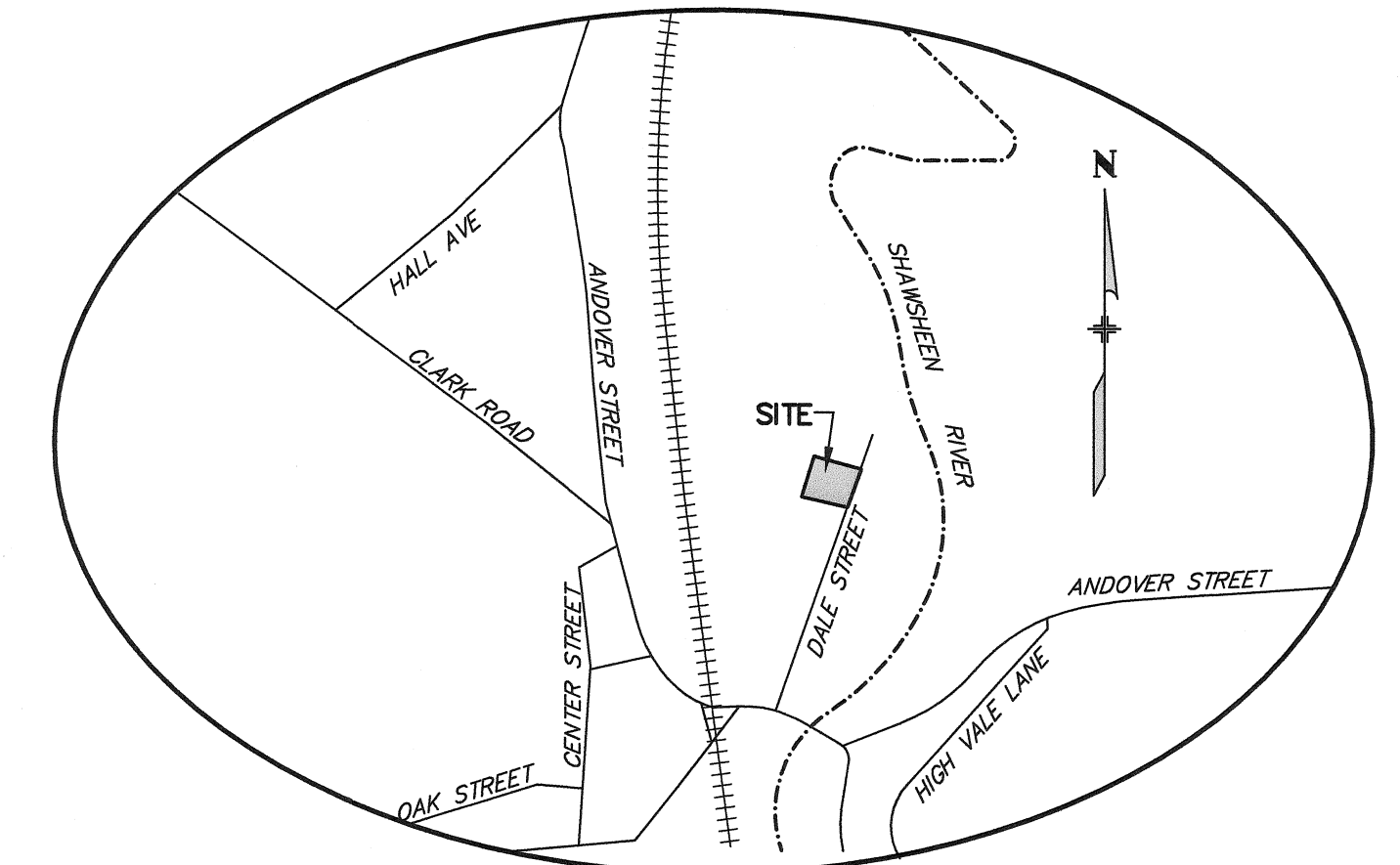


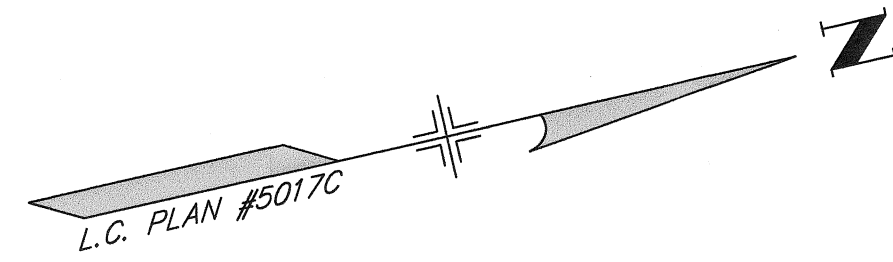
SITE IMPROVEMENT PLAN

24 & 30 DALE STREET

ANDOVER, MASSACHUSETTS



LOCUS MAP
(NTS)



NOTES:

- PERIMETER BOUNDARY SHOWN HEREIN IS AS DETERMINED BY A BOUNDARY SURVEY BY THIS OFFICE AND PLANS OF RECORD (SEE PLAN REFERENCES).
- TOPOGRAPHY IS FROM A FIELD SURVEY BY THIS OFFICE IN THE SUMMER OF 2025 ON THE 1988 NAVD DATUM.
- THIS SITE IS NOT WITHIN THE FLOOD HAZARD AREA AS SHOWN OF THE FEMA FLOOD INSURANCE RATE MAP COMMUNITY PANEL NUMBER 250 076 0218G, DATED JULY 8, 2025.
- OWNER OF RECORD:
 - MAP 138 - PARCEL 17 (LOT G-1)
PATRICK T. & NANCY W. KEENAN
24 DALE STREET
ANDOVER, MA 01810
ENDRD BOOK 10731 PAGE 129
 - MAP 138 - PARCEL 18 (LOT H-1)
BARRY M. & ROBERTA A. VERVILLE
30 DALE STREET
ANDOVER, MA 01810
ENDRD BOOK 7534 PAGE 132
- PLAN REFERENCES:
 - E.N.D.R.D. PLAN #1743
 - E.N.D.R.D. PLAN #2023
 - E.N.D.R.D. PLAN #14624
 - E.N.D.R.D. LC PLAN #5017C

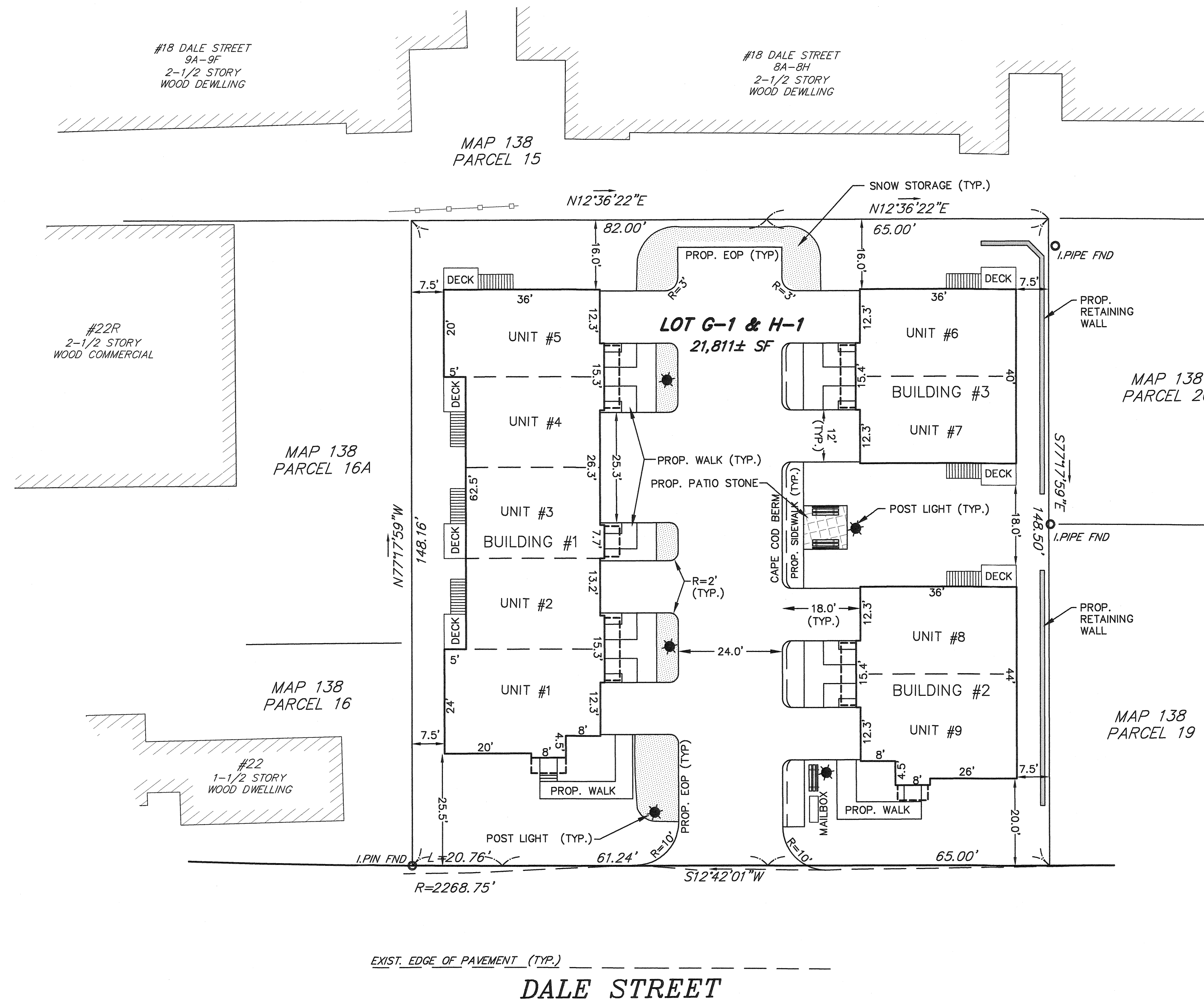
LAND USE TABLE

ASSESSOR'S MAP: 138
 PARCEL #: 17 & 18
 PROPERTY LOCATION: 24 & 30 DALE STREET
 ANDOVER, MA
 PARCEL AREA: 21,811± SF (0.50± AC)
 BUILDING COVERAGE: 30%

ZONING

ZONE DISTRICT: INDUSTRIAL G (IG) AND
 MULTIFAMILY OVERLAY-BALLARDVALE (MODB)
 PROPOSED USE: 9 UNIT TOWNHOUSE DEVELOPMENT

	REQUIRED		PROVIDED
	(IG)	(MODB)	
MIN. LOT AREA	-	-	21,811± SF
MIN. LOT FRONTAGE	-	-	147.0 FT
MIN. FRONT YARD	30 FT	5 FT	20.0 FT
MIN. SIDE YARD	15 FT	5 FT	5.0 FT
MIN. REAR YARD	15 FT	5 FT	15.0 FT
MAX. BUILDING STORIES	5 STORIES	3 STORIES	3 STORIES
MAX. BUILDING HEIGHT	60 FT	45 FT	< 45 FT
MAX. BUILDING COVERAGE	50%	30%	30%

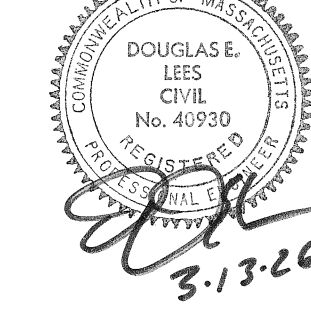
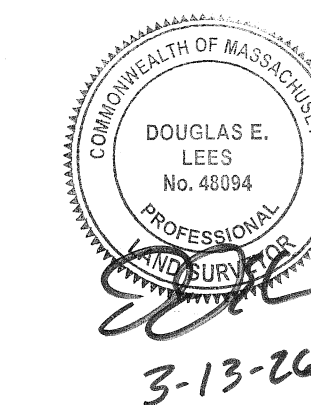


LEGEND

- I.P.I.P.E. FND IRON PIPE FOUND
- I.P.I.P.E. FND IRON ROD FOUND
- E.N.D.R.D. ESSEX NORTH DISTRICT REGISTRY OF DEEDS
- EOP PROPERTY LINE
- EXISTING EDGE OF PAVEMENT
- PROPOSED CAPE COD BERM

SHEET INDEX

- COVER SHEET/LAYOUT PLAN 1 OF 4
- EXISTING CONDITIONS PLAN 2 OF 4
- GRADING/UTILITY PLAN 3 OF 4
- DETAIL SHEET 4 OF 4



I CERTIFY THAT THE PREPARATION AND DESIGN OF THE PLAN AND ALL WORK SHOWN ON THE PLAN IS IN ACCORDANCE WITH GOOD ENGINEERING PRACTICES AND COMPLIES WITH ALL LOCAL REGULATIONS EXCEPT AS SHOWN HEREON.

[Signature]
 PROFESSIONAL ENGINEER
 DATE: 3-13-26

NOT RELEASED FOR CONSTRUCTION

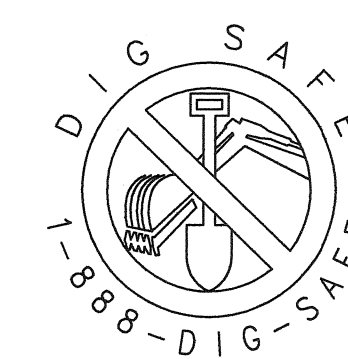
#24 & #30 DALE STREET
 IN
 ANDOVER, MASSACHUSETTS

COVER SHEET/LAYOUT PLAN

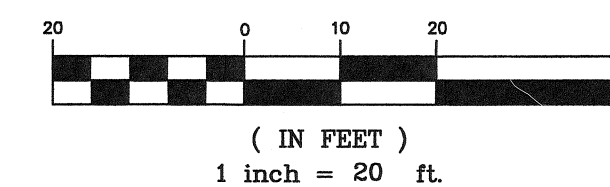
SCALE: 1"=20'	DATE: FEBRUARY 25, 2026	SHEET 1 OF 4	REV. A
JOB # 81502	REVISED: MARCH 13, 2026		

PREPARED FOR
 BRYAN DUBY CONSTRUCTION
 BILLERICA, MASSACHUSETTS

PREPARED BY
Land Engineering & Environmental Services, Inc.
 One Bridgeview Circle, Tyngsboro, Massachusetts 01879
 Telephone (978) 649-4642



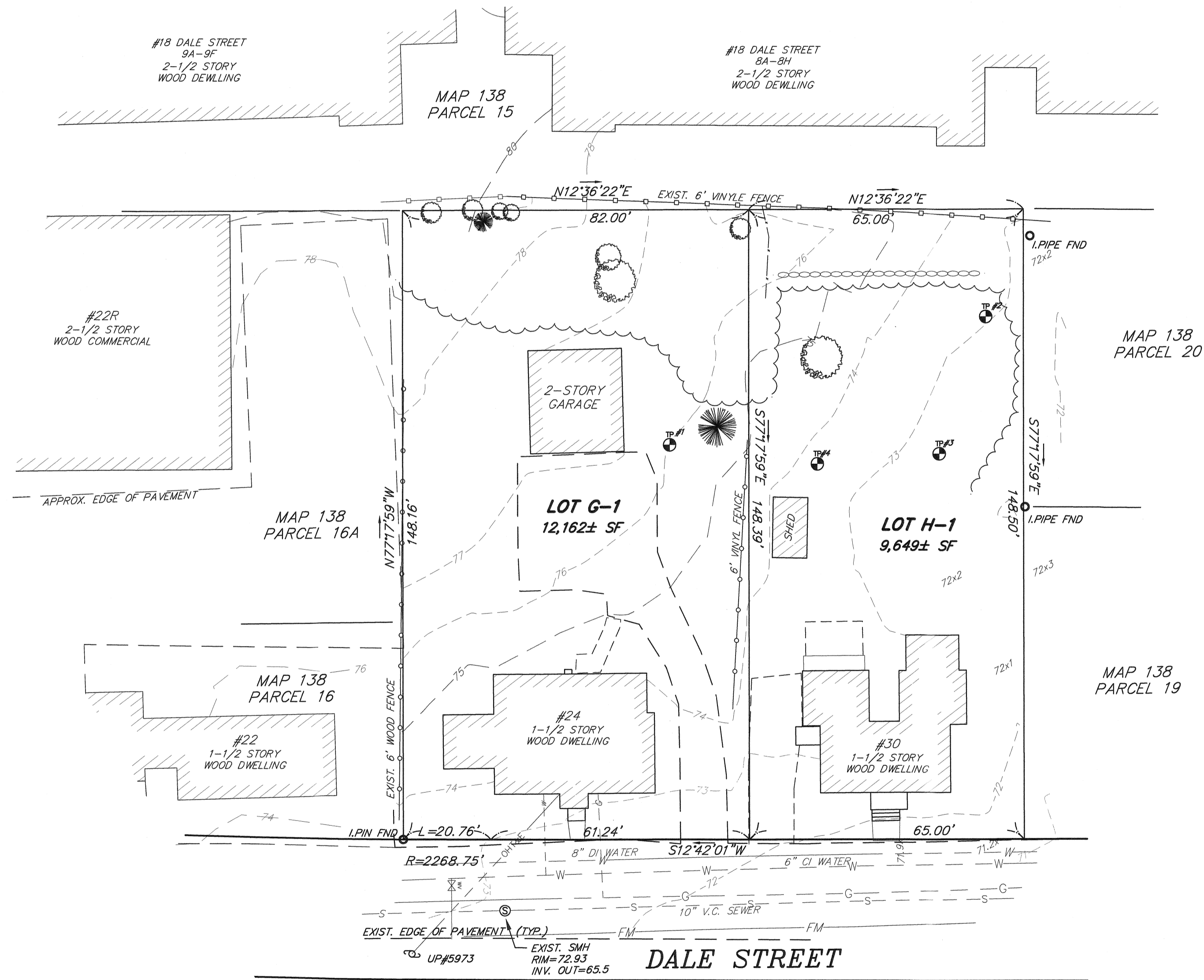
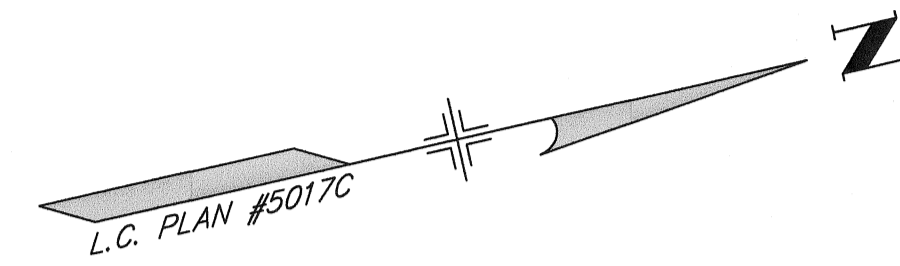
GRAPHIC SCALE



ANDOVER
 PLANNING BOARD

DATE

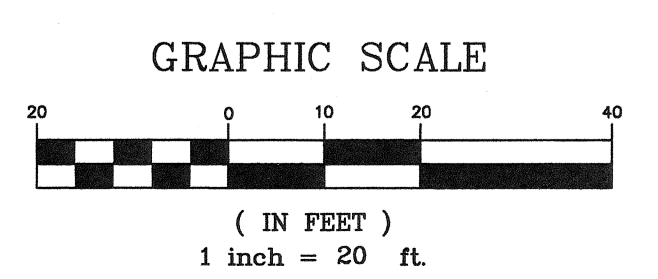
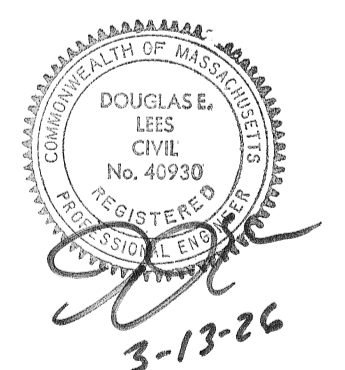
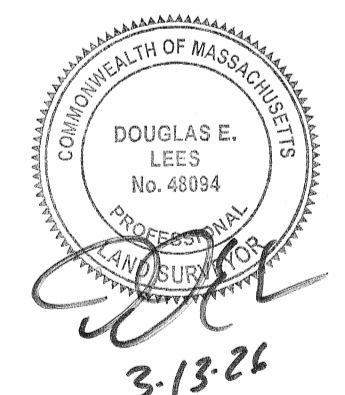
DATE	REVISION	BY
3/13/26	DRB COMMENTS	DEL



LEGEND

○ I.P.I.P.E. FND	IRON PIPE FOUND
● I.P.I.P.E. FND	IRON ROD FOUND
⊙	SEWER MANHOLE
⊕	UTILITY POLE
⊖	WATER GATE
⊗	TEST PIT
—	PROPERTY LINE
- - -	EDGE OF PAVEMENT
- - - G	GAS LINE
- - - S	SEWER PIPE
- - - W	WATER LINE
~~~~~	TREE LINE
—	STONEWALL
- - - OHT&E	OVERHEAD TELEPHONE & ELECTRIC
- - - FM	FORCE MAIN

**NOTE:**  
 1. EXISTING TOPOGRAPHY IS ON THE NAVD 88 DATUM.  
 2. THE LOCATION OF UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY AS SHOWN ON RECORD DRAWINGS AND HAVE NOT BEEN FIELD VERIFIED BY THE ENGINEER. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.



ANDOVER  
PLANNING BOARD

_____

_____

_____

DATE

NOT RELEASED FOR CONSTRUCTION

**#24 & #30 DALE STREET**  
 IN  
**ANDOVER, MASSACHUSETTS**

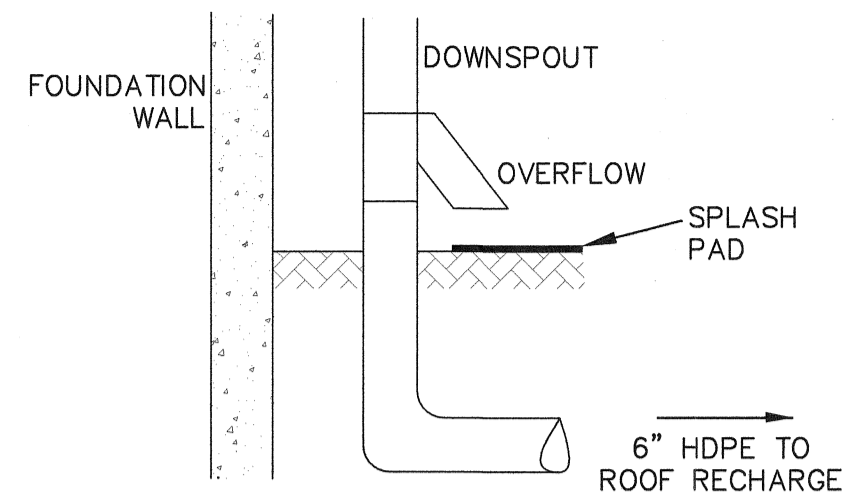
**EXISTING CONDITIONS PLAN**

SCALE: 1"=20'	DATE: FEBRUARY 25, 2026	SHEET 2 OF 4	REV. A
JOB # 81502	REVISED: MARCH 13, 2026		

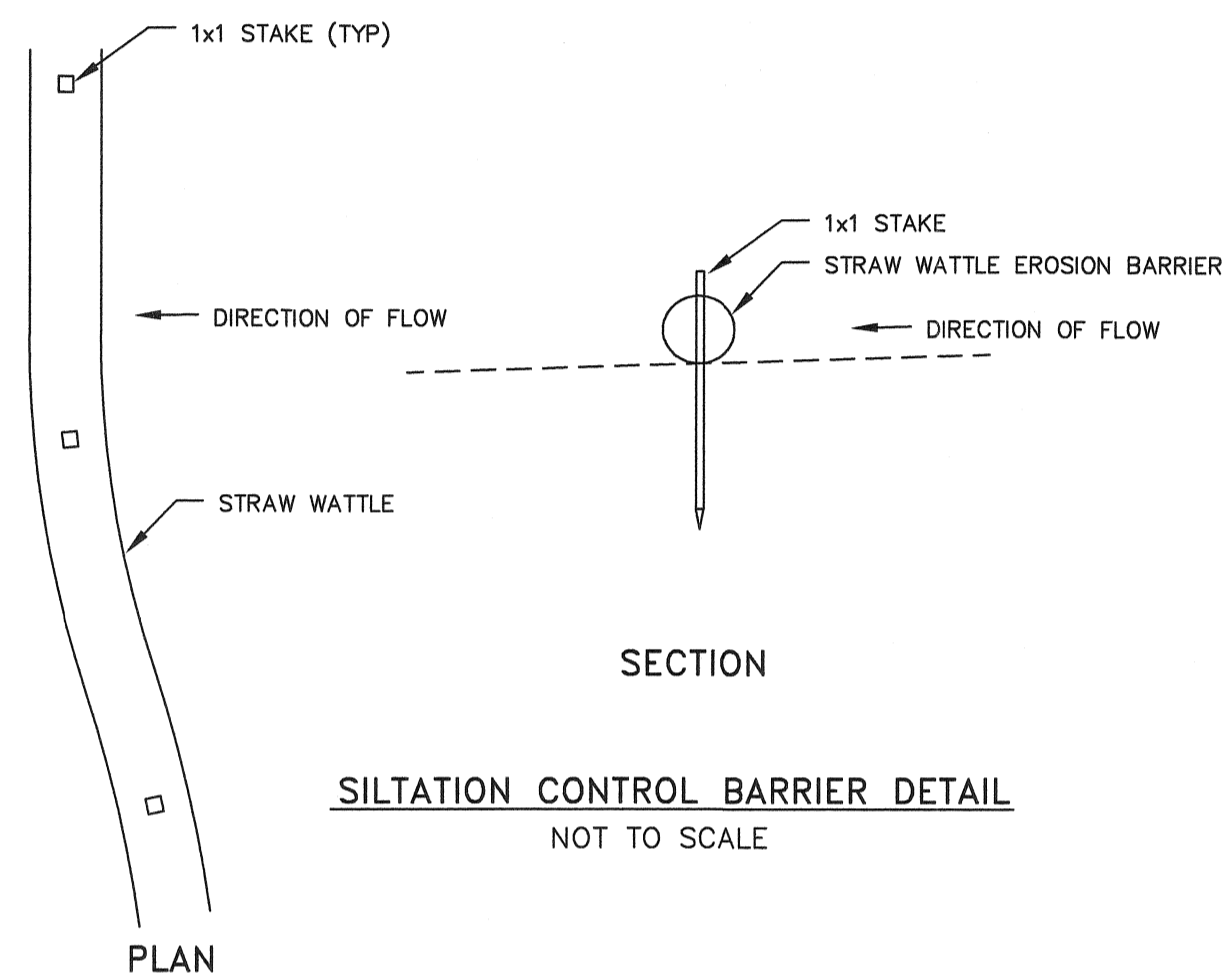
PREPARED FOR  
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 BILLERICA, MASSACHUSETTS

PREPARED BY  
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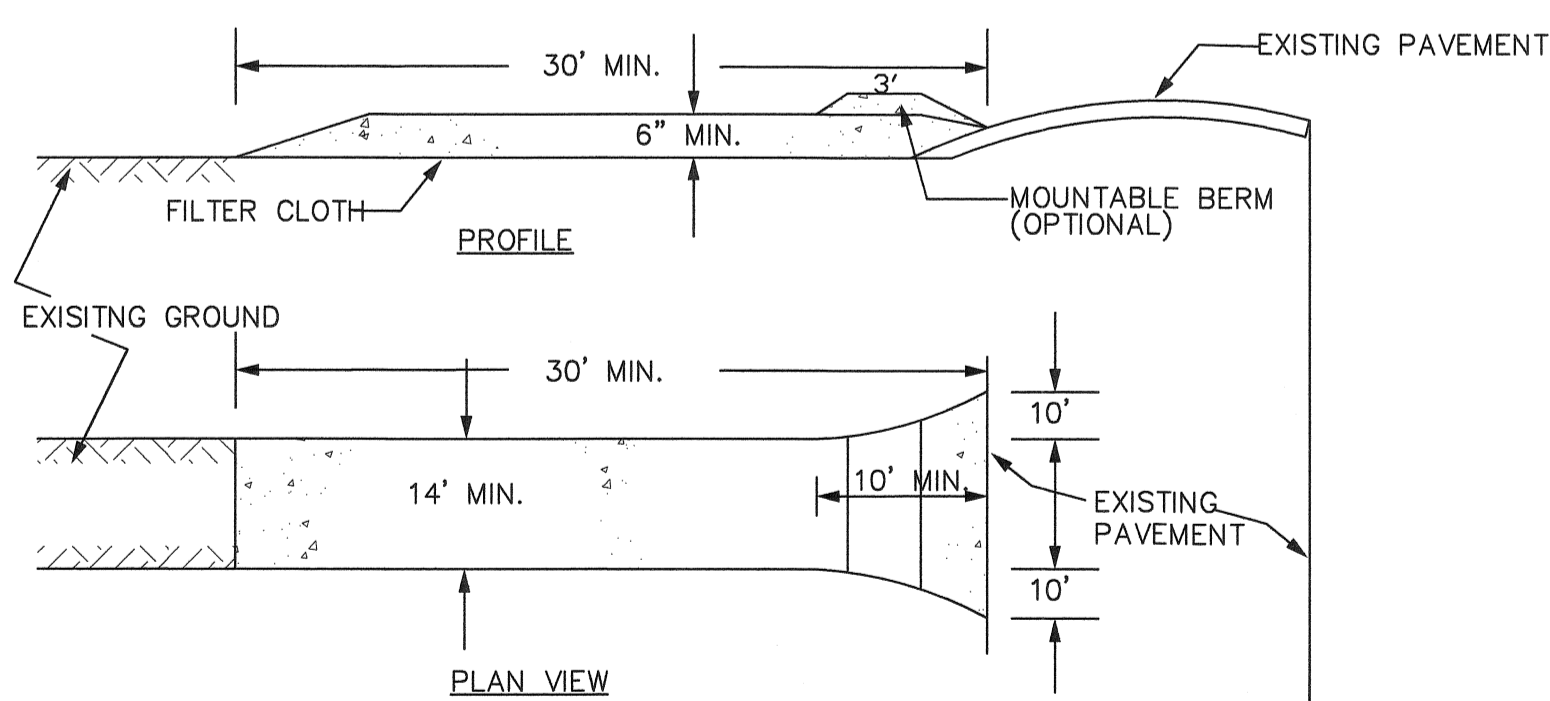
3/13/26	DRB COMMENTS	DEL
DATE	REVISION	BY



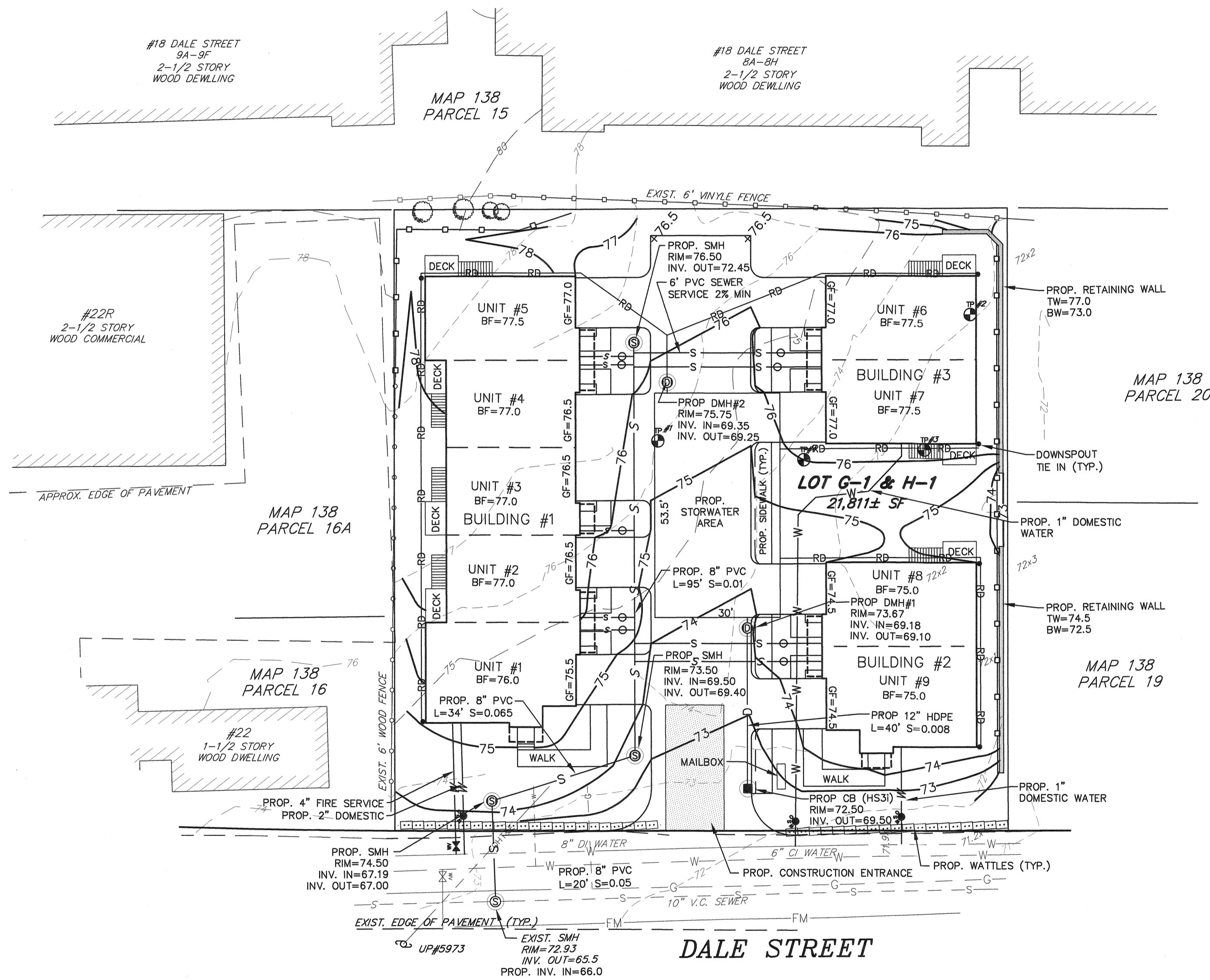
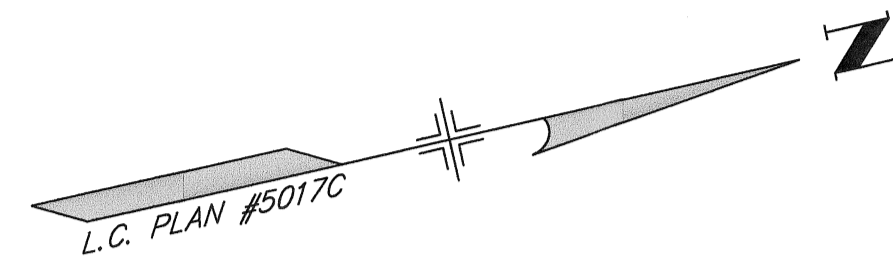
ROOF PIPE & DOWNSPOUT DETAIL  
NOT TO SCALE



SILTATION CONTROL BARRIER DETAIL  
NOT TO SCALE

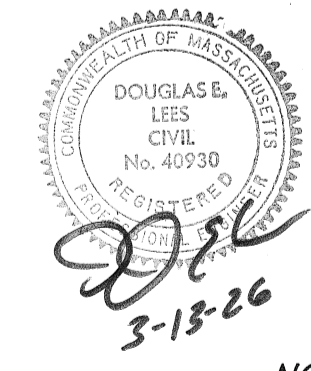


STABILIZED CONSTRUCTION ENTRANCE  
NOT TO SCALE



**LEGEND**

- |        |       |                           |
|--------|-------|---------------------------|
| EXIST. | PROF. |                           |
| ⊙      | ⊙     | CATCH BASIN               |
| ⊙      | ⊙     | DRAIN MANHOLE             |
| ⊙      | ⊙     | SEWER MANHOLE             |
| ⊙      | ⊙     | HYDRANT                   |
| ⊙      | ⊙     | WATER GATE                |
| ⊙      | ⊙     | WATER SHUT OFF            |
| ⊙      | ⊙     | UTILITY POLE              |
| ⊙      | ⊙     | TEST PIT                  |
| ---    | ---   | PROPERTY LINE             |
| ---    | ---   | EXISTING EDGE OF PAVEMENT |
| ---    | ---   | EXISTING GAS LINE         |
| ---    | ---   | EXISTING SEWER PIPE       |
| ---    | ---   | EXISTING WATER LINE       |
| ---    | ---   | PROPOSED DRAIN PIPE       |
| ---    | ---   | PROPOSED ROOF DRAIN       |
| ---    | ---   | PROPOSED GAS LINE         |
| ---    | ---   | PROPOSED SEWER PIPE       |
| ---    | ---   | PROPOSED WATER LINE       |
| ---    | ---   | PROPOSED CURB             |



NOT RELEASED FOR CONSTRUCTION

#24 & #30 DALE STREET  
IN  
ANDOVER, MASSACHUSETTS

**GRADING & UTILITY PLAN**

SCALE: 1"=20'	DATE: FEBRUARY 25, 2026	SHEET 3 OF 4	REV. A
JOB # 81502	REVISED: MARCH 13, 2026		

PREPARED FOR  
BRYAN DUBY CONSTRUCTION  
BILLERICA, MASSACHUSETTS

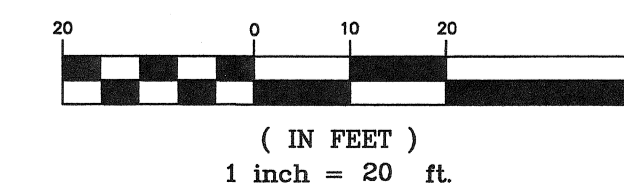
PREPARED BY  
**Land Engineering & Environmental Services, Inc.**  
One Bridgeview Circle, Tyngsboro, Massachusetts 01879  
Telephone (978) 649-4642

ANDOVER  
PLANNING BOARD

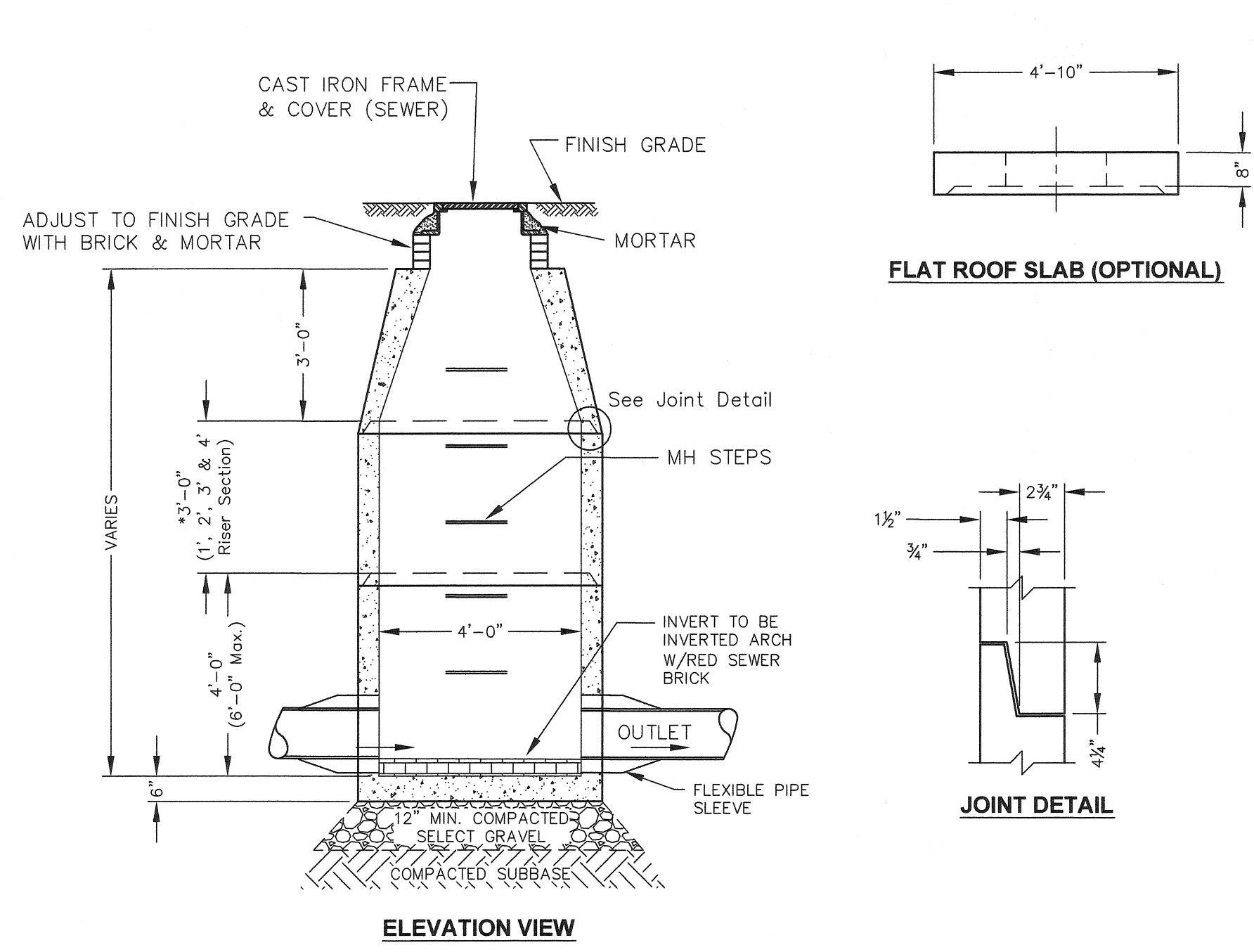
DATE



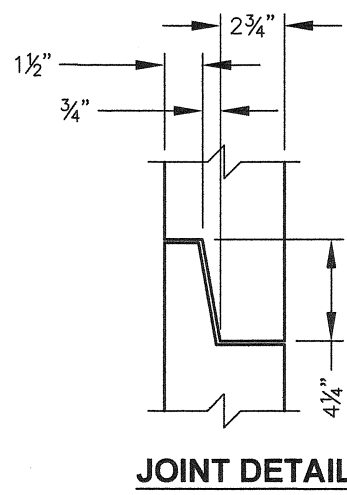
GRAPHIC SCALE



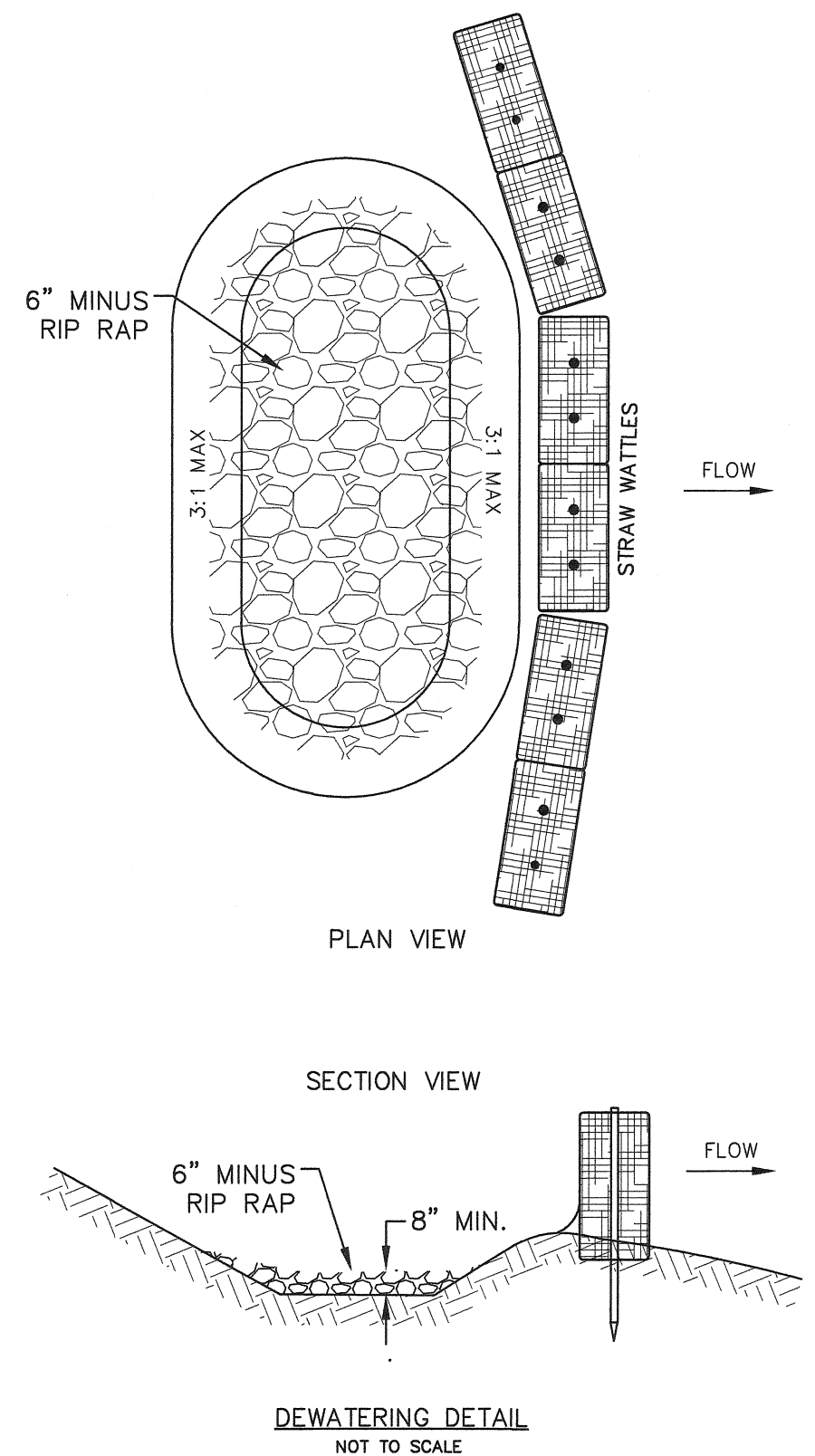
3/13/26	DRB COMMENTS	DEL
DATE	REVISION	BY



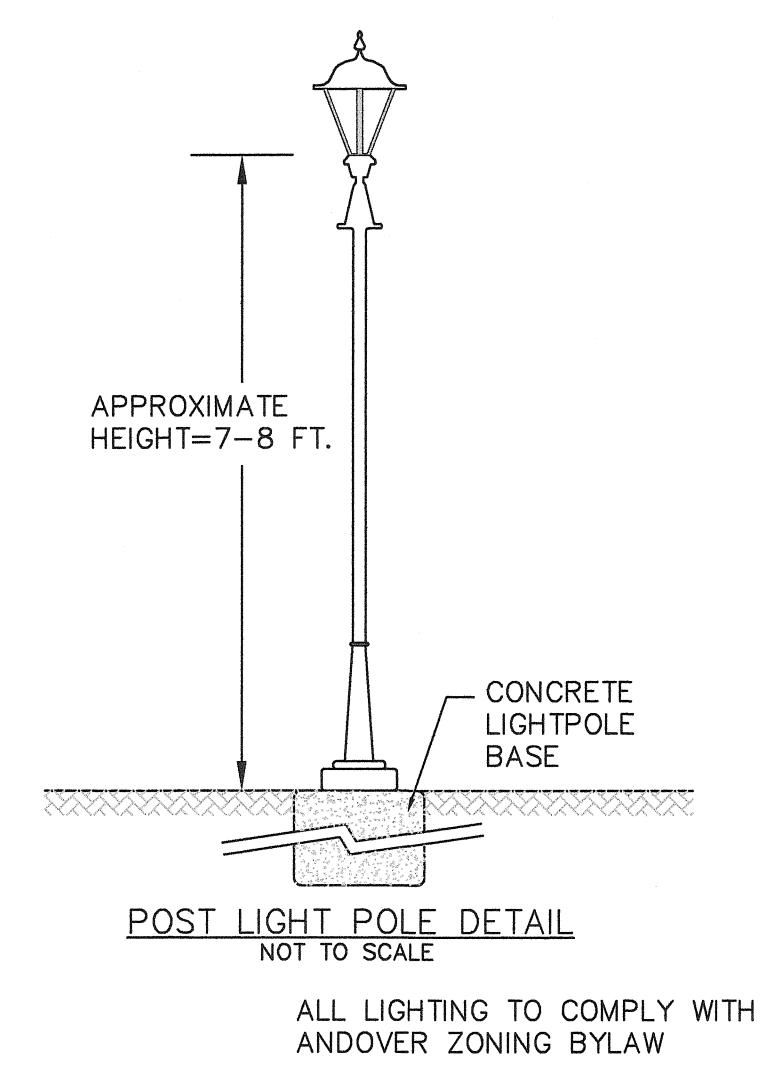
**FLAT ROOF SLAB (OPTIONAL)**



**TYPICAL SEWER MANHOLE DETAIL**  
NTS



**DEWATERING DETAIL**  
NOT TO SCALE



**Specifications**

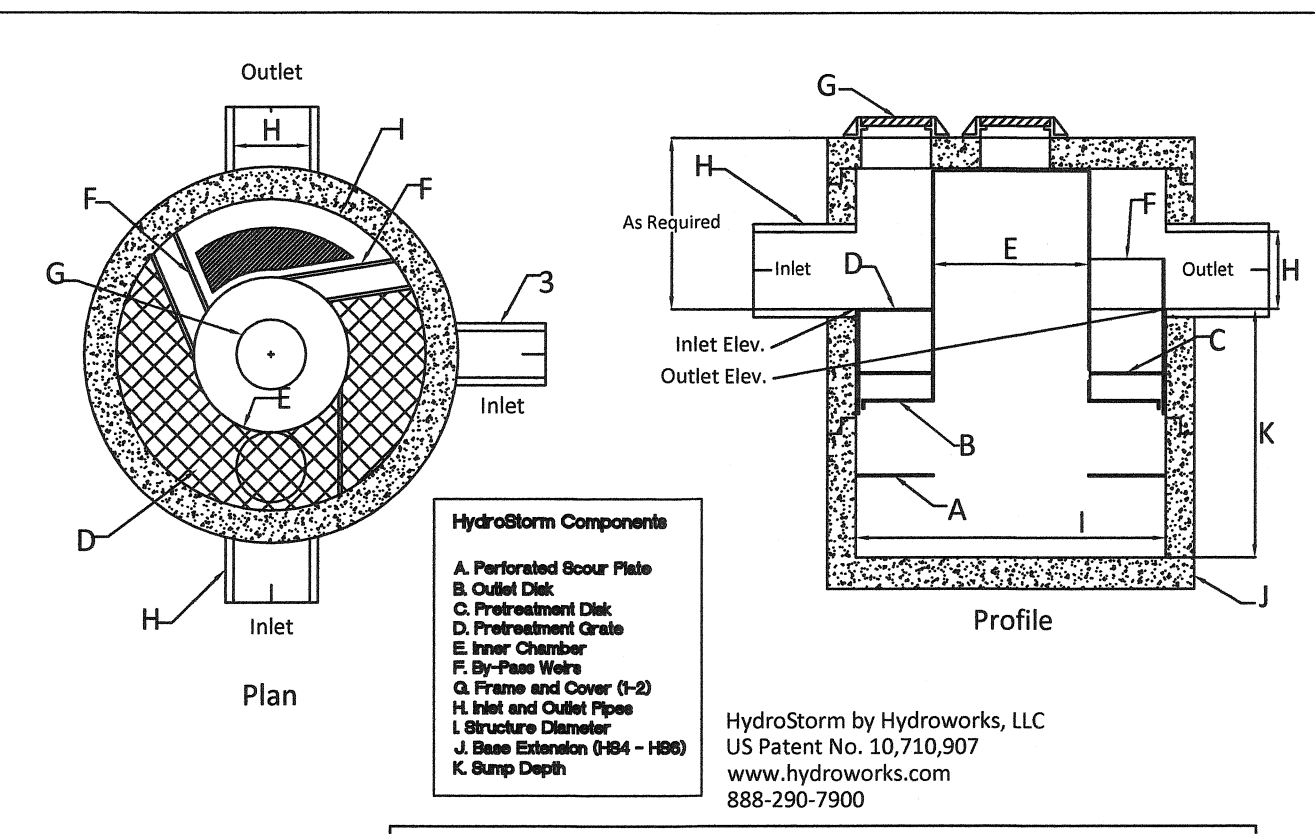
- Must be independently tested to the 2013 NIDEP Laboratory Protocol and 2013 ETV Canada protocol (ISO 14024:2016). Separator must be sized based on this data.
- Any testing performed by the manufacturer is unacceptable to demonstrate an alternate equal.
- Field Testing is unreliable, site and storm specific, and subject to compounding equipment and analytical errors and therefore is unacceptable as verification of an alternate equal. TARP verification as per NIDEP is testing consistent with the 2013 NIDEP laboratory protocol.
- The separator must be designed based on the following criteria:

Flow Criteria	
Water Quality Flow Rate cfs (L/s)	
Peak Design Flow Rate cfs (L/s)	

TSS Removal Criteria	
Annual TSS Removal (%)	
NIDEP/ETV Canada TSS	
OK110 Sand	
City of Toronto	
Other	

**Notes:**

- Headloss K factor of 1.04 for hydraulic gradeline calculations
- Sump depths shown are typical. Additional depth can be added as required
- Multiple inlet pipes allowed
- Drops allowed
- Inlet invert elevations should be the same or higher than the outlet invert elevation. Inlet can be up to 12" (300 mm) lower than outlet if pretreatment area is omitted but 12" (300 mm) must be added to sump depth to maintain overall treatment volume.
- Solid Cover shown. HydroStorm can be designed with an inlet grate if required.
- Oil capacities given are spill capacities.
- Sediment depths are maximum holding capacities and not recommended capacities for regular maintenance.
- Capacities are rounded down to nearest 5 gal or 19 (11 or 0.1 m3 for metric units)
- Base Extensions not provided on standard units larger than the HS 6. Extensions can be provided if required due to groundwater/buoyancy concerns at the request of the engineer of record.
- HS4 to HS6 models require one frame and cover. HS7 to HS12 models require two covers

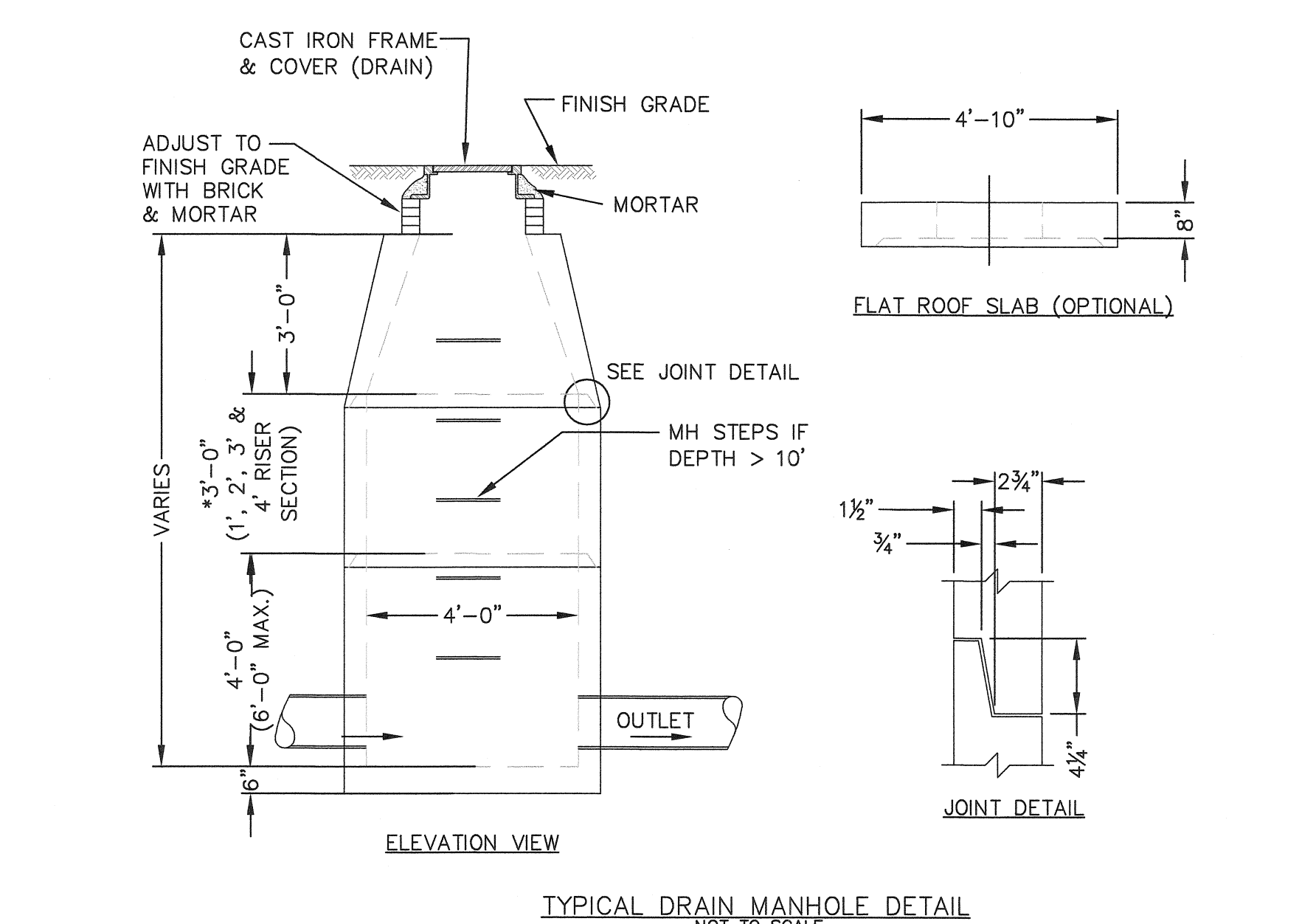


**Hydroworks HydroStorm**

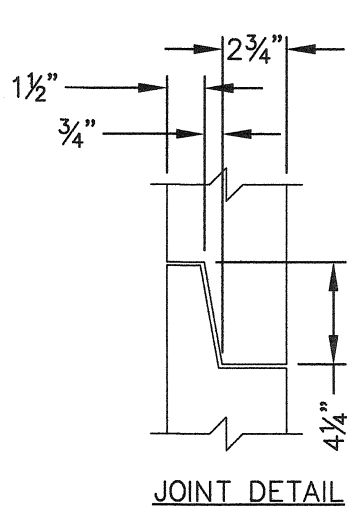
PROJECT:

LOCATION:

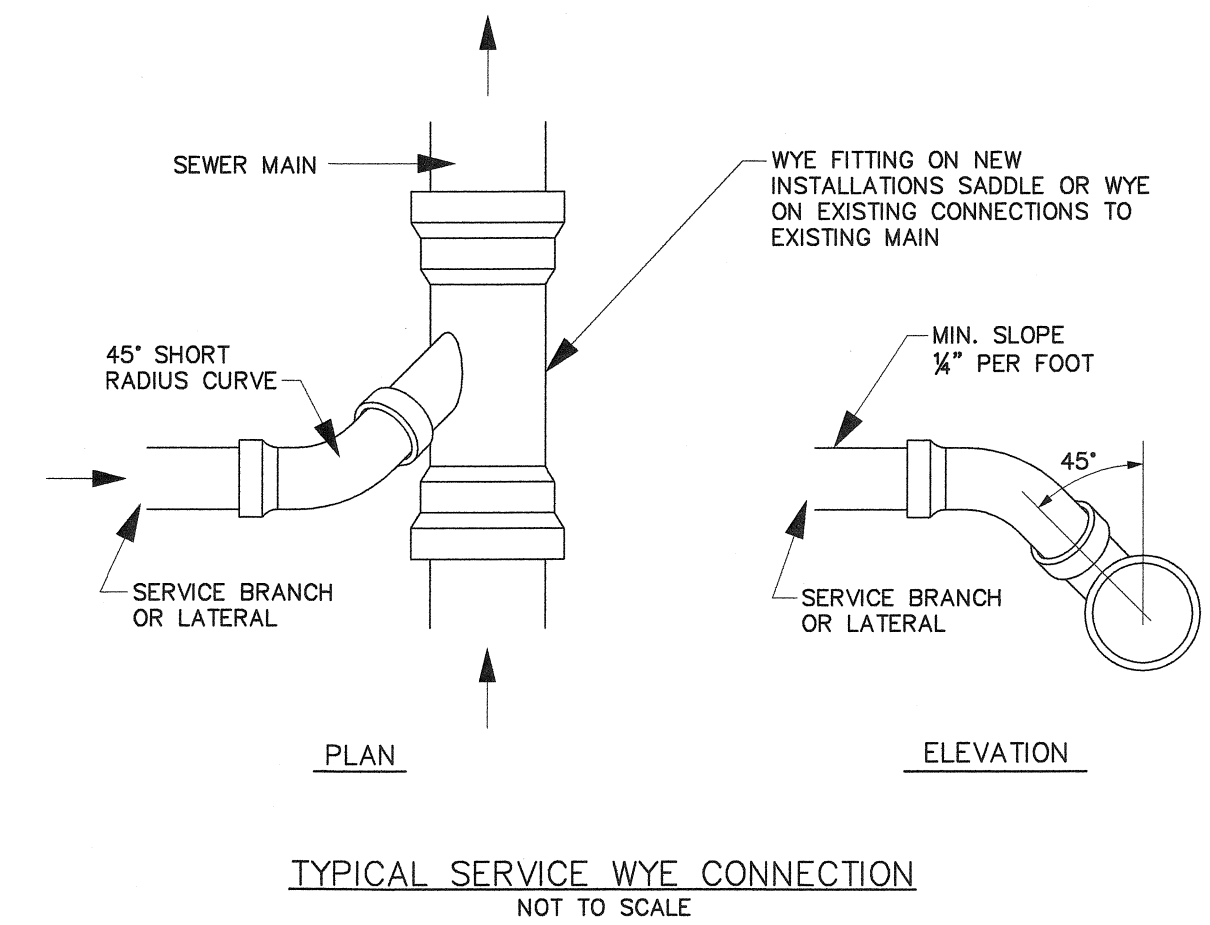
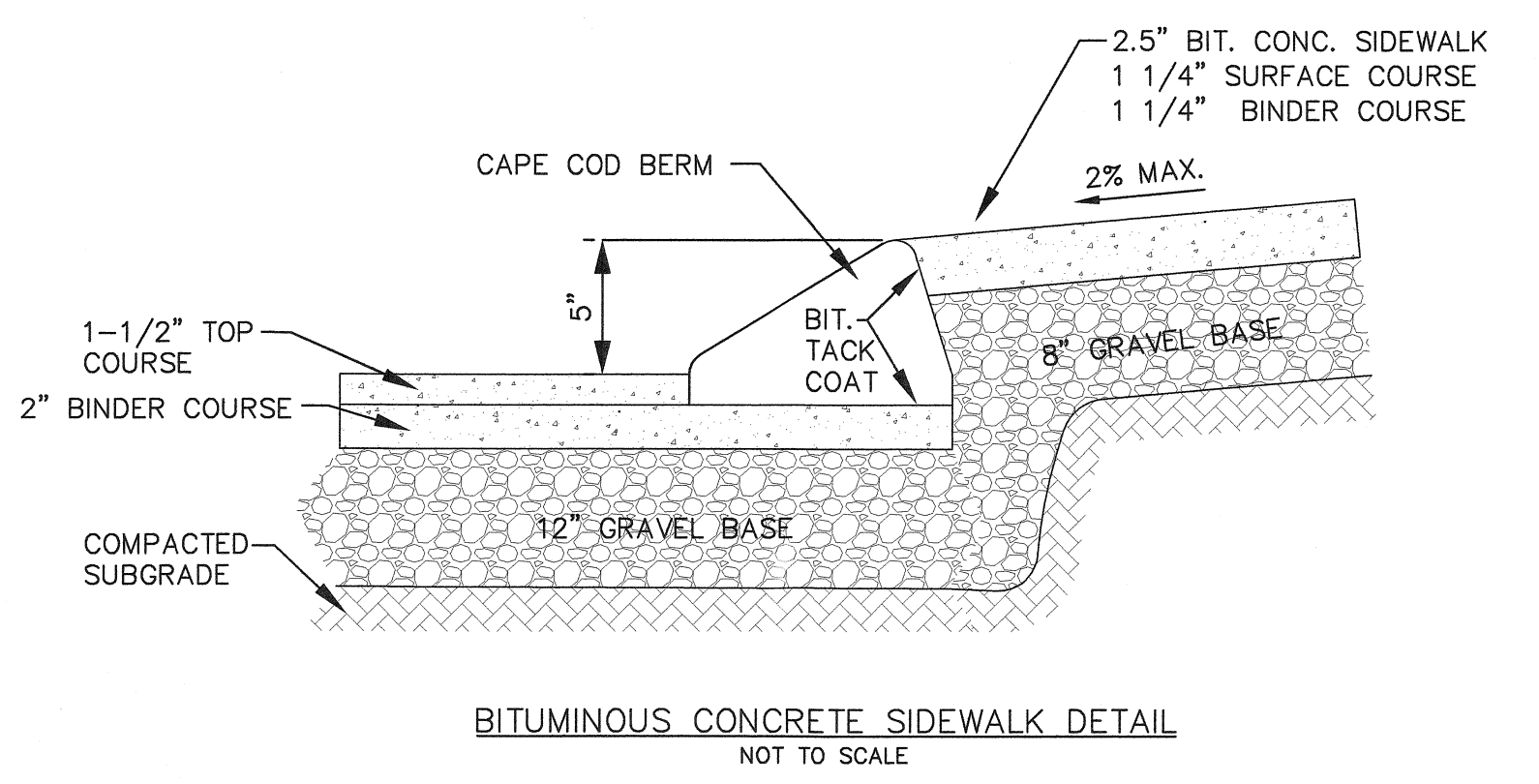
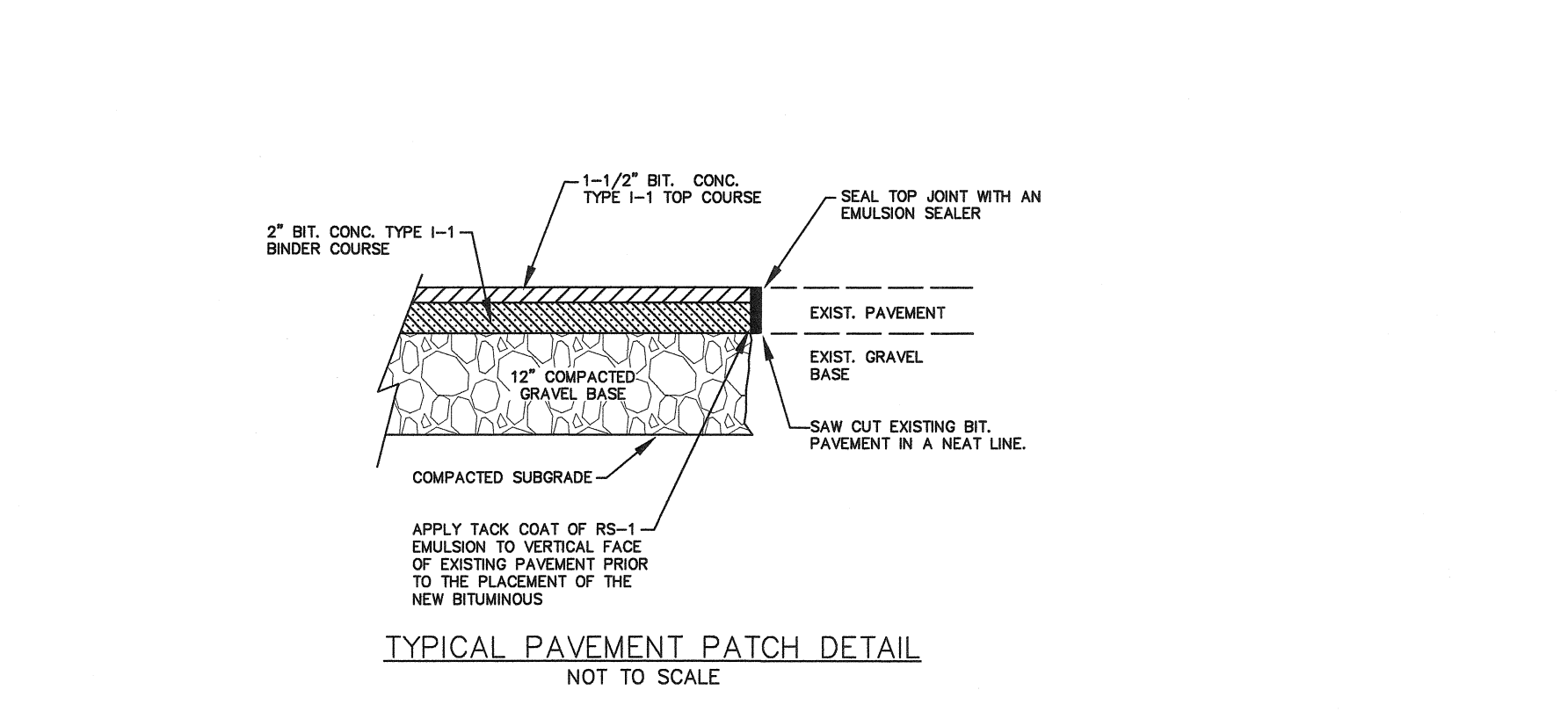
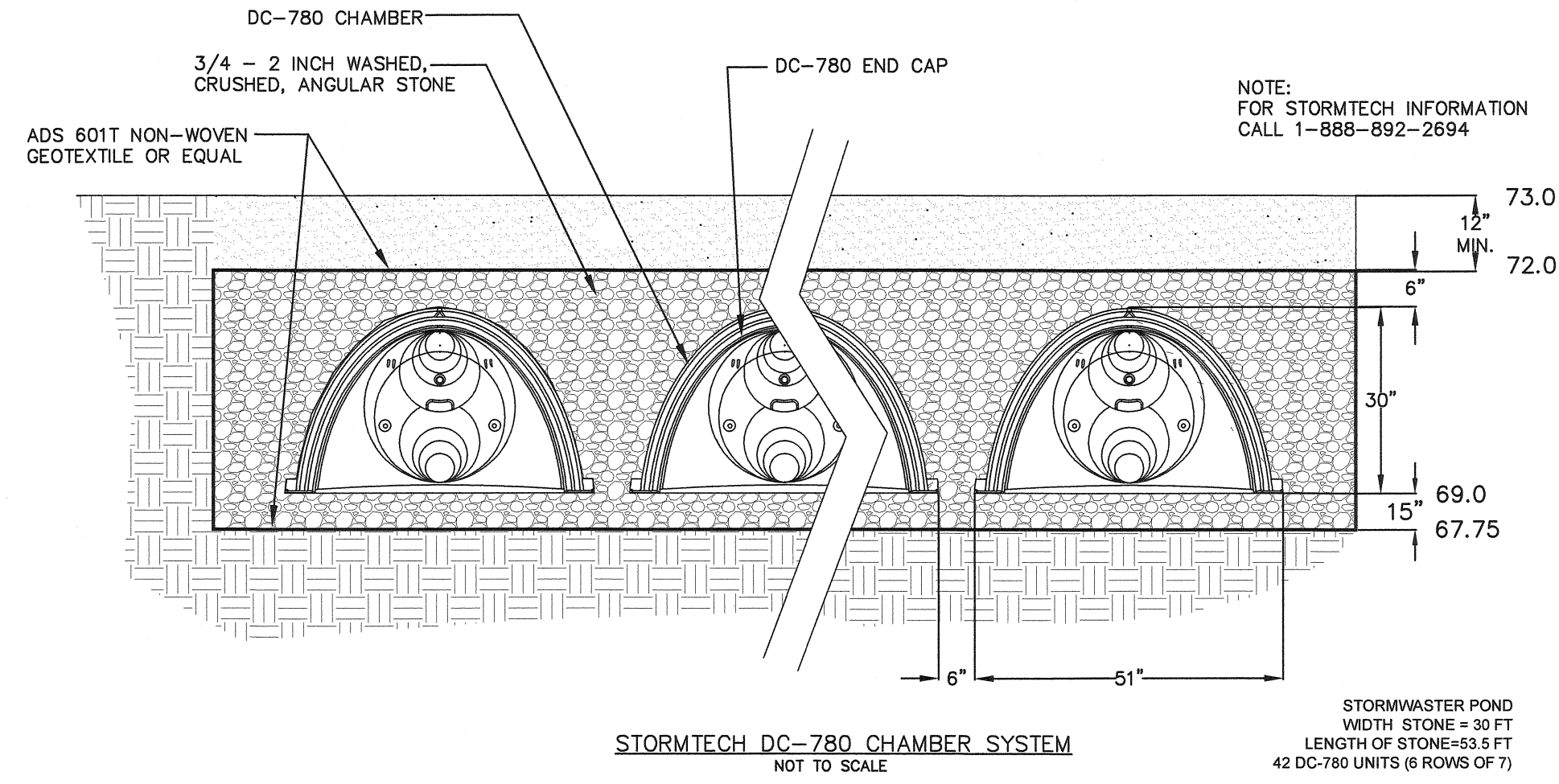
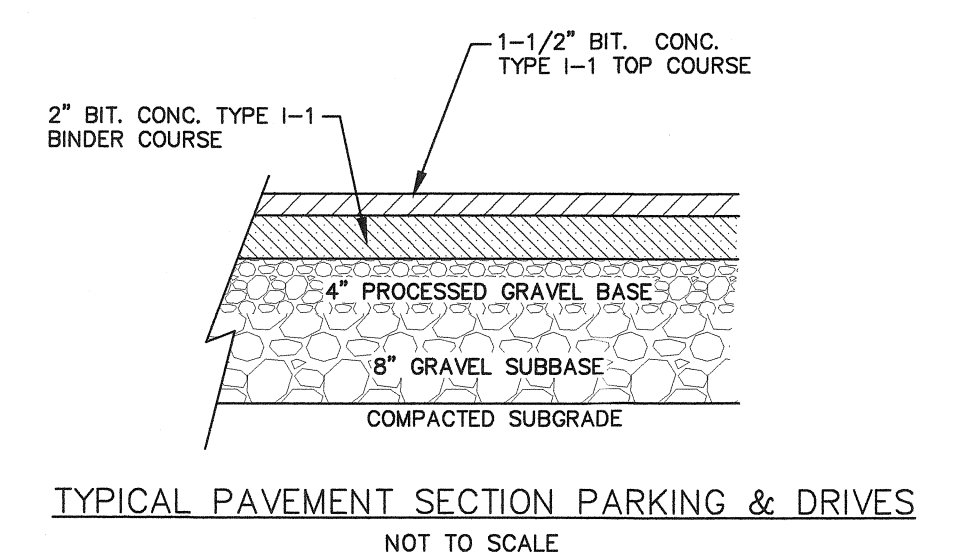
REVISION DATE: 08/07/2020



**FLAT ROOF SLAB (OPTIONAL)**

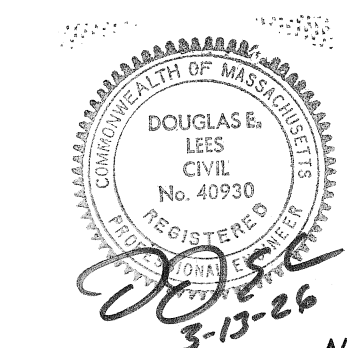


**TYPICAL DRAIN MANHOLE DETAIL**  
NOT TO SCALE



ANDOVER PLANNING BOARD

DATE



NOT RELEASED FOR CONSTRUCTION

#24 & #30 DALE STREET  
IN  
ANDOVER, MASSACHUSETTS

**DETAIL PLAN**

SCALE: AS NOTED	DATE: FEBRUARY 25, 2026	SHEET 4 OF 4	REV. A
JOB # 81502	REVISED: MARCH 13, 2026		

PREPARED FOR  
BRYAN DUBY CONSTRUCTION  
BILLERICA, MASSACHUSETTS

PREPARED BY  
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DATE	REVISION	BY
3/13/26	DRB COMMENTS	DEL