

# GUARDIAN ESTATES

20 UNIT RESIDENTIAL SUBDIVISION

For

GARY AND MEGAN JORDAN  
& DONALD GRANT  
33 QUINCY DRIVE  
GORHAM, MAINE 04038

## PLAN INDEX

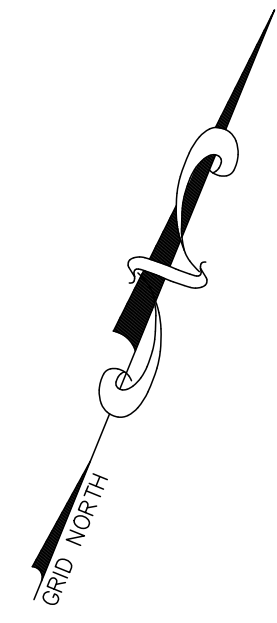
- 1 PRELIMINARY PLAN
- 2 EXISTING CONDITIONS
- 3 GUARDIAN HEIGHTS STA. 0+00 TO 6+50
- 4 GUARDIAN HEIGHTS STA. 6+50 TO 13+00
- 5 MUSTANG WAY STA. 0+00 TO 6+50
- 6 MUSTANG WAY STA. 6+50 TO 13+00
- 7 POND DETAILS
- 8 DETAILS A
- 9 DETAILS B
- A PRE DEVELOPMENT WATERSHED
- B POST DEVELOPMENT WATERSHED



*Berry, Huff, McDonald, Milligan Inc.*  
Engineers, Surveyors

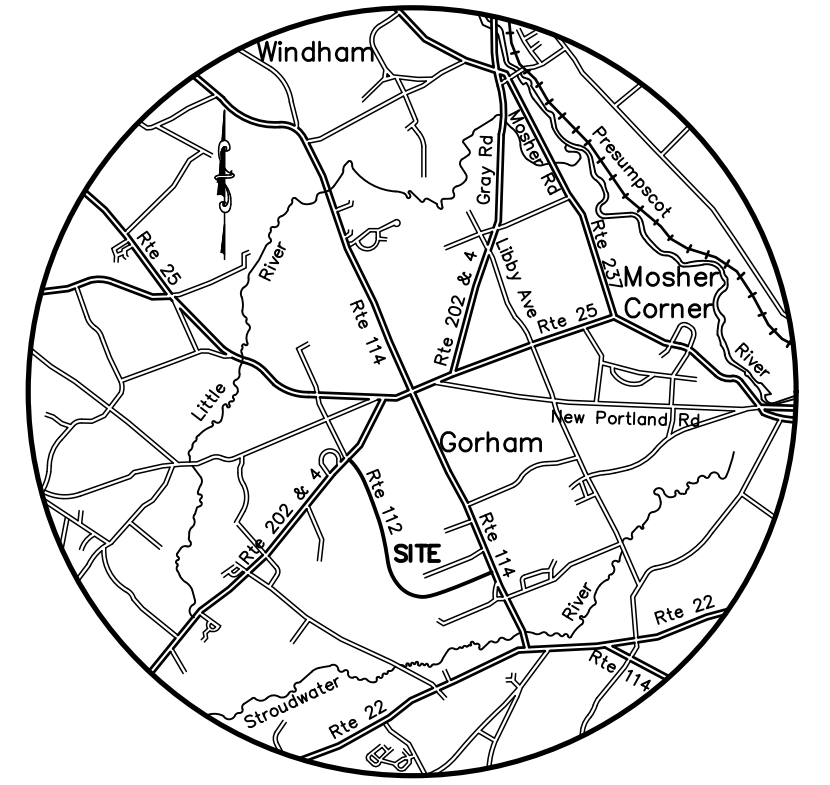
380B Main Street  
Gorham, Maine 04038

Tel. (207) 839-2771  
[www.bh2m.com](http://www.bh2m.com)



LINE, CURVE, & EASEMENT DATA

- L1 - S22°08'38"E, 16.50'
L2 - S67°51'22"W, 150.26'
L3 - S21°38'50"W, 41.92'
L4 - S21°38'50"W, 33.00'
L5 - S67°51'22"W, 144.48'
L6 - N21°30'50"W, 38.62'
L7 - S21°30'50"E, 38.62'
L8 - S68°21'10"W, 31.40'
L9 - S26°44'45"W, 51.47'
C1 - R=1900.00', L=17.43'
C2 - R=20.00', L=31.42'
C3 - R=20.00', L=31.42'
C4 - R=20.00', L=31.42'
C5 - R=20.00', L=31.42'
C6 - R=20.00', L=31.42'
C7 - R=20.00', L=31.42'
C8 - R=175.00', L=30.15'
E1 - S62°10'55"W, 78.45'
E2 - S62°10'55"W, 29.53'
E3 - S04°20'00"W, 325.23'
E4 - S85°40'00"W, 175.57'
E5 - N85°40'00"E, 134.73'



LOCATION MAP
SCALE: 1" = 2 MILES

Table with columns: NO., DATE, REVISION. Row 1: 1, 2/12/24, Submitted to Town for Preliminary Review.

- NOTES:
1. OWNERS: GARY AND MEGAN JORDAN...
2. SURVEYOR: ROBERT C. LIBBY JR., PLS #2190...
3. DEED REFERENCE: BK. 39417, PG. 77...
4. TAX MAP REFERENCE: MAP 18, LOT 5-1...
5. ZONING: URBAN RESIDENTIAL EXPANSION...
6. PARCEL AREA: 1,285,890 S.F. (29.520 ACRES)...
7. SEWER SERVICE: INDIVIDUAL SUBSURFACE DISPOSAL SYSTEM...
8. WATER: INDIVIDUAL DOMESTIC WELL...
9. ELECTRIC: UNDERGROUND...
10. COORDINATES/BEARINGS: BEARINGS ARE GRID NORTH, MAINE STATE PLANE 1802 WEST ZONE...
11. MIN. STANDARDS: URBAN RESIDENTIAL EXPANSION DISTRICT...
12. PLAN REFERENCES: A. STANDARD BOUNDARY SURVEY... B. LETTER OF MAP AMENDMENT SKETCH... C. PLAN OF PRIVATE WAY ON WATERHOUSE ROAD... D. STATE HIGHWAY 94...
13. THE HATCHED PORTION OF WATERHOUSE ROAD APPEARS TO BE ABANDONED...
14. SEE GORHAM TOWN RECORDS, VOLUME 4, ARTICLE 13, PAGES 447 AND 454...
15. CONTRACTOR SHALL RECEIVE AN EXCAVATORS LICENSE AND STREET OPENING PERMIT...
16. ALL UNDERGROUND POWER MUST BE INSPECTED BY CODE ENFORCEMENT DEPARTMENT...
17. A DRIVEWAY SIGN SHALL BE INSTALLED AS SOON AS CONSTRUCTION OF HOMES BEGINS...
18. SNOW WILL BE STORED ALONG THE ESPALANADE AND DITCHES OF THE ROADWAY...
19. THE BUILDING FOOTPRINT SHOWN IS FOR PERMITTING PURPOSE ONLY...
20. ALL BUILDINGS WITHIN THE SUBDIVISION ARE REQUIRED TO MEET ALL APPLICABLE SECTIONS OF NPFA 1 FIRE CODE AND NPFA 101 LIFE SAFETY CODE...
21. THE BUILDINGS SHALL BE PROTECTED UNDER THE FIRE SUPPRESSION SYSTEMS ORDINANCE...
22. THE BUILDINGS SHALL BE PROPERLY NUMBERED IN ACCORDANCE WITH ES91 STANDARDS...
23. WETLAND IMPACTS = 3,875 SF.

BH2M logo and contact information for Berry, Huff, MacDonald, Miliffigan Inc. Engineers, Surveyors.

FOR Gary & Megan Jordan & Donald Grant 33 Quincey Drive Gorham, Maine

PRELIMINARY PLAN GUARDIAN ESTATES WATERHOUSE ROAD GORHAM, MAINE

Table with columns: DESIGNED, DATE, DRAWN, SCALE, CHECKED, JOB. NO. Values: A. Fagan, August 2022, Dept., 1" = 100', R. Libby Jr., 22092.

SHEET 1

REPRODUCTION OR REUSE OF THIS DOCUMENT WITHOUT THE EXPRESSED WRITTEN CONSENT OF BH2M INC. IS PROHIBITED.



PLAN REVIEWED AND APPROVED BY THE TOWN OF FREEPORT PLANNING BOARD.

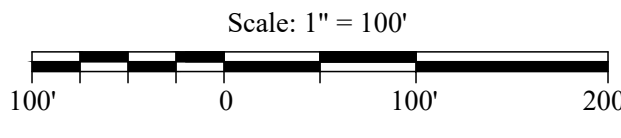
Table with columns: CHAIR, DATE. Includes a signature line for Robert C. Libby Jr.

I CERTIFY THAT THIS SURVEY CONFORMS TO THE MAINE BOARD OF LICENSURE FOR PROFESSIONAL LAND SURVEYORS TECHNICAL STANDARDS OF PRACTICE FOR A STANDARD BOUNDARY SURVEY WITH THE FOLLOWING EXCEPTIONS:

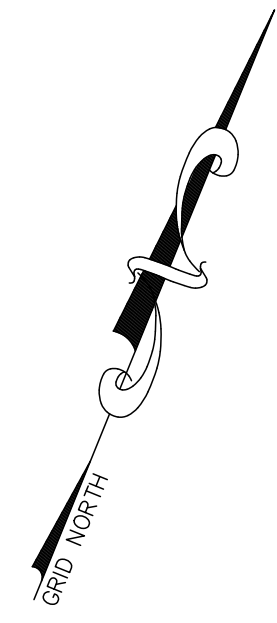
- 1. NO SURVEYORS REPORT

SYMBOL and LEGEND table listing symbols for iron rod found, property line, easement line, wetlands, etc.

Steven & Jackielyn Matthews, Book 40356, Page 319, Tax Map 18, Lot 6

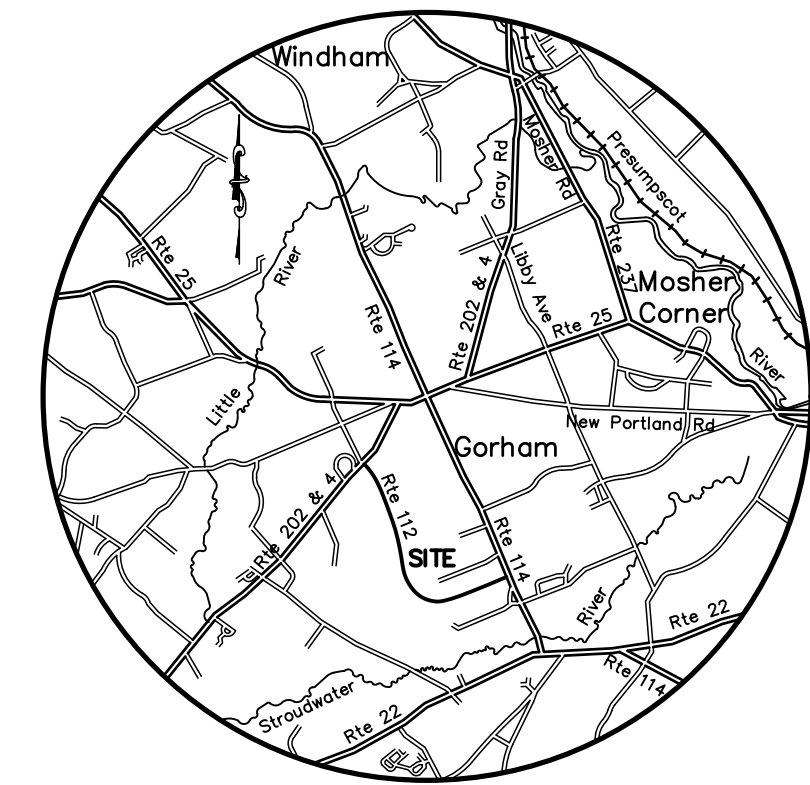


MAX NET RESIDENTIAL DENSITY CALCULATION table showing total area, isolated land, flood zone, wetlands, easements, stream channel, sustained slopes, borrow pit, poorly drained soils, other areas, and net area of 809,177 S.F.



LINE & CURVE DATA

- L1 - S22°08'38"E, 16.50'
- L2 - S67°51'22"W, 150.26'
- L3 - S21°38'50"W, 41.92'
- L4 - S21°38'50"W, 33.00'
- L5 - S67°51'22"W, 144.46'
- C1 - R=1900.00', L=17.43'

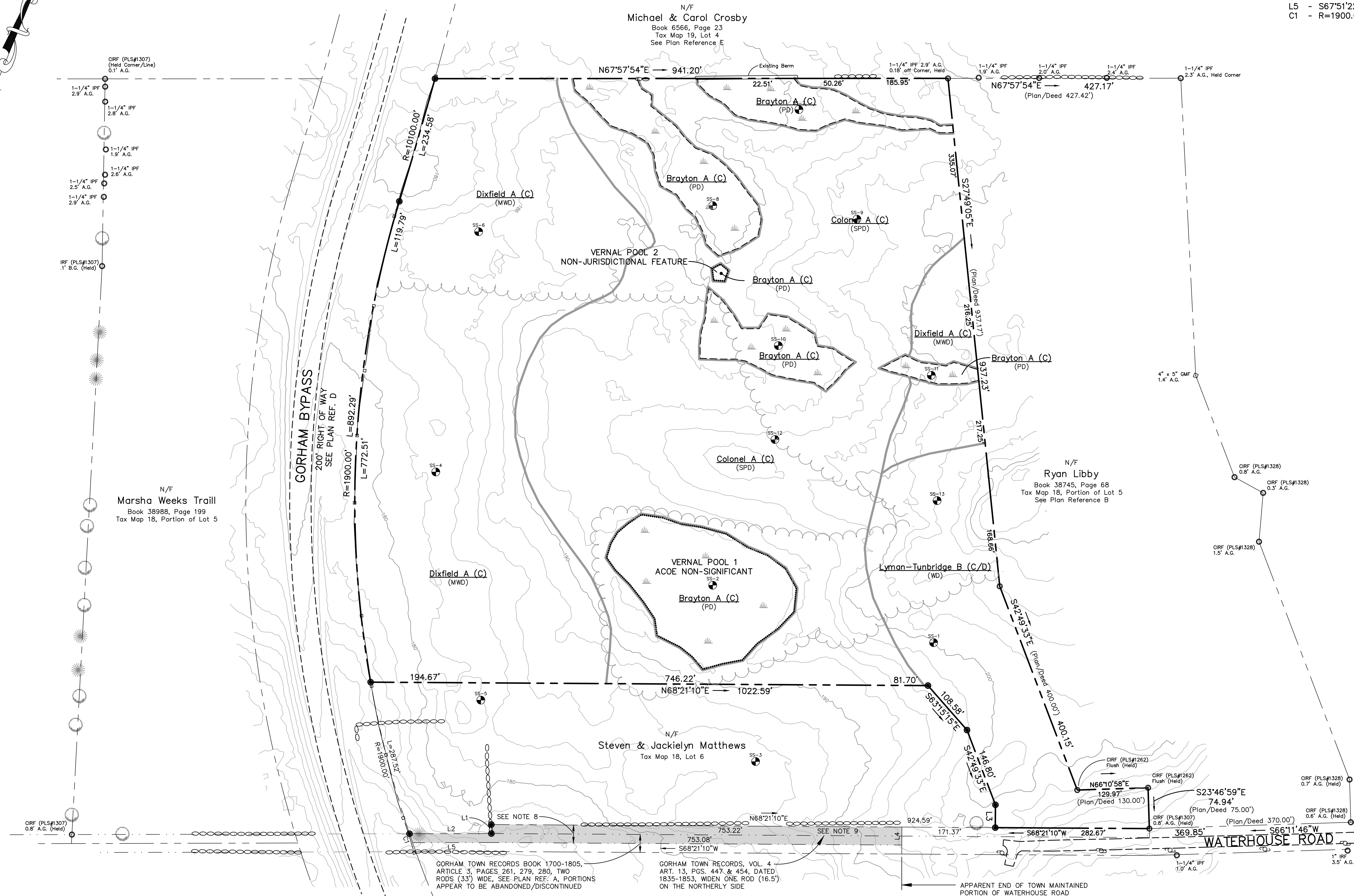


LOCATION MAP  
SCALE: 1" = 2 MILES

NO.	DATE	REVISION DESCRIPTION
1	2/12/24	Submitted To Town for Preliminary Review

NOTES:

1. OWNER: GARY AND MEGAN JORDAN  
33 QUINCY DRIVE  
GORHAM, MAINE
2. SURVEYOR: ROBERT C. LIBBY JR., PLS #2190  
BH2M  
380B MAIN STREET  
GORHAM, MAINE
3. DEED REFERENCE: BK. 39417, PG. 77
4. TAX MAP REFERENCE: MAP 18, LOT 5
5. ZONING: URBAN RESIDENTIAL EXPANSION
6. PARCEL AREA: 1,285,890 S.F. (29.520 ACRES)
7. PLAN REFERENCES:
  - A. STANDARD BOUNDARY SURVEY LOCATED IN GORHAM, CUMBERLAND COUNTY, MAINE, PROPERTY OF JOHN D. PHINNEY, DATED MAY 17, 1991, BY HORDES AND MCALLISTER LAND SURVEYORS, INC. AND RECORDED IN THE C.C.R.D., DEED BOOK 31853, PAGE 199.
  - B. LETTER OF MAP AMENDMENT SKETCH, 69 WATERHOUSE ROAD, GORHAM, MAINE, FOR TERRI HANSEN, ET AL, DATED SEPT. 13, 2021, BY STEVE MARTIN, PLS, (UNRECORDED).
  - C. PLAN OF PRIVATE WAY ON WATERHOUSE ROAD, GORHAM, ME, FOR HOMESTEAD ASSOC., DATED JUNE 1995, BY WAYNE T. WOOD & CO. AND RECORDED IN THE C.C.R.D., PLAN BOOK 196, PAGE 154.
  - D. STATE HIGHWAY 94, GORAM, CUMBERLAND COUNTY, FEDERAL AID PROJECT NO. HP-8151(300), (PART IV), DATED MARCH 2005, PAGES 15-19 OF 47, D.O.T. FILE NO. 3-511.
8. THE HATCHED PORTION OF WATERHOUSE ROAD APPEARS TO BE ABANDONED BY THE TOWN OF GORHAM. NO RECORDS OF DISCONTINUANCE WAS FOUND. THE OWNERSHIP OF THIS AREA WOULD REVERT BACK TO THE ADJUTING SUBJECT PROPERTY.
9. SEE GORHAM TOWN RECORDS, VOLUME 4, ARTICLE 13, PAGES 447 AND 454, DATED 1835-1853, WIDEN ONE ROD (16.5') ON NORTHERLY SIDE OF WATERHOUSE ROAD.



SOILS LEGEND

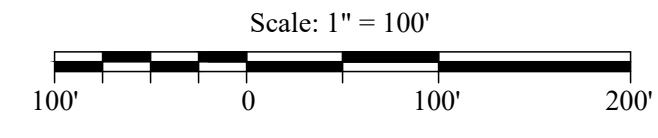
SYMBOL	DESCRIPTION
---	SOIL BOUNDARY LINES
---	LIMIT OF WETLANDS
<b>SLOPE DESIGNATION</b>	
A	0 - 3%
B	3 - 8%
C	8 - 15%
D	15 - 25%
E	> 25%
<b>DRAINAGE CLASS</b>	
EW	EXCESSIVELY WELL DRAINED
WD	WELL DRAINED
MWD	MODERATELY WELL DRAINED
SPD	SOMEWHAT POORLY DRAINED
PD	POORLY DRAINED
VPD	VERY POORLY DRAINED

LEGEND

SYMBOL	DESCRIPTION
○ IRF	IRON ROD FOUND
○ IRP	IRON PIPE FOUND
□ G.M.F.	GRANITE MONUMENT FOUND
● AG	5/8" IRON ROD W/ CAP TO BE SET ABOVE GRADE
● BG	5/8" IRON ROD W/ CAP TO BE SET BELOW GRADE
---	PROPERTY LINE
---	EDGE OF PAVEMENT
---	R.O.W. DEFINITION
---	STONE WALL
---	TREE LINE
---	NOW OR FORMERLY MESH D.O.T. FENCE
---	EASEMENT LINE
---	WETLANDS
---	VERNAL POOL
---	CONIFEROUS TREE
---	DECIDUOUS TREE
---	UTILITY POLE
---	SOIL TEST PIT

HIGH INTENSITY SOIL SURVEY HAS BEEN PREPARED BY MARK HAMPTON ASSOCIATES, INC. IN ACCORDANCE WITH THE STANDARDS ADOPTED BY THE MAINE ASSOCIATION OF PROFESSIONAL SOIL SCIENTISTS, AND THE MAINE BOARD OF CERTIFICATION OF GEOLOGISTS AND SOIL SCIENTISTS.

N/F  
Steven & Jackielyn Matthews  
Book 40356, Page 319  
Tax Map 18, Lot 6



EXISTING CONDITIONS

DESIGNED	DATE
A. Fagan	August 2022
DRAWN	SCALE
A. Fagan	1" = 100'
CHECKED	JOB. NO.
R. Libby Jr.	22092

SHEET  
2

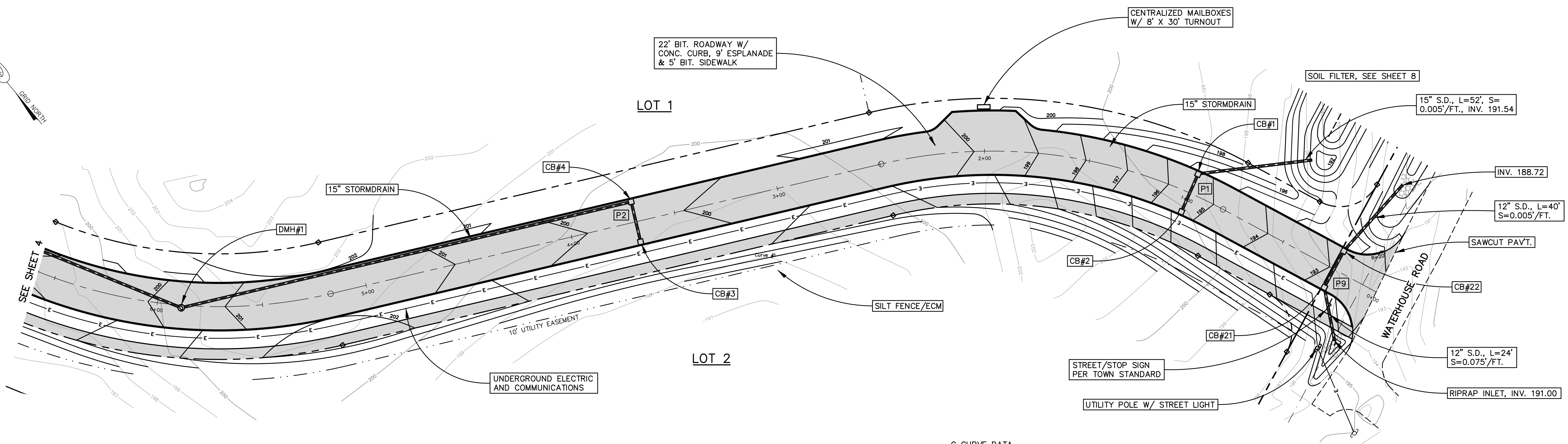
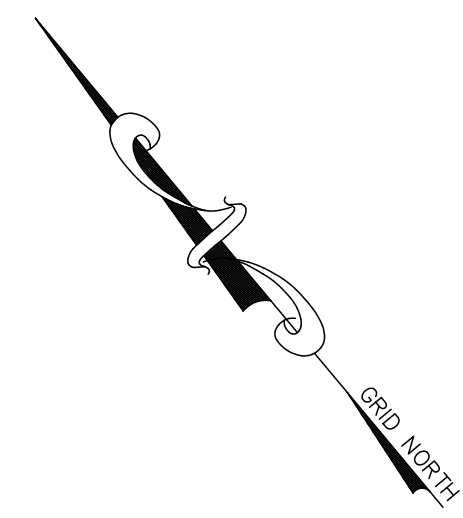
ROBERT C. LIBBY JR. PLS #2190

REPRODUCTION OR REUSE OF THIS DOCUMENT WITHOUT THE EXPRESSED WRITTEN CONSENT OF BH2M INC. IS PROHIBITED

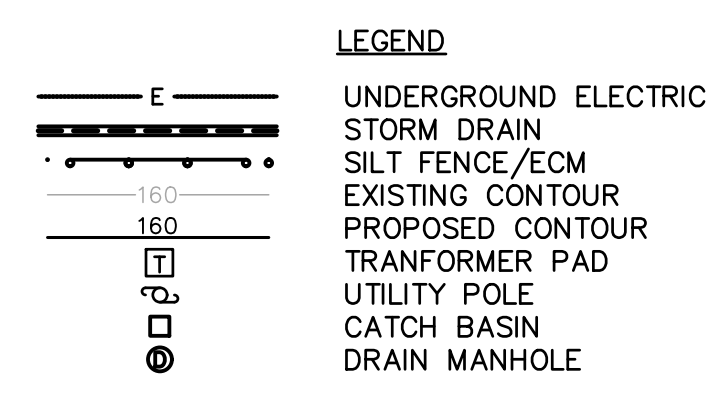
**BH2M**  
Berry, Huff, McDonald, Milfigan Inc.  
Engineers, Surveyors  
380B Main Street  
Gorham, Maine 04038  
Tel: (207) 839-2771  
www.bh2m.com

FOR  
Gary & Megan Jordan  
& Donald Grant  
33 Quincy Drive  
Gorham, Maine

WATERHOUSE ROAD  
GORHAM, MAINE

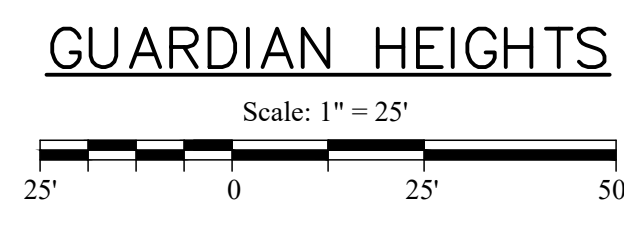


- NOTES:
- INSTALL STABILIZED CONSTRUCTION ENTRANCE PRIOR TO CONSTRUCTION, SEE DETAIL.
  - INSTALL LOWPOINT SEDIMENT CONTROL BARRIERS AT ALL CATCH BASIN LOCATIONS, SEE DETAIL.
  - SAWCUT EXISTING PAVEMENT AT PROJECT ENTRANCE AND WATER TRENCH, SEE DETAIL.
  - ALL STORMDRAIN PIPE SHALL BE ADS N12 OR EQUAL

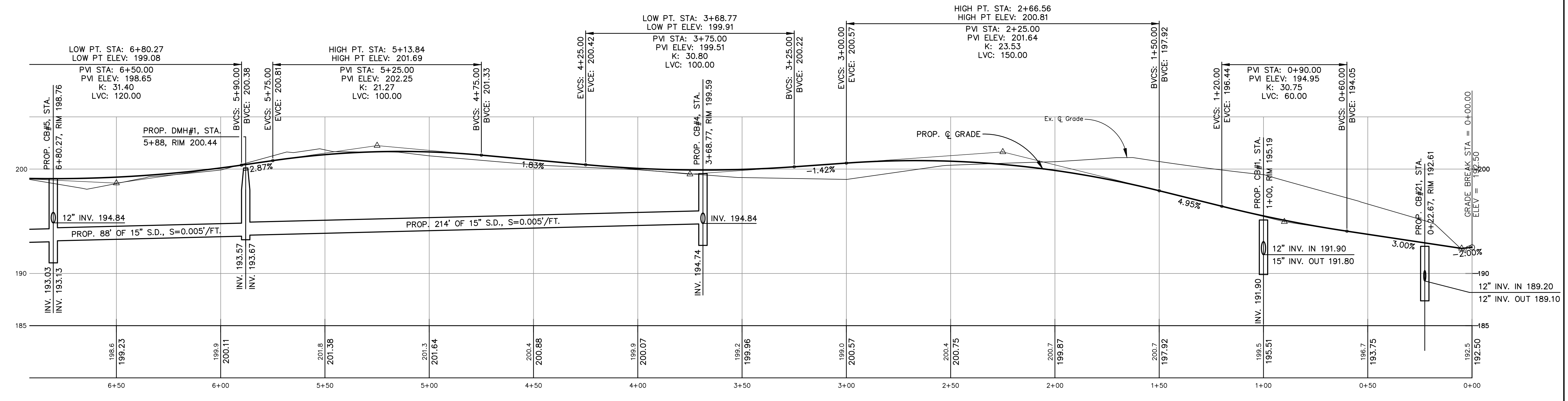


- STORMDRAIN STRUCTURES**
- CB#2 — RIM 195.19  
INV. OUT 192.06
  - CB#3 — RIM 199.59  
INV. OUT 195.00
  - CB#22 — RIM 192.61  
INV. IN 189.02  
INV. OUT 188.92

- STORMDRAIN PIPES**
- P1 - 12" S.D., L=16', S=0.010'/FT.
  - P2 - 12" S.D., L=16', S=0.010'/FT.
  - P9 - 12" S.D., L=16', S=0.005'/FT.



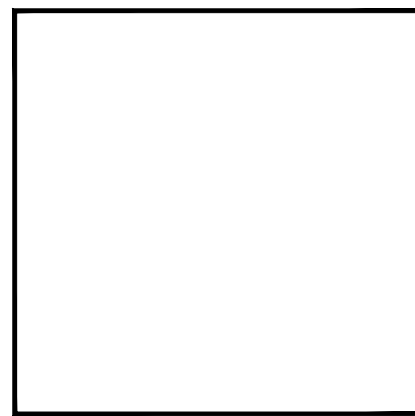
- Q CURVE DATA**
- CURVE #1**
    - R=230.00'
    - L=167.02'
    - T=87.38'
    - PC=0+82.41
    - PT=2+49.43
  - CURVE #2**
    - R=230.00'
    - L=142.25'
    - T=73.48'
    - PC=5+17.37
    - PT=6+59.62



**PROFILE**

SCALE  
VERTICAL: 1" = 5'  
HORIZONTAL: 1" = 25'

NO.	DATE	DESCRIPTION
1	2/12/24	Submitted to Town for Preliminary Review



**BH2M**  
Berry, Huff, McDonald, Milfigan Inc.  
Engineers, Surveyors  
380B Main Street  
Gorham, Maine 04038  
Tel: (207) 839-2771  
www.bh2m.com

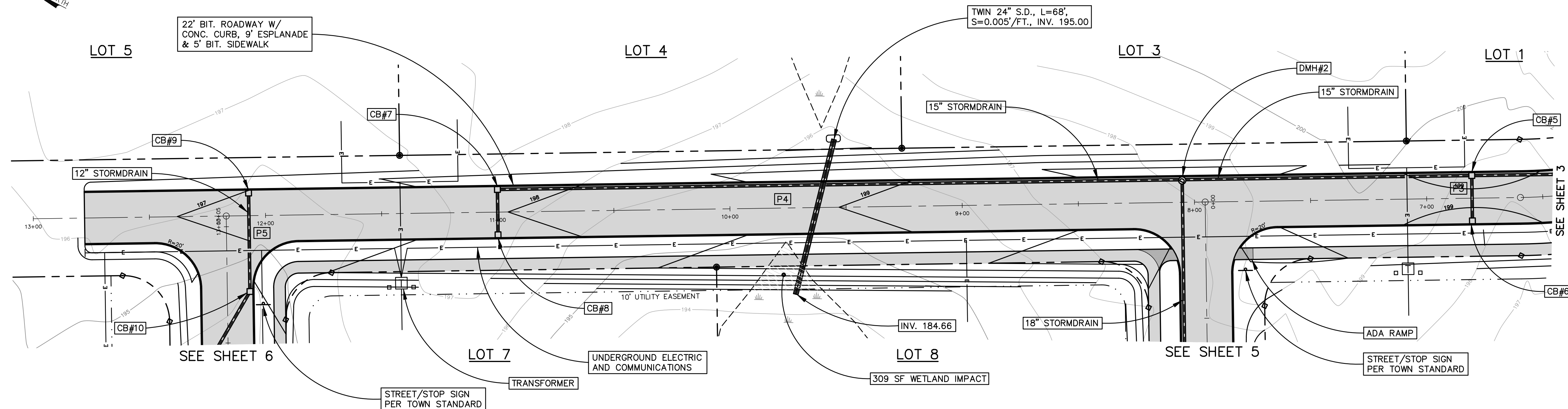
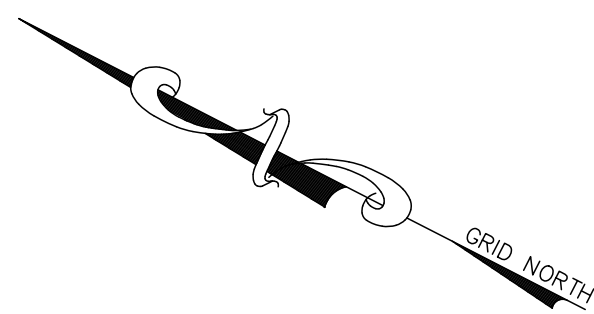
FOR  
Gary & Megan Jordan  
& Donald Grant  
33 Quincey Drive  
Gorham, Maine

**GUARDIAN HEIGHTS**  
STA. 0+00 to STA. 6+50  
**GUARDIAN ESTATES**  
WATERHOUSE ROAD  
GORHAM, MAINE

DESIGNED W. Pelkey	DATE Aug. 2023
DRAWN Dept.	SCALE As Noted
CHECKED A. Fagan	JOB. NO. 22092

SHEET  
**3**

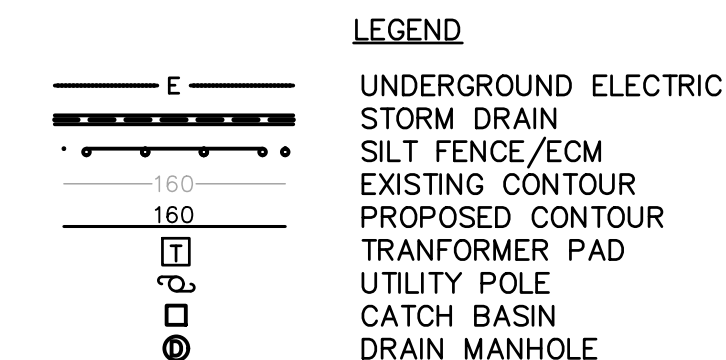
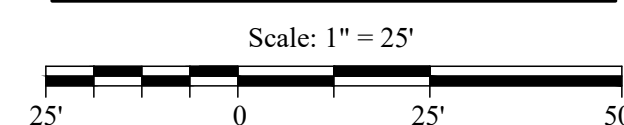
REPRODUCTION OR REUSE OF THIS DOCUMENT WITHOUT THE EXPRESSED WRITTEN CONSENT OF BH2M INC. IS PROHIBITED



**NOTES:**

1. INSTALL STABILIZED CONSTRUCTION ENTRANCE PRIOR TO CONSTRUCTION, SEE DETAIL.
2. INSTALL LOWPOINT SEDIMENT CONTROL BARRIERS AT ALL CATCH BASIN LOCATIONS, SEE DETAIL.
3. SAWCUT EXISTING PAVEMENT AT PROJECT ENTRANCE AND WATER TRENCH, SEE DETAIL.
4. ALL STORMDRAIN PIPE SHALL BE ADS N12 OR EQUAL

**GUARDIAN HEIGHTS**

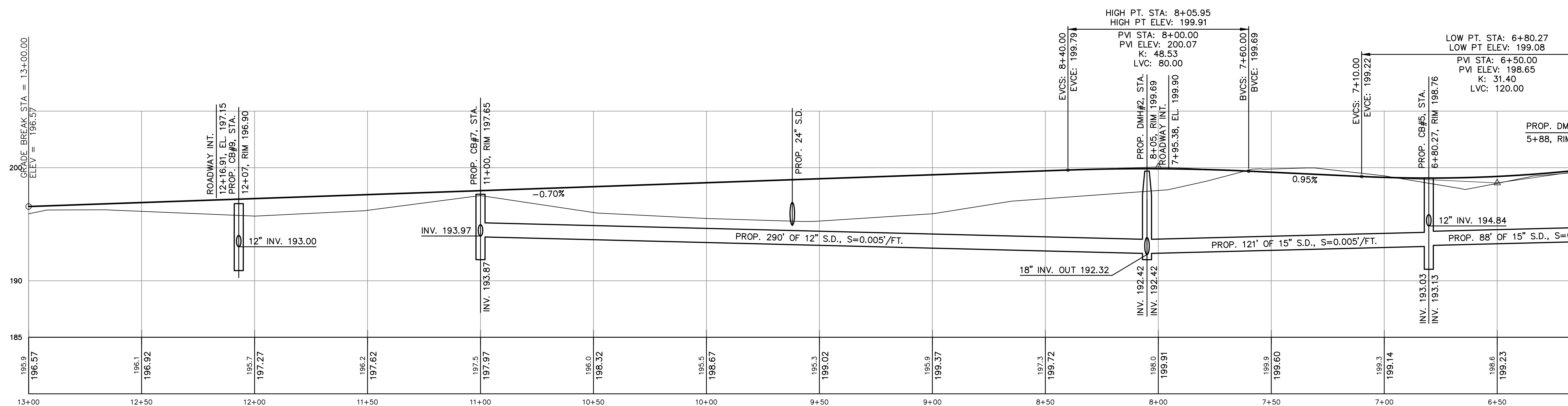


**STORMDRAIN STRUCTURES**

CB#6	RIM 199.16 INV. OUT 195.00
CB#8	RIM 196.82 INV. OUT 193.50
CB#10	RIM 196.20 INV. IN 192.20 INV. OUT 192.10

**STORMDRAIN PIPES**

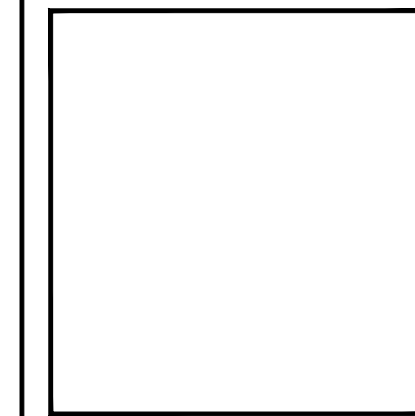
P3	12" S.D., L=16', S=0.010'/FT.
P4	12" S.D., L=16', S=0.010'/FT.
P5	12" S.D., L=40', S=0.020'/FT.



**PROFILE**

SCALE  
VERTICAL: 1" = 5'  
HORIZONTAL: 1" = 25'

NO.	DATE	DESCRIPTION
1	2/12/24	Submitted To Town for Preliminary Review



**BH2M**  
Berry, Huff, McDonald, Milfigan Inc.  
Engineers, Surveyors  
3809 Main Street  
Gorham, Maine 04038  
Tel: (207) 839-2771  
www.bh2m.com

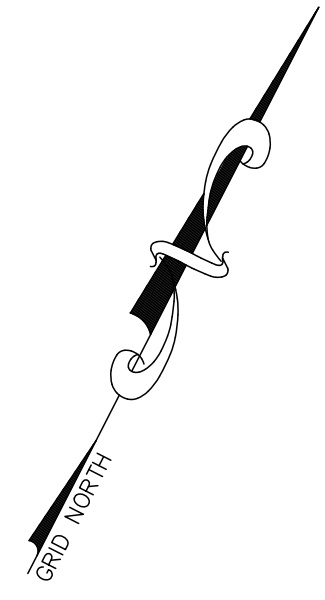
FOR  
Gary & Megan Jordan  
& Donald Grant  
33 Quincey Drive  
Gorham, Maine

**GUARDIAN HEIGHTS**  
STA. 6+50 to STA. 13+00  
**GUARDIAN ESTATES**  
WATERHOUSE ROAD  
GORHAM, MAINE

DESIGNED W. Pelkey	DATE Aug. 2023
DRAWN Dept.	SCALE As Noted
CHECKED A. Fagan	JOB. NO. 22092

SHEET  
**4**

REPRODUCTION OR REUSE OF THIS DOCUMENT WITHOUT THE EXPRESSED WRITTEN CONSENT OF BH2M INC. IS PROHIBITED



LOT 13

SEE SHEET 6

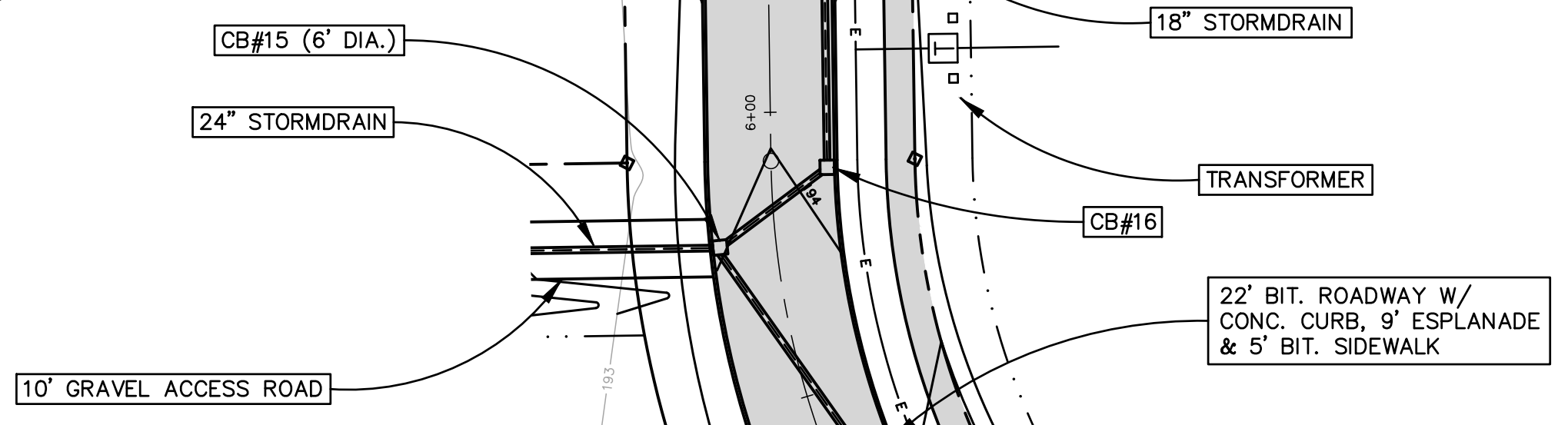
Q CURVE DATA  
 CURVE #3  
 R=150.00'  
 L=235.62'  
 T=150.00'  
 PC=3+55.92  
 PT=5+91.54

- NOTES:
1. INSTALL LOWPOINT SEDIMENT CONTROL BARRIERS AT ALL CATCH BASIN LOCATIONS, SEE DETAIL.
  2. ALL STORMDRAIN PIPE SHALL BE ADS N12 OR EQUAL

STORMDRAIN STRUCTURES  
 CB#17 RIM 197.45  
 INV. OUT 193.15

STORMDRAIN PIPES  
 P6 - 12" S.D., L=16', S=0.010'/FT.

- LEGEND
- E — UNDERGROUND ELECTRIC
  - S — STORM DRAIN
  - S — SILT FENCE/ECM
  - S — EXISTING CONTOUR
  - S — PROPOSED CONTOUR
  - S — TRANSFORMER PAD
  - S — UTILITY POLE
  - S — CATCH BASIN
  - S — DRAIN MANHOLE

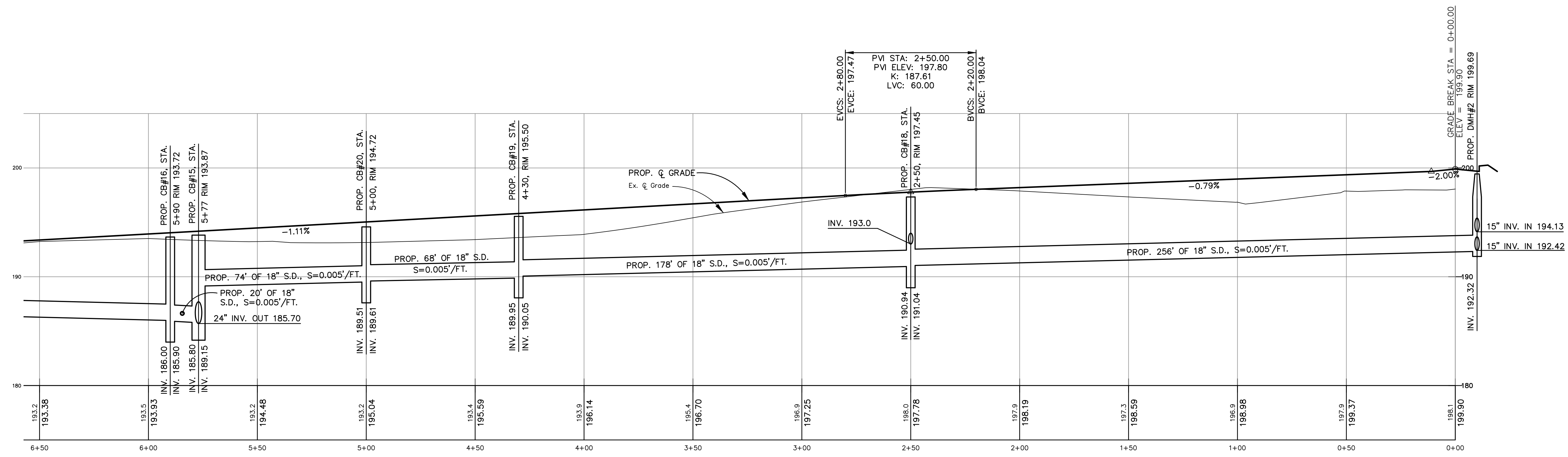
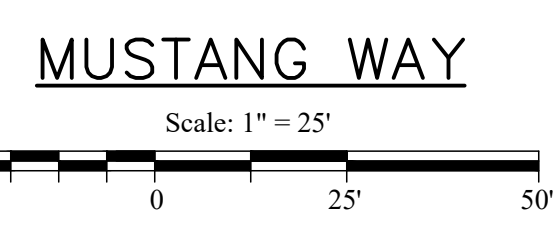
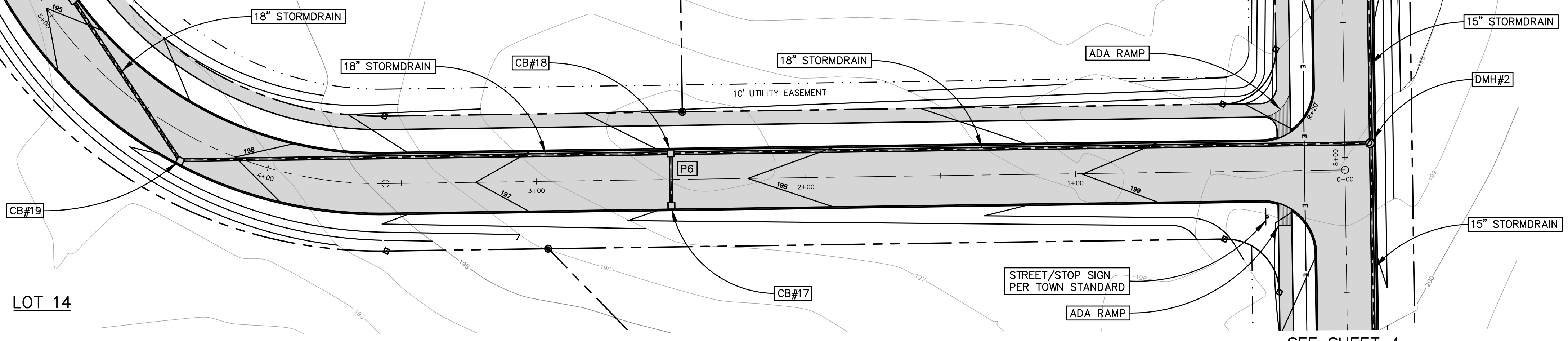


LOT 14

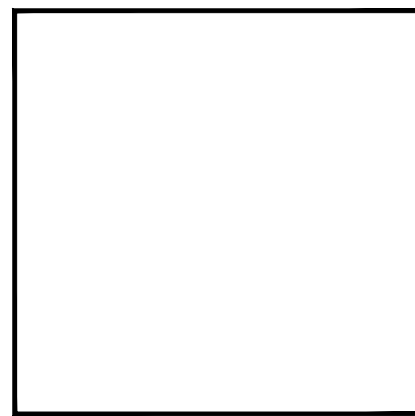
LOT 9

LOT 8

SEE SHEET 4



NO.	DATE	DESCRIPTION
1	2/12/24	Submitted To Town for Preliminary Review



**BH2M**  
 Berry, Huff, McDonald, Miffigan Inc.  
 Engineers, Surveyors  
 380B Main Street  
 Gorham, Maine 04038  
 Tel: (207) 839-2771  
 www.bh2m.com

FOR  
 Gary & Megan Jordan  
 & Donald Grant  
 33 Quincey Drive  
 Gorham, Maine

**MUSTANG WAY**  
 STA. 0+00 to STA. 6+50

**GUARDIAN ESTATES**  
 WATERHOUSE ROAD  
 GORHAM, MAINE

DESIGNED W. Pelkey	DATE Aug. 2023
DRAWN Dept.	SCALE As Noted
CHECKED A. Fagan	JOB. NO. 22092

SHEET  
**5**

REPRODUCTION OR REUSE OF THIS DOCUMENT WITHOUT THE EXPRESSED WRITTEN CONSENT OF BH2M INC. IS PROHIBITED

**STORMDRAIN STRUCTURES**

CB#12 - RIM 193.31  
 INV. OUT 189.65  
 CB#14 - RIM 191.21  
 INV. OUT 187.64

**Q CURVE DATA**

CURVE #4  
 R=150.00'  
 L=235.62'  
 T=150.00'  
 PC=7+13.07  
 PT=9+48.69

**STORMDRAIN PIPES**

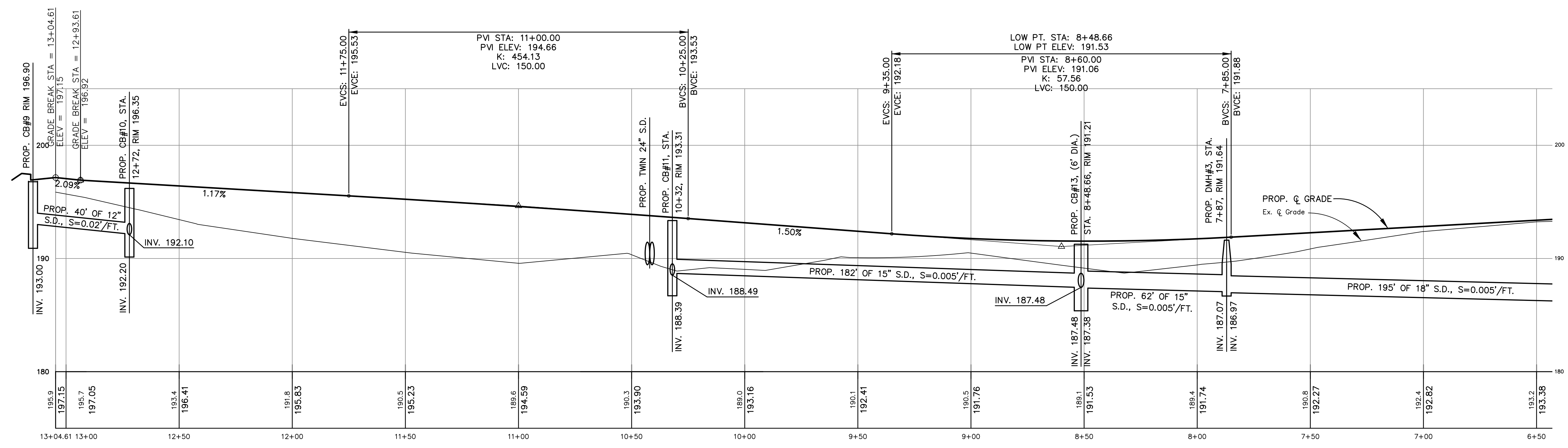
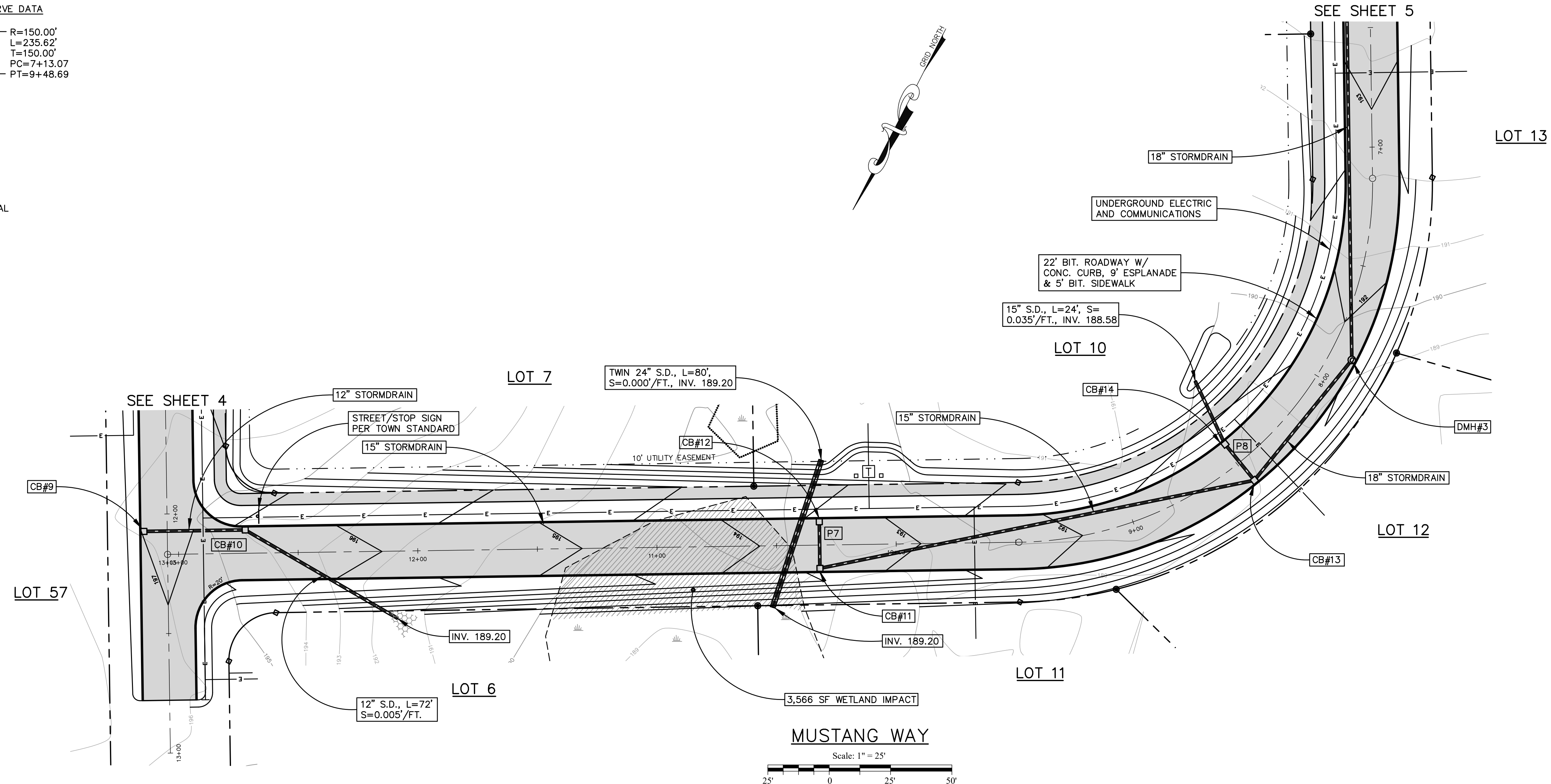
P7 - 12" S.D., L=16', S=0.010'/FT.  
 P8 - 12" S.D., L=16', S=0.010'/FT.

**NOTES:**

- INSTALL LOWPOINT SEDIMENT CONTROL BARRIERS AT ALL CATCH BASIN LOCATIONS, SEE DETAIL.
- ALL STORMDRAIN PIPE SHALL BE ADS N12 OR EQUAL

**LEGEND**

- UNDERGROUND ELECTRIC
- STORM DRAIN
- SILT FENCE/ECM
- EXISTING CONTOUR
- PROPOSED CONTOUR
- TRANSFORMER PAD
- UTILITY POLE
- CATCH BASIN
- DRAIN MANHOLE



**PROFILE**  
 SCALE  
 VERTICAL: 1" = 5'  
 HORIZONTAL: 1" = 25'

NO.	DATE	REVISION DESCRIPTION
1	2/12/24	Submitted To Town for Preliminary Review

**BH2M**  
 Berry, Huff, McDonald, Miffigan Inc.  
 Engineers, Surveyors  
 380B Main Street  
 Gorham, Maine 04038  
 Tel: (207) 839-2771  
 www.bh2m.com

**MUSTANG WAY**  
 STA. 6+50 to STA. 13+00  
**GUARDIAN ESTATES**  
 WATERHOUSE ROAD  
 GORHAM, MAINE

DESIGNED W. Pelkey	DATE Aug. 2023
DRAWN Dept.	SCALE As Noted
CHECKED A. Fagan	JOB. NO. 22092

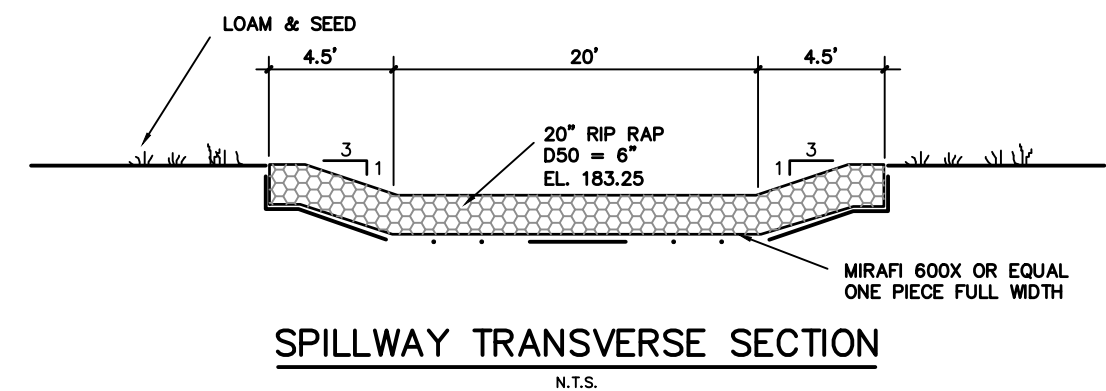
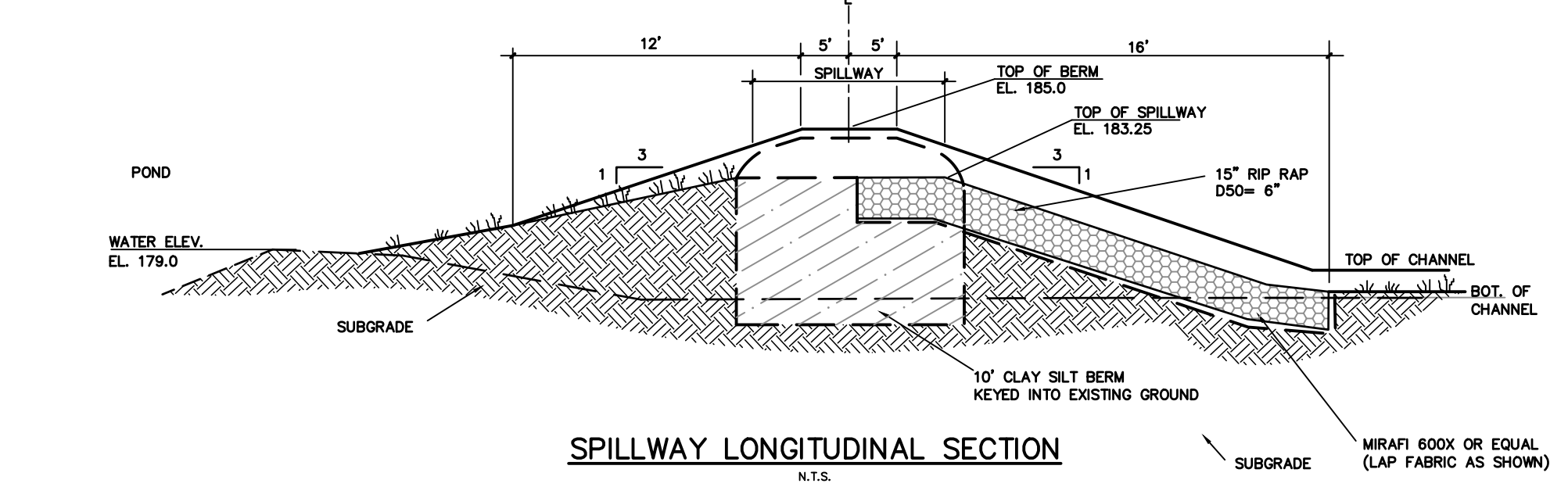
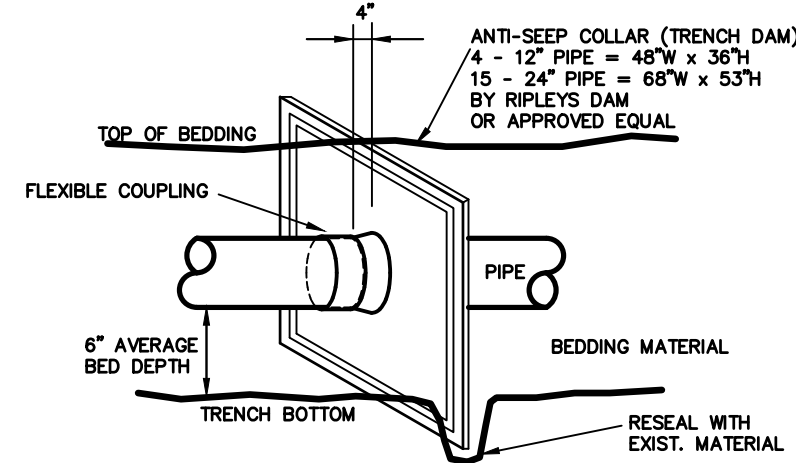
SHEET  
**6**  
 REPRODUCTION OR REUSE OF THIS DOCUMENT WITHOUT THE EXPRESSED WRITTEN CONSENT OF BH2M INC. IS PROHIBITED

**NOTES:**  
**CONSTRUCTION OVERSIGHT**  
 THE APPLICANT WILL RETAIN THE SERVICES OF A PROFESSIONAL ENGINEER TO INSPECT THE CONSTRUCTION AND STABILIZATION OF ALL STORMWATER MANAGEMENT STRUCTURES. IF NECESSARY, THE INSPECTING ENGINEER WILL INTERPRET THE POND'S CONSTRUCTION PLAN FOR THE CONTRACTOR. ONCE ALL STORMWATER MANAGEMENT STRUCTURES ARE CONSTRUCTED AND STABILIZED, THE INSPECTING ENGINEER WILL NOTIFY THE DEPARTMENT IN WRITING WITHIN 30 DAYS TO STATE THAT THE POND HAS BEEN COMPLETED. ACCOMPANYING THE ENGINEER'S NOTIFICATION MUST BE A LOG OF THE ENGINEER'S INSPECTIONS GIVING THE DATE OF EACH INSPECTION, THE TIME OF EACH INSPECTION, AND THE ITEMS INSPECTED ON EACH VISIT, AND INCLUDE ANY TESTING DATA OR SOIL ANALYSIS DATA OF EVERY MINERAL SOIL AND SOIL MEDIA SPECIFIED IN THE PLANS AND USED ON SITE.

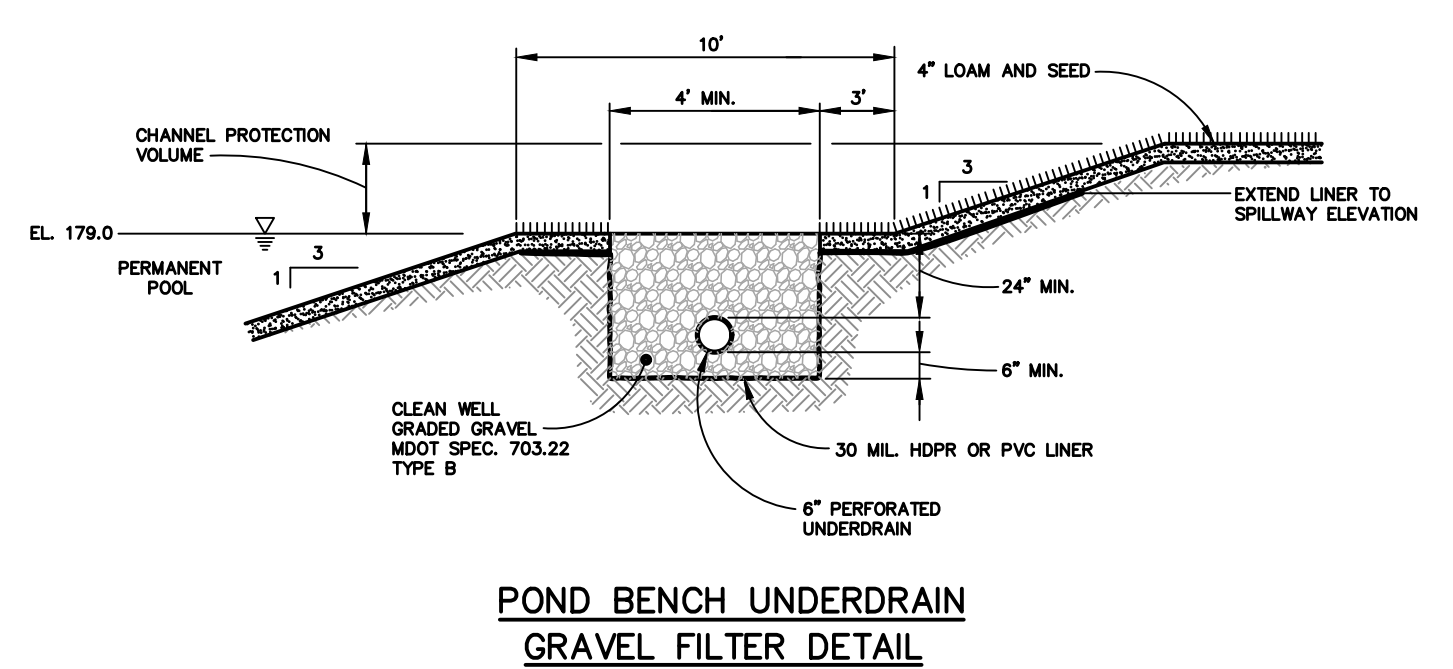
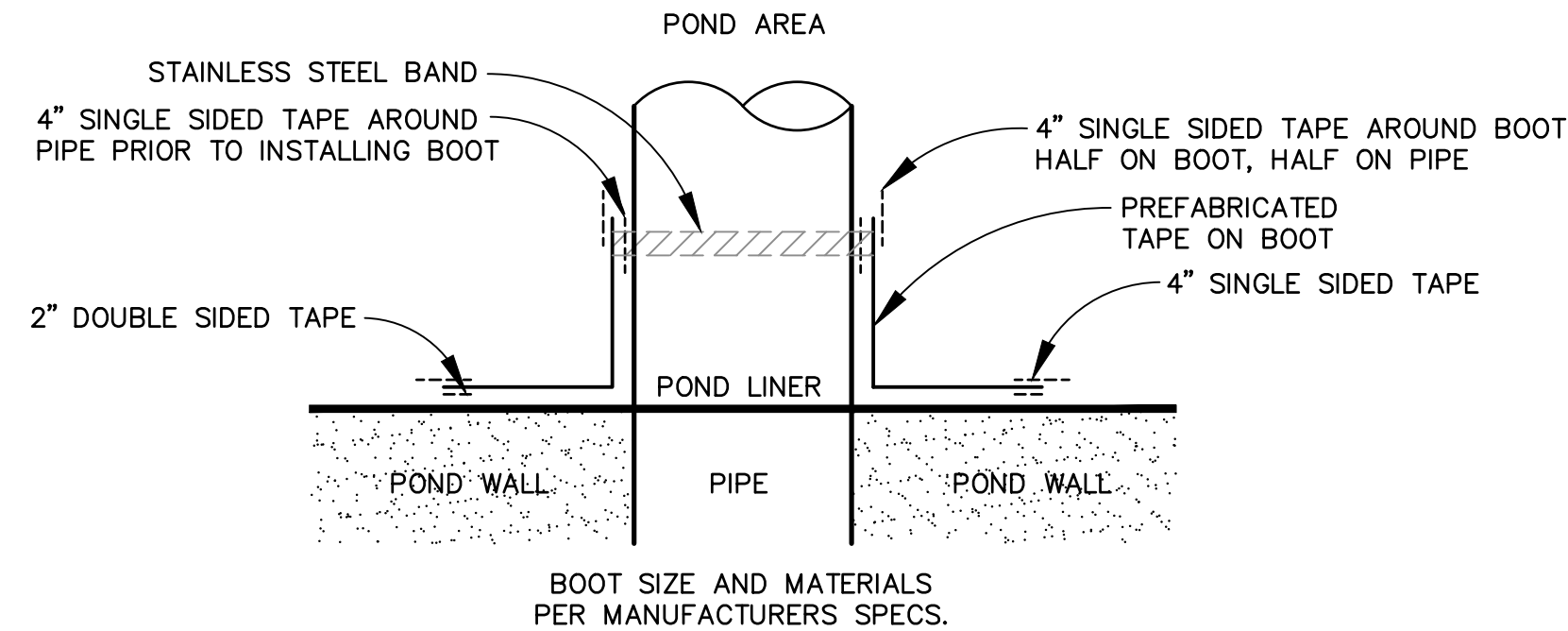
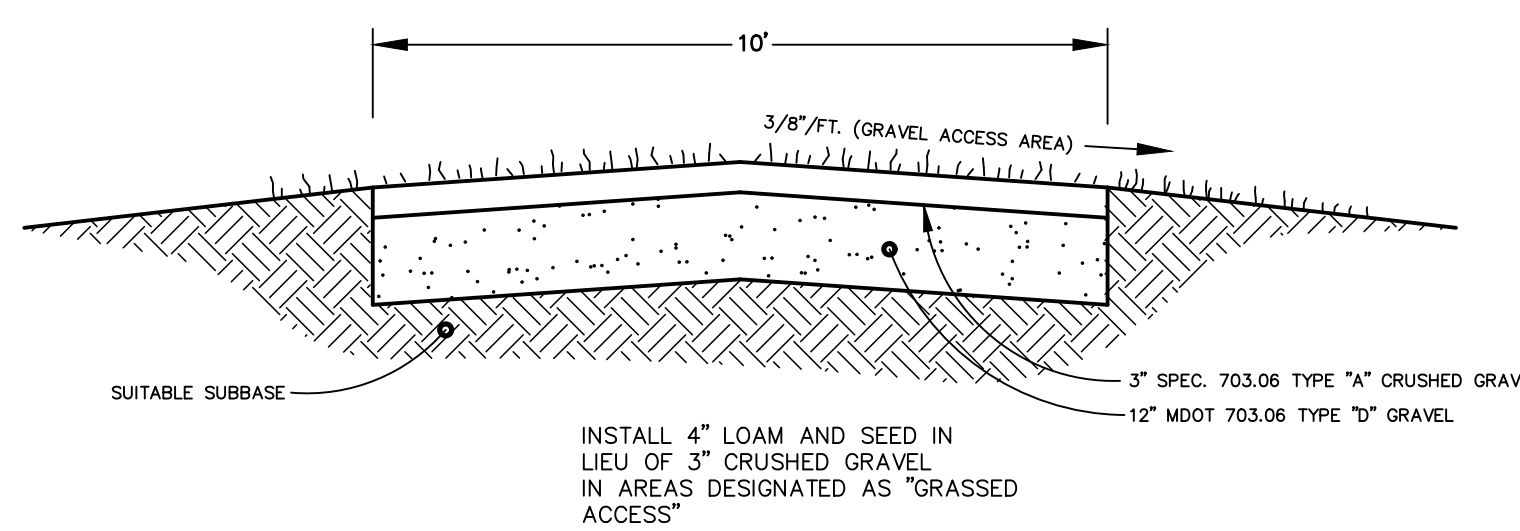
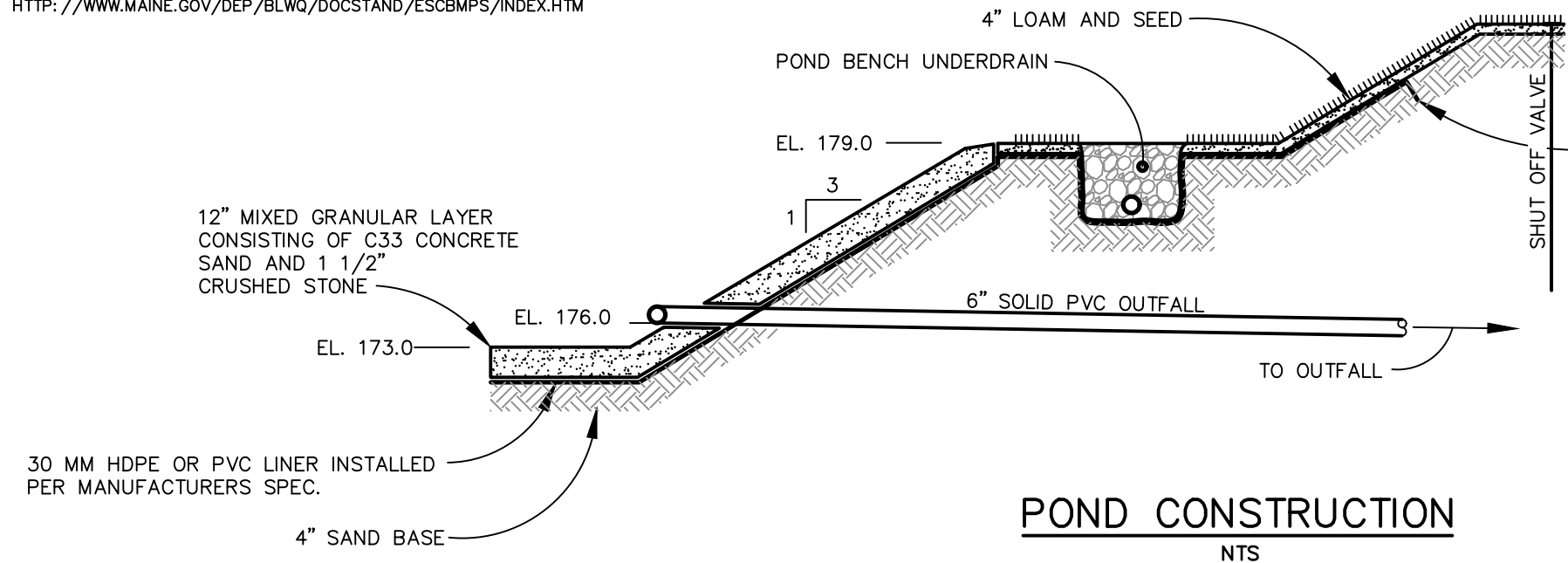
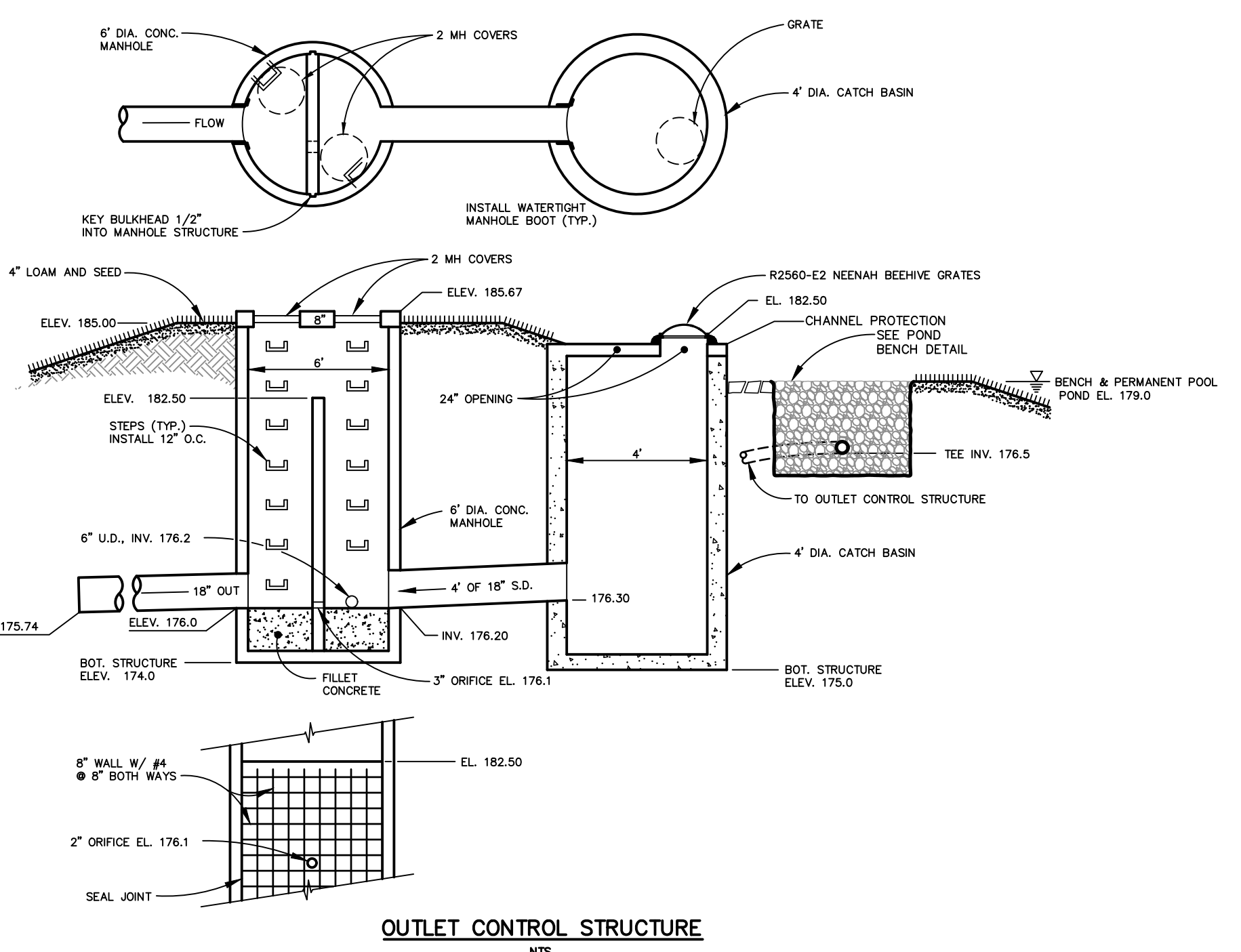
**WETPONDS**  
 INSPECTION BY A PROFESSIONAL ENGINEER WILL CONSIST OF WEEKLY VISITS TO THE SITE TO INSPECT THE INSTALLATION OF EACH POND'S EMBANKMENT CONSTRUCTION, STORMWATER INLET, UNDERDRAINED GRAVEL OUTLET, GRAVEL OUTLET FILTER MATERIAL MAKEUP AND PLACEMENT, OUTLET CONTROL STRUCTURE, CLAY LINER, AND EMERGENCY SPILLWAY CONSTRUCTION FROM INITIAL GROUND DISTURBANCE TO FINAL STABILIZATION OF THE POND. AN INSPECTION OF THE UNDER DRAINED GRAVEL OUTLET SHALL ALSO BE PERFORMED ONE YEAR AFTER THE FINAL STABILIZATION OF THE POND.

**BASIC STANDARDS - EROSION CONTROL MEASURES:**  
 MINIMUM EROSION CONTROL MEASURES WILL NEED TO BE IMPLEMENTED AND THE APPLICANT WILL BE RESPONSIBLE TO MAINTAIN ALL COMPONENTS OF THE EROSION CONTROL PLAN UNTIL THE SITE IS FULLY STABILIZED. HOWEVER, BASED ON SITE AND WEATHER CONDITIONS DURING CONSTRUCTION ADDITIONAL EROSION CONTROL MEASURES MAY NEED TO BE IMPLEMENTED. ALL AREAS OF INSTABILITY AND EROSION MUST BE REPAIRED IMMEDIATELY DURING CONSTRUCTION AND NEED TO BE MAINTAINED UNTIL THE SITE IS FULLY STABILIZED OR VEGETATION IS ESTABLISHED. A CONSTRUCTION LOG MUST BE MAINTAINED FOR THE EROSION AND SEDIMENTATION CONTROL INSPECTIONS AND MAINTENANCE.

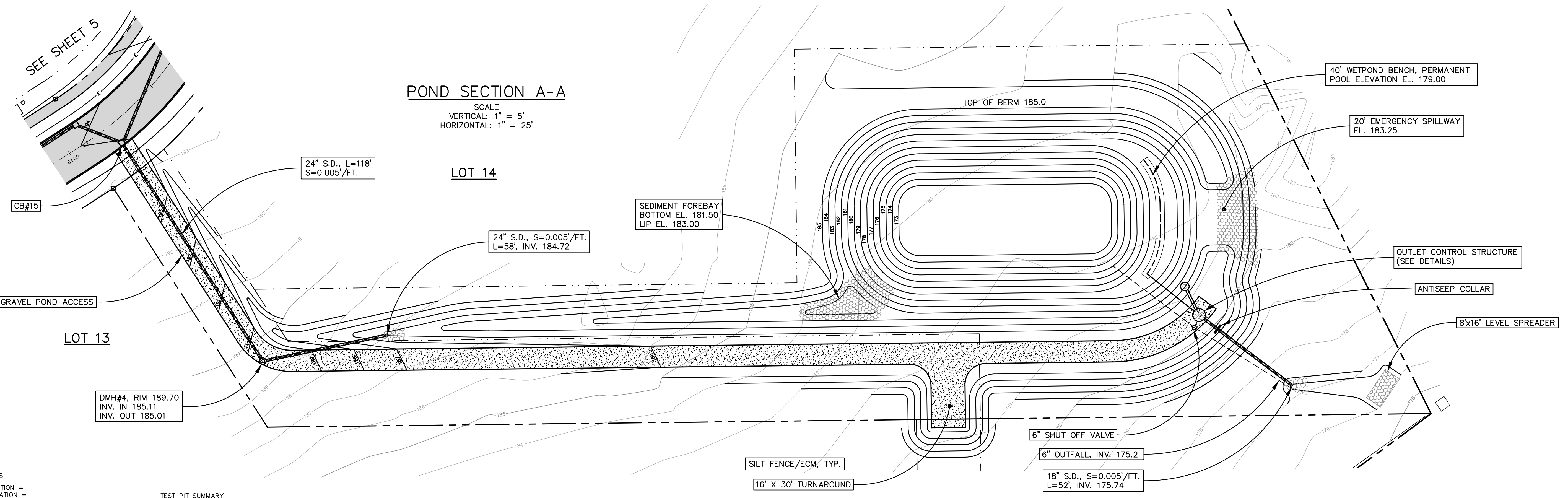
THE MAINE EROSION AND SEDIMENT CONTROL HANDBOOK FOR CONSTRUCTION: BEST MANAGEMENT PRACTICES AS PUBLISHED IN 1991 BY THE CUMBERLAND COUNTY SOIL AND WATER CONSERVATION DISTRICT AND THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION HAS BEEN CHANGED TO THE "MAINE EROSION AND SEDIMENT CONTROL BMP'S" PUBLISHED BY THE MAINE DEP IN 2003. ALL REFERENCES SHOULD BE CHANGED TO THE NEW MANUAL.  
[HTTP://WWW.MAINE.GOV/DEP/BLWQ/DOCSTAND/ESC BMPS/INDEX.HTM](http://www.maine.gov/dep/blwq/docstand/escbmps/index.htm)



**DETENTION / RETENTION POND EMBANKMENT NOTES:**  
 THE FOUNDATION AREA SHALL BE CLEARED OF TREES, LOGS, ROOTS BRUSH, BOULDERS, SOO, RUBBISH & TOPSOIL. THE ENGINEER SHALL OBSERVE & APPROVE THE EMBANKMENT SUBGRADE PRIOR TO PLACING ANY FILL TO DETERMINE SUITABILITY & POSSIBLE NEED FOR A CUTOFF TRENCH. FILL MATERIAL FOR THE EMBANKMENT SHALL CONSIST OF SILT AND/OR CLAY MATERIAL APPROVED BY THE ENGINEER. THE CONTRACTOR SHOULD NOTE THAT ACCEPTABLE MATERIAL MAY NOT BE FOUND ON-SITE. ALL FILL MATERIAL SHALL BE FREE OF SOO, ROOTS, FROZEN SOIL, STONES, GREATER THAN 6" IN DIA. & OTHER OBJECTIONABLE MATERIAL. ALL SNOW, ICE, OR FROZEN FILL SHALL BE REMOVED PRIOR TO ADDING ADDITIONAL FILL. FILLING SHALL COMMENCE IN THE LOWEST POINT OF THE CUTOFF TRENCH AND/OR DAM & CONTINUE IN HORIZONTAL LIFTS NO GREATER THAN 12". 92% MODIFIED PROCTOR DENSITIES SHALL BE OBTAINED IN EACH LIFT PRIOR TO ADDITIONAL LIFTS. THE DISTRIBUTION & GRADATION OF THE FILL SHALL BE SUCH THAT NO LENSES, POCKETS, STREAKS, OR LAYERS OF SUBSTANTIALLY DIFFERENT MATERIALS ARE PLACED IN THE LAYERS IN THE EMBANKMENT. FILL WITHIN 5' OF THE DISCHARGE PIPE & STRUCTURE SHALL BE COMPACTED TO 95% MODIFIED PROCTOR.



**POND SECTION A-A**  
 SCALE  
 VERTICAL: 1" = 5'  
 HORIZONTAL: 1" = 25'



**STORMWATER ELEVATIONS**

2 YEAR STORM PEAK ELEVATION =	
10 YEAR STORM PEAK ELEVATION =	
25 YEAR STORM PEAK ELEVATION =	
50 YEAR STORM PEAK ELEVATION =	
CHANNEL PROTECTION VOLUME ELEVATION =	
WATER QUALITY VOLUME ELEVATION =	

**TEST PIT SUMMARY**

TP #	EX. GRADE	DEPTH	ELEV.	FINAL DEPTH OF TP
TP2	--	--	--	--
STW2	--	--	--	--

NO.	DATE	DESCRIPTION
1	2/12/24	Submitted to Town for Preliminary Review

**BH2M**  
 Berry, Huff, McDonald, Milfigan Inc.  
 Engineers, Surveyors  
 380B Main Street  
 Gorham, Maine 04038  
 Tel: (207) 839-2771  
 Fax: (207) 839-8250

**POND DETAILS**  
**GUARDIAN ESTATES**  
 WATERHOUSE ROAD  
 GORHAM, MAINE

DESIGNED W. Pelkey  
 DRAWN Dept.  
 CHECKED A. Fagan

DATE Aug. 2023  
 SCALE As Noted  
 JOB. NO. 22092

SHEET  
**7**

REPRODUCTION OR REUSE OF THIS DOCUMENT WITHOUT THE EXPRESSED WRITTEN CONSENT OF BH2M INC. IS PROHIBITED



**EROSION AND SEDIMENT CONTROL PLAN**

THIS PLAN HAS BEEN DEVELOPED AS A STRATEGY TO CONTROL SOIL EROSION AND SEDIMENTATION DURING AND AFTER CONSTRUCTION. THIS PLAN IS BASED ON THE STANDARDS AND SPECIFICATIONS FOR EROSION PREVENTION IN DEVELOPING AREAS AS CONTAINED IN THE LATEST REVISION OF THE 2016 MAINE EROSION AND SEDIMENT CONTROL BMP'S MANUAL FOR DESIGNERS AND ENGINEERS, AND THE LATEST REVISION TO THE 2014 MAINE EROSION AND SEDIMENT CONTROL FIELD GUIDE FOR CONTRACTORS. SEE MANUALS FOR ADDITIONAL INFORMATION AND DETAILS.

DURING CONSTRUCTION THE DEVELOPER/APPLICANT OR THEIR REPRESENTATIVES WILL BE RESPONSIBLE FOR IMPLEMENTING THE EROSION AND SEDIMENT CONTROL BMP'S AS WELL ROUTINE INSPECTIONS AND MAINTENANCE OF THE BMP'S.

THE PROPOSED LOCATIONS OF SILTATION AND EROSION CONTROL STRUCTURES ARE SHOWN ON THE SITE PLAN.

- ALL CONSTRUCTION INSPECTIONS SHALL BE CONDUCTED BY SOMEONE WITH KNOWLEDGE OF EROSION AND STORMWATER CONTROL, INCLUDING STANDARDS AND PERMIT CONDITIONS. CONSTRUCTION INSPECTIONS SHALL BE PERFORMED AT LEAST ONCE A WEEK, AND PRIOR TO AND 24 HOURS AFTER A MET WEATHER EVENT (1 INCH OR MORE IN A 24 HOUR PERIOD). CONSTRUCTION INSPECTION AND CORRECTIVE ACTION DOCUMENTATION RECORDS SHALL BE MAINTAINED FOR A MINIMUM OF 5 YEARS.
- THE SCOPE OF CONSTRUCTION INSPECTIONS INCLUDE THE EROSION AND SEDIMENTATION CONTROL MEASURES AS WELL AS DISTURBED AREAS, MATERIAL STORAGE AREAS, AND LOCATIONS WHERE VEHICLES ENTER AND EXIT THE SITE.
- ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE DONE IN ACCORDANCE WITH THE "MAINE EROSION AND SEDIMENT CONTROL BMP'S", DEPARTMENT OF ENVIRONMENTAL PROTECTION, LATEST REVISION.
- THOSE AREAS UNDERGOING ACTUAL CONSTRUCTION WILL BE LEFT IN AN UNTRIPPED OR UNVEGETATED CONDITION FOR A MINIMUM TIME. AREAS SHALL BE PERMANENTLY STABILIZED WITHIN 7 DAYS OF FINAL GRADING AND PERMANENTLY STABILIZED WITHIN 7 DAYS OF INITIAL DISTURBANCE OF THE SOIL. IF THE DISTURBANCE IS WITHIN 75 FEET OF A WETLAND OR WATERBODY, THE AREA SHALL BE STABILIZED WITHIN 2 DAYS OR PRIOR TO ANY STORM EVENT, WHICHEVER COMES FIRST.
- EXCAVATION AND EARTHWORK SHALL BE DONE SUCH THAT NO MORE THAN 1 ACRE OF THE SITE IS WITHOUT STABILIZATION AT ANY ONE TIME.
- EXPOSED AREA SHOULD BE LIMITED TO THAT WHICH CAN BE MULCHED IN ONE DAY.
- CONTINUATION OF EARTHWORK OPERATIONS ON ADDITIONAL AREAS SHALL NOT BEGIN UNTIL THE EXPOSED SOIL SURFACE ON THE AREA BEING WORKED HAS BEEN STABILIZED SUCH THAT NO MORE THAN ONE ACRE OF THE SITE IS WITHOUT EROSION CONTROL PROTECTION.
- SEDIMENT BARRIERS (EROSION CONTROL MIX, STONE CHECK DAMS, STABILIZED CONSTRUCTION ENTRANCE, ETC.) SHOULD BE INSTALLED PRIOR TO ANY SOIL DISTURBANCE OF THE CONTRIBUTING DRAINAGE AREA ABOVE THEM. THE CONTRACTOR SHALL MAINTAIN THE STABILIZED CONSTRUCTION ENTRANCE UNTIL ALL DISTURBED AREAS ARE STABILIZED.
- ALL SEDIMENT BARRIERS SHOULD BE INSTALLED ALONG THE CONTOUR, WITH THE ENDS TURNED UP SLOPE.
- INSTALL EROSION CONTROL MIX AT TOE OF SLOPES TO FILTER SILT FROM RUNOFF. SEE E.C. MIX DETAIL FOR PROPER INSTALLATION. EROSION CONTROL MIX WILL REMAIN IN PLACE PER NOTE #7. THE USE OF AN EROSION CONTROL MIX BERM IS PROHIBITED AT THE BASE OF SLOPES GREATER THAN 3:1 WHERE THERE IS FLOWING WATER.
- ALL EROSION CONTROL STRUCTURES WILL BE INSPECTED, REPLACED, AND/OR REPAIRED EVERY 7 DAYS AND IMMEDIATELY BEFORE AND FOLLOWING ANY SIGNIFICANT RAINFALL (1.0 INCH OR MORE IN 24-HOUR PERIOD) OR SNOW MELT OR WHEN NO LONGER SERVICEABLE DUE TO SEDIMENT ACCUMULATION OR DECOMPOSITION. IF AN INSPECTION DETERMINES THAT A CORRECTIVE ACTION IS REQUIRED, THE ACTION OR REPAIR SHALL BE STARTED BY THE NEXT WORKDAY AND COMPLETED WITHIN SEVEN DAYS OR BEFORE THE NEXT STORM EVENT. SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE HALF THE HEIGHT OF THE BARRIER. SEDIMENT CONTROL DEVICES SHALL REMAIN IN PLACE AND BE MAINTAINED BY THE CONTRACTOR UNTIL AREAS UPSLOPE ARE STABILIZED BY TURF. EROSION CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS OF PERMANENT STABILIZATION. PERMANENT STABILIZATION IS 90% GRASS CATCH IN VEGETATED AREAS.
- NO SLOPES, EITHER PERMANENT OR TEMPORARY, SHALL BE STEEPER THAN ONE AND ONE HALF TO ONE (1.5:1).
- IF FINAL SEEDING OF THE DISTURBED AREA IS NOT COMPLETED 45 DAYS PRIOR TO THE FIRST KILLING FROST, USE TEMPORARY MULCHING (DORMANT SEEDING MAY BE ATTEMPTED AS WELL) TO PROTECT THE SITE AND DELAY SEEDING UNTIL THE NEXT RECOMMENDED SEEDING PERIOD.
- TEMPORARY SEEDING OF DISTURBED AREAS THAT HAVE NOT BEEN FINAL GRADED SHALL BE COMPLETED BY AUG. 15 OR 45 DAYS PRIOR TO THE FIRST KILLING FROST (OCT. 1) TO PROTECT FROM SPRING RUNOFF PROBLEMS.
- DURING THE CONSTRUCTION PHASE, INTERCEPTED SEDIMENT WILL BE RETURNED TO THE SITE AND REGRADED ONTO OPEN AREAS. POST SEEDING SEDIMENT, IF ANY, WILL BE DISPOSED OF IN AN ACCEPTABLE MANNER.
- REVEGETATION MEASURES WILL COMMENCE UPON COMPLETION OF CONSTRUCTION EXCEPT AS NOTED ABOVE. ALL DISTURBED AREAS NOT OTHERWISE STABILIZED WILL BE GRADED, SMOOTHED, AND PREPARED FOR FINAL SEEDING AS FOLLOWS:
  - FOUR INCHES OF LOAM WILL BE SPREAD OVER DISTURBED AREAS AND SMOOTHED TO A UNIFORM SURFACE.
  - APPLY LIMESTONE AND FERTILIZER ACCORDING TO SOIL TEST. IF SOIL TESTING IS NOT FEASIBLE ON SMALL OR VARIABLE SITES, OR WHERE TIMING IS CRITICAL, FERTILIZER MAY BE APPLIED AT THE RATE OF 800 POUNDS PER ACRE OR 18.4 POUNDS PER 1000 SQUARE FEET USING 10-20-20 (N-P20-O20) OR EQUIVALENT. APPLY GROUND LIMESTONE (EQUIVALENT TO 50% CALCIUM PLUS MAGNESIUM OXIDE) AT A RATE OF 3 TONS PER ACRE (138 LB PER 1000 SQ. FT.).
  - FOLLOWING SEED BED PREPARATION, DITCHES AND BACK SLOPES WILL BE SEEDING TO A MIXTURE OF 47% CREEPING RED FESCUE, 5% REDTOP, AND 48% TALL FESCUE. THE LAWN AREAS WILL BE SEEDING TO A PREMIUM TURF MIXTURE OF 44% KENTUCKY BLUEGRASS, 44% CREEPING RED FESCUE, AND 12% PERENNIAL RYEGRASS. SEEDING RATE IS 1.03 LBS PER 1000 SQ. FT. LAWN QUALITY SOD MAY BE SUBSTITUTED FOR SEED. SEED MIX SHALL CONTAIN 10% ANNUAL RYE GRASS.
  - HAY MULCH AT THE RATE OF 70-90 LBS PER 1000 SQUARE FEET FOR OVER 75% COVERAGE. FOR UNPROTECTED OR WINDY AREAS, ANCHOR MULCH WITH PEG AND TWINE (1 SO. YD./BLOCK). HYDRAULIC MULCHES MAY ALSO BE USED, APPLIED AT A RATE OF 5 LBS PER 1000 SQUARE FEET FOR PAPER MULCH OR 40 LBS PER 1000 SQUARE FEET OR AS DIRECTED BY THE MANUFACTURER. ON SLOPES GREATER THAN 3:1 EROSION CONTROL MIX MAY BE USED. SEE EROSION CONTROL MIX NOTES BELOW.
- FOR DISTURBED AREAS TO BE MAINTAINED IN POST-CONSTRUCTION AS A MEADOW BUFFER, APPLY NEW ENGLAND CONSERVATION WILDLIFE MIX BY NEW ENGLAND WETLAND PLANTS, INC. OF AMHERST, MASSACHUSETTS OR APPROVED EQUAL.
- ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS ONCE THE SITE IS STABILIZED WITH 90% GRASS CATCH IN VEGETATED AREAS. TEMPORARY EROSION AND SEDIMENT CONTROL BLANKET SHALL BE USED IN ALL DITCHES AND SWALES AS SHOWN IN DETAILS.
- WETLANDS WILL BE PROTECTED WITH A DOUBLE ROW OF EROSION CONTROL MIX OR SILT FENCE INSTALLED AT THE EDGE OF THE WETLAND OR THE BOUNDARY OF WETLAND DISTURBANCE. ALL AREAS WITHIN 75 FEET OF A PROTECTED NATURAL RESOURCE MUST BE PROTECTED WITH A DOUBLE ROW OF SEDIMENT BARRIERS DURING WINTER CONSTRUCTION.
- ALL STORMWATER WILL BE PREVENTED FROM RUNNING ONTO STOCKPILES. SEDIMENT BARRIERS WILL BE INSTALLED DOWNGRADIENT OF ALL STOCKPILES.
- PERMANENT POST-CONSTRUCTION BMP'S (VEGETATED SWALES, WET PONDS, ETC.) WILL NOT BE USED TO MANAGE FLOWS DURING CONSTRUCTION WITHOUT SPECIAL PROTECTION AND/OR RESTORATION.

**ADDITIONAL TEMPORARY SEED MIXTURE (FOR PERIODS LESS THAN 12 MONTHS)**

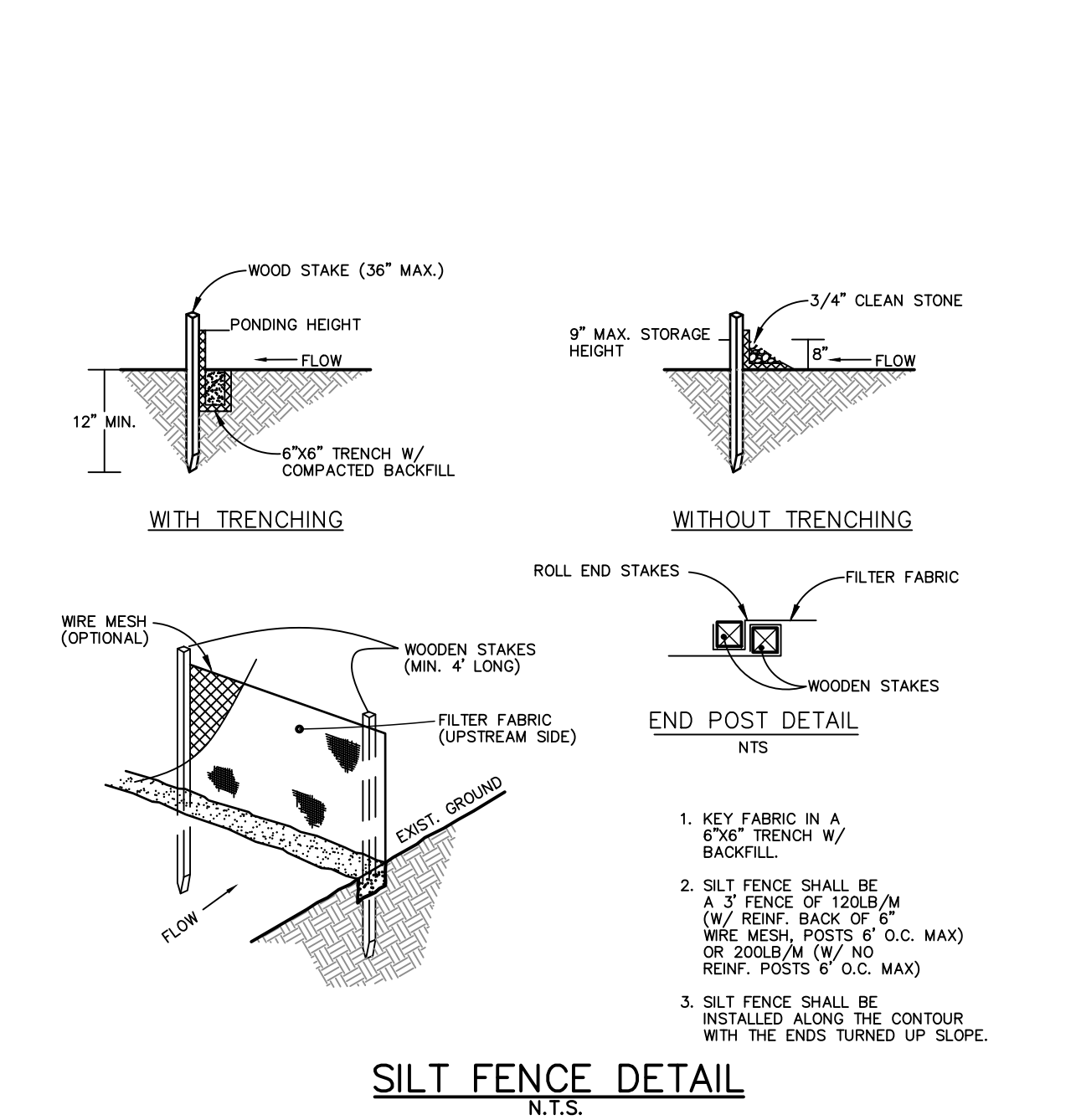
SEASON	SEED	RATE
SUMMER (5/15 - 8/15)	SUDANGRASS	40 LBS/ACRE
LATE SUMMER/EARLY FALL (8/15 - 9/15)	DATS	80 LBS/ACRE
FALL (9/15 - 11/1)	PERENNIAL RYEGRASS	40 LBS/ACRE
WINTER (11/1 - 4/1)	WINTER RYE	112 LBS/ACRE
WINTER (11/1 - 4/1)	MULCH W/ DORMANT SEED	80 LBS/ACRE**
SPRING (4/1 - 7/1)	GATE	80 LBS/ACRE
	ANNUAL RYEGRASS	40 LBS/ACRE

\*\*SEED RATE ONLY

**EROSION CONTROL MIX**

EROSION CONTROL MIX (ECM) SHALL MEET THE REQUIREMENTS PROVIDED IN THE LATEST REVISION OF MAINE DEP'S EROSION AND SEDIMENTATION CONTROL BMP MANUAL. ECM IS ACCEPTABLE FOR USE ON SLOPES OF GREATER THAN 3:1 BUT LESS THAN 2:1. ECM SHALL CONSIST OF AN ORGANIC COMPONENT 50 - 100% OF DRY WEIGHT, AND COMPRISED OF FIBROUS AND ELONGATED FRAGMENTS. ECM SHALL BE FREE FROM REFUSE, MATERIAL TOXIC TO PLANT GROWTH OR CONSTRUCTION DEBRIS. ECM SHALL BE EVENLY DISTRIBUTED AND APPLIED AT A THICKNESS OF 2" ON 3:1 SLOPES, WITH AN ADDITIONAL 1/2" PER 20' OF SLOPE FOR A MAXIMUM OF 100' IN LENGTH. SLOPES GREATER THAN 3:1, ECM SHALL BE APPLIED AT THICKNESS OF 4" OR 5" FOR SLOPES GREATER THAN 60° IN LENGTH.

NO SLOPES, EITHER PERMANENT OR TEMPORARY, SHALL BE STEEPER THAN ONE AND ONE HALF TO ONE (1.5:1). EROSION CONTROL MIX IS AN ACCEPTABLE STABILIZATION MEASURE FOR SLOPES UP TO 3:1, WITH LIMITS THAT ARE COVERED BY NOTING DISCHARGES IN SHEET. SLOPES BETWEEN 3:1 AND 2:1 SHALL BE STABILIZED WITH EROSION CONTROL BLANKETS, AND ALL SLOPES GREATER THAN 2:1 SHALL BE STABILIZED WITH RIPRAP. SEE SLOPE STABILIZATION DETAIL FOR ADDITIONAL INFORMATION.

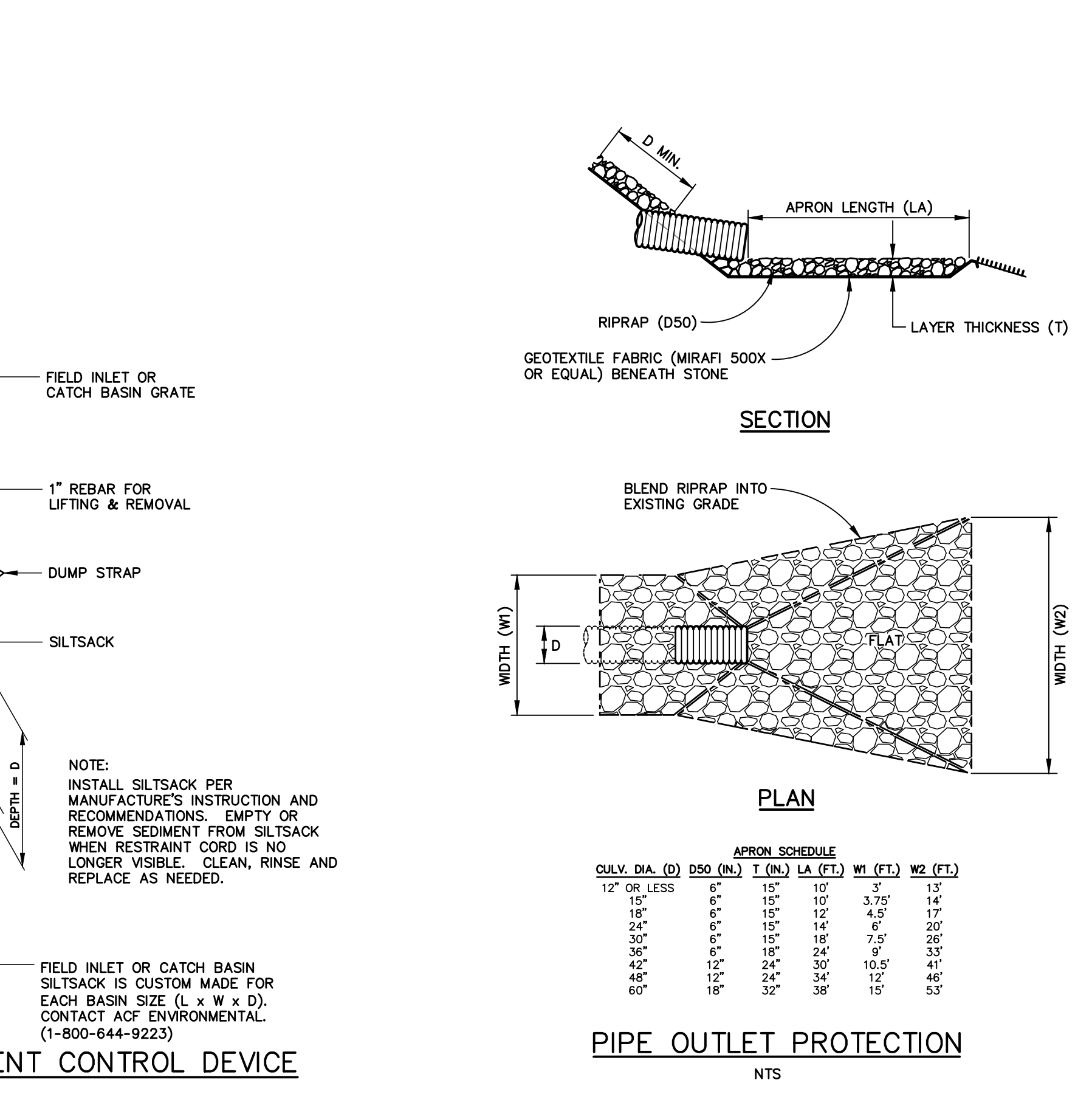
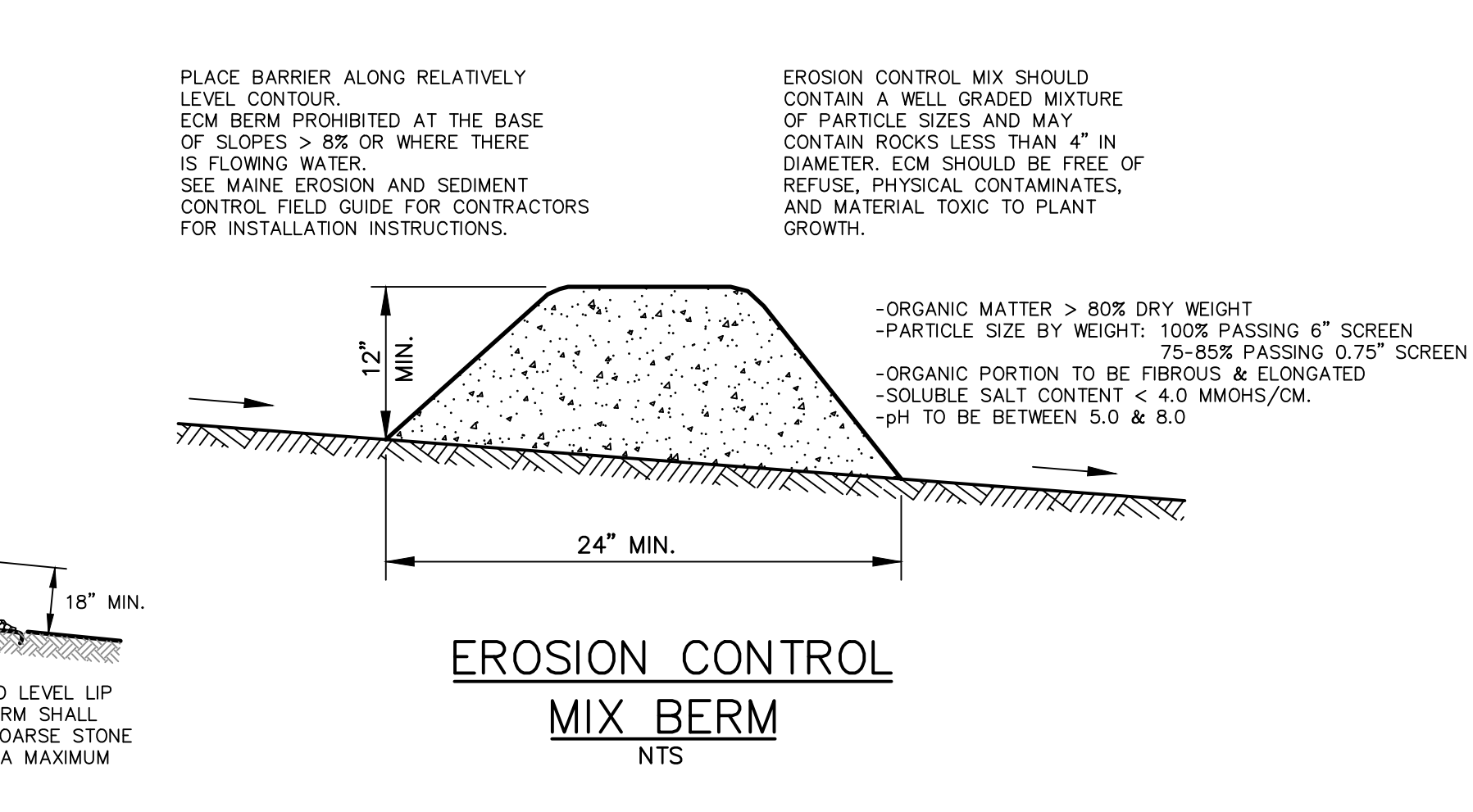
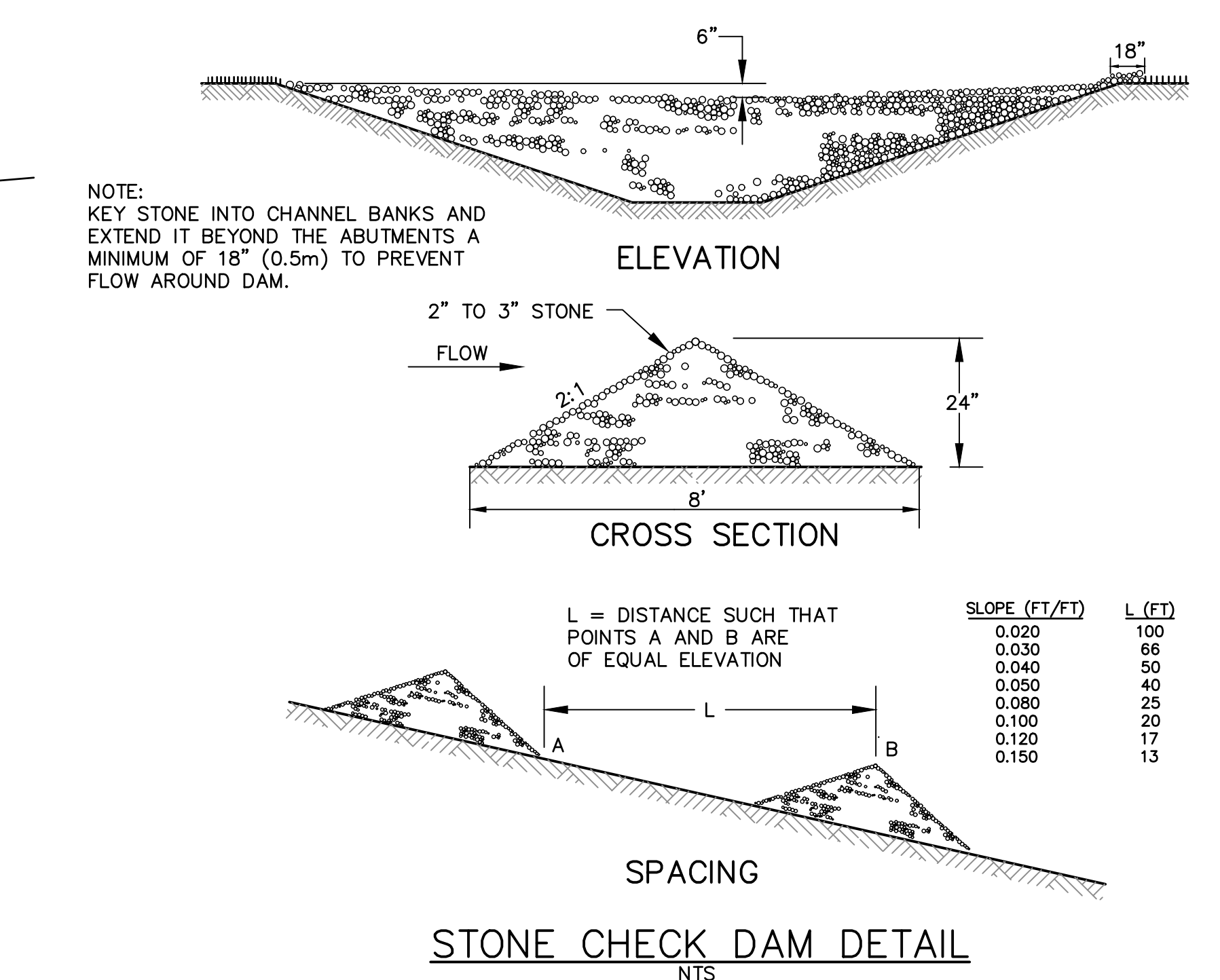
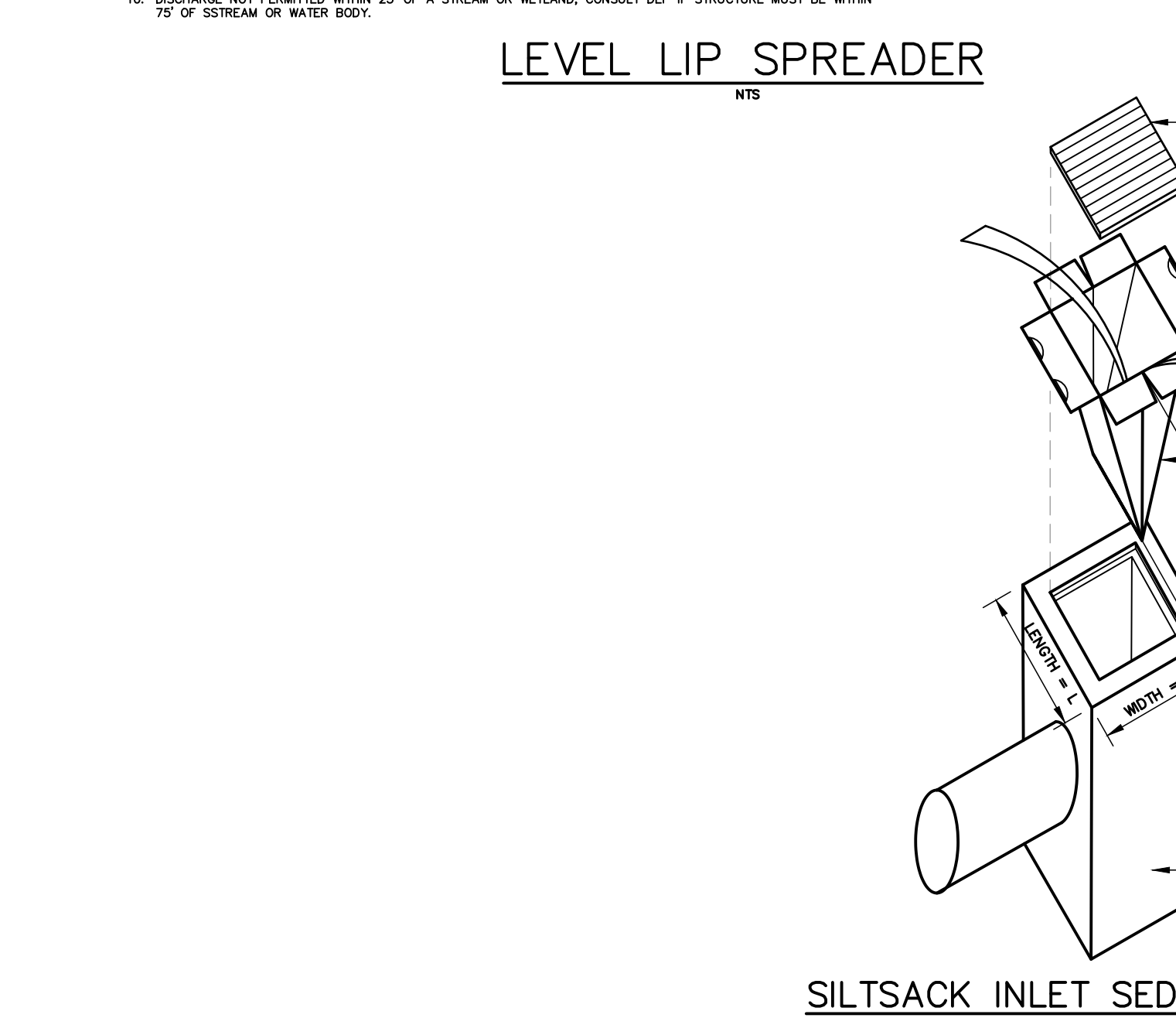
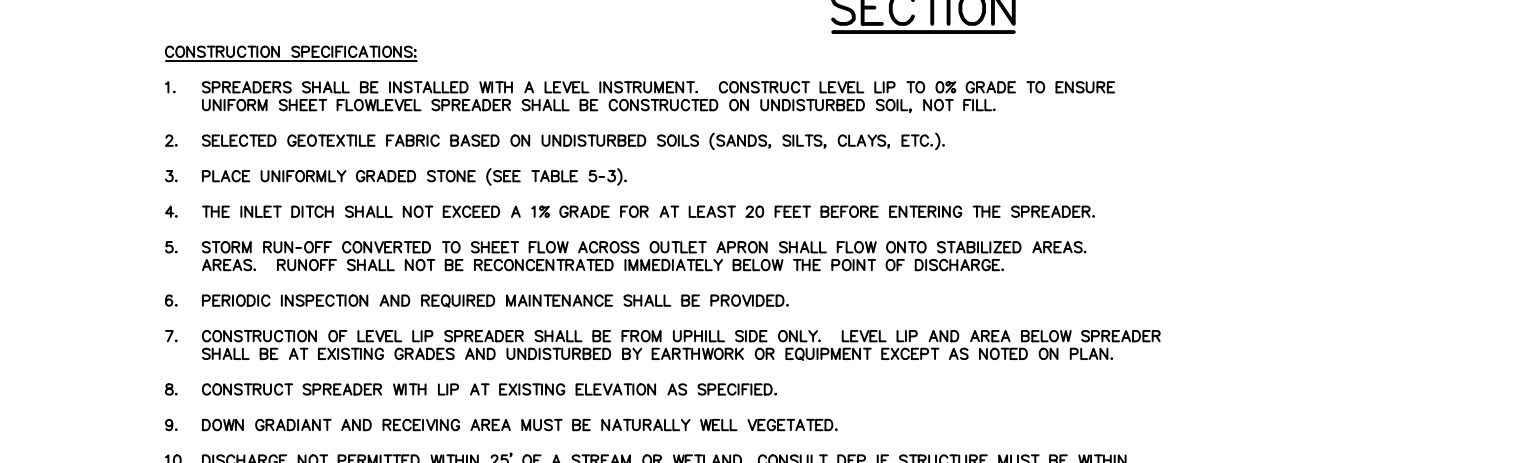
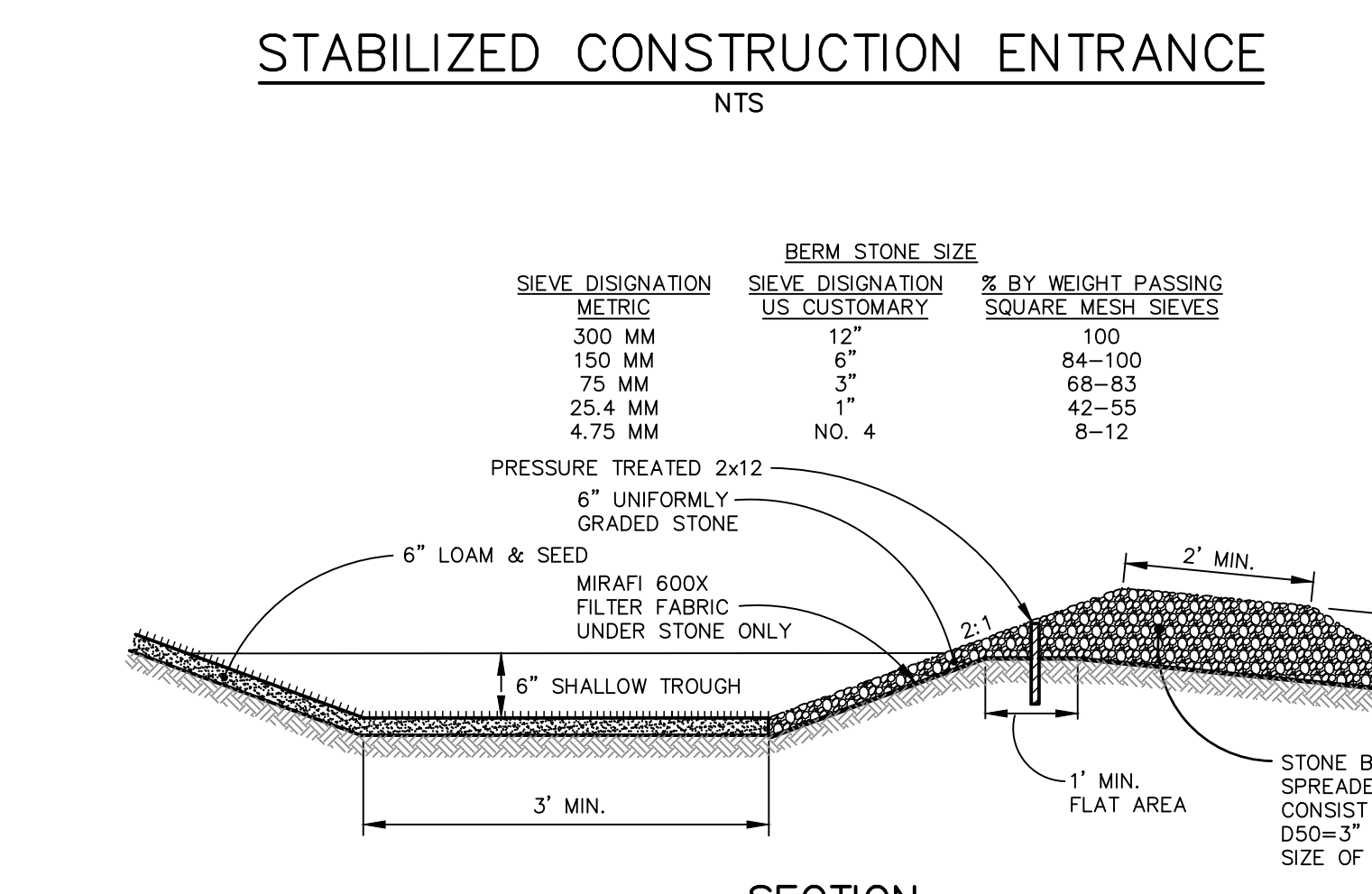
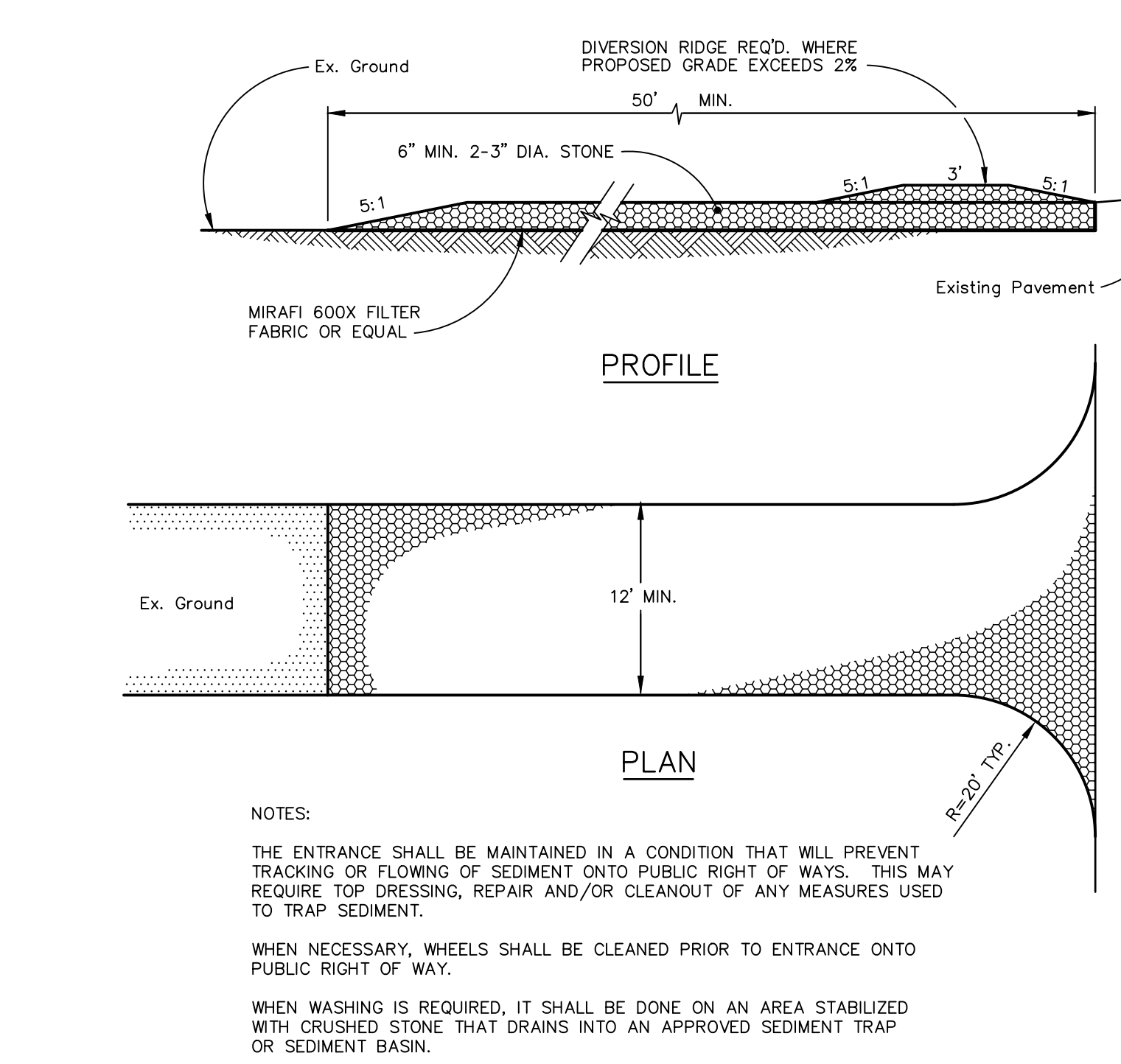
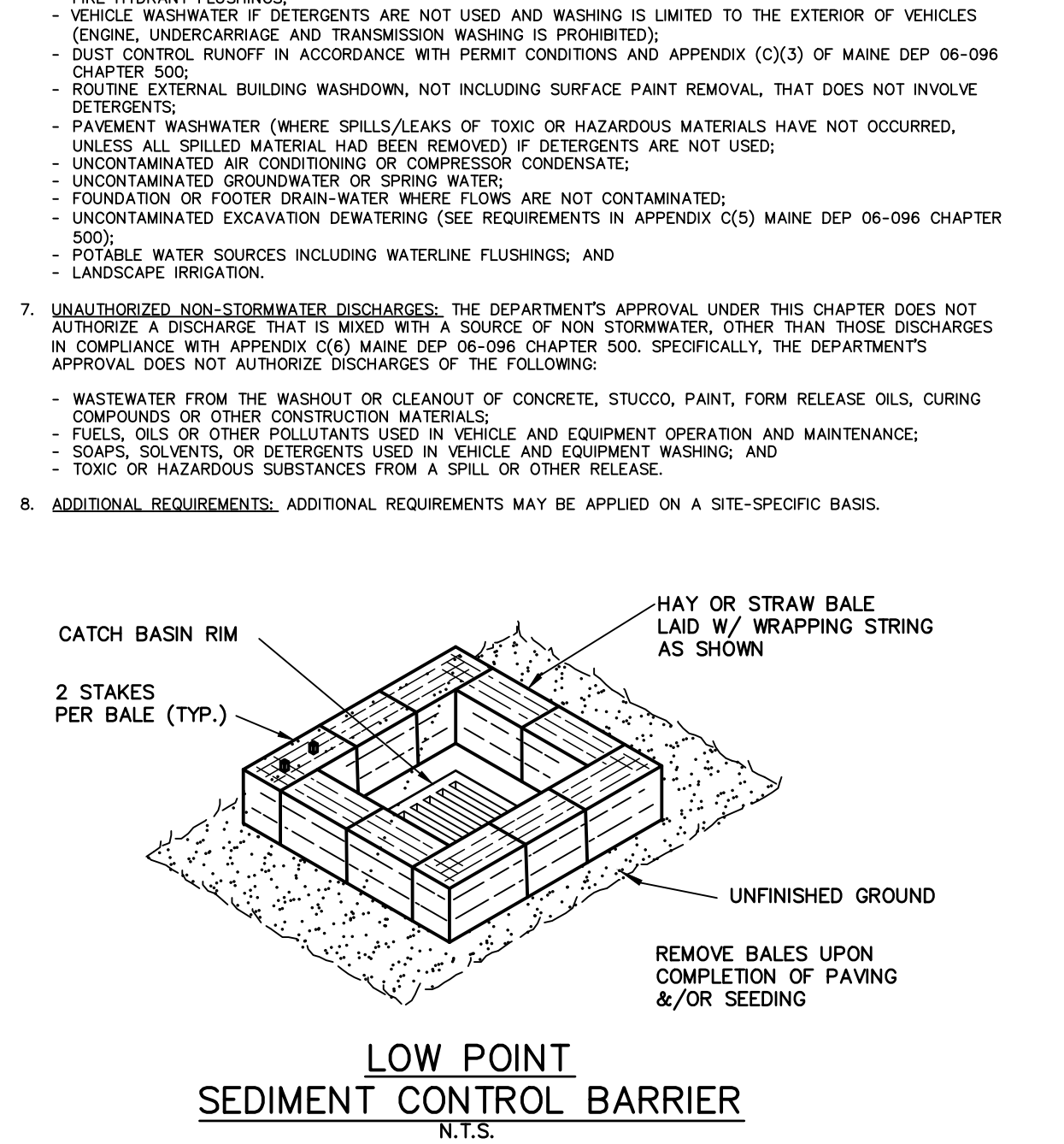


- EROSION CONTROL DURING CONSTRUCTION**
- WINTER CONSTRUCTION**
- WINTER CONSTRUCTION PERIOD: NOVEMBER 1 THROUGH APRIL 15
  - OVERWINTER STABILIZATION OF DITCHES AND CHANNELS:
    - ALL STONE-LINED DITCHES AND CHANNELS MUST BE CONSTRUCTED AND STABILIZED BY NOVEMBER 15. ALL GRASS LINED DITCHES AND CHANNELS MUST BE CONSTRUCTED AND STABILIZED BY SEPTEMBER 1. IF A DITCH OR CHANNEL IS NOT GRASS-LINED BY SEPTEMBER 1, THEN ONE OF THE FOLLOWING ACTIONS MUST BE TAKEN TO STABILIZE THE DITCH FOR LATE FALL AND WINTER.
      - INSTALL A SOD LINING IN THE DITCH. A DITCH MUST BE LINED WITH PROPERLY INSTALLED SOD BY OCTOBER 1. PROPER INSTALLATION INCLUDES: PINNING THE SOD ONTO THE SOIL WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, AND WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL. WATERING THE SOD MUST BE DONE AT LEAST THREE TIMES PER WEEK. ANCHORING SOD AT THE BASE OF THE DITCH WITH JUTE OR PLASTIC MESH TO PREVENT THE SOD FROM SLOUGHING DURING FLOW CONDITIONS. SEE THE PERMANENT VEGETATION BMP SECTION.
      - INSTALL A STONE LINING IN THE DITCH. A DITCH MUST BE LINED WITH STONE RIPRAP BY NOVEMBER 15. A REGISTERED PROFESSIONAL ENGINEER MUST BE HIRED TO DETERMINE THE STONE SIZE AND LINING THICKNESS NEEDED TO WITHSTAND THE ANTICIPATED FLOW VELOCITIES AND FLOW VOLUMES THROUGH THE DITCH. IF NECESSARY, THE CONTRACTOR WILL REGRADE THE DITCH PRIOR TO PLACING THE STONE LINING SO TO PREVENT THE STONE LINING FROM REDUCING THE DITCH'S CROSS-SECTIONAL AREA.
    - OVERWINTER STABILIZATION OF DISTURBED SLOPES: ALL STONE-COVERED SLOPES MUST BE CONSTRUCTED AND STABILIZED BY NOVEMBER 15. ALL SLOPES TO BE VEGETATED MUST BE SEED AND MULCHED BY SEPTEMBER 1. THE DEPARTMENT WILL CONSIDER ANY AREA HAVING A GRADE GREATER THAN 15% TO BE A SLOPE. IF A SLOPE IS NOT STABILIZED BY SEPTEMBER 1, THEN ONE OF THE FOLLOWING ACTIONS MUST BE TAKEN TO STABILIZE THE SLOPE FOR LATE FALL AND WINTER. STABILIZE THE SLOPE WITH TEMPORARY VEGETATION AND EROSION CONTROL MATS. BY OCTOBER 1, THE DISTURBED SLOPE MUST BE SEEDED WITH WINTER RYE AT A SEEDING RATE OF 3 POUNDS PER 1000 SQUARE FEET AND THEN INSTALL EROSION CONTROL MATS OR ANCHORED MULCH OVER THE SEEDING. THE RYE FAILS TO GROW AT LEAST THREE INCHES OR FAILS TO COVER AT LEAST 75% OF THE SLOPE BY NOVEMBER 1, THEN THE CONTRACTOR WILL COVER THE SLOPE WITH A LAYER OF EROSION CONTROL MIX OR WITH STONE RIPRAP AS DESCRIBED IN THE FOLLOWING SECTIONS.
      - STABILIZE THE SOIL WITH SOD: THE DISTURBED SLOPE MUST BE STABILIZED WITH PROPERLY INSTALLED SOD BY OCTOBER 1. PROPER INSTALLATION INCLUDES: PINNING THE SOD ONTO THE SOIL WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, AND WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL. THE CONTRACTOR WILL NOT USE LATE SEASON SOD INSTALLATION TO STABILIZE SLOPES HAVING A GRADE GREATER THAN 33% (2H:1V) OR HAVING GROUNDWATER SEEPS ON THE SOIL FACE.
      - STABILIZE THE SOIL WITH EROSION CONTROL MIX: EROSION CONTROL MIX MUST BE PROPERLY INSTALLED BY NOVEMBER 15. THE CONTRACTOR WILL NOT USE EROSION CONTROL MIX TO STABILIZE SLOPES HAVING GREATER THAN 50% (2H:1V) OR HAVING GROUNDWATER SEEPS ON THE SLOPE FACE. SEE THE EROSION CONTROL MIX NOTES FOR ADDITIONAL CRITERIA.
      - STABILIZE THE SOIL WITH STONE RIPRAP: PLACE A LAYER OF STONE RIPRAP ON THE SLOPE BY NOVEMBER 15. THE DEVELOPER'S OWNER WILL HIRE A REGISTERED PROFESSIONAL ENGINEER TO DETERMINE THE STONE SIZE NEEDED FOR STABILITY ON THE SLOPE AND TO DESIGN A FILTER LAYER FOR UNDERNEATH THE RIPRAP.
  - OVERWINTER STABILIZATION OF DISTURBED SOILS:
    - BY NOVEMBER 15, ALL DISTURBED SOIL ON AREAS HAVING A SLOPE LESS THAN 15% MUST BE SEED AND MULCHED. IF THE DISTURBED AREAS ARE NOT STABILIZED BY THIS DATE, THEN ONE OF THE FOLLOWING ACTIONS MUST BE TAKEN TO STABILIZE THE SOIL FOR LATE FALL AND WINTER.
      - STABILIZE THE SOIL WITH TEMPORARY VEGETATION: BY OCTOBER 1, SEED THE DISTURBED SOIL WITH WINTER RYE AT A SEEDING RATE OF 3 POUNDS PER 1000 SQUARE FEET. LIGHTLY MOW THE SEEDING WITH HAY OR STRAW AT 75 POUNDS PER 1000 SQUARE FEET, AND ANCHOR THE MULCH WITH PLASTIC NETTING. MONITOR GROWTH OF THE RYE. IF THE RYE FAILS TO GROW AT LEAST THREE INCHES OR FAILS TO COVER AT LEAST 90% OF THE DISTURBED SOIL BY NOVEMBER 1, THEN MULCH THE AREA FOR OVER-WINTER PROTECTION AS DESCRIBED BELOW.
      - STABILIZE THE SOIL WITH SOD: STABILIZE THE DISTURBED SOIL WITH PROPERLY INSTALLED SOD BY OCTOBER 1. PROPER INSTALLATION INCLUDES: PINNING THE SOD ONTO THE SOIL WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, AND WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL.
      - STABILIZE THE SOIL WITH MULCH: BY NOVEMBER 15, MOW THE DISTURBED SOIL WITH HAY OR STRAW AT A RATE OF AT LEAST 150 POUNDS PER 1000 SQUARE FEET ON A SLOPE SO THAT NO SOIL IS VISIBLE THROUGH THE MULCH. IMMEDIATELY AFTER APPLYING THE MULCH, ANCHOR THE MULCH WITH PLASTIC NETTING TO PREVENT WIND FROM MOVING THE MULCH OFF THE DISTURBED SOIL. PROVIDE NETTING ON ALL SLOPES GREATER THAN 8%.
  - MAINTENANCE: IF AN INSPECTION DETERMINES THAT A CORRECTIVE ACTION IS REQUIRED, THE ACTION OR REPAIR SHALL BE STARTED BY THE END WITHIN SEVEN DAYS OF THE NEXT WORKDAY AND COMPLETED WITHIN SEVEN DAYS OR BEFORE THE NEXT STORM EVENT. MAINTENANCE MEASURES SHALL BE APPLIED AS NEEDED DURING THE ENTIRE CONSTRUCTION SEASON. ONCE A WEEK BEFORE AND AFTER ANY SIGNIFICANT RAINFALL OR SNOW STORM, THE CONTRACTOR SHALL PERFORM A VISUAL INSPECTION OF ALL INSTALLED EROSION CONTROL MEASURES AND PERFORM REPAIRS AS NEEDED TO INSURE THEIR CONTINUOUS FUNCTION. FOLLOWING THE TEMPORARY AND/OR FINAL SEEDING AND MULCHING, THE CONTRACTOR SHALL, IN THE SPRING, INSPECT AND REPAIR ANY DAMAGED AND/OR BARE SPOTS. AN ESTABLISHED VEGETATIVE COVER MEANS A MINIMUM OF 85 TO 90% OF AREAS VEGETATED WITH VIGOROUS GROWTH.

- STABILIZATION SCHEDULE BEFORE WINTER:**
- SEPTEMBER 15: ALL DISTURBED AREAS MUST BE SEED AND MULCHED. ALL STONE-LINED DITCHES AND CHANNELS MUST BE CONSTRUCTED WITH MULCH OR AN EROSION CONTROL BLANKET.
  - OCTOBER 1: IF THE SLOPE IS STABILIZED WITH AN EROSION CONTROL BLANKET AND SEEDS, ALL DISTURBED AREAS TO BE PROTECTED WITH AN ANNUAL GRASS MUST BE SEED AT A SEEDING RATE OF 3 POUNDS PER 1000 SQUARE FEET AND MULCHED.
  - NOVEMBER 15: ALL STONE LINED DITCHES AND CHANNELS MUST BE CONSTRUCTED AND STABILIZED. SLOPES THAT ARE NOT STABILIZED WITHIN THIS DATE MUST BE CONSTRUCTED BY THAT DATE.

- HOUSEKEEPING**
- SPILL PREVENTION: CONTROLS MUST BE USED TO PREVENT POLLUTANTS FROM BEING DISCHARGED FROM MATERIALS 1. ON SITE, INCLUDING STORAGE PRACTICES TO MINIMIZE EXPOSURE TO STORMWATER, AND APPROPRIATE SPILL PREVENTION, CONTAINMENT, AND RESPONSE PLANNING AND IMPLEMENTATION.
  - GROUNDWATER PROTECTION: DURING CONSTRUCTION, LIQUID PETROLEUM PRODUCTS AND OTHER HAZARDOUS MATERIALS WITH THE POTENTIAL OF CONTAMINATING GROUNDWATER MUST NOT BE STORED OR HANDLED IN AREAS OF THE SITE DRAINING TO AN INFILTRATION AREA. AN INFILTRATION AREA IS ANY AREA OF THE SITE THAT BY DESIGN OR AS A RESULT OF A RESIDUAL, AND OTHER RELEVANT FACTORS ACCUMULATES RUNOFF THAT INFILTRATES INTO THE SOIL, DIKES, BERMS, SUMPS, AND OTHER FORMS OF SECONDARY AREAS THAT PREVENT DISCHARGE TO GROUNDWATER. MAY BE USED TO ISOLATE PORTIONS OF THE SITE FOR THE PURPOSES OF STORAGE AND HANDLING OF THESE MATERIALS.
  - FUGITIVE SEDIMENT AND DUST: ACTIONS MUST BE TAKEN TO ENSURE THAT ACTIVITIES DO NOT RESULT IN NOTICEABLE EROSION OF SOILS OR FUGITIVE DUST EMISSIONS DURING OR AFTER CONSTRUCTION. OIL MY NOT BE USED FOR DUST CONTROL. ANY OFFSITE TRACKING OF MUD OR SEDIMENT SHALL BE VACUUMED IMMEDIATELY AND PRIOR TO THE NEXT SIGNIFICANT STORM EVENT.
  - DEBRIS AND OTHER MATERIALS: LITTER, CONSTRUCTION DEBRIS, AND CHEMICALS EXPOSED TO STORMWATER MUST BE PREVENTED FROM BECOMING A POLLUTANT SOURCE.
  - TRENCH OR FOUNDATION DE-WATERING: TRENCH DE-WATERING IS THE REMOVAL OF WATER FROM TRENCHES, FOUNDATIONS, CONCRETE DAMS, POND, AND OTHER AREAS WITHIN THE CONSTRUCTION AREA THAT RETAIN WATER AFTER EXCAVATION. IN MOST CASES THE COLLECTED WATER IS HEAVILY SILTED AND HINDERS CORRECT SAFE CONSTRUCTION PRACTICES. THE COLLECTED WATER MUST BE REMOVED FROM THE PONDING AREA, EITHER THROUGH GRAVITY OR PUMPING, AND MUST BE SPREAD THROUGH NATURAL, WOODED BUFFERS, LINKED TO AREAS THAT ARE SPECIFICALLY DESIGNED TO COLLECT THE MAXIMUM AMOUNT OF SEDIMENT POSSIBLE, LIKE A COFFERDAM SEDIMENTATION BASIN, AND ALLOWING THE WATERS TO FLOW OVER DISTURBED AREAS OF THE SITE. EQUIVALENT MEASURES MAY BE TAKEN IF APPROVED BY THE DEPARTMENT.
  - NON-STORMWATER DISCHARGES: IDENTIFY AND PREVENT CONTAMINATION BY NON-STORMWATER DISCHARGES, WHERE ALLOWED NON-STORMWATER DISCHARGES EXIST. THEY MUST BE IDENTIFIED AND STEPS SHOULD BE TAKEN TO ENSURE THE IMPLEMENTATION OF APPROPRIATE POLLUTION PREVENTION MEASURES FOR THE NON-STORMWATER COMPONENT(S) OF THE DISCHARGE. AUTHORIZED NON-STORMWATER DISCHARGES ARE:
    - DISCHARGES FROM FIREFIGHTING ACTIVITY:
      - FIRE HYDRANT FLUSHINGS;
      - VEHICLE WASHWATER IF DETERGENTS ARE NOT USED AND WASHING IS LIMITED TO THE EXTERIOR OF VEHICLES (ENGINE, UNDERCARRIAGE AND TRANSMISSION WASHING IS PROHIBITED);
      - DUST CONTROL RUNOFF IN ACCORDANCE WITH PERMIT CONDITIONS AND APPENDIX (C)(3) OF MAINE DEP 06-096 CHAPTER 500;
      - ROUTINE EXTERNAL BUILDING WASHDOWN, NOT INCLUDING SURFACE PAINT REMOVAL, THAT DOES NOT INVOLVE DETERGENTS;
      - PAVEMENT WASHWATER (WHERE SPILLS/LEAKS OF TOXIC OR HAZARDOUS MATERIALS HAVE NOT OCCURRED, UNLESS ALL SPILLED MATERIAL HAD BEEN REMOVED) IF DETERGENTS ARE NOT USED;
      - UNCONTAMINATED AIR CONDITIONING OR COMPRESSOR CONDENSATE;
      - UNCONTAMINATED GROUNDWATER OR SPRING WATER;
      - FOUNDATION OR FOOTER DRAIN-WATER WHERE FLOWS ARE NOT CONTAMINATED;
      - UNCONTAMINATED EXCAVATION DEWATERING (SEE REQUIREMENTS IN APPENDIX (C) MAINE DEP 06-096 CHAPTER 500);
      - POTABLE WATER SOURCES INCLUDING WATERLINE FLUSHINGS; AND
      - LANDSCAPE IRRIGATION.

- UNAUTHORIZED NON-STORMWATER DISCHARGES:** THE DEPARTMENT'S APPROVAL UNDER THIS CHAPTER DOES NOT AUTHORIZE A DISCHARGE THAT IS MIXED WITH A SOURCE OF NON STORMWATER, OTHER THAN THOSE DISCHARGES IN COMPLIANCE WITH APPENDIX (C)(3) MAINE DEP 06-096 CHAPTER 500. SPECIFICALLY, THE DEPARTMENT'S APPROVAL DOES NOT AUTHORIZE DISCHARGES OF THE FOLLOWING:
- WASTEWATER FROM THE WASHOUT OR CLEANOUT OF CONCRETE, STUCCO, PAINT, FORM RELEASE OILS, CURING COMPOUNDS OR OTHER CONSTRUCTION MATERIALS;
  - FUELS, OILS OR OTHER POLLUTANTS USED IN VEHICLE AND EQUIPMENT OPERATION AND MAINTENANCE;
  - SOAPS, SOLVENTS, OR DETERGENTS USED IN VEHICLE AND EQUIPMENT WASHING; AND
  - TOXIC OR HAZARDOUS SUBSTANCES FROM A SPILL OR OTHER RELEASE.
8. ADDITIONAL REQUIREMENTS: ADDITIONAL REQUIREMENTS MAY BE APPLIED ON A SITE-SPECIFIC BASIS.



NO.	DATE	DESCRIPTION
1	2/12/24	Submitted To Town for Preliminary Review

**BH2M**

Berry, Huff, MacDonald, Miliffigan Inc.  
Engineers, Surveyors

3808 Main Street  
Gorham, Maine 04038

Tel: (207) 859-2771  
Fax: (207) 859-8250

FOR  
Gary & Megan Jordan  
& Donald Grant  
33 Quincey Drive  
Gorham, Maine

**DETAILS A**

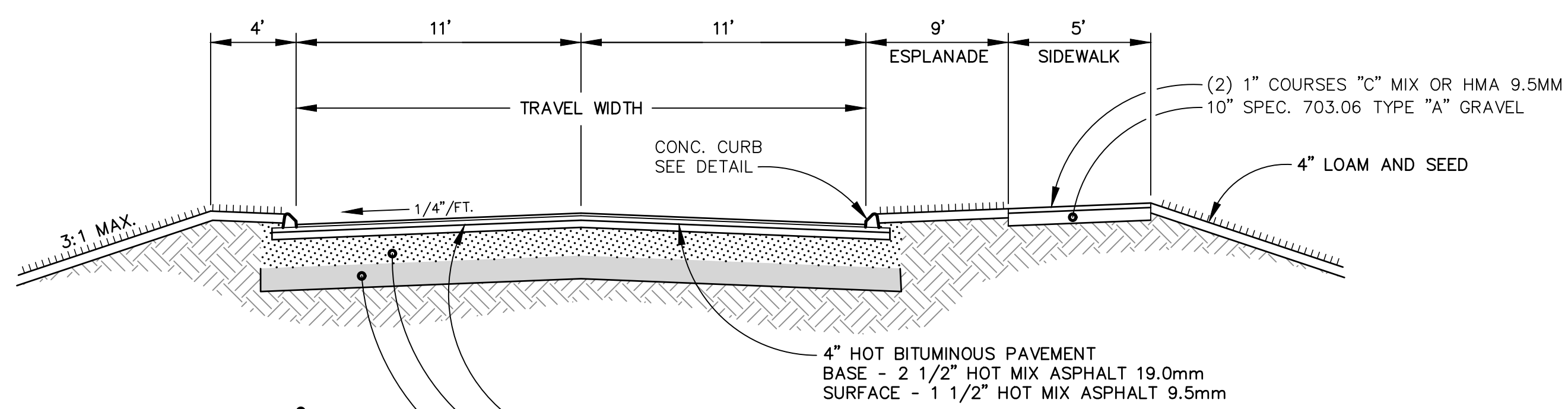
**GUARDIAN ESTATES**

WATERHOUSE ROAD  
GORHAM, MAINE

DESIGNED W. Pelkey	DATE Aug. 2023
DRAWN Dept.	SCALE As Noted
CHECKED A. Fagan	JOB. NO. 22092

SHEET  
**8**

REPRODUCTION OR REUSE OF THIS DOCUMENT WITHOUT THE EXPRESSED WRITTEN CONSENT OF BH2M INC. IS PROHIBITED



**ROADWAY SECTION**  
NTS

TABLE 7.1.1  
MAINE DOT SPEC. FOR UNDERDRAIN BACKFILL  
MEDOT #703.22

SEIVE #	% PASSING BY WEIGHT
1/2"	95-100
3/4"	90-100
#20	10-40
#60	0-5
#100	0-5

UNDERDRAIN TYPE B

SEIVE #	% PASSING BY WEIGHT
1/2"	100
3/4"	100
#20	0-25
#40	0-5
#100	0-5

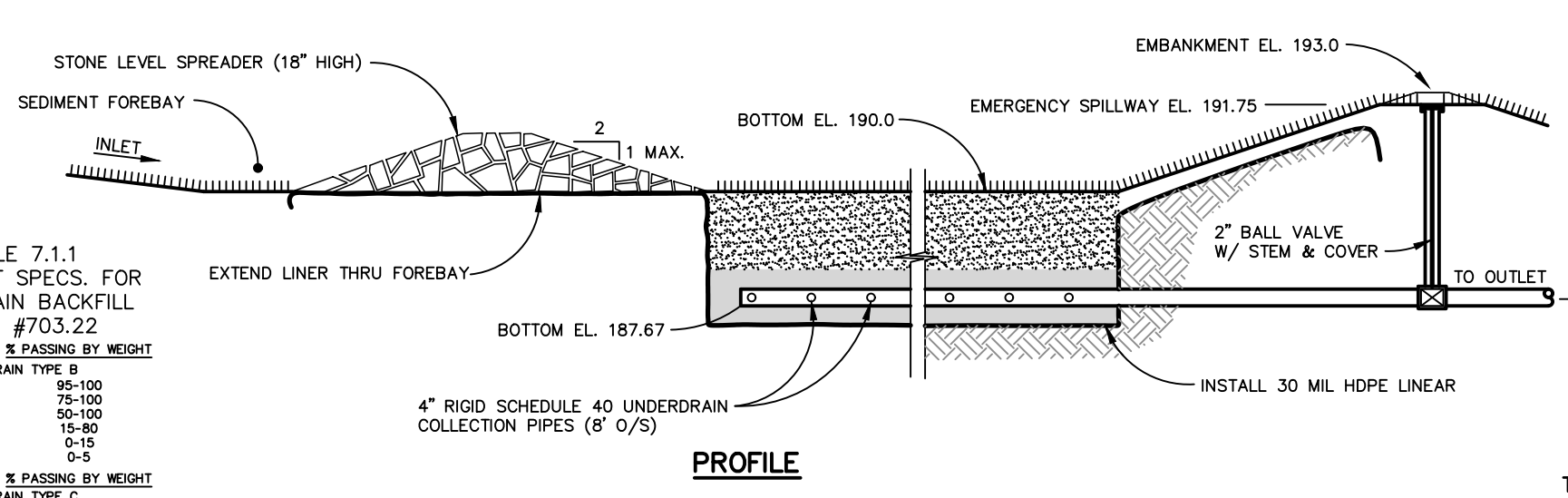
UNDERDRAIN TYPE C

TABLE 7.1.2  
SANDY LOAM TO FINE SANDY LOAM SPECIFICATION

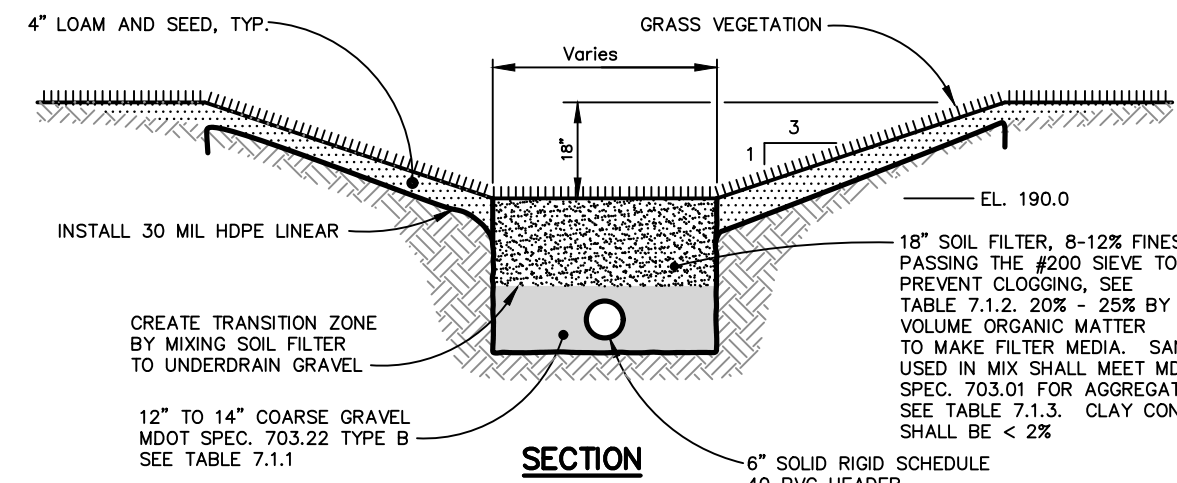
SEIVE #	% PASSING BY WEIGHT
4	75-85
10	85-95
20	90-100
40	95-100
60	98-100
100	99-100
200 (CLAY SIZE)	< 2.0

TABLE 7.1.3  
LOAMY COARSE SAND SPECIFICATION

SEIVE #	% PASSING BY WEIGHT
10	85-100
20	90-100
40	95-100
60	98-100
100	99-100
200	< 2.0

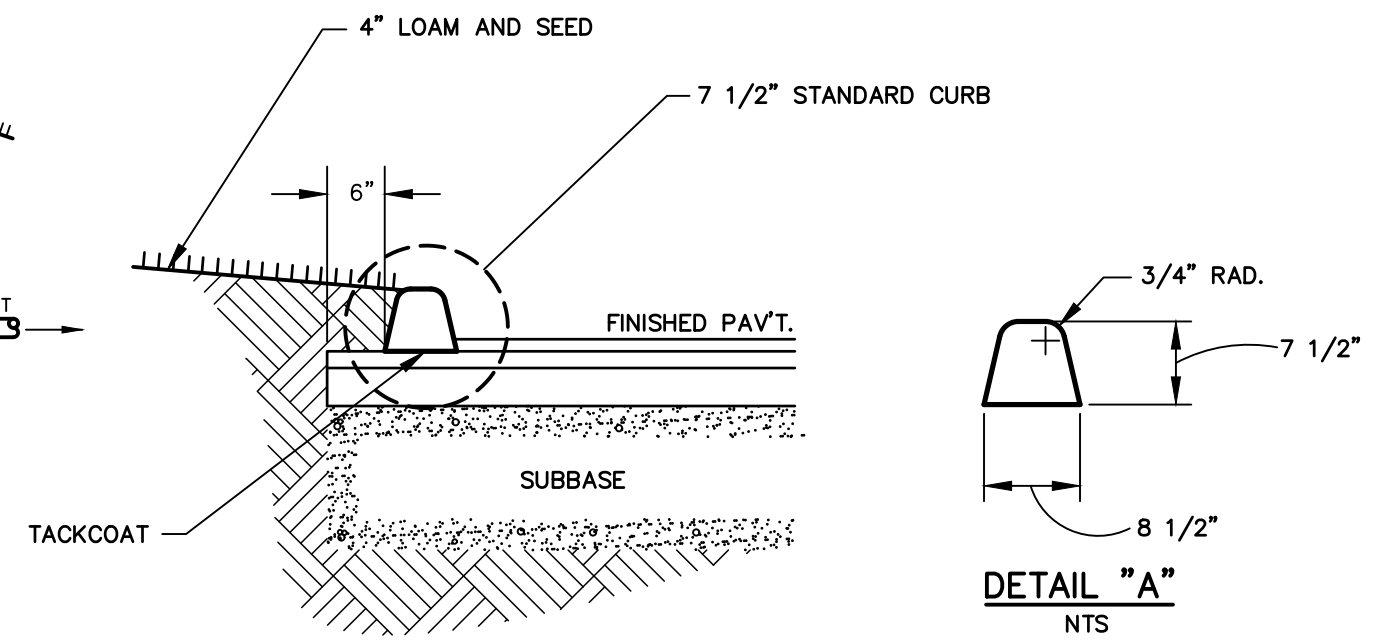


**PROFILE**



**SECTION**

**GRASSED UNDERDRAIN SOIL FILTER**  
NTS



**DETAIL "A"**  
NTS

1 LB. FIBER MESH SHALL BE ADDED TO EVERY CUBIC YARD OF CONCRETE. THE CONCRETE WILL CONTAIN THE MAXIMUM AMOUNT OF WATER TO BE OF A CONSISTENCY THAT THE CONCRETE WILL MAINTAIN THE SHAPE OF THE CURB SECTION WITHOUT SUPPORT. THIS MIX ALSO MEETS THE READY MIX REQUIREMENTS OF ASTM C94 AND WILL MEET OR EXCEED 4,000 PSI IN 28 DAYS.

THE PAVEMENT SHALL BE THOROUGHLY CLEANED TO REMOVE DUST, DIRT AND OIL BEFORE APPROVED ADHESIVE IS APPLIED PER MANUFACTURERS SPECIFICATIONS.

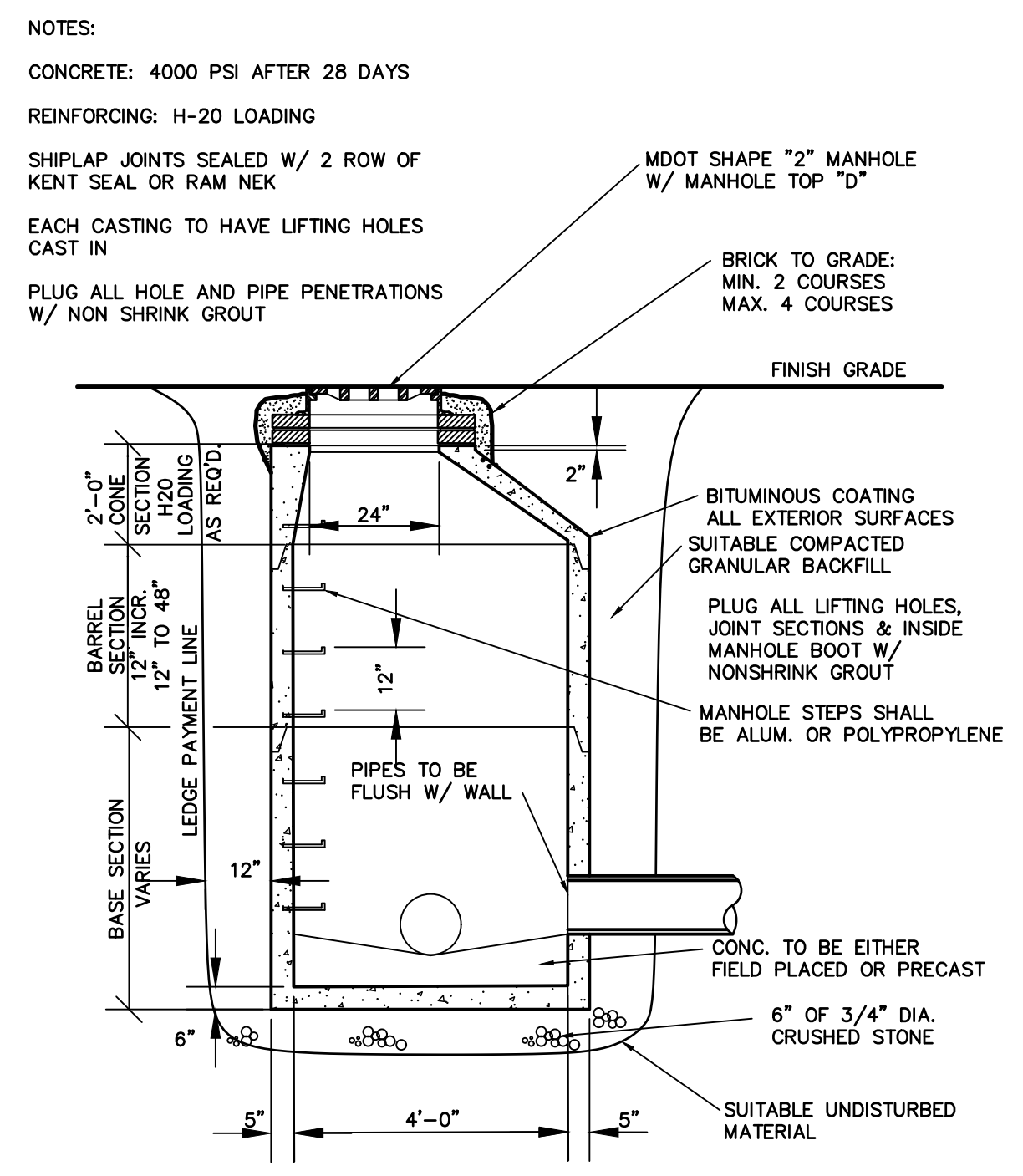
THE FIBER REINFORCED MIX SHALL BE FED INTO THE VIBRATING HOPPER WHERE IT IS COMPACTED INTO THE DESIRED MOLD PROFILE.

FRESHLY EXTRUDED CURB SHALL BE LIGHTLY TOUCHED UP WITH A STEEL HAND TROWEL. CONTROL JOINTS SHALL BE TOoled AS SOON AS POSSIBLE AT 9' INTERVALS. ADDITIONAL CONTROL JOINTS ADDED ON RADIUS AS NECESSARY.

THE FINISHED CURB WILL BE COATED WITH AN APPROVED CURING COMPOUND.

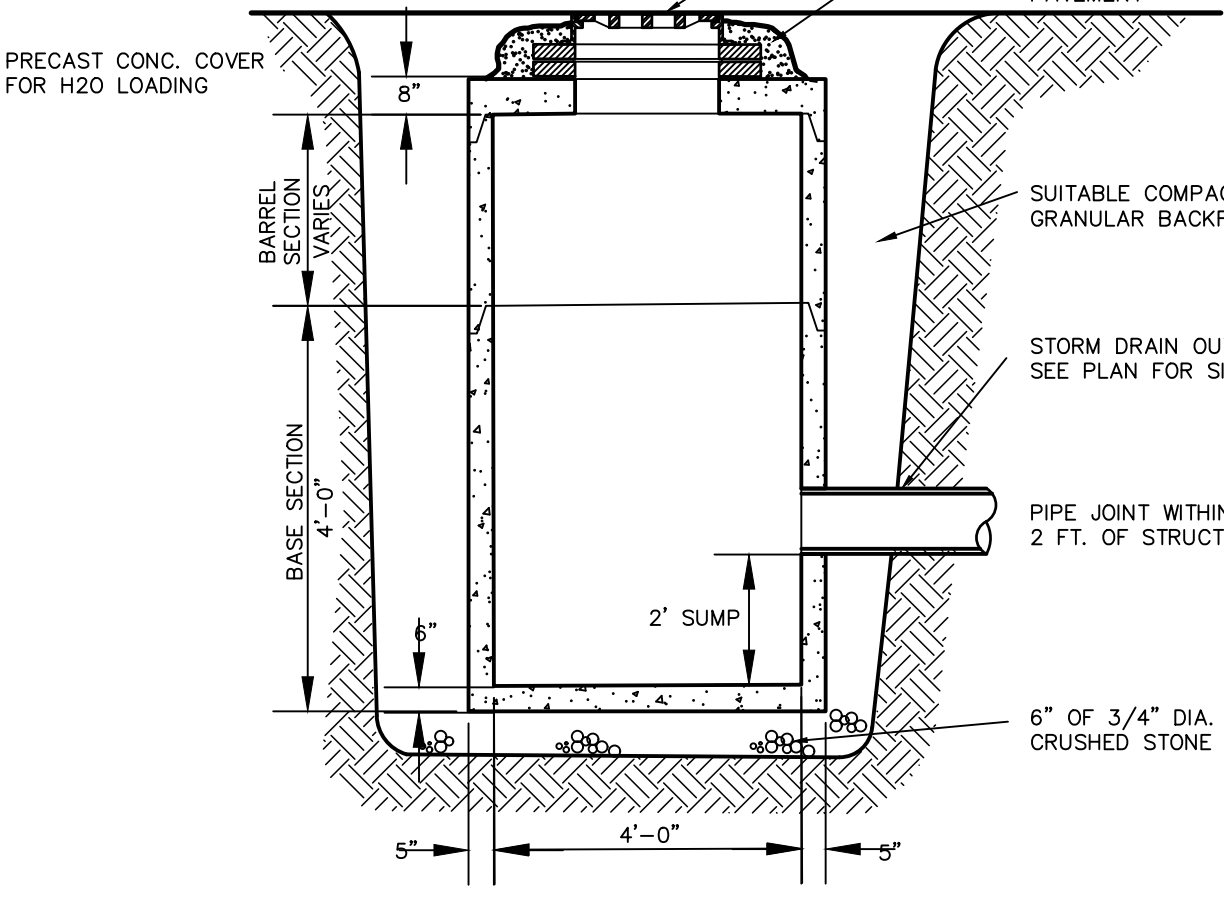
FOLLOW MANUFACTURERS INSTALLATION INSTRUCTIONS AND TEMPERATURE RESTRICTIONS.

**EXTRUDED CONCRETE CURB**  
NTS

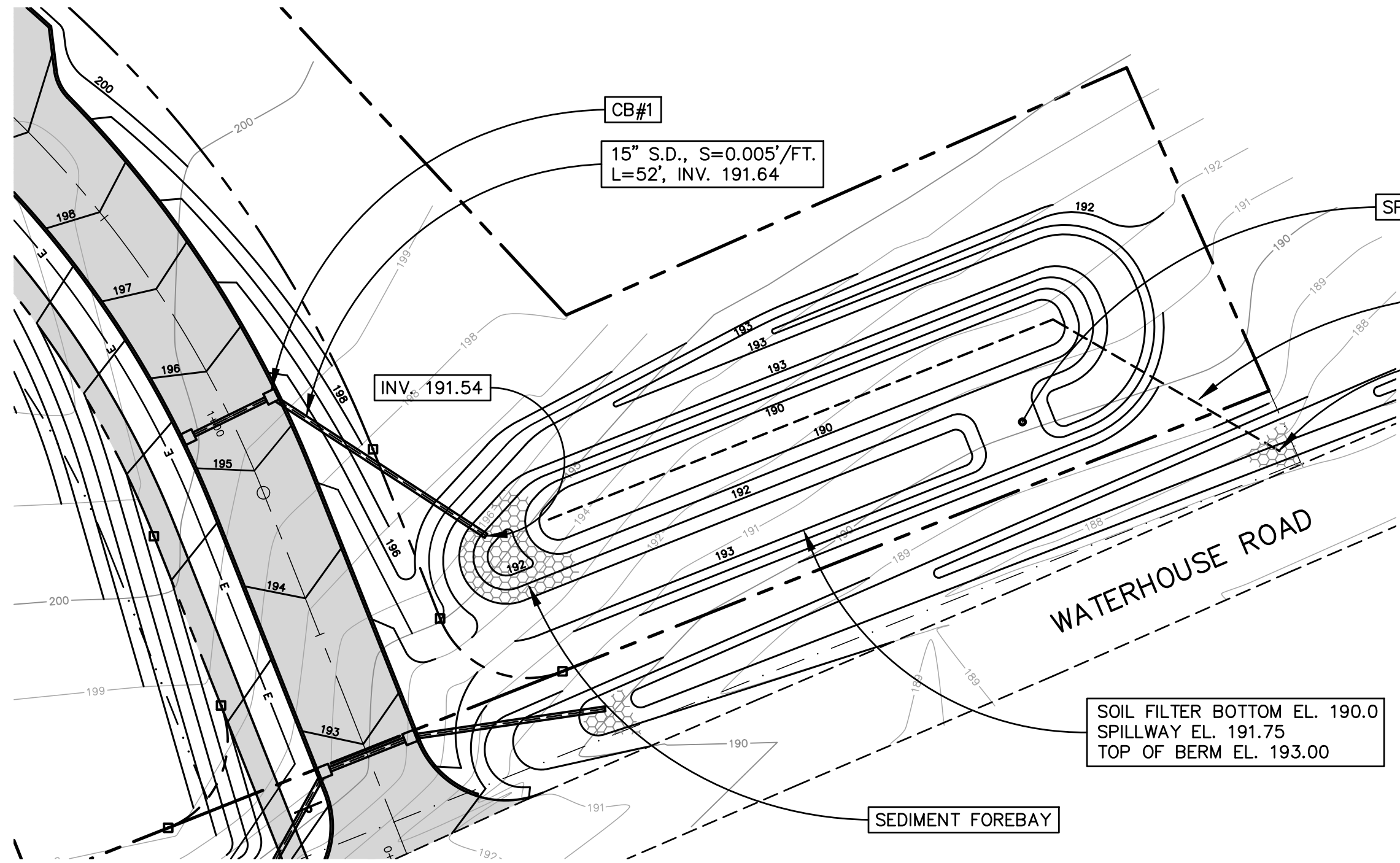


**PRECAST CONCRETE DRAIN MANHOLE**  
N.T.S.

Manhole shall conform to ASTM C478.  
Concrete: 4,000 PSI after 28 days.  
Reinforcing: H20 loading.  
Shiplap joints sealed w/ 1 strip of Butyl Rubber Sealant.  
Each casting to have lifting holes cast in.  
Plug all holes & pipe penetrations w/ non-shrink grout.  
Exterior asphalt coated.  
Lock joint flexible pipe sleeves cast in.

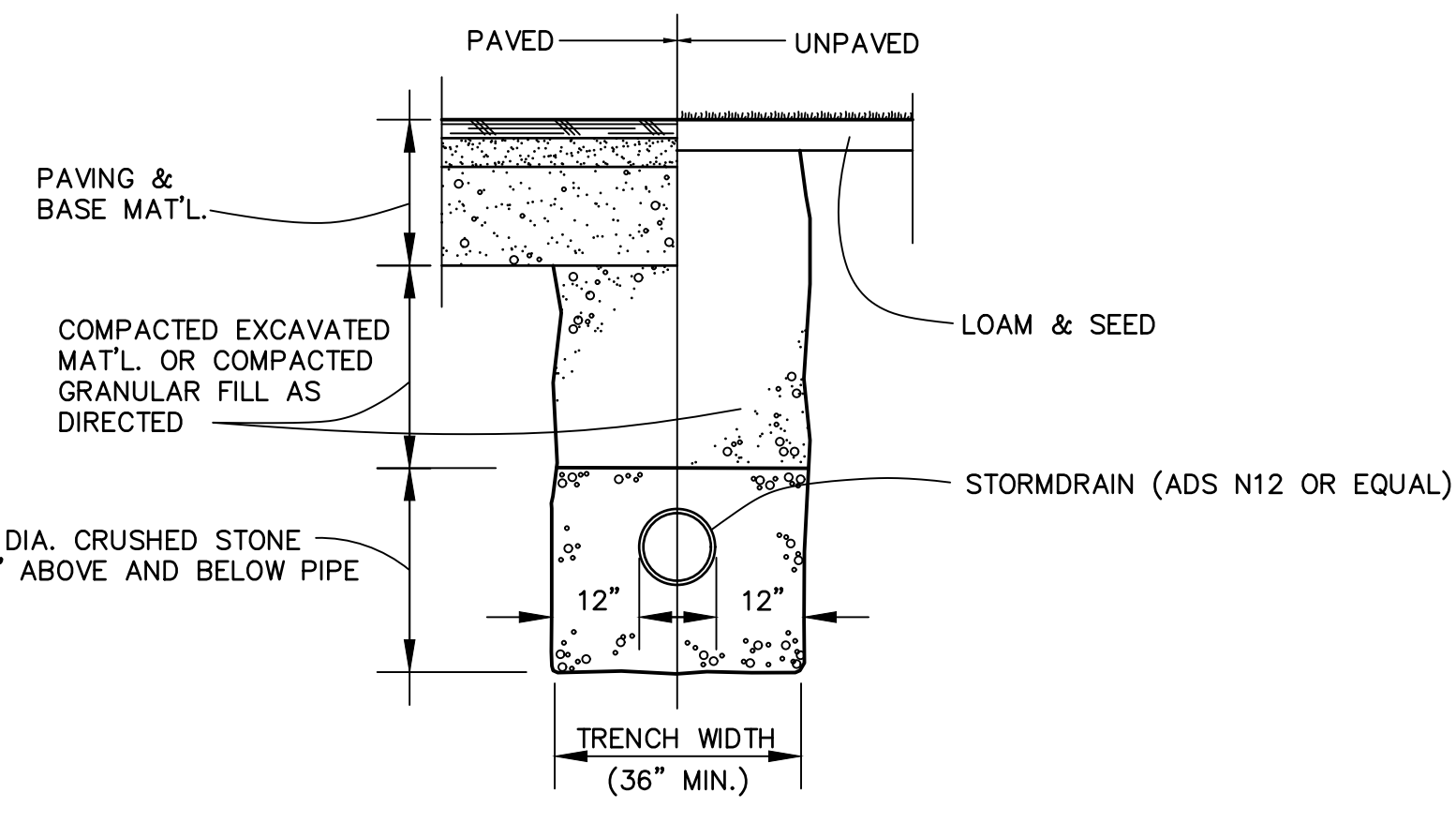


**PRECAST CONCRETE CATCH BASIN DETAIL**  
N.T.S.



**GRASSED UNDERDRAIN SOIL FILTER**  
SCALE: 1" = 25"

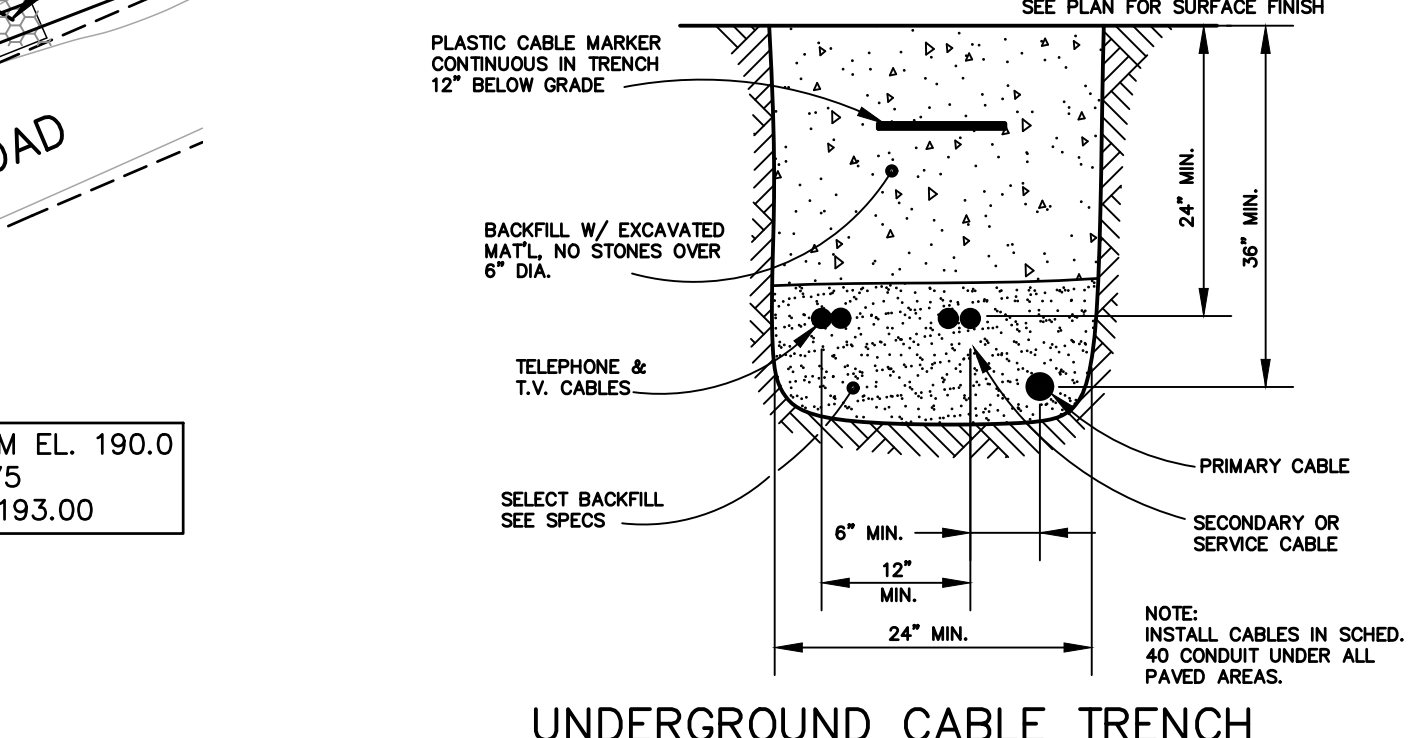
- NOTES:
- Trench width shown is payment width for rockexcavation & replacement of unsuitable material.
  - Do not mechanically compact directly over flexible pipe (e.g. PVC, Polyethylene)
  - Concrete pipe shall have sand bedding.



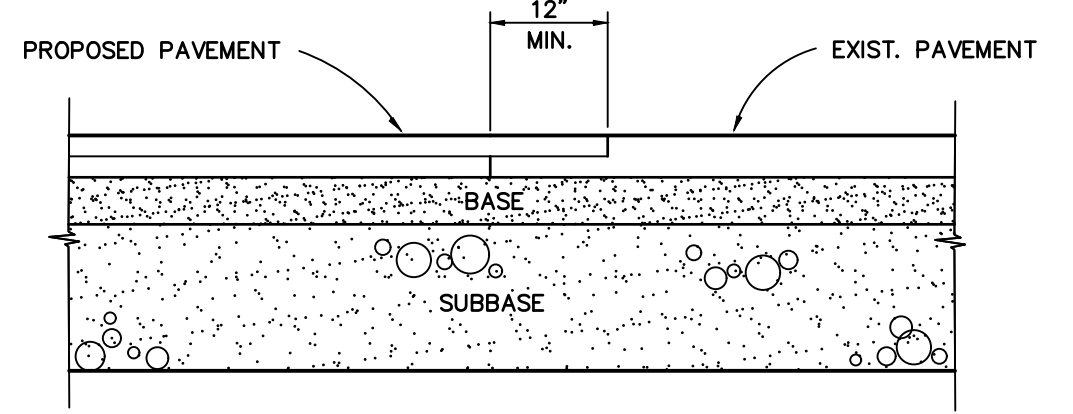
**TRENCH DETAIL**  
NTS

NOTE:

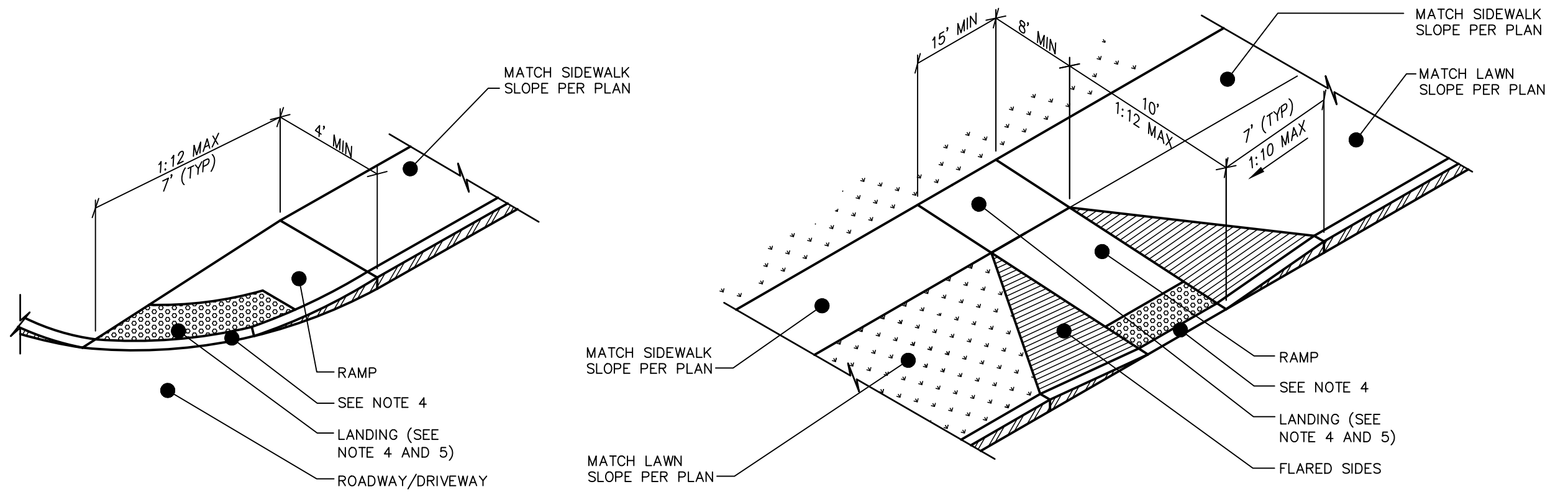
- CURB RAMP LENGTHS ARE BASED ON SIX (6) INCH CURB REVEAL HEIGHT AND NO RUNNING SLOPE. RAMP LENGTHS SHALL BE ADJUSTED AS NECESSARY TO ACCOMMODATE VARYING CURB REVEAL HEIGHTS AND TO MATCH RUNNING SLOPES OF ADJACENT ROADWAY AND SIDEWALK SLOPES TO MAINTAIN A RAMP THAT DOES NOT EXCEED THE MAXIMUM RAMP SLOPE OF 1:12.
- DETECTABLE WARNINGS SHALL CONSIST OF RAISED TRUNCATED DOMES AND SHALL HAVE A BASE DIAMETER OF 0.9 INCHES (23 mm) MINIMUM AND 1.4 INCHES (36 mm) MAXIMUM; A TOP DIAMETER OF 50 PERCENT OF THE BASE DIAMETER MINIMUM TO 45 PERCENT OF THE BASE DIAMETER MAXIMUM AND A HEIGHT OF 0.2 INCHES (5.1 mm). A CENTER-TO-CENTER SPACING OF 1.6 INCHES (41mm) MINIMUM AND 2.4 INCHES (61mm) MAXIMUM; AND A BASE-TO-BASE SPACING OF 0.65 INCHES (17mm) MINIMUM, MEASURED BETWEEN THE MOST ADJACENT DOMES ON A SQUARE GRID.
- DETECTABLE WARNINGS SHALL CONTRAST VISUALLY WITH ADJOINING SURFACES, EITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT. THE MATERIAL USED TO PROVIDE CONTRAST SHALL BE AN INTEGRAL PART OF THE WALKING SURFACE. DETECTABLE WARNINGS USED ON INTERIOR SURFACES SHALL DIFFER FROM ADJOINING WALKING SURFACES IN RESILIENCY OR SOUND-ON-CANE CONTACT.
- ALL ACCESSIBLE ROUTE SIDEWALKS INTERSECTING ROADWAYS, DRIVEWAYS, OR OTHER VEHICULAR CROSSINGS REQUIRE DETECTABLE WARNINGS. DETECTABLE WARNING ZONES SHALL BE INSTALLED SIX (6) INCHES (OR THE HORIZONTAL THICKNESS OF THE ADJACENT CURB) FROM THE FLOW LINE OF THE CURB, EXTEND INTO THE SIDEWALK FOR A 24" DEPTH, AND COVER THE COMPLETE WIDTH OF THE SIDEWALK OR RAMP AREA. DETECTABLE WARNING ZONES SHALL CONFORM TO THE SLOPE REQUIREMENTS OF THE RAMP, LANDING, OR ACCESSIBLE ROUTE AS DEFINED IN THE SPECIFIED DETAIL. DETECTABLE WARNINGS SHALL NOT BE INSTALLED IN FLARED SIDES, IF THE RAMP INCLUDES FLARED SIDES.
- ALL LANDING AREAS SHALL BE 4 FEET WIDE BY 4 FEET LONG (MINIMUM DIMENSIONS). THE SLOPE OF THE LANDING AREA SHALL NOT EXCEED A 1:48 IN ANY DIRECTION.
- ALL ACCESSIBLE ROUTE SLOPES ADJOINING THE LANDING AREA, EXCLUDING THE CURB RAMP, SHALL NOT EXCEED A SLOPE OF 1:20 UNLESS OTHERWISE NOTED.



**UNDERGROUND CABLE TRENCH**  
NTS



**PAVEMENT JOINT DETAIL**  
N.T.S.



**HANDICAP RAMP**  
N.T.S.

NO.	DATE	DESCRIPTION
1	2/12/24	Submitted To Town for Preliminary Review

**BH2M**  
Berry, Huff, MacDonald, Milfigan Inc.  
Engineers, Surveyors  
380B Main Street  
Gorham, Maine 04038  
Tel: (207) 839-2771  
Fax: (207) 839-8250

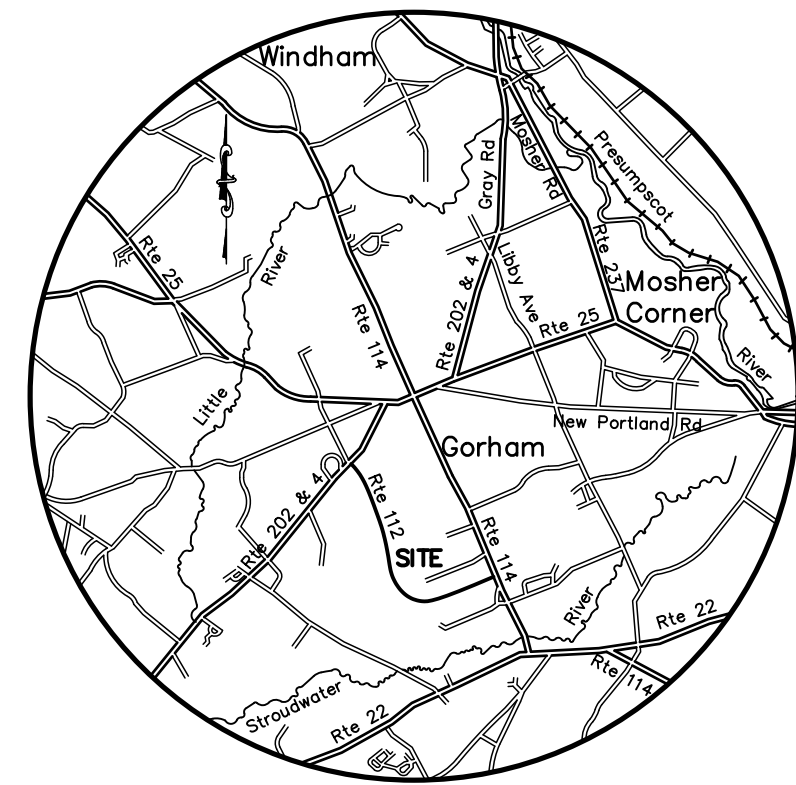
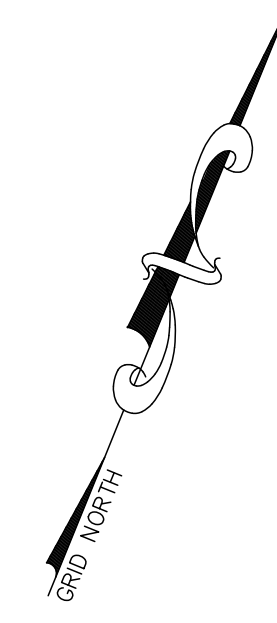
FOR  
Gary & Megan Jordan  
& Donald Grant  
33 Quincey Drive  
Gorham, Maine

**DETAILS B**  
GUARDIAN ESTATES  
WATERHOUSE ROAD  
GORHAM, MAINE

DESIGNED W. Pelkey	DATE Aug. 2023
DRAWN Dept.	SCALE As Noted
CHECKED A. Fagan	JOB. NO. 22092

SHEET  
**9**

REPRODUCTION OR REUSE OF THIS DOCUMENT WITHOUT THE EXPRESSED WRITTEN CONSENT OF BH2M INC. IS PROHIBITED



**LOCATION MAP**  
SCALE: 1" = 2 MILES

1. BOUNDARY/TOPOGRAPHY: BH2M  
ROBERT C. LIBBY JR. PLS#2190  
28 STATE STREET  
GORHAM, MAINE
2. SOILS MAPPING: OFFSITE:  
CUMBERLAND COUNTY MEDIUM INTENSITY  
SOILS MAPS  
ONSITE:  
MARK HAMPTON ASSOCIATES  
CLASS A SOIL STUDY
3. TEST PITS: MARK HAMPTON ASSOCIATES  
PORTLAND, MAINE
4. SEE STORMWATER MANAGEMENT REPORT FOR ADDITIONAL INFORMATION.

NO.	DATE	REVISION DESCRIPTION
1	2/12/24	Submitted To Town for Preliminary Review

**BH2M**  
Berry, Huff, McDonald, Miffigan Inc.  
Engineers, Surveyors  
380B Main Street  
Gorham, Maine 04038  
Tel: (207) 839-2771  
www.bh2m.com

FOR  
Gary & Megan Jordan  
& Donald Grant  
33 Quincey Drive  
Gorham, Maine

**PRE DEVELOPMENT WATERSHED**  
**GUARDIAN ESTATES**  
WATERHOUSE ROAD  
GORHAM, MAINE

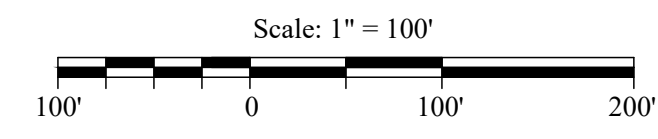
DESIGNED A. Fagan	DATE February 2024
DRAWN Dept.	SCALE 1" = 100'
CHECKED A. Fagan	JOB. NO. 22092

SHEET  
**A**

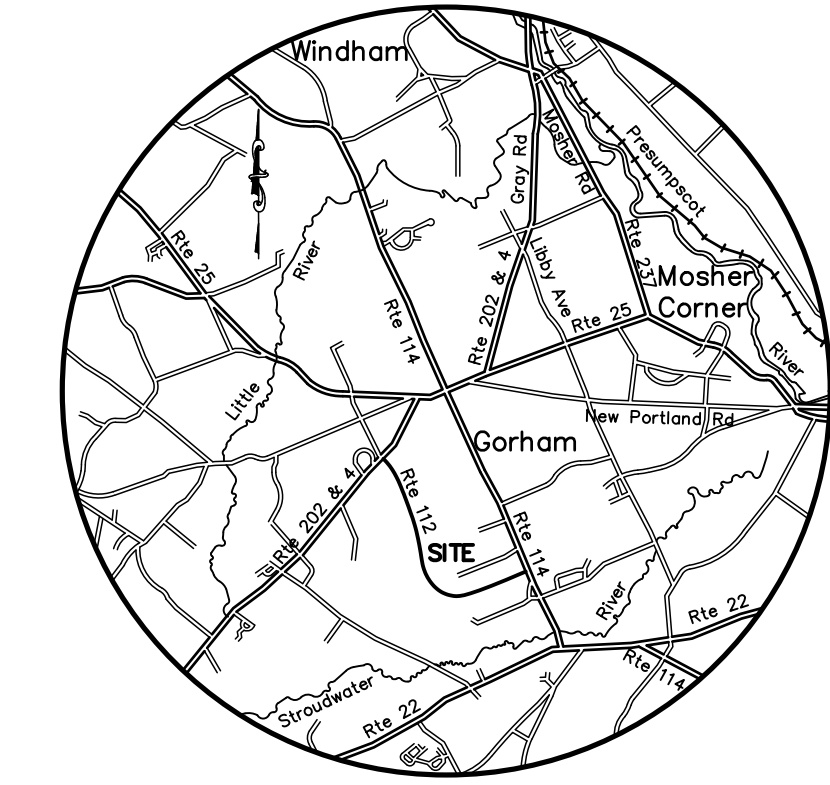
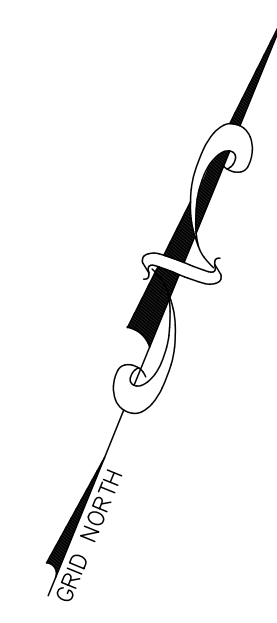
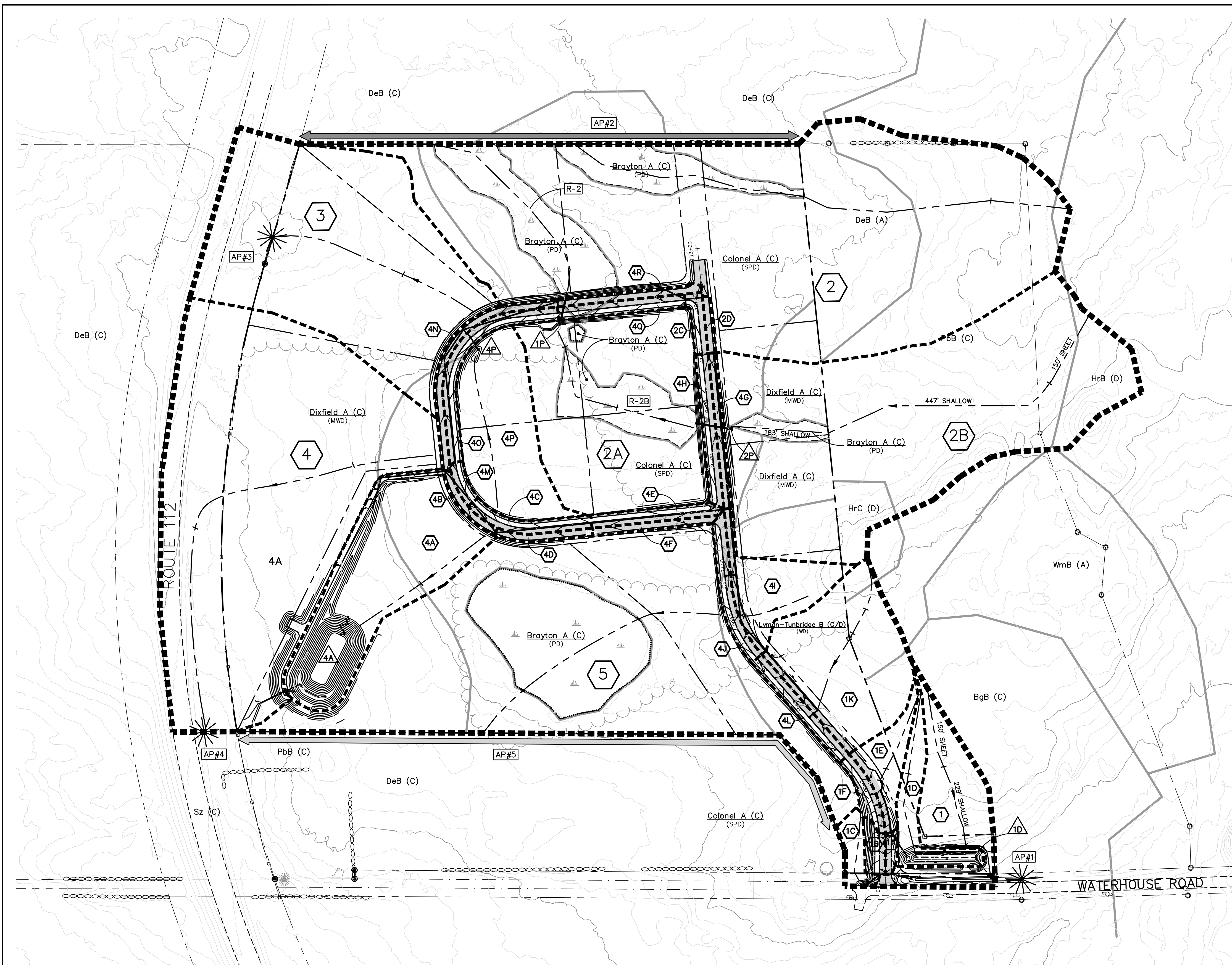
REPRODUCTION OR REUSE OF THIS DOCUMENT WITHOUT THE EXPRESSED WRITTEN CONSENT OF BH2M INC. IS PROHIBITED

SYMBOL	DESCRIPTION
	POND
	DRAINAGE SUB AREA
	REACH
	DRAINAGE AREA BOUNDARY
	TIME OF CONCENTRATION ROUTE
	LIMIT OF WETLANDS
	EXISTING CONTOUR
	PROPOSED CONTOUR

ANALYSIS POINT	PRE-DEVELOPMENT FLOWS		
	2 YR. STORM	10 YR. STORM	25 YR. STORM
AP-1	1.29 CFS	2.75 CFS	4.02 CFS
AP-2	4.41 CFS	12.24 CFS	19.69 CFS
AP-3	2.47 CFS	5.63 CFS	8.45 CFS
AP-4	6.90 CFS	14.65 CFS	21.39 CFS
AP-5	4.40 CFS	10.29 CFS	15.61 CFS



ONSITE SOILS LEGEND	
SYMBOL	DESCRIPTION
	SOIL BOUNDARY LINES
	LIMIT OF WETLANDS
SLOPE DESIGNATION	
A	0 - 3%
B	3 - 8%
C	8 - 20%
D	20%+
HYDROLOGIC SOIL GROUP	
SOIL	GROUP
BRAYTON	C
COLONEL	C
DIXFIELD	C
LYMAN-TUNBRIDGE	C/D*
SCANTIC	D
* ASSUME D SOILS FOR WETLANDS	
OFFSITE SOIL LEGEND	
HYDROLOGIC SOIL GROUP	
SOIL	GROUP
BgB	C
DeB	A
HrB, HrC	D
PbB	C
WmB	A
SOIL DESIGNATION	
	SLOPE DESIGNATION
	HYDROLOGIC SOIL GROUP
	HYDROLOGIC SOIL



**LOCATION MAP**  
SCALE: 1" = 2 MILES

1. BOUNDARY/TOPOGRAPHY: BH2M  
ROBERT C. LIBBY JR. PLS#2190  
28 STATE STREET  
GORHAM, MAINE
2. SOILS MAPPING: OFFSITE:  
CUMBERLAND COUNTY MEDIUM INTENSITY  
SOILS MAPS  
ONSITE:  
MARK HAMPTON ASSOCIATES  
CLASS A SOIL STUDY
3. TEST PITS: MARK HAMPTON ASSOCIATES  
PORTLAND, MAINE
4. SEE STORMWATER MANAGEMENT REPORT FOR ADDITIONAL INFORMATION.

**ALLOCATION SUMMARY:**

THE FOLLOWING IS A SUMMARY OF THE ALLOCATED IMPERVIOUS AREA FOR EACH LOT.

LOT 1=	5,000 SF
LOT 2=	5,000 SF
LOT 3=	5,000 SF
LOT 4=	5,000 SF
LOT 5=	5,000 SF
LOT 6=	5,000 SF
LOT 7=	5,000 SF
LOT 8=	5,000 SF
LOT 9=	5,000 SF
LOT 10=	5,000 SF
LOT 11=	5,000 SF
LOT 12=	10,000 SF
LOT 13=	20,000 SF
LOT 14=	20,000 SF

**ONSITE SOILS LEGEND**

SYMBOL	DESCRIPTION
---	SOIL BOUNDARY LINES
---	LIMIT OF WETLANDS

**SLOPE DESIGNATION**

A	= 0 - 3%
B	= 3 - 8%
C	= 8 - 20%
D	= 20%+

**HYDROLOGIC SOIL GROUP**

SOIL	GROUP
BRAYTON	C
COLONEL	C
DIXFIELD	C
LYMAN-TUNBRIDGE	C/D*
SCANTIC	D

\* ASSUME D SOILS FOR WETLANDS

NO.	DATE	REVISION
1	2/12/24	Submitted To Town for Preliminary Review

**BH2M**  
Berry, Huff, McDonald, Milfigan Inc.  
Engineers, Surveyors  
380B Main Street  
Gorham, Maine 04038  
Tel: (207) 839-2771  
www.bh2m.com

FOR  
Gary & Megan Jordan  
& Donald Grant  
33 Quincey Drive  
Gorham, Maine

POST DEVELOPMENT  
WATERSHED  
GUARDIAN ESTATES  
WATERHOUSE ROAD  
GORHAM, MAINE

DESIGNED	DATE
A. Fagan	February 2024
DRAWN	SCALE
Dept.	1" = 100'
CHECKED	JOB. NO.
A. Fagan	22092

SHEET  
**B**

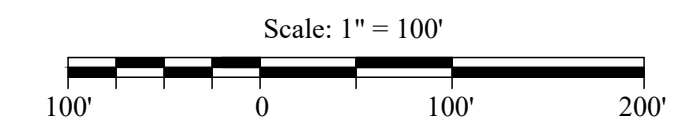
REPRODUCTION OR REUSE OF THIS DOCUMENT WITHOUT THE EXPRESSED WRITTEN CONSENT OF BH2M INC. IS PROHIBITED.

**LEGEND**

SYMBOL	DESCRIPTION
△	POND
12	DRAINAGE SUB AREA
R12	REACH
---	DRAINAGE AREA BOUNDARY
---	TIME OF CONCENTRATION ROUTE
---	LIMIT OF WETLANDS
---	EXISTING CONTOUR
---	PROPOSED CONTOUR

**POST DEVELOPMENT FLOWS**  
FLOW RATE = POST (PRE)

ANALYSIS POINT	2 YR. STORM	10 YR. STORM	25 YR. STORM
AP-1	0.33 (1.29) CFS	1.13 (2.75) CFS	2.47 (4.02) CFS
AP-2	4.34 (4.41) CFS	11.35 (12.24) CFS	18.26 (19.69) CFS
AP-3	2.43 (2.47) CFS	5.15 (5.63) CFS	7.52 (8.45) CFS
AP-4	6.37 (6.90) CFS	12.79 (14.65) CFS	18.36 (21.39) CFS
AP-5	3.37 (4.40) CFS	7.90 (10.29) CFS	11.98 (15.61) CFS



**Tc SUMMARY**  
(FOR THOSE NOT LABELED ON THE PLAN)

SUBCATCHMENT	Tc ROUTE
SA-1	150' SHEET, 158' SHALLOW, 95' CHANNEL
SA-1A	6 MIN. DIRECT ENTRY
SA-1B	6 MIN. DIRECT ENTRY
SA-1C	150' SHEET
SA-1D	150' SHEET, 161' SHALLOW
SA-1E	150' SHEET, 25' SHALLOW, 101' CHANNEL
SA-1F	6 MIN. DIRECT ENTRY
SA-2	150' SHEET, 360' SHALLOW 453' SHALLOW
SA-2A	150' SHEET, 178' SHALLOW, 32' CHANNEL
SA-2B	150' SHEET, 447' SHALLOW, 183' CHANNEL
SA-2C	6 MIN. DIRECT ENTRY
SA-2D	6 MIN. DIRECT ENTRY
SA-3	150' SHEET, 261' SHALLOW
SA-4	150' SHEET, 343' SHALLOW, 390' CHANNEL
SA-4A	150' SHEET, 100' SHALLOW
SA-4B	6 MIN. DIRECT ENTRY
SA-4C	6 MIN. DIRECT ENTRY
SA-4D	6 MIN. DIRECT ENTRY
SA-4E	6 MIN. DIRECT ENTRY
SA-4F	6 MIN. DIRECT ENTRY
SA-4G	6 MIN. DIRECT ENTRY
SA-4H	6 MIN. DIRECT ENTRY
SA-4I	6 MIN. DIRECT ENTRY
SA-4J	6 MIN. DIRECT ENTRY
SA-4K	6 MIN. DIRECT ENTRY
SA-4L	6 MIN. DIRECT ENTRY
SA-4M	6 MIN. DIRECT ENTRY
SA-4N	6 MIN. DIRECT ENTRY
SA-4O	6 MIN. DIRECT ENTRY
SA-4P	150' SHEET, 141' SHALLOW
SA-4Q	6 MIN. DIRECT ENTRY
SA-4R	6 MIN. DIRECT ENTRY
SA-4S	150' SHEET, 265' SHALLOW, 106' SHALLOW