

Legend

Road

County Boundary

Proposed Limits of Disturbance

State Boundary

Soil Boundary

ConnectGEN

SOUTH RIPLEY SOLAR PROJECT

FIGURE 3: PROJECT SOILS MAP

NRCS SSURGO SOILS

CHAUTAUQUE COUNTY, NEW YORK

0

1,000

2,000

4,000 Feet

N

W

E

S

ABSOLUTE SCALE:

1:24,000

REFERENCE SCALE:

1 inch=2,000 feet

PREPARED FOR

ConnectGEN

PREPARED BY

M

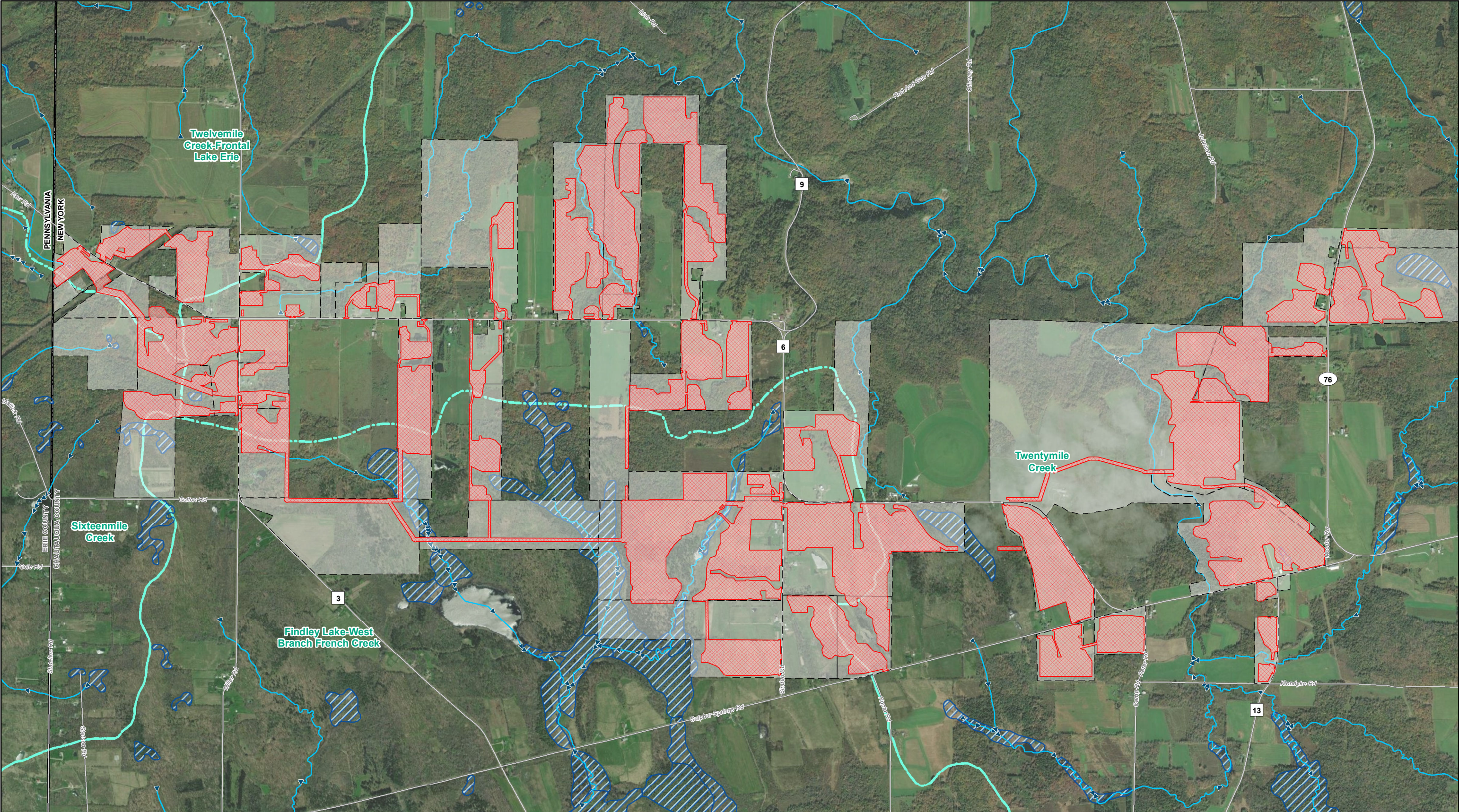
M

MOTT

MACDONALD

DRAWN BY:	EAP 07/31/2021
CHECKED BY:	JLM 01/11/2022
APPROVED BY:	RA 01/11/2022
REV. DATE:	01/11/2022
REVISION:	1
DESC:	ISSUED FOR PERMIT
DWG. NO.	1 OF 1

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Legend

==

 Road

→→

 NHD Flowline

Proposed Limits of Disturbance

Property Boundary

NWI Wetland

USG HUC12 Watershed Boundary

County Boundary

State Boundary

ConnectGEN

SOUTH RIPLEY SOLAR PROJECT

FIGURE 4: PROJECT WETLANDS & DRAINAGE MAP

PROJECT USGS NHD DATA

CHAUTAUQUA COUNTY, NEW YORK

0

1,000

2,000

4,000 Feet

N

W

E

S

ABSOLUTE SCALE:

1:24,000

REFERENCE SCALE:

1 inch=2,000 feet

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DRAWING INDEX											
DRAWING NO	DRAWING TITLE	DATE	REV	DATE	REV	DATE	REV	DATE	REV	DATE	REV
SRS-C-100-00	CIVIL COVER SHEET	1/29/2021	A	5/21/2021	B	7/14/2021	C	12/08/21		01/11/22	E
SRS-C-100-01	CIVIL GENERAL NOTES	1/29/2021	A	5/21/2021	B	7/14/2021	C				
SRS-C-100-02_SUP_A	OVERALL SITE AREA INDEX	11/24/2021	A	12/08/2021	B						
SRS-C-101-01	TYPICAL CIVIL DETAILS (SHEET 1 OF 11)	1/29/2021	A	5/21/2021	B	7/14/2021	C				
SRS-C-101-02_SUP_A	TYPICAL CIVIL DETAILS (SHEET 2 OF 11)	11/24/2021	A	12/08/2021	B						
SRS-C-101-03	TYPICAL CIVIL DETAILS (SHEET 3 OF 11)	1/29/2021	A	5/21/2021	B	7/14/2021	C				
SRS-C-101-04	TYPICAL CIVIL DETAILS (SHEET 4 OF 11)	1/29/2021	A	5/21/2021	B	7/14/2021	C				
SRS-C-101-05	TYPICAL CIVIL DETAILS (SHEET 5 OF 11)	1/29/2021	A	5/21/2021	B	7/14/2021	C				
SRS-C-101-06	TYPICAL CIVIL DETAILS (SHEET 6 OF 11)	1/29/2021	A	5/21/2021	B	7/14/2021	C				
SRS-C-101-07	TYPICAL CIVIL DETAILS (SHEET 7 OF 11)	1/29/2021	A	5/21/2021	B	7/14/2021	C				
SRS-C-101-08	TYPICAL CIVIL DETAILS (SHEET 8 OF 11)	1/29/2021	A	5/21/2021	B	7/14/2021	C				
SRS-C-101-09	TYPICAL CIVIL DETAILS (SHEET 9 OF 11)	1/29/2021	A	5/21/2021	B	7/14/2021	C				
SRS-C-101-10	TYPICAL CIVIL DETAILS (SHEET 10 OF 11)	1/29/2021	A	5/21/2021	B	7/14/2021	C				
SRS-C-101-11_SUP_A	TYPICAL CIVIL DETAILS (SHEET 11 OF 11)	1/10/2022	A								
SRS-C-110-01	EXISTING CONDITIONS & CLEARING PLAN SITE 1	1/29/2021	A	5/21/2021	B	7/14/2021	C				
SRS-C-110-02_SUP_A	EXISTING CONDITIONS & CLEARING PLAN SITE 2	11/24/2021	A	12/08/2021	B						
SRS-C-110-03	EXISTING CONDITIONS & CLEARING PLAN SITE 3	1/29/2021	A	5/23/2021	B	7/14/2021	C				
SRS-C-110-04	EXISTING CONDITIONS & CLEARING PLAN SITE 4	1/29/2021	A	5/24/2021	B	7/14/2021	C				
SRS-C-110-05	EXISTING CONDITIONS & CLEARING PLAN SITE 5	1/29/2021	A	5/25/2021	B	7/14/2021	C				
SRS-C-110-06	EXISTING CONDITIONS & CLEARING PLAN SITE 6	1/29/2021	A	5/26/2021	B	7/14/2021	C				
SRS-C-110-07	EXISTING CONDITIONS & CLEARING PLAN SITE 7	1/29/2021	A	5/27/2021	B	7/14/2021	C				
SRS-C-110-08	EXISTING CONDITIONS & CLEARING PLAN SITE 8	1/29/2021	A	5/28/2021	B	7/14/2021	C				
SRS-C-110-09	EXISTING CONDITIONS & CLEARING PLAN SITE 9	1/29/2021	A	5/29/2021	B	7/14/2021	C				
SRS-C-110-10	EXISTING CONDITIONS & CLEARING PLAN SITE 10	1/29/2021	A	5/30/2021	B	7/14/2021	C				
SRS-C-110-11	EXISTING CONDITIONS & CLEARING PLAN SITE 11	1/29/2021	A	5/31/2021	B	7/14/2021	C				
SRS-C-110-12	EXISTING CONDITIONS & CLEARING PLAN SITE 12	1/29/2021	A	6/1/2021	B	7/14/2021	C				
SRS-C-110-13	EXISTING CONDITIONS & CLEARING PLAN SITE 13	1/29/2021	A	6/2/2021	B	7/14/2021	C				
SRS-C-110-14	EXISTING CONDITIONS & CLEARING PLAN SITE 14	1/29/2021	A	6/3/2021	B	7/14/2021	C				
SRS-C-110-15	EXISTING CONDITIONS & CLEARING PLAN SITE 15	1/29/2021	A	6/4/2021	B	7/14/2021	C				
SRS-C-110-16	EXISTING CONDITIONS & CLEARING PLAN SITE 16	1/29/2021	A	6/5/2021	B	7/14/2021	C				
SRS-C-111-01	GRADING AND EROSION SITE 1	1/29/2021	A	5/21/2021	B	7/14/2021	C				
SRS-C-111-02	GRADING AND EROSION SITE 2	1/29/2021	A	5/21/2021	B	7/14/2021	C				
SRS-C-111-03	GRADING AND EROSION SITE 3	1/29/2021	A	5/21/2021	B	7/14/2021	C				
SRS-C-111-04	GRADING AND EROSION SITE 4	1/29/2021	A	5/21/2021	B	7/14/2021	C				
SRS-C-111-05	GRADING AND EROSION SITE 5	1/29/2021	A	5/21/2021	B	7/14/2021	C				
SRS-C-111-06	GRADING AND EROSION SITE 6	1/29/2021	A	5/21/2021	B	7/14/2021	C				
SRS-C-111-07	GRADING AND EROSION SITE 7	1/29/2021	A	5/21/2021	B	7/14/2021	C				
SRS-C-111-08	GRADING AND EROSION SITE 8	1/29/2021	A	5/21/2021	B	7/14/2021	C				
SRS-C-111-09	GRADING AND EROSION SITE 9	1/29/2021	A	5/21/2021	B	7/14/2021	C				
SRS-C-111-10	GRADING AND EROSION SITE 10	1/29/2021	A	5/21/2021	B	7/14/2021	C				
SRS-C-111-11	GRADING AND EROSION SITE 11	1/29/2021	A	5/21/2021	B	7/14/2021	C				
SRS-C-111-12	GRADING AND EROSION SITE 12	1/29/2021	A	5/21/2021	B	7/14/2021	C				
SRS-C-111-13	GRADING AND EROSION SITE 13	1/29/2021	A	5/21/2021	B	7/14/2021	C				
SRS-C-111-14	GRADING AND EROSION SITE 14	1/29/2021	A	5/21/2021	B	7/14/2021	C				
SRS-C-111-15	GRADING AND EROSION SITE 15	1/29/2021	A	5/21/2021	B	7/14/2021	C				
SRS-C-111-16	GRADING AND EROSION SITE 16	1/29/2021	A	5/21/2021	B	7/14/2021	C				
SRS-C-111-17_SUP_A	SUBSTATION GRADING AND EROSION CONTROL PLAN	11/24/2021	A	12/08/2021	B	01/10/2022	C				
SRS-C-111-18_SUP_A	B.E.S.S. GRADING AND EROSION CONTROL PLAN	11/24/2021	A	12/08/2021	B	01/10/2022	C				
SRS-C-111-19_SUP_A	B.E.S.S. & SUBSTATION AR 38, AR 38A & AR 38B PROFILES	11/24/2021	A	12/08/2021	B						
SRS-C-111-20_SUP_A	TIE-IN SWITCHYARD AR 39, AR 39A & AR 39B	11/24/2021	A	12/08/2021	B						
SRS-C-112-01	ACCESS ROAD 01 - PLAN & PROFILE	1/29/2021	A	5/21/2021	B	7/14/2021	C				
SRS-C-112-02	ACCESS ROAD 02 - PLAN & PROFILE	1/29/2021	A	5/21/2021	B	7/14/2021	C				
SRS-C-112-03	ACCESS ROAD 03 - PLAN & PROFILE	1/29/2021	A	5/21/2021	B	7/14/2021	C				
SRS-C-112-04	ACCESS ROAD 04-05-06 - PLAN & PROFILE	1/29/2021	A	5/21/2021	B	7/14/2021	C				
SRS-C-112-05	ACCESS ROAD 07 - PLAN & PROFILE	1/29/2021	A	5/21/2021	B	7/14/2021	C				
SRS-C-112-05A	ACCESS ROAD 07 - PLAN & PROFILE (Cont'd)	1/29/2021	A	5/21/2021	B	7/14/2021	C				
SRS-C-112-06	ACCESS ROAD 08 - PLAN & PROFILE	1/29/2021	A	5/21/2021	B	7/14/2021	C				
SRS-C-112-07	ACCESS ROAD 09 - PLAN & PROFILE	1/29/2021	A	5/21/2021	B	7/14/2021	C				
SRS-C-112-07A	ACCESS ROAD 09 - PLAN & PROFILE (Cont'd)	1/29/2021	A	5/21/2021	B	7/14/2021	C				
SRS-C-112-08	ACCESS ROAD 10 - PLAN & PROFILE	1/29/2021	A	5/21/2021	B	7/14/2021	C				
SRS-C-112-09	ACCESS ROAD 11 - PLAN & PROFILE	1/29/2021	A	5/21/2021	B	7/14/2021	C				
SRS-C-112-09A	ACCESS ROAD 11 - PLAN & PROFILE (Cont'd)	1/29/2021	A	5/21/2021	B	7/14/2021	C				
SRS-C-112-10	ACCESS ROAD 12 - PLAN & PROFILE	1/29/2021	A	5/21/2021	B	7/14/2021	C				
SRS-C-112-10A	ACCESS ROAD 12 TIE-IN - PLAN & PROFILE	1/29/2021	A	5/21/2021	B	7/14/2021	C				
SRS-C-112-11A	ACCESS ROAD 13 - PLAN & PROFILE	1/29/2021	A	5/21/2021	B	7/14/2021	C				
SRS-C-112-11	ACCESS ROAD 13 - PLAN & PROFILE (Cont'd)	1/29/2021	A	5/21/2021	B	7/14/2021	C				
SRS-C-112-12	ACCESS ROAD 14 - PLAN & PROFILE	1/29/2021	A	5/21/2021	B	7/14/2021	C				
SRS-C-112-13	ACCESS ROAD 15 - PLAN & PROFILE	1/29/2021	A	5/21/2021	B	7/14/2021	C				
SRS-C-112-14	ACCESS ROAD 16 - PLAN & PROFILE	1/29/2021	A	5/21/2021	B	7/14/2021	C				
SRS-C-112-15	ACCESS ROAD 17 - PLAN & PROFILE	1/29/2021	A	5/21/2021	B	7/14/2021	C				
SRS-C-112-16	ACCESS ROAD 18 - PLAN & PROFILE	1/29/2021	A	5/21/2021	B	7/14/2021	C				
SRS-C-112-17	ACCESS ROAD 19 - PLAN & PROFILE	1/29/2021	A	5/21/2021	B	7/14/2021	C				
SRS-C-112-18	ACCESS ROAD 20 - PLAN & PROFILE	1/29/2021	A	5/21/2021	B	7/14/2021	C				
SRS-C-112-19	ACCESS ROAD 21 & LATERAL 1 - PLAN & PROFILE	1/29/2021	A	5/21/2021	B	7/14/2021	C				
SRS-C-112-19A	ACCESS ROAD 21 & LATERAL 2 - PLAN & PROFILE	1/29/2021	A	5/21/2021	B	7/14/2021	C				
SRS-C-112-19B	ACCESS ROAD 21 LATERAL 3 - PLAN & PROFILE	1/29/2021	A	5/21/2021	B	7/14/2021	C				
SRS-C-112-20	ACCESS ROAD 22 - PLAN & PROFILE	1/29/2021	A	5/21/2021	B	7/14/2021	C				
SRS-C-112-20A	ACCESS ROAD 22A - PLAN & PROFILE	1/29/2021	A	5/21/2021	B	7/14/2021	C				
SRS-C-112-21	ACCESS ROAD 23 - PLAN & PROFILE	1/29/2021	A	5/21/2021	B	7/14/2021	C				
SRS-C-112-22	ACCESS ROAD 24 - PLAN & PROFILE	1/29/2021	A	5/21/2021	B	7/14/2021	C				
SRS-C-112-22A	ACCESS ROAD 24A - PLAN & PROFILE	1/29/2021	A	5/21/2021	B	7/14/2021	C				
SRS-C-112-22B	ACCESS ROAD 24A - PLAN & PROFILE (Cont'd)	1/29/2021	A	5/21/2021	B	7/14/2021	C				
SRS-C-112-22C	ACCESS ROAD 24A - PLAN & PROFILE (Cont'd)	1/29/2021	A	5/21/2021	B	7/14/2021	C				
SRS-C-112-23	ACCESS ROAD 25 - PLAN & PROFILE	1/29/2021	A	5/21/2021	B	7/14/2021	C				
SRS-C-112-24	ACCESS ROAD 26A - PLAN & PROFILE	1/29/2021	A	5/21/2021	B	7/14/2021	C				
SRS-C-112-24A	ACCESS ROAD 26A TIE-IN - PLAN & PROFILE	1/29/2021	A	5/21/2021	B	7/14/2021	C				
SRS-C-112-25	ACCESS ROAD 26B - PLAN & PROFILE	1/29/2021	A	5/21/2021	B	7/14/2021	C				
SRS-C-112-26	ACCESS ROAD 27 - PLAN & PROFILE	1/29/2021	A	5/21/2021	B	7/14/2021	C				
SRS-C-112-27	ACCESS ROAD 28 - PLAN & PROFILE	1/29/2021	A	5/21/2021	B	7/14/2021	C				
SRS-C-112-27A	ACCESS ROAD 28 - PLAN & PROFILE (Cont'd)	1/29/2021	A	5/21/2021	B	7/14/2021	C				
SRS-C-112-28	ACCESS ROAD 29 - PLAN & PROFILE	1/29/2021	A	5/21/2021	B	7/14/2021	C				
SRS-C-112-29	ACCESS ROAD 30 - PLAN & PROFILE	1/29/2021	A	5/21/2021	B	7/14/2021	C				
SRS-C-112-30	ACCESS ROAD 31 - PLAN & PROFILE	1/29/2021	A	5/21/2021	B	7/14/2021	C				
SRS-C-112-30A	ACCESS ROAD 31 - PLAN & PROFILE (Cont'd)	1/29/2021	A	5/21/2021	B	7/14/2021	C				
SRS-C-112-30B	ACCESS ROAD 31 & 31A - PLAN & PROFILE	1/29/2021	A	5/21/2021	B	7/14/2021	C				
SRS-C-112-30C	ACCESS ROAD 31A - PLAN & PROFILE	1/29/2021	A	5/21/2021	B	7/14/2021	C				
SRS-C-112-31	ACCESS ROAD 32 & 33 - PLAN & PROFILE	1/29/2021	A	5/21/2021	B	7/14/2021	C				
SRS-C-112-32A	ACCESS ROAD 34 - PLAN & PROFILE	1/29/2021	A	5/21/2021	B	7/14/2021	C				
SRS-C-112-32	ACCESS ROAD 34 - PLAN & PROFILE (Cont'd)	1/29/2021	A	5/21/2021	B	7/14/2021	C				
SRS-C-112-33	ACCESS ROAD 35 - PLAN & PROFILE	1/29/2021	A	5/21/2021	B	7/14/2021	C				
SRS-C-112-34	ACCESS ROAD 36 - PLAN & PROFILE	1/29/2021	A	5/21/2021	B	7/14/2021	C				
SRS-C-112-34A	ACCESS ROAD 36A - PLAN & PROFILE	1/29/2021	A	5/21/2021	B	7/14/2021	C				
SRS-C-112-34B	ACCESS ROAD 36 - LAT 1, LAT 2 & LAT 3 - PLAN & PROFILE	1/29/2021	A	5/21/2021	B	7/14/2021	C				
SRS-C-112-35	ACCESS ROAD 37 - PLAN & PROFILE	1/29/2021	A	5/21/2021	B	7/14/2021	C				

@ Mott MacDonald
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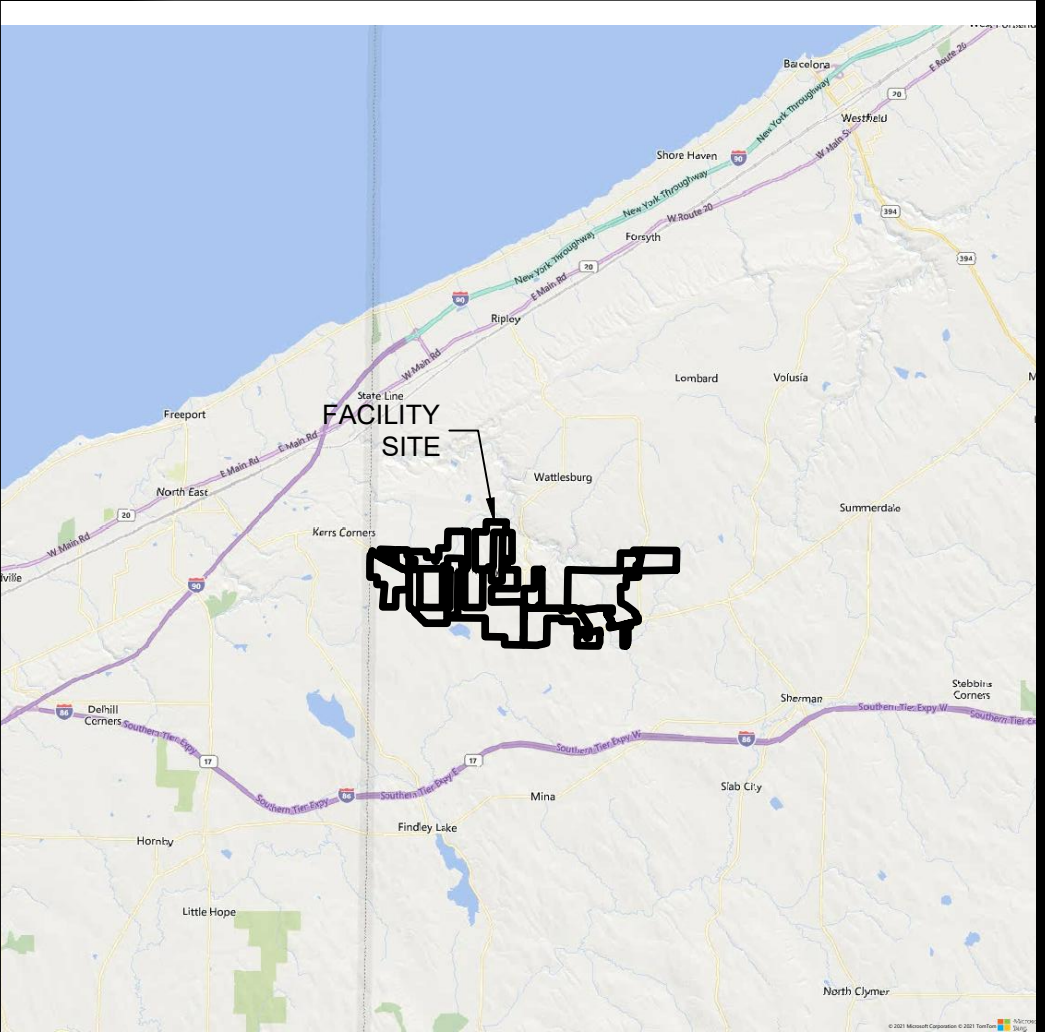
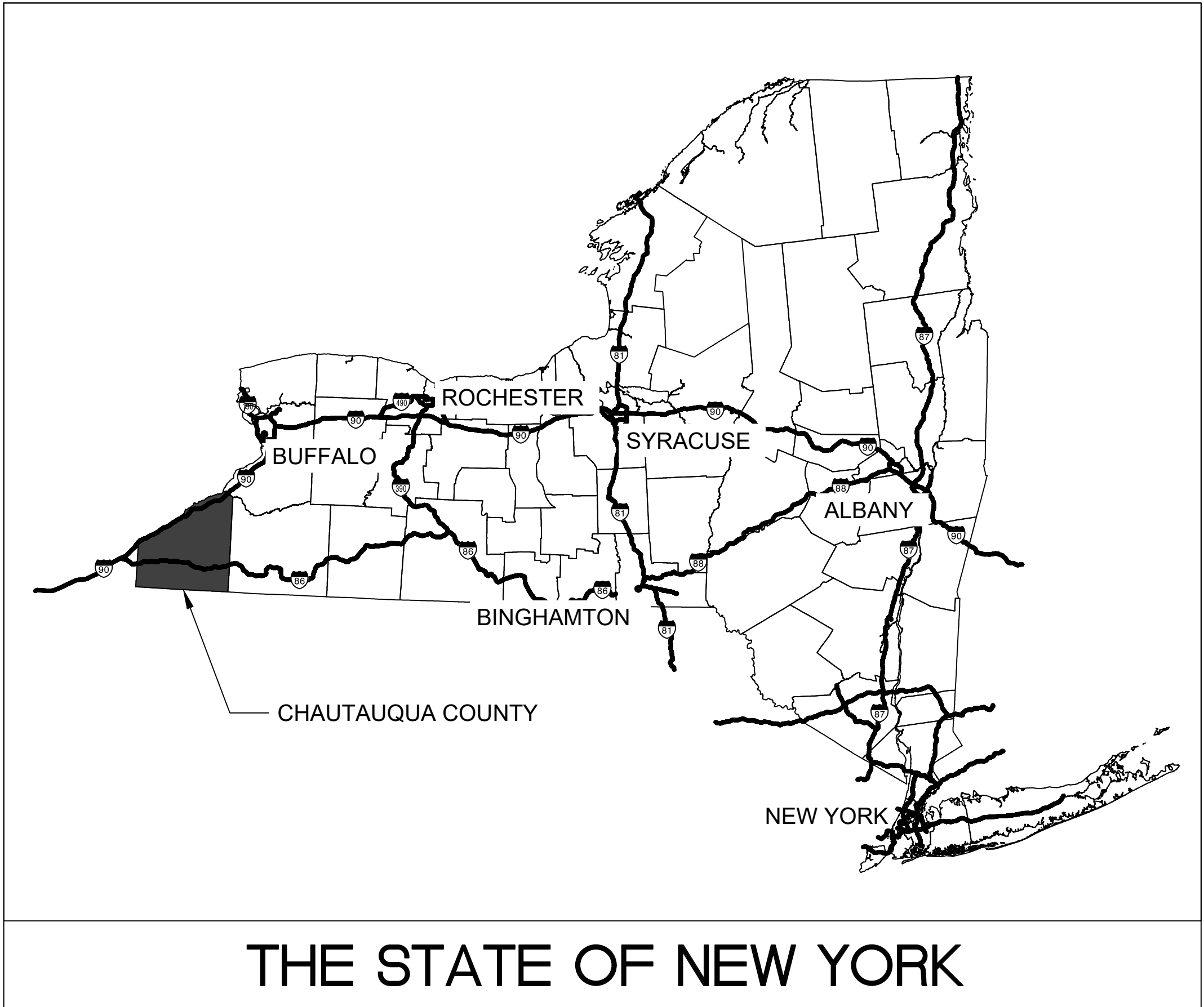
SOUTH RIPLEY SOLAR PROJECT

CIVIL - SOLAR

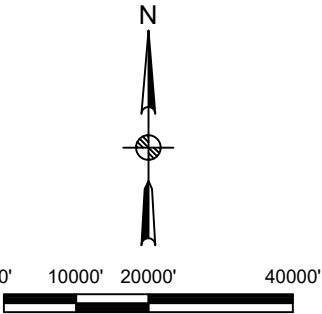
PREPARED FOR: CONNECTGEN CHAUTAUQUA COUNTY, LLC
PREPARED BY: MOTT MACDONALD NY, INC.
ISSUE DATE: JANUARY 11, 2022
ISSUE STATUS: RE-ISSUED FOR 94C

PROJECT DATA:

LOCATION: CHAUTAUQUA COUNTY, NY
PROJECTION: STATE PLANE NAD 83 (NY83-WF)
POWER GENERATED: 270 MWac



VICINITY MAP
SCALE: 1" = 20,000'



E	01/11/2022	RCB	RE-ISSUED FOR 94C	KW	NJM
D	12/08/2021	JSD	RE-ISSUED FOR 94C	KW	NJM
C	07/14/2021	JSD	ISSUED FOR 94C	KW	NJM
B	05/21/2021	RCB	ISSUED FOR REVIEW	KW	NJM
A	01/29/2021	RCB	ISSUED FOR REVIEW	KW	NJM
Rev	Date	Drawn	Description	Ch'k'd	App'd

PRELIMINARY CONTRACTOR NOTES:

1. ANY UNDERGROUND UTILITY LOCATIONS SHOWN ON DRAWINGS ARE APPROXIMATE. THE BALANCE OF PLANT (BOP) CONTRACTOR WILL TAKE ALL PRECAUTIONS NECESSARY TO PROTECT EXITING UTILITIES, PAVEMENTS, AND MONUMENTS EITHER SHOWN OR NOT SHOWN ON THESE DRAWINGS,
2. THE PROPOSED FACILITY COMPONENTS DEPICTED ON THE FINAL CONSTRUCTION DRAWINGS WILL BE DELINEATED IN THE FIELD BY EITHER LATH MARKERS, SURVEYORS RIBBON, PIN FLAGS, OR SUITABLE EQUIVALENT.
3. THE BOUNDARIES OF ALL STREAMS, WETLANDS, AND WETLAND ADJACENT AREAS AS DEPICTED ON THE FINAL CONSTRUCTION DRAWINGS WILL BE MARKED IN THE FIELD BY EITHER LATH MARKERS, SURVEYORS RIBBON, PIN FLAGS, OR SUITABLE EQUIVALENT PRIOR TO CONSTRUCTION BY THE BOP CONTRACTOR.
4. THE BOUNDARIES OF ALL AREAS OF TREES TO BE CLEARED AS DEPICTED ON THE FINAL CONSTRUCTION DRAWINGS WILL BE MARKED IN THE FIELD BY EITHER LATH MARKERS, SURVEYORS RIBBON, PIN FLAGS, OR SUITABLE EQUIVALENT PRIOR TO CONSTRUCTION BY THE BOP CONTRACTOR.
5. THE BOP CONTRACTOR WILL NOTE THE CONDITION OF ANY EXISTING FENCE THAT MAY BE IMPACTED BY PROJECT CONSTRUCTION. FENCES THAT MUST BE REMOVED AND/OR CUT WILL HAVE A TEMPORARY GATE INSTALLED IF NEEDED BASED ON LANDOWNER DISCUSSION. UPON COMPLETION OF CONSTRUCTION, THE FENCE WILL BE REBUILT, AT A MINIMUM TO ITS PRECONSTRUCTION CONDITION.
6. ANY DISRUPTION TO DEC REGULATED WETLANDS WILL BE MINIMIZED. DEC'S FIELD REPRESENTATIVE WILL NOTIFY THE DPS STAFF REPRESENTATIVE AND THE APPLICANT'S REPRESENTATIVE OF ANY ACTIVITIES THAT VIOLATE OR MAY VIOLATE EITHER THE TERMS OF THE CERTIFICATE OR THE ENVIRONMENTAL CONSERVATION LAW. DPS AND DEC STAFFS' FIELD REPRESENTATIVES WILL WORK COOPERATIVELY TO DETERMINE WHETHER STOP WORK AUTHORITY WILL BE EXERCISED, OR WHETHER TO DIRECT THE APPLICANT TO TAKE ACTION TO FURTHER MINIMIZE IMPACTS TO STREAMS AND WETLANDS.
7. RESTRICTED ACTIVITIES PERTAIN TO A BUFFER ZONE OF 100 FEET ON EITHER SIDE OF THE BOUNDARIES OF WATER-RELATED RESOURCES (STREAMS, WETLANDS, SPRINGS, WELLS, DRAINAGE, ETC.) AND INCLUDE THE FOLLOWING RESTRICTIONS:

A. NO DEPOSITION OF SLASH WITHIN IDENTIFIABLE STREAM CHANNELS OR WOOD CHIPS WITHIN 25 FEET OF WETLANDS;
B. NO UNNECESSARY REMOVAL OF WOOD VEGETATION OR DEGRADATION OF STREAM BANKS;
C. NO EQUIPMENT WASHING OR REFUELING EXCEPT AS SPECIFIED IN THE FINAL CONSTRUCTION DRAWINGS;
D. AND NO STORAGE MIXING OR HANDLING OF ANY PETROLEUM OR CHEMICAL MATERIALS IN OPEN CONTAINERS.
8. "AVOID, DO NOT CROSS" INDICATES THAT AN AREA DOES NOT HAVE A DESIGNATED ACCESS ROUTE AND THAT EQUIPMENT IS RESTRICTED FROM CROSSING OR OPERATING IN THAT AREA. THIS DESIGNATION IS APPLIED TO ALL WETLANDS, STREAMS, AND ASSOCIATED BUFFERS THAT DO NOT HAVE APPROVED EQUIPMENT ACCESS, AS DEPICTED ON THE FINAL CONSTRUCTION DRAWINGS
9. CONTRACTOR TO UTILIZE SOLAR SITES AS TEMPORARY LAYDOWN AREAS DURING CONSTRUCTION.
10. PARCEL LINES, RIGHT-OF-WAYS, EXISTING UTILITIES AND EXISTING CONTOURS SHOWN WITHIN THE DRAWINGS WERE FIELD DELINEATED BY MOTT MACDONALD SURVEYING AND PROVIDED IN CAD FILE FORMAT TITLED "CONNECT GEN SOUTH RIPLEY SOLAR PRELIM RECTIFY_052021.DWG" ON MAY 21, 2021. EXISTING CONTOURS SHOWN WITHIN THE DRAWINGS WERE GENERATED USING LIDAR.

PRELIMINARY GENERAL ENVIRONMENTAL RESTRICTIONS:

1. ALL EQUIPMENT ACCESS, STORAGE OF EQUIPMENT AND MATERIALS, AND OTHER CONSTRUCTION ACTIVITIES WILL BE CONFINED TO THE ACCESS ROADS, SOLAR SITES, SUBSTATIONS, AND THE COLLECTION LINE AND TRANSMISSION LINE ROUTES AS DEPICTED ON THE FINAL CONSTRUCTION DRAWINGS.
2. EQUIPMENT WILL UTILIZE THE INTERSECTION OF ACCESS ROADS AND EXISTING ROADS FOR TURNING. WORK AREAS, SUCH AS SOLAR SITES AND SUBSTATION AREAS, WILL ALSO PROVIDE AREAS FOR EQUIPMENT TURNING AND PARKING, IN ADDITION TO DESIGNATED TURNING LOCATIONS.
3. FUGITIVE DUST RESULTING FROM CONSTRUCTION ACTIVITIES WILL BE MINIMIZED TO THE MAXIMUM EXTENT PRACTICAL BY IMPLEMENTING APPROPRIATE CONTROL MEASURES. THESE MEASURES INCLUDE THE APPLICATION OF MULCH, WATER, OR STONE ON ACCESS ROADS, EXPOSED SOILS, STOCKPILED SOILS, OR UNPAVED PUBLIC ROADS WHEN DRY AND WINDY CONDITIONS EXIST. A WATERING VEHICLE (OR A VEHICLE CONTAINING AN APPROVED CHEMICAL TREATMENT) WILL BE AVAILABLE ON AN AS-NEEDED BASIS.
4. BOP CONTRACTOR MUST MAINTAIN ALL EQUIPMENT IN GOOD OPERATING CONDITIONS AND ALL MOTORS AND ENGINES WILL BE MUFFLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND WILL COMPLY WITH STATE ENVIRONMENTAL LAW, SUBCHAPTER E, PART 450 (NOISE FROM HEAVY MOTOR VEHICLES). ANY FAULTY NOISE SUPPRESSOR WILL BE REPAIRED OR REPLACED, EQUIPMENT WILL NOT BE LEFT RUNNING UNNECESSARILY, AND EXISTING TALL GROWING VEGETATION WILL BE MAINTAINED, TO THE MAXIMUM EXTENT PRACTICABLE, TO SERVE AS A NOISE BUFFER.
5. CONSTRUCTION ACTIVITY WILL GENERALLY OCCUR BETWEEN THE HOURS OF 6:00 A.M. AND 6:00 P.M. HOWEVER, DUE TO SAFETY OR CONTINUOUS OPERATION REQUIREMENTS, CONSTRUCTION ACTIVITIES MAY OCCUR OUTSIDE OF THESE TIME FRAMES AND ADDITIONAL WORK HOURS MAY BE NECESSARY.
6. WITHIN 100 FEET OF STATE REGULATED WETLANDS AND 25 FEET OF OTHER WATER BODIES, REMOVE ONLY THE MINIMUM VEGETATION NECESSARY TO ALLOW FOR CONSTRUCTION AND OPERATION OF THE FACILITY.
7. STREAMS AND WETLANDS WILL BE PROTECTED FROM INDIRECT IMPACTS DURING CONSTRUCTION BY UTILIZING VARIOUS EROSION AND SEDIMENT CONTROL MEASURES IN ACCORDANCE WITH APPROVED PROJECT STORMWATER POLLUTION PREVENTION PLAN (SWPPP). SUCH MEASURES WILL INCLUDE, BUT NOT BE LIMITED TO, SILT FENCES PLACED BETWEEN WATER RESOURCE BOUNDARIES AND CONSTRUCTION AREAS. EXPOSED SOIL WILL BE SEEDED AND/OR MULCHED, AS SOON AS PRACTICABLE, BUT IN ANY EVENT, NO LATER THAN SEVEN DAYS IN WHICH SITE DISTURBANCE OCCURS, TO ASSURE THAT EROSION AND SILTATION IS KEPT TO A MINIMUM ALONG STREAM AND WETLAND BOUNDARIES.
8. TEMPORARY EROSION CONTROL DEVICES AND STABILIZATION PRACTICES WILL BE INSTALLED SOON AS PRACTICABLE AND APPROPRIATE, IN ACCORDANCE WITH THE SWPPP. EROSION CONTROL DEVICES WILL BE INSTALLED AFTER CLEARING, BUT PRIOR TO SOIL DISTURBANCE.
9. IN THE EVENT THAT ARCHAEOLOGICAL MATERIALS, HUMAN REMAINS, OR EVIDENCE OF HUMAN BURIALS ARE ENCOUNTERED DURING CONSTRUCTION, ALL WORK IN THE VICINITY OF THE FIND WILL BE IMMEDIATELY HALTED AND THE "UNANTICIPATED DISCOVERY PLAN" WILL BE IMPLEMENTED.
10. THE BOP CONTRACTOR WILL LOCATE AND DISTRIBUTE EXCESS EXCAVATION MATERIAL IN NON-AGRICULTURE UPLAND AREAS (I.E., OUTSIDE OF WETLANDS, STREAMS, AND AGRICULTURAL FIELDS). WHERE PRACTICAL, SUCH MATERIAL WILL BE USED AS ROAD FILL OR BACKFILL AROUND STRUCTURES. EROSION CONTROL PRACTICES WILL BE INSTALLED, AND EXPOSED SOILS STABILIZED IN ACCORDANCE WITH THE SWPPP.
11. THE BOP CONTRACTOR WILL NOT LEAVE FUEL FIRED GENERATORS IDLING WHEN THEY ARE NOT IN ACTIVE USE.

PRELIMINARY SPECIFIC STREAM CROSSING RESTRICTIONS:

1. CONSTRUCTION WORK IN STREAMS WILL CONFORM TO APPROPRIATE TIMING RESTRICTIONS TO PROTECT IMPORTANT FISHERIES RESOURCES, DURING SPAWNING AND PRIMARY MIGRATION PERIODS. STREAMS SUBJECT TO SUCH RESTRICTIONS WILL BE DETERMINED IN THE FIELD BY REPRESENTATIVES OF THE DEC AND THE APPLICANT, PRIOR TO CONSTRUCTION. FOR COLD WATER FISHERIES IN THE PROJECT AREA, CONSTRUCTION WORK IN STREAMS WILL BE PROHIBITED BETWEEN OCTOBER 1 AND MAY 31 TO AVOID TROUT SPAWNING PERIODS. FOR WARM WATER FISHERIES, CONSTRUCTION WORK IN STREAMS WILL BE PROHIBITED BETWEEN MARCH 1 AND JULY 15. HOWEVER, ONCE INSTALLED, SUCH CROSSINGS CAN BE USED BY CONSTRUCTION VEHICLES THROUGHOUT THE DURATION OF PROJECT CONSTRUCTION. ANY EXCEPTIONS TO THESE PROHIBITED PERIODS REQUIRE PRIOR APPROVAL BY DPS STAFF, IN CONSULTATION WITH DEC.

PRELIMINARY SPECIFIC WETLAND CROSSING RESTRICTIONS:

1. ANY REQUIRED TEMPORARY ACCESS ROUTE WILL BE REMOVED FOLLOWING CONSTRUCTION.
2. IN ALL CASES, THE PRE-DISTURBANCE FLOW REGIME MUST BE MAINTAINED.

3. DURING EXCAVATION IN WETLANDS, TEMPORARY SPOIL STOCKPILES WILL BE PLACED ON CONSTRUCTION MATTING. FOLLOWING BACKFILL, ANY EXCESS SPOIL NOT USED AS STRUCTURE BACKFILL WILL BE DISPOSED OF AT AN UPLAND SITE AS APPROVED BY THE ENVIRONMENTAL INSPECTOR (NO BULL-DOZING, BACK-BLADING, OR OTHERWISE SPREADING OF EXCESS SPOIL OVER THE WETLAND SURFACE).
4. EROSION CONTROL AND OTHER WETLAND PROTECTION MEASURES WILL BE IMPLEMENTED AS SPECIFIED IN THE SWPPP.
5. BOP CONTRACTOR WILL INSTALL AND MAINTAIN SILT FENCING AND SEDIMENT BARRIERS WHEREVER EXCAVATION OR FILLING ACTIVITIES OCCUR ADJACENT TO OR WITHIN WETLAND AREAS AS INDICATED ON THE SWPPP DRAWINGS.

PRELIMINARY AGRICULTURAL LAND-RELATED RESTRICTIONS:

1. AGRICULTURAL MITIGATION, RESTORATION, AND CLEAN UP MAY INCLUDE, BUT IS NOT LIMITED TO, THE FOLLOWING: USE OF CONSTRUCTION MATTING, TOPSOIL STRIPPING, REMOVAL OF ROCK 4 INCHES OR LARGER PLACED BY BOP CONTRACTOR, REPLACEMENT OF EXISTING TOPSOIL WITH MATERIALS WHICH WERE STRIPPED IN THE AREA AT THE START OF CONSTRUCTION, SURFACE AND SUBSURFACE SHATTERING, DEEP TILLAGE, REPAIR OF FUNCTIONING STONE DRAINAGE SYSTEMS, BROKEN TILE OR TILING SYSTEMS, AND INSTALLATION OF NEW INTERCEPT DRAINS.
2. ACCESS ROUTES WILL BE CONSTRUCTED ONLY IN LOCATIONS SHOWN ON THE FINAL CONSTRUCTION DRAWINGS.
3. ALL ACCESS ROUTES WILL BE THE MINIMUM WIDTH NECESSARY TO ACCOMMODATE CONSTRUCTION TRAFFIC.
4. TO PREVENT DAMAGE TO ADJACENT AGRICULTURAL LAND, ALL VEHICLE TRAFFIC AND PARKING WILL BE CONFINED TO THE ACCESS ROADS AND DESIGNATED WORK AREAS AT THE SOLAR AND SUBSTATION FACILITY SITES. ANY NECESSARY PULL-OFFS AND PARKING AREAS WILL BE DEVELOPED OUTSIDE OF ACTIVE AGRICULTURAL FIELDS TO THE EXTENT PRACTICAL.
5. IN REPAIRING ANY DAMAGED DRAINAGE LINES, KNITTED FILTER COVERING WILL GENERALLY NOT BE USED AROUND CORRUGATED PLASTIC TUBING (TO AVOID POTENTIAL SILT ACCUMULATION AND SEAL-OFF OF DRAINAGE LINES).
6. IMMEDIATELY FOLLOWING CONSTRUCTION ACTIVITY, THE WORK AREAS WILL BE THOROUGHLY AND SAFELY CLEARED OF NUTS, BOLTS, SPIKES, WIRE, PIECES OF STEEL, AND OTHER ASSORTED ITEMS.
7. THE FUNCTIONS SERVED BY ACTIVE FARM FENCES AND GATES AFFECTED BY THE CONSTRUCTION WILL BE TEMPORARILY SUSTAINED THROUGHOUT ALL PHASES OF CONSTRUCTION AND SUCH SEGMENTS OF AFFECTED FENCES AND GATES WILL BE REBUILT AT A MINIMUM TO IT PRE-CONSTRUCTION CONDITION OR AS AGREED TO WITH THE LANDOWNER.
8. NO PIN FLAGS WILL BE USED IN AGRICULTURAL FIELDS.
9. THE NEW YORK DEPARTMENT OF AGRICULTURE AND MARKETS (NYDAM) GUIDELINES FOR AGRICULTURE AND MITIGATION FOR SOLAR PV PROJECTS WILL BE FOLLOWED TO THE EXTENT PRACTICABLE. NYDAM WILL BE CONSULTED WITH WHEN DEVIATIONS FROM THE GUIDELINES ARE NECESSARY.

PRELIMINARY EROSION & SEDIMENT CONTROL NOTES:

1. REFER TO THE CONSTRUCTION SEQUENCE IN THE PRELIMINARY SWPPP.
2. THE BOP CONTRACTOR WILL INSTALL EROSION AND SEDIMENT CONTROL PRACTICES AS SHOWN ON THE SWPPP, AS WARRANTED BY SITE CONDITIONS, AND THROUGHOUT ALL PHASES OF CONSTRUCTION.
3. ALL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE CONSTRUCTED AND OPERATED IN ACCORDANCE WITH THEIR DESIGN. ANY NECESSARY REPAIRS SHALL BE MADE IMMEDIATELY TO ASSURE THE CONTINUED PERFORMANCE OF THEIR INTENDED FUNCTION THROUGHOUT THE CONSTRUCTION PROCESS.
4. CONSTRUCTION ENTRANCES WILL BE INSTALLED FOR THE ACCESS ROUTES AT EACH JUNCTION WITH A PUBLIC ROAD, UNLESS OTHERWISE INDICATED ON THE FINAL CONSTRUCTION DRAWINGS.
5. INSTALL SILT FENCE ON THE DOWNSTREAM SIDE OF ALL DISTURBED AREAS, AS NECESSARY.
6. PLACE CHECK DAMS IN ALL SWALES/DITCHES, WHERE SPECIFIED IN THE FINAL CONSTRUCTION DRAWINGS, IN ACCORDANCE WITH THE 2005 NYS STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL.
7. THE CONTRACTOR SHALL PLACE SOIL AND EXCESS EXCAVATED EARTH IN TEMPORARY STOCK PILE AREAS THAT DO NOT INTERFERE WITH CONSTRUCTION ACTIVITIES, AND STORMWATER RUNOFF, AND ARE NOT IN ENVIRONMENTALLY SENSITIVE AREAS. STOCK PILES SHALL BE STABILIZED PER THE DETAIL.
8. ALL DISTURBED AREAS SHALL BE STABILIZED PER THE NYS STANDARDS FOR EROSION AND SEDIMENT CONTROL, AS NECESSARY BASED ON SITE CONDITIONS.
9. AFTER CONSTRUCTION IS COMPLETE, THE CONTRACTOR SHALL ROUGH GRADE, RE-APPLY STOCKPILED TOPSOIL, FINE GRADE, SEED, AND MULCH ALL DISTURBED AREAS PLANNED FOR VEGETATIVE COVER.
10. CONSTRUCTION WORK AREAS AND ACCESS ROUTES MAY BE IMPROVED, AS NECESSARY, TO ALLOW CONSTRUCTION ACCESS. ANY IMPROVEMENTS, UNLESS DEEMED PERMANENT, MUST BE REMOVED AT THE COMPLETION OF CONSTRUCTION AND THE AREA RESTORED TO PRE-CONSTRUCTION CONDITION.
11. THE CONTRACTOR IS RESPONSIBLE FOR THE PLACEMENT, DESIGN, APPROVAL, AND OPERATION OF CONCRETE WASHOUTS. THE CONCRETE WASHOUTS SHALL BE INSTALLED A MINIMUM OF 50 FEET AWAY FROM STORM DRAINAGE, SURFACE WATER, OR OTHER SENSITIVE AREAS. CONCRETE WASTE MATERIAL SHALL NOT BE ALLOWED TO OVERFLOW OR OTHERWISE DISCHARGE FROM THE CONCRETE WASHOUT.
12. THE CONTRACTOR SHALL PROVIDE HANDWASHING AND SANITARY FACILITIES, THESE FACILITIES SHALL BE SERVICED REGULARLY AND PROPERLY IN ACCORDANCE WITH LOCAL, STATE AND/OR FEDERAL REQUIREMENTS.

ARCHAEOLOGICAL SITES NOTE:

ARCHAEOLOGICAL SITES WILL BE IDENTIFIED DURING THE PHASE 1B ARCHAEOLOGICAL SURVEY. THE SITES RECOMMENDED FOR AVOIDANCE SHOULD BE AVOIDED BY ALL POTENTIALLY EARTH-DISTURBING ACTIVITIES RELATED TO THE CONSTRUCTION OF THE FACILITY. THE MAPPED LOCATIONS OF ALL ARCHAEOLOGICAL SITES RECOMMENDED FOR AVOIDANCE THAT OCCUR WITHIN 100 FEET (31 METERS) OF PROPOSED FACILITY-RELATED IMPACTS WILL BE IDENTIFIED AS ENVIRONMENTALLY SENSITIVE AREAS OR SIMILAR ON THE FINAL CONSTRUCTION DRAWINGS, AND MARKED IN THE FIELD BY CONSTRUCTION FENCING WITH SIGNS THAT RESTRICT ACCESS. THESE MEASURES SHOULD BE ADEQUATE TO ENSURE THAT IMPACTS TO ARCHAEOLOGICAL RESOURCES ARE AVOIDED.

Legend

Key Plan

C	07/14/2021	JSD	ISSUED FOR 94C	KW	NJM
B	05/21/2021	RCB	ISSUED FOR PERMIT	KW	NJM
A	01/29/2021	RCB	ISSUED FOR REVIEW	KW	NJM
Rev	Date	Drawn	Description	Ch'k'd	App'd

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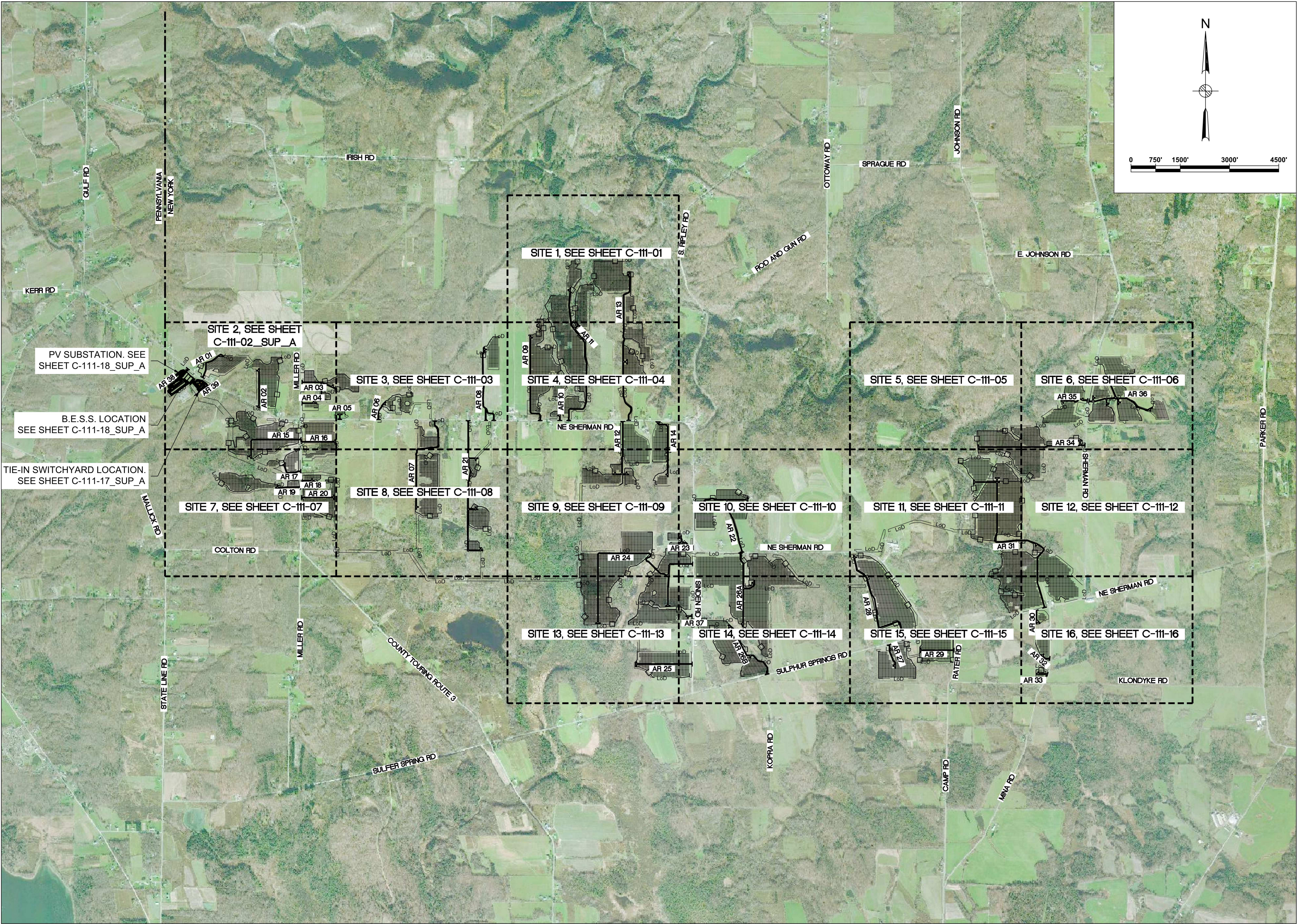


SOUTH RIPLEY SOLAR
CIVIL GENERAL NOTES

PRELIMINARY
NOT FOR
CONSTRUCTION
REPLACE WITH
ENGINEERS STAMP
AT CONSTRUCTION
AND/OR
FABRICATION

Designed	MU	Eng check	KW
Drawn	RCB	Approved	NJM
Dwg check		Project Mngr	
Scale at ANSI D NTS	Date 07/14/2021	Rev C	
Drawing Number	SRS-C-100-01		

CONCEPTUAL - NOT FOR CONSTRUCTION



Legend	
	TAX PARCEL BOUNDARY
	PROPOSED ACCESS ROAD
	SOLAR PANEL BUILDABLE AREA
	GAS
	LoD
	AR ##
	EXISTING ROAD CENTERLINE
	EXISTING GAS PIPELINE
	LIMITS OF DISTURBANCE
	PROPOSED ACCESS ROAD NUMBER
	EXISTING ROAD CENTERLINE

Key Plan

B	12/08/2021	RCB	ISSUED FOR 94-C-SUPPLEMENT A	KW	NJM
A	11/24/2021	RCB	ISSUED FOR REVIEW	KW	NJM
Rev	Date	Drawn	Description	Ch'k'd	App'd



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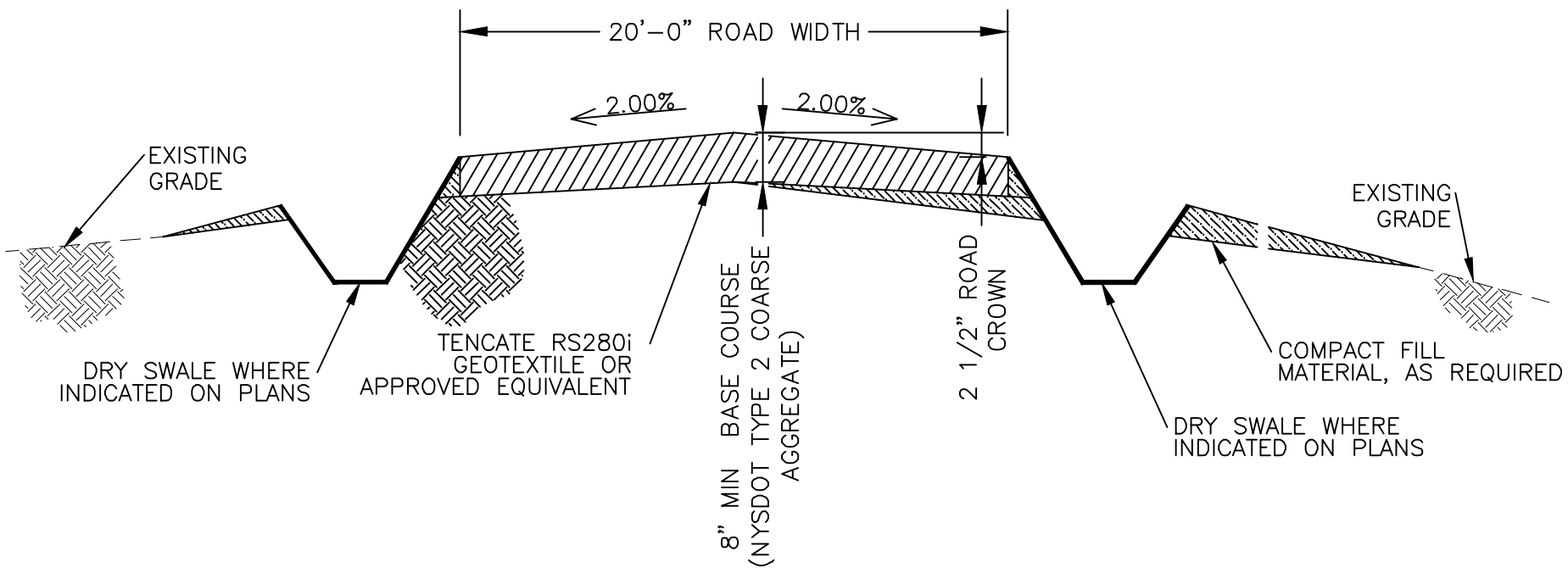
Title
SOUTH RIPLEY SOLAR
GRADING AND EROSION CONTROL
SITE AREA INDEX SHEET
SUPPLEMENT A

PRELIMINARY
NOT FOR
CONSTRUCTION
REPLACE WITH
ENGINEERS STAMP
AT CONSTRUCTION
AND/OR
FABRICATION

Designed	MU	Eng check	KW
Drawn	RCB	Approved	NJM
Dwg check		Project Mngr	
Scale at ANSI D 1" = 1500'	Date 12/08/2021	Rev B	
Drawing Number SRS-C-100-02_SUP_A			

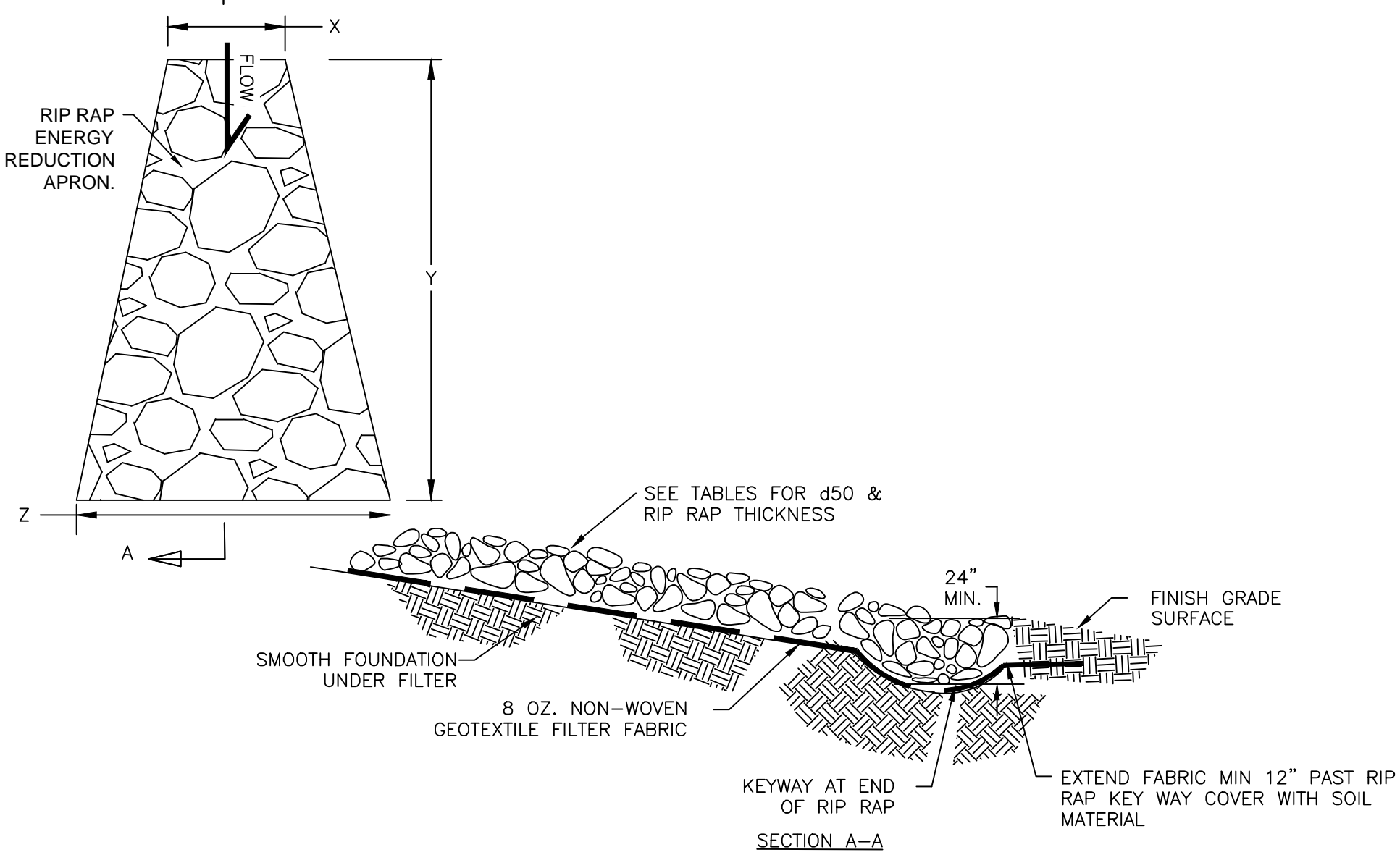
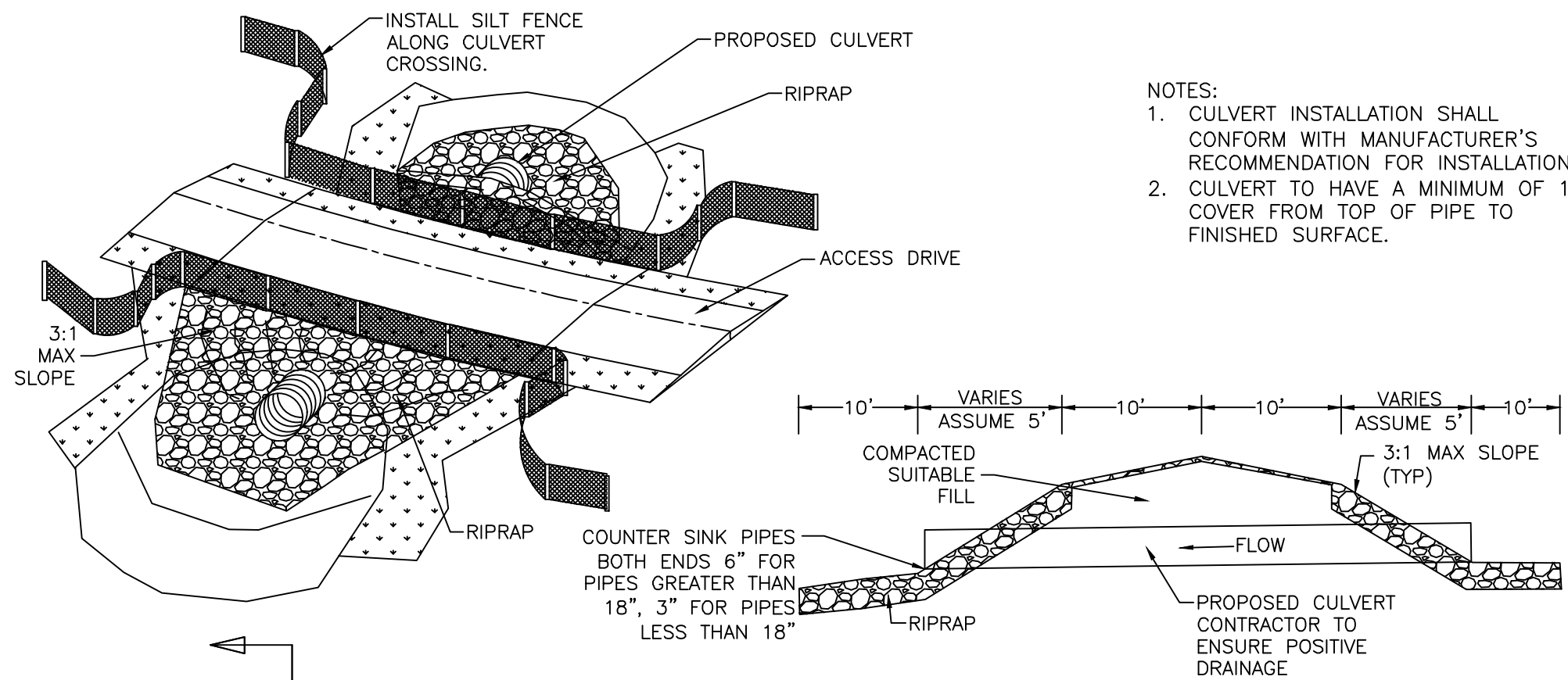
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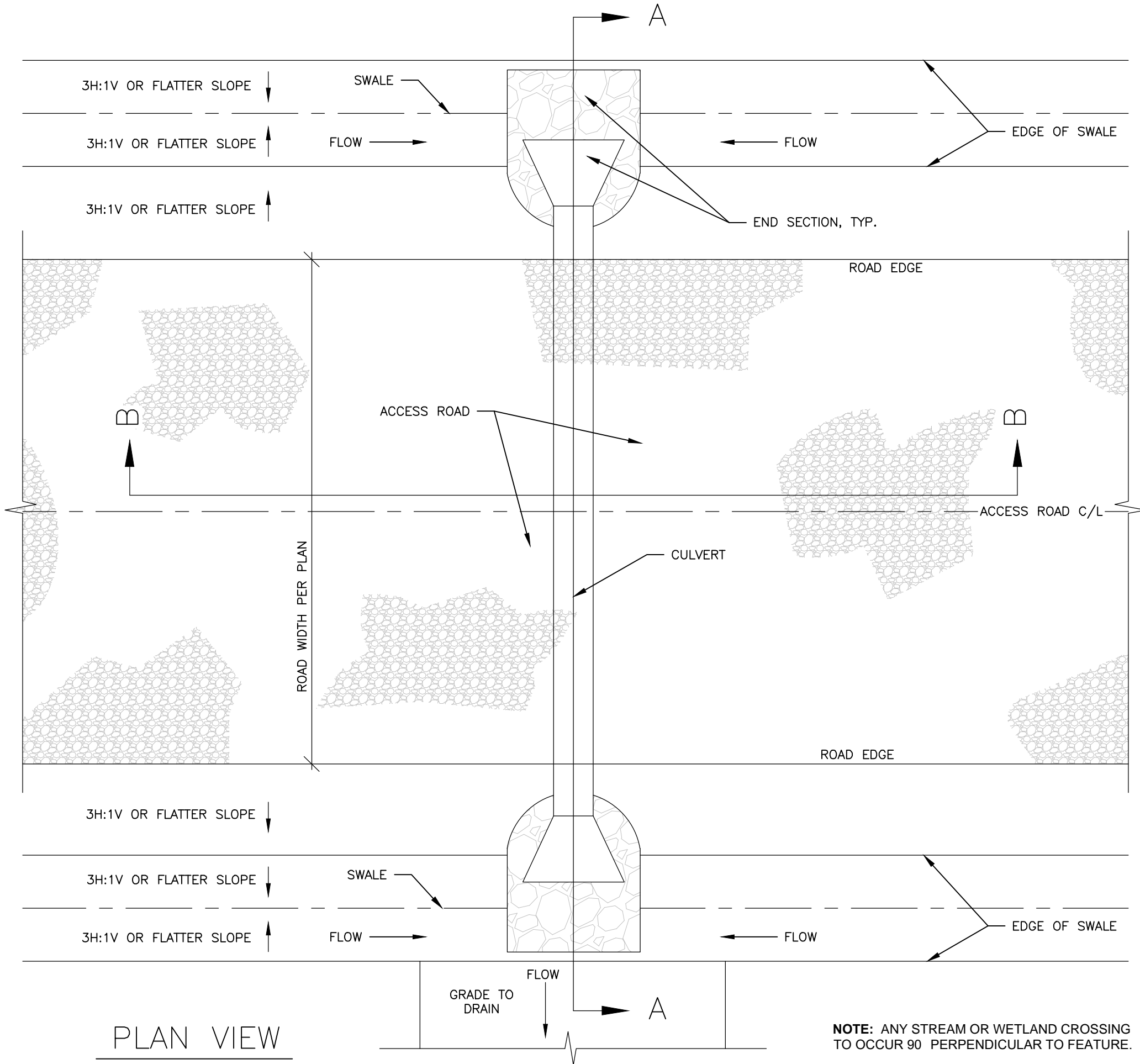


- NOTES:
1. ROADWAY SHOULDER SHALL BE COMPACTED AND SLOPED TO MEET FLUSH WITH ADJACENT GRADE FINAL TOPSOIL ELEVATION.
 2. MINIMUM ROADWAY CENTERLINE RADIUS SHALL BE 50 FT.
 3. ALL PV ACCESS ROADS ARE TO BE 20' IN WIDTH. IN AREAS OF WEAK SUBGRADES (CBR LESS THAN 10), ADDITIONAL STABILIZATION MAY BE OBTAINED THROUGH CHEMICAL TREATMENT OF THE SUBGRADE INCLUDING INTRODUCTION OF LIME OR CEMENT.
 4. REFER TO DETAIL 35 IN SHEET SRS-C-101-06 FOR ACCESS ROAD TYPICAL SECTION

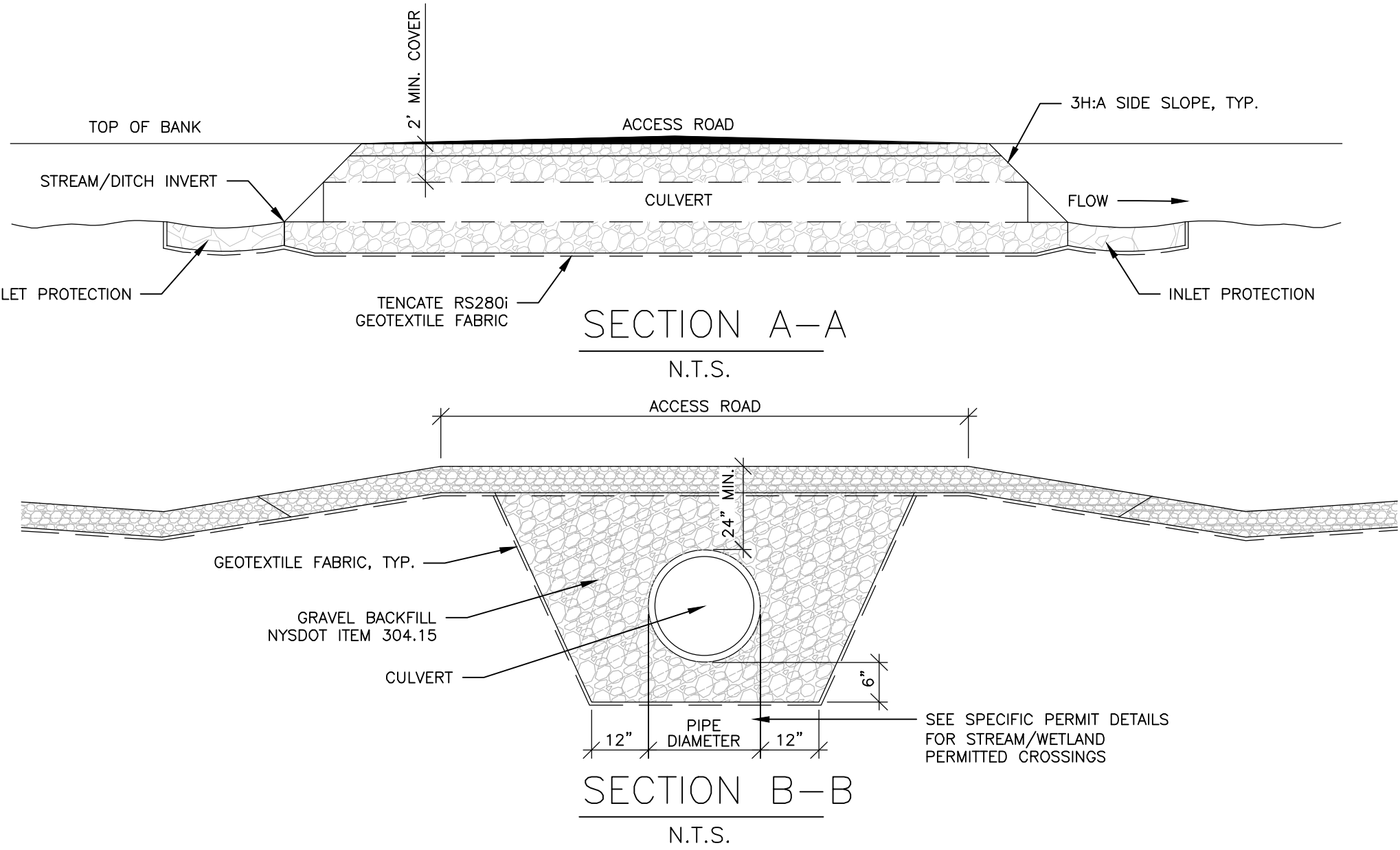
1 TYPICAL ACCESS ROAD CROSS SECTION
N.T.S.



2 CULVERT INSTALLATION AND RIP RAP APRON DETAIL WITHIN SOLAR SITE
N.T.S.



PLAN VIEW
N.T.S.



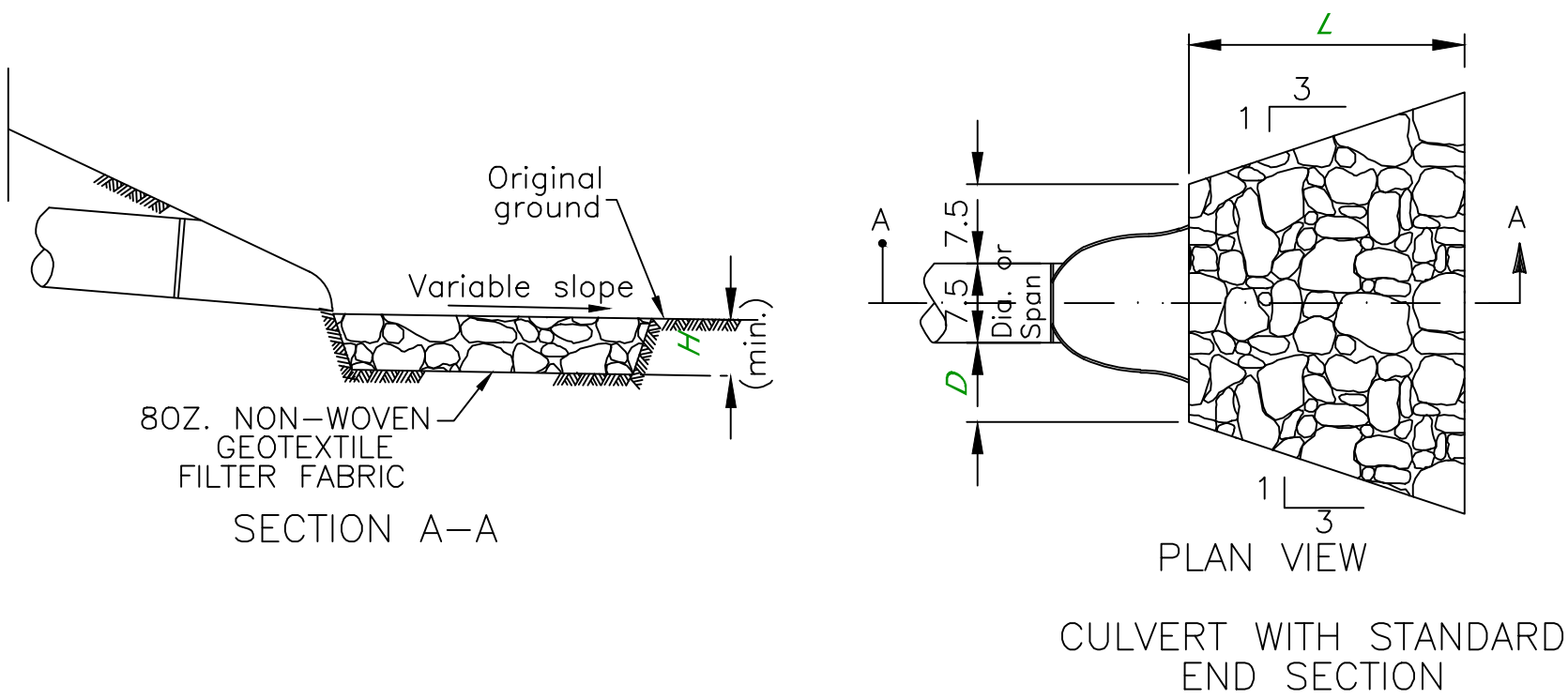
SECTION B-B
N.T.S.

- CULVERT NOTES:
1. ALL BACKFILL SHALL BE COMPACTED TO 95% STD. PROCTER.
 2. CULVERT SIZE: THE CROSS SECTIONAL AREA OF THE CULVERT PIPE SHALL BE THE LARGEST PIPE DIAMETER EQUAL TO THE UNDISTURBED CROSS SECTIONAL AREA OF THE BANK FULL CONDITION OF THE STREAM. IT SHOULD FIT INTO THE EXISTING CHANNEL WITHOUT EXCAVATION OF THE WATERWAY CHANNEL OR MAJOR APPROACH FILLS. IF A CHANNEL WIDTH EXCEEDS 3 FEET, ADDITIONAL PIPES MAY BE USED UNTIL THE CROSS SECTIONAL AREA OF THE PIPES APPROACHES THE EXISTING CHANNEL. THE MINIMUM CULVERT SIZE SHALL BE AN 18" DIAMETER PIPE.
 3. TEMPORARY INLET AND OUTLET PROTECTION SHALL BE INSTALLED AS DETAILED
 4. MULTIPLE PIPE INLETS: 4.A. CULVERT LENGTH: THE CULVERTS SHALL EXTEND TO THE UPSTREAM AND DOWNSTREAM TOE OF SLOPE. 4.B. MULTIPLE CULVERTS SHALL BE SET SO THEY HAVE A MINIMUM OF 12" SEPARATION FROM OUTSIDE PIPE TO OUTSIDE PIPE. 4.C. THE INVERT ELEVATIONS OF THE CULVERT SHALL BE INSTALLED AT OR BELOW THE NATURAL STREAMBED GRADE TO MINIMIZE INTERFERENCE WITH FISH MIGRATION. 4.D. THE CULVERT SHALL BE COVERED WITH A MINIMUM OF TWO FEET AGGREGATE.

3 CULVERT INSTALLATION DETAIL WITHIN STREAMS/WETLANDS AND STATE AND COUNTY ROAD ROWS
N.T.S.

OUTLET WITHOUT DITCH PROTECTIVE APRON DIMENSIONS AND ESTIMATED QUANTITIES

	CULVERT SIZE D (INCHES)	RIPRAP CLASS	LENGTH OF APRON L (FEET)	DEPTH OF APRON H (FEET)	ESTIMATED RIPRAP QUANTITY (CY)	ESTIMATED GEOTEXTILE QUANTITY (SY)
WITH END SECTION	12	2	4	1.5	1	5
	18	2	6	1.5	2.2	9
	24	2	8	1.5	3.9	14
	30	3	12.5	2	10.9	28
	36	3	16	2	15.6	37
	42	4	21	2.5	34.1	63
	48	4	24	2.5	44.5	79



END SECTION DETAIL AND RIP RAP DETAIL
WITHIN STATE AND COUNTY ROAD ROW
5 N.T.S.

Rev	Date	Drawn	Description	Ch'k'd	App'd
C	07/14/2021	JSD	ISSUED FOR 94C	KW	NJM
B	05/21/2021	RCB	ISSUED FOR REVIEW	KW	NJM
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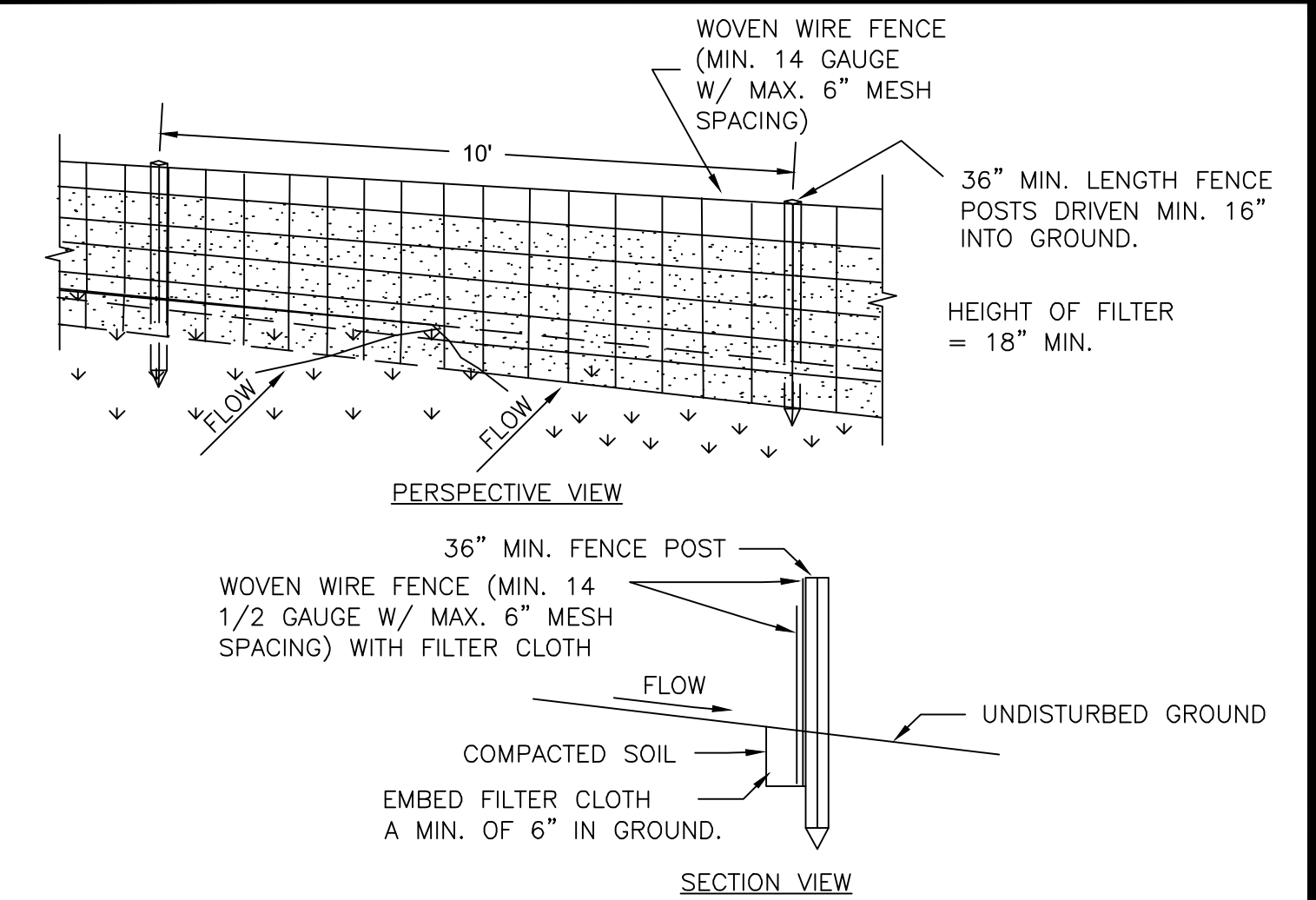


Title
SOUTH RIPLEY SOLAR
TYPICAL CIVIL DETAILS
SHEET 1 OF 10

PRELIMINARY
NOT FOR
CONSTRUCTION
REPLACE WITH
ENGINEERS STAMP
AT CONSTRUCTION
AND/OR FABRICATION

Designed	MU	Eng check	KW
Drawn	RCB	Approved	NJM
Scale at ANSI D NTS		Date	Rev
Drawing Number		07/14/2021	C
SRS-C-101-01			

CONCEPTUAL - NOT FOR CONSTRUCTION

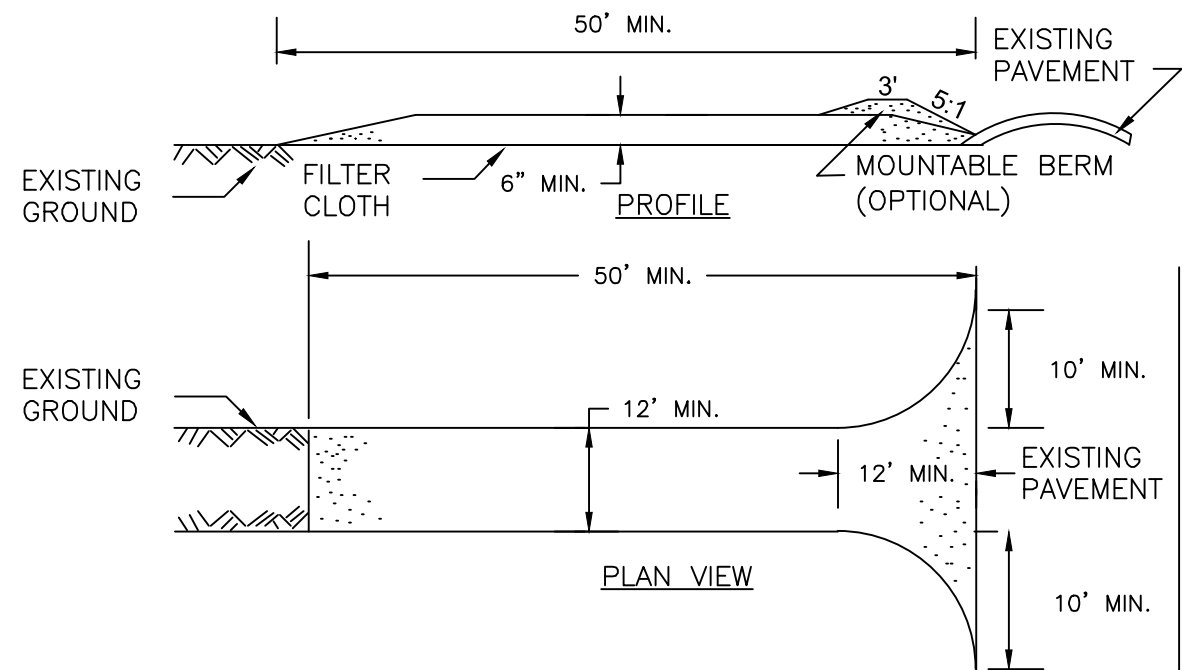


CONSTRUCTION SPECIFICATIONS

- WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES. POSTS SHALL BE STEEL EITHER "T" OR "U" TYPE OR HARDWOOD.
- FILTER CLOTH TO BE TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION. FENCE SHALL BE WOVEN WIRE, 6" MAXIMUM MESH OPENING.
- WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI 100X, STABILINKA T140N, OR APPROVED EQUIVALENT.
- PREFABRICATED UNITS SHALL BE GEOFAB, ENVIROFENCE, OR APPROVED EQUIVALENT.
- MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

ADAPTED FROM DETAILS PROVIDED BY: USDA - NRCS,
NEW YORK STATE DEPARTMENT OF TRANSPORTATION,
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION,
NEW YORK STATE SOIL & WATER CONSERVATION COMMITTEE

5 SILT FENCE DETAIL
N.T.S.

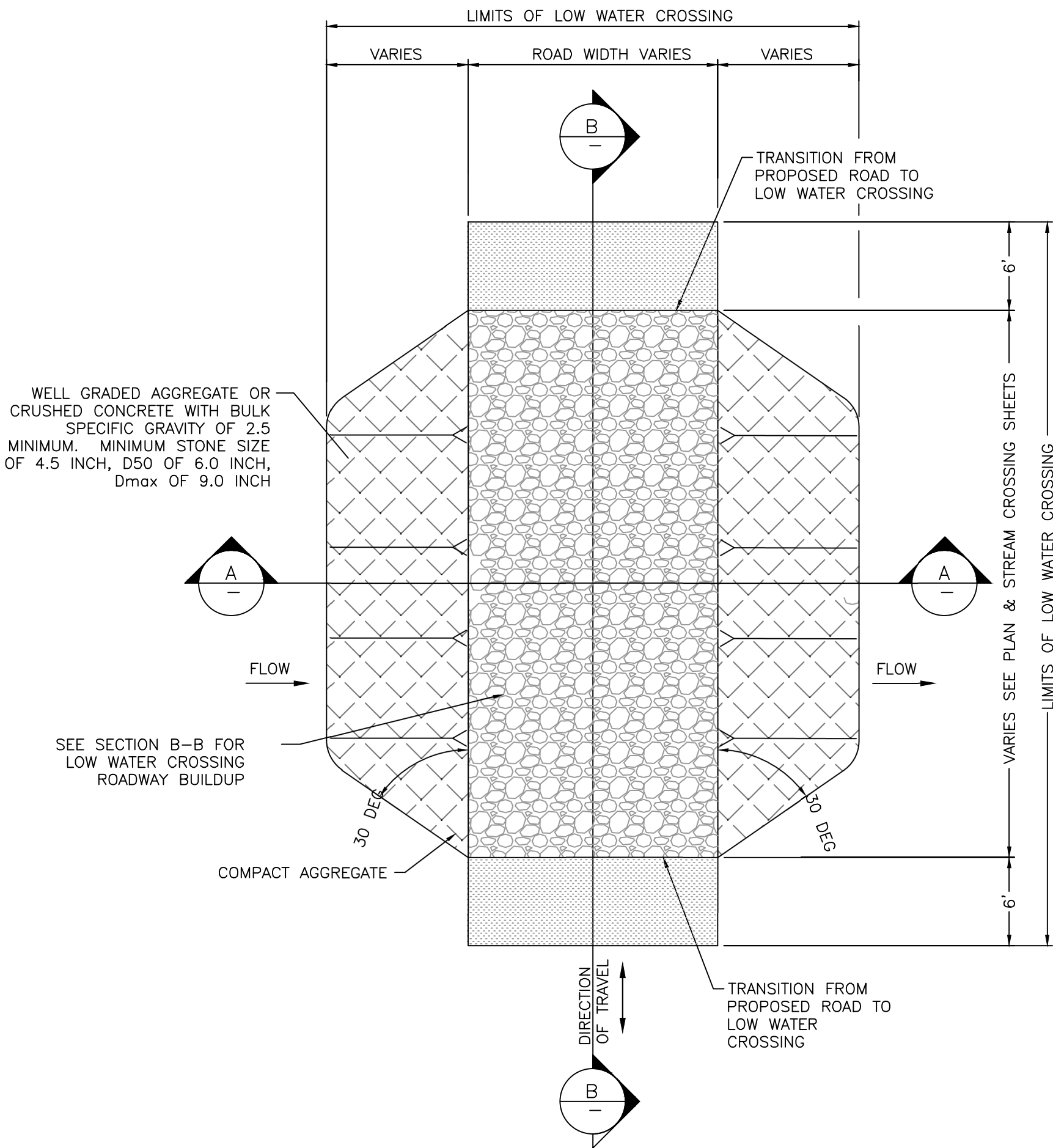


CONSTRUCTION SPECIFICATIONS

- STONE SIZE - USE 1-4 INCH STONE (NYDOT TYPE 4 OR 5), OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
- LENGTH - NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY).
- THICKNESS - NOT LESS THAN SIX (6) INCHES.
- WIDTH - TWELVE (12) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. TWENTY-FOUR (24) FOOT IF SINGLE ENTRANCE TO SITE.
- GEOTEXTILE - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
- SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ACCESS SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
- MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY, ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
- WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON A AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
- PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

ADAPTED FROM DETAILS PROVIDED BY: USDA - NRCS,
NEW YORK STATE DEPARTMENT OF TRANSPORTATION,
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION,
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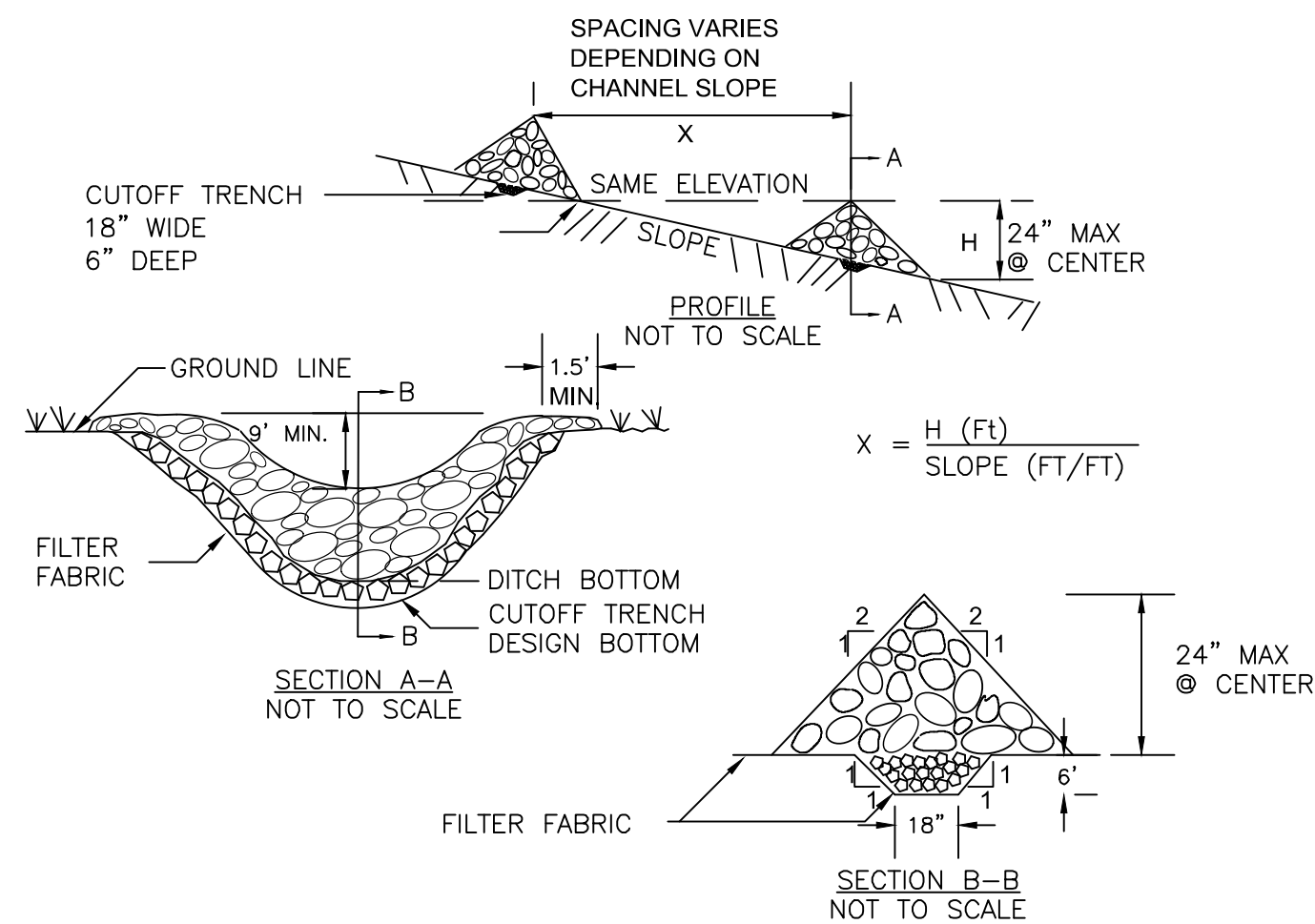
6 STABILIZED CONSTRUCTION ACCESS
N.T.S.



NOTES:

- CHANNEL SLOPES TO BE MODIFIED TEMPORARILY DURING CONSTRUCTION TO ALLOW FOR ADEQUATE COMPONENT DELIVERY.
- THE ACCESS ROAD SHALL CROSS THE DITCH AT A 90° ANGLE AND NOT DEFLECT FOR MORE THAN 6 INCHES OVER 50 FEET.
- THE TOP BED OF THE ROCK CHANNEL CROSSING SHALL CONFORM TO THE EXISTING DITCH CROSS SECTIONAL SLOPES.
- THE SLOPE OF THE LOW WATER CROSSING SHOULD MATCH THE EXISTING GRADE UNLESS OTHERWISE IDENTIFIED ON THE PLAN SHEETS.
- CONTRACTOR MAY SUBMIT ALTERNATE LOW WATER CROSSING REVETMENT AND ROAD BED STABILIZATION TO THE ENGINEER OF RECORD FOR REVIEW AND POSSIBLE APPROVAL.

7 LOW WATER CROSSING
N.T.S.

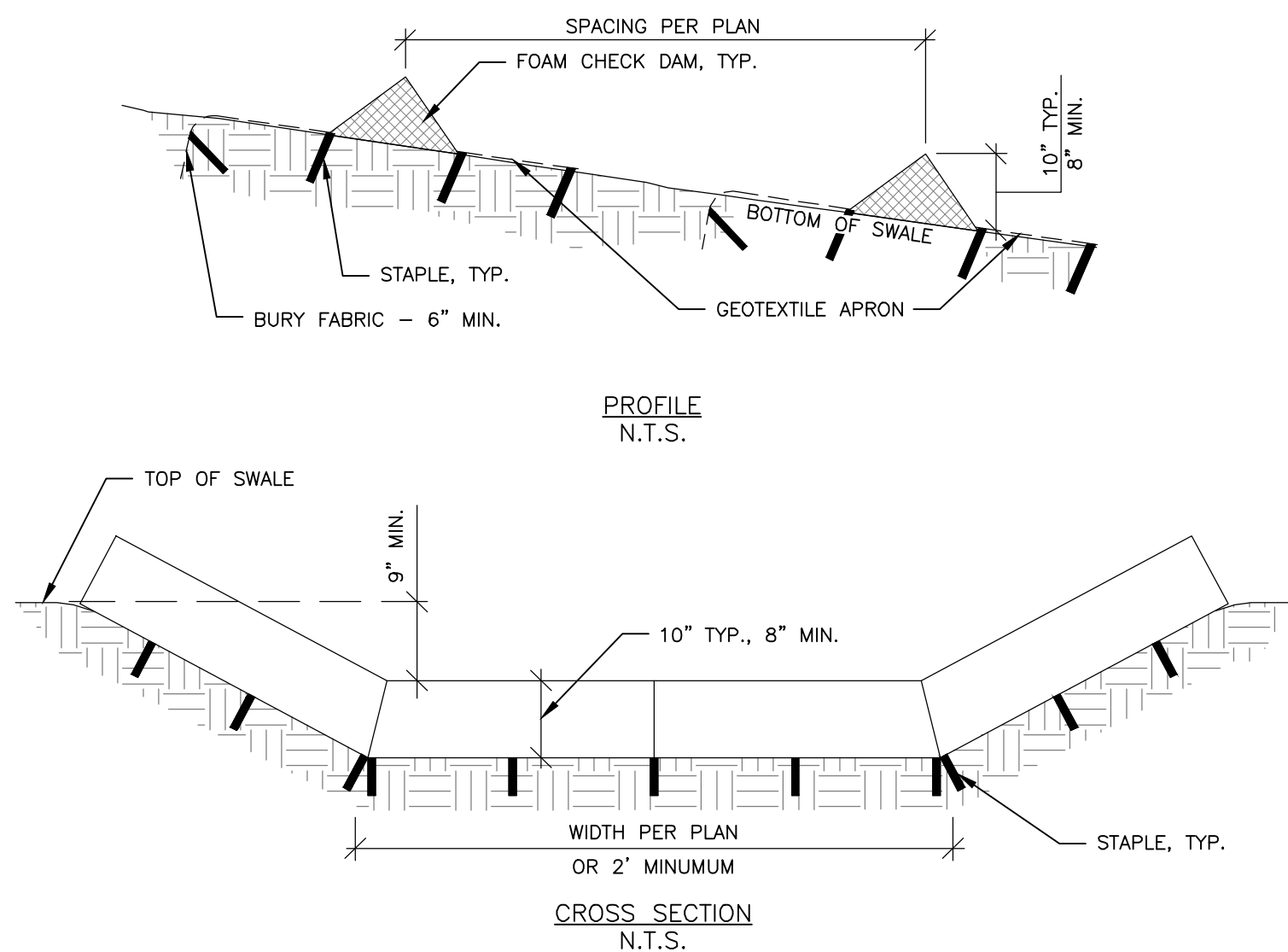


CONSTRUCTION SPECIFICATIONS

- STONE WILL BE PLACED ON A FILTER FABRIC FOUNDATION TO THE LINES, GRADES AND LOCATIONS SHOWN IN THE PLAN.
- SET SPACING OF CHECK DAMS TO ASSUME THAT THE ELEVATIONS OF THE CREST OF THE DOWNSTREAM DAM IS AT THE SAME ELEVATION OF THE TOE OF THE UPSTREAM DAM.
- EXTEND THE STONE A MINIMUM OF 1.5 FEET BEYOND THE DITCH BANKS TO PREVENT CUTTING AROUND THE DAM.
- PROTECT THE CHANNEL DOWNSTREAM OF THE LOWEST CHECK DAM FROM SCOUR AND EROSION WITH STONE OR LINER AS APPROPRIATE.
- ENSURE THAT CHANNEL APPURTENANCES SUCH AS CULVERT ENTRANCES BELOW CHECK DAMS ARE NOT SUBJECT TO DAMAGE OR BLOCKAGE FROM DISPLACED STONE. MAXIMUM DRAINAGE AREA 2 ACRES.

ADAPTED FROM DETAILS PROVIDED BY: USDA - NRCS,
NEW YORK STATE DEPARTMENT OF TRANSPORTATION,
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION,
NEW YORK STATE SOIL & WATER CONSERVATION COMMITTEE

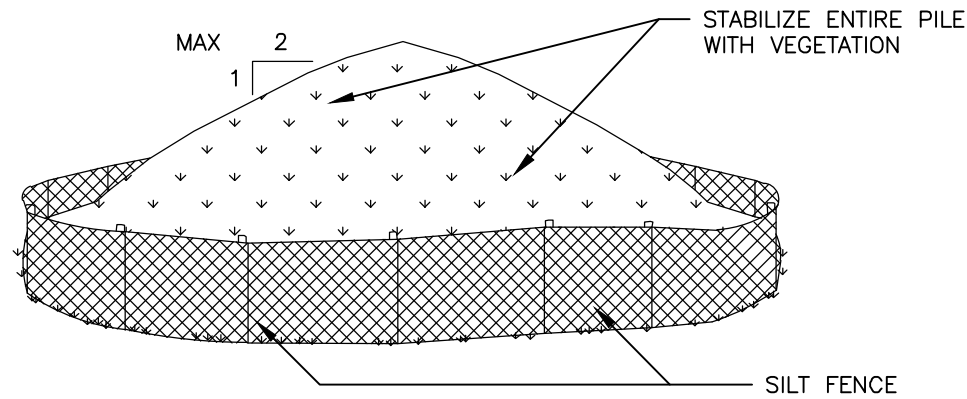
8 STONE CHECK DAM DETAIL
N.T.S.



NOTES:

- PREFABRICATED TEMPORARY CHECK DAMS SHALL BE EITHER URETHANE FOAM (CFC FREE) COVERED WITH GEOTEXTILE FABRIC, TRIANGULAR SILT DIKE BY ACF OR EQUAL.
- ALTERNATELY, DPE TEMPORARY CHECK DAMS, GEORIDGE BY NILEX OR EQUAL, MAY BE USED. INSTALL PER MANUFACTURER'S INSTRUCTIONS.
- STAPLES SHALL BE PLACES WHERE UNITS OVERLAP AND DIRECTED BY MANUFACTURER'S INSTRUCTIONS.

9 PREFABRICATED TEMPORARY CHECK DAM DETAIL
N.T.S.



INSTALLATION NOTES:

- AREA CHOSEN FOR STOCKPILING OPERATIONS SHALL BE DRY AND STABLE.
- MAXIMUM SLOPE OF STOCKPILE SHALL BE 3H:1V. MAXIMUM HEIGHT SHALL BE 4 FEET.
- EACH PILE SHALL BE SURROUNDED WITH SILT FENCING, INSTALLED PER CORRESPONDING DETAIL, THEN STABILIZED WITH ANNUAL GRASS WITHIN 3 DAYS.
- A PERIMETER DIKE/SWALE SHALL BE LOCATED UP-SLOPE OF THE TOPSOIL STOCKPILE.

10 STABILIZED TEMPORARY TOPSOIL STOCKPILE
N.T.S.

B	12/08/2021	RCB	ISSUED FOR 94-C-SUPPLEMENT A	KW	NJM
A	11/24/2021	RCB	ISSUED FOR REVIEW	KW	NJM
Rev	Date	Drawn	Description	Ch'k'd	App'd

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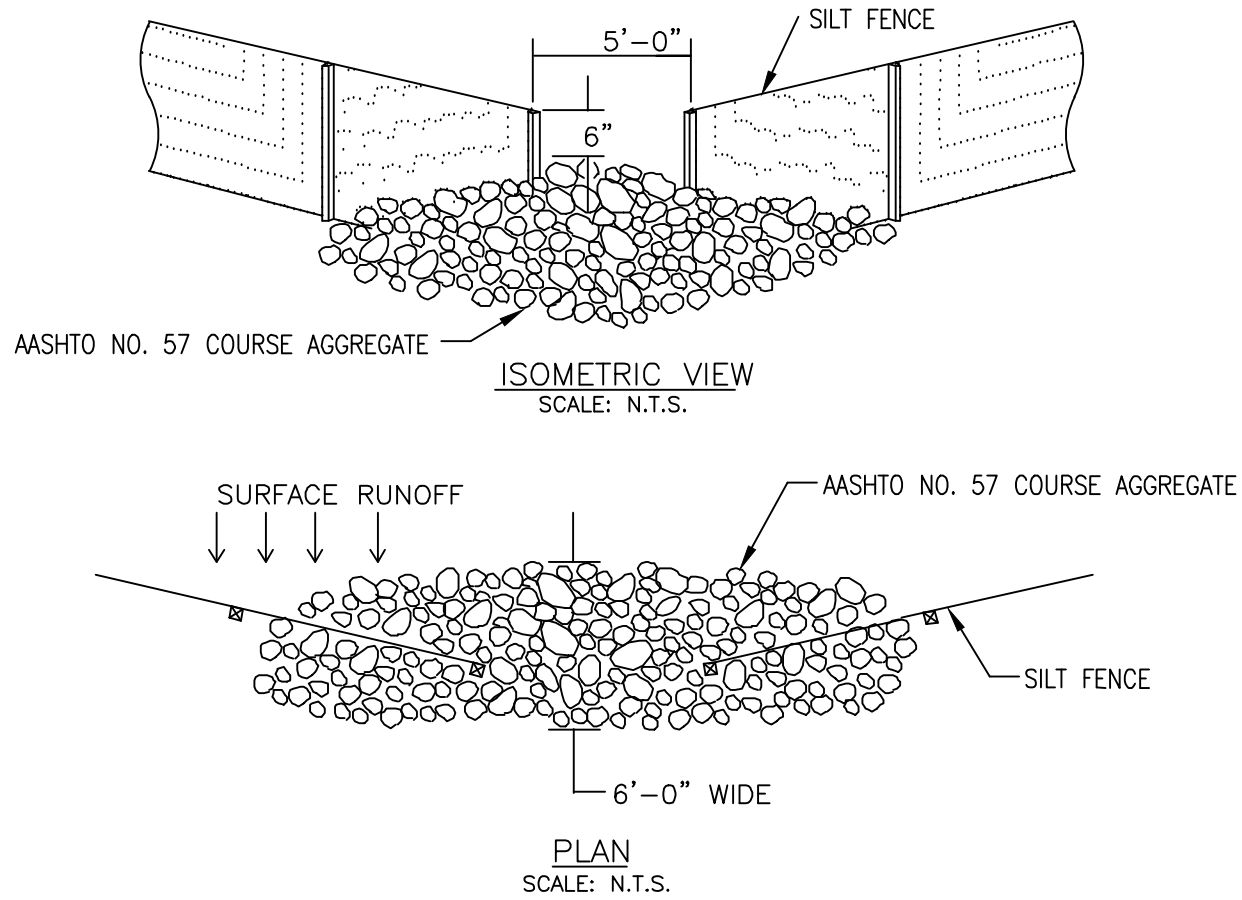


Title
SOUTH RIPLEY SOLAR
TYPICAL CIVIL DETAILS

PRELIMINARY
NOT FOR
CONSTRUCTION
REPLACE WITH
ENGINEERS STAMP
AT CONSTRUCTION
AND/OR FABRICATION

Designed	MU	Eng check	KW
Drawn	RCB	Approved	NJM
Scale at ANSI D NTS	Date 12/08/2021	Rev B	
Drawing Number	SRS-C-101-02_SUP_A		

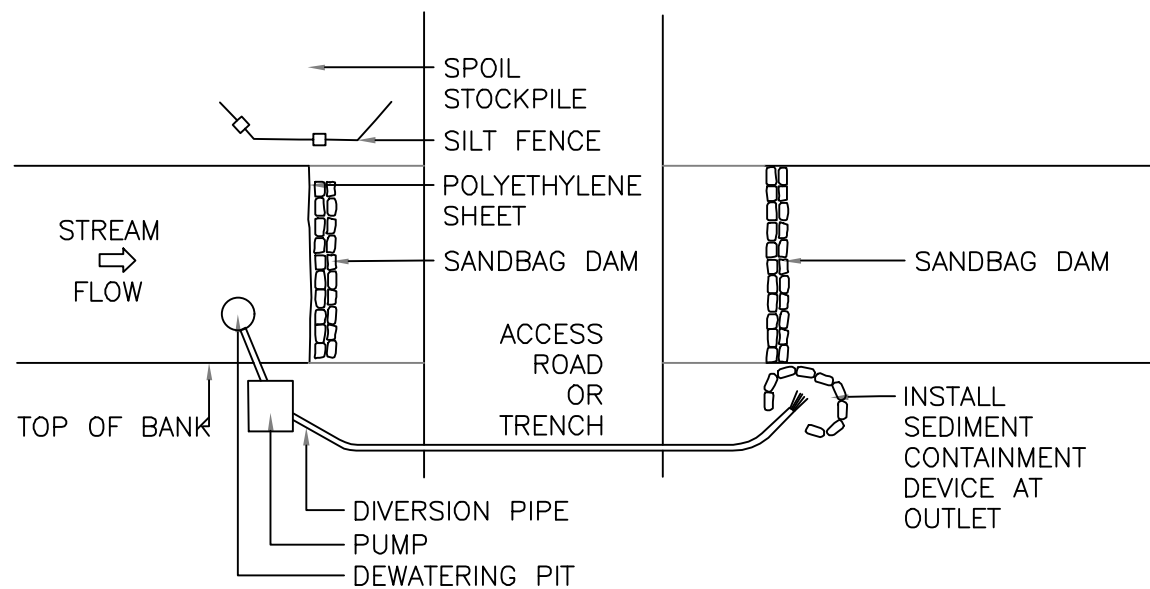
CONCEPTUAL - NOT FOR CONSTRUCTION



NOTES:

- ROCK FILTER OUTLETS SHALL BE PLACED ALONG SEDIMENT BARRIERS AS SHOWN ON THE PLAN. THE ROCK FILTER OUTLET IS NOT INTENDED TO BE PLACED IN STREAMS, RIVERS, CREEKS OR DITCHES WHICH NORMALLY HAVE FLOWING WATER.
- ONCE THE DISTURBED AREA IS STABILIZED, THE ROCK FILTER OUTLET SHALL BE REMOVED AND ANY DISTURBED AREAS CAUSED BY REMOVAL SHALL BE RETURNED TO ORIGINAL CONDITION AND REVEGETATED.
- THE ROCK UTILIZED IN THE ROCK FILTER OUTLET SHALL BE CLEANED OR REPLACED WHEN THE ACCUMULATION OF SEDIMENT IS SUCH THAT THE ROCK FILTER OUTLET CAN NOT EFFECTIVELY FILTER DISCHARGE WATER.
- INSTALL AASHTO NO. 1 COURSE AGGREGATE AT THE OUTLET SIDE OF THE SEDIMENT BARRIER AS SHOWN IN THE DETAIL. AFTER INSTALLING AASHTO NO. 1 COURSE AGGREGATE, INSTALL AASHTO NO. 57 COURSE AGGREGATE AT THE INLET SIDE OF THE SEDIMENT BARRIER TO CREATE AN ADEQUATE FILTER STONE FACE FOR THE OUTLET STRUCTURE.

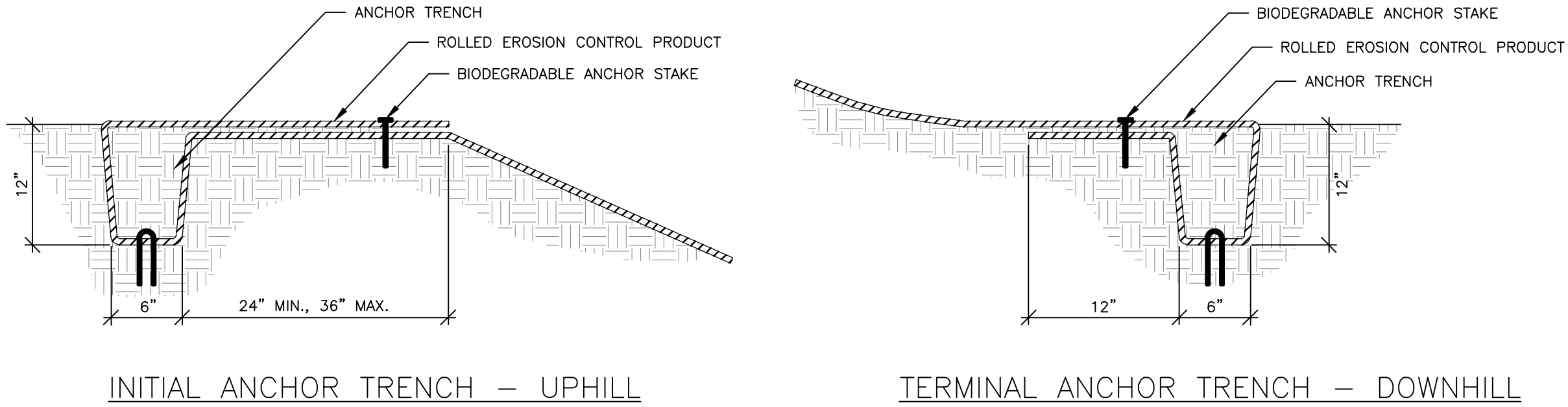
11 ROCK FILTER OUTLET
N.T.S.



NOTES:

- TEMPORARY SAND BAGS ARE TO BE INSTALLED PRIOR TO ANY CONSTRUCTION WITHIN THE LIMITS OF THE STREAM. IN THE EVENT THAT THE STREAM IS DRY DURING CONSTRUCTION AND NO RAIN IS FORECAST, SAND BAGS AND TEMPORARY DIVERSION ARE NOT NECESSARY.
- EXCAVATED TRENCH MATERIAL SHALL BE STOCKPILED ADJACENT TO THE TRENCH, NO CLOSER THAN 25' FROM THE TOP OF BANK OF THE STREAM.
- SILT FENCE SHALL BE INSTALLED BETWEEN THE STOCKPILED MATERIAL AND THE TOP OF BANK OF THE STREAM.
- IMMEDIATELY AFTER CONSTRUCTION IS COMPLETE, PERMANENT STABILIZATION MEASURES SHALL BE APPLIED.

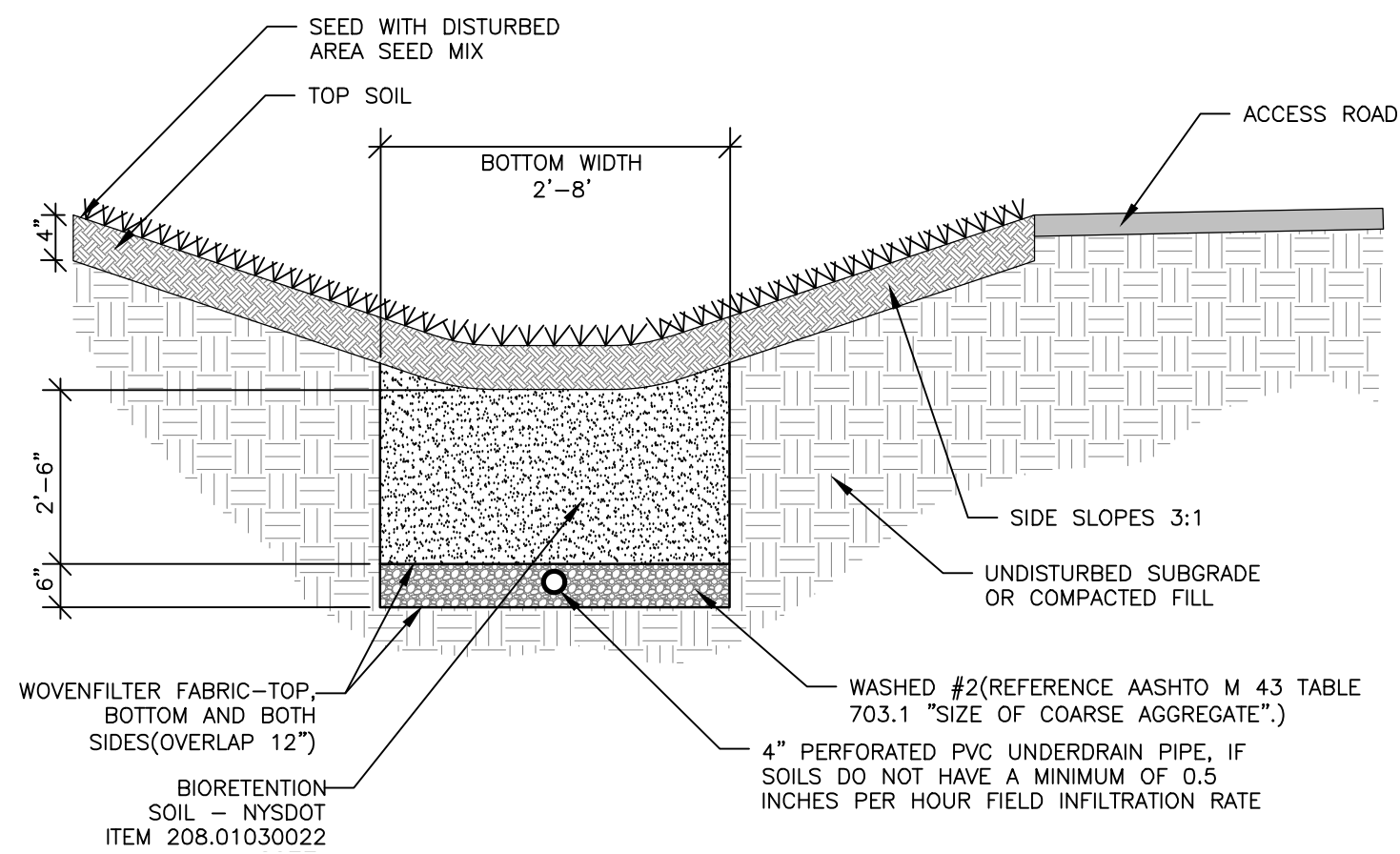
12 TYPICAL STREAM DIVERSION DETAIL
N.T.S.



INITIAL ANCHOR TRENCH - UPHILL

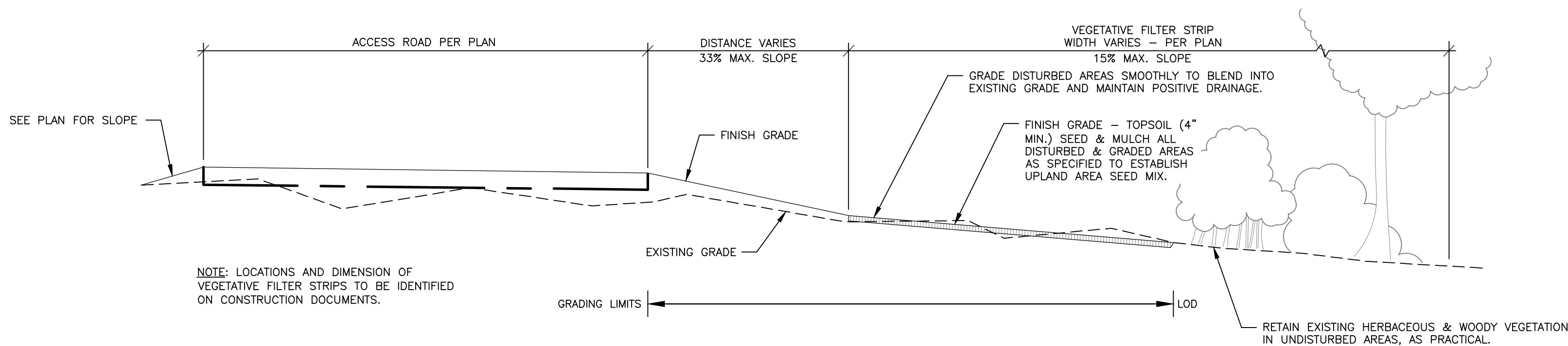
TERMINAL ANCHOR TRENCH - DOWNHILL

13 ROLLED EROSION CONTROL PRODUCT ANCHORING DETAIL
N.T.S.



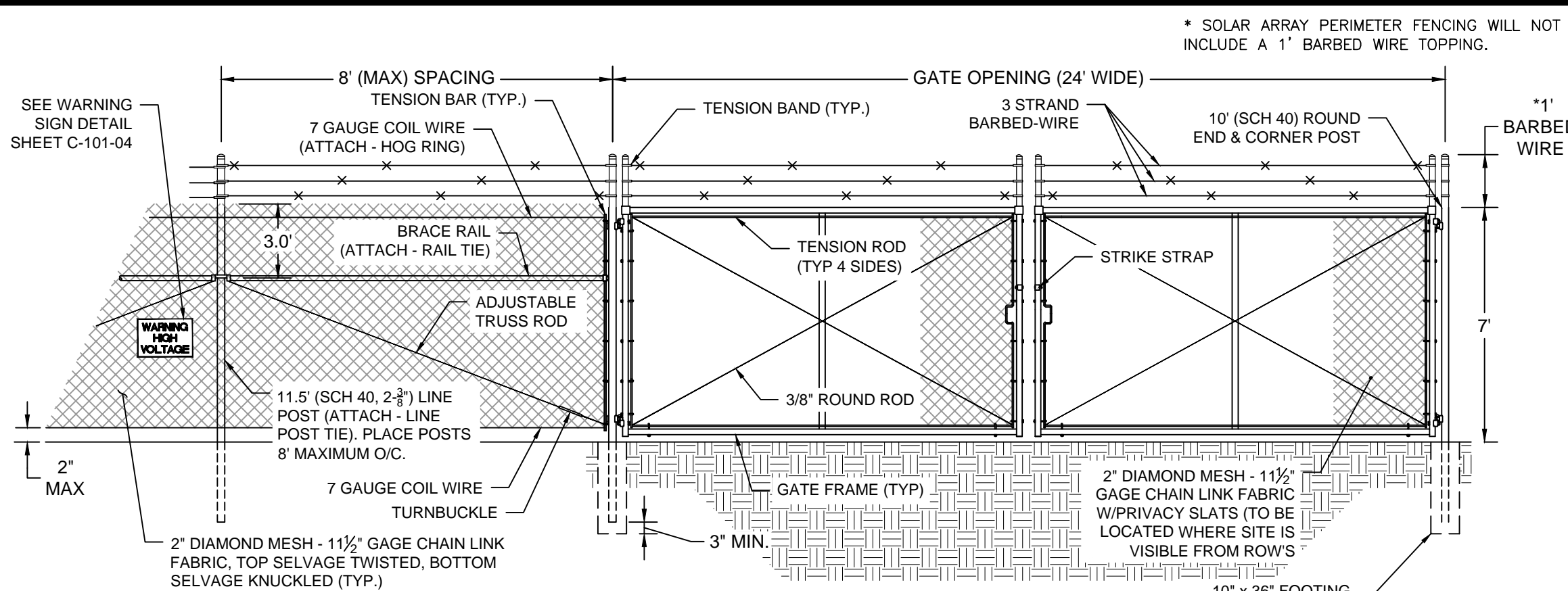
NOTE: LOCATIONS AND DIMENSION OF DRY SWALES TO BE IDENTIFIED ON CONSTRUCTION DOCUMENTS.

14 TYPICAL DRY SWALE (INTERFACE @ UG COLLECTOR)
N.T.S.



NOTE: LOCATIONS AND DIMENSION OF VEGETATIVE FILTER STRIPS TO BE IDENTIFIED ON CONSTRUCTION DOCUMENTS.

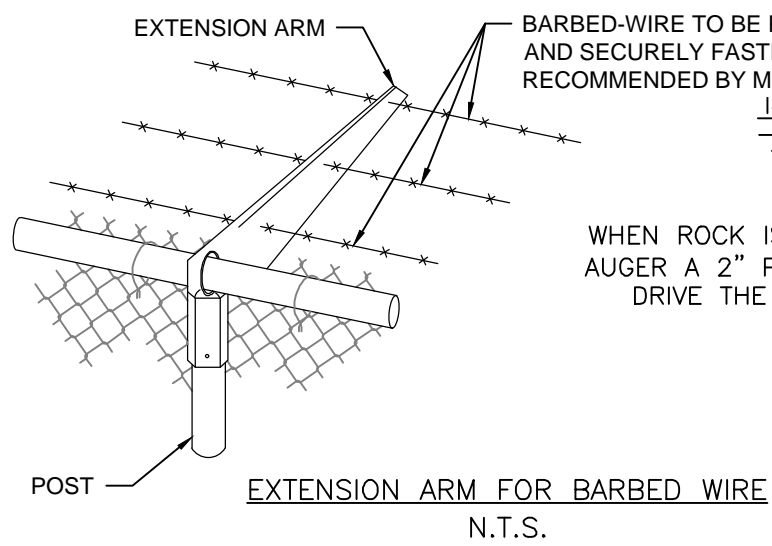
16 TYPICAL VEGETATIVE FILTER STRIP
N.T.S.



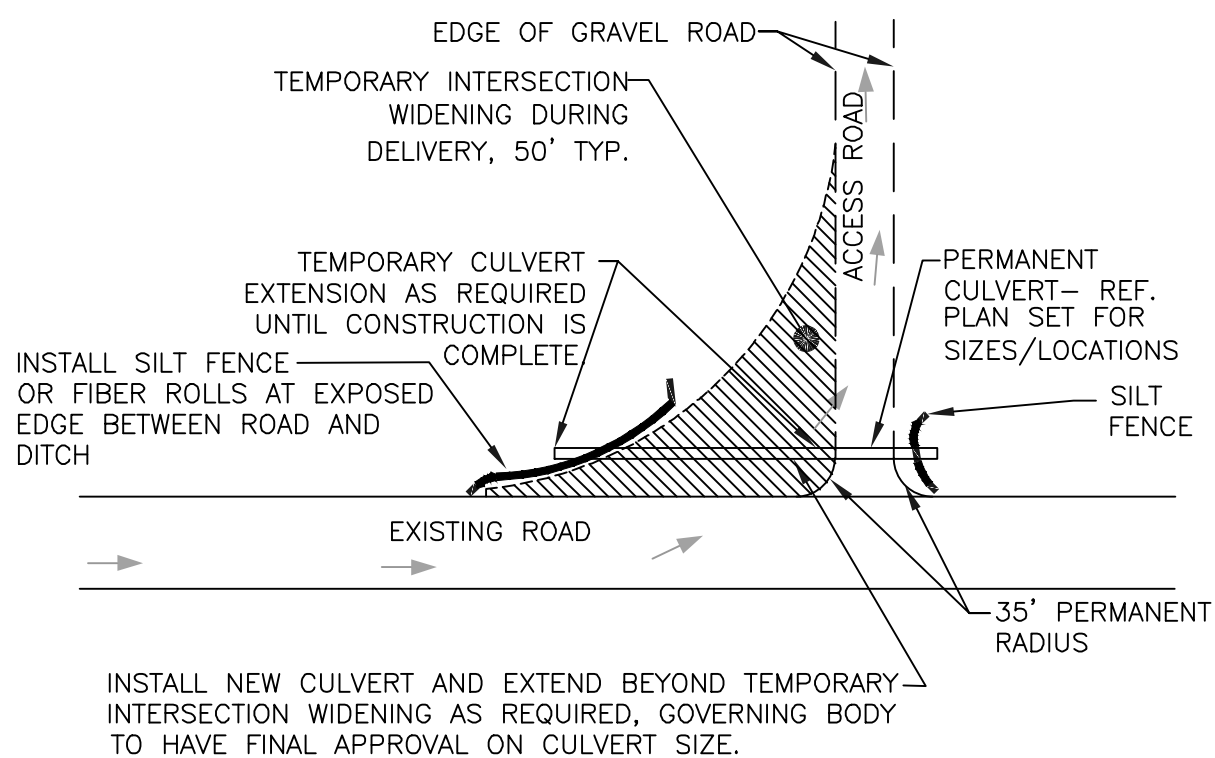
POST SCHEDULE: (SCH 40)
TERMINAL 2- 1/2" OD
GATE 4" OD
POST SCHEDULE: (SCH 40)
LINE 2- 3/8" OD
BRACE RAIL 1- 5/8" OD

NOTE:

- ALL POST HOLES SHALL BE AUGERED. DO NOT FORM.
- FOR PLAN AND LOCATION FOR GATES. SEE SITE SPECIFIC DRAWING.
- CONCRETE SHALL REACH A MINIMUM COMPRESSIVE STRENGTH OF 3000 P.S.I. AT 28 DAYS.
- LINE POST SHALL BE INSTALLED EQUALLY SPACED ALONG FENCE LINE AT A MAXIMUM 8'-0" CENTER TO CENTER.
- ALL WIRE, FENCE FABRIC POST, BRACE RAILS AND HARDWARE TO BE HOT DIPPED GALVANIZED.
- CONTRACTOR TO SUBMIT SHOP DRAWING FOR FENCE GATE LATCH FOR ENGINEER'S APPROVAL.



15 TYPICAL SUBSTATION FENCING DETAIL
N.T.S. (FOR INFORMATIONAL PURPOSES ONLY)



NOTES:

- UPON DELIVERY VEHICLE COMPLETION, TEMPORARY INTERSECTION WIDENING AND TEMPORARY CULVERT TO BE REMOVED AND ALL DISTURBED AREA RESTORED TO NATIVE CONDITIONS.
- CULVERTS AND SILT FENCE SHALL BE INSTALLED AND MAINTAINED AT INTERSECTIONS WHERE THE ACCESS ROAD IS CROSSING AN EXISTING DITCH TO ENSURE ADEQUATE DRAINAGE.
- INTERSECTION IMPROVEMENTS AND CULVERT INSTALLATION NEEDS TO BE APPROVED BY GOVERNING BODY.

17 SOLAR DELIVERY ACCESS ROAD TYPICAL INTERSECTION

Rev	Date	Drawn	Description	Ch'k'd	App'd
C	07/14/2021	JSD	ISSUED FOR 94C	KW	NJM
B	05/21/2021	RCB	ISSUED FOR REVIEW	KW	NJM
A	01/29/2021	RCB	ISSUED FOR REVIEW	KW	NJM

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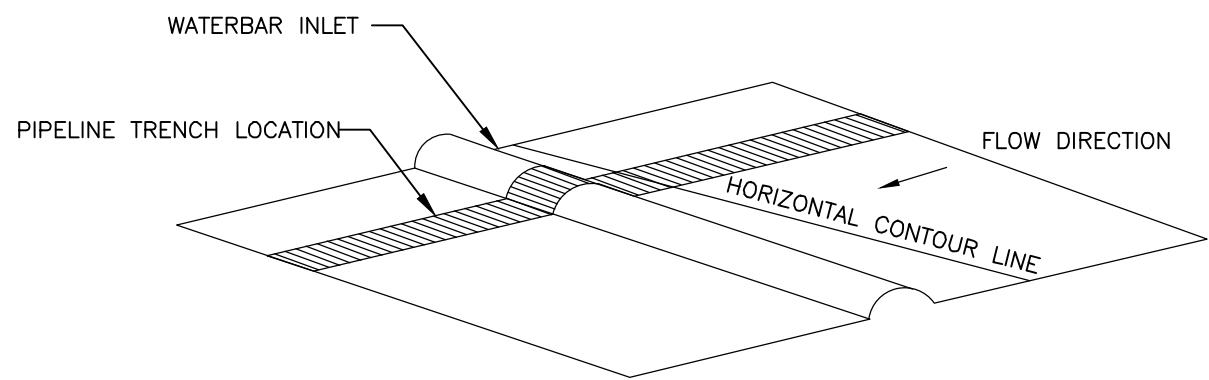
Client



Title
SOUTH RIPLEY SOLAR
TYPICAL CIVIL DETAILS
SHEET 3 OF 10

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AT CONSTRUCTION
AND/OR FABRICATION

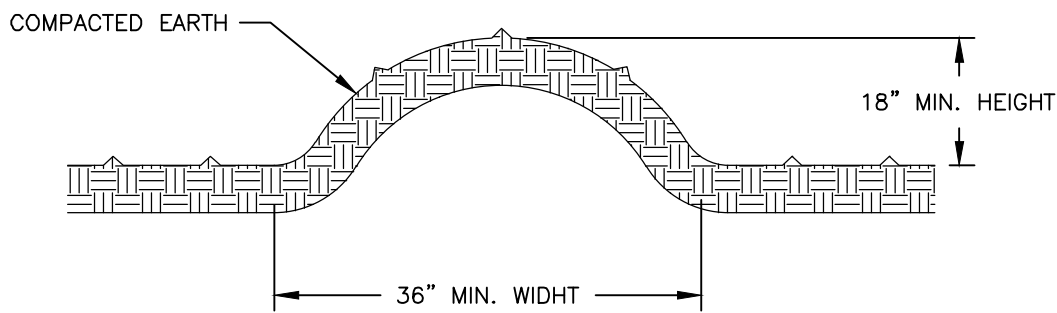
Designed	MU	Eng check	KW
Drawn	RCB	Approved	NJM
Scale at ANSI D NTS	Date 07/14/2021	Rev C	
Drawing Number	SRS-C-101-03		



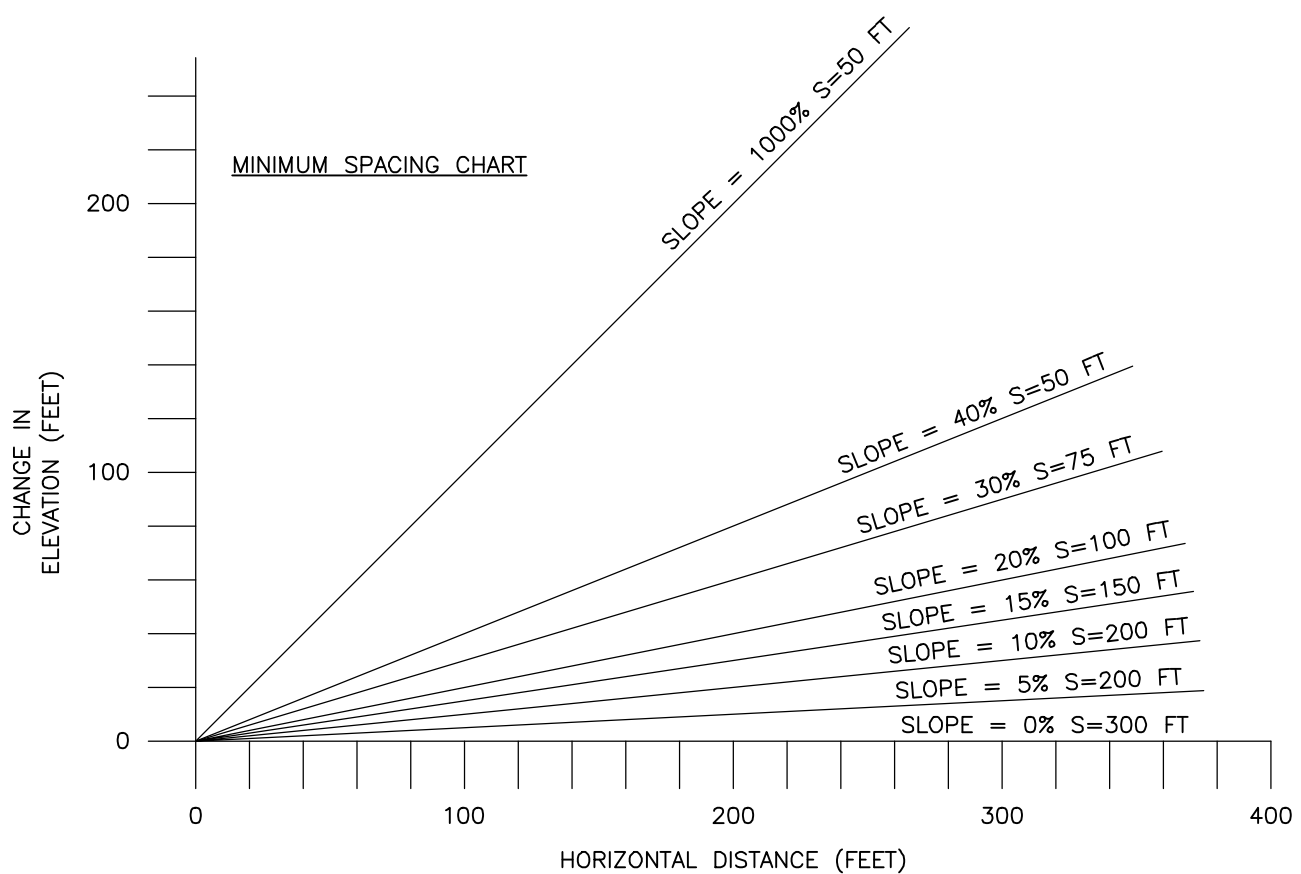
NOTES:

- WATERBARS ARE TO BE CONSTRUCTED AT SPACING AS INDICATED IN WATERBAR SPACING DETAIL.
 - WATER SHALL BE DIVERTED OFF THE DISTURBED RIGHT-OF-WAY AT AN OUTSLOPE OF THREE TO FIVE PERCENT BY CONSTRUCTING WATERBARS ACCORDING TO THE FOLLOWING PROCEDURE:
 - AT THE PROPOSED WATERBAR INTERCEPTOR LOCATION ESTABLISH A HORIZONTAL CONTOUR LINE (USING A POCKET TRANSIT OR HAND HELD LEVEL) WHICH EXTENDS COMPLETELY ACROSS THE DISTURBED RIGHT-OF-WAY. THIS LINE WILL ALWAYS BE PERPENDICULAR TO THE DIRECTION OF WATER FLOW AND SHOULD BE PARALLEL TO MAP CONTOURS SHOWN ON THE PLAN DRAWINGS.
 - DETERMINE WHICH SIDE OF THE RIGHT-OF-WAY IS BEST SUITED FOR THE WATERBAR OUTLET (EVALUATE VEGETATION DENSITY, LOCAL TOPOGRAPHY, ETC.) AND DEVIATE WATERBARS AWAY FROM THE HORIZONTAL CONTOUR LINE SLIGHTLY DOWNWARD TOWARD THE SELECTED OUTLET SIDE MAINTAINING A THREE TO FIVE PERCENT SLOPE.
 - WHEN OUTLETING NEAR WATER BODIES, STREAMS, DITCHES AND CROP FIELDS, A STONE CHECK DAM SHALL BE PLACED ON THE OUTLET END OF THE INTERCEPT WATERBAR.
- PERMANENT TRENCH BREAKER SANDBAGS SHALL NOT BE FILLED WITH TOPSOIL.
- SPACING SHOWN ARE RECOMMENDED GUIDELINES, OWNER REPRESENTATIVE MAY ADJUST SPACING IN THE FIELD.
- ONE TRENCH BREAKER IS REQUIRED AT ALL STREAM BANKS AND AT WETLAND BOUNDARIES.

WATERBAR DETAIL
N.T.S.



MINIMAL HEIGHT & WIDTH DIMENSIONS FOR

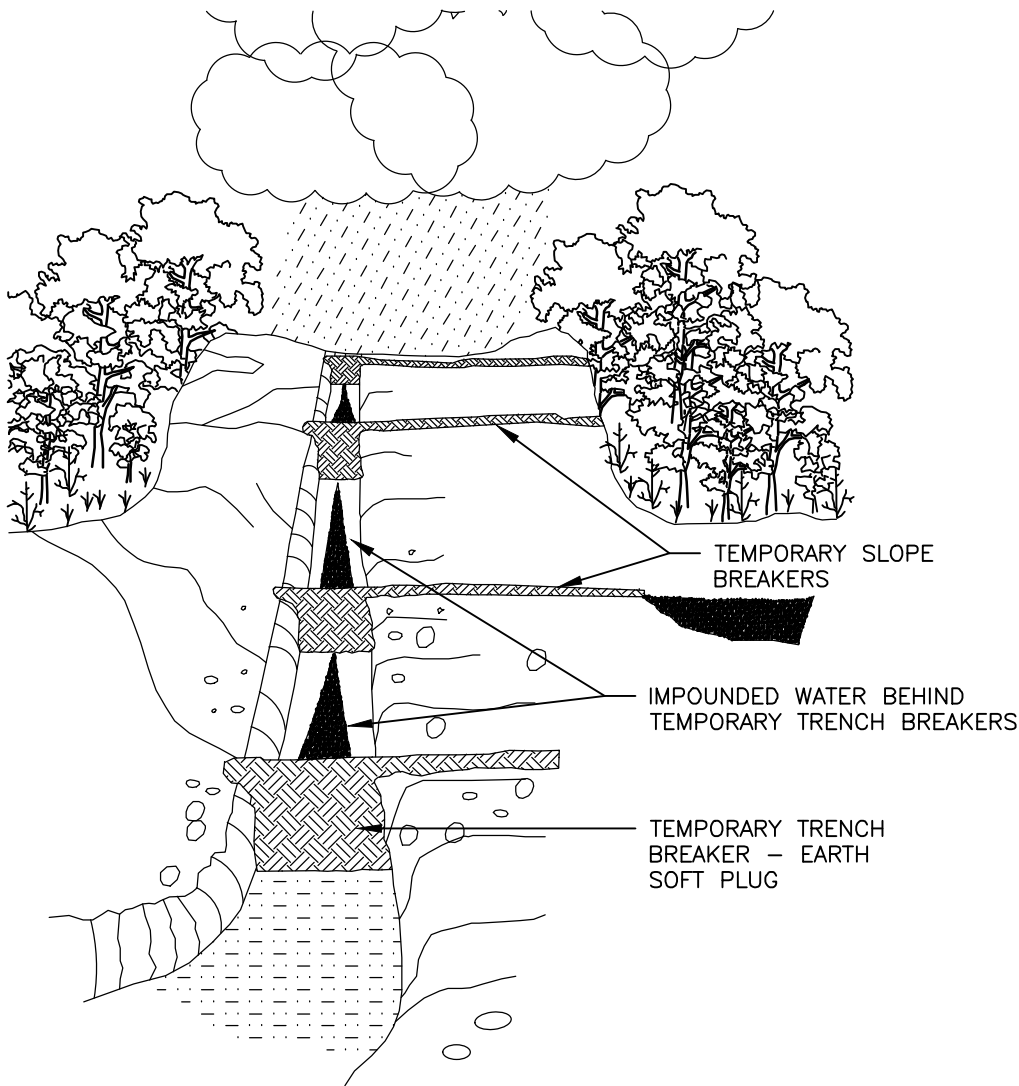


WATERBAR SPACING GUIDELINE

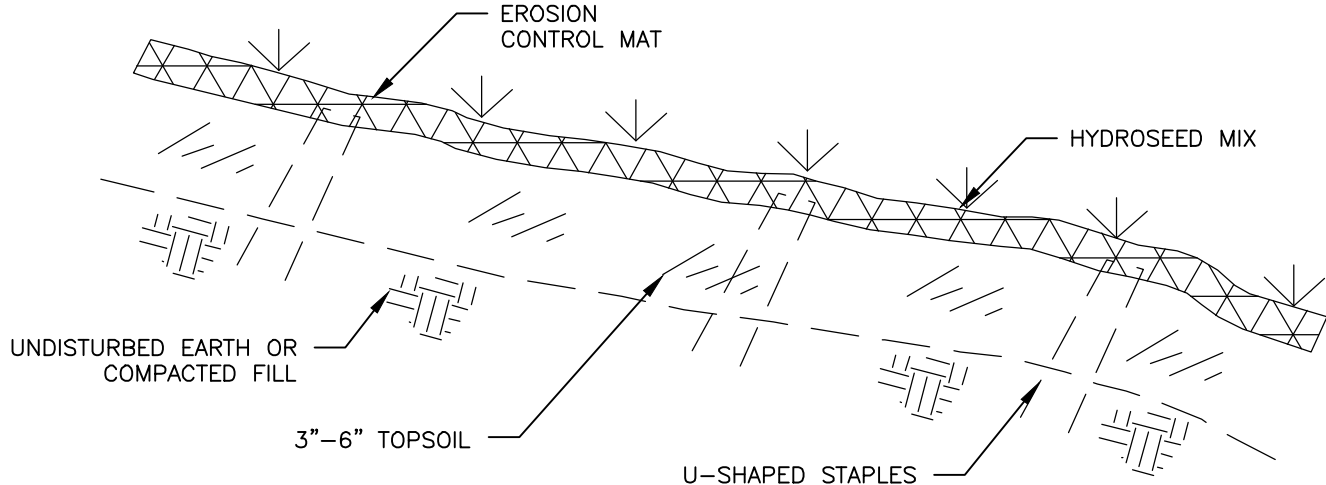
18 WATERBAR CONSTRUCTION DETAIL
N.T.S.

NOTES:

- TEMPORARY TRENCH BREAKERS WILL BE INSTALLED TO PROVIDE CROSSING AS NECESSARY FOR PROPERTY OWNERS, FARMERS AND WILDLIFE OR CURTAIL THE FLOW OF WATER ALONG THE DITCH, IN AREAS OF SLOPE.
- TEMPORARY TRENCH BREAKERS WILL BE MAINTAINED DURING THE VARIOUS STAGES OF CONSTRUCTION AND WILL BE REMOVED IMMEDIATELY PRIOR TO THE LOWERING-IN OPERATIONS.
- ANY PONDED WATER BEHIND THE SOFT PLUG SHALL BE PUMPED OUT OF THE DITCH BEFORE THE REMOVAL OF THE SOFT PLUG.
- TEMPORARY SLOPE BREAKERS SHOULD INSTALLED IN THE SAME LOCATION AS THE TRENCH BREAKERS TO DIVERT WATER OFF OF RIGHT-OF-WAY.



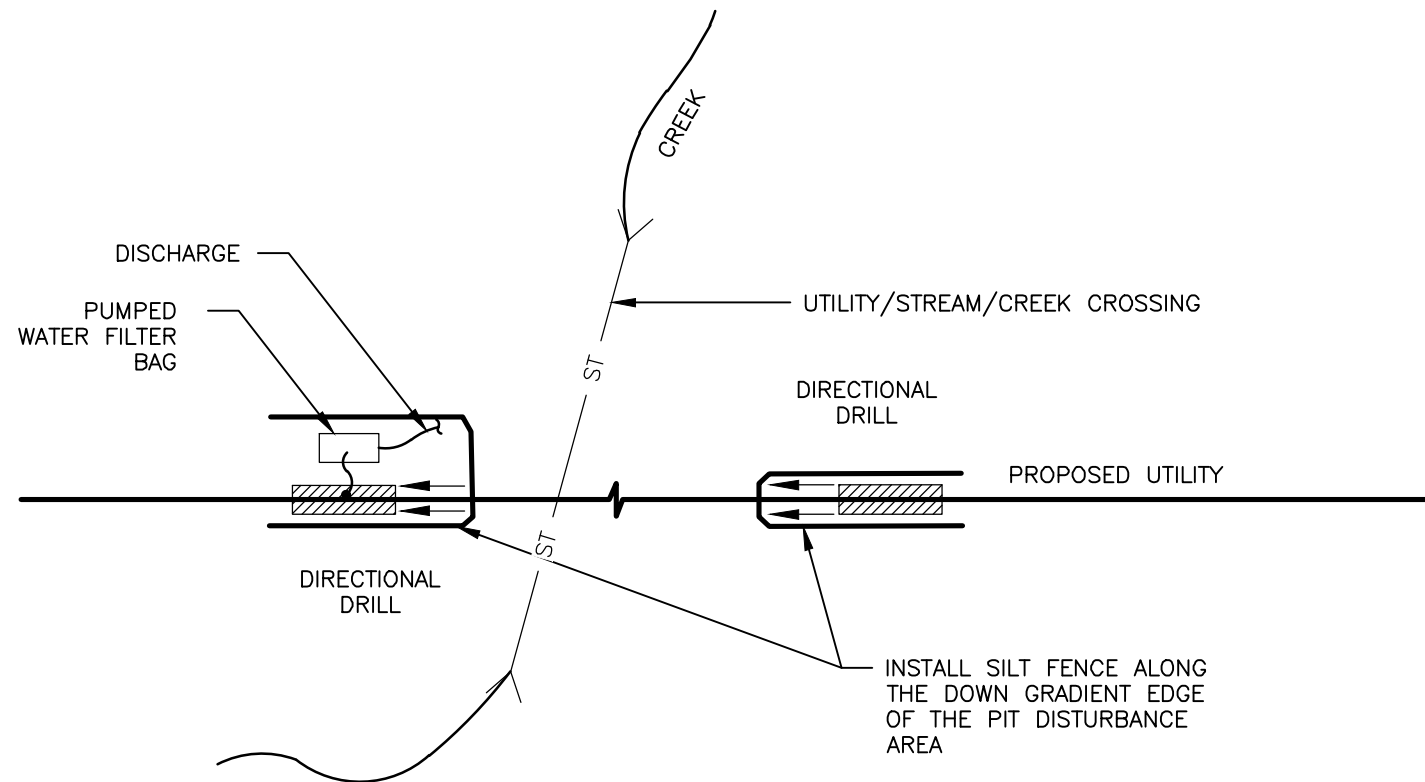
19 TEMPORARY TRENCH BREAKERS - SOFT PLUGS DETAIL
N.T.S.



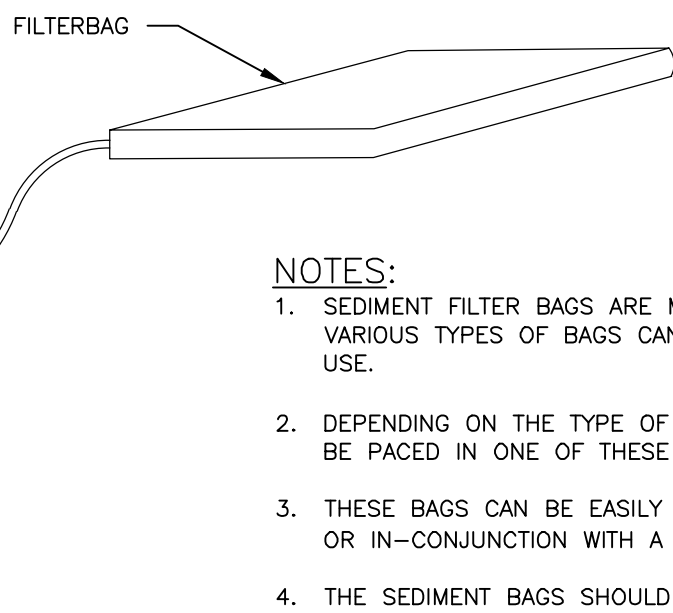
NOTES:

- EROSION CONTROL MAT TO BE MANUFACTURED USING WEED FREE STRAW FROM AGRICULTURAL CROPS. STRAW SHALL BE MIN. 1/4 INCH THICK ON PHOTODEGRADABLE POLYPROPYLENE MESH AND ATTACHED WITH HIGH STRENGTH THREAD. MANUFACTURE TO BE NORTH AMERICAN GREEN, COMTECH ERO MAT OR APPROVED EQUAL.
- EROSION CONTROL MAT IS TO BE SECURED TO THE SLOPED AREA WITH U SHAPED STAPLES. SIZE AND LOCATION SHALL BE PER THE MANUFACTURE'S SPECIFICATIONS.
- TOPSOIL SHALL BE FINE GRADED AND ROLLED OR TAMPED TO PREVENT SETTLING. BEFORE SEEDING, TOPSOIL SHALL BE TRIMMED AND RAKED. OBJECTIONABLE MATERIALS SHALL BE REMOVED AND A FINELY PULVERIZED SEED BED SHALL BE FORMED.
- HYDROSEED MIX SHALL BE A COMBINATION OF PERENNIAL RYEGRASS, FESCUE AND KENTUCKY BLUEGRASS. TACTIFIER AND FERTILIZER SHALL BE ADDED TO THE HYDROSEED MIX.
- THE RESTORED AREA SHALL BE WATERED AND MAINTAINED BY THE CONTRACTOR FOR TWO MOWINGS. ANY AREAS WHICH FAIL TO SHOW A UNIFORM CATCH SHALL BE RESEED BY THE CONTRACTOR.

20 EROSION CONTROL MAT DETAIL
N.T.S.



TYPICAL EROSION CONTROL MEASURES INSTALLED AT
DIRECTIONAL-DRILL PIT
N.T.S.



NOTES:

- SEDIMENT FILTER BAGS ARE MADE OUT OF GEOTEXTILE MATERIAL AND VARIOUS TYPES OF BAGS CAN BE CHOSEN TO SUIT THE INTENDED USE.
- DEPENDING ON THE TYPE OF BAG CHOSEN, A6" DIAMETER HOSE CAN BE PACED IN ONE OF THESE BAGS.
- THESE BAGS CAN BE EASILY INSTALLED AND MAY BE USED SINGLY OR IN-CONJUNCTION WITH A STRAW/HAY BALE RETENTION POND.
- THE SEDIMENT BAGS SHOULD BE REMOVED DURING RESTORATION AND CLEANUP PHASE OF THE PROJECT WHEN EQUIPMENT IS AVAILABLE TO EFFICIENTLY REMOVE THESE BAGS.

21 FILTERBAG DETAIL
N.T.S.

C	07/14/2021	JSD	ISSUED FOR 94C	KW	NJM
B	05/21/2021	RCB	ISSUED FOR REVIEW	KW	NJM
A	01/29/2021	RCB	ISSUED FOR REVIEW	KW	NJM
Rev	Date	Drawn	Description	Ch'k'd	App'd

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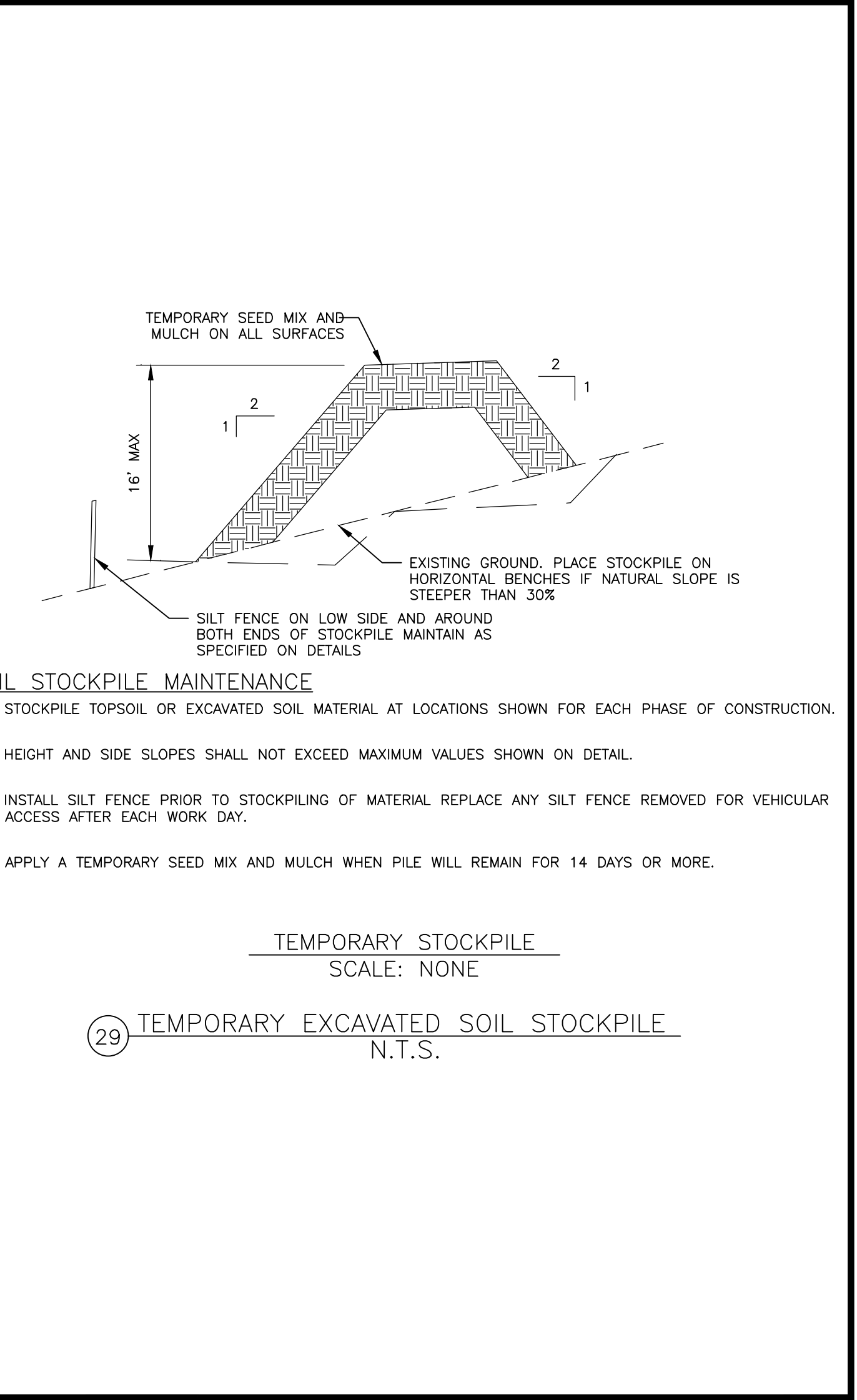
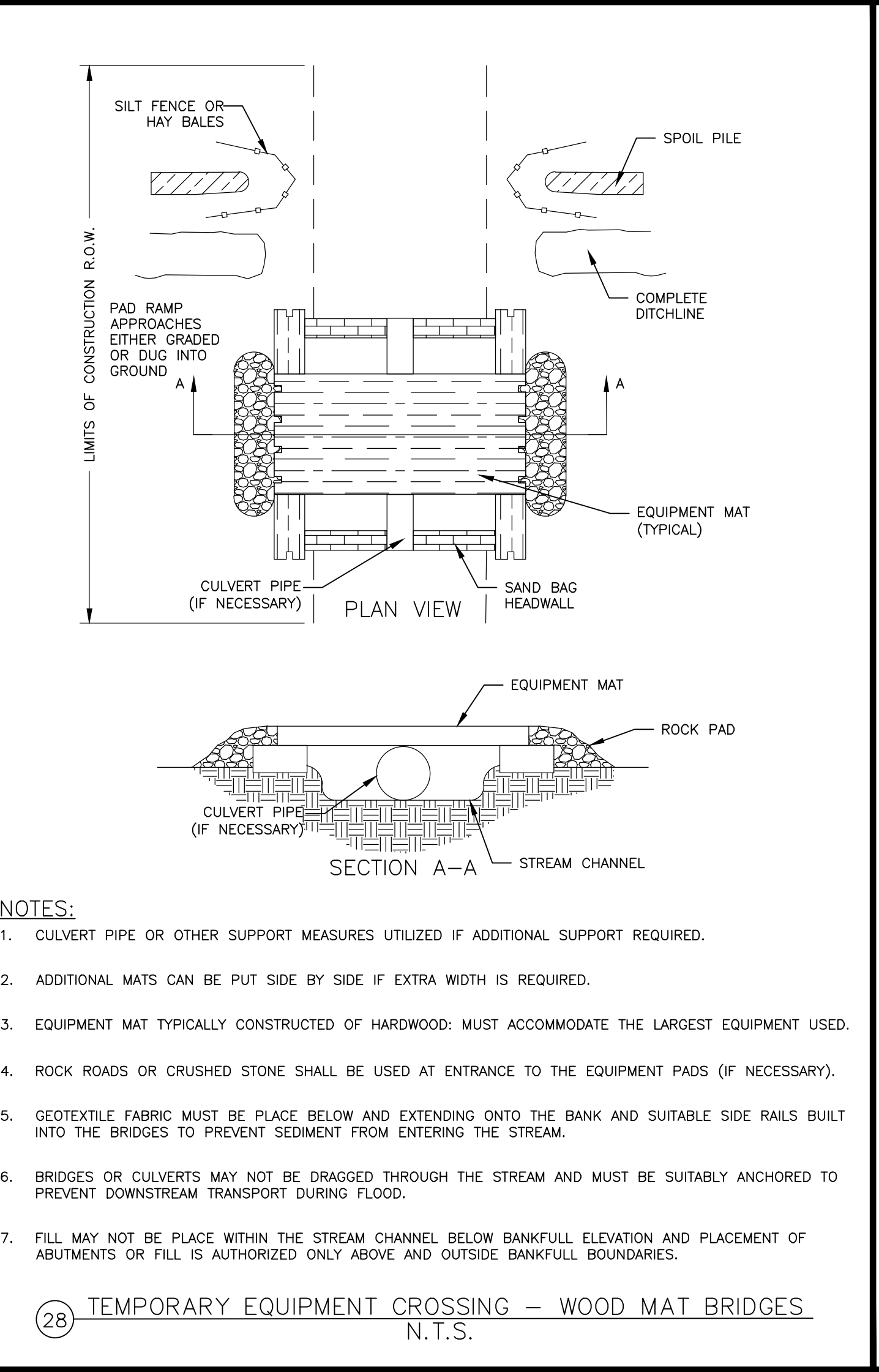
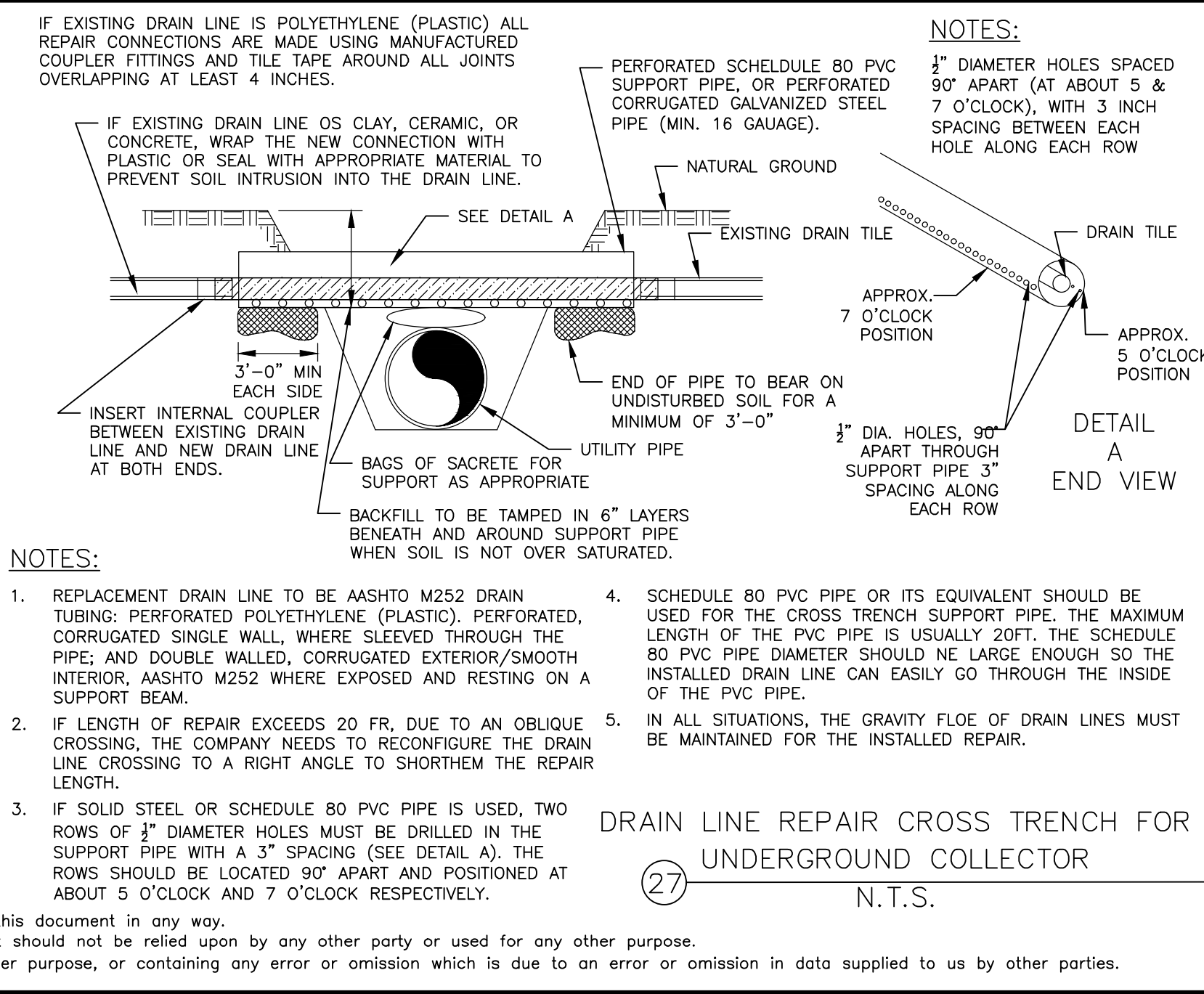
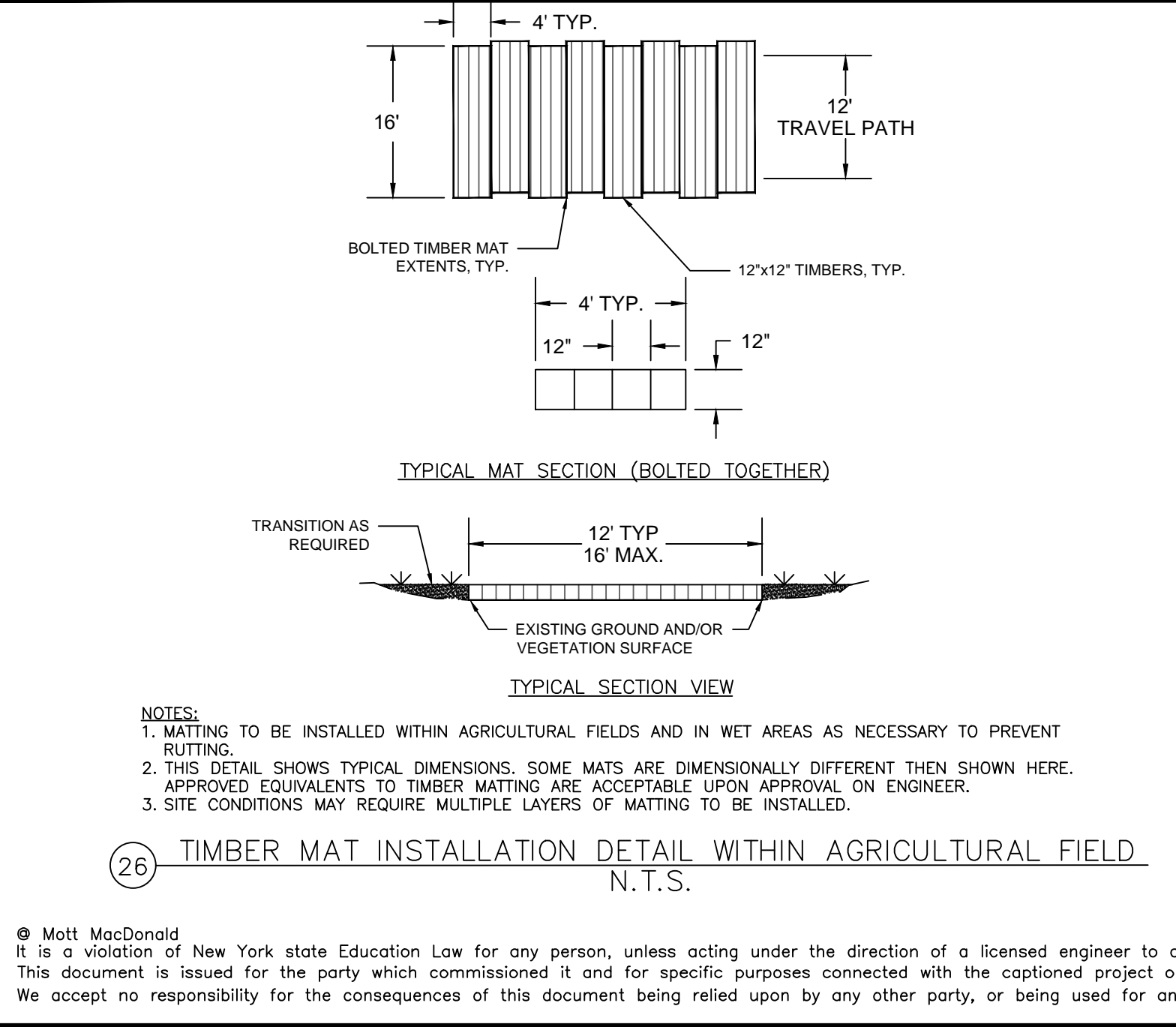
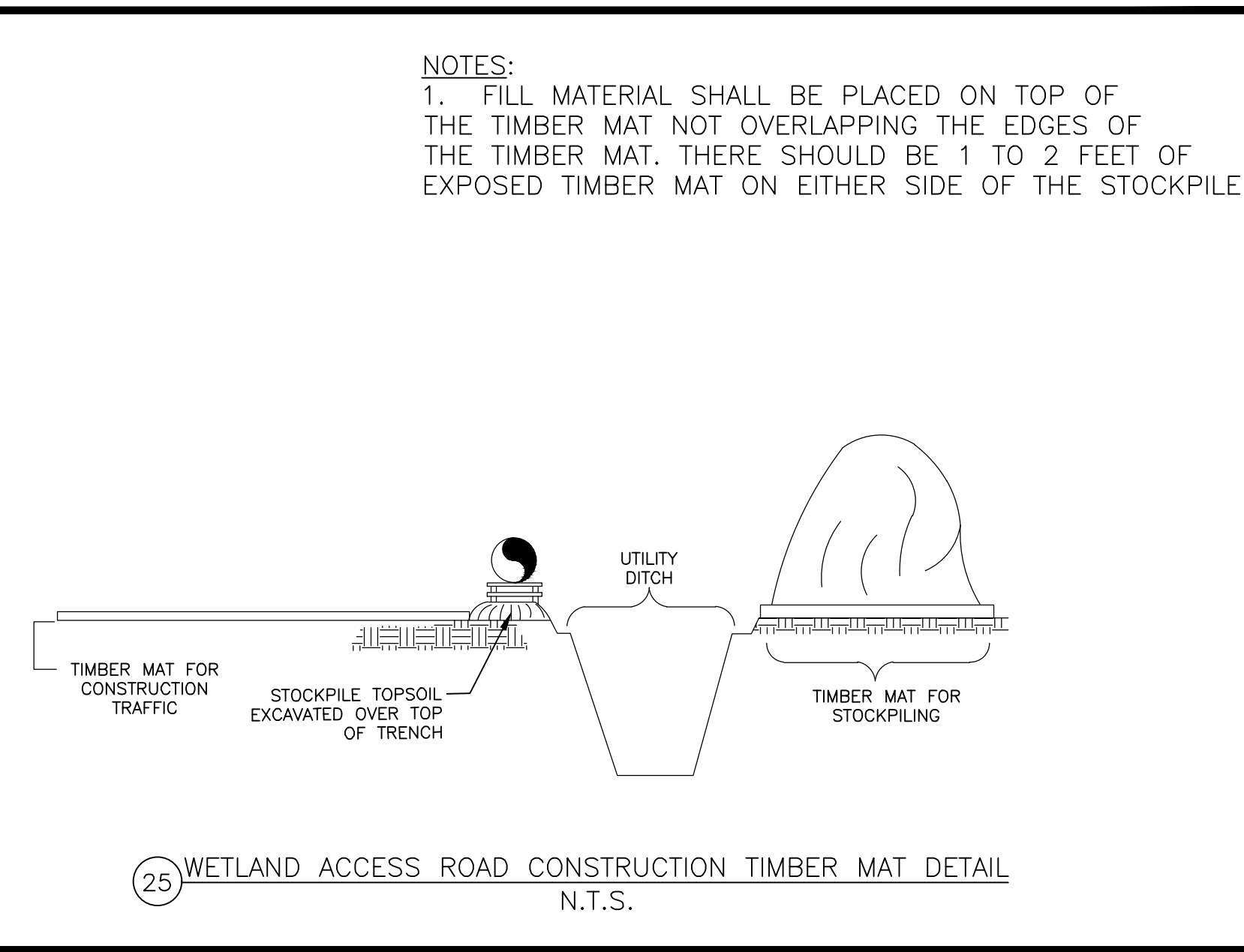
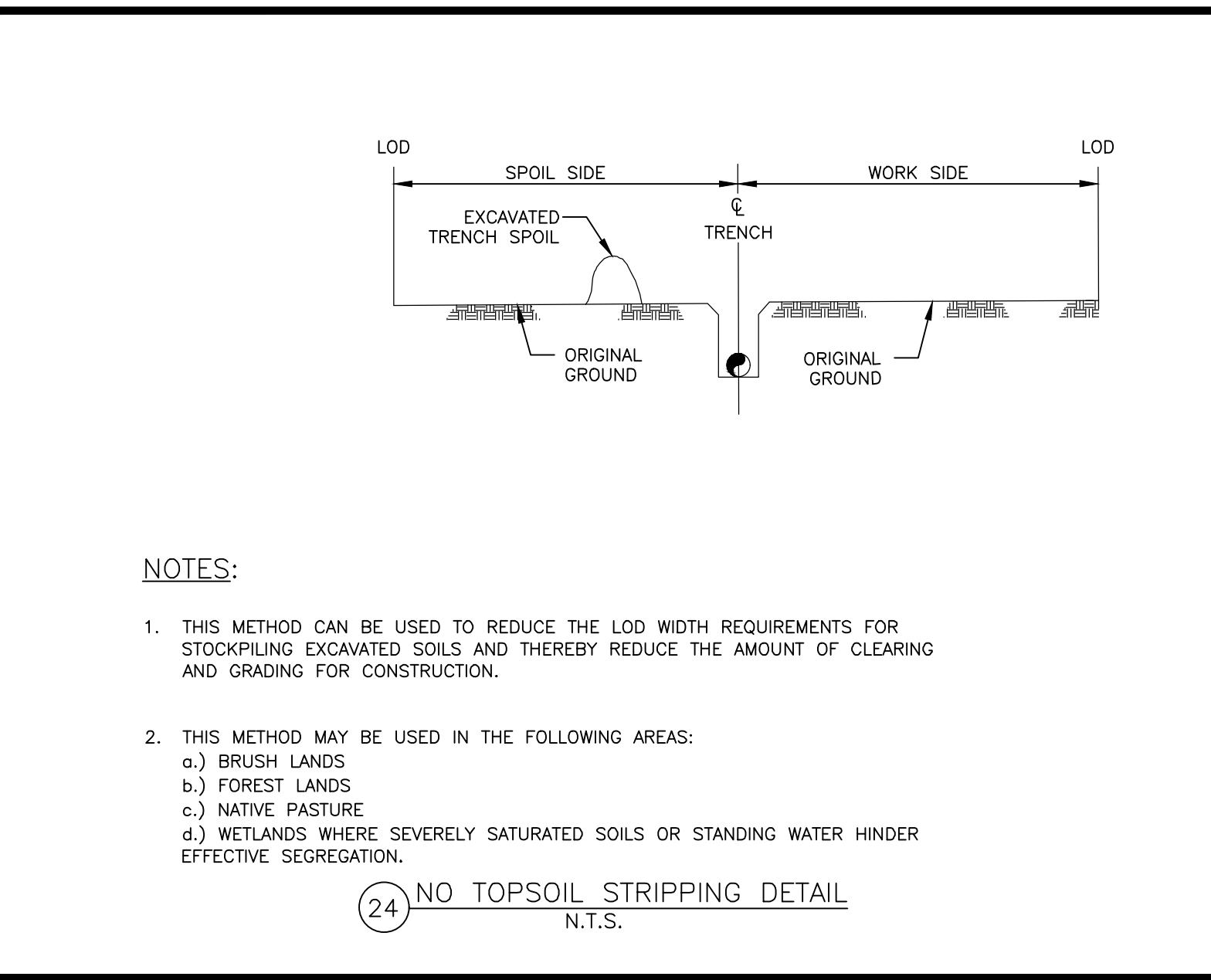
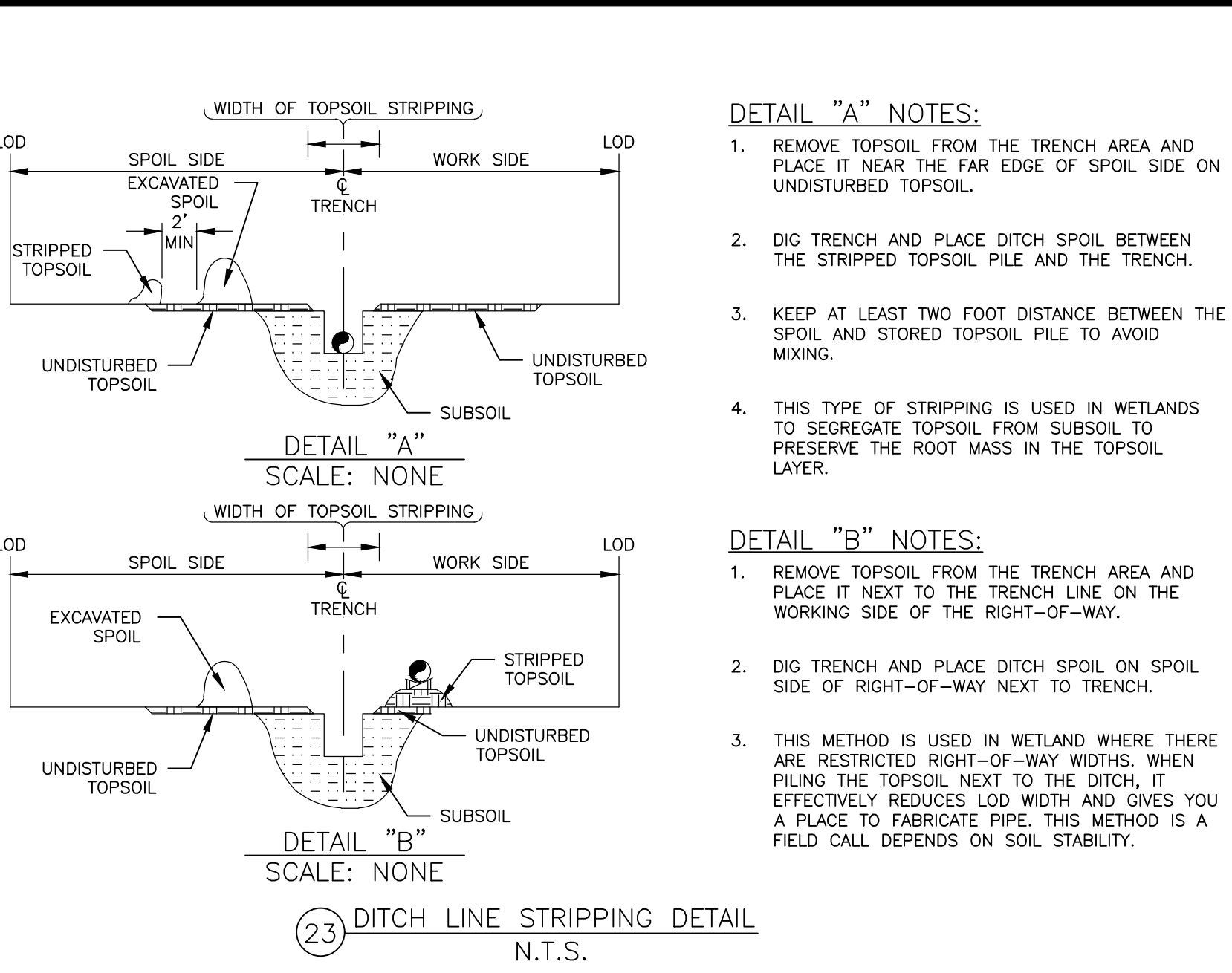
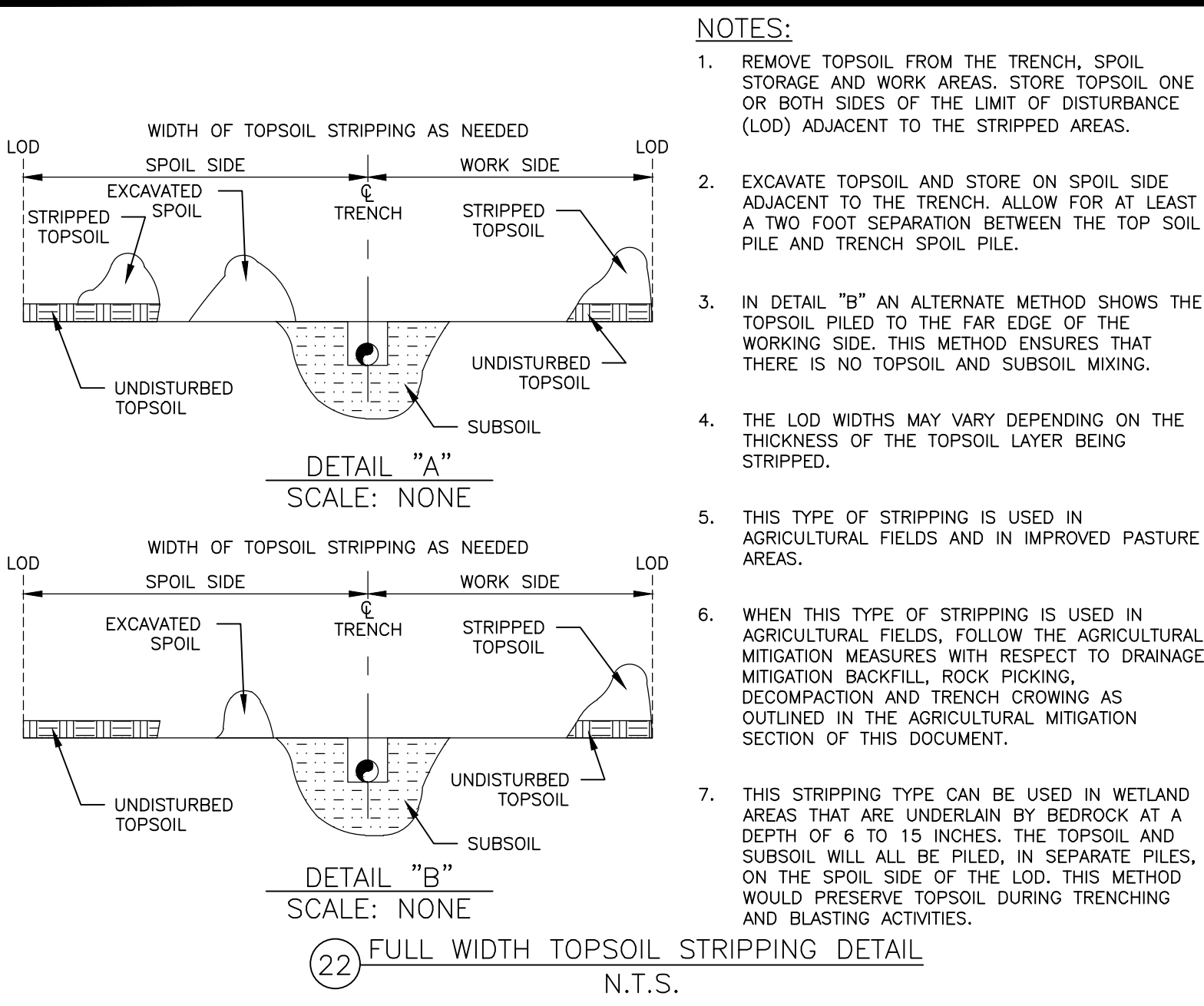


Title
SOUTH RIPLEY SOLAR
TYPICAL CIVIL DETAILS
SHEET 4 OF 10

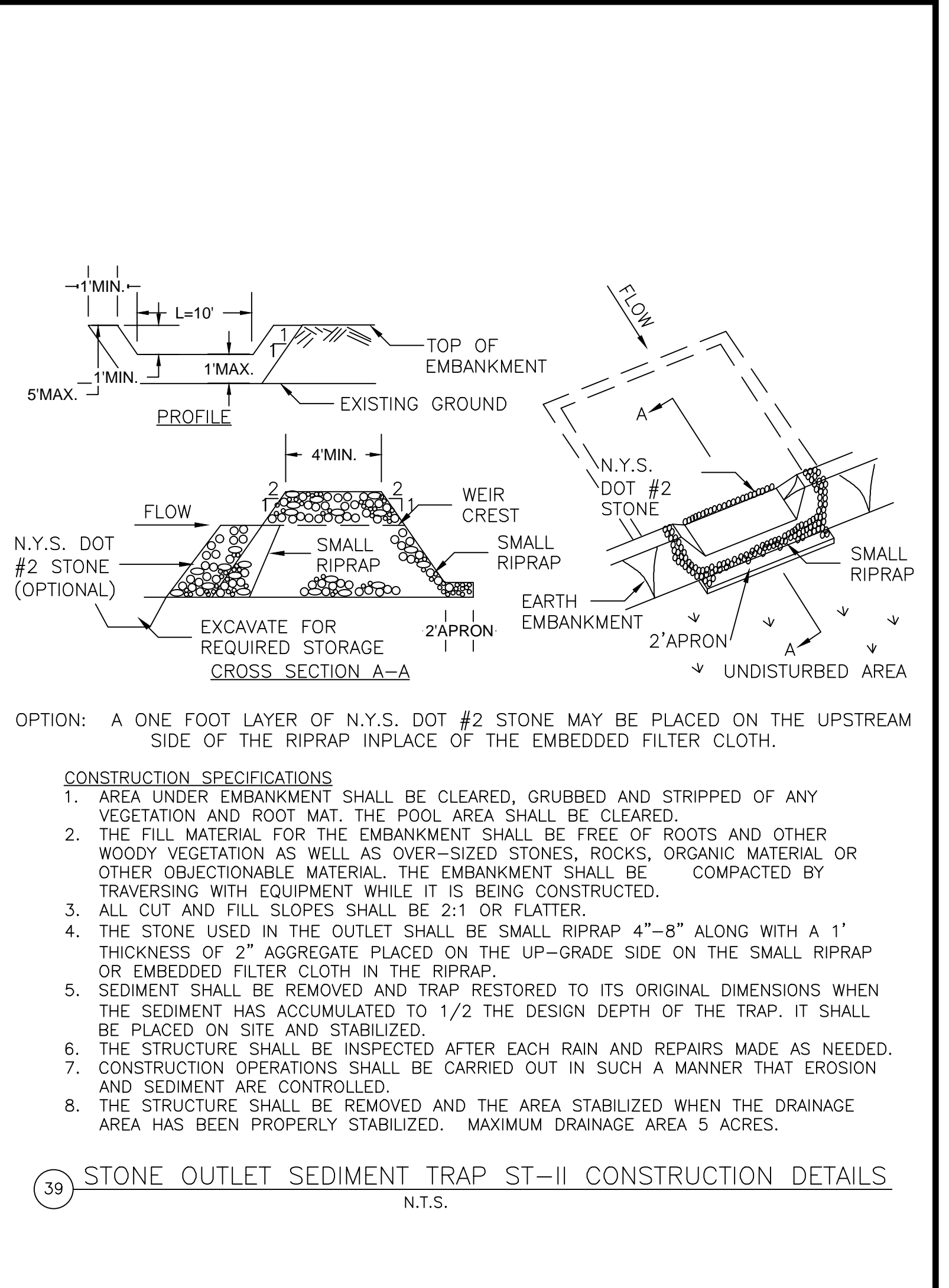
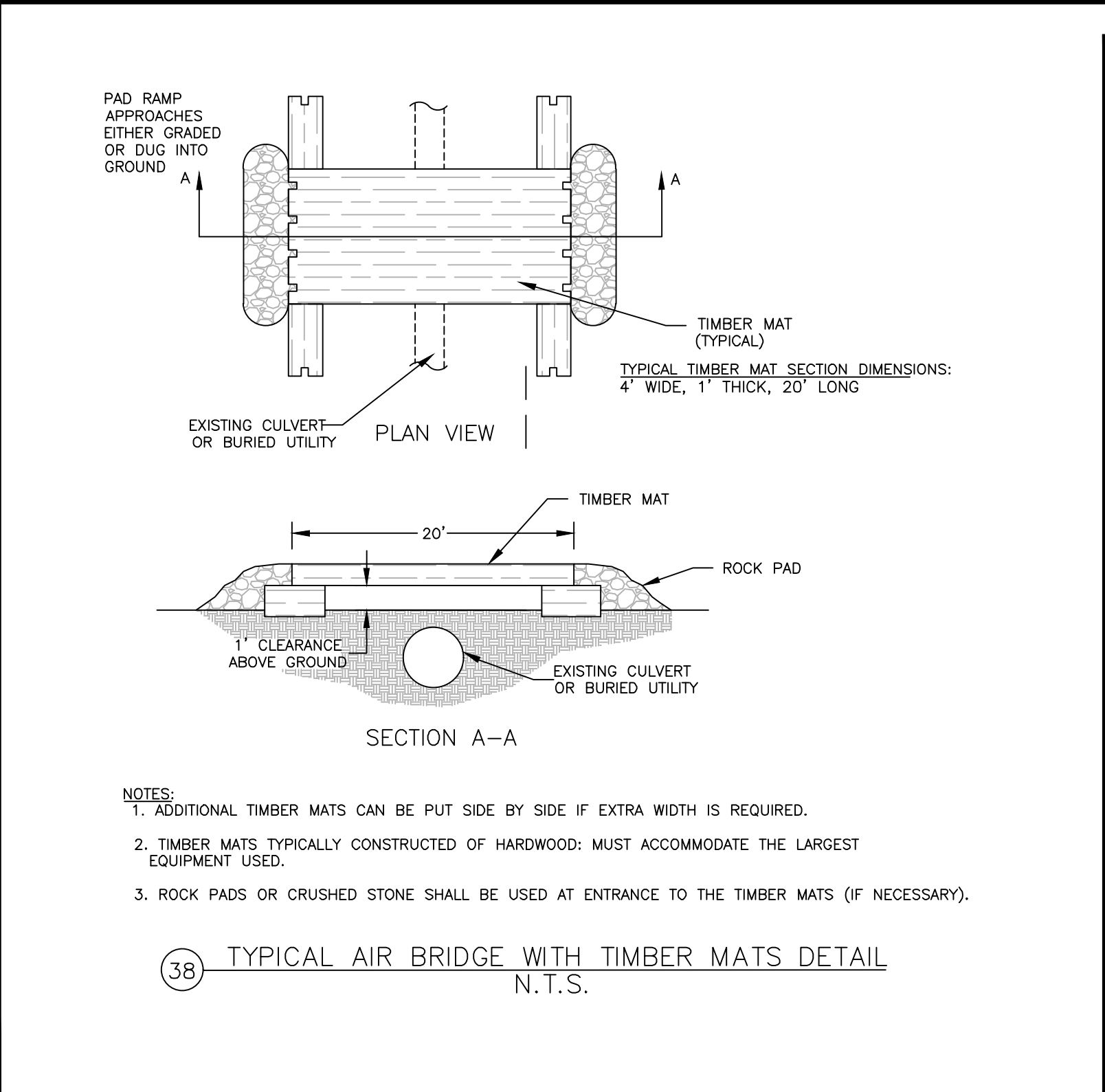
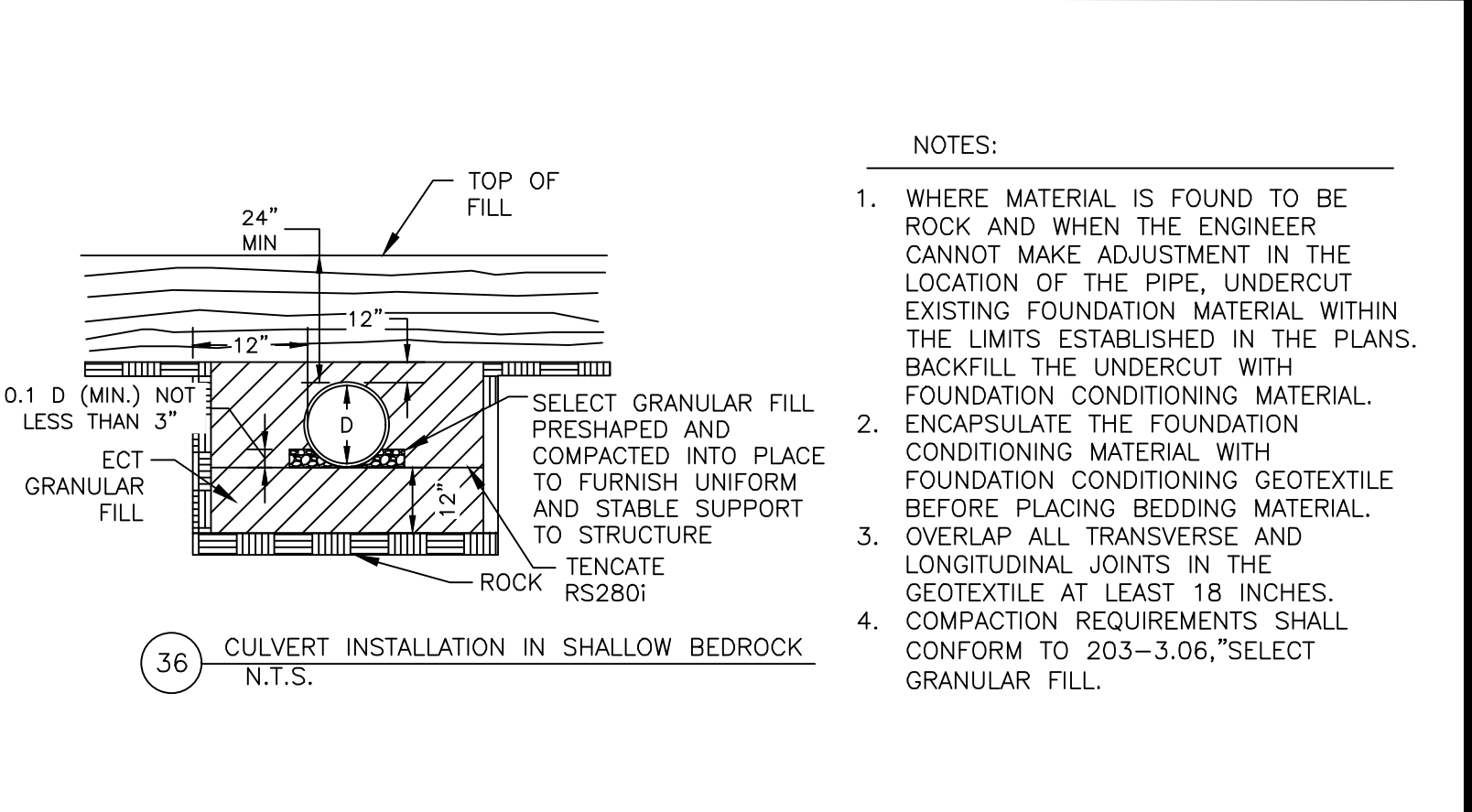
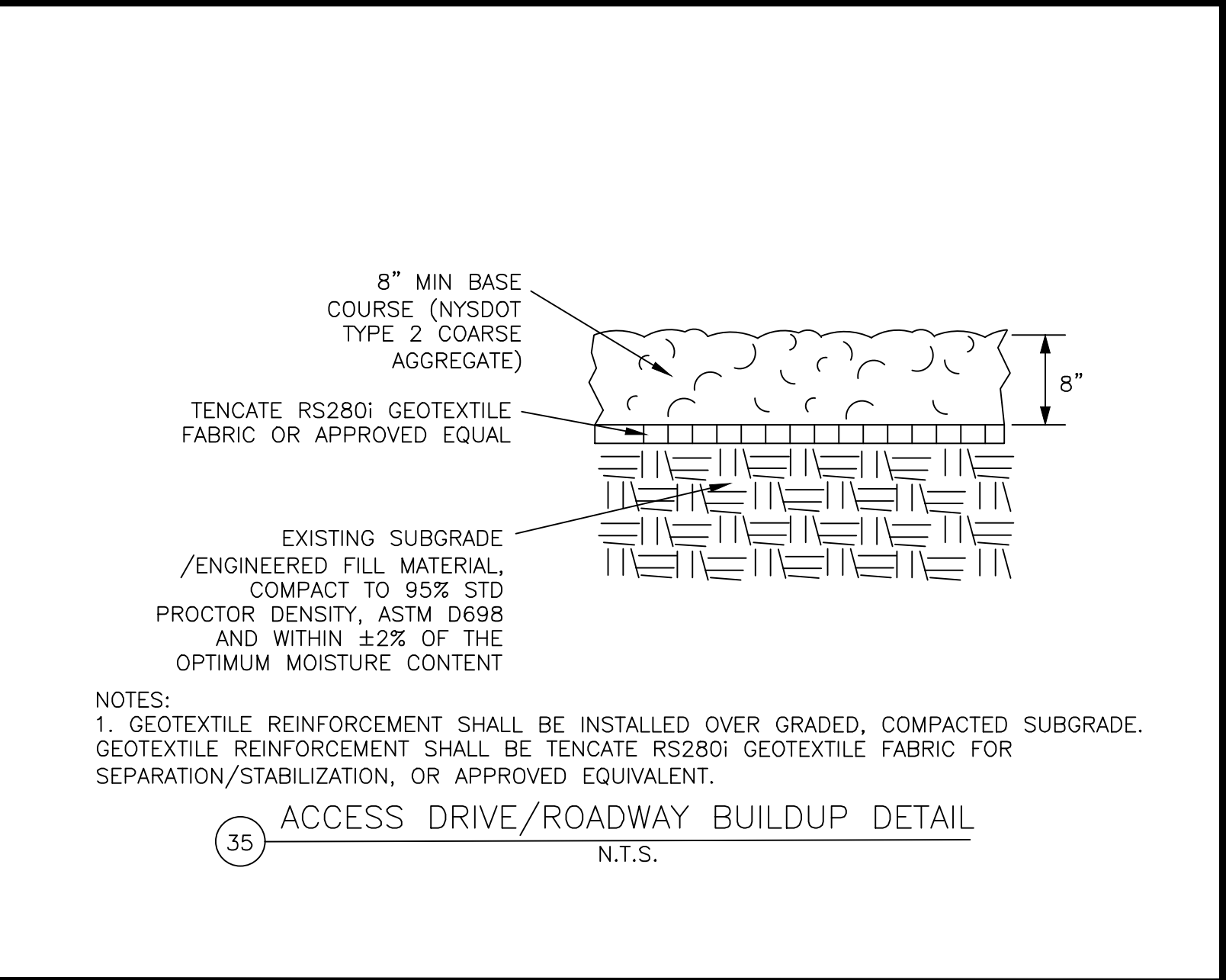
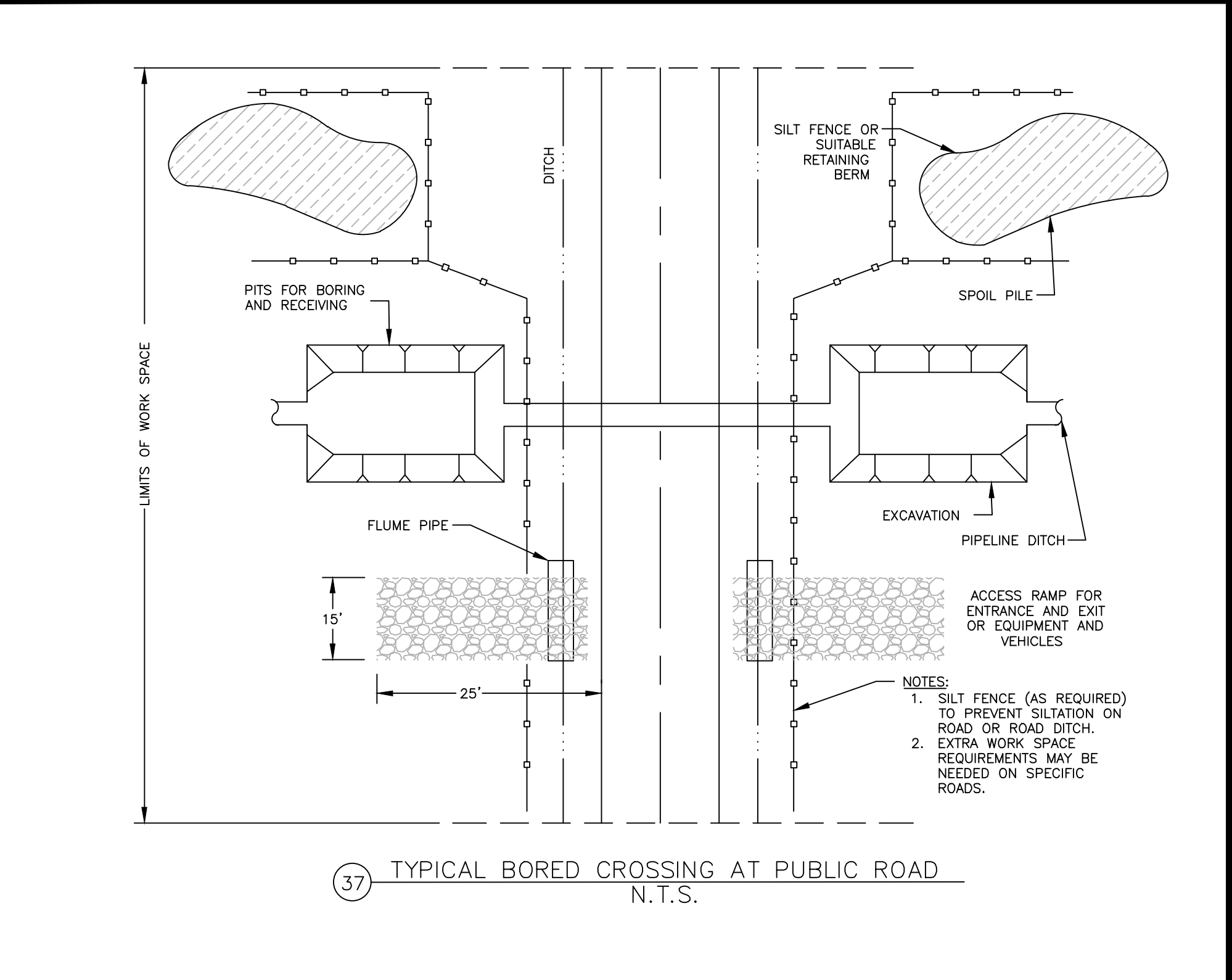
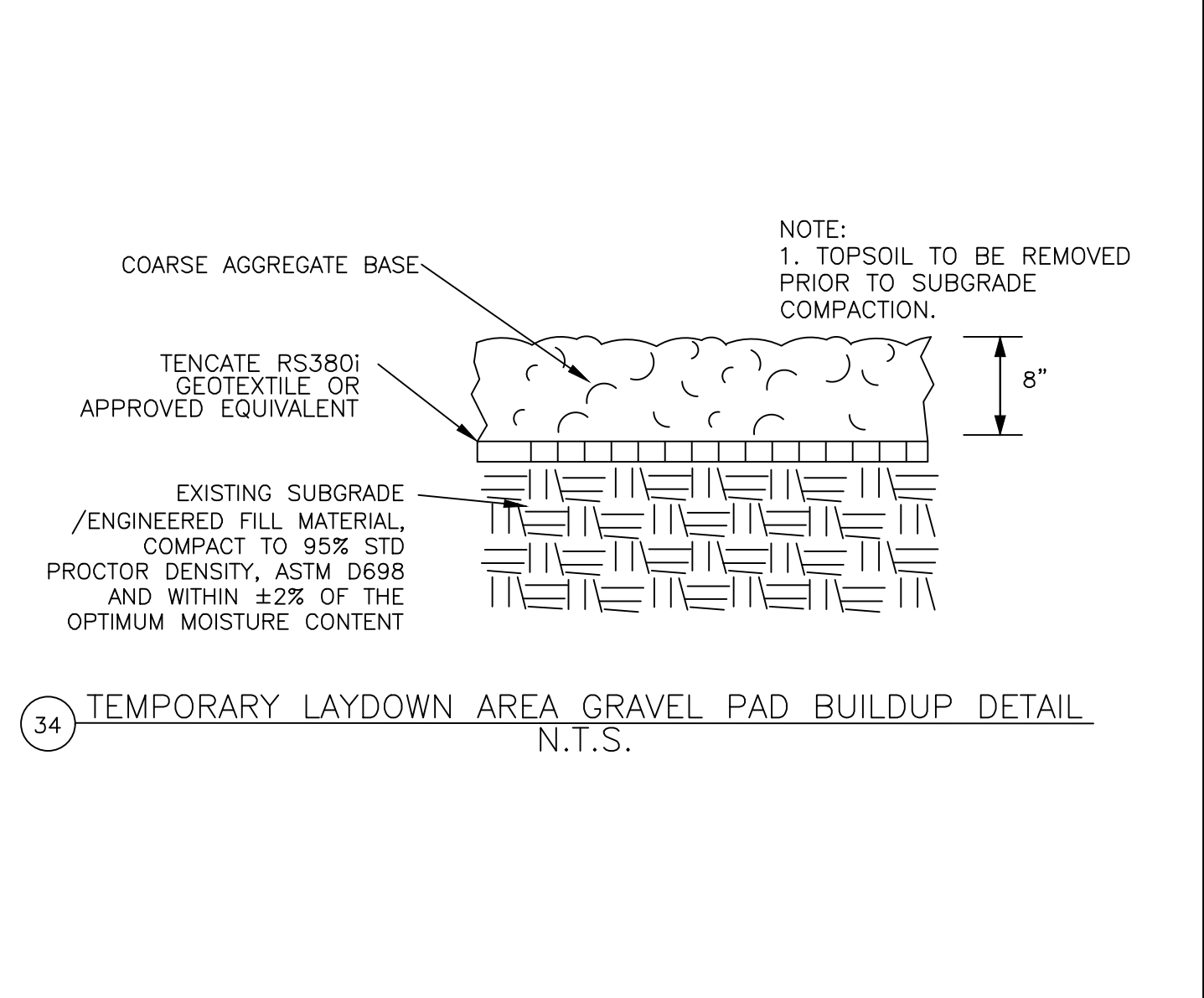
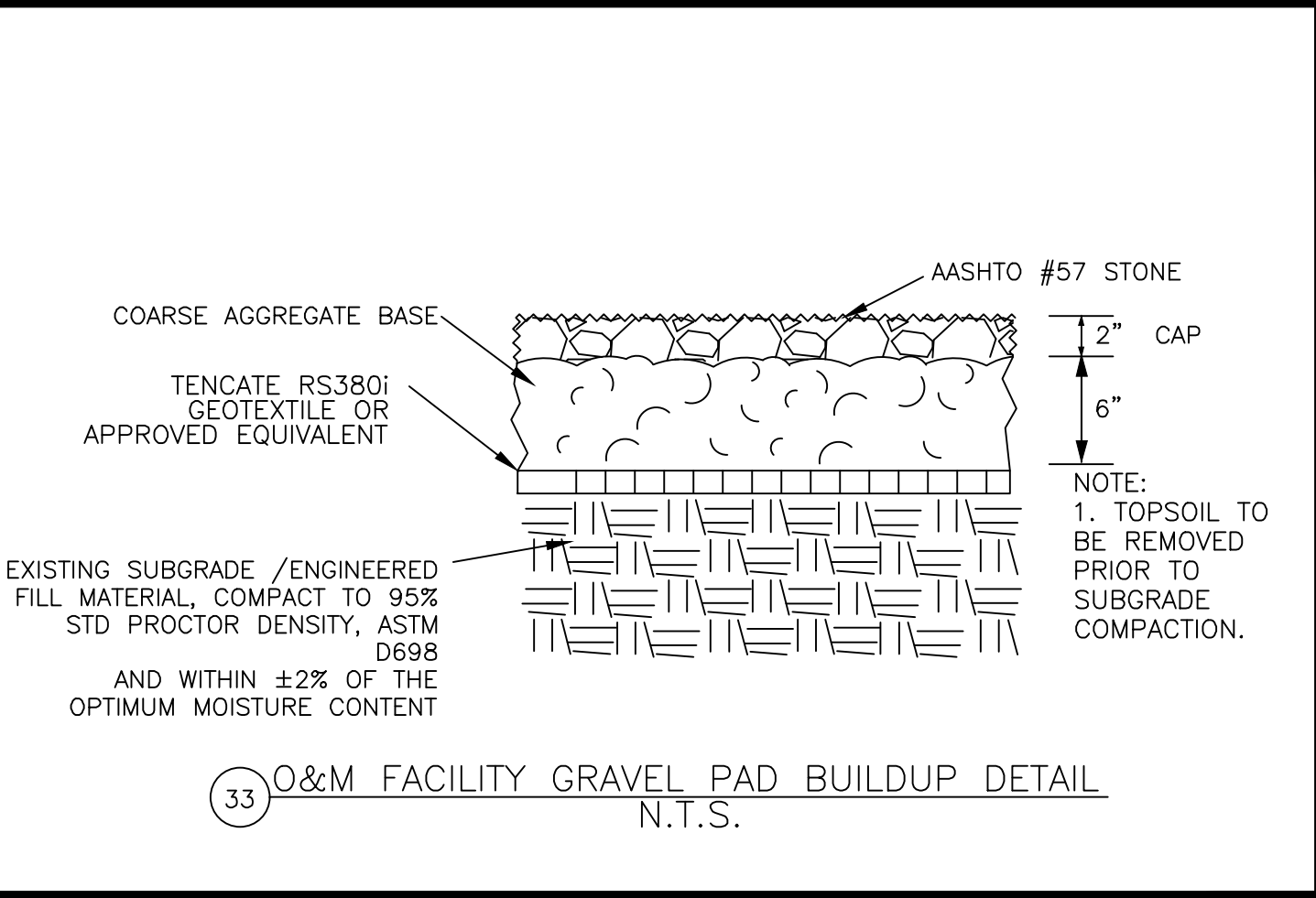
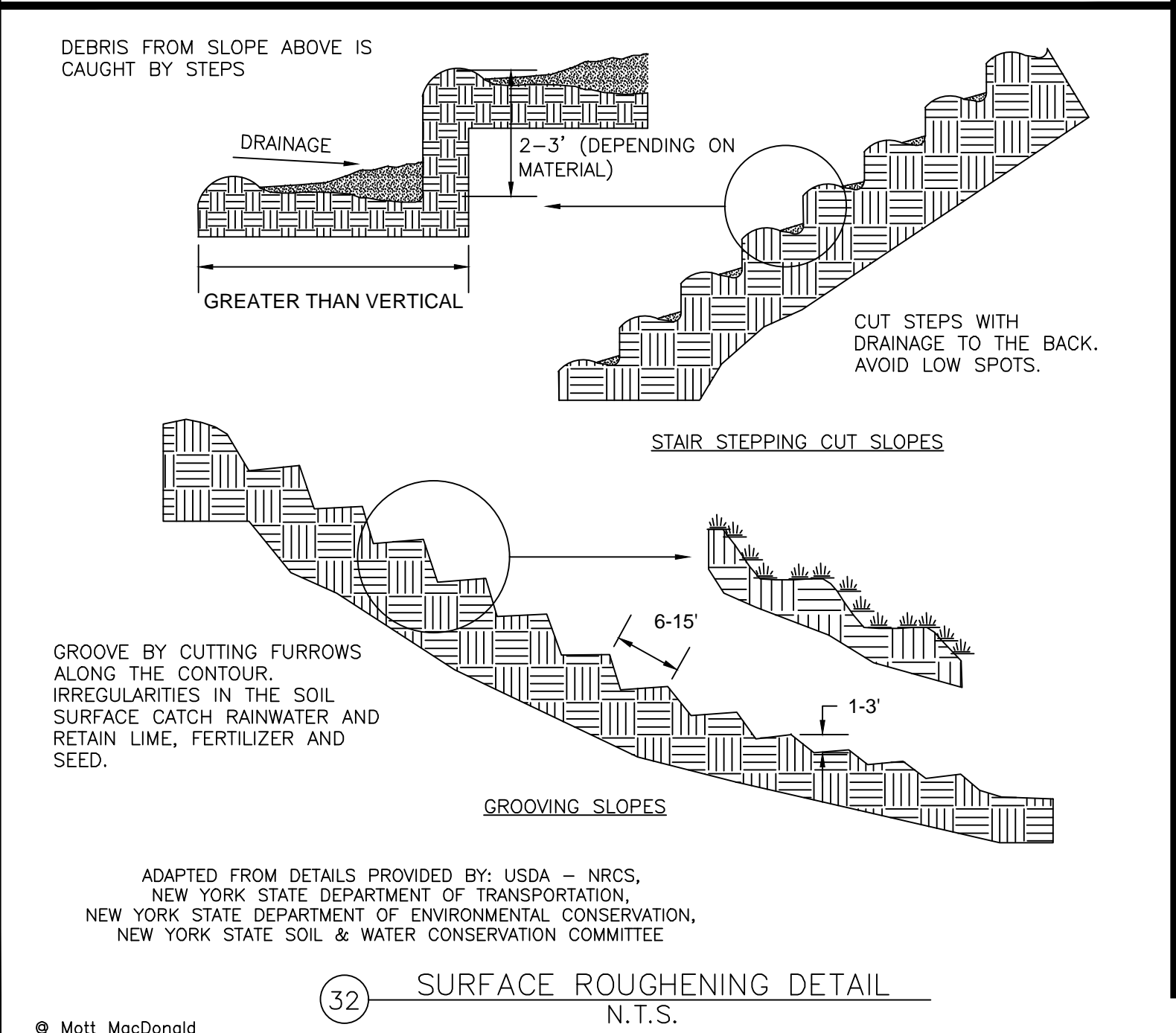
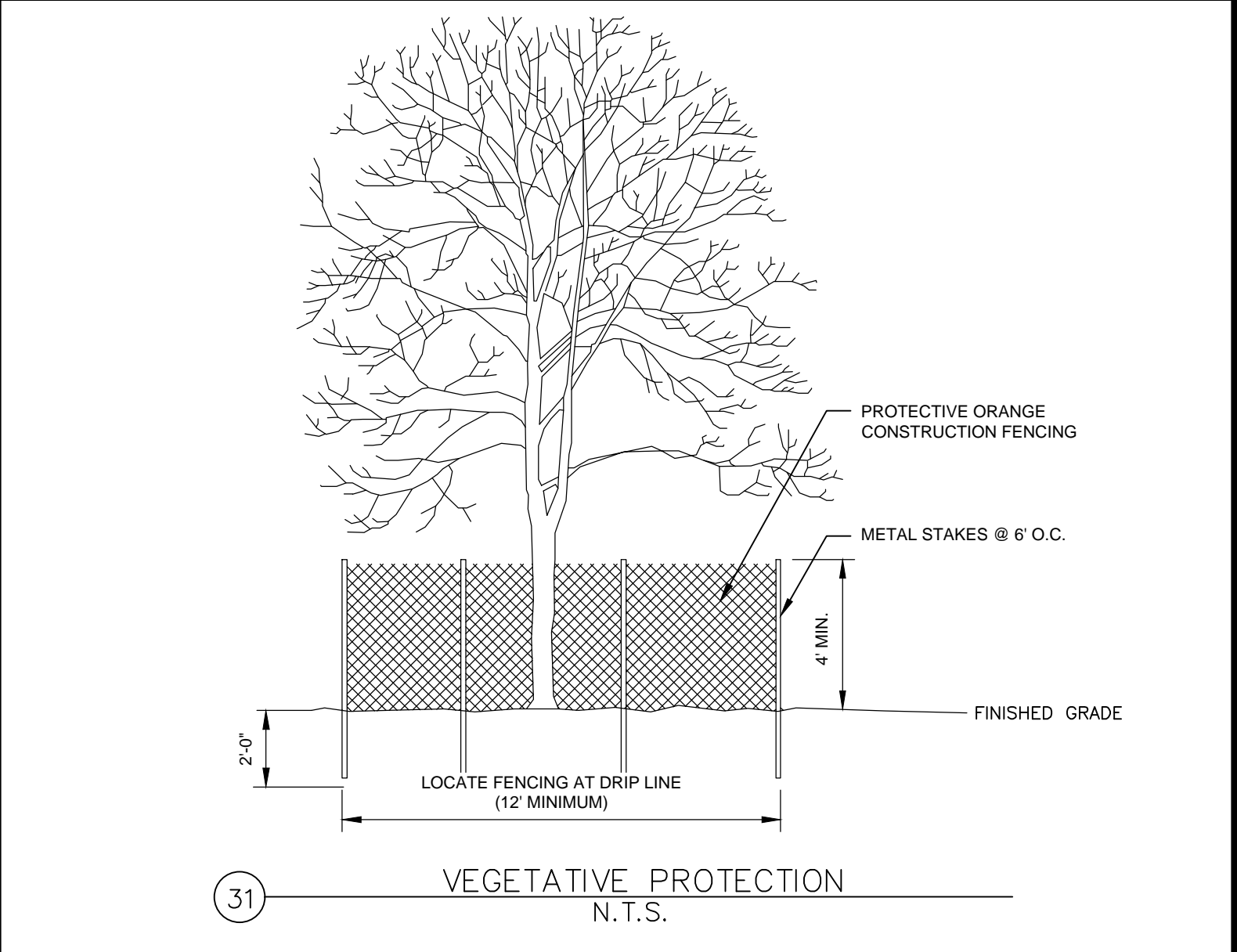
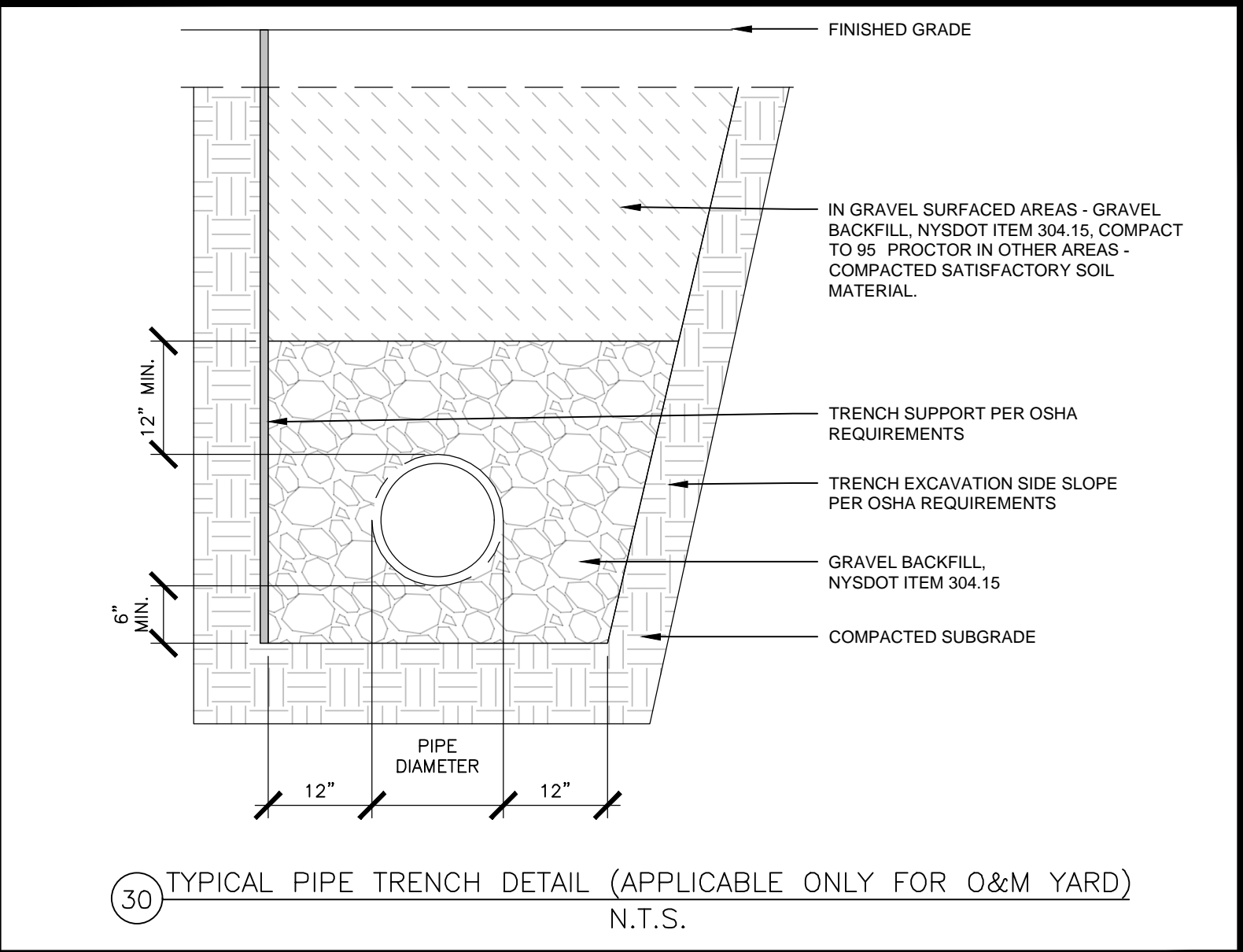
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CONSTRUCTION
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ENGINEERS STAMP
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Designed	MU	Eng check	KW
Drawn	RCB	Approved	NJM
Scale at ANSI D NTS	Date 07/14/2021	Rev C	
Drawing Number	SRS-C-101-04		

CONCEPTUAL - NOT FOR CONSTRUCTION



C	07/14/2021	JSD	ISSUED FOR 94C	KW	NJM
B	05/21/2021	RCB	ISSUED FOR REVIEW	KW	NJM
A	01/29/2021	RCB	ISSUED FOR REVIEW	KW	NJM
Rev	Date	Drawn	Description	Ch'k'd	App'd
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Client					
<div><div><div>G</div><div>South Ripley SOLAR PROJECT</div></div></div>					
Title					
SOUTH RIPLEY SOLAR TYPICAL CIVIL DETAILS SHEET 5 OF 10					
PRELIMINARY NOT FOR CONSTRUCTION REPLACE WITH ENGINEERS STAMP AT CONSTRUCTION AND/OR FABRICATION		Designed	MU	Eng check	KW
		Drawn	RCB	Approved	NJM
		Scale at ANSI D NTS		Date	Rev
		Drawing Number		07/14/2021	C
SRS-C-101-05					



C	07/14/2021	JSD	ISSUED FOR 94C	KW	NJM
B	05/21/2021	RCB	ISSUED FOR REVIEW	KW	NJM
A	01/29/2021	RCB	ISSUED FOR REVIEW	KW	NJM
Rev	Date	Drawn	Description	Ch'k'd	App'd
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Client					
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Title					
SOUTH RIPLEY SOLAR TYPICAL CIVIL DETAILS SHEET 6 OF 10					
PRELIMINARY NOT FOR CONSTRUCTION REPLACE WITH ENGINEERS STAMP AT CONSTRUCTION AND/OR FABRICATION					
Designed	MU	Eng check	KW		
Drawn	RCB	Approved	NJM		
Scale at ANSI D NTS		Date	07/14/2021	Rev	C
Drawing Number		SRS-C-101-06			

STANDARD AND SPECIFICATIONS FOR PERMANENT CONSTRUCTION AREA PLANTING



Definition & Scope

Establishing **permanent** grasses with other forbs and/or shrubs to provide a minimum 80% perennial vegetative cover on areas disturbed by construction and critical areas to reduce erosion and sediment transport. Critical areas may include but are not limited to steep excavated cut or fill slopes as well as eroding or denuded natural slopes and areas subject to erosion.

Conditions Where Practice Applies

This practice applies to all disturbed areas void of, or having insufficient, cover to prevent erosion and sediment transport. See additional standards for special situations such as sand dunes and sand and gravel pits.

Criteria

All water control measures will be installed as needed prior to final grading and seedbed preparation. Any severely compacted sections will require chiseling or diskking to provide an adequate rooting zone, to a minimum depth of 12", see Soil Restoration Standard. The seedbed must be prepared to allow good soil to seed contact, with the soil not too soft and not too compact. Adequate soil moisture must be present to accomplish this. If surface is powder dry or sticky wet, postpone operations until moisture changes to a favorable condition. If seeding is accomplished within 24 hours of final grading, additional scarification is generally not needed, especially on ditch or stream banks. Remove all stones and other debris from the surface that are greater than 4 inches, or that will interfere with future mowing or maintenance.

Soil amendments should be incorporated into the upper 2 inches of soil when feasible. **The soil should be tested to determine the amounts of amendments needed.** Apply

ground agricultural limestone to attain a pH of 6.0 in the upper 2 inches of soil. If soil must be fertilized before results of a soil test can be obtained to determine fertilizer needs, apply commercial fertilizer at 600 lbs. per acre of 5-5-10 or equivalent. If manure is used, apply a quantity to meet the nutrients of the above fertilizer. This requires an appropriate manure analysis prior to applying to the site. Do not use manure on sites to be planted with birdsfoot trefoil or in the path of concentrated water flow.

Seed mixtures may vary depending on location within the state and time of seeding. Generally, warm season grasses should only be seeded during early spring, April to May. These grasses are primarily used for vegetating excessively drained sands and gravels. See Standard and Specification for Sand and Gravel Mine Reclamation. Other grasses may be seeded any time of the year when the soil is not frozen and is workable. When legumes such as birdsfoot trefoil are included, spring seeding is preferred. See Table 4.4, "Permanent Construction Area Planting Mixture Recommendations" for additional seed mixtures.

General Seed Mix:	Variety	lbs./acre	lbs/1000 sq. ft.
Red Clover ¹ OR	Acclaim, Rally, Red Head II, Renegade	8 ²	0.20
Common white clover ¹	Common	8	0.20
PLUS			
Creeping Red Fescue	Common	20	0.45
PLUS			
Smooth Bromegrass OR	Common	2	0.05
Ryegrass (perennial)	Pennfine/Linn	5	0.10

Pure Live Seed, or (PLS) refers to the amount of live seed in a lot of bulk seed. Information on the seed bag label includes the type of seed, supplier, test date, source of seed, purity, and germination. Purity is the percentage of pure seed. Germination is the percentage of pure seed that will produce normal plants when planted under favorable conditions.

To compute Pure Live Seed multiply the "germination percent" times the "purity" and divide that by 100 to get Pure Live Seed.

$$\text{Pure Live Seed (PLS)} = \frac{\% \text{ Germination} \times \% \text{ Purity}}{100}$$

For example, the PLS for a lot of Kentucky Blue grass with 75% purity and 96% germination would be calculated as follows:

$$\frac{(96) \times (75)}{100} = 72\% \text{ Pure Live Seed}$$

For 10lbs of PLS from this lot =

$$\frac{10}{0.72} = 13.9 \text{ lbs}$$

Therefore, 13.9 lbs of seed is the actual weight needed to meet 10lbs PSL from this specific seed lot.

Time of Seeding: The optimum timing for the general seed mixture is early spring. Permanent seedings may be made any time of year if properly mulched and adequate moisture is provided. Late June through early August is not a good time to seed, but may facilitate covering the land without additional disturbance if construction is completed. Portions of the seeding may fail due to drought and heat. These areas may need reseeding in late summer/fall or the following spring.

Method of seeding: Broadcasting, drilling, cultipack type seeding, or hydroseeding are acceptable methods. Proper soil to seed contact is key to successful seedings.

Mulching: Mulching is essential to obtain a uniform stand of seeded plants. Optimum benefits of mulching new seedings are obtained with the use of small grain straw applied at a rate of 2 tons per acre, and anchored with a netting or tackifier. See the Standard and Specifications for Mulching for choices and requirements.

Irrigation: Watering may be essential to establish a new seeding when a drought condition occurs shortly after a new seeding emerges. Irrigation is a specialized practice and care must be taken not to exceed the application rate for the soil or subsoil. When disconnecting irrigation pipe, be sure pipes are drained in a safe manor, not creating an erosion concern.



80% Perennial Vegetative Cover



50% Perennial Vegetative Cover

Table 4.4
Permanent Construction Area Planting Mixture Recommendations

Seed Mixture	Variety	Rate in lbs./acre (PLS)	Rate in lbs./ 1,000 ft ²
Mix #1			
Creeping red fescue	Ensylva, Pennlawn, Boreal	10	.25
Perennial ryegrass	Pennfine, Linn	10	.25
*This mix is used extensively for shaded areas.			
Mix #2			
Switchgrass	Shelter, Pathfinder, Trailblazer, or Blackwell	20	.50
*This rate is in pure live seed, this would be an excellent choice along the upland edge of a wetland to filter runoff and provide wildlife benefits. In areas where erosion may be a problem, a companion seeding of sand lovegrass should be added to provide quick cover at a rate of 2 lbs. per acre (0.05 lbs. per 1000 sq. ft.).			
Mix #3			
Switchgrass	Shelter, Pathfinder, Trailblazer, or Blackwell	4	.10
Big bluestem	Niagara	4	.10
Little bluestem	Aldous or Camper	2	.05
Indiangrass	Rumsey	4	.10
Coastal panicgrass	Atlantic	2	.05
Sideoats grama	El Reno or Trailway	2	.05
Wildflower mix		.50	.01
*This mix has been successful on sand and gravel plantings. It is very difficult to seed without a warm season grass seeder such as a Truax seed drill. Broadcasting this seed is very difficult due to the fluffy nature of some of the seed, such as bluestems and indiagrass.			
Mix #4			
Switchgrass	Shelter, Pathfinder, Trailblazer, or Blackwell	10	.25
Coastal panicgrass	Atlantic	10	.25
*This mix is salt tolerant, a good choice along the upland edge of tidal areas and roadsides.			
Mix #5			
Saltmeadow cordgrass (Spartina patens)—This grass is used for tidal shoreline protection and tidal marsh restoration. It is planted by vegetative stem divisions.			
*Cape' American beachgrass can be planted for sand dune stabilization above the saltmeadow cordgrass zone.			
Mix #6			
Creeping red fescue	Ensylva, Pennlawn, Boreal	20	.45
Chewings Fescue	Common	20	.45
Perennial ryegrass	Pennfine, Linn	5	.10
Red Clover	Common	10	.45
*General purpose erosion control mix. Not to be used for a turf planting or play grounds.			

STANDARD AND SPECIFICATIONS FOR VEGETATING WATERWAYS



Definition & Scope

Waterways are a **permanently** constructed conveyance channel, shaped or graded. They are vegetated for the safe transport of excess surface water from construction sites and urban areas without damage from erosion.

Conditions Where Practice Applies

This standard applies to vegetating waterways and similar water carrying structures.

Supplemental measures may be required with this practice. These may include: subsurface drainage to permit the growth of suitable vegetation and to eliminate wet spots; a section stabilized with asphalt, stone, or other suitable means; or additional storm drains to handle snowmelt or storm runoff.

Retardance factors for determining waterway dimensions are shown in Table 3.1 on page 3.10 and "Maximum Permissible Velocities for Selected Grass and Legume Mixtures" (See Table 4.10 on page 4.79).

Design Criteria

Waterways or outlets shall be protected against erosion by vegetative means as soon after construction as practical. Vegetation must be well established before diversions or other channels are outletted into them. Consideration should be given to the use of turf reinforcement mats, excelsior matting, other rolled erosion control products, or sodding of channels to provide erosion protection as soon after construction as possible. It is strongly recommended that the center line of the waterway be protected with one of the above materials to avoid center gullies and to protect seedlings from erosion before establishment.

- Liming, fertilizing, and seedbed preparation.

- Lime to pH 6.5.
- The soil should be tested to determine the amounts of amendments needed.** If the soil must be fertilized before results of a soil test can be obtained to determine fertilizer needs, apply commercial fertilizer at 1.0 lbs/1,000 sq. ft. of N, P₂O₅, and K₂O.
- Lime and fertilizer shall be mixed thoroughly into the seedbed during preparation.
- Channels, except for paved section, shall have at least 4 inches of topsoil.
- Remove stones and other obstructions that will hinder maintenance.

- Timing of Seeding.

- Early spring and late August are best.
- Temporary cover to protect from erosion is recommended during periods when seedlings may fail.

- Seed Mixtures:

Mixtures	Rate per Acre (lbs)	Rate per 1,000 sq. ft. (lbs)
A. White clover or ladino clover ¹	8	0.20
Smooth bromegrass	20	0.45
Creeping red fescue ²	2	0.05
Total	30	0.70
OR		
B. Smooth bromegrass ³	25	0.60
Creeping red fescue	20	0.50
Perennial ryegrass	10	0.20
Total	55	1.30

¹ Inoculate with appropriate inoculum immediately prior to seeding. Ladino or birdsfoot trefoil may be substituted for common white clover and seeded at the same rate.

² Perennial ryegrass may be substituted for the creeping red fescue but increase seeding rate to 5 lbs/acre (0.1 lb/1,000 sq. ft.).

³ Use this mixture in areas which are mowed frequently. Common white clover may be added if desired and seeded at 8 lbs/acre (0.2 lb/1,000 sq. ft.).

- Seeding

Select the appropriate seed mixture and apply uniformly over the area. Rolling or cultipacking across the waterway is desirable.

Waterway centers or crucial areas may be sodded. Refer to the standard and specification for Stabilization with Sod. Be sure sod is securely anchored using staples or stakes.

- Mulching

All seeded areas will be mulched. Channels more than 300 feet long, and/or where the slope is 5 percent or more, must have the mulch securely anchored. Refer to the standard and specifications for Mulching for details.

- Maintenance

Fertilize, lime, and mow as needed to maintain dense protective vegetative cover.

Waterways shall not be used for roadways.

If rills develop in the centerline of a waterway, prompt attention is required to avoid the formation of gullies. Either stone and/or compacted soil fill with excelsior or filter fabric as necessary may be used during the establishment phase. See Figure 4.25, Rill Maintenance Measures. Spacing between rill maintenance barriers shall not exceed 100 feet.

Table 4.10
Maximum Permissible Velocities for Selected Seed Mixtures

Cover	Slope Range ² (%)	Permissible Velocity ¹	
		Erosion-resistant Soils (ft. per sec.) K=0.10 - 0.35 ³	Easily Eroded Soils (ft. per sec.) K=0.36 - 0.80
Smooth Bromegrass Hard Fescue	0-5 5-10 Over 10	7 6 5	5 4 3
Grass Mixtures	² 0-5 5-10	5 4	4 3
White/Red Clover Alfalfa Red Fescue	⁴ 0-5	3.5	2.5

¹ Use velocities exceeding 5 feet per second only where good covers and proper maintenance can be obtained.

² Do not use on slopes steeper than 10 percent except for vegetated side slopes in combination with a stone, concrete, or highly resistant vegetative center section.

³ K is the soil erodibility factor used in the Revised Universal Soil Loss Equation. Visit Appendix A or consult the appropriate USDA-NRCS technical guide for K values for New York State soils.

⁴ Do not use on slopes steeper than 5 percent except for vegetated side slopes in combination with a stone, concrete, or highly resistant vegetative center section.

⁵ Annuals - use on mild slopes or as temporary protection until permanent covers are established.

⁶ Use on slopes steeper than 5 percent is not recommended.

STANDARD AND SPECIFICATIONS FOR SOIL RESTORATION



Definition & Scope

The decompaction of areas of a development site or construction project where soils have been disturbed to recover the original properties and porosity of the soil; thus providing a sustainable growth medium for vegetation, reduction of runoff and filtering of pollutants from stormwater runoff.

Conditions Where Practice Applies

Soil restoration is to be applied to areas whose heavy construction traffic is done and final stabilization is to begin. This is generally applied in the cleanup, site restoration, and landscaping phase of construction followed by the permanent establishment of an appropriate ground cover to maintain the soil structure. Soil restoration measures should be applied over and adjacent to any runoff reduction practices to achieve design performance.



Design Criteria

- Soil restoration areas will be designated on the plan views of areas to be disturbed.

- Soil restoration will be completed in accordance with Table 4.6 on page 4.53.

Specification for Full Soil Restoration

During periods of relatively low to moderate subsoil moisture, the disturbed subsoils are returned to rough grade and the following Soil Restoration steps applied:

- Apply 3 inches of compost over subsoil. The compost shall be well decomposed (matured at least 3 months), weed-free, organic matter. It shall be aerobically composted, possess no objectionable odors, and contain less than 1%, by dry weight, of man-made foreign matter. The physical parameters of the compost shall meet the standards listed in Table 5.2 - Compost Standards Table, except for "Particle Size" 100% will pass the 1/2" sieve. **Note: All biosolids compost produced in New York State (or approved for importation) must meet NYS DEC's 6 NYCRR Part 360 (Solid Waste Management Facilities) requirements. The Part 360 requirements are equal to or more stringent than 40 CFR Part 503 which ensure safe standards for pathogen reduction and heavy metals content.**



- Till compost into subsoil to a depth of at least 12 inches using a cat-mounted ripper, tractor mounted disc, or tiller, to mix and circulate air and compost into the subsoil.
- Rock-pick until uplifted stone/rock materials of four inches and larger size are cleaned off the site.
- Apply topsoil to a depth of 6 inches.
- Vegetate as required by the seeding plan. Use appropriate ground cover with deep roots to maintain the soil structure.
- Topsoil may be manufactured as a mixture or a mineral component and organic material such as compost.

C	07/14/2021	JSD	ISSUED FOR 94C	KW	NJM
B	05/21/2021	RCB	ISSUED FOR REVIEW	KW	NJM
A	01/29/2021	RCB	ISSUED FOR REVIEW	KW	NJM
Rev	Date	Drawn	Description	Ch'k'd	App'd

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Scale at ANSI D NTS		Date 07/14/2021	Rev C
Drawing Number SRS-C-101-07			

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