

GOVERNORS ROAD SUBDIVSION

MEETING HOUSE VILLAGE

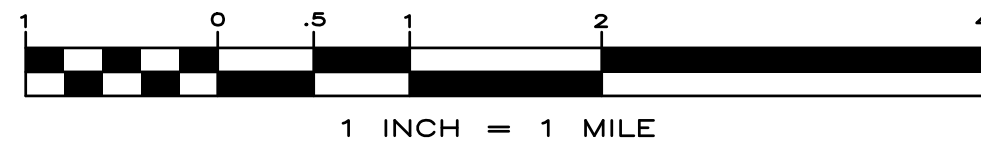
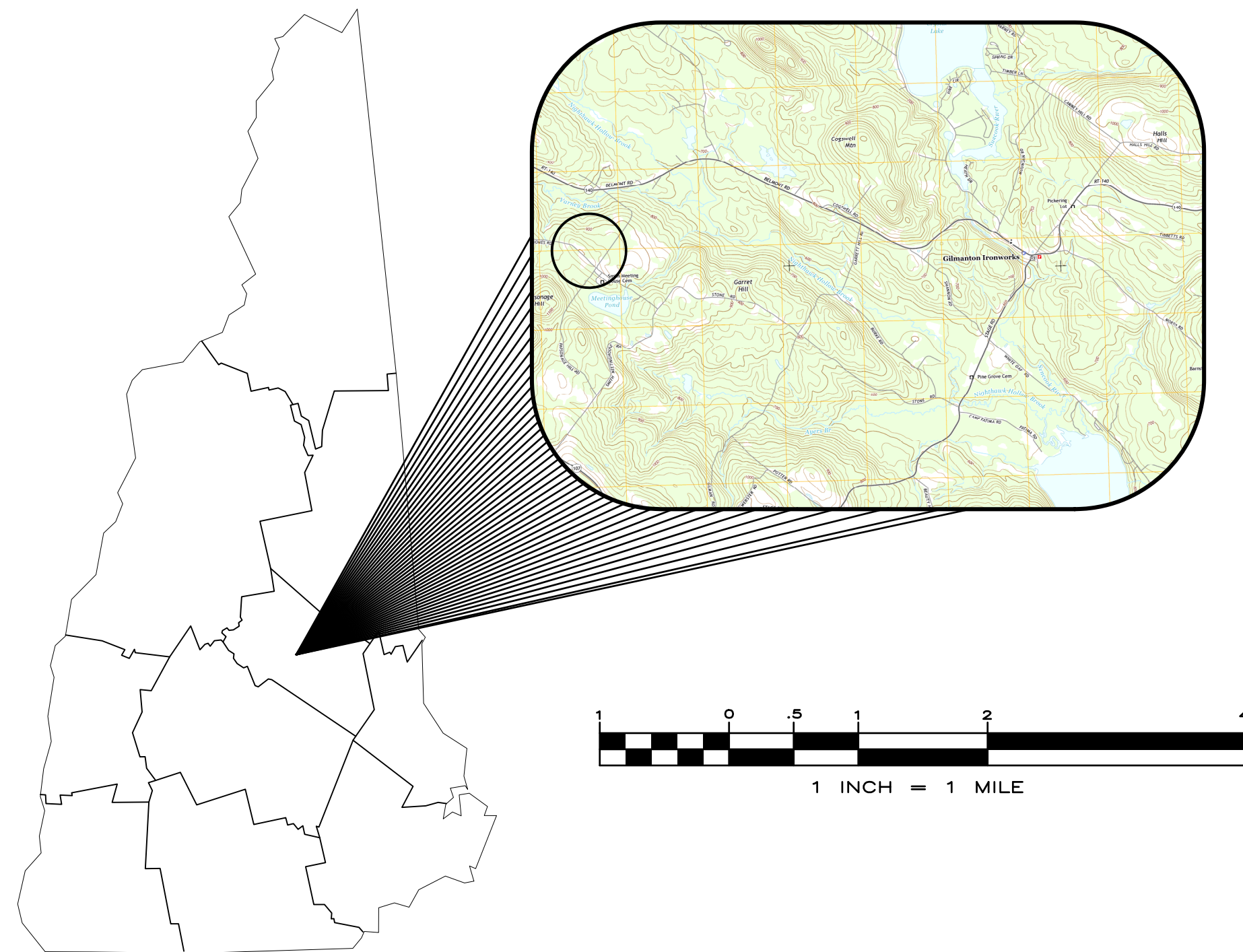
PREPARED FOR

GRANITE STATE CONSERVATION TRUST

LAND LOCATED AT GOVERNORS ROAD & PARSONAGE HILL ROAD

GILMANTON, NH

OCTOBER 2023



CAREFULLY REVIEW ALL SHEETS OF THIS PACKAGE TO INSURE PROPER CONSTRUCTION. SPECIFIC SITE CONDITIONS SHOULD BE EXPLORED PRIOR TO CONSTRUCTION. CONTACT BOTH THE DESIGN ENGINEER AND THE PROJECT OWNER FOR ANY AVAILABLE GEOTECHNICAL OR HYDROGEOLOGICAL INFORMATION AVAILABLE BUT NOT CONTAINED WITH IN THE PLAN SET. IF THERE ARE ANY QUESTIONS WITH THE DESIGN PRESENTED IN THIS PLAN SET PLEASE CONTACT THE ENGINEERING STAFF AT NORWAY PLAINS ASSOCIATES, INC. (603)-335-3948.

STATE AND FEDERAL PERMITS:
 STATE OF NEW HAMPSHIRE PERMIT NUMBERS:
 NHDES ALTERATION OF TERRAIN: **REQUIRED**
 NHDES WETLANDS PERMIT: **NOT REQUIRED**
 NHDES DAM PERMIT: **NOT REQUIRED**
 NHDES SUBDIVISION PERMIT: **PENDING**
 NHDES SUBSURFACE SYSTEMS PERMIT: **NOT REQUIRED**
 NHDES WASTEWATER PERMIT: **NOT REQUIRED**
 NHDOT DRIVEWAY/ENTRANCE PERMIT: **NOT REQUIRED**

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES):
 NPDES PERMITS ARE ONLY REQUIRED FOR PROJECTS MEETING THE DISTURBED AREA CRITERIA BELOW AND HAVING A POINT SOURCE STORMWATER DISCHARGE FROM THE SITE TO AN ADJACENT WETLAND OR WATER BODY (I.E. CULVERT, SWALE, ETC. OUTLETING TO A WETLAND, CREEK, STREAM OR RIVER).

NPDES PERMIT: **REQUIRED**
 NPDES PERMITS CONSIST OF A NOTICE OF INTENT (NOI) FILED WITH THE ENVIRONMENTAL PROTECTION AGENCY AT LEAST 14 DAYS PRIOR TO CONSTRUCTION COMMENCING AND A STORMWATER POLLUTION PREVENTION PLAN (SWPPP) BEING PREPARED, KEPT ON SITE AND FOLLOWED BY THE CONTRACTOR.
 FOR STATUS OF THIS PERMIT, CONTACT THE PROJECT GENERAL CONTRACTOR.

FINAL APPROVAL BY
GILMANTON PLANNING BOARD

CERTIFIED BY: _____ DATE: _____

| SHEET INDEX | | |
|-------------|---|----------|
| | COVER | |
| SHEET E-1 | EXISTING FEATURES | 1" = 80' |
| SHEET C-1 | PLAN AND PROFILE STA 0+00 TO STA 11+00 | 1" = 50' |
| SHEET C-2 | PLAN AND PROFILE STA 11+00 TO STA END | 1" = 50' |
| SHEET C-3 | ROAD CROSS SECTION STA 0+00 TO STA 8+00 | 1" = 10' |
| SHEET C-4 | ROAD CROSS SECTION STA 8+00 TO STA END | 1" = 10' |
| SHEET C-5 | EROSION AND SEDIMENTATION CONTROL PLAN | 1" = 80' |
| SHEET C-6 | CONSTRUCTION DETAILS | AS SHOWN |
| SHEET C-7 | DRAINAGE DETAILS | AS SHOWN |
| SHEET C-8 | TREATMENT SWALE & DETENTION BASIN DETAILS | AS SHOWN |
| SHEET C-9 | INFILTRATION BASIN DETAILS | AS SHOWN |
| SHEET C-10 | TEMPORARY EROSION AND SEDIMENTATION CONTROL DETAILS | AS SHOWN |
| SHEET C-11 | PERMANENT EROSION AND SEDIMENTATION CONTROL DETAILS | AS SHOWN |

CIVIL ENGINEERS
 NORWAY PLAINS ASSOCIATES, INC.
 2 CONTINENTAL BOULEVARD
 ROCHESTER, NEW HAMPSHIRE 03867
 (603) 335-3948

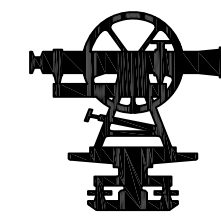
OWNERS OF RECORD
 TAX MAP 414, LOT 50
 FIRST CONGREGATIONAL SOCIETY IN GILMANTON
 544 MEETING HOUSE ROAD
 GILMANTON, NH 03237
 CCRD BOOK 730, PAGE 48

TAX MAP 414, LOT 52
 GRANITE STATE CONSERVATION TRUST
 16 ACADEMY STREET
 LACONIA, NH 03246
 CCRD BOOK 3510, PAGE 566

TAX MAP 414, LOT 53
 GRANITE STATE CONSERVATION TRUST
 16 ACADEMY STREET
 LACONIA, NH 03246
 CCRD BOOK 3495, PAGE 945

APPLICANT
 GRANITE STATE CONSERVATION TR.
 C/O PHILIP BROUILLARD
 16 ACADEMY STREET
 LACONIA, NH 03246

FILE NO. 458
 PLAN NO. C-xxx
 DWG. NO. 23058 PP-1
 F.B. NO.

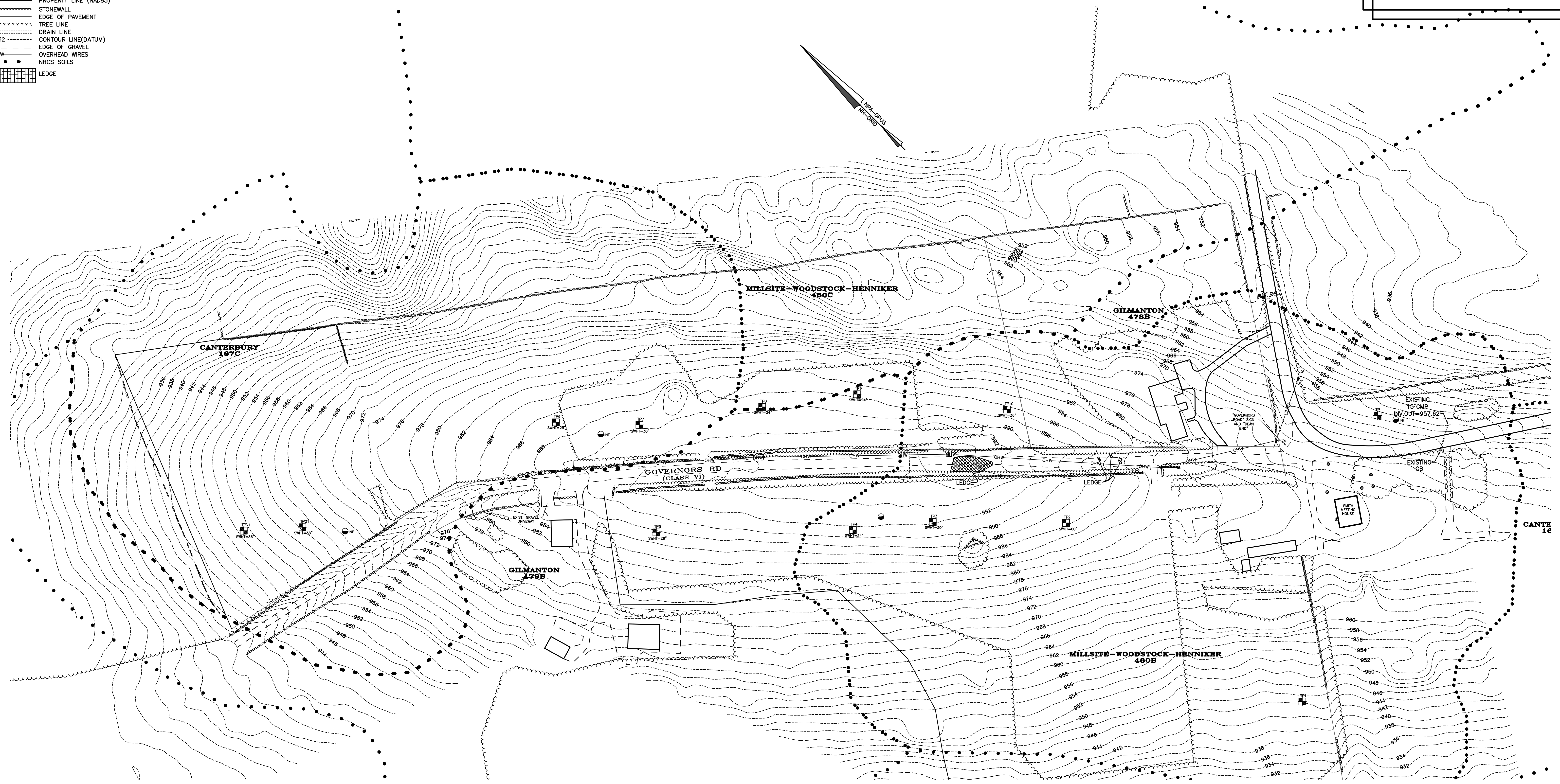


LEGEND

- ⊙ MONUMENT
- NO MONUMENT FOUND OR SET
- UTILITY POLE
- PROPERTY LINE (NAD83)
- STONEWALL
- EP EDGE OF PAVEMENT
- TREE LINE
- DRAIN LINE
- CONTOUR LINE (DATUM)
- 232 EDGE OF GRAVEL
- CHW OVERHEAD WIRES
- NRCS SOILS
- ▣ LEDGE

NOTES:

1. THE PURPOSE OF THIS PLAN IS TO SHOW THE EXISTING CONDITIONS OF GOVERNORS ROAD.



REFERENCE PLANS:

1. "SUBDIVISION - MEETING HOUSE VILLAGE LAND LOCATED AT GOVERNORS ROAD & PARSONAGE ROAD, GILMANTON NH" DATED: JUNE 2023 BY: BAILEY ASSOCIATES

FILE NO. 458
 PLAN NO. C-xxx
 DWG. NO. 23058 PP-1
 F.B. NO.

EXISTING FEATURES PLAN
 TAX MAP 414, LOT 50, 52 & 53
 GOVERNORS ROAD
 GILMANTON, NH

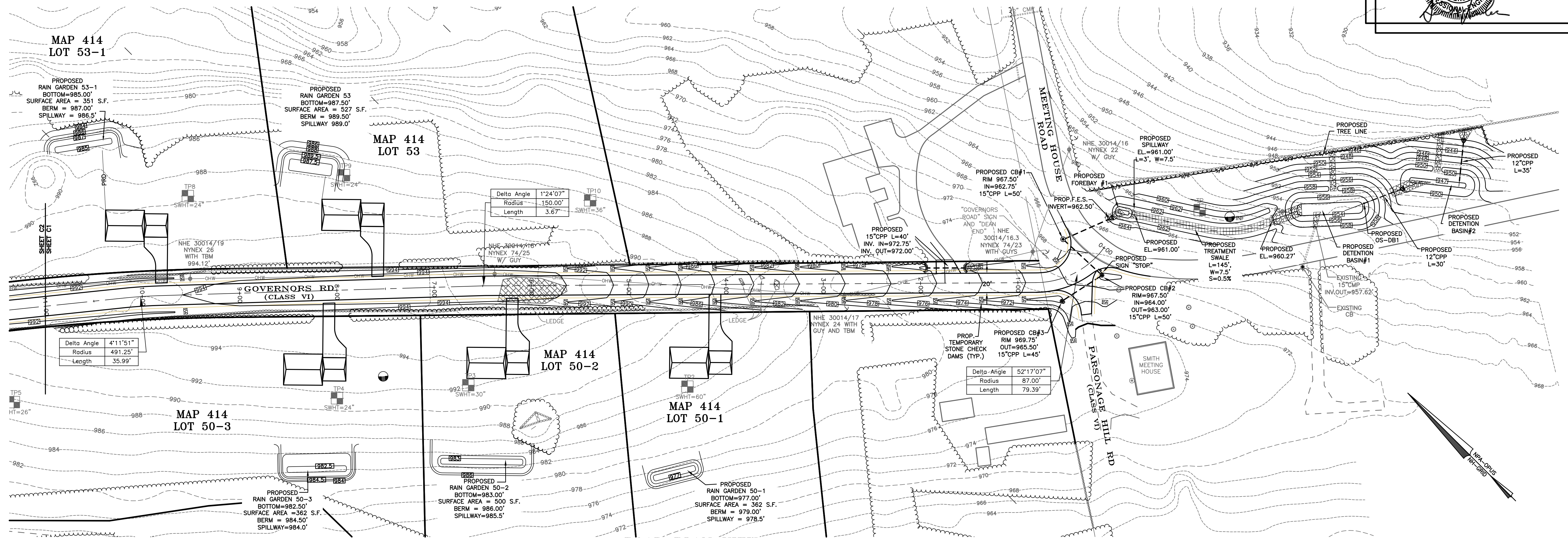
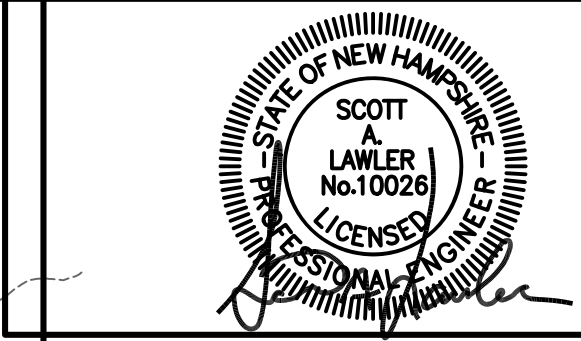
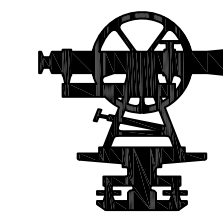
PREPARED FOR:
 GRANITE STATE
 CONSERVATION TRUST

OCTOBER 2023
 GRAPHIC SCALE

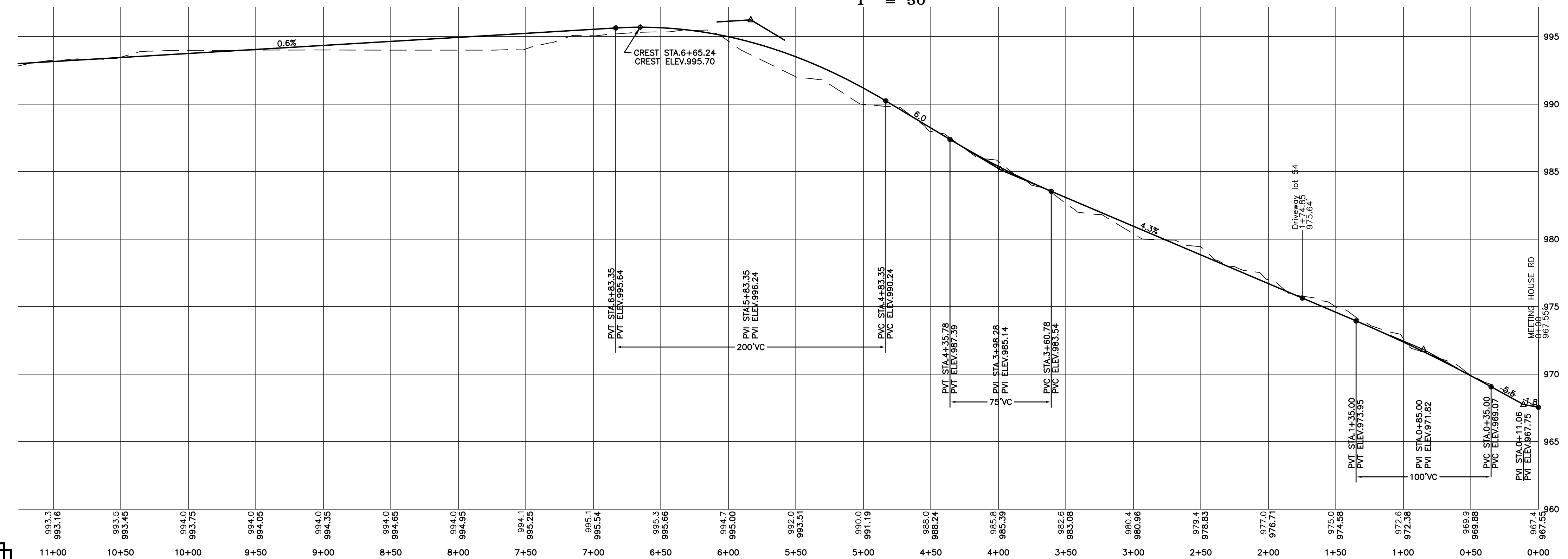


1 INCH = 80 FEET

Drawing Location: M:\2023\23058\DWG\23058_PP-1.dwg
 Date: 19 Oct 2023 - 3:23pm



ROAD PLAN VIEW
1" = 50'



ROAD PROFILE
1" = 50' (HORZ.), 1" = 5' (VERT.)

LEGEND

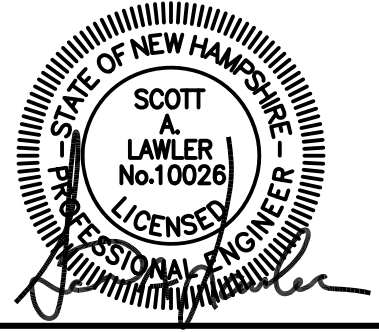
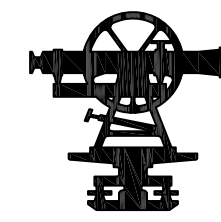
- PROPERTY LINE
- EXISTING STONE WALL
- EXISTING TREE LINE
- EXISTING DRAIN LINE
- EXISTING CONTOUR LINE (NAVD88)
- EXISTING SPOT GRADE
- PROPOSED SPOT GRADE
- PROPOSED TREE LINE
- PROPOSED DRAIN LINE
- PROPOSED CONTOUR LINE (NAVD88)
- PROPOSED SILTATION FENCE
- PROPOSED CATCH BASIN
- △ PROPOSED FLARED END SECTION (FES)
- CPP
- PROPOSED OUTLET PROTECTION
- PROPOSED TEMPORARY STONE CHECK DAMS

- NOTES:**
1. THE PURPOSE OF THIS PLAN IS TO DEPICT THE RECONSTRUCTION OF GOVERNORS ROAD TO THE TOWN OF GILMANTON ROADWAY STANDARDS.
 2. ALL PROPOSED IMPROVEMENTS SHALL BE DONE IN ACCORDANCE TO THE TOWN OF GILMANTON ROADWAY REQUIREMENTS.
 3. PRIOR TO ANY EARTHWORK, EROSION AND SEDIMENTATION CONTROLS SHALL BE INSTALLED AS DEPICTED ON THE PLAN AND IN ACCORDANCE TO THE CONSTRUCTION DETAILS.
 4. ALL DISTURBED AREAS SHALL HAVE A MINIMUM OF 4" OF LOAM AND SEEDED WITHIN 72 HOURS OF FINAL GRADING.
 5. ALL RAIN GARDENS SHALL BE INSTALLED DURING THE INDIVIDUAL LOT DEVELOPMENT AND IN ACCORDANCE WITH THE APPROVED PLANS.
 6. ALL HOUSE AND GARAGE ROOF RUNOFF SHALL BE DIRECTED INTO THE INDIVIDUAL RAIN GARDENS.

ROADWAY PLAN AND PROFILE
STA. 0+00 TO 11+00
TAX MAP 414, LOT 50, 52 & 53
GOVERNORS ROAD
GILMANTON, NH
 PREPARED FOR:
GRANITE STATE CONSERVATION TRUST
 OCTOBER 2023

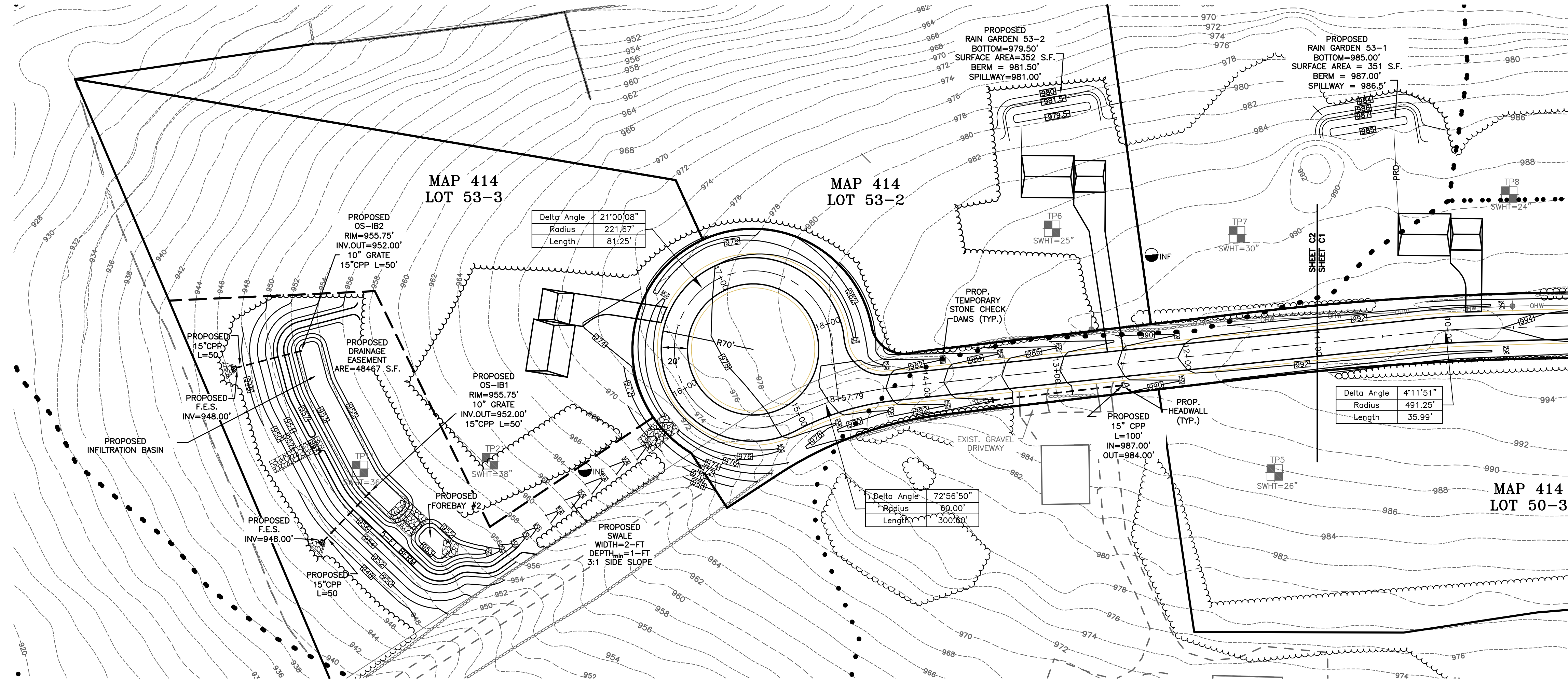
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 PLAN NO. C-xxx
 DWC. NO. 23058 PP-1
 F.B. NO.

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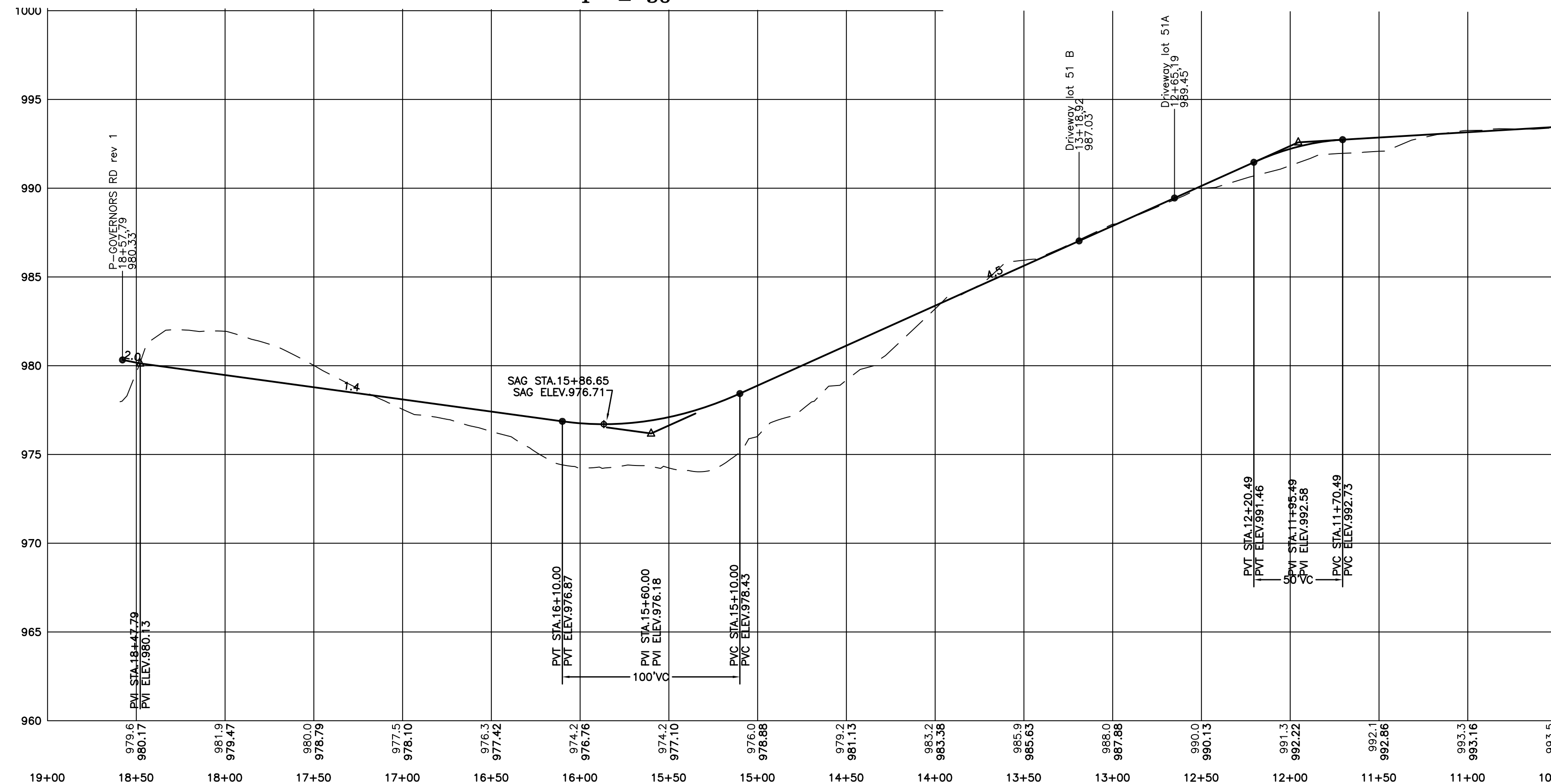
LEGEND

- PROPERTY LINE
- EXISTING STONE WALL
- EXISTING TREE LINE
- EXISTING DRAIN LINE
- EXISTING CONTOUR LINE
- 232
- E234.1' EXISTING SPOT GRADE
- P234.25' PROPOSED SPOT GRADE
- PROPOSED TREE LINE
- PROPOSED DRAIN LINE
- PROPOSED CONTOUR LINE
- PROPOSED SILTATION FENCE
- PROPOSED CATCH BASIN
- PROPOSED FLARED END SECTION (FES)
- CPP CORRUGATED POLYETHYLENE PIPE
- PROPOSED OUTLET PROTECTION
- PROPOSED TEMPORARY STONE CHECK DAMS



ROAD PLAN VIEW

1" = 50'



ROAD PROFILE

1" = 50' (HORZ.), 1" = 5' (VERT.)

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 6. ALL HOUSE AND GARAGE ROOF RUNOFF SHALL BE DIRECTED INTO THE INDIVIDUAL RAIN GARDENS.

ROADWAY PLAN AND PROFILE
STA. 11+00 TO END
TAX MAP 414, LOT 50, 52 & 53
GOVERNORS ROAD
GILMANTON, NH
 PREPARED FOR:
GRANITE STATE
CONSERVATION TRUST
 OCTOBER 2023

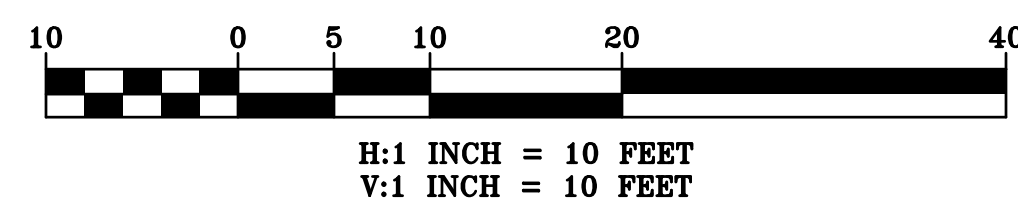
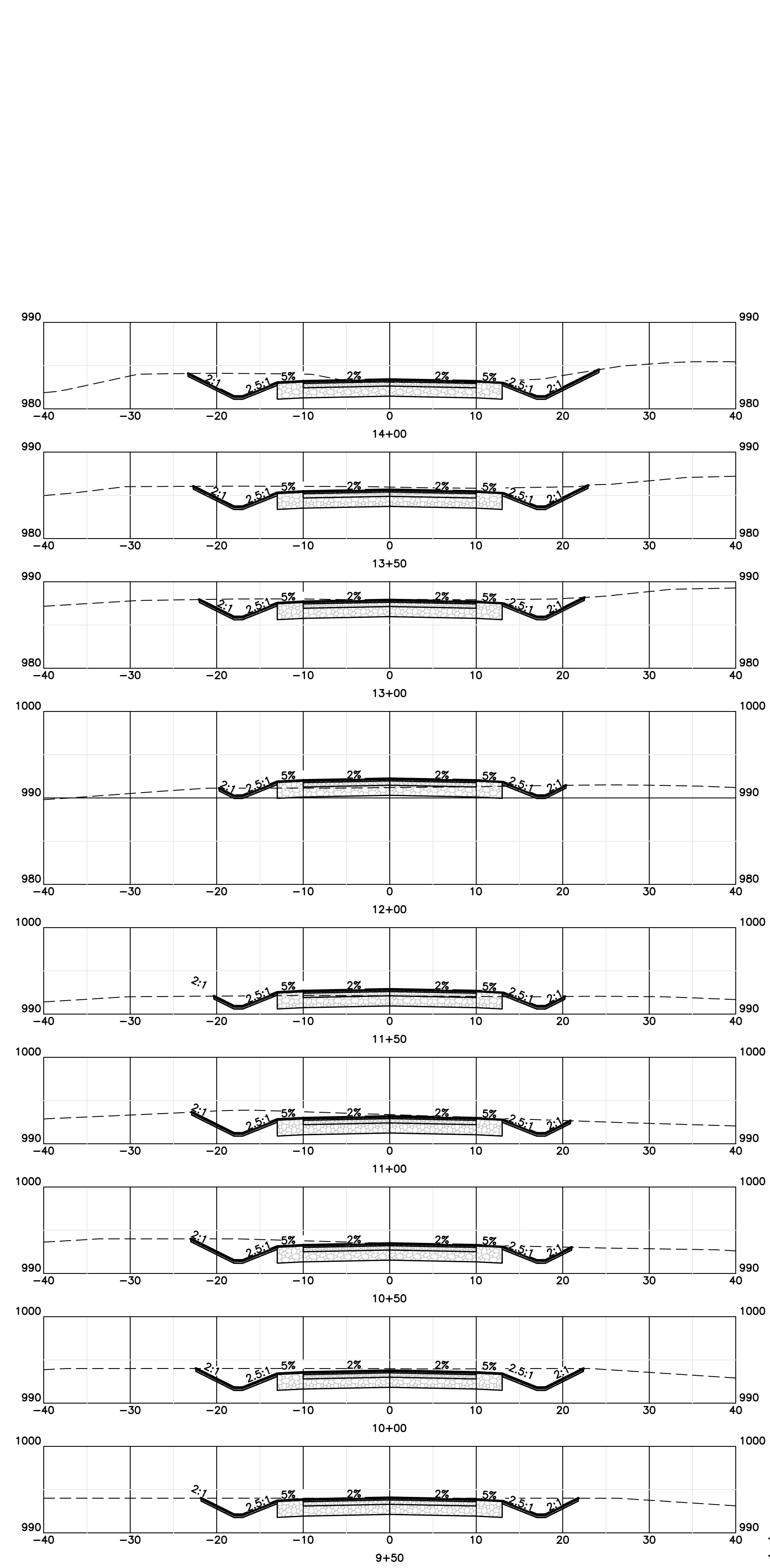
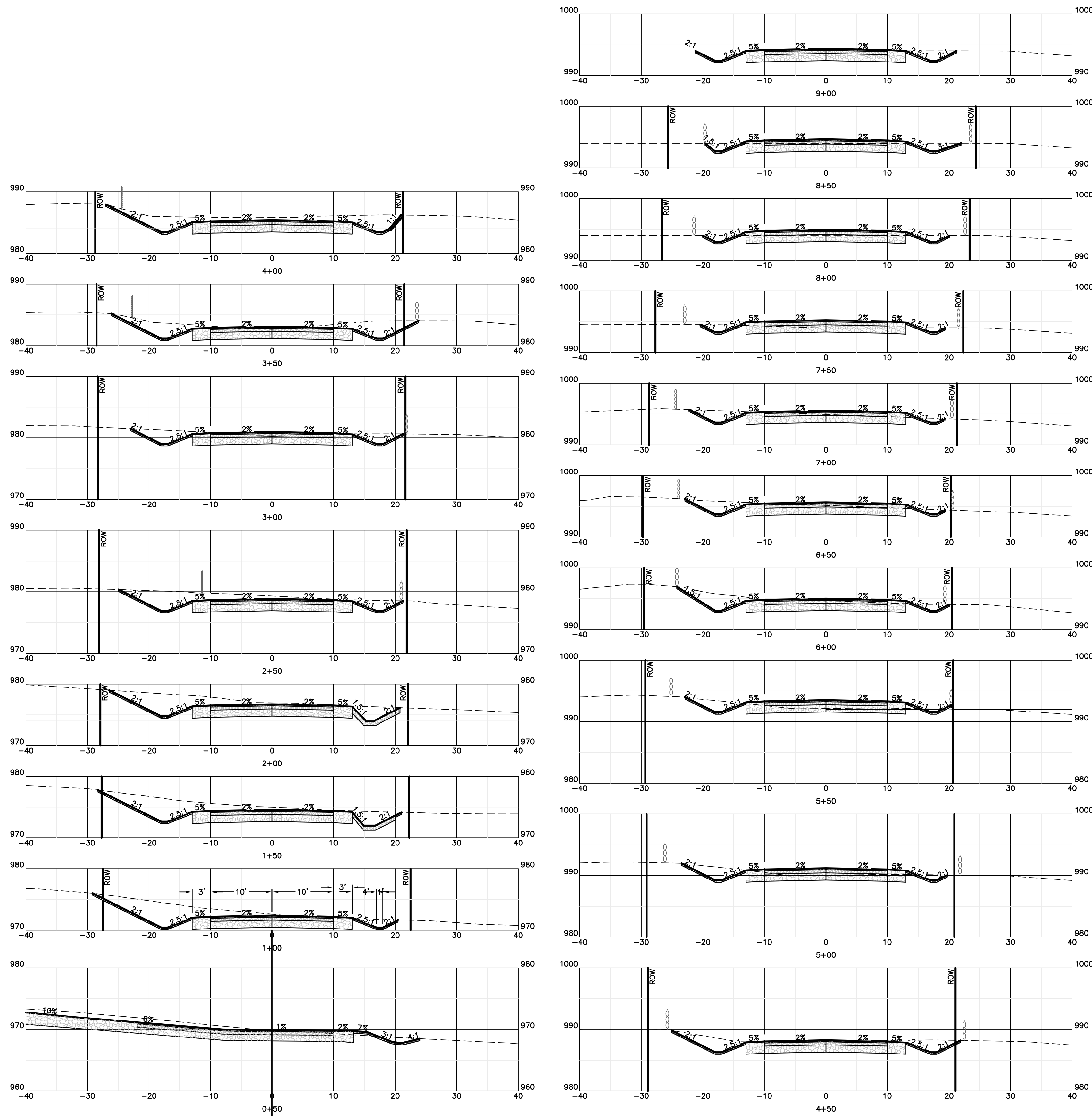
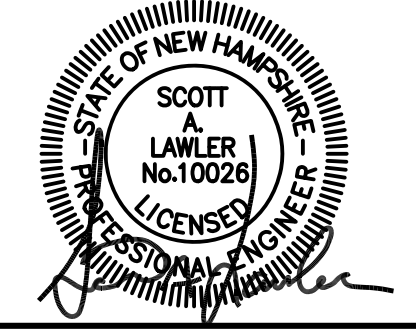
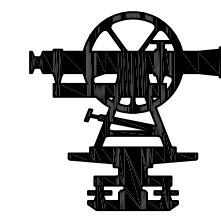
FILE NO. 458
 PLAN NO. C-xxx
 DWG. NO. 23058 PP-1
 F.B. NO.

31 MOONEY STREET, ALTON, NH 603-875-3948

NORWAY PLAINS ASSOCIATES, INC.

2 CONTINENTAL BLVD., ROCHESTER, NH 603-335-3948

Drawing Location: \\s1\cadd\23058\DWG\C-23058-PP-1.dwg Date: 10/23/2023 2:10:15 PM



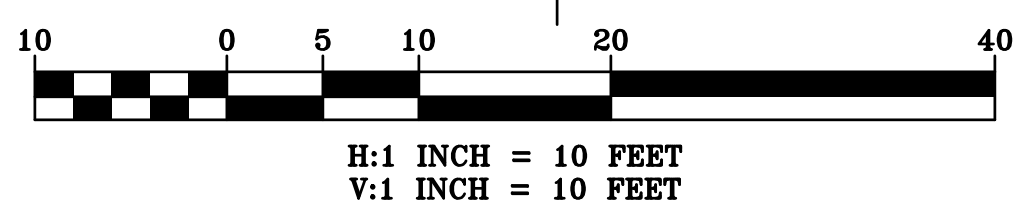
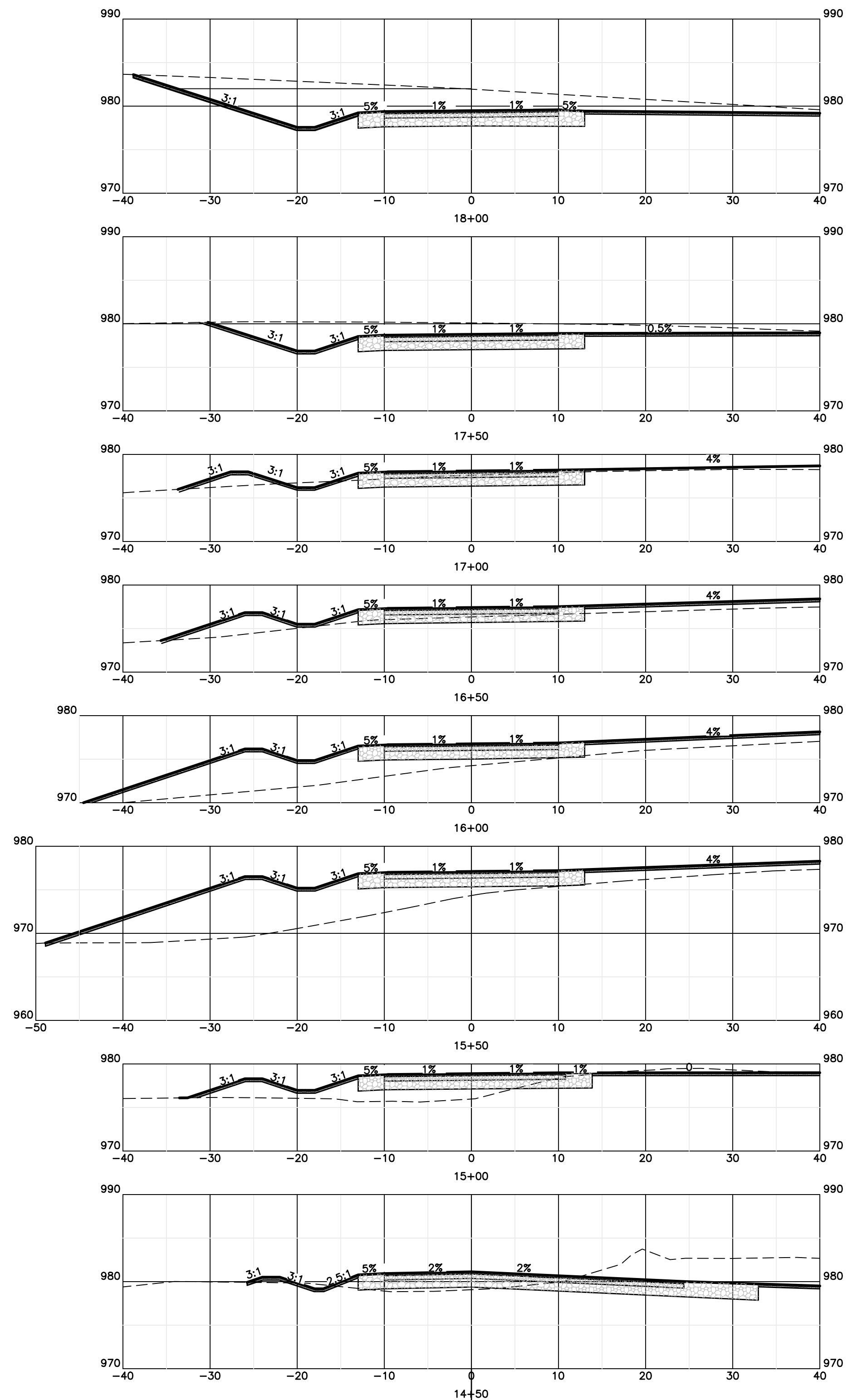
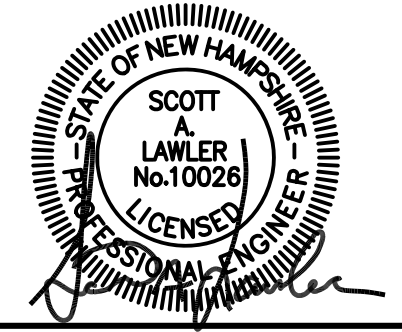
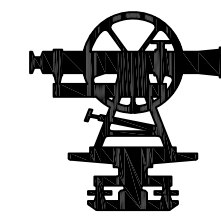
ROADWAY CROSS SECTIONS
STA 0+00 TO STA 14+00
TAX MAP 414, LOT 50, 52 & 53
GOVERNORS ROAD
GILMANTON, NH
 PREPARED FOR:
GRANITE STATE
CONSERVATION TRUST
 OCTOBER 2023

FILE NO. 458
 PLAN NO. C-xxx
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31 MOONEY STREET, ALTON, NH 603-875-3948

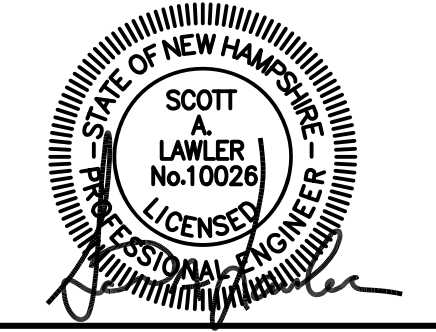
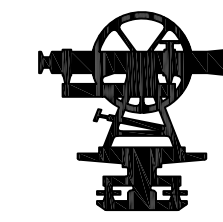
NORWAY PLAINS ASSOCIATES, INC.

2 CONTINENTAL BLVD., ROCHESTER, NH 603-335-3948



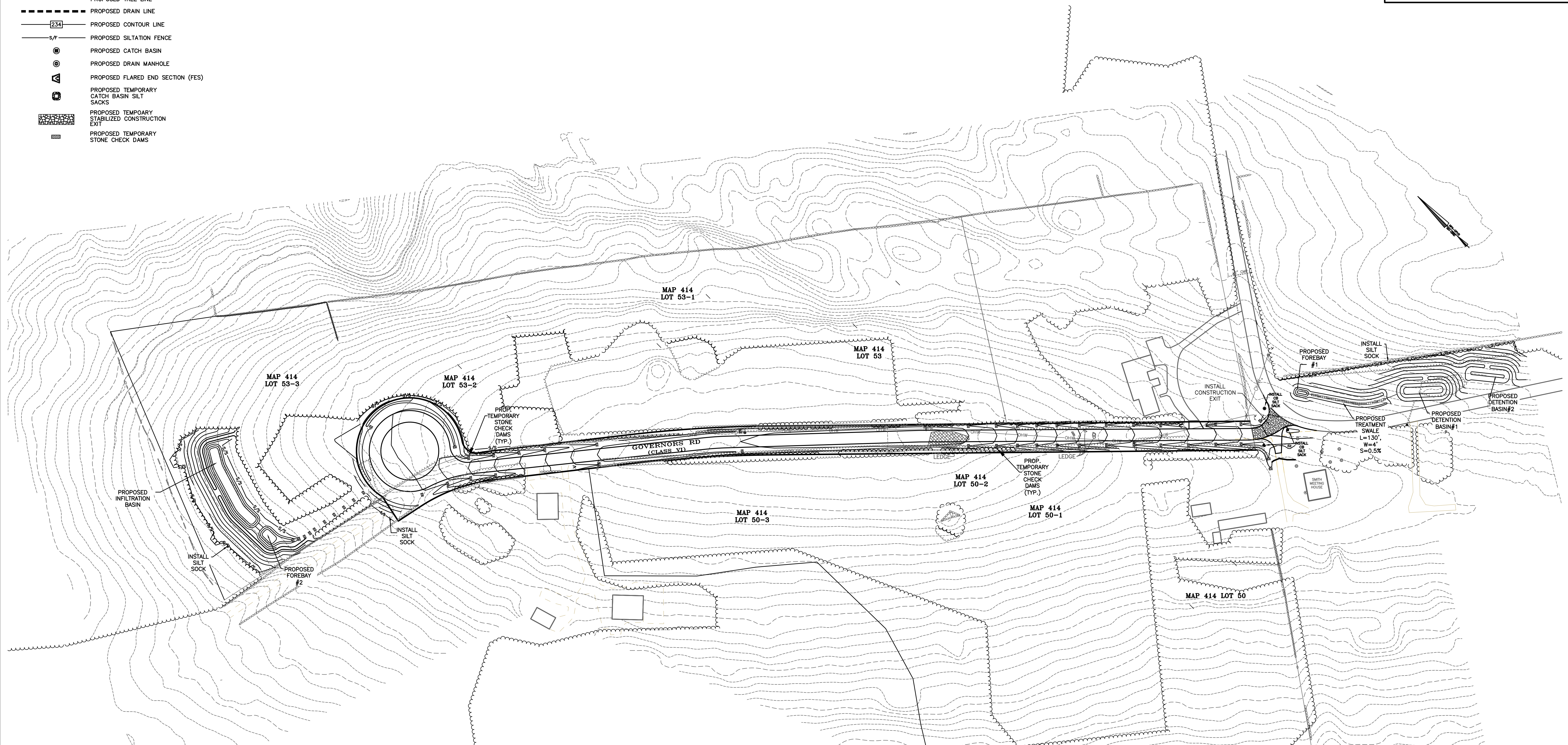
ROADWAY CROSS SECTIONS
 STA14+50 TO STA END
 TAX MAP 414, LOT 50, 52 & 53
 GOVERNORS ROAD
 GILMANTON, NH
 PREPARED FOR:
 GRANITE STATE
 CONSERVATION TRUST
 OCTOBER 2023

FILE NO. 458
 PLAN NO. C-xxx
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LEGEND

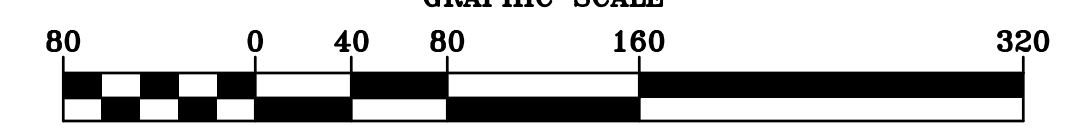
- PROPERTY LINE
- - - JURISDICTIONAL WETLANDS
- ~ ~ ~ EXISTING TREE LINE
- EXISTING DRAIN LINE
- 232--- EXISTING CONTOUR LINE
- EXISTING CATCH BASIN
- PROPOSED TREE LINE
- PROPOSED DRAIN LINE
- 234--- PROPOSED CONTOUR LINE
- s/r--- PROPOSED SILTATION FENCE
- ⊙ PROPOSED CATCH BASIN
- ⊙ PROPOSED DRAIN MANHOLE
- ▲ PROPOSED FLARED END SECTION (FES)
- PROPOSED TEMPORARY CATCH BASIN SILT SACKS
- ▨ PROPOSED TEMPORARY STABILIZED CONSTRUCTION EXIT
- ▨ PROPOSED TEMPORARY STONE CHECK DAMS



EROSION & SEDIMENTATION
TAX MAP 414, LOT 50, 52 & 53
GOVERNORS ROAD
GILMANTON, NH
 PREPARED FOR:
GRANITE STATE
CONSERVATION TRUST

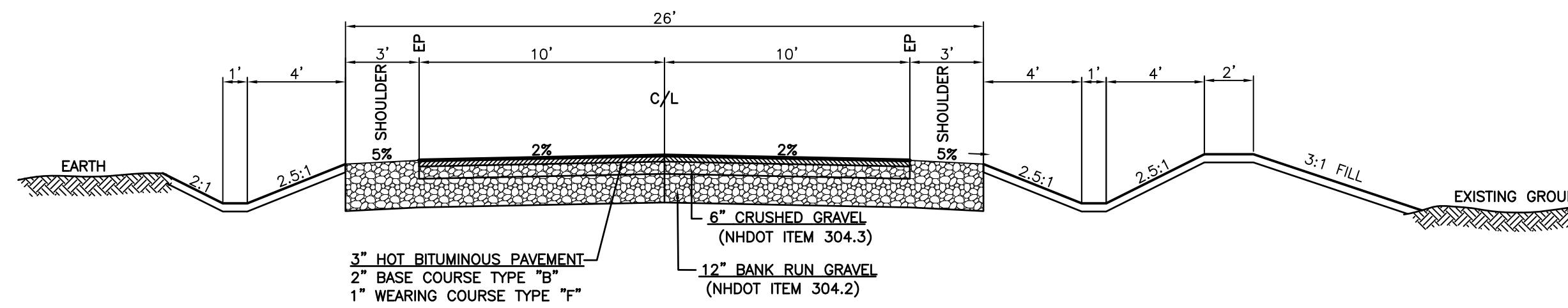
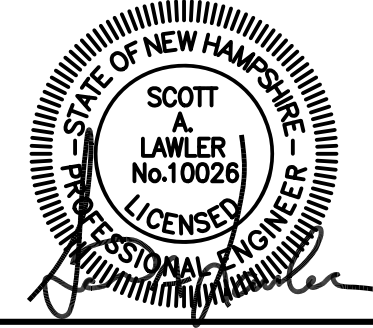
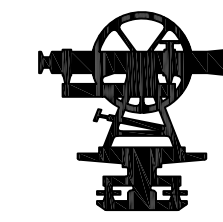
OCTOBER 2023

GRAPHIC SCALE



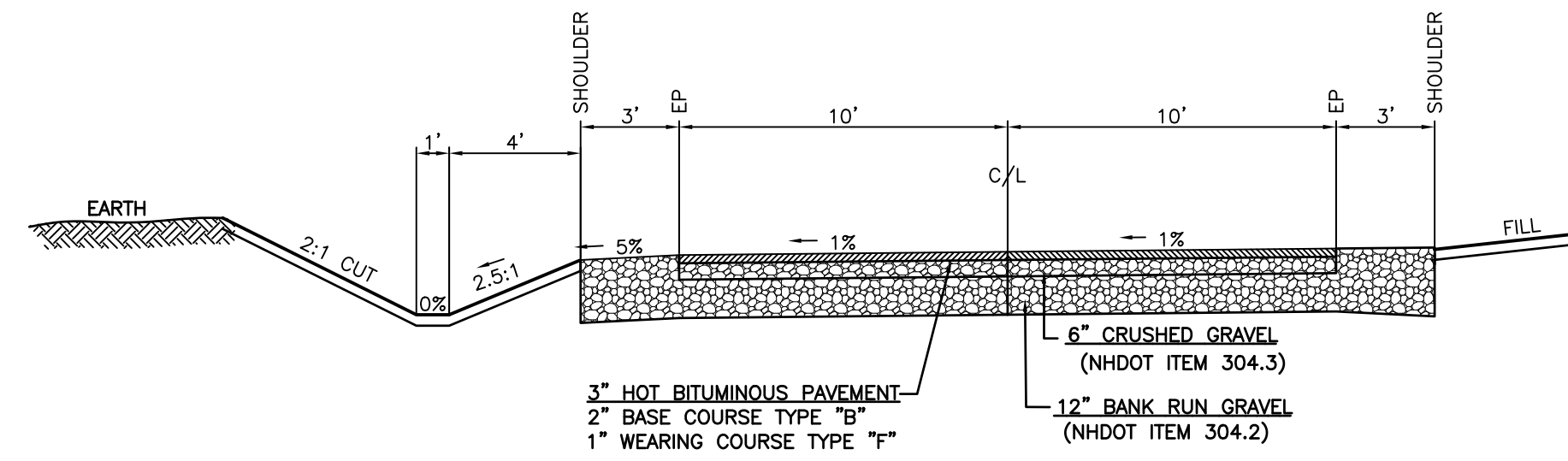
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 PLAN NO. C-xxx
 DWG. NO. 23058 PP-1
 F.B. NO.

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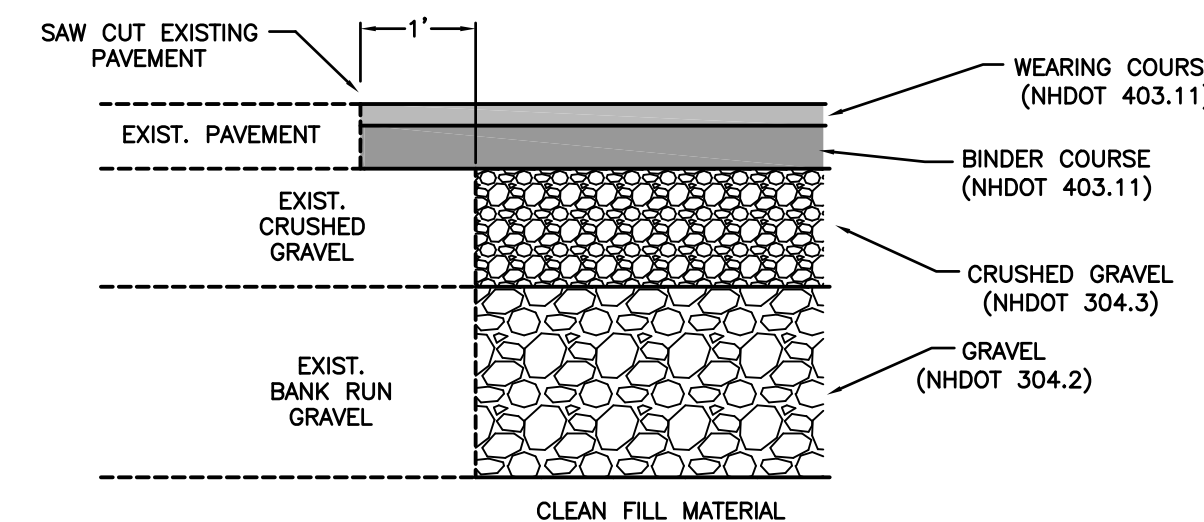
TYPICAL ROADWAY CROSS SECTION DETAIL

1" = 5'



TYPICAL CUL-DE-SAC CROSS SECTION DETAIL

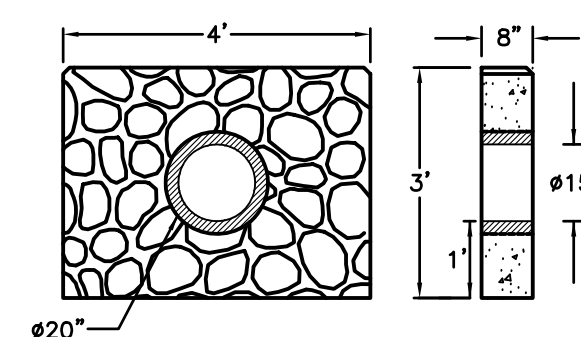
1" = 5'



TYPICAL PAVEMENT SAWCUT DETAIL

NOT TO SCALE

- PAVEMENT SAWCUT NOTES:
1. SAWCUT THROUGH DEPTH OF PAVEMENT AT LEAST 1 FT. FROM EDGE OR GREATER IF REQUIRED.
 2. INSTALL AND COMPACT CRUSHED GRAVEL TO GRADE.
 3. PLACE BINDER COURSE.
 4. GRIND OR SAWCUT EXISTING PAVEMENT 1 FT. WIDE TO A DEPTH NECESSARY TO PROPERLY MATCH NEW WEARING COURSE PAVEMENT.
 5. TACK COAT ALL EXISTING PAVEMENT SURFACES WITH EMULSIFIED ASPHALT (MS-1) PRIOR TO PLACING NEW PAVEMENT.

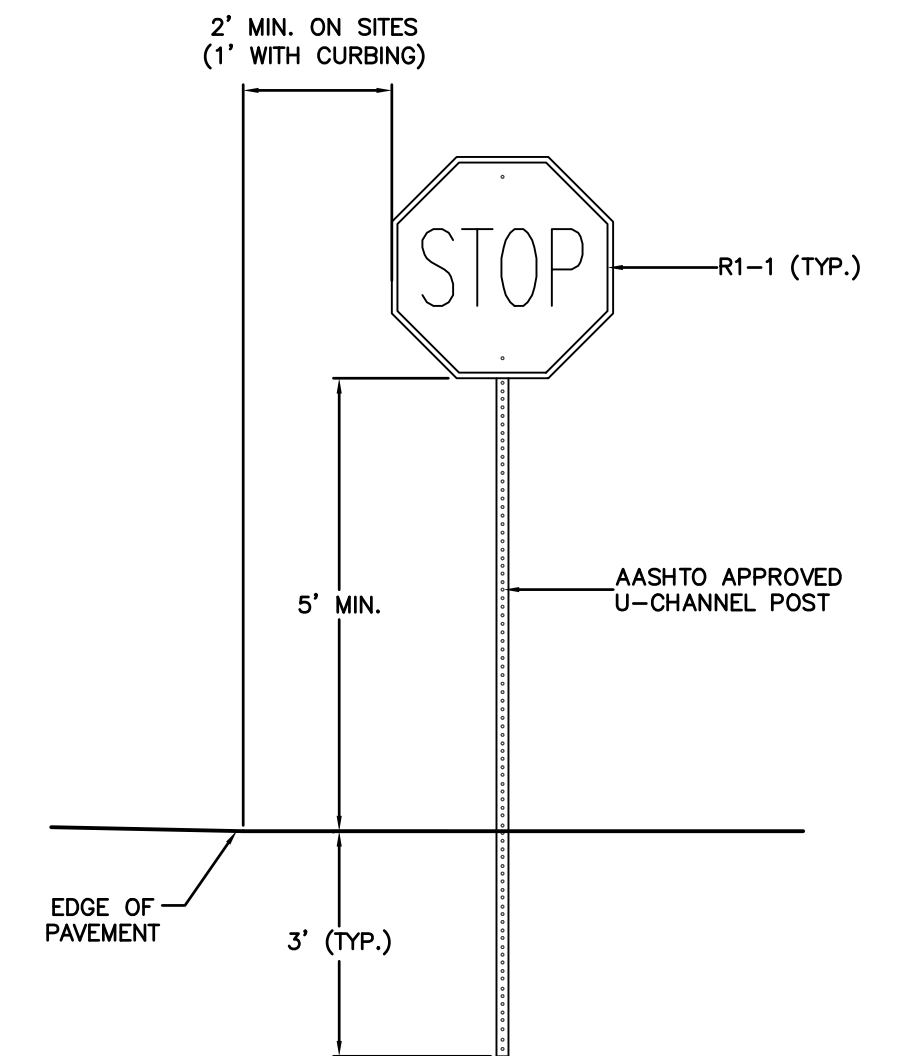


TYPICAL DRIVE HEADWALL

NOT TO SCALE

| ITEM NO. | SIGN SIZE | | TEXT | NO. SIGNS REQ'D |
|----------|-----------|-------|------|-----------------|
| | HEIGHT | WIDTH | | |
| R1-1 | 30" | 30" | STOP | 1 |

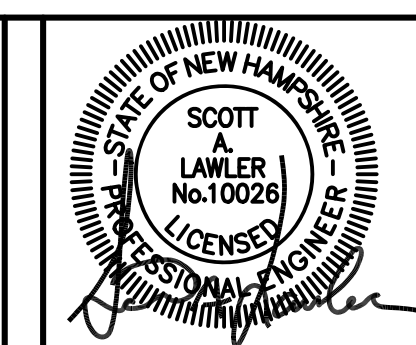
- NOTES:
1. ROADWAY MATERIALS AND CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", N.H.D.O.T., CURRENT EDITION.
 2. ALL ROADS WILL BE CONSTRUCTED UNDER SUPERVISION OF AN INDEPENDENT ENGINEERING FIRM. ALL MATERIALS WILL BE TESTED TO ASSURE THEY MEET THE STATE STANDARDS.
 3. ALL LOAM AND ORGANIC MATERIAL SHALL BE REMOVED FROM THE ROAD BED BENEATH THE BASE MATERIALS AND REPLACED WITH SUITABLE FILL.
 4. ALL BOULDERS AND LEDGE SHALL BE REMOVED TO A UNIFORM CROSS SECTION DEPTH OF NOT LESS THAN 12 INCHES BELOW THE SUBGRADE AND REPLACED WITH SAND OR GRAVEL AND COMPACTED TO THE SUBGRADE LEVEL.
 5. ROADWAY SUBGRADE AND BASE COURSES SHALL BE COMPACTED TO 95% OF MAXIMUM DENSITY PROCTOR METHOD IN ACCORDANCE WITH AASHTO T-99.
 6. PAVEMENT SHALL BE PLACED IN TWO COURSE, BASE AND WEARING.



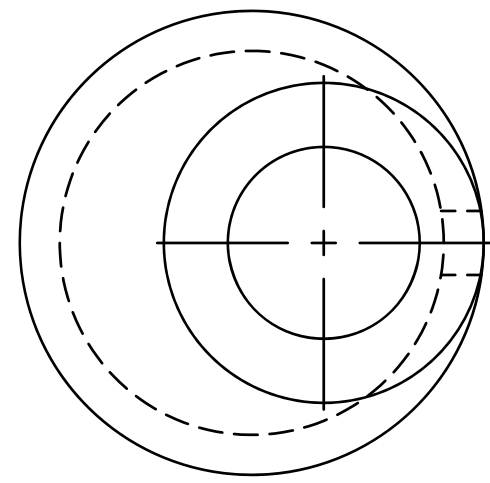
- NOTES:
1. SIGN POST SHALL BE AASHTO APPROVED U-CHANNEL OR OTHER PER AASHTO "SPECIFICATIONS FOR STRUCTURAL SUPPORT OF HIGHWAY SIGNS, LUMINARIES AND SIGNALS", LATEST EDITION.
 2. SIGNS SHALL BE MOUNTED 5 FT FROM GROUND TO BOTTOM EDGE WHERE PARKING AND PARKING LOT MOVEMENTS TAKE PLACE.
 3. SIGNS SHALL BE PLACED SO THAT NEAREST EDGE IS 2 FT. FROM EDGE OF PAVEMENT UNLESS CURBED.

TYPICAL TRAFFIC SIGN
NOT TO SCALE

FILE NO. 458
PLAN NO. C-xxx
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F.B. NO.



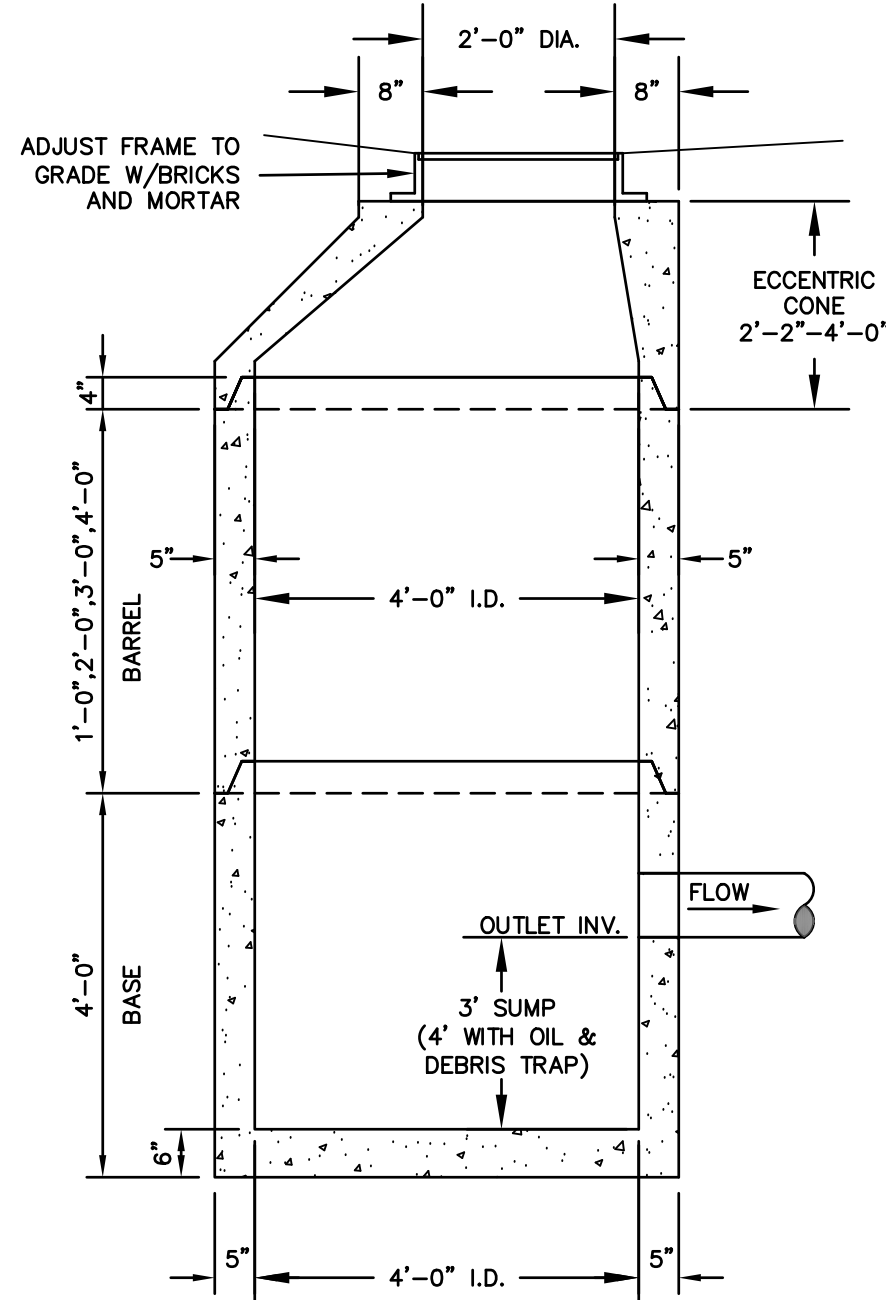
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PLAN VIEW

| DRAIN LINE DIAMETER | SUM OF DRAIN LINE DIAMETER | CATCH BASIN DIAMETER |
|---------------------|----------------------------|-----------------------|
| 15" TO 18" | LESS THAN 54" | 4' |
| 21" TO 27" | LESS THAN 72" | 5' |
| 30" TO 33" | LESS THAN 90" | 6' |
| 36" & LARGER | GREATER THAN 90" | REFER TO THE STANDARD |

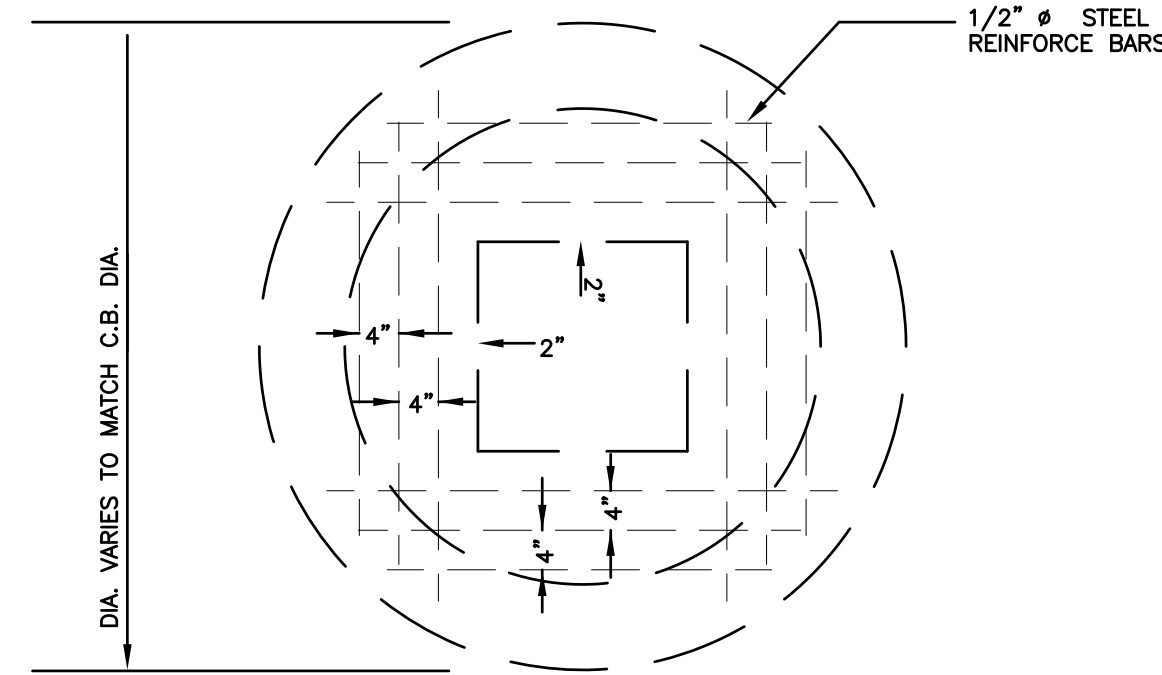
- NOTES:
- CONCRETE: 4,000 PSI AFTER 28 DAYS.
 - REINFORCING: SHALL BE PROVIDED FOR H-20 LOADING.
 - SHOULDER JOINTS SEALED WITH 1 STRIP OF BUTYL RUBBER SEALANT.
 - PIPE OPENINGS CAST IN AS REQUIRED.
 - RISER HEIGHT VARIES 1', 2', 3' OR 4' TO REACH DESIRED DEPTH.
 - PIPE CONNECTIONS SHALL BE MORTARED.
 - PRECAST SECTIONS SHALL CONFORM TO ASTM C-478.
 - SEE SLAB TOP DETAIL FOR STRUCTURES REQUIRING SLAB TOPS, I.E. DOUBLE GRATE AND FRAME STRUCTURES.



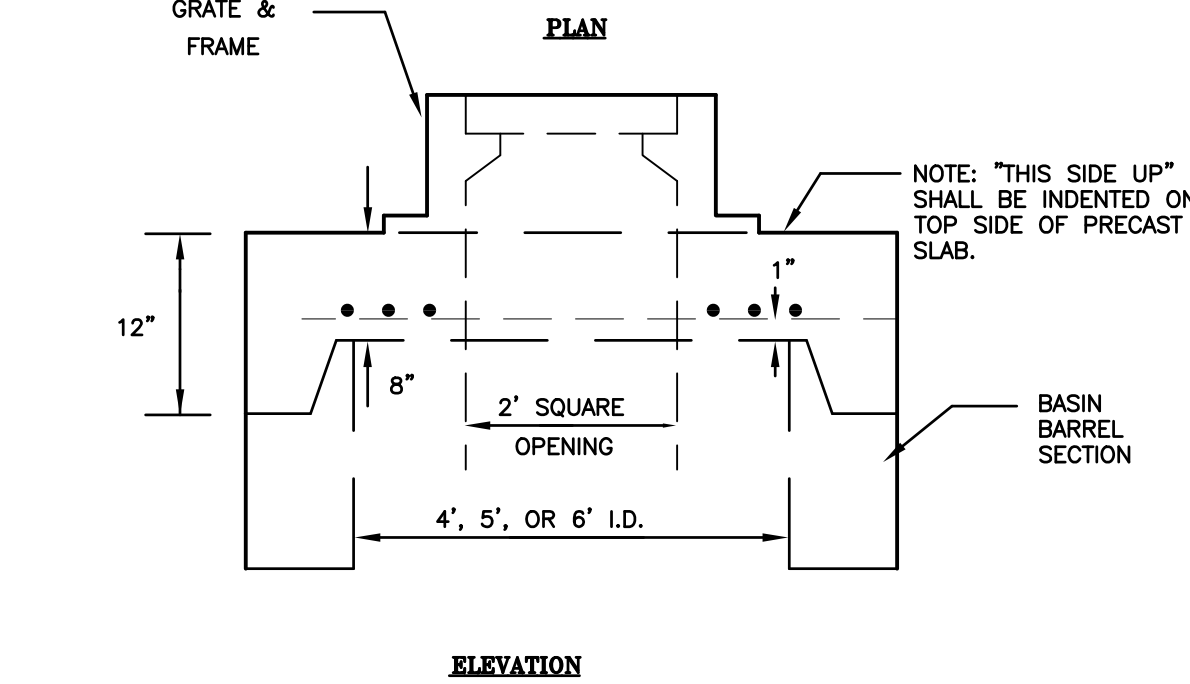
SECTION VIEW

PRE-CAST REINFORCED CATCH BASIN

NOT TO SCALE



PLAN

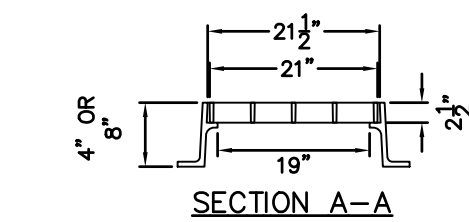


ELEVATION

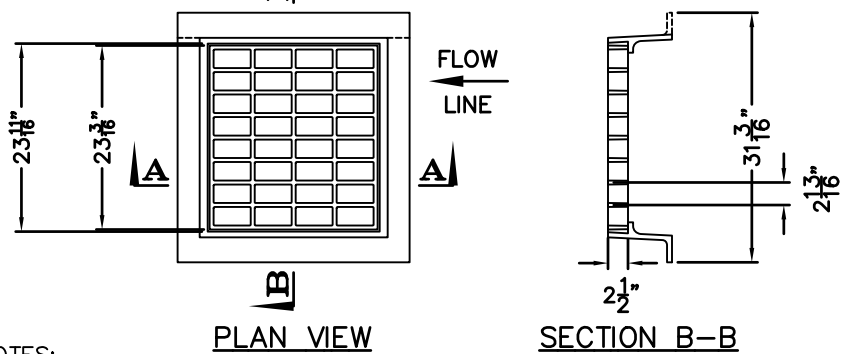
- NOTE:
- SLAB TO BE PLACED IN LIEU OF TAPERED SECTION WHERE PIPE WOULD OTHERWISE ENTER INTO TAPERED SECTION OF THE STRUCTURE AND WHERE PERMITTED.
 - SLAB TOP MAY BE CASTED WITH MINIMUM OR NO INTERLOCKING CHANNEL. HOWEVER, THE CONTRACTOR MUST ENSURE THE SLAB TOP IS FIRMLY ATTACHED TO THE STRUCTURE.

REINFORCED CONCRETE SLAB COVER

NOT TO SCALE



SECTION A-A



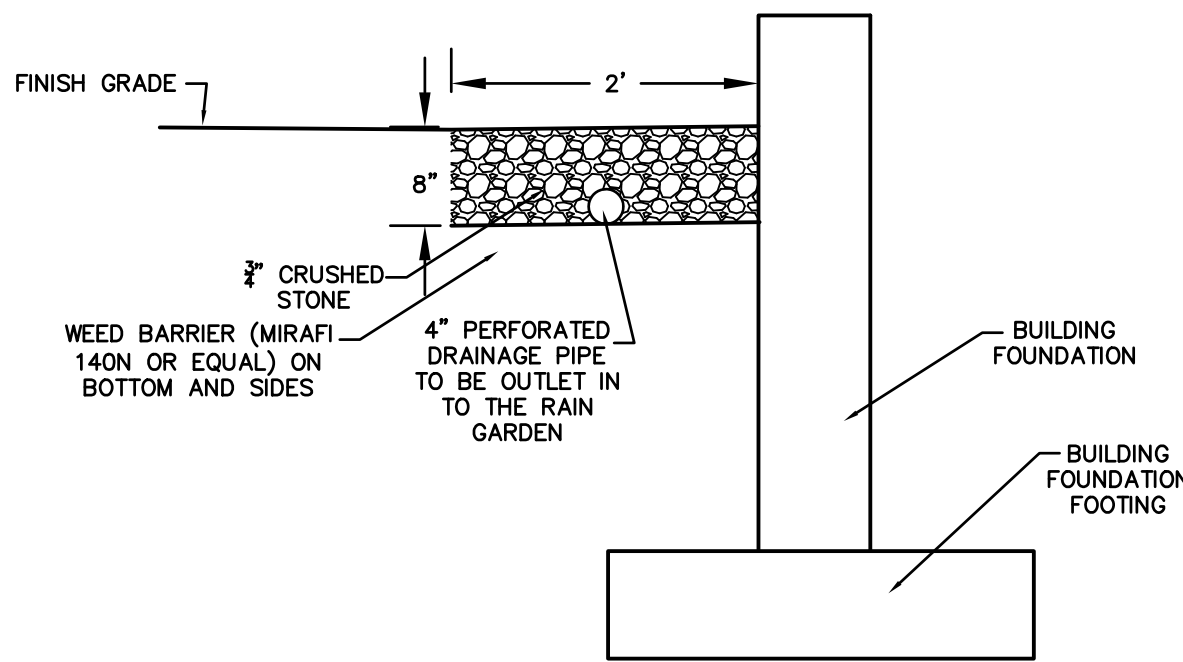
PLAN VIEW

SECTION B-B

- NOTES:
- FRAME AND GRATE SHALL BE CAST IRON.
 - FRAME AVAILABLE IN 4" OR 8" HEIGHTS.
 - USE 3 FLANGE FRAME IF INSTALLED ADJACENT TO GRANITE CURB.
 - ALL DIMENSIONS ARE NOMINAL.

CATCH BASIN TYPE 'B' GRATE DETAIL

NOT TO SCALE

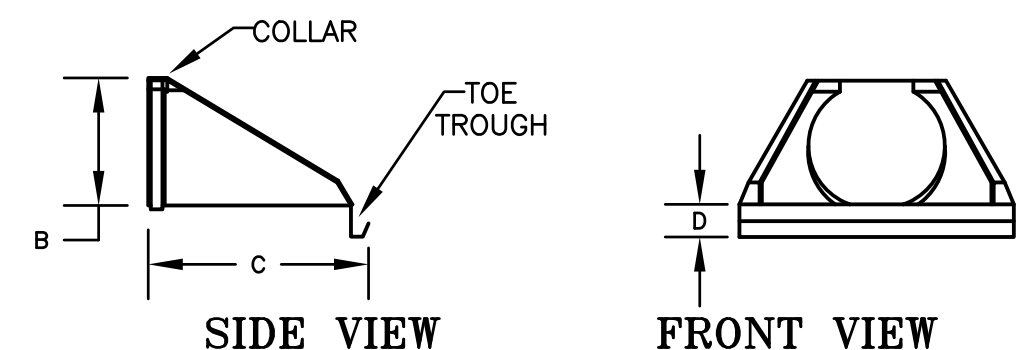


DRIP EDGE DRAIN DETAIL

NOT TO SCALE

| PIPE DIAMETERS | DIMENSIONS (INCHES) | | | |
|----------------|---------------------|------|------|---|
| | A | B | C | D |
| 10" / 12" | 42 | 14.5 | 33 | 6 |
| 15" | 41 | 19 | 34 | 6 |
| 18" | 49 | 22 | 43 | 6 |
| 24" | 59.5 | 28 | 48 | 6 |
| 30" | 88 | 36 | 63.5 | 6 |
| 36" | 88 | 43 | 66.5 | 6 |

TOP VIEW



SIDE VIEW

FRONT VIEW

FLAIRED END SECTION DETAIL

NOT TO SCALE

- INSTALLATION NOTES:
- ANTI-SEEP COLLARS SHALL BE MADE PLASTIC IF BEING USED WITH PLASTIC PIPE. ANTI-SEEP COLLARS SHALL BE GALVANIZED SHEET STEEL IF BEING USED WITH CORRUGATED METAL PIPE AND SHALL BE POURED CONCRETE IF BEING USED WITH REINFORCED CONCRETE PIPE.
 - ANTI-SEEP COLLAR SHALL BE WATERPROOF AND HAVE A WATERPROOF CONNECTION TO THE OUTLET PIPE.
 - A NUMBER OF ANTI-SEEP COLLARS SHALL BE PLACED ALONG THE PIPE IN A SPACING THAT INCREASES THE PIPE LENGTH BY 15%.

SOURCES FOR PLASTIC ANTI-SEEP COLLARS FOR USE WITH PLASTIC PIPE:

- THE FOLLOWING ARE A FEW MANUFACTURER'S OF PLASTIC ANTI-SEEP COLLARS.
- COLLARS FROM THESE MANUFACTURER'S MAY BE USED WITH BOTH SMOOTH WALLED AND CORRUGATED OUTSIDE WALLED PIPE.

TRENCH DAM SYSTEMS
DURHAM, NH 03824
PHONE: (603) 343-8634
FAX: (603) 552-5564
E-MAIL: bob@trenchdam.com
http://www.trenchdam.com/contact

SOHBE DRAINAGE PRODUCTS
203 SOUTH MONROE STREET
OREGON, MO 64473
PHONE: (660)-446-2343

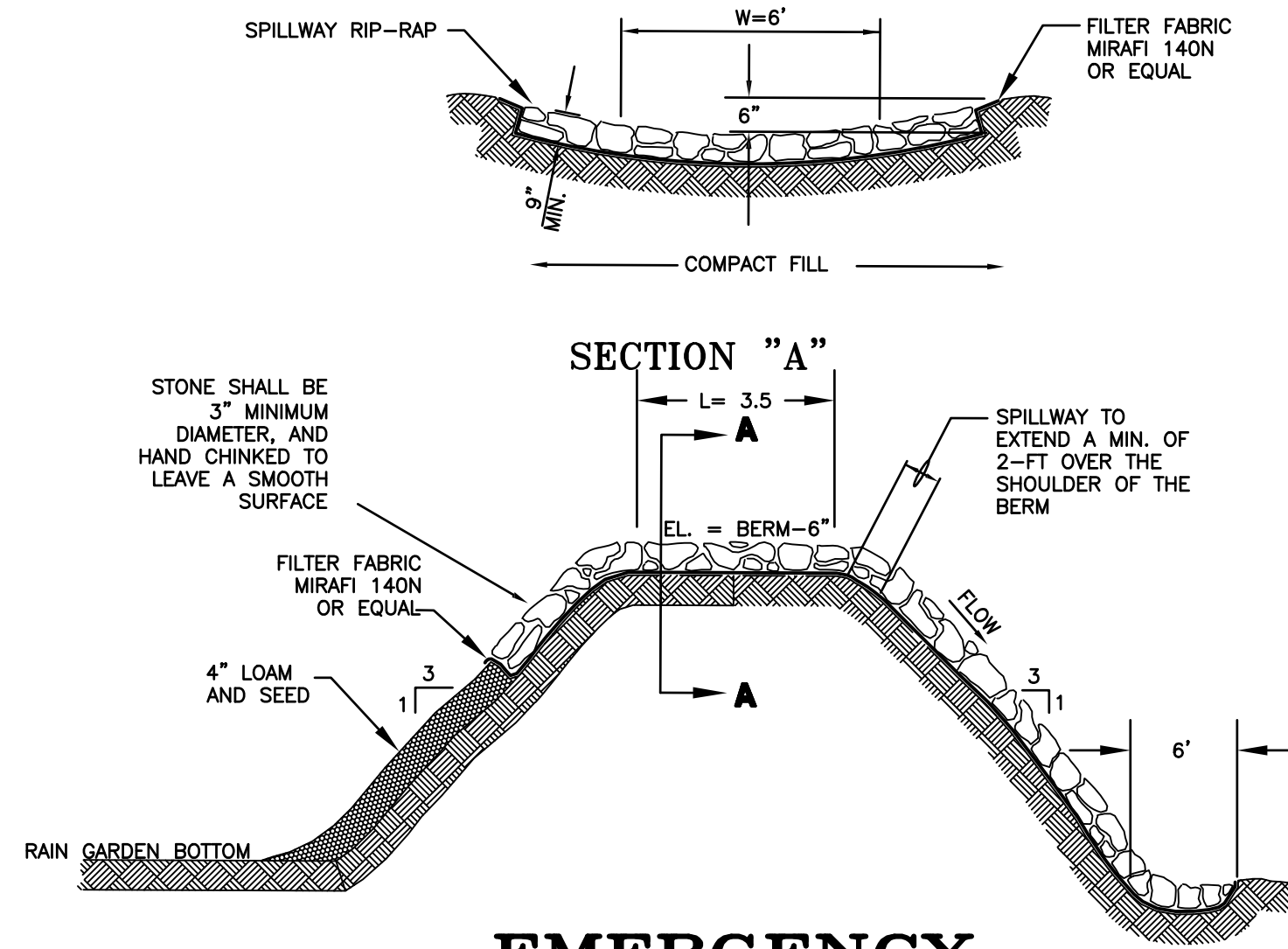
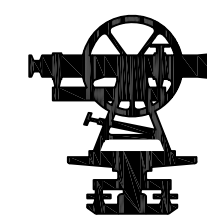
2. IT IS ALSO SUGGESTED THAT LOCAL SUPPLIERS BE CONTACTED TO ENQUIRE ABOUT SUITABLE ANTI-SEEP COLLAR PRODUCTS. IF A POSSIBLE ALTERNATIVE IS FOUND CONTACT THE DESIGN ENGINEER TO ENSURE ITS APPROPRIATENESS AND TO GET APPROVAL FOR ITS USE.

COLLAR DIMENSION TABLE

| COLLAR | W | H |
|--------|--------|------|
| 12 | 10' | 6" |
| 18 | 10.25' | 6" |
| 24 | 12' | 7.5" |
| 30 | 12' | 7.5" |

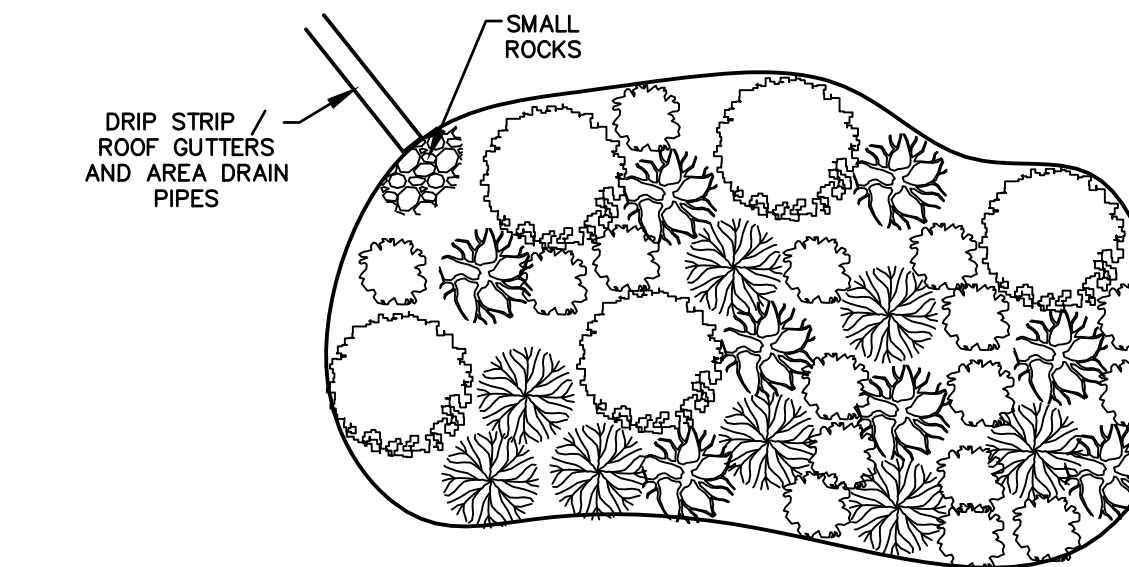
ANTI-SEEP COLLAR DETAIL

NOT TO SCALE

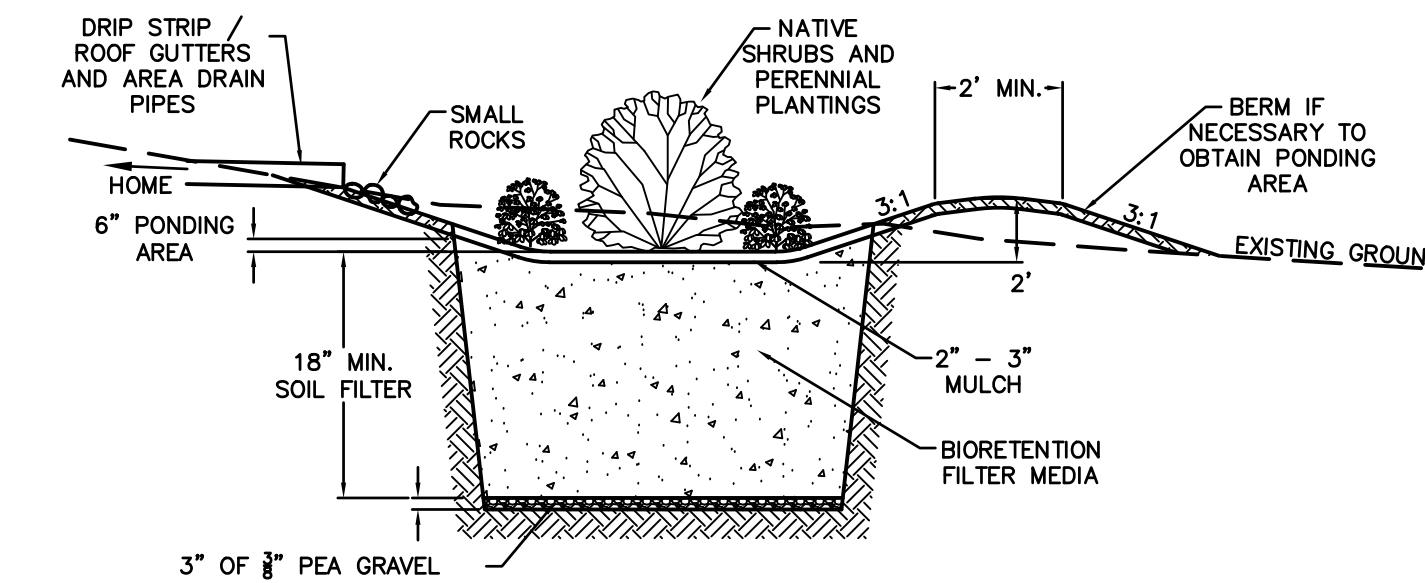


EMERGENCY SPILLWAY DETAIL FOR RAIN GARDEN

NOT TO SCALE



TYPICAL PLAN VIEW



CROSS SECTION

RAIN GARDEN DETAIL

NOT TO SCALE

- VEGETATED RESIDENTIAL RAIN GARDEN CONSTRUCTION AND MAINTENANCE NOTES:
- RAIN GARDEN AREAS SHOULD BE LOCATED CLOSE TO THE SOURCE OF RUNOFF.
 - DO NOT PLACE RAIN GARDEN SYSTEMS INTO SERVICE UNTIL THE PLANTS HAS BEEN PLANTED AND THE ADJACENT AREAS ARE FULLY ESTABLISHED.
 - SYSTEMS SHOULD BE INSPECTED AT LEAST TWICE ANNUALLY, AND FOLLOWING ANY RAINFALL EVENTS EXCEEDING 2.5 INCHES IN A 24-HOUR PERIOD, WITH MAINTENANCE OR REHABILITATION AS WARRANTED BY SUCH INSPECTION.
 - TRASH AND DEBRIS SHOULD BE REMOVED AT EACH INSPECTION.
 - AT LEAST ANNUALLY, SYSTEM SHOULD BE INSPECTED FOR DRAINAGE TIME. IF THE RAIN GARDEN DOES NOT DRAIN WITHIN 72 HOURS FOLLOWING A RAINFALL EVENT, THEN A QUALIFIED PROFESSIONAL SHOULD ASSESS THE CONDITIONS OF THE GARDEN TO DETERMINE MEASURES REQUIRED TO RESTORE FILTRATION FUNCTION, INCLUDING BUT NOT LIMITED TO REMOVAL OF ACCUMULATED SEDIMENTS OR RECONSTRUCTION OF THE FILTER MEDIA.
 - VEGETATION SHOULD BE INSPECTED AT LEAST ANNUALLY, AND MAINTAINED IN HEALTHY CONDITION, INCLUDING PRUNING, REMOVAL AND REPLACEMENT OF DEAD OR DISEASED VEGETATION, AND REMOVAL OF INVASIVE SPECIES.
 - THE SHAPE OF THE RAIN GARDEN SHALL BE RANDOM AND NATURAL CONFIGURATION.
 - SEE RAIN GARDEN TABLE FOR SURFACE AREA OF RAIN GARDEN.

SUGGESTED PLANTINGS (SHADY RAIN GARDEN)

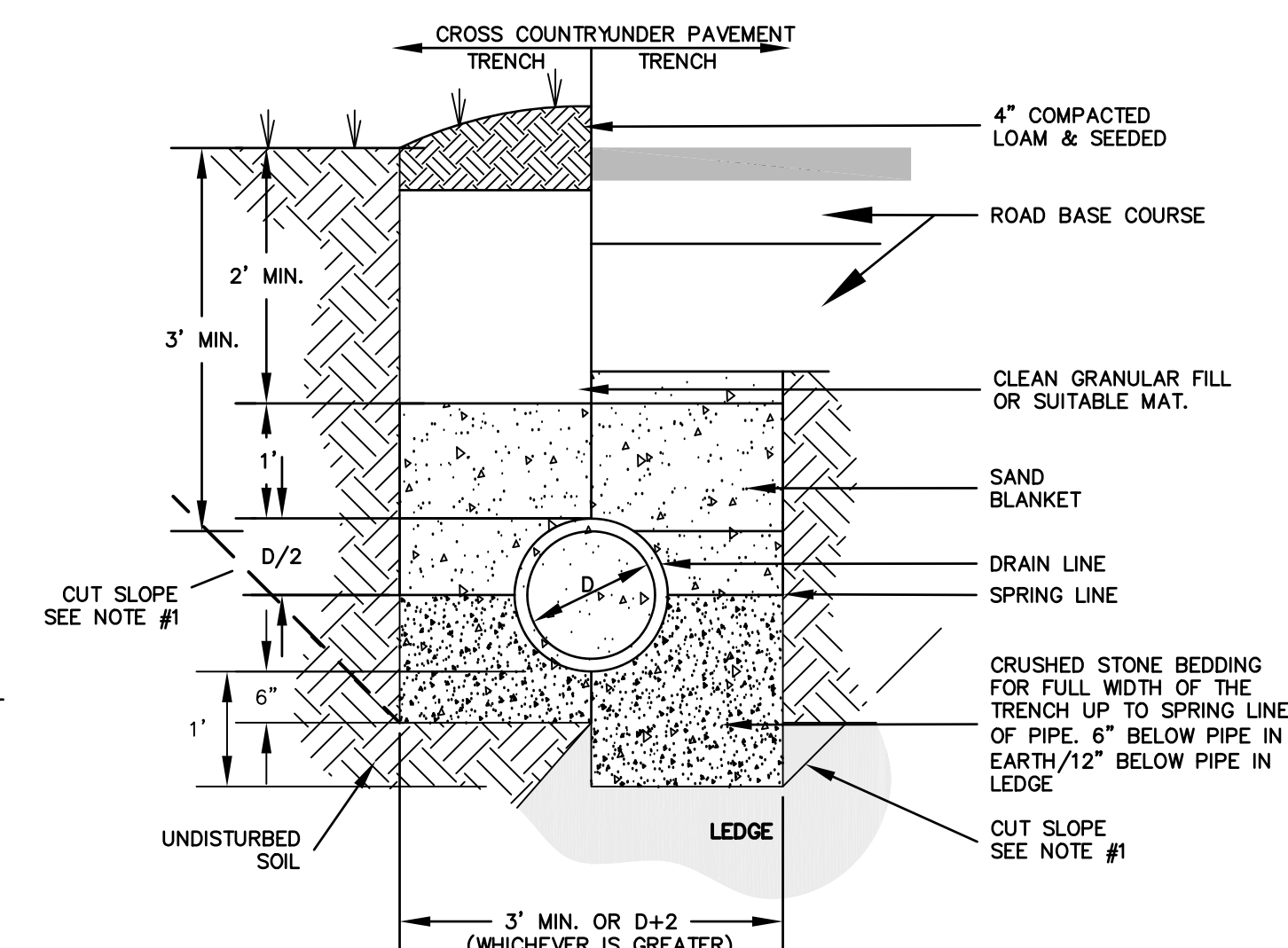
PLANTS WITHIN THE WETTER CENTER OF THE GARDEN:

- WOODY SHRUBS:
VERNAL WITCH HAZEL; 6-10'H x 6-10'W
NATIVE RHODODENDRON; 1-3'H x 1-3'W
LABRADOR TEA; 1-3'H x 1-3'W
WINTERBERRY; 6-8'H x 6-8'W

- PERENNIALS:
ROYAL FERN; 2-5'H x 2-5'W
NATIVE COLOMBINE; 1-2'H x 1-2'W
SENSITIVE FERN; 2'H x 18'W
CARDINAL FLOWERS; 2-4'H x 1'W

PLANTS WITHIN THE DRYER OUTER EDGE OF THE GARDEN:

- WOODY SHRUBS:
SWEETFERN; 2-4'H x 2-4'W
BEARBERRY; 6-12' x 1-2'W
PERENNIALS:
WILD GERANIUM; 1-2'H x 2'W



- NOTES:
- PIPES MAY BE INSTALLED BY EXCAVATING AN OPEN TRENCH WITH SIDE SLOPES OF 1:1 MAXIMUM TO A DEPTH OF 4-FT. INSTALLATIONS DEEPER THAN 4-FT REQUIRE THE USE OF A TRENCH BOX.
 - PIPE MATERIALS SHALL BE AS SPECIFIED ON THE DESIGN PLAN.
 - SAND BLANKET MAY BE OMITTED FOR REINFORCED CONCRETE PIPE.

DRAINAGE PIPE TRENCH INSTALLATION DETAIL

NOT TO SCALE

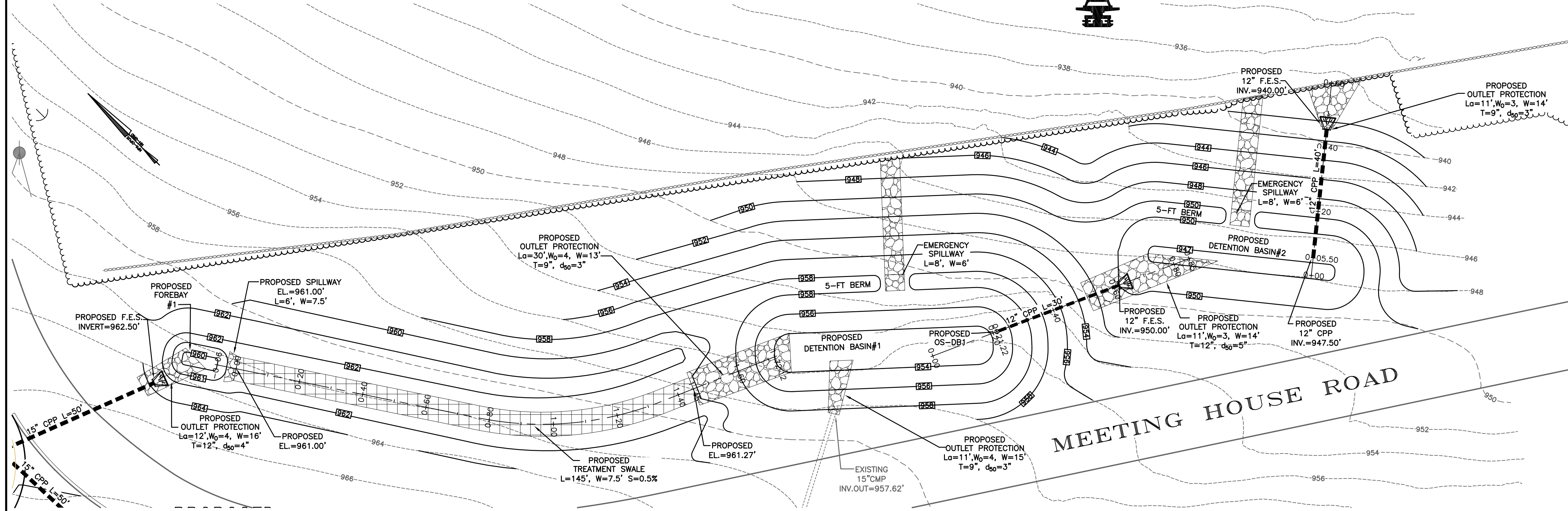
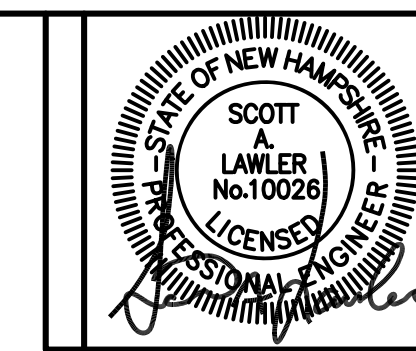
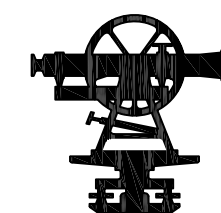
| COMPONENT MATERIAL | BIORETENTION FILTER MEDIA | |
|--|------------------------------|-----------------------|
| | PERCENT OF MIXTURE BY VOLUME | GRADATION OF MATERIAL |
| ASTM C-33 CONCRETE SAND | 50 TO 55 | |
| LOAMY SAND TOPSOIL, WITH FINES AS INDICATED | 20 TO 30 | 15 TO 25 |
| MODERATELY FINE SHREDDY BARK OR WOOD FIBERS MULCH, WITH FINES AS INDICATED | 20 TO 30 | < 5 |
| MODERATELY FINE SHREDDY BARK OR WOOD FIBERS MULCH, WITH FINES AS INDICATED | 20 TO 30 | < 5 |
| LOAMY COURSE SAND | 70 TO 80 | 10 |
| | | 20 |
| | | 60 |
| | | 200 |
| | | 8 TO 15 |

LOTS RAIN GARDENS

| LOT | MINIMUM SURFACE AREA OF POND (SF) |
|------|-----------------------------------|
| 50-1 | 362 |
| 50-2 | 500 |
| 50-3 | 362 |
| 53 | 927 |
| 53-1 | 351 |
| 53-2 | 350 |

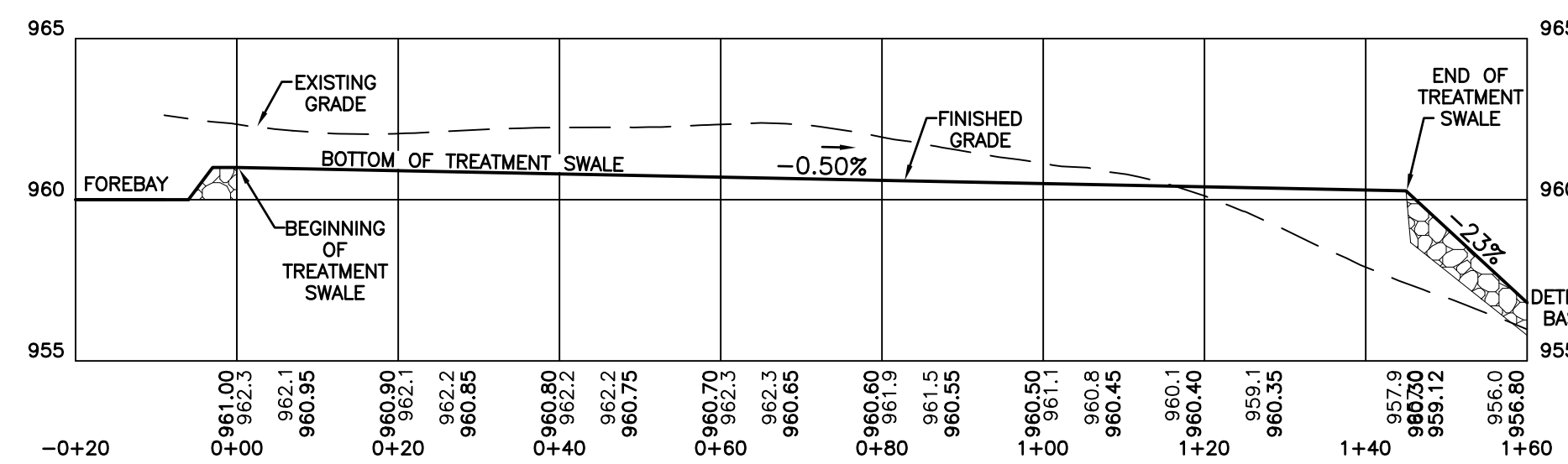
DRAINAGE DETAILS
TAX MAP 414, LOT 50, 52 & 53
GOVERNORS ROAD
GILMANTON, NH
PREPARED FOR:
GRANITE STATE
CONSERVATION TRUST
OCTOBER 2023

FILE NO. 458
PLAN NO. C-xxx
DWG. NO. 23058 PP-1
F.B. NO.



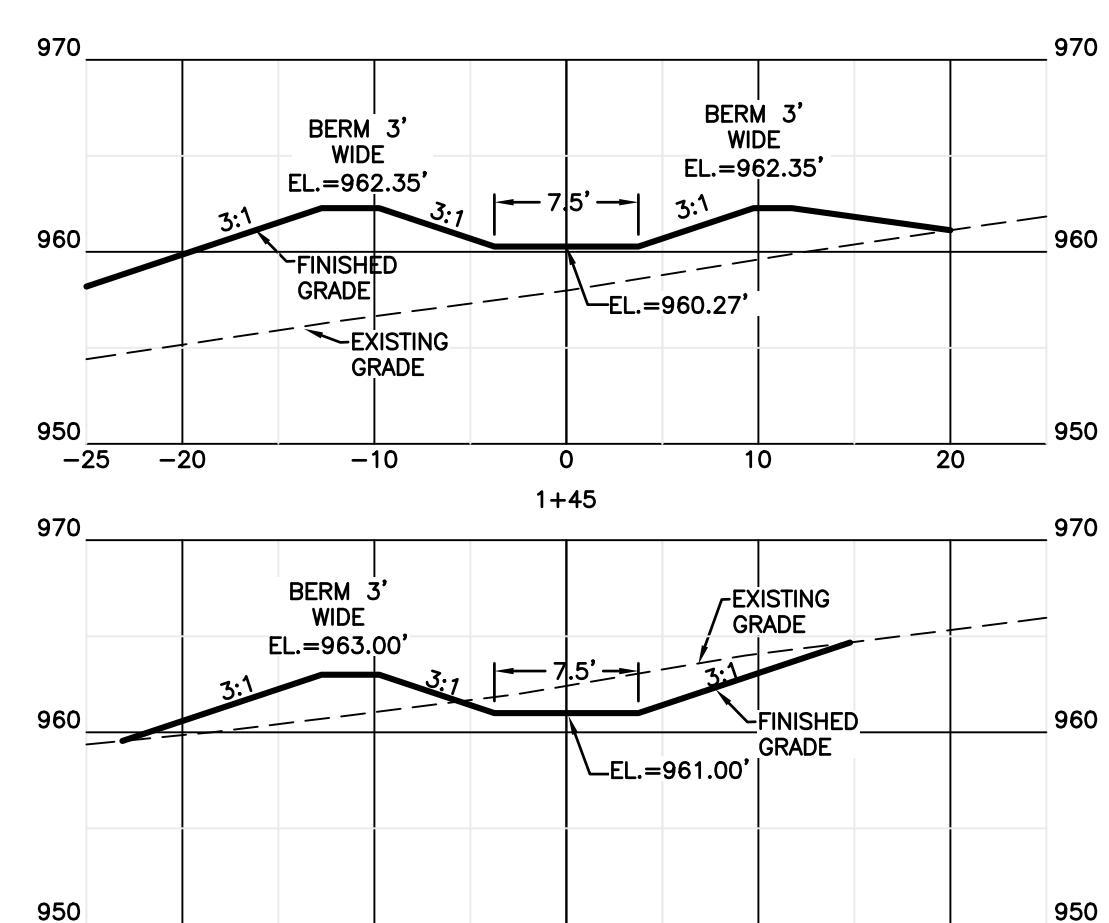
TREATMENT SWALE AND DETENTION BASIN 1 AND 2 PLAN VIEW

1" = 20'



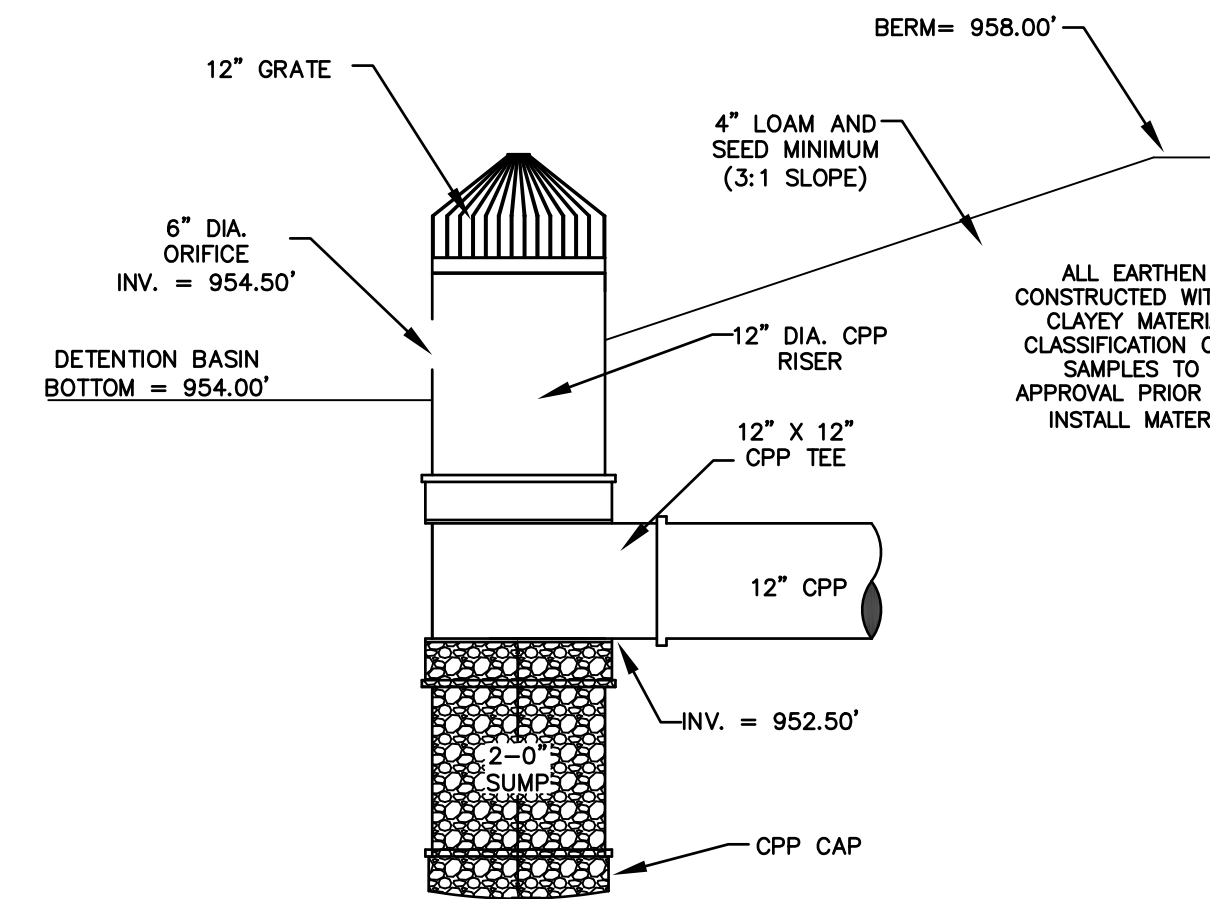
TREATMENT SWALE PROFILE

HORIZONTAL 1" = 20'
VERTICAL 1" = 5'



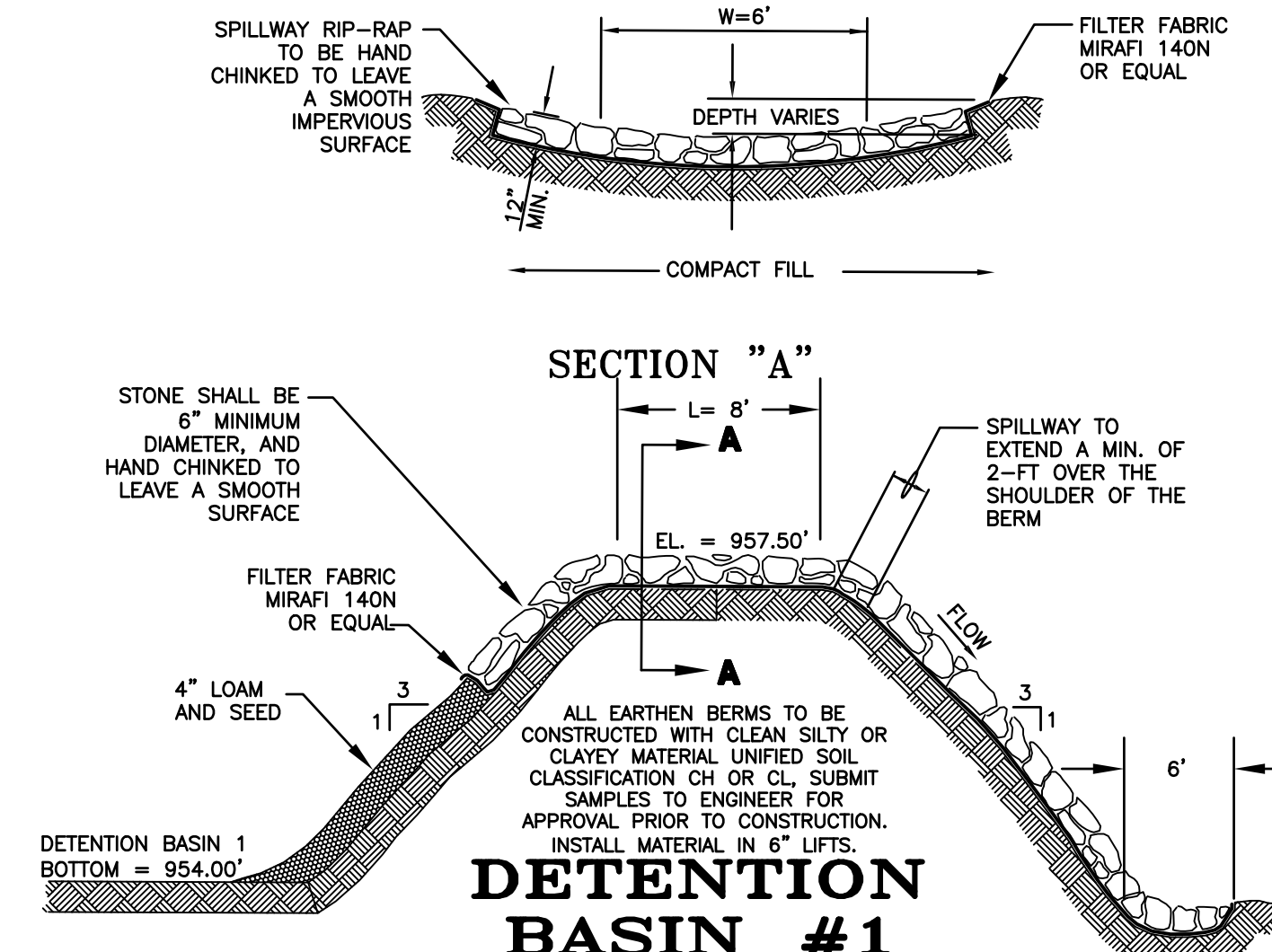
TREATMENT SWALE CROSS SECTION

HORIZONTAL 1" = 10'
VERTICAL 1" = 10'



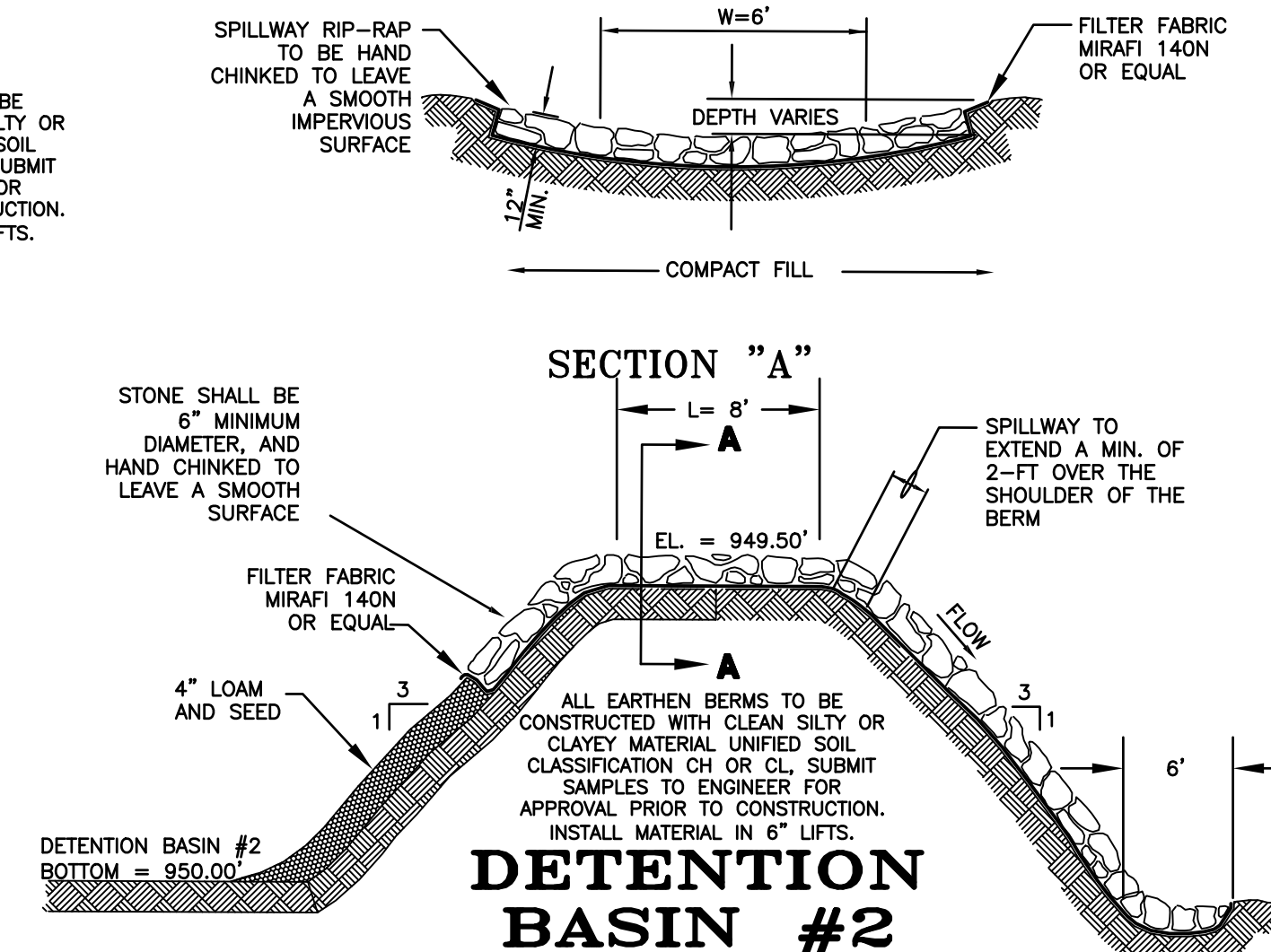
DETENTION BASIN #1
OUTLET STANDPIPE #1

NOT TO SCALE



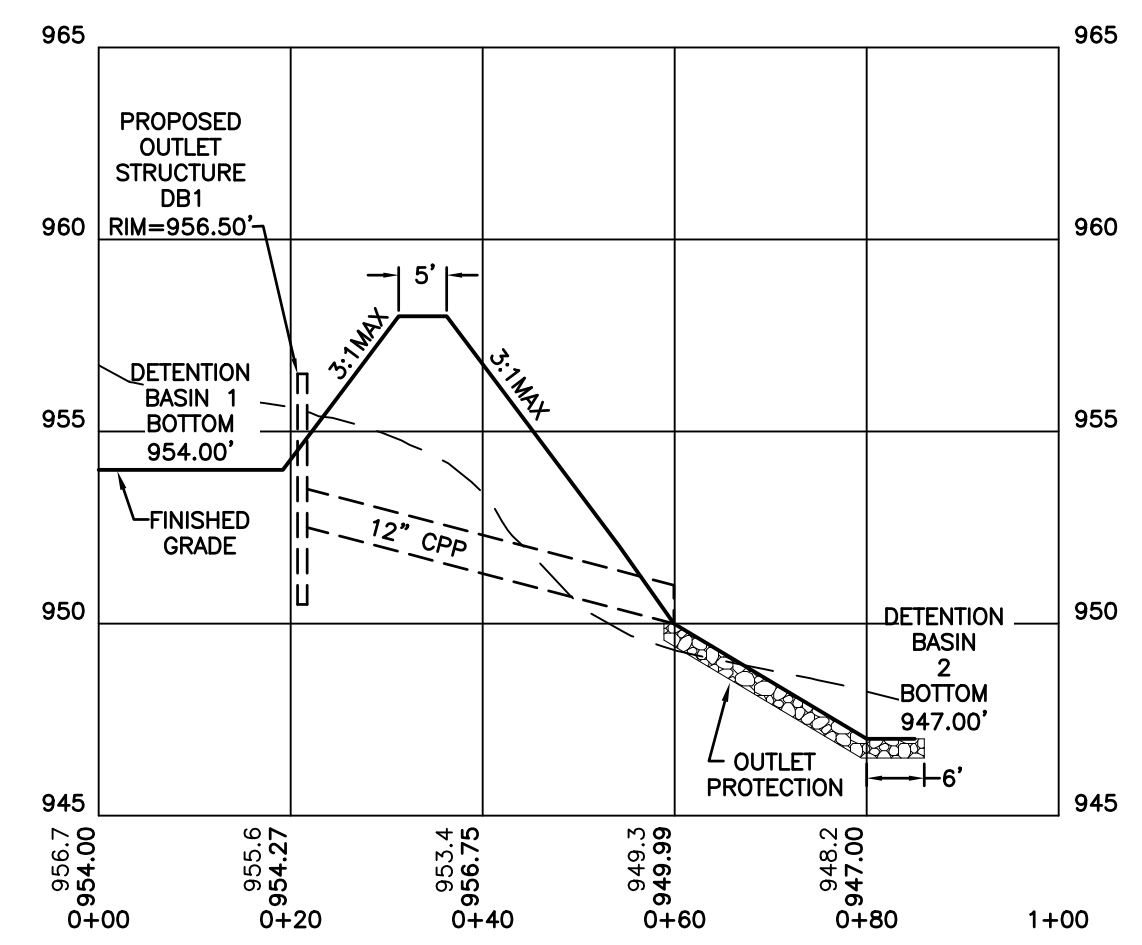
DETENTION
BASIN #1
EMERGENCY
SPILLWAY DETAIL

NOT TO SCALE



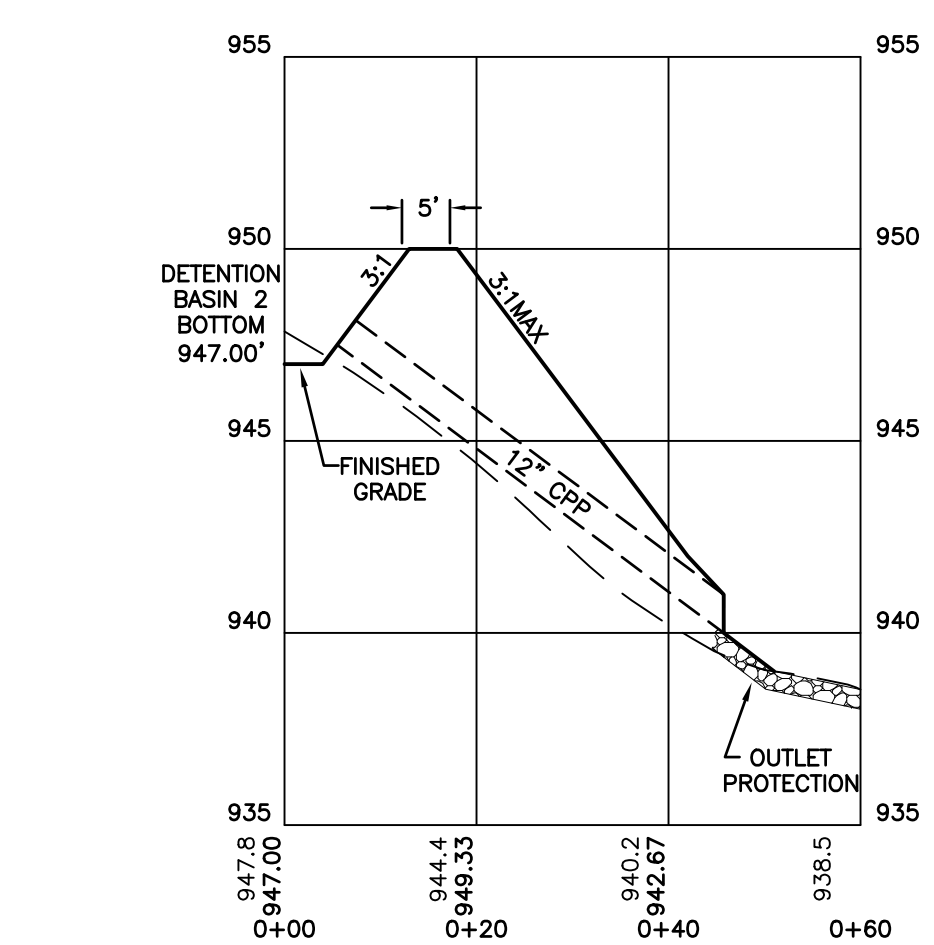
DETENTION
BASIN #2
EMERGENCY
SPILLWAY DETAIL

NOT TO SCALE



DETENTION BASIN #1 CROSS SECTION

HORIZONTAL 1" = 20'
VERTICAL 1" = 5'

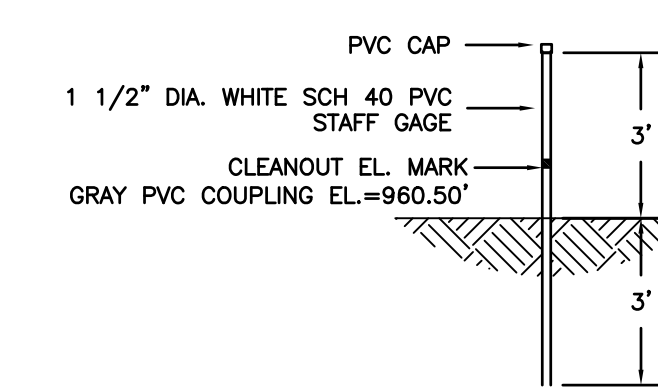


DETENTION BASIN #2 CROSS SECTION

HORIZONTAL 1" = 20'
VERTICAL 1" = 5'

SEDIMENT FOREBAY:

- SPECIFICATIONS:**
1. CONSTRUCT THE SEDIMENT FOREBAY TO THE GRADES DEPICTED ON THE PLAN AND CROSS-SECTION.
 2. LOAM AND SEED THE SLOPES AND BOTTOM OF THE SEDIMENT FOREBAY AS PRESCRIBED IN THE "PERMANENT VEGETATION" NOTES FOUND ON SHEET C-11.
 3. SEED MIXTURE = A
- MAINTENANCE REQUIREMENTS:**
1. INSPECT SEDIMENT FOREBAY BI-ANNUALLY. ONCE IN THE SPRING PRIOR TO MAY 15 AND ONCE IN THE FALL PRIOR TO OCTOBER 15.
 2. CONDUCT PERIODIC MOWING OF THE SEDIMENT FOREBAY SLOPES AND EMBANKMENTS (MINIMUM TWICE A YEAR) TO ELIMINATE WOODY GROWTH FROM THE EMBANKMENTS AND BOTTOM. MOWING THE SEDIMENT FOREBAY EMBANKMENTS WHEN MOWING THE REST OF THE SITE IS RECOMMENDED.
 3. REMOVE DEBRIS FROM THE OUTLET STRUCTURE OF THE SEDIMENT FOREBAY (I.E. STONE CHECK DAM) AT LEAST ONCE ANNUALLY.
 4. REMOVE AND DISPOSE OF ACCUMULATED SEDIMENT BASED ON INSPECTION. WHEN SEDIMENT HAS REACHED THE RED MARK ON THE SEDIMENT STAFF GAGE INSTALLED IN THE FOREBAY, REMOVE SEDIMENT AND DISPOSE OF IT OFF-SITE IN ACCORDANCE WITH STATE AND LOCAL REGULATIONS. ELEVATION OF RED CLEANOUT MARK ON STAFF GAUGE = 960.5'



SEDIMENT FOREBAY
GAUGE DETAIL

NOT TO SCALE

- NOTES:**
1. STAFF GAGE TO BE SCHEDULE 40 WHITE PVC DRIVEN OR PLACED IN GROUND A MINIMUM 3'-FT.
 2. CLEANOUT MARK ON STAFF TO BE GRAY PVC COUPLING SET 6-INCHES FROM BOTTOM OF BASIN.

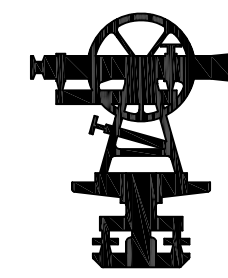
**TREATMENT SWALE &
DETENTION BASIN #1 & #2 DETAILS**

TAX MAP 414, LOT 50, 52 & 53
GOVERNORS ROAD
GILMANTON, NH

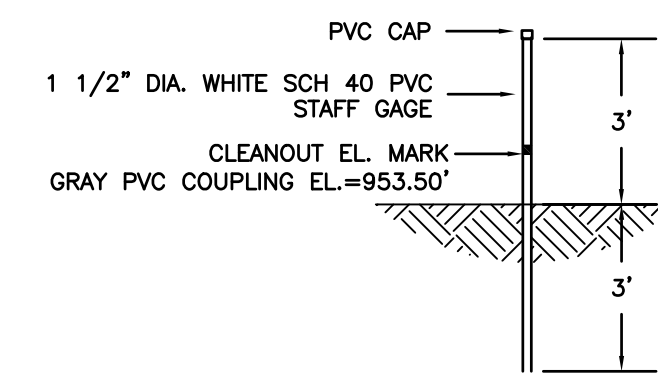
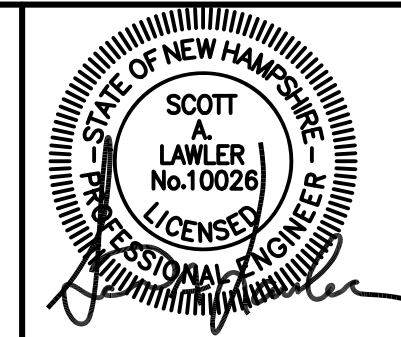
PREPARED FOR:
**GRANITE STATE
CONSERVATION TRUST**

OCTOBER 2023

FILE NO. 458
PLAN NO. C-xxx
DWG. NO. 23058 PP-1
F.B. NO.



CAREFULLY REVIEW ALL SHEETS OF THIS PACKAGE TO INSURE PROPER CONSTRUCTION. SPECIFIC SITE CONDITIONS SHOULD BE EXPLORED PRIOR TO CONSTRUCTION. CONTACT BOTH THE DESIGN ENGINEER AND THE PROJECT OWNER FOR ANY AVAILABLE GEOTECHNICAL OR HYDROGEOLOGICAL INFORMATION AVAILABLE BUT NOT CONTAINED WITH IN THE PLAN SET. IF THERE ARE ANY QUESTIONS WITH THE DESIGN PRESENTED IN THIS PLAN SET PLEASE CONTACT THE ENGINEERING STAFF AT NORWAY PLAINS ASSOCIATES, INC. (603)-335-3948.

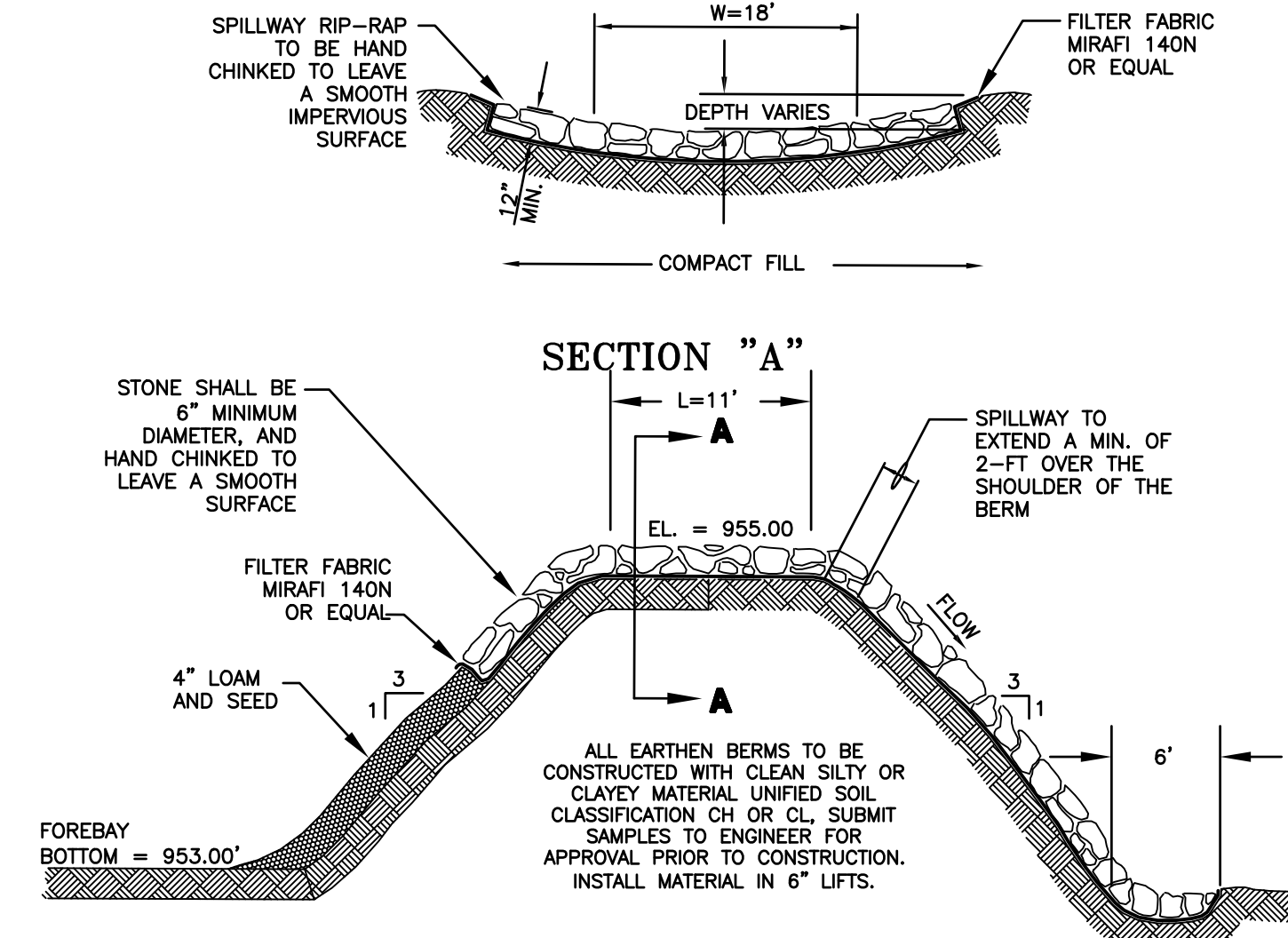


SEDIMENT FOREBAY GAUGE DETAIL
NOT TO SCALE

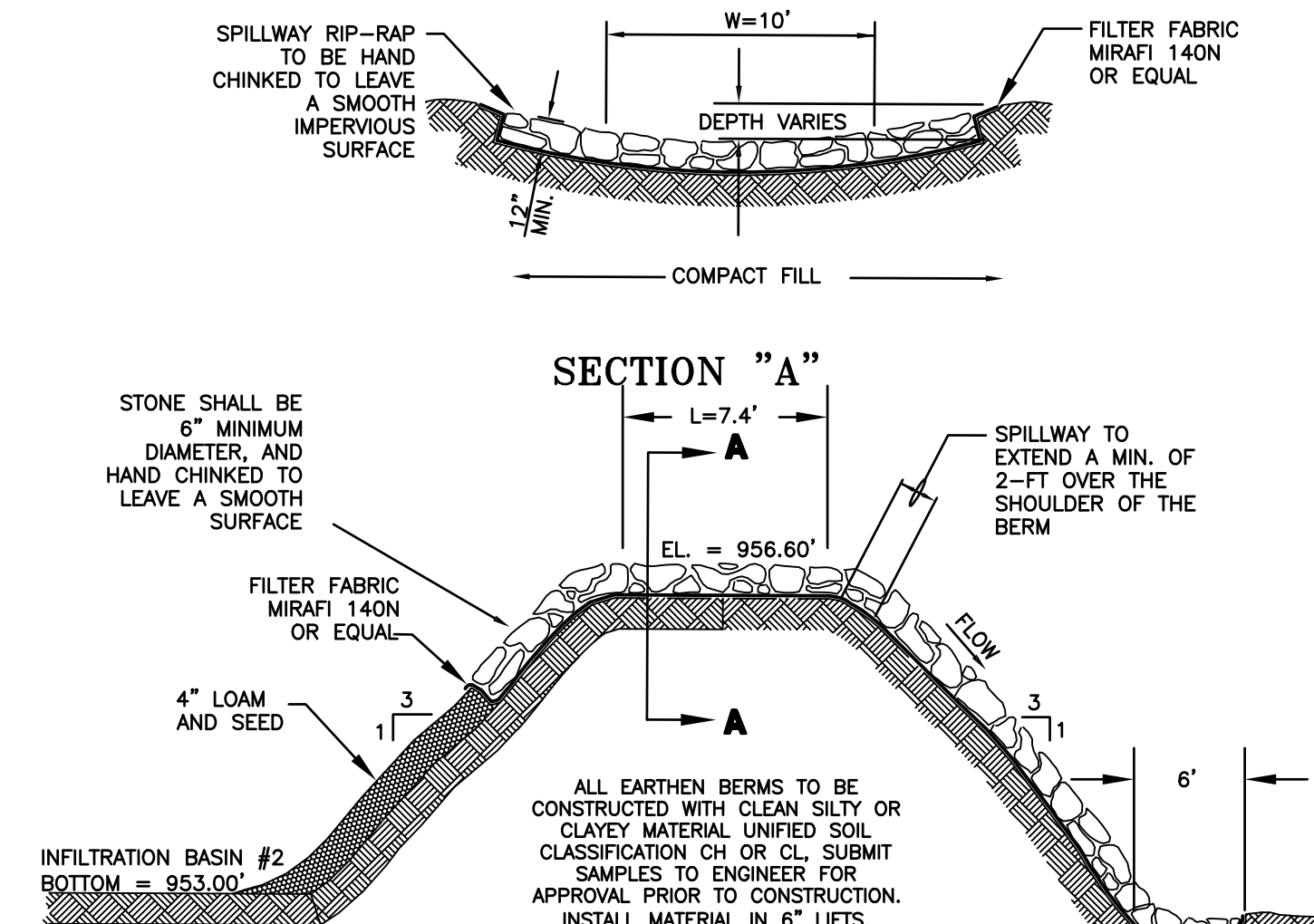
- NOTES:
1. STAFF GAGE TO BE SCHEDULE 40 WHITE PVC DRIVEN OR PLACED IN GROUND A MINIMUM 3'-FT.
2. CLEANOUT MARK ON STAFF TO BE GRAY PVC COUPLING SET 6-INCHES FROM BOTTOM OF BASIN.

SEDIMENT FOREBAY:

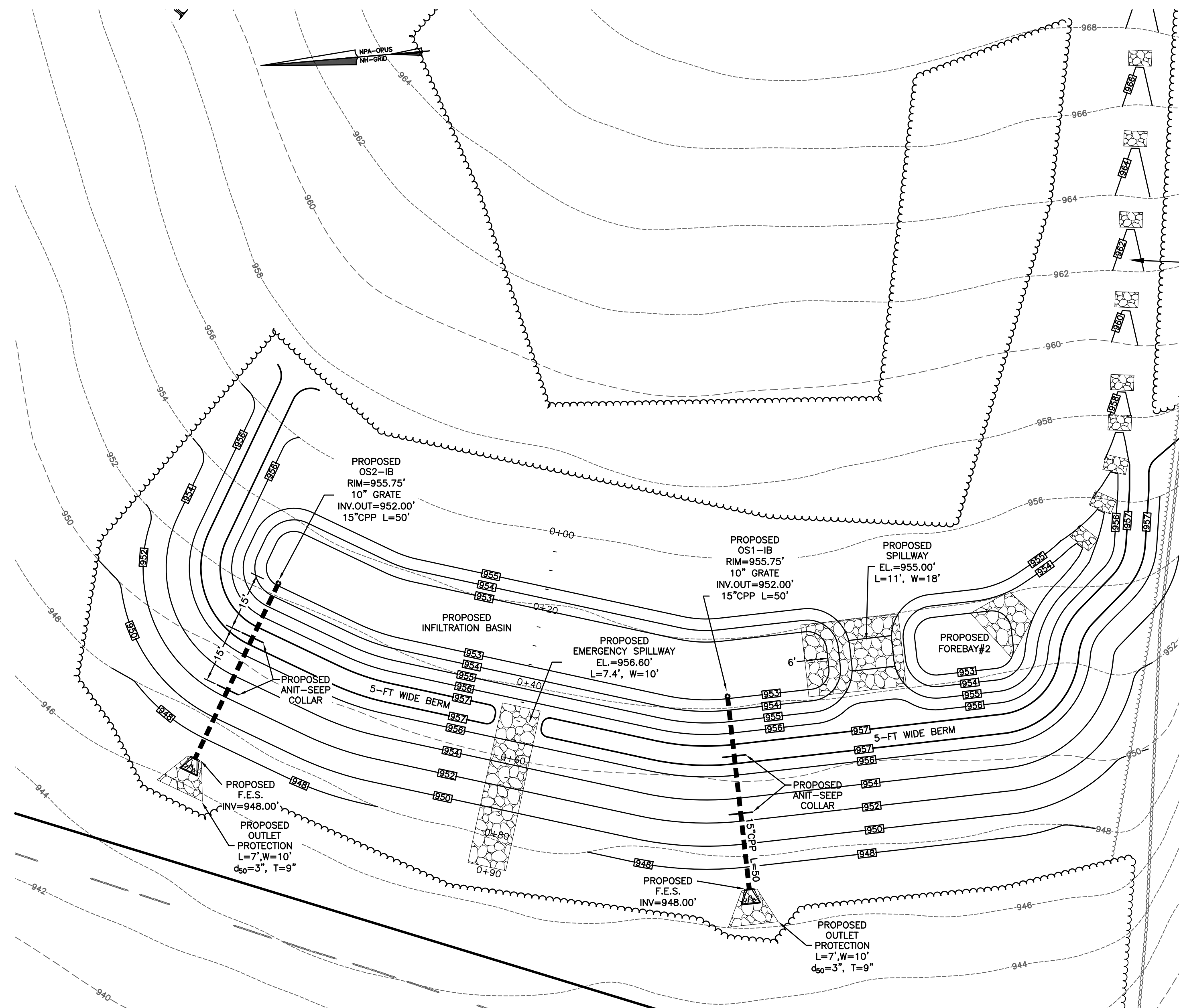
- SPECIFICATIONS:**
1. CONSTRUCT THE SEDIMENT FOREBAY TO THE GRADES DEPICTED ON THE PLAN AND CROSS-SECTION.
2. LOAM AND SEED THE SLOPES AND BOTTOM OF THE SEDIMENT FOREBAY AS PRESCRIBED IN THE "PERMANENT VEGETATION" NOTES FOUND ON SHEET C-11.
SEED MIXTURE = A
MAINTENANCE REQUIREMENTS:
1. INSPECT SEDIMENT FOREBAY BI-ANNUALLY, ONCE IN THE SPRING PRIOR TO MAY 15 AND ONCE IN THE FALL PRIOR TO OCTOBER 15.
2. CONDUCT PERIODIC MOWING OF THE SEDIMENT FOREBAY SLOPES AND EMBANKMENTS (MINIMUM TWICE A YEAR) TO ELIMINATE WOODY GROWTH FROM THE EMBANKMENTS AND BOTTOM. MOWING THE SEDIMENT FOREBAY EMBANKMENTS WHEN MOWING THE REST OF THE SITE IS RECOMMENDED.
3. REMOVE DEBRIS FROM THE OUTLET STRUCTURE OF THE SEDIMENT FOREBAY (I.E. STONE CHECK DAM) AT LEAST ONCE ANNUALLY.
4. REMOVE AND DISPOSE OF ACCUMULATED SEDIMENT BASED ON INSPECTION. WHEN SEDIMENT HAS REACHED THE RED MARK ON THE SEDIMENT STAFF GAGE INSTALLED IN THE FOREBAY, REMOVE SEDIMENT AND DISPOSE OF IT OFF-SITE IN ACCORDANCE WITH STATE AND LOCAL REGULATIONS. ELEVATION OF RED CLEANOUT MARK ON STAFF GAUGE = 953.5'



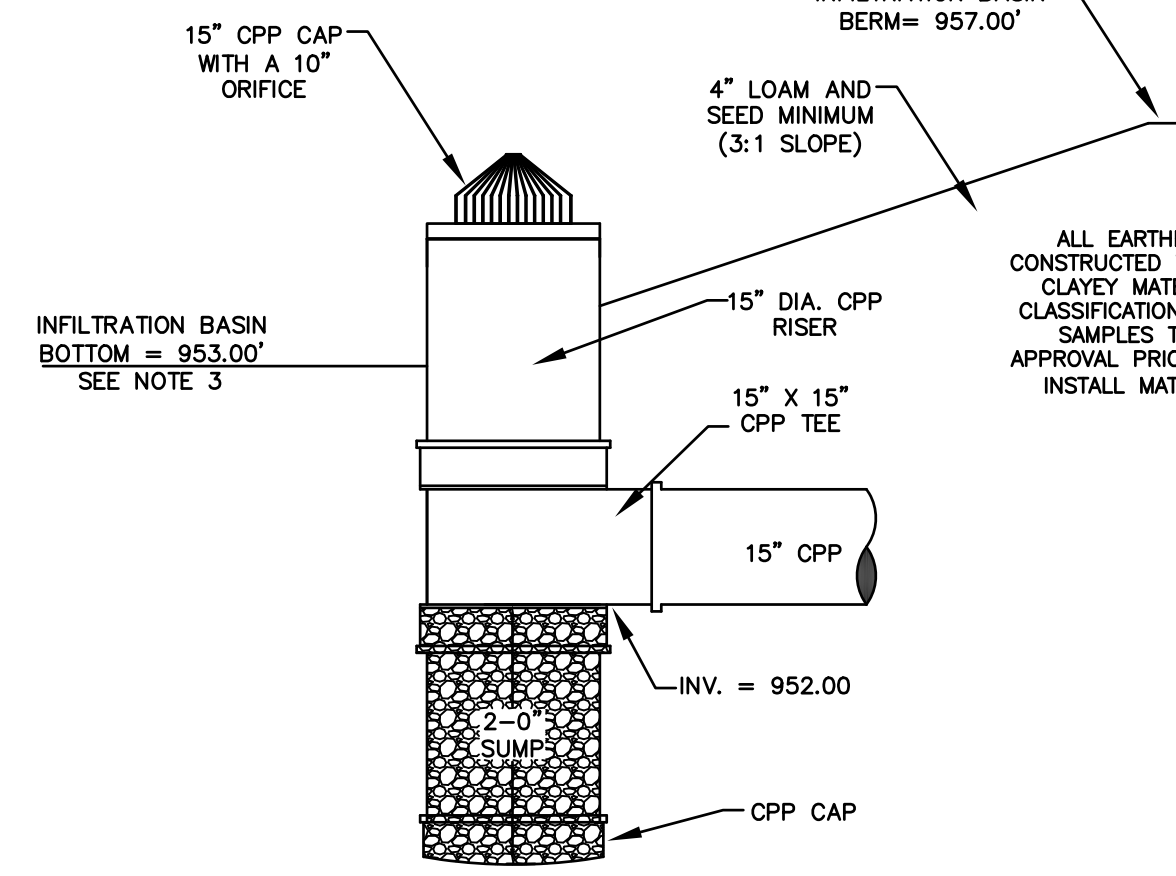
FOREBAY SPILLWAY DETAIL
NOT TO SCALE



EMERGENCY SPILLWAY DETAIL
NOT TO SCALE



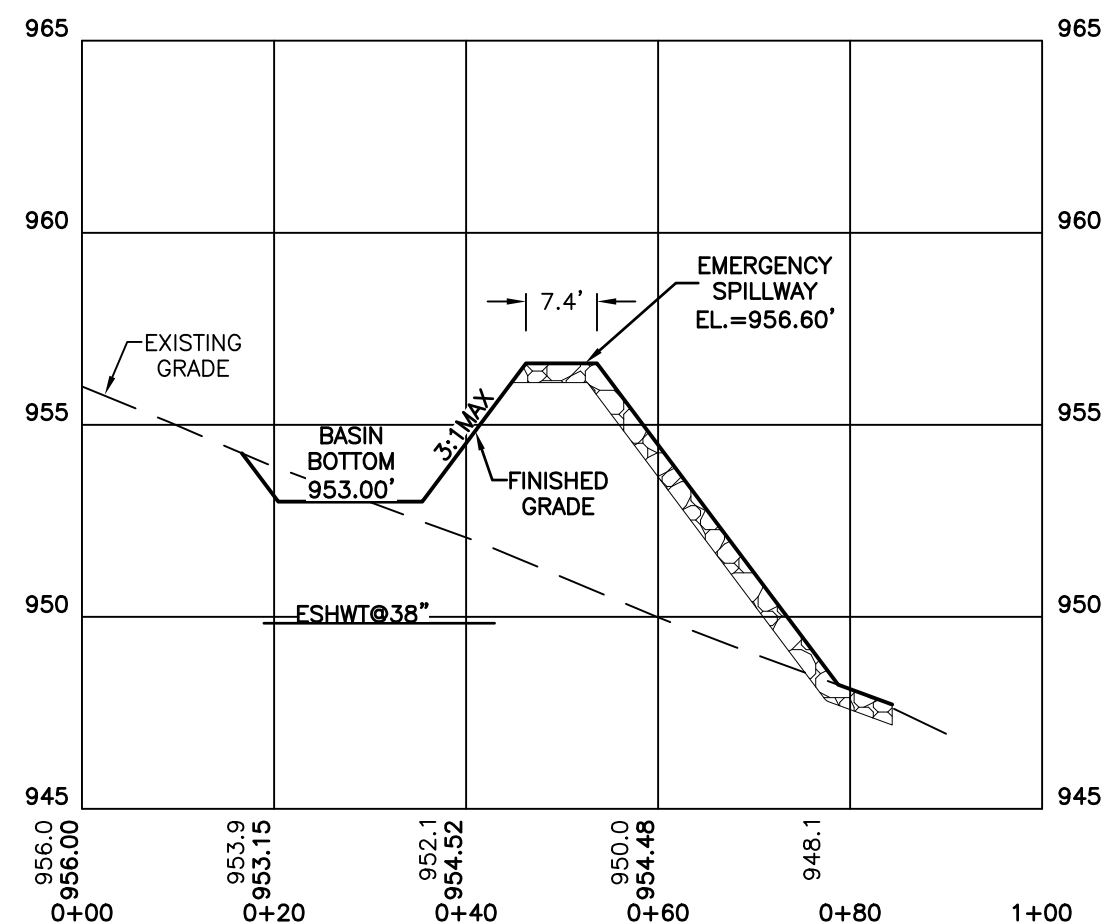
INFILTRATION BASIN PLAN VIEW
1" = 20'



INFILTRATION BASIN #1 OUTLET STANDPIPE DETAIL #1 AND #2
NOT TO SCALE

INFILTRATION BASIN:

- SPECIFICATIONS:**
1. DO NOT DISCHARGE SEDIMENT-LADEN WATERS FROM CONSTRUCTION ACTIVITIES (RUNOFF, WATER FROM EXCAVATIONS) TO THE INFILTRATION BASIN.
2. DO NOT TRAFFIC EXPOSED SOIL SURFACE WITH CONSTRUCTION EQUIPMENT; IF FEASIBLE, PERFORM EXCAVATIONS WITH EQUIPMENT POSITIONED OUTSIDE THE LIMITS OF THE INFILTRATION BASIN.
3. AFTER THE BASIN IS EXCAVATED TO THE FINAL DESIGN ELEVATION, THE FLOOR SHALL BE DEEPLY TILLED WITH A ROTARY TILLER OR DISC HARROW TO RESTORE INFILTRATION RATES, FOLLOWED BY A PASS WITH A LEVELING DRAG.
4. VEGETATION SHALL BE ESTABLISHED IMMEDIATELY AFTER FINAL GRADING IS COMPLETED.
5. CONSTRUCT THE INFILTRATION BASIN TO THE GRADES DEPICTED ON THE PLAN AND CROSS-SECTION.
6. LOAM AND SEED ONLY THE SLOPES OF THE INFILTRATION BASIN AS PRESCRIBED IN THE "PERMANENT VEGETATION" NOTES FOUND ON SHEET C-11. SEED MIXTURE = A.
7. DO NOT PLACE INFILTRATION SYSTEMS INTO SERVICE UNTIL THE CONTRIBUTING AREAS HAVE BEEN FULLY STABILIZED.
MAINTENANCE REQUIREMENTS:
1. INSPECT PRETREATMENT MEASURES (I.E. SEDIMENT FOREBAY(S), HOODED CATCH BASINS, ETC.) AT LEAST TWICE A YEAR AND AFTER EVERY STORM GREATER THAN 2.5 INCHES OF RAIN OVER A 24-HOUR PERIOD.
2. INSPECT INFILTRATION SURFACE BI-ANNUALLY, ONCE IN THE SPRING PRIOR TO MAY 15 AND ONCE IN THE FALL PRIOR TO OCTOBER 15.
3. INSPECT INFILTRATION SURFACE AFTER ANY RAINFALL EVENT OF 2.5-INCHES OR GREATER IN A 24-HOUR PERIOD.
4. REMOVE AND DISPOSE OF ACCUMULATED SEDIMENT BASED ON INSPECTION. REPAIR AREA OF REMOVAL AS NECESSARY TO RESTORE INFILTRATION CAPACITY.
5. PERFORM MAINTENANCE AND REHABILITATION BASED ON INSPECTIONS.
6. REMOVE DEBRIS (IF ANY) FROM INFILTRATION BASIN INLET BASED ON INSPECTION.
7. CONDUCT PERIODIC MOWING OF THE INFILTRATION BASIN SLOPES AND EMBANKMENTS (MINIMUM TWICE A YEAR) TO ELIMINATE WOODY GROWTH FROM THE EMBANKMENTS AND BOTTOM. MOWING THE INFILTRATION BASIN EMBANKMENTS WHEN MOWING THE REST OF THE SITE IS RECOMMENDED.
8. IF THE INFILTRATION SYSTEM DOES NOT DRAIN WITHIN 72-HOURS FOLLOWING A RAINFALL EVENT, THEN A QUALIFIED PROFESSIONAL (I.E. PROFESSIONAL ENGINEER, CERTIFIED SOILS SCIENTIST, ETC.) SHALL ASSESS THE CONDITION OF THE FACILITY TO DETERMINE MEASURES REQUIRED TO RESTORE INFILTRATION FUNCTION, INCLUDING BUT NOT LIMITED TO REMOVAL OF ACCUMULATED SEDIMENTS OR RECONSTRUCTION OF THE INFILTRATION SURFACE.

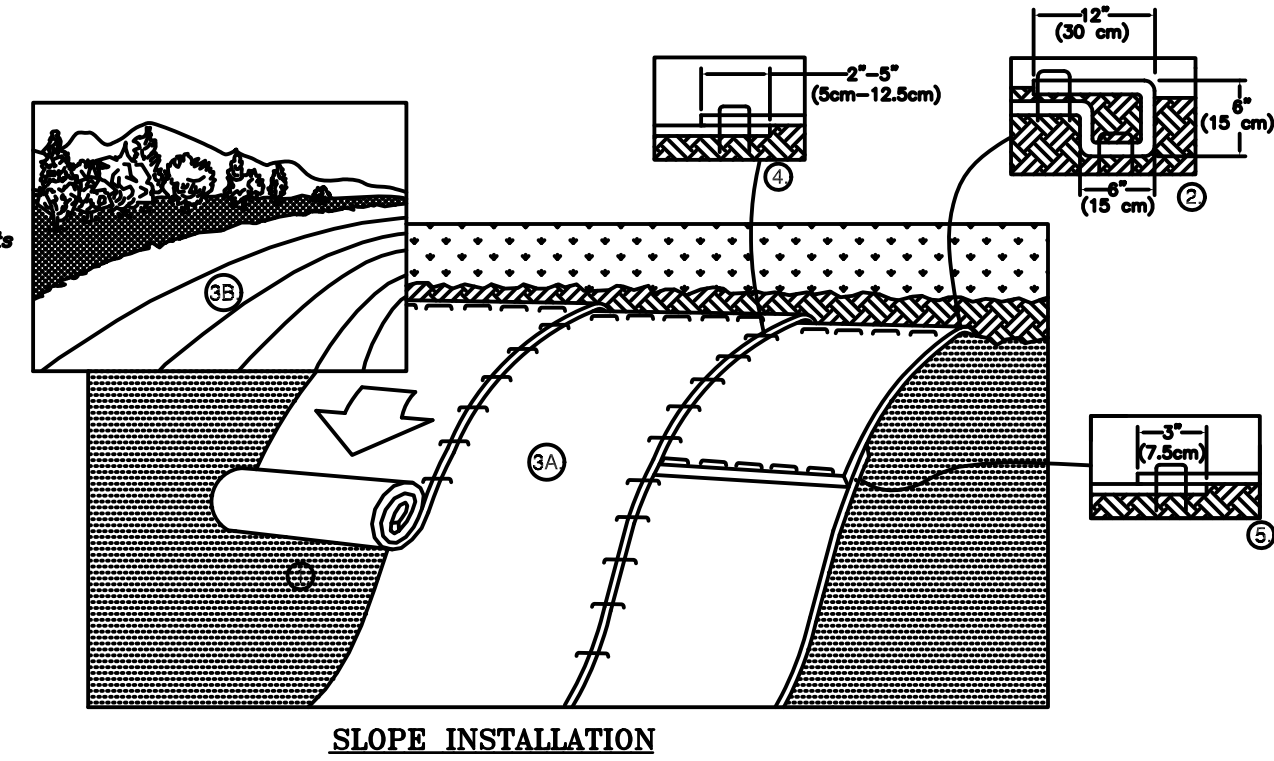


INFILTRATION BASIN CROSS SECTION
HORIZONTAL 1" = 20'
VERTICAL 1" = 5'

FILE NO. 458
PLAN NO. C-xxx
DWG. NO. 23058 PP-1
F.B. NO.

INFILTRATION BASIN DETAILS
TAX MAP 414, LOT 50, 52 & 53
GOVERNORS ROAD
GILMANTON, NH
PREPARED FOR:
GRANITE STATE
CONSERVATION TRUST
OCTOBER 2023

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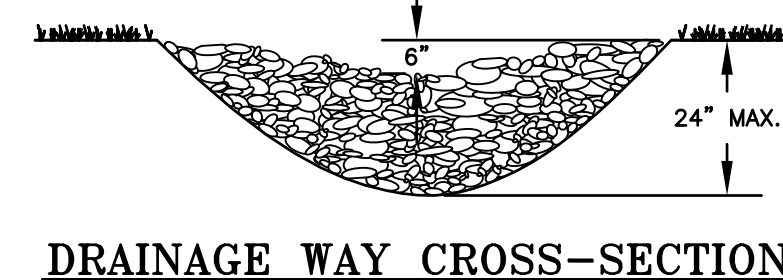
SLOPE INSTALLATION

MAINTENANCE REQUIREMENTS:
1. ALL BLANKET AND MATS SHALL BE INSPECTED WEEKLY DURING THE CONSTRUCTION PERIOD, AND AFTER ANY RAINFALL EVENT EXCEEDING 1/2 INCH IN A 24-HOUR PERIOD.
2. ANY FAILURE SHALL BE REPAIRED IMMEDIATELY. IF WASHOUT OF THE SLOPE, DISPLACEMENT OF THE MAT, OR DAMAGE TO THE MAT OCCURS, THE AFFECTED SLOPE SHALL BE REPAIRED AND RESEDED, AND THE AFFECTED AREA OF MAT SHALL BE RE-INSTALLED.

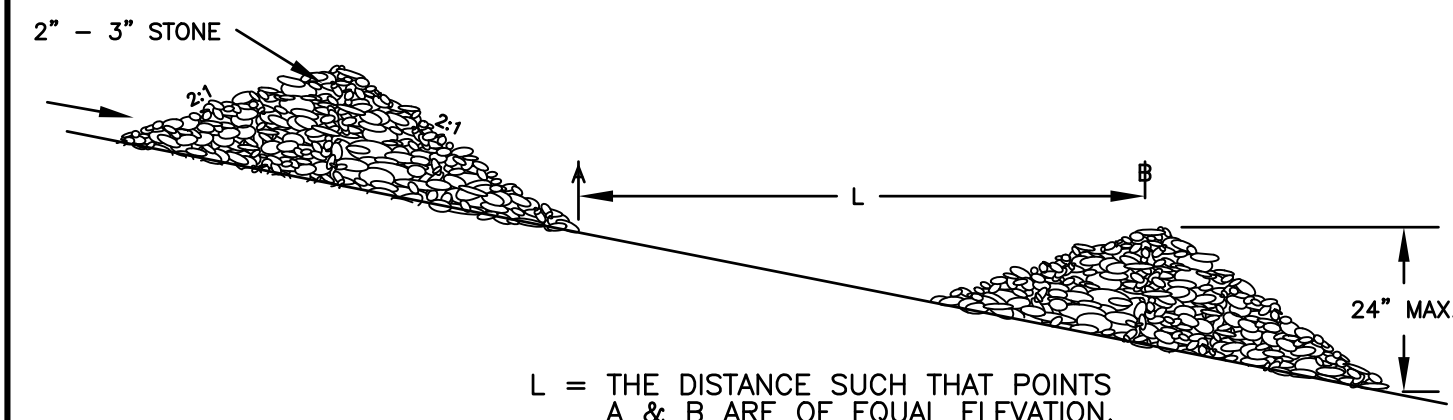
- CONSTRUCTION SPECIFICATIONS:**
1. MANUFACTURE'S INSTALLATION INSTRUCTIONS:
A. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP's), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
B. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECP'S IN A 6" (15 CM) DEEP X 6" (15 CM) WIDE TRENCH WITH APPROXIMATELY 12" (30cm) OF RECP'S EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP'S WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30 CM) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30 CM) PORTION OF RECP'S BACK OVER SEED AND COMPACTED SOIL. SECURE RECP'S OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30 CM) APART ACROSS THE WIDTH OF THE RECP'S.
C. ROLL THE RECP'S (A) DOWN OR (B) HORIZONTALLY ACROSS THE SLOPE. RECP'S WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECP'S MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM STAPLES/STAKES SHALL BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
D. THE EDGES OF PARALLEL RECP'S MUST BE STAPLED WITH APPROXIMATELY 2" - 5" (5 CM - 12.5 CM) OVERLAP DEPENDING ON RECP'S TYPE.
E. CONSECUTIVE RECP'S DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" (7.5 CM) OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" (30 CM) APART ACROSS ENTIRE RECP'S WIDTH.
NOTE: IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15 CM) MAY BE NECESSARY TO PROPERLY SECURE THE RECP'S.
2. SITE PREPARATION:
A. PROPER SITE PREPARATION IS ESSENTIAL TO ENSURE COMPLETE CONTACT OF THE PROTECTION MATTING WITH THE SOIL. GRADE AND SHAPE AREA IF INSTALLATION.
B. REMOVE ALL ROCKS, CLODS, TRASH, VEGETATION OR OTHER OBSTRUCTIONS SO THAT THE INSTALLED BLANKETS WILL HAVE DIRECT CONTACT WITH THE SOIL.
C. PREPARE SEEDBED BY LOOSENING 2-3 INCHES OF TOPSOIL ABOVE FINAL GRADE.
D. INCORPORATE AMENDMENTS, SUCH AS LIME AND FERTILIZER, INTO SOIL ACCORDING TO SOIL TEST AND THE SEEDING PLAN.
3. SEEDING:
A. SEED AREA BEFORE BLANKET INSTALLATION FOR EROSION CONTROL AND REVEGETATION. SEEDING AFTER MAT INSTALLATION IS OFTEN SPECIFIED FOR TURF REINFORCEMENT APPLICATIONS. WHEN SEEDING PRIOR TO BLANKET INSTALLATION, ALL CHECK STOPS AND OTHER AREAS DISTURBED DURING INSTALLATION MUST BE RESEDED.
B. WHEN SOIL FILLING IS SPECIFIED, SEED THE MATTING AND THE ENTIRE DISTURBED AREA AFTER INSTALLATION AND PRIOR TO FILLING THE MAT WITH SOIL.

TEMPORARY EROSION CONTROL BLANKET DETAIL
NOT TO SCALE

| SPACING BETWEEN CHECK DAMS | |
|----------------------------|-------------|
| SLOPE (FT/FT) | LENGTH (FT) |
| 0.020 | 75 |
| 0.030 | 50 |
| 0.040 | 37 |
| 0.050 | 30 |
| 0.080 | 19 |
| 0.100 | 15 |
| 0.120 | 13 |
| 0.150 | 10 |



DRAINAGE WAY CROSS-SECTION



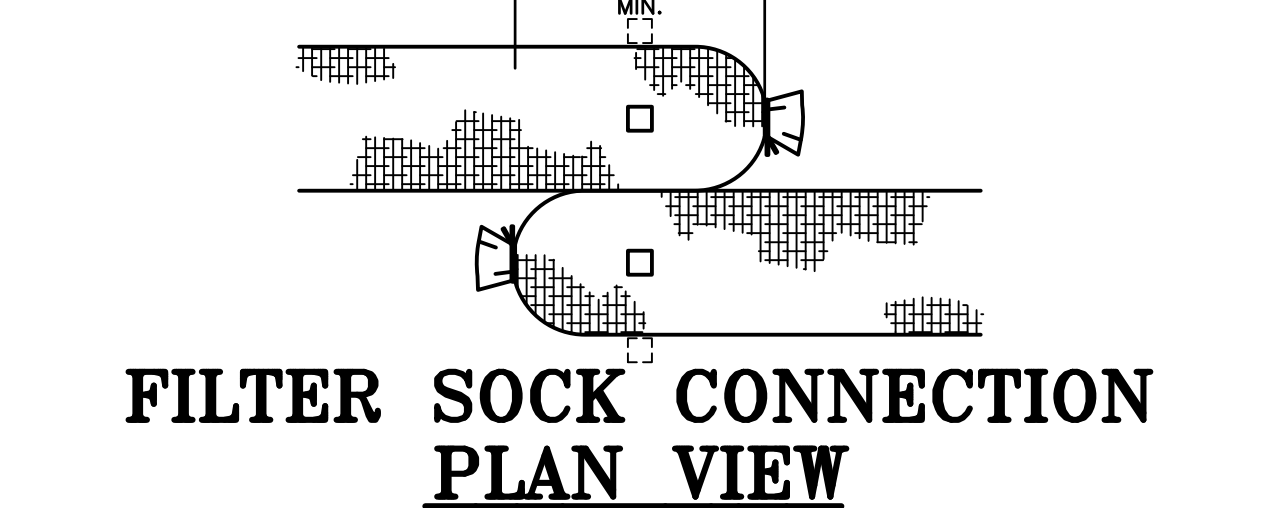
SPACING BETWEEN STONE CHECK DAMS

- CONSTRUCTION SPECIFICATIONS:**
1. STRUCTURES SHALL BE INSTALLED ACCORDING TO THE DIMENSIONS SHOWN ON THE PLANS AT THE APPROPRIATE SPACING.
2. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER SO THAT EROSION, AIR AND WATER POLLUTION WILL BE MINIMIZED.
3. STRUCTURES SHALL BE REMOVED FROM THE CHANNEL WHEN THEIR USEFUL LIFE HAS BEEN COMPLETED.

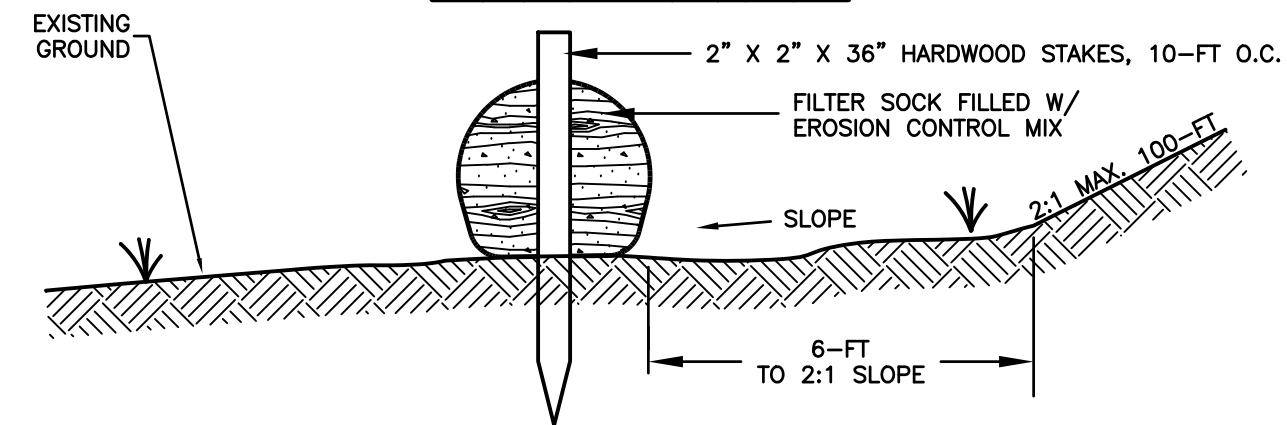
- MAINTENANCE NOTES:**
1. TEMPORARY GRADE STABILIZATION STRUCTURES SHALL BE INSPECTED AFTER EACH STORM AND DAILY DURING PROLONGED STORM EVENTS. ANY DAMAGE TO THE STRUCTURES SHALL BE REPAIRED IMMEDIATELY.
2. PARTICULAR ATTENTION SHALL BE GIVEN TO END RUN AND EROSION AT THE DOWNSTREAM TOE OF THE STRUCTURE.
3. WHEN REMOVING THE STRUCTURES, THE DISTURBED AREAS SHALL BE BROUGHT UP TO EXISTING CHANNEL GRADE AND THE AREAS PREPARED, SEEDED AND MULCHED.
4. SEDIMENT SHALL BE REMOVED FROM BEHIND THE STRUCTURES WHEN IT REACHES 1/2 THE ORIGINAL HEIGHT OF THE STRUCTURE.

STONE CHECK DAM INSTALLATION DETAIL
NOT TO SCALE

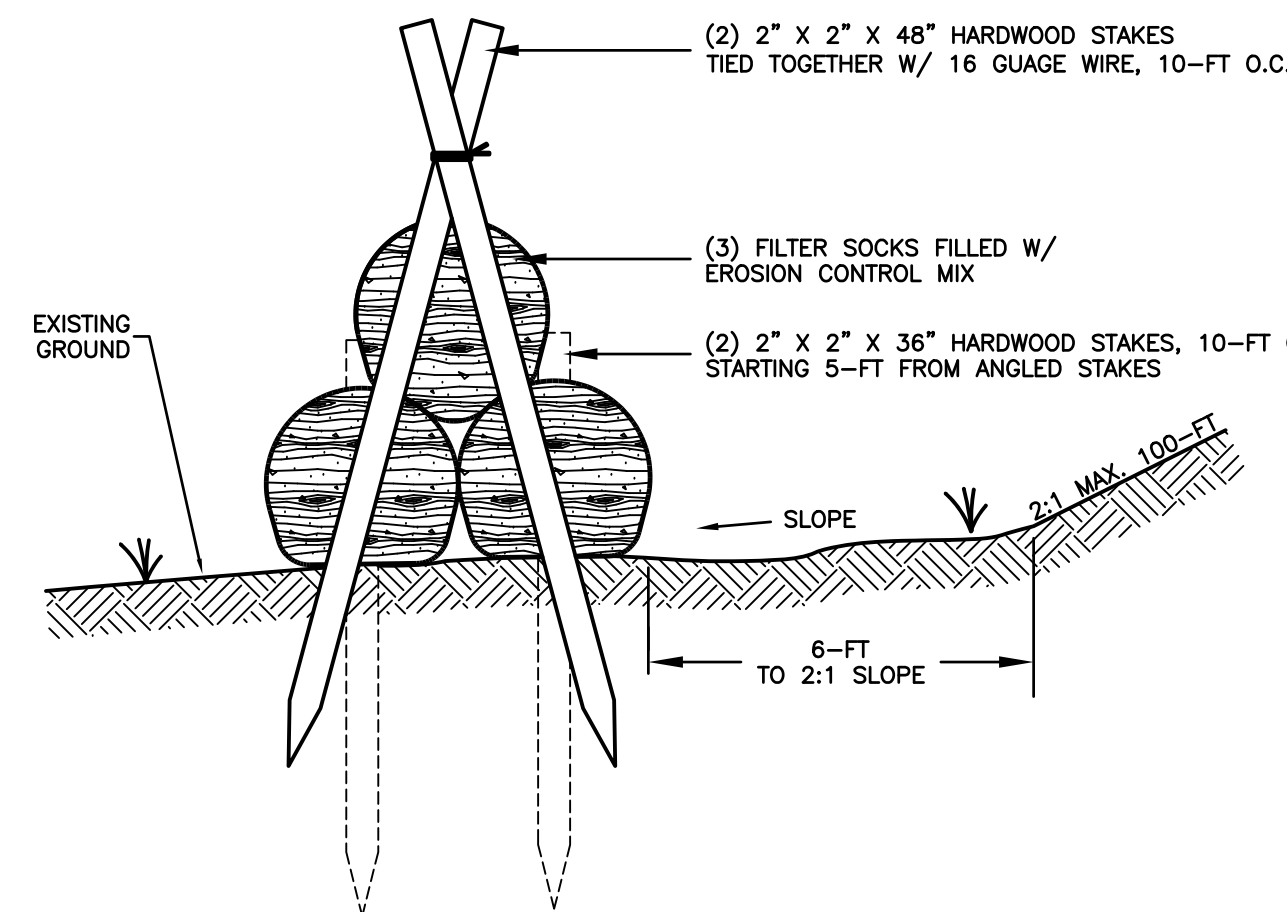
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FILTER SOCK CONNECTION PLAN VIEW



FILTER SOCK CROSS-SECTION



HEAVY DUTY PYRAMID FILTER SOCK CROSS-SECTION

- CONTINUOUS CONTAINED BERM (FILTER SOCK ALTERNATIVE):**
1. AN ALTERNATIVE PRODUCT, THE CONTINUOUS CONTAINED BERM (OR "FILTER SOCK") CAN BE AN EFFECTIVE SEDIMENT BARRIER AS IT ADDS CONTAINMENT AND STABILITY TO A BERM OF EROSION CONTROL MIX.
2. IN THE EVENT THAT USE OF CONTINUOUS CONTAINED BERM IS DESIRED, THE PRODUCT SELECTED SHOULD BE REVIEWED AND APPROVED BY THE DESIGN ENGINEER.
3. INSTALLATION OF CONTINUOUS CONTAINED BERMS SHALL BE PERFORMED IN ACCORDANCE WITH THE SPECIFICATIONS OF THE MANUFACTURER.

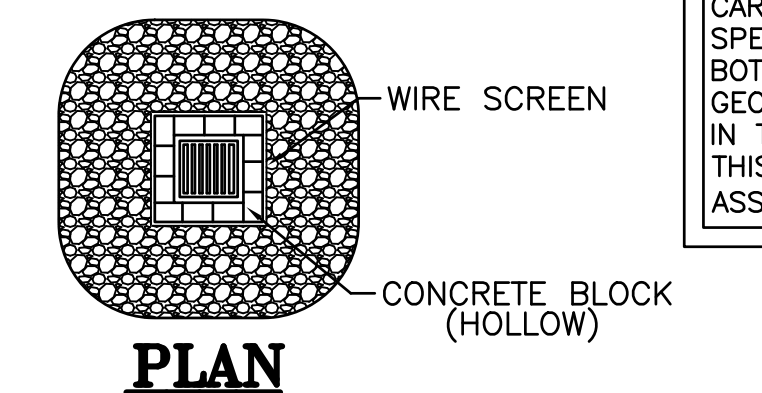
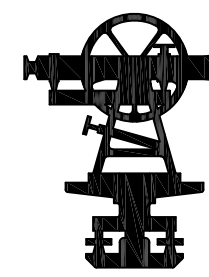
- MAINTENANCE REQUIREMENTS:**
1. FILTER SOCK MAINTENANCE SHALL FOLLOW THE SAME SCHEDULE AS EROSION CONTROL MIX BERMS.
CONSTRUCTION SPECIFICATIONS:
1. COMPOSITION OF THE EROSION CONTROL MIX SHALL EITHER BE THE SAME AS EROSION CONTROL MIX BERM MATERIAL OR AS SPECIFIED BY THE FILTER SOCK MANUFACTURER.
2. THE BARRIER MUST BE PLACED ALONG A RELATIVELY LEVEL CONTOUR.
3. IT MAY BE NECESSARY TO CUT TALL GRASSES AND WOODY VEGETATION TO AVOID CREATING VOIDS AND BRIDGES IN THE BARRIER THAT WOULD ENABLE FINES TO WASH UNDER THE BARRIER THROUGH THE GRASS BLADES OR PLANT STEMS.
4. FILTER SOCK DIAMETER (HEIGHT) SHALL BE PER THE MANUFACTURER RECOMMENDATION FOR THE AREA OF INSTALLATION.

CONTINUOUS CONTAINED BERM "FILTER SOCK" DETAIL
NOT TO SCALE

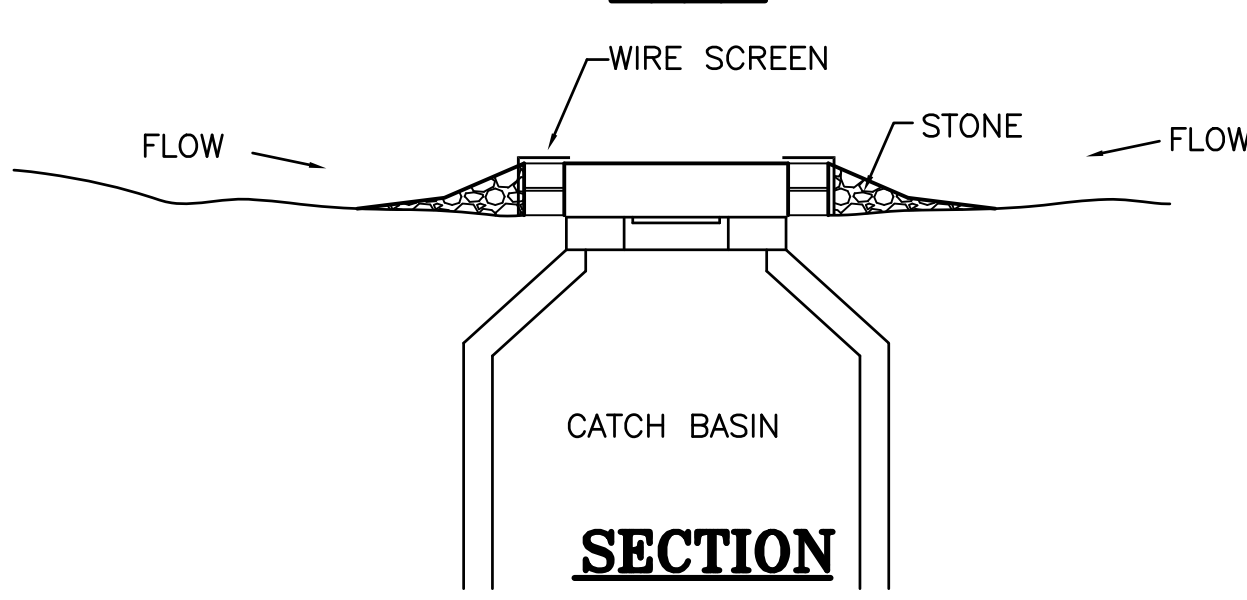
TEMPORARY VEGETATION SEEDING RECOMMENDATIONS

| SPECIES | PER ACRE BUSHELS (BU) OR POUNDS (LBS.) | PER 1,000-SF | REMARKS |
|---------------------|--|--------------|---|
| WINTER RYE | 2.5 BU OR 112 LBS. | 2.5 LBS. | BEST FOR FALL SEEDING. SEED FROM AUGUST 15 TO SEPTEMBER 15 FOR BEST COVER. SEED TO A DEPTH OF 1 INCH. |
| OATS | 2.5 BU OR 80 LBS. | 2.0 LBS. | BEST FOR SPRING SEEDING. SEED NO LATER THAN MAY 15 FOR SUMMER PROTECTION. SEED TO A DEPTH OF 1 INCH. |
| ANNUAL RYE GRASS | 40 LBS. | 1.0 LB. | GROWS QUICKLY BUT IS OF SHORT DURATION. USE WHERE APPEARANCES ARE IMPORTANT. SEED EARLY SPRING AND/OR BETWEEN AUGUST 15 AND SEPTEMBER 15. COVER THE SEED WITH NO MORE THAN 0.25 INCH OF SOIL. |
| PERENNIAL RYE GRASS | 30 LBS. | 0.7 LBS. | BEST FOR FALL SEEDING. SEED FROM AUGUST 15 TO SEPTEMBER 15 FOR BEST COVER. SEED TO A DEPTH OF 1 INCH. |

SOURCES:
1. NEW HAMPSHIRE STORMWATER MANAGEMENT MANUAL, VOLUME 3, TABLE 4-1
2. MINNICK, E.L. AND H.T. MARSHALL, (AUGUST 1992)



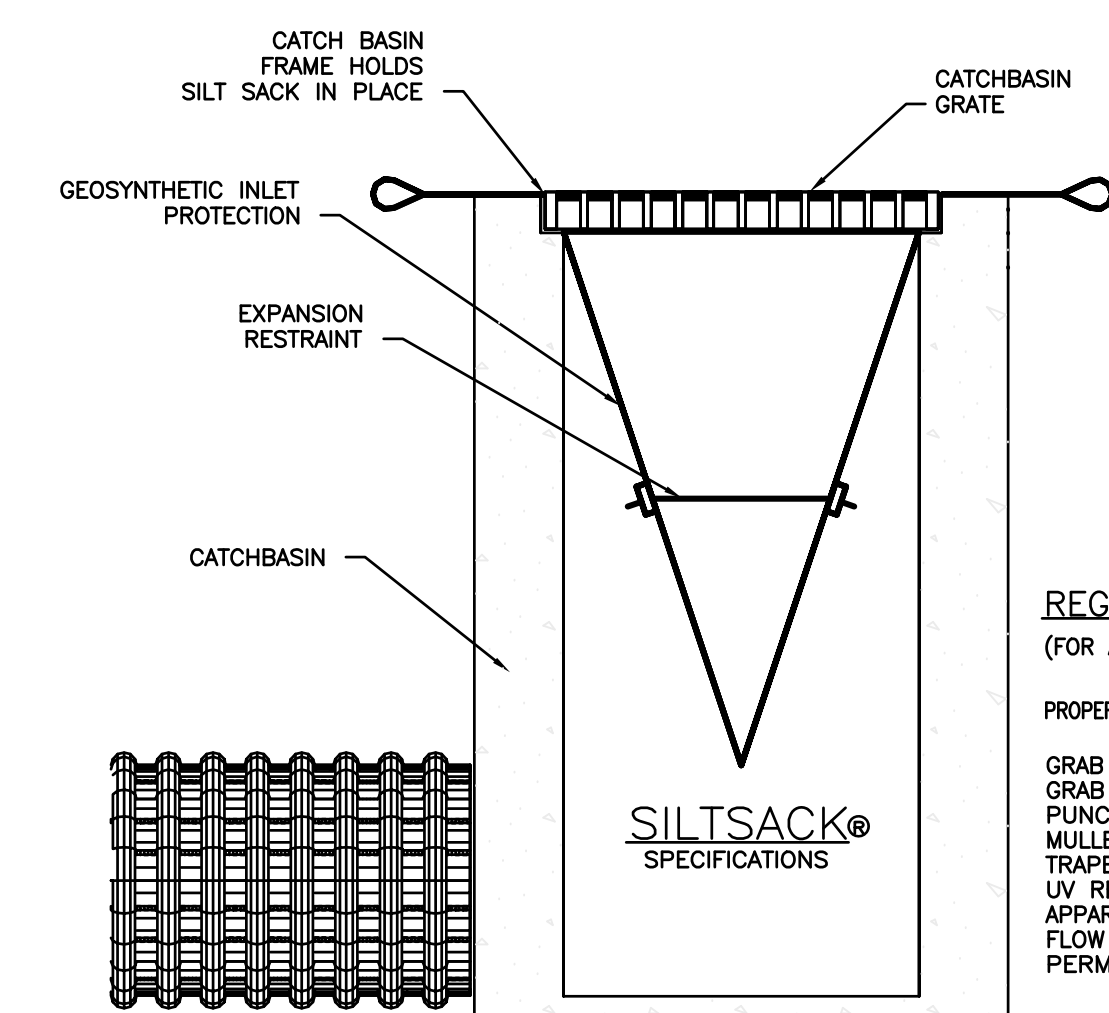
PLAN



SECTION

BLOCK AND GRAVEL DROP INLET SEDIMENT FILTER
NOT TO SCALE

- CONSTRUCTION SPECIFICATIONS:**
1. PLACE CONCRETE BLOCKS LENGTHWISE ON THEIR SIDE IN A SINGLE ROW AROUND THE PERIMETER OF THE INLET, WITH THE ENDS OF ADJACENT BLOCKS ABUTTING. THE HEIGHT OF THE BARRIER CAN BE VARIED, DEPENDING ON DESIGN NEEDS, BY STACKING COMBINATIONS OF 4-INCH, 8-INCH AND 12-INCH WIDE BLOCKS. THE BARRIER OF BLOCKS SHALL BE AT LEAST 12 INCHES HIGH AND NO GREATER THAN 24 INCHES HIGH.
2. WIRE MESH SHALL BE PLACED OVER THE OUTSIDE VERTICAL FACE (WEBBING) OF THE CONCRETE BLOCKS TO PREVENT STONE FROM BEING WASHED THROUGH THE HOLES IN THE BLOCKS. HARDWARE CLOTH OR COMPARABLE WIRE MESH WITH 1/2-INCH OPENINGS SHALL BE USED.
3. STONE SHALL BE PILED AGAINST THE WIRE TO THE TOP OF THE BLOCK BARRIER, AS SHOWN IN FIGURE 16.7. STONE GRADATION SHALL BE WELL GRADED WITH THE MAXIMUM STONE SIZE OF 6 INCHES AND MINIMUM STONE SIZE OF 1 INCH.
4. IF THE STONE FILTER BECOMES CLOGGED WITH SEDIMENT SO THAT IT NO LONGER ADEQUATELY PERFORMS ITS FUNCTION, THE STONE MUST BE PULLED AWAY FROM THE BLOCKS, CLEANED AND REPLACED.
MAINTENANCE
1. THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN AND REPAIRS MADE AS NEEDED.
2. SEDIMENT SHALL BE REMOVED AND THE TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO 1/2 THE DESIGN DEPTH OF THE TRAP. REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.
3. STRUCTURES SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE REMAINING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

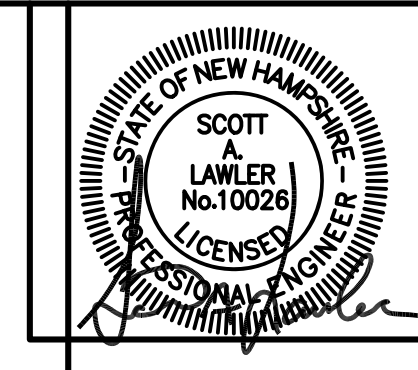


REGULAR FLOW SILTSACK®
(FOR AREAS OF LOW TO MODERATE PRECIPITATION AND RUN-OFF)

| PROPERTIES | TEST METHOD | UNITS |
|-------------------------|-------------|-------------|
| GRAB TENSILE STRENGTH | ASTM D-4632 | 300 LBS |
| GRAB TENSILE ELONGATION | ASTM D-4632 | 20 % |
| PUNCTURE | ASTM D-4833 | 120 LBS |
| MULLEN BURST | ASTM D-3786 | 800 PSI |
| TRAPEZOID TEAR | ASTM D-4533 | 120 LBS |
| LIV RESISTANCE | ASTM D-4355 | 80 % |
| APPEARANT OPENING SIZE | ASTM D-4751 | 40 US SIEVE |
| FLOW RATE PERMITTIVITY | ASTM D-4491 | 0.55 SEC -1 |
| | ASTM D-4491 | |

- NOTES:**
1. GEOSYNTHETIC SEDIMENT FILTER TRAP SHALL BE 'REGULAR FLOW SILTSACK®' OR APPROVED EQUAL. SPECIFICATIONS FOR SILTSACK® ARE DETAILED.
2. FILTER TRAPS SHALL BE INSPECTED AFTER EVERY RAIN EVENT OF 0.25" OR GREATER AND SEDIMENTS SHALL BE REMOVED FROM TRAP WHEN SEDIMENT HAS REACHED TWO THIRDS OF THE DEPTH OF THE TRAP, OR IF PONDING OF WATER AT SURFACE BEGINS TO OCCUR. DO NOT PUNCTURE FILTER TRAP TO MITIGATE PONDING.
3. INSTALL SILT SACKS IN CATCH BASIN UPON INSTALLATION OF STRUCTURE.

CATCH BASIN GEOSYNTHETIC SEDIMENT TRAP
NOT TO SCALE



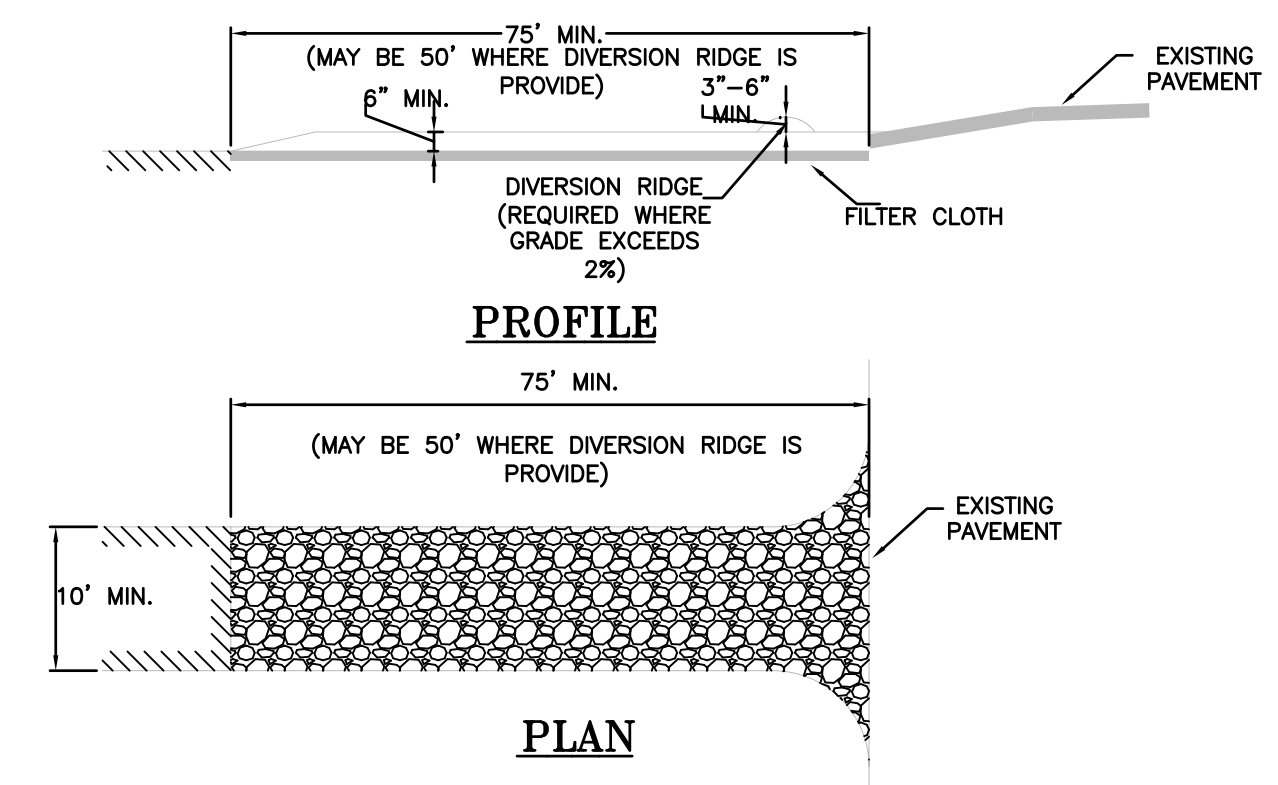
CAREFULLY REVIEW ALL SHEETS OF THIS PACKAGE TO INSURE PROPER CONSTRUCTION. SPECIFIC SITE CONDITIONS SHOULD BE EXPLORED PRIOR TO CONSTRUCTION. CONTACT BOTH THE DESIGN ENGINEER AND THE PROJECT OWNER FOR ANY AVAILABLE GEOTECHNICAL OR HYDROGEOLOGICAL INFORMATION AVAILABLE BUT NOT CONTAINED WITHIN THE PLAN SET. IF THERE ARE ANY QUESTIONS WITH THE DESIGN PRESENTED IN THIS PLAN SET PLEASE CONTACT THE ENGINEERING STAFF AT NORWAY PLAINS ASSOCIATES, INC. (603)-335-3948.

TEMPORARY VEGETATION:

- SPECIFICATIONS:**
SITE PREPARATION:
1. INSTALL NEEDED EROSION AND SEDIMENT CONTROL MEASURES SUCH AS SILTATION BARRIERS, DIVERSIONS, AND SEDIMENT TRAPS.
2. GRADE AS NEEDED FOR THE ACCESS OF EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION, AND MULCH ANCHORING.
3. RUNOFF SHALL BE DIVERTED FROM THE SEEDBED AREA.
4. ON SLOPES 4:1 OR STEEPER THE FINAL PREPARATION SHALL INCLUDE CREATING HORIZONTAL GROOVES PERPENDICULAR TO THE DIRECTION OF THE SLOPE TO CATCH SEED AND REDUCE RUNOFF.
SEEDBED PREPARATION:
1. STONES AND TRASH SHALL BE REMOVED SO AS NOT TO INTERFERE WITH THE SEEDING AREA.
2. WHERE THE SOIL HAS BEEN COMPACTED BY CONSTRUCTION OPERATIONS, LOOSEN SOIL TO A DEPTH OF 2 INCHES BEFORE APPLYING FERTILIZER, LIME AND SEED.
3. IF APPLICABLE, FERTILIZER AND ORGANIC SOIL AMENDMENTS SHALL BE APPLIED DURING THE GROWING SEASON.
4. APPLY LIMESTONE AND FERTILIZER ACCORDING TO SOIL TEST RECOMMENDATIONS. FERTILIZER SHALL BE RESTRICTED TO LIME, WOOD ASH OR LOW PHOSPHATE AND SLOW RELEASE NITROGEN VARIETIES, UNLESS A SOIL TEST WARRANTS OTHERWISE. IF SOIL TESTING IS NOT FEASIBLE ON SMALL OR VARIABLE SITES, OR WHERE TIMING IS CRITICAL FERTILIZER AND LIMESTONE MAY BE APPLIED AT THE FOLLOWING RATES:
LIMESTONE APPLICATION RATE = 3 TONS/ACRE (138 LB./1,000-SF)*
*EQUIVALENT TO 50% CALCIUM PLUS MAGNESIUM OXIDE
FERTILIZER APPLICATION RATE = 870 LB./ACRE (20 LB./1,000-SF)*
*LOW PHOSPHATE FERTILIZER (6-0-4) OR EQUIVALENT

- SEEDING:**
1. APPLY SEED UNIFORMLY BY HAND, CYCLONE SEEDER, DRILL CULTIPACKER TYPE SEEDER OR HYDRO SEEDER (SLURRY INCLUDING SEED AND FERTILIZER). NORMAL SEEDING DEPTH IS FROM 1/4 TO 1/2 INCH. HYDROSEEDING THAT INCLUDES MULCH MAY BE LEFT ON SOIL SURFACE. SEEDING RATES MUST BE INCREASED BY 10% WHEN HYDROSEEDING.
2. TEMPORARY SEED SHALL TYPICALLY OCCUR PRIOR TO SEPTEMBER 15.
3. AREAS SEEDED BETWEEN MAY 15 AND AUGUST 15 SHALL BE COVERED WITH HAY OR STRAW MULCH, ACCORDING TO THE "TEMPORARY AND PERMANENT MULCHING" PRACTICE DESCRIBED IN THE NHSSM, VOL. 3.
4. VEGETATED GROWTH COVERING AT LEAST 85% OF THE DISTURBED AREA SHALL BE ACHIEVED PRIOR TO OCTOBER 15. IF THIS CONDITION IS NOT ACHIEVED, IMPLEMENT OTHER TEMPORARY STABILIZATION MEASURES FOR OVER WINTER PROTECTION.

- MAINTENANCE REQUIREMENTS:**
1. TEMPORARY SEEDING SHALL BE INSPECTED WEEKLY AFTER ANY RAINFALL EXCEEDING 1/2 INCH IN 24 HOURS ON ACTIVE CONSTRUCTION SITES. TEMPORARY SEEDING SHALL BE INSPECTED JUST PRIOR TO SEPTEMBER 15, TO ASCERTAIN WHETHER ADDITIONAL SEEDING IS REQUIRED TO PROVIDE STABILIZATION OVER THE WINTER PERIOD.
2. BASED ON INSPECTION, AREAS SHALL BE RESEDED TO ACHIEVE FULL STABILIZATION OF EXPOSED SOILS. IF IT IS TOO LATE IN THE PLANTING SEASON TO APPLY ADDITIONAL SEED, THEN OTHER TEMPORARY STABILIZATION MEASURES SHALL BE IMPLEMENTED.
3. IF ANY EVIDENCE OF EROSION OR SEDIMENTATION IS APPARENT, REPAIRS SHALL BE MADE AND AREAS SHALL BE RESEDED, WITH OTHER TEMPORARY MEASURES (I.E. MULCH, ETC.) USED TO PROVIDE EROSION PROTECTION DURING THE PERIOD OF VEGETATION ESTABLISHMENT.

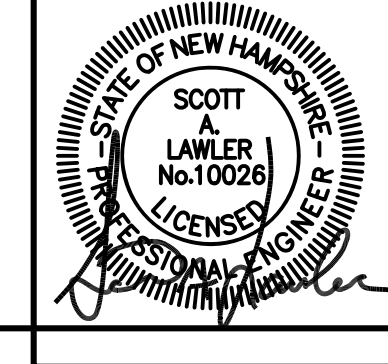
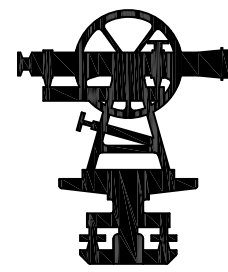


TEMPORARY CONSTRUCTION EXIT
NOT TO SCALE

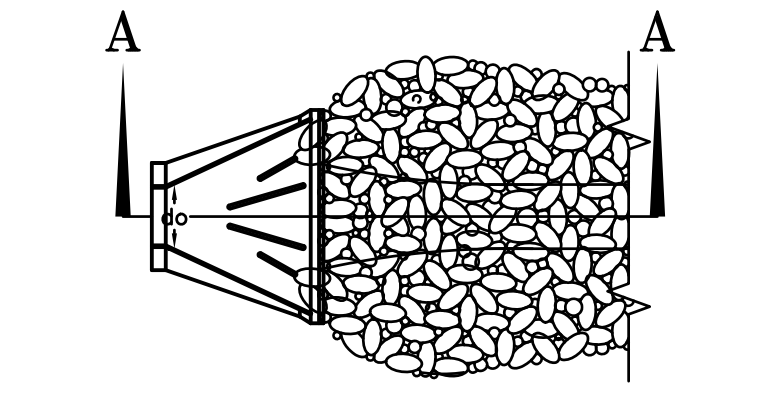
- MAINTENANCE REQUIREMENTS:**
1. WHEN THE CONTROL PAD BECOMES INEFFECTIVE, THE STONE SHALL BE REMOVED ALONG WITH THE COLLECTED SOIL MATERIAL, REGRADED ON SITE, AND STABILIZED. THE ENTRANCE SHALL THEN BE RECONSTRUCTED.
2. THE CONTRACTOR SHALL SWEEP THE PAVEMENT AT EXITS WHENEVER SOIL MATERIALS ARE TRACKED ONTO THE ADJACENT PAVEMENT OR TRAVELED WAY.
3. WHEN WHEEL WASHING IS REQUIRED, IT SHALL BE CONDUCTED ON AN AREA STABILIZED WITH AGGREGATE, WHICH DRAINS INTO AN APPROVED SEDIMENT-TRAPPING DEVICE. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING STORM DRAINS, DITCHES, OR WATERWAYS.

- CONSTRUCTION SPECIFICATIONS:**
1. THE MINIMUM STONE USED SHALL BE 3-INCH CRUSHED STONE.
2. THE MINIMUM LENGTH OF THE PAD SHALL BE 75 FEET, EXCEPT THAT THE MINIMUM LENGTH MAY BE REDUCED TO 50 FEET IF A 3-INCH TO 6-INCH BERM IS INSTALLED AT THE ENTRANCE OF THE PROJECT SITE.
3. THE PAD SHALL BE THE FULL WIDTH OF CONSTRUCTION ACCESS ROAD OR 10 FEET, WHICHEVER IS GREATER.
4. THE PAD SHALL SLOPE AWAY FROM THE EXISTING ROADWAY.
5. THE PAD SHALL BE AT LEAST 6 INCHES THICK.
6. THE GEOTEXTILE FILTER FABRIC SHALL BE PLACED BETWEEN THE STONE PAD AND THE EARTH SURFACE BELOW THE PAD.
7. THE PAD SHALL BE MAINTAINED OR REPLACED WHEN MUD AND SOIL PARTICLES CLOG THE VOIDS IN THE STONE SUCH THAT MUD AND SOIL PARTICLES ARE TRACKED OFF-SITE.
8. NATURAL DRAINAGE TO CROSS THE LOCATION OF THE STONE PAD SHALL BE INTERCEPTED AND PIPED BENEATH THE PAD, AS NECESSARY, WITH SUITABLE OUTLET PROTECTION.

TEMPORARY EROSION AND SEDIMENTATION CONTROL
TAX MAP 414, LOT 50, 52 & 53
GOVERNORS ROAD
GILMANTON, NH
PREPARED FOR:
GRANITE STATE
CONSERVATION TRUST
OCTOBER 2023



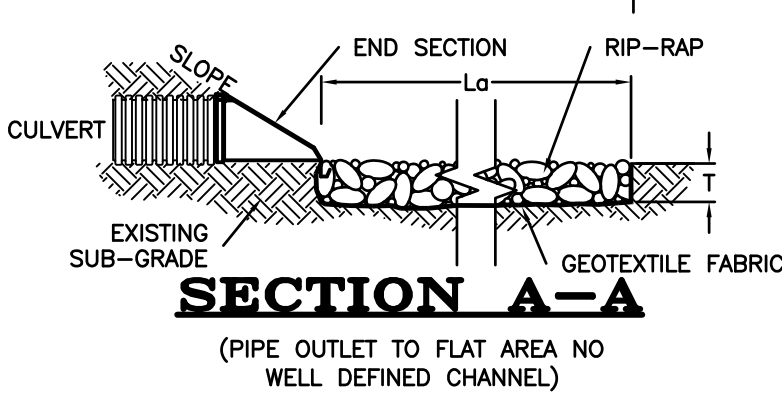
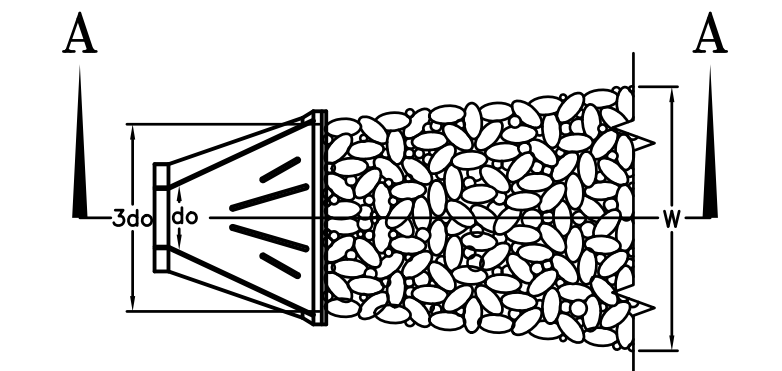
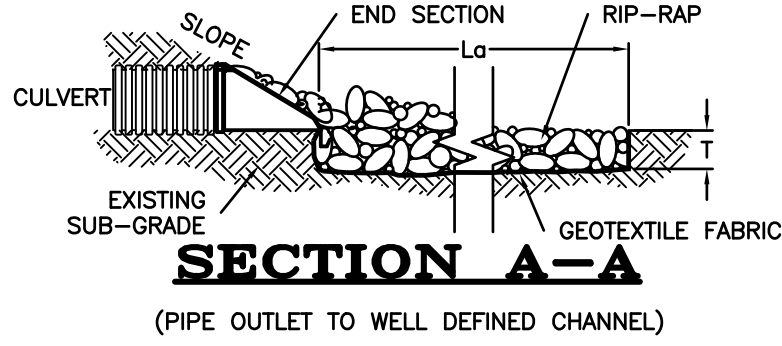
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RIP-RAP GRADATION

d50 = 3"

| % OF WEIGHT SMALLER THAN THE GIVEN SIZE | SIZE OF STONE (INCHES) |
|---|------------------------|
| 100 | 5 TO 6 |
| 85 | 4 TO 5 |
| 50 | 3 TO 5 |
| 15 | 1 TO 2 |



- NOTES:**
- ALL PIPE CULVERTS SHALL HAVE END SECTIONS OR HEADWALLS. END SECTION MATERIAL AND MANUFACTURER SHALL MATCH THAT OF THE PIPE CULVERT.
 - THE LARGEST RIP-RAP SIZE DETERMINED DURING HYDROLOGIC ANALYSIS HAS BEEN USED FOR ALL OUTLETS FOR ECONOMY AND SIMPLICITY.
 - APRON LENGTHS, WIDTHS AND THICKNESSES HAVE BEEN ROUNDED UP TO WHOLE NUMBERS FOR EASE OF CONSTRUCTION.
- CONSTRUCTION SPECIFICATIONS:**
- PREPARE THE SUB-GRADE FOR THE FILTER MATERIAL, GEOTEXTILE FABRIC, AND RIP-RAP TO THE GRADES SHOWN ON THE PLANS.
 - MINIMUM 6" SAND/GRAVEL BEDDING OR GEOTEXTILE FABRIC REQUIRED UNDER ALL ROCK RIP-RAP.
 - THE ROCK OR GRAVEL USED FOR FILTER OR RIP-RAP SHALL CONFORM TO THE SPECIFIED GRADATION.
 - GEOTEXTILE FABRICS SHALL BE PROTECTED FROM PUNCTURE OR TEARING DURING THE PLACEMENT OF ROCK RIP-RAP. DAMAGED AREAS IN THE FABRIC SHALL BE REPAIRED BY PLACING A PIECE OF FABRIC OVER THE DAMAGED AREA OR BY COMPLETE REPLACEMENT OF THE FABRIC. ALL OVERLAPS REQUIRED FOR REPAIRS OR JOINING TWO (2) PIECES OF FABRIC SHALL BE A MINIMUM OF 12 INCHES.
 - STONE FOR THE RIP-RAP MAY BE PLACED BY EQUIPMENT AND SHALL BE CONSTRUCTED TO THE FULL LAYER THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO PREVENT SEGREGATION OF THE STONE SIZES.
 - RIP-RAP SIZE CHOSEN FOR THE WORST CASE OF ALL OUTLETS. ALL RIP-RAP USED FOR PIPE OUTLET PROTECTION WILL HAVE THE SAME GRADATION AND THICKNESS.
- MAINTENANCE NOTES:**
- OUTLETS SHALL BE INSPECTED AND CLEANED ANNUALLY AND AFTER ANY MAJOR STORM EVENT. ANY EROSION OR DAMAGE TO THE RIP-RAP SHALL BE REPAIRED IMMEDIATELY.
 - THE CHANNEL IMMEDIATELY DOWNSTREAM FROM THE OUTLET SHOULD BE CHECKED TO SEE THAT NO EROSION IS OCCURRING.
 - THE DOWNSTREAM CHANNEL SHOULD BE KEPT CLEAR OF OBSTRUCTIONS SUCH AS FALLEN TREES, DEBRIS, AND SEDIMENT THAT COULD CHANGE FLOW PATTERNS AND/OR TAILWATER DEPTHS ON THE PIPES. REPAIRS MUST BE CARRIED OUT IMMEDIATELY TO AVOID ADDITIONAL DAMAGE TO THE OUTLET PROTECTION APRON.

PIPE OUTLET PROTECTION DETAIL

PERMANENT VEGETATION:

- SPECIFICATIONS:**
- SITE PREPARATION:**
- INSTALL NEEDED EROSION AND SEDIMENT CONTROL MEASURES SUCH AS SILTATION BARRIERS, DIVERSIONS, AND SEDIMENT TRAPS.
 - GRADE AS NEEDED FOR THE ACCESS OF EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION, AND MULCH ANCHORING.
 - RUNOFF SHALL BE DIVERTED FROM THE SEEDBED AREA.
 - ON SLOPES 4:1 OR STEEPER, THE FINAL PREPARATION SHALL INCLUDE CREATING HORIZONTAL GROOVES PERPENDICULAR TO THE DIRECTION OF THE SLOPE TO CATCH SEED AND REDUCE RUNOFF.
- SEEDBED PREPARATION:**
- WORK LIME AND FERTILIZER INTO THE SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES WITH A DISC, SPRING TOOTH HARROW OR OTHER SUITABLE EQUIPMENT. THE FINAL HARROWING OPERATION SHALL BE ON THE GENERAL CONTOUR. CONTINUE TILLAGE UNTIL A REASONABLY UNIFORM, FINE SEEDBED IS PREPARED. ALL BUT CLAY AND SILT SOILS SHALL BE ROLLED TO FIRM THE SEEDBED WHEREVER FEASIBLE.
 - REMOVE FROM THE SURFACE ALL STONES 2 INCHES OR LARGER IN ANY DIMENSION. REMOVE ALL OTHER DEBRIS, SUCH AS WIRE, CABLE, TREE ROOTS, CONCRETE CLOUDS, LUMPS, TRASH OR OTHER UNSUITABLE MATERIAL.
 - INSPECT SEEDBED JUST BEFORE SEEDING. IF TRAFFIC HAS LEFT THE SOIL COMPACTED, THE AREA MUST BE TILLED AND FIRMED AS ABOVE.
 - WHERE THE SOIL HAS BEEN COMPACTED BY CONSTRUCTION OPERATIONS, LOOSEN SOIL TO A DEPTH OF 2 INCHES BEFORE APPLYING FERTILIZER, LIME AND SEED.
 - IF APPLICABLE, FERTILIZER AND ORGANIC SOIL AMENDMENTS SHALL BE APPLIED DURING THE GROWING SEASON.
 - APPLY LIME AND FERTILIZER ACCORDING TO SOIL TEST RECOMMENDATIONS. FERTILIZER SHALL BE RESTRICTED TO LIME, WOOD ASH OR LOW PHOSPHATE AND SLOW RELEASE NITROGEN VARIETIES, UNLESS A SOIL TEST WARRANTS OTHERWISE. IF SOIL TESTING IS NOT FEASIBLE ON SMALL OR VARIABLE SITES, OR WHERE TIMING IS CRITICAL, FERTILIZER AND LIME/STONE MAY BE APPLIED AT THE FOLLOWING RATES:
LIME/STONE APPLICATION RATE = .3 TONS/ACRE (138 LB./1,000-SF)*
*EQUIVALENT TO 50% CALCIUM PLUS MAGNESIUM OXIDE
FERTILIZER APPLICATION RATE = .870 LB./ACRE (20 LB./1,000-SF)*
*LOW PHOSPHATE FERTILIZER (6-0-4) OR EQUIVALENT
- SEEDING:**
- INOCULATE ALL LEGUME SEED WITH THE CORRECT TYPE OF INOCULANT.
 - APPLY SEED UNIFORMLY BY HAND, CYCLONE SEEDER, DRILL CULTIPACKER TYPE SEEDER OR HYDROSEEDER (SLURRY INCLUDING SEED AND FERTILIZER). NORMAL SEEDING DEPTH IS FROM 1/4 TO 1/2 INCH. HYDROSEEDING THAT INCLUDES MULCH MAY BE LEFT ON SOIL SURFACE.
 - WHERE FEASIBLE EXCEPT WHERE EITHER CULTIPACKER TYPE SEEDER OR HYDROSEEDER IS USED, THE SEEDBED SHALL BE FIRMED FOLLOWING SEEDING OPERATIONS WITH A ROLLER, OR LIGHT DRAG.
 - SPRING SEEDING USUALLY GIVES THE BEST RESULTS FOR ALL SEED MIXES OR WITH LEGUMES. PERMANENT SEEDING SHALL BE COMPLETED BY OCTOBER 15 TO FIRST KILLING FROST. WHEN CROWN VETCH IS SEEDING IN LATE SUMMER AT LEAST 35% OF THE SEED SHALL BE HARD SEED (UNSCARIFIED). IF SEEDING CANNOT BE DONE WITHIN THE SPECIFIED SEEDING DATES, MULCH ACCORDING TO THE "TEMPORARY AND PERMANENT MULCHING" PRACTICE DESCRIBED IN THE NHPMM, VOL. 3, AND DELAY SEEDING UNTIL THE NEXT RECOMMENDED SEEDING PERIOD.
 - AREAS SEEDING BETWEEN MAY 15 AND AUGUST 15 SHALL BE COVERED WITH HAY OR STRAW MULCH, ACCORDING TO THE "TEMPORARY AND PERMANENT MULCHING" PRACTICE DESCRIBED IN THE NHPMM, VOL. 3.
 - VEGETATED GROWTH COVERING AT LEAST 85% OF THE DISTURBED AREA SHALL BE ACHIEVED PRIOR TO OCTOBER 15. IF THIS CONDITION IS NOT ACHIEVED, IMPLEMENT OTHER TEMPORARY STABILIZATION MEASURES FOR OVER WINTER PROTECTION.

- HYDROSEEDING:**
- WHEN HYDROSEEDING (HYDRAULIC APPLICATION), PREPARE THE SEEDBED AS SPECIFIED ABOVE OR BY HAND RAKING TO LOOSEN AND SMOOTH THE SOIL AND REMOVE SURFACE STONES LARGER THAN 2 INCHES IN DIAMETER.
 - SLOPES MUST BE NO STEEPER THAN 2:1 (2 FEET HORIZONTAL BY 1 FOOT VERTICALLY).
 - LIME AND FERTILIZER MAY BE APPLIED SIMULTANEOUSLY WITH THE SEED. THE USE OF FIBER MULCH ON CRITICAL AREAS IS NOT RECOMMENDED (UNLESS IT IS USED TO HOLD STRAW OR HAY). BETTER PROTECTION IS GAINED BY USING STRAW MULCH AND HOLDING IT WITH ADHESIVE MATERIALS OR 500 POUNDS PER ACRE OF WOOD FIBER MULCH.
 - SEEDING RATES MUST BE INCREASED BY 10% WHEN HYDROSEEDING.
- MAINTENANCE REQUIREMENTS:**
- PERMANENT SEEDING AREAS SHALL BE INSPECTED AT LEAST MONTHLY DURING THE COURSE OF CONSTRUCTION. INSPECTION, MAINTENANCE AND CORRECTIVE ACTIONS SHALL CONTINUE UNTIL THE OWNER ASSUMES PERMANENT OPERATION OF THE SITE.
 - SEEDING AREAS SHALL BE MOWED AS REQUIRED TO MAINTAIN A HEALTHY STAND OF VEGETATION. MOWING HEIGHT AND FREQUENCY DEPEND OF TYPE OF GRASS COVER, BASED ON INSPECTION, AREAS SHALL BE RESEED TO ACHIEVE FULL STABILIZATION OF EXPOSED SOILS.
 - AT A MINIMUM 85% OF THE SOIL SURFACE SHALL BE COVERED BY VEGETATION. IF ANY EVIDENCE OF EROSION OR SEDIMENTATION IS APPARENT, REPAIRS SHALL BE MADE AND AREAS SHALL BE RESEED, WITH OTHER TEMPORARY MEASURES (I.E. MULCH, ETC.) USED TO PROVIDE EROSION PROTECTION DURING THE PERIOD OF VEGETATION ESTABLISHMENT.

- GENERAL CONSTRUCTION PHASING:**
- STABILIZATION:**
 - A SITE IS DEEMED STABILIZED WHEN IT IS IN A CONDITION IN WHICH THE SOIL ON SITE WILL NOT EXPERIENCE ACCELERATED OR UNNATURAL EROSION UNDER THE CONDITIONS OF A 10-YEAR STORM EVENT, SUCH AS BUT NOT LIMITED TO:
 - MIN AREAS THAT WILL NOT BE PAVED.
 - A MINIMUM OF 85% VEGETATIVE COVER HAS BEEN ESTABLISHED;
 - A MINIMUM OF 3-INCHES OF NON-EROSIVE MATERIAL SUCH AS STONE OR A CERTIFIED COMPOST BLANKET HAS BEEN INSTALLED, OR;
 - EROSION CONTROL BLANKETS HAVE BEEN INSTALLED.
 - MIN AREAS TO BE PAVED:**
 - A MINIMUM OF 3-INCHES OF NON-EROSIVE MATERIAL SUCH AS STONE OR A CERTIFIED COMPOST BLANKET HAS BEEN INSTALLED, OR;
 - EROSION CONTROL BLANKETS HAVE BEEN INSTALLED.
 - TEMPORARY STABILIZATION:**
 - ALL AREAS OF EXPOSED OR DISTURBED SOIL SHALL BE TEMPORARILY STABILIZED AS SOON AS PRACTICABLE BUT NO LATER THAN 3 DAYS FOLLOWING FINAL GRADING.
 - MAXIMUM AREA OF DISTURBANCE:
 - THE SMALLEST PRACTICAL AREA SHALL BE DISTURBED DURING CONSTRUCTION, NO MORE THAN 5 ACRES SHALL BE DISTURBED (NOT STABILIZED) AT ANY TIME.
 - ONLY DISTURB CLEAR OR GRADE AREAS NECESSARY FOR CONSTRUCTION.
 - FLAG OR OTHERWISE DELINEATE AREAS NOT TO BE DISTURBED.
 - EXCLUDE VEHICLES AND CONSTRUCTION EQUIPMENT FROM THESE AREAS TO PRESERVE NATURAL VEGETATION.
 - ALL GRADED OR DISTURBED AREAS INCLUDING SLOPES SHALL BE PROTECTED DURING CLEARING AND CONSTRUCTION IN ACCORDANCE WITH THE APPROVED PLAN SHEET C-1, C-2 AND C-5.**
 - ALL EROSION AND SEDIMENT CONTROL PRACTICES AND MEASURES SHALL BE CONSTRUCTED, APPLIED AND MAINTAINED IN ACCORDANCE WITH THE APPROVED EROSION AND SEDIMENT CONTROL PLAN DEPICTED ON SHEET C-5.**
 - TOPSOIL REQUIRED FOR THE ESTABLISHMENT OF VEGETATION SHALL BE STOCKPILED IN THE AMOUNT NECESSARY TO COMPLETE FINISHED GRADING AND BE PROTECTED FROM EROSION.**
 - STOCKPILES, BORROW AREAS AND SPOILS SHALL BE STABILIZED AS DESCRIBED UNDER "SOIL STOCKPILE PRACTICES".**
 - EXPOSED SOILS SHALL BE CLOSE TO PROPERTY LINES AS TO ENDANGER ADJOINING PROPERTIES WITHOUT ADEQUATE PROTECTION AGAINST SEDIMENTATION, EROSION, SLIPPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED DAMAGE.**
 - AREAS TO BE FILLED SHALL BE CLEARED, GRUBBED AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS AND/OR OTHER OBJECTIONABLE MATERIALS.**
 - AREAS SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 3-INCHES PRIOR TO PLACEMENT OF TOPSOIL. TOPSOIL SHALL BE PLACED WITHOUT SIGNIFICANT COMPACTURE TO PROVIDE A LOOSE BEDDING FOR PLACEMENT OF SEED.**
 - ALL FILLS SHALL BE COMPACTED IN ACCORDANCE WITH PROJECT SPECIFICATIONS TO REDUCE EROSION, SLIPPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED PROBLEMS. FILL INTENDED TO SUPPORT BUILDINGS, STRUCTURES, SITE UTILITIES, CONDUITS AND OTHER FACILITIES, SHALL BE COMPACTED IN ACCORDANCE WITH LOCAL REQUIREMENTS OR CODES.**
 - IN GENERAL, FILLS SHALL BE COMPACTED IN LAYERS RANGING FROM 6 TO 24 INCHES IN THICKNESS. THE CONTRACTOR SHALL REVIEW THE PROJECT GEOTECHNICAL REPORT AND/OR THE "PROJECT SPECIFIC PHASING NOTES" FOR SPECIFIC GUIDANCE.**
 - ANY AND ALL FILL MATERIAL SHALL BE FREE OF BRUSH, RUBBISH, ROCKS (LARGER THAN 3/4" DEPTH OF THE LIFT BEING INSTALLED), LOGS, STUMPS, BUILDING DEBRIS, FROZEN MATERIAL AND OTHER OBJECTIONABLE MATERIALS THAT WOULD INTERFERE WITH OR PREVENT CONSTRUCTION OF SATISFACTORY LIFTS.**
 - FROZEN MATERIAL OR SOFT, MUCKY OR HIGHLY COMPRESSIBLE (I.E. CLAY, SILT) MATERIALS ARE SUSCEPTIBLE TO ACCELERATED SETTLEMENT AND POTENTIAL ACCELERATED EROSION. WORK IN AREAS OF THESE MATERIALS SHALL BE PERFORMED UNDER THE DIRECTION OF A PROFESSIONAL ENGINEER.**
 - THE OUTER FACE OF THE FILL SLOPE SHALL BE ALLOWED TO STAY LOOSE, NOT ROLLED OR COMPACTED, OR BLADE SMOOTHED. A BULLDOZER MAY RUN UP AND DOWN THE FILL SLOPE SO THE DOZER TREADS (CLEAT TRACKS) CREATE GROOVES PERPENDICULAR TO THE SLOPE. IF THE SOIL IS NOT TOO MOIST, EXCESSIVE COMPACTURE WILL NOT OCCUR. SEE "SURFACE ROUGHENING" IN THE NHPMM, VOL. 3.**
 - ROUGHEN THE SURFACE OF ALL SLOPES DURING THE CONSTRUCTION OPERATION TO RETAIN WATER, INCREASE INFILTRATION AND FACILITATE VEGETATION ESTABLISHMENT.**
 - USE SLOPE BREAKS, SUCH AS DIVERSIONS, BENCHES, OR CONTOUR FURROWS AS APPROPRIATE TO REDUCE THE LENGTH OF CUT-FILL SLOPES TO LIMIT SHEET AND RILL EROSION AND PREVENT GULLY EROSION. ALL BENCHES SHALL BE KEPT FREE OF SEDIMENT DURING ALL PHASES OF CONSTRUCTION.**
 - SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE EVALUATED BY A PROFESSIONAL ENGINEER (PREFERABLY THE DESIGN ENGINEER) TO DETERMINE IF THE PROPOSED DESIGN SHALL BE REVISED TO PROPERLY MANAGE THE CONDITION.**
 - STABILIZE ALL GRADED AREAS (AS ABOVE) WITH VEGETATION, CRUSHED STONE, COMPOST BLANKET, OR OTHER GROUND COVER AS SOON AS GRADING IS COMPLETE OR IF WORK IS INTERRUPTED FOR 21 WORKING DAYS OR MORE. USE MULCH OR OTHER APPROVED METHODS TO STABILIZE AREAS TEMPORARILY WHERE FINAL GRADING MUST BE DELAYED.**
 - ALL GRADED AREAS SHALL BE PERMANENTLY STABILIZED IMMEDIATELY FOLLOWING FINISHED GRADING.**
 - THE PROJECT SHALL BE CONSTRUCTED TO MEET ALL REQUIREMENTS AND INTENT OF RSA 430:53 AND CHAPTER ARG 3800 RELATIVE TO INVASIVE SPECIES.**

PERMANENT VEGETATION SEEDING RECOMMENDATIONS

| USE | MIXTURE | SPECIES | LBS./ACRE | LBS./1,000-SF |
|--|---------|---------------------|-----------|---------------|
| STEEP CUTS AND FILLS, BORROW AND DISPOSAL AREAS | A | TALL FESCUE | 20 | 0.45 |
| | | CREeping RED FESCUE | 20 | 0.45 |
| | | REDTOP | 2 | 0.05 |
| | | TOTAL | 42 | 0.95 |
| WATERWAYS, EMERGENCY SPILLWAYS, AND OTHER CHANNELS WITH FLOWING WATER | A | TALL FESCUE | 20 | 0.45 |
| | | CREeping RED FESCUE | 20 | 0.45 |
| | | REDTOP | 2 | 0.05 |
| | | TOTAL | 42 | 0.95 |
| LIGHTLY USED PARKING LOTS, ODD AREAS, UNUSED LANDS, AND LOW INTENSITY RECREATION SITES | A | TALL FESCUE | 20 | 0.45 |
| | | CREeping RED FESCUE | 20 | 0.45 |
| | | REDTOP | 2 | 0.05 |
| | | TOTAL | 42 | 0.95 |
| PLAY AREAS AND ATHLETIC FIELDS (TOPSOIL ESSENTIAL FOR GOOD TURF) | F | CREeping RED FESCUE | 50 | 1.15 |
| | | KENTUCKY BLUEGRASS | 50 | 1.15 |
| | | TOTAL | 100 | 2.30 |

SOURCES:

- NEW HAMPSHIRE STORMWATER MANAGEMENT MANUAL, VOLUME 3, TABLES 4-2 AND 4-3
- MINNICK, E.L. AND H.T. MARSHALL, (AUGUST 1992)

ABOVE NOTES EXCERPTED, ADAPTED AND REFERENCED FROM "NEW HAMPSHIRE STORMWATER MANAGEMENT MANUAL, VOLUME 3 CONSTRUCTION PHASE EROSION AND SEDIMENT CONTROLS, DECEMBER 2008" (NHPMM, VOL. 3)

DUST CONTROL PRACTICES:

- APPLY DUST CONTROL MEASURES AS NECESSARY TO MAINTAIN CONTROL OF DUST ON SITE.
- WATER APPLICATION:**
 - A) MOISTEN EXPOSED SOIL SURFACES PERIODICALLY WITH ADEQUATE WATER TO CONTROL DUST.
 - B) AVOID EXCESSIVE APPLICATION OF WATER THAT WOULD RESULT IN MOBILIZING SEDIMENT AND SUBSEQUENT DEPOSITION IN NATURAL WATERBODIES.
- STONE APPLICATION:**
 - A) COVER SURFACE WITH CRUSHED OR COARSE GRAVEL.
 - B) IN AREAS NEAR WATERWAYS USE ONLY CHEMICALLY STABILIZED OR WASHED AGGREGATE.
- REFER TO "NEW HAMPSHIRE STORMWATER MANAGEMENT MANUAL, VOLUME 3 CONSTRUCTION PHASE EROSION AND SEDIMENT CONTROLS, DECEMBER 2008" FOR OTHER ALLOWABLE DUST CONTROL PRACTICES (I.E. COMMERCIAL TACKIFIERS OR CHEMICAL TREATMENTS SUCH AS CALCIUM CHLORIDE, ETC.)

STOCKPILE PRACTICES:

- LOCATE STOCKPILES A MINIMUM OF 50-FT. AWAY FROM CONCENTRATED FLOWS OF STORMWATER, DRAINAGE COURSES OR INLETS.
 - PROTECT ALL STOCKPILES FROM STORMWATER RUN-ON USING TEMPORARY PERIMETER MEASURES SUCH AS DIVERSIONS, BERMS, SANDBAGS OR OTHER APPROVED PRACTICES.
 - STOCKPILES SHALL BE SURROUNDED BY SEDIMENT BARRIERS AS DESCRIBED ON THE PLANS AND IN NHPMM VOL. 3 TO PREVENT MIGRATION OF MATERIAL BEYOND THE IMMEDIATE CONTOUR OF THE STOCKPILE.
 - IMPLEMENT WIND EROSION CONTROL PRACTICES AS APPROPRIATE ON ALL STOCKPILED MATERIAL.
 - PLACE BAGGED MATERIALS ON PALLETS OR UNDERCOVER.
- PROTECTION OF INACTIVE STOCKPILES:**
- INACTIVE SOIL STOCKPILES SHALL BE COVERED WITH ANCHORED TARPS OR PROTECTED WITH SOIL STABILIZATION MEASURES (TEMPORARY SEED AND MULCH OR OTHER TEMPORARY STABILIZATION PRACTICE) AND TEMPORARY PERIMETER SEDIMENT BARRIER (I.E. SILT FENCE, ETC.) ON ALL SIDES.
 - INACTIVE STOCKPILES OF CONCRETE RUBBLE, ASPHALT, CONCRETE RUBBLE, AGGREGATE MATERIALS, AND SIMILAR MATERIALS SHALL BE PROTECTED WITH TEMPORARY SEDIMENT PERIMETER BARRIERS (I.E. SILT FENCE, ETC.) AT ALL TIMES. IF THE MATERIALS ARE A SOURCE OF DUST, THEY SHALL ALSO BE COVERED.
- PROTECTION OF ACTIVE STOCKPILES:**
- ALL STOCKPILES SHALL BE SURROUNDED WITH TEMPORARY LINEAR SEDIMENT BARRIERS (I.E. SILT FENCE, ETC.) PRIOR TO THE ONSET OF PRECIPITATION. PERIMETER BARRIERS SHALL BE MAINTAINED AT ALL TIMES, AND ADJUSTED AS NEEDED TO ACCOMMODATE THE DELIVERY AND REMOVAL OF MATERIAL FROM THE STOCKPILE. THE INTEGRITY OF THE BARRIER SHALL BE INSPECTED AT THE END OF EACH WORKING DAY.
 - WHEN A STORM IS PREDICTED, STOCKPILES SHALL BE PROTECTED WITH AN ANCHORED PROTECTIVE COVERING.

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PLAN NO. C-111
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F.B. NO.

PERMANENT EROSION AND SEDIMENTATION CONTROL
TAX MAP 414, LOT 50, 52 & 53
GOVERNORS ROAD
GILMANTON, NH
PREPARED FOR:
GRANITE STATE CONSERVATION TRUST
OCTOBER 2023