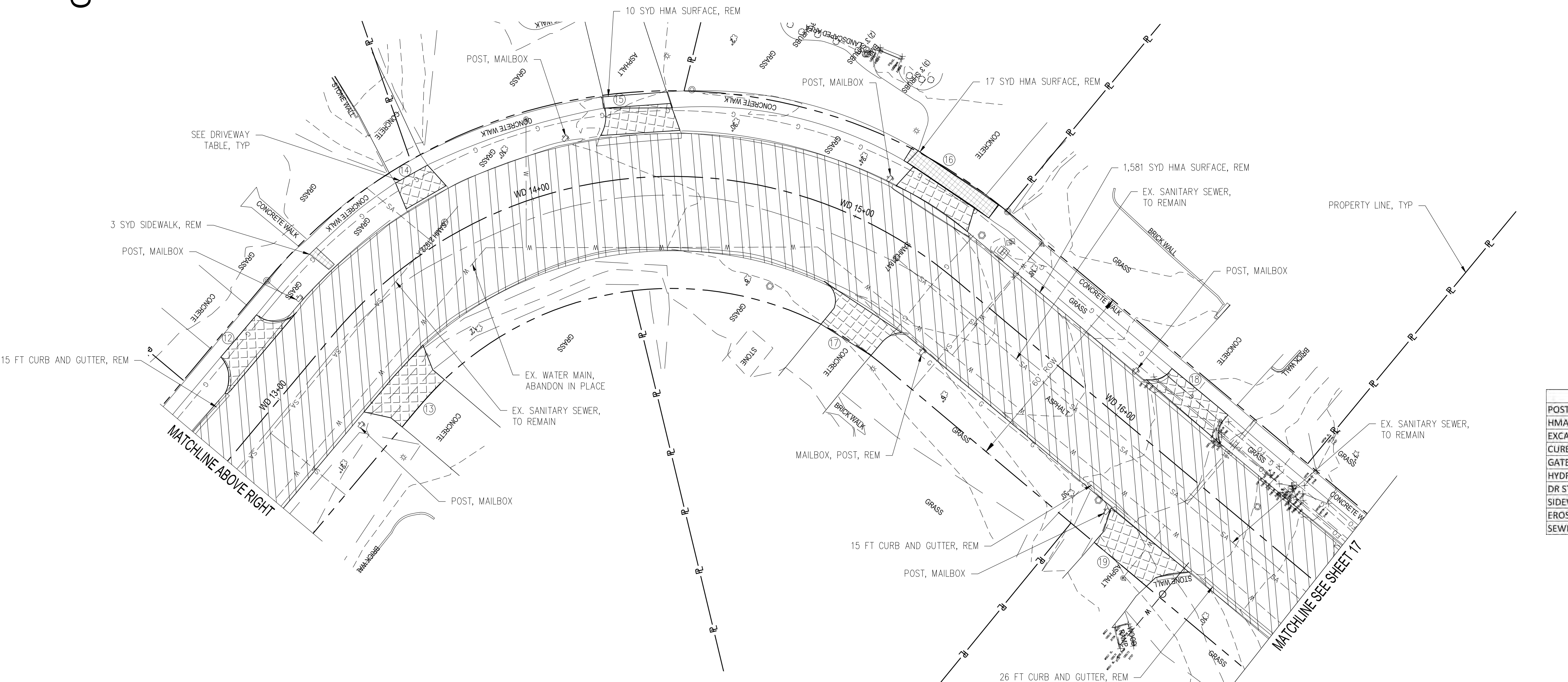
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|----|----|
| 15 | 52 |
|----|----|

WESTWOOD DRIVE



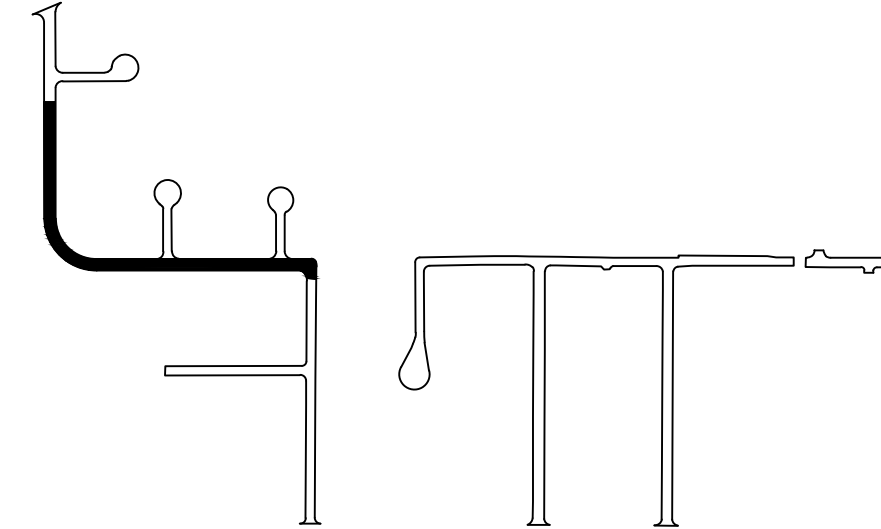
CORONA
CIRCLE

AZALEA
COURT



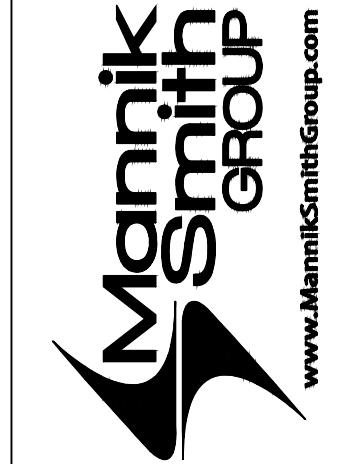
WESTWOOD DRIVE

| QUANTITIES THIS SHEET | | |
|--|------|-----|
| POST, MAILBOX | 15 | EA |
| HMA SURFACE, REM | 3863 | SYD |
| EXCAVATION, EARTH | 1030 | CYD |
| CURB AND GUTTER, REM | 641 | LFT |
| GATE VALVE, REM | 5 | EA |
| HYDRANT, REM | 2 | EA |
| DR STRUCTURE, REM | 2 | EA |
| SIWALK, REM | 80 | SYD |
| EROSION CONTROL, INLET PROTECTION, FABRIC DROP | 1 | EA |
| SEWER, REM, LESS THAN 24 INCH | 5 | LFT |



| NO. | DATE | DESCRIPTION | BY |
|-----|------------|-----------------------------|------|
| 1 | 12/18/23 | CONSTRUCTION PLANS | ACH |
| 2 | 1/27/2023 | CONSTRUCTION PLANS | ACH |
| 3 | 03/09/2023 | REISSUED CONSTRUCTION PLANS | VOIM |

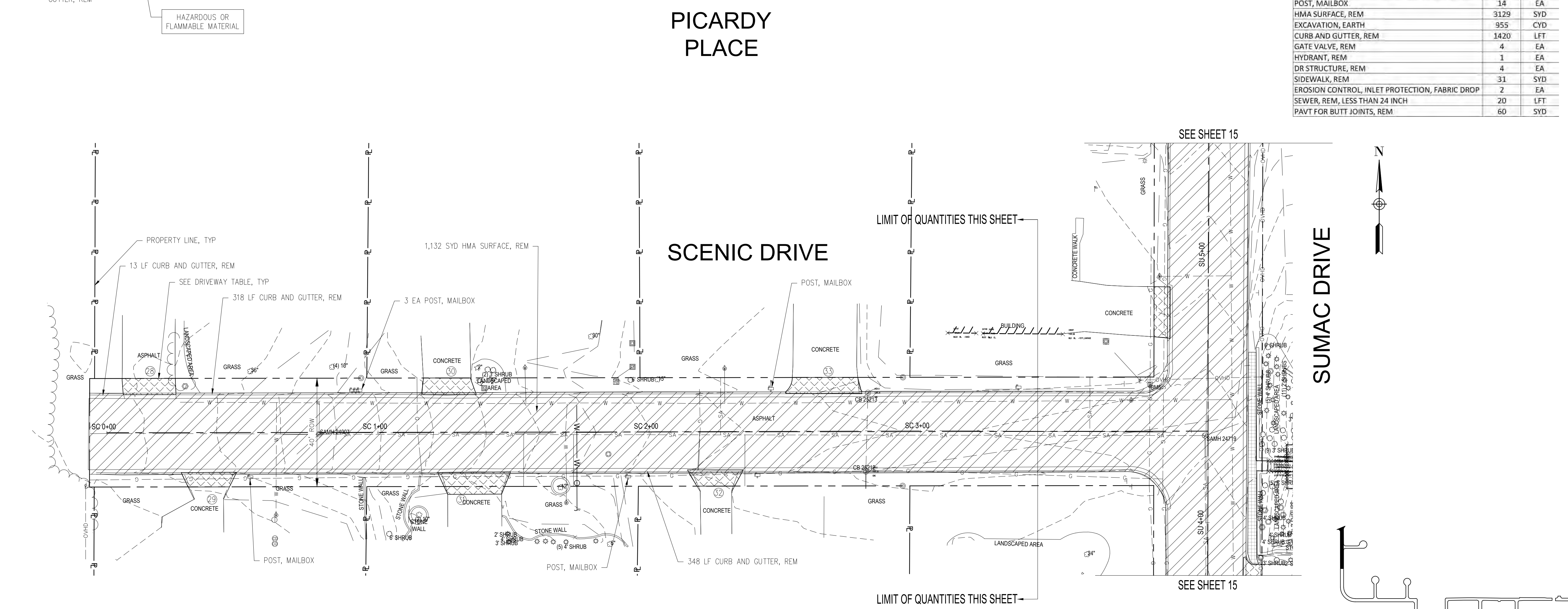
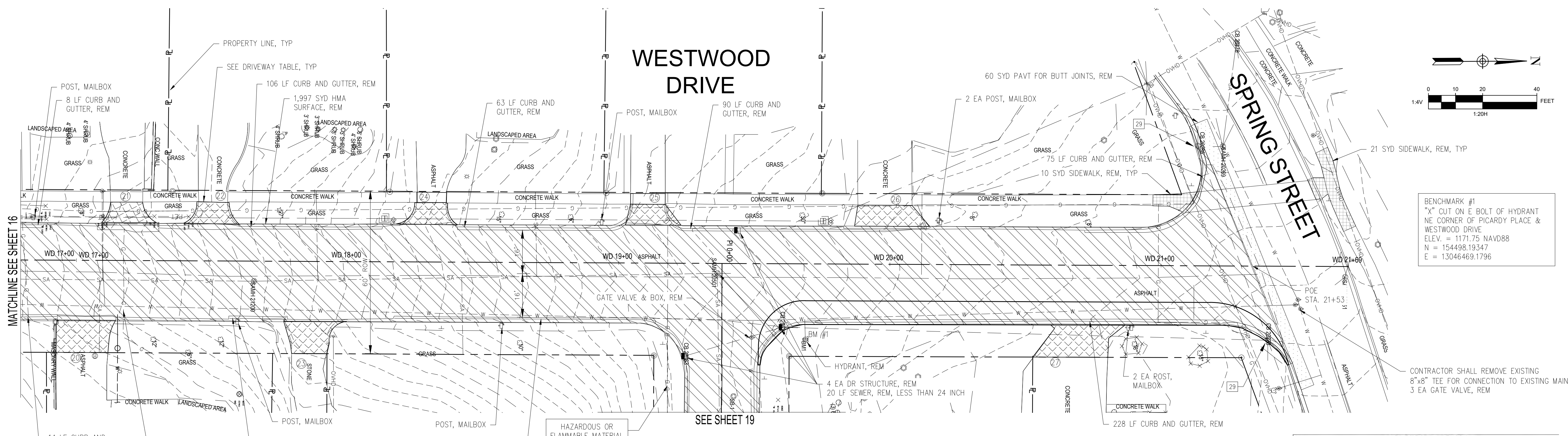
237 NORTH MAIN STREET
ADRIAN, MI 49221
TEL: 517.263.4515



PREPARED FOR:
CITY OF HILLSDALE

**WESTWOOD AREA
RECONSTRUCTION**
WESTWOOD AREA

**WESTWOOD DRIVE
REMOVAL**



MATCHLINE SEE SHEET 16

SEE SHEET 19

SEE SHEET 15

SEE SHEET 15

BENCHMARK #1
 "X" CUT ON E BOLT OF HYDRANT
 NE CORNER OF PICARDY PLACE &
 WESTWOOD DRIVE
 ELEV. = 1171.75 NAVD88
 N = 154498.19347
 E = 13046469.1796

CONTRACTOR SHALL REMOVE EXISTING
 8"x8" TEE FOR CONNECTION TO EXISTING MAIN
 3 EA GATE VALVE, REM

| QUANTITIES THIS SHEET | | |
|--|------|-----|
| POST, MAILBOX | 14 | EA |
| HMA SURFACE, REM | 3129 | SYD |
| EXCAVATION, EARTH | 955 | CYD |
| CURB AND GUTTER, REM | 1420 | LFT |
| GATE VALVE, REM | 4 | EA |
| HYDRANT, REM | 1 | EA |
| DR STRUCTURE, REM | 4 | EA |
| SIDEWALK, REM | 31 | SYD |
| EROSION CONTROL, INLET PROTECTION, FABRIC DROP | 2 | EA |
| SEWER, REM, LESS THAN 24 INCH | 20 | LFT |
| PAVT FOR BUTT JOINTS, REM | 60 | SYD |

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| | | | |
|-----|------------|-----|-----------------------------|
| NO. | DATE | BY | DESCRIPTION |
| 1 | 12/15/23 | ACH | CONSTRUCTION PLANS |
| 2 | 1/27/2023 | ACH | REISSUED CONSTRUCTION PLANS |
| 3 | 03/02/2023 | VOH | REISSUED CONSTRUCTION PLANS |

| | |
|--------------|------------|
| PROJECT NO. | 4480002 |
| PROJECT DATE | 03/02/2023 |
| DRAWN BY | KHW |
| CHECKED BY | ACH |

237 NORTH MAIN STREET
 ADRIAN, MI 49221
 TEL: 517.263.4515

TECHNICAL SKILL:
CREATIVE SPIRIT.

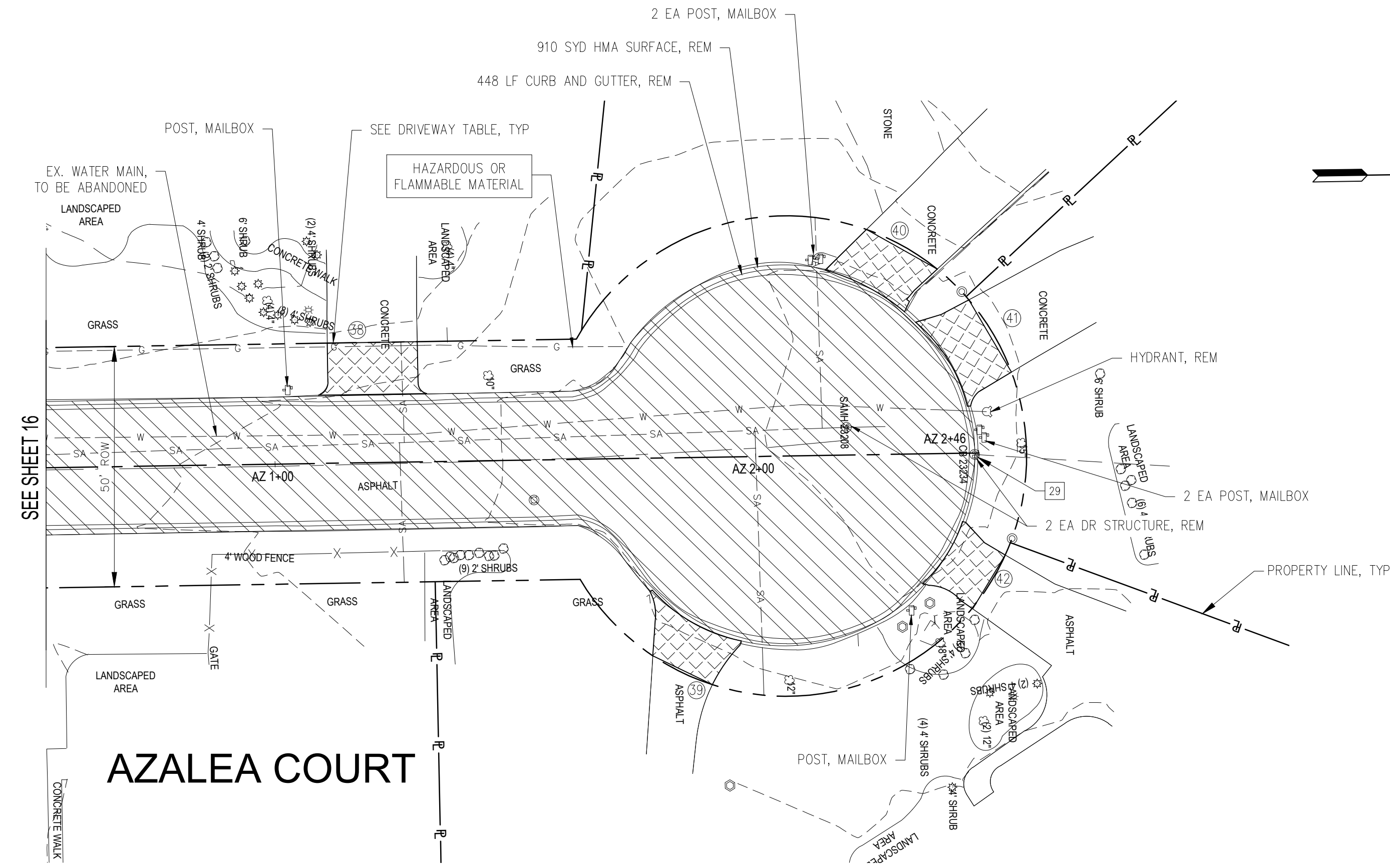
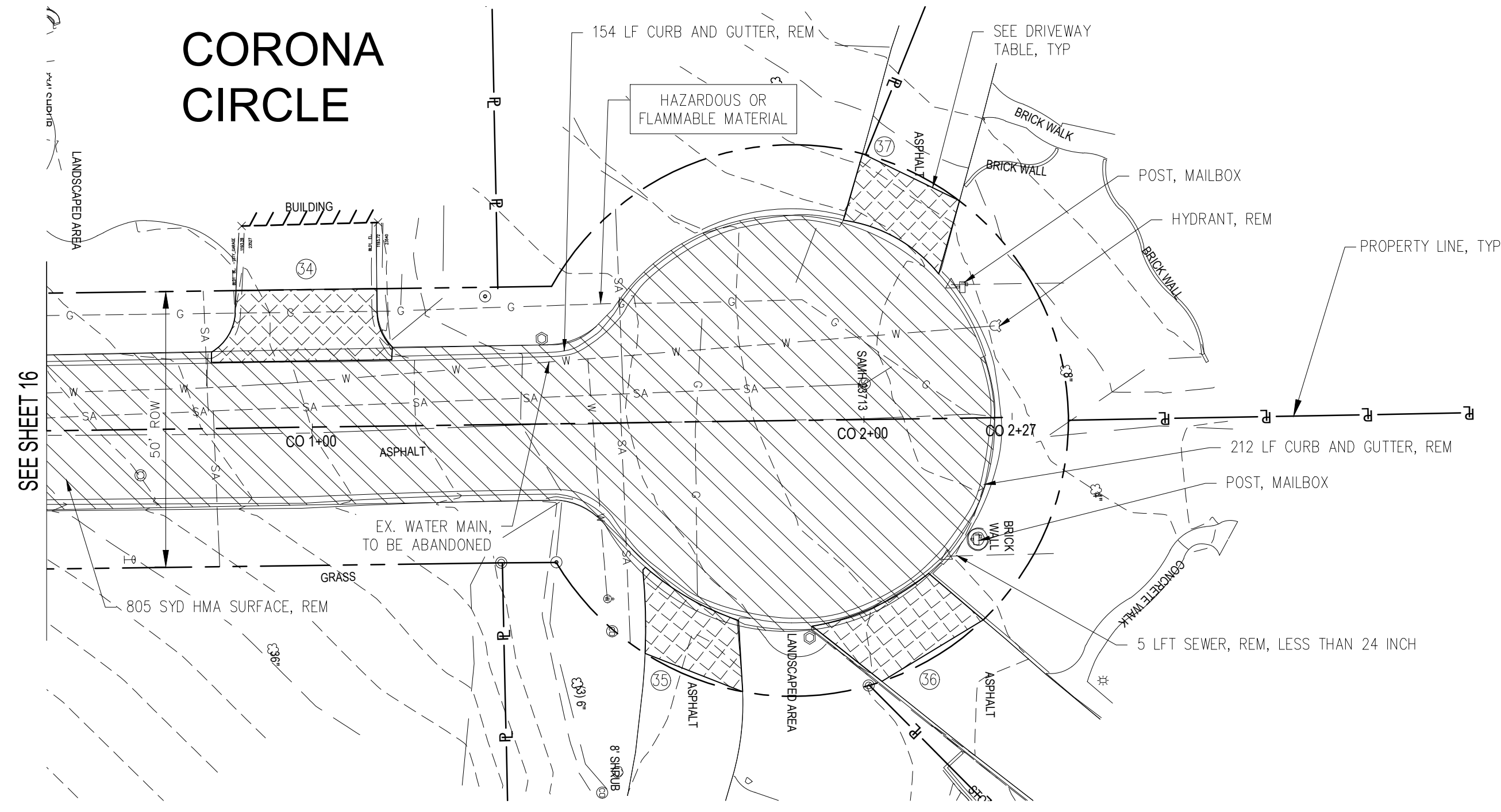
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PREPARED FOR:
CITY OF HILLSDALE
 97 BROAD STREET
 HILLSDALE, MI 49242

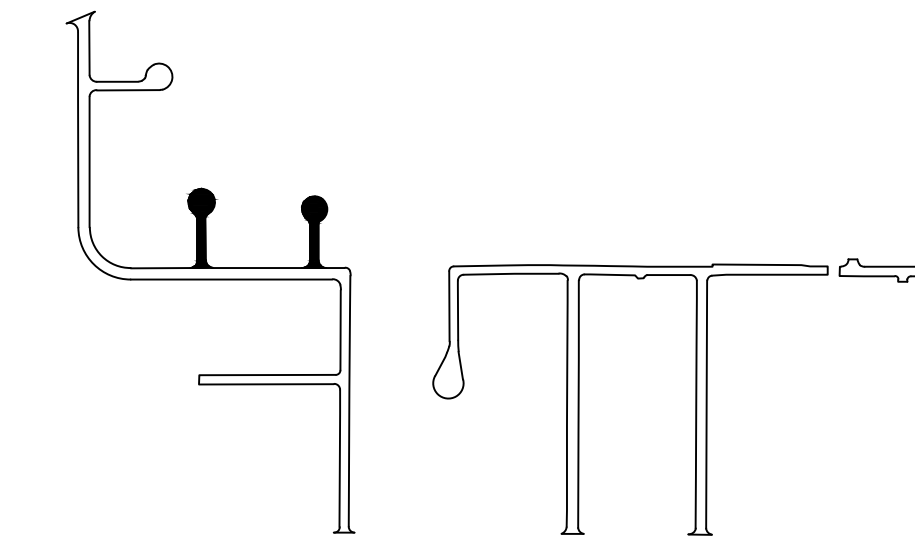
WESTWOOD AREA
 RECONSTRUCTION
 WESTWOOD AREA

WESTWOOD DRIVE &
 SCENIC DRIVE
 REMOVAL

17 52



| QUANTITIES THIS SHEET | | |
|-----------------------|------|-----|
| POST, MAILBOX | 8 | EA |
| HMA SURFACE, REM | 1715 | SYD |
| CURB AND GUTTER, REM | 814 | LFT |
| HYDRANT, REM | 2 | EA |
| DR STRUCTURE, REM | 3 | EA |
| SIDEWALK, REM | 5 | SYD |



| DESCRIPTION | | BY | | DATE | |
|-----------------------------|-----|------------|-----|------------|-----|
| CONSTRUCTION PLANS | ACH | 12/15/22 | ACH | 12/15/22 | ACH |
| REISSUED CONSTRUCTION PLANS | VOM | 03/02/2023 | VOM | 03/02/2023 | VOM |

| PREPARED FOR: | | CITY OF HILLSDALE | |
|------------------------------|---------------|-------------------|---------------------|
| WESTWOOD AREA RECONSTRUCTION | WESTWOOD AREA | 97 BROAD STREET | HILLSDALE, MI 49242 |

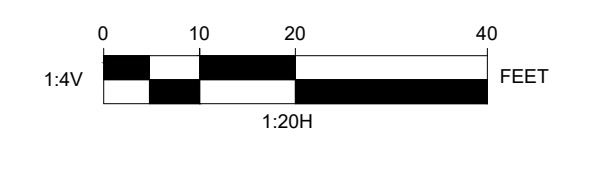
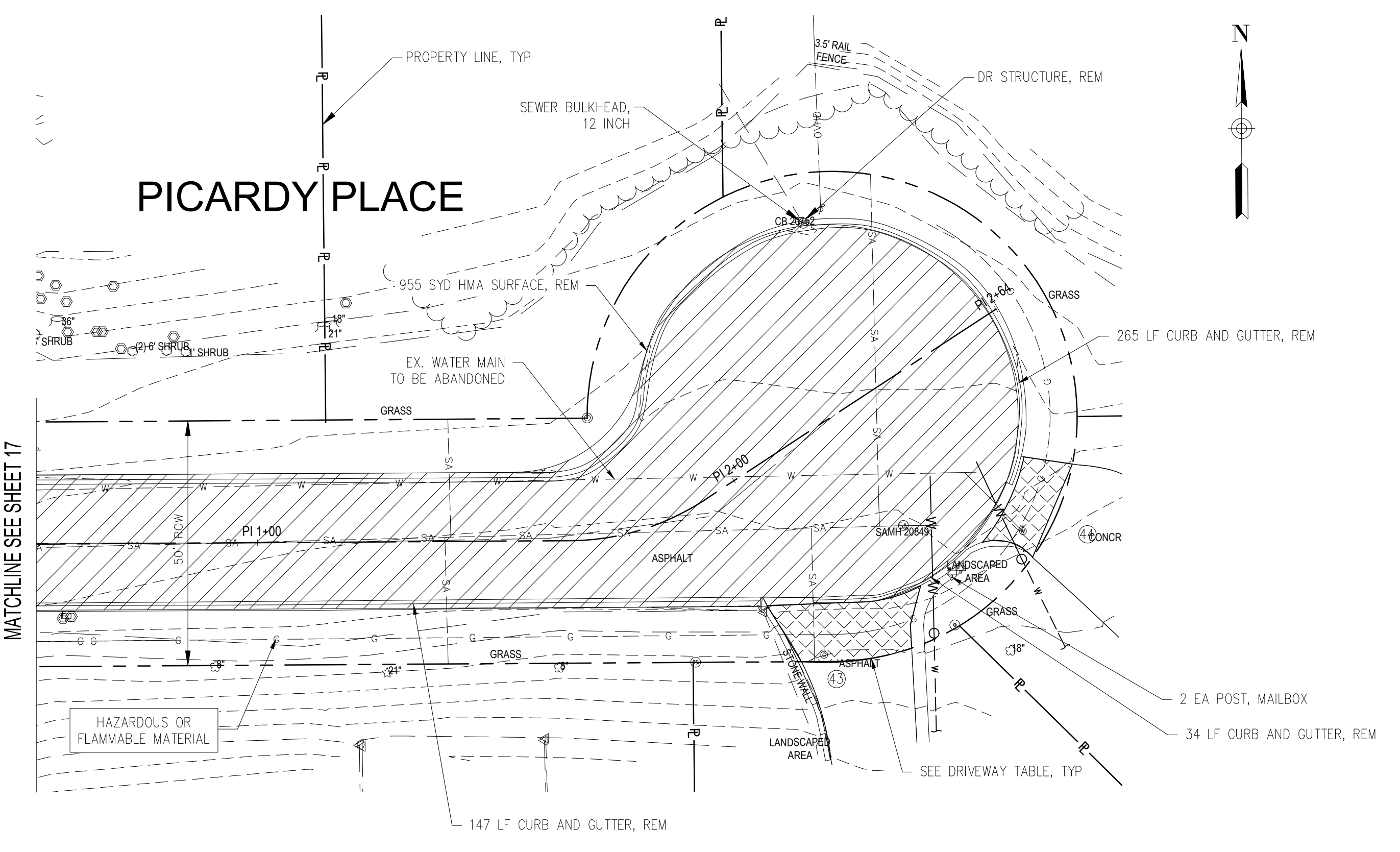
| CORONA CIRCLE AZALEA COURT REMOVAL | |
|------------------------------------|----|
| 18 | 52 |

| PROJECT INFORMATION | |
|---------------------|------------|
| PROJECT NO.: | H489002 |
| PROJECT DATE: | 03/02/2023 |
| DRAWN BY: | KHW |
| CHECKED BY: | ACH |



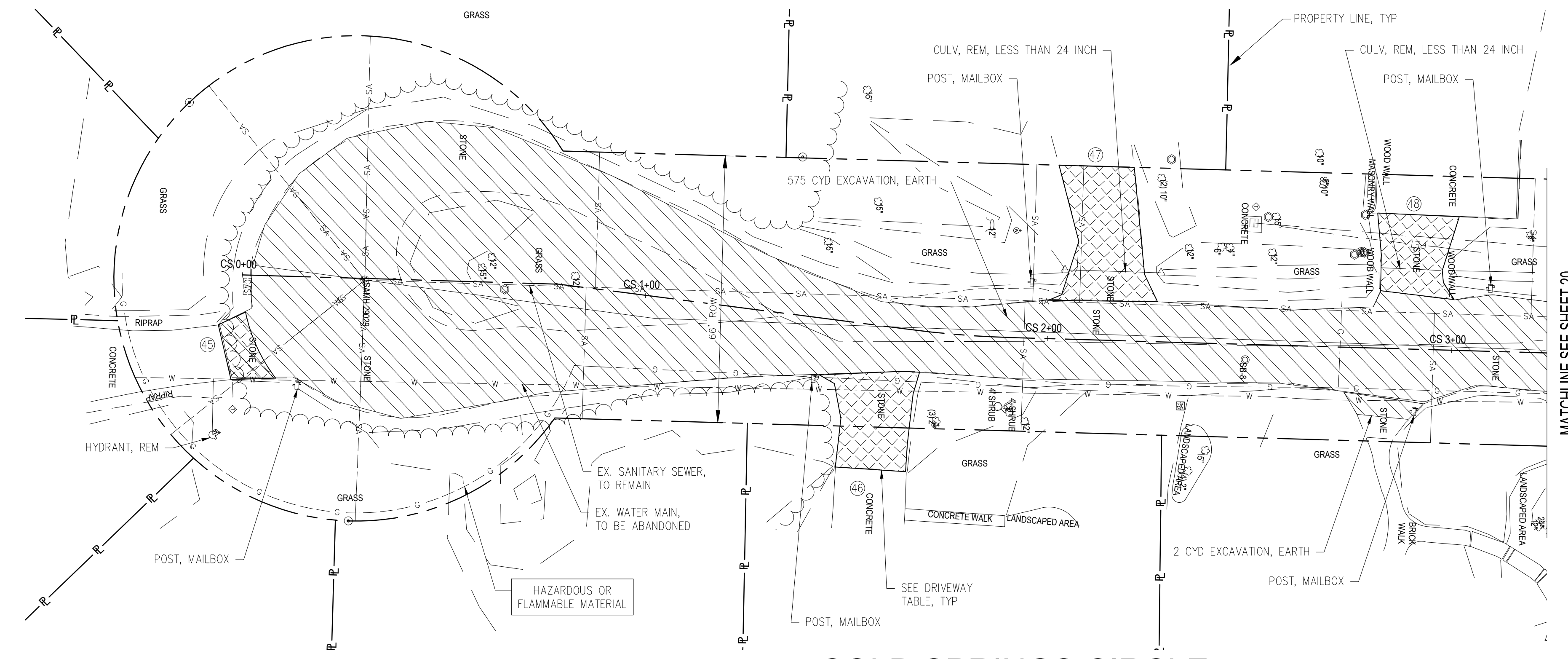
PICARDY PLACE

MATCHLINE SEE SHEET 17

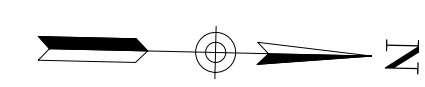


| QUANTITIES THIS SHEET | | |
|------------------------------|-----|-----|
| POST, MAILBOX | 7 | EA |
| HMA SURFACE, REM | 955 | SYD |
| EXCAVATION, EARTH | 577 | CYD |
| CURB AND GUTTER, REM | 446 | LFT |
| HYDRANT, REM | 1 | EA |
| DR STRUCTURE, REM | 1 | EA |
| SEWER BULKHEAD, 12 INCH | 1 | EA |
| CULV, REM, LESS THAN 24 INCH | 2 | EA |

COLD SPRINGS CIRCLE



MATCHLINE SEE SHEET 20

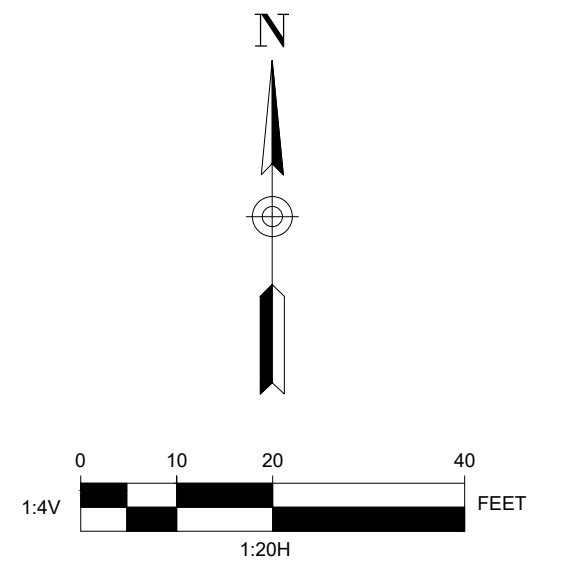
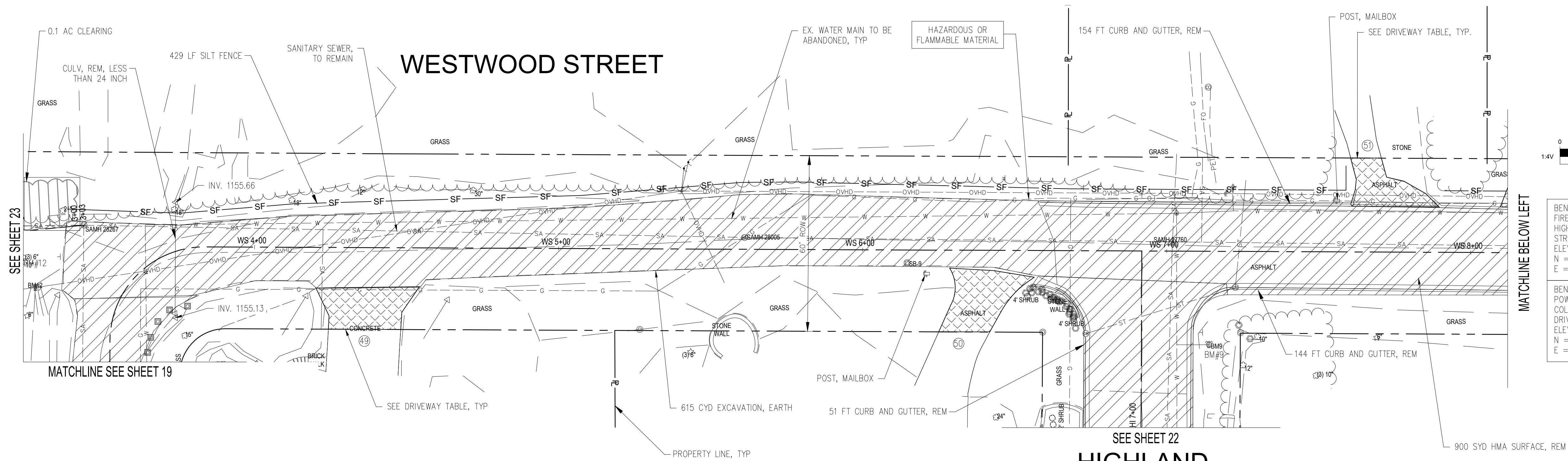


| NO. | DATE | BY | DESCRIPTION |
|-----|------------|-----|--------------------------------|
| 1 | 11/17/23 | ACH | PRELIMINARY CONSTRUCTION PLANS |
| 2 | 1/27/2023 | ACH | CONSTRUCTION PLANS |
| 3 | 03/09/2023 | VOM | REISSUED CONSTRUCTION PLANS |

| | | | |
|--|--------------------------|----------------------|-----|
| 237 NORTH MAIN STREET ADRIAN, MI 49221 TEL: 517.263.4615 | PROJECT DATE: 03/09/2023 | PROJECT NO.: H489002 | KHW |
| DRAWN BY: | | | ACH |
| CHECKED BY: | | | ACH |

| PREPARED FOR: | PROJECT NAME: | PROJECT LOCATION: |
|-------------------|------------------------------|-------------------|
| CITY OF HILLSDALE | WESTWOOD AREA RECONSTRUCTION | WESTWOOD AREA |

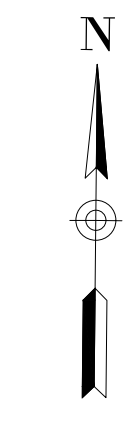
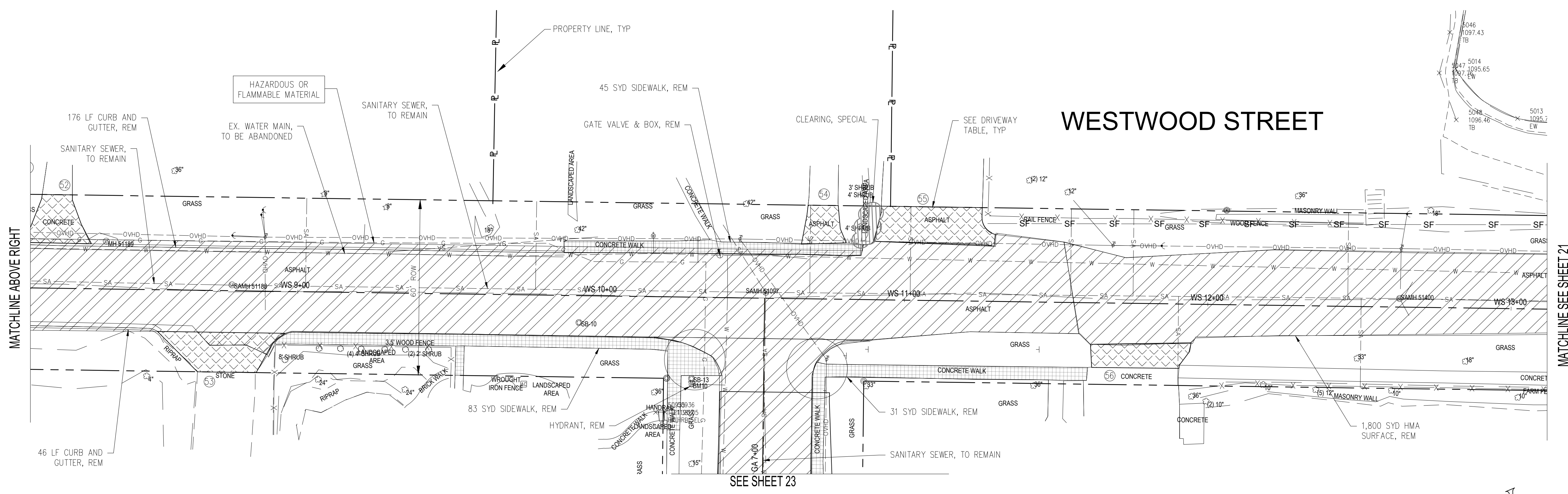
| | |
|----|----|
| 19 | 52 |
|----|----|



BENCHMARK #9
 FIRE HYDRANT AT SE CORNER OF
 HIGHLAND AVENUE & WESTWOOD
 STREET
 ELEV. = 1140.86 NAVD88
 N = 153914.26932
 E = 13047854.8998

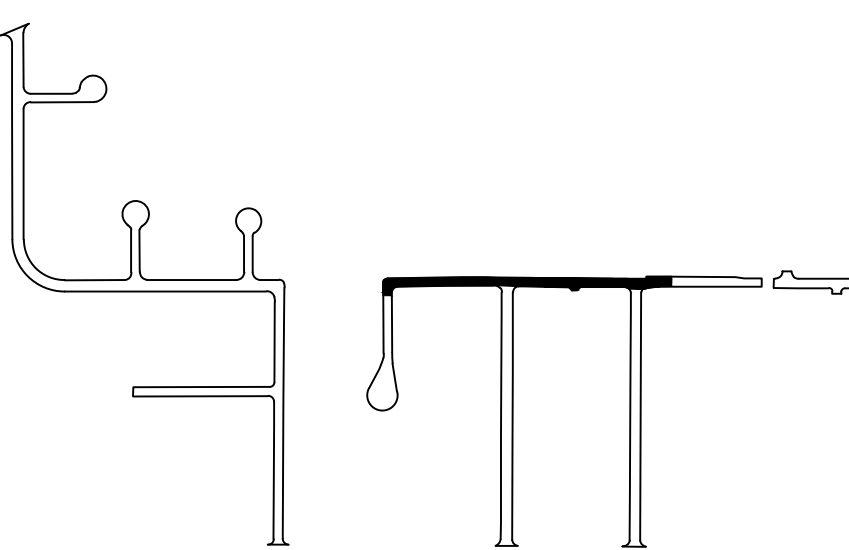
BENCHMARK #12
 POWER POLE AT SW CORNER OF
 COLD SPRING CIRCLE & WESTWOOD
 DRIVE
 ELEV. = 1160.19 NAVD88
 N = 153933.0541
 E = 13047468.9400

SEE SHEET 22
HIGHLAND AVENUE



SEE SHEET 23
GLENDALE AVENUE

| QUANTITIES THIS SHEET | | |
|-----------------------------|------|-----|
| POST, MAILBOX | 2 | EA |
| HMA SURFACE, REM | 2490 | SYD |
| EXCAVATION, EARTH | 1015 | CYD |
| CURB AND GUTTER, REM | 571 | LFT |
| HYDRANT, REM | 2 | EA |
| GATE VALVE, REM | 2 | EA |
| SIDEWALK, REM | 159 | SYD |
| EROSION CONTROL, SILT FENCE | 587 | LFT |



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| | | | |
|-----|------------|-----|-----------------------------|
| NO. | DATE | BY | DESCRIPTION |
| 1 | 12/15/13 | ACH | PRELIMINARY |
| 2 | 1/27/2023 | ACH | CONSTRUCTION PLANS |
| 3 | 03/08/2023 | ACH | REISSUED CONSTRUCTION PLANS |

| | |
|--------------|--|
| PROJECT NO. | 4489002 |
| PROJECT NAME | 237 NORTH MAIN STREET ADRIAN, MI 49221 TEL: 517.263.4515 |
| DRAWN BY | KHW |
| CHECKED BY | ACH |

TECHNICAL SKILL:
CREATIVE SPIRIT.

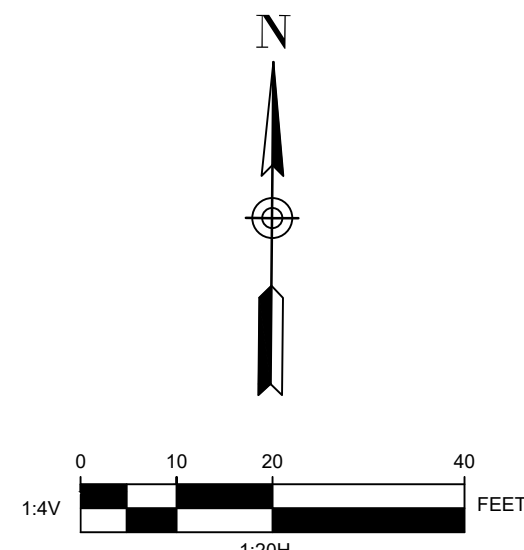
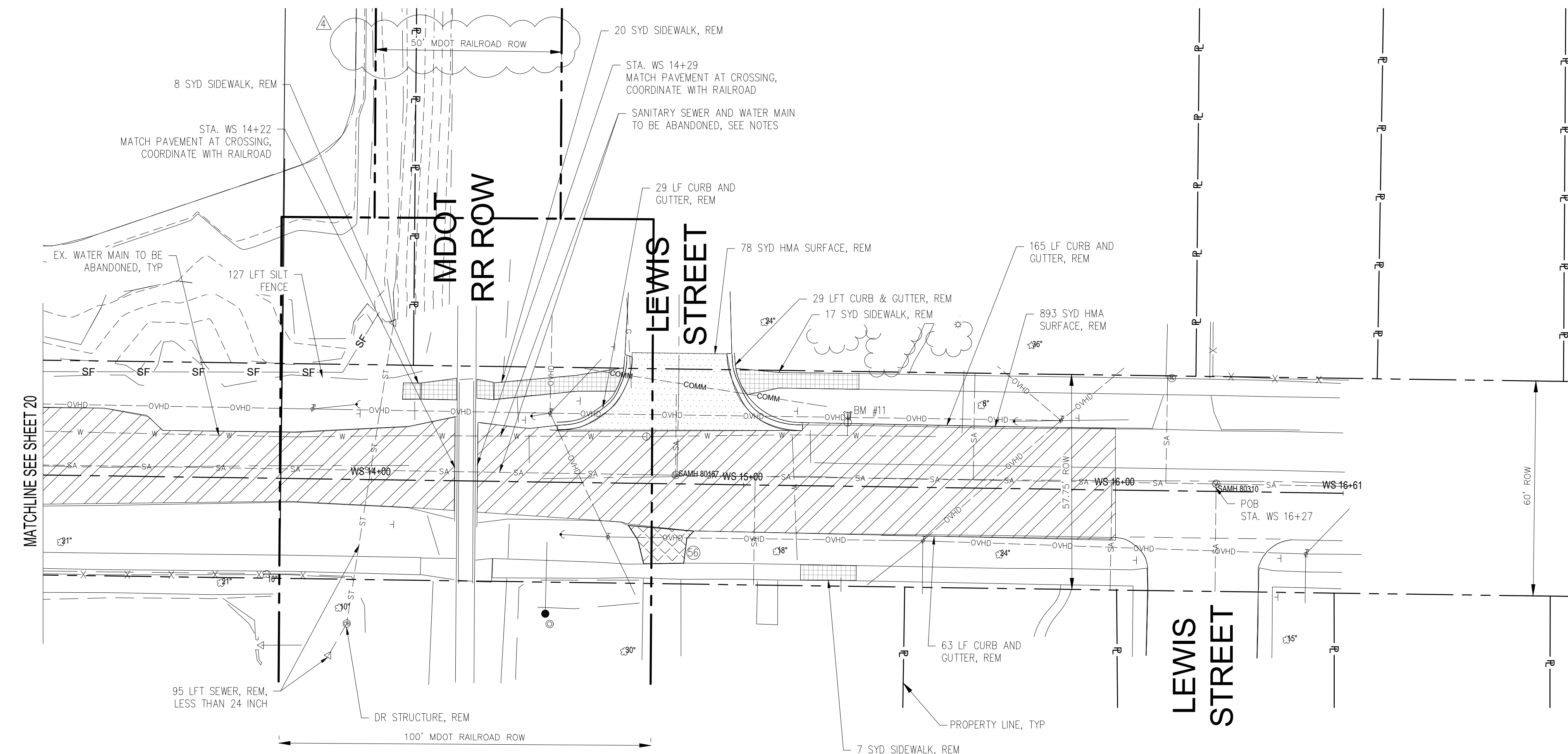
www.MannikSmithGroup.com

PREPARED FOR:
CITY OF HILLSDALE
 97 BROAD STREET
 HILLSDALE, MI 49242

WESTWOOD AREA RECONSTRUCTION
WESTWOOD AREA

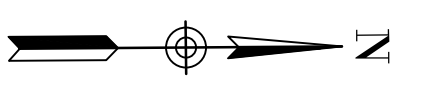
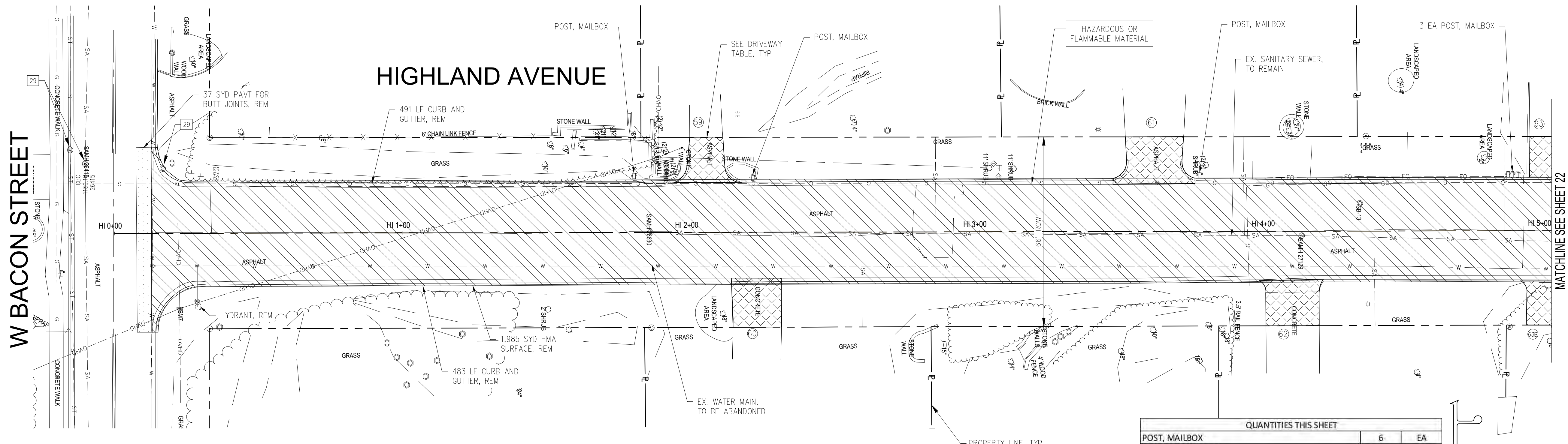
WESTWOOD STREET REMOVAL

20 / 52



BENCHMARK #11
 "X" CUT ON NE BOLT OF HYDRANT
 AT NE CORNER OF LEWIS STREET &
 WESTWOOD STREET
 ELEV. = 1097.69 NAVD88
 N = 153960.2508
 E = 13048669.1802

- NOTES:
- CONTRACTOR SHALL LOCATE THE EXISTING CASING PIPE FOR SANITARY SEWER. ONCE LOCATED, REMOVE 10-FT OF SEWER FOR INSTALLATION OF FLOWABLE FILL. CONTRACTOR SHALL REMOVE SEWER FROM CASING PIPE AND INSTALL 6 CYD OF FLOWABLE FILL TO ABANDON CASING PIPE IN PLACE. THE COST OF CUTTING AND REMOVAL OF SEWER SHALL BE INCLUDED IN THE COST FOR THE FLOWABLE FILL, NON-STRUCTURAL PAY ITEM.
 - CONTRACTOR SHALL LOCATE THE EXISTING CASING PIPE FOR WATER MAIN. ONCE LOCATED, REMOVE 10-FT OF WATER MAIN FOR INSTALLATION OF FLOWABLE FILL. CONTRACTOR SHALL REMOVE WATER MAIN FROM CASING PIPE AND INSTALL 6 CYD OF FLOWABLE FILL TO ABANDON CASING PIPE IN PLACE. THE COST OF CUTTING AND REMOVAL OF WATER MAIN SHALL BE INCLUDED IN THE COST FOR THE FLOWABLE FILL, NON-STRUCTURAL PAY ITEM.
 - MDOT RAILROAD INFORMATION:
 INDIANA NORTHERN RAILROAD COMPANY
 CROSSING NUMBER: 5099155; MP 55.87



| QUANTITIES THIS SHEET | | |
|--|------|-----|
| POST, MAILBOX | 6 | EA |
| HMA SURFACE, REM | 2878 | SYD |
| CURB AND GUTTER, REM | 1225 | LFT |
| HYDRANT, REM | 2 | EA |
| SIDEWALK, REM | 45 | SYD |
| EROSION CONTROL, SILT FENCE | 127 | LFT |
| EROSION CONTROL, INLET PROTECTION, FABRIC DROP | 2 | EA |
| PAVT FOR BUTT JOINTS, REM | 37 | SYD |
| SEWER, REM, LESS THAN 24 INCH | 85 | LFT |
| DR STRUCTURE, REM | 1 | EA |

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| | | | | | | | | | | |
|-----------------------------|----|------|-----|--|---------------|------------|--------------|---------|-----|-----|
| DESCRIPTION | BY | DATE | NO. | 237 NORTH MAIN STREET ADRIAN, MI 49221 TEL: 517.263.4515 | PROJECT DATE: | 03/09/2023 | PROJECT NO.: | H489002 | KHW | ACH |
| REVISIONS | BY | DATE | NO. | | PROJECT NO.: | H489002 | PROJECT NO.: | H489002 | KHW | ACH |
| CONSTRUCTION PLANS | BY | DATE | NO. | | PROJECT NO.: | H489002 | PROJECT NO.: | H489002 | KHW | ACH |
| REISSUED CONSTRUCTION PLANS | BY | DATE | NO. | | PROJECT NO.: | H489002 | PROJECT NO.: | H489002 | KHW | ACH |

PREPARED FOR:
CITY OF HILLSDALE
 97 BROAD STREET
 HILLSDALE, MI 49242

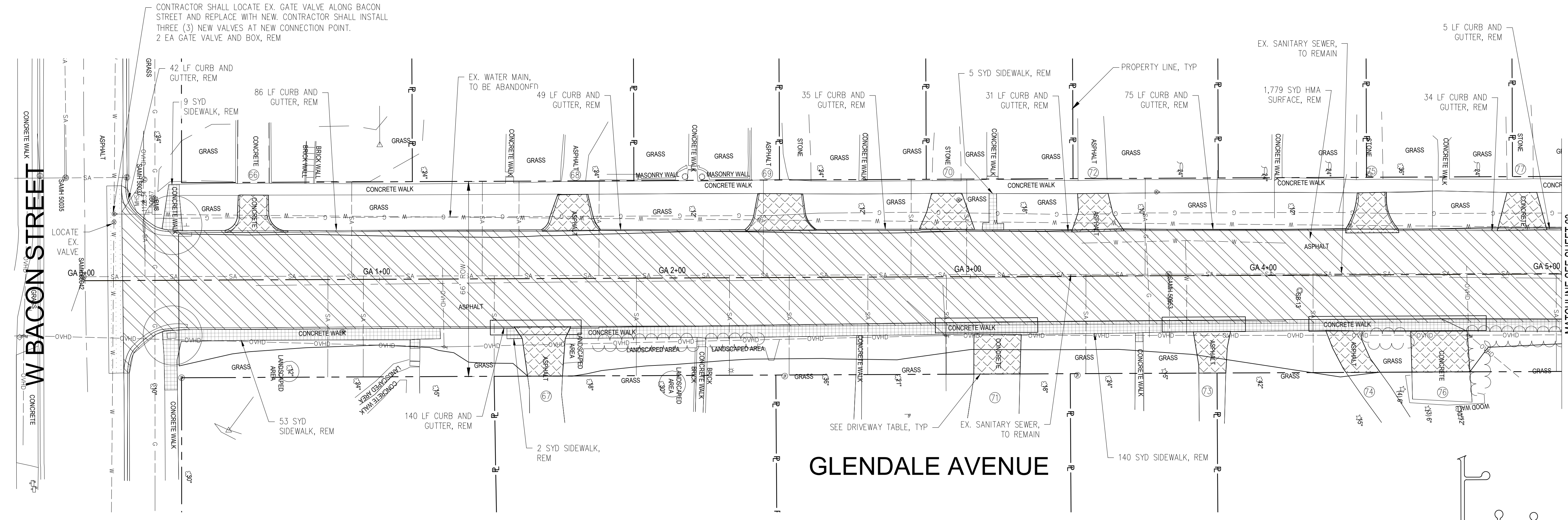
WESTWOOD AREA
 RECONSTRUCTION
 WESTWOOD AREA

HIGHLAND AVENUE
 WESTWOOD STREET
 REMOVAL

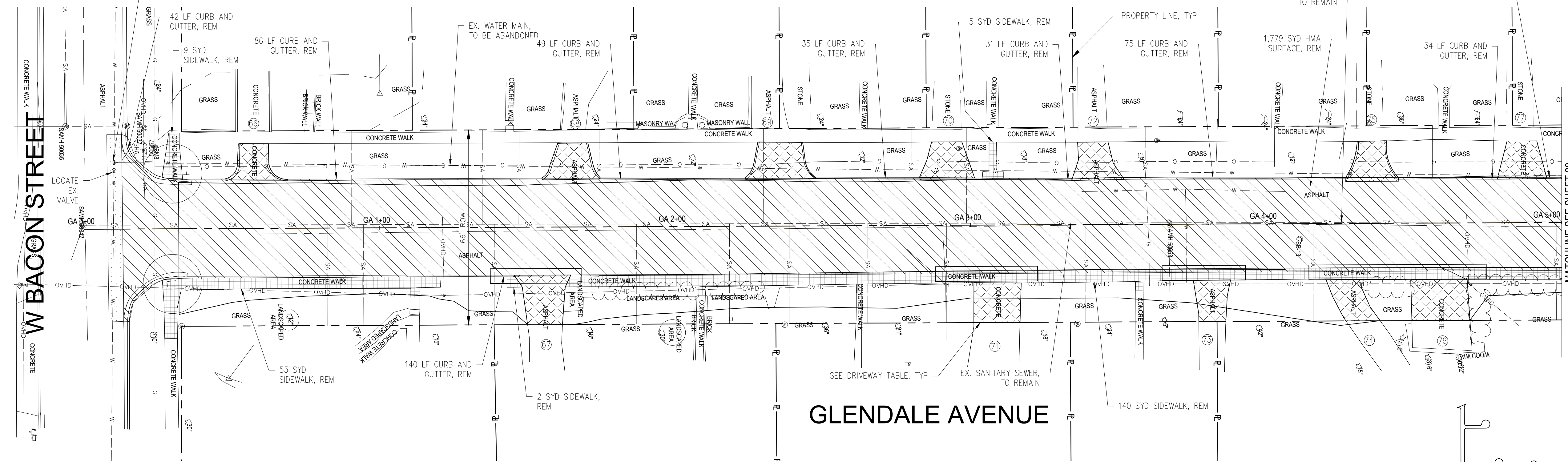
21 52



W:\Projects\18181\18181.dwg

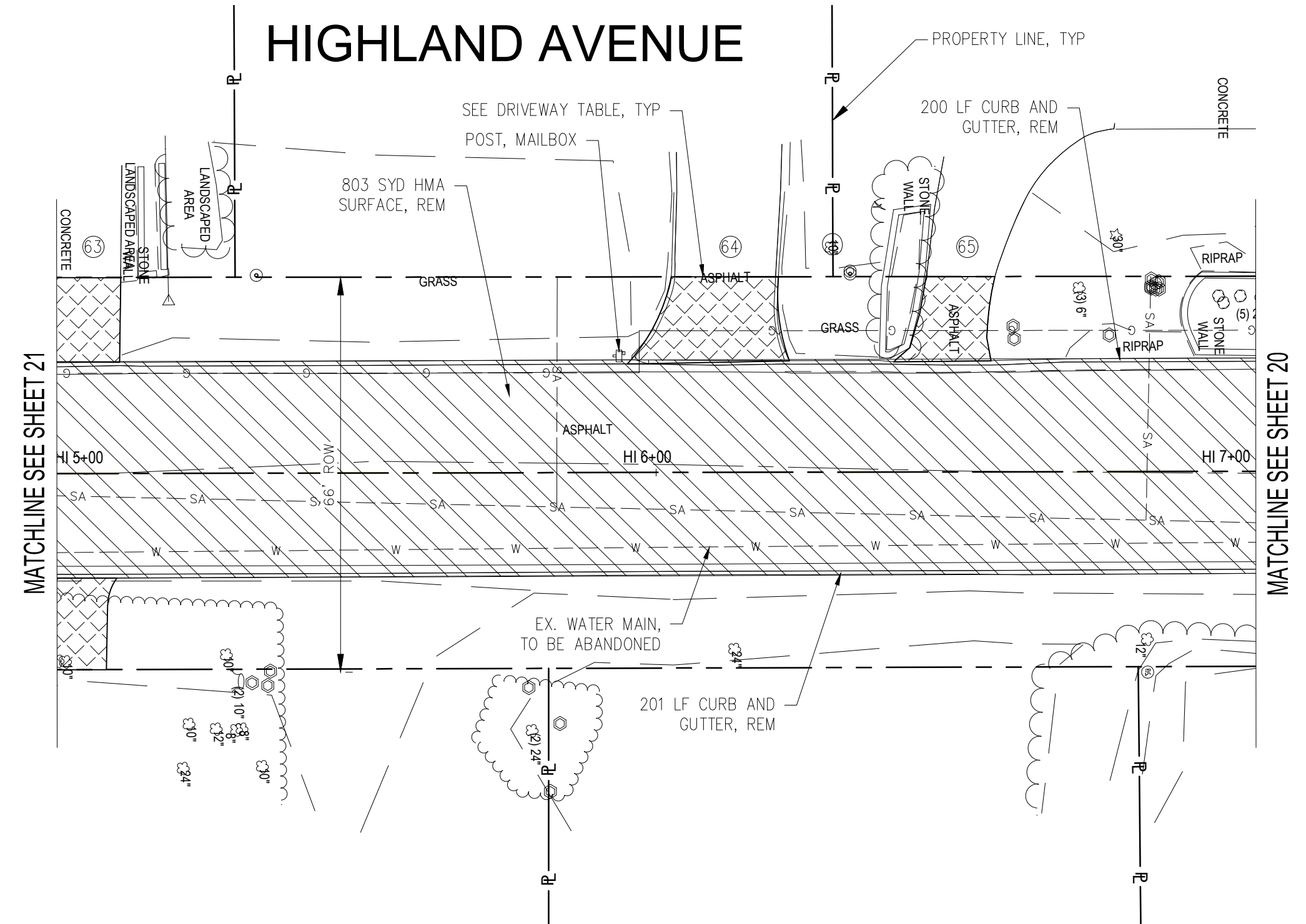


CONTRACTOR SHALL LOCATE EX. GATE VALVE ALONG BACON STREET AND REPLACE WITH NEW. CONTRACTOR SHALL INSTALL THREE (3) NEW VALVES AT NEW CONNECTION POINT.
2 EA GATE VALVE AND BOX, REM



MATCHLINE SEE SHEET 21

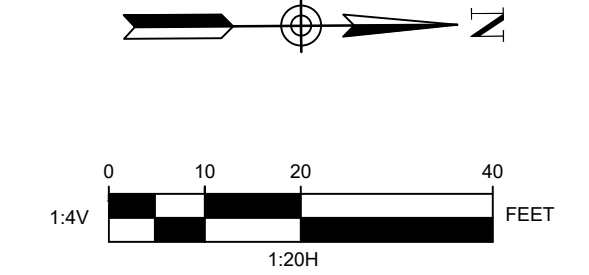
MATCHLINE SEE SHEET 20



HIGHLAND AVENUE

GLENDALE AVENUE

W BACON STREET



| QUANTITIES THIS SHEET | | |
|-----------------------|------|-----|
| POST, MAILBOX | 1 | EA |
| HMA SURFACE, REM | 2582 | SYD |
| CURB AND GUTTER, REM | 898 | LFT |
| SIDEWALK, REM | 209 | SYD |
| GATE VALVE, REM | 2 | EA |

| NO. | DATE | BY | DESCRIPTION |
|-----|------------|-----|-----------------------------|
| 1 | 12/15/22 | ACH | PRELIMINARY |
| 2 | 1/27/2023 | ACH | CONSTRUCTION PLANS |
| 3 | 03/09/2023 | ACH | REISSUED CONSTRUCTION PLANS |

| | | |
|--|----------------------|--------------------------|
| 237 NORTH MAIN STREET ADRIAN, MI 49221 TEL: 517.263.4515 | PROJECT NO.: H489002 | PROJECT DATE: 03/09/2023 |
| | DRAWN BY: KHW | CHECKED BY: ACH |

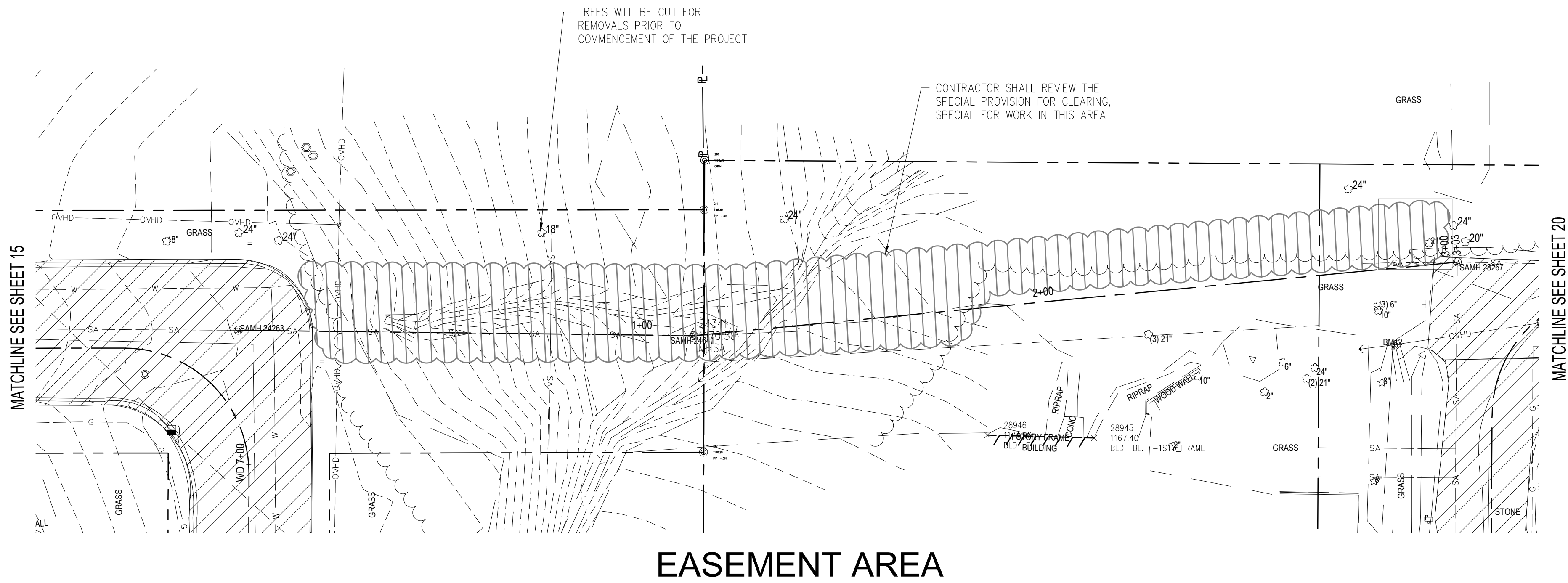
TECHNICAL SKILL:
CREATIVE SPIRIT.

Mannik Smith GROUP
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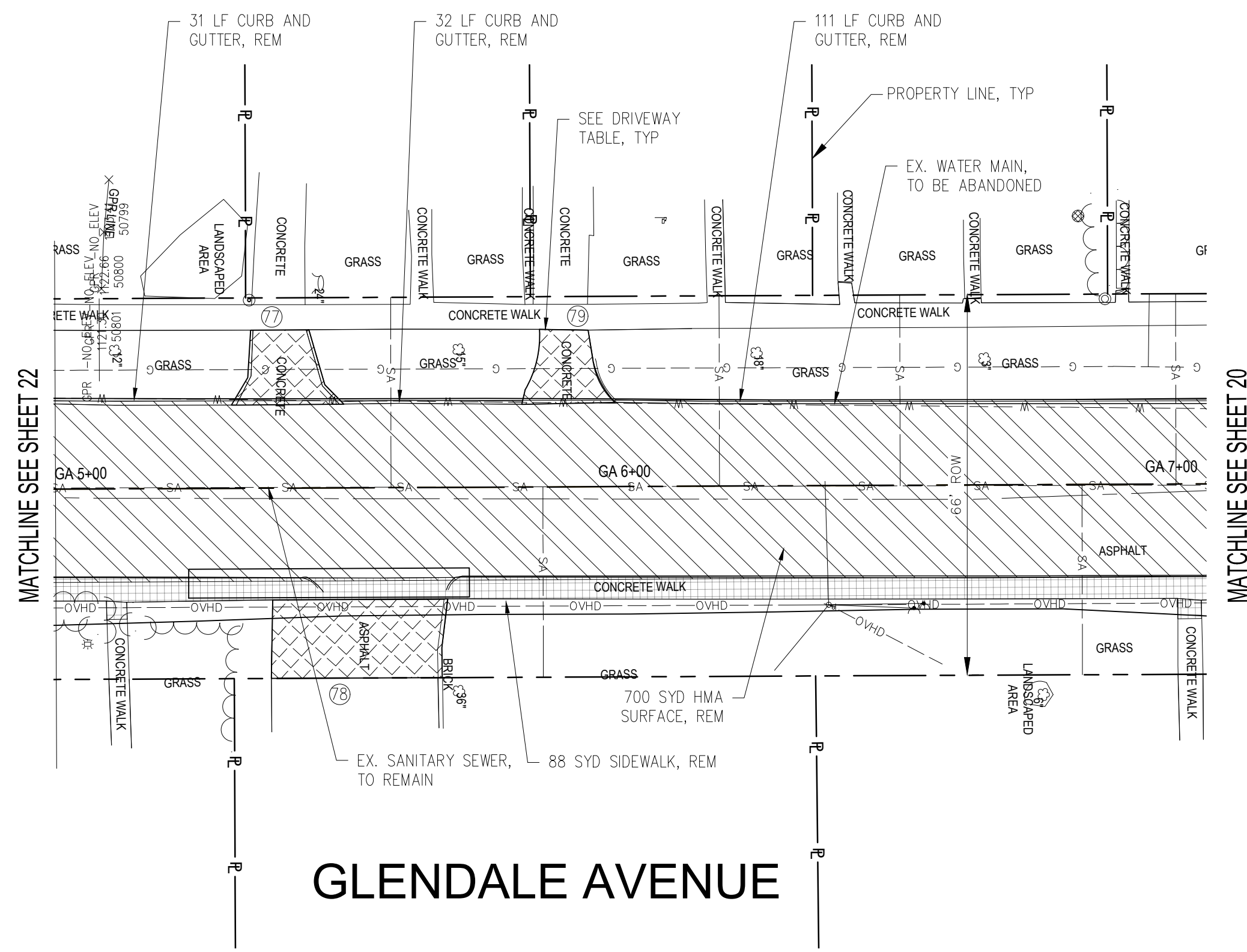
PREPARED FOR:
CITY OF HILLSDALE
97 BROAD STREET
HILLSDALE, MI 49242

**WESTWOOD AREA
RECONSTRUCTION**
WESTWOOD AREA

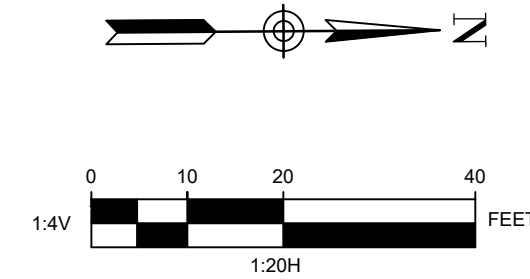
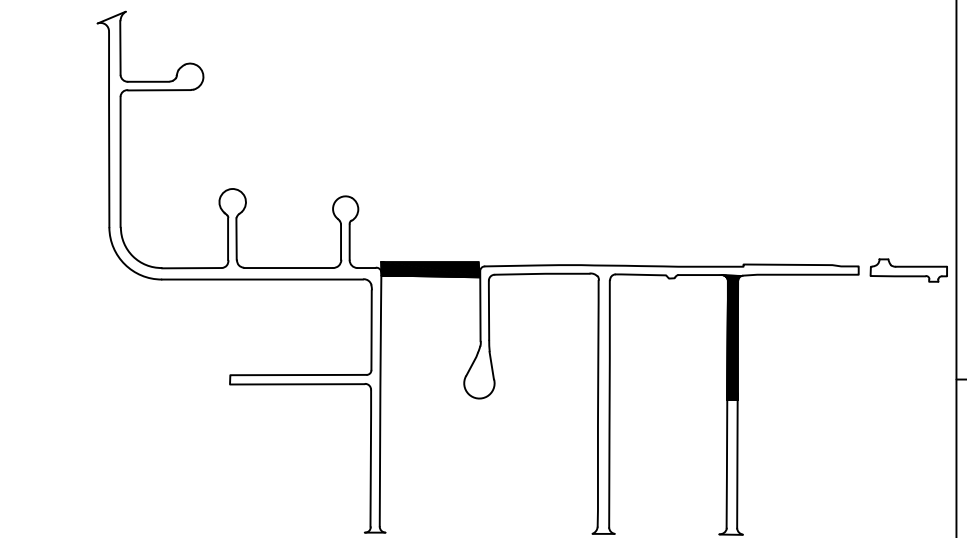
**HIGHLAND AVENUE
GLENDALE AVENUE
REMOVAL**



EASEMENT AREA



GLENDALE AVENUE



| QUANTITIES THIS SHEET | | |
|-----------------------|-----|-----|
| HMA SURFACE, REM | 700 | SYD |
| CURB AND GUTTER, REM | 174 | LFT |
| SIDEWALK, REM | 88 | SYD |

| NO. | DATE | BY | DESCRIPTION |
|-----|------------|-----|-----------------------------|
| | | | |
| 2 | 12/27/2023 | ACH | CONSTRUCTION PLANS |
| 3 | 03/09/2023 | VOH | REISSUED CONSTRUCTION PLANS |

| | | | |
|--|--------------------------|----------------------|--------------------|
| 237 NORTH MAIN STREET ADRIAN, MI 49221 TEL: 517.263.4515 | PROJECT DATE: 03/09/2023 | PROJECT NO.: H489002 | PROJECT TITLE: KHW |
| | DRAWN BY: | CHECKED BY: | ACH |

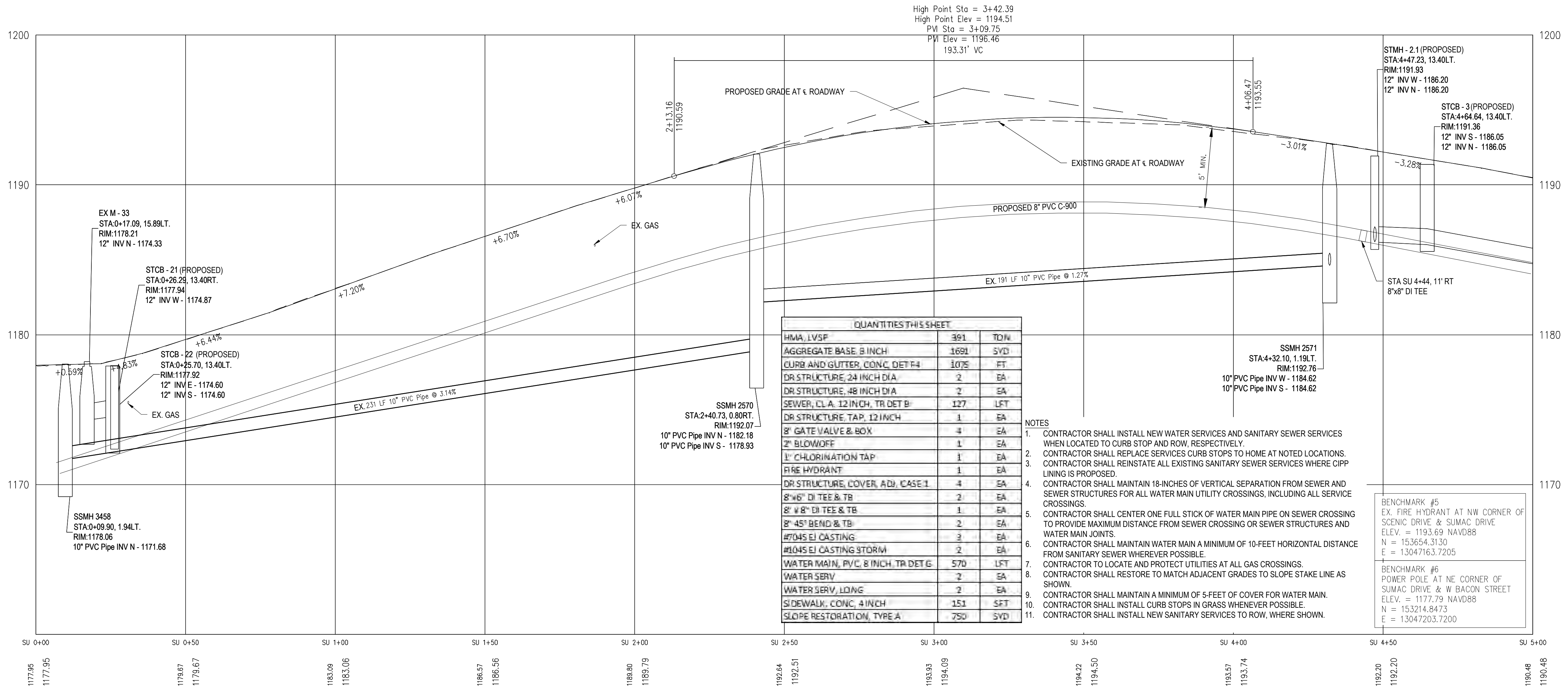
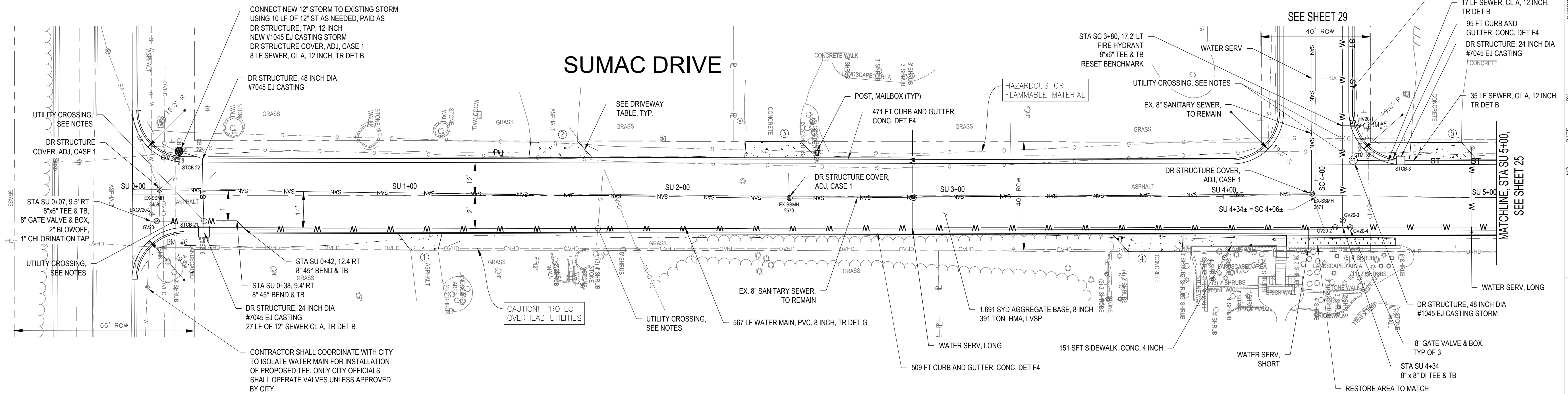
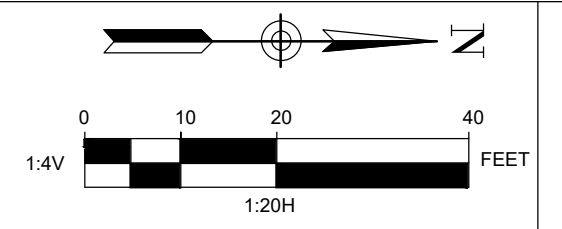
| TECHNICAL SKILL: |
|---|
| Mannik Smith GROUP www.MannikSmithGroup.com |

| | | |
|------------------------------|-------------------|--|
| PREPARED FOR: | CITY OF HILLSDALE | 97 BROAD STREET HILLSDALE, MI 49242 |
| WESTWOOD AREA RECONSTRUCTION | WESTWOOD AREA | |
| GLENDALE AVENUE REMOVAL | | |

W BACON STREET

SUMAC DRIVE

SCENIC DRIVE



| QUANTITIES THIS SHEET | | |
|---------------------------------|------|-----|
| HMA, LVSP | 391 | TON |
| AGGREGATE BASE, 8 INCH | 1691 | SYD |
| CURB AND GUTTER, CONC. DET F4 | 1075 | FT |
| DR STRUCTURE, 24 INCH DIA | 2 | EA |
| DR STRUCTURE, 48 INCH DIA | 2 | EA |
| SEWER, CL. A, 12 INCH, TR DET B | 127 | LF |
| DR STRUCTURE, TAP, 12 INCH | 1 | EA |
| 8\"/> | | |

- NOTES
- CONTRACTOR SHALL INSTALL NEW WATER SERVICES AND SANITARY SEWER SERVICES WHEN LOCATED TO CURB STOP AND ROW, RESPECTIVELY.
 - CONTRACTOR SHALL REPLACE SERVICES CURB STOPS TO HOME AT NOTED LOCATIONS.
 - CONTRACTOR SHALL REINSTATE ALL EXISTING SANITARY SEWER SERVICES WHERE CIPP LINING IS PROPOSED.
 - CONTRACTOR SHALL MAINTAIN 18-INCHES OF VERTICAL SEPARATION FROM SEWER AND SEWER STRUCTURES FOR ALL WATER MAIN UTILITY CROSSINGS, INCLUDING ALL SERVICE CROSSINGS.
 - CONTRACTOR SHALL CENTER ONE FULL STICK OF WATER MAIN PIPE ON SEWER CROSSING TO PROVIDE MAXIMUM DISTANCE FROM SEWER CROSSING OR SEWER STRUCTURES AND WATER MAIN JOINTS.
 - CONTRACTOR SHALL MAINTAIN WATER MAIN A MINIMUM OF 10-FOOT HORIZONTAL DISTANCE FROM SANITARY SEWER WHEREVER POSSIBLE.
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BENCHMARK #5
EX. FIRE HYDRANT AT NW CORNER OF SCENIC DRIVE & SUMAC DRIVE
ELEV. = 1193.69 NAVD88
N = 153654.3130
E = 13047163.7205

BENCHMARK #6
POWER POLE AT NE CORNER OF SUMAC DRIVE & W BACON STREET
ELEV. = 1177.79 NAVD88
N = 153214.8473
E = 13047203.7200

| | | | |
|-----|------------|-----|-----------------------------|
| NO. | DATE | BY | DESCRIPTION |
| 1 | 9/14/2022 | ACH | PRELIMINARY DESIGN PLANS |
| 2 | 12/19/2022 | ACH | PERMITTING PLANS |
| 3 | 1/27/2023 | ACH | CONSTRUCTION PLANS |
| 4 | 03/08/2023 | VOM | REISSUED CONSTRUCTION PLANS |

237 NORTH MAIN STREET
ADRIAN, MI 49221
TEL: 517.283.4515

PROJECT DATE: 03/08/2023
PROJECT NO.: H489002
DRAWN BY: JJP
CHECKED BY: ACH

TECHNICAL SKILL:
CREATIVE SPIRIT.

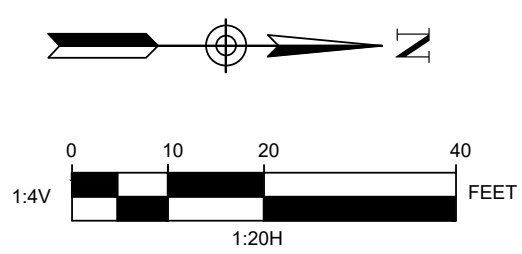
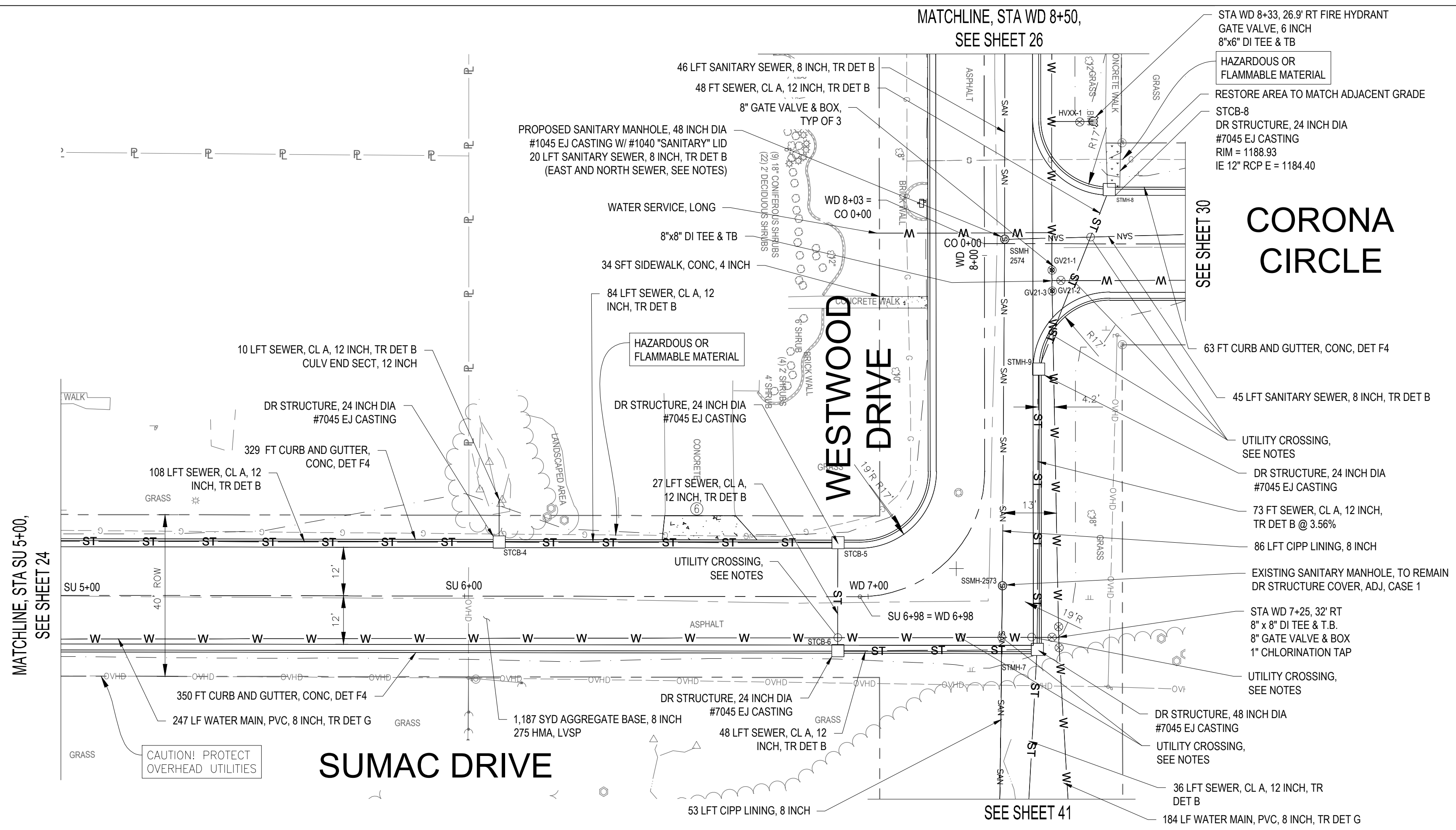
Mannik Smith GROUP
www.MannikSmithGroup.com

PREPARED FOR:
CITY OF HILLSDALE
97 BROAD STREET
HILLSDALE, MI 49924

WESTWOOD AREA
RECONSTRUCTION
WESTWOOD AREA

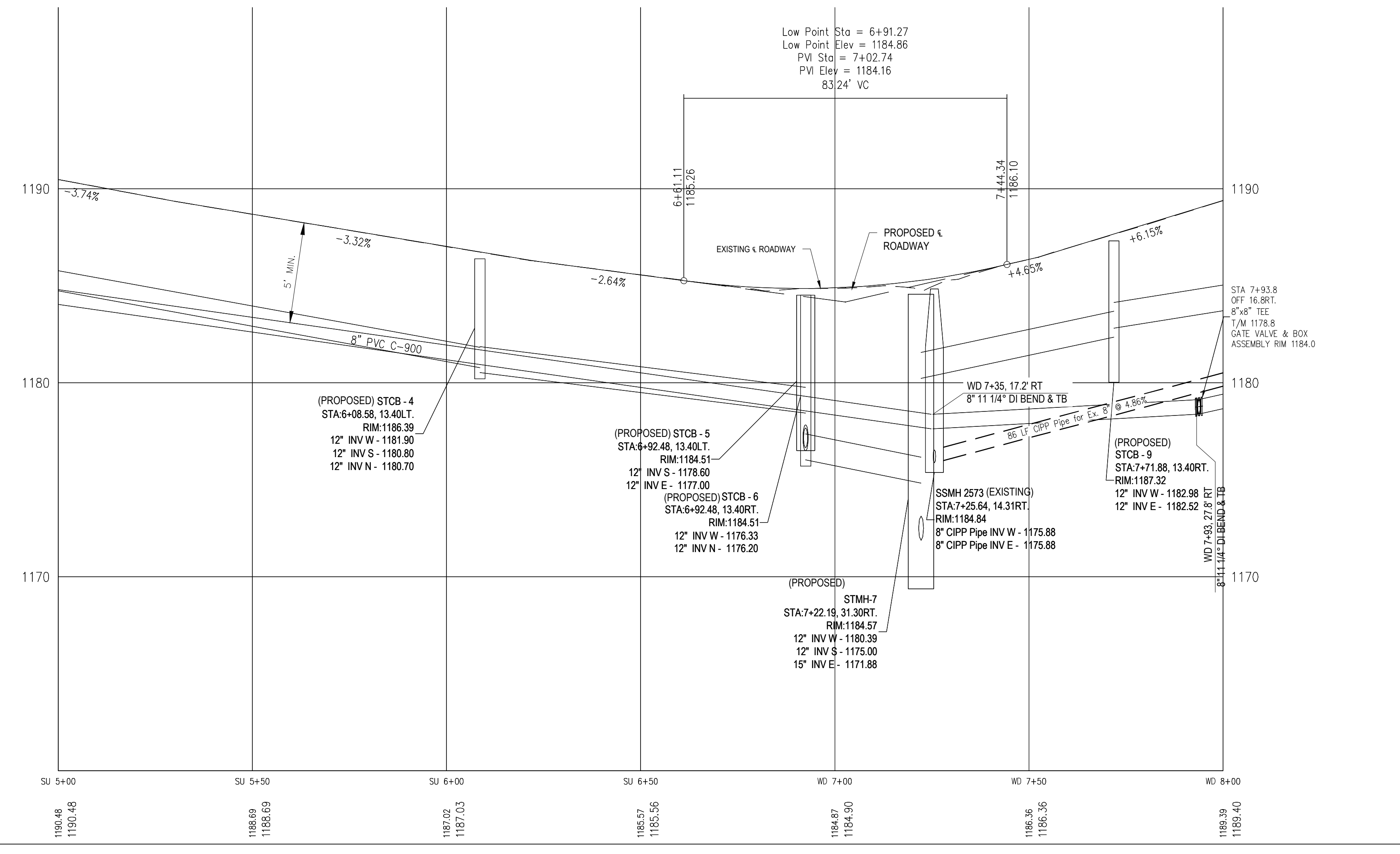
SUMAC DRIVE
PLAN & PROFILE
Sta. SU 0+00 to
Sta. SU 5+00

24 52



- NOTES**
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 - CONTRACTOR SHALL INSTALL NEW SANITARY SERVICES TO ROW, WHERE SHOWN.
 - CONTRACTOR SHALL RECONNECT EXISTING SEWER WHERE PROPOSED SANITARY SEWER MANHOLES ARE LOCATED WITH CONCRETE COLLAR. CONTRACTOR SHALL INSTALL CIPP LINING THROUGH PROPOSED SANITARY SEWER WHERE SHOWN ON PLAN.

| QUANTITIES THIS SHEET | | |
|--|------|-----|
| | 275 | TON |
| HMA, LVSP | 1187 | SYD |
| AGGREGATE BASE, 8 INCH | 1187 | SYD |
| CURB AND GUTTER, CONC, DET F4 | 742 | FT |
| DR STRUCTURE, 24 INCH DIA | 5 | EA |
| DR STRUCTURE, 48 INCH DIA | 1 | EA |
| SEWER, CL A, 12 INCH, TR DET B | 434 | LFT |
| CULV END SECT, 12 INCH | 1 | EA |
| GATE VALVE, 6 INCH | 1 | EA |
| 8" GATE VALVE & BOX | 4 | EA |
| 2" BLOWOFF | 1 | EA |
| 1" CHLORINATION TAP | 1 | EA |
| FIRE HYDRANT | 1 | EA |
| DR STRUCTURE, COVER, ADJ, CASE 1 | 1 | EA |
| 8" x 6" DI TEE & TB | 1 | EA |
| 8" x 8" DI TEE & TB | 2 | EA |
| #7045 EJ CASTING | 6 | EA |
| #1045 EJ CASTING W/ #1040 "SANITARY" LID | 1 | EA |
| WATER MAIN, PVC, 8 INCH, TR DET G | 360 | LFT |
| 8" 11 1/4" DI BEND & TB | 1 | EA |
| CIPP LINING, 8 INCH | 139 | LFT |
| SANITARY SEWER MANHOLE, 48 INCH DIA | 1 | EA |
| SANITARY SEWER, 8 INCH, TR DET B | 111 | LFT |
| SIDEWALK, CONC, 4 INCH | 34 | SFT |
| SLOPE RESTORATION, TYPE A | 510 | SYD |



| | | | |
|-----|------------|-----|------------------------------|
| NO. | DATE | BY | DESCRIPTION |
| 1 | 01/20/23 | ACH | PRELIMINARY PERMITTING PLANS |
| 2 | 12/19/2022 | ACH | PERMITTING PLANS |
| 3 | 11/27/2023 | ACH | CONSTRUCTION PLANS |
| 4 | 03/08/2023 | VOM | REVISED CONSTRUCTION PLANS |

237 NORTH MAIN STREET
ADRIAN, MI 49221
TEL: 517.283.4515

PROJECT DATE: 03/08/2023
PROJECT NO.: H489002
DRAWN BY: JJP
CHECKED BY: ACH

TECHNICAL SKILL:
CREATIVE SPIRIT.

Mannik Smith GROUP
www.MannikSmithGroup.com

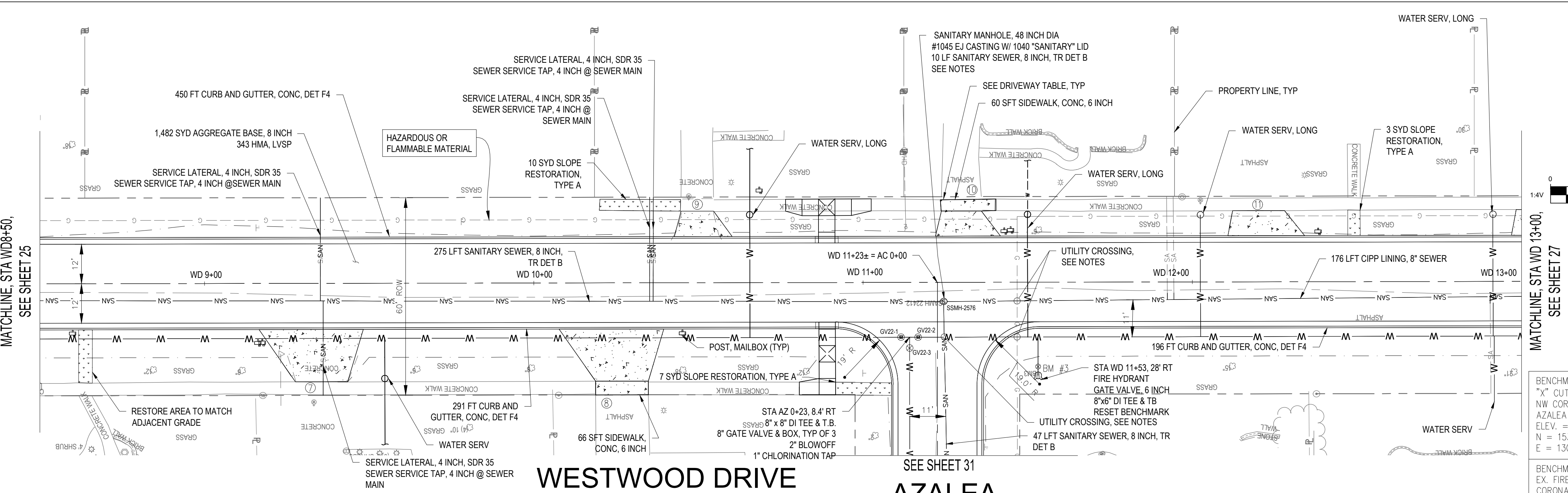
PREPARED FOR:
CITY OF HILLSDALE
97 BROAD STREET
HILLSDALE, MI 49242

WESTWOOD AREA
RECONSTRUCTION
WESTWOOD AREA

SUMAC DRIVE & WESTWOOD DRIVE
PLAN & PROFILE
Sta. SU 5+00 to Sta. WD 8+50

25 52

- NOTES
- CONTRACTOR SHALL INSTALL NEW WATER SERVICES AND SANITARY SEWER SERVICES WHEN LOCATED TO CURB STOP AND ROW, RESPECTIVELY.
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DATE: 03/09/2023
 BY: ACH
 CHECKED: ACH
 DESCRIPTION: PRELIMINARY PLANS, PERMITTING PLANS, CONSTRUCTION PLANS, REISSUED CONSTRUCTION PLANS

PROJECT NO.: H489002
 DRAWN BY: JJP
 CHECKED BY: ACH

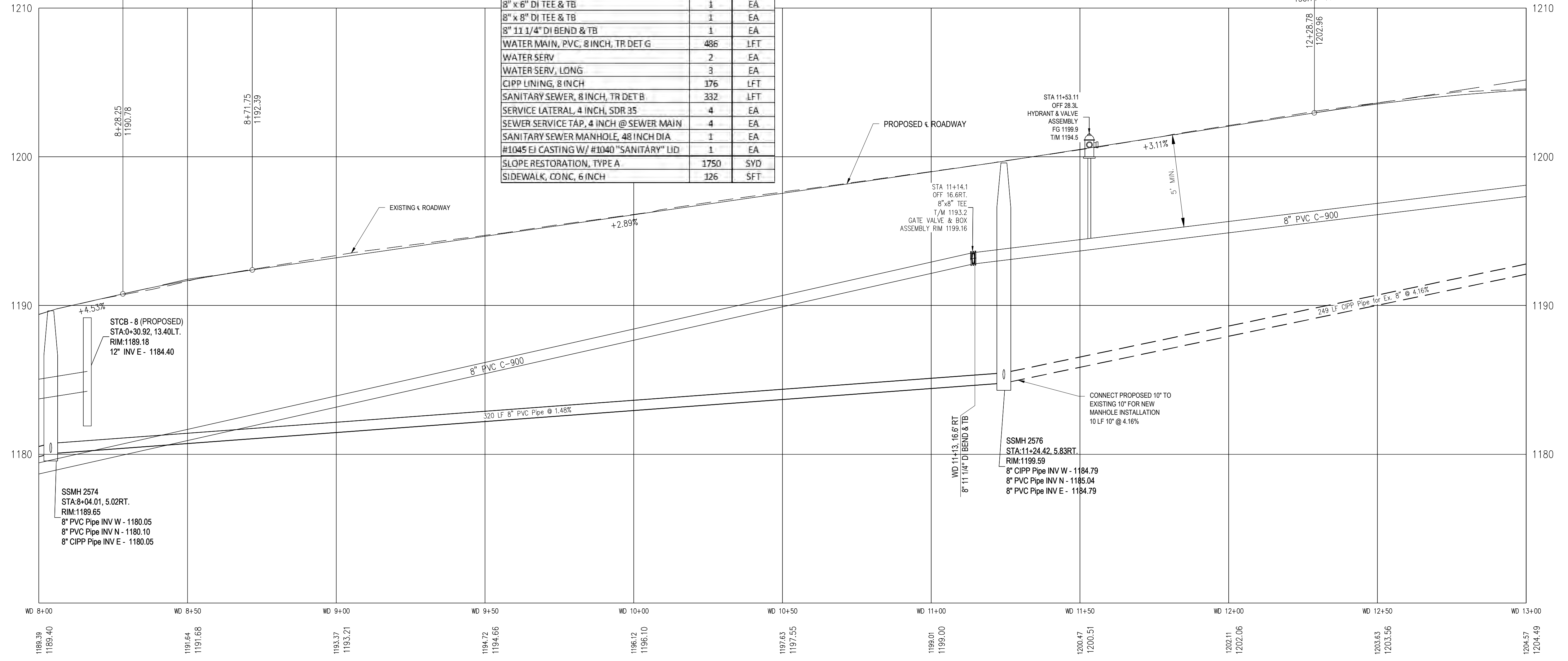
BENCHMARK #3
 "X" CUT ON E BOLT OF EX. HYDRANT NW CORNER OF WESTWOOD DRIVE & AZALEA COURT
 ELEV. = 1201.22 NAVD88
 N = 153960.0447
 E = 13047068.0878

BENCHMARK #4
 EX. FIRE HYDRANT AT NW CORNER OF CORONA CIRCLE & WESTWOOD DRIVE
 ELEV. = 1192.60 NAVD88
 N = 153959.0789
 E = 13047068.0405

High Point Sta = 8+71.75
 High Point Elev = 1192.39
 PVI Sta = 8+49.99
 PVI Elev = 1191.76
 43.51' VC

| QUANTITIES THIS SHEET | | |
|--|------|-----|
| HMA, LVSP | 343 | TON |
| AGGREGATE BASE, 8 INCH | 1482 | SYD |
| CURB AND GUTTER, CONC, DET F4 | 937 | FT |
| GATE VALVE, 6 INCH | 1 | EA |
| 8" GATE VALVE & BOX | 3 | EA |
| 2" BLOWOFF | 1 | EA |
| 1" CHLORINATION TAP | 1 | EA |
| FIRE HYDRANT | 1 | EA |
| 8" x 8" DI TEE & TB | 1 | EA |
| 8" x 8" DI TEE & TB | 1 | EA |
| 8" 11 1/4" DI BEND & TB | 1 | EA |
| WATER MAIN, PVC, 8 INCH, TR DET G | 486 | LFT |
| WATER SERV | 2 | EA |
| WATER SERV, LONG | 3 | EA |
| CIPP LINING, 8 INCH | 176 | LFT |
| SANITARY SEWER, 8 INCH, TR DET B | 332 | LFT |
| SERVICE LATERAL, 4 INCH, SDR 35 | 4 | EA |
| SEWER SERVICE TAP, 4 INCH @ SEWER MAIN | 4 | EA |
| SANITARY SEWER MANHOLE, 48 INCH DIA | 1 | EA |
| #1045 EJ CASTING W/ #1040 "SANITARY" LID | 1 | EA |
| SLOPE RESTORATION, TYPE A | 1750 | SYD |
| SIDEWALK, CONC, 6 INCH | 126 | SFT |

High Point Sta = 13+44.73
 High Point Elev = 1204.76
 PVI Sta = 13+05.62
 PVI Elev = 1205.35
 153.71' VC



237 NORTH MAIN STREET
 ADRIAN, MI 49221
 TEL: 517.263.4515

PROJECT DATE: 03/09/2023
 PROJECT NO.: H489002
 DRAWN BY: JJP
 CHECKED BY: ACH

TECHNICAL SKILL:
 CREATIVE SPIRIT.

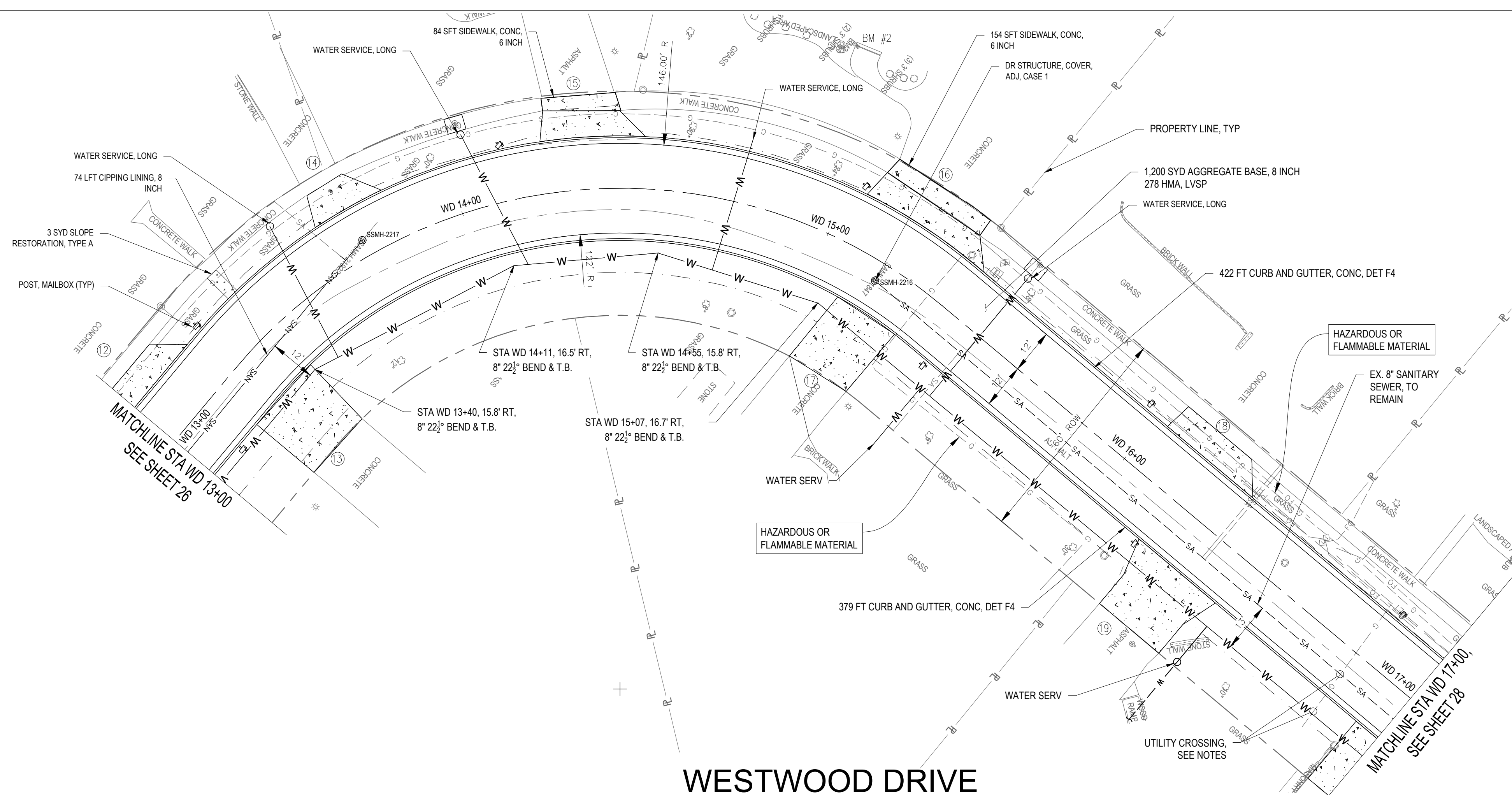
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PREPARED FOR:
 CITY OF HILLSDALE
 97 BROAD STREET
 HILLSDALE, MI 49242

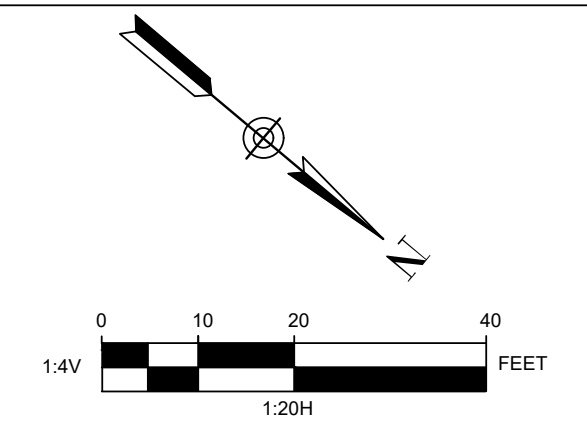
WESTWOOD AREA
 RECONSTRUCTION
 WESTWOOD AREA

WESTWOOD DRIVE
 PLAN & PROFILE
 Sta. WD 8+50 to
 Sta. WD 13+00

26 52



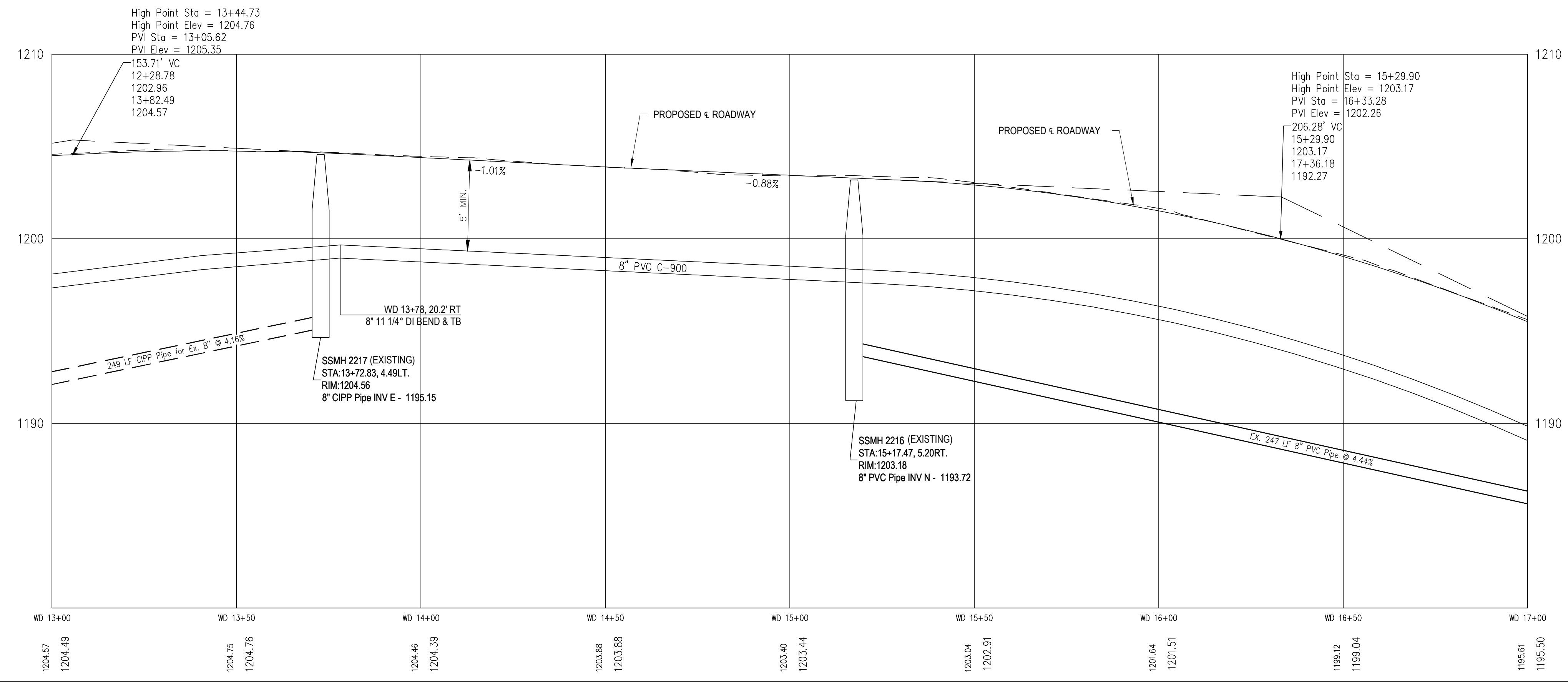
BENCHMARK #2
SE CORNER OF FRONT STEP TO
PORCH AT HOUSE #158 WESTWOOD
DRIVE
ELEV. = 1204.66 NAVD88
N = 154003.1136
E = 13046402.9101



- NOTES**
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| QUANTITIES THIS SHEET | | |
|-----------------------------------|------|-----|
| HMA, LVSP | 278 | TON |
| AGGREGATE BASE, 8 INCH | 1200 | SYD |
| CURB AND GUTTER, CONC, DET F4 | 801 | FT |
| DR STRUCTURE COVER, ADJ, CASE 1 | 1 | EA |
| 8" 22 1/2" BEND & TB | 4 | EA |
| 8" 11 1/4" DI BEND & TB | 1 | EA |
| WATER MAIN, PVC, 8 INCH, TR DET G | 374 | LFT |
| WATER SERV, LONG | 2 | EA |
| WATER SERV, LONG | 4 | EA |
| CIPP LINING, 8 INCH | 74 | LFT |
| SIDEWALK, CONC, 6 INCH | 238 | SFT |

| CURVE TABLE | | |
|-------------------|---------------|--|
| LENGTH | 207.21 | |
| STARTING NORTHING | 153936.2097 | |
| STARTING EASTING | 13046576.5322 | |
| START STATION | 13+49.09 | |
| END NORTHING | 154068.1409 | |
| END EASTING | 13046446.0211 | |
| END STATION | 15+56.30 | |
| DELTA ANGLE | 91°19'34" | |
| RADIUS | 130 | |
| CHORD LENGTH | 185.96 | |
| MID ORDINATE | 39.146 | |



| | | | | | |
|-----------------------------|------------|-----|-----|--|--|
| DESCRIPTION | DATE | BY | NO. | 237 NORTH MAIN STREET ADRIAN, MI 49221 TEL: 517.263.4615 | PROJECT DATE: 03/08/2023 PROJECT NO.: H486002 DRAWN BY: JJP CHECKED BY: ACH |
| PRELIMINARY PLANS | 01/23/23 | ACH | 1 | | |
| PERMITTING PLANS | 02/02/23 | ACH | 2 | | |
| CONSTRUCTION PLANS | 11/27/23 | ACH | 3 | | |
| REISSUED CONSTRUCTION PLANS | 03/08/2023 | VOM | 4 | | |

TECHNICAL SKILL:
CREATIVE SPIRIT.

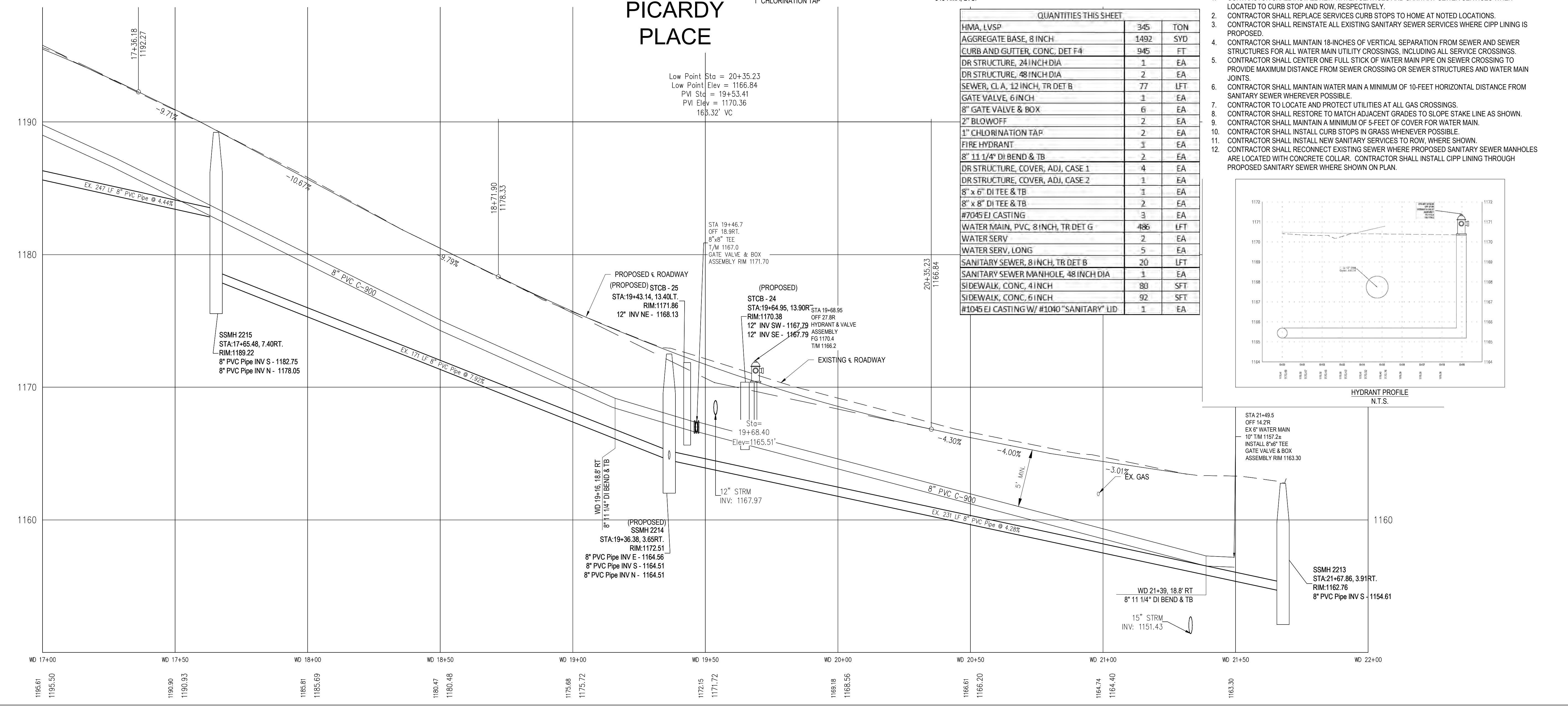
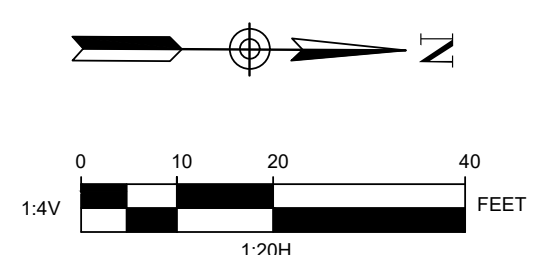
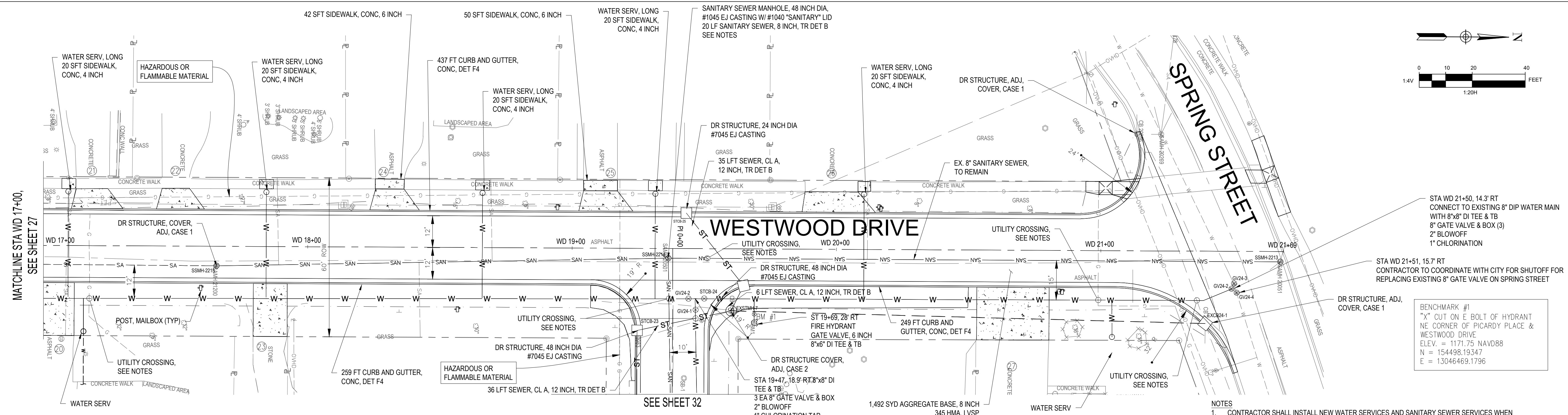
Mannik Smith GROUP
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PREPARED FOR:
CITY OF HILLSDALE
97 BROAD STREET
HILLSDALE, MI 49242

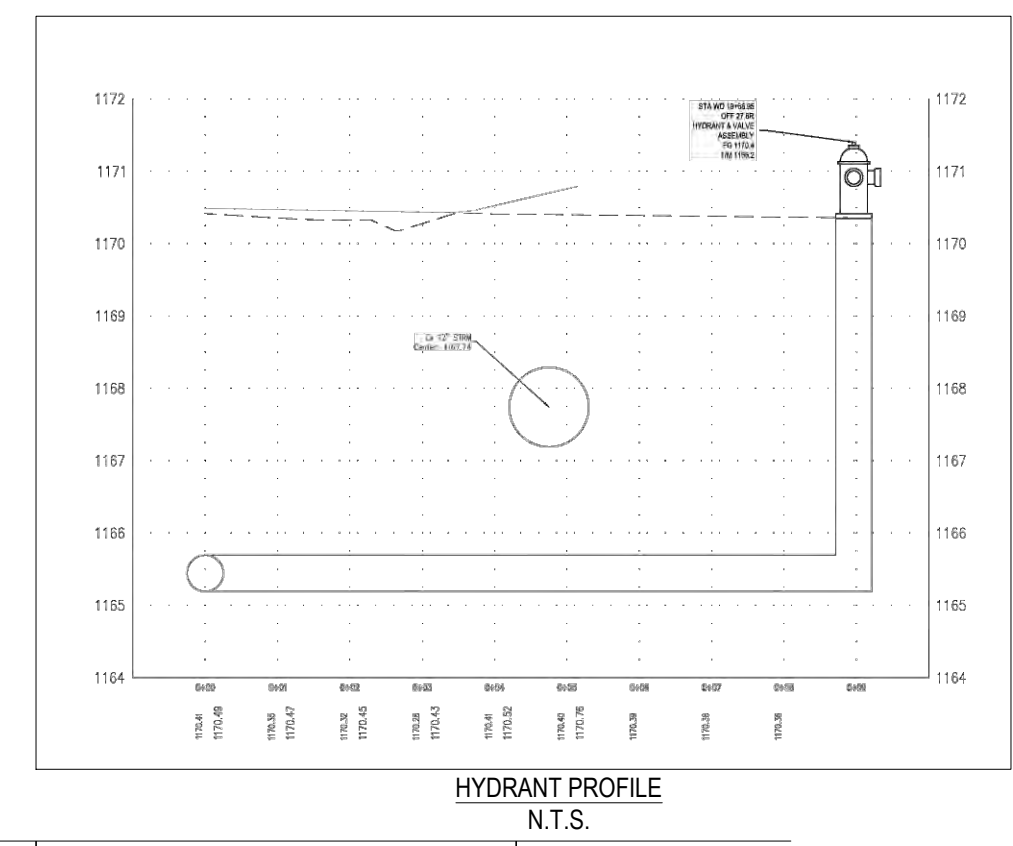
WESTWOOD AREA RECONSTRUCTION
WESTWOOD AREA

WESTWOOD DRIVE PLAN & PROFILE
Sta. WD 13+00 to
Sta. WD 17+00

27 / 52



- NOTES**
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 - CONTRACTOR SHALL MAINTAIN WATER MAIN A MINIMUM OF 10-FEET HORIZONTAL DISTANCE FROM SANITARY SEWER WHEREVER POSSIBLE.
 - CONTRACTOR TO LOCATE AND PROTECT UTILITIES AT ALL GAS CROSSINGS.
 - CONTRACTOR SHALL RESTORE TO MATCH ADJACENT GRADES TO SLOPE STAKE LINE AS SHOWN.
 - CONTRACTOR SHALL MAINTAIN A MINIMUM OF 5-FEET OF COVER FOR WATER MAIN.
 - CONTRACTOR SHALL INSTALL CURB STOPS IN GRASS WHENEVER POSSIBLE.
 - CONTRACTOR SHALL INSTALL NEW SANITARY SERVICES TO ROW, WHERE SHOWN.
 - CONTRACTOR SHALL RECONNECT EXISTING SEWER WHERE PROPOSED SANITARY SEWER MANHOLES ARE LOCATED WITH CONCRETE COLLAR. CONTRACTOR SHALL INSTALL CIPP LINING THROUGH PROPOSED SANITARY SEWER WHERE SHOWN ON PLAN.



| NO. | DATE | BY | DESCRIPTION |
|-----|------------|-----|-----------------------------|
| 1 | 01/20/23 | ACH | PRELIMINARY PLANS |
| 2 | 02/02/23 | ACH | PERMITTING PLANS |
| 3 | 02/20/23 | ACH | CONSTRUCTION PLANS |
| 4 | 03/08/2023 | VOM | REISSUED CONSTRUCTION PLANS |

237 NORTH MAIN STREET
ADRIAN, MI 49221
TEL: 517.263.4515

PROJECT NO.: H489002
DRAWN BY: JJP
CHECKED BY: ACH

TECHNICAL SKILL:
CREATIVE SPIRIT.

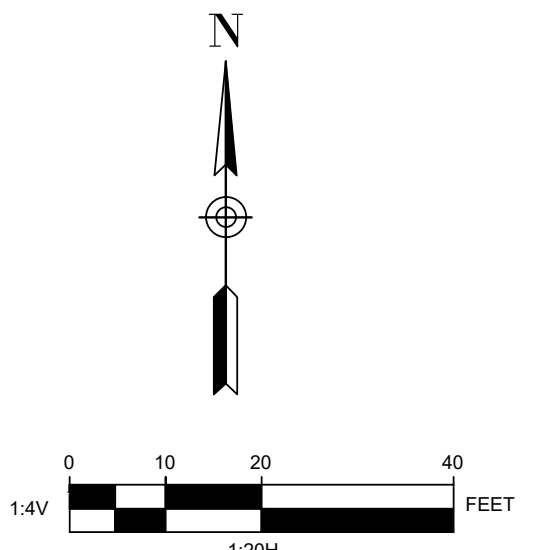
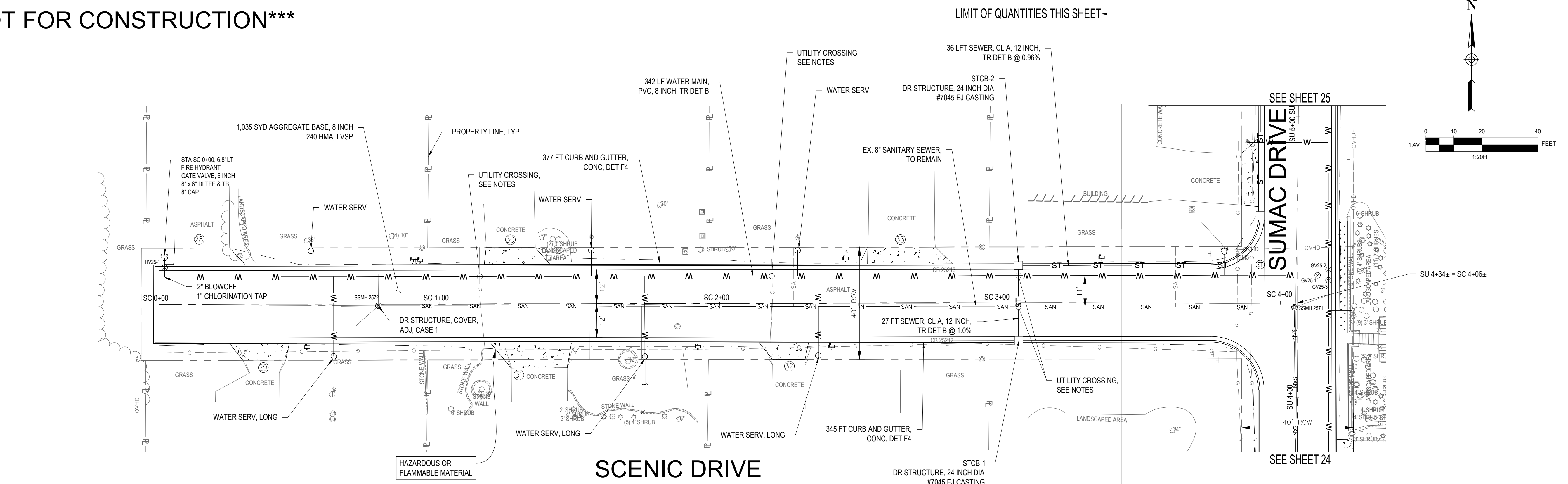
Mannik Smith GROUP
www.MannikSmithGroup.com

PREPARED FOR:
CITY OF HILLSDALE

WESTWOOD AREA RECONSTRUCTION
WESTWOOD AREA

WESTWOOD DRIVE PLAN & PROFILE
Sta. WD 17+00 to Sta. WD 21+34

NOT FOR CONSTRUCTION



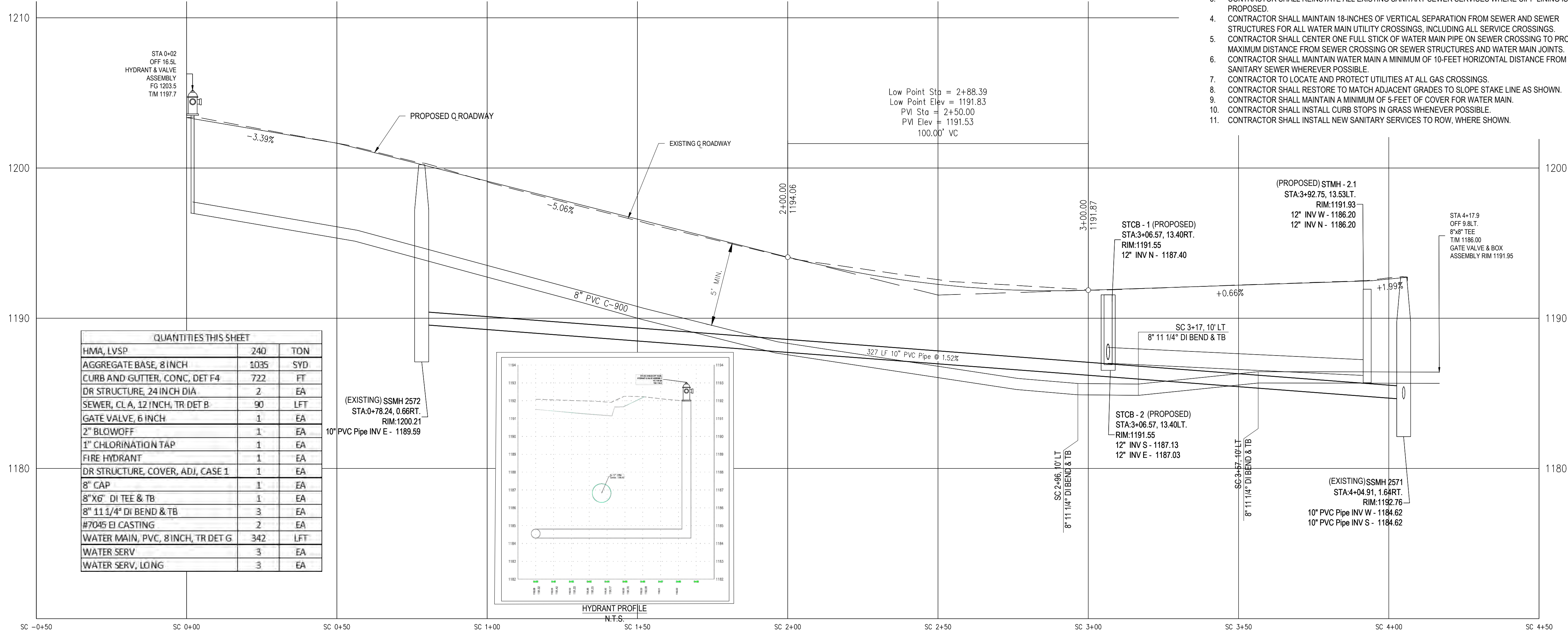
SCENIC DRIVE

SEE SHEET 25

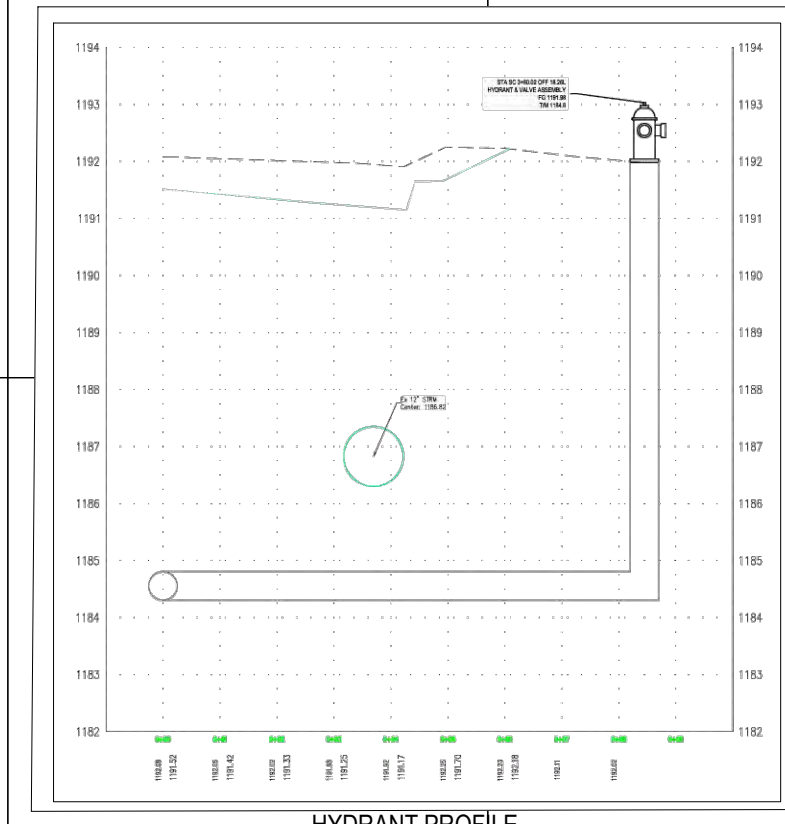
SEE SHEET 24

LIMIT OF QUANTITIES THIS SHEET

- NOTES
- CONTRACTOR SHALL INSTALL NEW WATER SERVICES AND SANITARY SEWER SERVICES WHEN LOCATED TO CURB STOP AND ROW, RESPECTIVELY.
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| QUANTITIES THIS SHEET | | |
|-----------------------------------|------|-----|
| HMA, LVSP | 240 | TON |
| AGGREGATE BASE, 8 INCH | 1035 | SYD |
| CURB AND GUTTER, CONC, DET F4 | 722 | FT |
| DR STRUCTURE, 24 INCH DIA | 2 | EA |
| SEWER, CL A, 12 INCH, TR DET B | 90 | LFT |
| GATE VALVE, 6 INCH | 1 | EA |
| 2" BLOWOFF | 1 | EA |
| 1" CHLORINATION TAP | 1 | EA |
| FIRE HYDRANT | 1 | EA |
| DR STRUCTURE, COVER, ADJ, CASE 1 | 1 | EA |
| 8" CAP | 1 | EA |
| 8" X 6" DI TEE & TB | 1 | EA |
| 8" 11 1/4" DI BEND & TB | 3 | EA |
| #7045 EJ CASTING | 2 | EA |
| WATER MAIN, PVC, 8 INCH, TR DET G | 342 | LFT |
| WATER SERV | 3 | EA |
| WATER SERV, LONG | 3 | EA |



Low Point Stp = 2+88.39
 Low Point Elev = 1191.83
 PVI Sto = 2+50.00
 PVI Elev = 1191.53
 100.00' VC

(EXISTING) SSMH 2572
 STA: 0+78.24, 0.66RT.
 RIM: 1200.21
 10" PVC Pipe INV E - 1189.59

STCB - 1 (PROPOSED)
 STA: 3+06.57, 13.40RT.
 RIM: 1191.55
 12" INV N - 1187.40

STCB - 2 (PROPOSED)
 STA: 3+17, 10' LT
 STA: 3+06.57, 13.40RT.
 RIM: 1191.55
 12" INV S - 1187.13
 12" INV E - 1187.03

(PROPOSED) STMH - 2.1
 STA: 3+92.75, 13.53LT.
 RIM: 1181.93
 12" INV W - 1186.20
 12" INV N - 1186.20

STA 4+17.9
 OFF 9.8LT
 8" X 8" TEE
 TM 1186.00
 GATE VALVE & BOX
 ASSEMBLY RIM 1191.95

(EXISTING) SSMH 2571
 STA: 4+04.91, 1.64RT.
 RIM: 1192.76
 10" PVC Pipe INV W - 1184.62
 10" PVC Pipe INV S - 1184.62

| NO. | DATE | BY | DESCRIPTION |
|-----|------------|-----|------------------------------|
| 1 | 01/10/23 | ACH | PRELIMINARY PERMITTING PLANS |
| 2 | 12/19/2023 | ACH | PERMITTING PLANS |
| 3 | 11/27/2023 | ACH | CONSTRUCTION PLANS |
| 4 | 03/08/2023 | VOM | REISSUED CONSTRUCTION PLANS |

237 NORTH MAIN STREET
 ADRIAN, MI 49221
 TEL: 517.263.4515

PROJECT DATE: 03/08/2023
 PROJECT NO.: H486002
 DRAWN BY: JJP
 CHECKED BY: ACH

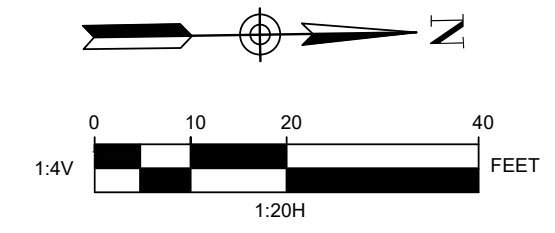
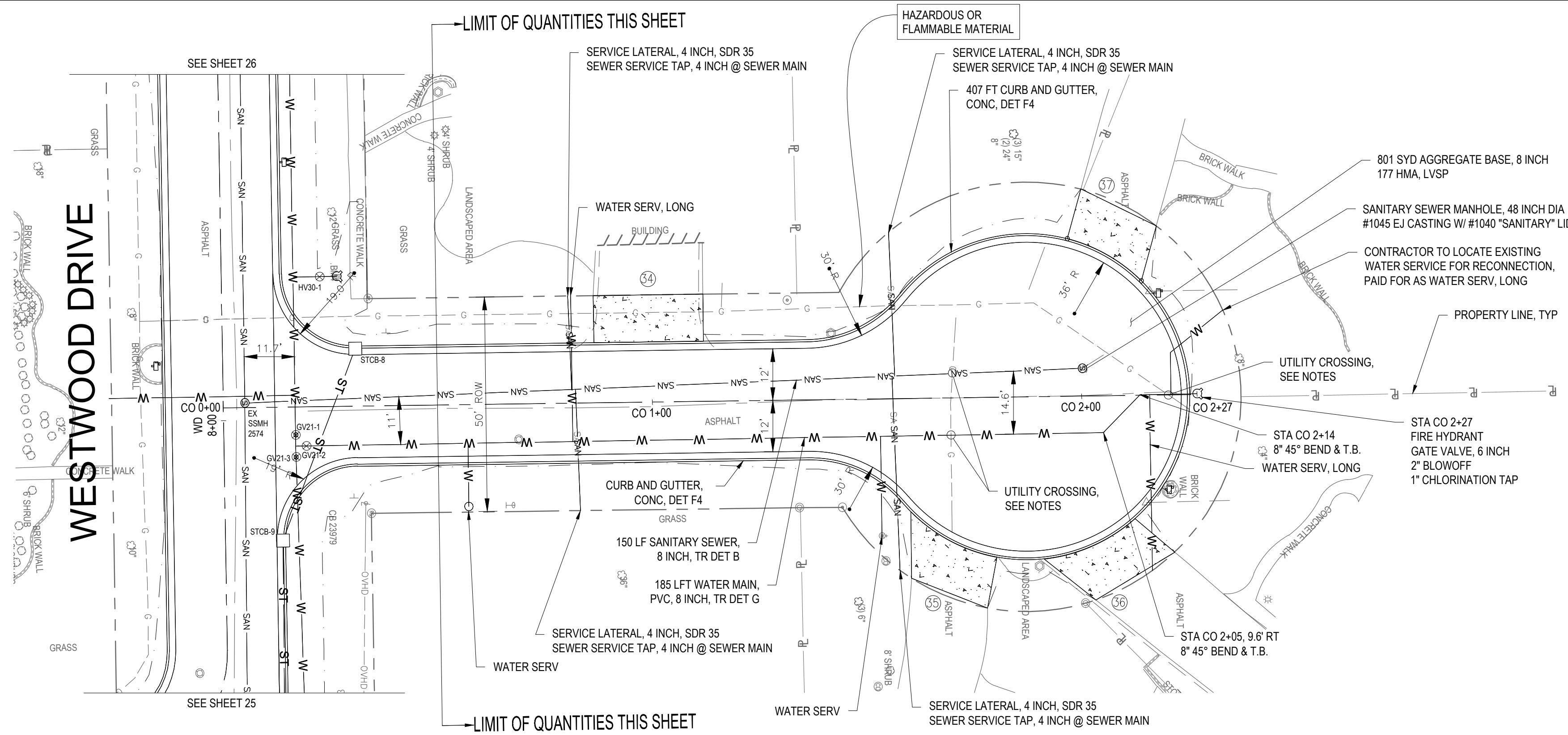
TECHNICAL SKILL:
CREATIVE SPIRIT.

Mannik Smith GROUP
 www.MannikSmithGroup.com

PREPARED FOR:
CITY OF HILLSDALE

WESTWOOD AREA RECONSTRUCTION
 WESTWOOD AREA

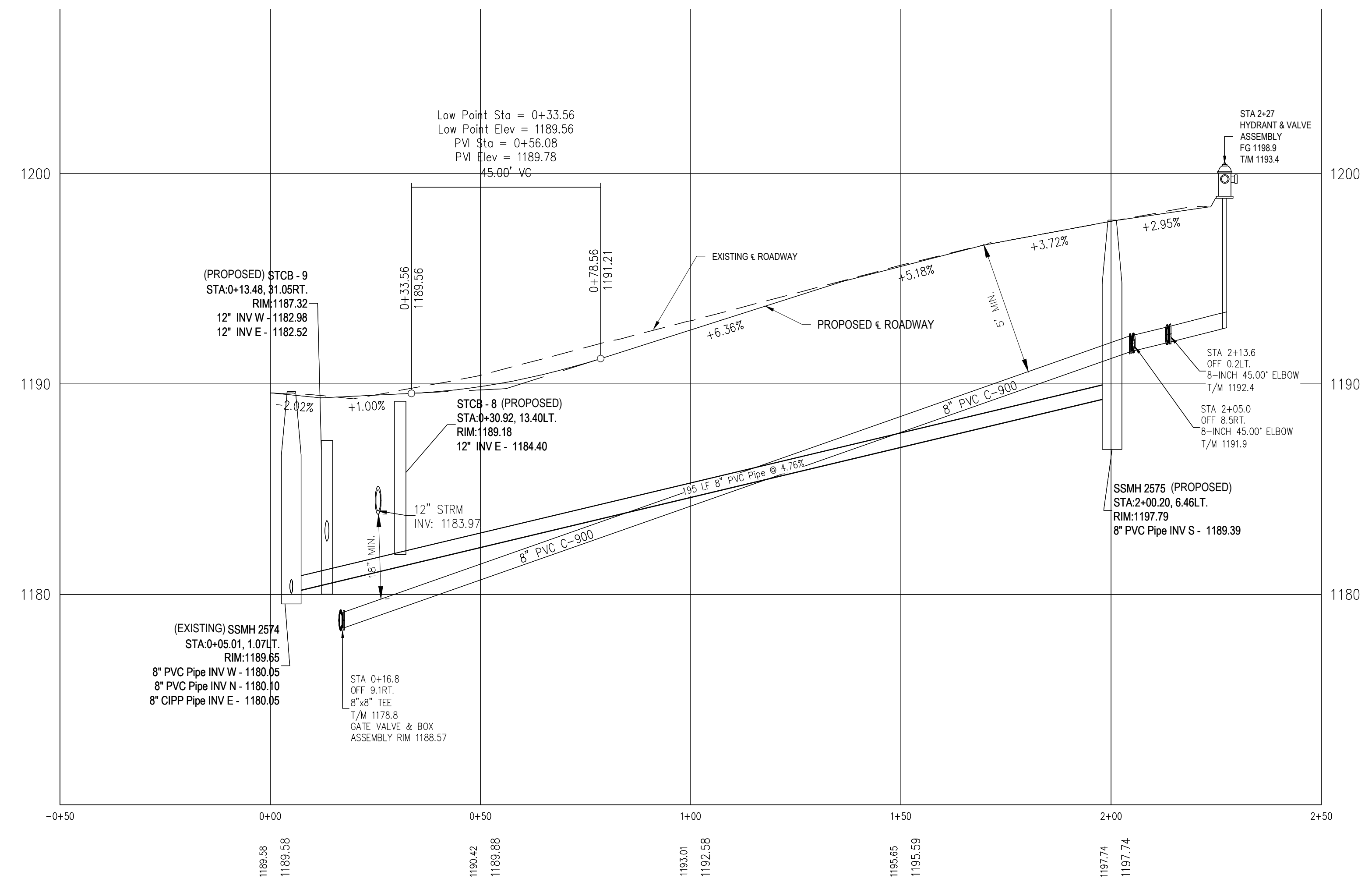
SCENIC DRIVE
 PLAN & PROFILE
 Sta. SC 0+00 to
 Sta. SC 4+50



- NOTES**
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CORONA CIRCLE

| QUANTITIES THIS SHEET | | |
|--|-----|-----|
| HMA, LVSP | 177 | TON |
| AGGREGATE BASE, 8 INCH | 801 | SYD |
| CURB AND GUTTER, CONC, DET F4 | 407 | FT |
| GATE VALVE, 6 INCH | 1 | EA |
| 2" BLOWOFF | 1 | EA |
| 1" CHLORINATION TAP | 1 | EA |
| FIRE HYDRANT | 1 | EA |
| WATER MAIN, PVC, 8 INCH, TR DET G | 185 | LFT |
| WATER SERV | 3 | EA |
| WATER SERV, LONG | 2 | EA |
| 8" 45" DI BEND & TB | 2 | EA |
| SANITARY SEWER, 8 INCH, TR DET B | 150 | LFT |
| SANITARY SEWER MANHOLE, 48 INCH DIA #1045 EJ CASTING W/ #1040 "SANITARY" LID | 1 | EA |
| SERVICE LATERAL, 4 INCH, SDR 35 | 4 | EA |
| SEWER SERVICE TAP, 4 INCH @ SEWER MAIN | 4 | EA |



| | | | |
|-----|------------|-----|-----------------------------|
| NO. | DATE | BY | DESCRIPTION |
| 1 | 01/20/23 | ACH | PRELIMINARY PLANS |
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| 4 | 03/09/2023 | VOM | REISSUED CONSTRUCTION PLANS |

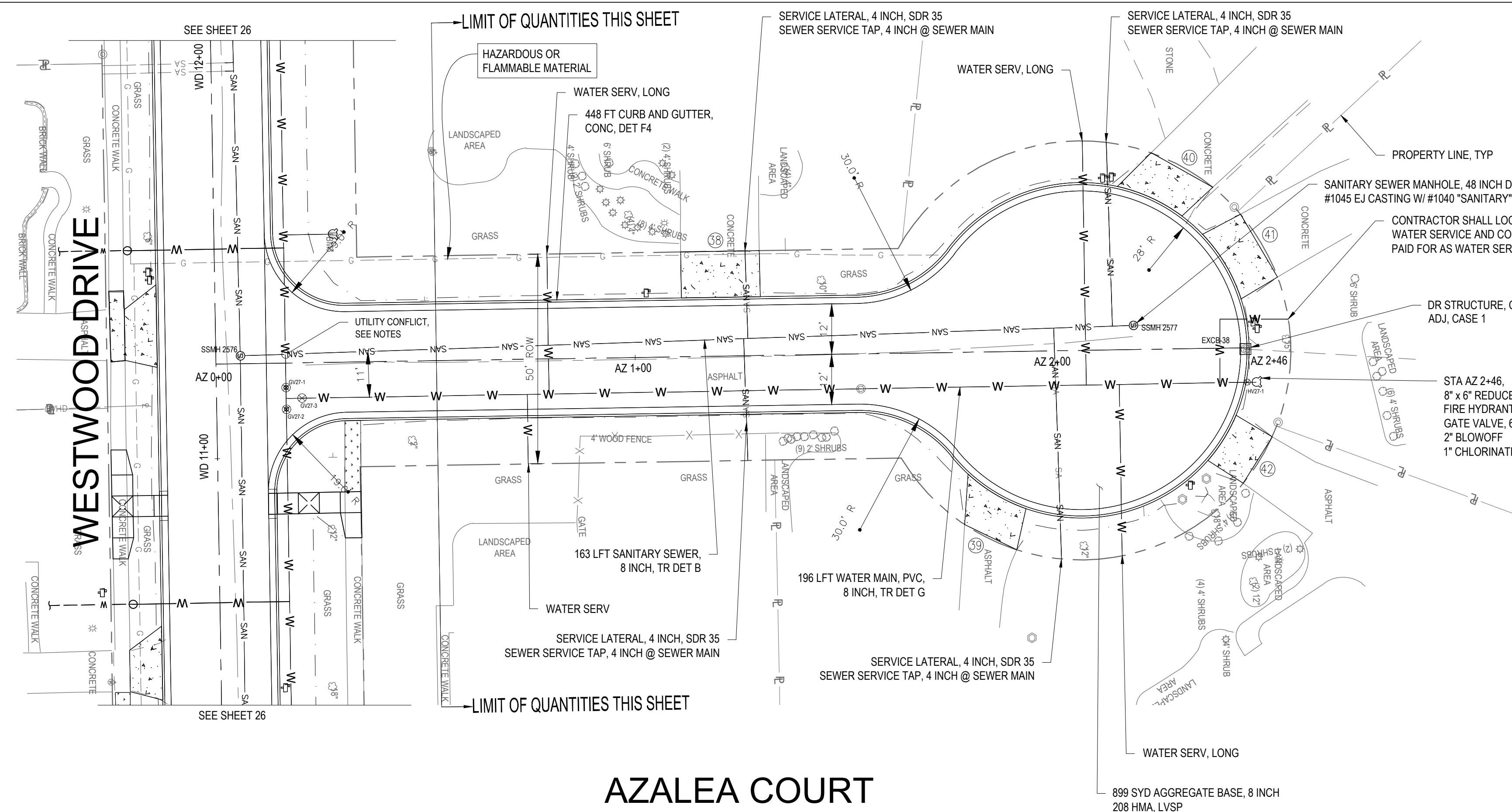
| | |
|--|--|
| 237 NORTH MAIN STREET ADRIAN, MI 49221 TEL: 517.263.4515 | PROJECT DATE: 03/09/2023 PROJECT NO.: H486002 DRAWN BY: JJP CHECKED BY: |
|--|--|

TECHNICAL SKILL:
CREATIVE SPIRIT.

Mannik Smith GROUP
www.MannikSmithGroup.com

PREPARED FOR:
CITY OF HILLSDALE
WESTWOOD AREA
RECONSTRUCTION
WESTWOOD AREA

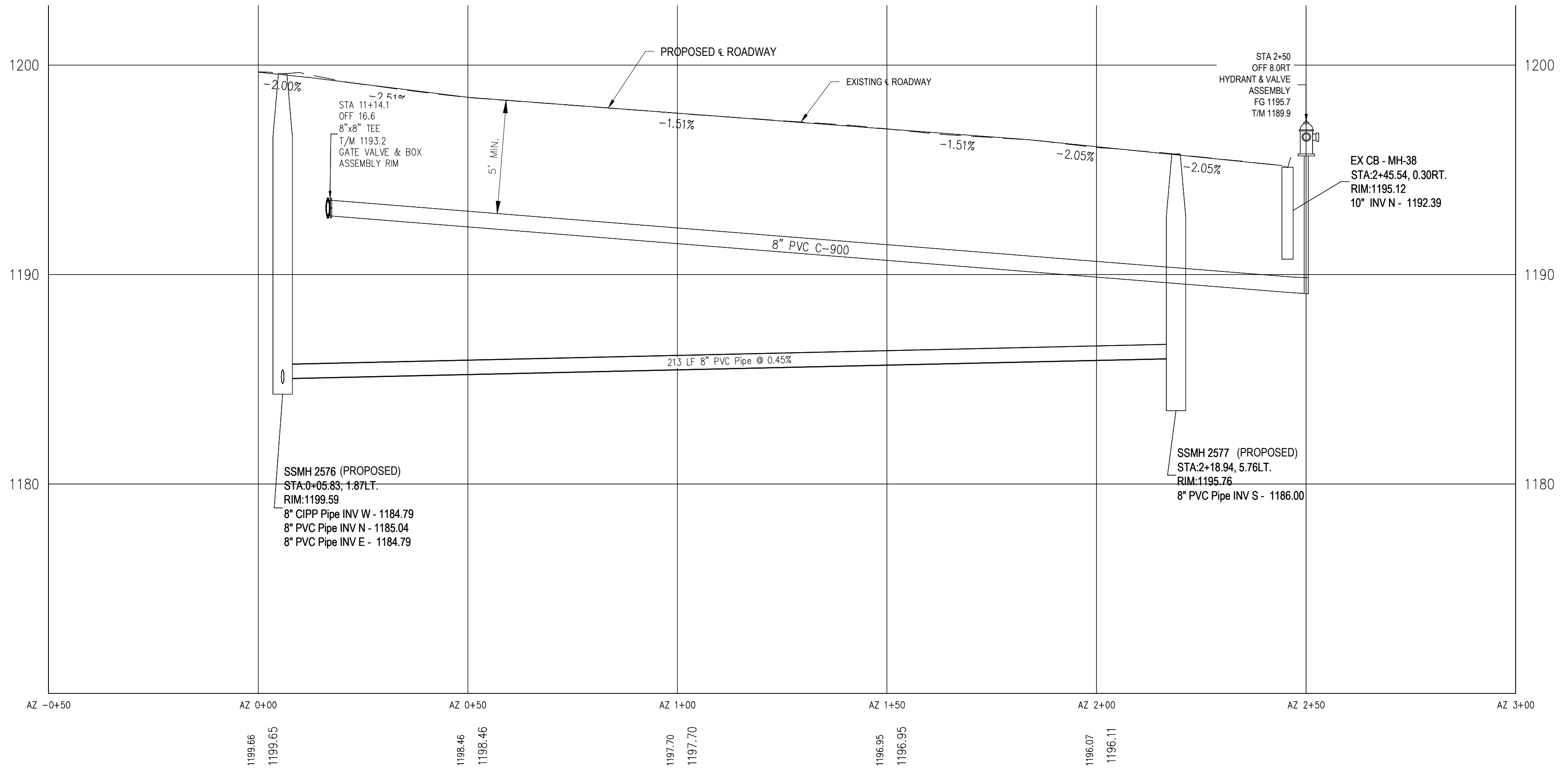
CORONA CIRCLE
PLAN & PROFILE
Sta. CO 0+00 to
Sta. CO 2+27



AZALEA COURT

- NOTES**
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 - CONTRACTOR SHALL INSTALL NEW SANITARY SERVICES TO ROW, WHERE SHOWN.
 - CONTRACTOR TO VERIFY AN ADDITIONAL SERVICE LATERAL IS NOT PRESENT DURING CONSTRUCTION. CONTRACTOR SHALL CONNECT ADDITIONAL SERVICES, AS NEEDED, TO BE PAID FOR USING APPROPRIATE PAY ITEMS.

| QUANTITIES THIS SHEET | | |
|--|-----|------|
| DESCRIPTION | QTY | UNIT |
| HMA, LVSP | 208 | TON |
| AGGREGATE BASE, 8 INCH | 899 | SYD |
| CURB AND GUTTER, CONC, DET F4 | 448 | FT |
| DR STRUCTURE, COVER, ADJ, CASE 1 | 1 | EA |
| GATE VALVE, 6 INCH | 1 | EA |
| 2" BLOWOFF | 1 | EA |
| 1" CHLORINATION TAP | 1 | EA |
| FIRE HYDRANT | 1 | EA |
| WATER MAIN, PVC, 8 INCH, TR DET G | 196 | FT |
| WATER SERV | 1 | EA |
| WATER SERV, LONG | 4 | EA |
| SANITARY SEWER, 8 INCH, TR DET B | 167 | LFT |
| SERVICE LATERAL, 4 INCH, SDR 35 | 5 | EA |
| SEWER SERVICE TAP, 4 INCH @ SEWER MAIN | 5 | EA |
| SANITARY SEWER MANHOLE, 48 INCH DIA #1045 EJ CASTING W/ #1040 "SANITARY" LID | 1 | EA |



| | | | |
|-----|------------|-----|--------------------------------|
| NO. | DATE | BY | DESCRIPTION |
| 1 | 01/20/23 | ACH | PRELIMINARY PLANS |
| 2 | 02/02/23 | ACH | PERMITTING PLANS |
| 3 | 12/20/23 | ACH | CONSTRUCTION PLANS |
| 4 | 03/09/2023 | VOM | RESUBMITTED CONSTRUCTION PLANS |

237 NORTH MAIN STREET
ADRIAN, MI 49221
TEL: 517.263.4515

PROJECT DATE: 03/09/2023
PROJECT NO.: H486002
DRAWN BY: JJP
CHECKED BY: ACH

TECHNICAL SKILL:
CREATIVE SPIRIT.

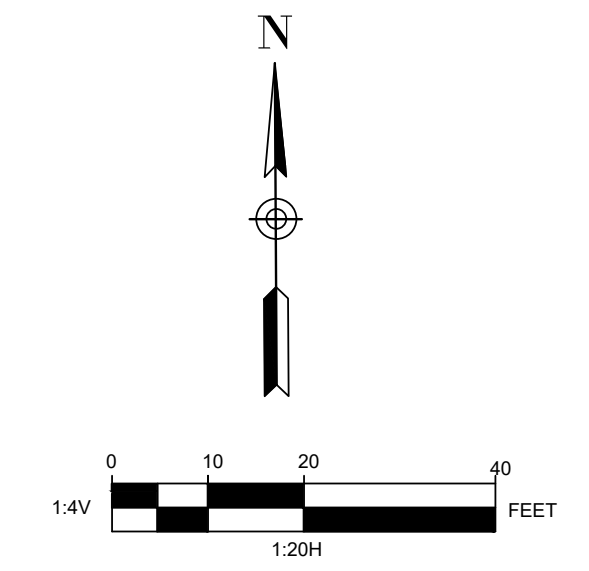
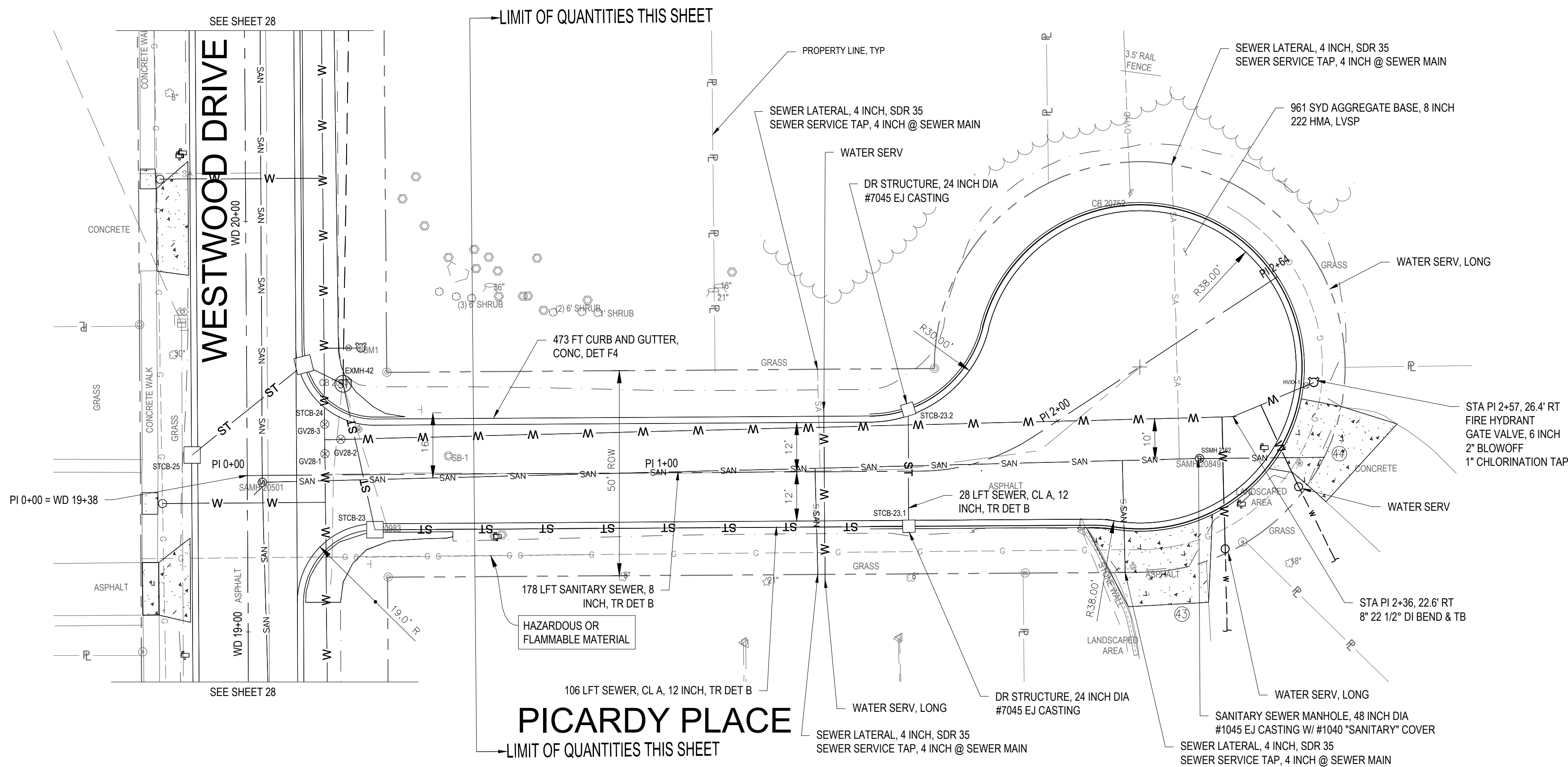
Mannik Smith GROUP
www.MannikSmithGroup.com

PREPARED FOR:
CITY OF HILLSDALE

WESTWOOD AREA RECONSTRUCTION
WESTWOOD AREA

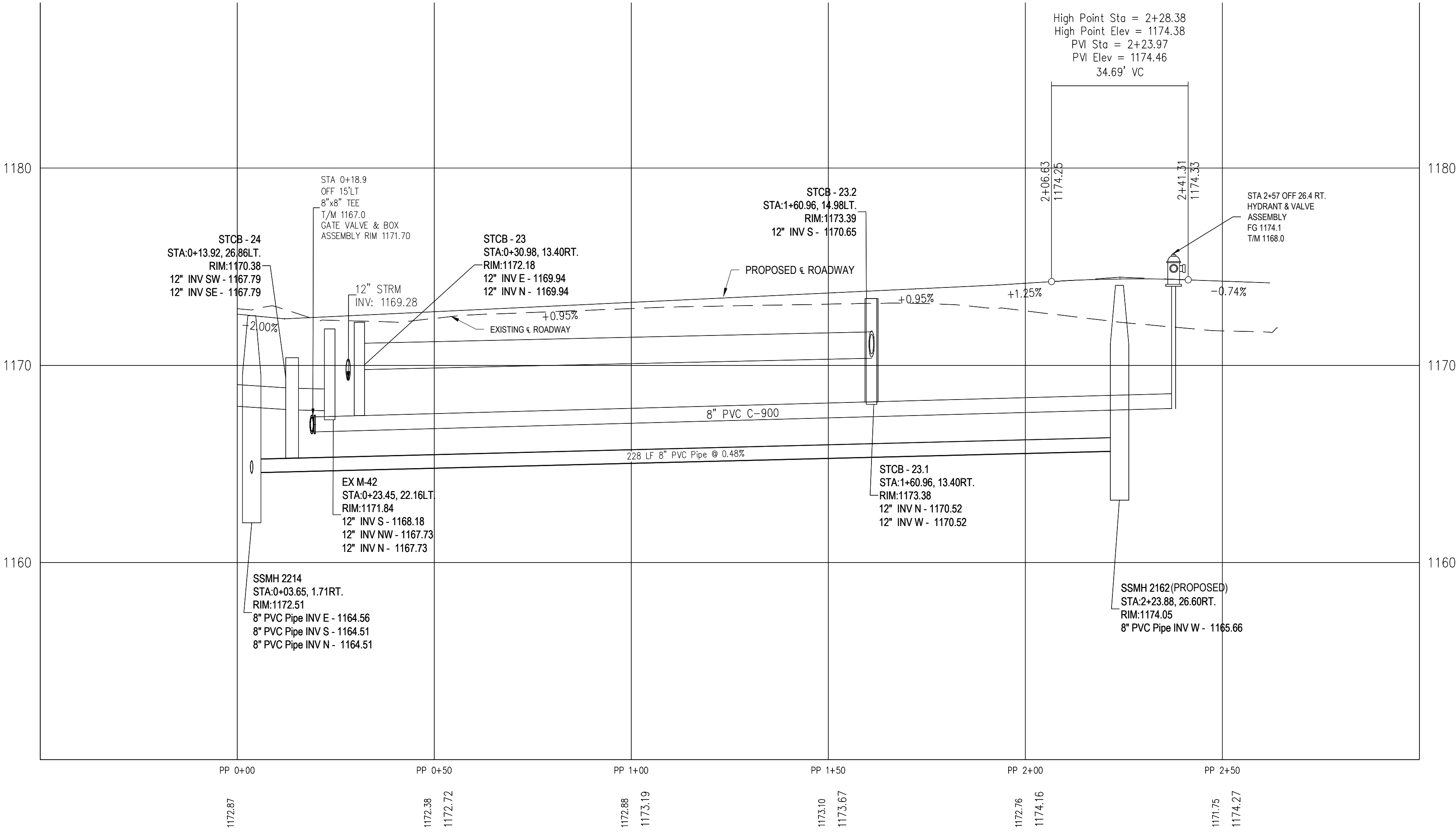
97 BROAD STREET
HILLSDALE, MI 49422

AZALEA COURT PLAN & PROFILE
Sta. AZ 0+00 to AZ 2+46



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| QUANTITIES THIS SHEET | | |
|--|-----|------|
| DESCRIPTION | QTY | UNIT |
| HMA, LVSP | 222 | TON |
| AGGREGATE BASE, 8 INCH | 961 | SYD |
| CURB AND GUTTER, CONC. DET F4 | 473 | FT |
| GATE VALVE, 6 INCH | 1 | EA |
| 2" BLOWOFF | 1 | EA |
| 1" CHLORINATION TAP | 1 | EA |
| FIRE HYDRANT | 1 | EA |
| 8" 22 1/2" DI BEND & TB | 1 | EA |
| WATER MAIN, PVC, 8 INCH, TR DET G | 204 | FT |
| WATER SERV | 2 | EA |
| WATER SERV, LONG | 3 | EA |
| SANITARY SEWER, 8 INCH, TR DET B | 178 | LFT |
| SERVICE LATERAL, 4 INCH, SDR 35 | 4 | EA |
| SEWER SERVICE TAP, 4 INCH @ SEWER MAIN | 4 | EA |
| SANITARY SEWER MANHOLE, 48 INCH DIA | 1 | EA |
| #1045 EJ CASTING W/ #1040 "SANITARY" LID | 1 | EA |
| #7045 EJ CASTING | 2 | EA |
| DR STRUCTURE, 24 INCH DIA | 2 | EA |
| SEWER, CL A, 12 INCH, TR DET B | 134 | LFT |



DESCRIPTION: PRELIMINARY PERMITTING PLANS
 DATE: 01/20/23
 BY: ACH
 NO: 2
 PROJECT NO.: 237 NORTH MAIN STREET ADRIAN, MI 49221
 PROJECT DATE: 03/08/2023
 PROJECT NO.: H486002
 DRAWN BY: JJP
 CHECKED BY: ACH

TECHNICAL SKILL: CREATIVE SPIRIT.

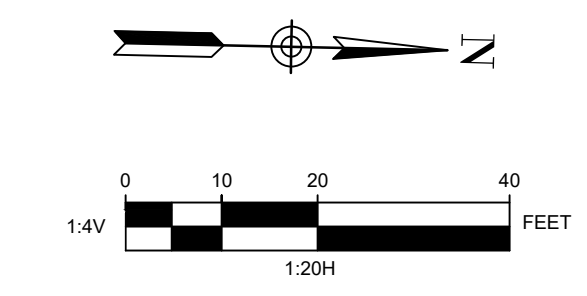
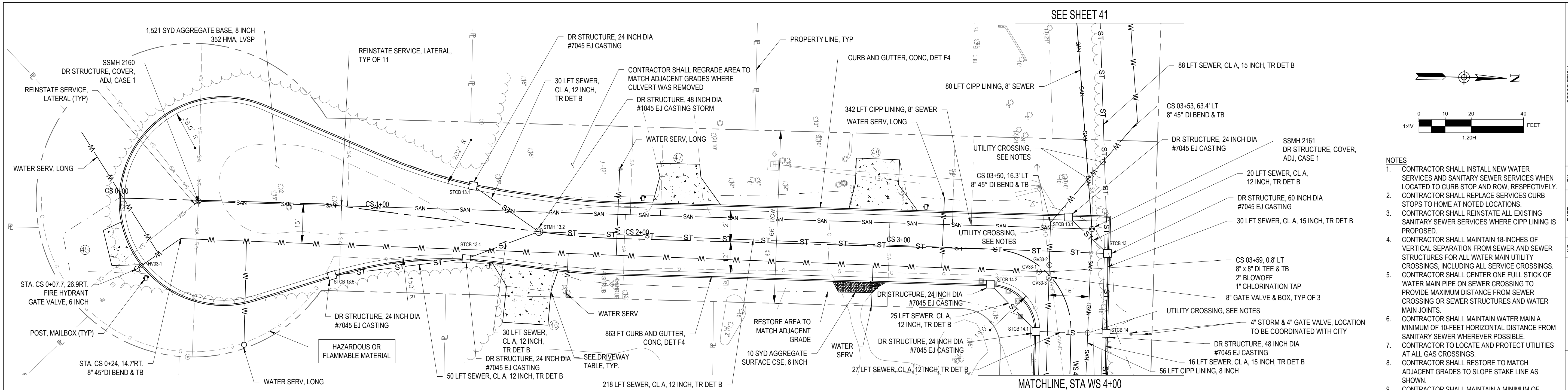
Mannik Smith GROUP
 www.MannikSmithGroup.com

PREPARED FOR: CITY OF HILLSDALE
 97 BROAD STREET
 HILLSDALE, MI 49242

WESTWOOD AREA RECONSTRUCTION
 WESTWOOD AREA

PICARDY PLACE PLAN & PROFILE
 Sta. PI 0+00 to Sta. PI 2+64

32 / 52



- NOTES**
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| NO. | DATE | BY | DESCRIPTION |
|-----|------------|-----|-----------------------------|
| 1 | 02/12/2023 | ACH | PRELIMINARY PLANS |
| 2 | 12/12/2023 | ACH | PERMITTING PLANS |
| 3 | 11/27/2023 | ACH | CONSTRUCTION PLANS |
| 4 | 03/09/2023 | VOM | REISSUED CONSTRUCTION PLANS |

237 NORTH MAIN STREET
ADRIAN, MI 49221
TEL: 517.263.4515

PROJECT NO.: H489002
DRAWN BY: JJP
CHECKED BY: ACH



PREPARED FOR:
CITY OF HILLSDALE

97 BROAD STREET
HILLSDALE, MI 49224

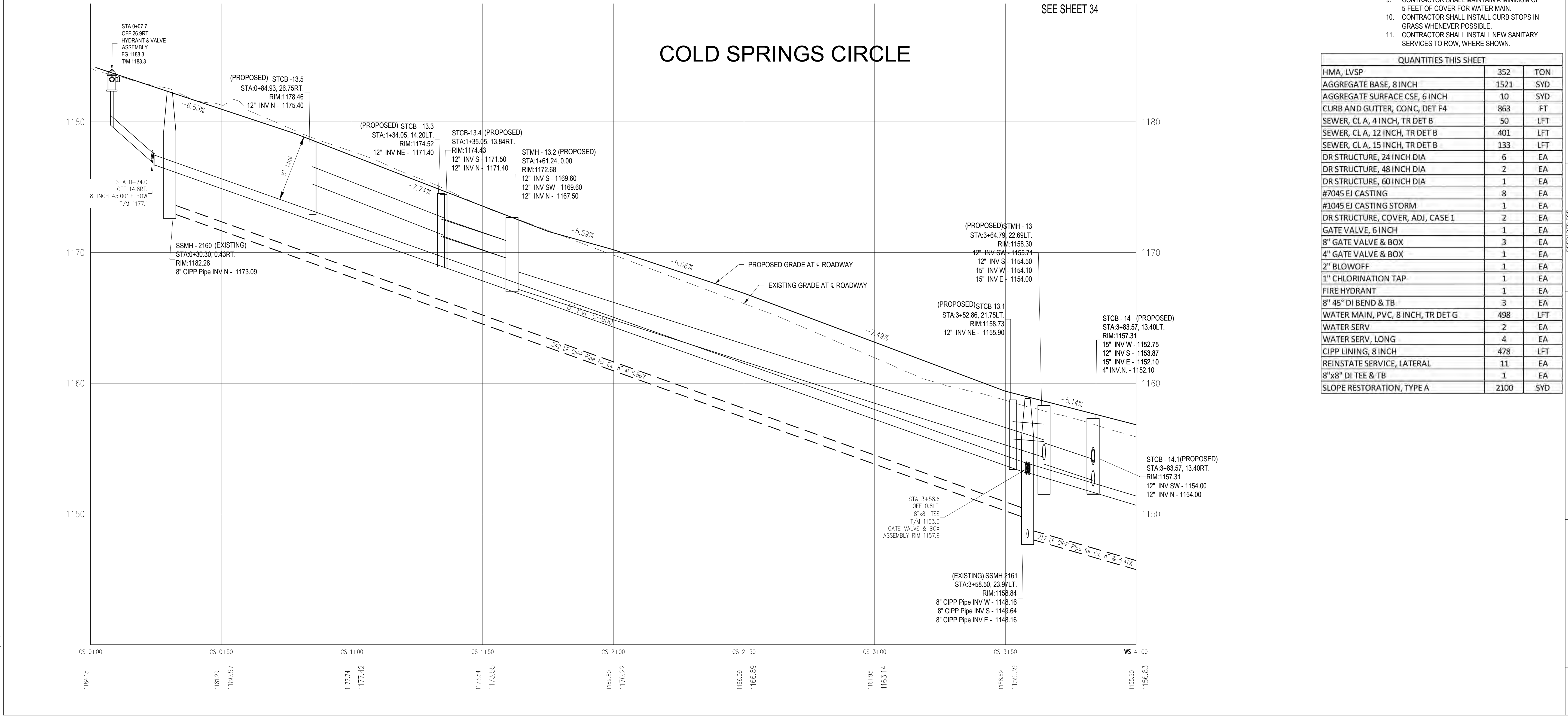
WESTWOOD AREA RECONSTRUCTION

WESTWOOD AREA

COLD SPRINGS CIRCLE PLAN & PROFILE
Sta. CS 0+00 to Sta. CS 4+00

33

52



COLD SPRINGS CIRCLE

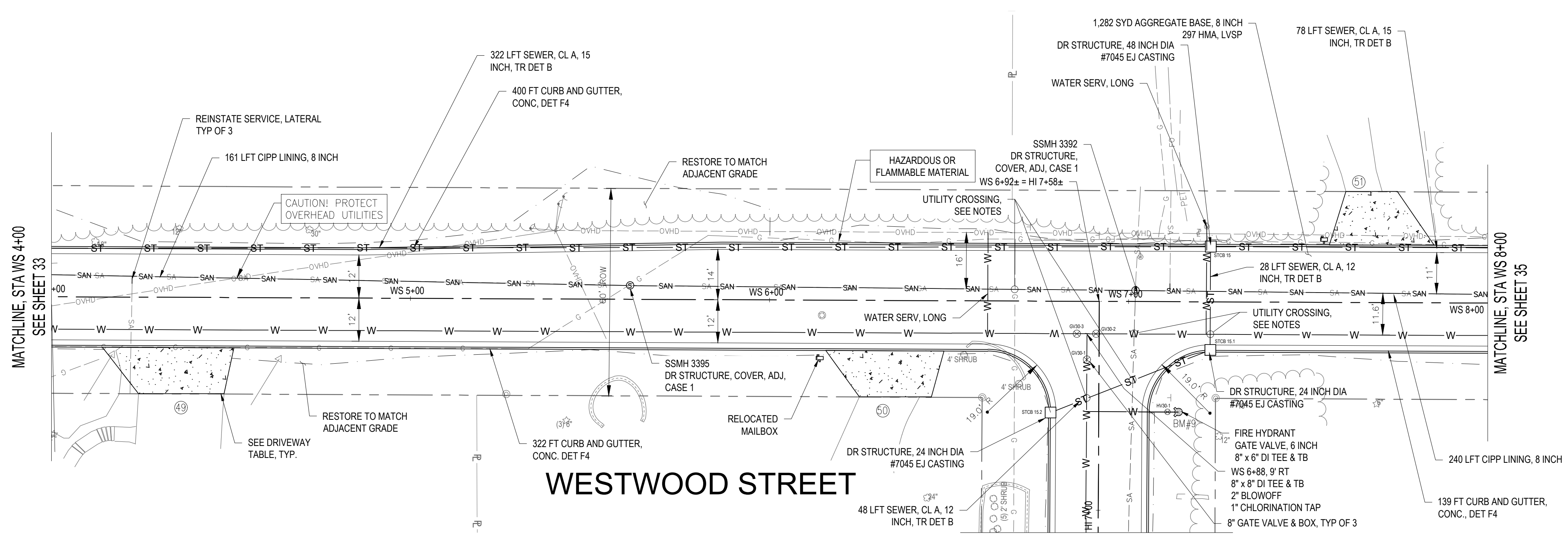
QUANTITIES THIS SHEET

| ITEM | QUANTITY | UNIT |
|--|----------|------|
| HMA, LVSP | 352 | TON |
| AGGREGATE BASE, 8 INCH | 1521 | SYD |
| AGGREGATE SURFACE CSE, 6 INCH | 10 | SYD |
| CURB AND GUTTER, CONC, DET F4 | 863 | FT |
| SEWER, CL A, 4 INCH, TR DET B | 50 | LFT |
| SEWER, CL A, 12 INCH, TR DET B | 401 | LFT |
| SEWER, CL A, 15 INCH, TR DET B | 133 | LFT |
| DR STRUCTURE, 24 INCH DIA #7045 EJ CASTING | 6 | EA |
| DR STRUCTURE, 48 INCH DIA #7045 EJ CASTING | 2 | EA |
| DR STRUCTURE, 60 INCH DIA #7045 EJ CASTING | 1 | EA |
| DR STRUCTURE, 24 INCH DIA #7045 EJ CASTING | 8 | EA |
| #1045 EJ CASTING STORM | 1 | EA |
| DR STRUCTURE, COVER, ADJ, CASE 1 | 2 | EA |
| GATE VALVE, 6 INCH | 1 | EA |
| 8" GATE VALVE & BOX | 3 | EA |
| 4" GATE VALVE & BOX | 1 | EA |
| 2" BLOWOFF | 1 | EA |
| 1" CHLORINATION TAP | 1 | EA |
| FIRE HYDRANT | 1 | EA |
| 8" 45° DI BEND & TB | 3 | EA |
| WATER MAIN, PVC, 8 INCH, TR DET G | 498 | LFT |
| WATER SERV | 2 | EA |
| WATER SERV, LONG | 4 | EA |
| CIPP LINING, 8 INCH | 478 | LFT |
| REINSTATE SERVICE, LATERAL | 11 | EA |
| 8"x8" DI TEE & TB | 1 | EA |
| SLOPE RESTORATION, TYPE A | 2100 | SYD |

© Hillman & Associates, Inc. 11/14/2023 10:00 AM. 11/14/2023 10:00 AM

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| QUANTITIES THIS SHEET | | |
|-----------------------------------|------|-----|
| HMA, LVSP | 297 | TON |
| AGGREGATE BASE, 8 INCH | 1282 | SYD |
| CURB AND GUTTER, CONC, DET F4 | 861 | FT |
| SEWER, CL A, 12 INCH, TR DET B | 76 | LFT |
| SEWER, CL A, 15 INCH, TR DET B | 400 | LFT |
| DR STRUCTURE, 48 INCH DIA | 1 | EA |
| DR STRUCTURE, 24 INCH DIA | 2 | EA |
| DR STRUCTURE, COVER, ADJ, CASE 1 | 2 | EA |
| #7045 EJ CASTING | 3 | EA |
| GATE VALVE, 6 INCH | 1 | EA |
| 8" GATE VALVE & BOX | 3 | EA |
| 2" BLOWOFF | 1 | EA |
| 1" CHLORINATION TAP | 1 | EA |
| 8" x 8" DI TEE & TB | 1 | EA |
| 8" x 5" DI TEE & TB | 1 | EA |
| FIRE HYDRANT | 1 | EA |
| WATER MAIN, PVC, 8 INCH, TR DET G | 455 | LFT |
| WATER SERV, LONG | 2 | EA |
| CIPP LINING, 8 INCH | 401 | LFT |
| REINSTATE SERVICE, LATERAL | 3 | EA |
| SLOPE RESTORATION, TYPE A | 770 | SYD |

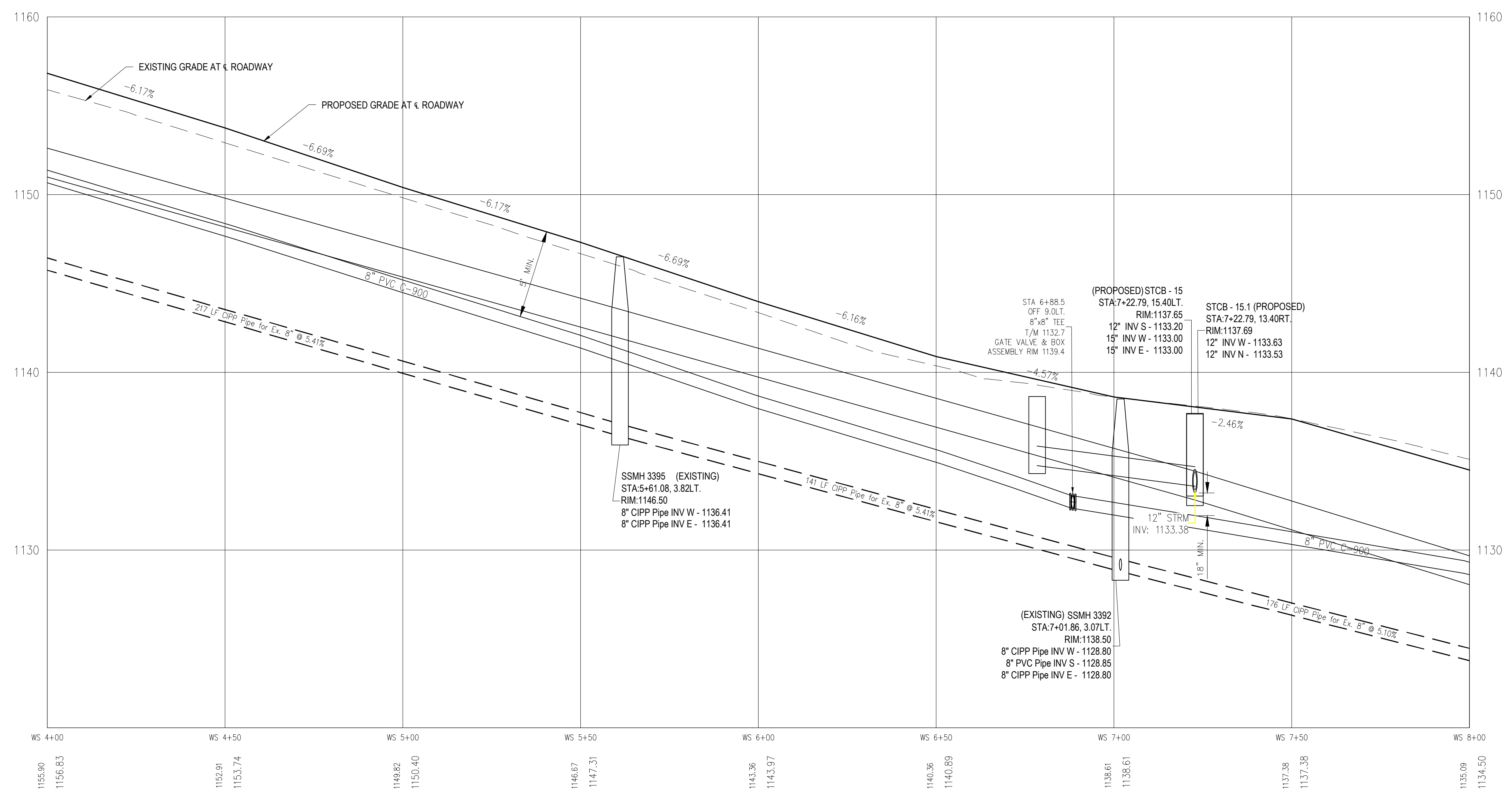


N

0 10 20 40
1:20H
FEET

BENCHMARK #9
FIRE HYDRANT AT SE CORNER OF
HIGHLAND AVENUE & WESTWOOD
STREET
ELEV. = 1140.86 NAVD88
N = 153914.26932
E = 13047854.8998

BENCHMARK #12
POWER POLE AT SW CORNER OF
COLD SPRING CIRCLE & WESTWOOD
DRIVE
ELEV. = 1160.19 NAVD88
N = 153933.0541
E = 13047468.9400



WESTWOOD STREET
HIGHLAND AVENUE

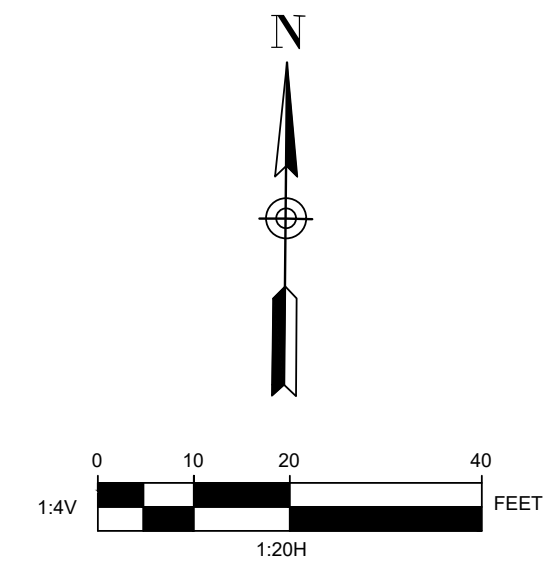
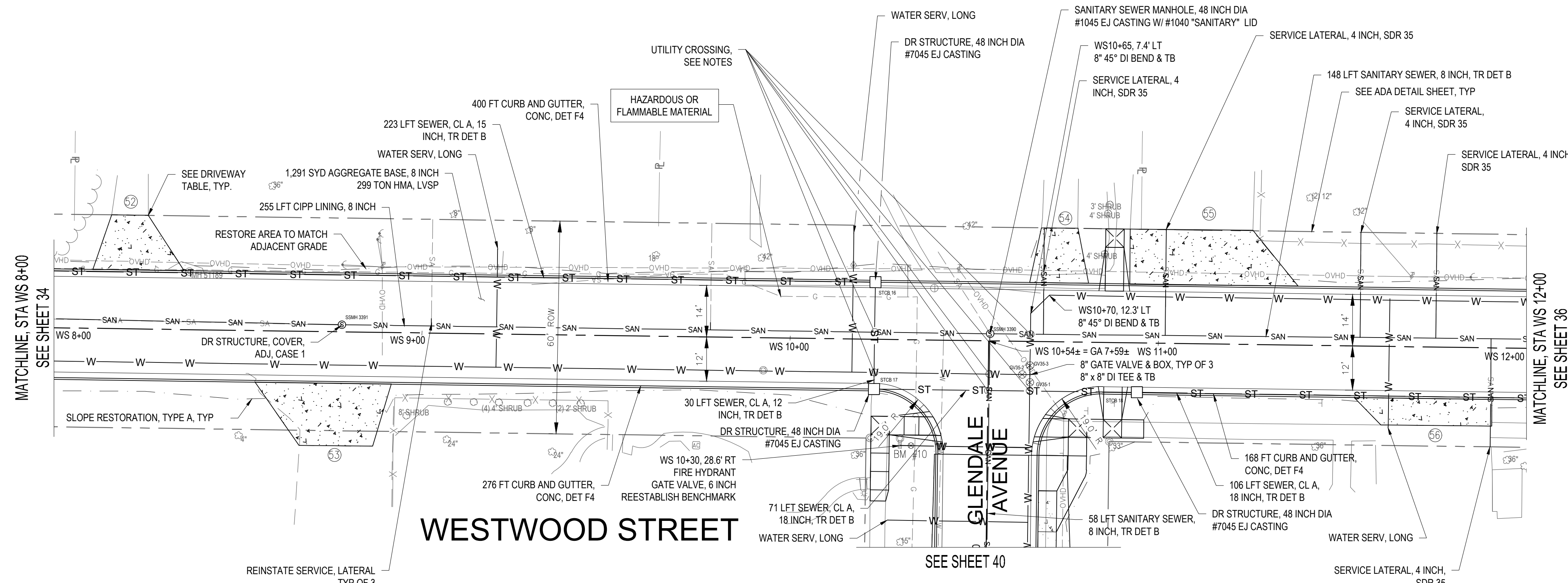
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|-----|------------|-----|--------------------------------|
| NO. | DATE | BY | DESCRIPTION |
| 1 | 01/23/23 | ACH | PRELIMINARY PLANS |
| 2 | 12/20/22 | ACH | PERMITTING PLANS |
| 3 | 11/27/2023 | ACH | CONSTRUCTION PLANS |
| 4 | 03/08/2023 | ACH | RESUBMITTED CONSTRUCTION PLANS |

| | | |
|--|--|--------------------------|
| 237 NORTH MAIN STREET ADRIAN, MI 49221 TEL: 517.283.4515 | PROJECT NO.: H486002 DRAWN BY: JJP CHECKED BY: ACH | PROJECT DATE: 03/08/2023 |
|--|--|--------------------------|

PREPARED FOR:
CITY OF HILLSDALE
97 BROAD STREET
HILLSDALE, MI 49242

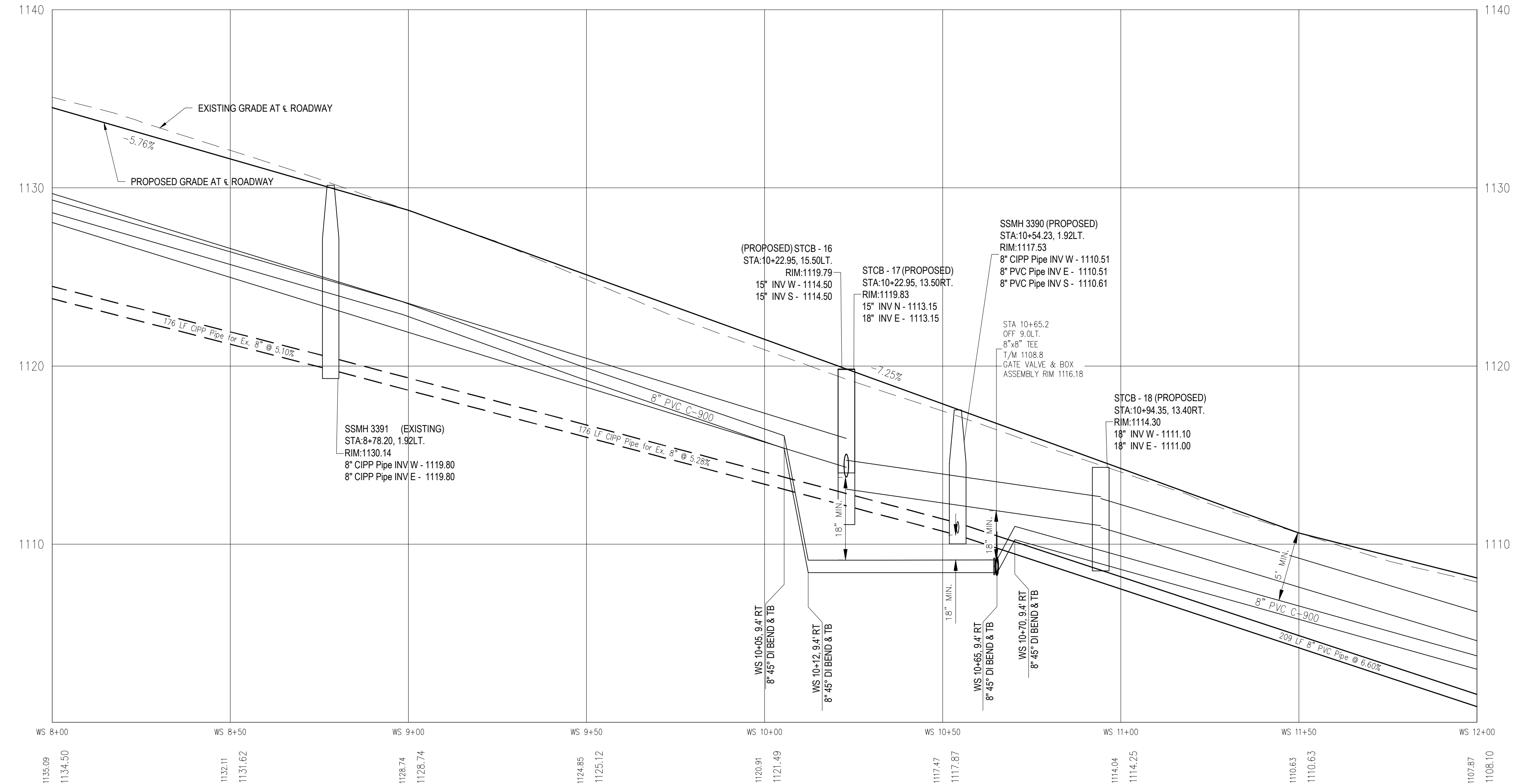
**WESTWOOD AREA
RECONSTRUCTION
WESTWOOD AREA**

**WESTWOOD STREET
PLAN & PROFILE
Sta. WS 4+00 to
Sta. WS 8+00**



BENCHMARK #10
 "X" CUT ON SW BOLT OF HYDRANT
 AT SW CORNER OF GLENDALE AVENUE
 & WESTWOOD STREET
 ELEV. = 1120.77 NAVD88
 N = 153915.0850
 E = 13048171.1010

- NOTES
- CONTRACTOR SHALL INSTALL NEW WATER SERVICES AND SANITARY SEWER SERVICES WHEN LOCATED TO CURB STOP AND ROW, RESPECTIVELY.
 - CONTRACTOR SHALL REPLACE SERVICES CURB STOPS TO HOME AT NOTED LOCATIONS.
 - CONTRACTOR SHALL REINSTATE ALL EXISTING SANITARY SEWER SERVICES WHERE CIPP LINING IS PROPOSED.
 - CONTRACTOR SHALL MAINTAIN 18-INCHES OF VERTICAL SEPARATION FROM SEWER AND SEWER STRUCTURES FOR ALL WATER MAIN UTILITY CROSSINGS, INCLUDING ALL SERVICE CROSSINGS.
 - CONTRACTOR SHALL CENTER ONE FULL STICK OF WATER MAIN PIPE ON SEWER CROSSING TO PROVIDE MAXIMUM DISTANCE FROM SEWER CROSSING OR SEWER STRUCTURES AND WATER MAIN JOINTS.
 - CONTRACTOR SHALL MAINTAIN WATER MAIN A MINIMUM OF 10-FOOT HORIZONTAL DISTANCE FROM SANITARY SEWER WHEREVER POSSIBLE.
 - CONTRACTOR TO LOCATE AND PROTECT UTILITIES AT ALL GAS CROSSINGS.
 - CONTRACTOR SHALL RESTORE TO MATCH ADJACENT GRADES TO SLOPE STAKE LINE AS SHOWN.
 - CONTRACTOR SHALL MAINTAIN A MINIMUM OF 5-FEET OF COVER FOR WATER MAIN.
 - CONTRACTOR SHALL INSTALL CURB STOPS IN GRASS WHENEVER POSSIBLE.
 - CONTRACTOR SHALL INSTALL NEW SANITARY SERVICES TO ROW, WHERE SHOWN.



| QUANTITIES THIS SHEET | | |
|--|------|------|
| ITEM | QTY | UNIT |
| HMA, LVSP | 299 | TON |
| AGGREGATE BASE, 8 INCH | 1291 | SYD |
| CURB AND GUTTER, CONC, DET F4 | 444 | FT |
| SEWER, CL A, 15 INCH, TR DET B | 253 | LFT |
| SEWER, CL A, 18 INCH, TR DET B | 177 | LFT |
| DR STRUCTURE, 48 INCH DIA | 3 | EA |
| DR STRUCTURE, COVER, ADJ, CASE 1 | 1 | EA |
| #7045 EJ CASTING | 3 | EA |
| FIRE HYDRANT | 1 | EA |
| GATE VALVE, 6 INCH | 1 | EA |
| 8" 45° DI BEND & TB | 4 | EA |
| 8" GATE VALVE & BOX | 3 | EA |
| WATER MAIN, PVC, 8 INCH, TR DET G | 468 | LFT |
| WATER SERV, LONG | 4 | EA |
| SANITARY SEWER MANHOLE, 48 INCH DIA | 1 | EA |
| #1045 EJ CASTING W/ #1040 "SANITARY" LID | 1 | EA |
| CIPP LINING, 8 INCH | 255 | LFT |
| REINSTATE SERVICE, LATERAL | 3 | EA |
| SANITARY SEWER, 8 INCH, TR DET B | 206 | LFT |
| SERVICE LATERAL, 4 INCH, SDR 35 | 5 | EA |
| SEWER SERVICE TAP, 4 INCH @ SEWER MAIN | 5 | EA |
| SLOPE RESTORATION, TYPE A | 750 | SYD |

| | | | | |
|-------------|-------------------|------------------|--------------------|-----------------------------|
| DESCRIPTION | PRELIMINARY PLANS | PERMITTING PLANS | CONSTRUCTION PLANS | REISSUED CONSTRUCTION PLANS |
| NO. | 1 | 2 | 3 | 4 |
| DATE | 01/20/23 | 02/15/23 | 11/27/2023 | 03/09/2023 |
| BY | ACH | ACH | ACH | VOM |
| NO. | 1 | 2 | 3 | 4 |
| DATE | 01/20/23 | 02/15/23 | 11/27/2023 | 03/09/2023 |
| BY | ACH | ACH | ACH | VOM |

237 NORTH MAIN STREET
 ADRIAN, MI 49221
 TEL: 517.263.4515

PROJECT DATE: 03/09/2023
 PROJECT NO.: H486002
 DRAWN BY: JJP
 CHECKED BY: ACH

TECHNICAL SKILL:
CREATIVE SPIRIT.

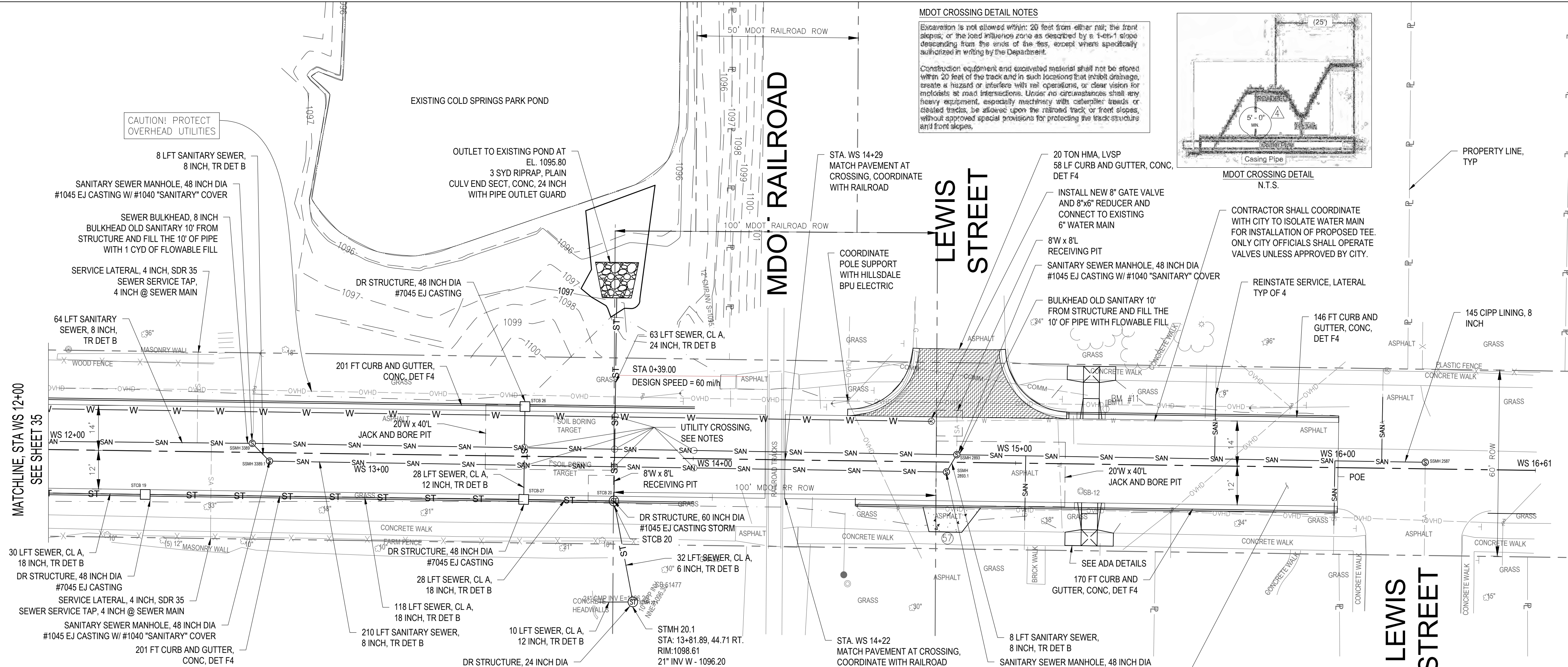
Mannik Smith GROUP
 www.MannikSmithGroup.com

PREPARED FOR:
CITY OF HILLSDALE
 97 BROAD STREET
 HILLSDALE, MI 49242

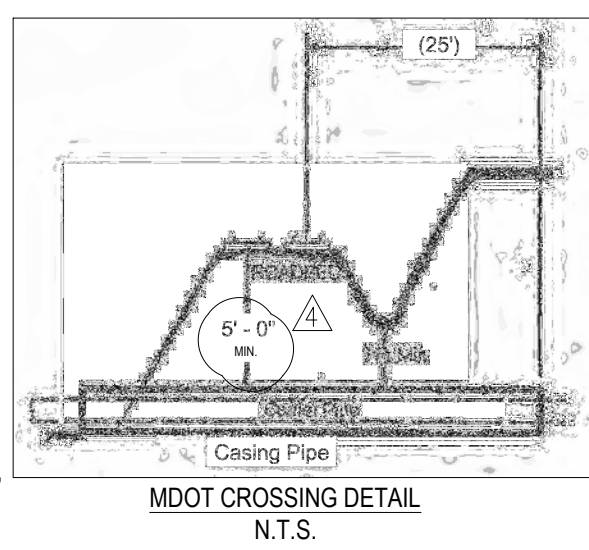
WESTWOOD AREA RECONSTRUCTION
 WESTWOOD AREA

WESTWOOD STREET PLAN & PROFILE
 Sta. WS 8+00 to
 Sta. WS 12+00

35 52



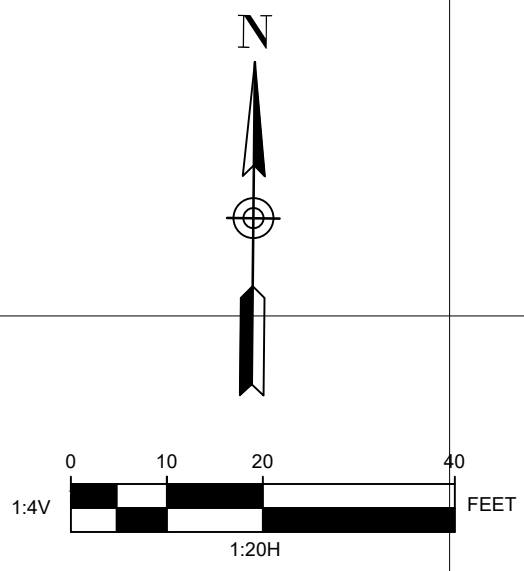
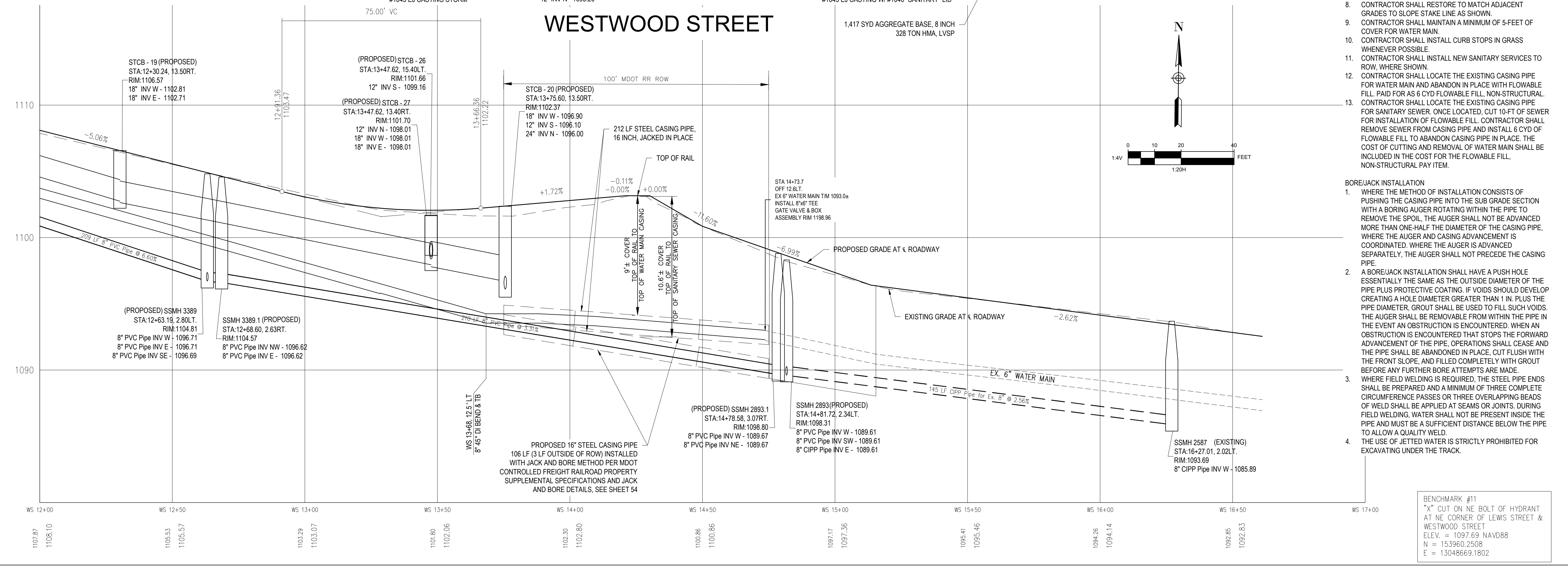
MDOT CROSSING DETAIL NOTES
 Excavation is not allowed within 20 feet from either rail; the front slopes, or the load influence zone as described by a 1-ft-1 slope descending from the ends of the ties, except where specifically authorized in writing by the Department.
 Construction equipment and excavated material shall not be stored within 20 feet of the track and in such locations that inhibit drainage, create a hazard or interfere with rail operations, or clear vision for motorists at road intersections. Under no circumstances shall any heavy equipment, especially machinery with caterpillar treads or cleated tracks, be allowed upon the railroad track or front slopes, without approved special provisions for protecting the track structure and front slopes.



| QUANTITIES THIS SHEET | | |
|---|------|-----|
| HMA, LVSP | 348 | TON |
| AGGREGATE BASE, 8 INCH | 1417 | SYD |
| CURB AND GUTTER, CONC, DET F4 | 776 | FT |
| SEWER, CL A, 6 INCH, TR DET B | 32 | LFT |
| SEWER, CL A, 12 INCH, TR DET B | 38 | LFT |
| SEWER, CL A, 18 INCH, TR DET B | 176 | LFT |
| SEWER, CL A, 24 INCH, TR DET B | 63 | LFT |
| DR STRUCTURE, 24 INCH DIA | 1 | EA |
| DR STRUCTURE, 48 INCH DIA | 3 | EA |
| DR STRUCTURE, 60 INCH DIA | 1 | EA |
| #7045 EJ CASTING | 2 | EA |
| #1045 EJ CASTING STORM | 2 | EA |
| 8" 45° DI BEND & TB | 1 | EA |
| 8" GATE VALVE & BOX | 1 | EA |
| 8" x 6" REDUCER | 1 | EA |
| WATER MAIN, PVC, 8 INCH, TR DET G | 275 | LFT |
| SANITARY SEWER MANHOLE, 48 INCH DIA | 4 | EA |
| #1045 EJ CASTING W/ #1040 "SANITARY" LID | 4 | EA |
| CIPP LINING, 8 INCH | 145 | LFT |
| SANITARY SEWER, 8 INCH, TR DET B | 290 | LFT |
| SERVICE LATERAL, 4 INCH, SDR 35 | 2 | EA |
| SEWER SERVICE TAP, 4 INCH @ SEWER MAIN | 2 | EA |
| STEEL CASING PIPE, 16 INCH, JACKED IN PLACE | 212 | LFT |
| REINSTATE SERVICE, LATERAL | 4 | EA |
| SEWER BULKHEAD, 8 INCH | 2 | EA |
| RIPRAP, PLAIN | 3 | SYD |
| CULV END SECT, CONC, 24 INCH | 1 | EA |
| SLOPE RESTORATION, TYPE A | 1340 | SYD |

- NOTES**
- CONTRACTOR SHALL INSTALL NEW WATER SERVICES AND SANITARY SEWER SERVICES WHEN LOCATED TO CURB STOP AND ROW, RESPECTIVELY.
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 - CONTRACTOR SHALL MAINTAIN WATER MAIN A MINIMUM OF 10-FOOT HORIZONTAL DISTANCE FROM SANITARY SEWER WHEREVER POSSIBLE.
 - CONTRACTOR TO LOCATE AND PROTECT UTILITIES AT ALL GAS CROSSINGS.
 - CONTRACTOR SHALL RESTORE TO MATCH ADJACENT GRADES TO SLOPE STAKE LINE AS SHOWN.
 - CONTRACTOR SHALL MAINTAIN A MINIMUM OF 5-FOOT OF COVER FOR WATER MAIN.
 - CONTRACTOR SHALL INSTALL CURB STOPS IN GRASS WHENEVER POSSIBLE.
 - CONTRACTOR SHALL INSTALL NEW SANITARY SERVICES TO ROW, WHERE SHOWN.
 - CONTRACTOR SHALL LOCATE THE EXISTING CASING PIPE FOR WATER MAIN AND ABANDON IN PLACE WITH FLOWABLE FILL. PAID FOR AS 6 CYD FLOWABLE FILL, NON-STRUCTURAL. CONTRACTOR SHALL LOCATE THE EXISTING CASING PIPE FOR SANITARY SEWER. ONCE LOCATED, CUT 10-FT OF SEWER FOR INSTALLATION OF FLOWABLE FILL. CONTRACTOR SHALL REMOVE SEWER FROM CASING PIPE AND INSTALL 6 CYD OF FLOWABLE FILL TO ABANDON CASING PIPE IN PLACE. THE COST OF CUTTING AND REMOVAL OF WATER MAIN SHALL BE INCLUDED IN THE COST FOR THE FLOWABLE FILL, NON-STRUCTURAL PAY ITEM.

- BORE/JACK INSTALLATION**
- WHERE THE METHOD OF INSTALLATION CONSISTS OF PUSHING THE CASING PIPE INTO THE SUB GRADE SECTION WITH A BORING AUGER ROTATING WITHIN THE PIPE TO REMOVE THE SPOIL, THE AUGER SHALL NOT BE ADVANCED MORE THAN ONE-HALF THE DIAMETER OF THE CASING PIPE, WHERE THE AUGER AND CASING ADVANCEMENT IS COORDINATED. WHERE THE AUGER IS ADVANCED SEPARATELY, THE AUGER SHALL NOT PRECEDE THE CASING PIPE.
 - A BORE/JACK INSTALLATION SHALL HAVE A PUSH HOLE ESSENTIALLY THE SAME AS THE OUTSIDE DIAMETER OF THE PIPE PLUS PROTECTIVE COATING. IF VOIDS SHOULD DEVELOP CREATING A HOLE DIAMETER GREATER THAN 1 IN. PLUS THE PIPE DIAMETER, GROUT SHALL BE USED TO FILL SUCH VOIDS. THE AUGER SHALL BE REMOVABLE FROM WITHIN THE PIPE IN THE EVENT AN OBSTRUCTION IS ENCOUNTERED. WHEN AN OBSTRUCTION IS ENCOUNTERED THAT STOPS THE FORWARD ADVANCEMENT OF THE PIPE, OPERATIONS SHALL CEASE AND THE PIPE SHALL BE ABANDONED IN PLACE. CUT FLUSH WITH THE FRONT SLOPE, AND FILLED COMPLETELY WITH GROUT BEFORE ANY FURTHER BORE ATTEMPTS ARE MADE.
 - WHERE FIELD WELDING IS REQUIRED, THE STEEL PIPE ENDS SHALL BE PREPARED AND A MINIMUM OF THREE COMPLETE CIRCUMFERENCE PASSES OR THREE OVERLAPPING BEADS OF WELD SHALL BE APPLIED AT SEAMS OR JOINTS. DURING FIELD WELDING, WATER SHALL NOT BE PRESENT INSIDE THE PIPE AND MUST BE A SUFFICIENT DISTANCE BELOW THE PIPE TO ALLOW A QUALITY WELD.
 - THE USE OF JETTED WATER IS STRICTLY PROHIBITED FOR EXCAVATING UNDER THE TRACK.



PREPARED FOR: **CITY OF HILLSDALE**
 WESTWOOD AREA
 RECONSTRUCTION
 WESTWOOD AREA
 WESTWOOD STREET
 PLAN & PROFILE
 Sta. WS 12+00 to
 Sta. WS 16+61

PROJECT NO.: H488002
 PROJECT DATE: 03/08/2023
 DRAWN BY: JPP
 CHECKED BY: ACH

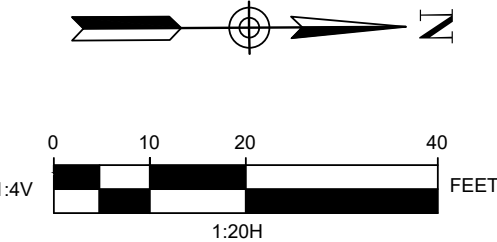
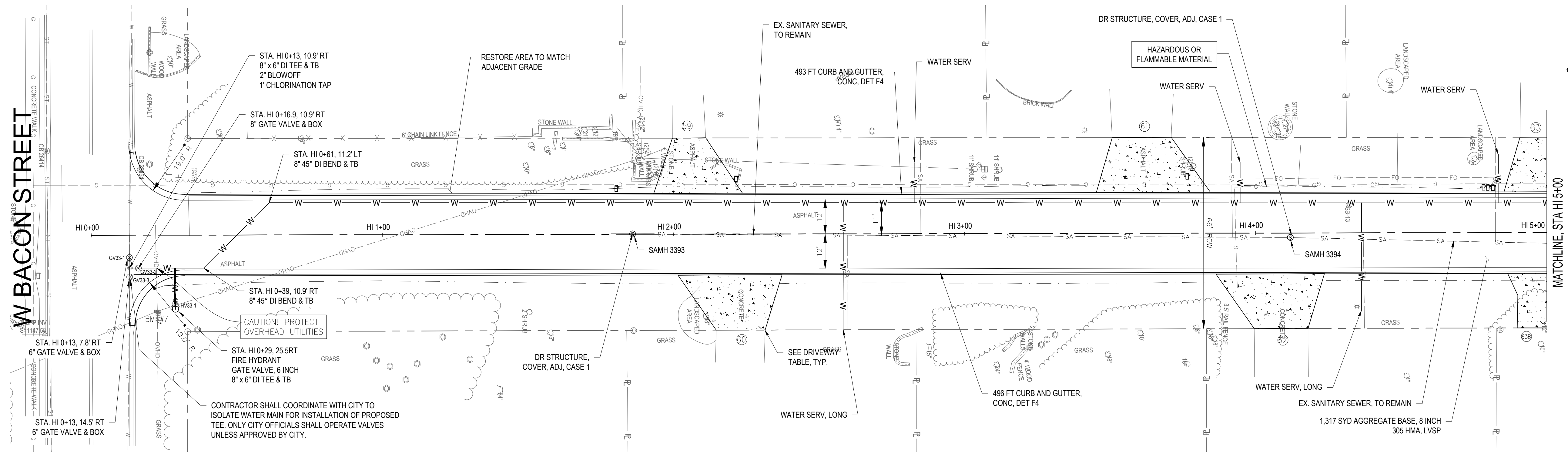
Mannik Smith GROUP
 www.MannikSmithGroup.com

97 BROAD STREET
 HILLSDALE, MI 49221
 TEL: 517.263.4515

TECHNICAL SKILL:
 CREATIVE SPIRIT.

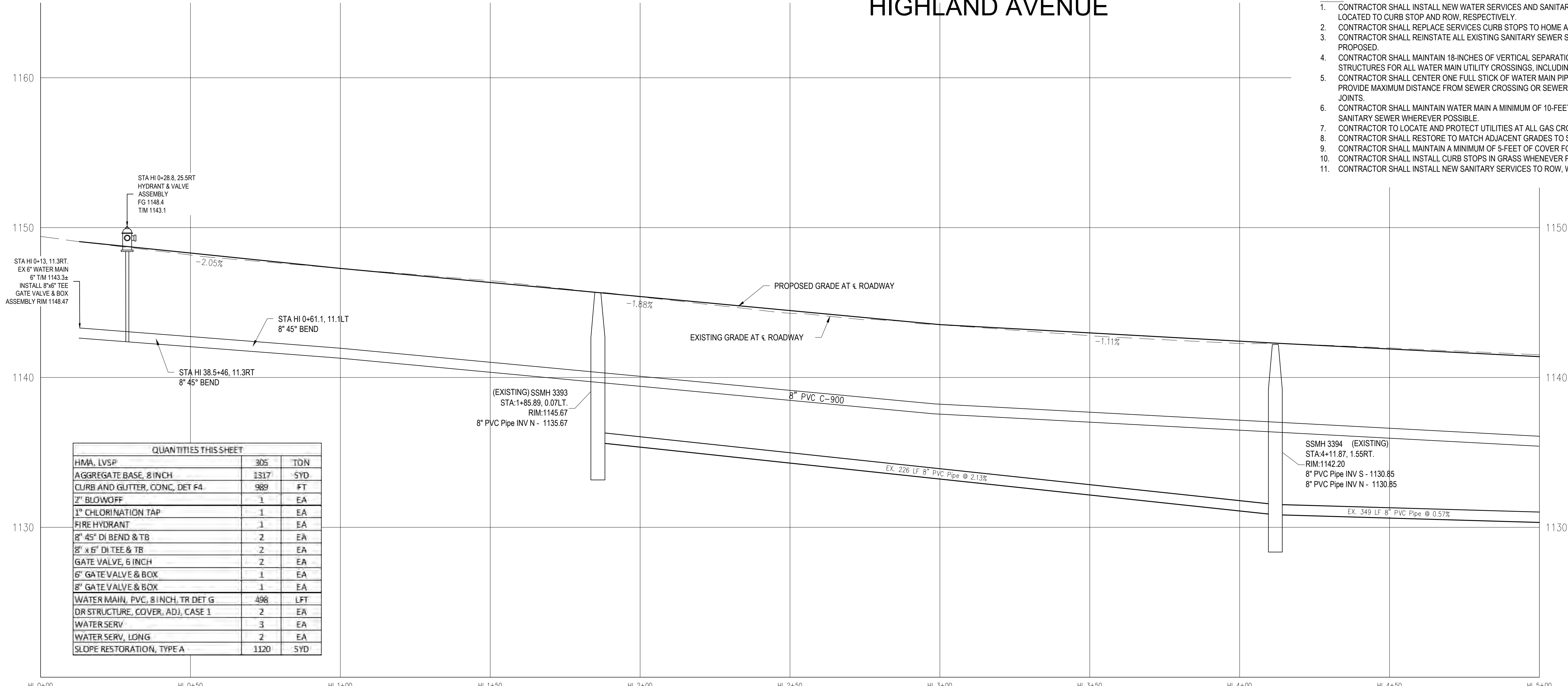
36 52

W BACON STREET



BENCHMARK #7
 POWER POLE AT NE CORNER OF
 HIGHLAND AVENUE & W BACON
 STREET
 ELEV. = 1149.35 NAVD88
 N = 153209.4350
 E = 13047855.3400

HIGHLAND AVENUE



- NOTES
- CONTRACTOR SHALL INSTALL NEW WATER SERVICES AND SANITARY SEWER SERVICES WHEN LOCATED TO CURB STOP AND ROW, RESPECTIVELY.
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 - CONTRACTOR SHALL MAINTAIN WATER MAIN A MINIMUM OF 10-FOOT HORIZONTAL DISTANCE FROM SANITARY SEWER WHEREVER POSSIBLE.
 - CONTRACTOR TO LOCATE AND PROTECT UTILITIES AT ALL GAS CROSSINGS.
 - CONTRACTOR SHALL RESTORE TO MATCH ADJACENT GRADES TO SLOPE STAKE LINE AS SHOWN.
 - CONTRACTOR SHALL MAINTAIN A MINIMUM OF 5-FOOT OF COVER FOR WATER MAIN.
 - CONTRACTOR SHALL INSTALL CURB STOPS IN GRASS WHENEVER POSSIBLE.
 - CONTRACTOR SHALL INSTALL NEW SANITARY SERVICES TO ROW, WHERE SHOWN.

| QUANTITIES THIS SHEET | | |
|-----------------------------------|------|-----|
| HMA, LVSP | 305 | TON |
| AGGREGATE BASE, 8 INCH | 1317 | SYD |
| CURB AND GUTTER, CONC, DET F4 | 989 | FT |
| 2" BLOWOFF | 1 | EA |
| 1" CHLORINATION TAP | 1 | EA |
| FIRE HYDRANT | 1 | EA |
| 8" 45° DI BEND & TB | 2 | EA |
| 8" x 6" DI TEE & TB | 2 | EA |
| GATE VALVE, 6 INCH | 2 | EA |
| 6" GATE VALVE & BOX | 1 | EA |
| 8" GATE VALVE & BOX | 1 | EA |
| WATER MAIN, PVC, 8 INCH, TR DET G | 496 | LFT |
| DR STRUCTURE, COVER, ADJ, CASE 1 | 2 | EA |
| WATER SERV | 3 | EA |
| WATER SERV, LONG | 2 | EA |
| SLOPE RESTORATION, TYPE A | 1120 | SYD |

| | | | |
|-----|------------|-----|----------------------------|
| NO. | DATE | BY | DESCRIPTION |
| 1 | 01/23/23 | ACH | PRELIM. PLANS |
| 2 | 12/12/23 | ACH | PERMITTING PLANS |
| 3 | 1/27/2023 | ACH | CONSTRUCTION PLANS |
| 4 | 03/08/2023 | VOM | REVISED CONSTRUCTION PLANS |

237 NORTH MAIN STREET
 ADRIAN, MI 49221
 TEL: 517.263.4515

PROJECT DATE: 03/08/2023
 PROJECT NO.: H486002
 DRAWN BY: JPP
 CHECKED BY: ACH

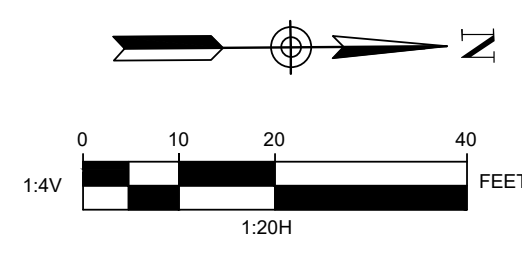
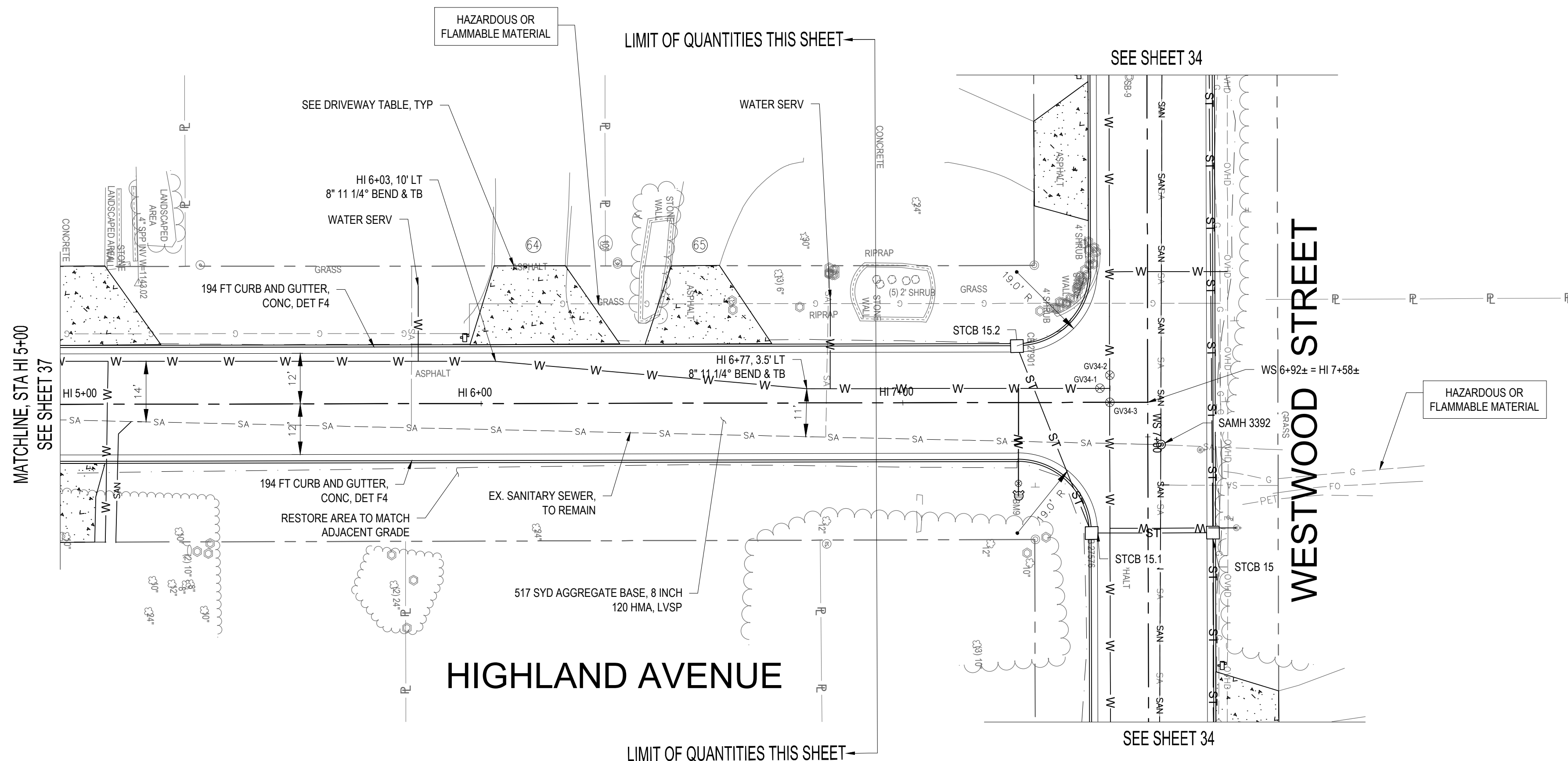
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PREPARED FOR:
CITY OF HILLSDALE
 97 BROAD STREET
 HILLSDALE, MI 49242

WESTWOOD AREA
 WESTWOOD AREA

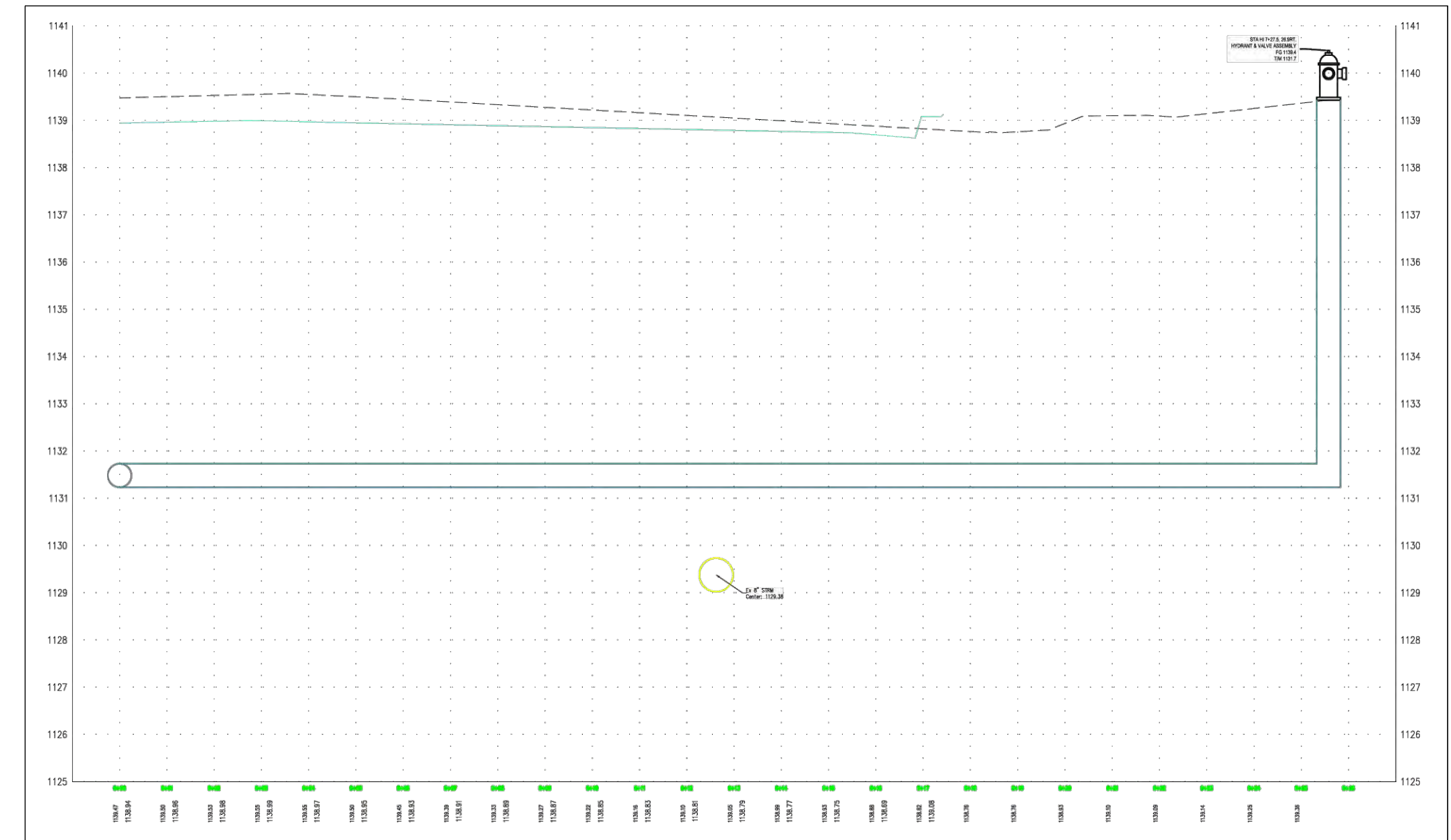
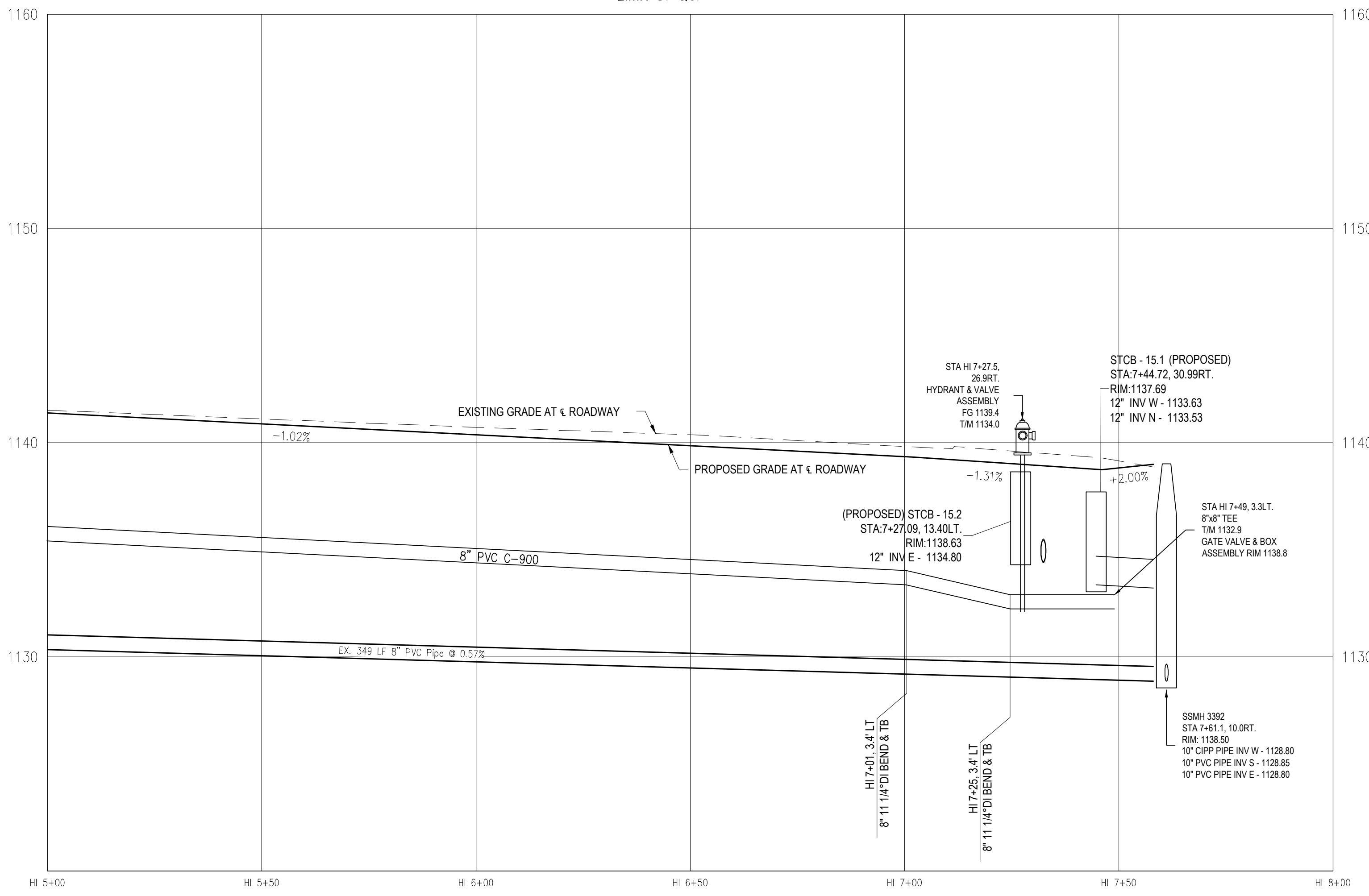
HIGHLAND AVENUE
 PLAN & PROFILE
 Sta. HI 0+00 to
 Sta. HI 5+00

37 / 52



- NOTES**
- CONTRACTOR SHALL INSTALL NEW WATER SERVICES AND SANITARY SEWER SERVICES WHEN LOCATED TO CURB STOP AND ROW, RESPECTIVELY.
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 - CONTRACTOR SHALL MAINTAIN WATER MAIN A MINIMUM OF 10-FEET HORIZONTAL DISTANCE FROM SANITARY SEWER WHEREVER POSSIBLE.
 - CONTRACTOR TO LOCATE AND PROTECT UTILITIES AT ALL GAS CROSSINGS.
 - CONTRACTOR SHALL RESTORE TO MATCH ADJACENT GRADES TO SLOPE STAKE LINE AS SHOWN.
 - CONTRACTOR SHALL MAINTAIN A MINIMUM OF 5-FEET OF COVER FOR WATER MAIN.
 - CONTRACTOR SHALL INSTALL CURB STOPS IN GRASS WHENEVER POSSIBLE.
 - CONTRACTOR SHALL INSTALL NEW SANITARY SERVICES TO ROW, WHERE SHOWN.

| QUANTITIES THIS SHEET | | |
|-----------------------------------|-----|-----|
| HMA, LVSP | 120 | TON |
| AGGREGATE BASE, 8 INCH | 517 | SYD |
| CURB AND GUTTER, CONC, DET F4 | 388 | FT |
| WATER MAIN, PVC, 8 INCH, TR DET G | 195 | LFT |
| 8" 11/4" DI BEND & TB | 4 | EA |
| WATER SERV | 2 | EA |
| SLOPE RESTORATION, TYPE A | 770 | SYD |



HYDRANT PROFILE
N.T.S.

| | | | |
|-----|------------|-----|--------------------------------|
| NO. | DATE | BY | DESCRIPTION |
| 1 | 02/15/23 | ACH | PRELIM PLAN |
| 2 | 02/15/23 | ACH | PERMITTING PLANS |
| 3 | 02/27/23 | ACH | CONSTRUCTION PLANS |
| 4 | 03/09/2023 | VOM | RESUBMITTED CONSTRUCTION PLANS |

| | |
|--|--|
| 237 NORTH MAIN STREET ADRIAN, MI 49221 TEL: 517.263.4515 | PROJECT DATE: 03/09/2023 PROJECT NO.: H489002 DRAWN BY: JJP CHECKED BY: ACH |
|--|--|

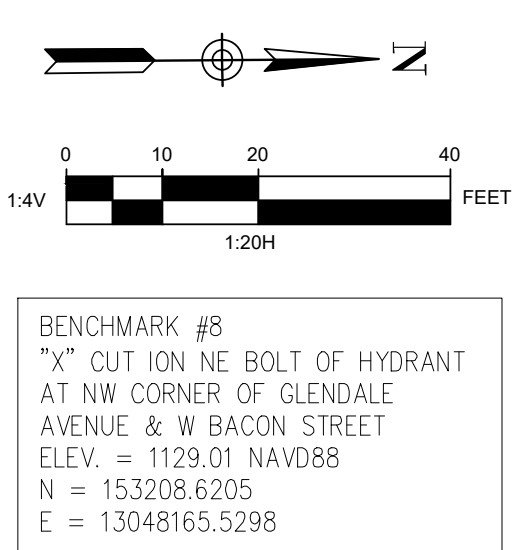
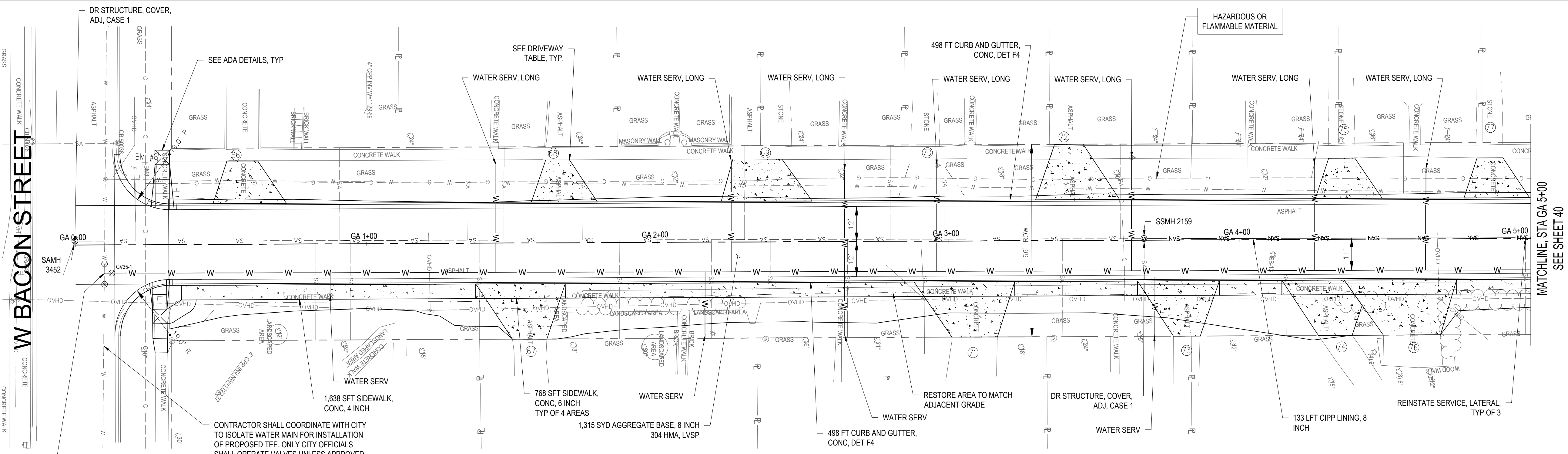
TECHNICAL SKILL:
CREATIVE SPIRIT.

Mannik Smith GROUP
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PREPARED FOR:
CITY OF HILLSDALE
97 BROAD STREET
HILLSDALE, MI 49242

WESTWOOD AREA RECONSTRUCTION
WESTWOOD AREA

HIGHLAND AVENUE PLAN & PROFILE
Sta. HI 5+00 to Sta. HI 7+58



BENCHMARK #8
 "X" CUT ION NE BOLT OF HYDRANT
 AT NW CORNER OF GLENDALE
 AVENUE & W BACON STREET
 ELEV. = 1129.01 NAVD88
 N = 153208.6205
 E = 13048165.5298

CONTRACTOR SHALL COORDINATE WITH CITY TO ISOLATE WATER MAIN FOR INSTALLATION OF PROPOSED TEE. ONLY CITY OFFICIALS SHALL OPERATE VALVES UNLESS APPROVED BY CITY.

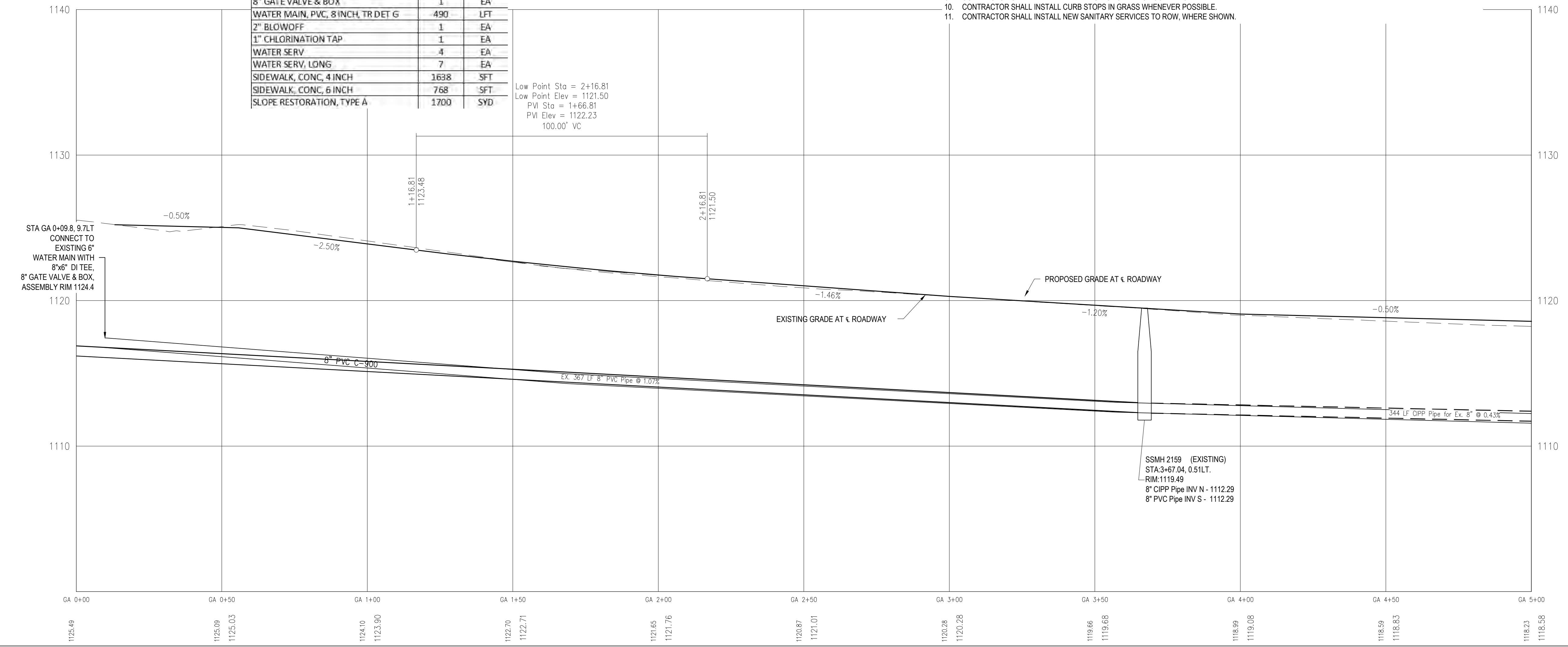
| QUANTITIES THIS SHEET | | |
|-----------------------------------|----------|------|
| ITEM | QUANTITY | UNIT |
| HMA, LVSP | 304 | TON |
| AGGREGATE BASE, 8 INCH | 1315 | SYD |
| CURB AND GUTTER, CONC. DET F4 | 996 | FT |
| DR STRUCTURE, COVER, ADJ, CASE 1 | 2 | EA |
| CIPP LINING, 8 INCH | 133 | LFT |
| REINSTATE SERVICE, LATERAL | 3 | EA |
| 6" GATE VALVE & BOX | 2 | EA |
| 8" GATE VALVE & BOX | 1 | EA |
| WATER MAIN, PVC, 8 INCH, TR DET G | 490 | LFT |
| 2" BLOWOFF | 1 | EA |
| 1" CHLORINATION TAP | 1 | EA |
| WATER SERV | 4 | EA |
| WATER SERV, LONG | 7 | EA |
| SIDWALK, CONC, 4 INCH | 1638 | SFT |
| SIDWALK, CONC, 6 INCH | 768 | SFT |
| SLOPE RESTORATION, TYPE A | 1700 | SYD |

Low Point Sta = 2+16.81
 Low Point Elev = 1121.50
 PVI Sta = 1+66.81
 PVI Elev = 1122.23
 100.00' VC

GLENDALE AVENUE

NOTES

1. CONTRACTOR SHALL INSTALL NEW WATER SERVICES AND SANITARY SEWER SERVICES WHEN LOCATED TO CURB STOP AND ROW, RESPECTIVELY.
2. CONTRACTOR SHALL REPLACE SERVICES CURB STOPS TO HOME AT NOTED LOCATIONS.
3. CONTRACTOR SHALL REINSTATE ALL EXISTING SANITARY SEWER SERVICES WHERE CIPP LINING IS PROPOSED.
4. CONTRACTOR SHALL MAINTAIN 18-INCHES OF VERTICAL SEPARATION FROM SEWER AND SEWER STRUCTURES FOR ALL WATER MAIN UTILITY CROSSINGS, INCLUDING ALL SERVICE CROSSINGS.
5. CONTRACTOR SHALL CENTER ONE FULL STICK OF WATER MAIN PIPE ON SEWER CROSSING TO PROVIDE MAXIMUM DISTANCE FROM SEWER CROSSING OR SEWER STRUCTURES AND WATER MAIN JOINTS.
6. CONTRACTOR SHALL MAINTAIN WATER MAIN A MINIMUM OF 10-FOOT HORIZONTAL DISTANCE FROM SANITARY SEWER WHEREVER POSSIBLE.
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8. CONTRACTOR SHALL RESTORE TO MATCH ADJACENT GRADES TO SLOPE STAKE LINE AS SHOWN.
9. CONTRACTOR SHALL MAINTAIN A MINIMUM OF 5-FOOT OF COVER FOR WATER MAIN.
10. CONTRACTOR SHALL INSTALL CURB STOPS IN GRASS WHENEVER POSSIBLE.
11. CONTRACTOR SHALL INSTALL NEW SANITARY SERVICES TO ROW, WHERE SHOWN.



W:\Projects\1148002\1148002.dwg (11/14/2023) 11:48 AM

| | | | |
|------------|-------------|-----------|-----------------------------|
| NO. | DATE | BY | DESCRIPTION |
| 1 | 01/23/23 | ACH | PRELIMINARY PLANS |
| 2 | 12/15/23 | ACH | PERMITTING PLANS |
| 3 | 1/27/2023 | ACH | CONSTRUCTION PLANS |
| 4 | 03/08/2023 | VOM | REISSUED CONSTRUCTION PLANS |

| | |
|--|--|
| 237 NORTH MAIN STREET ADRIAN, MI 49221 TEL: 517.263.4515 | PROJECT NO.: 1148002 PROJECT DATE: 03/08/2023 DRAWN BY: JJP CHECKED BY: ACH |
|--|--|

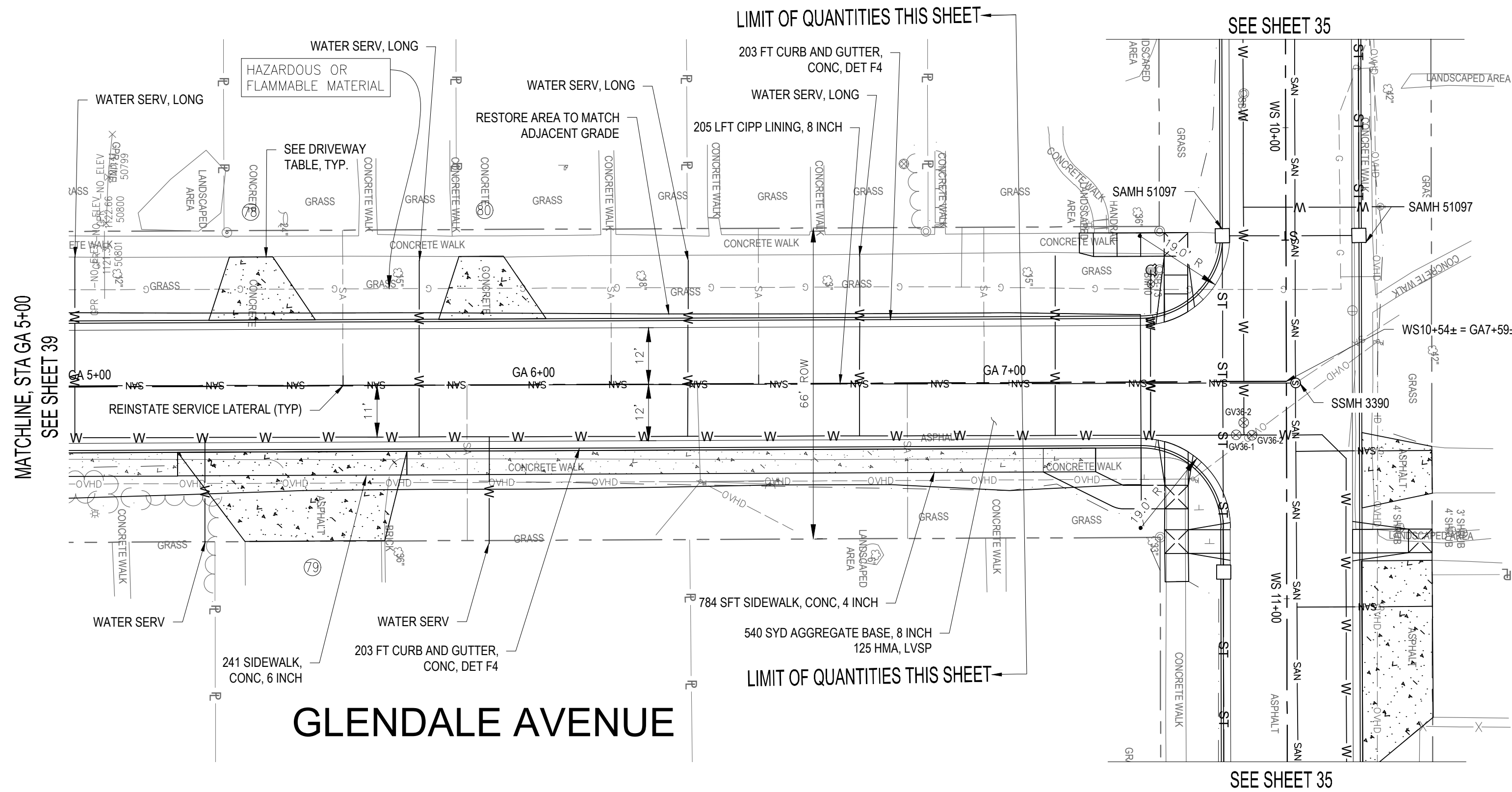
TECHNICAL SKILL:
CREATIVE SPIRIT.

PREPARED FOR:
CITY OF HILLSDALE
97 BROAD STREET
HILLSDALE, MI 49242

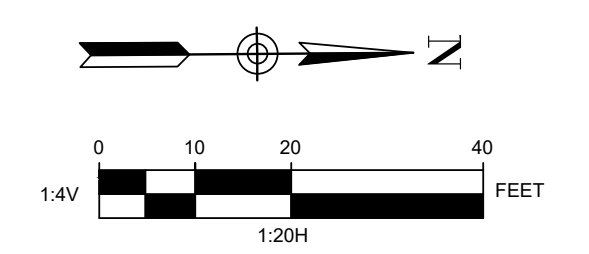
WESTWOOD AREA RECONSTRUCTION
WESTWOOD AREA

GLENDALE AVENUE PLAN & PROFILE
Sta. GA 0+00 to Sta. GA 5+00

39
52

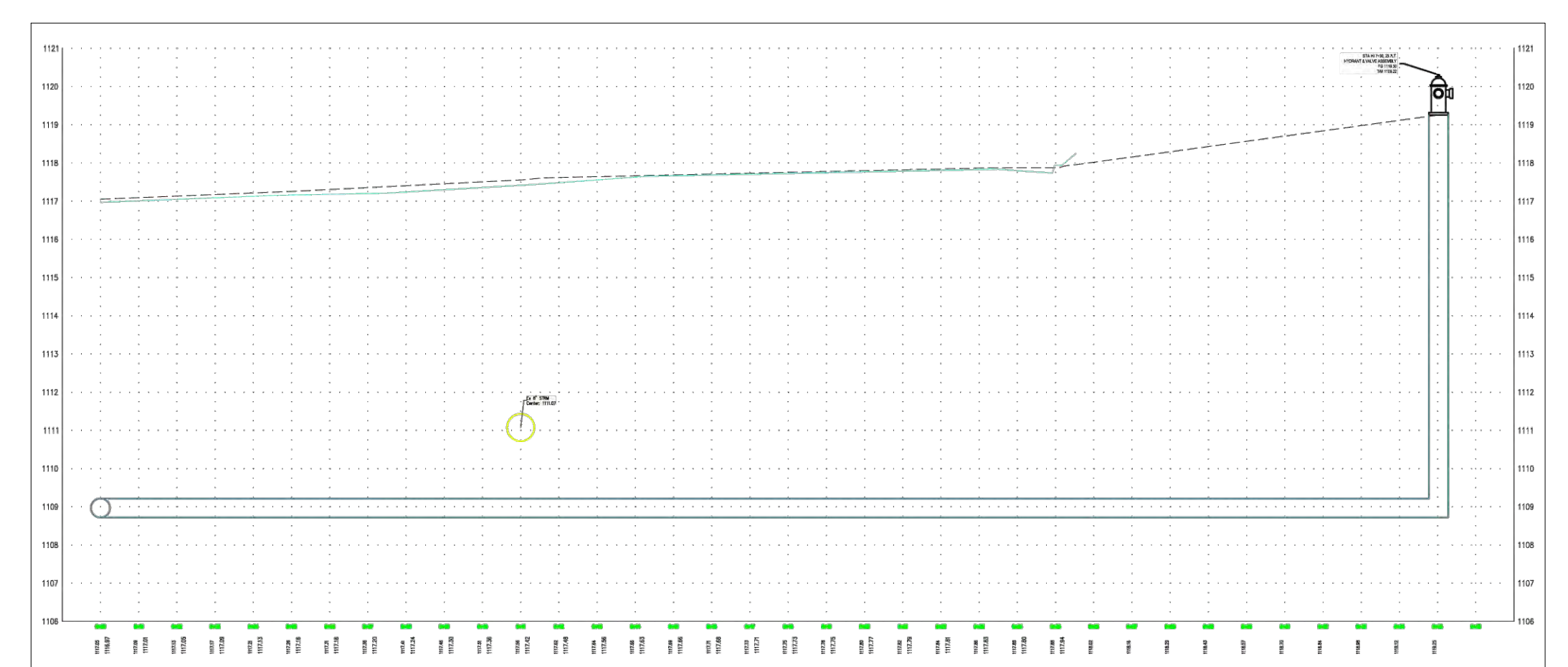
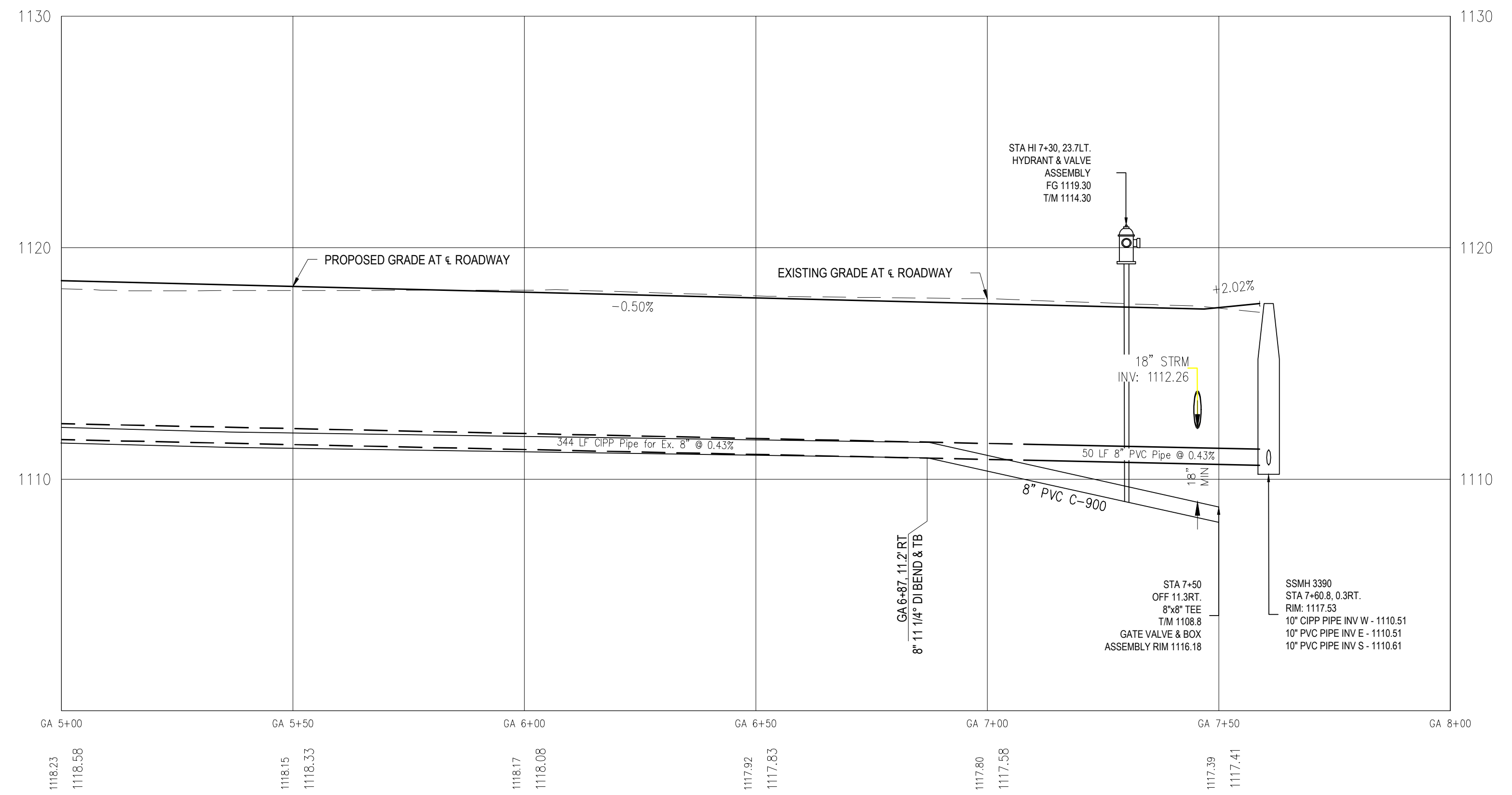


WESTWOOD STREET



- NOTES**
- CONTRACTOR SHALL INSTALL NEW WATER SERVICES AND SANITARY SEWER SERVICES WHEN LOCATED TO CURB STOP AND ROW, RESPECTIVELY.
 - CONTRACTOR SHALL REPLACE SERVICES CURB STOPS TO HOME AT NOTED LOCATIONS.
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 - CONTRACTOR SHALL INSTALL CURB STOPS IN GRASS WHENEVER POSSIBLE.
 - CONTRACTOR SHALL INSTALL NEW SANITARY SERVICES TO ROW, WHERE SHOWN.

| QUANTITIES THIS SHEET | | |
|-----------------------------------|-----|-----|
| | QTY | TON |
| HMA, LVSP | 125 | |
| AGGREGATE BASE 8 INCH | 540 | SYD |
| CURB AND GUTTER, CONC. DET F4 | 406 | FT |
| CIPP LINING, 8 INCH | 205 | LFT |
| REINSTATE SERVICE, LATERAL | 1 | EA |
| WATER MAIN, PVC, 8 INCH, TR DET C | 205 | LFT |
| 8" 11 1/4" DI BEND & TB | 1 | EA |
| WATER SERV. | 2 | EA |
| WATER SERV, LONG | 4 | EA |
| SIDEWALK, CONC. 4 INCH | 784 | SFT |
| SIDEWALK, CONC. 6 INCH | 241 | SFT |
| SLOPE RESTORATION, TYPE A | 750 | SYD |
| CONCRETE COLLAR | 1 | EA |

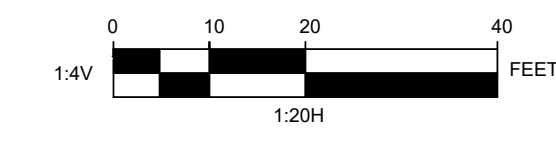
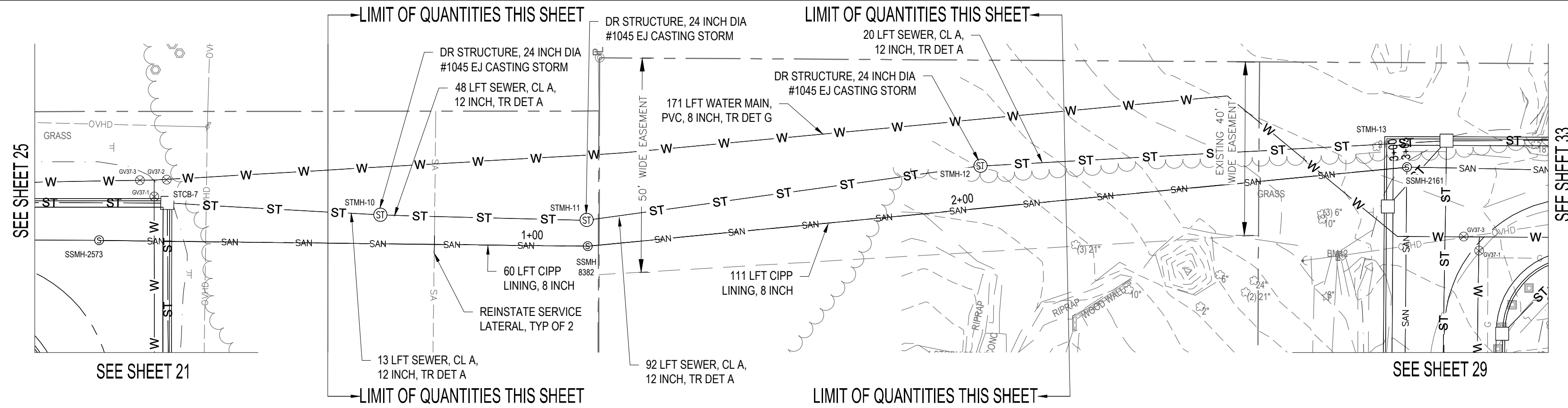


HYDRANT PROFILE
N.T.S.

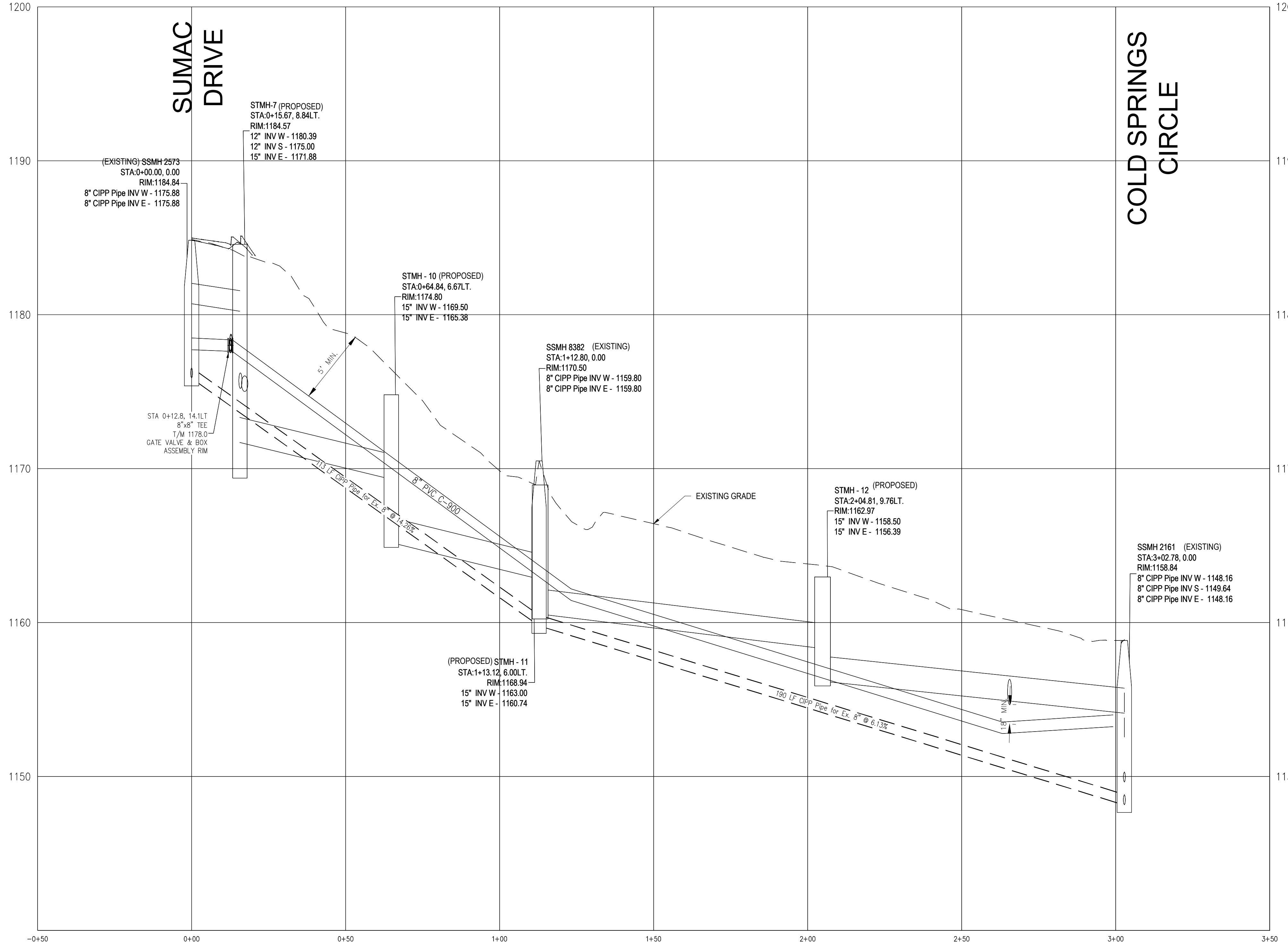
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|--|-----------------------------|-----------------------------------|------------|--|--|---|------------------|--------------------|
| | DESCRIPTION | BY | DATE | NO. | 237 NORTH MAIN STREET ADRIAN, MI 49221 TEL: 517.263.4515 | PROJECT NO.: H486002 | DRAWN BY: JJP | CHECKED BY: ACH |
| | PRELIMINARY PLANS | ACH | 01/23/23 | 1 | | | | |
| | PERMITTING PLANS | ACH | 12/20/22 | 2 | | | | |
| | CONSTRUCTION PLANS | ACH | 1/27/2023 | 3 | | | | |
| | REISSUED CONSTRUCTION PLANS | ACH | 03/09/2023 | 4 | | | | |
| TECHNICAL SKILL: CREATIVE SPIRIT. | | Mannik Smith GROUP | | www.MannikSmithGroup.com | | CITY OF HILLSDALE 97 BROAD STREET HILLSDALE, MI 49242 | | |
| WESTWOOD AREA RECONSTRUCTION | | WESTWOOD AREA | | | GLENDALE AVENUE PLAN & PROFILE Sta. GA 5+00 to Sta. 7+59 | | | |
| 40 | | | | 52 | | | | |

WESTWOOD DRIVE

WESTWOOD STREET



- NOTES
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 - CONTRACTOR SHALL INSTALL CURB STOPS IN GRASS WHENEVER POSSIBLE.
 - CONTRACTOR SHALL INSTALL NEW SANITARY SERVICES TO ROW, WHERE SHOWN.



| QUANTITIES THIS SHEET | | |
|-----------------------------------|-----|-----|
| WATER MAIN, PVC, 8 INCH, TR DET G | 171 | LFT |
| CIPP LINING, 8 INCH | 171 | LFT |
| SEWER, CL A, 12 INCH, TR DET B | 173 | LFT |
| REINSTATE SERVICE, LATERAL | 2 | EA |
| DR STRUCTURE, 24 INCH DIA | 3 | EA |
| #1045 EJ CASTING STORM | 3 | EA |

| | | | |
|-----|------------|-----|--------------------------------|
| NO. | DATE | BY | DESCRIPTION |
| 1 | 01/20/23 | ACH | PRELIMINARY PLANS |
| 2 | 12/19/2022 | ACH | PERMITTING PLANS |
| 3 | 1/27/2023 | ACH | CONSTRUCTION PLANS |
| 4 | 03/09/2023 | VOM | RESUBMITTED CONSTRUCTION PLANS |

| | |
|--------------|------------|
| PROJECT NO.: | 03/09/2023 |
| PROJECT NO.: | H489002 |
| DRAWN BY: | JJP |
| CHECKED BY: | ACH |

237 NORTH MAIN STREET
ADRIAN, MI 49221
TEL: 517.283.4515

PROJECT DATE: 03/09/2023
PROJECT NO.: H489002
DRAWN BY: JJP
CHECKED BY: ACH

TECHNICAL SKILL:
CREATIVE SPIRIT.

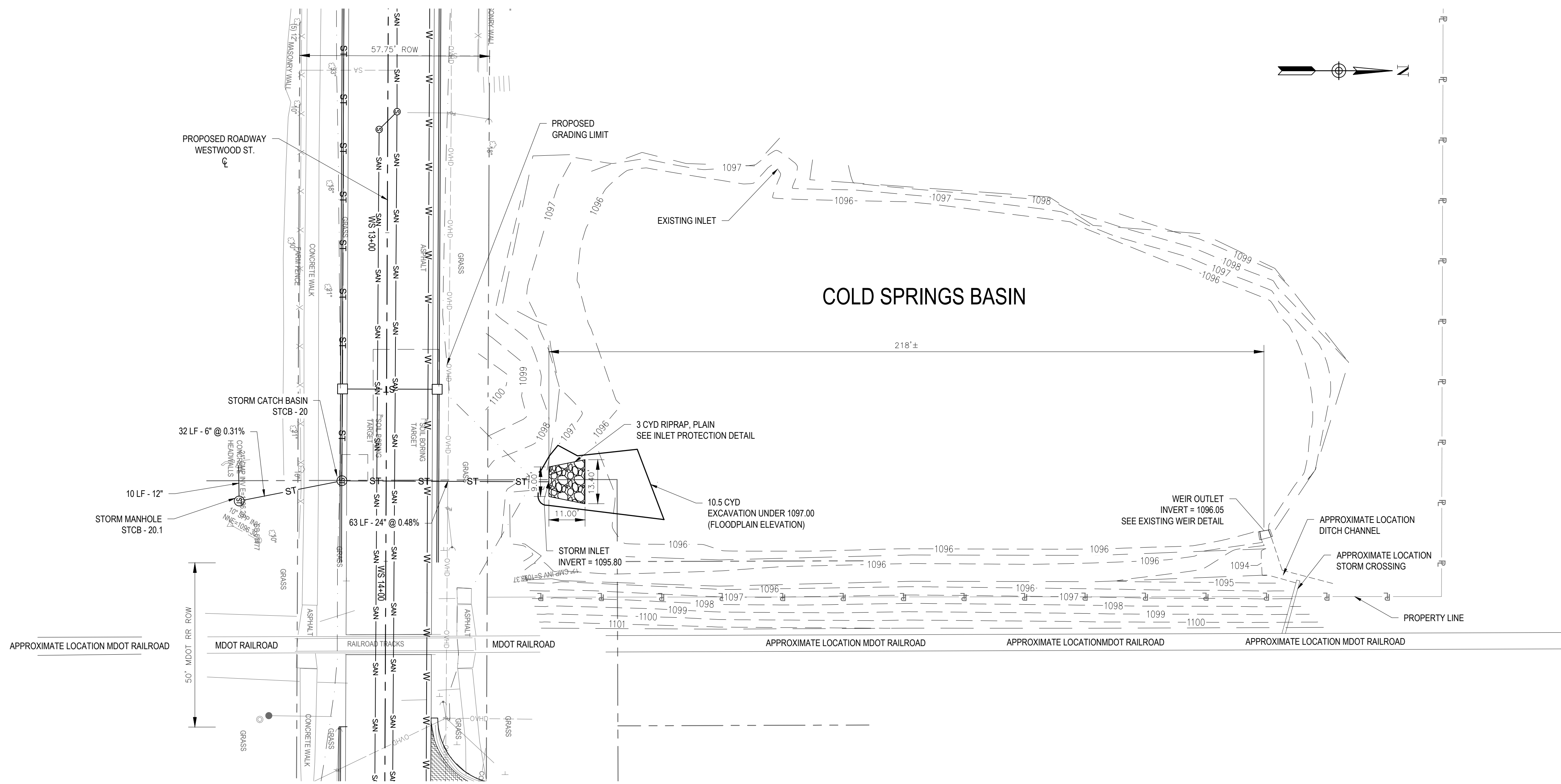
Mannik Smith GROUP
www.MannikSmithGroup.com

PREPARED FOR:
CITY OF HILLSDALE
97 BROAD STREET
HILLSDALE, MI 49242

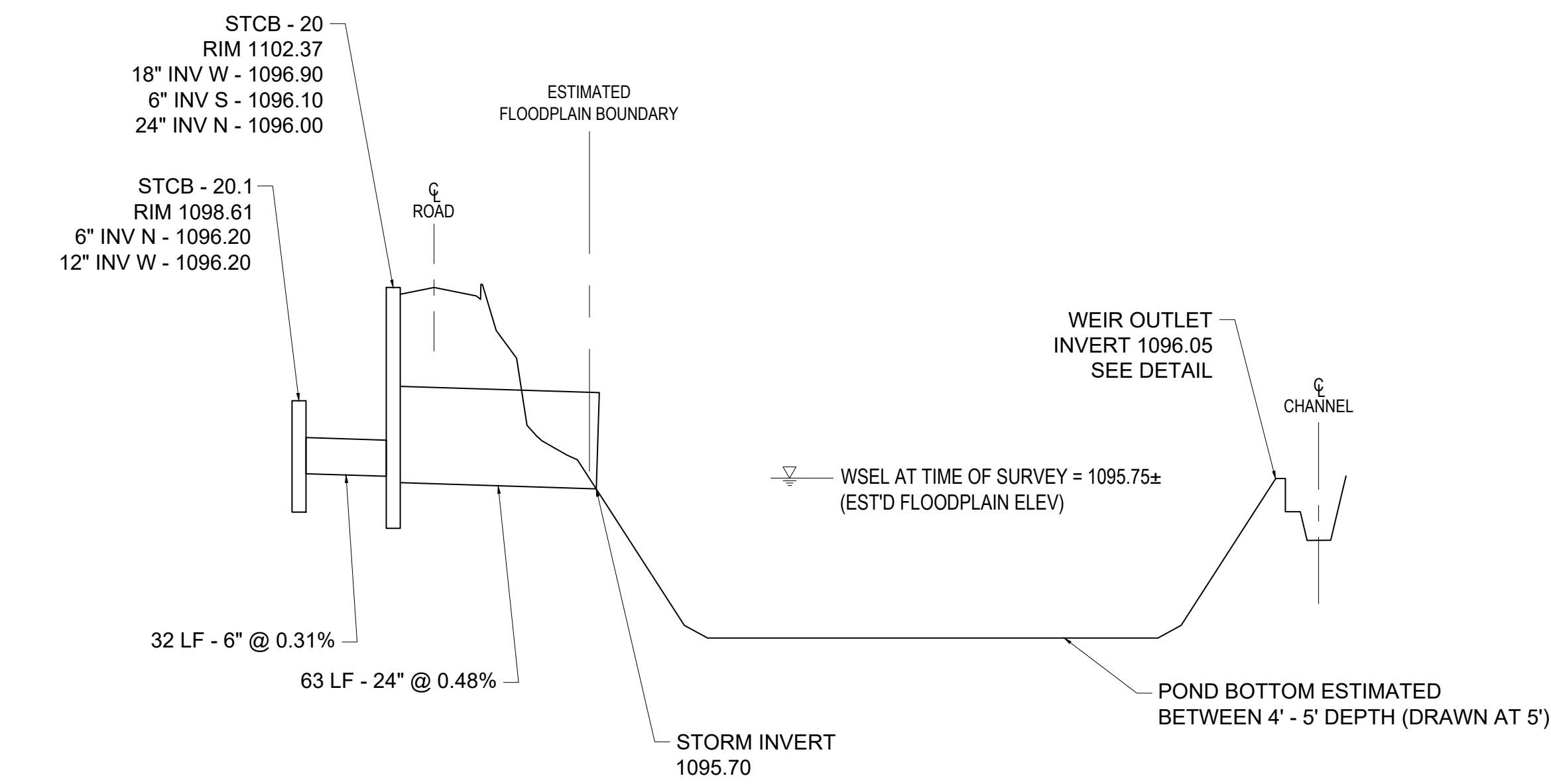
WESTWOOD AREA
RECONSTRUCTION
WESTWOOD AREA

PLAN & PROFILE
UTILITIES THRU
EASEMENT AREA

41 52

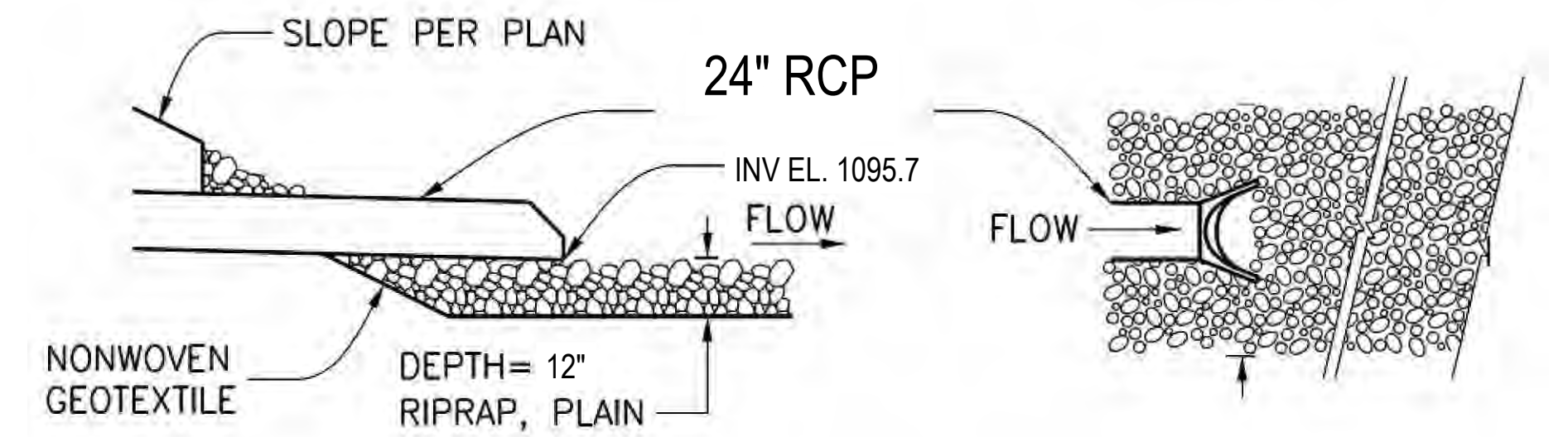


BASIN PLAN VIEW
SCALE 1" = 20'

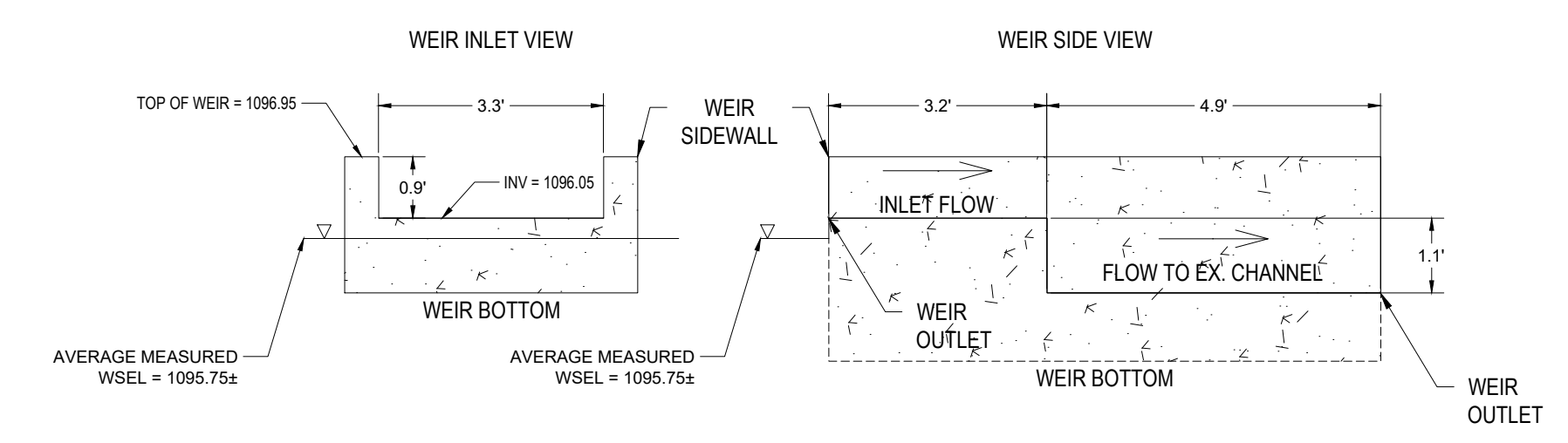


OUTLET STRUCTURE DETAIL

- NOTES**
1. CONTRACTOR SHALL INSTALL NEW WATER SERVICES AND SANITARY SEWER SERVICES WHEN LOCATED TO CURB STOP AND ROW, RESPECTIVELY.
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INLET PROTECTION DETAIL



EXISTING WEIR DETAIL

| | | | |
|-----|------------|-----|-----------------------------|
| NO. | DATE | BY | DESCRIPTION |
| 2 | 03/08/2023 | ACH | REISSUED CONSTRUCTION PLANS |

237 NORTH MAIN STREET
ADRIAN, MI 49221
TEL: 517.263.4515

PROJECT DATE: 03/08/2023
PROJECT NO.: H489002
DRAWN BY: J.M.
CHECKED BY: ACH

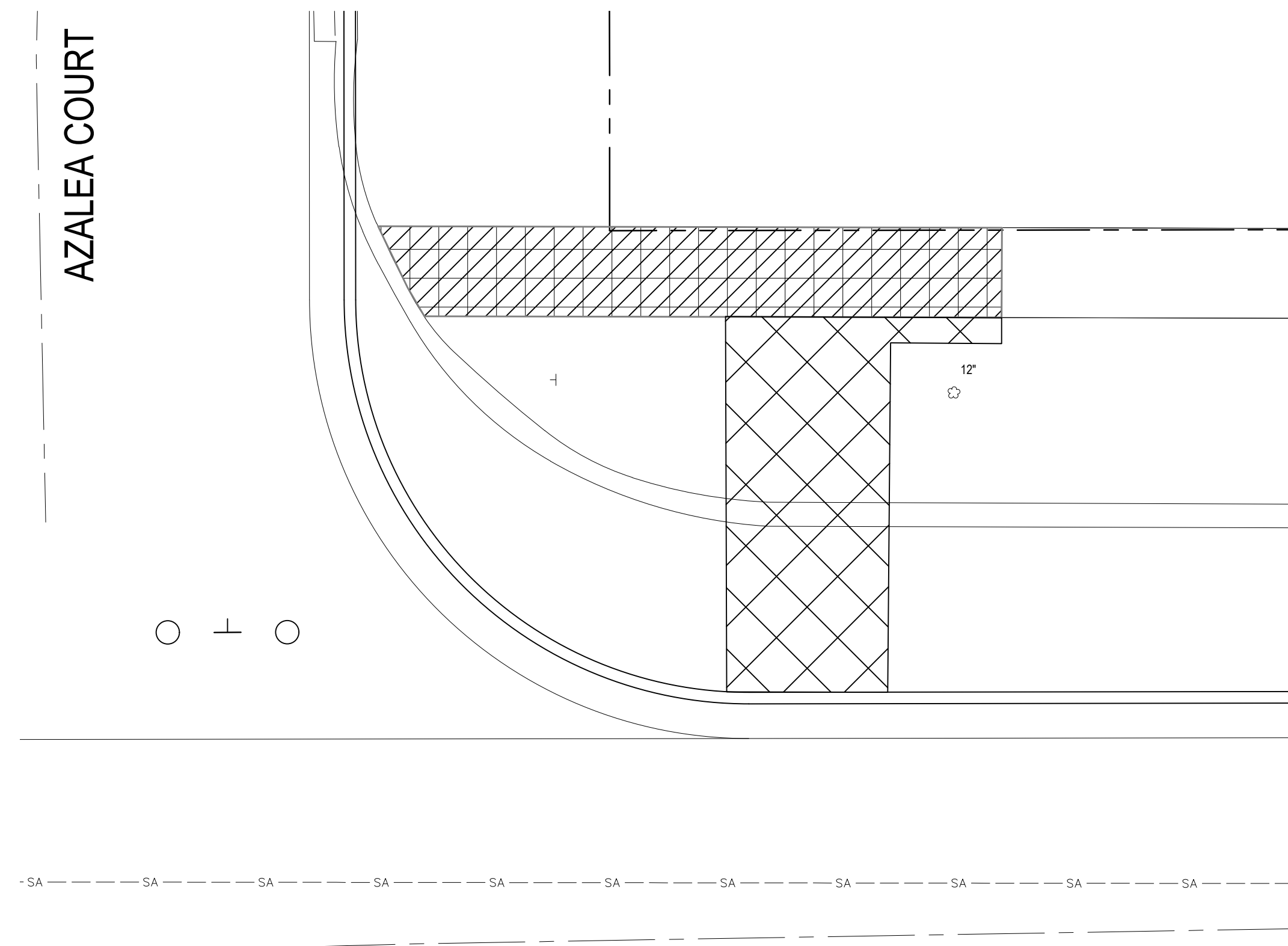
Mannik Smith GROUP
www.MannikSmithGroup.com

PREPARED FOR:
CITY OF HILLSDALE
97 BROAD STREET
HILLSDALE, MI 49242

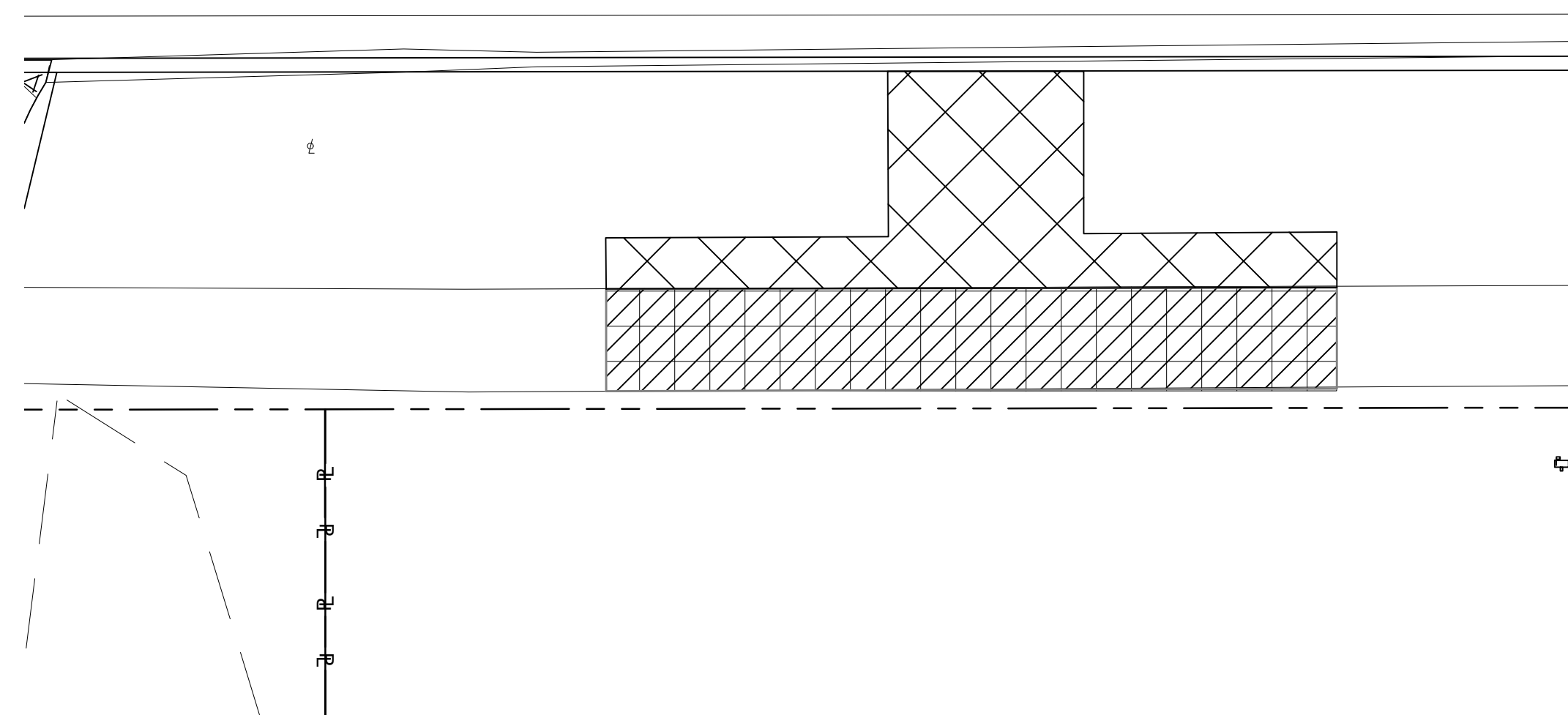
WESTWOOD AREA RECONSTRUCTION
WESTWOOD AREA

POND DETAIL PLAN

AZALEA COURT

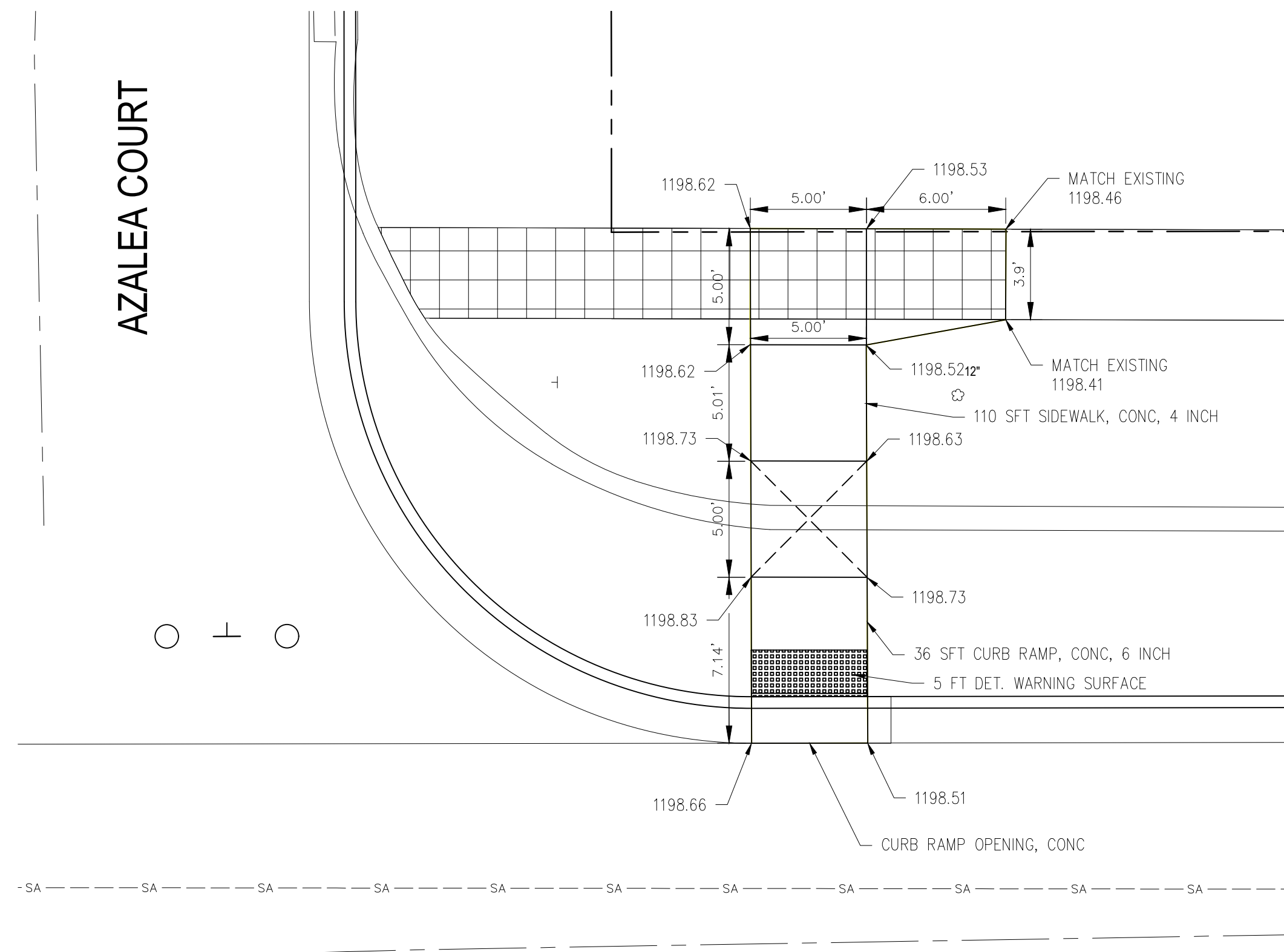


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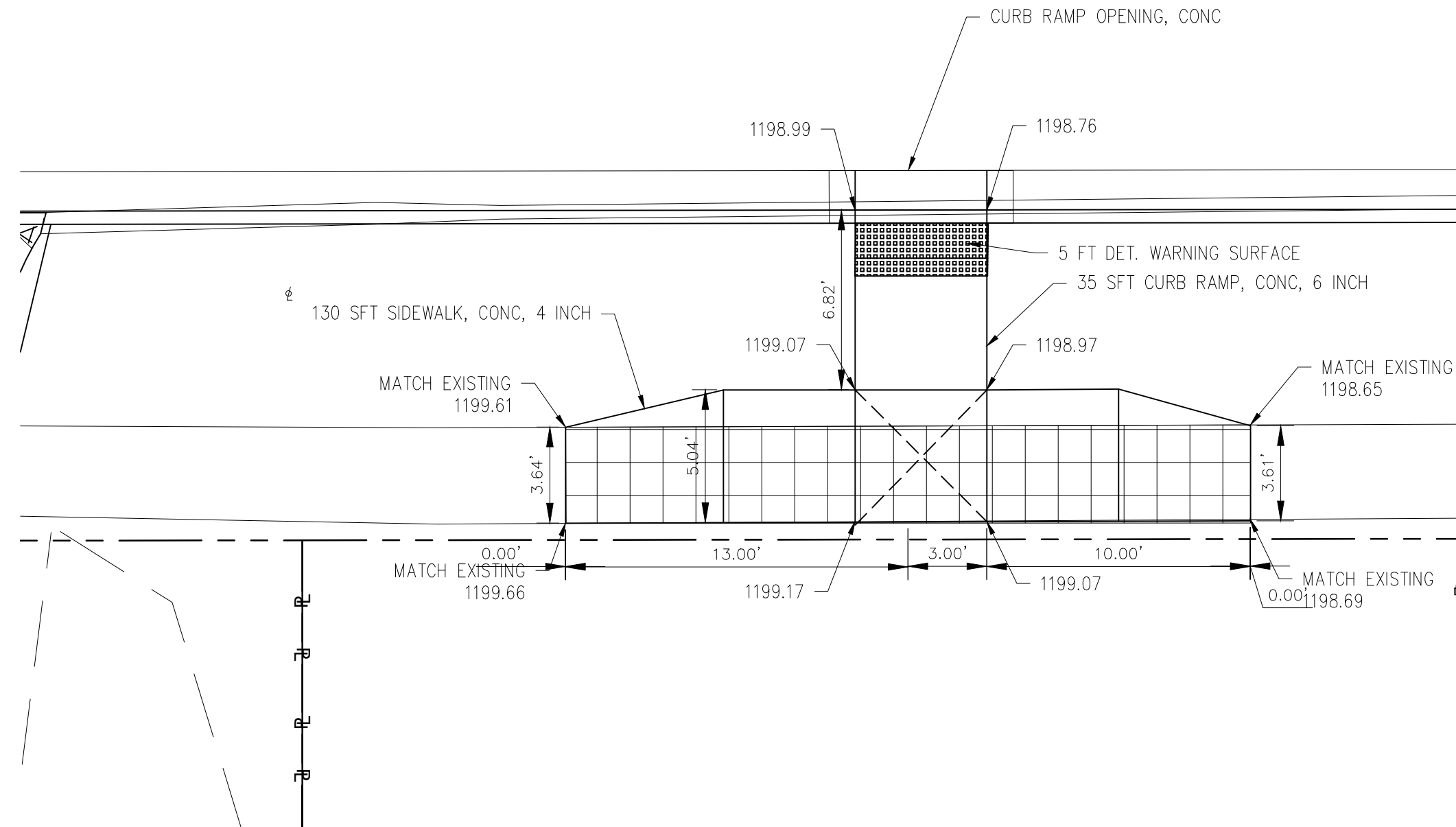


WESTWOOD DRIVE ADA RAMP REMOVAL PLAN
SCALE 1" = 5'

AZALEA COURT



WESTWOOD DRIVE



WESTWOOD DRIVE ADA RAMP REMOVAL PLAN
SCALE 1" = 5'



| NO. | DATE | DESCRIPTION |
|-----|------------|-----------------------------|
| 1 | 02/20/2023 | PRELIMINARY PLANS |
| 2 | 10/20/2023 | PERMITTING PLANS |
| 3 | 11/27/2023 | CONSTRUCTION PLANS |
| 4 | 03/09/2023 | REISSUED CONSTRUCTION PLANS |

237 NORTH MAIN STREET
ADRIAN, MI 49221
TEL: 517.263.4515

PROJECT NO.: H489002
DRAWN BY: JPP
CHECKED BY: ACH

PROJECT DATE: 03/09/2023

Mannik Smith GROUP
www.MannikSmithGroup.com

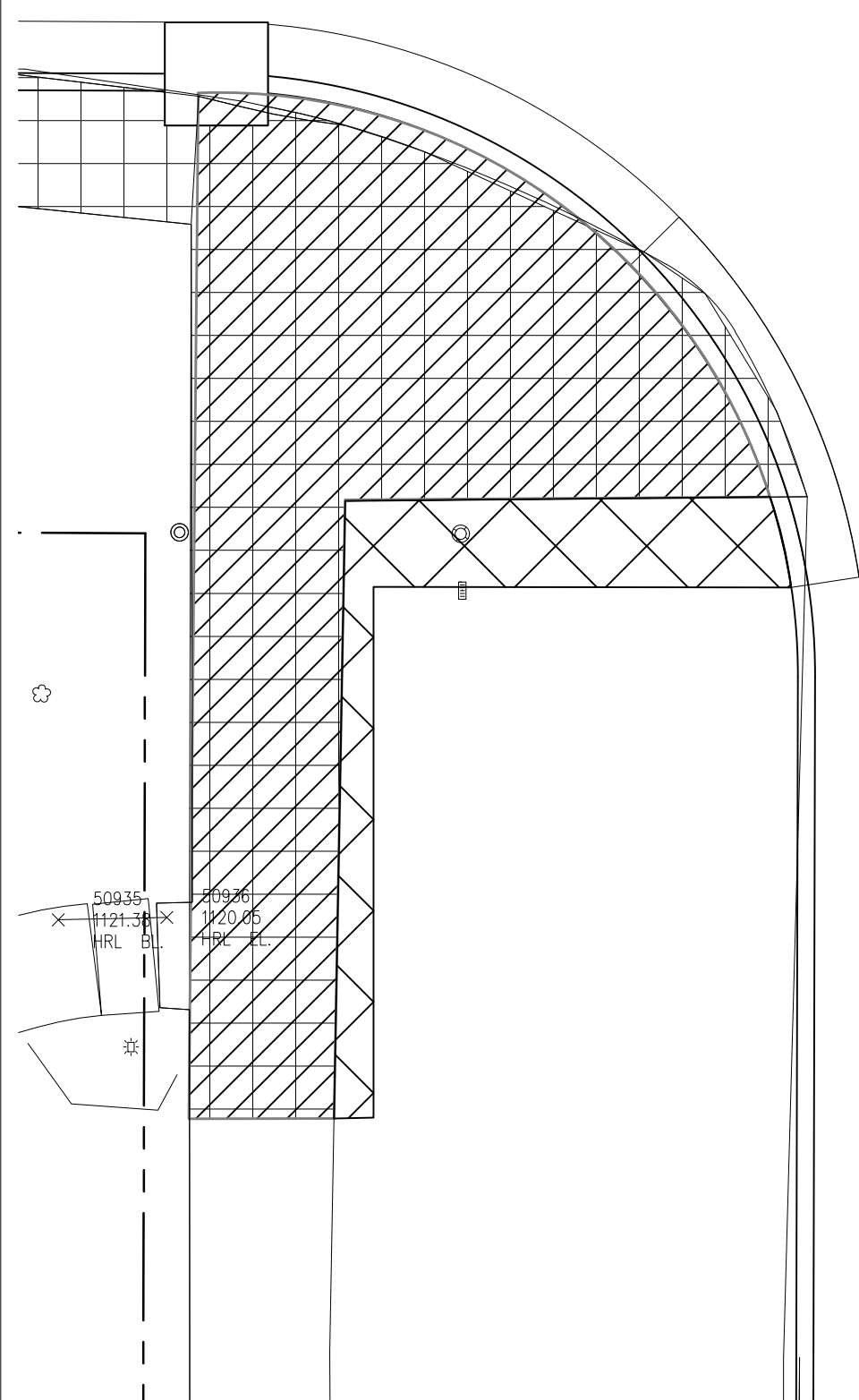
TECHNICAL SKILL:
CREATIVE SPIRIT.

PREPARED FOR:
CITY OF HILLSDALE
97 BOARD STREET
HILLSDALE, MI 49242

WESTWOOD AREA
RECONSTRUCTION
WESTWOOD SUBDIVISIONS

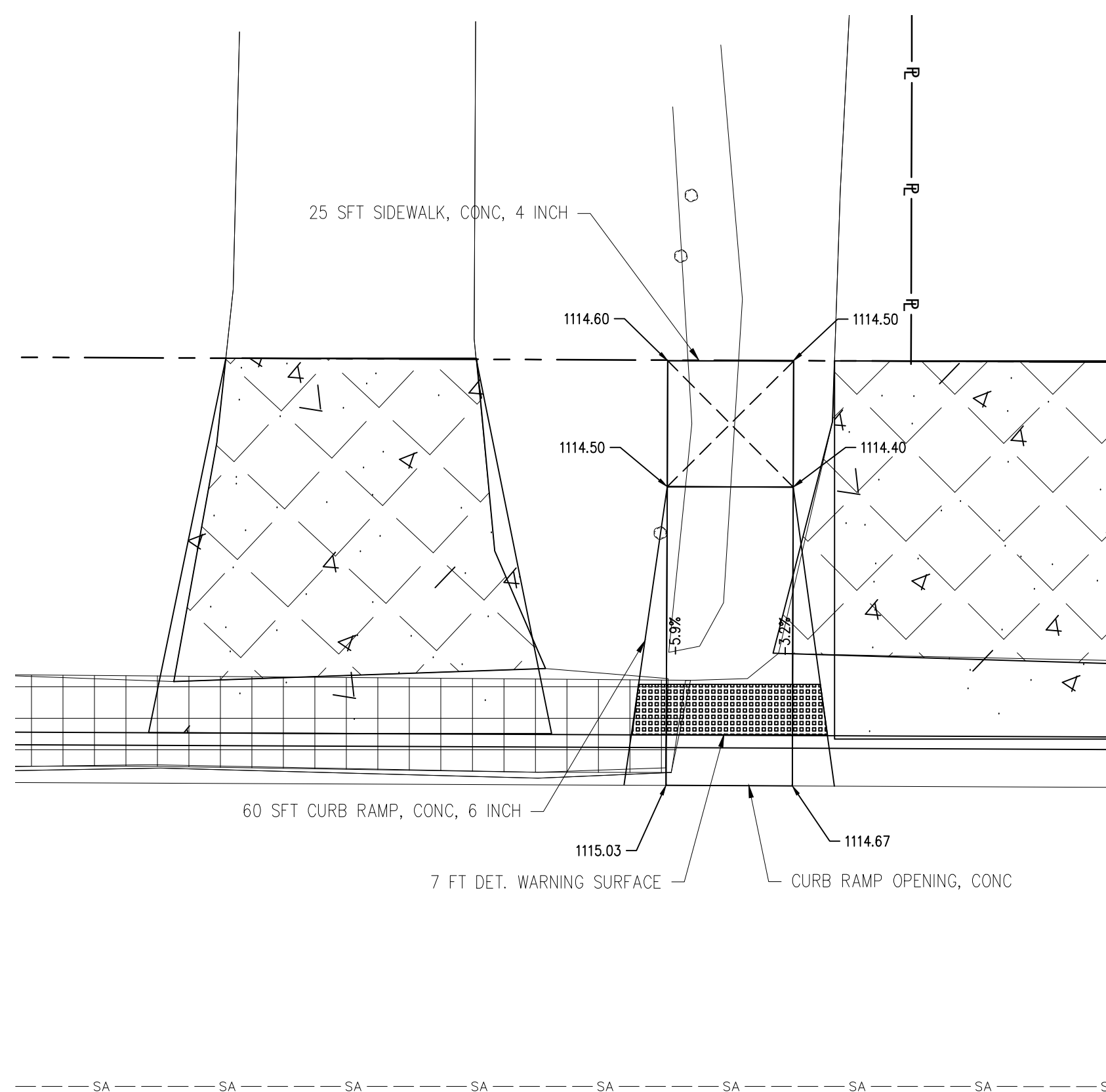
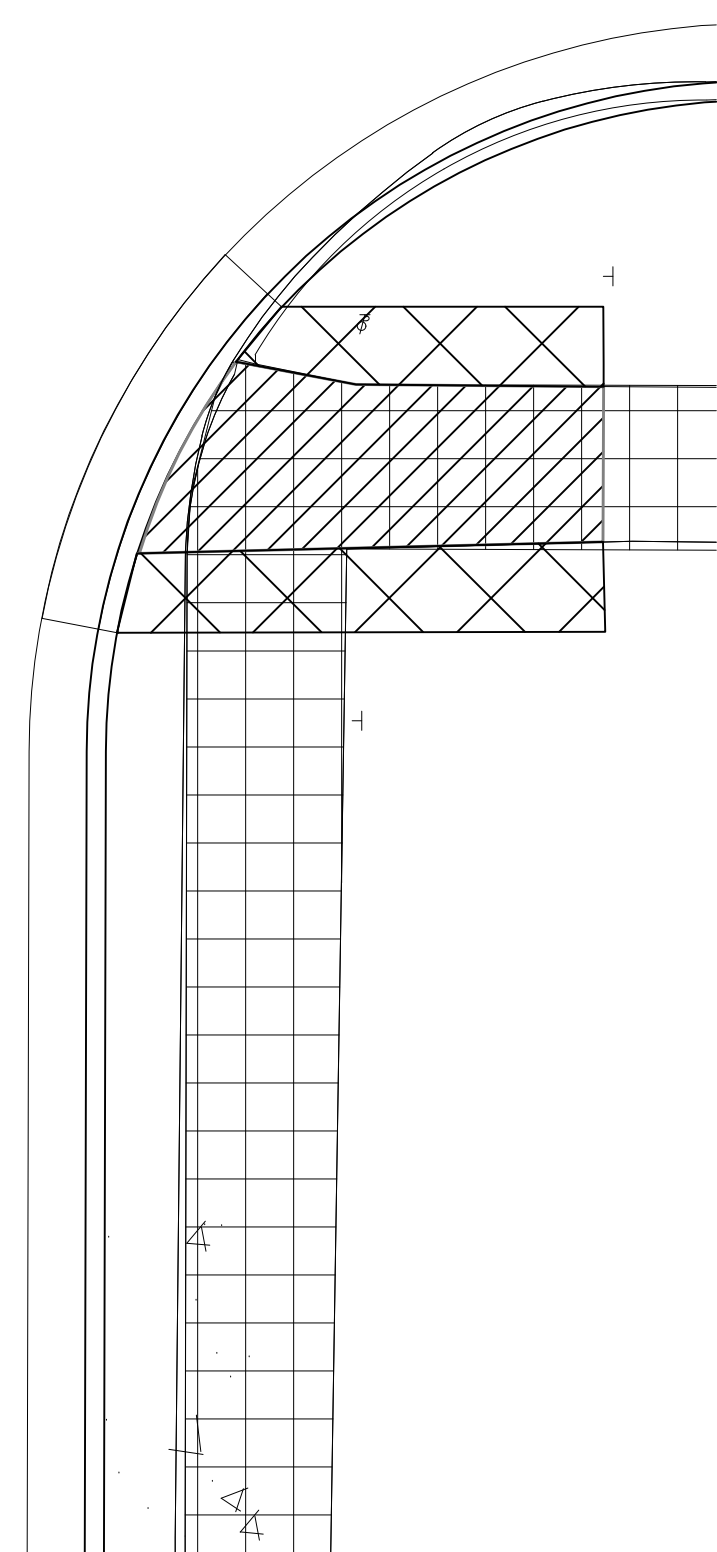
WESTWOOD DRIVE &
AZALEA COURT
SIDEWALK DETAILS

WESTWOOD STREET

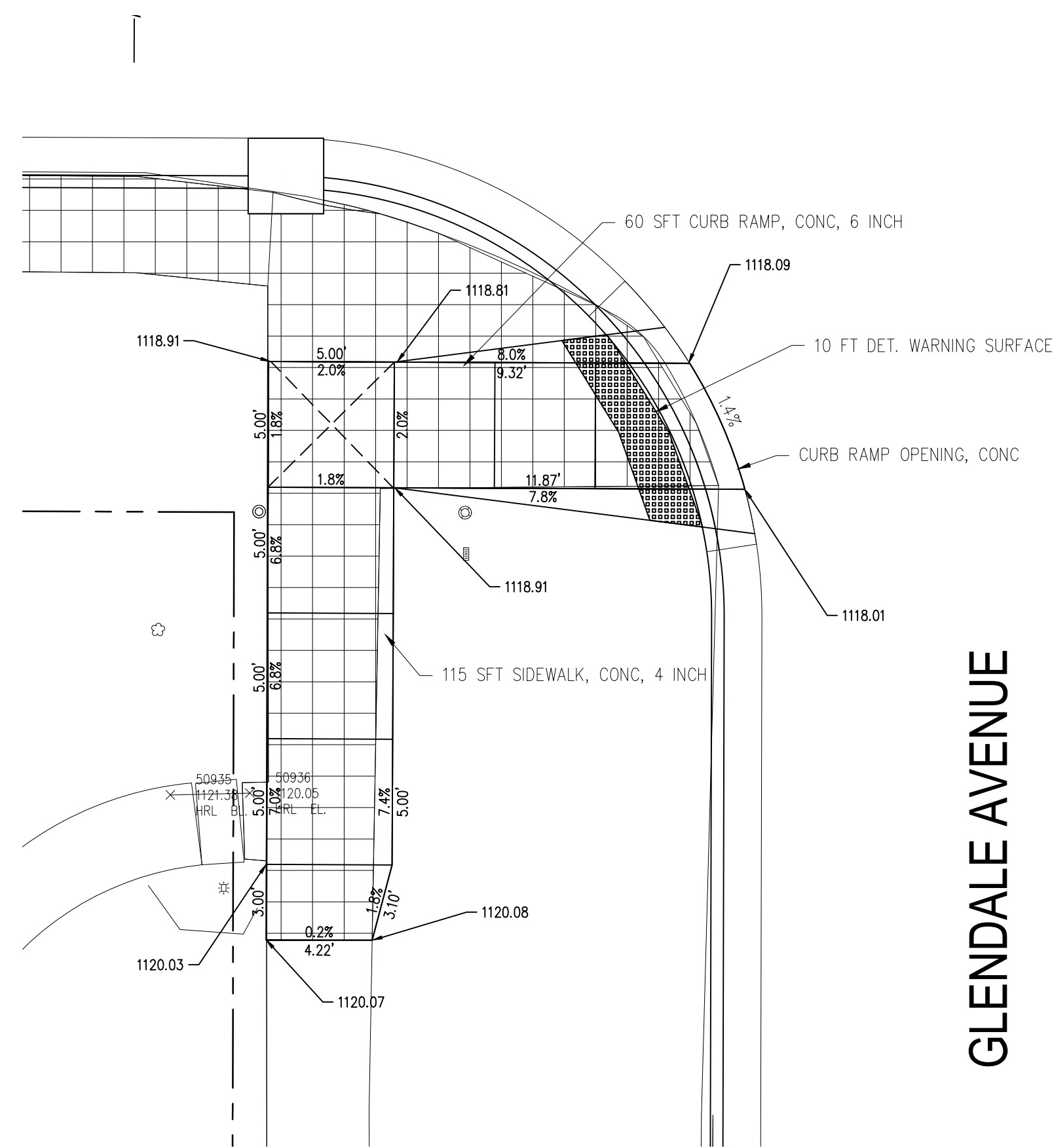


GLENDALE AVENUE

GLENDALE AVENUE ADA RAMP REMOVAL PLAN
SCALE 1" = 5'

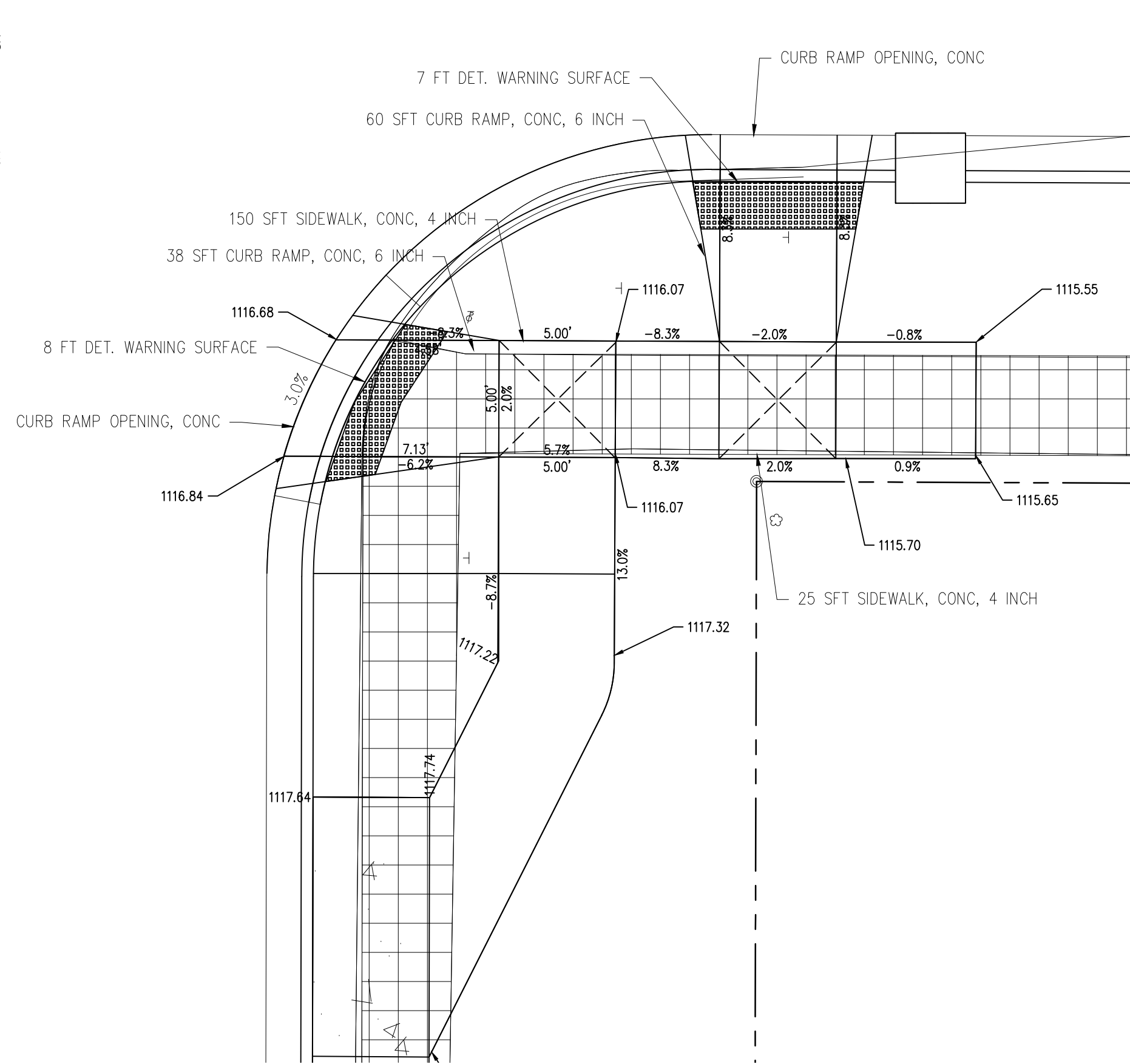


WESTWOOD STREET



GLENDALE AVENUE

GLENDALE AVENUE ADA RAMP SITE PLAN
SCALE 1" = 5'



| NO. | DATE | BY | DESCRIPTION |
|-----|------------|-----|-----------------------------|
| 1 | 02/01/2023 | ACH | PRELIMINARY PLANS |
| 2 | 12/27/2022 | ACH | PERMITTING PLANS |
| 3 | 11/27/2023 | ACH | CONSTRUCTION PLANS |
| 4 | 03/09/2023 | VOM | REISSUED CONSTRUCTION PLANS |

237 NORTH MAIN STREET
ADRIAN, MI 49221
TEL: 517.263.4515

PROJECT NO.: H4680102
PROJECT DATE: 03/09/2023

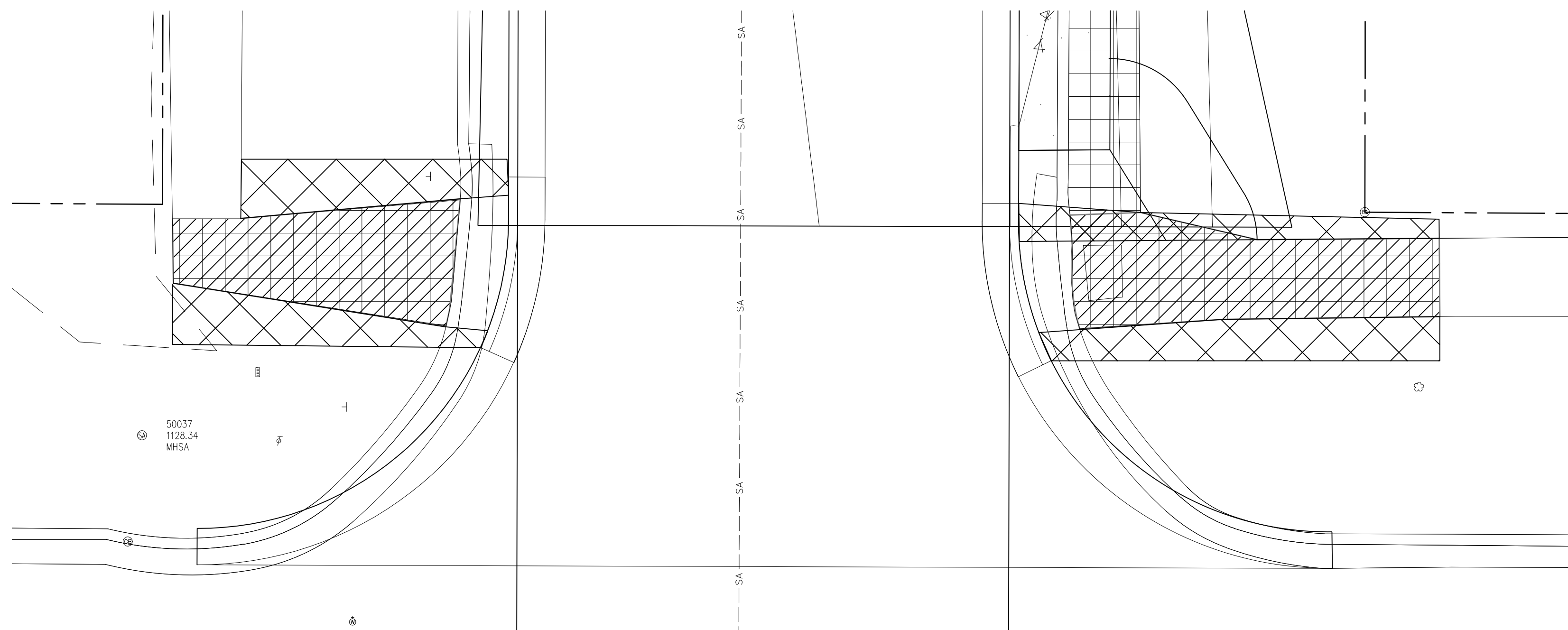
DRAWN BY: JPP
CHECKED BY: ACH

Mannik Smith GROUP
CREATIVE SPIRIT.
www.MannikSmithGroup.com

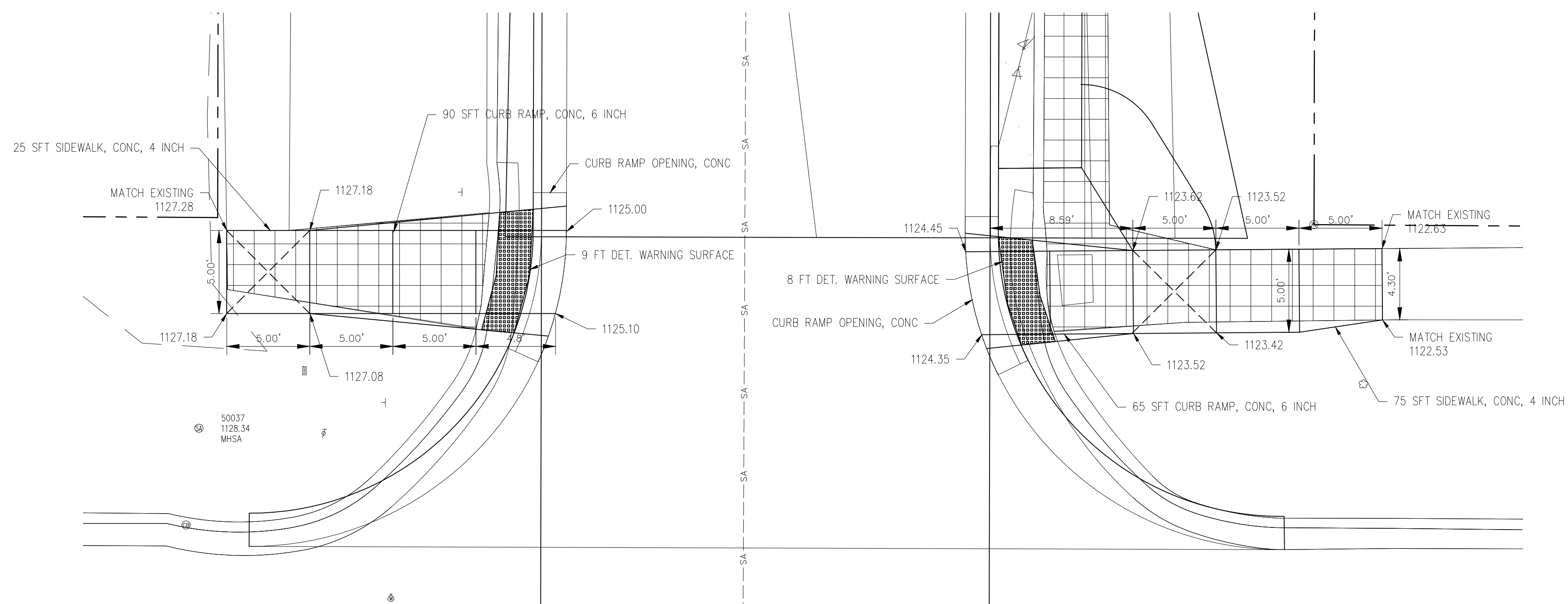
PREPARED FOR:
CITY OF HILLSDALE
97 BOARD STREET
HILLSDALE, MI 49242

WESTWOOD AREA RECONSTRUCTION
WESTWOOD SUBDIVISIONS

GLENDALE AVENUE & WESTWOOD ST. SIDEWALK DETAILS



GLENDALE AVENUE ADA RAMP REMOVAL PLAN
SCALE 1" = 5'



GLENDALE AVENUE ADA RAMP SITE PLAN
SCALE 1" = 5'



| NO. | DATE | BY | DESCRIPTION |
|-----|------------|-----|-----------------------------|
| 1 | 02/01/2023 | ACH | PRELIMINARY PLANS |
| 2 | 10/23/2022 | ACH | PERMITTING PLANS |
| 3 | 11/27/2023 | ACH | CONSTRUCTION PLANS |
| 4 | 03/09/2023 | VOM | REISSUED CONSTRUCTION PLANS |

237 NORTH MAIN STREET
ADRIAN, MI 49221
TEL: 517.263.4515

PROJECT DATE: 03/09/2023
PROJECT NO.: H480002
DRAWN BY: JPP
CHECKED BY: ACH

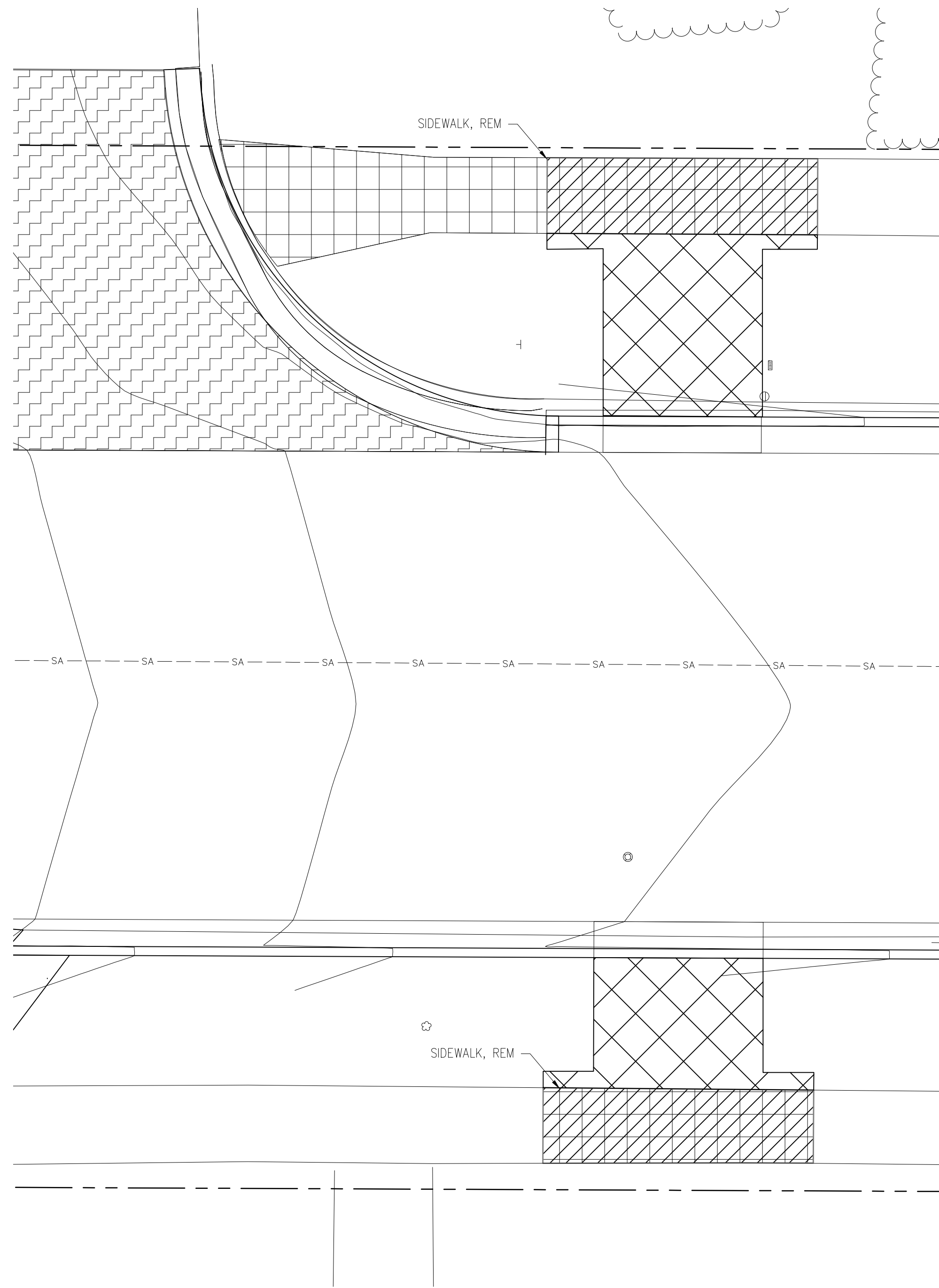
Mannik Smith GROUP
www.MannikSmithGroup.com

TECHNICAL SKILL:
CREATIVE SPIRIT.

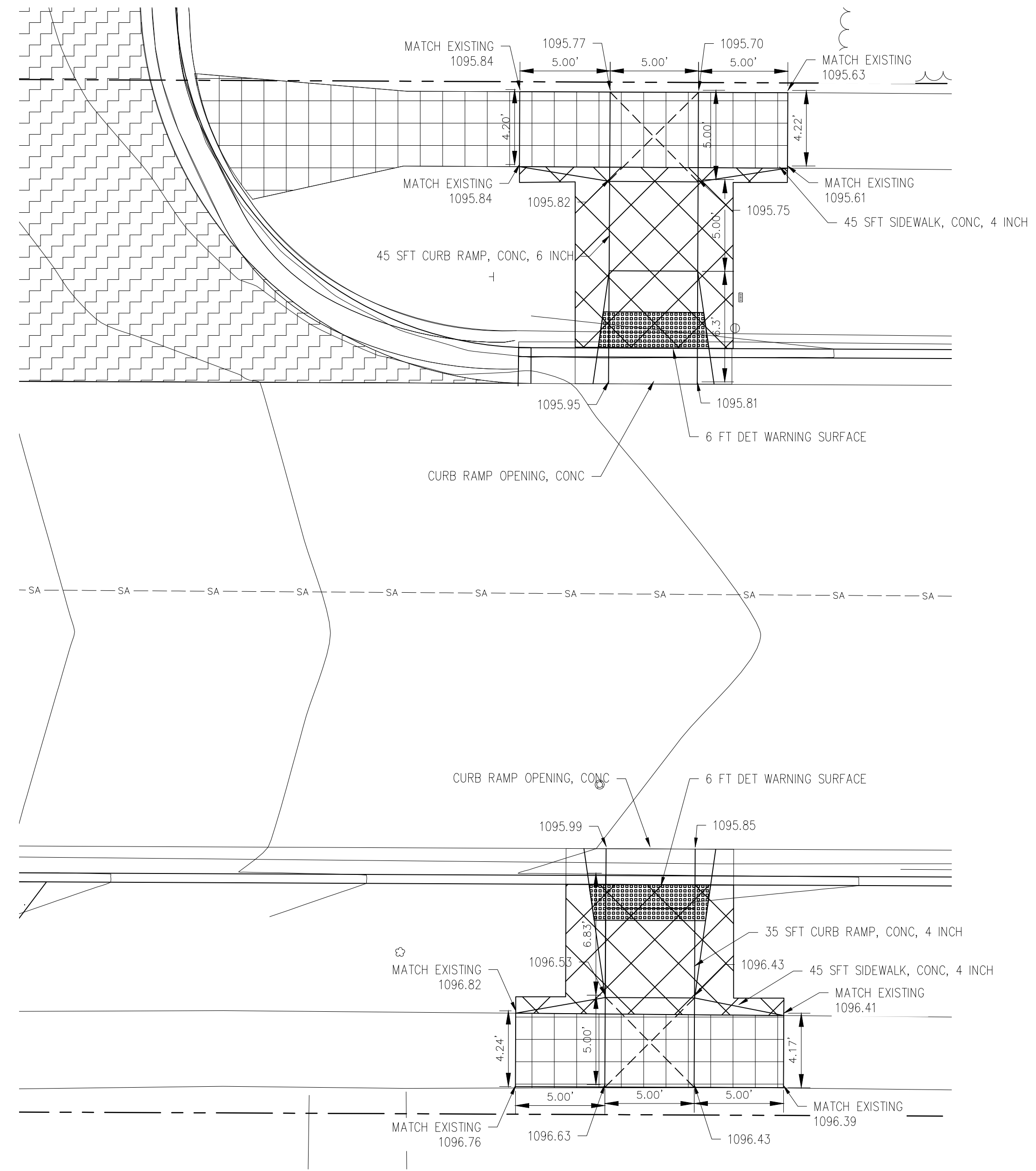
PREPARED FOR:
CITY OF HILLSDALE
977 BOARD STREET
HILLSDALE, MI 49242

**WESTWOOD AREA
RECONSTRUCTION**
WESTWOOD SUBDIVISIONS

**GLENDALE AVE. &
BACON STREET
SIDEWALK DETAILS**



WESTWOOD STREET ADA RAMP REMOVAL PLAN
SCALE 1" = 5'



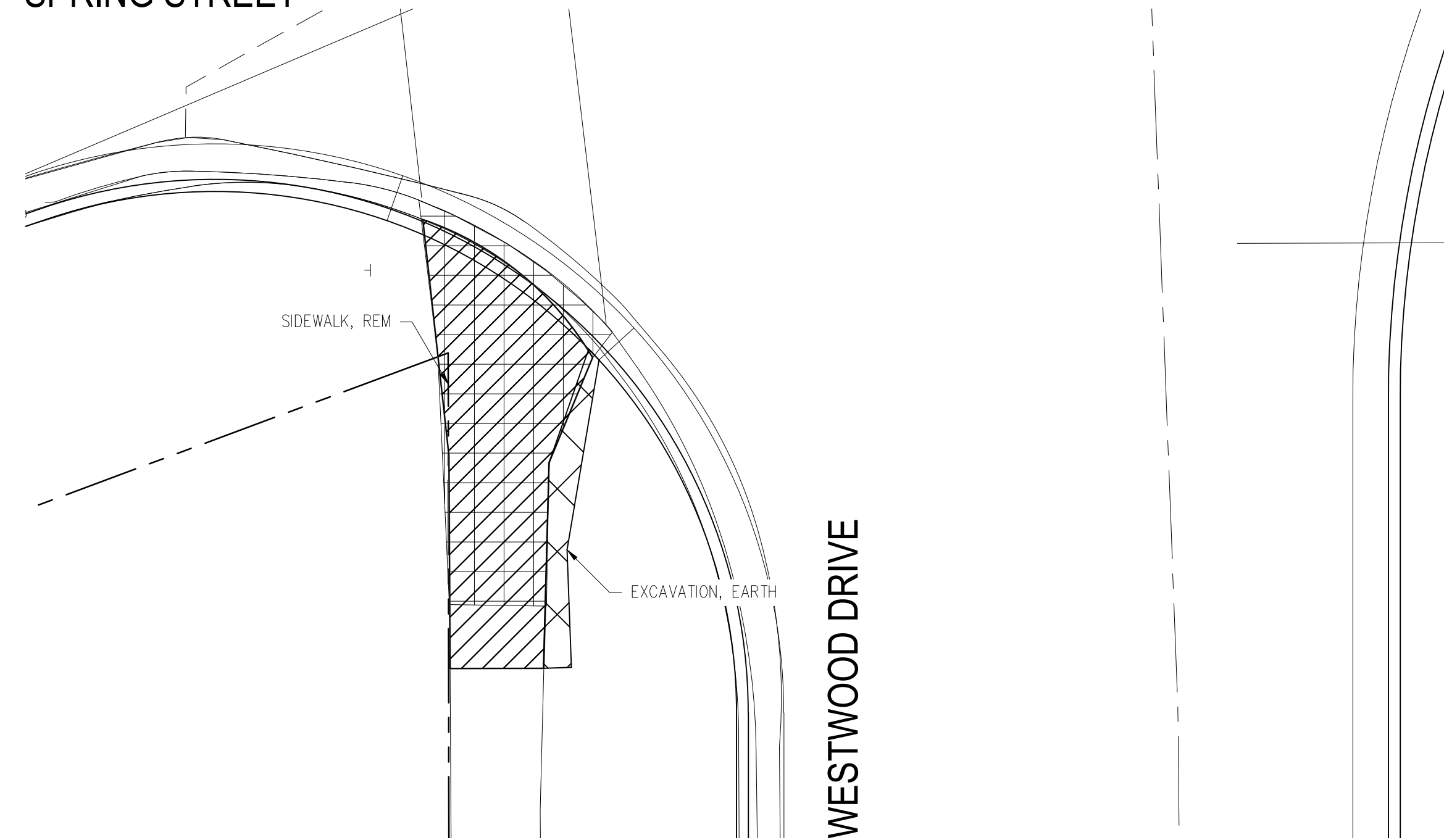
WESTWOOD STREET ADA RAMP SITE PLAN
SCALE 1" = 5'

| | | | |
|-----|------------|-----|-----------------------------|
| NO. | DATE | BY | DESCRIPTION |
| 1 | 02/23/2022 | ACH | PRELIMINARY PLANS |
| 2 | 12/23/2022 | ACH | PERMITTING PLANS |
| 3 | 11/27/2023 | ACH | CONSTRUCTION PLANS |
| 4 | 03/09/2023 | VOM | REISSUED CONSTRUCTION PLANS |

| | | | |
|--|--------------------------|----------------------|-----|
| 237 NORTH MAIN STREET ADRIAN, MI 49221 TEL: 517.263.4515 | PROJECT DATE: 03/09/2023 | PROJECT NO.: H480002 | JPP |
| | | DRAWN BY: | ACH |
| | | CHECKED BY: | |

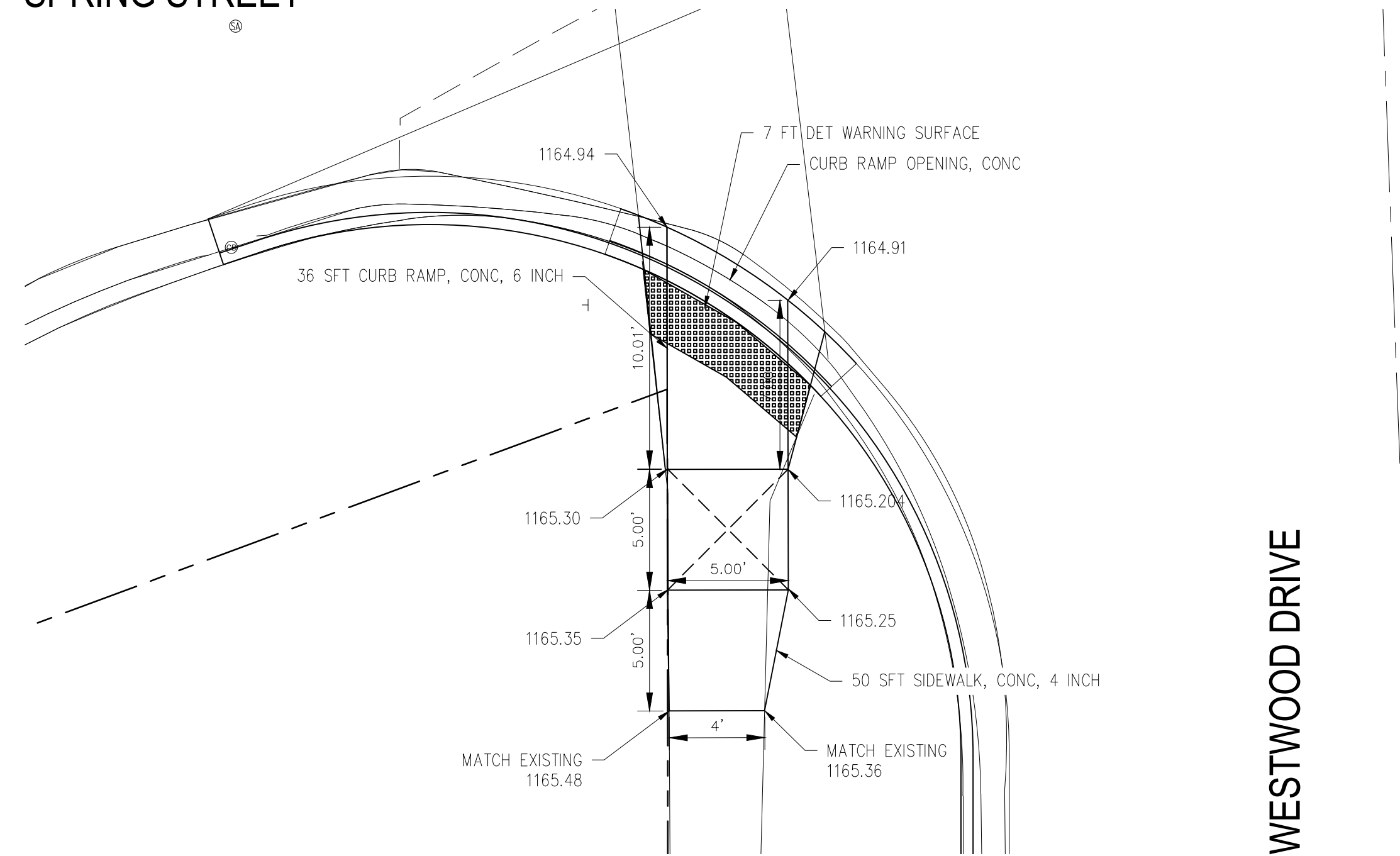
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| TECHNICAL SKILL: Mannik Smith GROUP www.MannikSmithGroup.com |
| PREPARED FOR: CITY OF HILLSDALE 97 BOARD STREET HILLSDALE, MI 49242 |
| WESTWOOD AREA RECONSTRUCTION WESTWOOD SUBDIVISIONS |
| WESTWOOD ST. & LEWIS ST. SIDEWALK DETAILS |

SPRING STREET

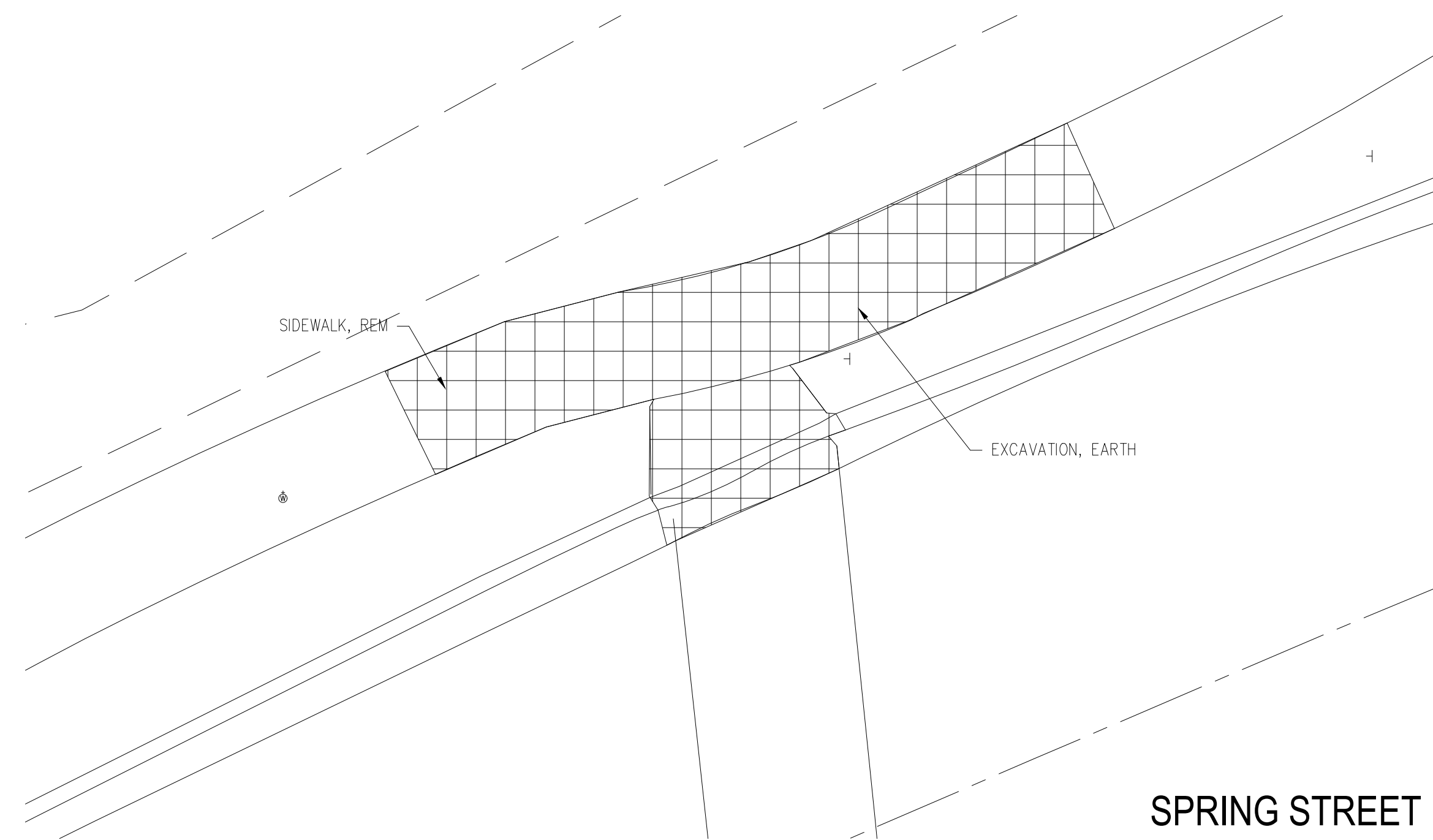
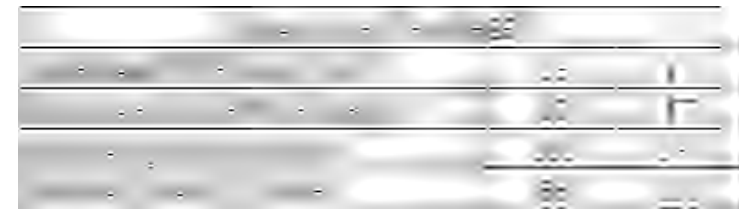


WESTWOOD DRIVE ADA RAMP REMOVAL PLAN
SCALE 1" = 5'

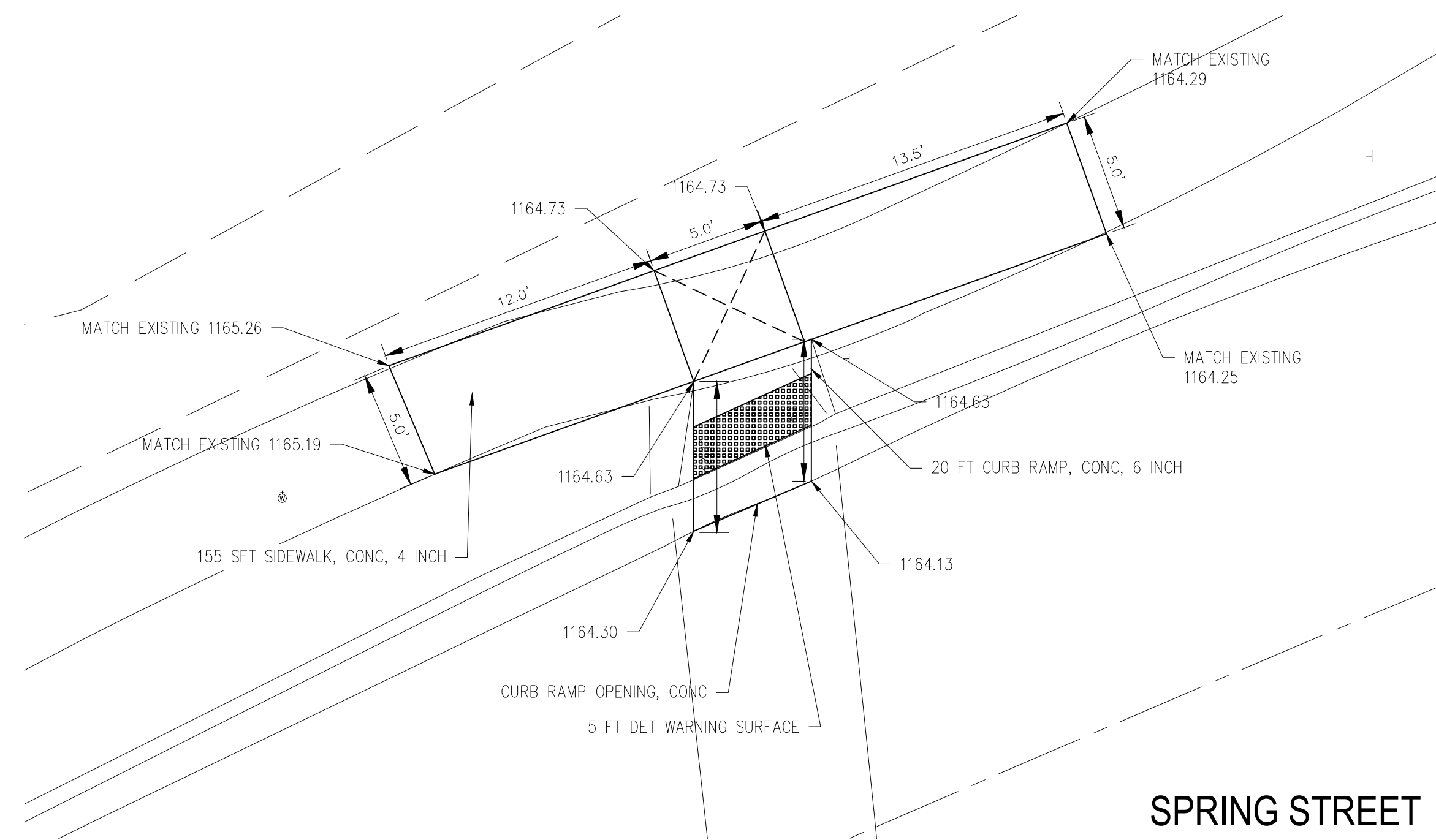
SPRING STREET



WESTWOOD DRIVE ADA RAMP SITE PLAN
SCALE 1" = 5'



SPRING STREET ADA RAMP REMOVAL PLAN
SCALE 1" = 5'



SPRING STREET ADA RAMP SITE PLAN
SCALE 1" = 5'

| NO. | DATE | BY | DESCRIPTION |
|-----|------------|-----|-----------------------------|
| 1 | 12/23/2022 | JPP | PRELIMINARY PLANS |
| 2 | 12/23/2022 | ACH | PERMITTING PLANS |
| 3 | 12/27/2023 | ACH | CONSTRUCTION PLANS |
| 4 | 03/09/2023 | VOM | REISSUED CONSTRUCTION PLANS |

237 NORTH MAIN STREET
ADRIAN, MI 49221
TEL: 517.263.4515

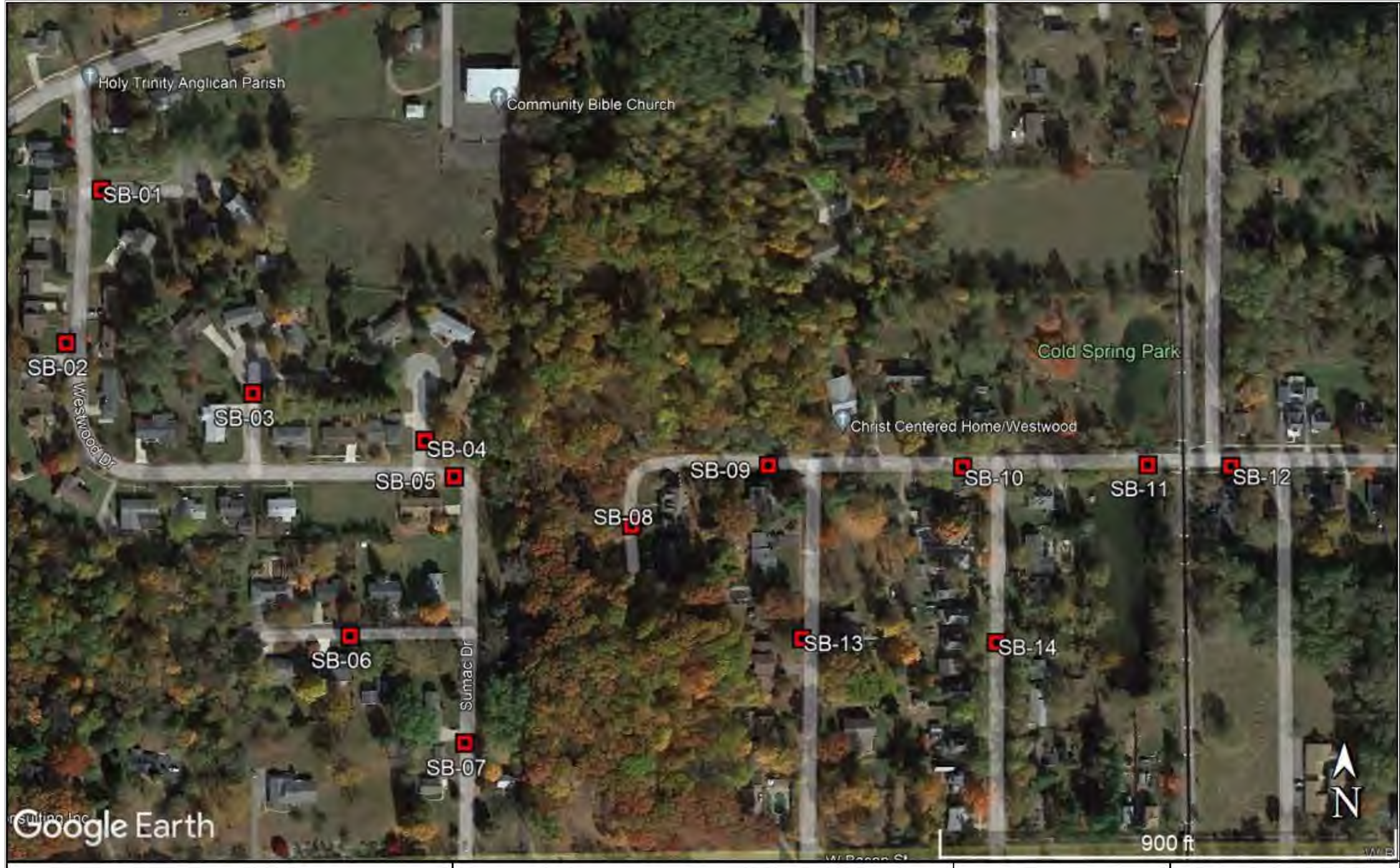
PROJECT DATE: 03/09/2023
PROJECT NO.: H480002
DRAWN BY: JPP
CHECKED BY: ACH



PREPARED FOR:
CITY OF HILLSDALE
977 BOARD STREET
HILLSDALE, MI 49242

WESTWOOD AREA
RECONSTRUCTION
WESTWOOD SUBDIVISIONS

SIDEWALK DETAILS



Google Earth

| NO. | DATE | BY | DESCRIPTION |
|-----|------------|-----|--------------------------------|
| 1 | 03/09/2023 | JPP | PRELIMINARY SOIL BORING PLANS |
| 2 | 10/22/2023 | ACH | PERMITTING SOIL BORING |
| 3 | 03/09/2023 | VOM | RESUBMITTED CONSTRUCTION PLANS |

237 NORTH MAIN STREET
ADRIAN, MI 49221
TEL: 517.263.4515

PROJECT NO.: H480002
DRAWN BY: JPP
CHECKED BY: ACH

PREPARED FOR:
CITY OF HILLSDALE
97 BOARD STREET
HILLSDALE, MI 49242

**WESTWOOD AREA
RECONSTRUCTION**
WESTWOOD SUBDIVISIONS

**SOIL BORING
LOCATION MAP**

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| | | | |
|-----|----------|-----|----------------------------|
| NO. | DATE | BY | DESCRIPTION |
| 1 | 9/10/22 | JCH | PRELIMINARY DESIGN PLANS |
| 2 | 12/22/23 | JCH | CONSTRUCTION PLANS |
| 3 | 3/26/23 | DOM | REVISED CONSTRUCTION PLANS |

237 NORTH MAIN STREET
ADRIAN, MI 49221
TEL. 517.263.4515

PROJECT NO.: H480002
DRAWN BY: JJP
CHECKED BY: ACH

03/09/2023

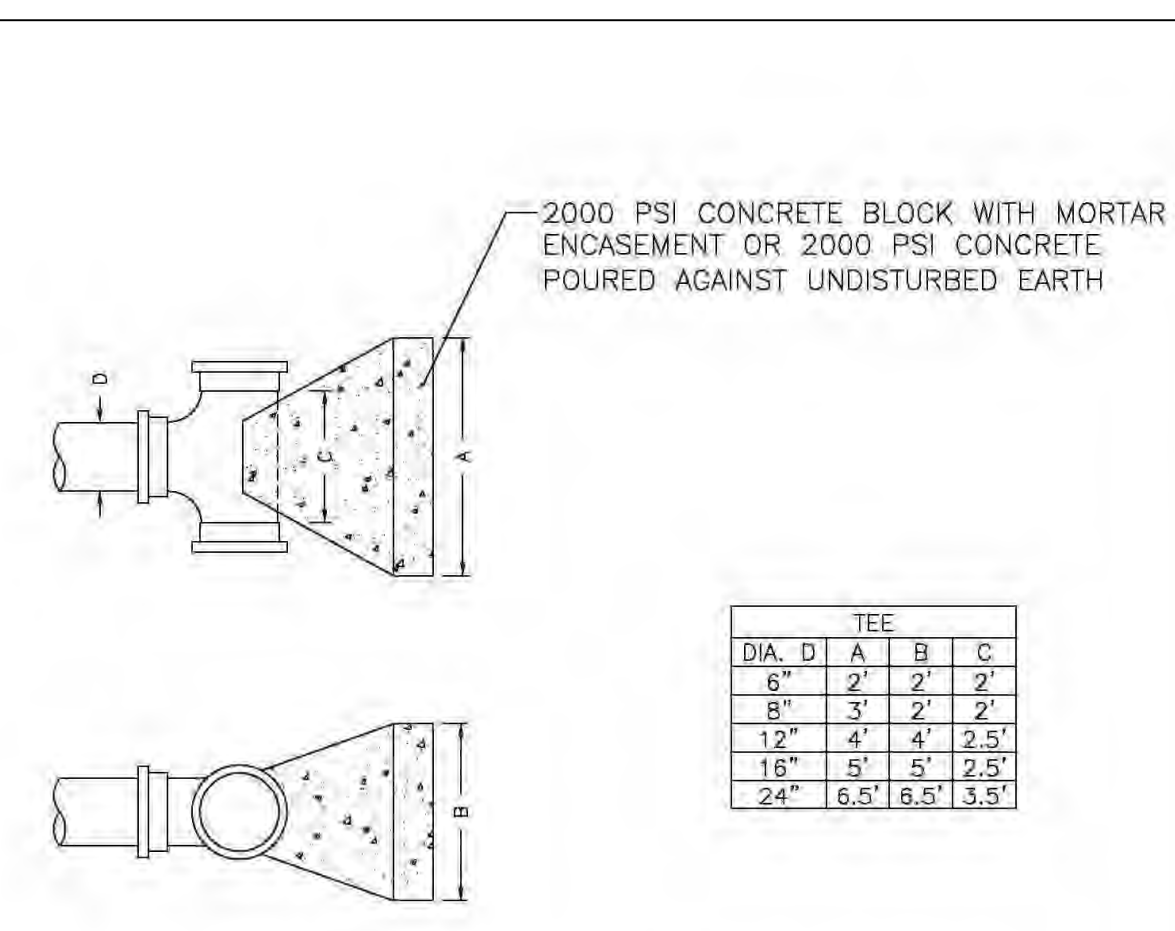
TECHNICAL SKILL:
CREATIVE SPIRIT.

Mannik Smith GROUP
www.MannikSmithGroup.com

PREPARED FOR:
CITY OF HILLSDALE
97 BOARD STREET
HILLSDALE, MI 49242

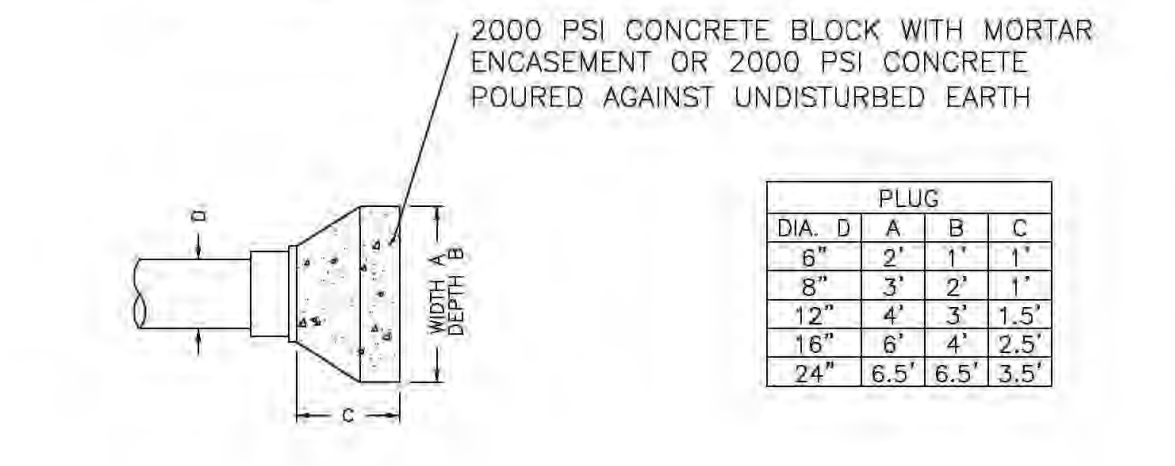
WESTWOOD AREA RECONSTRUCTION
WESTWOOD SUBDIVISIONS

MISCELLANEOUS DETAILS



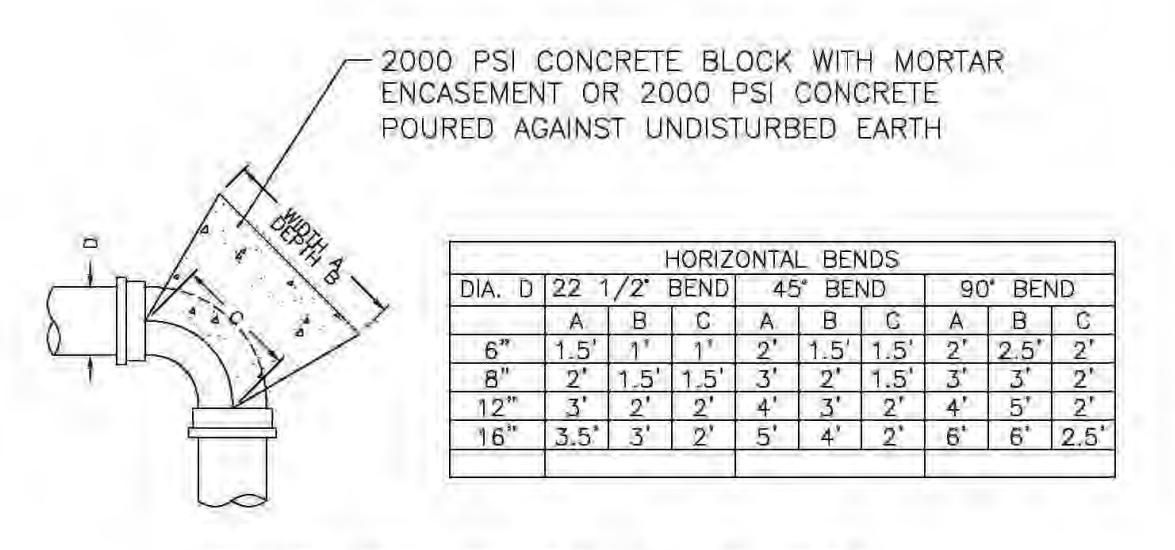
| TEE | | | | |
|--------|------|------|------|--|
| DIA. D | A | B | C | |
| 6" | 2' | 2' | 2' | |
| 8" | 3' | 2' | 2' | |
| 12" | 4' | 4' | 2.5' | |
| 16" | 5' | 5' | 2.5' | |
| 24" | 6.5' | 6.5' | 3.5' | |

THRUST BLOCK AT TEE



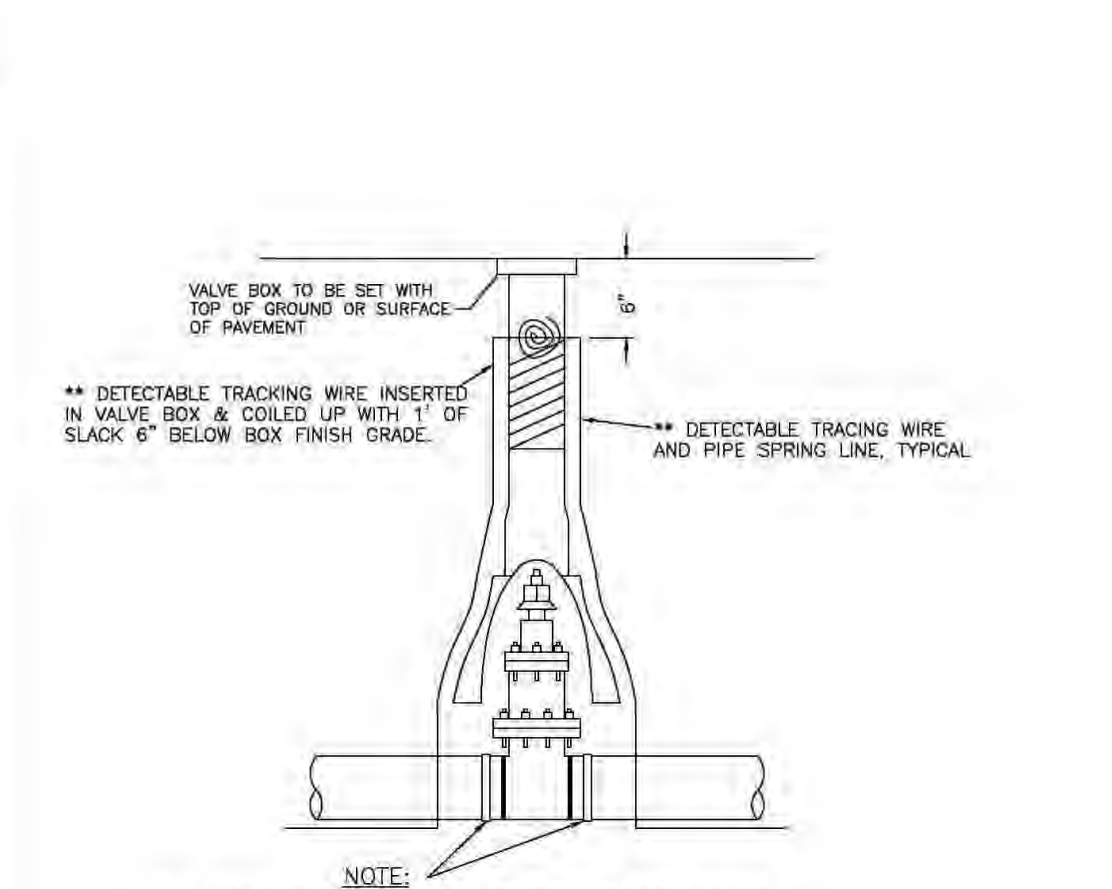
| PLUG | | | | |
|--------|------|------|------|--|
| DIA. D | A | B | C | |
| 6" | 2' | 1' | 1' | |
| 8" | 3' | 2' | 1' | |
| 12" | 4' | 3' | 1.5' | |
| 16" | 6' | 4' | 2.5' | |
| 24" | 6.5' | 6.5' | 3.5' | |

THRUST BLOCK AT PLUG



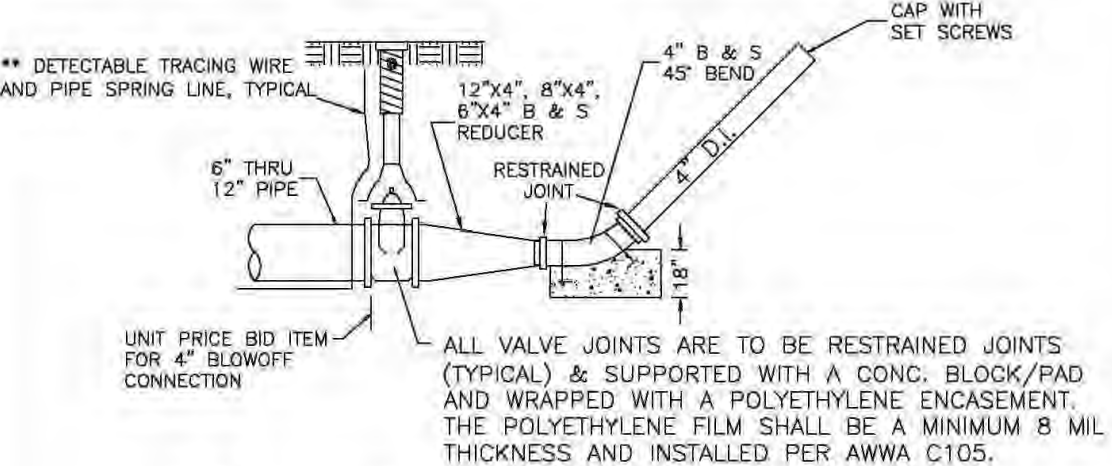
| HORIZONTAL BENDS | | | | | | | | | | | | |
|------------------|--------------|------|------|----------|------|------|----------|------|------|---|---|---|
| DIA. D | 22 1/2° BEND | | | 45° BEND | | | 90° BEND | | | | | |
| | A | B | C | A | B | C | A | B | C | A | B | C |
| 6" | 1.5' | 1' | 1' | 2' | 1.5' | 1.5' | 2' | 2.5' | 2' | | | |
| 8" | 2' | 1.5' | 1.5' | 3' | 2' | 1.5' | 3' | 3' | 2' | | | |
| 12" | 3' | 2' | 2' | 4' | 3' | 2' | 4' | 5' | 2' | | | |
| 16" | 3.5' | 3' | 2' | 5' | 4' | 2' | 6' | 6' | 2.5' | | | |

THRUST BLOCK AT 90° OR SMALLER BENDS

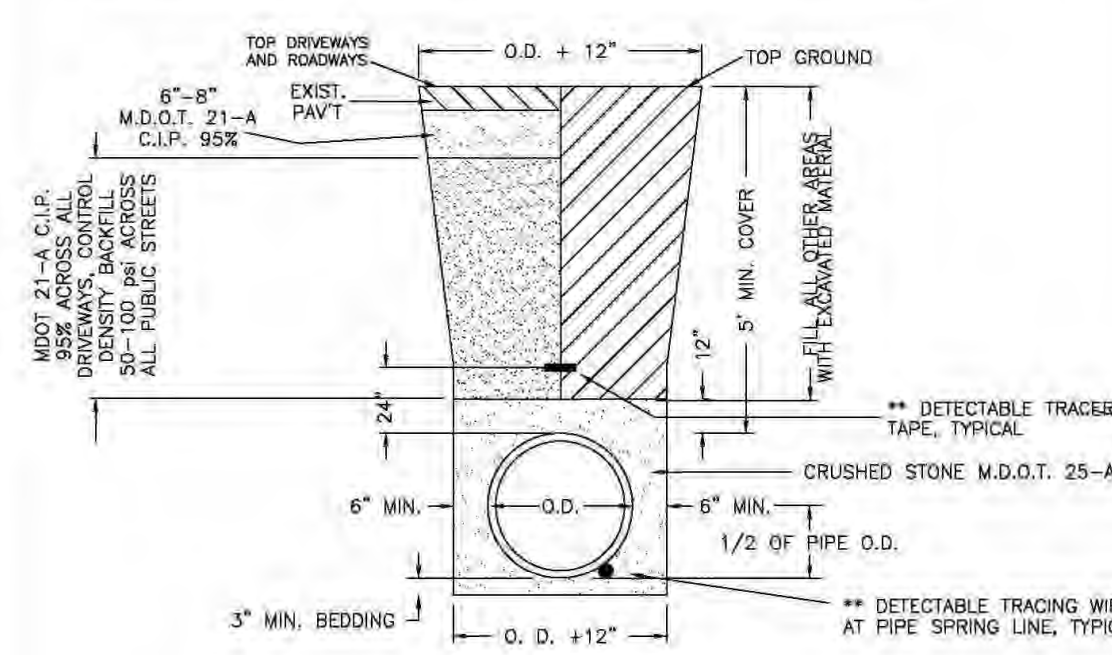


NOTE:
ALL VALVE JOINTS ARE TO BE RESTRAINED JOINTS (TYPICAL) & SUPPORTED WITH A CONC. BLOCK/PAD AND WRAPPED WITH A POLYETHYLENE ENCASEMENT. THE POLYETHYLENE FILM SHALL BE A MINIMUM 8 MIL THICKNESS AND INSTALLED PER AWWA C105.

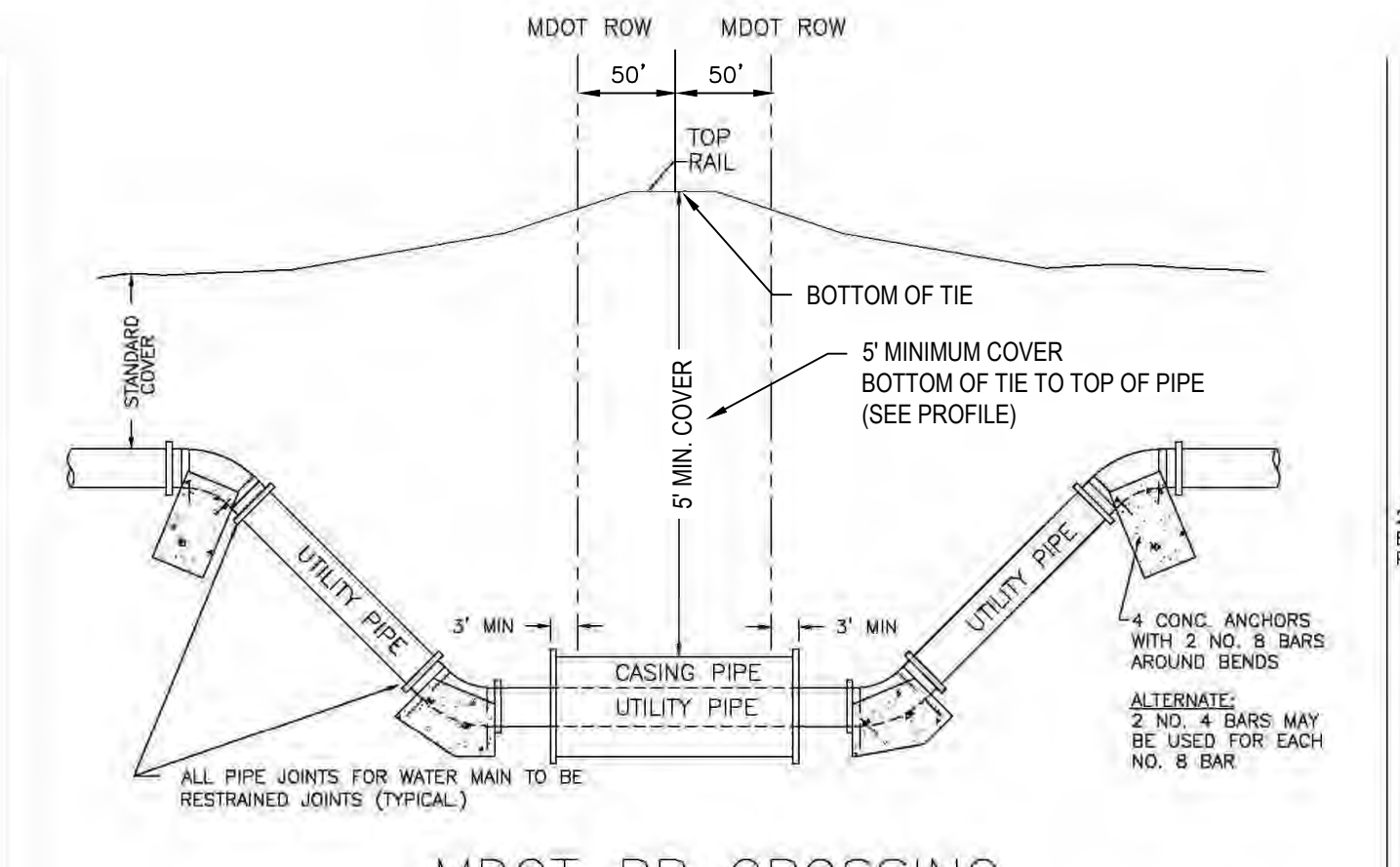
DETAIL OF GATE VALVE AND BOX



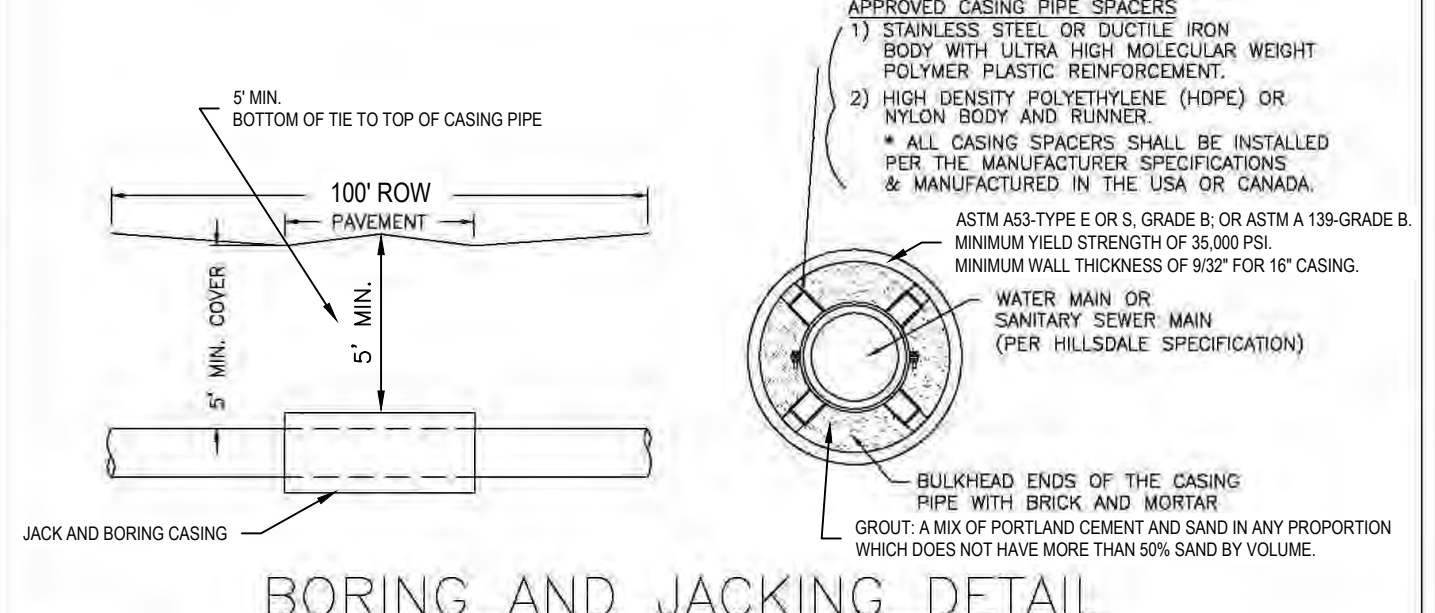
TYPICAL BLOWOFF ASSEMBLY



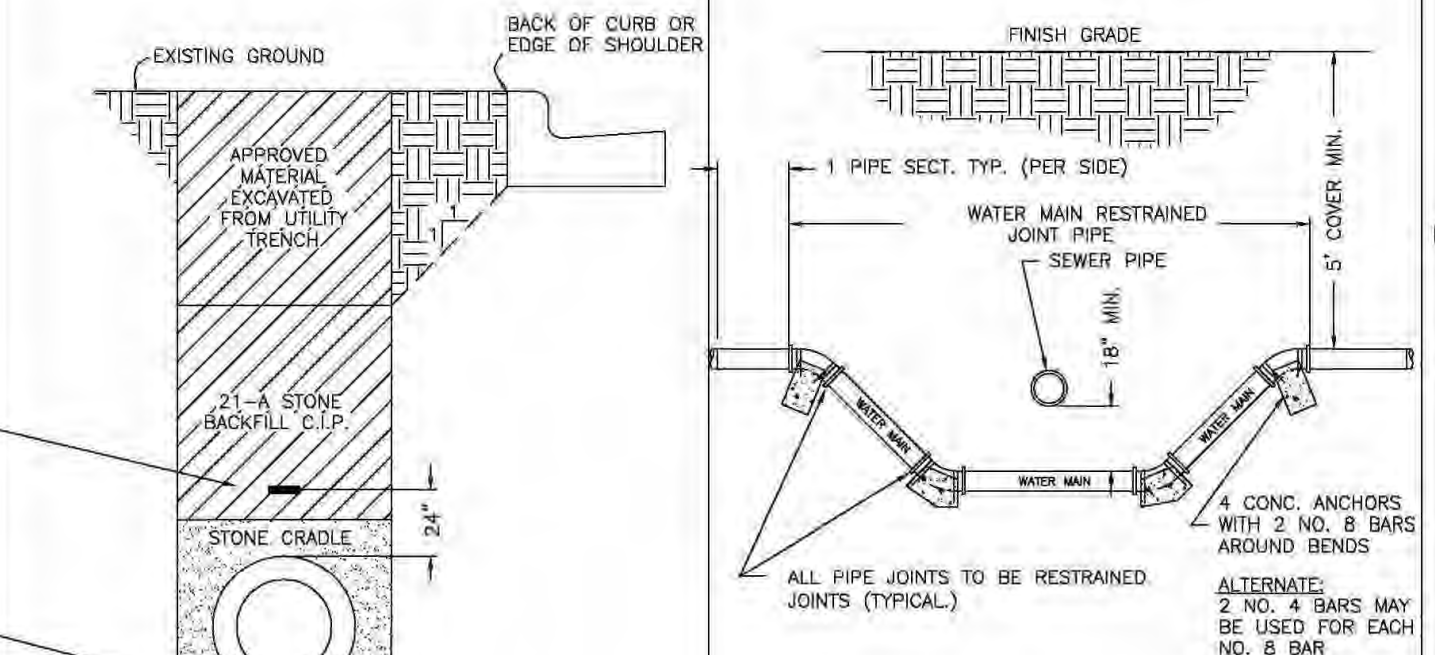
PIPE BEDDING FOR 12" AND SMALLER WM, TYPICAL TRENCH PAY LIMIT



MDOT RR CROSSING

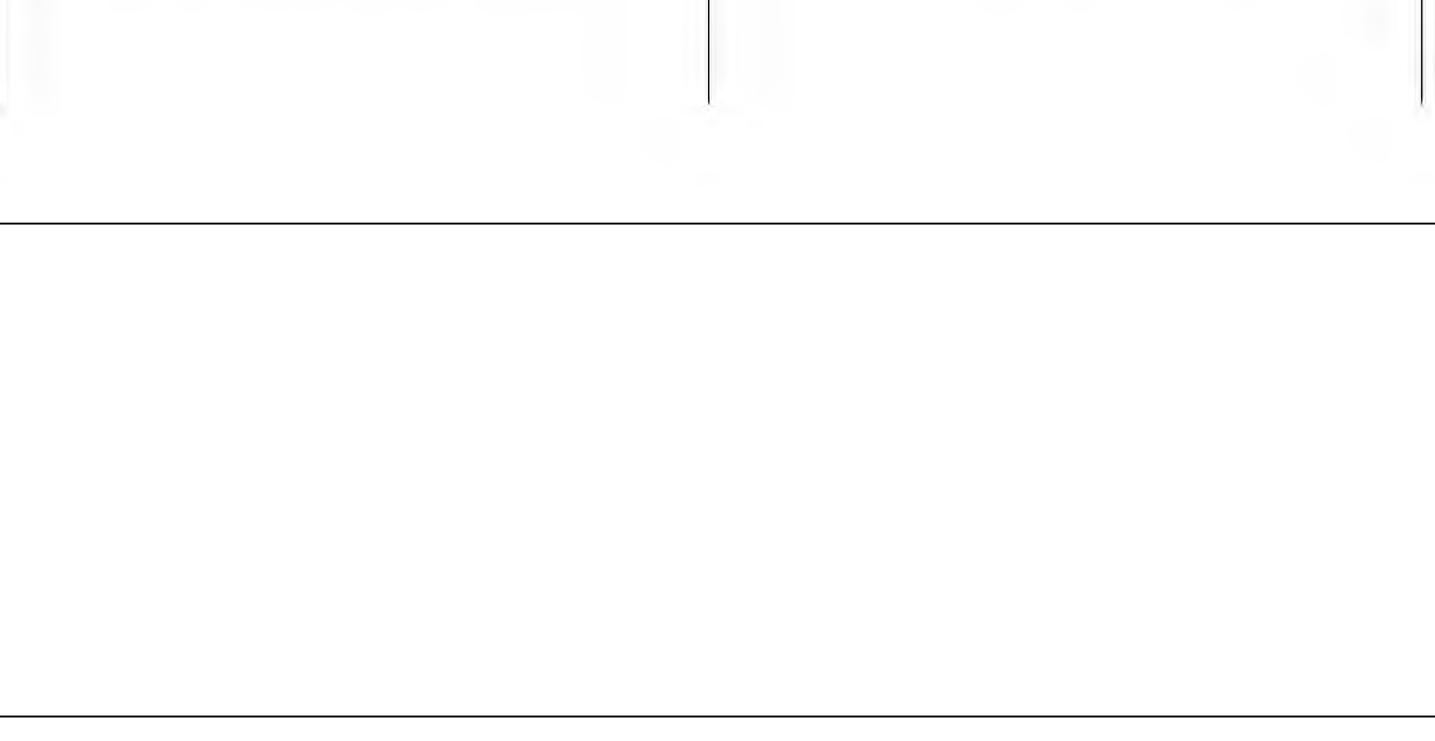


BORING AND JACKING DETAIL

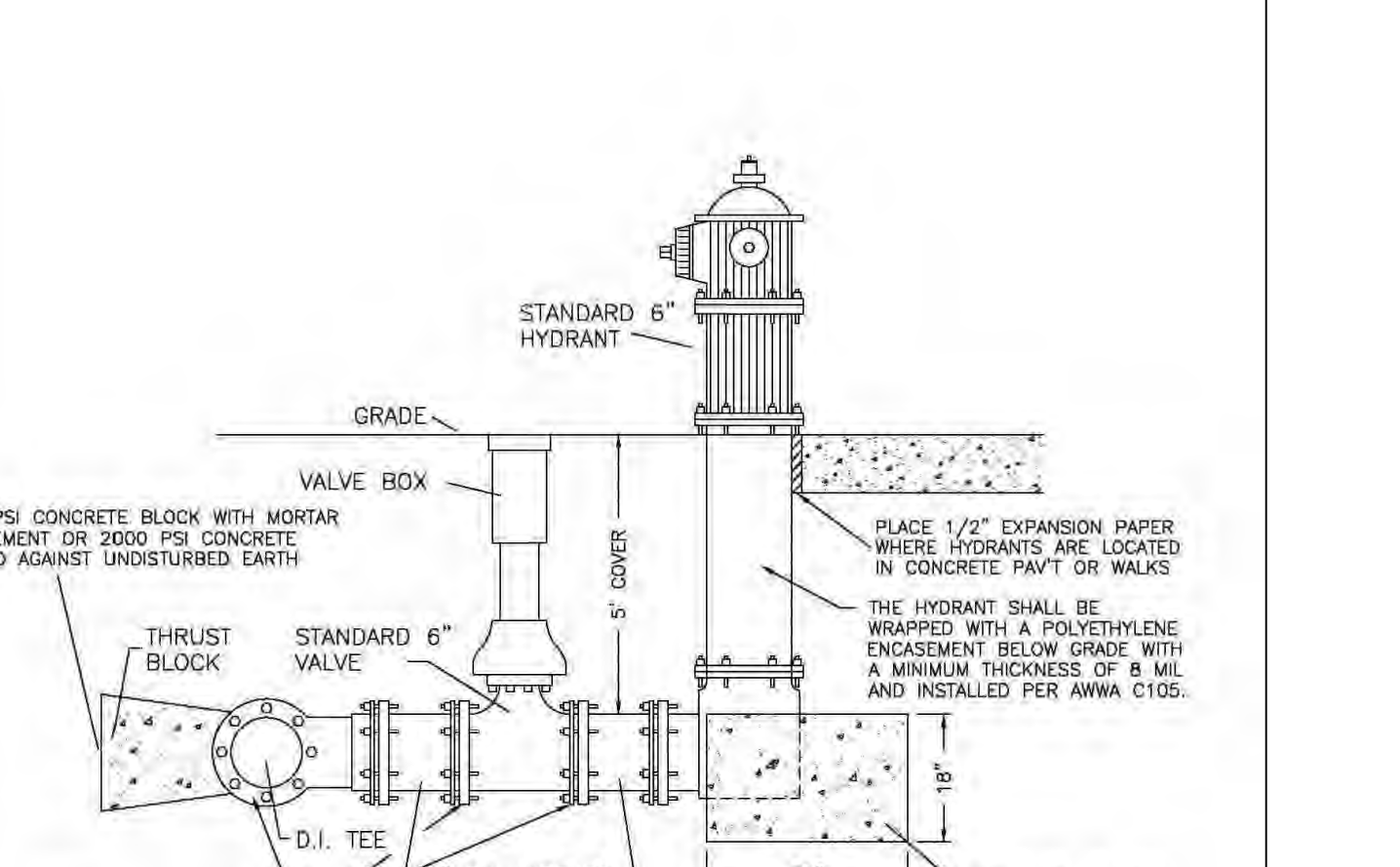


BACKFILL OUTSIDE PAV'T

** USED FOR NON - METALLIC PIPE INSTALLATIONS ONLY

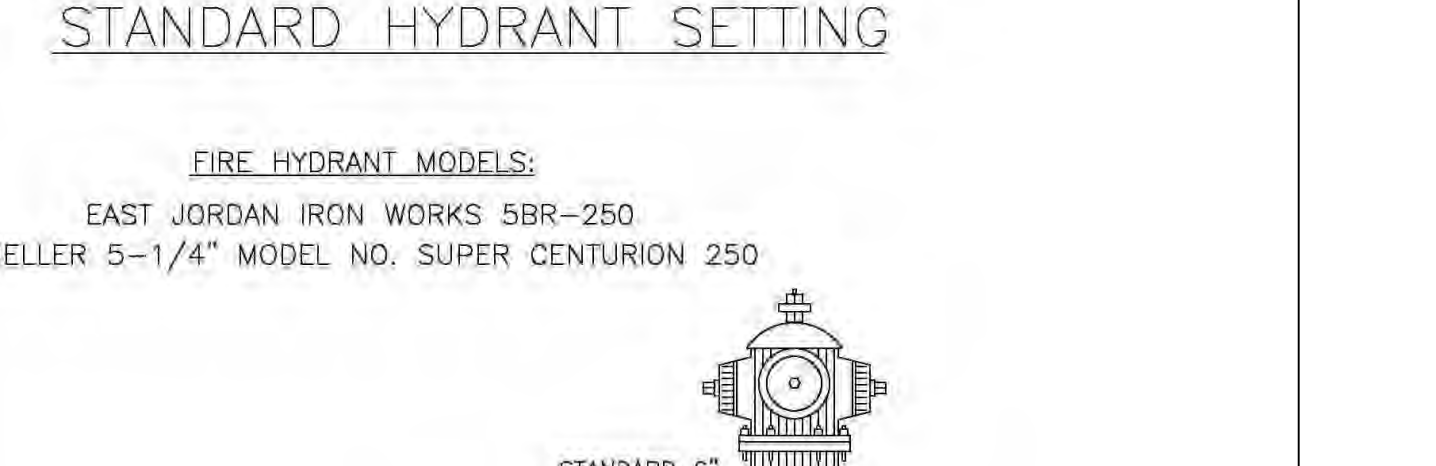


DEFLECTION FOR CONFLICT WITH UTILITIES

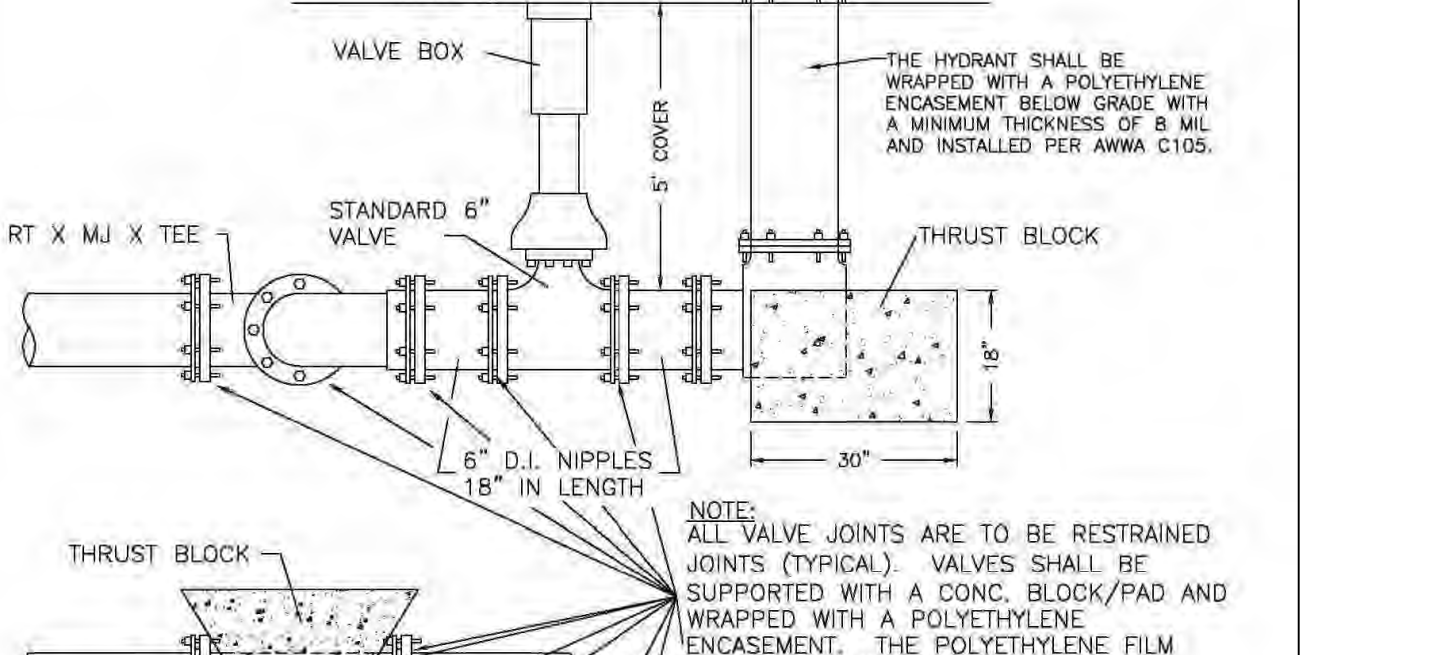


NOTE:
ALL VALVE JOINTS ARE TO BE RESTRAINED JOINTS (TYPICAL). VALVES SHALL BE SUPPORTED WITH A CONC. BLOCK/PAD AND WRAPPED WITH A POLYETHYLENE ENCASEMENT. THE POLYETHYLENE FILM SHALL BE A MINIMUM 8 MIL THICKNESS AND INSTALLED PER AWWA C105.

STANDARD HYDRANT SETTING

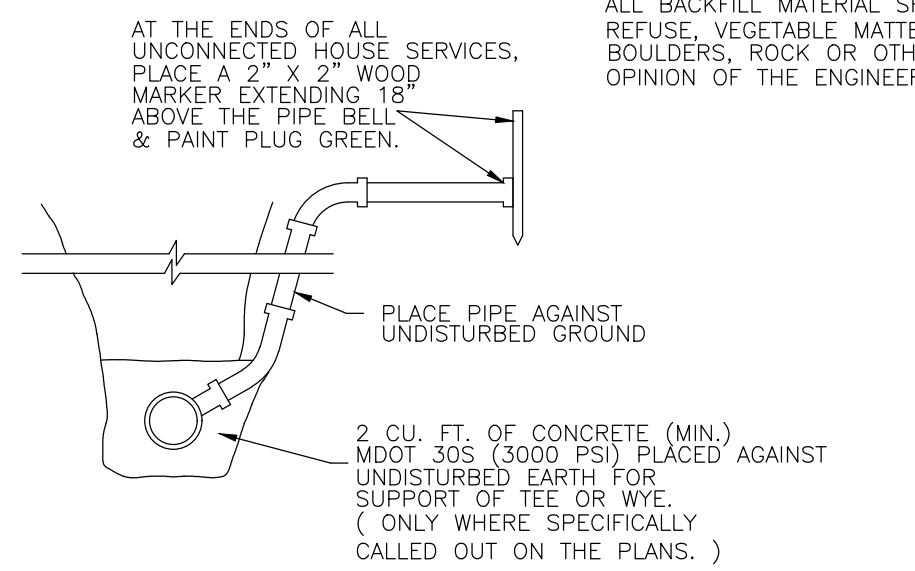
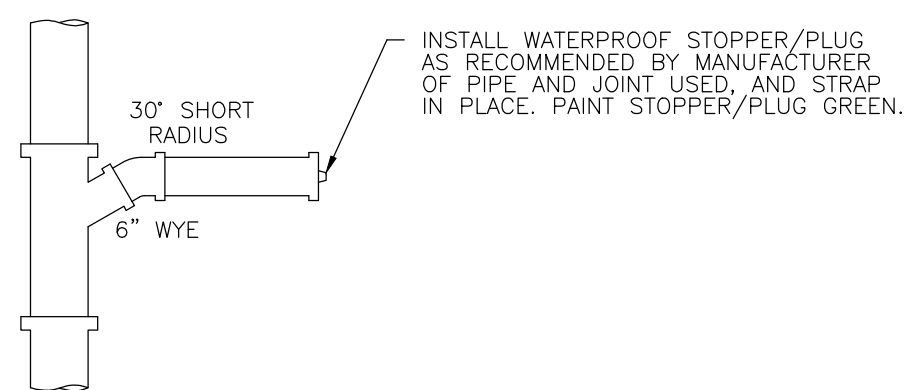


STANDARD CLOSE HYDRANT SETTING



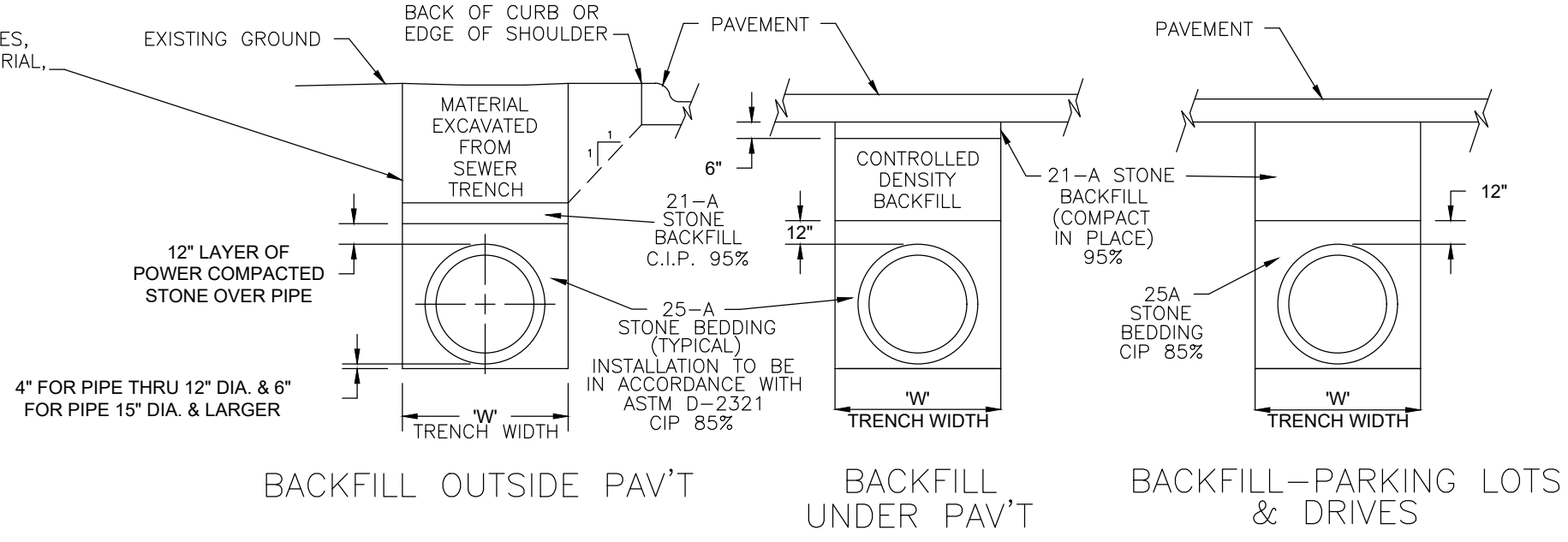
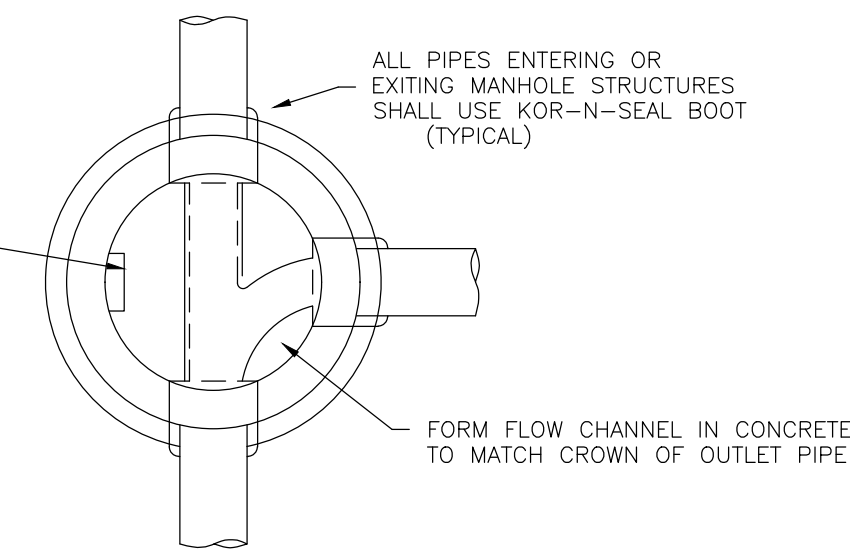
STANDARD CLOSE HYDRANT SETTING

NOTE:
ALL VALVE JOINTS ARE TO BE RESTRAINED JOINTS (TYPICAL). VALVES SHALL BE SUPPORTED WITH A CONC. BLOCK/PAD AND WRAPPED WITH A POLYETHYLENE ENCASEMENT. THE POLYETHYLENE FILM SHALL BE A MINIMUM 8 MIL THICKNESS AND INSTALLED PER AWWA C105.



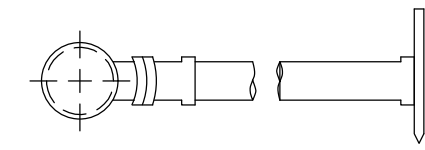
TRENCH WIDTH TABLE

| I.D. PIPE(INCHES) | 18" & LESS | 21" | 24" | 27" | 30" | 33" | 36" | 42" | 48" | 54" | 60" | 66" | 72" | 78" | 84" | 90" | 96" | 102" | 108" |
|------------------------|------------|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| "W" TRENCH WIDTH(FEET) | 3.0' | 3.5' | 4.0' | 4.5' | 5.0' | 5.5' | 6.0' | 7.0' | 8.0' | 9.0' | 10.0' | 10.5' | 11.0' | 11.5' | 12.0' | 12.5' | 13.0' | 13.5' | 14.0' |



ALUMINIUM MANHOLE STEPS EQUAL TO NEEHAH NO. R-1980, ALUMINIUM OR POLYPROPYLENE (REINFORCED) 16" MAX. C. TO C.

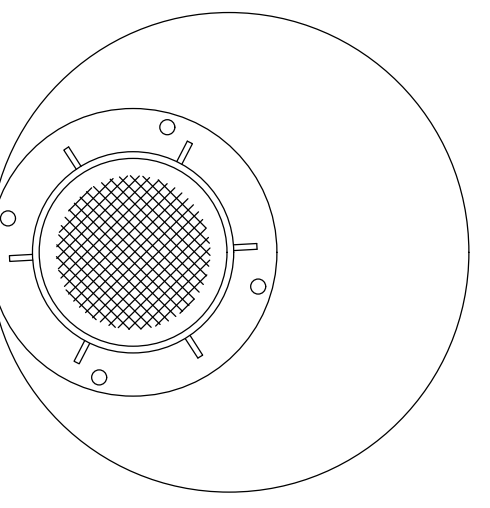
RISER DETAIL



TEE OR WYE HOUSE CONNECTION

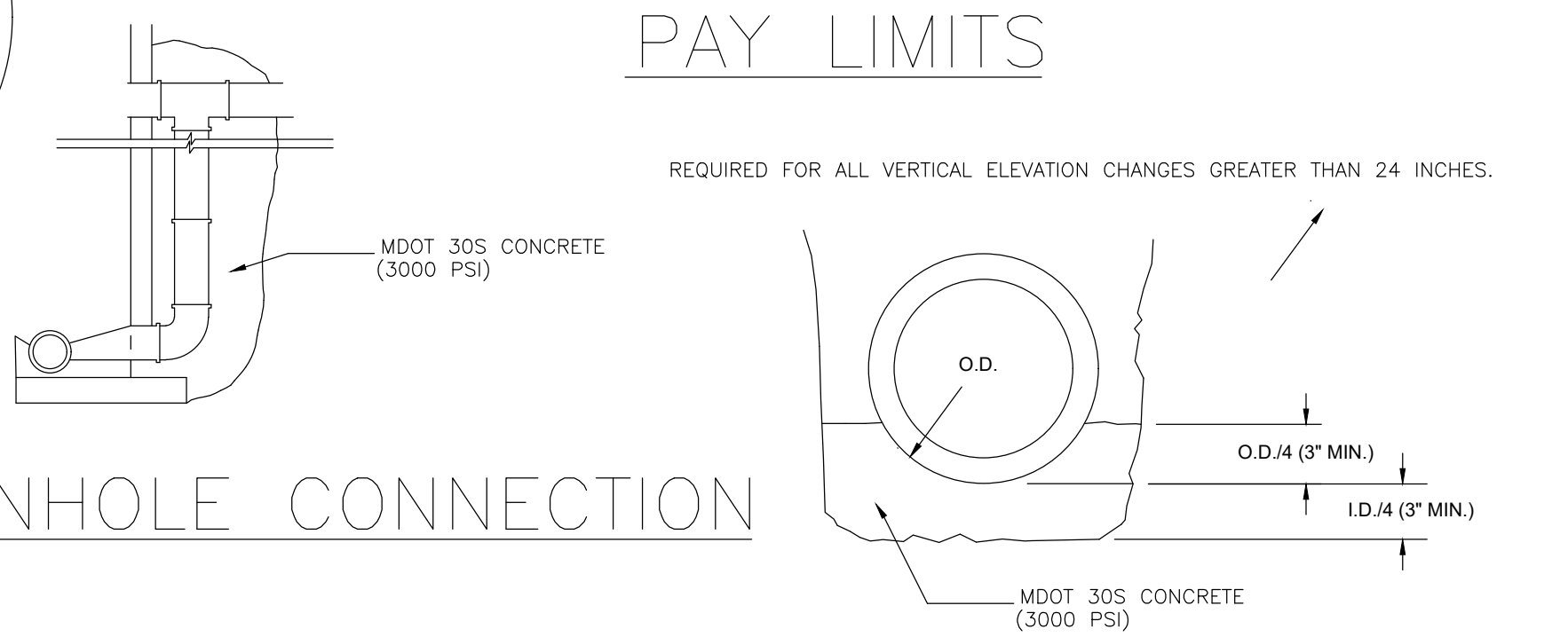
TABLE 6.3.2 MINIMUM CRITERIA FOR SILT FENCE FABRIC (ODOT, 2002)

| FABRIC PROPERTIES | VALUES | TEST METHOD |
|--------------------------------|---------------------------|-------------|
| MINIMUM TENSILE STRENGTH | 120 LBS. (535 N) | ASTM D 4632 |
| MAXIMUM ELONGATION AT 60 LBS | 50% | ASTM D 4632 |
| MINIMUM PUNCTURE STRENGTH | 50 LBS (220 N) | ASTM D 4833 |
| MINIMUM TEAR STRENGTH | 40 LBS (1 80N) | ASTM D 4533 |
| APPARENT OPENING SIZE | ≤0.84 MM | ASTM D 4751 |
| MINIMUM PERMITTIVITY | 1X10 ⁻² SEC.-1 | ASTM D 4491 |
| UV EXPOSURE STRENGTH RETENTION | 70% | ASTM G 4355 |

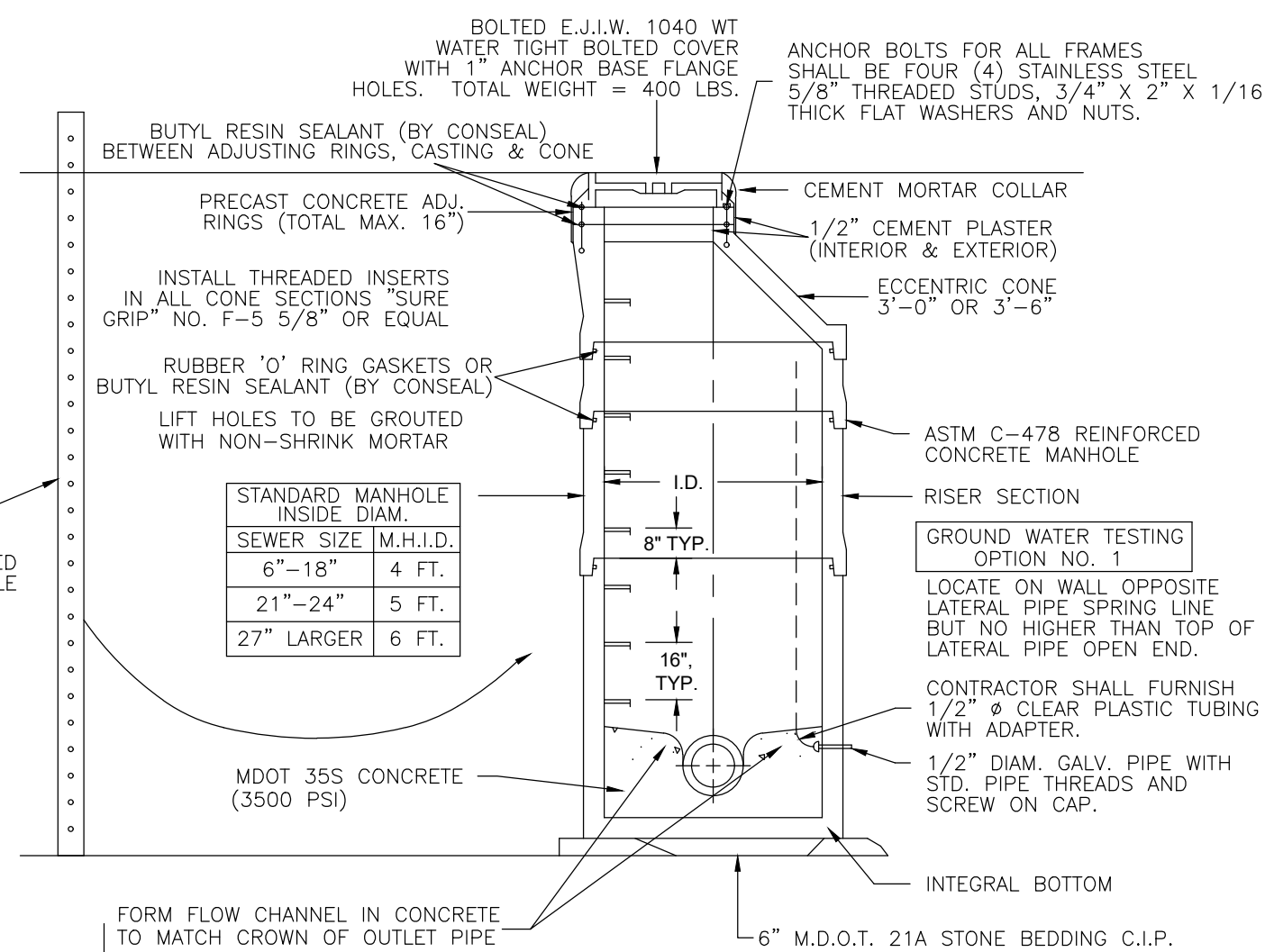


DROP MANHOLE CONNECTION

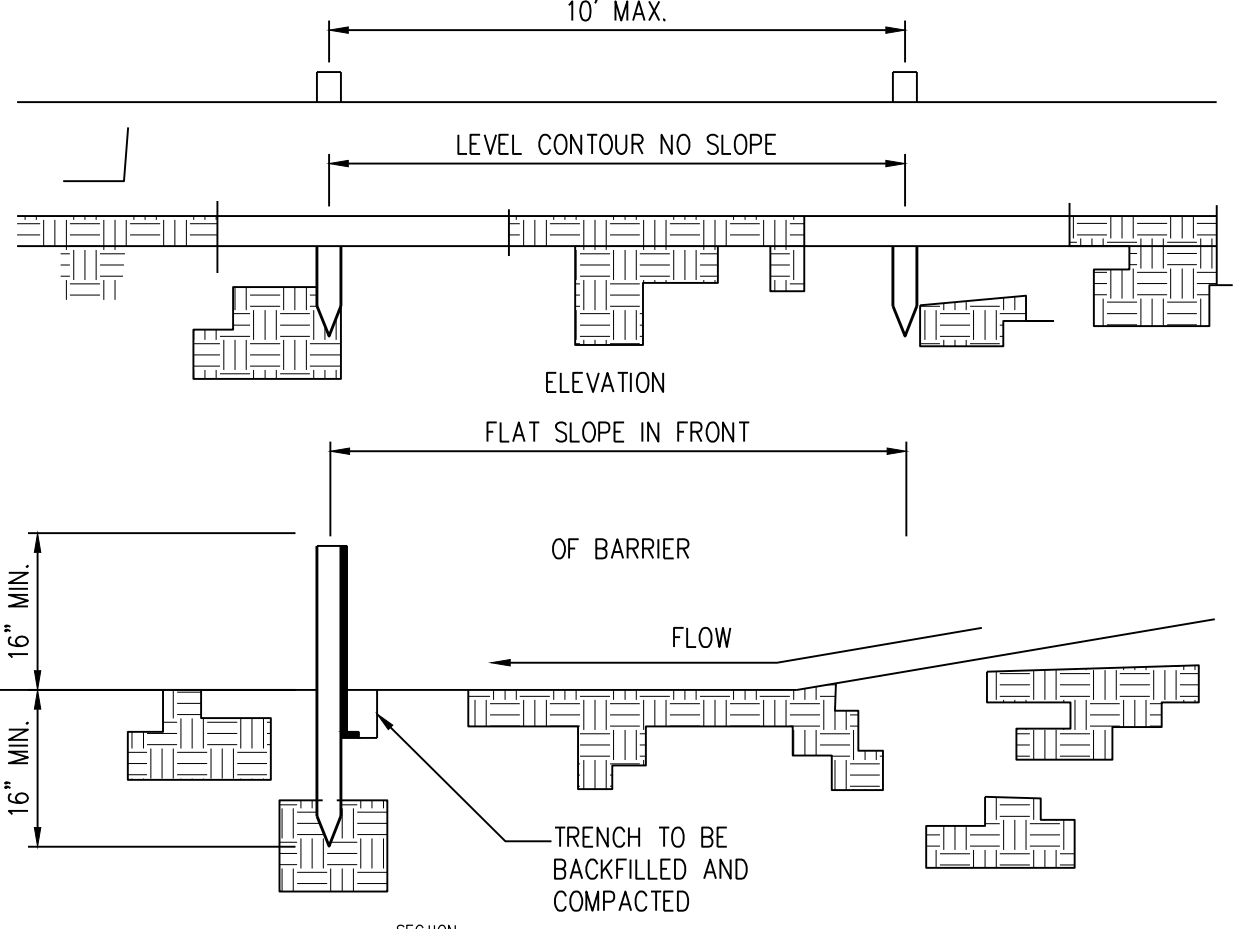
STANDARD BEDDING AND BACKFILL PAY LIMITS



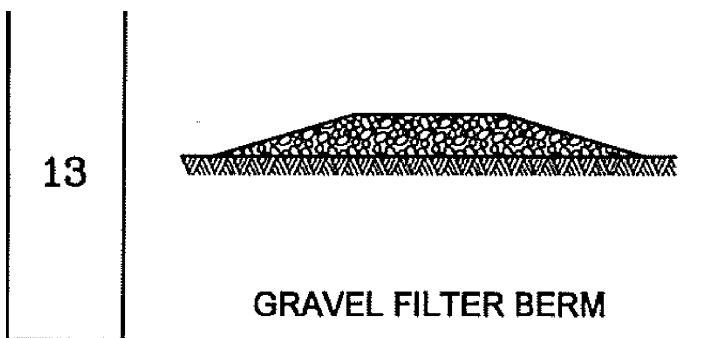
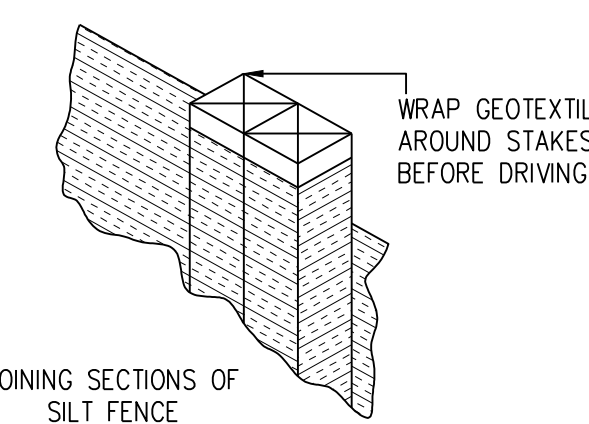
CONCRETE CRADLE BEDDING



STANDARD MANHOLE

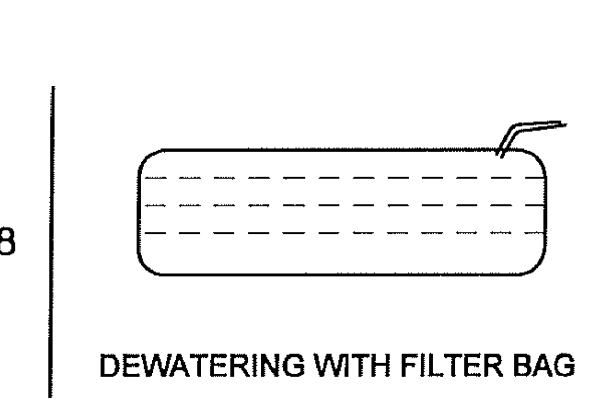


- SILT FENCE SHALL BE CONSTRUCTED BEFORE UPSLOPE LAND DISTURBANCE BEGINS.
- ALL SILT FENCE SHALL BE PLACED AS CLOSE TO THE CONTOUR AS POSSIBLE SO THAT WATER WILL NOT CONCENTRATE AT LOW POINTS IN THE FENCE AND SO THAT SMALL SHOALS OR DEPRESSIONS THAT MAY CARRY SMALL CONCENTRATED FLOWS TO THE SILT FENCE ARE DISSIPATED ALONG ITS LENGTH.
- ENDS OF THE SILT FENCES SHALL BE BROUGHT UPSLOPE SLIGHTLY SO THAT WATER PONDED BY THE SILT FENCE WILL BE PREVENTED FROM FLOWING AROUND THE ENDS.
- SILT FENCE SHALL BE PLACED ON THE FLATTEST AREA AVAILABLE.
- WHERE POSSIBLE, VEGETATION SHALL BE PRESERVED FOR 5 FEET (OR AS MUCH AS POSSIBLE) UPSLOPE FROM THE SILT FENCE. IF VEGETATION IS REMOVED, IT SHALL BE REESTABLISHED WITHIN 7 DAYS FROM THE INSTALLATION OF THE SILT FENCE.
- THE HEIGHT OF THE SILT FENCE SHALL BE A MINIMUM OF 16 INCHES ABOVE THE ORIGINAL GROUND SURFACE.
- THE SILT FENCE SHALL BE PLACED IN AN EXCAVATED OR SLICED TRENCH CUT A MINIMUM OF 6 INCHES DEEP. THE TRENCH SHALL BE MADE WITH A TRENCHER, CABLE LAYING MACHINE, SLICING MACHINE, OR OTHER SUITABLE DEVICE THAT WILL ENSURE AN ADEQUATELY UNIFORM TRENCH DEPTH.
- THE SILT FENCE SHALL BE PLACED WITH THE STAKES ON THE DOWNSLOPE SIDE OF THE GEOTEXTILE. A MINIMUM OF 8 INCHES OF GEOTEXTILE MUST BE BELOW THE GROUND SURFACE. EXCESS MATERIAL SHALL LAY ON THE BOTTOM OF THE 6-INCH DEEP TRENCH. THE TRENCH SHALL BE BACKFILLED AND COMPACTED ON BOTH SIDES OF THE FABRIC.
- SEAMS BETWEEN SECTIONS OF SILT FENCE SHALL BE SPICED TOGETHER ONLY AT A SUPPORT POST WITH A MINIMUM 6-IN. OVERLAP PRIOR TO DRIVING INTO THE GROUND. (SEE DETAILS).
- MAINTENANCE-SILT FENCE SHALL ALLOW RUNOFF TO PASS ONLY AS DIFFUSE FLOW THROUGH THE GEOTEXTILE. IF RUNOFF OVERTOPS THE SILT FENCE, FLOWS UNDER THE FABRIC OR AROUND THE FENCE ENDS, OR IN ANY OTHER WAY ALLOWS A CONCENTRATED FLOW DISCHARGE, ONE OF THE FOLLOWING SHALL BE PERFORMED, AS APPROPRIATE: 1) THE LAYOUT OF THE SILT FENCE SHALL BE CHANGED, 2) ACCUMULATED SEDIMENT SHALL BE REMOVED, OR 3) OTHER PRACTICES SHALL BE INSTALLED.
- SEDIMENT DEPOSITS SHALL BE ROUTINELY REMOVED WHEN THE DEPOSIT REACHES APPROXIMATELY ONE-HALF OF THE HEIGHT OF THE SILT FENCE.
- SILT FENCES SHALL BE INSPECTED AFTER EACH RAINFALL AND AT LEAST DAILY DURING A PROLONGED RAINFALL. THE LOCATION OF EXISTING SILT FENCE SHALL BE REVIEWED DAILY TO ENSURE ITS PROPER LOCATION AND EFFECTIVENESS. IF DAMAGED, THE SILT FENCE SHALL BE REPAIRED IMMEDIATELY.
- CRITERIA FOR SILT FENCE MATERIALS
 - FENCE POST - THE LENGTH SHALL BE A MINIMUM OF 32 INCHES. WOOD POSTS WILL BE 2-BY-2-IN. NOMINAL DIMENSIONED HARDWOOD OF SOUND QUALITY. THEY SHALL BE FREE OF KNOTS, SPLITS AND OTHER VISIBLE IMPERFECTIONS. THAT WILL WEAKEN THE POSTS. THE MAXIMUM SPACING BETWEEN POSTS SHALL BE 10 FT. POSTS SHALL BE DRIVEN A MINIMUM 16 INCHES INTO THE GROUND, WHERE POSSIBLE. IF NOT POSSIBLE, THE POSTS SHALL BE ADEQUATELY STOKED TO PREVENT OVERTURNING OF THE FENCE DUE TO SEDIMENT/WATER LOADING.
 - SILT FENCE FABRIC - SEE CHART BELOW.



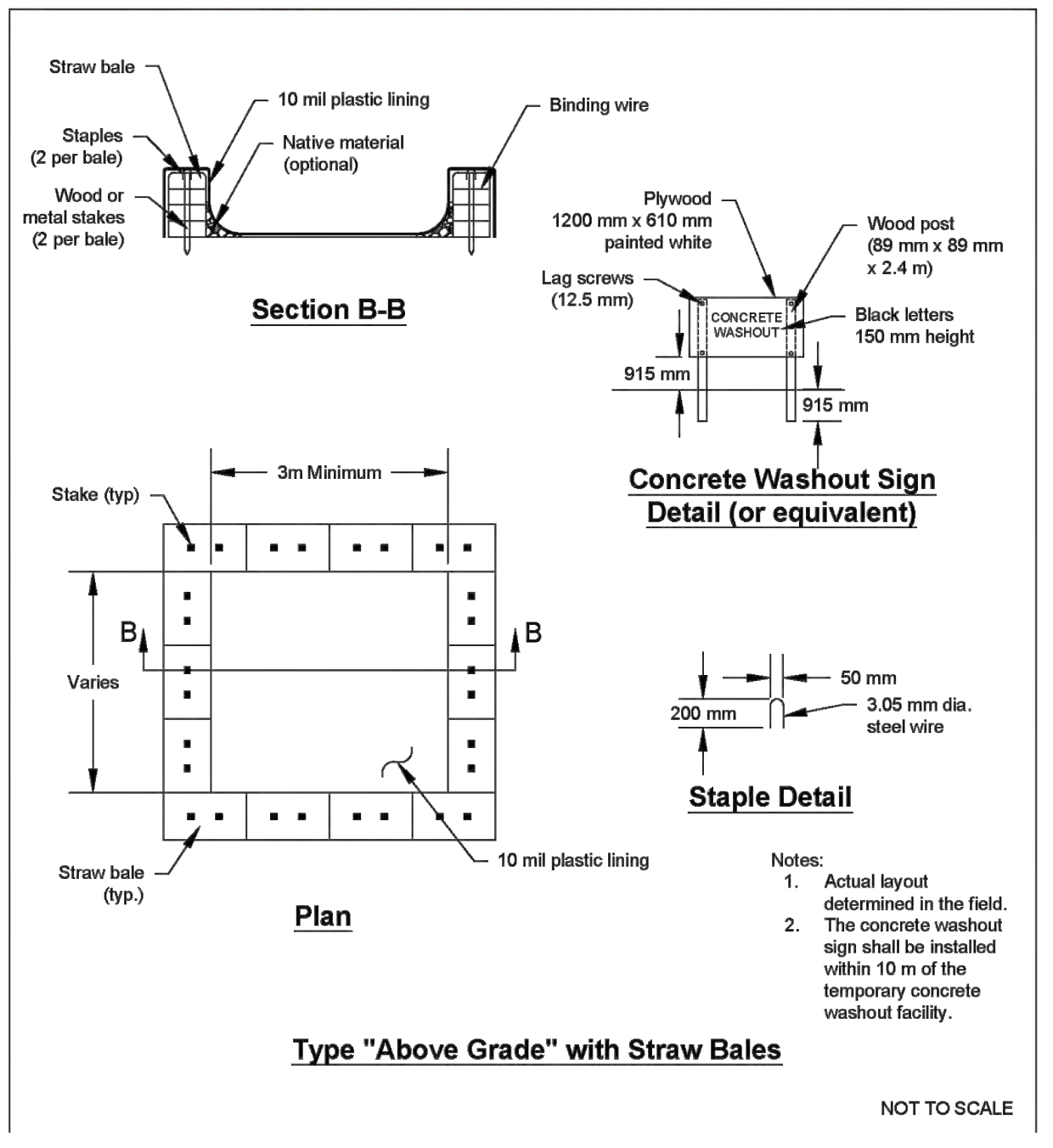
AS-NEEDED DETAILS

Useful in filtering flow prior to its reentry into a lake, stream or wetland. Works well with SEDIMENT TRAP (KEY 20) and TEMPORARY BYPASS CHANNEL (KEY 35). Not to be used in lieu of a CHECK DAM (KEY 37) in a ditch.



It may be necessary to dewater from behind a cofferdam or construction dam to create a dry work site. Discharged water must be pumped to a filter bag. A GRAVEL FILTER BERM (KEY 13) may be placed downslope of the filter bag to provide additional filtration prior to entering any stream or wetland.

DEWATERING WITH FILTER BAG



CONCRETE WASHOUT AREA

- NOT TO SCALE
- Actual layout determined in the field.
 - The concrete washout sign shall be installed within 10 m of the temporary concrete washout facility.

16 SILT FENCE NOT TO SCALE

DESCRIPTION: PRELIMINARY DESIGN PLANS, CONSTRUCTION PLANS, REVISIONS

BY: JPH

DATE: 9/17/23

NO: 2

PROJECT NO.: 237 NORTH MAIN STREET

PROJECT DATE: 03/09/2023

PROJECT NO.: ADRIAN, MI 49221

PROJECT NO.: TEL: 517.263.4515

PROJECT NO.: H480002

PROJECT NO.: JPP

PROJECT NO.: ACH

PROJECT NO.: CHECKED BY:

TECHNICAL SKILL: CREATIVE SPIRIT.

Mannik Smith GROUP

www.MannikSmithGroup.com

PREPARED FOR: CITY OF HILLSDALE

97 BOARD STREET HILLSDALE, MI 49242

WESTWOOD AREA RECONSTRUCTION WESTWOOD SUBDIVISIONS

MISCELLANEOUS DETAILS

51 52

