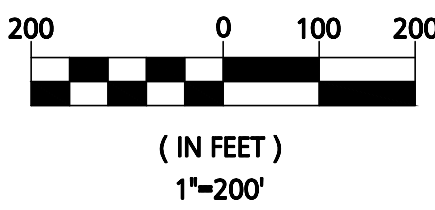
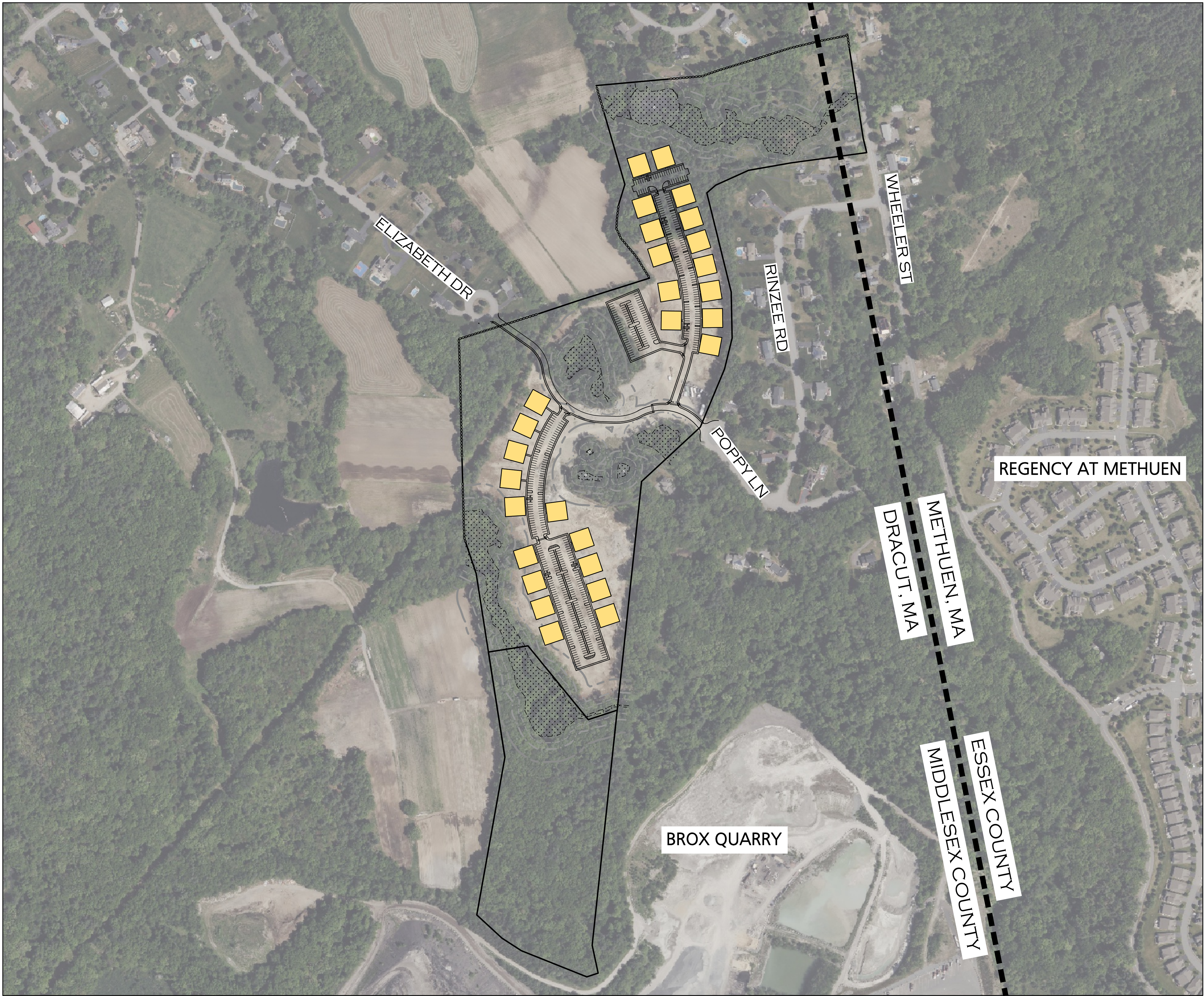


COMPREHENSIVE PERMIT SITE PLAN

FOR
MURPHY'S FARM

231 WHEELER STREET
(MAP 22 / LOT 53) &
(MAP 39 / BLOCK 53 / LOTS 1-23)
DRACUT, MASSACHUSETTS 01826



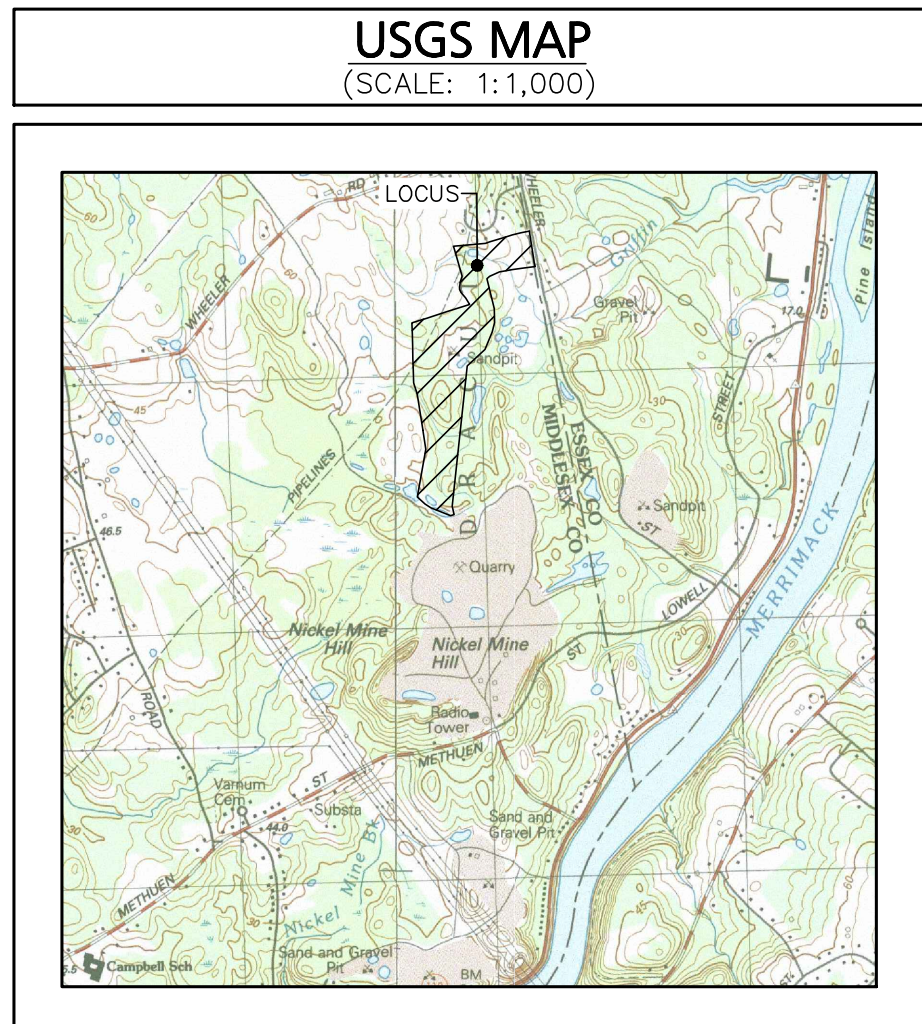
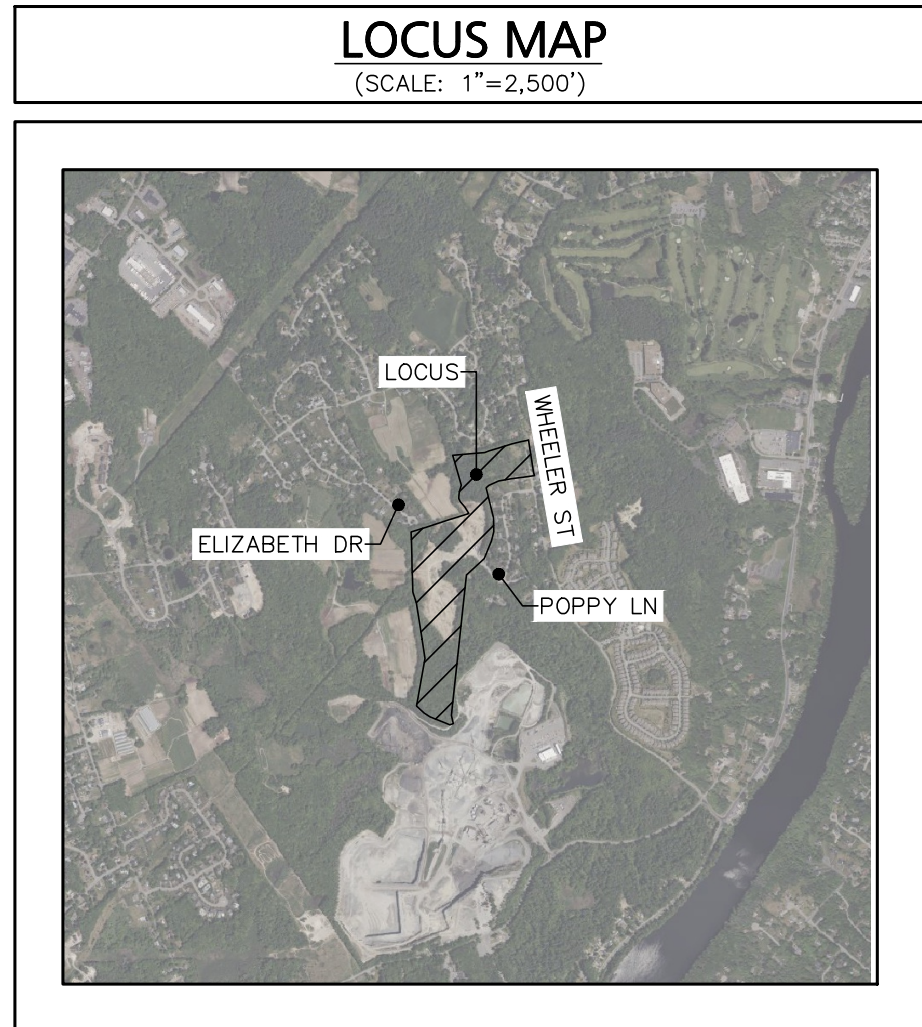
LAND USE TABLE		
LOCATION:	MAP 22 / LOT 53 & MAP 39 / BLOCK 53 / LOTS 1-23	
ZONE:	RESIDENTIAL 1 (R-1)	
USE:	MULTI-FAMILY RESIDENTIAL	
ITEM	REQUIRED	PROVIDED
MINIMUM LOT AREA	40,000-SF	33.30-AC
MINIMUM LOT FRONTAGE	175-FT	60-FT (ELIZABETH DR) 52-FT (POPPY LN)
MINIMUM FRONT SETBACK	30-FT	>30-FT
MINIMUM SIDE SETBACK	15-FT	35.1-FT
MINIMUM REAR SETBACK	35-FT	35.1-FT (TBD)
MAXIMUM BUILDING HEIGHT	35-FT 2.5 STORIES	32-FT 3 STORIES

PARKING CALCULATIONS:	
MULTIFAMILY RESIDENTIAL :	268 X (2 SPACE / UNIT) 536-SPACES REQUIRED 549-SPACE PROVIDED 12 ACCESSIBLE SPACES PROVIDED

AREA SUMMARY:	
-TOTAL LOT AREA:	33.30-AC
-TOTAL WETLAND AREA:	3.04-AC
-TOTAL UPLAND AREA:	30.26-AC
DEVELOPMENT SUMMARY:	
-TOTAL ROADWAY LENGTH:	3,050-FT
-NUMBER OF BUILDINGS:	28
-NUMBER OF UNITS:	268
-NUMBER OF BEDROOMS:	563

- PROJECT NOTES:
- LOCATION:
 - 231 WHEELER STREET (PARCEL ID: 22-53)
 - 15 MURPHY WAY (PARCEL ID: 39-53-1)
 - 21 MURPHY WAY (PARCEL ID: 39-53-2)
 - 25 MURPHY WAY (PARCEL ID: 39-53-3)
 - 28 MURPHY WAY (PARCEL ID: 39-53-4)
 - 22 MURPHY WAY (PARCEL ID: 39-53-5)
 - 16 MURPHY WAY (PARCEL ID: 39-53-6)
 - 10 MURPHY WAY (PARCEL ID: 39-53-7)
 - 4 MURPHY WAY (PARCEL ID: 39-53-8)
 - 40 ELIZABETH DRIVE (PARCEL ID: 39-53-9)
 - 34 ELIZABETH DRIVE (PARCEL ID: 39-53-10)
 - 29 ELIZABETH DRIVE (PARCEL ID: 39-53-11)
 - 35 ELIZABETH DRIVE (PARCEL ID: 39-53-12)
 - 41 ELIZABETH DRIVE (PARCEL ID: 39-53-13)
 - 47 ELIZABETH DRIVE (PARCEL ID: 39-53-14)
 - 53 ELIZABETH DRIVE (PARCEL ID: 39-53-15)
 - 59 ELIZABETH DRIVE (PARCEL ID: 39-53-16)
 - 16 MURPHY WAY (PARCEL ID: 39-53-17)
 - 58 ELIZABETH DRIVE (PARCEL ID: 39-53-18)
 - 46 ELIZABETH DRIVE (PARCEL ID: 39-53-19)
 - 40 ELIZABETH DRIVE (PARCEL ID: 39-53-20)
 - 34 ELIZABETH DRIVE (PARCEL ID: 39-53-21)
 - 29 ELIZABETH DRIVE (PARCEL ID: 39-53-22)
 - 70 ELIZABETH DRIVE (PARCEL ID: 39-53-23)
 - DEED: NORTH MIDDLESEX REGISTRY OF DEEDS BOOK 31624 PAGE 254
 - ZONE: RESIDENTIAL 1 (R-1)
 - USE: MULTI FAMILY RESIDENTIAL
 - APPLICANT: THE HOMES AT MURPHY'S FARM LLC
18 CASSIMERE STREET
ANDOVER, MA 01810
 - OWNER: O'BRIEN HOMES, INC
NORSE ENVIRONMENTAL SERVICES, INC
2100 LAKEVIEW AVENUE, UNIT 3A
DRACUT, MA 01826
 - SOILS / WETLANDS: NORSE ENVIRONMENTAL SERVICES, INC. 2100 LAKEVIEW AVENUE, UNIT 3A DRACUT, MA 01826
 - EXISTING CONDITIONS INFORMATION GENERATED FROM RECORD DOCUMENTS AS WELL AS AN ON GROUND SURVEY AND AERIAL SURVEY BY CIVIL DESIGN CONSULTANTS, INC. IN DECEMBER OF 2023 AND JANUARY OF 2024.
 - ALL ELEVATIONS REFER TO THE NORTH AMERICAN VERTICAL DATUM (NAVD83).
 - TEMPORARY BENCH MARKS SET:
 - TBM 1: SPIKE IN U-POLE#6 ON POPPY LANE. ELEV.=135.29'
 - TBM 2: X-CUT IN CB ON ELIZABETH DRIVE. ELEV.=168.41'
 - TBM 3: SPIKE IN TREE 620+/- EAST OF TBM 1. ELEV.=159.52'
 - TBM 4: SPIKE IN U-POLE#5 ON POPPY LANE. ELEV.=134.80'
 - PLAN BEARINGS ARE BASED UPON THE MASSACHUSETTS STATE PLANE COORDINATE SYSTEM (NAD83), MAINLAND ZONE.
 - THIS PROPERTY IS NOT LOCATED IN A FLOOD HAZARD AREA AS DEPICTED BY THE FLOOD INSURANCE RATE MAPS FOR MIDDLESEX COUNTY, MASSACHUSETTS MAP #2501700153C (EFFECTIVE DATE JUNE 4, 2010) AND MAP #2501700161E (EFFECTIVE DATE JUNE 4, 2010).
 - WETLANDS WERE DELINEATED BY NORSE ENVIRONMENTAL SERVICES, INC. OF DRACUT IN AUGUST, 2015.
 - THE INTENT OF THIS PLAN SET IS TO MEET THE PRELIMINARY PLAN CONTENT REQUIREMENTS TO ALLOW FOR INITIAL REVIEW OF THE PROPOSED 408 DEVELOPMENT. ADDITIONAL DETAIL MAY BE REQUIRED PRIOR TO ANY CONSTRUCTION.
 - NO BUILDING OR STRUCTURE SHALL BE BUILT OR PLACED WITHOUT A PERMIT FROM THE HEALTH DEPARTMENT IF SUCH A PERMIT IS REQUIRED.

REFERENCE PLANS:		
PLANS ON FILE AT THE NORTH MIDDLESEX COUNTY REGISTRY OF DEEDS.		
PLAN BOOK 118 PLAN 100		
PLAN BOOK 145 PLAN 56		
PLAN BOOK 159 PLAN 132		
PLAN BOOK 161 PLAN 136		
PLAN BOOK 165 PLAN 93		
PLAN BOOK 174 PLAN 26		
PLAN BOOK 206 PLAN 26		
PLAN BOOK 235 PLAN 67		
PLAN BOOK 244 PLAN 26		



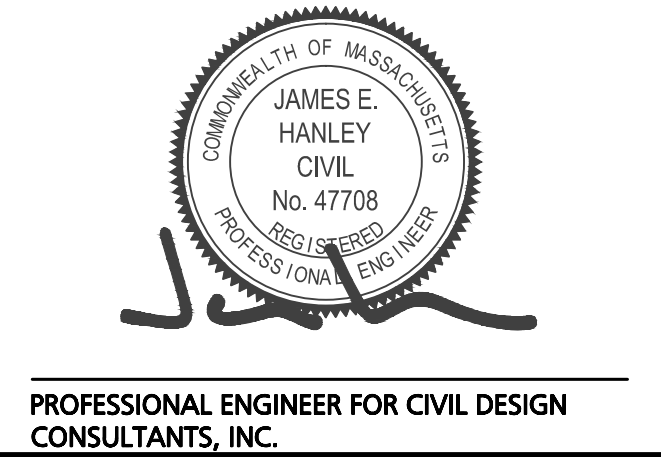
LEGEND	
PROPERTY LINE	---
BUILDING SETBACK	---
CENTERLINE	0+50 1+00
PROPOSED STRUCTURE	=====
PROPOSED CURB	=====
PROPOSED PAVEMENT	=====
PROPOSED CONCRETE	=====
PROPOSED CONTOUR	135
PROPOSED SPOT GRADE	159.57
PROPOSED SPOT GRADE (TW/50)	159.57
PROPOSED DRAIN	=====
PROPOSED CATCH BASIN	⊙
PROPOSED DRAIN MANHOLE	⊙
PROPOSED UNDERDRAIN	-----
PROPOSED ROCK RIP-RAP	=====
PROPOSED SILT FENCE	-----
PROPOSED RETAINING WALL	-----
PROPOSED TIMBER GUARDRAIL	-----
PROPOSED CHAINLINK FENCE	-----
PROPOSED STOCKADE FENCE	-----
PROPOSED TREE LINE	-----
PROPOSED LANDSCAPE AREA	=====
PROPOSED WATER	-----
PROPOSED GATE VALVE	W
PROPOSED HYDRANT	HY
PROPOSED SEWER	-----
PROPOSED SEWER MANHOLE	⊙
PROPOSED ELECTRIC/TELEPHONE/CABLE	-----
PROPOSED LIGHTING	⊙
PROPOSED EASEMENT	-----
PROPOSED STRIPING	-----
PROPOSED PARKING COUNT	⊙
PROPOSED HANDICAP SPACE	-----
PROPOSED TRAFFIC ARROW	-----
PROPOSED SIGN	-----
PROPOSED LIMIT OF WORK	-----

PLAN INDEX:		
TITLE	COVER SHEET	09/01/25
C-1	EXISTING CONDITIONS PLAN	05/09/25
C-2B	EXISTING CONDITIONS PLAN	05/09/25
C-3	LAYOUT & MATERIALS PLAN	09/01/25
C-4A	GRADING, DRAINAGE & UTILITIES PLAN	09/01/25
C-4B	GRADING, SEWER & UTILITIES PLAN	09/01/25
C-4C	GRADING & UTILITIES OVERALL PLAN	09/01/25
C-5A	PLAN & PROFILE	09/01/25
C-5B	PLAN & PROFILE	09/01/25
C-5C	PLAN OF LAND	02/25/25
C-6	EROSION CONTROL PLAN	09/01/25
C-7	FIRE TRUCK TURNING PLAN	09/01/25
C-8A	PLAN OF LAND	02/25/25
C-8B	PLAN OF LAND	02/25/25
D-1	CONSTRUCTION DETAILS	09/01/25
D-2	CONSTRUCTION DETAILS	09/01/25
D-3	CONSTRUCTION DETAILS	09/01/25
D-4	CONSTRUCTION DETAILS	09/01/25
D-5	CONSTRUCTION DETAILS	09/01/25
D-6	CONSTRUCTION DETAILS	09/01/25

09/01/25	REVISED LAYOUT
05/09/25	REV. PER PEER REVIEW COMMENTS
03/27/25	REV. PER PEER REVIEW COMMENTS
02/25/25	REV. PER PEER REVIEW COMMENTS
01/21/25	REV. PER INTERNAL REVIEW
12/30/24	REV. PER PEER REVIEW COMMENTS
10/04/24	REV. PER PEER REVIEW COMMENTS
DATE	DESCRIPTION
REVISIONS	
APPLICANT:	
THE HOMES AT MURPHY'S FARM LLC	
18 CASSIMERE STREET ANDOVER, MA 01810	

PROJECT:	MURPHY'S FARM
	DRACUT, MA 01826

DATE ISSUED:	APRIL 22, 2024
PROJECT #:	23-10524
PREPARED BY:	TWS



DRAWING TITLE:	COVER SHEET
----------------	-------------

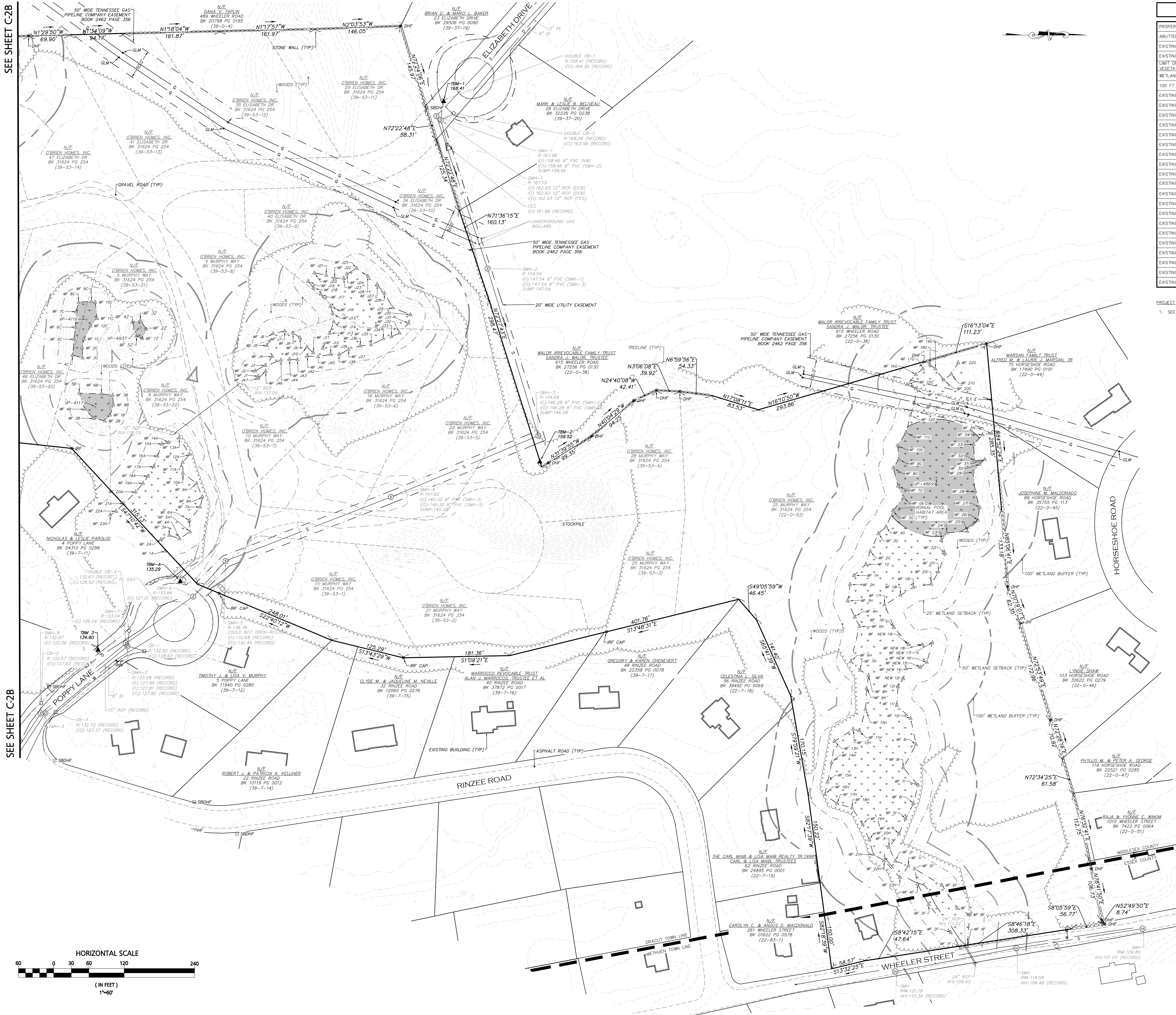
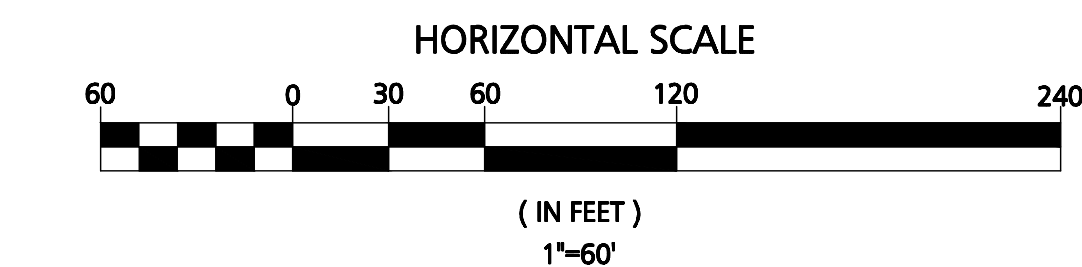
DRAWING #:	
------------	--

ISSUED FOR REVIEW: SEPTEMBER 1, 2025

C-1

SEE SHEET C-2B

SEE SHEET C-2B



LEGEND

PROPERTY LINE	---
ABUTTERS PROPERTY LINE	---
EXISTING EDGE OF PAVEMENT	---
EXISTING EDGE OF GRAVEL	---
LIMIT OF BORDERING VEGETATED WETLAND (BWV)	---
WETLAND	---
100 FT BUFFER TO BWV	---
EXISTING WETLAND FLAG	△
EXISTING VERNAL POOL	○
EXISTING CONTOUR	---
EXISTING EASEMENT	---
EXISTING TREE LINE	---
EXISTING STONE WALL	---
EXISTING UTILITY POLE	---
EXISTING DRAIN MANHOLE	⊙
EXISTING DRAIN	---
EXISTING CATCHBASIN	□
EXISTING FLARED END SECTION	---
EXISTING SEWER MANHOLE	⊙
EXISTING WATER	---
EXISTING SEWER	---
EXISTING HYDRANT	---
EXISTING GAS	---
EXISTING GAS BOLLARD	○
EXISTING IRON PIN	○
EXISTING BOUND	---
EXISTING BENCHMARK	▲

PROJECT NOTES:

1. SEE SHEET C-1 FOR FULL PROJECT NOTES

05/09/25	REV. PER PEER REVIEW COMMENTS
DATE	DESCRIPTION

REVISIONS

OWNER / APPLICANT:

THE HOMES AT MURPHY'S FARM LLC
18 CASSIMERE STREET
ANDOVER, MA 01810

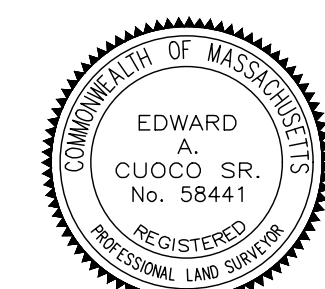
PROJECT:

MURPHY'S FARM
DRACUT, MA 01826

DATE ISSUED: MARCH 27, 2025

PROJECT #: 23-10524

PREPARED BY: MEY/EAC



PROFESSIONAL LAND SURVEYOR FOR
CIVIL DESIGN CONSULTANTS, INC.



DRAWING TITLE:

**EXISTING
CONDITIONS PLAN**

DRAWING #:

C-2A



PROJECT NOTES:
1. SEE SHEET C-1 FOR FULL PROJECT NOTES

05/09/25	REV. PER PEER REVIEW COMMENTS
DATE	DESCRIPTION
REVISIONS	

OWNER / APPLICANT:
THE HOMES AT MURPHY'S FARM LLC
18 CASSIMERE STREET
ANDOVER, MA 01810

PROJECT:
MURPHY'S FARM
DRACUT, MA 01826

DATE ISSUED:	MARCH 27, 2025
PROJECT #:	23-10524
PREPARED BY:	MEY/EAC

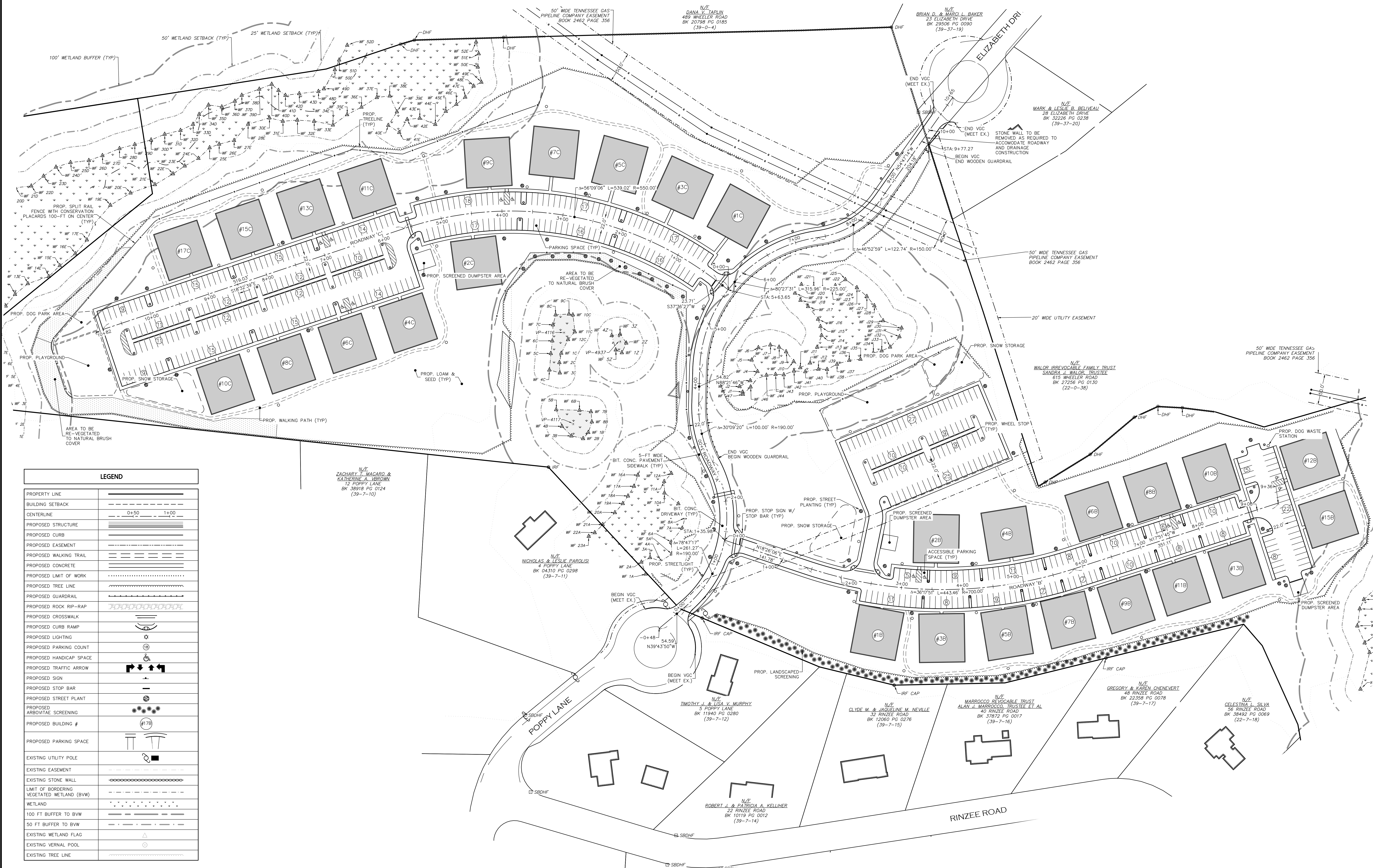
EDWARD A. CUOCO SR.
No. 58441
REGISTERED PROFESSIONAL LAND SURVEYOR
5/15/25
PROFESSIONAL LAND SURVEYOR FOR
CIVIL DESIGN CONSULTANTS, INC.

CIVIL DESIGN
CONSULTANTS, INC.
344 North Main Street | Andover, MA 01810
(978) 456-0000 | www.civildesign.com

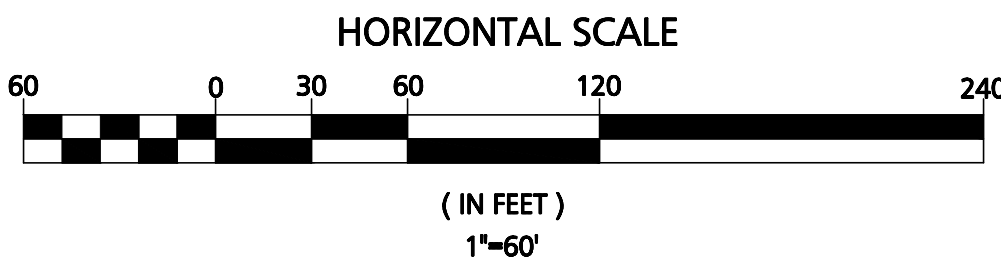
DRAWING TITLE:
EXISTING CONDITIONS PLAN

DRAWING #:
C-2B

NAD83



LEGEND	
PROPERTY LINE	---
BUILDING SETBACK	---
CENTERLINE	0+50 1+00
PROPOSED STRUCTURE	=====
PROPOSED CURB	=====
PROPOSED EASEMENT	-----
PROPOSED WALKING TRAIL	=====
PROPOSED CONCRETE	=====
PROPOSED LIMIT OF WORK	
PROPOSED TREE LINE	=====
PROPOSED GUARDRAIL	=====
PROPOSED ROCK RIP-RAP	=====
PROPOSED CROSSWALK	=====
PROPOSED CURB RAMP	=====
PROPOSED LIGHTING	=====
PROPOSED PARKING COUNT	=====
PROPOSED HANDICAP SPACE	=====
PROPOSED TRAFFIC ARROW	=====
PROPOSED SIGN	=====
PROPOSED STOP BAR	=====
PROPOSED STREET PLANT	=====
PROPOSED ARBORESCENT SCREENING	=====
PROPOSED BUILDING #	=====
PROPOSED PARKING SPACE	=====
EXISTING UTILITY POLE	=====
EXISTING EASEMENT	-----
EXISTING STONE WALL	=====
LIMIT OF BORDERING VEGETATED WETLAND (BVW)	-----
WETLAND	=====
100 FT BUFFER TO BVW	-----
50 FT BUFFER TO BVW	-----
EXISTING WETLAND FLAG	=====
EXISTING VERNAL POOL	=====
EXISTING TREE LINE	=====

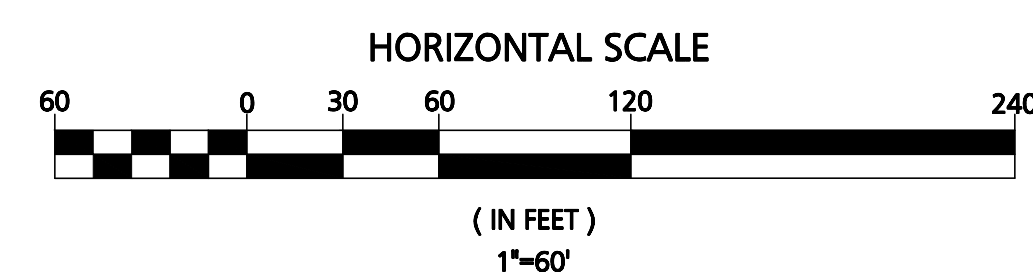


09/01/25	REVISED LAYOUT
05/09/25	REV. PER PEER REVIEW COMMENTS
03/27/25	REV. PER PEER REVIEW COMMENTS
02/25/25	REV. PER PEER REVIEW COMMENTS
01/21/25	REV. PER INTERNAL REVIEW
12/30/24	REV. PER PEER REVIEW COMMENTS
10/04/24	REV. PER PEER REVIEW COMMENTS
DATE	DESCRIPTION
REVISIONS	
APPLICANT:	
THE HOMES AT MURPHY'S FARM LLC	
18 CASSIMERE STREET ANDOVER, MA 01810	
PROJECT:	
MURPHY'S FARM	
DRACUT, MA 01826	
DATE ISSUED:	
APRIL 22, 2024	
PROJECT #:	
23-10524	
PREPARED BY:	
TWS	
PROFESSIONAL ENGINEER FOR CIVIL DESIGN CONSULTANTS, INC.	
DRAWING TITLE:	
LAYOUT & MATERIALS PLAN	
DRAWING #:	
C-3	



PROJECT NOTES:

- SEE SHEET C-1 FOR FULL PROJECT NOTES
- SEE CONSTRUCTION SEQUENCING NOTES ON SHEET D-1.
- CONTRACTOR IS TO VERIFY THE LOCATION, DEPTH, AND CONDITION OF THE EXISTING SEWER AND WATER PRIOR TO CONSTRUCTION.
- PROPOSED WATER AND SEWER MAINS TO MAINTAIN 10'-FT OF HORIZONTAL SEPARATION, WHERE SANITARY SEWERS CROSS WATER MAINS, THE SEWER SHALL BE LAID AT SUCH AN ELEVATION THAT THE CROWN OF THE SEWER IS AT LEAST 18 INCHES BELOW THE INVERT OF THE WATER MAIN. IF THE ELEVATION OF THE SEWER CANNOT BE VARIED TO MEET THIS REQUIREMENT, THE WATER MAIN SHALL BE RELOCATED TO PROVIDE THIS SEPARATION OR CONSTRUCTED WITH MECHANICAL JOINT PIPE FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE SEWER. ONE FULL LENGTH OF WATER MAIN SHALL BE CENTERED OVER THE SEWER SO THAT BOTH JOINTS WILL BE AS FAR FROM THE SEWER AS POSSIBLE. WHENEVER IT IS IMPOSSIBLE TO OBTAIN VERTICAL SEPARATION AS STIPULATED ABOVE, BOTH THE WATER MAIN AND SEWER SHALL BE ENCASED IN CONCRETE FOR A MINIMUM DISTANCE OF 10 FEET FROM THE CROSSING POINT OF THE OTHER PIPE AS MEASURED NORMALLY FROM ALL POINTS ALONG THE PIPE.
- PROPOSED GAS AND ELECTRIC SERVICE LOCATIONS TO BE CONFIRMED BY THE UTILITY COMPANY.
- DOWNSPOUT/GUTTER LOCATIONS TO BE COORDINATED WITH ARCHITECT



09/01/25	REVISED LAYOUT
05/09/25	REV. PER PEER REVIEW COMMENTS
03/27/25	REV. PER PEER REVIEW COMMENTS
02/25/25	REV. PER PEER REVIEW COMMENTS
01/21/25	REV. PER INTERNAL REVIEW
12/30/24	REV. PER PEER REVIEW COMMENTS
10/04/24	REV. PER PEER REVIEW COMMENTS
DATE	REVISIONS
DATE	DESCRIPTION

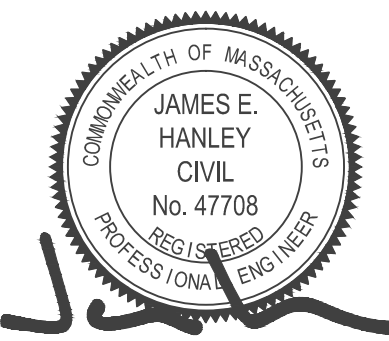
APPLICANT:
THE HOMES AT MURPHY'S FARM LLC
 18 CASSIMERE STREET
 ANDOVER, MA 01810

PROJECT:
MURPHY'S FARM
 DRACUT, MA 01826

DATE ISSUED: APRIL 22, 2024

PROJECT #: 23-10524

PREPARED BY: TWS



PROFESSIONAL ENGINEER FOR CIVIL DESIGN
 CONSULTANTS, INC.

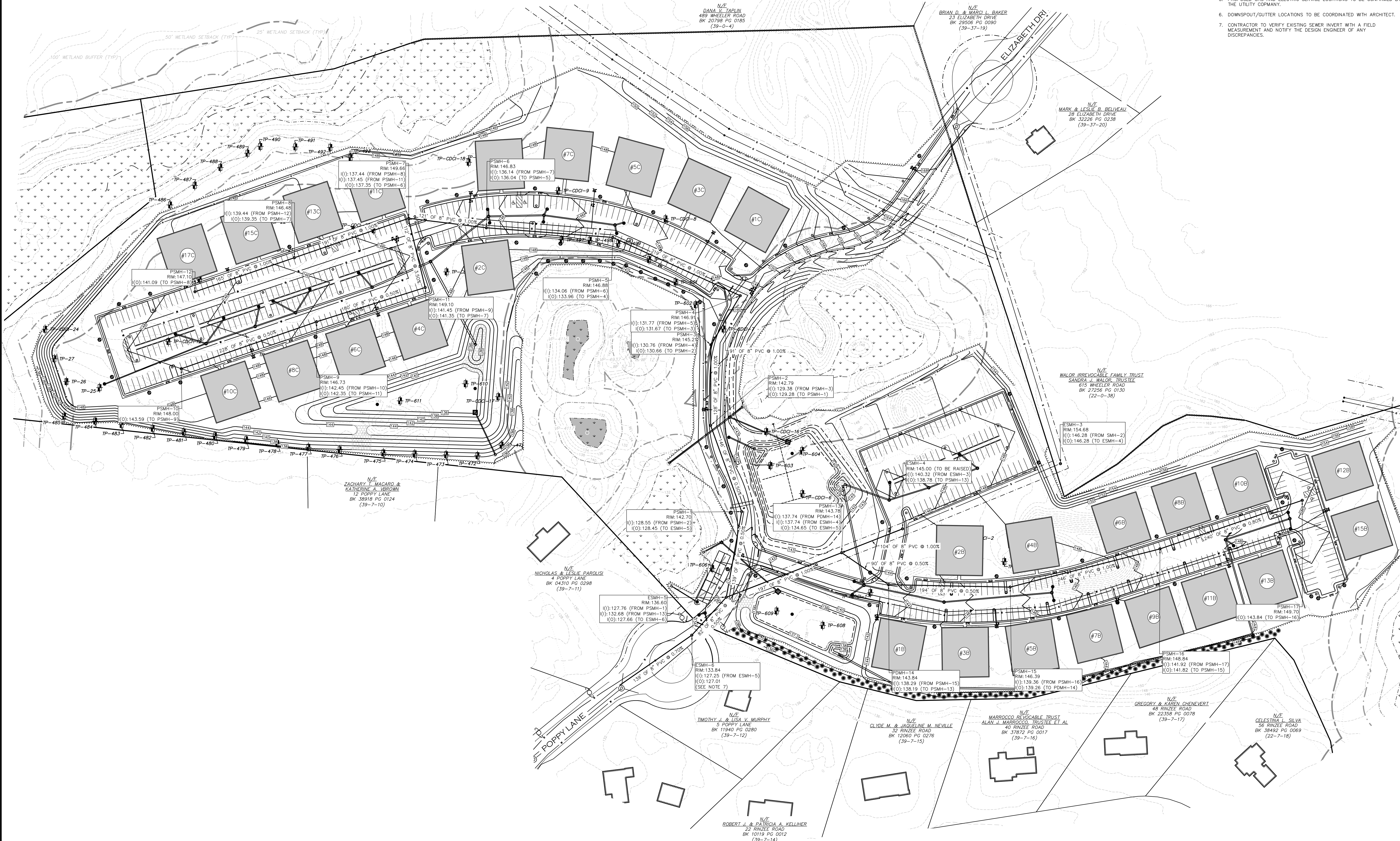


344 North Main Street | Andover, MA 01810
 (978) 446-0502 | www.civilcdi.com

DRAWING TITLE:
GRADING, DRAINAGE & UTILITIES PLAN

DRAWING #:

C-4A



PROJECT NOTES:

- SEE SHEET C-1 FOR FULL PROJECT NOTES
- SEE CONSTRUCTION SEQUENCING NOTES ON SHEET D-1.
- CONTRACTOR IS TO VERIFY THE LOCATION, DEPTH, AND CONDITION OF THE EXISTING SEWER AND WATER PRIOR TO CONSTRUCTION.
- PROPOSED WATER AND SEWER MAINS TO MAINTAIN 10'-FT OF HORIZONTAL SEPARATION, WHERE SANITARY SEWERS CROSS WATER MAINS, THE SEWER SHALL BE LAID AT SUCH AN ELEVATION THAT THE CROWN OF THE SEWER IS AT LEAST 18 INCHES BELOW THE INVERT OF THE WATER MAIN. IF THE ELEVATION OF THE SEWER CANNOT BE VARIED TO MEET THIS REQUIREMENT, THE WATER MAIN SHALL BE RELOCATED TO PROVIDE THIS SEPARATION OR CONSTRUCTED WITH MECHANICAL JOINT PIPE FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE SEWER. ONE FULL LENGTH OF WATER MAIN SHALL BE CENTERED OVER THE SEWER SO THAT BOTH JOINTS WILL BE AS FAR FROM THE SEWER AS POSSIBLE. WHENEVER IT IS IMPOSSIBLE TO OBTAIN VERTICAL SEPARATION AS STIPULATED ABOVE, BOTH THE WATER MAIN AND SEWER SHALL BE ENCASED IN CONCRETE FOR A MINIMUM DISTANCE OF 10 FEET FROM THE CROSSING POINT OF THE OTHER PIPE AS MEASURED NORMALLY FROM ALL POINTS ALONG THE PIPE.
- PROPOSED GAS AND ELECTRIC SERVICE LOCATIONS TO BE CONFIRMED BY THE UTILITY COMPANY.
- DOWNSPOUT/GUTTER LOCATIONS TO BE COORDINATED WITH ARCHITECT.
- CONTRACTOR TO VERIFY EXISTING SEWER INVERT WITH A FIELD MEASUREMENT AND NOTIFY THE DESIGN ENGINEER OF ANY DISCREPANCIES.

DATE	DESCRIPTION
09/01/25	REVISED LAYOUT
05/09/25	REV. PER PEER REVIEW COMMENTS
03/27/25	REV. PER PEER REVIEW COMMENTS
02/25/25	REV. PER PEER REVIEW COMMENTS
01/21/25	REV. PER INTERNAL REVIEW
12/30/24	REV. PER PEER REVIEW COMMENTS
10/04/24	REV. PER PEER REVIEW COMMENTS

APPLICANT:
THE HOMES AT MURPHY'S FARM LLC
 18 CASSIMERE STREET
 ANDOVER, MA 01810

PROJECT:
MURPHY'S FARM
 DRACUT, MA 01826

DATE ISSUED:	APRIL 22, 2024
PROJECT #:	23-10524
PREPARED BY:	TWS

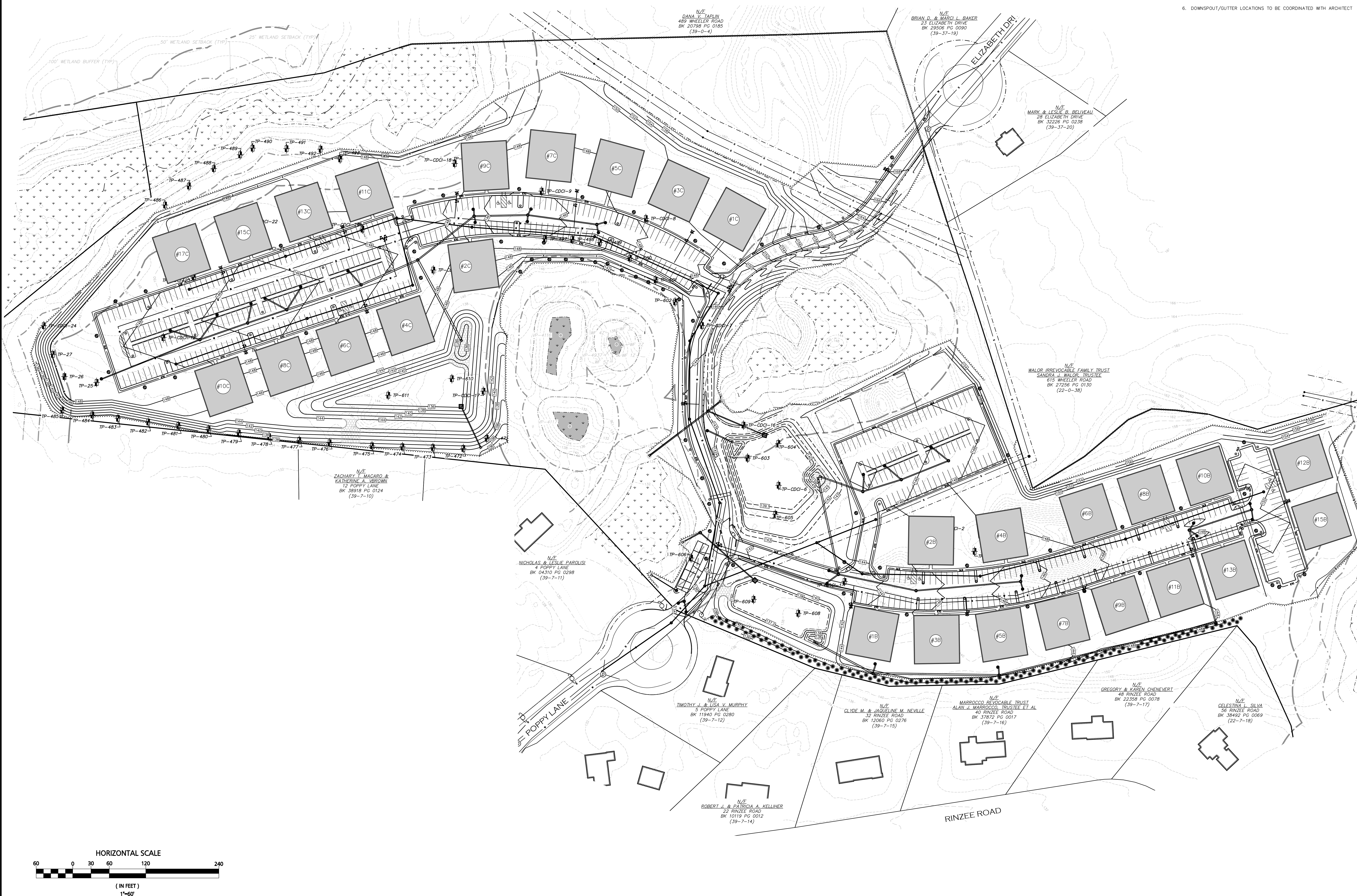
PROFESSIONAL ENGINEER FOR CIVIL DESIGN
 CONSULTANTS, INC.

CIVIL DESIGN
 CONSULTANTS, INC.

344 North Main Street | Andover, MA 01810
 (978) 468-0502 | www.cd85.com

DRAWING TITLE:
GRADING, SEWER & UTILITIES PLAN

DRAWING #:
C-4B



1. SEE SHEET C-1 FOR FULL PROJECT NOTES
2. SEE CONSTRUCTION SEQUENCING NOTES ON SHEET D-1.
3. CONTRACTOR IS TO VERIFY THE LOCATION, DEPTH, AND CONDITION OF THE EXISTING SEWER AND WATER PRIOR TO CONSTRUCTION.
4. PROPOSED WATER AND SEWER MAINS TO MAINTAIN 10-FT OF HORIZONTAL SEPARATION, WHERE SANITARY SEWERS CROSS WATER MAINS, THE SEWER MAIN SHALL BE LOCATED AT LEAST 10 FEET FROM THE WATER MAIN. IF THE SEWER MAIN IS AT LEAST 18 INCHES BELOW THE INVERT OF THE WATER MAIN, IF THE WATER MAIN IS AT LEAST 18 INCHES ABOVE THE INVERT OF THE SEWER, THIS REQUIREMENT, THE WATER MAIN SHALL BE RELOCATED TO PROVIDE THIS SEPARATION OR CONSTRUCTED WITH MECHANICAL JOINT PIPE FOR A DISTANCE OF 10 FEET FROM EACH SIDE OF THE SEWER. ONE FULL LENGTH OF WATER MAIN SHALL BE CENTERED OVER THE SEWER SO THAT BOTH ENDS OF THE WATER MAIN ARE AT LEAST 10 FEET FROM THE SEWER. IF IT IS IMPOSSIBLE TO OBTAIN VERTICAL SEPARATION AS STIPULATED ABOVE, THE WATER MAIN SHALL BE RELOCATED TO MAINTAIN A MINIMUM DISTANCE OF 10 FEET FROM THE CROSSING POINT OF THE OTHER PIPE AS MEASURED NORMALLY FROM ALL POINTS ALONG THE PIPE.
5. PROPOSED GAS AND ELECTRIC SERVICE LOCATIONS TO BE CONFIRMED BY THE UTILITY COMPANY.
6. DOWNSPOUT/GUTTER LOCATIONS TO BE COORDINATED WITH ARCHITECT

09/01/25	REVISED LAYOUT
05/09/25	REV. PER PEER REVIEW COMMENTS
03/27/25	REV. PER PEER REVIEW COMMENTS
02/25/25	REV. PER PEER REVIEW COMMENTS
01/21/25	REV. PER INTERNAL REVIEW
12/30/24	REV. PER PEER REVIEW COMMENTS
10/04/24	REV. PER PEER REVIEW COMMENTS
DATE	DESCRIPTION

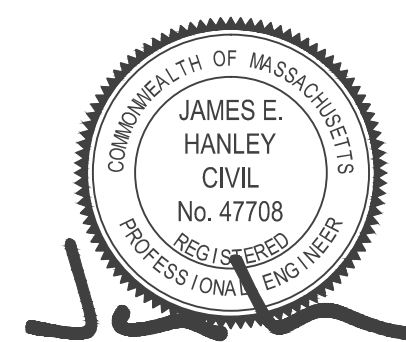
APPLICANT:
THE HOMES AT
MURPHY'S FARM LLC
18 CASSIMERE STREET
ANDOVER, MA 01810

PROJECT:

MURPHY'S FARM

DRACUT, MA 01826

DATE ISSUED:	APRIL 22, 2024
PROJECT #:	23-10524
PREPARED BY:	TWS



PROFESSIONAL ENGINEER FOR CIVIL DESIGN
CONSULTANTS, INC.

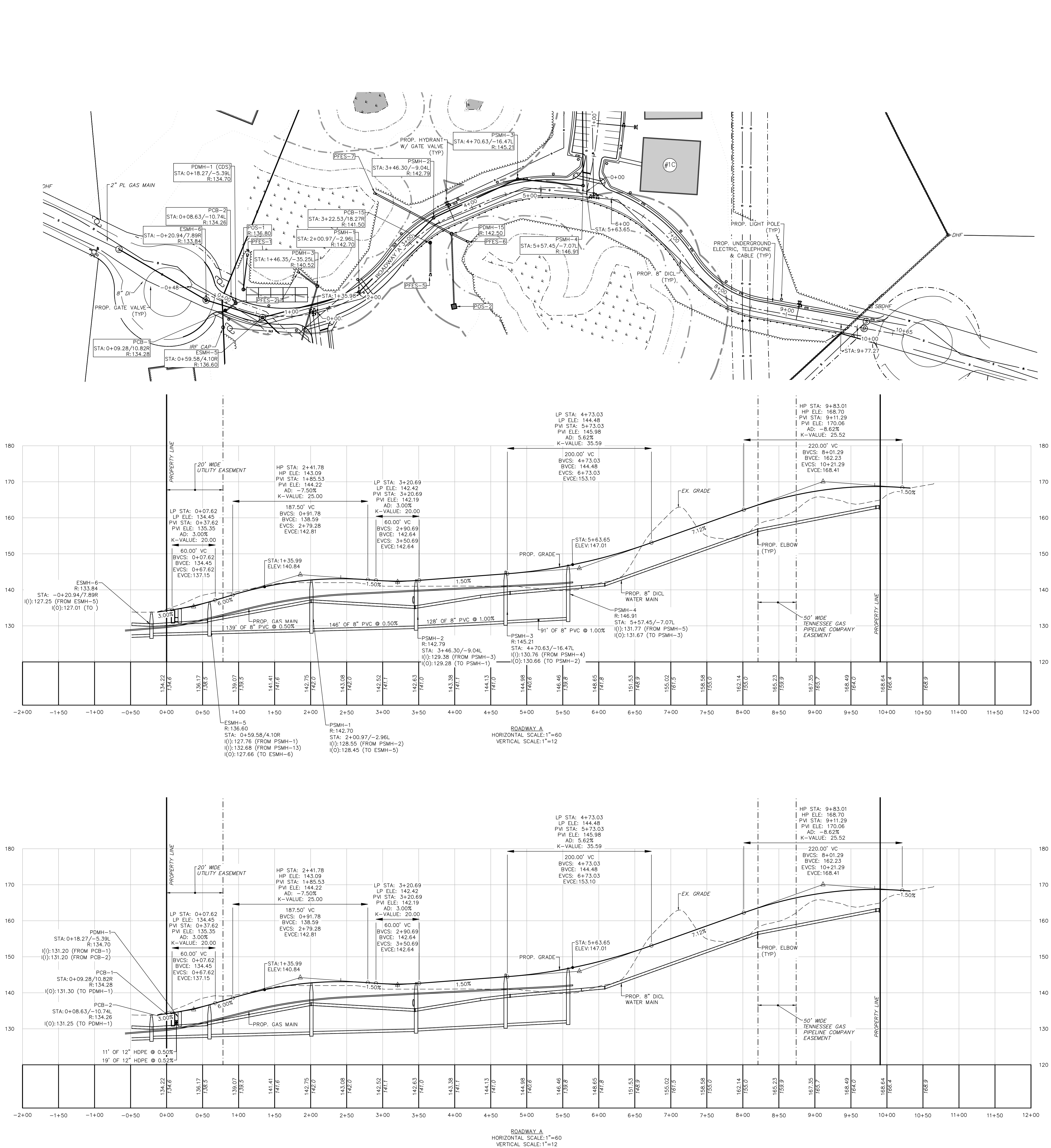


DRAWING TITLE:
**OVERALL GRADING &
UTILITIES PLAN**

DRAWING #:

C-4C

PROJECT NOTES:
1. SEE SHEET C-1 FOR FULL PROJECT NOTES

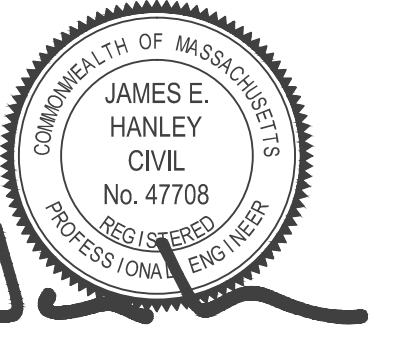


REVISIONS	
09/01/25	REVISED LAYOUT
05/09/25	REV. PER PEER REVIEW COMMENTS
03/27/25	REV. PER PEER REVIEW COMMENTS
02/25/25	REV. PER PEER REVIEW COMMENTS
01/21/25	REV. PER INTERNAL REVIEW
12/30/24	REV. PER PEER REVIEW COMMENTS
10/04/24	REV. PER PEER REVIEW COMMENTS
DATE	DESCRIPTION

APPLICANT:
THE HOMES AT MURPHY'S FARM LLC
18 CASSIMERE STREET
ANDOVER, MA 01810

PROJECT:
MURPHY'S FARM
DRACUT, MA 01826

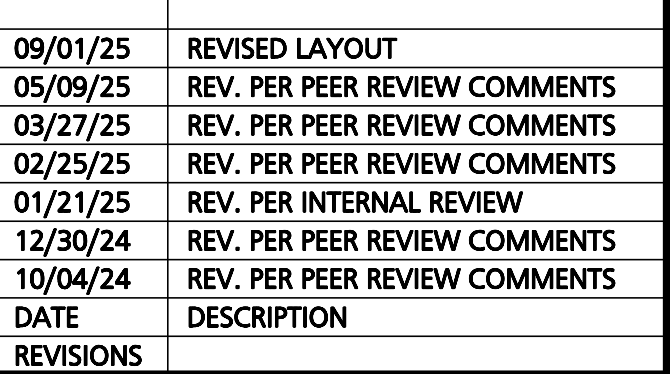
DATE ISSUED: **APRIL 22, 2024**
PROJECT #: **23-10524**
PREPARED BY: **TWS**


JAMES E. HANLEY
CIVIL
No. 47708
PROFESSIONAL ENGINEER
PROFESSIONAL ENGINEER FOR CIVIL DESIGN
CONSULTANTS, INC.


CIVIL DESIGN
CONSULTANTS, INC.
344 North Main Street | Andover, MA 01810
(978) 446-0900 | www.civilcd.com

DRAWING TITLE:
PLAN & PROFILE

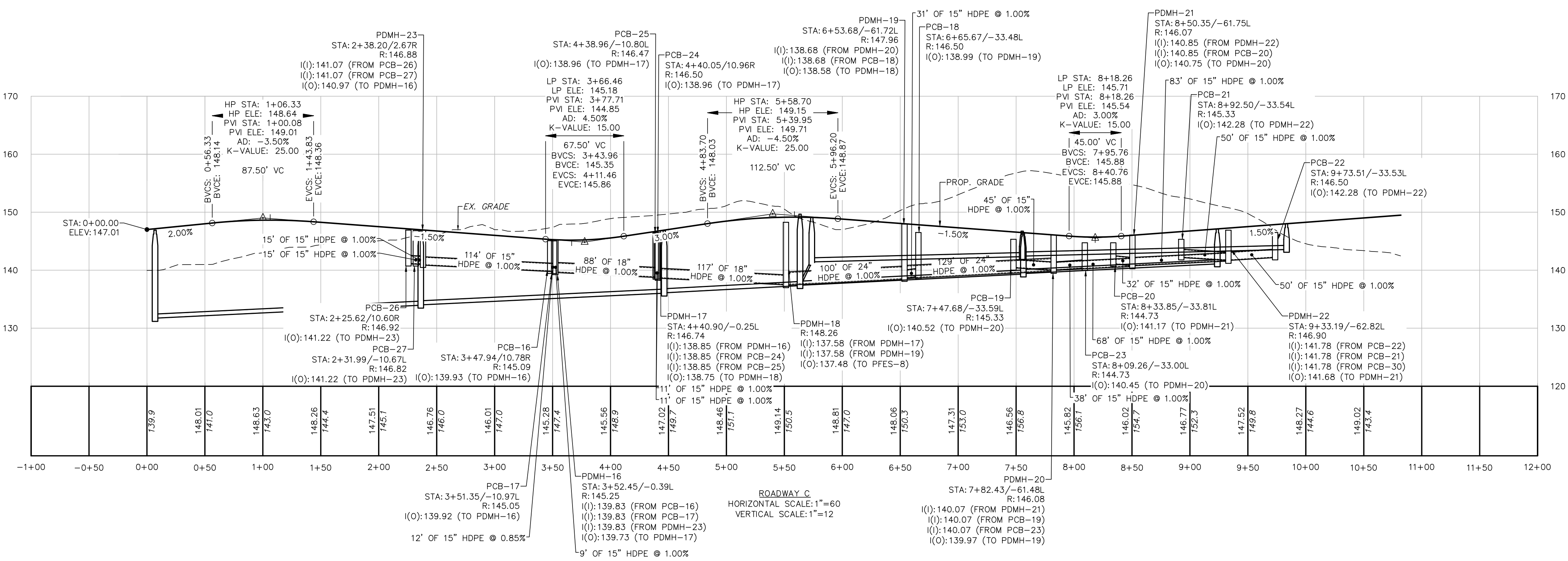
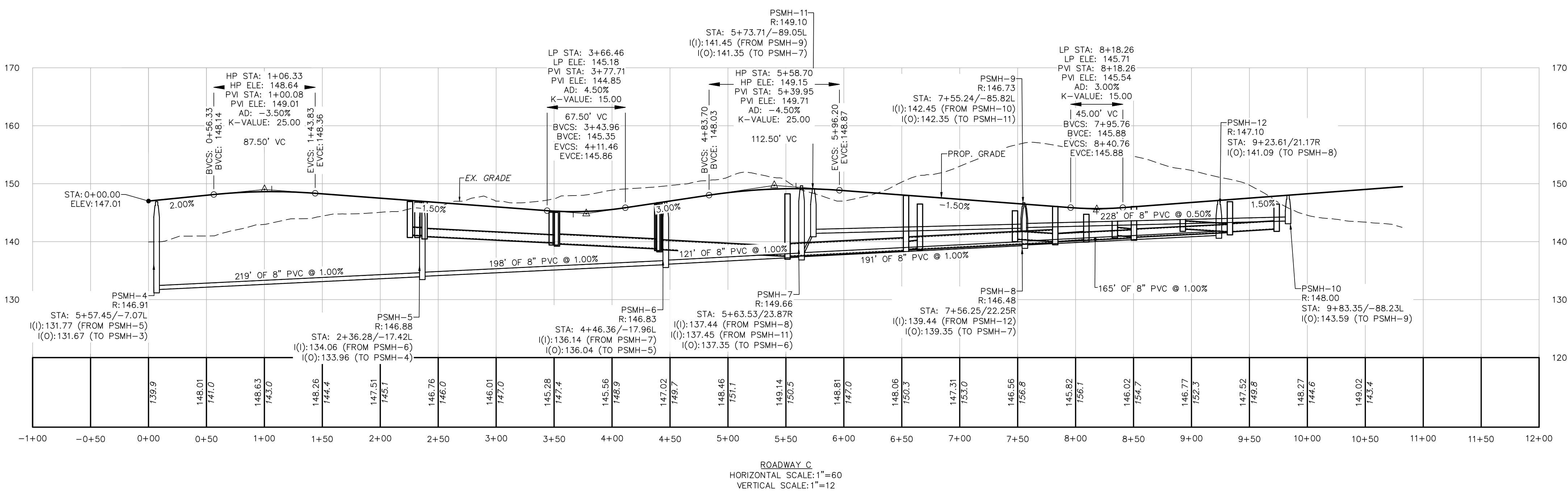
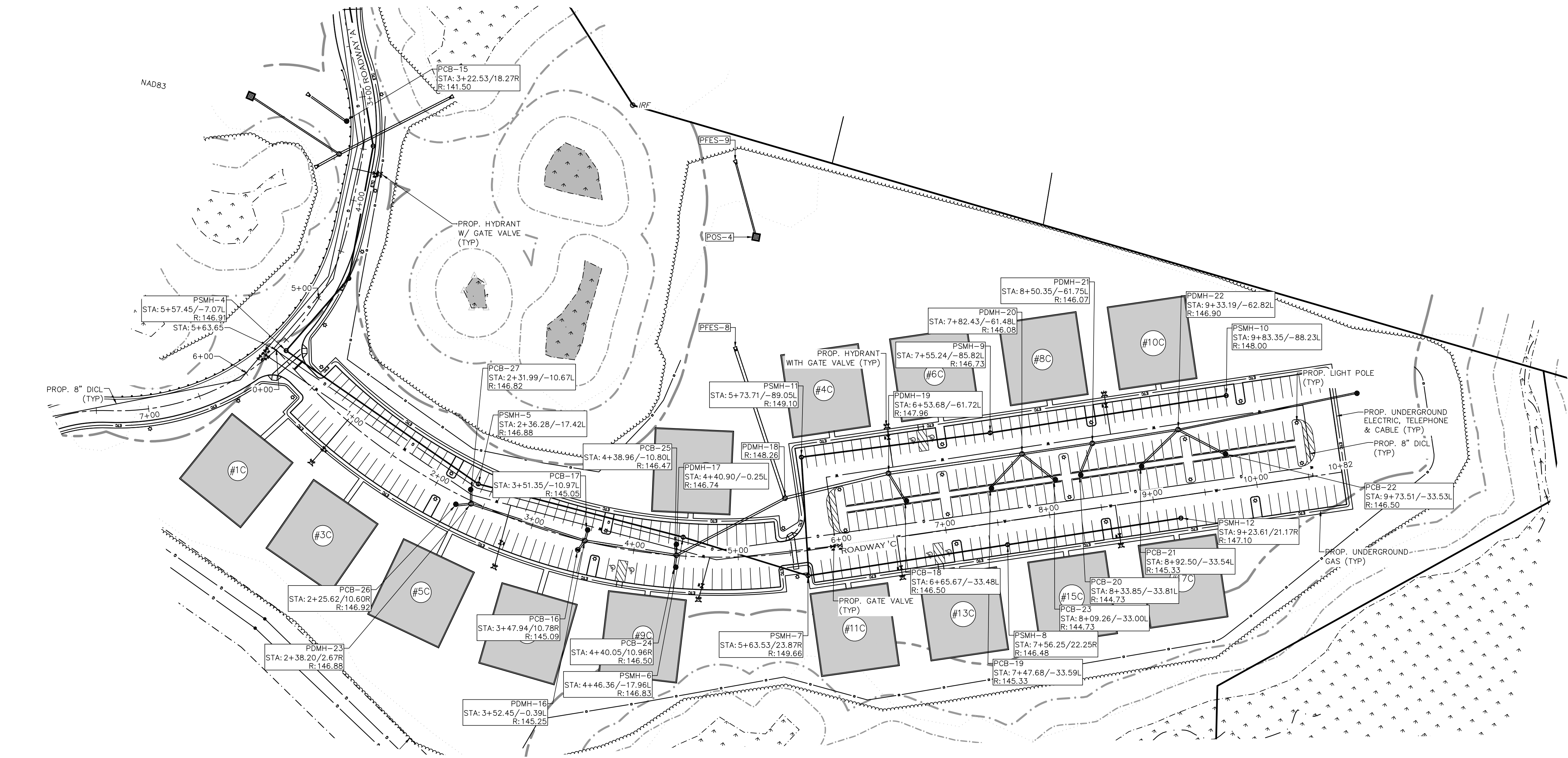
DRAWING #:
C-5A



**CIVIL
DESIGN**
CONSULTANTS, INC.

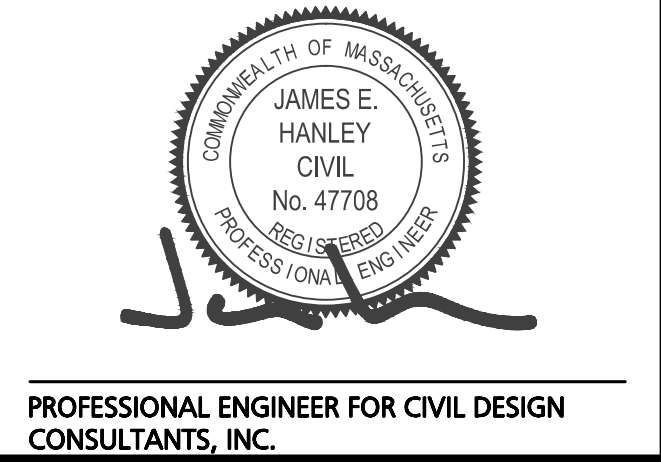
344 North Main Street | Andover - MA 01810
(978) 416-0920 | www.civildci.com

DRAWING #:



09/01/25	REVISED LAYOUT
05/09/25	REV. PER PEER REVIEW COMMENTS
03/27/25	REV. PER PEER REVIEW COMMENTS
02/25/25	REV. PER PEER REVIEW COMMENTS
01/21/25	REV. PER INTERNAL REVIEW
12/30/24	REV. PER PEER REVIEW COMMENTS
10/04/24	REV. PER PEER REVIEW COMMENTS
DATE	DESCRIPTION
APPLICANT:	
THE HOMES AT MURPHY'S FARM LLC 18 CASSIMERE STREET ANDOVER, MA 01810	
PROJECT:	
MURPHY'S FARM DRACUT, MA 01826	

DATE ISSUED:	APRIL 22, 2024
PROJECT #:	23-10524
PREPARED BY:	TWS



DRAWING TITLE:

PLAN & PROFILE

DRAWING #:

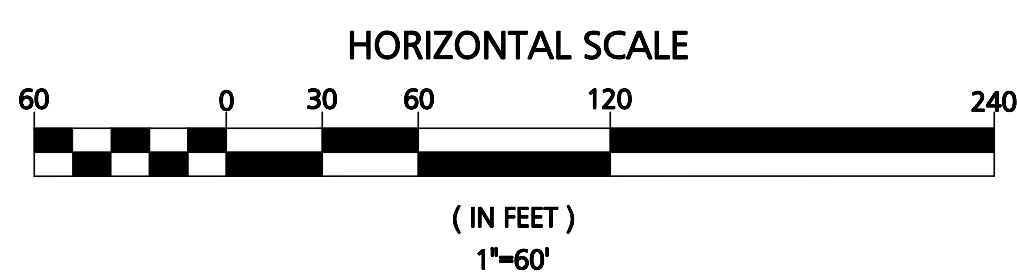
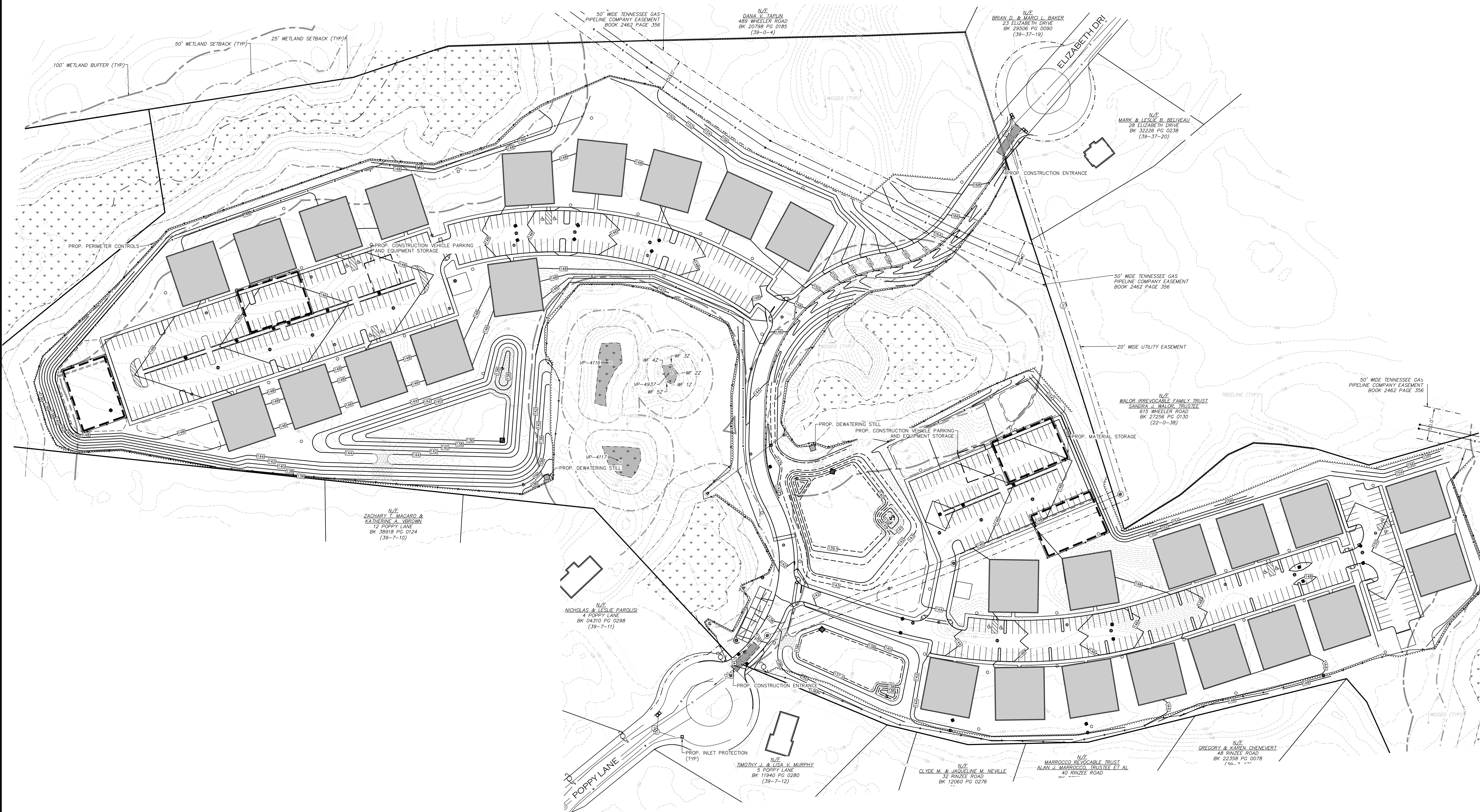
C-5C

NAD83



PROJECT NOTES:

1. SEE SHEET C-1 FOR FULL PROJECT NOTES
2. SEE EROSION CONTROL NOTES ON SHEET D-2.



DATE	DESCRIPTION
09/01/25	REVISED LAYOUT
05/09/25	REV. PER PEER REVIEW COMMENTS
03/27/25	REV. PER PEER REVIEW COMMENTS
02/25/25	REV. PER PEER REVIEW COMMENTS
01/21/25	REV. PER INTERNAL REVIEW
12/30/24	REV. PER PEER REVIEW COMMENTS
10/04/24	REV. PER PEER REVIEW COMMENTS

APPLICANT:
THE HOMES AT MURPHY'S FARM LLC
18 CASSIMERE STREET
ANDOVER, MA 01810

PROJECT:
MURPHY'S FARM
DRACUT, MA 01826

DATE ISSUED:	APRIL 22, 2024
PROJECT #:	23-10524
PREPARED BY:	TWS

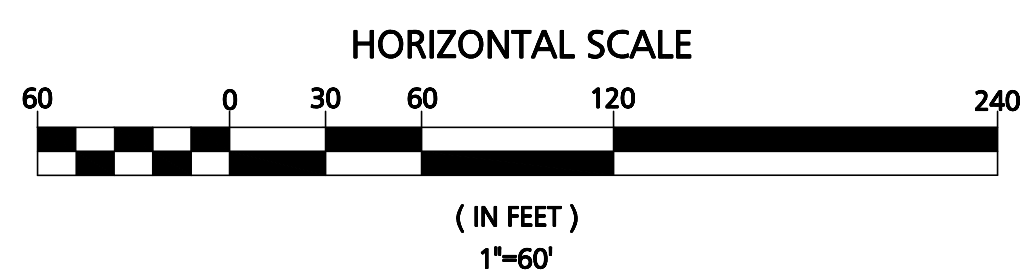
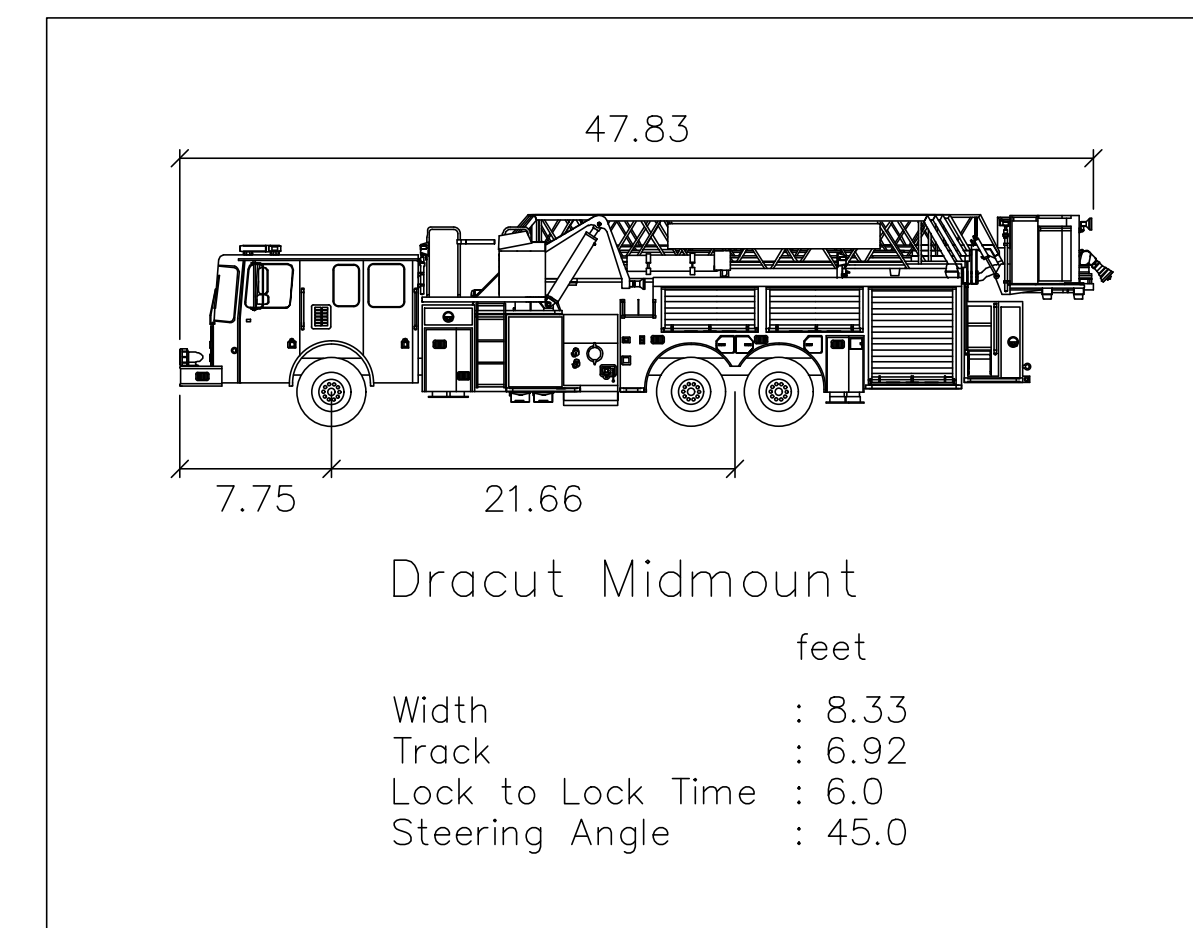


PROFESSIONAL ENGINEER FOR CIVIL DESIGN
CONSULTANTS, INC.



DRAWING TITLE:
EROSION CONTROL PLAN

DRAWING #:
C-6



N/E
NICHOLAS & LESLIE PAROLISI
4 POPPY LANE
BK 04310 PG 0298
(39-7-11)

N/E
TIMOTHY J. & LISA V. MURPHY
3 POPPY LANE
BK 11940 PG 0280
(39-7-12)

N/E
CLYDE M. & JARLENE M. NEVILLE
32 RINZEE ROAD
BK 12060 PG 0276
(39-7-12)

N/E
MARROCCO REVOCABLE TRUST
ALAN J. MARROCCO, TRUSTEE ET AL
40 RINZEE ROAD
BK 12060 PG 0276
(39-7-12)

N/E
GREGORY & KAREN CHENEVERT
48 RINZEE ROAD
BK 22358 PG 0078
(39-7-12)

N/E
WALOR IRREVOCABLE FAMILY TRUST
SANDRA J. WALOR, TRUSTEE
615 WHEELER ROAD
BK 27256 PG 0130
(22-0-36)

N/E
MARK & LESLIE B. BELVEAU
28 ELIZABETH DRIVE
BK 32226 PG 0238
(39-37-20)

N/E
BRIAN D. & MARCI L. BAKER
23 ELIZABETH DRIVE
BK 29506 PG 0090
(39-37-19)

N/E
DANA J. TAPLIN
489 WHEELER ROAD
BK 20798 PG 0165
(39-0-4)

50' WIDE TENNESSEE GAS
PIPELINE COMPANY EASEMENT
BOOK 2462 PAGE 356

50' WIDE TENNESSEE GAS
PIPELINE COMPANY EASEMENT
BOOK 2462 PAGE 356

20' WIDE UTILITY EASEMENT

50' WIDE TENNESSEE GAS
PIPELINE COMPANY EASEMENT
BOOK 2462 PAGE 356

09/01/25	REVISED LAYOUT
05/09/25	REV. PER PEER REVIEW COMMENTS
03/27/25	REV. PER PEER REVIEW COMMENTS
02/25/25	REV. PER PEER REVIEW COMMENTS
01/21/25	REV. PER INTERNAL REVIEW
12/30/24	REV. PER PEER REVIEW COMMENTS
10/04/24	REV. PER PEER REVIEW COMMENTS
DATE	DESCRIPTION
REVISIONS	

APPLICANT:

**THE HOMES AT
MURPHY'S FARM LLC**
18 CASSIMERE STREET
ANDOVER, MA 01820

PROJECT:

MURPHY'S FARM
DRACUT, MA 01826

DATE ISSUED: APRIL 22, 2024

PROJECT #: 23-10524

PREPARED BY: TWS



PROFESSIONAL ENGINEER FOR CIVIL DESIGN
CONSULTANTS, INC.

**CIVIL
DESIGN**
CONSULTANTS, INC.

344 North Main Street | Andover, MA 01820
(978) 468-0502 | www.cdci85.com

DRAWING TITLE:

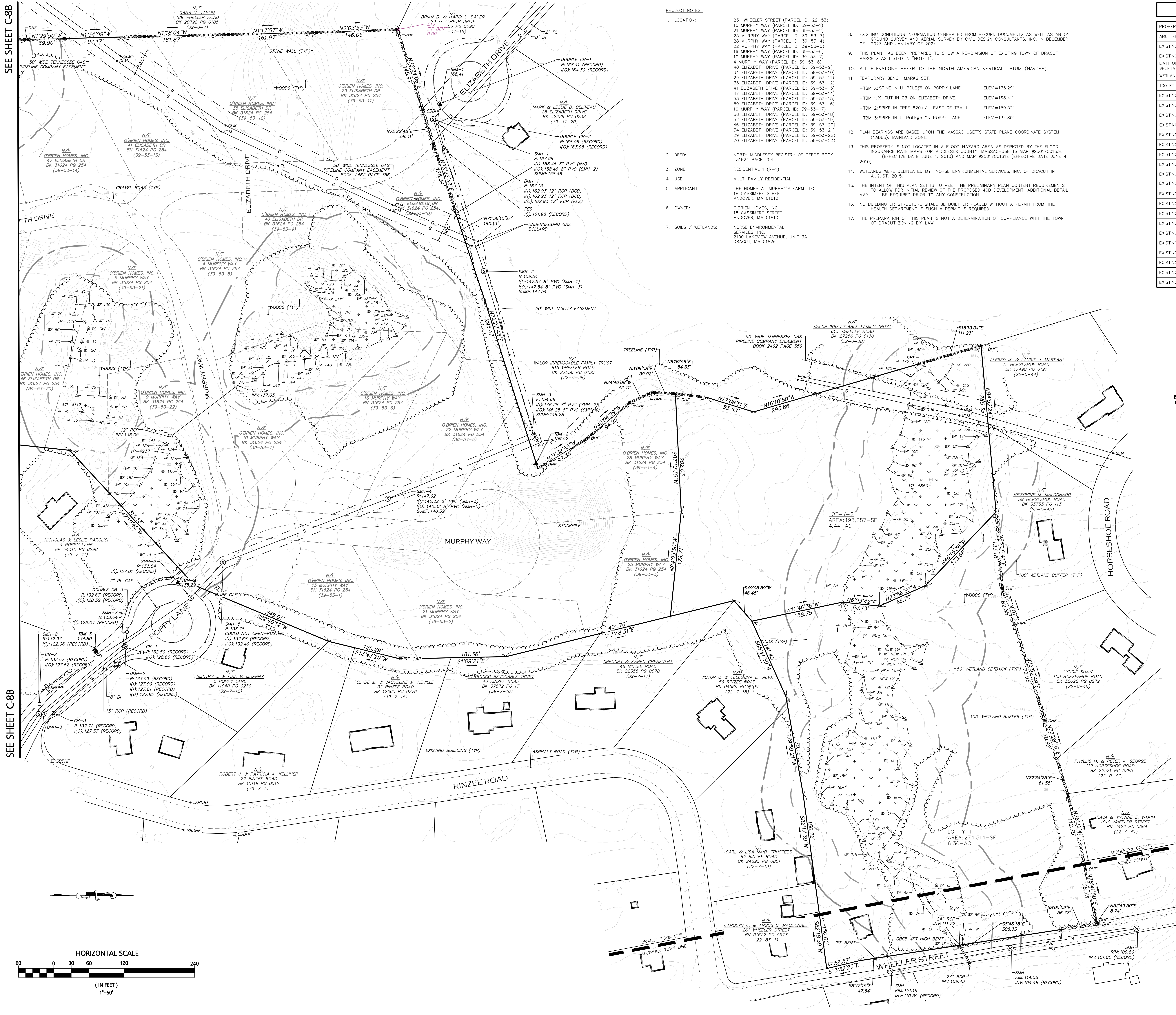
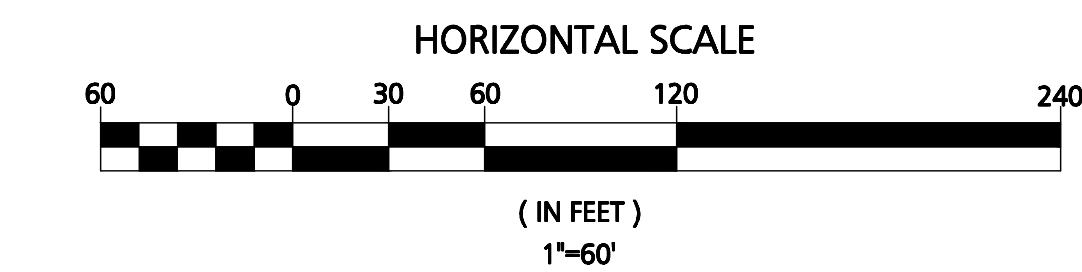
**FIRE TRUCK TURNING
PLAN**

DRAWING #:

C-7

SEE SHEET C-8B

SEE SHEET C-8B



PROJECT NOTES:

- LOCATION: 231 WHEELER STREET (PARCEL ID: 22-53)
15 MURPHY WAY (PARCEL ID: 39-53-1)
21 MURPHY WAY (PARCEL ID: 39-53-2)
25 MURPHY WAY (PARCEL ID: 39-53-3)
28 MURPHY WAY (PARCEL ID: 39-53-4)
22 MURPHY WAY (PARCEL ID: 39-53-5)
16 MURPHY WAY (PARCEL ID: 39-53-6)
10 MURPHY WAY (PARCEL ID: 39-53-7)
4 MURPHY WAY (PARCEL ID: 39-53-8)
40 ELIZABETH DRIVE (PARCEL ID: 39-53-9)
34 ELIZABETH DRIVE (PARCEL ID: 39-53-10)
29 ELIZABETH DRIVE (PARCEL ID: 39-53-11)
35 ELIZABETH DRIVE (PARCEL ID: 39-53-12)
41 ELIZABETH DRIVE (PARCEL ID: 39-53-13)
47 ELIZABETH DRIVE (PARCEL ID: 39-53-14)
53 ELIZABETH DRIVE (PARCEL ID: 39-53-15)
59 ELIZABETH DRIVE (PARCEL ID: 39-53-16)
16 MURPHY WAY (PARCEL ID: 39-53-17)
58 ELIZABETH DRIVE (PARCEL ID: 39-53-18)
52 ELIZABETH DRIVE (PARCEL ID: 39-53-19)
46 ELIZABETH DRIVE (PARCEL ID: 39-53-20)
34 ELIZABETH DRIVE (PARCEL ID: 39-53-21)
29 ELIZABETH DRIVE (PARCEL ID: 39-53-22)
70 ELIZABETH DRIVE (PARCEL ID: 39-53-23)
 - DEED: NORTH MIDDLESEX REGISTRY OF DEEDS BOOK 31624 PAGE 254
 - ZONE: RESIDENTIAL 1 (R-1)
 - USE: MULTI FAMILY RESIDENTIAL
 - APPLICANT: THE HOMES AT MURPHY'S FARM LLC
18 CASSIMERE STREET
ANDOVER, MA 01810
 - OWNER: O'BRIEN HOMES, INC.
18 CASSIMERE STREET
ANDOVER, MA 01810
 - SOILS / WETLANDS: NORSE ENVIRONMENTAL SERVICES, INC.
2100 LAKEVIEW AVENUE, UNIT 3A
DRACUT, MA 01826
- EXISTING CONDITIONS INFORMATION GENERATED FROM RECORD DOCUMENTS AS WELL AS AN ON GROUND SURVEY AND AERIAL SURVEY BY CIVIL DESIGN CONSULTANTS, INC. IN DECEMBER OF 2023 AND JANUARY OF 2024.
- THIS PLAN HAS BEEN PREPARED TO SHOW A RE-DIVISION OF EXISTING TOWN OF DRACUT PARCELS AS LISTED IN "NOTE 1".
- ALL ELEVATIONS REFER TO THE NORTH AMERICAN VERTICAL DATUM (NAVD83).
- TEMPORARY BENCH MARKS SET:
-TBM 1: SPIKE IN U-POLE#6 ON POPPY LANE. ELEV.=135.29'
-TBM 1: X-CUT IN CB ON ELIZABETH DRIVE. ELEV.=168.41'
-TBM 2: SPIKE IN TREE 620+/- EAST OF TBM 1. ELEV.=159.52'
-TBM 3: SPIKE IN U-POLE#5 ON POPPY LANE. ELEV.=134.80'
- PLAN BEARINGS ARE BASED UPON THE MASSACHUSETTS STATE PLANE COORDINATE SYSTEM (NAD83), MAINLAND ZONE.
- THIS PROPERTY IS NOT LOCATED IN A FLOOD HAZARD AREA AS DEPICTED BY THE FLOOD INSURANCE RATE MAPS FOR MIDDLESEX COUNTY, MASSACHUSETTS MAP #2501700153E (EFFECTIVE DATE JUNE 4, 2010) AND MAP #2501700161E (EFFECTIVE DATE JUNE 4, 2010).
- WETLANDS WERE DELINEATED BY NORSE ENVIRONMENTAL SERVICES, INC. OF DRACUT IN AUGUST, 2015.
- THE INTENT OF THIS PLAN SET IS TO MEET THE PRELIMINARY PLAN CONTENT REQUIREMENTS TO ALLOW FOR INITIAL REVIEW OF THE PROPOSED 408 DEVELOPMENT. ADDITIONAL DETAIL MAY BE REQUIRED PRIOR TO ANY CONSTRUCTION.
- NO BUILDING OR STRUCTURE SHALL BE BUILT OR PLACED WITHOUT A PERMIT FROM THE HEALTH DEPARTMENT IF SUCH A PERMIT IS REQUIRED.
- THE PREPARATION OF THIS PLAN IS NOT A DETERMINATION OF COMPLIANCE WITH THE TOWN OF DRACUT ZONING BY-LAW.

LEGEND

PROPERTY LINE	—————
ABUTTERS PROPERTY LINE	—————
EXISTING EDGE OF PAVEMENT	-----
EXISTING EDGE OF GRAVEL	-----
LIMIT OF BORDERING VEGETATED WETLAND (BWV)	-----
WETLAND	
100 FT BUFFER TO BWV	-----
EXISTING WETLAND FLAG	△
EXISTING VERNAL POOL	○
EXISTING CONTOUR	-----
EXISTING EASEMENT	-----
EXISTING TREE LINE	-----
EXISTING STONE WALL	-----
EXISTING UTILITY POLE	○
EXISTING DRAIN MANHOLE	⊙
EXISTING DRAIN	-----
EXISTING CATCHBASIN	⊕
EXISTING FLARED END SECTION	⊕
EXISTING SEWER MANHOLE	⊕
EXISTING WATER	-----
EXISTING SEWER	-----
EXISTING HYDRANT	⊕
EXISTING GAS	-----
EXISTING GAS BOLLARD	○
EXISTING IRON PIN	○
EXISTING BOUND	□
EXISTING BENCHMARK	▲

APPROVAL NOT REQUIRED UNDER THE SUBDIVISION CONTROL LAW, DRACUT ZONING BOARD OF APPEALS ACTING ON BEHALF OF THE DRACUT PLANNING BOARD PURSUANT TO ITS AUTHORITY UNDER THE COMPREHENSIVE PERMIT STATUTE

DATE OF ENDORSEMENT

2/25/25
DATE
REV. PER GAS EASEMENT CHANGE
DESCRIPTION

REVISIONS

OWNER / APPLICANT:

THE HOMES AT MURPHY'S FARM LLC
18 CASSIMERE STREET
ANDOVER, MA 01810

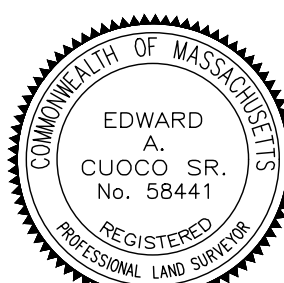
PROJECT:

MURPHY'S FARM
DRACUT, MA 01826

DATE ISSUED: MARCH 28, 2025

PROJECT #: 23-10524

PREPARED BY: EAC



PROFESSIONAL LAND SURVEYOR FOR CIVIL DESIGN CONSULTANTS, INC.

CIVIL DESIGN
CONSULTANTS, INC.

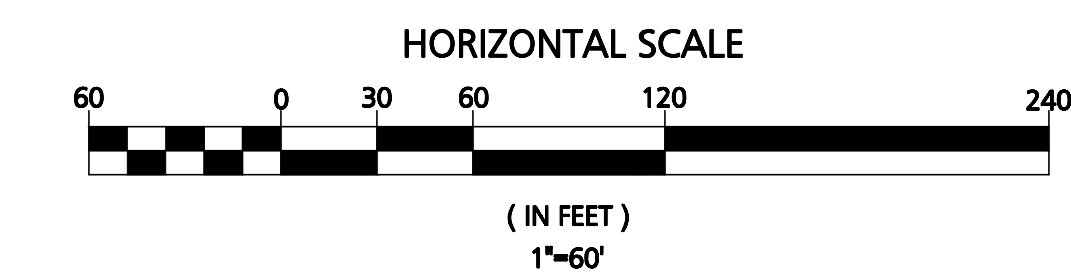
344 North Main Street | Andover, MA 01810
(978) 486-0000 | www.civildesign.com

DRAWING TITLE:

PLAN OF LAND

DRAWING #:

C-8A

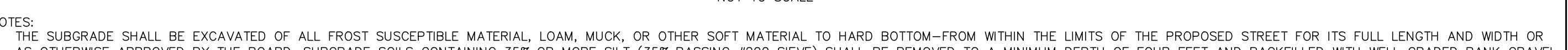
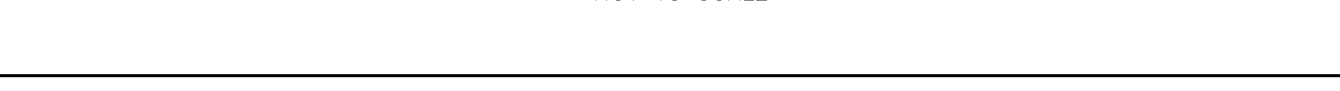


C-8B

1. THE CONTRACTOR SHALL VERIFY THE PROPOSED LAYOUT WITH ITS RELATIONSHIP TO THE EXISTING SITE SURVEY. THE CONTRACTOR SHALL ALSO VERIFY ALL DIMENSIONS, SITE CONDITIONS, AND MATERIAL SPECIFICATIONS AND SHALL BE RESPONSIBLE FOR THE CORRECTION OF ANY ERRORS, OMISSIONS OR DISCREPANCIES BEFORE COMMENCING OR PROCEEDING WITH CONSTRUCTION.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS, INSPECTIONS, BONDS, ETC. AND OTHER APPROVAL RELATED ITEMS. NO CONSTRUCTION SHALL COMMENCE UNTIL SUCH PERMITS HAVE BEEN SECURED.
3. METHODS AND MATERIALS USED IN THE CONSTRUCTION OF IMPROVEMENTS FOR THIS PROJECT SHALL CONFORM TO THE CURRENT CONSTRUCTION STANDARDS AND SPECIFICATIONS OF THE MASSDOT AND THE LOCAL SUBDIVISION REGULATIONS.
4. CONTRACTOR TO CONFIRM AND VERIFY THE VALIDITY, LOCATION, MATERIAL, AND AVAILABILITY STATUS EXISTING UTILITIES OR NEAR THE PROJECT SITE PROPERTY. CONTRACTOR TO LOCATE EXISTING UTILITIES AND CONFIRM SAID UTILITIES WITH ALL APPLICABLE MUNICIPALITIES AND UTILITY COMPANIES PRIOR TO ANY CONSTRUCTION. ONCE CONTRACTOR HAS BEEN CONFIRMED BY ALL APPLICABLE MUNICIPALITIES AND UTILITY COMPANIES, CONTRACTOR SHALL OBTAIN APPROVAL BY APPLICABLE MUNICIPALITY AND UTILITY COMPANY AND CONNECTION HAS BEEN APPROVED BY ENTITY, ONLY THEN SHALL THE CONTRACTOR BE ALLOWED TO PROCEED WITH THESE UTILITIES. CONTRACTOR TO IMMEDIATELY INFORM THE ENGINEER OF RECORD OF ANY DEVIATIONS TO PLANS.
5. THE CONTRACTOR SHALL MAKE EXPLORATORY EXCAVATIONS AND LOCATE ANY EXISTING UTILITIES SUFFICIENTLY AHEAD OF CONSTRUCTION TO PERMIT REVISIONS TO PLANS IF NECESSARY. THE EXISTENCE AND/OR LOCATION OF UTILITIES NOT SHOWN ON PLANS MAY BE ONLY APPROXIMATELY CORRECT AND THE CONTRACTOR IS REQUIRED TO TAKE PRECAUTIONARY MEASURES TO PROTECT THE UTILITIES SHOWN HEREON AND ANY OTHER EXISTING UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OF ANY UTILITIES DAMAGED DURING THE CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ANY EXPENSE OF EXISTING UTILITIES DAMAGED DURING THE CONSTRUCTION.
6. THE CONTRACTOR SHALL NOTIFY OPERATORS WHO MAINTAIN UNDERGROUND UTILITY LINES IN THE AREA OF PROPOSED EXCAVATION AT LEAST THREE WORKING DAYS, BUT NOT MORE THAN TEN WORKING DAYS, PRIOR TO THE START OF CONSTRUCTION OF EXCAVATION. ALL WATER, GAS, SEWER AND OTHER UTILITIES SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION.
7. RELOCATION OF ANY UTILITIES SHALL BE AT THE OWNERS EXPENSE AND COMPLETED WITH THE UTILITY WORK. THE OWNER SHALL BE NOTIFIED AS TO THE RELOCATIONS REQUIRED PRIOR TO THE START OF CONSTRUCTION.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING, WITH MATCHING MATERIALS, ANY PAVEMENT, WALKS, CURBS, ETC. THAT MUST BE OR THAT ARE DAMAGED DURING CONSTRUCTION.
9. AN APPROVED SET OF PLANS AND ALL APPLICABLE PERMITS MUST BE AVAILABLE AT THE CONSTRUCTION SITE.
10. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THESE DOCUMENTS AND SUBSEQUENT ISSUED PLAN REVISIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS PRIOR TO THE COMMENCEMENT OF CONSTRUCTING ANY CHANGE. THE CONTRACTOR WILL BE WORKING AT HIS OR HER OWN RISK.
11. ALL WATER AND SEWER CONNECTIONS SHALL BE PERFORMED IN ACCORDANCE WITH THE TOWN OF GRACUT RULES AND REGULATIONS

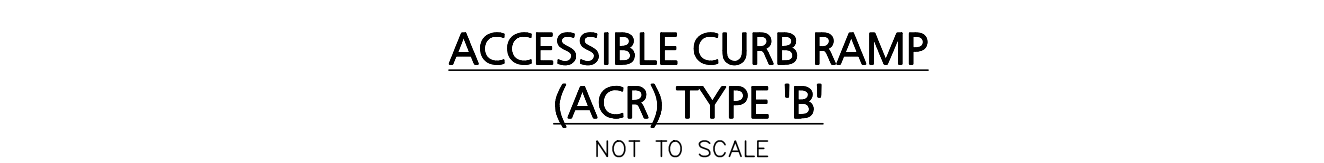
DESCRIBED BELOW ARE THE MAJOR CONSTRUCTION ACTIVITIES. THEY ARE PRESENTED IN THE ORDER (OR SEQUENCE) THEY ARE EXPECTED TO BEGIN, BUT EACH ACTIVITY WILL NOT NECESSARILY BE COMPLETED BEFORE THE NEXT BEGINS. ALSO, THESE ACTIVITIES COULD OCCUR IN A DIFFERENT ORDER IF NECESSARY TO MAINTAIN ADEQUATE EROSION AND SEDIMENTATION CONTROL. ALL ACTIVITIES AND THE TIMEFRAME (BEGINNING AND ENDING DATES) SHALL BE RECORDED BY THE GENERAL CONTRACTOR:

1. CONTRACTOR TO REVIEW ALL LOCAL, STATE AND FEDERAL PERMITS.
2. REVIEW AND CERTIFY THE STORMWATER POLLUTION PREVENTION PLAN.
3. DELINEATE THE LIMIT OF THE TREE CLEARING OPERATIONS.
4. INSTALL STABILIZED CONSTRUCTION ENTRANCE.
5. CUT AND CLEAR TREES WITHIN THE AREA OF DISTURBANCE.
6. PLACE REMAINING EROSION CONTROL MEASURES PRIOR TO ANY EARTH MOVING OPERATIONS.
7. CONSTRUCT BASINS: LIMIT EXCAVATION TO WITHIN 1-FT OF BASIN BOTTOM TO PREVENT SEDIMENT ACCUMULATION IN FINISHED BASIN BOTTOM. NO MATERIAL OR VEHICLE STORAGE SHOULD OCCUR OVER PROPOSED BASIN LOCATIONS, WHERE APPROPRIATE AND/OR AS-NEEDED, ADDITIONAL SITUATION SENSITIVE, SEDIMENT TRAPS, OR STONE CHECKDAMS SHOULD BE CONSTRUCTED.
8. BEGIN ROUGH GRADING AND EARTHWORK OPERATIONS.
9. CONSTRUCT REMAINING DRAINAGE IMPROVEMENTS. ALL SLOPES SHALL BE STABILIZED IMMEDIATELY AFTER GRADING. ALL DISTURBED AREAS SHALL BE STABILIZED NO LATER THAN 72-HOURS AFTER CONSTRUCTION COMPLETION. IF EARTHWORK TEMPORARILY INTERRUPTS ON A PORTION OF OR ON THE ENTIRE SITE, AND WILL NOT RESUME WITHIN 2-1/2 DAYS, THE AREA SHALL BE STABILIZED. AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED:
 - A. BACKFILL GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED;
 - B. A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED;
 - C. A MINIMUM OF 3" OF FERTILE TOPSOIL MATERIAL (SUCH AS STONE OR RIP-RAP HAS BEEN INSTALLED; OR
 - D. EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.
10. AFTER CONTRIBUTING AREAS HAVE BEEN STABILIZED BUT PRIOR TO BASINS RECEIVING RUNOFF, BASINS ARE TO BE BROUGHT TO FINAL GRADE. CONSTRUCTION VEHICLES SHOULD AVOID TRAVERSING THE BASIN BOTTOM TO PREVENT UNWANTED COMPACTION.
11. INSTALL ALL UNDERGROUND UTILITIES.
12. CONSTRUCT ROADWAYS ACCORDING TO THE PLAN. ALL SLOPES SHALL BE STABILIZED IMMEDIATELY AFTER GRADING.
13. CONSTRUCT RESIDENCES AND ASSOCIATED INFRASTRUCTURE.
14. SURFACE TREATMENT OF ALL DISTURBED AREAS NOT PAVED OR OTHERWISE LANDSCAPED SHALL BE TREATED WITH 4" OF LOAM AND SEED.
15. INSPECT AND MAINTAIN ALL EROSION AND SEDIMENTATION CONTROL MEASURES CONSISTENT WITH THE PROCEDURE AND SCHEDULE OUTLINED IN THE STORMWATER POLLUTION PREVENTION PLAN.
16. COMPLETE PERMANENT SEEDING AND LANDSCAPING.
17. REMOVE TEMPORARY EROSION CONTROL MEASURES ONCE ALL AREAS ARE STABILIZED WITH A SUITABLE STAND OF GRASS, PAVEMENT OR COMPACTED GRAVELS.



- AS URBANWASH APPROVED (1" H. BEARD). CURBING: SLOTS CONTAINING 35% OR MORE SILT (35% PASSING #200 SIEVE) SHALL BE REMOVED TO A MINIMUM DEPTH OF FOUR FEET AND BACKFILLED WITH WELL GRADED BANK DRAINAGE GRAVEL.
SEE PROJECT PLANS FOR ROADWAY CURBING APPLICATIONS.
- INDIVIDUAL VGC SEGMENTS SHALL BE 6' IN LENGTH EXCEPT ALONG THE PINEDALE AVENUE CURB RETURN WHERE THE SEGMENTS SHALL BE 4'-6" IN LENGTH. GRANITE TRANSITION STONES SHALL BE PROVIDED AT ALL LOCATIONS WHERE CURBING TRANSITIONS FROM VGC TO BIT, CONC. CAPE COD BERM.

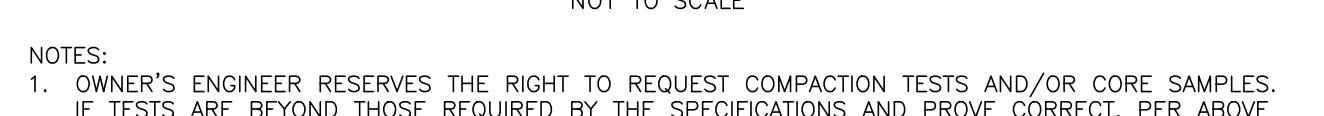
NOT TO SCALE



SOD OR GRASS SEED

-
- 4" TO 6" OF COMPACTED SCREENED TOPSOIL (NO STONES LARGER THAN 1 1/4")
- COMPACTED SUBGRADE
- NOTES:
1. TOP OF LOAM (TOPSOIL) IS FINISHED GRADE.
 2. TOPSOIL SHALL CONTAIN BETWEEN 5% AND 12% ORGANIC MATTER AND SHALL HAVE A MAXIMUM STONE SIZE OF 1 1/4" AND SHALL CONFORM TO THE FOLLOWING:
- | SIEVE | % PASSING |
|------------|-----------|
| 1 1/4 INCH | 100 |
| No. 4 | 85-100 |
| No. 10 | 60-85 |
| No. 20 | 50-70 |

NOT TO SCALE



GEOTECHNICAL INVESTIGATIONS.

- TYPICAL SURFACE TREATMENT CROSS SECTIONS**
NOT TO SCALE



09/01/25	REVISED LAYOUT
05/09/25	REV. PER PEER REVIEW COMMENTS
03/27/25	REV. PER PEER REVIEW COMMENTS
02/25/25	REV. PER PEER REVIEW COMMENTS
01/21/25	REV. PER INTERNAL REVIEW
12/30/24	REV. PER PEER REVIEW COMMENTS
10/04/24	REV. PER PEER REVIEW COMMENTS
DATE	DESCRIPTION
REVISIONS	

APPLICANT:

THE HOMES AT
MURPHY'S FARM LLC
18 CASSIMERE STREET
ANDOVER, MA 01810

Figure 1. The effect of the number of trials on the mean accuracy of the responses. The error bars represent the standard error of the mean.

PROJECT:

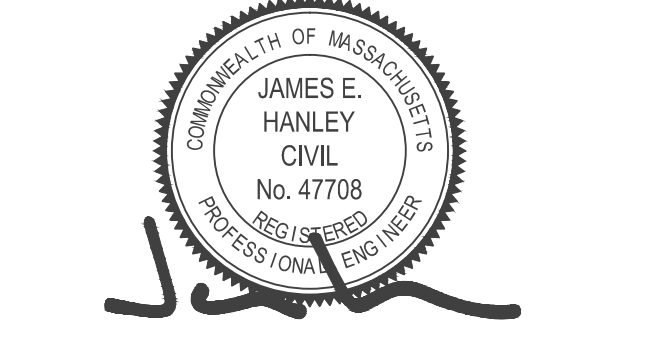
MURPHY'S FARM

DRACUT, MA 01826

DATE ISSUED:	APRIL 22, 2024
--------------	----------------

PROJECT #:	23-10524
PREPARED BY:	TWS

1987-1988	1989



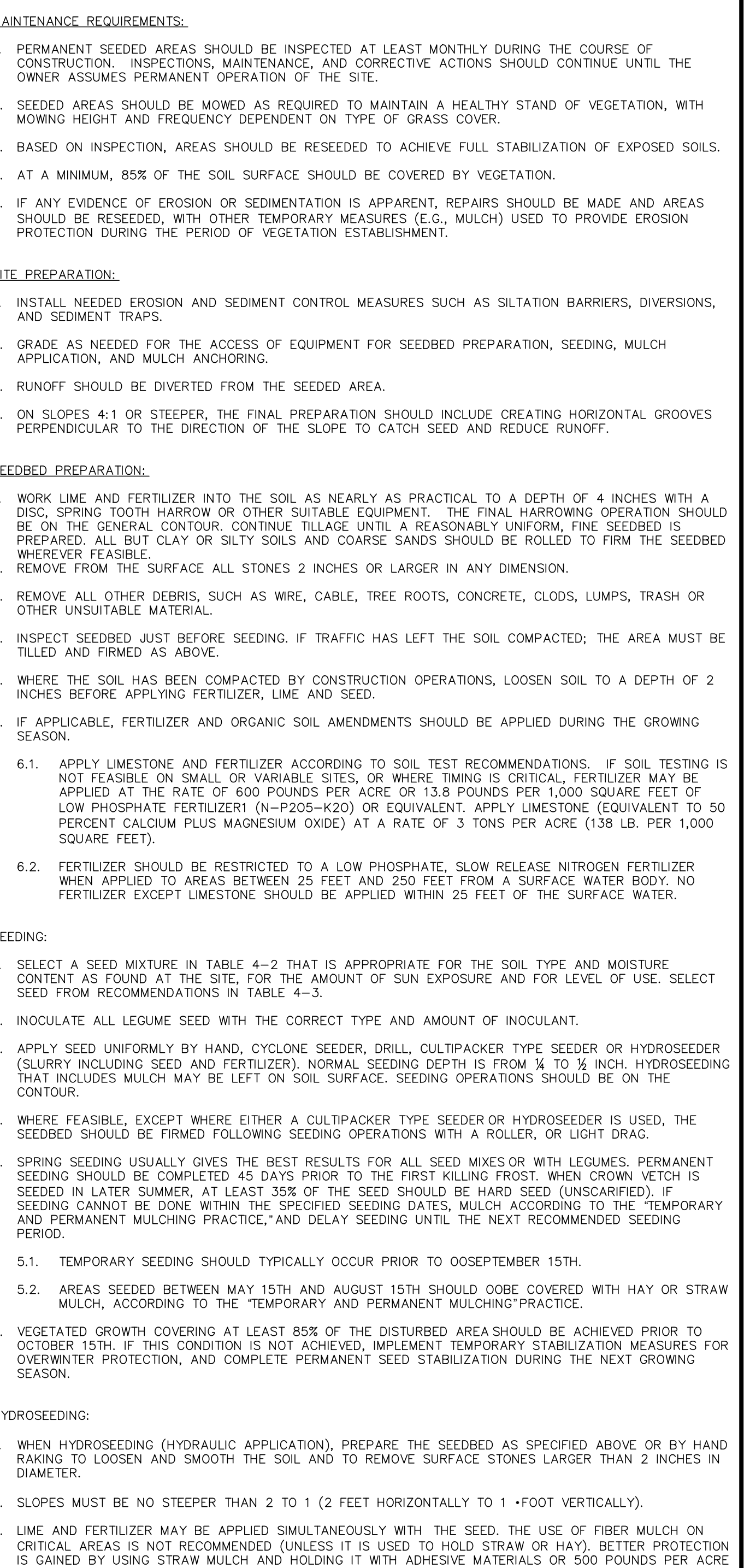
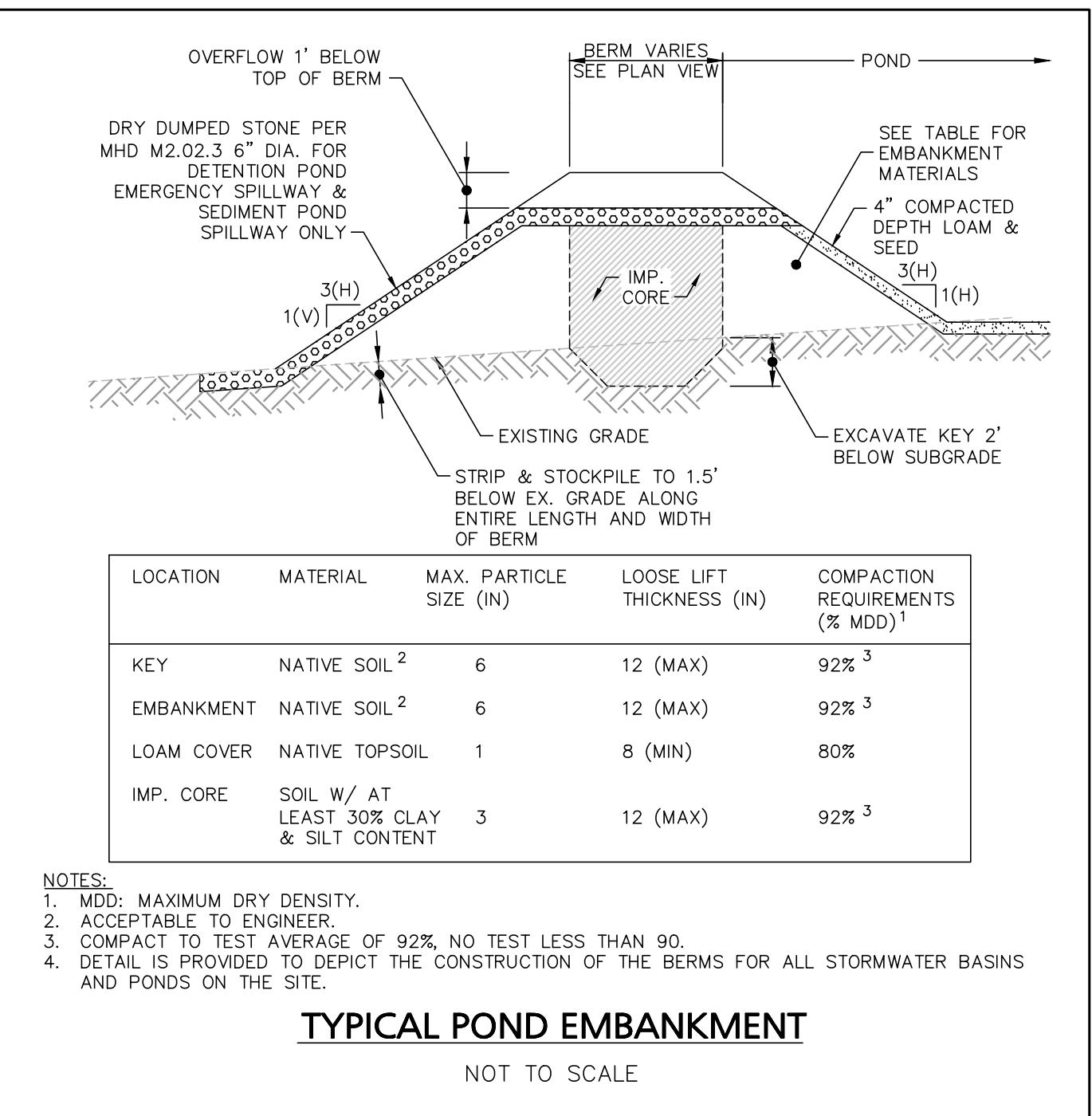
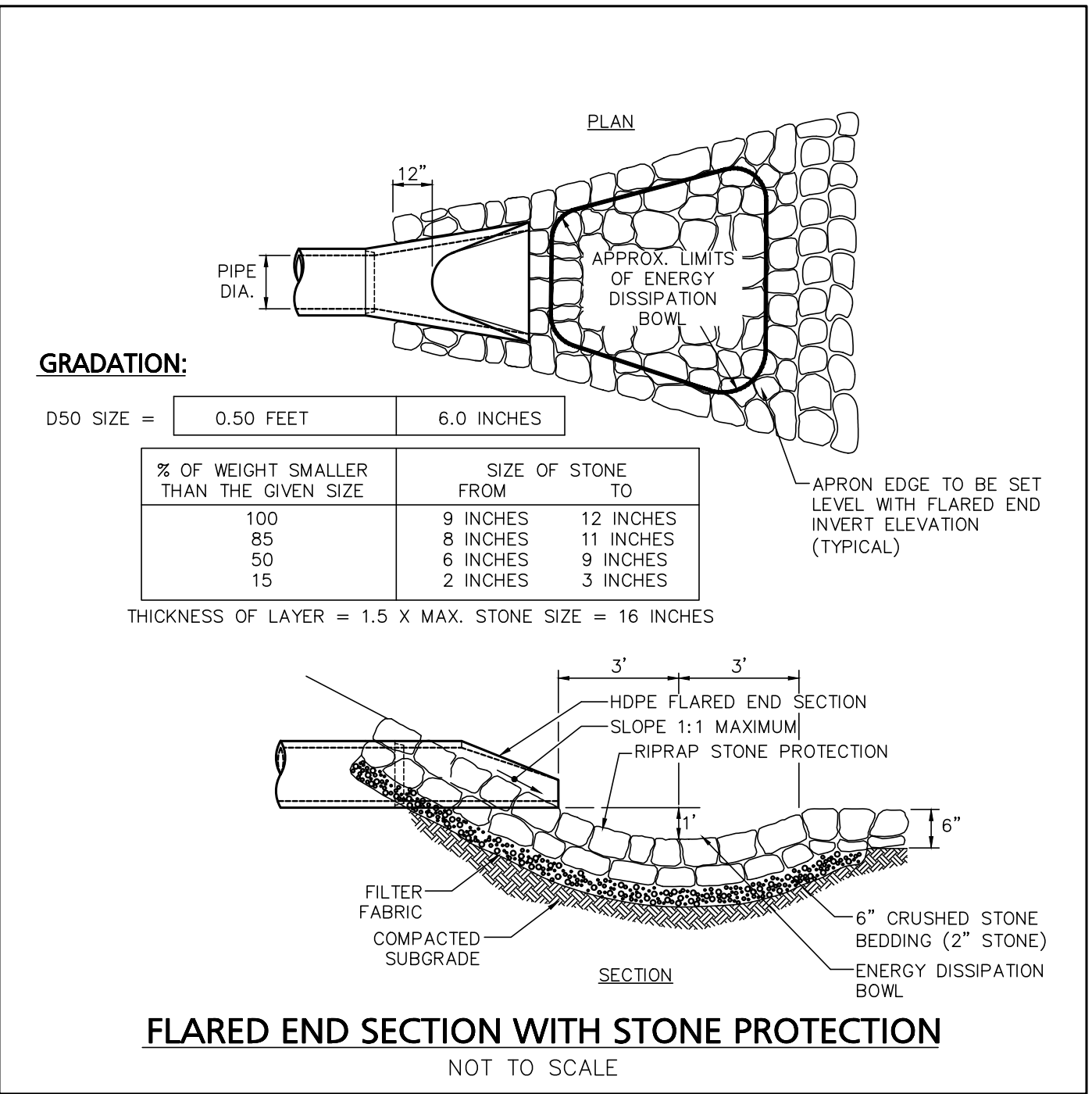
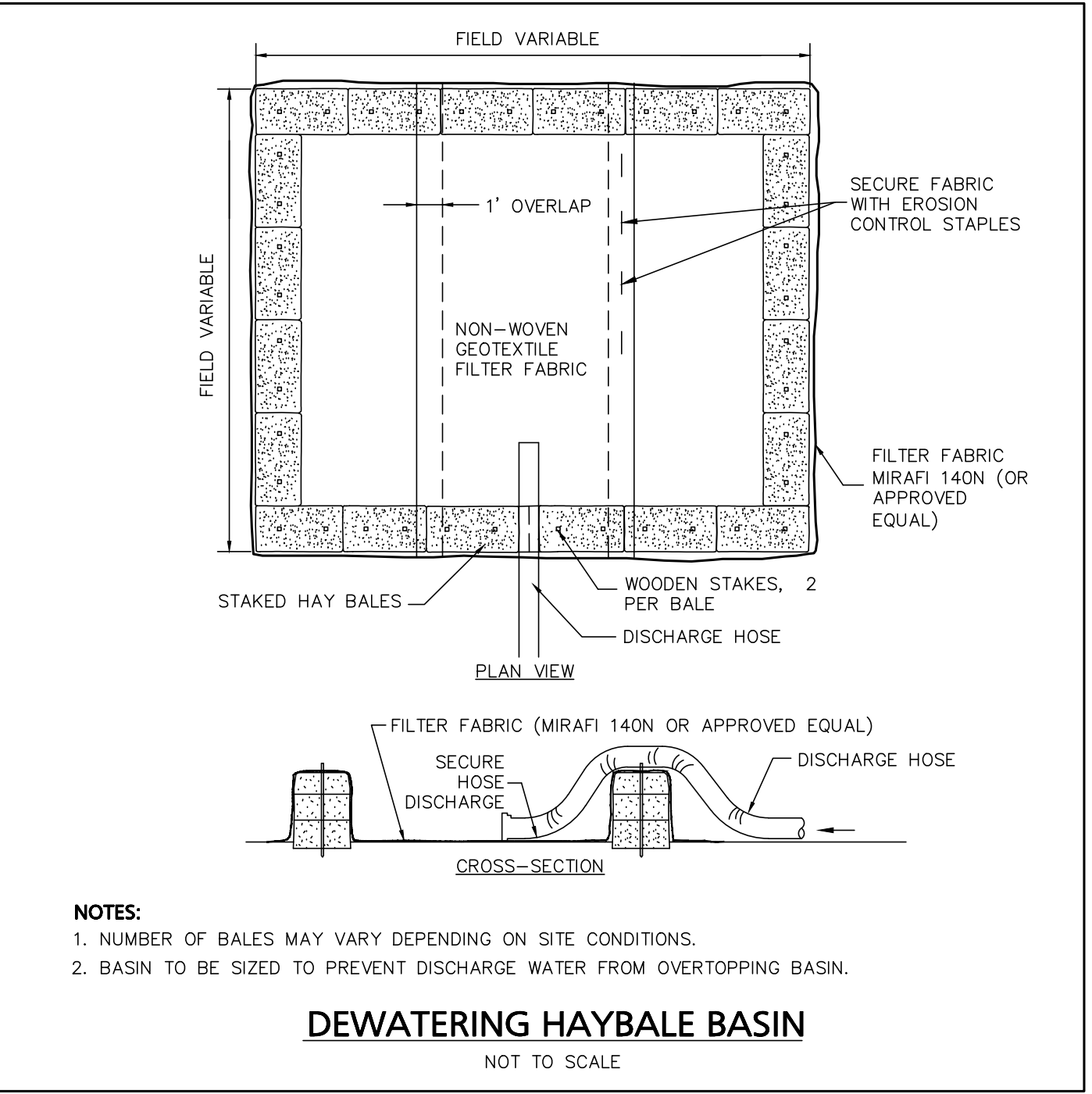
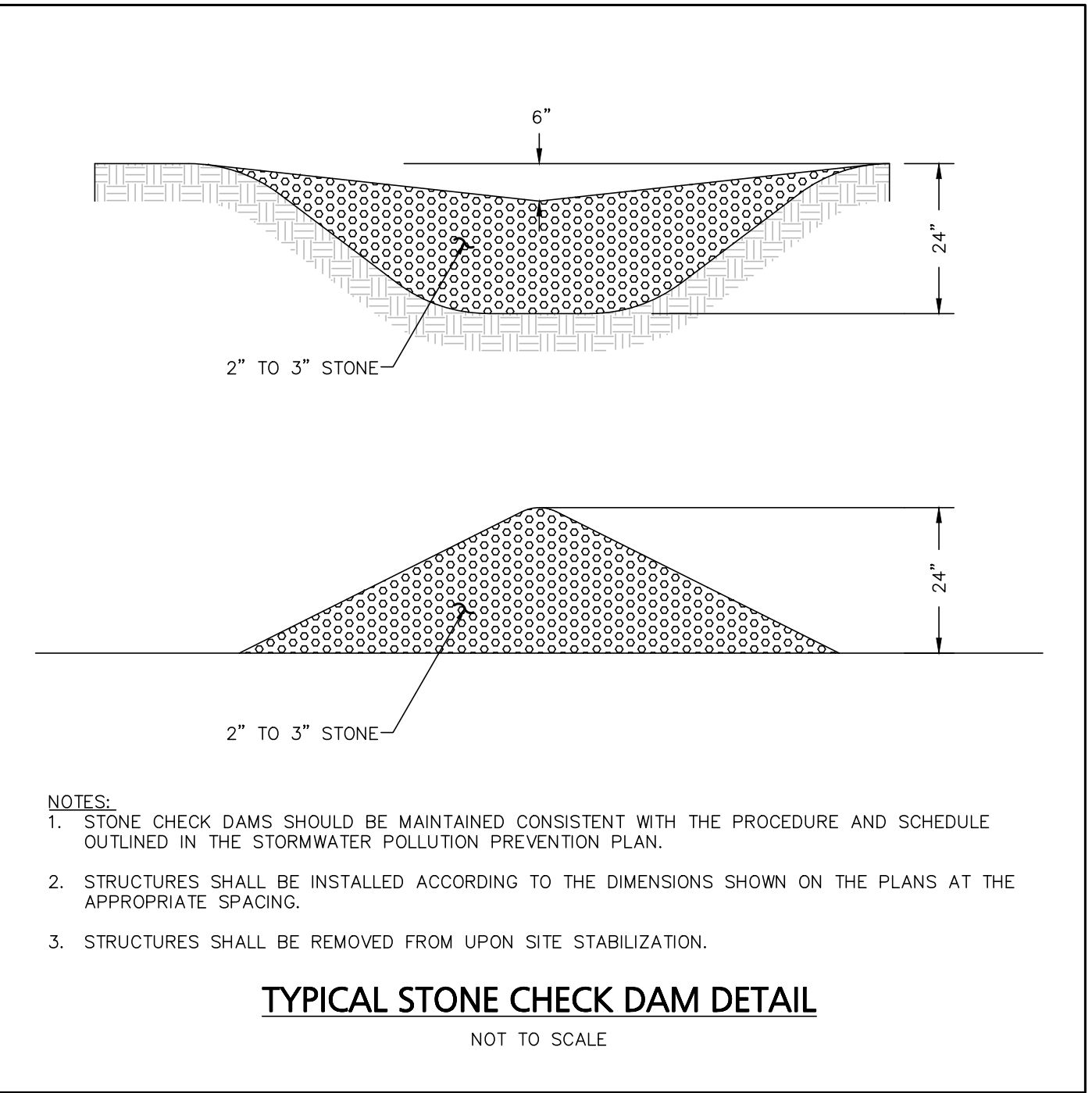
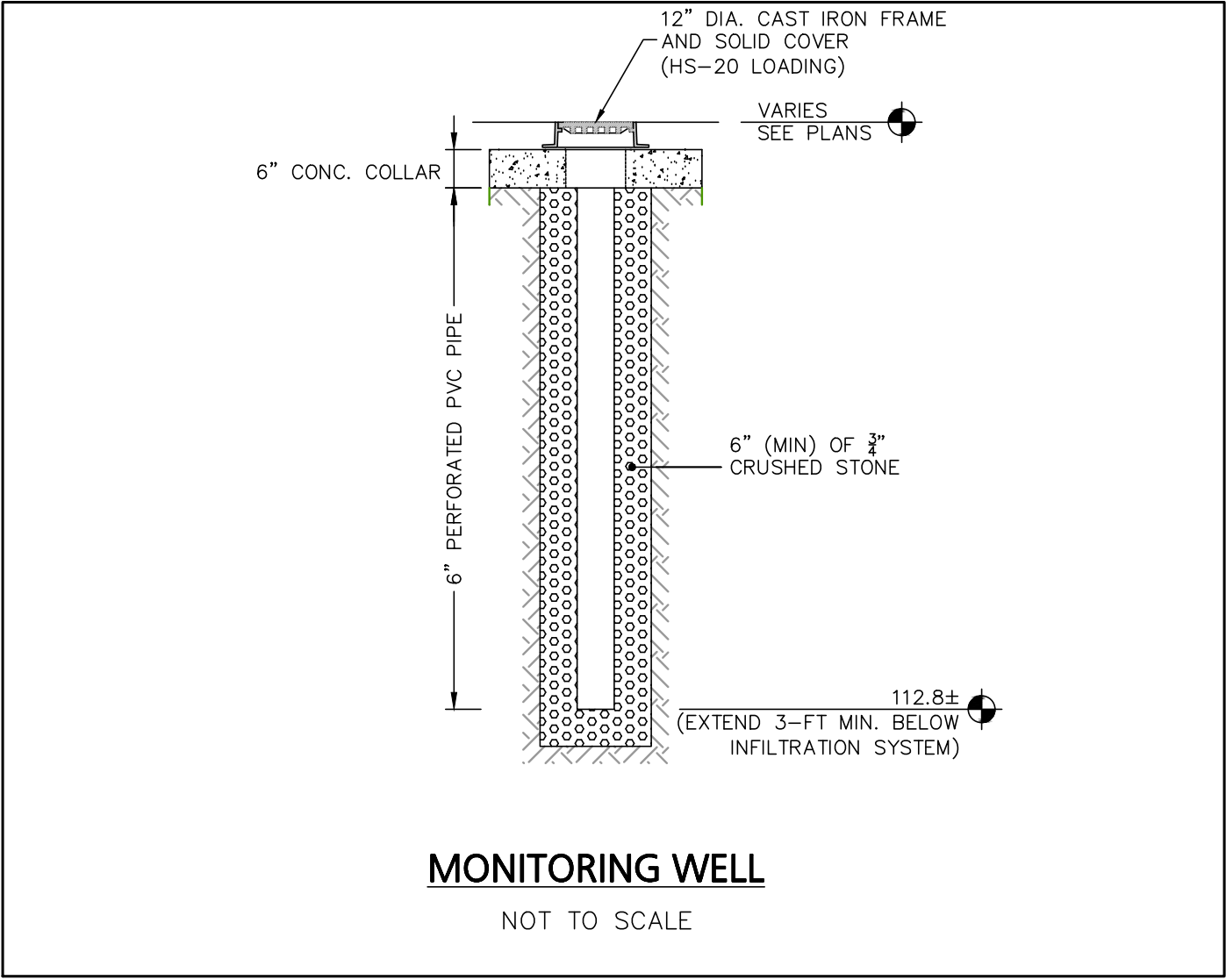
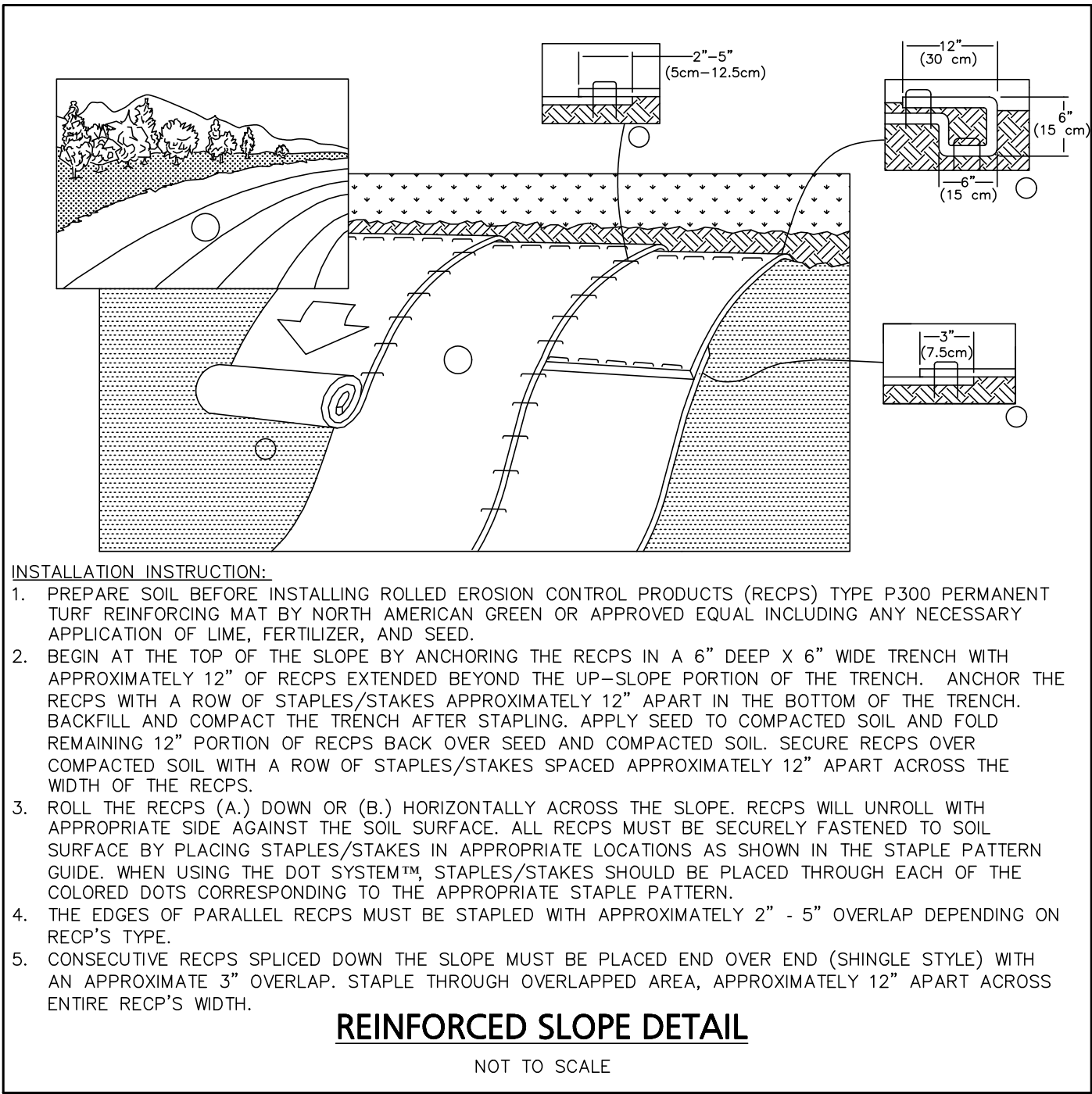
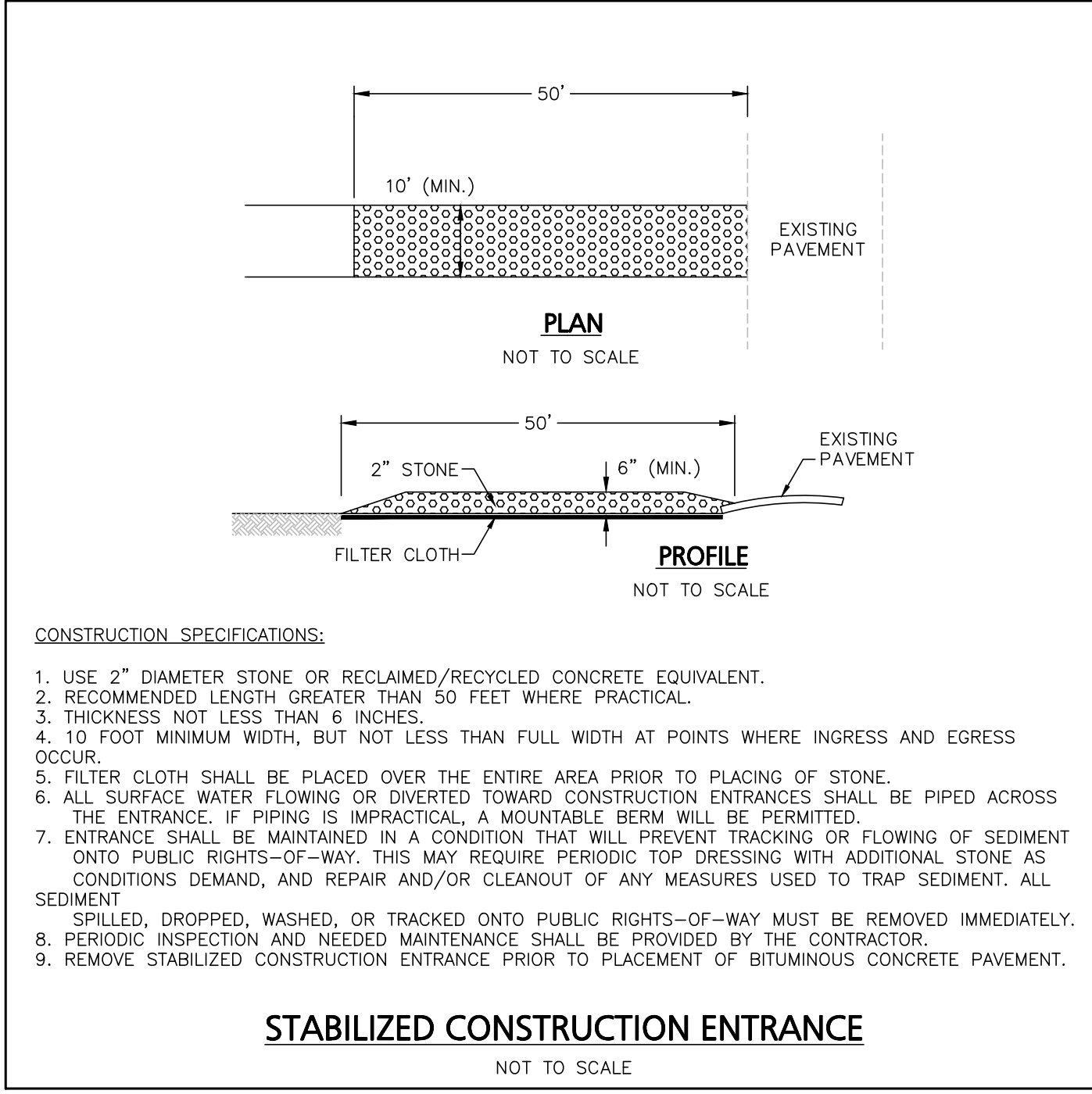
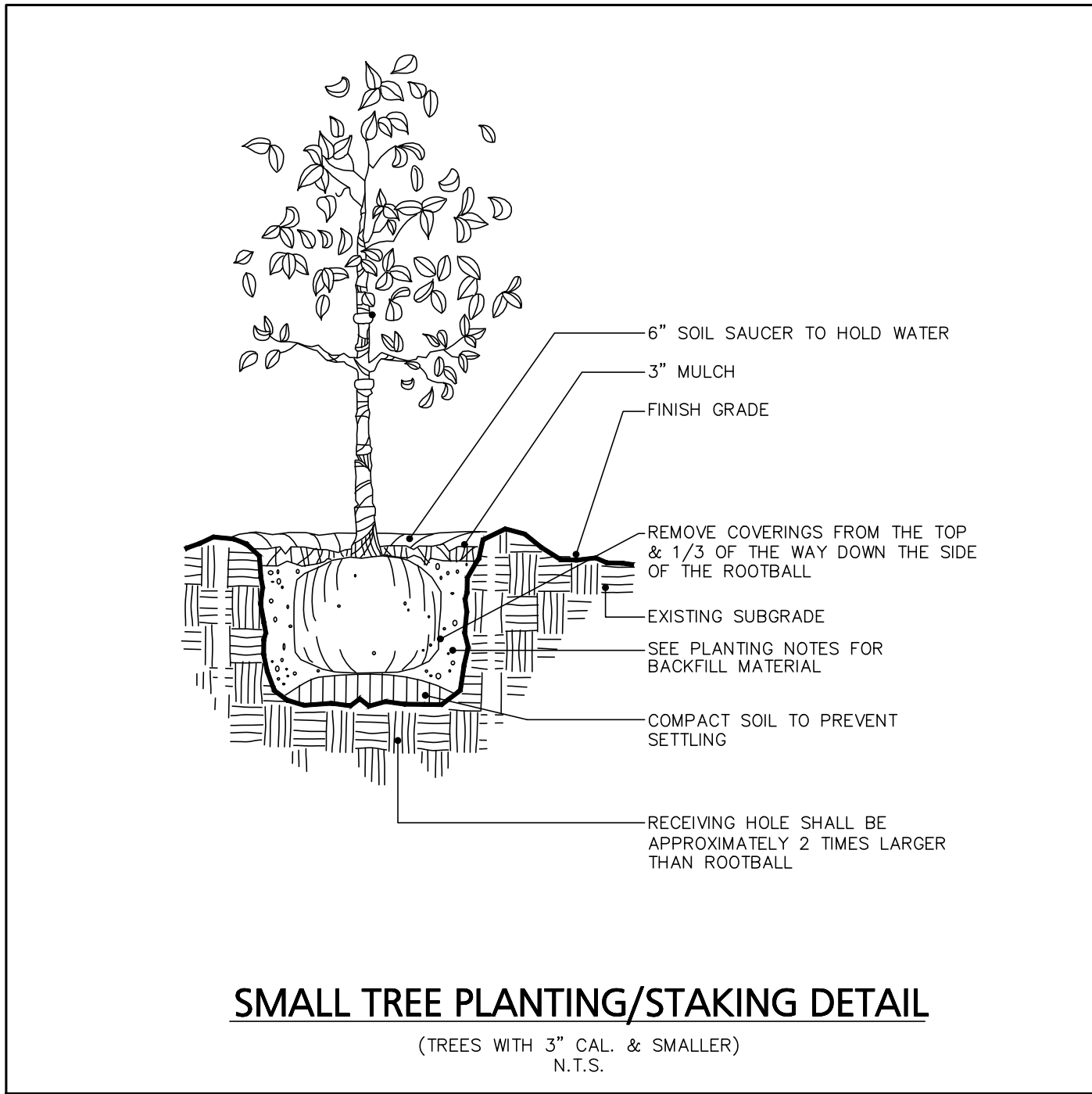
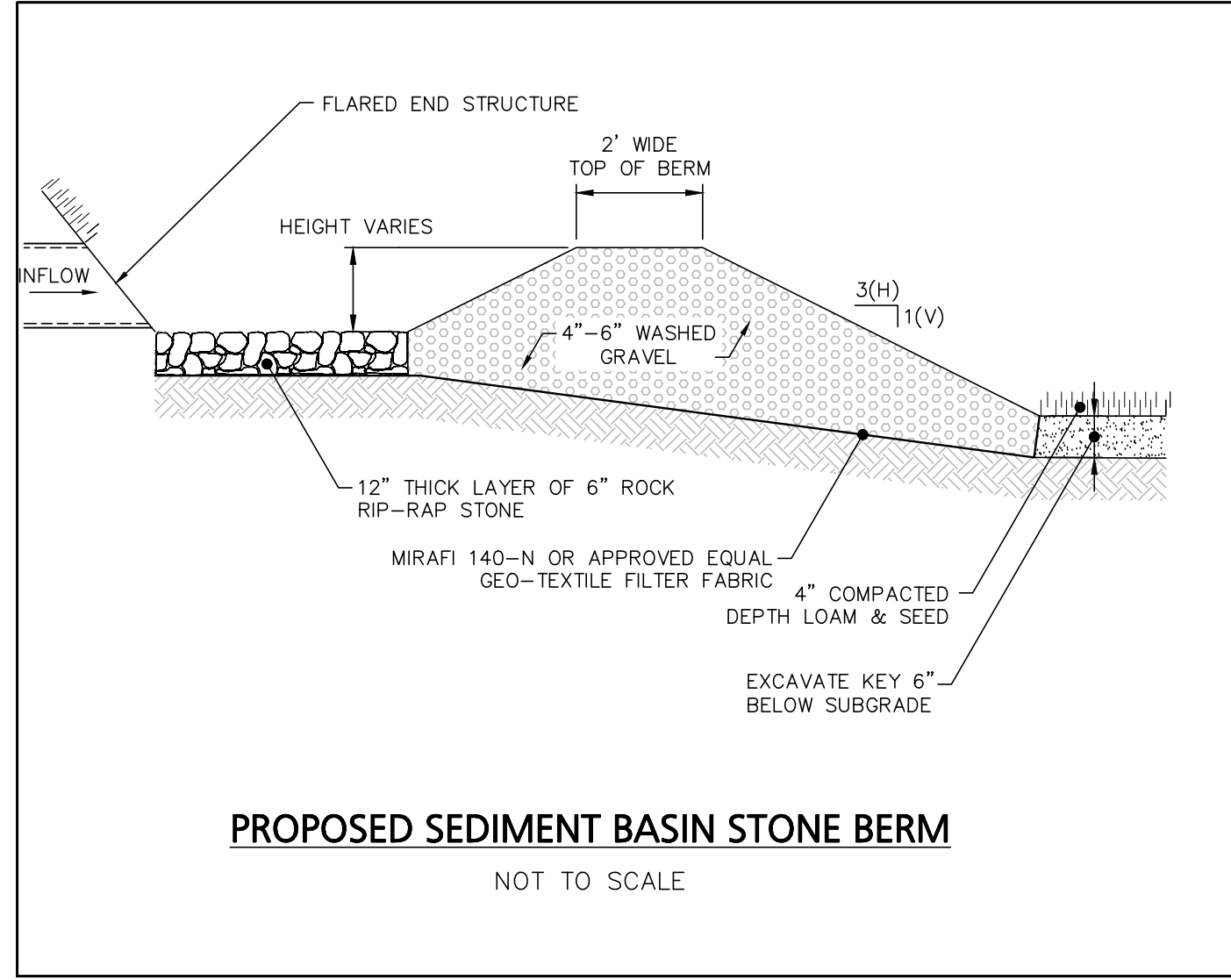
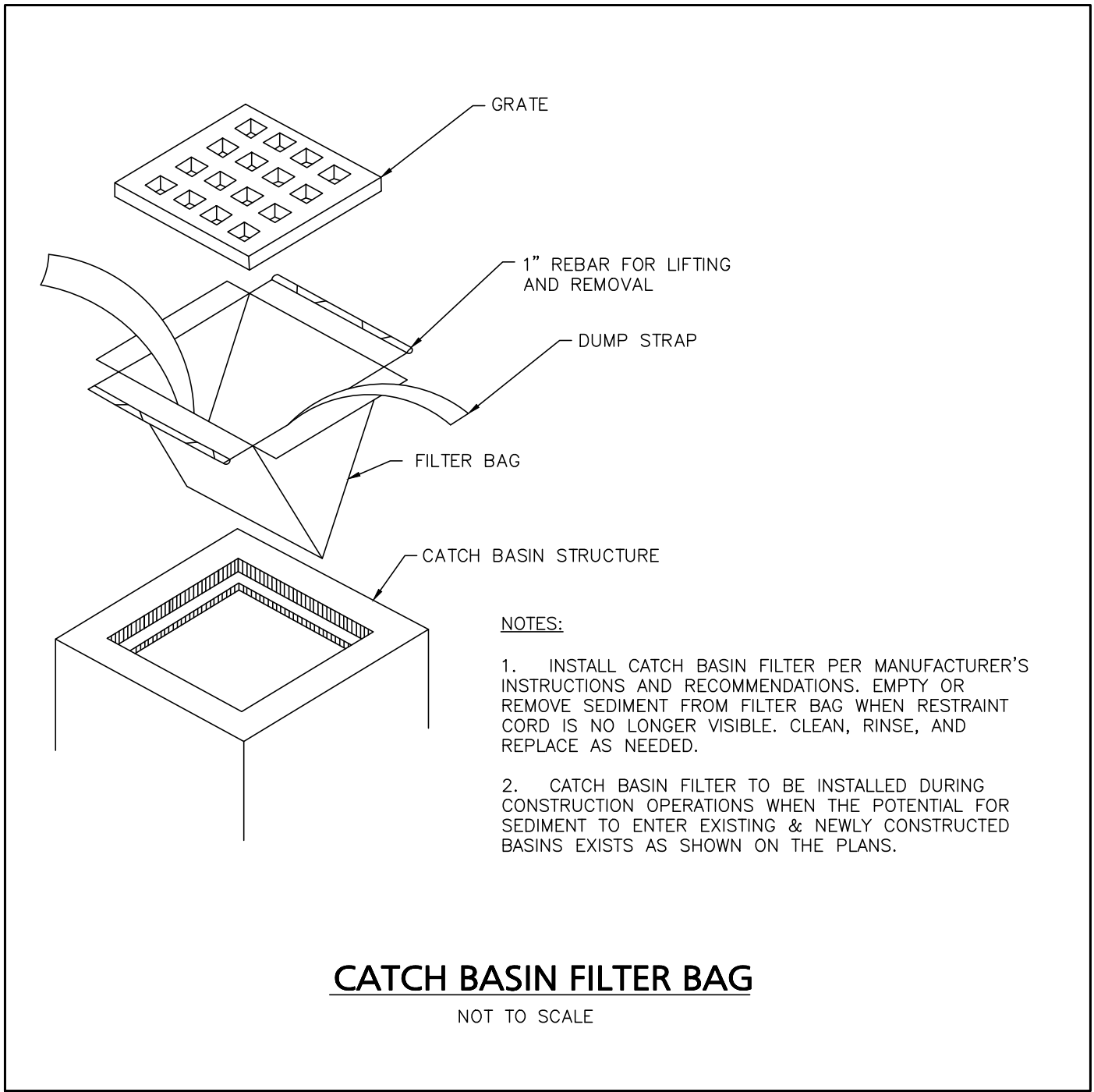
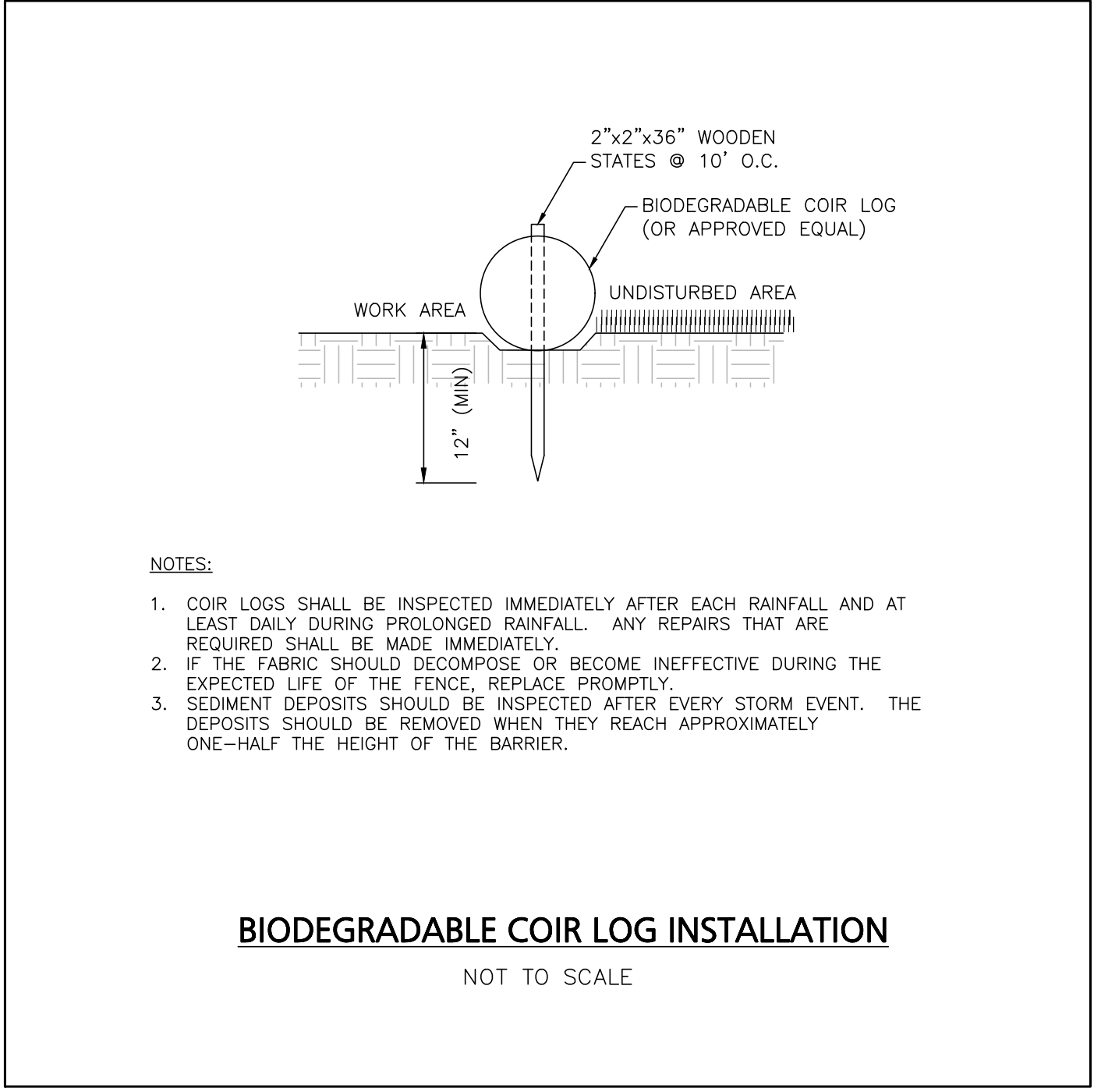
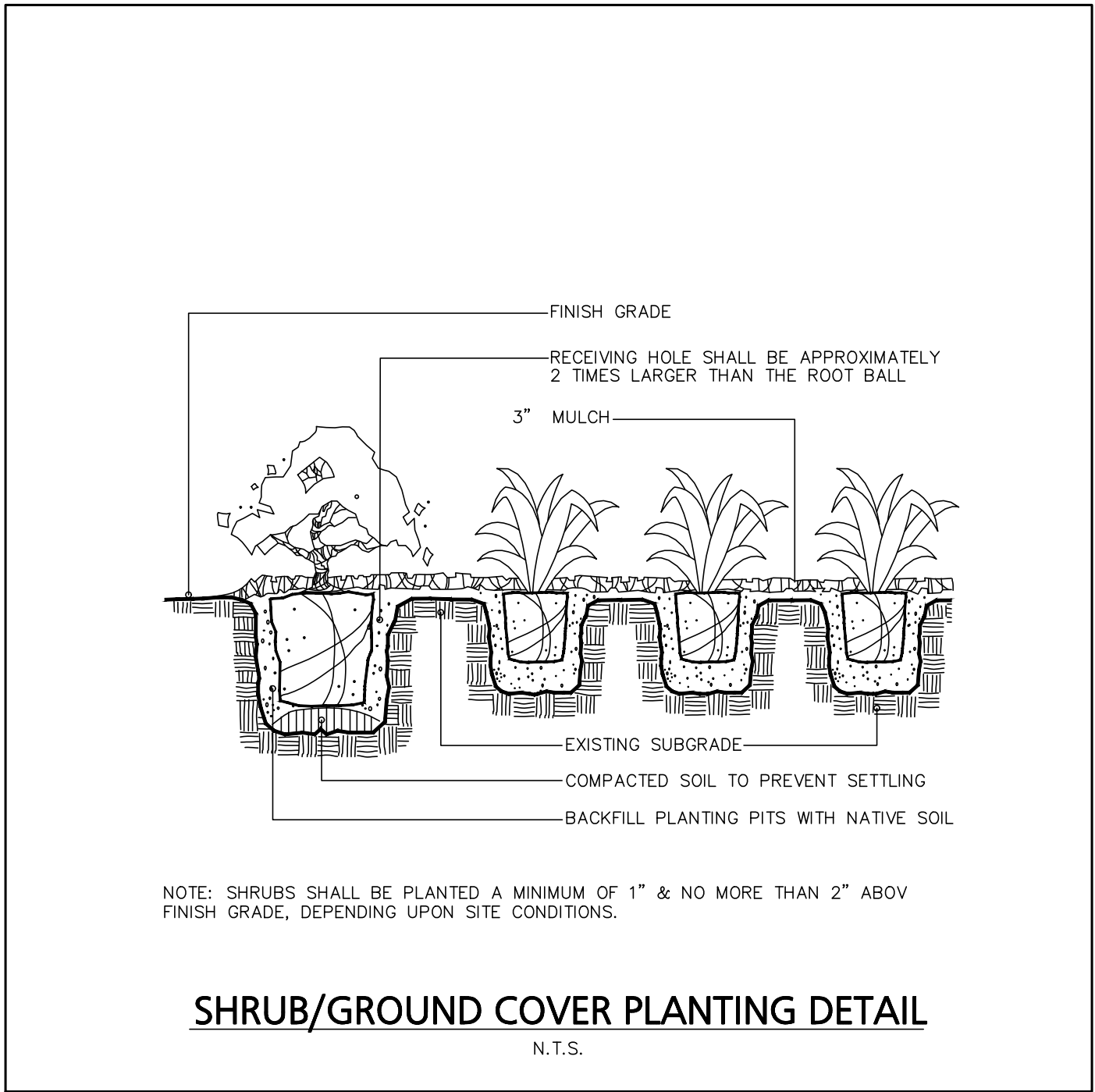
PROFESSIONAL ENGINEER FOR CIVIL DESIGN
CONSULTANTS, INC.



DRAWING TITLE:

CONSTRUCTION
DETAILS

D-1



09/01/25 REVISED LAYOUT

05/09/25 REV. PER PEER REVIEW COMMENTS

03/27/25 REV. PER PEER REVIEW COMMENTS

02/25/25 REV. PER PEER REVIEW COMMENTS

01/21/25 REV. PER INTERNAL REVIEW

12/30/24 REV. PER PEER REVIEW COMMENTS

10/04/24 REV. PER PEER REVIEW COMMENTS

DATE DESCRIPTION

REVISIONS

APPLICANT:

THE HOMES AT MURPHY'S FARM LLC

18 CASSIMERE STREET
ANDOVER, MA 01810

PROJECT:

MURPHY'S FARM

DRACUT, MA 01826

DATE ISSUED: APRIL 22, 2024

PROJECT #: 23-10524

PREPARED BY: TW5

PROFESSIONAL ENGINEER FOR CIVIL DESIGN CONSULTANTS, INC.

CIVIL DESIGN CONSULTANTS, INC.

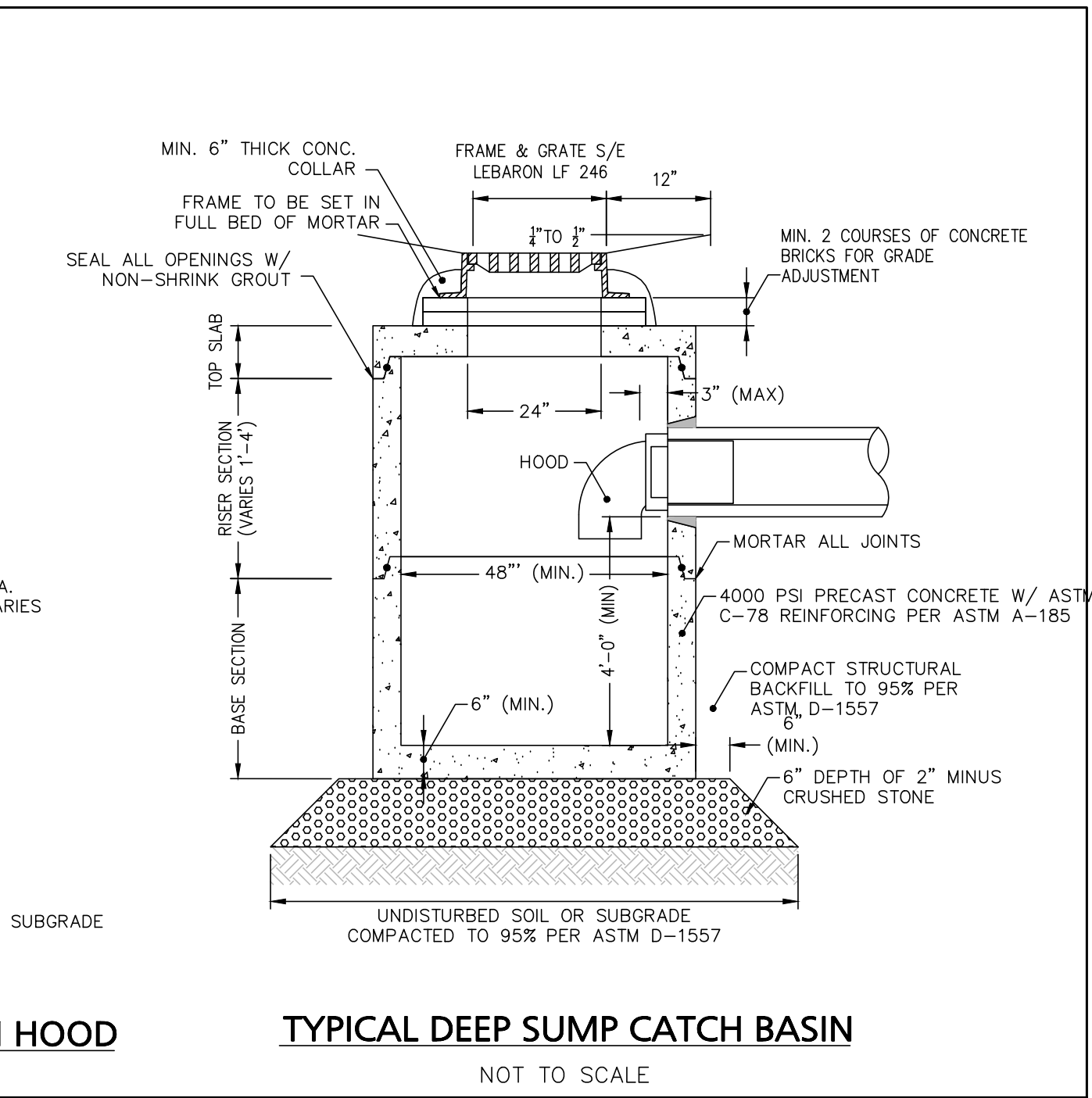
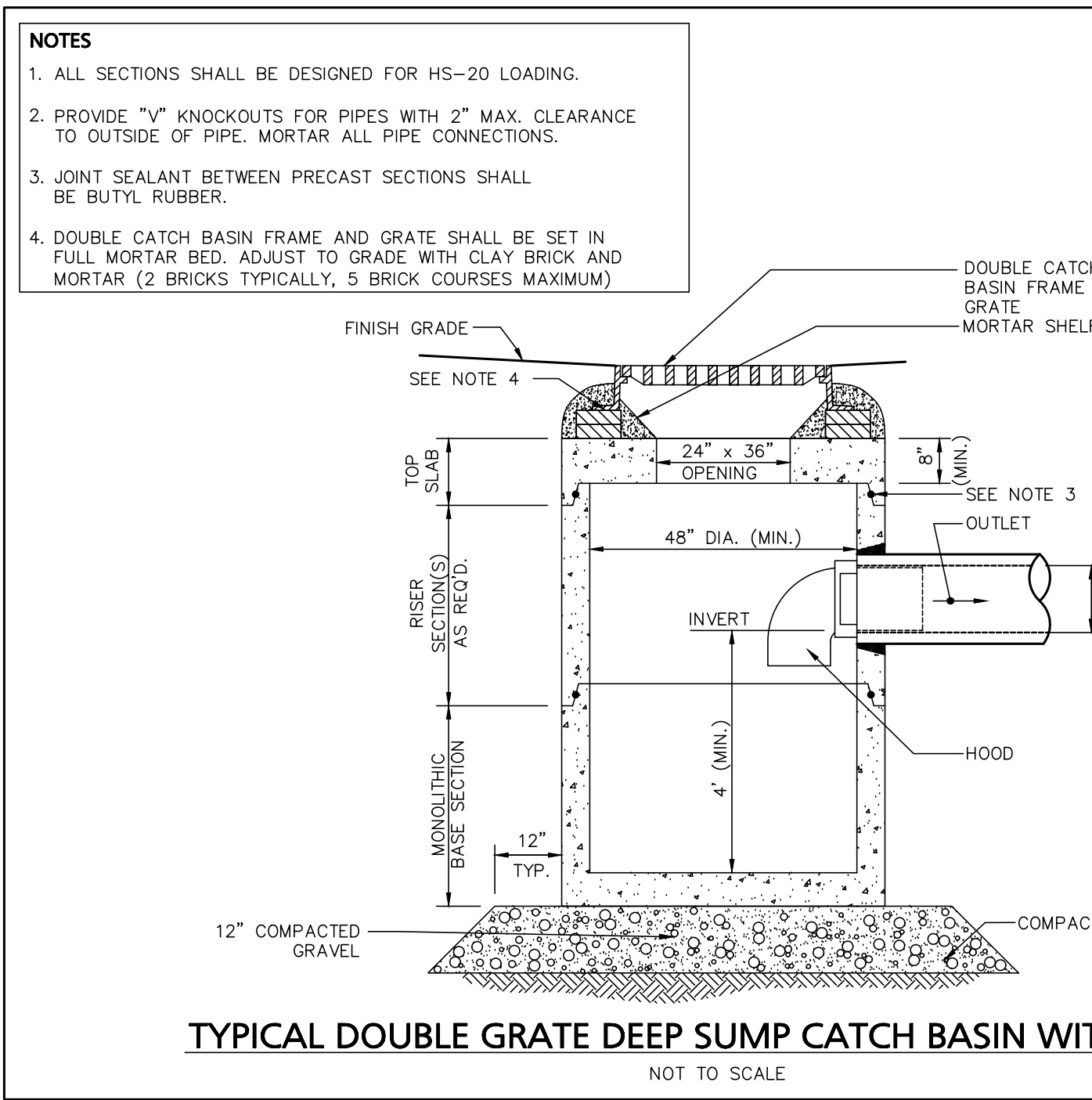
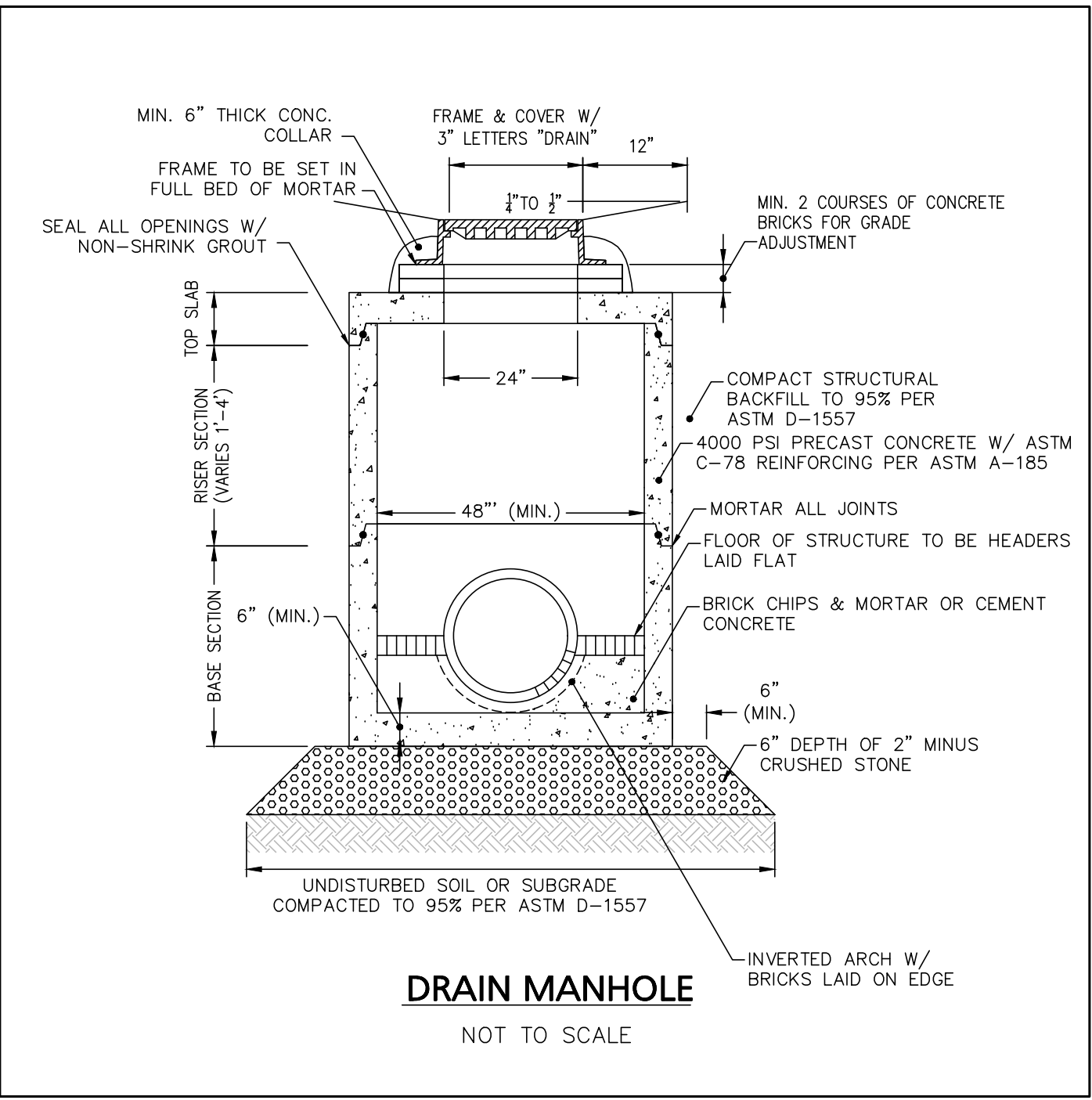
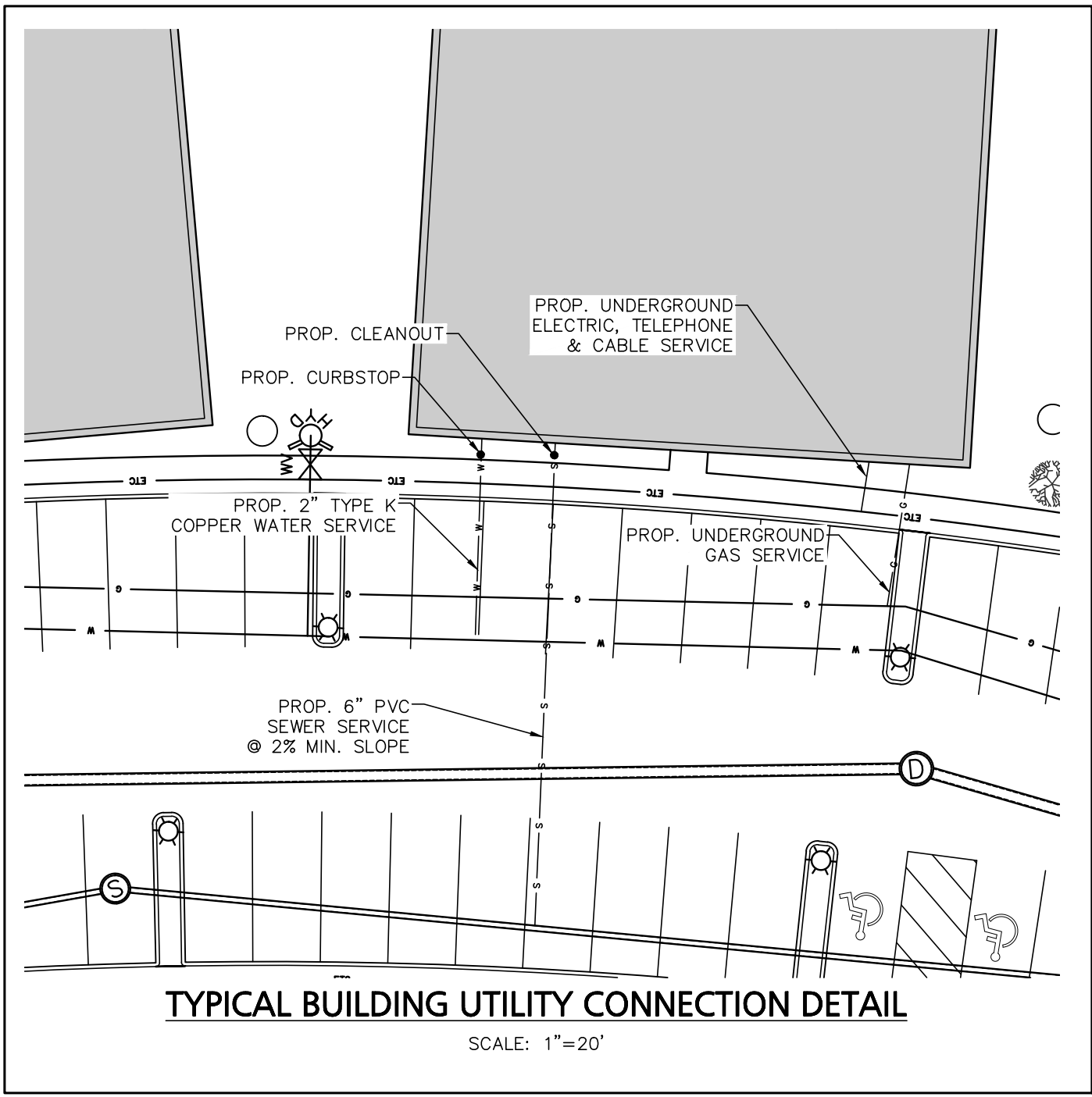
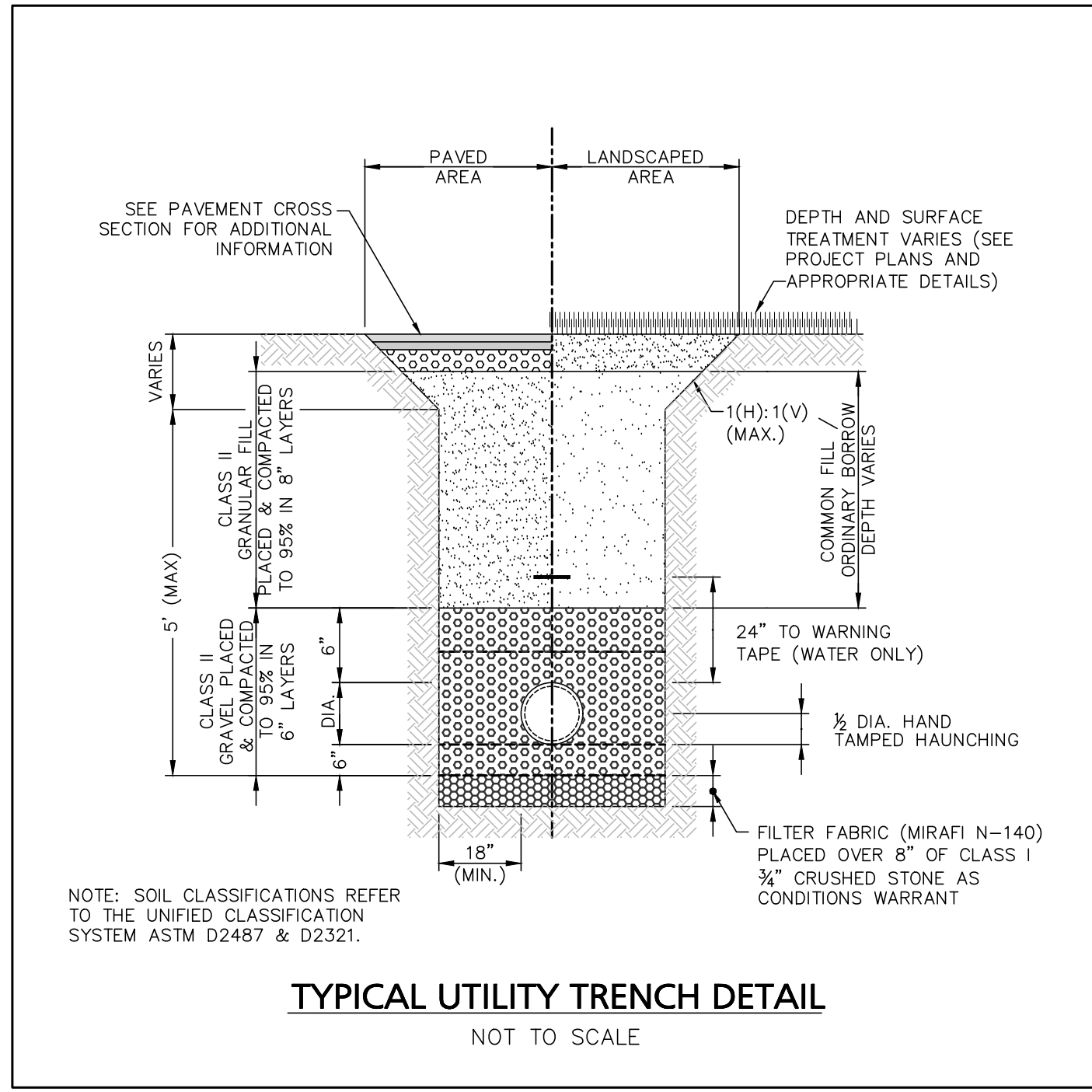
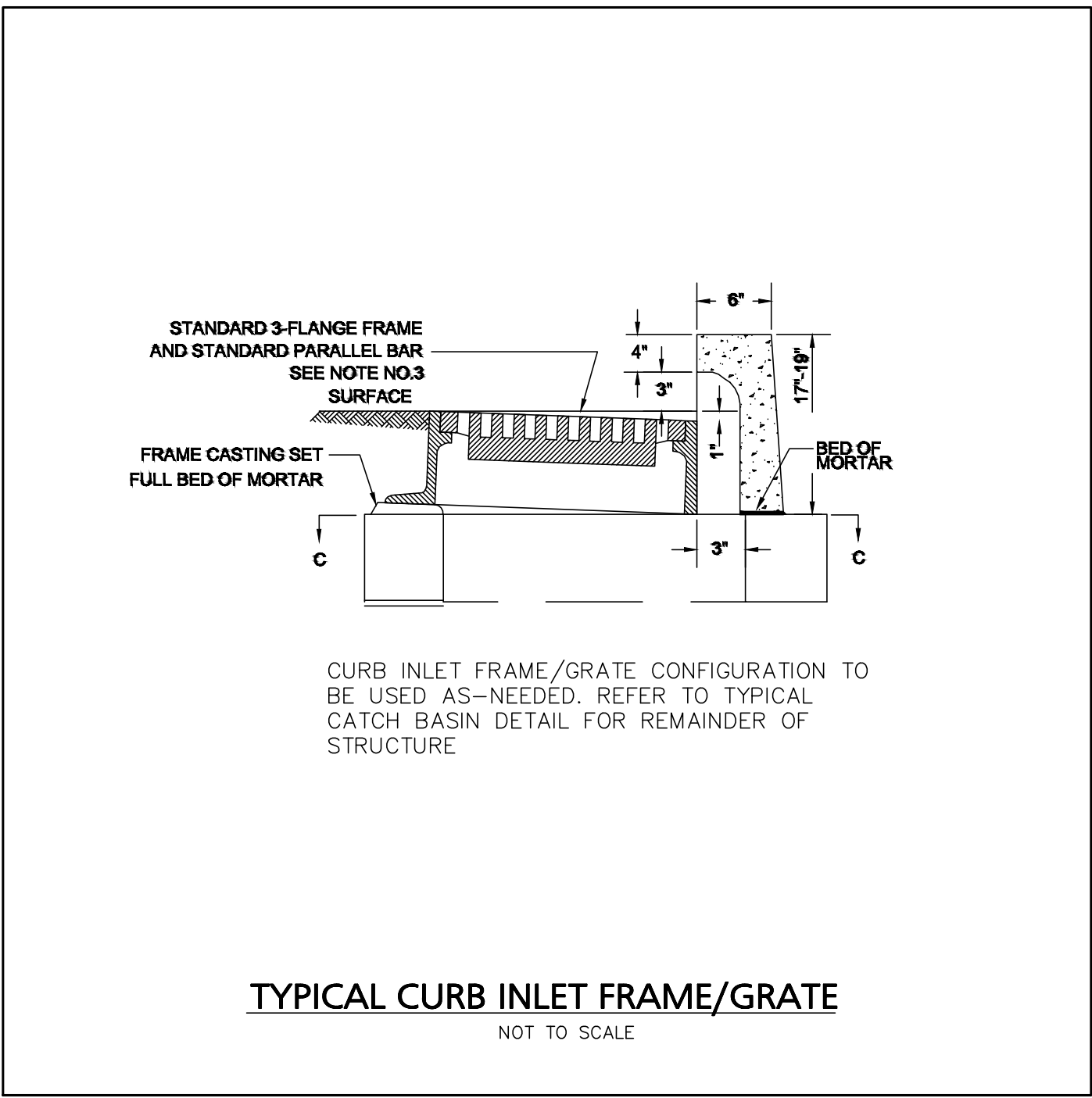
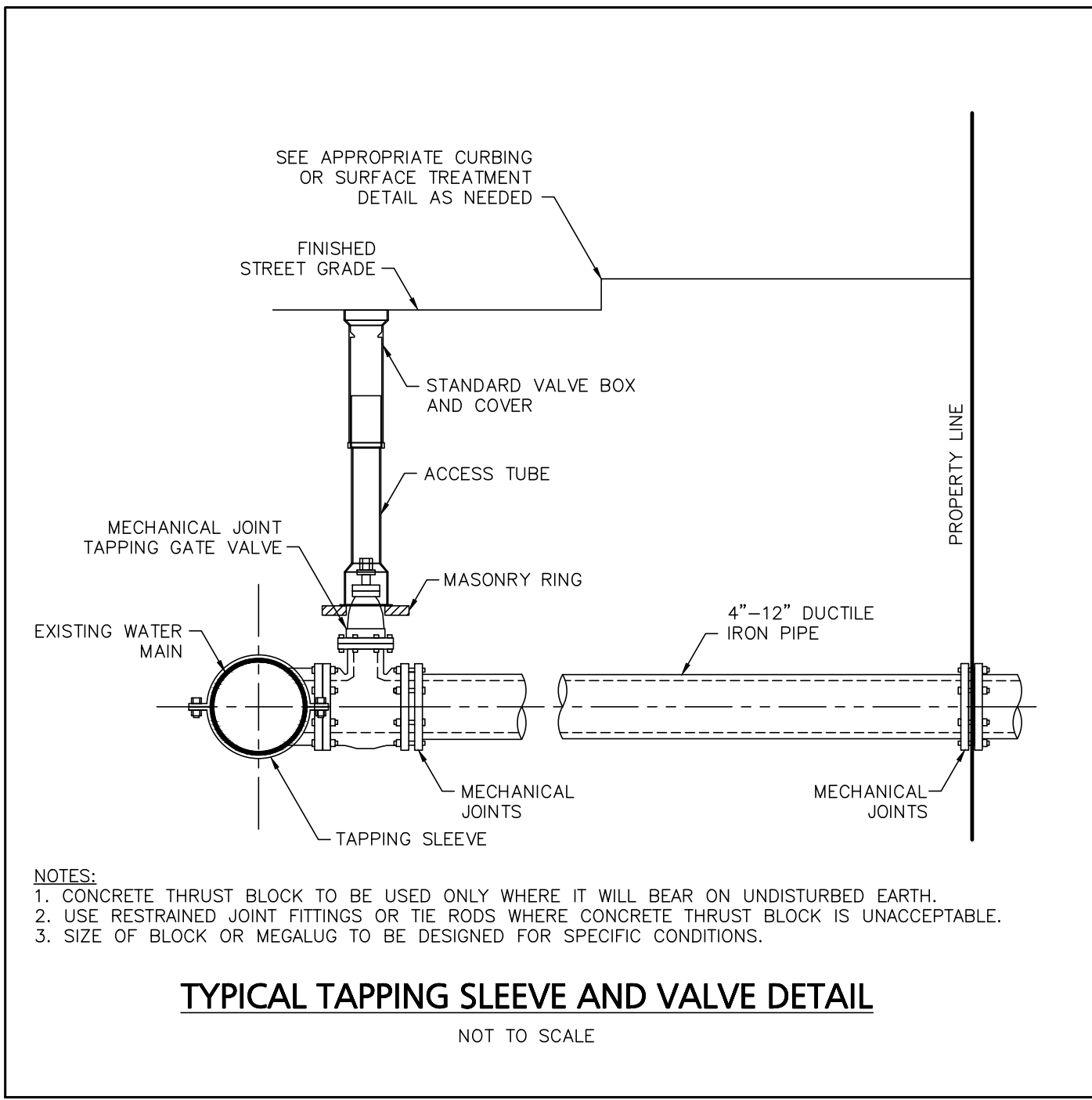
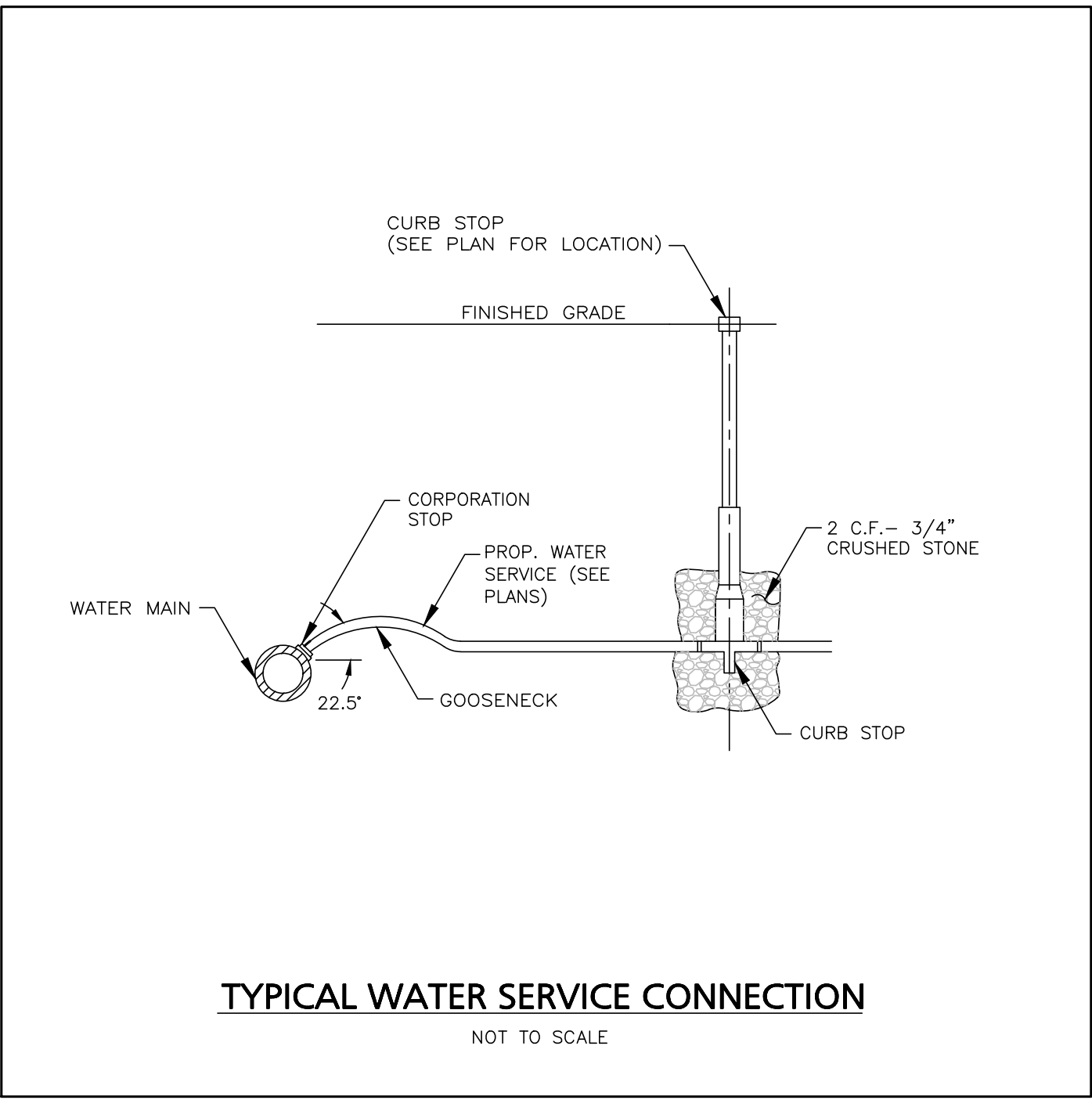
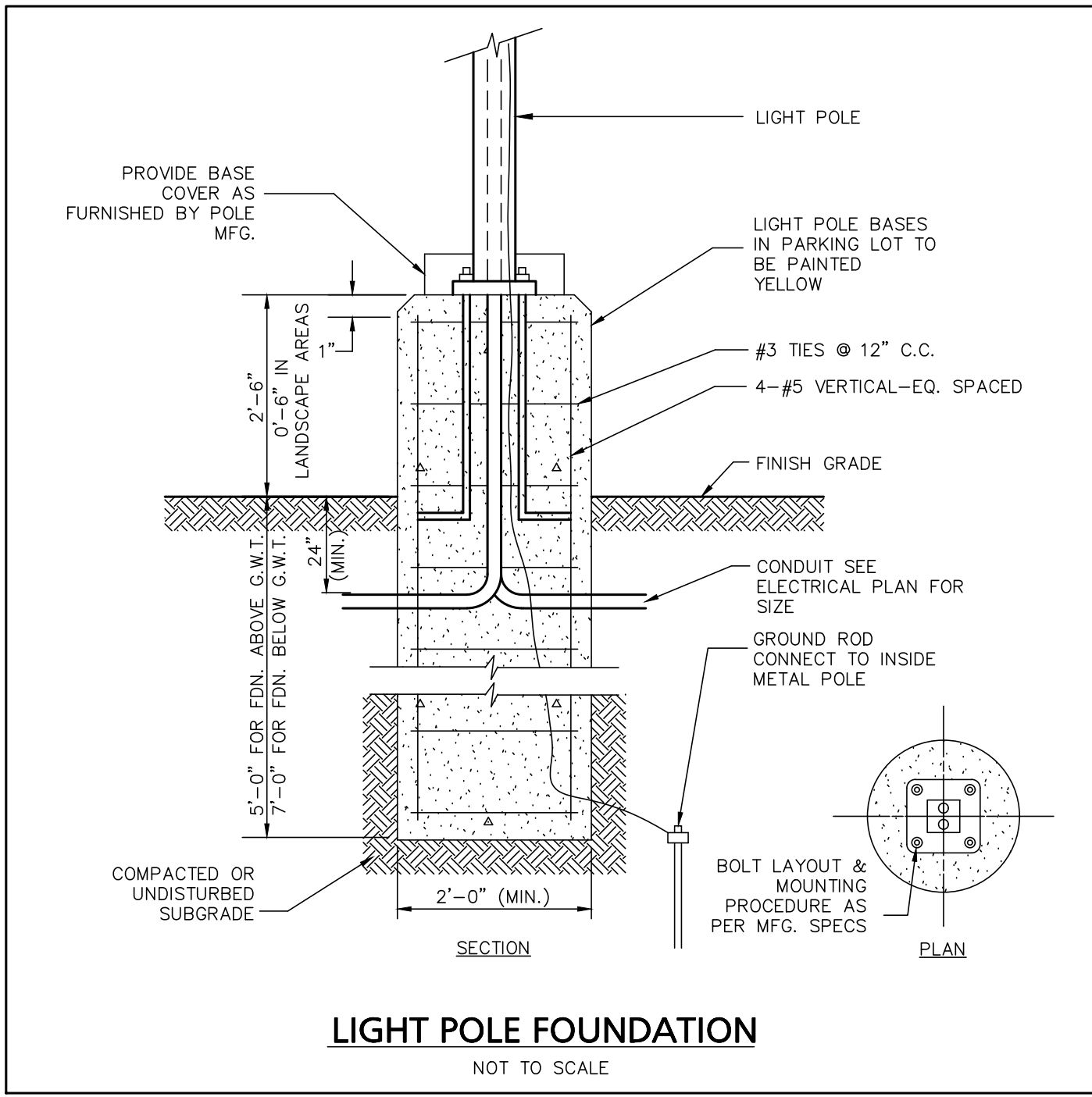
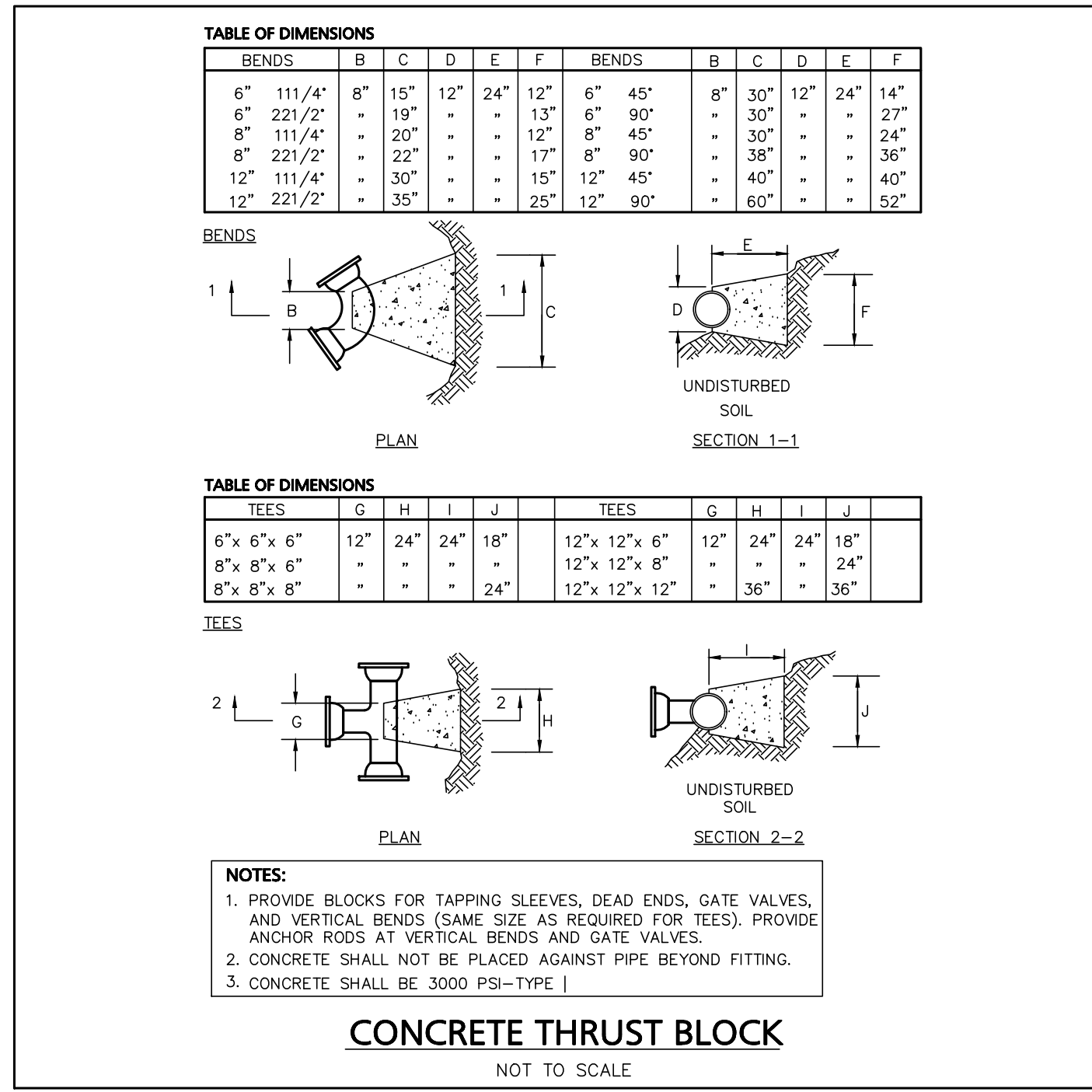
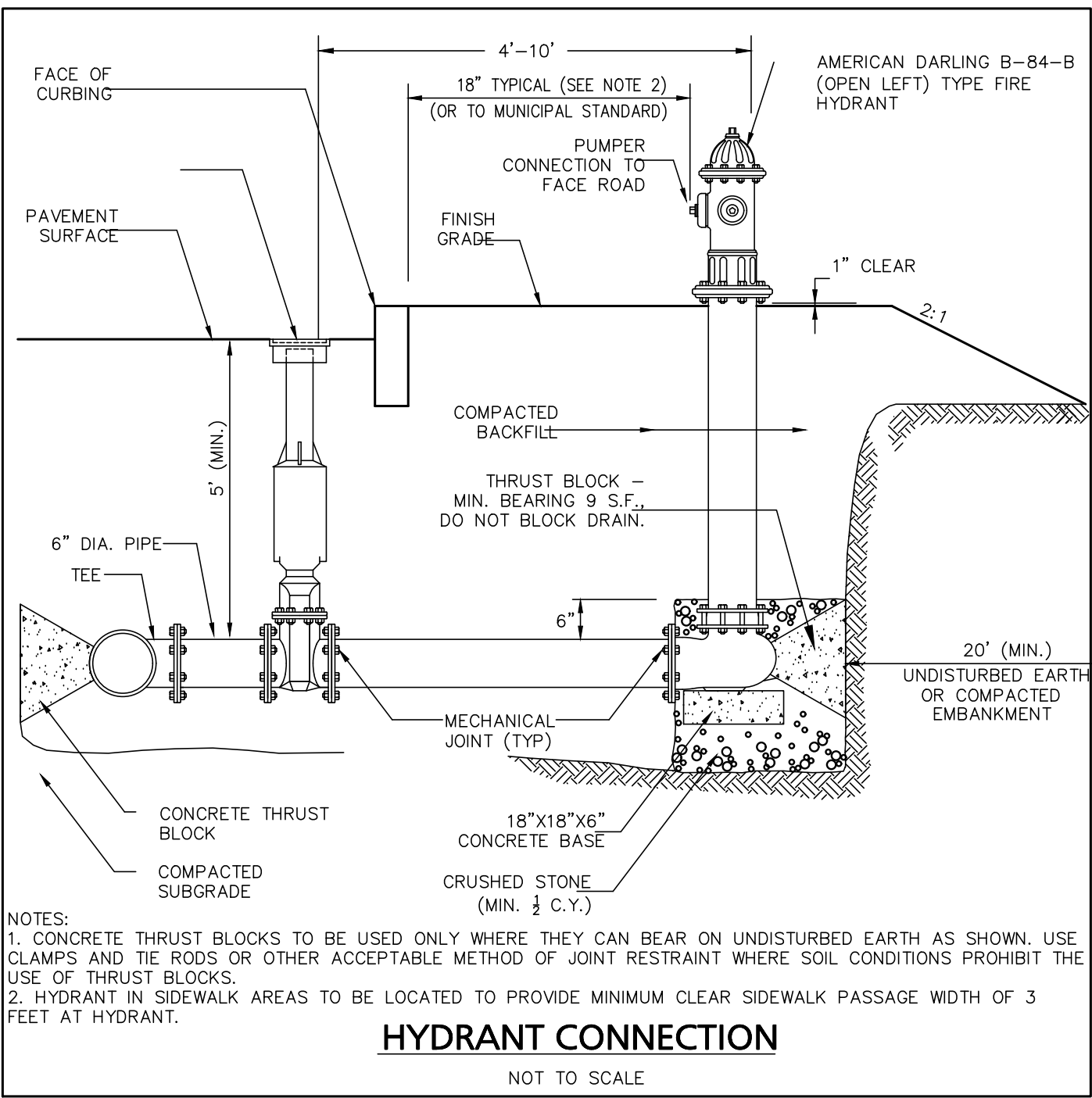
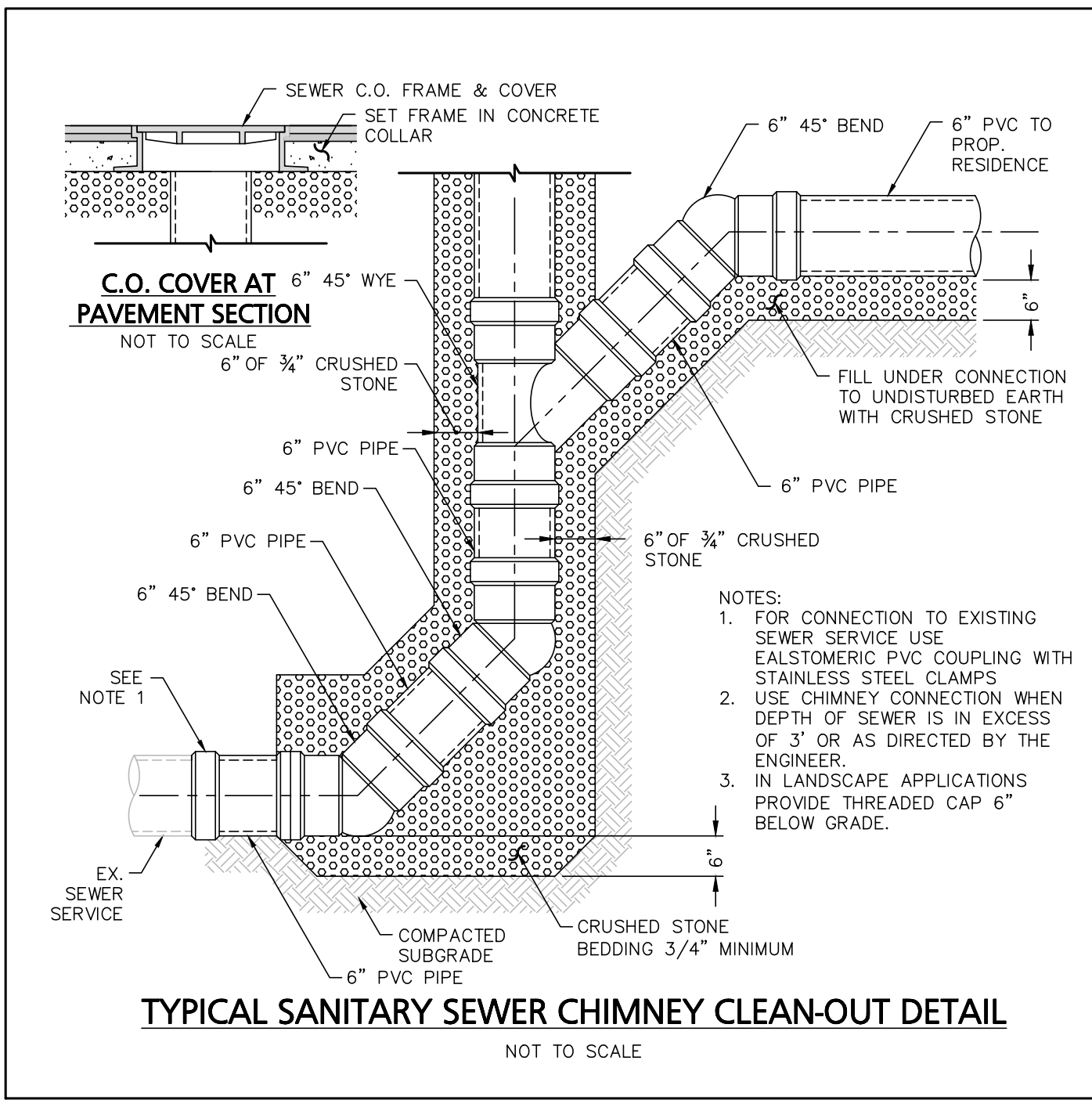
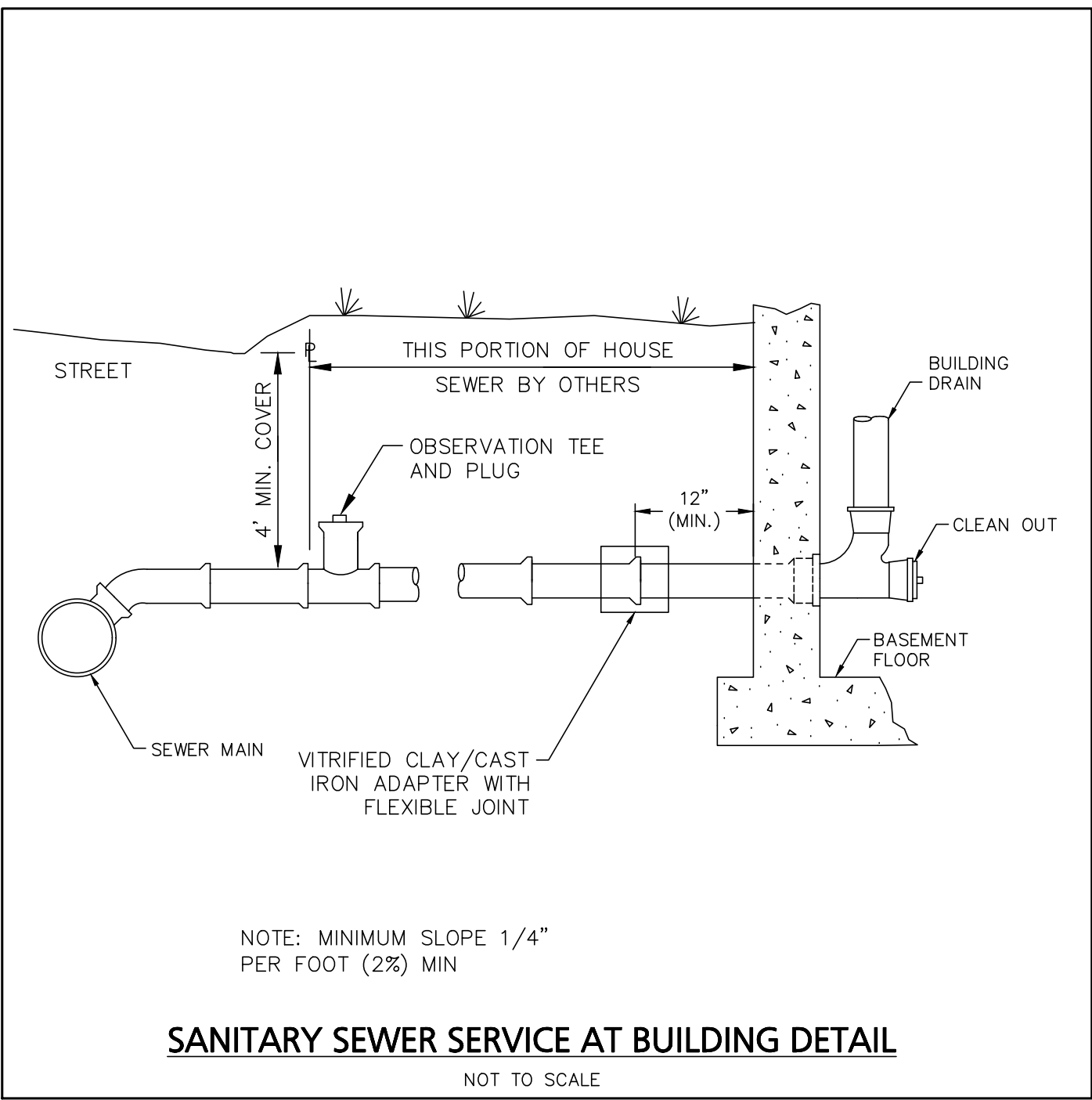
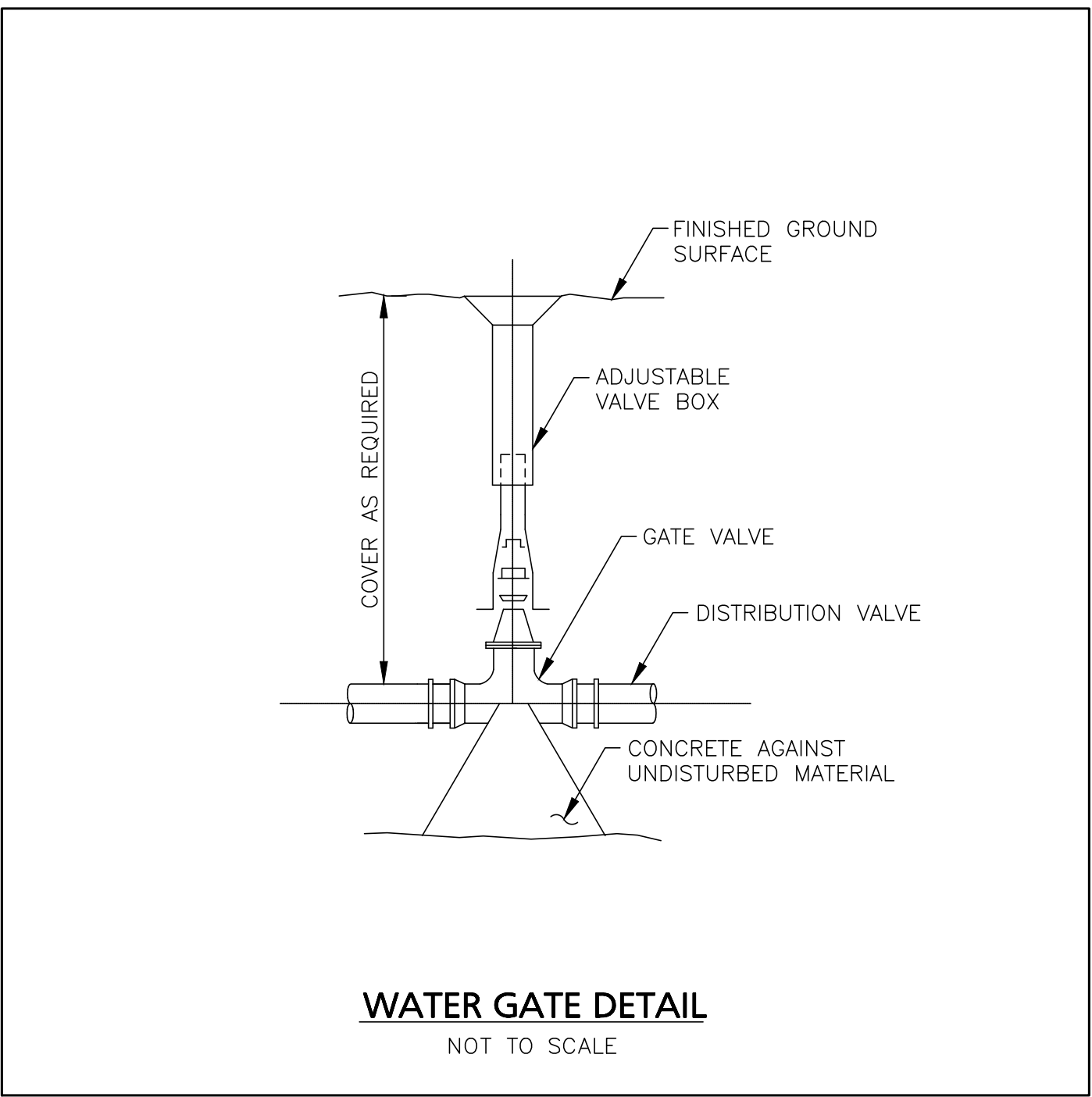
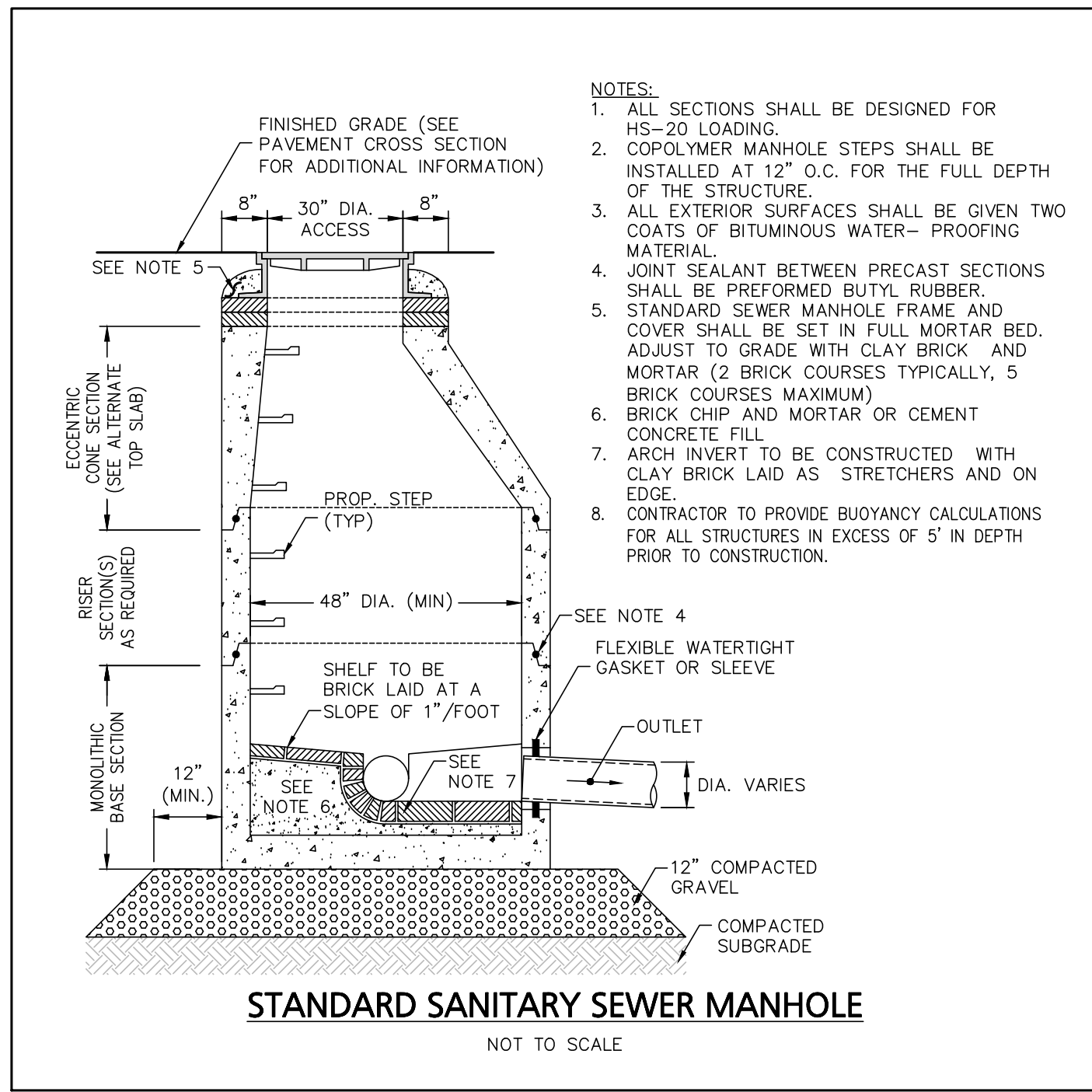
144 North Main Street | Andover, MA 01810
(978) 466-0920 | www.civilcd.com

DRAWING TITLE:

CONSTRUCTION DETAILS

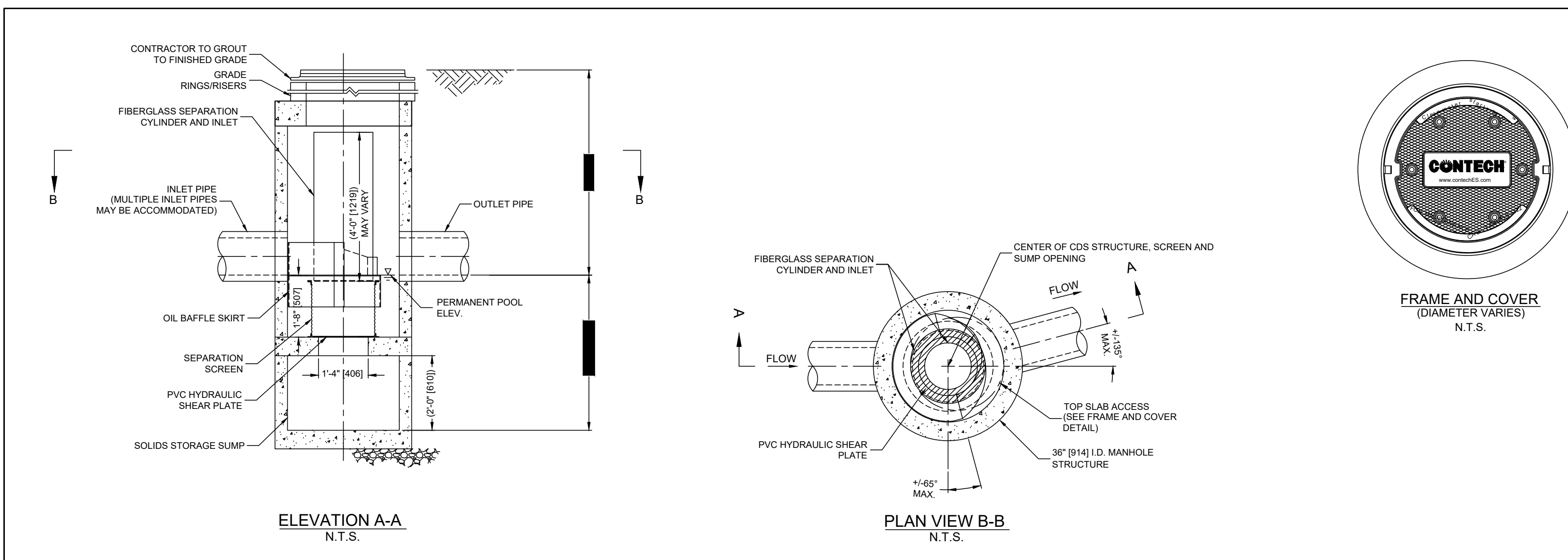
DRAWING #:

D-2



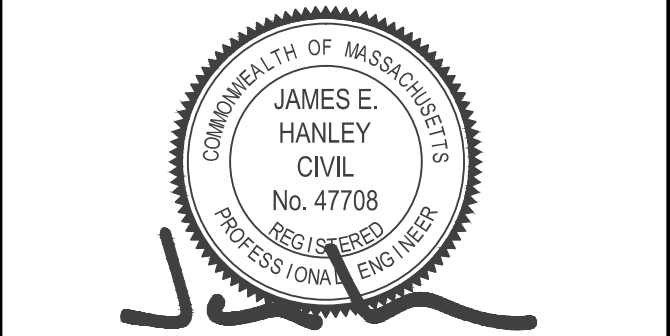
GENERAL UTILITY NOTES:

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING ALL CONTROL POINTS AND BENCHMARKS NECESSARY FOR THE WORK.
- WHERE SANITARY SEWERS CROSS WATER MAINS, THE SEWER SHALL BE LAID AT SUCH AN ELEVATION THAT THE CROWN OF THE SEWER IS AT LEAST 18 INCHES BELOW THE INVERT OF THE WATER MAIN. IF THE ELEVATION OF THE SEWER CANNOT BE VARIED TO MEET THIS REQUIREMENT, THE WATER MAIN SHALL BE RELOCATED TO PROVIDE THIS SEPARATION OR CONSTRUCTED WITH MECHANICAL-JOINT PIPE FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE SEWER. ONE FULL LENGTH OF WATER MAIN SHALL BE CENTERED OVER THE SEWER SO THAT BOTH JOINTS WILL BE AS FAR FROM THE SEWER AS POSSIBLE. WHENEVER IT IS IMPOSSIBLE TO OBTAIN VERTICAL SEPARATION AS STIPULATED ABOVE, BOTH THE WATER MAIN AND THE SEWER MAIN SHALL BE ENCASED IN CONCRETE FOR A MINIMUM DISTANCE OF 10 FEET FROM THE CROSSING POINT OF THE OTHER PIPE AS MEASURED NORMALLY FROM ALL POINTS ALONG THE PIPE.
- ALL UTILITY WORK PERFORMED WITHIN RIGHT-OF-WAY SHALL BE PERFORMED BY A CONTRACTOR LICENSED BY THE DPW AND OBTAIN A PERMIT FOR SUCH WORK FROM THE DPW, IF NEEDED.
- ALL DEBRIS SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS.
- A DUST EMISSION CONTROL PLAN SHALL BE DEVELOPED AND IMPLEMENTED BY THE CONTRACTOR IF CONDITIONS WARRANT.
- CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING ALL UTILITIES AS SHOWN ON THESE PLANS IN ACCORDANCE WITH THE APPROPRIATE UTILITY COMPANY. ALL UTILITY CONSTRUCTION SHALL CONFORM TO THE APPROPRIATE UTILITY COMPANY STANDARDS FOR CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING SPECIFICATIONS OF MATERIALS AND INSTALLATION PROCEDURES AND INSTALL IN ACCORDANCE WITH APPLICABLE REGULATIONS.
- THE CONTRACTOR IS RESPONSIBLE TO CONTACT AND DETERMINE, COORDINATE AND SCHEDULE ALL NECESSARY INSPECTIONS AND MONITORING WITH ALL APPROPRIATE UTILITY COMPANIES.
- THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND PAYING FOR ANY PERMITS AND/OR CONNECTION FEES REQUIRED TO PERFORM THE WORK.
- ALL ELEVATIONS SHOWN ARE IN REFERENCE TO THE PROJECT BENCHMARK AND MUST BE VERIFIED BY THE GENERAL CONTRACTOR PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR SITE RESTORATION AND CLEAN UP UPON COMPLETION OF THE PROJECT.
- WATER AND SEWER TESTING TO CONFORM TO LOCAL DPW REGULATIONS.
- ALL MECHANICAL JOINTS TO BE MEGALUG SERIES 1100 INSTALLED IN ACCORDING WITH MANUFACTURER RECOMMENDATIONS OR APPROVED EQUAL.
- ALL SEWER SYSTEM MAINS, STRUCTURES, AND CONNECTIONS SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE LOCAL REGULATIONS.
- CONTRACTOR TO COORDINATE ALL BUILDING PENETRATIONS AND ROOF LEADER LOCATIONS WITH ARCHITECTURAL DOCUMENTS PRIOR TO CONSTRUCTION.



09/01/25	REVISED LAYOUT
05/09/25	REV. PER PEER REVIEW COMMENTS
03/27/25	REV. PER PEER REVIEW COMMENTS
02/25/25	REV. PER PEER REVIEW COMMENTS
01/21/25	REV. PER INTERNAL REVIEW
12/30/24	REV. PER PEER REVIEW COMMENTS
10/04/24	REV. PER PEER REVIEW COMMENTS
DATE	DESCRIPTION
REVISIONS	
APPLICANT:	
THE HOMES AT MURPHY'S FARM LLC	
18 CASSIMERE STREET ANDOVER, MA 01810	
PROJECT:	
MURPHY'S FARM	
DRACUT, MA 01826	

DATE ISSUED:	APRIL 22, 2024
PROJECT #:	23-10524
PREPARED BY:	TWS



PROFESSIONAL ENGINEER FOR CIVIL DESIGN
CONSULTANTS, INC.

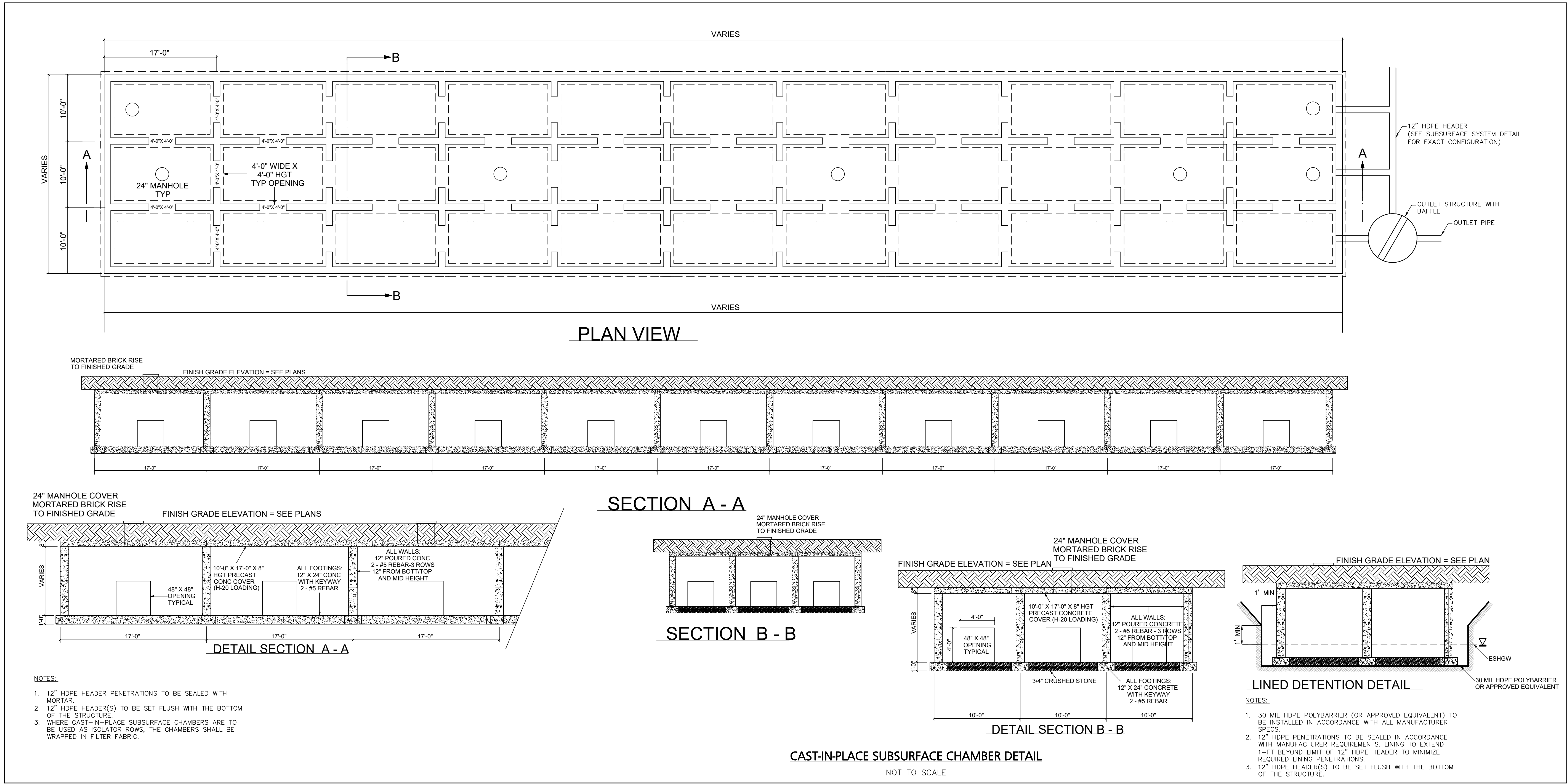
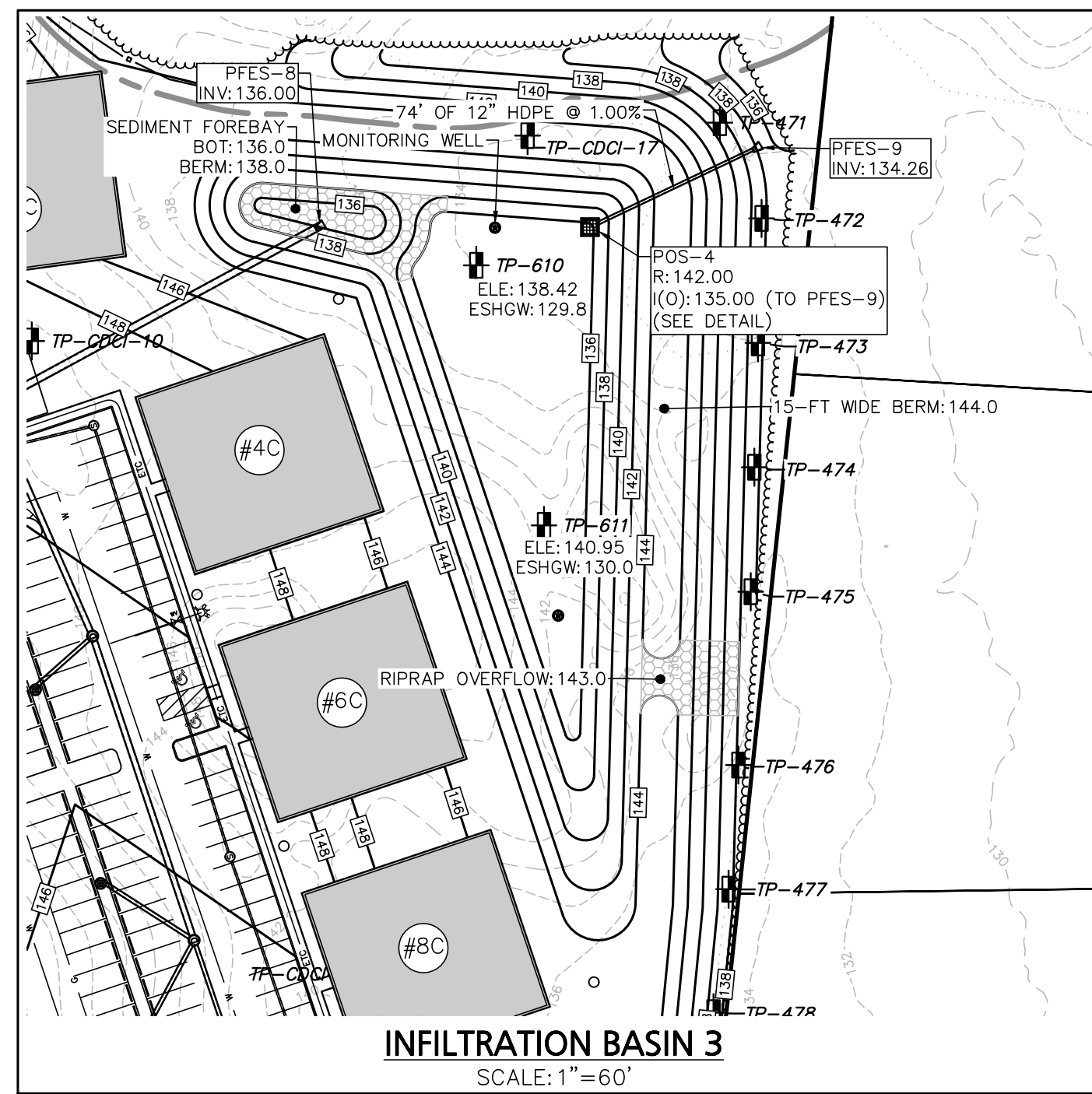
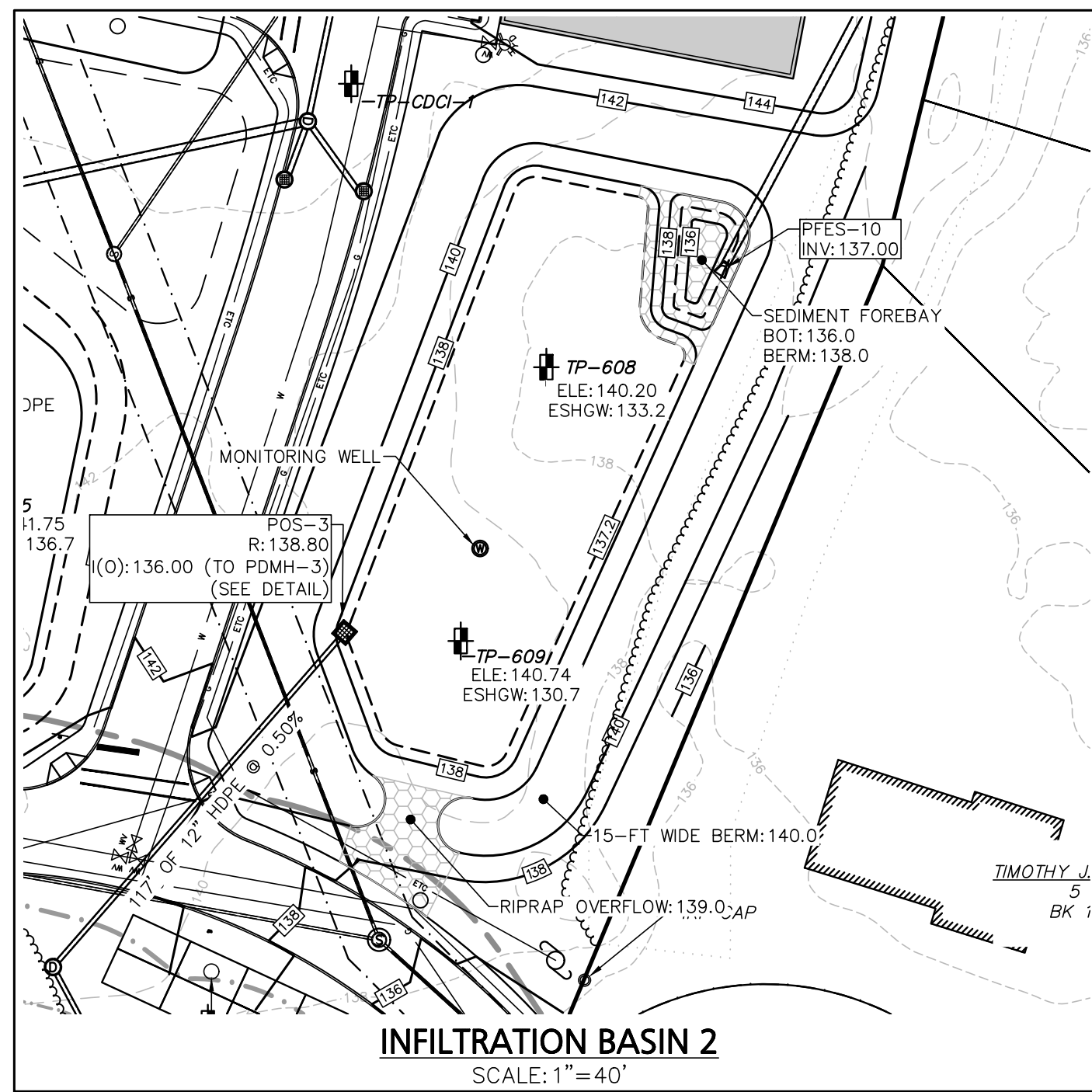
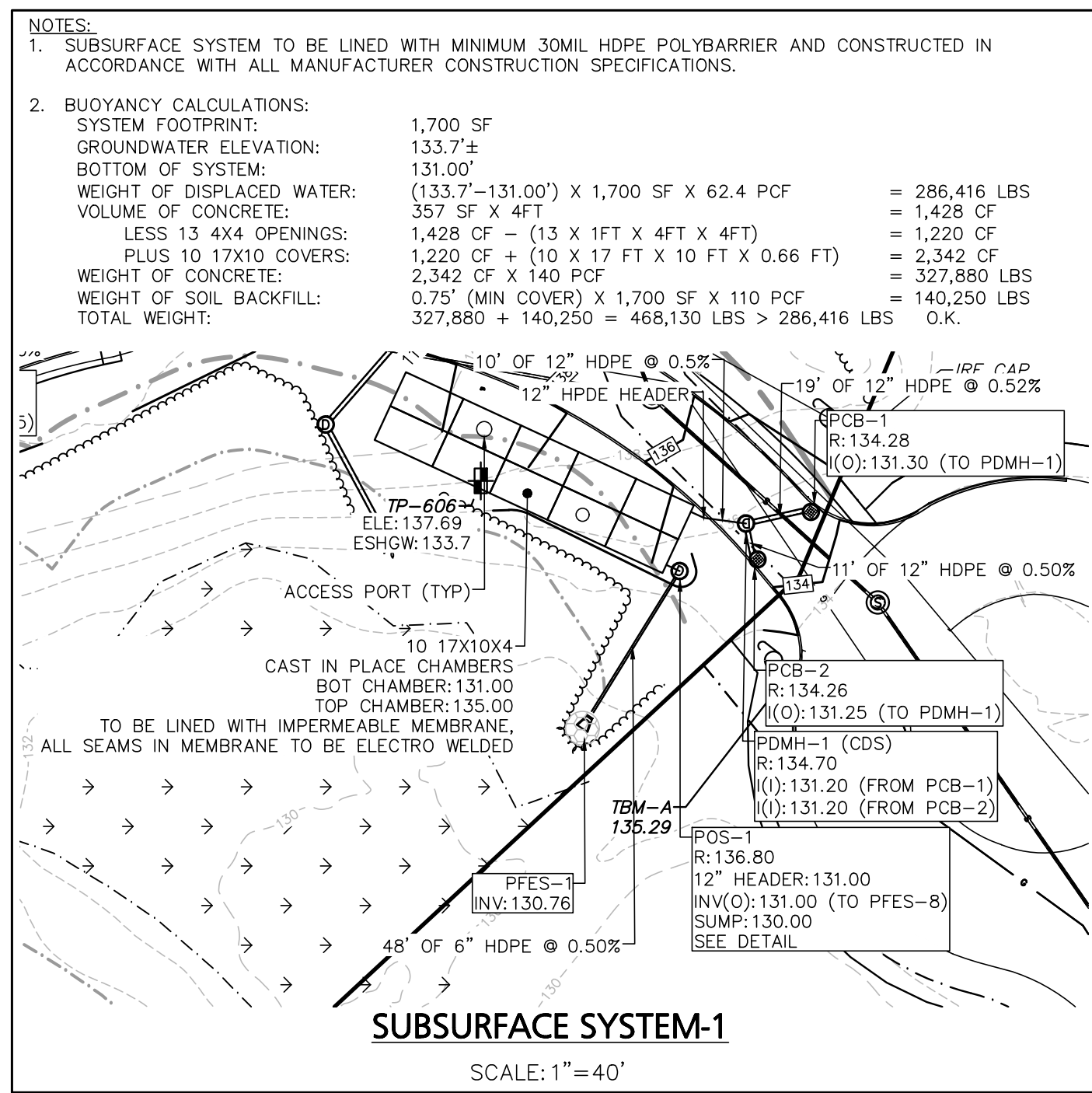
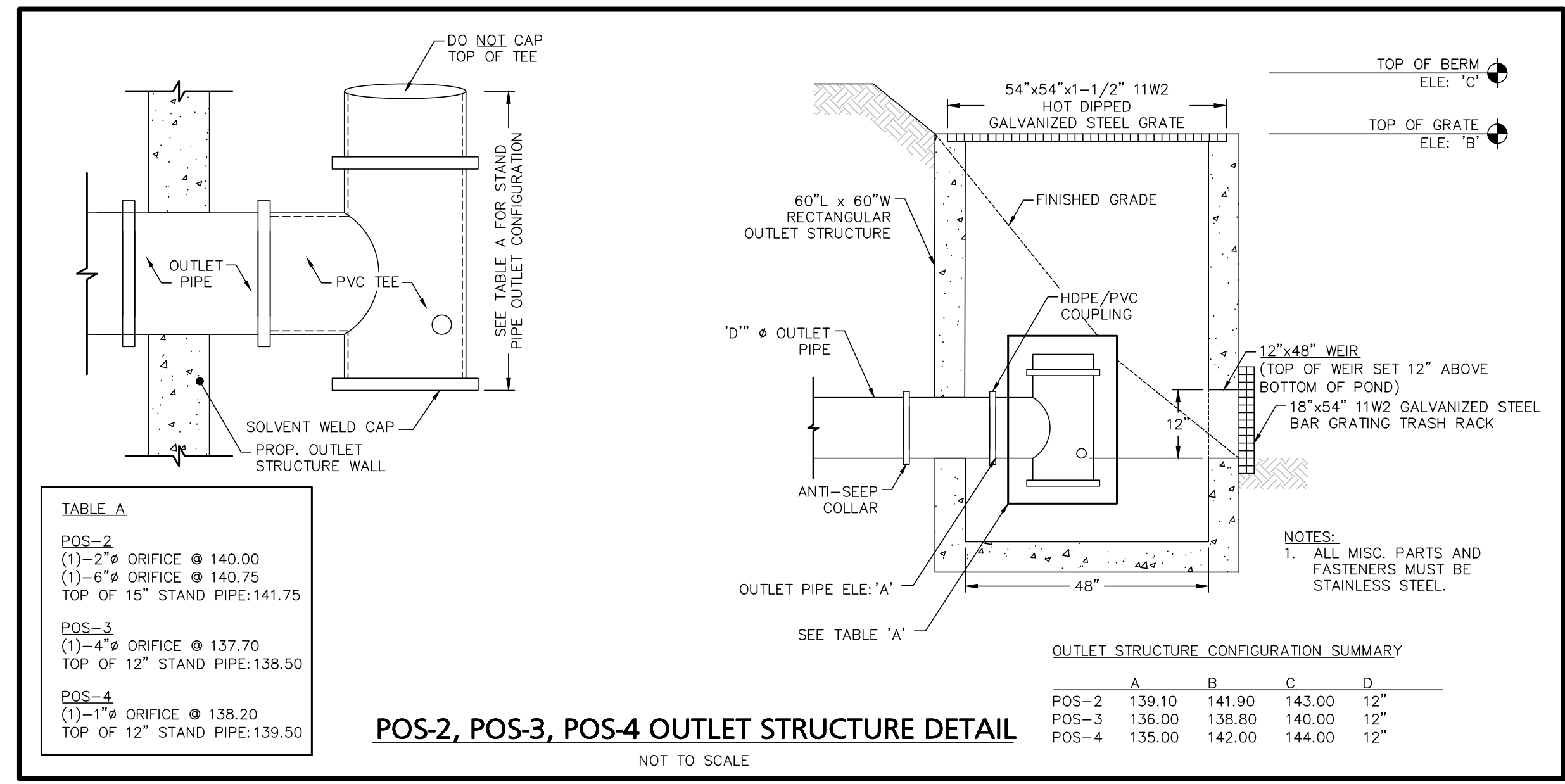
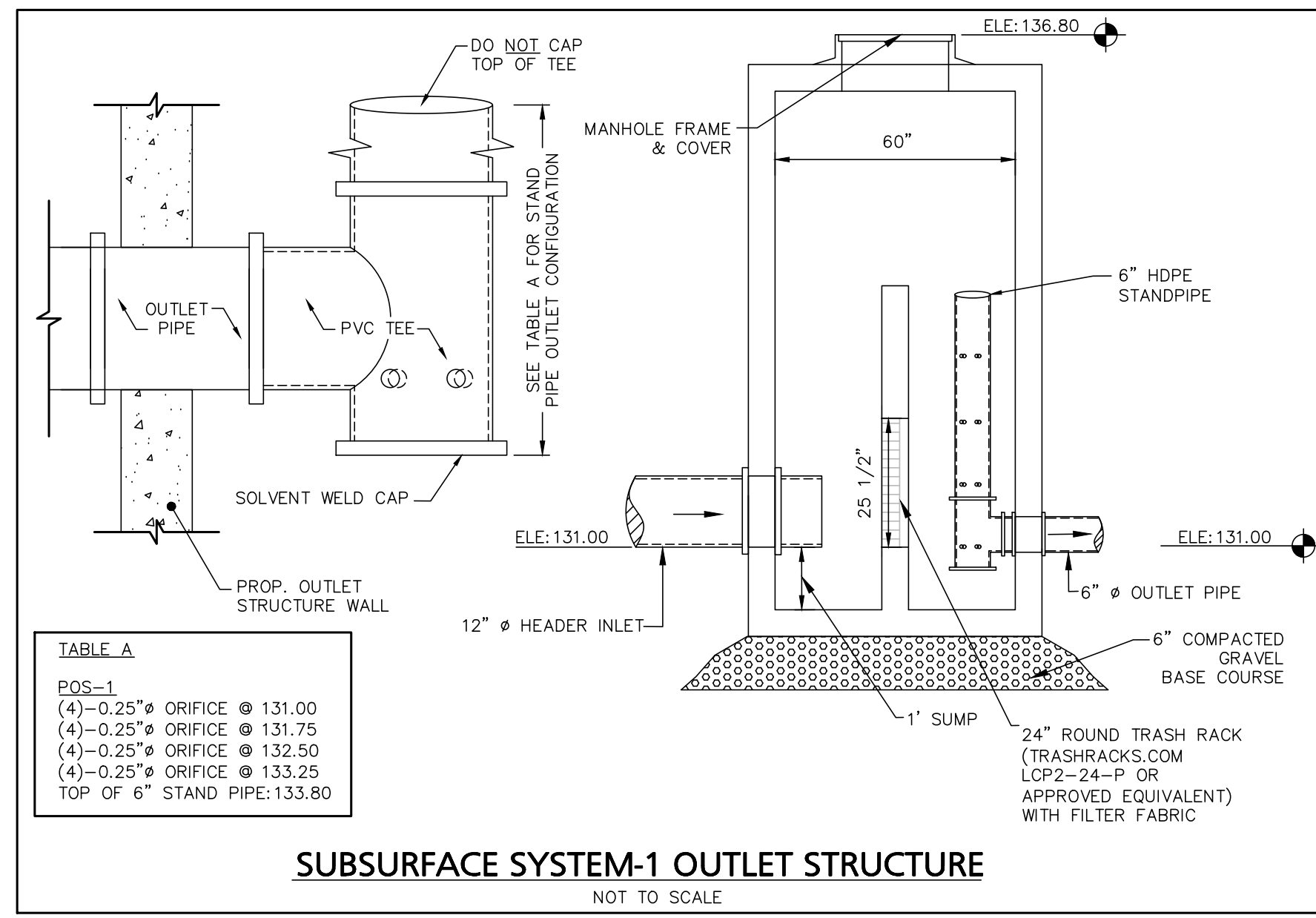
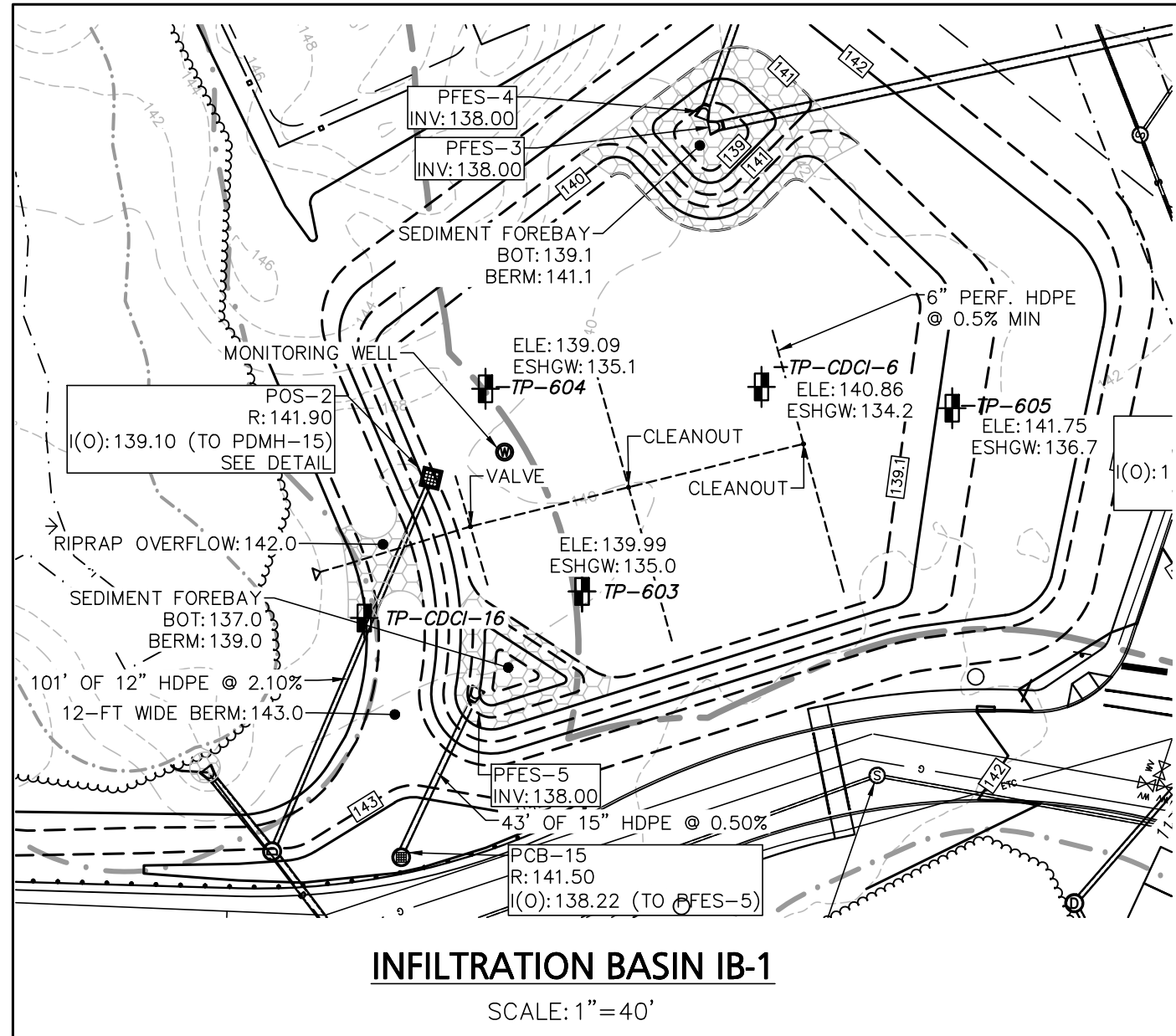
CIVIL DESIGN
CONSULTANTS, INC.

144 North Main Street | Andover, MA 01810
(978) 466-0950 | www.civilids.com

DRAWING TITLE:
CONSTRUCTION DETAILS

DRAWING #:

D-3



09/01/25 REVISED LAYOUT
05/09/25 REV. PER PEER REVIEW COMMENTS
03/27/25 REV. PER PEER REVIEW COMMENTS
02/25/25 REV. PER PEER REVIEW COMMENTS
01/21/25 REV. PER INTERNAL REVIEW
12/30/24 REV. PER PEER REVIEW COMMENTS
10/04/24 REV. PER PEER REVIEW COMMENTS
DATE DESCRIPTION
REVISIONS

APPLICANT:
THE HOMES AT MURPHY'S FARM LLC
18 CASSIMERE STREET
ANDOVER, MA 01810

PROJECT:
MURPHY'S FARM
DRACUT, MA 01826

DATE ISSUED: APRIL 22, 2024
PROJECT #: 23-10524
PREPARED BY: TWS

PROFESSIONAL ENGINEER FOR CIVIL DESIGN
CONSULTANTS, INC.

CIVIL DESIGN CONSULTANTS, INC.
544 North Main Street | Andover, MA 01810
(978) 486-0500 | www.civil80.com

DRAWING TITLE:
CONSTRUCTION DETAILS

DRAWING #:
D-4

TEST PIT LOGS

Address: Murphy's Farm, Dracut, MA

Date: 12/7/2023

S.E.: William Hall

Witness: Tina Rivard

Note: Areas where test pits were performed have been stripped of top and subsoil.

CDCI-1

Depth	Horizon	Color	Texture
0-120	C	10YR5/4	Coarse Sand
Many cobbles and stones			
Not mottling observed			
No water observed			

CDCI-3

Depth	Horizon	Color	Texture
0-156	C	10YR5/4	Coarse Sand
Many cobbles and stones			
Not mottling observed			
No water observed			

CDCI-5

Depth	Horizon	Color	Texture
0-126	C	10YR5/4	Coarse Sand
Many cobbles and stones			
Not mottling observed			
No water observed			

CDCI-7

Depth	Horizon	Color	Texture
0-72	Sandy Fill	----	----
Not mottling observed			
No water observed			
Ledge encountered at 72"			

CDCI-9

Depth	Horizon	Color	Texture
0-102	C1	10YR5/4	Coarse Sand
102-144	C2	10YR6/3	Loamy Sand
Many cobbles and stones in C1 layer			
Not mottling observed			
No water observed			

CDCI-11

Depth	Horizon	Color	Texture
0-90	C1	10YR5/4	Coarse Sand
90-166	C2	10YR6/3 F.	Loamy Sand
Many cobbles and stones in C1 layer			
Mottling @ 128"			
Weeping @ 160"			

CDCI-2

Depth	Horizon	Color	Texture
0-132	C	10YR5/4	Coarse Sand
Many cobbles and stones			
Not mottling observed			
No water observed			

CDCI-4

Depth	Horizon	Color	Texture
0-120	C	10YR5/4	Coarse Sand
Many cobbles and stones			
Not mottling observed			
No water observed			

CDCI-6

Depth	Horizon	Color	Texture
0-24	Fill	----	----
24-80	C	10YR5/4	Coarse Sand
Many cobbles and stones			
Not mottling observed			
No water observed			
Ledge encountered at 80"			

CDCI-8

Depth	Horizon	Color	Texture
0-80	C1	10YR5/4	Coarse Sand
80-144	C2	10YR6/3	Loamy Sand
Many cobbles and stones in C1 layer			
Not mottling observed			
No water observed			

CDCI-10

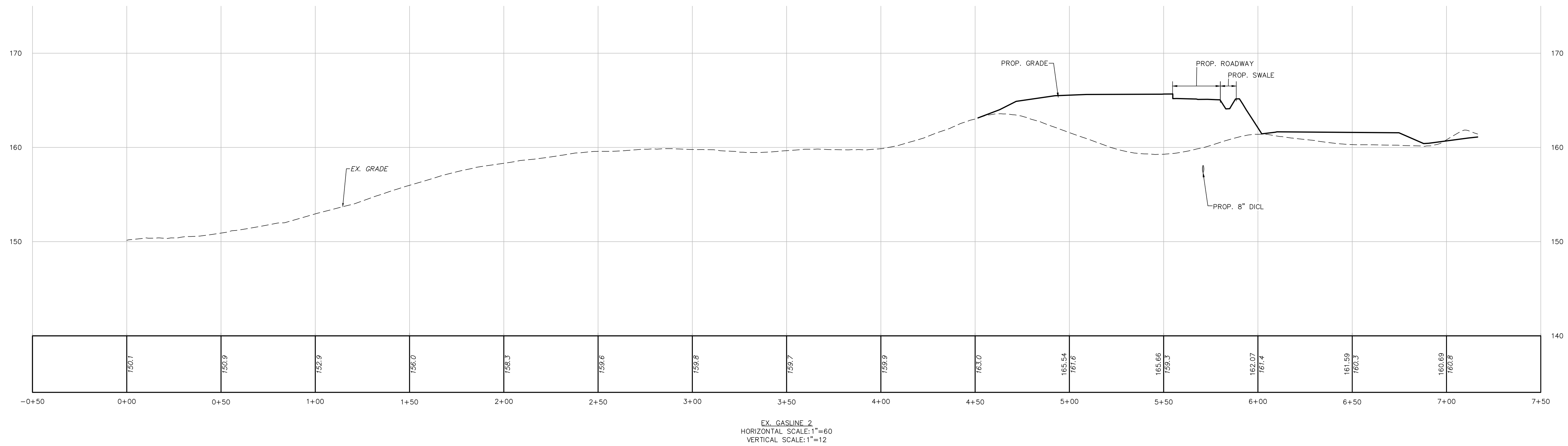
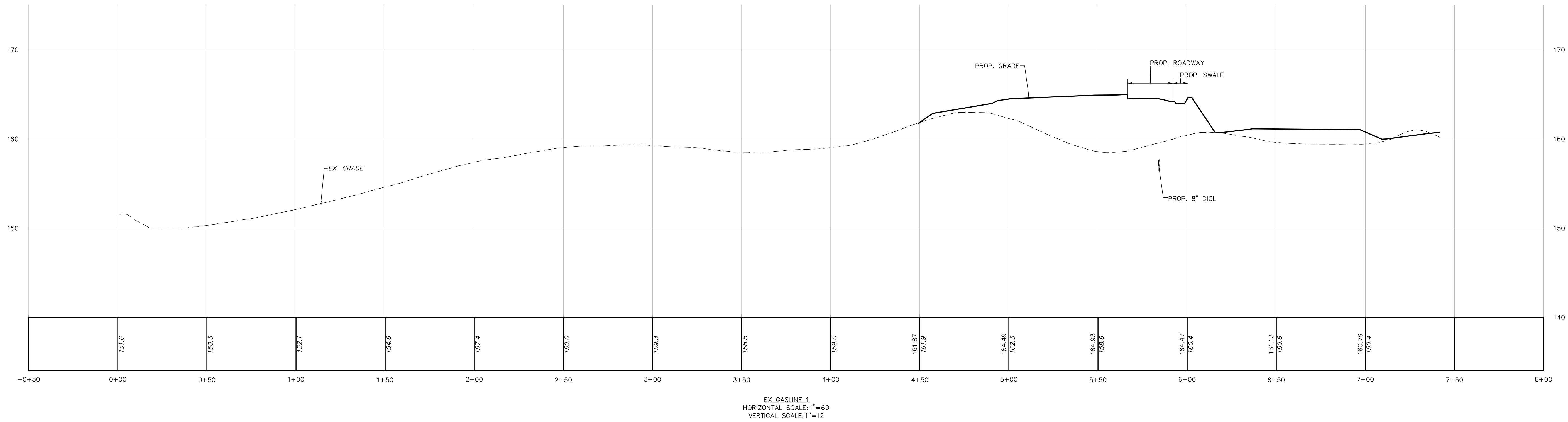
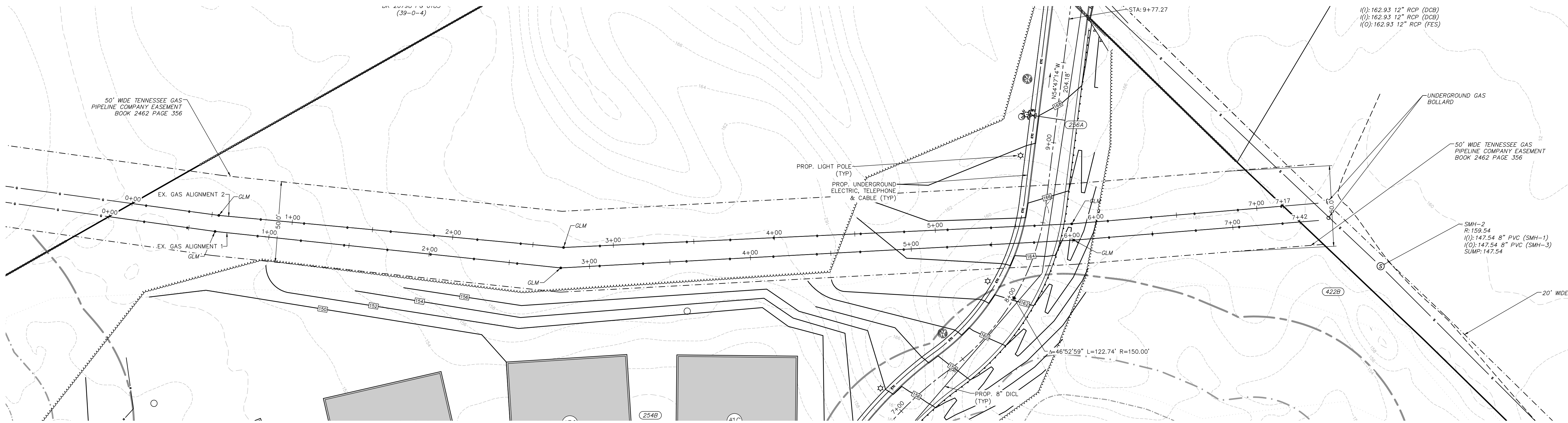
Depth	Horizon	Color	Texture
0-84	C1	10YR5/4	Coarse Sand
84-136	C2	10YR6/3	F. Loamy Sand
Many cobbles and stones in C1 layer			
Mottling @ 72"			
Weeping @ 84"			

CDCI-12

Depth	Horizon	Color	Texture
0-80	C1	10YR5/4	Coarse Sand
80-144	C2	10YR6/3	F. Loamy Sand
Many cobbles and stones in C1 layer			
Mottling @ 112"			
Weeping @ 144"			

Address: Murphy's Farm, Dracut, MA			
Date: 4/3/2024			
S.E.: Thomas Schomburg			
Witness: N/a			
Note: Test pits CDCI-14 - CDCI-23 performed in areas that have been stripped of top and subsoil. Soil has begun to weather.			
CDCI-13			
Depth	Horizon	Color	Texture
0-16	A	10YR3/2	Sandy Loam
16-36	B	10YR5/6	Sandy Loam
36-80	C	10YR5/3	Sandy Loam
Mottling @ 32"			
Water @ 40"			
CDCI-15			
Depth	Horizon	Color	Texture
0-12	A	10YR3/2	Sandy Loam
12-32	B	10YR5/6	Sandy Loam
32-96	C	10YR5/3	Sandy Loam
Mottling @ 30"			
Water @ 30"			
CDCI-16			
Depth	Horizon	Color	Texture
0-48	FILL	----	----
48-80	C	10YR5/3	Loamy Sand
Mottling @ 56"			
Water @ 72"			
Ledge @ 80"			
CDCI-17			
Depth	Horizon	Color	Texture
0-16	B	10YR5/6	Fine Sand
16-80	C	10YR5/3	Fine Sand
80-108	C2	10YR5/3	Gravely Sand
Many cobbles and stones in C Layer			
C2 Layer primarily gravel			
Mottling @ 24"			
Water @ 80"			
CDCI-19			
Depth	Horizon	Color	Texture
0-12	B	10YR5/6	Sand
12-120	C	10YR5/3	Gravely Sand
Many cobbles and stones in C Layer			
Mottling @ 60"			
Water @ 90"			
CDCI-21			
Depth	Horizon	Color	Texture
0-24	B	10YR5/6	Sand
24-48	C	10YR5/6	Gravely Sand
48-80	2C	10YR5/3	F. Loamy Sand
Many cobbles and stones in C Layer			
No mottling observed			
No water observed			
Ledge encountered at 80"			
CDCI-23			
Depth	Horizon	Color	Texture
0-16	B	10YR5/6	Sand
16-54	C	10YR5/6	Gravely Sand
Many cobbles and stones in C Layer			
No mottling observed			
No water observed			
Ledge encountered at 54"			
CDCI-14			
Depth	Horizon	Color	Texture
0-16	A	10YR3/2	Sandy Loam
16-32	B	10YR5/6	Sandy Loam
32-108	C	10YR5/3	Sandy Loam
Mottling @ 30"			
Water @ 30"			
CDCI-16			
Depth	Horizon	Color	Texture
0-48	FILL	----	----
48-80	C	10YR5/3	Loamy Sand
Mottling @ 56"			
Water @ 72"			
Ledge @ 80"			
CDCI-18			
Depth	Horizon	Color	Texture
0-24	B	10YR5/6	Sand
24-104	C	10YR5/3	Gravely Sand
Many cobbles and stones in C Layer			
Mottling @ 80"			
No water observed			
CDCI-20			
Depth	Horizon	Color	Texture
0-12	B	10YR5/6	Sand
12-102	C	10YR5/6	Gravely Sand
102-138	2C	10YR5/3	F. Loamy Sand
Many cobbles and stones in C Layer			
Mottling @ 102"			
No water observed			
CDCI-22			
Depth	Horizon	Color	Texture
0-16	B	10YR5/6	Sand
16-60	C	10YR5/6	Gravely Sand
60-80	2C	10YR5/3	F. Loamy Sand
Many cobbles and stones in C Layer			
No mottling observed			
No water observed			
Ledge encountered at 80"			
CDCI-24			
Depth	Horizon	Color	Texture
0-8	A	10YR3/2	Sand
8-16	B	10YR5/6	Sand
16-60	C	10YR5/6	Gravely Sand
60-72	2C	10YR5/3	F. Loamy Sand
Many cobbles and stones in C Layer			
Mottling @ 32"			
Water @ 72"			
Ledge encountered at 72"			

Address: Murphy's Farm, Dracut, MA			
Date: 12/4/2024			
S.E.: Thomas Schomburg & Steven Cummings			
Witness: N/A			
Note: Test pits CDCI-25 - CDCI-608 performed in areas that have been stripped of top and subsoil. Soil has begun to weather.			

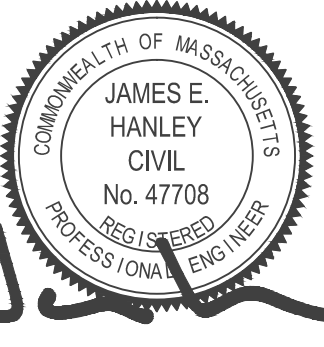


09/01/25	REVISED LAYOUT
05/09/25	REV. PER PEER REVIEW COMMENTS
03/27/25	REV. PER PEER REVIEW COMMENTS
02/25/25	REV. PER PEER REVIEW COMMENTS
01/21/25	REV. PER INTERNAL REVIEW
12/30/24	REV. PER PEER REVIEW COMMENTS
10/04/24	REV. PER PEER REVIEW COMMENTS
DATE	DESCRIPTION
REVISIONS	

APPLICANT:
**THE HOMES AT
MURPHY'S FARM LLC**
18 CASSIMERE STREET
ANDOVER, MA 01810

PROJECT:
MURPHY'S FARM
DRACUT, MA 01826

DATE ISSUED:	APRIL 22, 2024
PROJECT #:	23-10524
PREPARED BY:	TWS


PROFESSIONAL ENGINEER FOR CIVIL DESIGN
CONSULTANTS, INC.

**CIVIL
DESIGN**
CONSULTANTS, INC.
344 North Main Street | Andover, MA 01810
(978) 486-0920 | www.civil80.com

DRAWING TITLE:
**CONSTRUCTION
DETAILS**

DRAWING #:
D-6