

ZPTII-241 SOLAR ARRAY
 5 & 5R HATFIELD STREET
 (ASSESSOR MAP K - LOT 33
 & MAP G LOT 76-1)
 -PERMIT SITE PLANS-

MODULES	DC POWER
14,924±	4.75±MW

LOCATED IN
WILLIAMSBURG, MASSACHUSETTS
 DATE: FEBRUARY 19, 2019



APPLICANT: ZPT ENERGY SOLUTIONS II, LLC
 6 PARK AVENUE, SUITE 100, LOWER LEVEL
 WORCESTER, MASSACHUSETTS 01605

RECORD OWNERS:
 PENELOPE JOHNSON
 5 & 5R HATFIELD STREET
 WILLIAMSBURG, MASSACHUSETTS 01096



LAND SURVEYOR/SITE CIVIL ENGINEER: MERIDIAN ASSOCIATES
 ENVIRONMENTAL CONSULTANT: LEC ENVIRONMENTAL CONSULTANTS, INC.

MERIDIAN ASSOCIATES
 580 CLAMMING CENTER SUITE 5000 69 MILK STREET SUITE 302
 BEVERLY, MASSACHUSETTS 01915 WESTBOROUGH, MASSACHUSETTS 01581
 TELEPHONE: (978) 299-0447 TELEPHONE: (508) 871-7000
 WWW.MERIDIANASSOC.COM

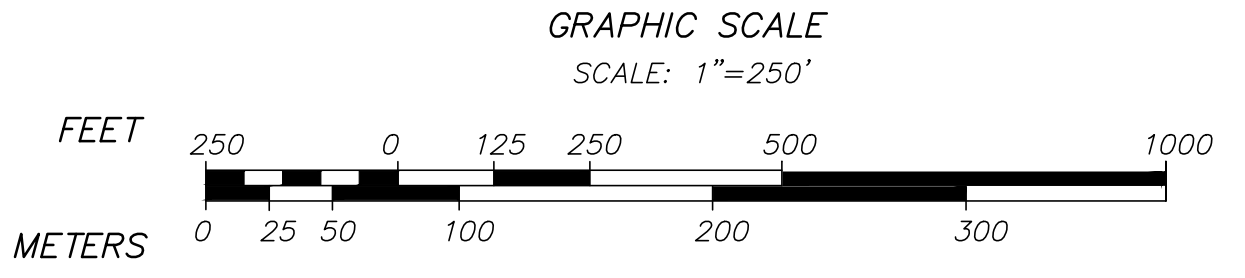
LEC ENVIRONMENTAL CONSULTANTS, INC.
 100 GROVE STREET, SUITE 302
 WORCESTER, MA 01605
 TEL: (508) 753-3077 FAX: (508) 753-3177
 WWW.LECENVIRONMENTAL.COM

DRAWING INDEX:

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APPROVED BY:
 WILLIAMSBURG ZONING BOARD OF APPEALS

LOCUS CONTEXT MAP:

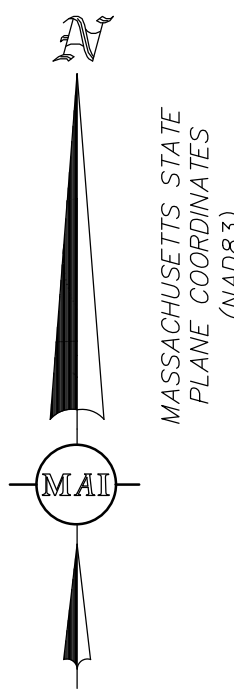


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 NOT FOR CONSTRUCTION

DWG. No. 6091_CVR(PENNY)_R1.DWG [CVR]

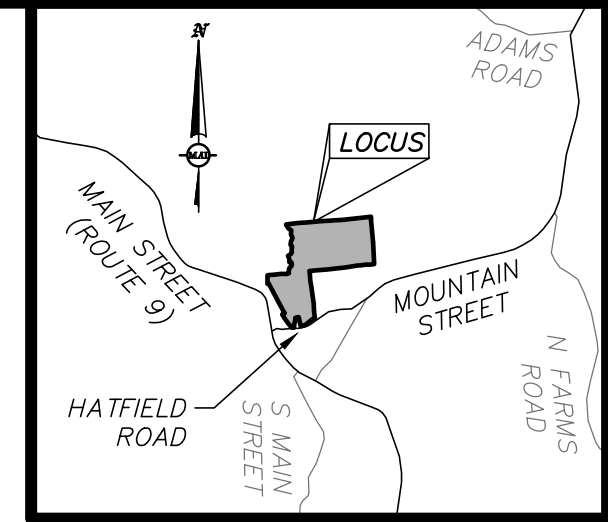
"THIS PLAN IS SUBJECT TO A SPECIAL PERMIT DATED _____"
 "THIS PLAN IS SUBJECT TO A SITE PLAN REVIEW DATED _____"

TOWN CLERK _____ DATE _____ DATE: _____



EXISTING LEGEND & ABBREVIATIONS

- TWO FOOT CONTOUR
- TEN FOOT CONTOUR
- BORDERING VEGETATED WETLANDS
- TOP OF BANK
- TREELINE
- LIMIT OF RIVERFRONT BUFFER
- 100' WETLAND BUFFER
- 50' NO BUILD
- 25' NO DISTURB
- NOW OR FORMERLY
- TEST PIT



LOCUS MAP:
(1"=5000')

UNOFFICIAL SOILS INFORMATION

DATE: SEPTEMBER 13, 2018
CONDUCTED BY: ANDREW RODRIGUEZ, SE (13890)

TEST PIT TP-101
ELEV.=665±

0"-6" A HORIZON: FINE SANDY LOAM
6"-34" B HORIZON: FINE SANDY LOAM
34"-92" LAYER C: GRAVELY SANDY LOAM
REDOX NOT OBSERVED
REFUSAL @ 92"

TEST PIT TP-102
ELEV.=691±

0"-8" A HORIZON: FINE SANDY LOAM
8"-43" B HORIZON: FINE SANDY LOAM
43"-100" LAYER C: GRAVELY SANDY LOAM
REDOX NOT OBSERVED
REFUSAL @ 100"

TEST PIT TP-103
ELEV.=666±

0"-7" A HORIZON: FINE SANDY LOAM
7"-23" B HORIZON: FINE SANDY LOAM
23"-105" LAYER C: GRAVELY SANDY LOAM
REDOX NOT OBSERVED
REFUSAL @ 100"

TEST PIT TP-104
ELEV.=683±

ASSUMED E.S.H.G.W. ELEV.=680.7
0"-7" A HORIZON: FINE SANDY LOAM
7"-23" B HORIZON: FINE SANDY LOAM
23"-108" LAYER C: GRAVELY SANDY LOAM
WEEPING @ 27"
STANDING @ 100"

TEST PIT TP-105
ELEV.=753±

ASSUMED E.S.H.G.W. ELEV.=750.9
0"-7" A HORIZON: FINE SANDY LOAM
7"-23" B HORIZON: FINE SANDY LOAM
23"-105" LAYER C: GRAVELY SANDY LOAM
REDOX @ 25"
WEEPING @ 39"
STANDING @ 100"

NOTES

1. THE TOPOGRAPHY, SITE DETAIL & SURFACE IMPROVEMENTS DEPICTED HEREON WERE OBTAINED FROM AN AERIAL LIDAR SURVEY CONDUCTED BY MERIDIAN ASSOCIATES, INC. (MAI) ON MARCH 28, 2018 AND SUPPLEMENTED WITH AN ON-THE-GROUND INSTRUMENT SURVEY CONDUCTED BY MERIDIAN ASSOCIATES, INC. ON MAY 8-10, 2018.
2. THE SUBJECT PROPERTY IS LOCATED IN THE RURAL (RU) ZONING DISTRICT.
3. THE SUBJECT PROPERTIES ARE DEPICTED AS MAP K LOT 33 (5 HATFIELD STREET) AND MAP 9 LOT 76-1 (5R HATFIELD STREET) ON TOWN OF WILLIAMSBURG ASSESSOR MAP.
4. THE LOCATION OF ALL UNDERGROUND UTILITIES SHOWN ARE APPROXIMATE AND ARE BASED UPON A PARTIAL FIELD SURVEY AND COMPILATION OF PLANS OF RECORD. MERIDIAN ASSOCIATES, INC. DOES NOT WARRANT NOR GUARANTEE THE LOCATION OF ALL UTILITIES DEPICTED OR NOT DEPICTED. THE CONTRACTOR, PRIOR TO COMMENCEMENT OF CONSTRUCTION, SHALL VERIFY THE LOCATION OF ALL UTILITIES AND CONTACT DIG SAFE AT 1-888-344-7233.
5. THE ELEVATIONS DEPICTED HEREON WERE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
6. THIS PLAN DOES NOT SHOW ANY UNRECORDED OR UNWRITTEN EASEMENTS WHICH MAY EXIST. A REASONABLE AND DILIGENT ATTEMPT HAS BEEN MADE TO OBSERVE ANY APPARENT, VISIBLE USES OF THE LAND; HOWEVER, THIS DOES NOT CONSTITUTE A GUARANTEE THAT NO SUCH EASEMENTS EXIST.
7. PROPERTY LINES DEPICTED HEREON ARE BASED ON COMPILED DEEDS AND PLANS OF RECORD. THIS PLAN IS NOT TO BE USED FOR THE RECONSTRUCTION OF BOUNDARY LINES OR FOR TITLE INSURANCE PURPOSES. ALL BOUNDARY LINES DEPICTED ARE APPROXIMATE ONLY. MAI DID NOT PERFORM A BOUNDARY RETRACEMENT SURVEY.
8. THE SUBJECT PREMISES IS LOCATED IN FLOOD ZONE C, AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN PER FEMA FLOOD INSURANCE RATE MAP COMMUNITY-PANEL NUMBER 2501740002B DATED JUNE 1, 1981.
9. THE WETLAND LIMITS DEPICTED WERE DEMARCATED BY LEC ENVIRONMENTAL CONSULTANTS, INC. ON FEBRUARY 13, FEBRUARY 28, AND APRIL 9, 2018.

ALL UNDERGROUND UTILITY DATA REPRESENTS RECORD INFORMATION RECOVERED THROUGH RESEARCH WITHOUT SURFACE DEMARCATION NOR SUBSURFACE VERIFICATION.

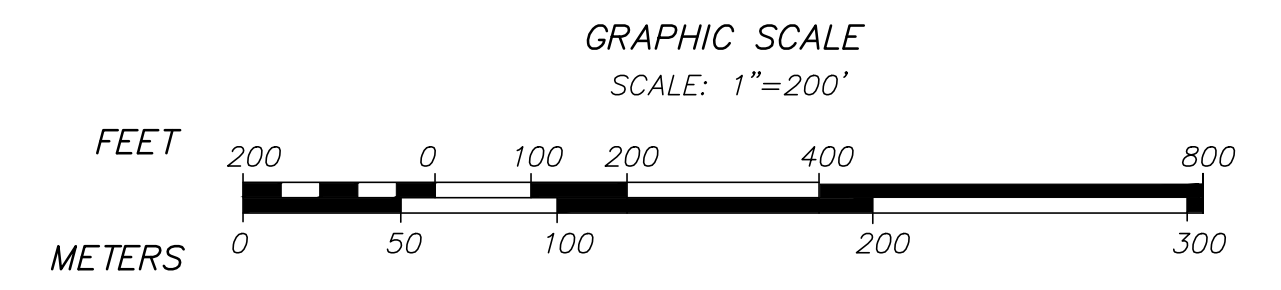
RECORD OWNERS

- PENELOPE JOHNSON
- 5 & 5R HATFIELD STREET
- WILLIAMSBURG, MASSACHUSETTS 01096
- DEED BOOK 3482, PAGE 290
- DEED BOOK 3690, PAGE 313

REFERENCES

- PLAN BOOK 71, PLAN 37
- PLAN BOOK 164, PLAN 34
- PLAN BOOK 167, PLAN 79
- PLAN BOOK 213, PLAN 53
- PLAN BOOK 218, PLAN 102
- PLAN BOOK 205, PLAN 6
- PLAN BOOK 205, PLAN 7
- 1928 STATE HIGHWAY LAYOUT #2537

DOCUMENTS ON RECORD AT THE HAMPSHIRE DISTRICT REGISTRY OF DEEDS.



DWG. No. 6091_REC(PENNY).DWG [REC]

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NOT FOR CONSTRUCTION

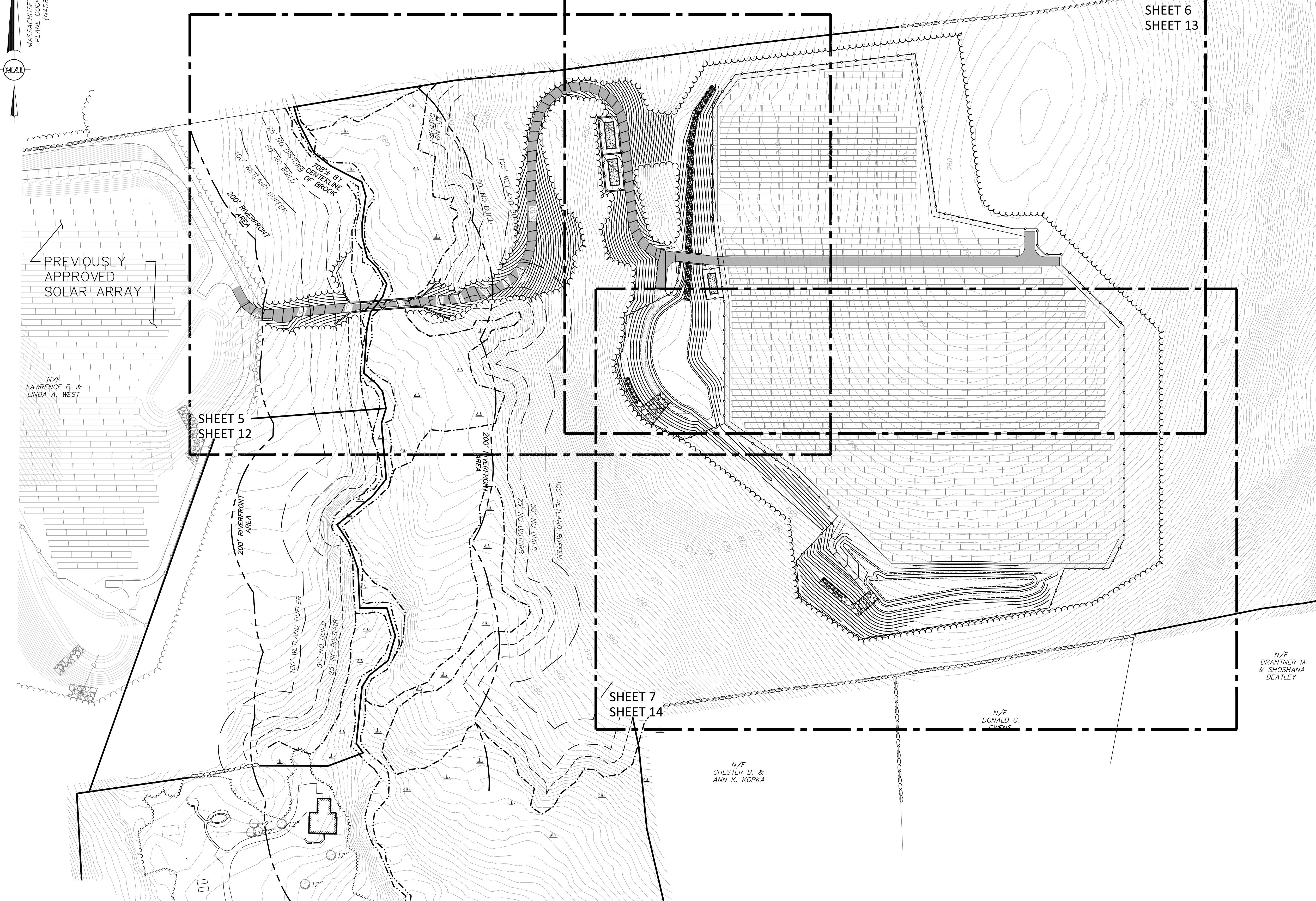
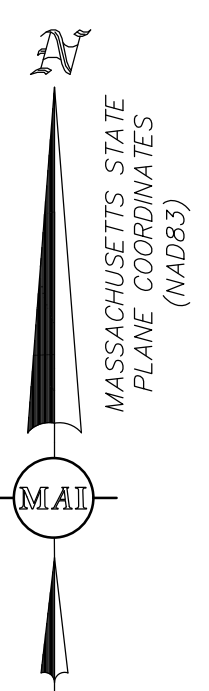
REVISIONS	DATE	DESCRIPTION



5 & 5R HATFIELD STREET
RECORD CONDITIONS PLAN OF LAND
LOCATED IN
WILLIAMSBURG, MASSACHUSETTS
(HAMPSHIRE COUNTY)
PREPARED FOR
ZPT ENERGY SOLUTIONS II, LLC

MERIDIAN ASSOCIATES
69 MILK STREET, SUITE 302
BEVERLY, MASSACHUSETTS 01915
TELEPHONE: (978) 299-0447
WWW.MERIDIANASSOC.COM

DESIGNED BY: _____
CHECKED BY: _____
DATE: FEBRUARY 19, 2019
SCALE: 1"=200'
SHEET No. 2 OF 16
PROJECT No. 6091



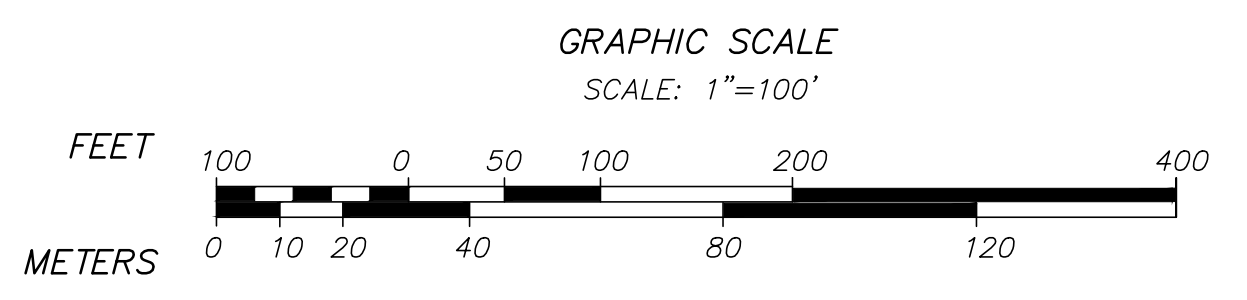
PROPOSED LEGEND & ABBREVIATIONS

- PROPOSED TREELINE
- PROPOSED CONTOUR
- PROPOSED CHAINLINK FENCE
- PD PROPOSED DRAIN LINE
- PROPOSED WALL
- PFE PROPOSED FLARED END
- OCS PROPOSED OUTLET CONTROL STRUCTURE
- PE PROPOSED ELECTRIC CONDUIT
- PROPOSED CONCRETE
- PROPOSED RIPRAP
- PROPOSED GRAVEL DRIVE
- PROPOSED GRASSED PATH

MIN PROP TYP INV L S T.O.W B.O.W DBO

MINIMUM PROPOSED TYPICAL INVERT ELEVATIONS PROPOSED PIPE LENGTH PROPOSED PIPE SLOPE TOP OF WALL BOTTOM OF WALL DESIGNED BY OTHERS

SEE RECORD CONDITIONS PLAN OF LAND SHEET 2 FOR EXISTING LEGEND & ABBREVIATIONS AND NOTES



REVISIONS	DATE	DESCRIPTION	BY



5 & 5R HATFIELD STREET
SITE OVERVIEW
LOCATED IN
WILLIAMSBURG, MASSACHUSETTS
(HAMPSHIRE COUNTY)
PREPARED FOR
ZPT ENERGY SOLUTIONS II, LLC

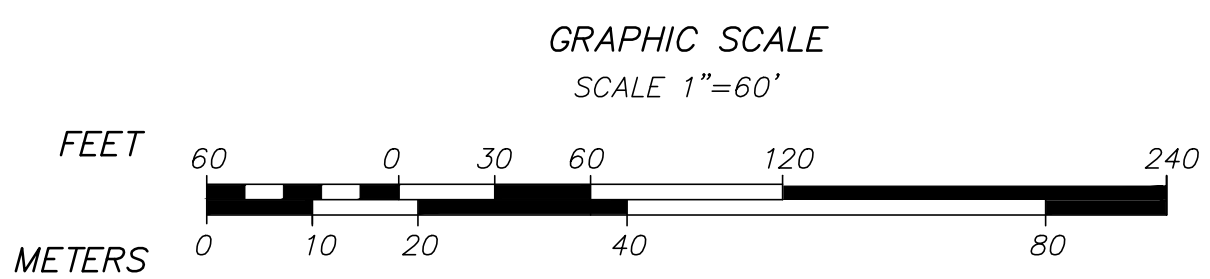
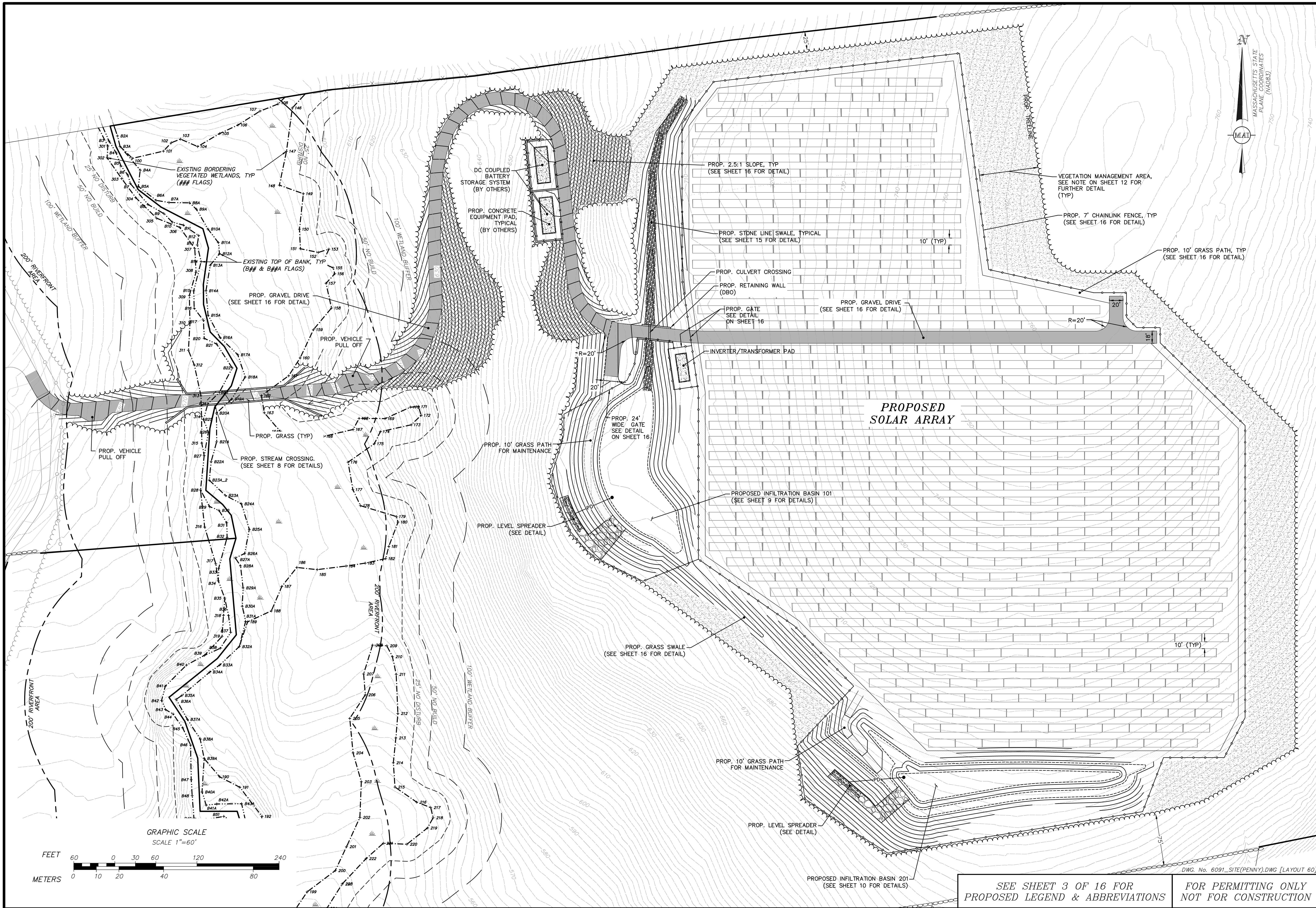
MERIDIAN ASSOCIATES
60 MILE STREET, SUITE 302
BEVERLY, MASSACHUSETTS 01915
TELEPHONE: (978) 299-0447
WWW.MERIDIANASSOC.COM

DESIGNED BY: C. BROYLES
CHECKED BY: C. RYAN

DATE: FEBRUARY 19, 2019
SCALE: 1"=100'
SHEET No. **3 of 16**
PROJECT No. **6091**

DWG. No. 6091_SITE(PENNY).DWG [OVERVIEW 100]

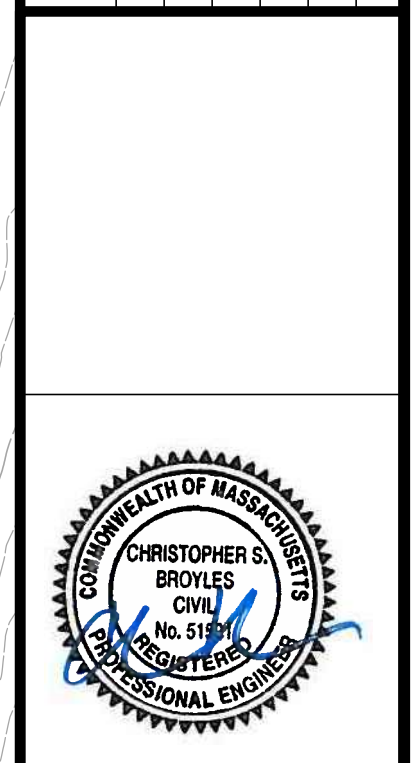
**FOR PERMITTING ONLY
NOT FOR CONSTRUCTION**



SEE SHEET 3 OF 16 FOR PROPOSED LEGEND & ABBREVIATIONS

FOR PERMITTING ONLY NOT FOR CONSTRUCTION

REVISIONS	DATE	DESCRIPTION	BY

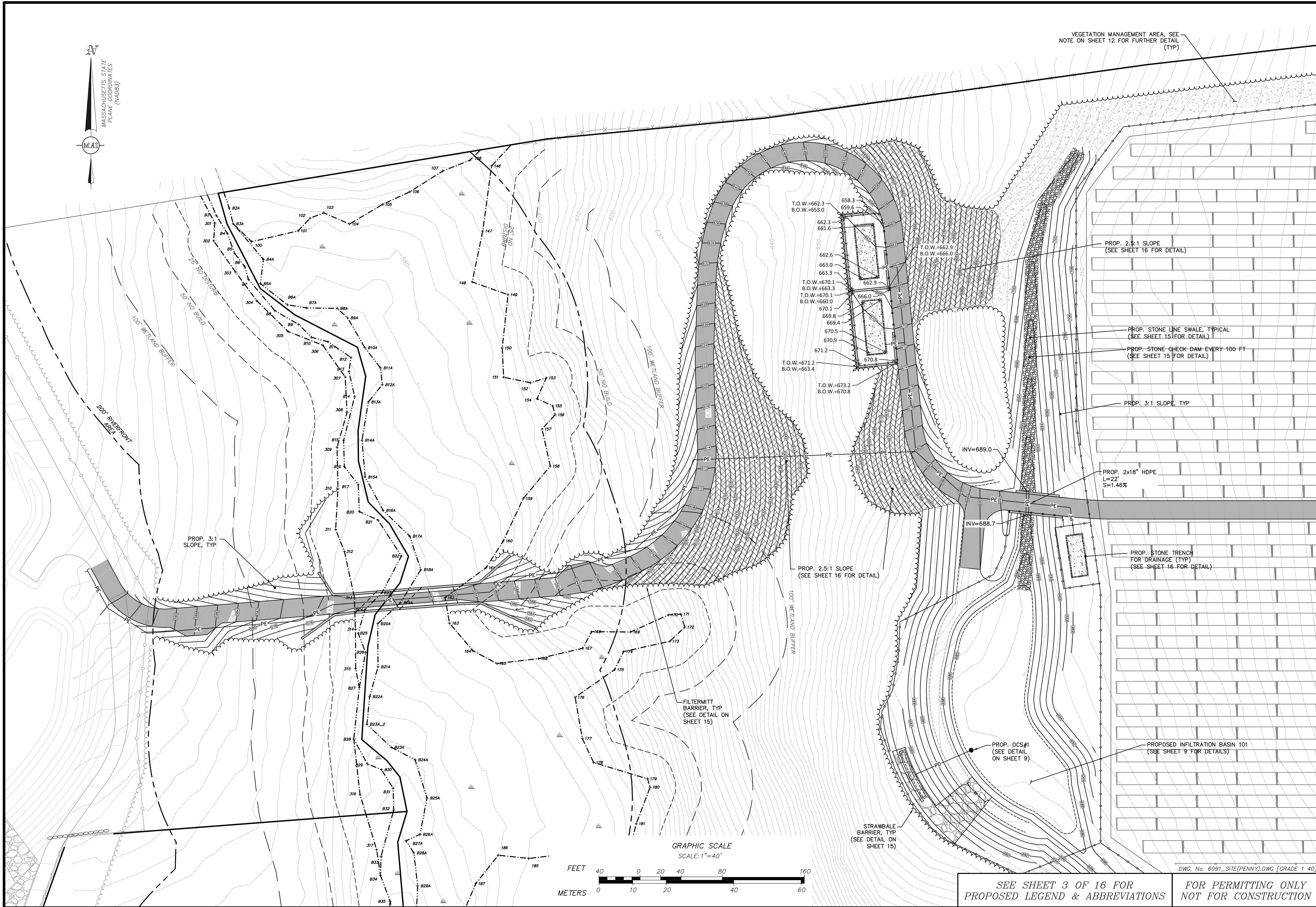
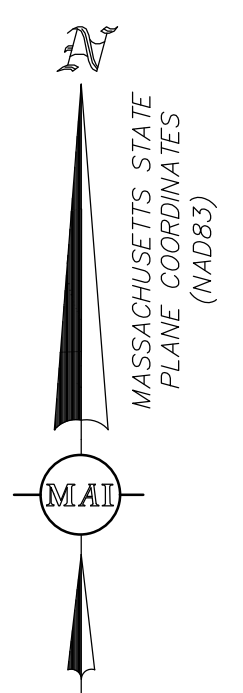


5 & 5R HATFIELD STREET
 SITE LAYOUT
 LOCATED IN
WILLIAMSBURG, MASSACHUSETTS
 (HAMPSHIRE COUNTY)
 PREPARED FOR
ZPT ENERGY SOLUTIONS II, LLC

MERIDIAN ASSOCIATES
 500 CUMMINGS CENTER, SUITE 5950
 BEVERLY, MASSACHUSETTS 01915
 TELEPHONE: (978) 299-0447
 WWW.MERIDIANASSOC.COM

DESIGNED BY: C. BROYLES
 CHECKED BY: C. RYAN

DATE: FEBRUARY 19, 2019
 SCALE: 1"=60'
 SHEET No. 4 OF 16
 PROJECT No. 6091



VEGETATION MANAGEMENT AREA, SEE NOTE ON SHEET 12 FOR FURTHER DETAIL (TYP)

PROP. 3:1 SLOPE, TYP

PROP. 2.5:1 SLOPE (SEE SHEET 16 FOR DETAIL)

PROP. 2.5:1 SLOPE (SEE SHEET 16 FOR DETAIL)

PROP. STONE LINE SWALE, TYPICAL (SEE SHEET 15 FOR DETAIL)

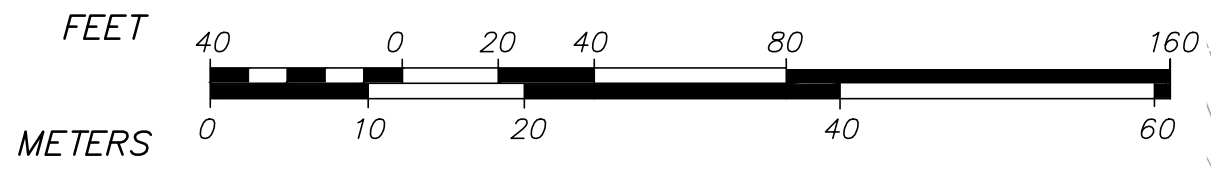
PROP. STONE CHECK-DAM EVERY 100 FT (SEE SHEET 15 FOR DETAIL)

PROP. 3:1 SLOPE, TYP

PROP. 2x18" HDPE L=22' S=1.46%

PROP. STONE TRENCH FOR DRAINAGE (TYP) (SEE SHEET 16 FOR DETAIL)

GRAPHIC SCALE SCALE: 1"=40'



SEE SHEET 3 OF 16 FOR PROPOSED LEGEND & ABBREVIATIONS

FOR PERMITTING ONLY NOT FOR CONSTRUCTION

DWG. No. 6091_SITE(PENNY).DWG [GRADE 1 40']

REVISIONS	DATE	DESCRIPTION

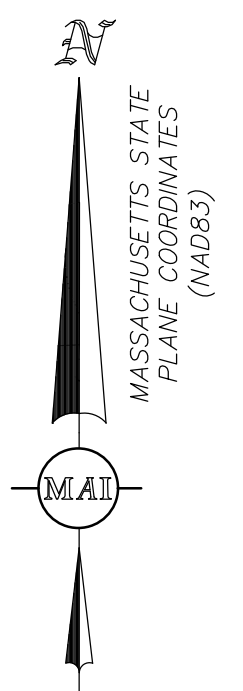
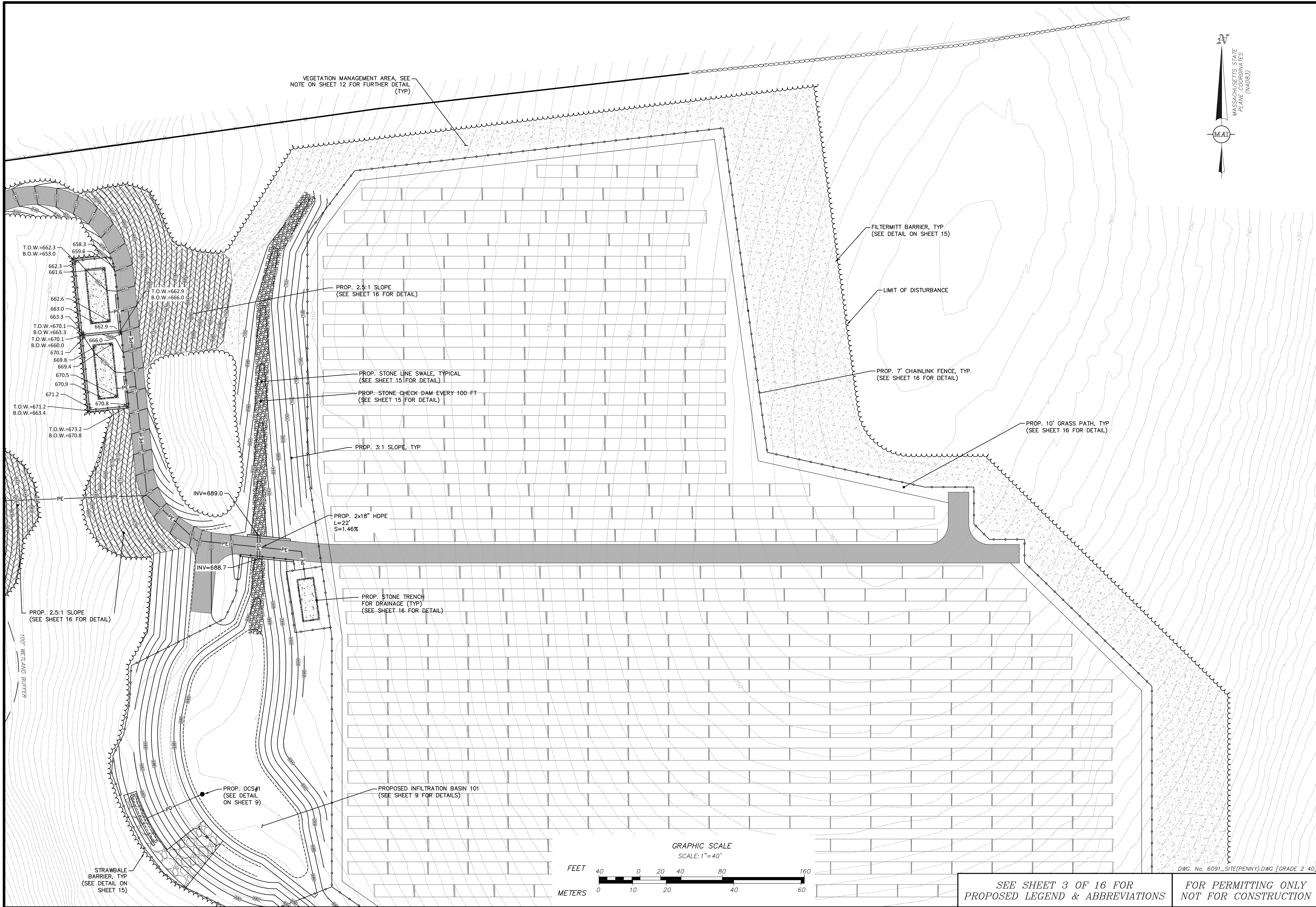


5 & 5R HATFIELD STREET GRADING & UTILITY PLAN 1
 LOCATED IN
WILLIAMSBURG, MASSACHUSETTS
 (HAMPSHIRE COUNTY)
 PREPARED FOR
ZPT ENERGY SOLUTIONS II, LLC

MERIDIANS ASSOCIATES
 500 CUMMINGS CENTER, SUITE 5950
 BEVERLY, MASSACHUSETTS 01915
 TELEPHONE: (978) 299-4447
 WWW.MERIDIANSASSOC.COM

DESIGNED BY: C. BROYLES
 CHECKED BY: C. RYAN

DATE: FEBRUARY 19, 2019
 SCALE: 1"=40'
 SHEET No. **5 OF 16**
 PROJECT No. **6091**



VEGETATION MANAGEMENT AREA, SEE NOTE ON SHEET 12 FOR FURTHER DETAIL (TYP)

FILTERMITT BARRIER, TYP (SEE DETAIL ON SHEET 15)

LIMIT OF DISTURBANCE

PROP. 7' CHAINLINK FENCE, TYP (SEE SHEET 16 FOR DETAIL)

PROP. 10' GRASS PATH, TYP (SEE SHEET 16 FOR DETAIL)

PROP. 2.5:1 SLOPE (SEE SHEET 16 FOR DETAIL)

PROP. STONE LINE SWALE, TYPICAL (SEE SHEET 15 FOR DETAIL)

PROP. STONE CHECK DAM EVERY 100 FT (SEE SHEET 15 FOR DETAIL)

PROP. 3:1 SLOPE, TYP

PROP. 2x18" HDPE
L=22'
S=1.46%

PROP. STONE TRENCH FOR DRAINAGE (TYP) (SEE SHEET 16 FOR DETAIL)

PROP. OCS#1 (SEE DETAIL ON SHEET 9)

PROPOSED INFILTRATION BASIN 101 (SEE SHEET 9 FOR DETAILS)

T.O.W.=662.3
B.O.W.=653.0

T.O.W.=662.9
B.O.W.=666.0

T.O.W.=670.1
B.O.W.=663.3

T.O.W.=671.2
B.O.W.=663.4

T.O.W.=673.2
B.O.W.=670.8

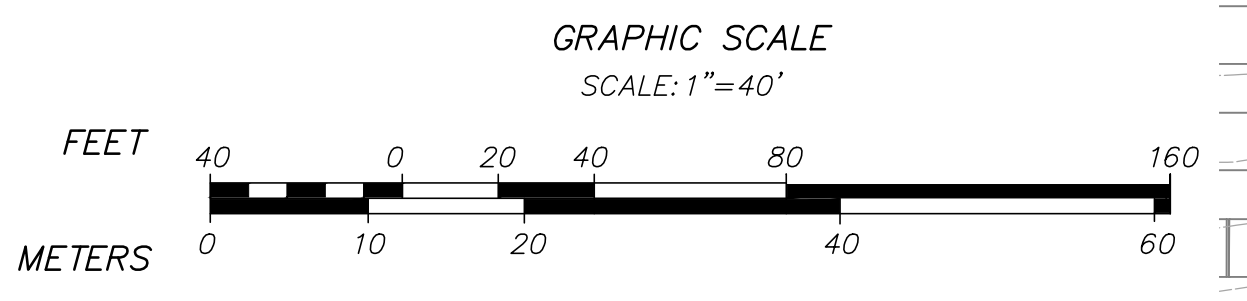
INV=689.0

INV=688.7

PROP. 2.5:1 SLOPE (SEE SHEET 16 FOR DETAIL)

100' WETLAND BUFFER

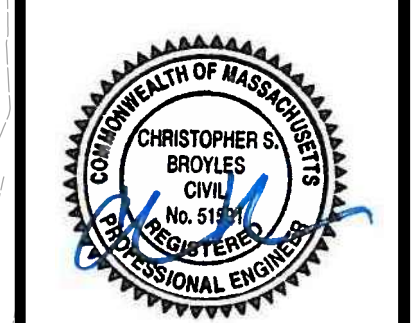
STRAWBALE BARRIER, TYP (SEE DETAIL ON SHEET 15)



SEE SHEET 3 OF 16 FOR PROPOSED LEGEND & ABBREVIATIONS FOR PERMITTING ONLY NOT FOR CONSTRUCTION

DWG. No. 6091_SITE(PENNY).DWG [GRADE 2 40]

REVISIONS	DATE	DESCRIPTION

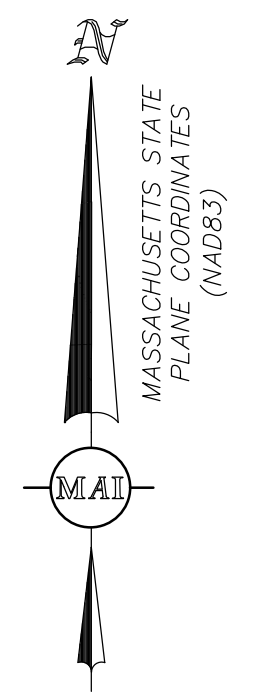
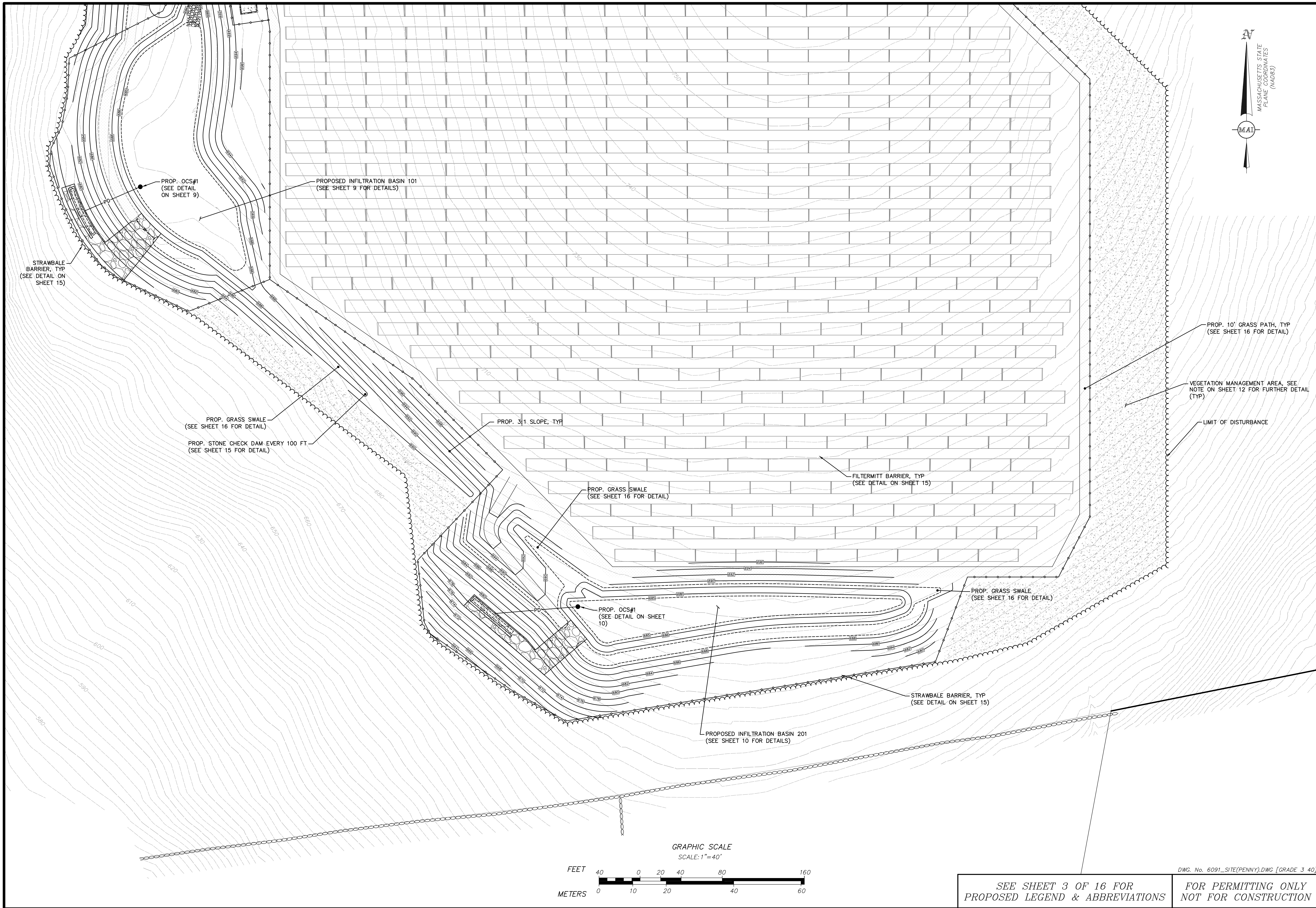


5 & 5R HATFIELD STREET
GRADING & UTILITY PLAN 2
LOCATED IN
WILLIAMSBURG, MASSACHUSETTS
(HAMPSHIRE COUNTY)
PREPARED FOR
ZPT ENERGY SOLUTIONS II, LLC

MERIDIANS ASSOCIATES
500 CUMMINGS CENTER, SUITE 5950
BEVERLY, MASSACHUSETTS 01915
TELEPHONE: (978) 299-0447
WWW.MERIDIANSASSOC.COM

DESIGNED BY: C. RYAN
CHECKED BY: C. BROYLES

DATE: FEBRUARY 19, 2019
SCALE: 1" = 40'
SHEET No. 6 OF 16
PROJECT No. 6091



PROP. OCS#1
(SEE DETAIL
ON SHEET 9)

PROPOSED INFILTRATION BASIN 101
(SEE SHEET 9 FOR DETAILS)

STRAWBALE
BARRIER, TYP
(SEE DETAIL ON
SHEET 15)

PROP. GRASS SWALE
(SEE SHEET 16 FOR DETAIL)
PROP. STONE CHECK DAM EVERY 100 FT
(SEE SHEET 15 FOR DETAIL)

PROP. 3:1 SLOPE, TYP

PROP. GRASS SWALE
(SEE SHEET 16 FOR DETAIL)

PROP. OCS#1
(SEE DETAIL ON SHEET
10)

FILTERMITT BARRIER, TYP
(SEE DETAIL ON SHEET 15)

PROP. GRASS SWALE
(SEE SHEET 16 FOR DETAIL)

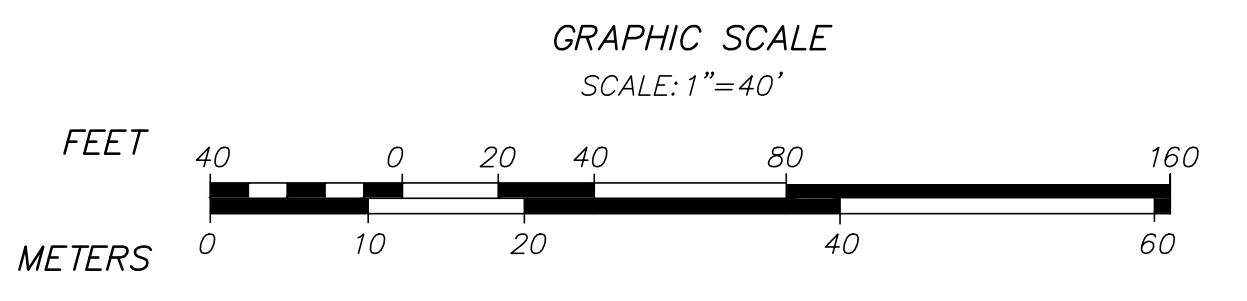
STRAWBALE BARRIER, TYP
(SEE DETAIL ON SHEET 15)

PROPOSED INFILTRATION BASIN 201
(SEE SHEET 10 FOR DETAILS)

PROP. 10' GRASS PATH, TYP
(SEE SHEET 16 FOR DETAIL)

VEGETATION MANAGEMENT AREA, SEE
NOTE ON SHEET 12 FOR FURTHER DETAIL
(TYP)

LIMIT OF DISTURBANCE



REVISIONS	DATE	DESCRIPTION	BY



**5 & 5R HATFIELD STREET
GRADING & UTILITY PLAN 3**
LOCATED IN
WILLIAMSBURG, MASSACHUSETTS
(HAMPSHIRE COUNTY)
PREPARED FOR
ZPT ENERGY SOLUTIONS II, LLC

**MERIDIAN
ASSOCIATES**
500 CUMMINGS CENTER, SUITE 5950
BEVERLY, MASSACHUSETTS 01915
TELEPHONE: (978) 299-0447
WWW.MERIDIANASSOC.COM

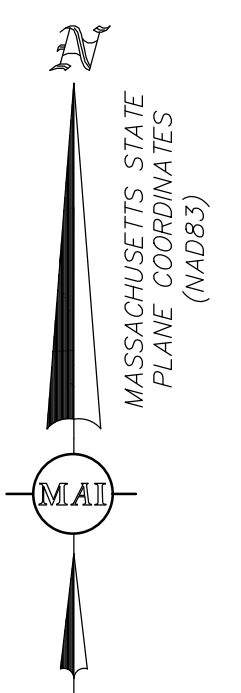
DESIGNED BY: C. BROYLES
CHECKED BY: C. RYAN

DATE:
FEBRUARY 19, 2019
SCALE:
1" = 40'
SHEET No.
7 OF 16
PROJECT No.
6091

SEE SHEET 3 OF 16 FOR
PROPOSED LEGEND & ABBREVIATIONS

FOR PERMITTING ONLY
NOT FOR CONSTRUCTION

DWG. No. 6091_SITE(PENNY).DWG [GRADE 3 40']

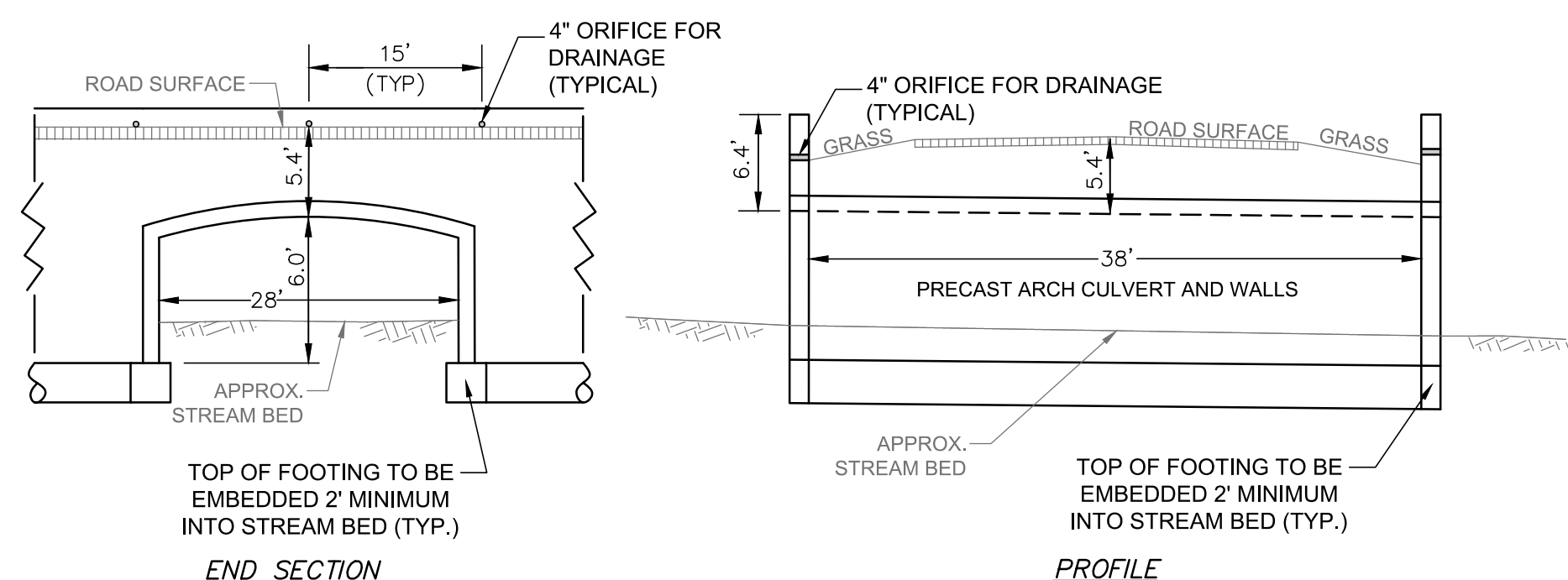


RESOURCE AREA DISTURBANCE TABLE

RESOURCE	PERMANENT	TEMPORARY	TOTAL
BANK	0 FT	108 FT	108 FT
LAND UNDER WATER	0 SF	1,054 SF	1,054 FT
BORDERING VEGETATED WETLANDS	1,323 SF	1,661 SF	2,984 FT
25' NO DISTURB	2,120 SF	1,389 SF	3,509 FT
50' NO BUILD	5,822 SF	2,614 SF	8,436 FT
100' WET BUFFER	11,119 SF	2,080 SF	13,199 FT
200' RIVERFRONT*	19,173 SF	6,144 SF	25,317 FT

NOTES:

* TOTAL AREA OF RIVERFRONT AREA WITHIN LAWRENCE E. WEST & LINDA A. WEST PROPERTY IS 133,420 SF.
 TOTAL AREA OF RIVERFRONT AREA WITHIN PENELOPE JOHNSON PROPERTY IS 975,313 SF.



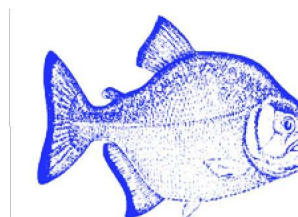
NOTES:

1. THIS DETAIL IS PROVIDED FOR REFERENCE ONLY.
2. FINAL DESIGN OF PRECAST ARCH IS TO BE PROVIDED BY VENDOR AND APPROVED BY THE ENGINEER OF RECORD AND THE TOWN OF WILLIAMSBURG BUILDING DEPARTMENT PRIOR TO INSTALLATION.

PRECAST ARCH CULVERT CROSSING DETAIL (N.T.S.)

STREAM CROSSING STANDARDS

CHANNEL WIDTH = 22' (MAXIMUM)
 BANKFULL DESIGN = 22'x1.2 = 26.4' (28' USED)
 OPENNESS RATIO
 CROSS SECTIONAL AREA / CROSSING LENGTH
 83 SF / 38 FT = 2.4 FT > 0.82 FT



PIRANHA PUMPS ARE MADE BY: EQUIPMENT SPECIALTIES CO. ALBUQUERQUE, NM
 PHONE: (505) 822-0449 FAX: (505) 858-0171

Piranha (OR APPROVED EQUAL)
Submersible Dewatering Pumps
Model P-300
3 HP / 3 Inch Discharge
230v single phase

Home Of Piranha Pumps www.piranhapump.com

Motor Specifications

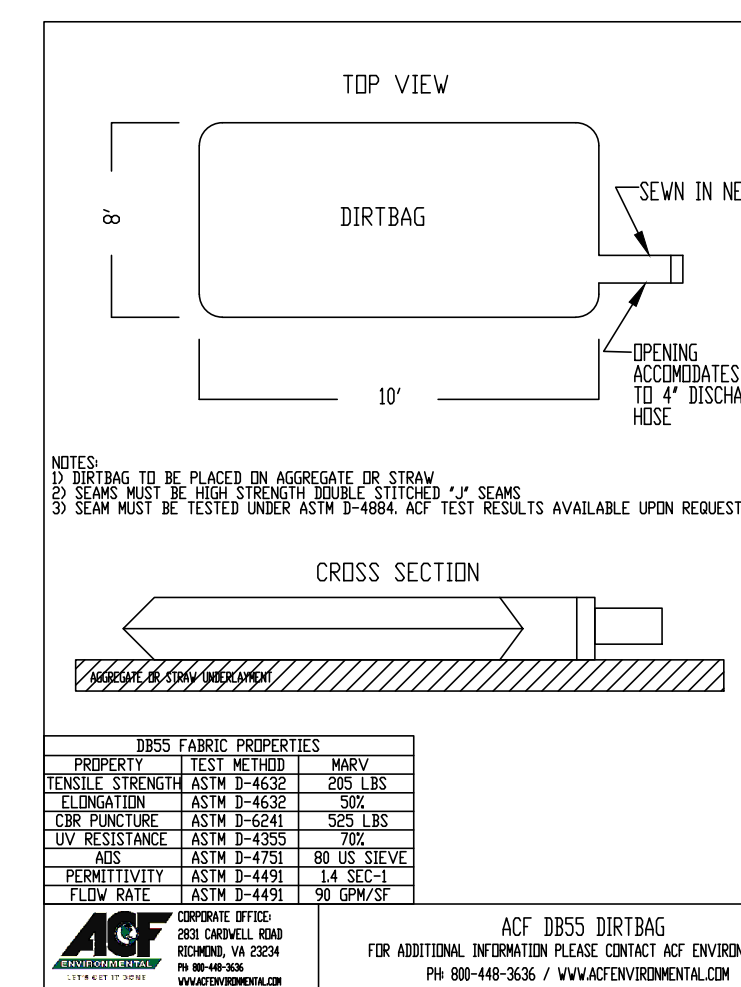
- Motor Seal Double O-ring
- Rating 1 Phase 3 HP
- Voltage 230 Volt
- Current F.L.A. 13.5
- Thermal Overload 2 Integral Switches
- Circuit Breaker Short Circuit, Locked Rotor, & Overload Protection
- RPM 3450
- Insulation Class F / 310 Degrees F
- Power Cable 50' 12/4 SOW-A
- Control NEMA 4X

Pump Construction

- Housing 356T6 Al Alloy
- Mechanical Seals Silicon Carbide
- Impeller Heat Treated 17-4 PH SS
- Rotor Shaft 416 SS
- Lower Diffuser Nitrile Rubber - Adjustable
- Discharge Lining Nitrile Rubber
- Strainer 316 SS 1/4" x 1" Openings
- Hardware 304 SS
- Pump Weight 66 Lbs
- Lifting Handle 316 SS With Rubber Grip



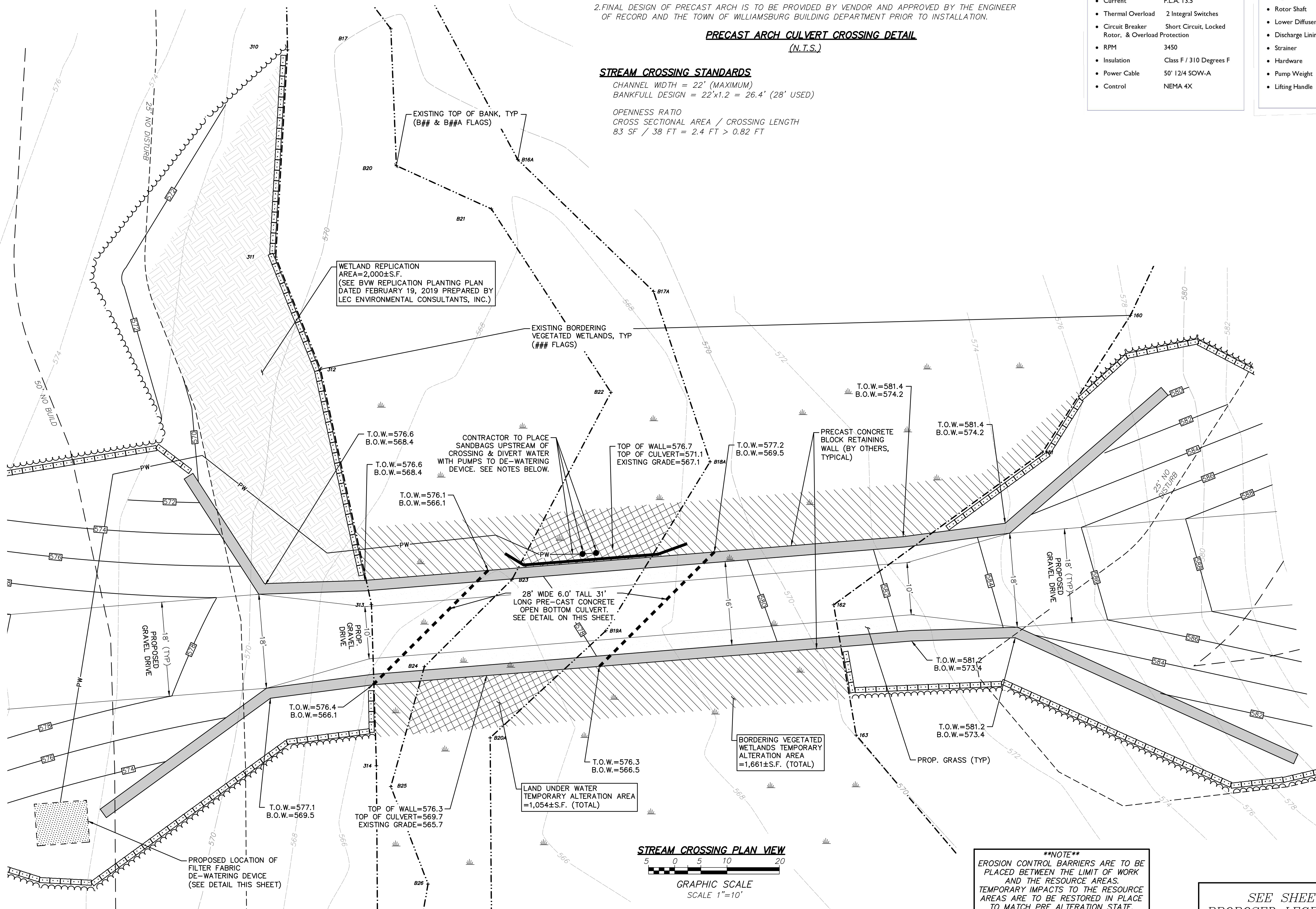
SUBMERSIBLE PUMP DETAIL (NOT TO SCALE)



FILTER FABRIC DEWATERING DEVICE (NOT TO SCALE)

NOTES:

1. CONTRACTOR TO PLACE SANDBAGS UPSTREAM OF THE PROPOSED CROSSING, AS SHOWN ON THE ABOVE PLAN.
2. CONTRACTOR TO PROVIDE AT A MINIMUM TWO (2), THREE (3) INCH DIAMETER DISCHARGE LINE, THREE (3) HORSEPOWER SUBMERSIBLE DEWATERING PUMPS UPSTREAM OF THE SAND BAGS. SEE DETAIL THIS SHEET.
3. CONTRACTOR TO PLACE A FILTER FABRIC DEWATERING DEVICE(S), DOWNSTREAM OF THE CROSSING, AS SHOWN ON THE ABOVE PLAN. DEWATERING DEVICE SHOULD BE PLACED IN A LOCATION THAT DRAINS TOWARD THE STREAM.
4. THE SUBMERSIBLE PUMPS ARE TO BE DISCHARGED INTO THE FILTER FABRIC DEWATERING DEVICE(S).
5. SUBMERSIBLE PUMPS AND FILTER FABRIC DEWATERING DEVICE(S) ARE TO BE CONSTANTLY MONITORED AT ALL TIMES DURING USE.
6. SAND BAGS AND PUMPS ARE TO BE REMOVED FROM THE STREAM/RESOURCE AREA, AT THE END OF EACH WORK DAY. CONTRACTOR IS TO ENSURE THAT THE STREAM/RESOURCE AREA IS UNOBSTRUCTED FROM DEBRIS, SEDIMENT OR OTHER MANMADE DEVICES.
7. CONTRACTOR IS TO PROVIDE ADDITIONAL PUMPS AND FILTER FABRIC DEWATERING DEVICE(S) AS REQUIRED DURING CONSTRUCTION TO PREVENT SEDIMENT FROM ENTERING THE RESOURCE AREAS.
8. CONTRACTOR IS TO MAINTAIN THESE DEVICES TO ENSURE THAT THEY ARE DEPENDABLE AND FUNCTION PROPERLY.
9. SEE ATTACHED SUBMERSIBLE DEWATERING PUMP AND FILTER FABRIC DEWATERING DEVICE DETAILS.
10. ADDITIONAL DETAILS, COORDINATION AND CLARIFICATION MAY BE REQUIRED DURING THE CONSTRUCTION PROCESS.
11. CONTRACTOR TO LIMIT THE STREAM BED DISTURBANCE TO AREAS OF FOOTING INSTALLATION.
12. CONTRACTOR SHALL STOCKPILE STREAM BED MATERIAL AND RESTORE ANY DISTURBANCE TO IT'S ORIGINAL CONDITION.
13. ANY WORK DONE IN STREAM BED SHALL BE PERFORMED UNDER THE SUPERVISION OF A WETLAND SCIENTIST, WHICH SHALL BE ASSIGNED BY THE TOWN.



****NOTE****
 EROSION CONTROL BARRIERS ARE TO BE PLACED BETWEEN THE LIMIT OF WORK AND THE RESOURCE AREAS. TEMPORARY IMPACTS TO THE RESOURCE AREAS ARE TO BE RESTORED IN PLACE TO MATCH PRE ALTERATION STATE.

SEE SHEET 3 OF 16 FOR PROPOSED LEGEND & ABBREVIATIONS FOR PERMITTING ONLY NOT FOR CONSTRUCTION

DWG. No. 6091_SITE(PENNY).DWG [WETCROSS 10]

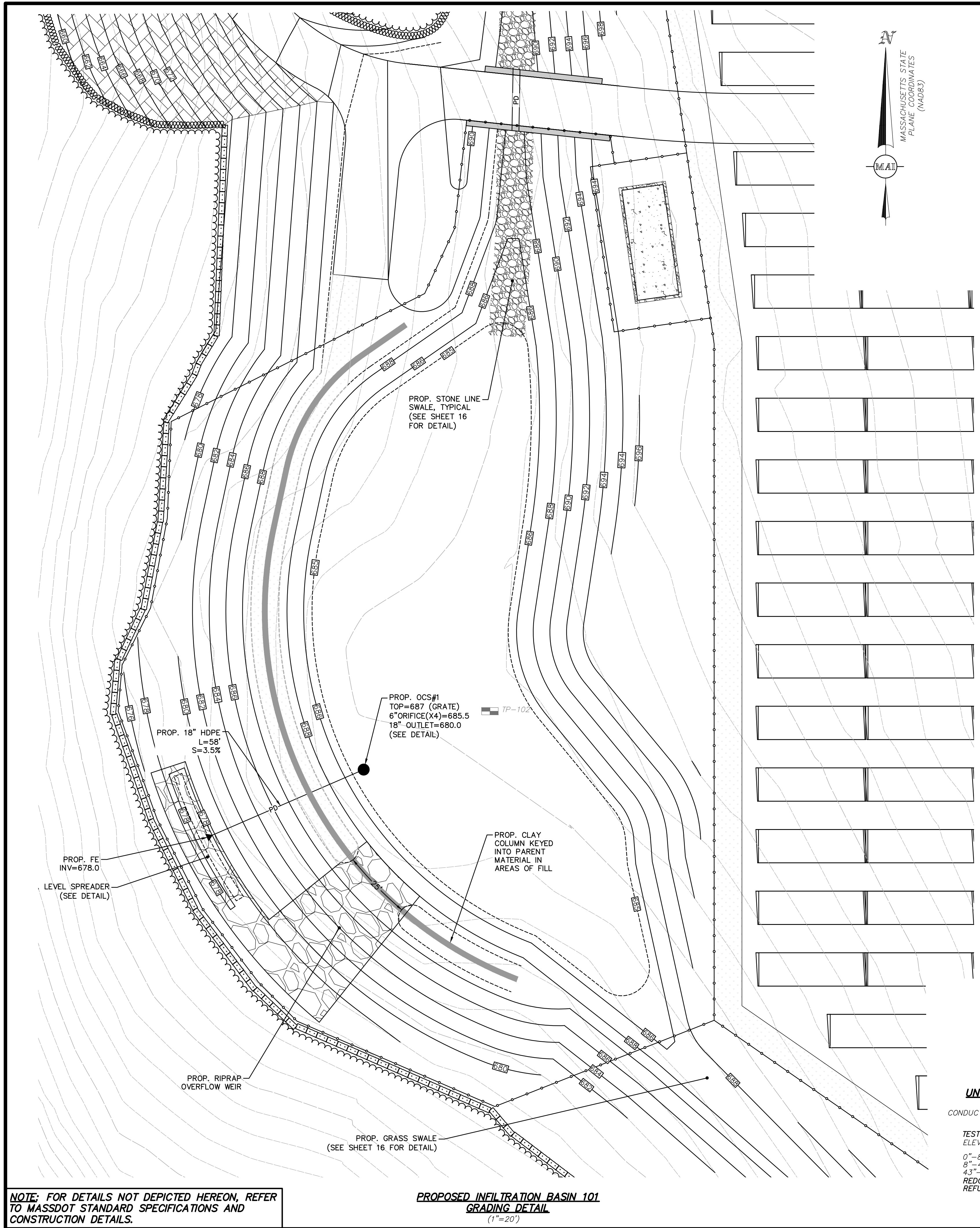
REVISIONS	DATE	DESCRIPTION



5 & 5R HATFIELD STREET
 WETLAND CROSSING
 LOCATED IN
 WILLIAMSBURG, MASSACHUSETTS
 (HAMPSHIRE COUNTY)
 PREPARED FOR
 ZPT ENERGY SOLUTIONS II, LLC

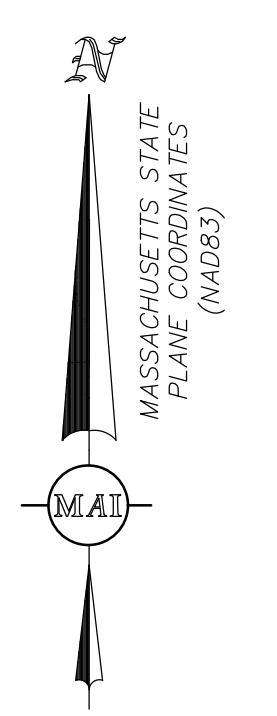
MERIDIAN ASSOCIATES
 500 CUMMINGS CENTER, SUITE 5950
 BEVERLY, MASSACHUSETTS 01915
 TELEPHONE: (978) 299-0447
 WWW.MERIDIANASSOC.COM

DATE: FEBRUARY 19, 2019
 SCALE: AS NOTED
 SHEET No. 8 OF 16
 PROJECT No. 6091

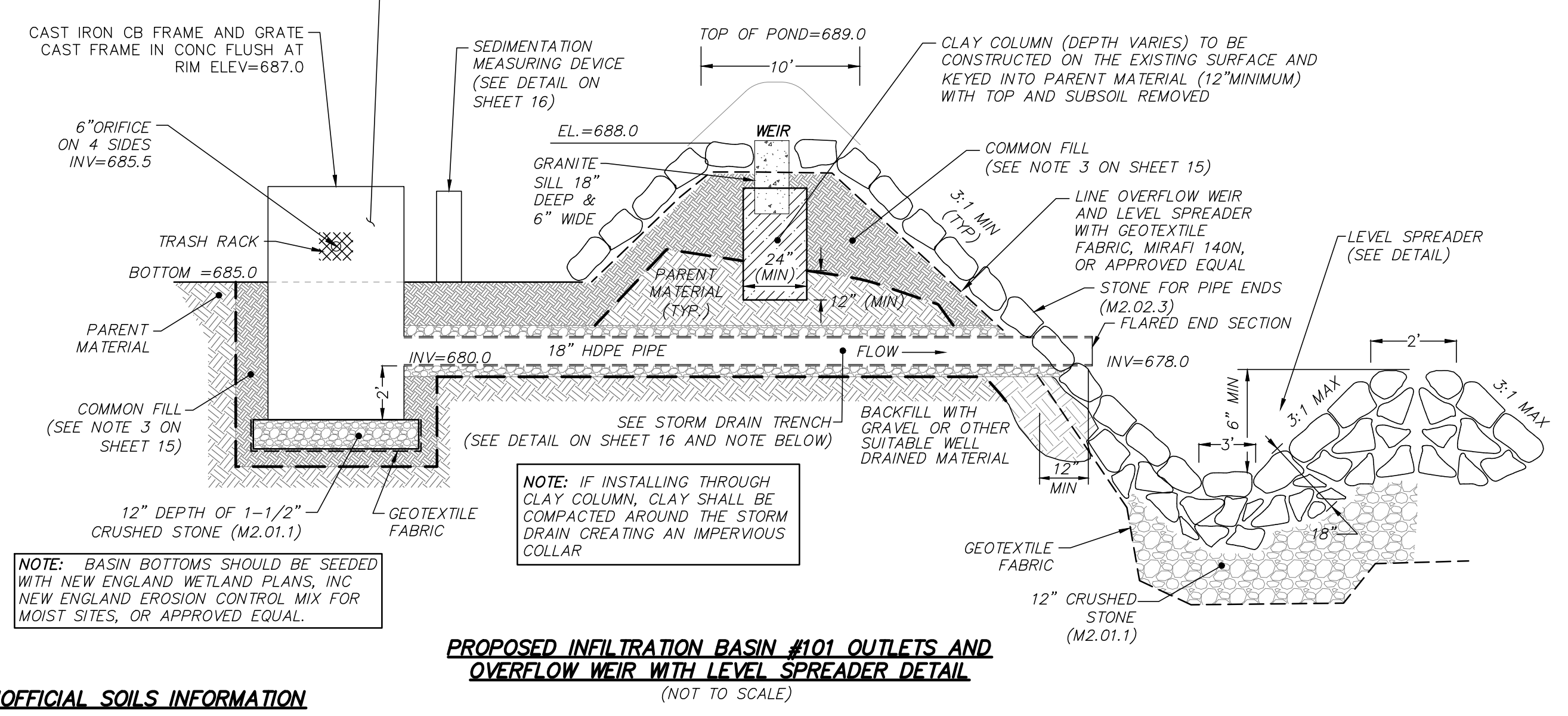


NOTE: FOR DETAILS NOT DEPICTED HEREON, REFER TO MASSDOT STANDARD SPECIFICATIONS AND CONSTRUCTION DETAILS.

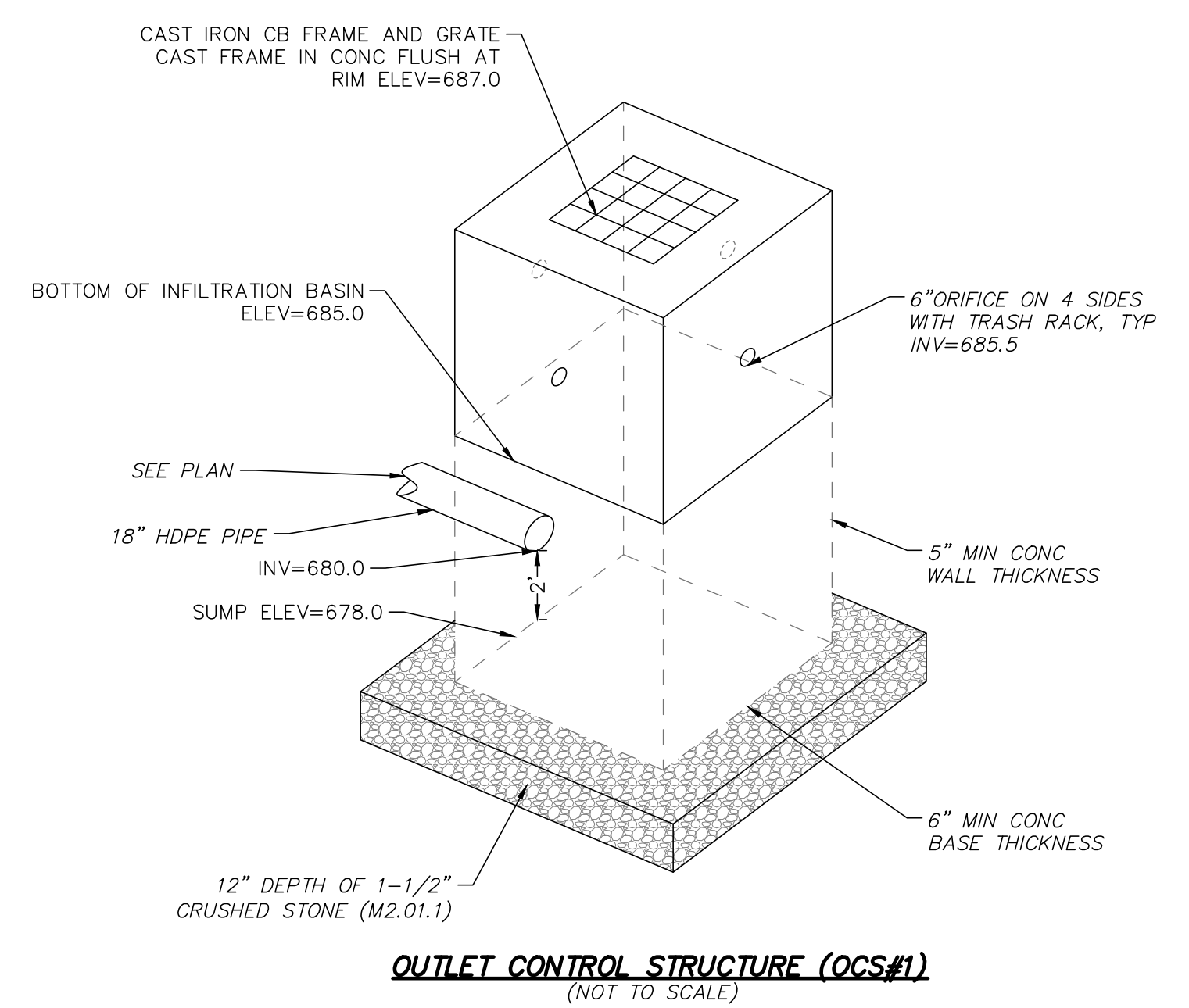
PROPOSED INFILTRATION BASIN #101 GRADING DETAIL
(1"=20')



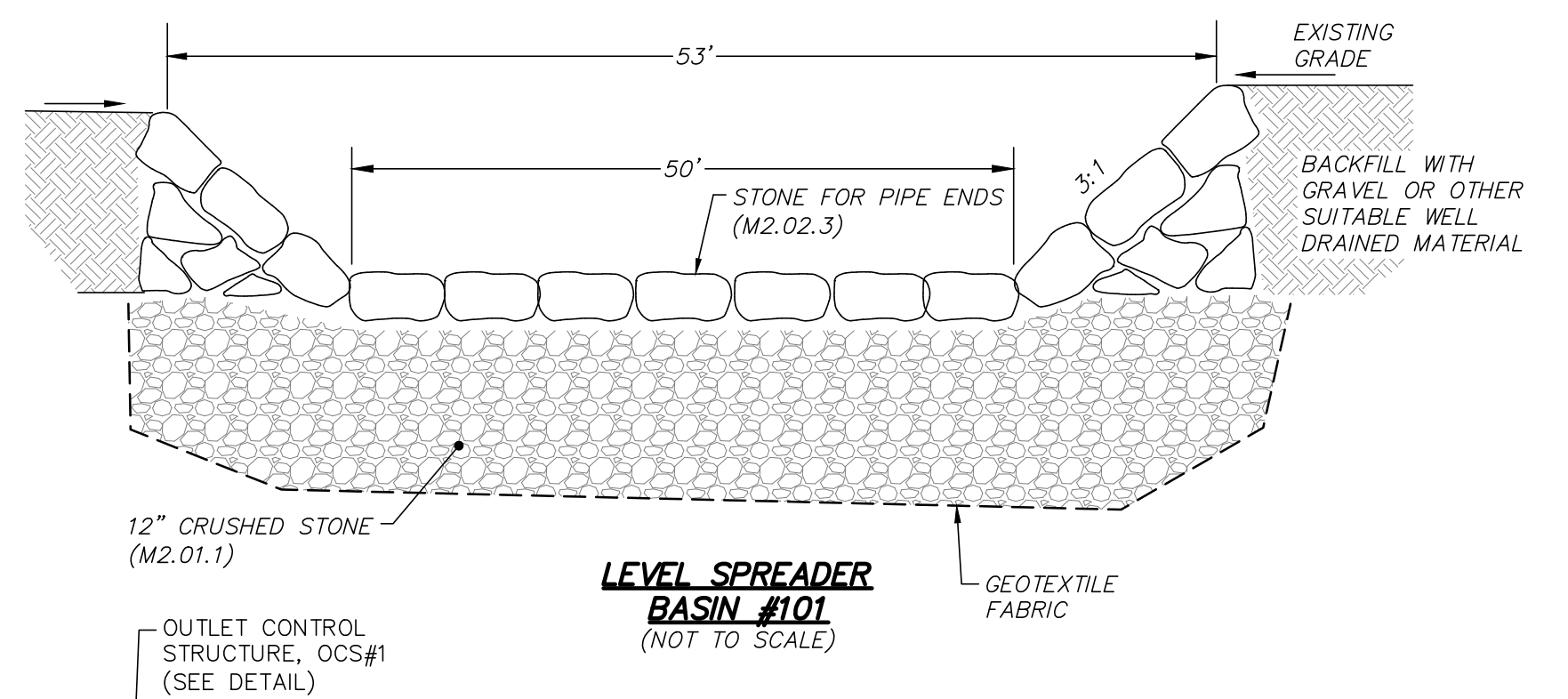
UNOFFICIAL SOILS INFORMATION
DATE: SEPTEMBER 13, 2019
CONDUCTED BY: ANDREW RODRIGUEZ, SE (13890)
TEST PIT TP-102
ELEV.=691±
0"-8" A HORIZON: FINE SANDY LOAM
8"-43" B HORIZON: FINE SANDY LOAM
43"-100" LAYER C: GRAVELLY SANDY LOAM
REDOX NOT OBSERVED
REFUSAL @ 100"



PROPOSED INFILTRATION BASIN #101 OUTLETS AND OVERFLOW WEIR WITH LEVEL SPREADER DETAIL
(NOT TO SCALE)

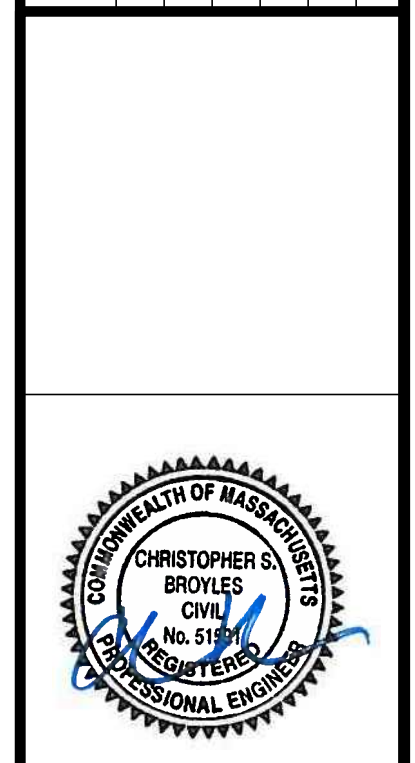


OUTLET CONTROL STRUCTURE (OCS#1)
(NOT TO SCALE)



LEVEL SPREADER BASIN #101
(NOT TO SCALE)

REVISIONS	DATE	DESCRIPTION



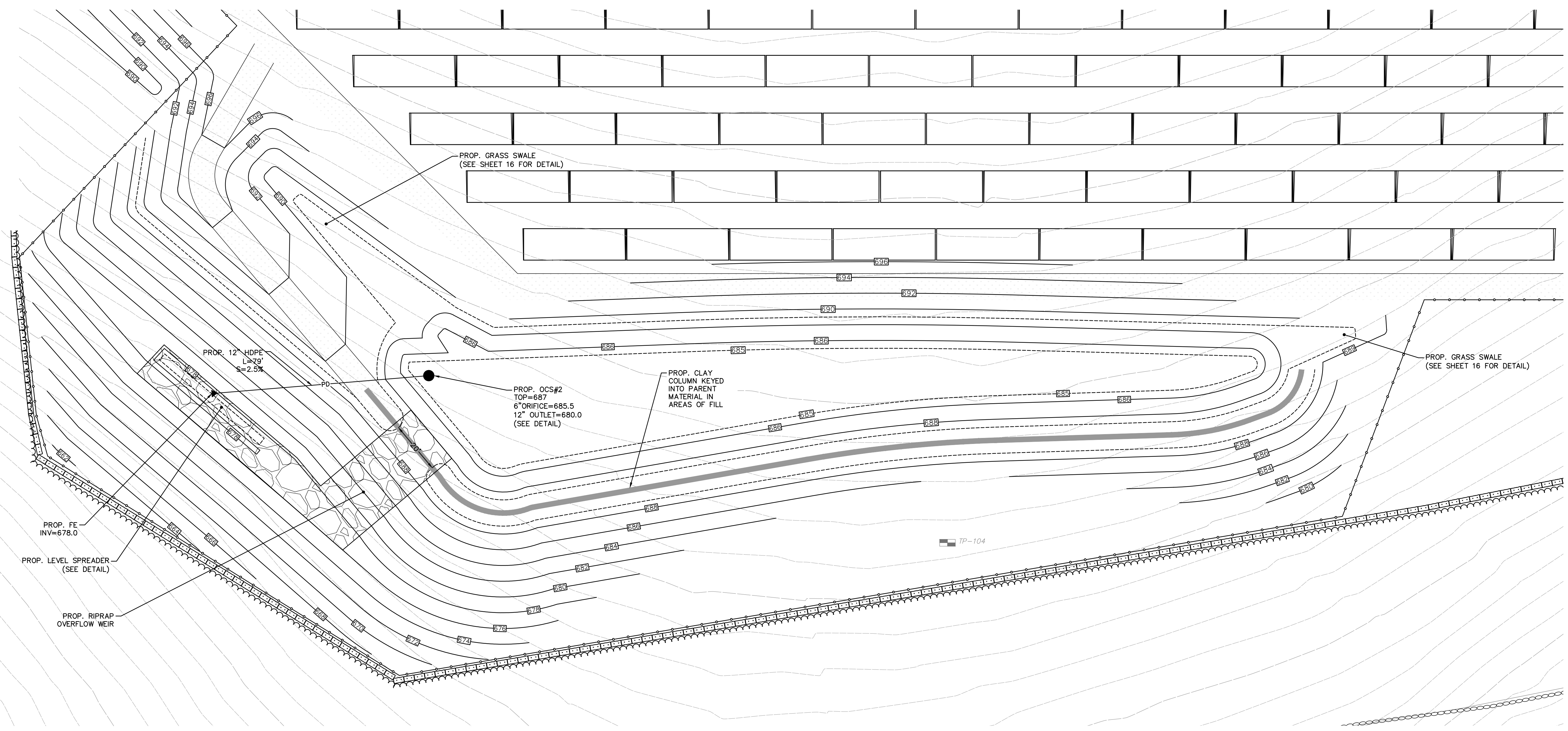
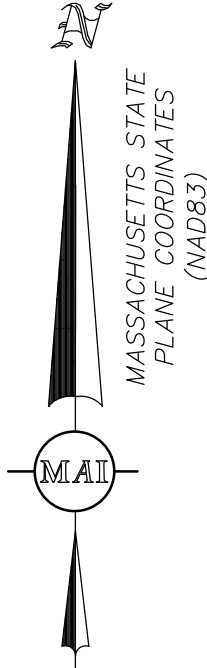
**5 & 5R HATFIELD STREET
BASIN DETAIL 1**
LOCATED IN
WILLIAMSBURG, MASSACHUSETTS
(HAMPSHIRE COUNTY)
PREPARED FOR
ZPT ENERGY SOLUTIONS II, LLC

MERIDIANS ASSOCIATES
500 CUMMINGS CENTER, SUITE 5950
BEVERLY, MASSACHUSETTS 01915
TELEPHONE: (978) 299-0447
WWW.MERIDIANSOC.COM
69 MILK STREET, SUITE 302
WESTBOROUGH, MASSACHUSETTS 01581
TELEPHONE: (508) 871-7030
DESIGNED BY: C. BROYLES
CHECKED BY: C. RYAN

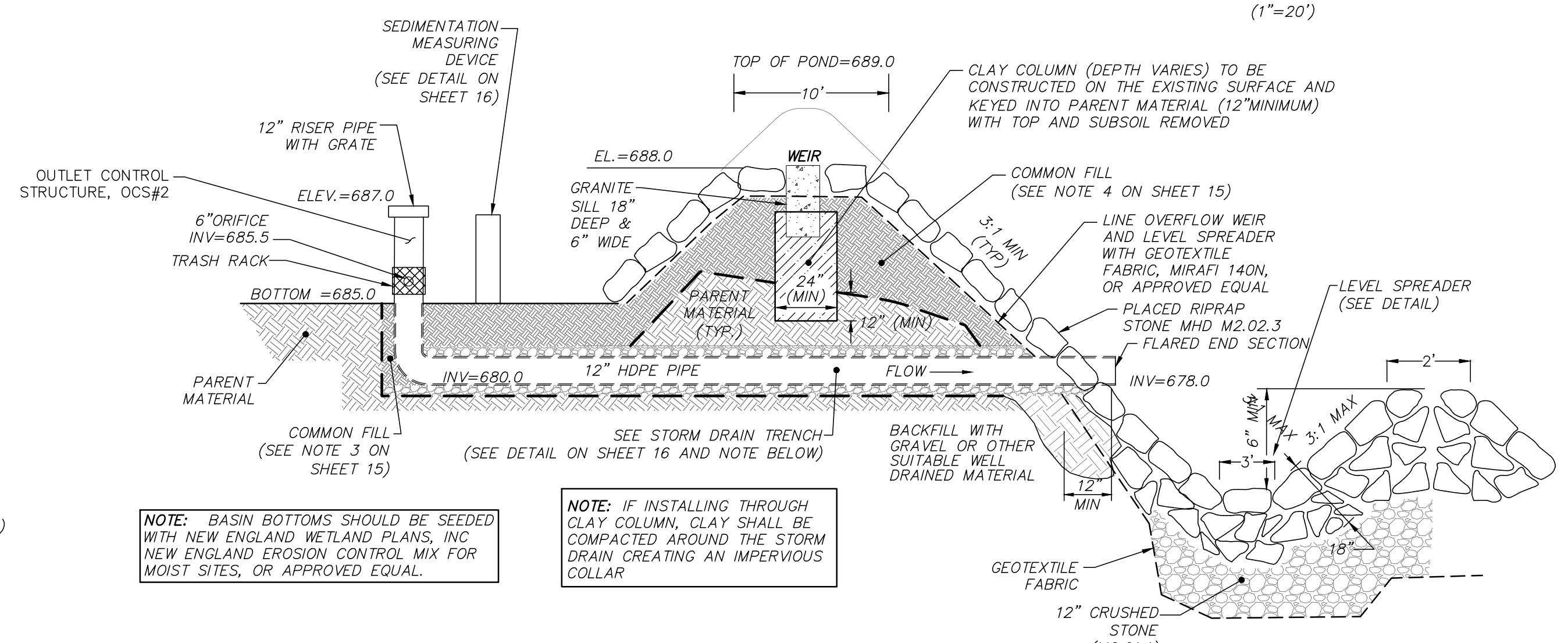
DATE: FEBRUARY 19, 2019
SCALE: AS NOTED
SHEET No. **9 OF 16**
PROJECT No. **6091**

SEE SHEET 3 OF 16 FOR PROPOSED LEGEND & ABBREVIATIONS
FOR PERMITTING ONLY NOT FOR CONSTRUCTION

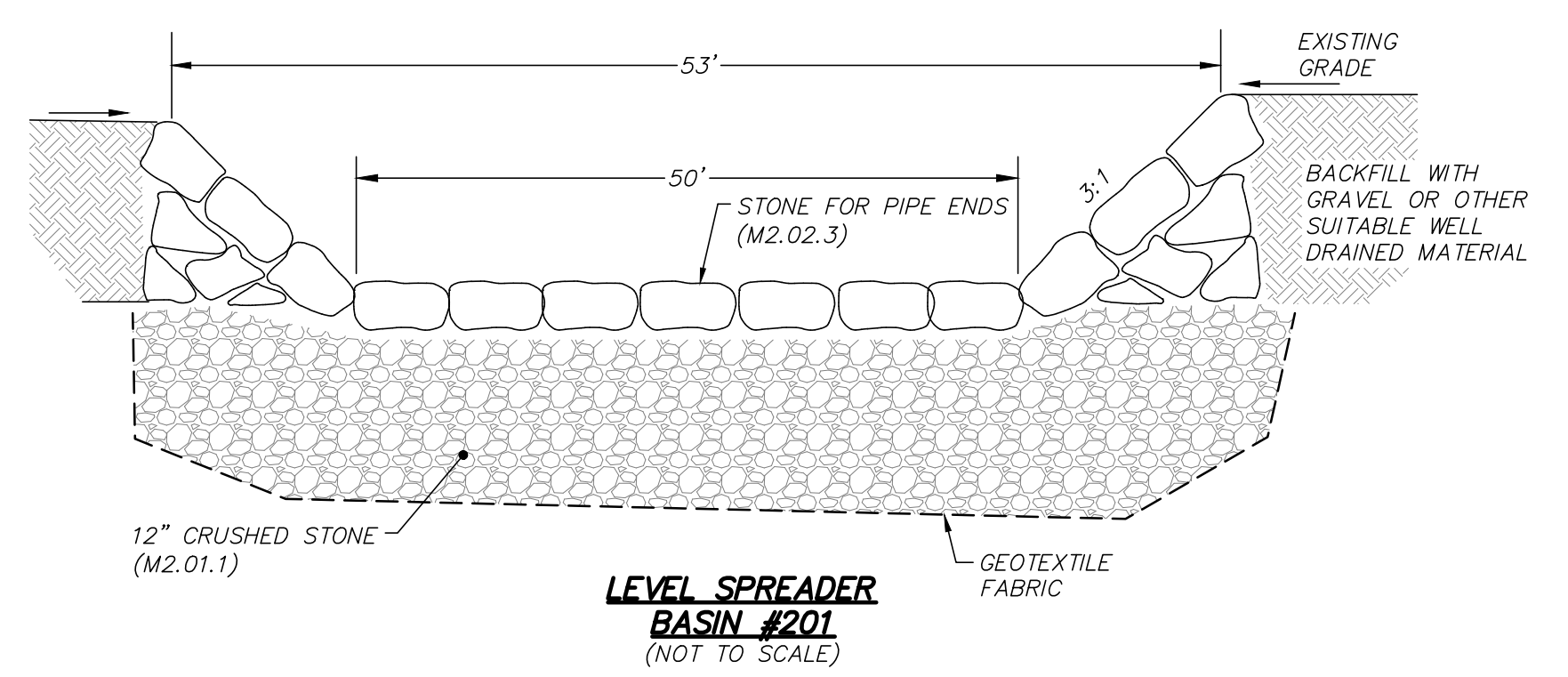
DWG. No. 6091_SITE(PENNY).DWG [POND DET 1 20]



**PROPOSED INFILTRATION BASIN #201
GRADING DETAIL**
(1"=20')



**PROPOSED INFILTRATION BASIN #201 OUTLETS AND
OVERFLOW WEIR WITH LEVEL SPREADER DETAIL**
(NOT TO SCALE)



**LEVEL SPREADER
BASIN #201**
(NOT TO SCALE)

UNOFFICIAL SOILS INFORMATION
DATE: SEPTEMBER 13, 2018
CONDUCTED BY: ANDREW RODRIGUEZ, SE (13890)

TEST PIT TP-104
ELEV.=68.5±
ASSUMED E.S.H.G.W. ELEV.=680.7
0"-7" A HORIZON: FINE SANDY LOAM
7"-23" B HORIZON: FINE SANDY LOAM
23"-108" LAYER C: GRAVELLY SANDY LOAM
WEAVING @ 27"
STANDING @ 100"

NOTE: BASIN BOTTOMS SHOULD BE SEEDED WITH NEW ENGLAND WETLAND PLANTS, INC NEW ENGLAND EROSION CONTROL MIX FOR MOIST SITES, OR APPROVED EQUAL.

NOTE: IF INSTALLING THROUGH CLAY COLUMN, CLAY SHALL BE COMPACTED AROUND THE STORM DRAIN CREATING AN IMPERVIOUS COLLAR

NOTE: FOR DETAILS NOT DEPICTED HEREON, REFER TO MASSDOT STANDARD SPECIFICATIONS AND CONSTRUCTION DETAILS.

SEE SHEET 3 OF 16 FOR PROPOSED LEGEND & ABBREVIATIONS

FOR PERMITTING ONLY NOT FOR CONSTRUCTION

DWG. No. 6091_SITE(PENNY).DWG [POND DET 2 20]

DATE: FEBRUARY 19, 2019
SCALE: AS NOTED
SHEET No. 10 OF 16
PROJECT No. 6091

REVISIONS	DATE	DESCRIPTION

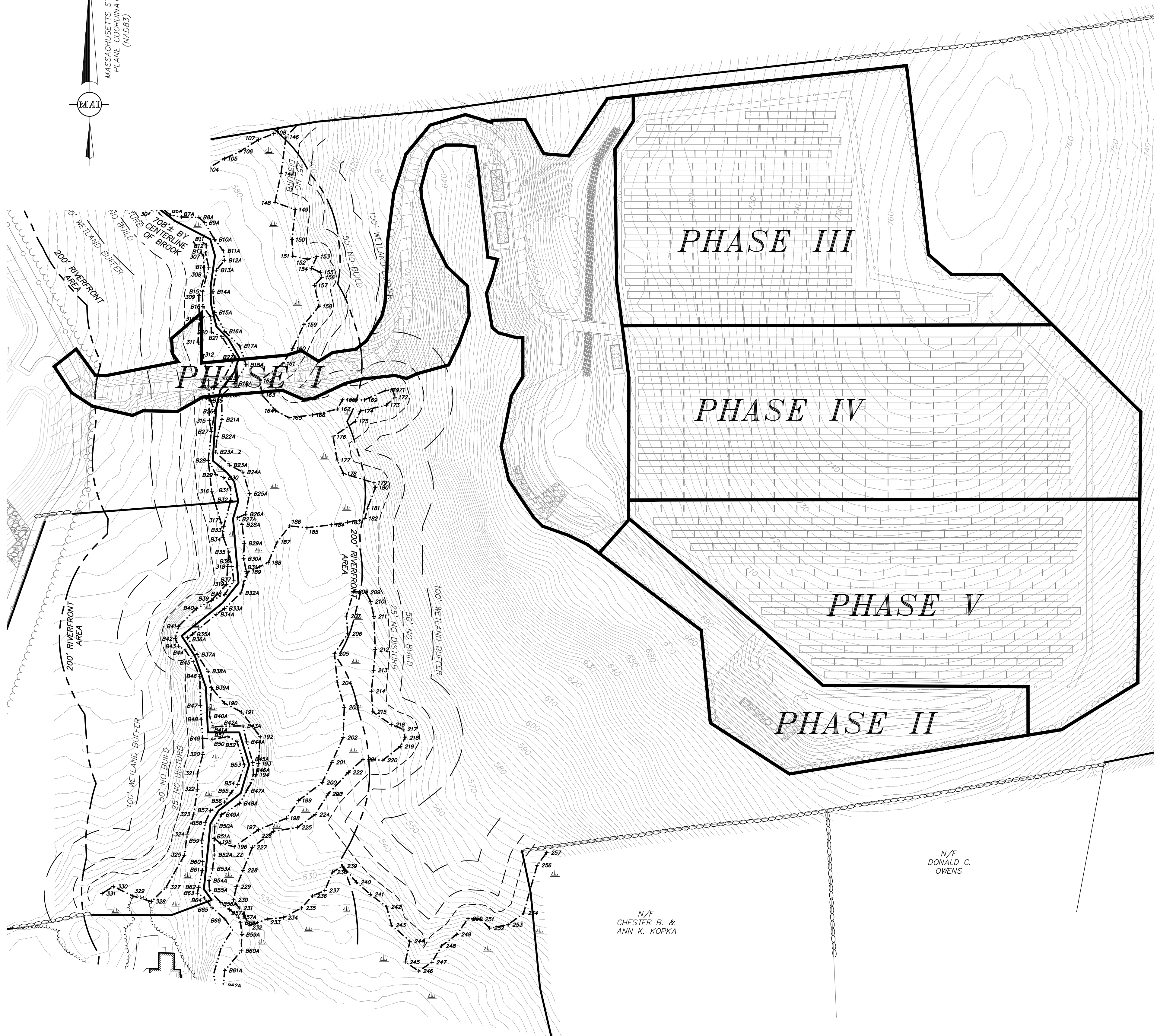
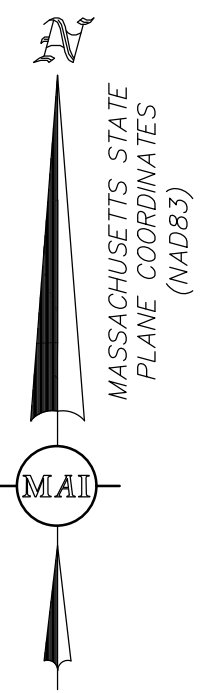


5 & 5R HATFIELD STREET
BASIN DETAIL 2
LOCATED IN
WILLIAMSBURG, MASSACHUSETTS
(HAMPSHIRE COUNTY)
PREPARED FOR
ZPT ENERGY SOLUTIONS II, LLC

MERIDIANS ASSOCIATES
500 CUMMINGS CENTER, SUITE 5950
BEVERLY, MASSACHUSETTS 01915
TELEPHONE: (978) 299-0447
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69 MILK STREET, SUITE 302
WESTBOROUGH, MASSACHUSETTS 01581
TELEPHONE: (508) 871-7030

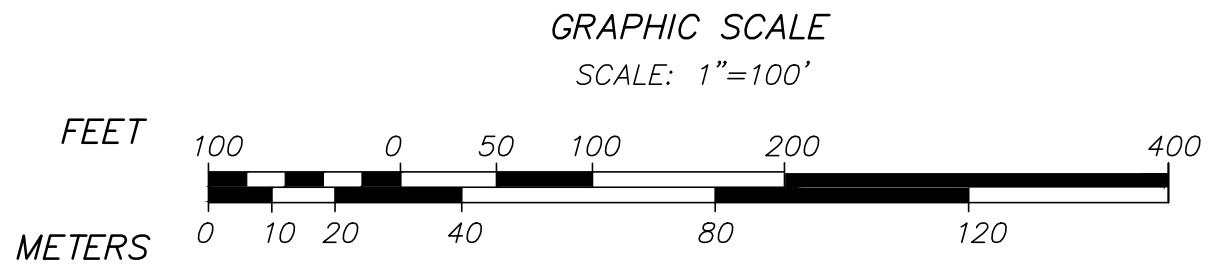
DESIGNED BY: C. BROYLES
CHECKED BY: C. RYAN



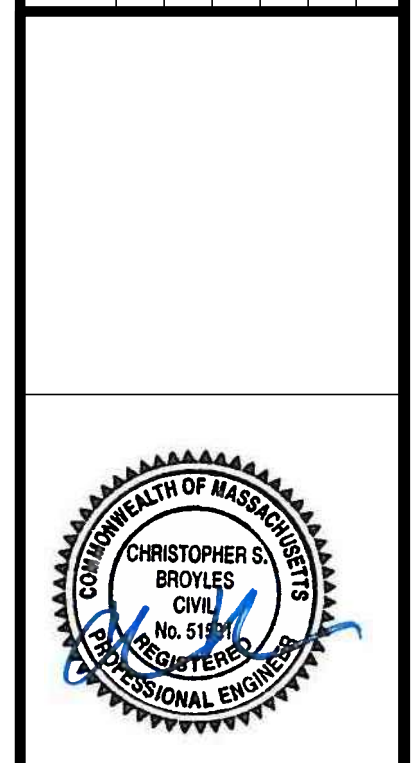
- NOTES:**
1. THE PURPOSE OF THIS PLAN IS TO DEPICT THE APPROXIMATE LOCATIONS OF THE PROJECTS CONSTRUCTION PHASES.
 2. REFER TO SHEETS 12-15 (EROSION CONTROL SHEETS), FOR ADDITIONAL NOTES AND INFORMATION.
 3. ONCE EROSION CONTROL MEASURES HAVE BEEN ESTABLISHED IN EACH PHASE AND NECESSARY CLEARING AND STABILIZATION HAS BEEN COMPLETED (AS LISTED ABOVE), ARRAY CONSTRUCTION MAY BEGIN. CONTRACTOR SHALL HAVE FLEXIBILITY TO BEGIN ARRAY CONSTRUCTION IN PHASE I, II OR III OUT OF SEQUENCE AS LONG AS IT IS NOT TO THE DETRIMENT OF EROSION AND SEDIMENTATION CONSIDERATION.

SITE PREPARATION SHALL BE CONDUCTED IN MULTIPLE PHASES IN ORDER TO MAXIMIZE EROSION AND SEDIMENTATION CONTROL

- PHASE I:**
1. ESTABLISH PHASE I EROSION AND SEDIMENTATION CONTROL MEASURES (HAYBALES, SILT FENCE AND FILTERMATT) AS DEPICTED ON SHEETS 12-14 AROUND AREAS OF DISTURBANCE AND MAINTAIN THROUGHOUT CONSTRUCTION IN ACCORDANCE WITH LOCAL REQUIREMENTS. PERFORM INSPECTIONS, REPAIR IF NECESSARY, AND DOCUMENT AFTER EACH PRECIPITATION EVENT OF 0.25-INCHES OR GREATER.
 2. PERFORM LIMITED CLEARING ACTIVITIES IN ORDER TO CONSTRUCT GRAVEL DRIVE.
 3. SITE PREPARATION SHALL INCLUDE CLEARING AND REMOVAL OF EXISTING VEGETATION AND DEBRIS. ALL TREES, STUMPS, BRUSH, SHRUBS, ROOTS, GRASS, WEEDS, RUBBISH, BITUMINOUS PAVEMENT, STONES LARGER THAN 2-IN. IN THE LARGEST DIAMETER AND OTHER OBJECTIONABLE MATERIAL SHALL BE REMOVED AND DISPOSED OF FROM AREAS TO BE FILLED AND COMPACTED. AREAS OUTSIDE OF THE LIMITS OF WORK SHALL BE PROTECTED FROM DAMAGE. NO STUMPS, TREES, LIMBS, OR BRUSH SHALL BE BURIED IN ANY FILLS OR EMBANKMENTS.
 4. CONSTRUCT INFILTRATION BASINS AND SWALE AS SHOWN ON PLANS.
 5. FOR AREAS WHERE NO GRADING IS PROPOSED, REPAIR UNEVEN AREAS WITHIN LIMITS OF THE SOLAR DEVELOPMENT, AS NECESSARY TO CREATE A TOLERABLE GROUND SURFACE. GENERAL TOLERANCE FOR ALLOWABLE GROUND SLOPE IS TWO FOOT VERTICAL CHANGE OVER A 20 FOOT HORIZONTAL RUN [NOTE THAT THIS REFERS TO THE ALLOWABLE LONGITUDINAL SLOPE (I.E., ALONG THE CONTOUR) AND NOT THE INCLINATION OF THE EXPOSURE (I.E., PERPENDICULAR TO THE CONTOUR)].
 6. UPON SIGNS OF CONCENTRATED FLOW BY EVIDENCE OF GULLYING OR RILLING IN DISTURBED AREAS, HAYBALES, OR APPROVED EQUAL, SHALL BE PLACED IN THESE AREAS, SPACED EVERY 50' IN THE UPGRADIENT SLOPE.
- PHASE II:**
1. ESTABLISH PHASE II EROSION AND SEDIMENTATION CONTROL MEASURES (HAYBALES, FILTERMATT & SILT FENCE) AS DEPICTED ON THE PLANS AND AROUND AREAS OF DISTURBANCE AND MAINTAIN THROUGHOUT CONSTRUCTION IN ACCORDANCE WITH LOCAL REQUIREMENTS. PERFORM INSPECTIONS, REPAIR IF NECESSARY, AND DOCUMENT AFTER EACH PRECIPITATION EVENT OF 0.25-INCHES OR GREATER (PHASE I EROSION CONTROL IS TO REMAIN IN PLACE AND MAINTAINED AS DESCRIBED ABOVE).
 2. REPEAT STEPS 3, 4, 5 AND 6 FROM PHASE I FOR PHASE III.
 3. ARRAY CONSTRUCTION AS SHOWN.
 4. ALL DISTURBED AREAS SHALL BE STABILIZED WITH SEED MIX GUIDELINES AS NOTED ON SHEET 15, IN THE EVENT THAT THE SEEDING FALLS OUTSIDE OF THE RECOMMENDED SEEDING DATES, DISTURBED AREAS SHALL BE RE-ESTABLISHED USING ALTERNATIVES METHODS AS APPROVED BY THE PROJECT SITE ENGINEER.
- PHASE III:**
1. ESTABLISH PHASE III EROSION AND SEDIMENTATION CONTROL MEASURES (HAYBALES, FILTERMATT & SILT FENCE) AS DEPICTED ON THE PLANS AND AROUND AREAS OF DISTURBANCE AND MAINTAIN THROUGHOUT CONSTRUCTION IN ACCORDANCE WITH LOCAL REQUIREMENTS. PERFORM INSPECTIONS, REPAIR IF NECESSARY, AND DOCUMENT AFTER EACH PRECIPITATION EVENT OF 0.25-INCHES OR GREATER (PHASE I & II EROSION CONTROL IS TO REMAIN IN PLACE AND MAINTAINED AS DESCRIBED ABOVE).
 2. PERFORM LIMITED CLEARING ACTIVITIES IN ORDER TO CONSTRUCT GRASS PATH.
 3. REPEAT STEPS 3, 5 AND 6 FROM PHASE I FOR PHASE III.
 4. PERFORM VEGETATION MANAGEMENT WITHIN AREAS AS SHOWN ON SHEET 4.
 5. ARRAY CONSTRUCTION AS SHOWN.
 6. ALL DISTURBED AREAS SHALL BE STABILIZED WITH SEED MIX GUIDELINES AS NOTED ON SHEET 15, IN THE EVENT THAT THE SEEDING FALLS OUTSIDE OF THE RECOMMENDED SEEDING DATES, DISTURBED AREAS SHALL BE RE-ESTABLISHED USING ALTERNATIVES METHODS AS APPROVED BY THE PROJECT SITE ENGINEER.
- PHASE IV:**
1. ESTABLISH PHASE IV EROSION AND SEDIMENTATION CONTROL MEASURES (HAYBALES, FILTERMATT & SILT FENCE) AS DEPICTED ON THE PLANS AND AROUND AREAS OF DISTURBANCE AND MAINTAIN THROUGHOUT CONSTRUCTION IN ACCORDANCE WITH LOCAL REQUIREMENTS. PERFORM INSPECTIONS, REPAIR IF NECESSARY, AND DOCUMENT AFTER EACH PRECIPITATION EVENT OF 0.25-INCHES OR GREATER (PHASE I, II & III EROSION CONTROL IS TO REMAIN IN PLACE AND MAINTAINED AS DESCRIBED ABOVE).
 2. PERFORM LIMITED CLEARING ACTIVITIES IN ORDER TO CONSTRUCT GRAVEL DRIVE AND GRASS PATH.
 3. REPEAT STEPS 3, 5 AND 6 FROM PHASE I FOR PHASE IV.
 4. PERFORM VEGETATION MANAGEMENT WITHIN AREAS AS SHOWN ON SHEET 4.
 5. ARRAY CONSTRUCTION AS SHOWN.
 6. ALL DISTURBED AREAS SHALL BE STABILIZED WITH SEED MIX GUIDELINES AS NOTED ON SHEET 15, IN THE EVENT THAT THE SEEDING FALLS OUTSIDE OF THE RECOMMENDED SEEDING DATES, DISTURBED AREAS SHALL BE RE-ESTABLISHED USING ALTERNATIVES METHODS AS APPROVED BY THE PROJECT SITE ENGINEER.
- PHASE V:**
1. ESTABLISH PHASE V EROSION AND SEDIMENTATION CONTROL MEASURES (HAYBALES, FILTERMATT & SILT FENCE) AS DEPICTED ON THE PLANS AND AROUND AREAS OF DISTURBANCE AND MAINTAIN THROUGHOUT CONSTRUCTION IN ACCORDANCE WITH LOCAL REQUIREMENTS. PERFORM INSPECTIONS, REPAIR IF NECESSARY, AND DOCUMENT AFTER EACH PRECIPITATION EVENT OF 0.25-INCHES OR GREATER (PHASE I, II, III & IV EROSION CONTROL IS TO REMAIN IN PLACE AND MAINTAINED AS DESCRIBED ABOVE).
 2. PERFORM LIMITED CLEARING ACTIVITIES IN ORDER TO CONSTRUCT GRASS ACCESS PATH.
 3. REPEAT STEPS 3, 5 AND 6 FROM PHASE I FOR PHASE V.
 4. PERFORM VEGETATION MANAGEMENT WITHIN AREAS AS SHOWN ON SHEET 4.
 5. ARRAY CONSTRUCTION AS SHOWN.
 6. ALL DISTURBED AREAS SHALL BE STABILIZED WITH SEED MIX GUIDELINES AS NOTED ON SHEET 15, IN THE EVENT THAT THE SEEDING FALLS OUTSIDE OF THE RECOMMENDED SEEDING DATES, DISTURBED AREAS SHALL BE RE-ESTABLISHED USING ALTERNATIVES METHODS AS APPROVED BY THE PROJECT SITE ENGINEER.
 7. REMOVE ANY ACCUMULATED SEDIMENT FROM TEMPORARY SEDIMENTATION BASINS. BRING TEMPORARY SEDIMENTATION BASINS TO GRADE AND SEED.
 8. UPON COMPLETION OF CONSTRUCTION ACTIVITIES WITHIN THE LIMIT OF WORK, THE CONTRACTOR SHALL EFFECTIVELY AND PERMANENTLY STABILIZE THE SITE AND ALL VEGETATIVE COVER SHALL BE RE-ESTABLISHED TO THE SATISFACTION OF TOWN AUTHORITIES.



REVISIONS	DATE	DESCRIPTION



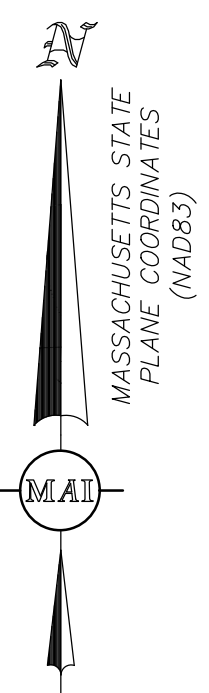
5 & 5R HATFIELD STREET
PHASING PLAN
LOCATED IN
WILLIAMSBURG, MASSACHUSETTS
(HAMPSHIRE COUNTY)
PREPARED FOR
ZPT ENERGY SOLUTIONS II, LLC

MERIDIANS ASSOCIATES
500 CUMMINGS CENTER, SUITE 5950
BEVERLY, MASSACHUSETTS 01915
TELEPHONE: (978) 299-0447
WWW.MERIDIANASSOC.COM

DESIGNED BY: C. BROYLES
CHECKED BY: C. RYAN

DATE:
FEBRUARY 19, 2019
SCALE:
1"=100'
SHEET No.
11 OF 16
PROJECT No.
6091

DWG. No. 6091_SITE(PENNY).DWG [PHASING 100]
FOR PERMITTING ONLY
NOT FOR CONSTRUCTION



TEMPORARY SEDIMENTATION BASINS ARE TO BE INSTALLED IN LOCATIONS UPSTREAM OF ANY EROSION CONTROL BARRIERS WHERE EXCESS SEDIMENT IS OBSERVED DURING THE CONSTRUCTION PROCESS. CONTRACTOR TO LOCATE TEMPORARY SEDIMENTATION BASINS AS THEY DEEM NECESSARY TO PREVENT SEDIMENT FROM LEAVING THE LIMIT OF WORK. AS THE SITE STABILIZES, THE TEMPORARY SEDIMENTATION BASINS CAN BE REMOVED AND BROUGHT TO FINISHED GRADES.

VEGETATION MANAGEMENT AREA
AREAS OUTSIDE OF THE FENCE THAT DO NOT REQUIRE GRADING ARE CUT BUT STUMPS AND UNDERGROWTH REMAIN AND THE GROUND IS STABILIZED WITH WOOD MULCH/GRINDINGS AND SEEDED WITH NEW ENGLAND CONSERVATION/WILDLIFE MIX.

AREAS WHERE GRADING IS NEEDED (CUTS AND FILLS), THE STUMPS SHALL BE REMOVED AND THE AREA STABILIZED WITH LOAM AND NEW ENGLAND CONSERVATION/WILDLIFE MIX SEED AS NEEDED.

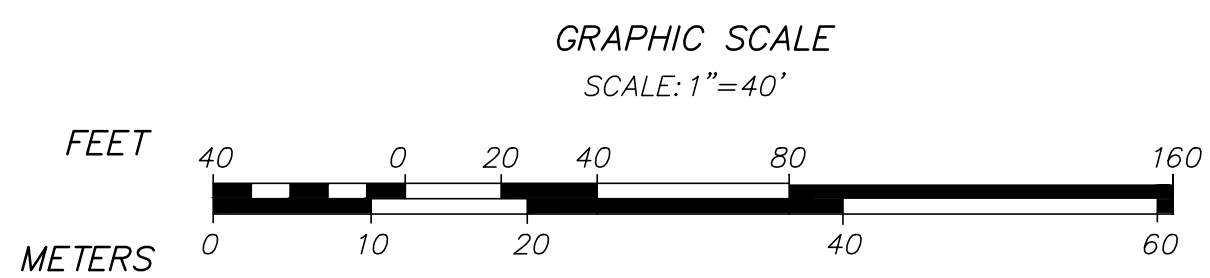
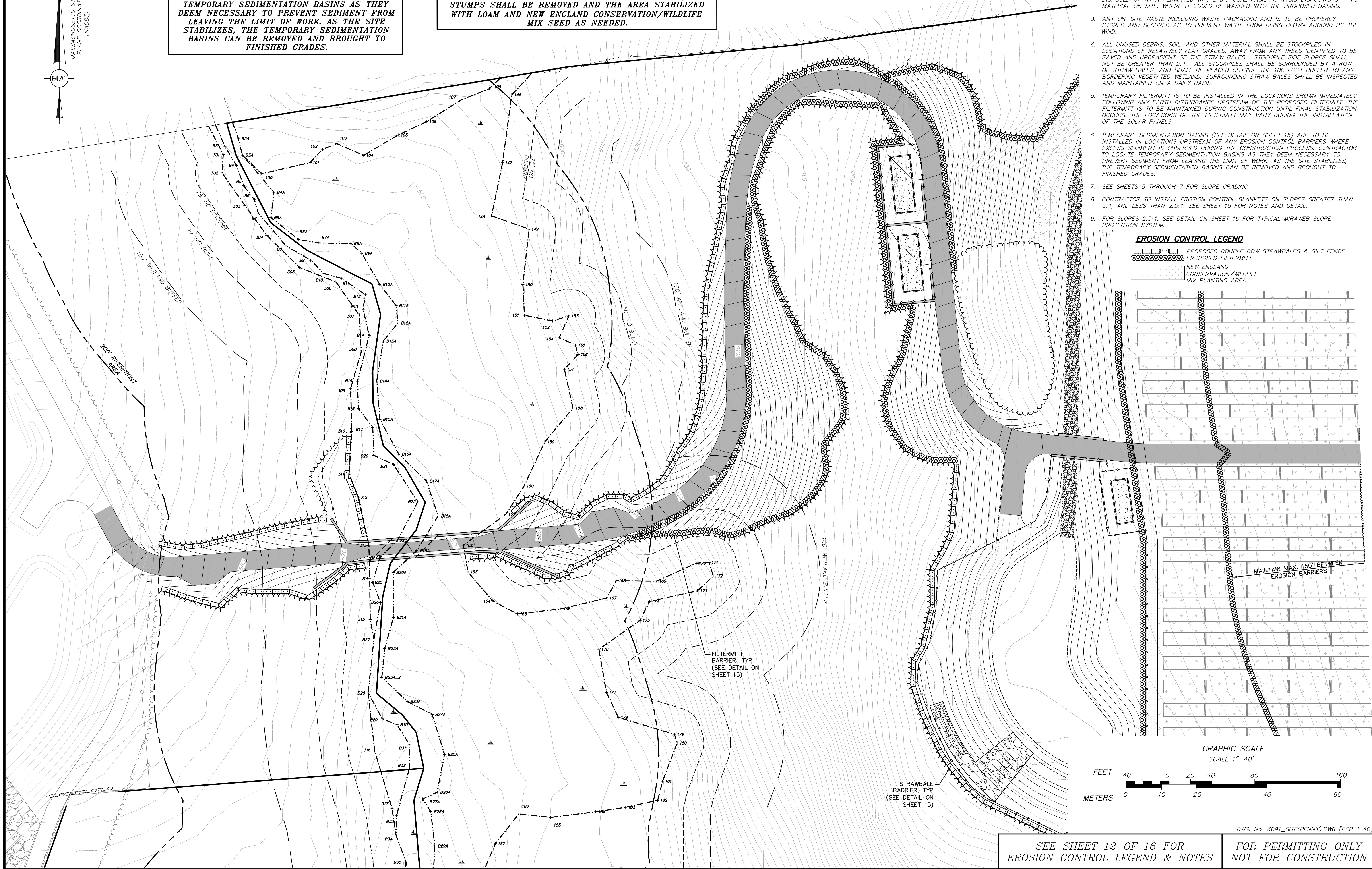
CONTRACTOR TO UTILIZE SPRAY MULCH WITH TACKIFIER AS AN ALTERNATIVE TO FILTERMITT WHEN APPLICABLE

EROSION CONTROL NOTES

1. CONTRACTOR IS TO REFER TO AND COMPLY WITH THE OPERATION AND MAINTENANCE PROGRAM FOR 5 HATFIELD ROAD, PREPARED BY MERIDIAN ASSOCIATES DATED FEBRUARY 19, 2019.
2. TRASH MAY COLLECT IN THE BMP'S, POTENTIALLY CAUSING CLOGGING OF THE FACILITIES. ALL DEBRIS AND LITTER SHALL BE REMOVED WHEN NECESSARY, AND AFTER EACH STORM EVENT, SEDIMENT AND DEBRIS COLLECTED SHOULD BE DISPOSED OF AT A PERMITTED WASTE DISPOSAL FACILITY. AVOID DISPOSING OF THIS MATERIAL ON SITE, WHERE IT COULD BE WASHED INTO THE PROPOSED BASINS.
3. ANY ON-SITE WASTE INCLUDING WASTE PACKAGING AND IS TO BE PROPERLY STORED AND SECURED AS TO PREVENT WASTE FROM BEING BLOWN AROUND BY THE WIND.
4. ALL UNUSED DEBRIS, SOIL, AND OTHER MATERIAL SHALL BE STOCKPILED IN LOCATIONS OF RELATIVELY FLAT GRADES, AWAY FROM ANY TREES IDENTIFIED TO BE SAVED AND UPGRADIENT OF THE STRAW BALES. STOCKPILE SIDE SLOPES SHALL NOT BE GREATER THAN 2:1. ALL STOCKPILES SHALL BE SURROUNDED BY A ROW OF STRAW BALES, AND SHALL BE PLACED OUTSIDE THE 100 FOOT BUFFER TO ANY BORDERING VEGETATED WETLAND. SURROUNDING STRAW BALES SHALL BE INSPECTED AND MAINTAINED ON A DAILY BASIS.
5. TEMPORARY FILTERMITT IS TO BE INSTALLED IN THE LOCATIONS SHOWN IMMEDIATELY FOLLOWING ANY EARTH DISTURBANCE UPSTREAM OF THE PROPOSED FILTERMITT. THE FILTERMITT IS TO BE MAINTAINED DURING CONSTRUCTION UNTIL FINAL STABILIZATION OCCURS. THE LOCATIONS OF THE FILTERMITT MAY VARY DURING THE INSTALLATION OF THE SOLAR PANELS.
6. TEMPORARY SEDIMENTATION BASINS (SEE DETAIL ON SHEET 15) ARE TO BE INSTALLED IN LOCATIONS UPSTREAM OF ANY EROSION CONTROL BARRIERS WHERE EXCESS SEDIMENT IS OBSERVED DURING THE CONSTRUCTION PROCESS. CONTRACTOR TO LOCATE TEMPORARY SEDIMENTATION BASINS AS THEY DEEM NECESSARY TO PREVENT SEDIMENT FROM LEAVING THE LIMIT OF WORK. AS THE SITE STABILIZES, THE TEMPORARY SEDIMENTATION BASINS CAN BE REMOVED AND BROUGHT TO FINISHED GRADES.
7. SEE SHEETS 5 THROUGH 7 FOR SLOPE GRADING.
8. CONTRACTOR TO INSTALL EROSION CONTROL BLANKETS ON SLOPES GREATER THAN 3:1, AND LESS THAN 2.5:1. SEE SHEET 15 FOR NOTES AND DETAIL.
9. FOR SLOPES 2.5:1, SEE DETAIL ON SHEET 16 FOR TYPICAL MIRAWEB SLOPE PROTECTION SYSTEM.

EROSION CONTROL LEGEND

- PROPOSED DOUBLE ROW STRAWBALES & SILT FENCE
- PROPOSED FILTERMITT
- NEW ENGLAND CONSERVATION/WILDLIFE MIX PLANTING AREA



SEE SHEET 12 OF 16 FOR EROSION CONTROL LEGEND & NOTES FOR PERMITTING ONLY NOT FOR CONSTRUCTION

REVISIONS	DATE	DESCRIPTION

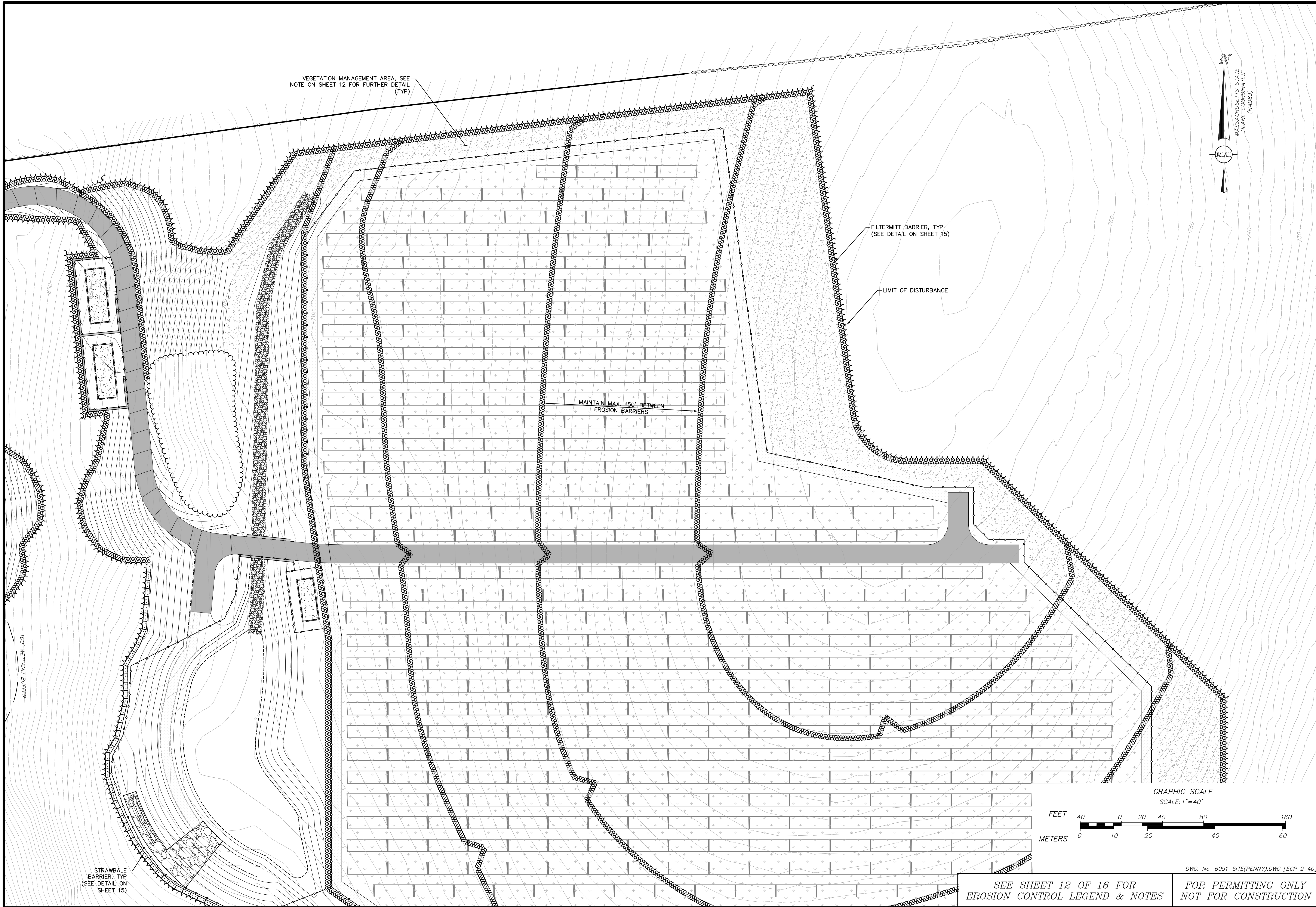


5 & 5R HATFIELD STREET
EROSION & SEDIMENT PLAN 1
LOCATED IN
WILLIAMSBURG, MASSACHUSETTS
(HAMPSHIRE COUNTY)
PREPARED FOR
ZPT ENERGY SOLUTIONS II, LLC

MERIDIAN ASSOCIATES
500 CUMMINGS CENTER, SUITE 5950
BEVERLY, MASSACHUSETTS 01915
TELEPHONE: (978) 299-0447
WWW.MERIDIANASSOC.COM

CHECKED BY: C. RYAN

DATE: FEBRUARY 19, 2019
SCALE: 1"=40'
SHEET No. 12 OF 16
PROJECT No. 6091

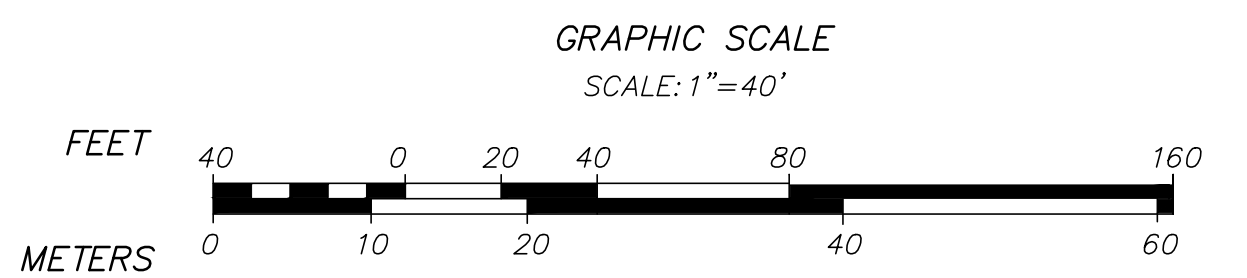


VEGETATION MANAGEMENT AREA, SEE NOTE ON SHEET 12 FOR FURTHER DETAIL (TYP)

FILTERMITT BARRIER, TYP (SEE DETAIL ON SHEET 15)

LIMIT OF DISTURBANCE

MAINTAIN MAX 150' BETWEEN EROSION BARRIERS



STRAWBALE BARRIER, TYP (SEE DETAIL ON SHEET 15)

100' WETLAND BUFFER

REVISIONS	DATE	DESCRIPTION	BY



5 & 5R HATFIELD STREET
 EROSION & SEDIMENT PLAN 2
 LOCATED IN
 WILLIAMSBURG, MASSACHUSETTS
 (HAMPSHIRE COUNTY)
 PREPARED FOR
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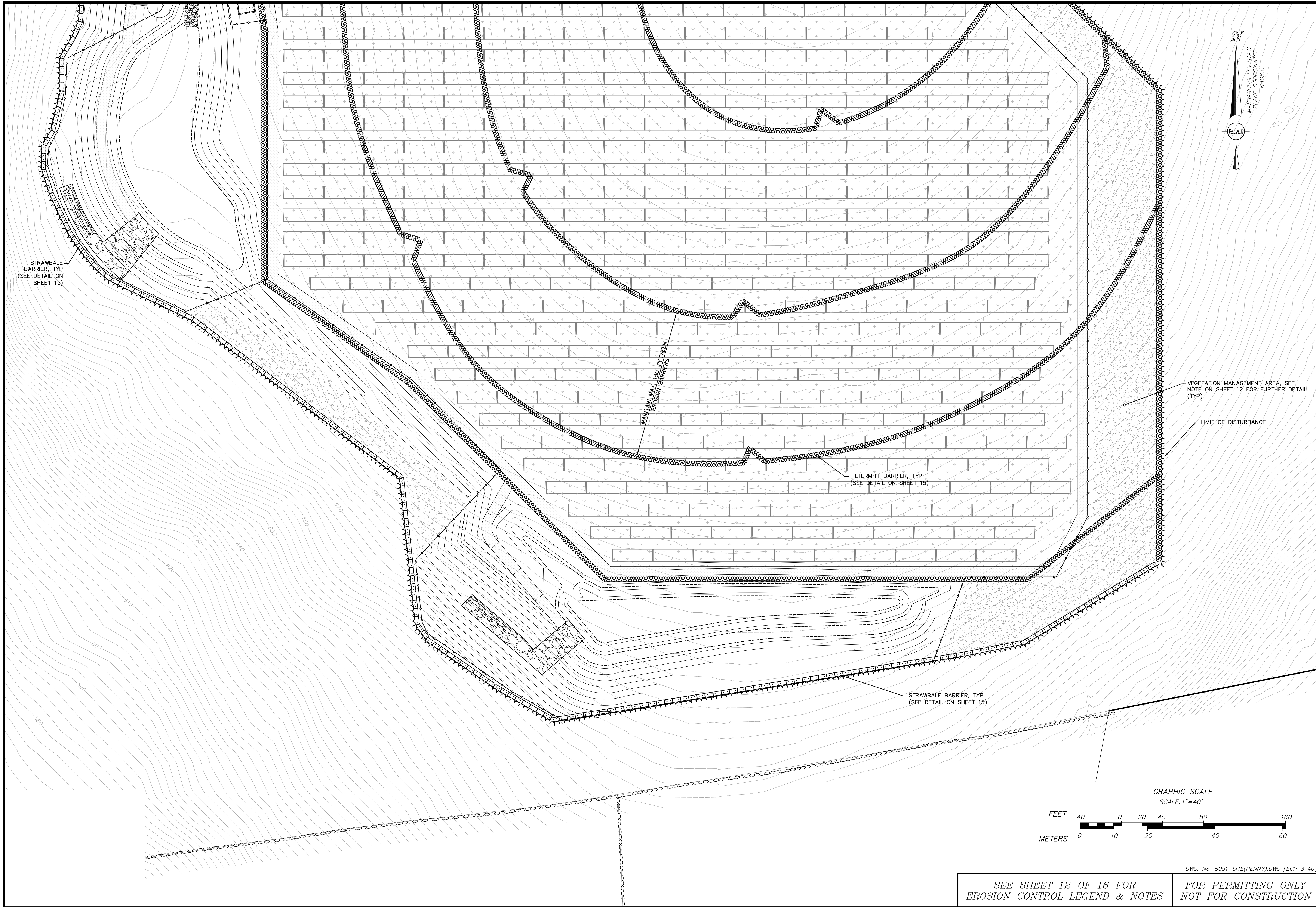
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 BEVERLY, MASSACHUSETTS 01915
 TELEPHONE: (978) 299-0447
 WWW.MERIDIANASSOC.COM

DESIGNED BY: C. BROYLES
 CHECKED BY: C. RYAN

DATE: FEBRUARY 19, 2019
 SCALE: 1" = 40'
 SHEET No. 13 OF 16
 PROJECT No. 6091

SEE SHEET 12 OF 16 FOR EROSION CONTROL LEGEND & NOTES
 FOR PERMITTING ONLY NOT FOR CONSTRUCTION

DWG. No. 6091_SITE(PENNY).DWG [ECP 2 40]



STRAWBALE BARRIER, TYP (SEE DETAIL ON SHEET 15)

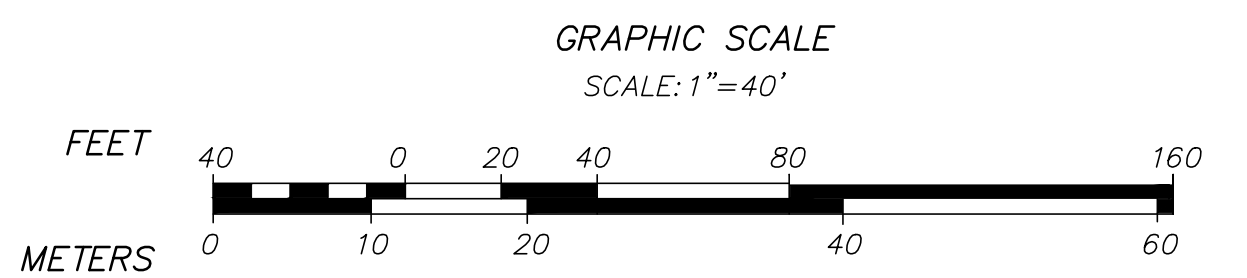
MAINTAIN MAX. 150' BETWEEN EROSION BARRIERS

FILTERMITT BARRIER, TYP (SEE DETAIL ON SHEET 15)

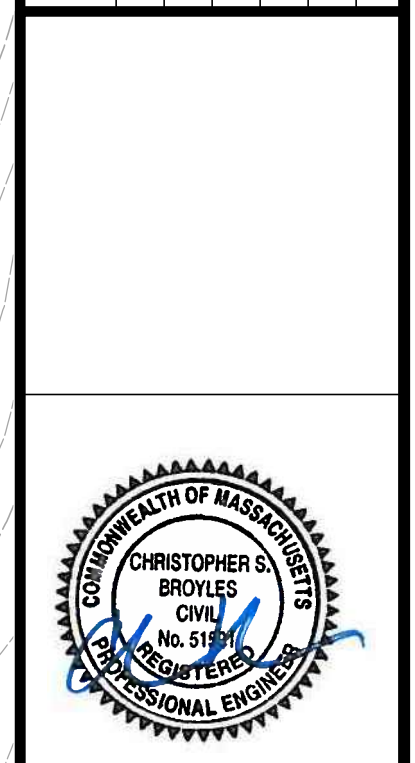
STRAWBALE BARRIER, TYP (SEE DETAIL ON SHEET 15)

VEGETATION MANAGEMENT AREA, SEE NOTE ON SHEET 12 FOR FURTHER DETAIL (TYP)

LIMIT OF DISTURBANCE



REVISIONS	DATE	DESCRIPTION	BY



5 & 5R HATFIELD STREET
 EROSION & SEDIMENT PLAN 3
 LOCATED IN
 WILLIAMSBURG, MASSACHUSETTS
 (HAMPSHIRE COUNTY)
 PREPARED FOR
 ZPT ENERGY SOLUTIONS II, LLC

MERIDIAN ASSOCIATES
 500 CUMMINGS CENTER, SUITE 5950
 BEVERLY, MASSACHUSETTS 01915
 TELEPHONE: (978) 299-4447
 WWW.MERIDIANASSOC.COM

DESIGNED BY: C. BROYLES
 CHECKED BY: C. RYAN

DATE: FEBRUARY 19, 2019
 SCALE: 1" = 40'
 SHEET No. 14 OF 16
 PROJECT No. 6091

SEE SHEET 12 OF 16 FOR EROSION CONTROL LEGEND & NOTES
 FOR PERMITTING ONLY NOT FOR CONSTRUCTION

DWG. No. 6091_SITE(PENNY).DWG [ECP 3 40]

NOTES:

- EXISTING GROUND WITHIN THE PROPOSED CHAINLINK FENCE SHALL BE CLEARED, STUMPED AND RE-GRADED TO ELIMINATE MINOR SURFACE DISTURBANCES. RE-VEGETATION OF THE SITE SHALL BE ESTABLISHED WITH LOW GROWTH GROUND COVER.
- THE PROPOSED TREE CLEARING ALSO DEPICTS THE LIMIT OF WORK TO BE PERFORMED ON THE PROJECT SITE. NO TREES OUTSIDE THE DESIGNATED LIMIT OF WORK LINE ARE TO BE REMOVED BY THE CONTRACTOR.
- COMMON FILL (SITE GRADING AREAS) SHALL CONSIST OF MINERAL SOIL SUBSTANTIALLY FREE FROM ORGANIC MATERIALS, LOAM, WOOD TRASH AND OTHER OBJECTIONABLE MATERIALS WHICH MAY BE COMPRESSIBLE OR WHICH CANNOT BE PROPERLY COMPACTED. SELECT COMMON FILL SHALL NOT CONTAIN STONES LARGER THAN 2-IN. IN LARGEST DIAMETER AND SHALL HAVE A MAXIMUM OF 75% PASSING THE NO. 40 SIEVE AND A MAXIMUM OF 20% PASSING THE NO. 200 SIEVE. SELECT COMMON FILL SHALL NOT CONTAIN GRANITE BLOCKS, BROKEN CONCRETE, MASONRY RUBBLE OR OTHER SIMILAR MATERIALS. IT SHALL HAVE PHYSICAL PROPERTIES SUCH THAT IT CAN BE EASILY SPREAD AND COMPACTED DURING FILLING. SNOW, ICE AND FROZEN SOIL WILL NOT BE PERMITTED. SOIL EXCAVATED FROM THE STRUCTURE AREAS AND WHICH MEETS THE ABOVE REQUIREMENTS MAY BE USED.
- ORDINARY FILL SHALL BE WELL GRADED, NATURAL INORGANIC SOIL, FREE OF ORGANIC OR OTHER WEAK OR COMPRESSIBLE MATERIALS, FROZEN MATERIALS, AND OF STONES LARGER THAN TWO THIRDS (2/3) THE LIFT THICKNESS. IT SHALL BE OF SUCH NATURE AND CHARACTER THAT IT CAN BE COMPACTED TO THE SPECIFIED DENSITIES IN A REASONABLE LENGTH OF TIME. IT SHALL BE FREE OF PLASTIC CLAY, OF ALL MATERIALS SUBJECT TO DECAY, DECOMPOSITION, OR DISSOLUTION, AND OF CINDERS OR OTHER MATERIALS THAT WILL CORRODE PIPING OR OTHER METAL. IT SHALL HAVE A MINIMUM DRY DENSITY OF NOT LESS THAN 120 POUNDS PER CUBIC FOOT. MATERIAL FROM EXCAVATION ON THE SITE MAY BE USED AS ORDINARY FILL IF IT MEETS THE ABOVE REQUIREMENTS. ORDINARY FILL SHALL HAVE A MAXIMUM OF 60% PASSING THE #40 SIEVE, AND A MAXIMUM OF 20% PASSING THE #100 SIEVE. IT SHOULD NOT CONTAIN BROKEN CONCRETE, MASONRY RUBBLE OR OTHER SIMILAR MATERIALS, AND SHALL HAVE PHYSICAL PROPERTIES SUCH THAT IT CAN BE EASILY SPREAD AND COMPACTED DURING FILLING. SNOW, ICE AND FROZEN SOIL SHALL NOT BE PERMITTED.
- SELECT COMMON FILL (ROADWAY AREAS) SHALL BE PLACED IN LAYERS HAVING A MAXIMUM THICKNESS OF 8 IN. MEASURED BEFORE COMPACTION. EACH LAYER OF FILL SHALL BE COMPACTED TO AT LEAST 95 PERCENT OF MAXIMUM DRY DENSITY DETERMINED BY THE ASTM D1557. COMPACTED STRUCTURAL FILL SHALL CONSIST OF FULLY LOADED TEN WHEEL TRUCKS, A TRACTOR DOZER WEIGHING AT LEAST 30,000 LBS AND OPERATED AT FULL SPEED, A HEAVY VIBRATORY ROLLER, OR OTHER METHOD ONLY AS APPROVED BY THE ENGINEER. COMPACTION OF SELECT COMMON FILL IN CONFINED AREAS ADJACENT TO STRUCTURES SHALL BE ACCOMPLISHED BY HAND OPERATED VIBRATORY EQUIPMENT OR MECHANICAL TAMPERS APPROVED BY THE ENGINEER. AS A MINIMUM, COMPACTION OF SELECT COMMON FILL SHALL CONSIST OF FOUR COVERAGES OF THE APPROVED EQUIPMENT.
- SITE PREPARATION SHALL INCLUDE CLEARING, GRUBBING, DELETERIOUS SOILS, VEGETATION AND DEBRIS, ALL TREES, STUMPS, BRUSH, SHRUBS, ROOTS, GRASSES, WEEDS, RUBBISH, STONES LARGER THAN 2-IN. IN THE LARGEST DIAMETER AND OTHER OBJECTIONABLE MATERIAL SHALL BE REMOVED AND DISPOSED OF FROM AREAS TO BE FILLED AND COMPACTED. AREAS OUTSIDE OF THE LIMITS OF WORK SHALL BE PROTECTED FROM DAMAGE AND NO EQUIPMENT OR MATERIALS SHALL BE STORED IN THESE AREAS. NO STUMPS, TREES, LIMBS, OR BRUSH SHALL BE BURIED IN ANY FILLS OR EMBANKMENTS.
- EROSION AND SEDIMENT CONTROL, BOTH DURING AND AFTER CONSTRUCTION, SHALL BE PROVIDED AS REQUIRED TO RETAIN SEDIMENT ONSITE AND TO CONTROL EROSION OF EMBANKMENTS, TEMPORARY AND FINAL EXPOSED SLOPES, AND TEMPORARY MATERIAL STOCKPILE(S). SILT FENCES, CHECK DAMS, DRAINAGE DITCHES OR SWALES, TEMPORARY SEEDING, AND PRE-MANUFACTURED TEXTILES, GEOTUBES, GEOGRID, CELLULAR GEOWEB, ETC., SHALL BE UTILIZED AS APPROPRIATE. EROSION AND SETTLEMENT CONTROL MEASURES SHALL BE IN ACCORDANCE WITH ALL PERMITS AND CODES AND THIS SPECIFICATION. DURING THE EXCAVATION OF THE WORK AT THE SITE, OPERATIONS SHALL BE CONTINUOUSLY MONITORED TO AVOID THE CREATION OF CONDITIONS THAT COULD LEAD TO EXCESSIVE EROSION OF SOIL WITH SURFACE RUNOFF FROM THE WORK AREAS. CONTROLS SHALL BE PROVIDED TO PROTECT THE WATER QUALITY AND SHALL BE IN ACCORDANCE WITH PROJECT DOCUMENTS AND ALL LOCAL, STATE AND FEDERAL LAWS AND REGULATIONS. EROSION CONTROL MEASURES SHALL BE EMPLOYED TO REDUCE EROSION OF SLOPES AND SILTATION OF OFF-SITE OUTFALLS AND TRIBUTARIES.
- UPON SIGNS OF CONCENTRATED FLOW BY EVIDENCE OF GULLING OR RILLING IN DISTURBED AREAS, STAWBALES AND/OR STONE CHECK DAMS SHALL BE PLACED IN THESE AREAS, SPACED EVERY 50' IN THE UPGRADIENT SLOPE.
- ALL DISTURBED AREAS (UNLESS OTHERWISE NOTED) SHALL BE RE-ESTABLISHED WITH A 50/50 MIX OF "NEW ENGLAND CONSERVATION/WILDLIFE MIX" AND "NEW ENGLAND EROSION CONTROL/RESTORATION MIX FOR DRY SITES" FROM NEW ENGLAND WETLAND PLANTS, INC. OR APPROVED EQUAL. SEE ESTABLISHED GUIDELINES FOR SEED MIX BELOW FOR MORE INFORMATION.

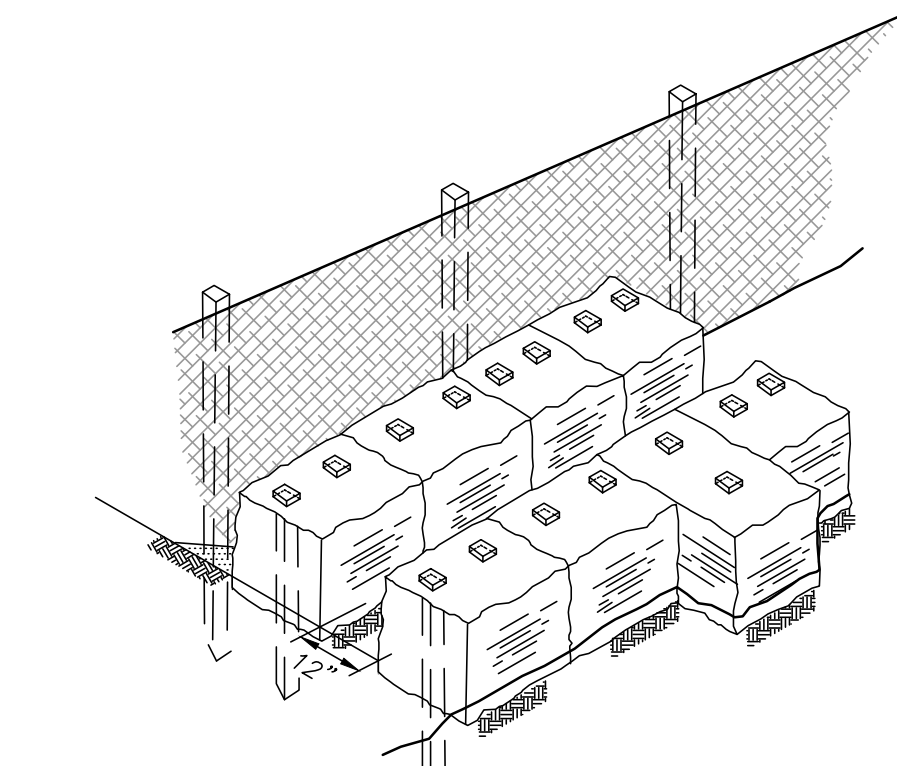
ESTABLISHED GUIDELINES FOR SEED MIX

NEW ENGLAND WETLAND PLANTS, INC.
820 WEST STREET, AMHERST, MA 01002
(413) 548-8000

- NOTES:**
- ALL DISTURBED AREAS (UNLESS OTHERWISE NOTED) SHALL BE RE-ESTABLISHED WITH A 50/50 MIX OF "NEW ENGLAND CONSERVATION/WILDLIFE MIX" AND "NEW ENGLAND EROSION CONTROL/RESTORATION MIX FOR DRY SITES" FROM NEW ENGLAND WETLAND PLANTS, INC. OR APPROVED EQUAL.
 - THE MIX PROVIDES A PERMANENT COVER OF GRASSES, WILDFLOWERS AND LEGUMES TO PROVIDE BOTH GOOD EROSION CONTROL AND WILDLIFE HABITAT VALUE. THIS MIX IS DESIGNED TO BE A NO MAINTENANCE SEEDING, AND IT IS APPROPRIATE TO CUT AND FILL SLOPES, DETENTION BASIN SLOPES, AND DISTURBED AREAS ADJACENT TO COMMERCIAL AND RESIDENTIAL PROJECTS. ALWAYS APPLY ON CLEAN BARE SOIL. THE MIX MAY BE APPLIED BY HYDRO-SEEDING, BY MECHANICAL SPREADER, OR ON SMALL SITES IT CAN BE SPREAD BY HAND. LIGHTLY RAKE, OR ROLL TO ENSURE PROPER SEED TO SOIL CONTACT. BEST RESULTS ARE OBTAINED WITH A SPRING SEEDING. LATE SPRING THROUGH EARLY SUMMER SEEDING WILL BENEFIT WITH A LIGHT MULCHING OF WEED-FREE STRAW TO CONSERVE MOISTURE. IF CONDITIONS ARE DRIER THAN USUAL, WATERING WILL BE REQUIRED. LATE FALL AND WINTER DORMANT SEEDING REQUIRE AN INCREASE IN THE SEEDING RATE. FERTILIZATION IS NOT REQUIRED UNLESS THE SOILS ARE PARTICULARLY INFERTILE. PREPARATION OF A CLEAN WEED FREE SOIL SURFACE IS NECESSARY FOR OPTIMAL RESULTS.

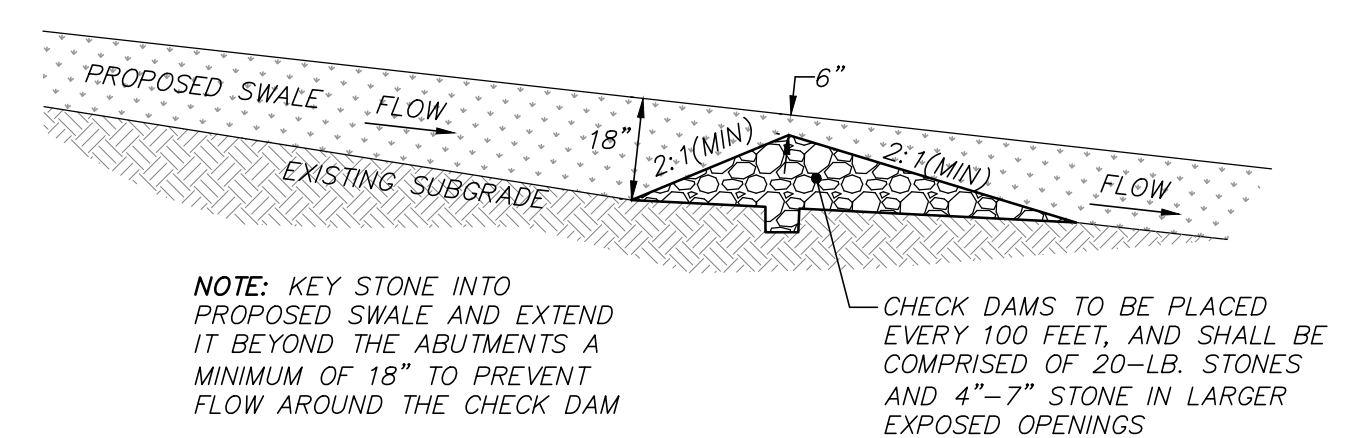
- SEED BED PREPARATION:**
REMOVE ALL INVASIVE SPECIES, TILL EXISTING SOIL AND RAKE SMOOTH. APPLY 3" OF COMPOSTED LEAF LITTER. ALL AREAS WHERE ROOTS HAVE BEEN GRUBBED SHALL BE FILLED.
- SEED APPLICATION AND RATE:**
THE IDEAL PLANTING DEPTH IS 1/4-1/2". UNDER IDEAL CONDITIONS SEEDS LAYING ON THE SURFACE WILL GERMINATE. RECOMMENDED APPLICATION RATE FOR SEEDING IS 1 LBS PER 1,750 SQUARE FEET.

- SEEDING DATES:**
FOR FALL INSTALLATION, SEED BETWEEN AUGUST 15 AND SEPTEMBER 10. FOR SPRING INSTALLATION, SEED AS EARLY AS POSSIBLE SOMETIME BETWEEN APRIL 15 AND MAY 10.
- FERTILIZATION AND SOIL REQUIREMENTS:**
REFER TO MANUFACTURERS RECOMMENDATIONS
- GENERAL MAINTENANCE:**
REFER TO MANUFACTURERS RECOMMENDATIONS
- ESTABLISHMENT:**
REFER TO MANUFACTURERS RECOMMENDATIONS



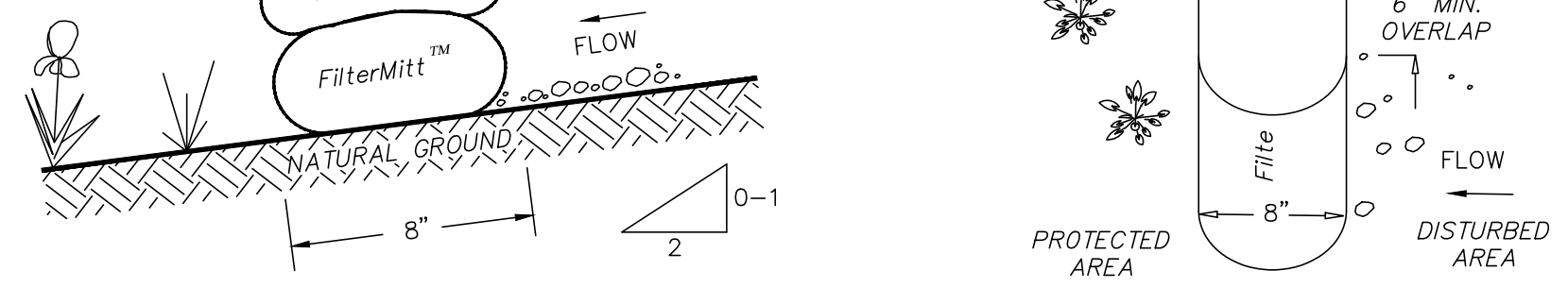
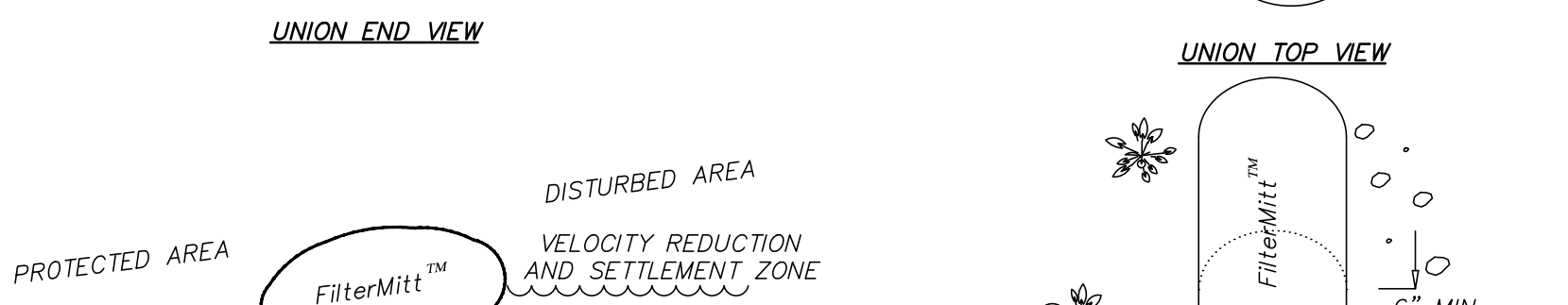
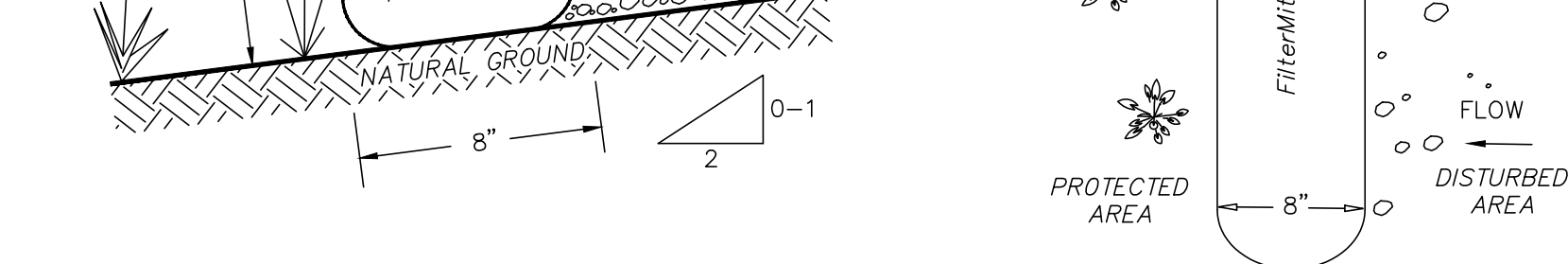
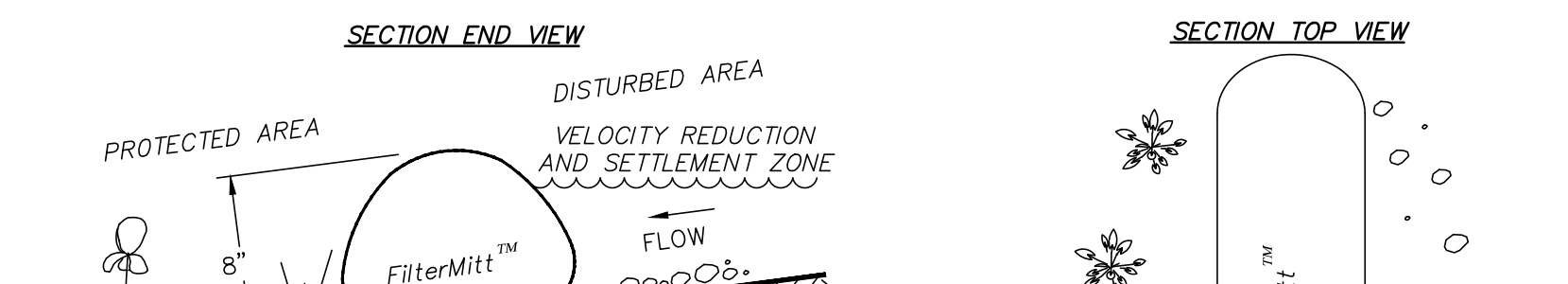
- NOTES:**
- BALES TO BE TIED WITH ORGANIC FIBER TWINE ONLY NO PLASTIC OR WIRE.
 - STRAWBALES TO BE SECURED WITH A MINIMUM OF TWO (2) 1" x 1" WOODEN STAKES PER BALE DRIVEN 18" MIN. INTO GRADE.

DOUBLE ROW STRAWBALE WITH SILT FENCE BARRIER
(NOT TO SCALE)



- NOTE: KEY STONE INTO PROPOSED SWALE AND EXTEND IT BEYOND THE ABUTMENTS A MINIMUM OF 18" TO PREVENT FLOW AROUND THE CHECK DAM**
- CHECK DAMS TO BE PLACED EVERY 100 FEET, AND SHALL BE COMPRISED OF 20-LB. STONES AND 4"-7" STONE IN LARGER EXPOSED OPENINGS**

TYPICAL STONE CHECK DAM
(NOT TO SCALE)

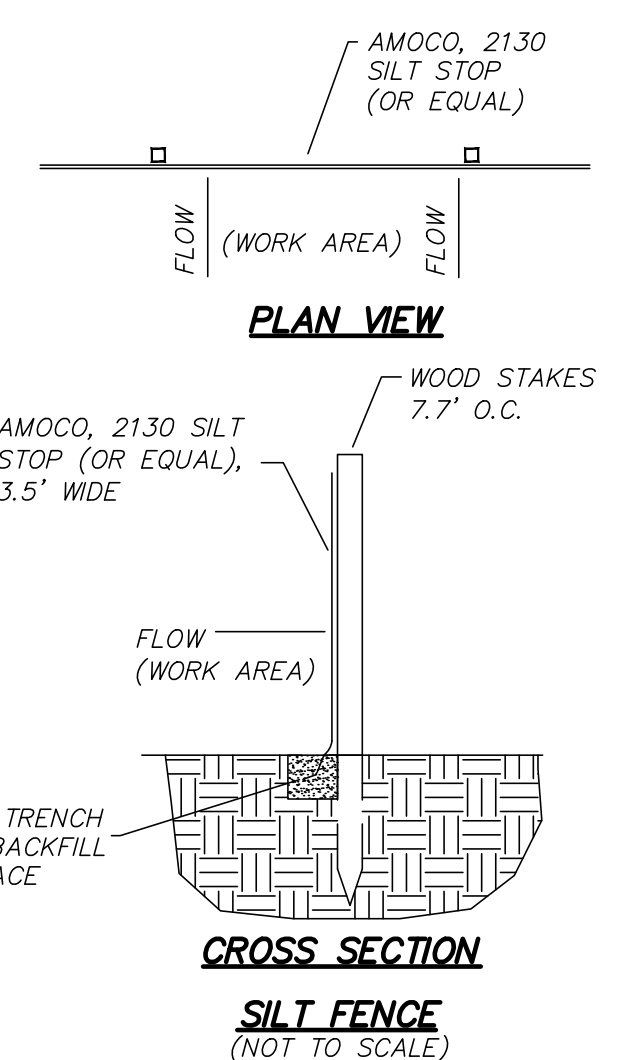


- FilterMitt™ COMPONENTS:**
- OUTSIDE CASING: 100% organic hessian.
 - FILLER INGREDIENT: FiberRoot Mulch™
 - A BLEND OF COARSE AND FINE COMPOST AND SHREDDED WOOD.
 - PARTICLE SIZES: 100% PASSING A 3" SCREEN; 90-100% PASSING A 1" SCREEN; 70-100% PASSING A 0.75" SCREEN; 30-75% PASSING A 0.25" SCREEN.
 - WEIGHT: APPROX. 310 LBS./CU.YD. (AVE. 11.5 LBS./L.F.)
- FilterMitt™ INSTALLATION:**
- WITH THE NEWEST TECHNOLOGY AND EQUIPMENT, SECTIONS CAN BE CONSTRUCTED ON SITE IN LENGTHS FROM 1' TO 100'.
- SECTIONS CAN ALSO BE DELIVERED TO THE SITE IN LENGTHS FROM 1' TO 8'.
- THE FLEXIBILITY OF FilterMitt™ ALLOWS IT TO CONFORM TO ANY CONTOUR OR TERRAIN WHILE HOLDING A SLIGHTLY ROUND SHAPE AT 8" HIGH BY 8" WIDE.
- WHERE SECTION ENDS MEET, THERE SHALL BE AN OVERLAP OF 6" OR GREATER.

For more information visit:
www.groundscapecxpress.com or contact us at:
Groundscapes Express, Inc.

P.O. Box 737
Wrentham, MA 02093
(508) 384-7140

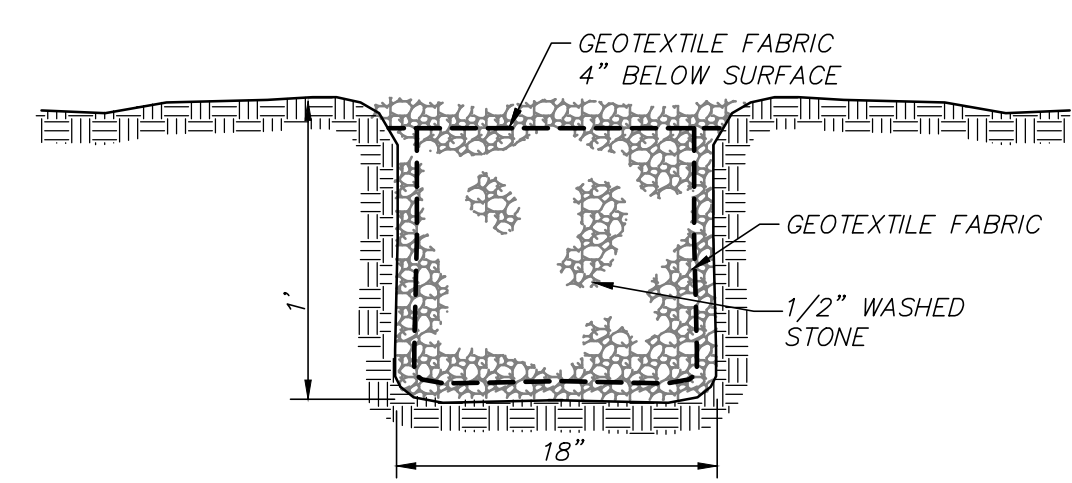
FILTERMITT
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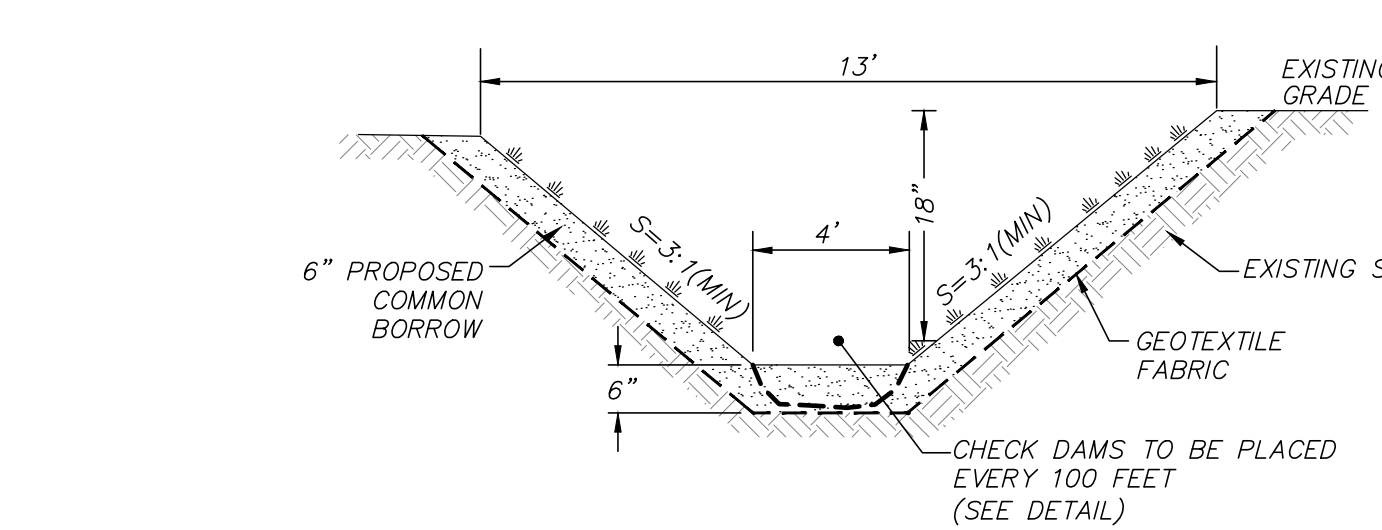
PLAN VIEW

CROSS SECTION

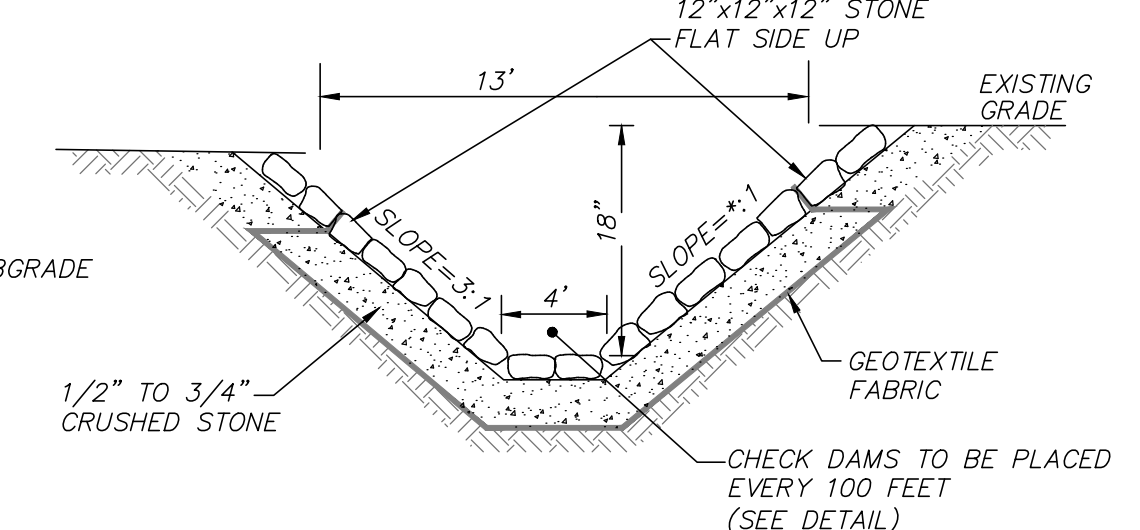
SILT FENCE
(NOT TO SCALE)



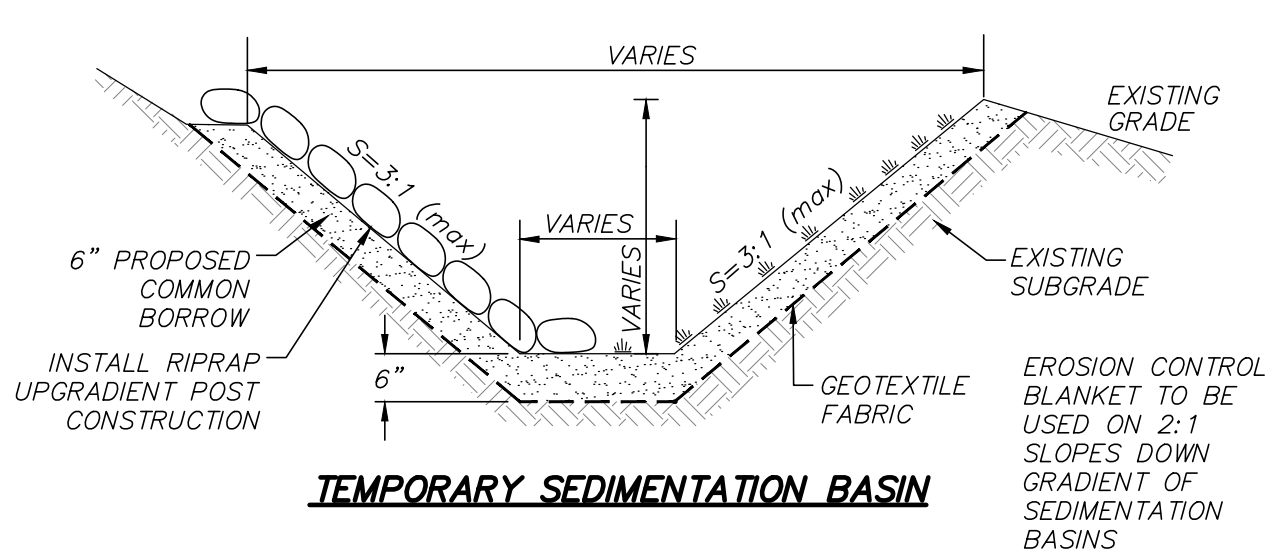
GRAVEL STONE TRENCH DETAIL
(NOT TO SCALE)



GRASS LINED SWALE DETAIL
(NOT TO SCALE)



STONE LINED DRAINAGE SWALE
(NOT TO SCALE)



TEMPORARY SEDIMENTATION BASIN

TEMPORARY SEDIMENTATION BASINS ARE TO BE INSTALLED IN LOCATIONS UPSTREAM OF ANY EROSION CONTROL BARRIERS WHERE EXCESS SEDIMENT IS OBSERVED DURING THE CONSTRUCTION PROCESS. CONTRACTOR TO LOCATE TEMPORARY SEDIMENTATION BASINS AS THEY DEEM NECESSARY TO PREVENT SEDIMENT FROM LEAVING THE LIMIT OF WORK. AS THE SITE STABILIZES, THE TEMPORARY SEDIMENTATION BASINS CAN BE REMOVED AND BROUGHT TO FINISHED GRADES.

EAST COAST
erosion control

Proud Member and Participant of:
www.eastcoasterosion.com
443 Bricker Road, Bernville, PA 19506
1.800.582.4005 +1.610.488.8496 Fax +1.610.488.8494

Material and Performance Specification

ECSC-2™ Double Net Straw/Coconut Rolled Erosion Control Product

Description:
The ECSC-2™ is made with uniformly distributed 70% agricultural straw, 30% coconut fiber and two polypropylene nets securely sewn together with degradable thread. The tightly compressed blankets are wrapped and include a product label, code and installation guide. The blankets are palletized for easy transportation. The ECSC-2™ has functional longevity of approximately 24 months, but will vary depending on soil and climatic conditions, and is suitable for slopes 2:1 to 1:1 and low to medium flow channels. The ECSC-2™ meets Type 3.8 specification requirements established by the Erosion Control Technology Council (ECTC) and Federal Highway Administration's (FHWA) FP-03 Section 713.17.

Matrix:	70% Straw	30% Coconut	2
Netting:	Type	Not Color	
Top:	Medium weight UV Stabilized Polypropylene	Green	
Middle:	None		
Bottom:	Lightweight Photodegradable Polypropylene		
Net Opening:	Top	Middle	Bottom
	0.5" x 0.5"		0.75" x 0.75"
Thread:	Type	Color	
	Degradable Thread	White	
Roll Sizes:	Standard	"A" Size	Mega
Width:	7.5 ft 2.3 m	3.75 ft 1.1 m	15 ft 4.6 m
Length:	120 ft 36.6 m	240 ft 73.2 m	120 ft 36.6 m
Weight ±10%:	57 lbs 25.9 kg	57 lbs 25.9 kg	114 lbs 51.7 kg
Area:	100 yd² 83.6 m²	100 yd² 83.6 m²	200 yd² 167.2 m²
#/Pallet:	20	9	16

Property	Test Method	Typical	Bench-Scale Testing* (NTPEP#18)	Parameters	Results
Mass/Unit Area	ASTM D6475	9.00 oz/yd²	305.1 g/m²	50mm (2in) / hr-30 min	SLR**±8.52
Thickness	ASTM D6525	0.30 in	7.62 mm	ECTC Method 2 Rainfall	100mm (4in) / hr-30 min SLR**±11.01
Tensile Strength-MD	ASTM D6818	178 lb/ft	2.60 kN/m	150mm (6in) / hr-30 min	SLR**±14.28
Elongation-MD	ASTM D6818	31 %		ECTC Method 3 Shear Resistance	Shear at 50 in soil loss 2.16 lb/ft²
Tensile Strength-TD	ASTM D6818	148 lb/ft	2.16 kN/m	ECTC Method 4 Germination	Top soil; Fescue; 21 day incubation 503 %
Elongation-TD	ASTM D6818	22.4 %		*Bench scale tests should not be used for design purposes.	
Light Penetration	ASTM D6567	13 %		**Soil Loss Ratio=Soil Loss Bare Soil/Soil Loss with REC±1/C-Factor	
Density / Specific Gravity	ASTM D792	N/A %		***The preceding test data excerpts were reproduced with the permission of AASHTO. However, this does not constitute endorsement or approval of the product, material or device by AASHTO.	
Water Absorption	ASTM D1117	436 %		*May differ depending upon raw material variations	

Property	Test Method	Value	Channel Performance Design Values*	Value
C-Factor	ASTM D6459	0.02	Unvegetated Shear Stress	ASTM D 6460 2.25 lbf/ft² 107.73 Pa
Slope Length (L)	≤ 3:1	3:1-2:1	Unvegetated Velocity	ASTM D 6460 8.0 ft/s 2.44 m/s
< 50 ft (15 m)	0.017	0.028	Vegetated Shear Stress	NA N/A lbf/ft² N/A Pa
50 ft - 100 ft	0.031	0.059	Vegetated Velocity	NA N/A ft/s N/A m/s
> 100 ft (30 m)	0.080	0.090	Manning's N (Value Represents a Range)	0.029

*Large-Scale Results obtained by 3rd Party GAI Accredited Independent Laboratory

*Large-Scale Results obtained by 3rd Party GAI Accredited Independent Laboratory

The values presented are for guidance purposes and do not constitute the practice of engineering. East Coast Erosion Blankets LLC (ECEB) warrants that at the time of manufacture, all information presented herein is accurate and reliable and falls within the ECEB manufacturing product specification variances. If the product does not meet the stated values and ECEB is notified in writing prior to installation, the product will be replaced at no cost to the purchaser. ECEB will not be held liable for any type of damage or losses, directly or indirectly, the failure of this product. Current revision supersedes all historical versions the AEC website.

EROSION CONTROL BLANKET OR APPROVED EQUAL
(NOT TO SCALE)

NOTE: FOR DETAILS NOT DEPICTED HEREON, REFER TO MASSDOT STANDARD SPECIFICATIONS AND CONSTRUCTION DETAILS.

DWG. No. 6091_SITE(PENNY).DWG [ECP NOTES]

FOR PERMITTING ONLY
NOT FOR CONSTRUCTION

REVISIONS	DATE	DESCRIPTION

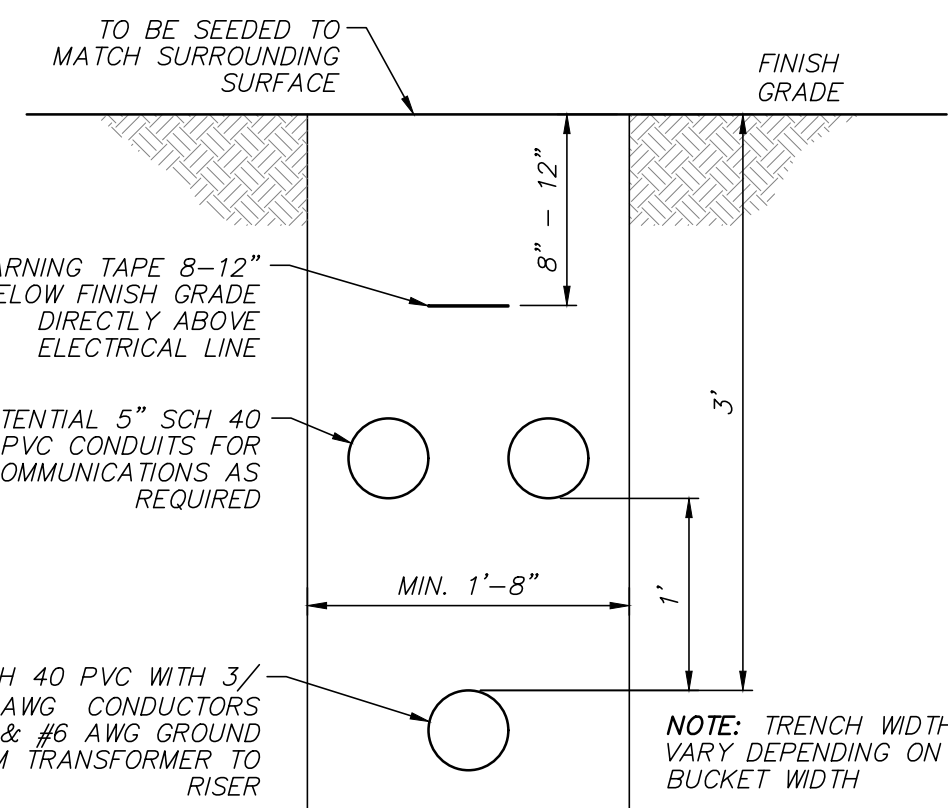


5 & 5R HATFIELD STREET
NOTES & DETAILS
LOCATED IN
WILLIAMSBURG, MASSACHUSETTS
(HAMPSHIRE COUNTY)
PREPARED FOR
ZPT ENERGY SOLUTIONS II, LLC

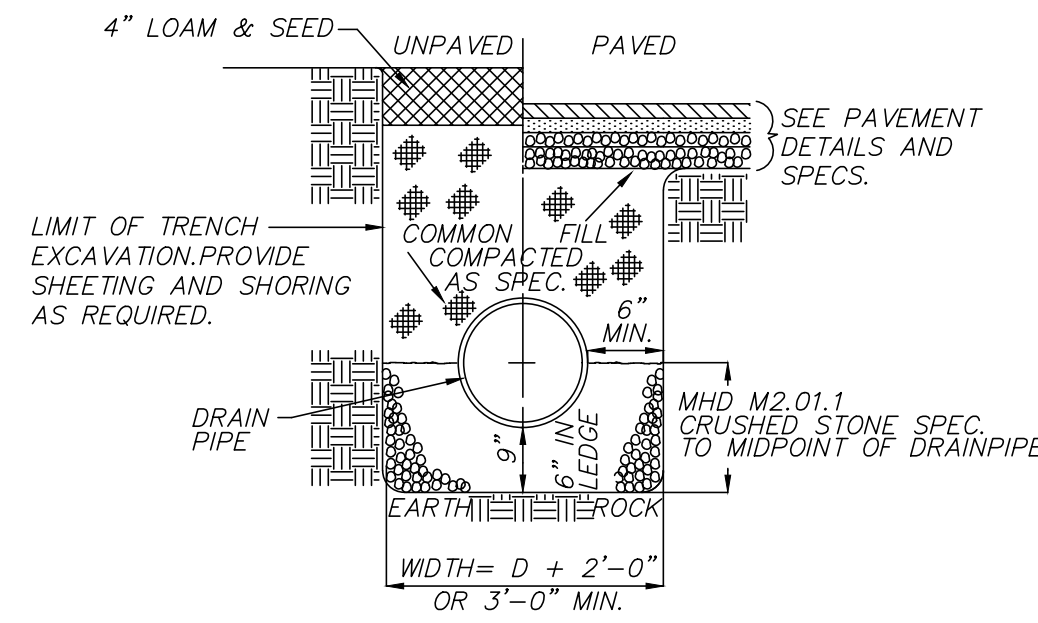
MERIDIAN ASSOCIATES
69 MILK STREET, SUITE 302
BEVERLY, MASSACHUSETTS 01915
WESTBOROUGH, MASSACHUSETTS 01581
TELEPHONE: (978) 299-0447
WWW.MERIDIANASSOC.COM

CHECKED BY: C. RYAN
DESIGNED BY: C. BROYLES

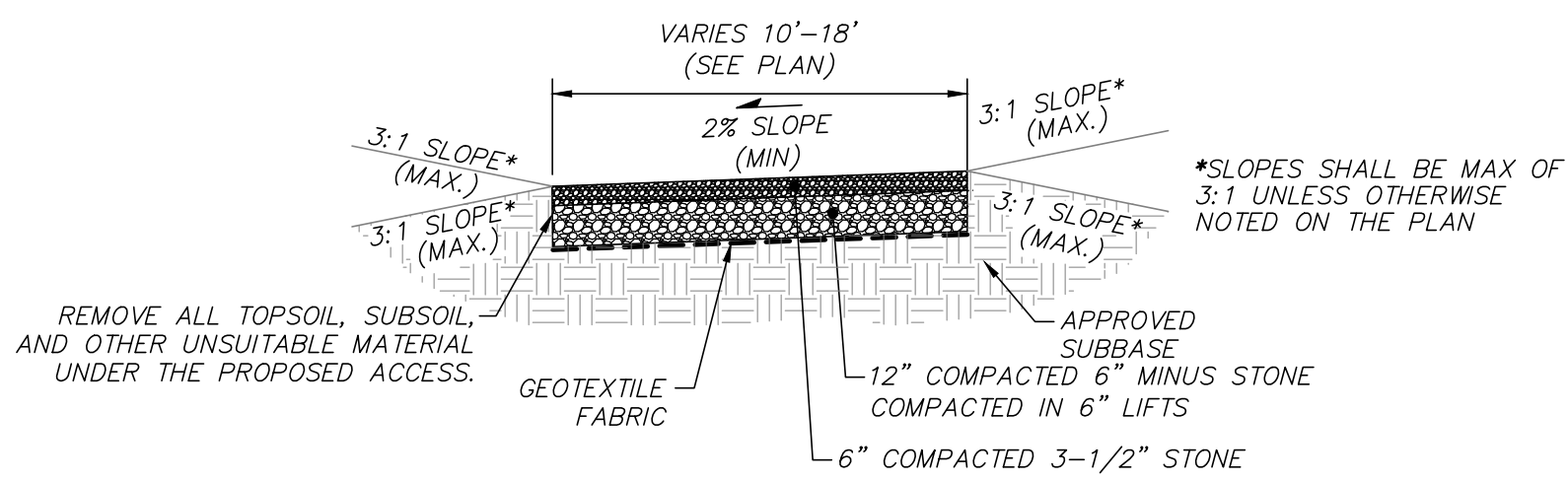
DATE: FEBRUARY 19, 2019
SCALE: NOT TO SCALE
SHEET No. 15 OF 16
PROJECT No. 6091



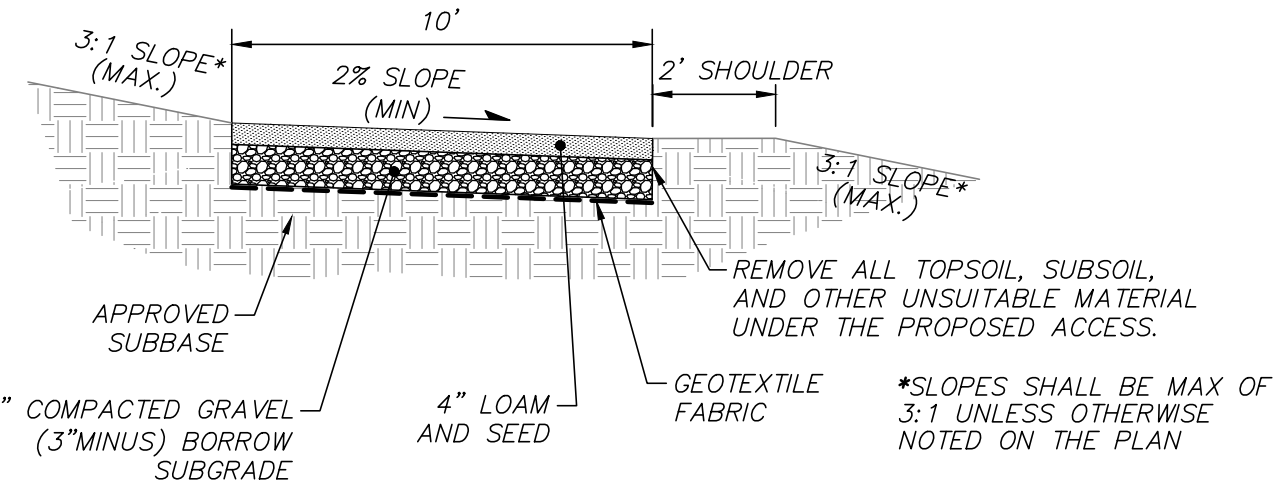
TYPICAL AC CONDUIT TRENCH DETAIL
(NOT TO SCALE)



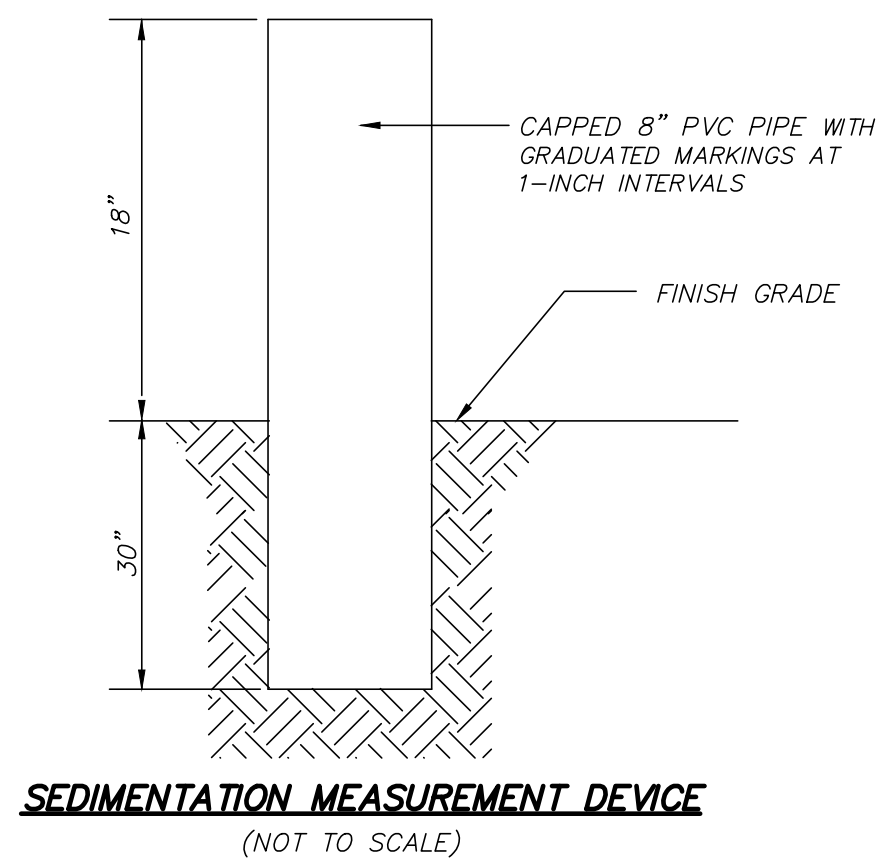
STORM DRAIN TRENCH DETAIL
(NOT TO SCALE)



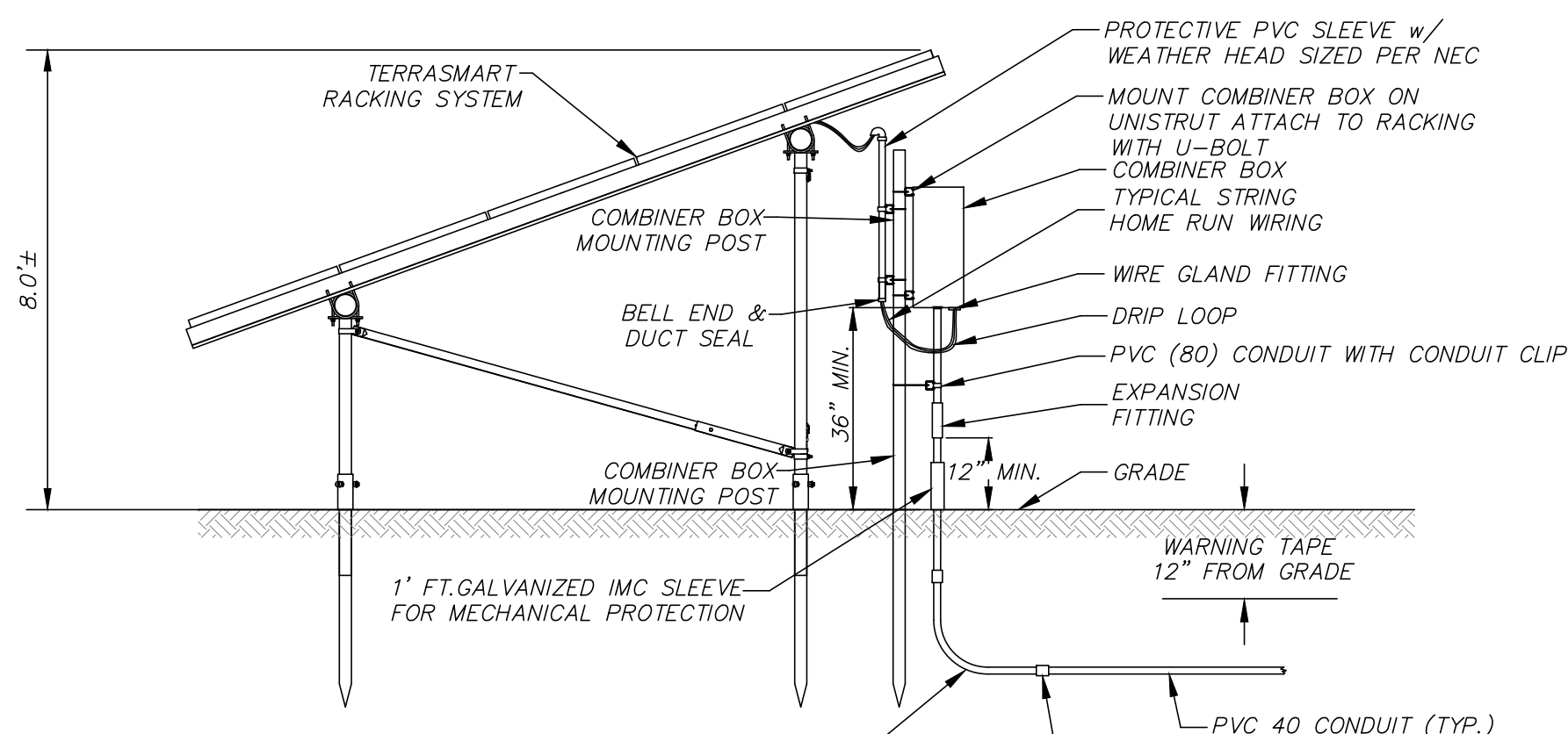
TYPICAL GRAVEL ACCESS DRIVE CROSS SECTION
(NOT TO SCALE)



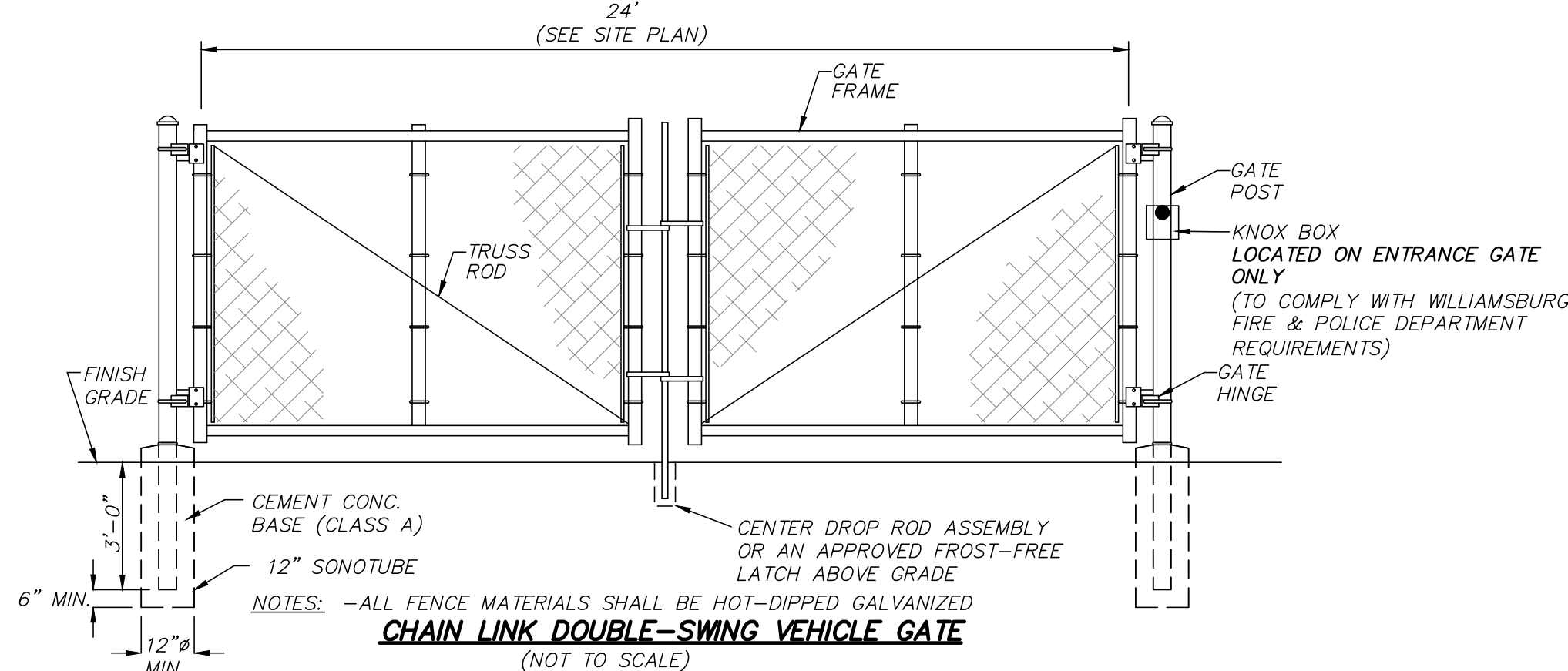
GRASSSED ACCESS DRIVE
(NOT TO SCALE)



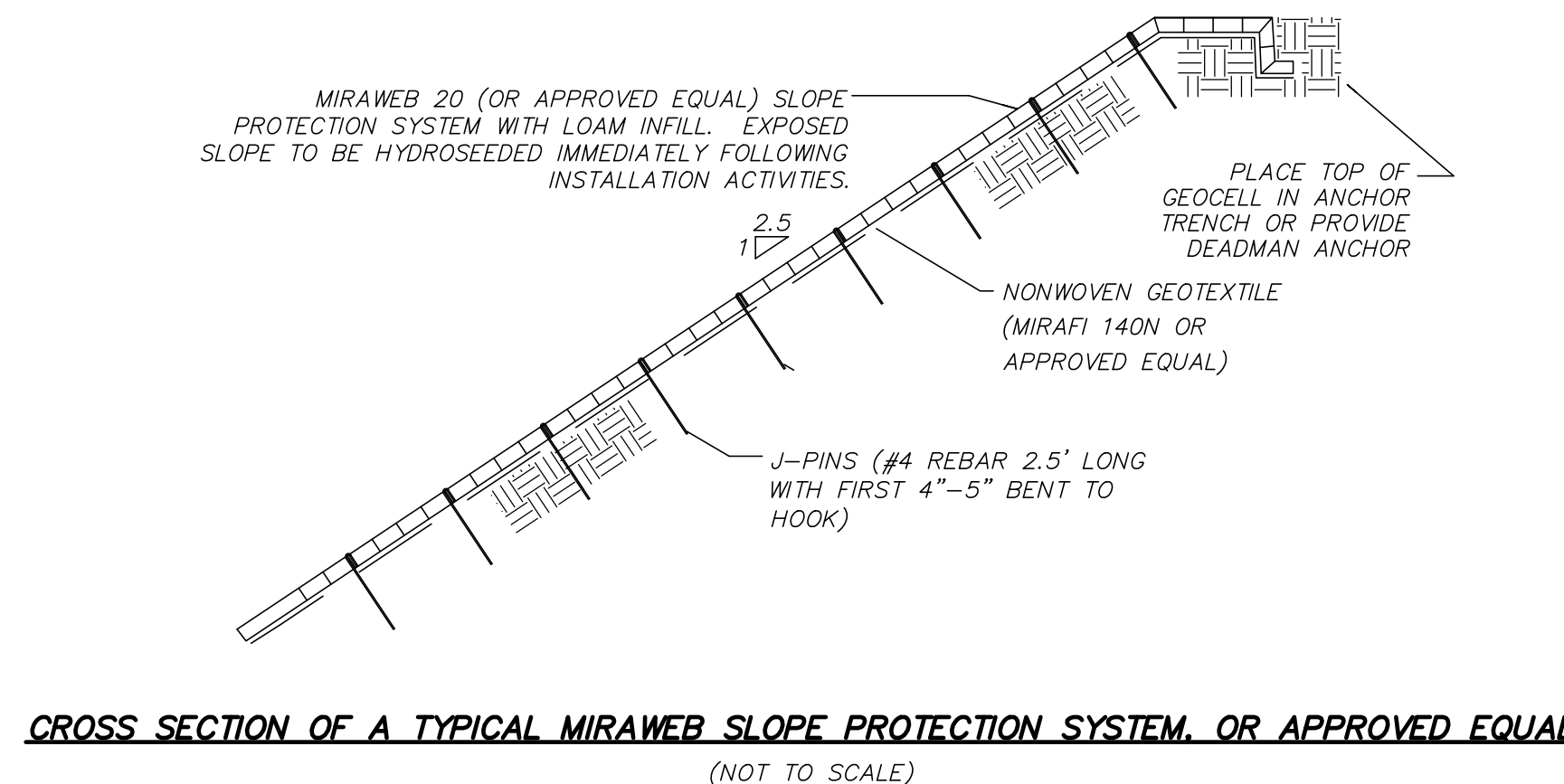
SEDIMENTATION MEASUREMENT DEVICE
(NOT TO SCALE)



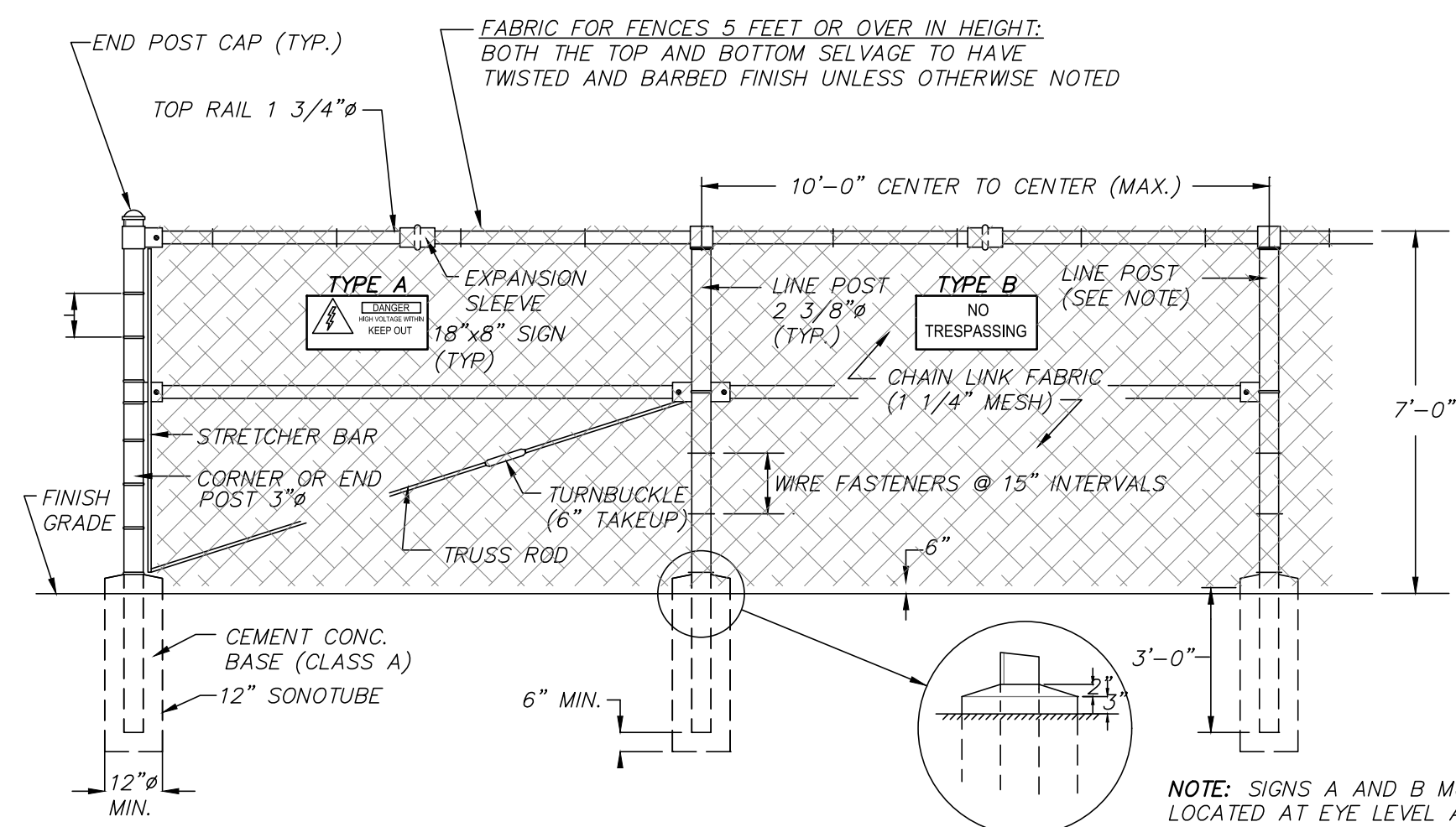
TYPICAL RACK SECTION WITH COMBINER OR APPROVED EQUAL
(NOT TO SCALE)



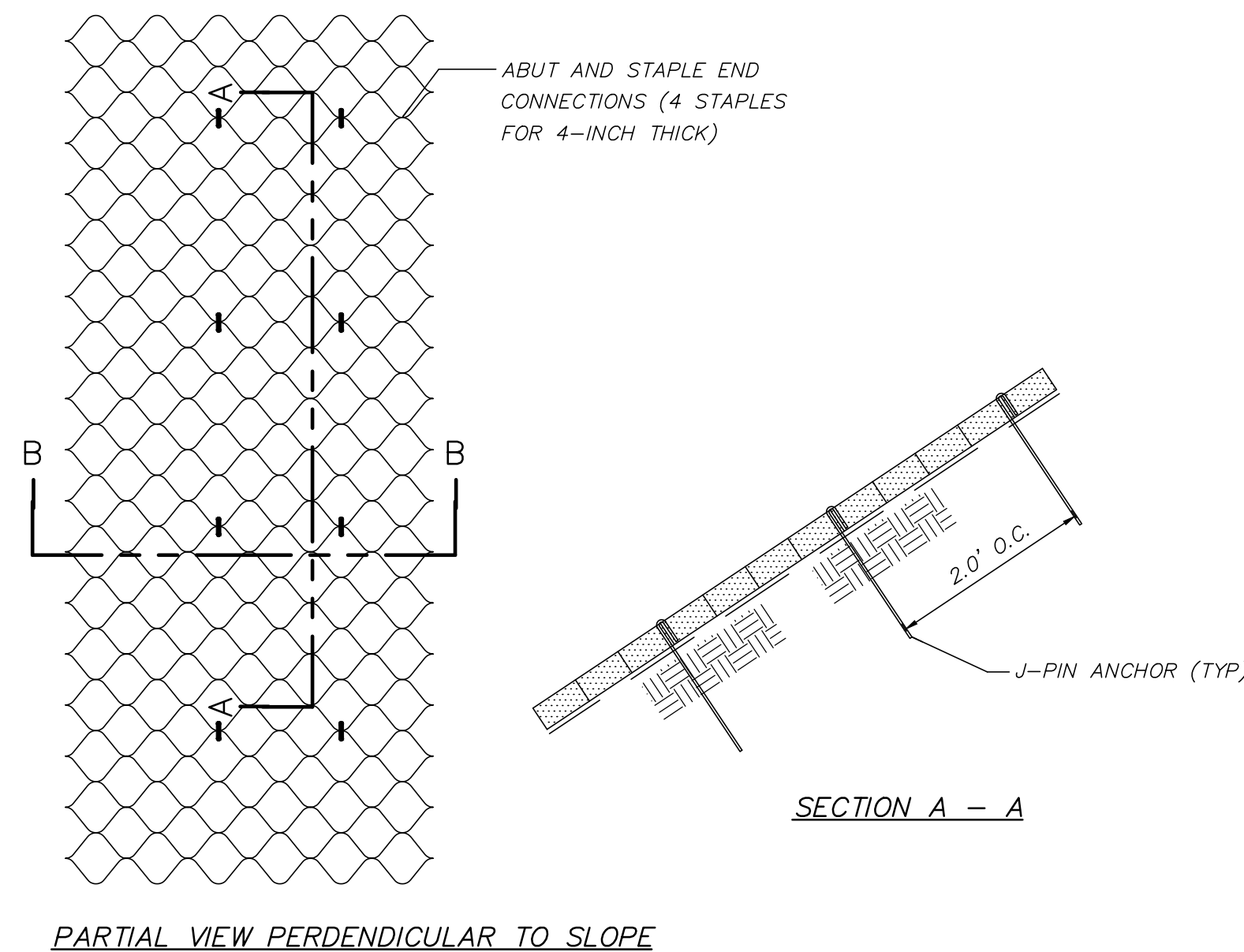
CHAIN LINK DOUBLE-SWING VEHICLE GATE
(NOT TO SCALE)



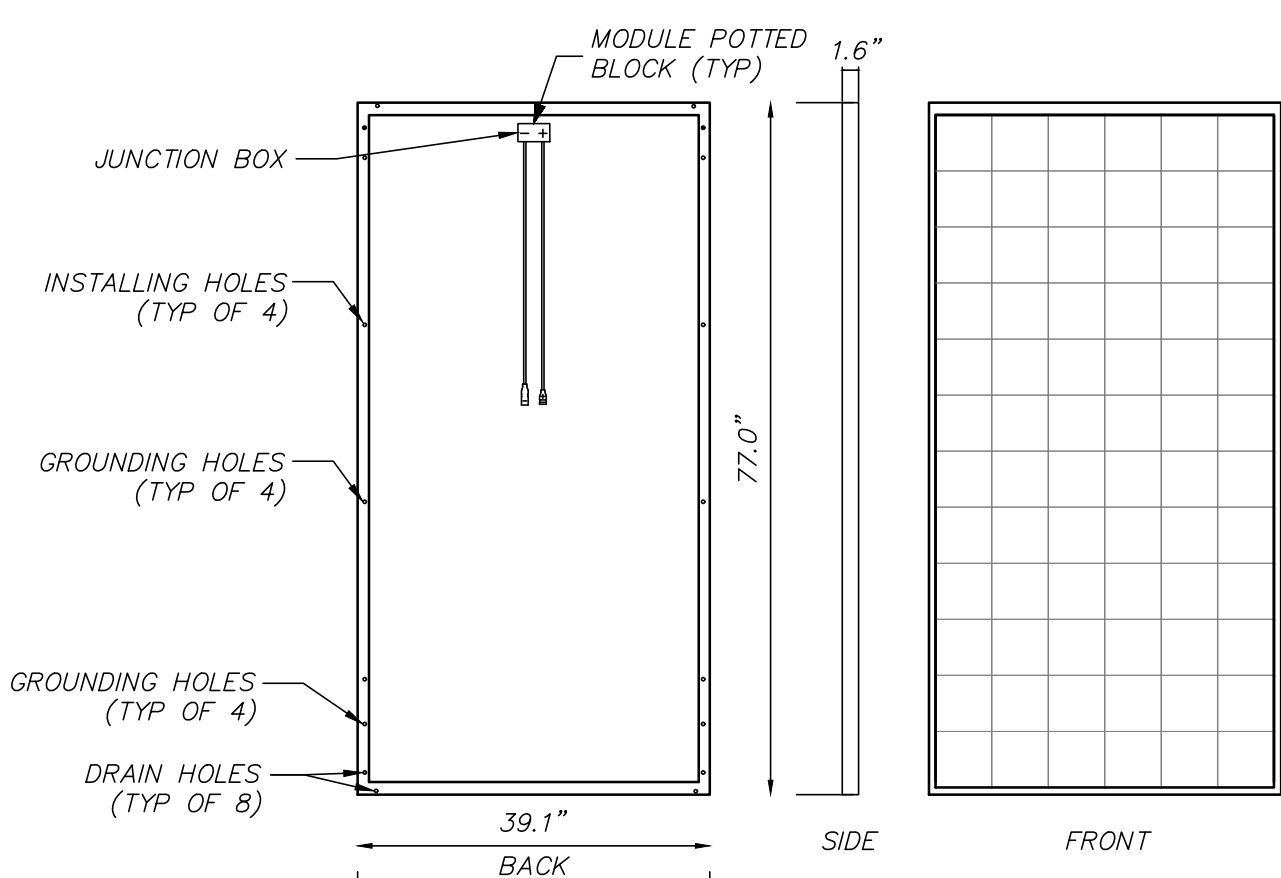
CROSS SECTION OF A TYPICAL MIRAWEB SLOPE PROTECTION SYSTEM OR APPROVED EQUAL
(NOT TO SCALE)



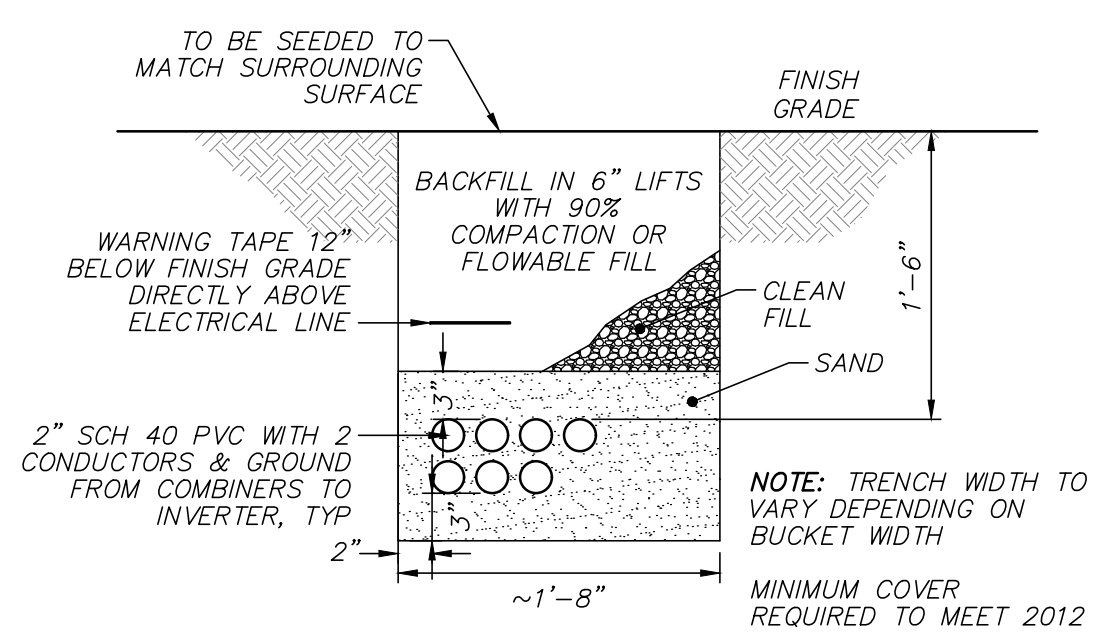
CHAIN LINK FENCE W/ TOPRAIL DETAIL
(NOT TO SCALE)



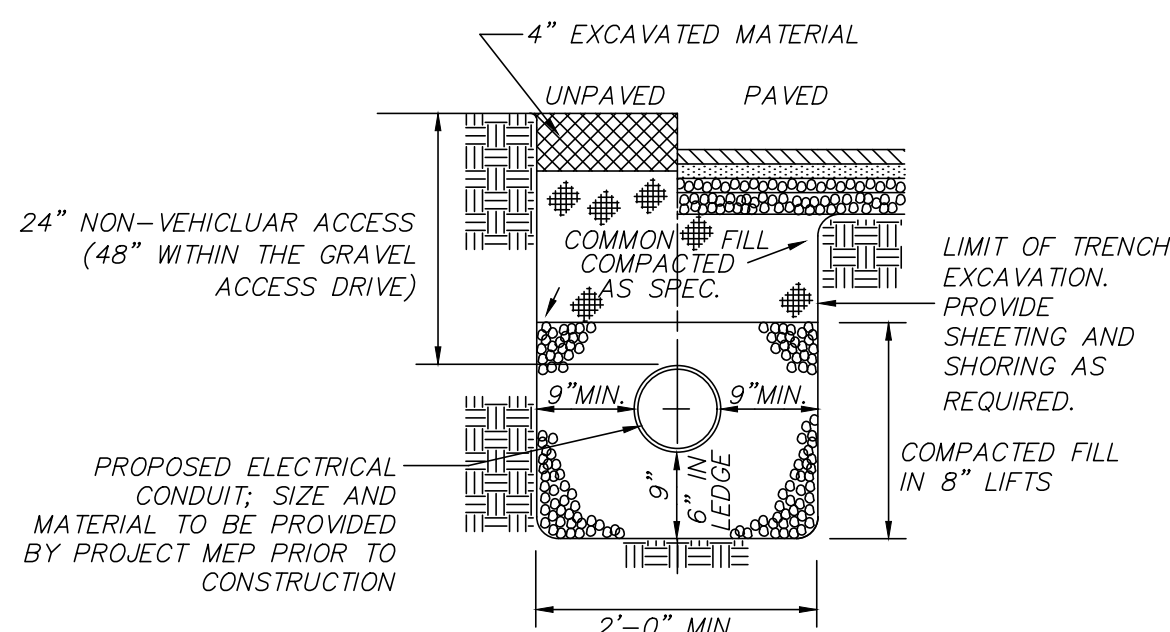
PARTIAL VIEW PERPENDICULAR TO SLOPE



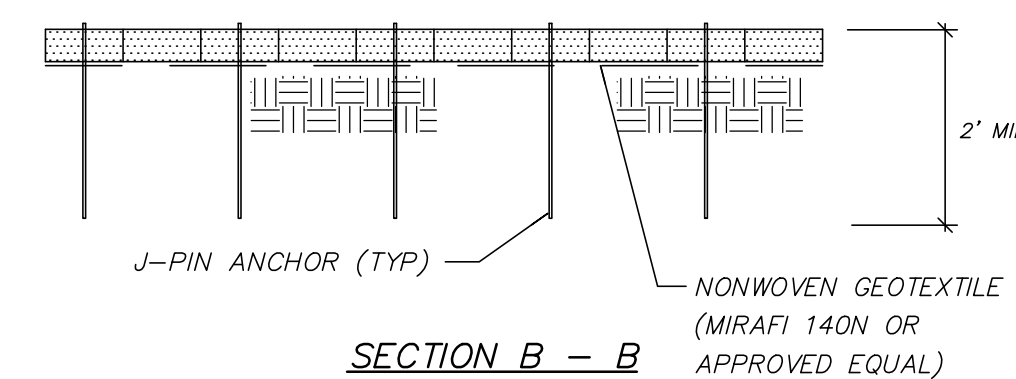
TYPICAL PV MODULE OR APPROVED EQUAL
(NOT TO SCALE)



TYPICAL DC CONDUIT TRENCH DETAIL
(NOT TO SCALE)



TYPICAL CONDUIT TRENCH DETAIL
(NOT TO SCALE)



TYPICAL MIRAWEB J-PIN, TENDON AND CLIP ANCHOR SYSTEM OR APPROVED EQUAL
(NOT TO SCALE)

NOTE: FOR DETAILS NOT DEPICTED HEREON, REFER TO MASSDOT STANDARD SPECIFICATIONS AND CONSTRUCTION DETAILS.

REVISIONS	DATE	DESCRIPTION



5 & 5R HATFIELD STREET
DETAILS LOCATED IN
WILLIAMSBURG, MASSACHUSETTS
(HAMPSHIRE COUNTY)
PREPARED FOR
ZPT ENERGY SOLUTIONS II, LLC

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DATE: FEBRUARY 19, 2019
SCALE: NOT TO SCALE
SHEET No. 16 OF 16
PROJECT No. 6091

DWG. No. 6091_SITE(PENNY).DWG [DET.]

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