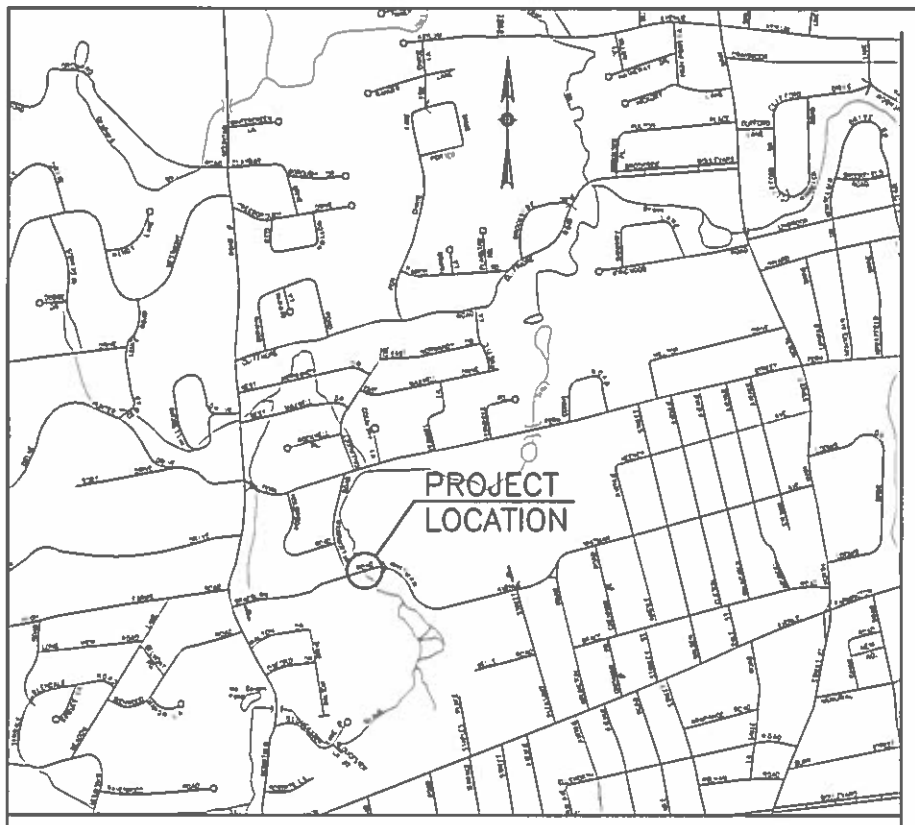
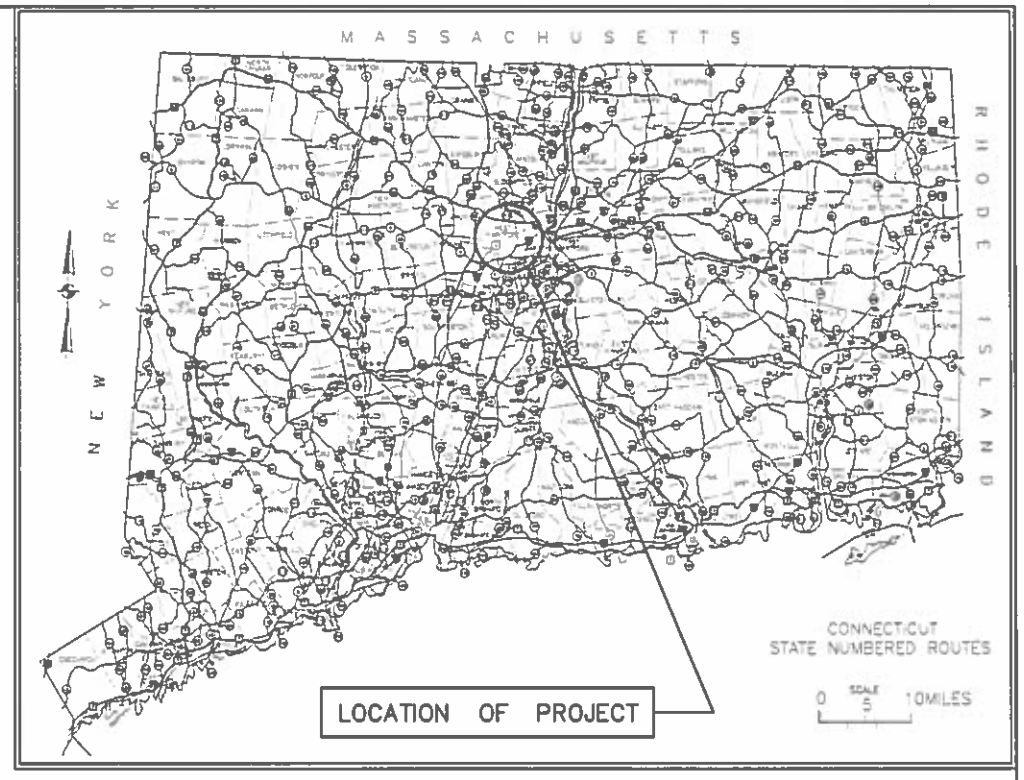


LOCATION PLAN
SCALE: 1"= 1000'

4 SERIES 16-S SIGN

TOWN OF WEST HARTFORD
CONSTRUCTION PLANS
FOR
CULVERT REPAIRS
OF BRIDGE NO. 06076
BRAEBURN ROAD
OVER
WEST BRANCH
TROUT BROOK



2004 SPECIFICATIONS, CDOT FORM NO. 816 INCLUDING ALL SUPPLEMENTAL SPECIFICATIONS UP TO AND INCLUDING JULY 2015 GOVERN.

LIST OF DRAWINGS

SHEET NO.	TITLE
1	TITLE SHEET
2	EXISTING CONDITIONS PLAN
3	PROPOSED STRUCTURE AND SHEETING DETAIL
4	CULVERT PROFILE
5	CULVERT STAGING PLAN AND REPAIR DETAILS
6	CULVERT REINFORCEMENT AND SHEETING
7	RESTORATION & SEDIMENTATION CONTROL PLAN
8	SEDIMENTATION AND EROSION CONTROL DETAILS

RON VAN WINKLE
TOWN MANAGER

DUANE J. MARTIN P.E.
TOWN ENGINEER

July 6, 2016

CONSTRUCTION CHANGE ORDER REVISIONS

SHEET NO.	DESCRIPTION	DATE	BY

DESIGNED BY: TECTONIC ENGINEERING & SURVEYING CONSULTANTS P.C.

PER _____

DATE: _____

CONN. P.E. NO. _____

APPROVED FOR BIDDING BY: TOWN OF WEST HARTFORD

PER _____

DATE: _____

RECEIVED
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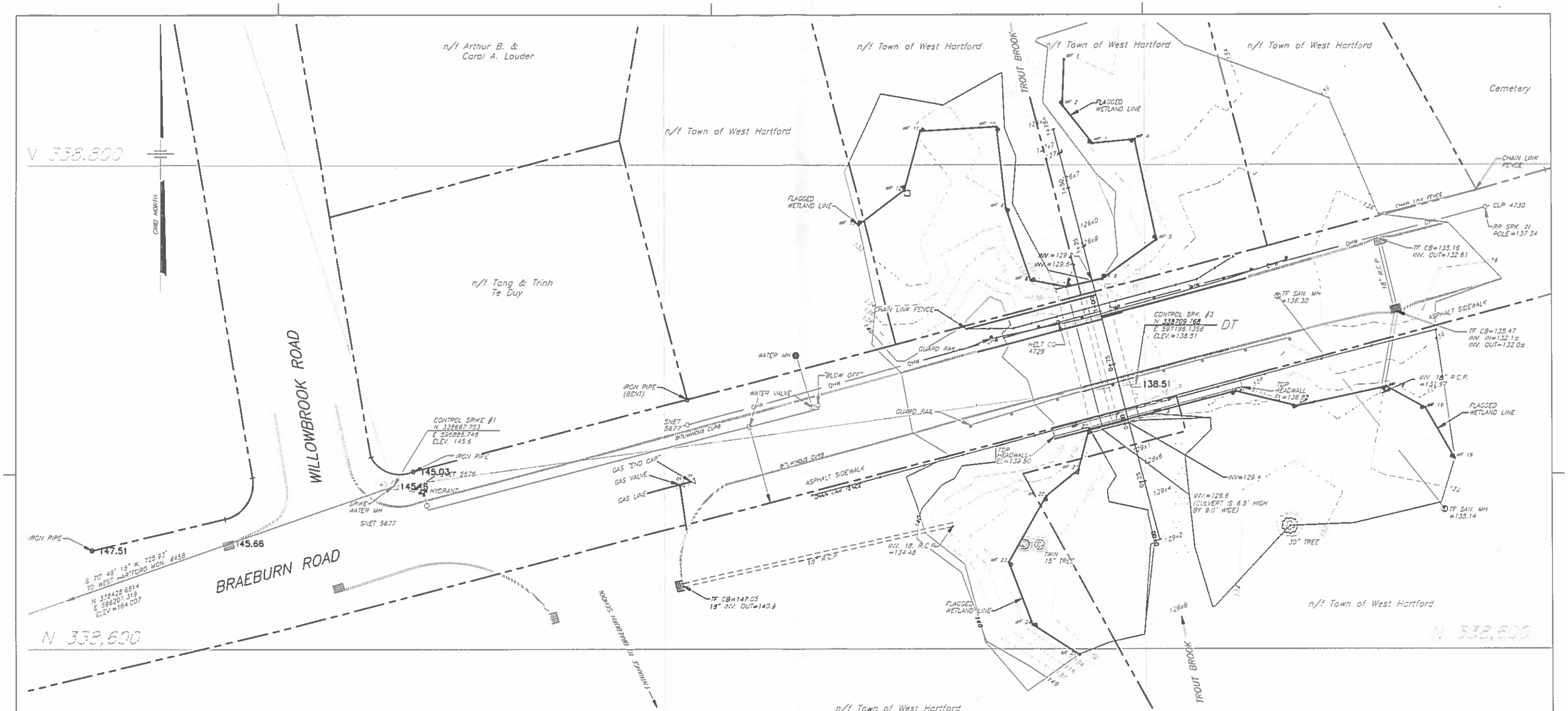

NOTES:

1. THIS MAP WAS PREPARED BY POST LAND SURVEYING 250 TOWN HILL ROAD, NEW HARTFORD, CONNECTICUT ON DECEMBER 12, 2015
1.a. THIS SURVEY AND MAP HAVE BEEN PREPARED PURSUANT TO THE REGULATIONS OF CONNECTICUT STATE AGENCIES, 20-300b-1 THROUGH 20-300b-20, AND THE "STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT", AS ADOPTED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC., SEPT. 26, 1996.
b. THIS IS A TOPOGRAPHIC SURVEY OF THE AREAS IMMEDIATELY NORTH AND SOUTH OF THE CULVERTS EASTERLY OF THE BRAEBURN SCHOOL PROPERTY (THIS AREA IS SHOWN AS BRAEBURN ROAD, WHITMAN AVE. AND PLEASANT STREET)
c. THE INTENT OF THIS TOPOGRAPHIC SURVEY IS TO SHOW EXISTING CONDITIONS.
d. THIS MAP CONFORMS TO STANDARDS FOR CLASS T-2 VERTICAL ACCURACY. PROPERTY LINES ARE CLASS D ACCURACY. ELEVATIONS BASED ON WEST HARTFORD MUNICIPAL DATUM (WEST HARTFORD MONUMENT # 458 = 164.007)
2. PROPERTY IS SITUATED IN ZONE R-10.
3. REFER TO VOL. 255, PG. 30 FOR OWNER OF RECORD.
4. GAS LINES, WATER LINES AND WETLAND FLAGS LOCATED AS MARKED IN THE FIELD.

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Rev	Date	Revision	Approved

DRAWING CONTROL

Designed by: JAS	Drawn by: KRF	Checked by: PJO
Purpose	Released by	Date
For Comment		
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EXISTING CONDITIONS PLAN

CULVERT REPAIRS OF BRIDGE NO. 06076
BRAEBURN ROAD TWIN CULVERT
OVER WEST BRANCH TROUT BROOK
WEST HARTFORD , CONNECTICUT

Date	Work Order	Drawing No.	Rev
3-29-16	7486.01	2	
Scale 1:20			

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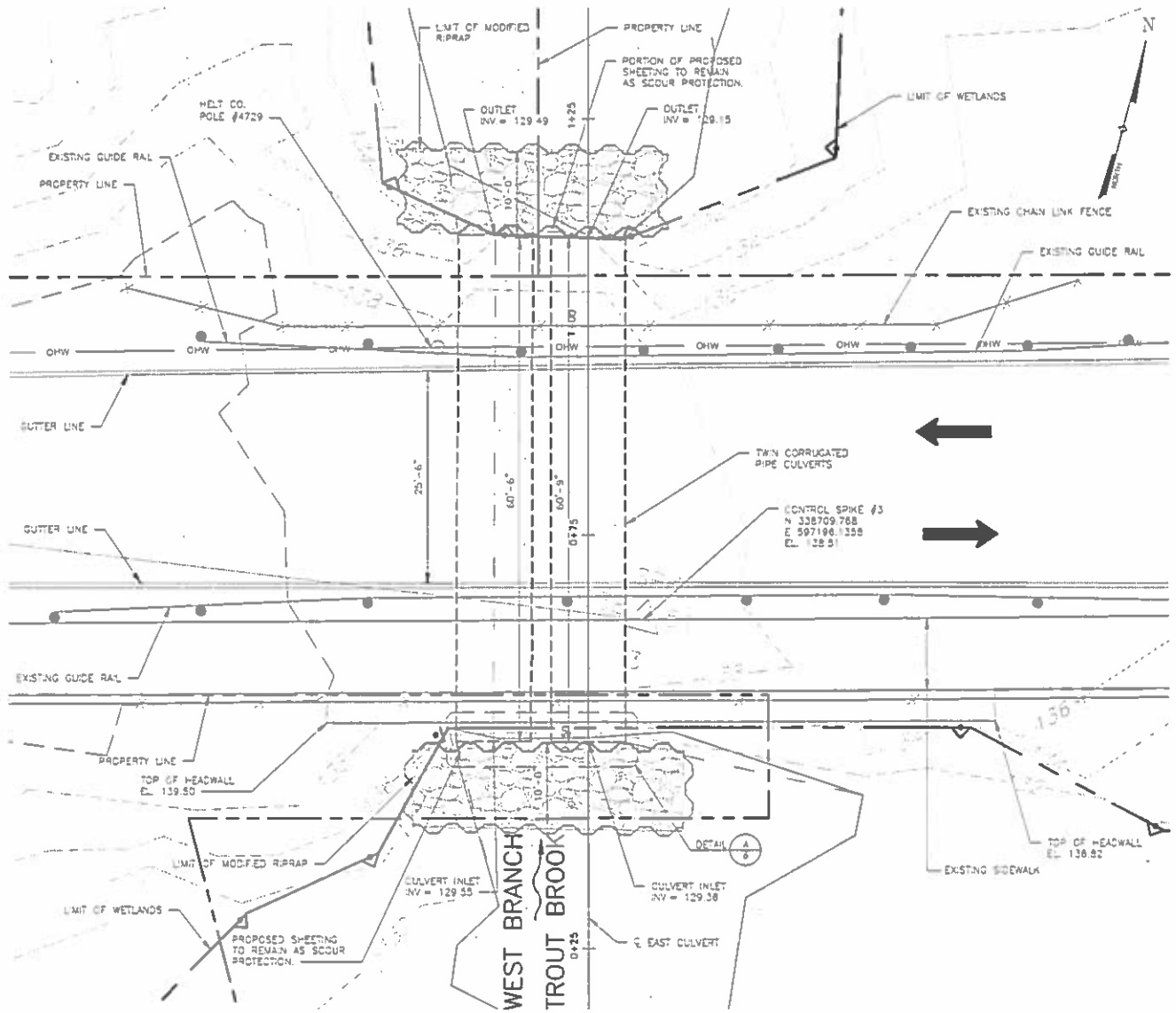
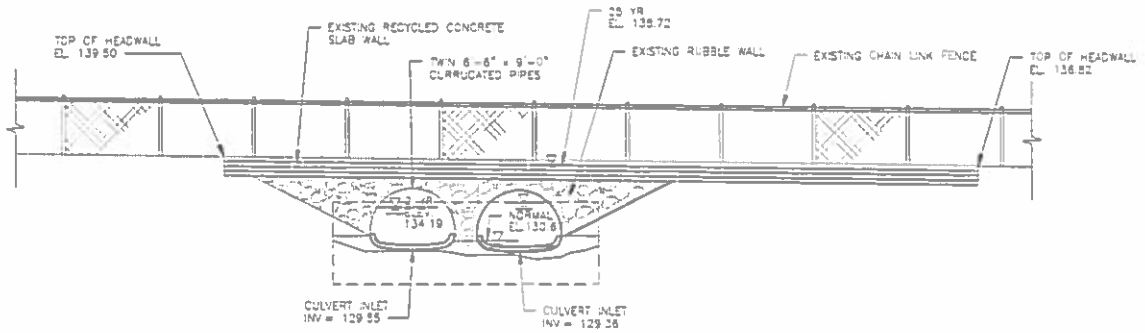


GENERAL PLAN

SCALE: 1:10



INLET ELEVATION

SCALE: 1:10

NOTES:

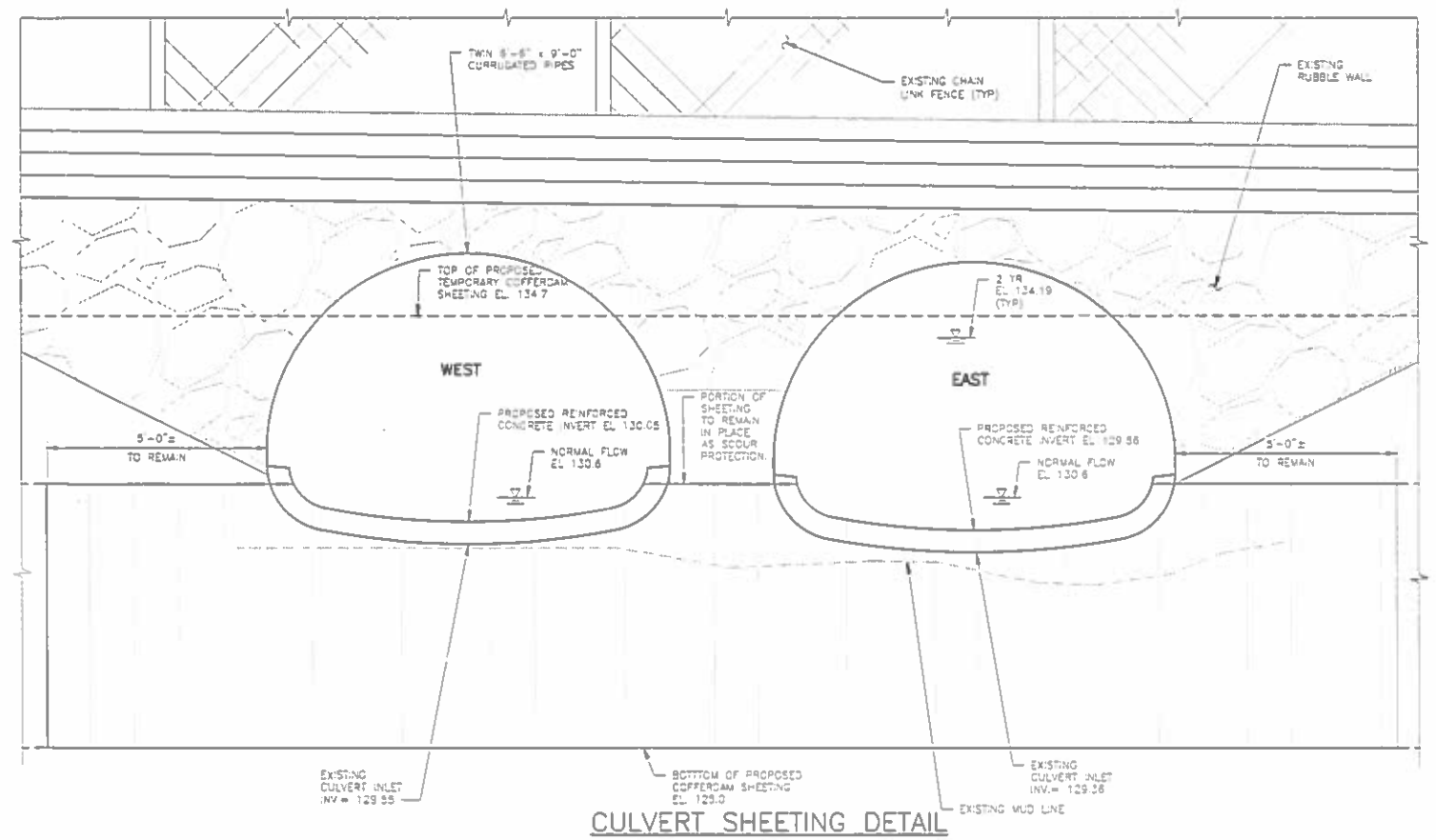
1. REMOVAL AND REINSTALLATION OF FENCE AND GUIDE RAILING SHALL NOT BE MEASURED FOR PAYMENT BUT SHALL BE INCLUDED IN THE GENERAL COST OF THE WORK.
2. DAMAGE TO EXISTING INFRASTRUCTURE INCLUDING BUT NOT LIMITED TO SIDEWALKS, CURBING, PAVEMENT OVERHEAD UTILITIES, UNDERGROUND UTILITIES, GUIDE RAILING AND FENCES SHALL BE REPAIRED BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER. ANY REPAIR WORK SHALL BE AT THE CONTRACTORS EXPENSE.

HYDRAULIC DATA

DRAINAGE AREA = 7.79 SQ. MILES

Q_2 = 344 CFS	ELEV = 134.19 FT	
Q_{25} = 1040 CFS	ELEV = 139.72 FT	
Q_{50} = 1260 CFS	ELEV = 139.15 FT	
Q_{100} = 1480 CFS	ELEV = 139.51 FT	
Q_h = 17.2 CFS	ELEV = 130.60 FT	

*Q FROM STREAM STAT V 3.0



CULVERT SHEETING DETAIL

SCALE 1/2" = 1'-0"

(INLET IS SHOWN, OUTLET IS SIMILAR)

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www.tectonicengineering.com

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DRAWING CONTROL

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For Approval					
For Bid					
For Construction					

PROPOSED STRUCTURE AND SHEETING DETAIL

CULVERT REPAIRS OF BRIDGE NO. 06076
BRAEBURN ROAD TWIN CULVERT
OVER WEST BRANCH TROUT BROOK
WEST HARTFORD, CONNECTICUT

Date	Work Order	Drawing No	Rev
3-23-18	7486.01	3	
Scale: AS SHOWN			

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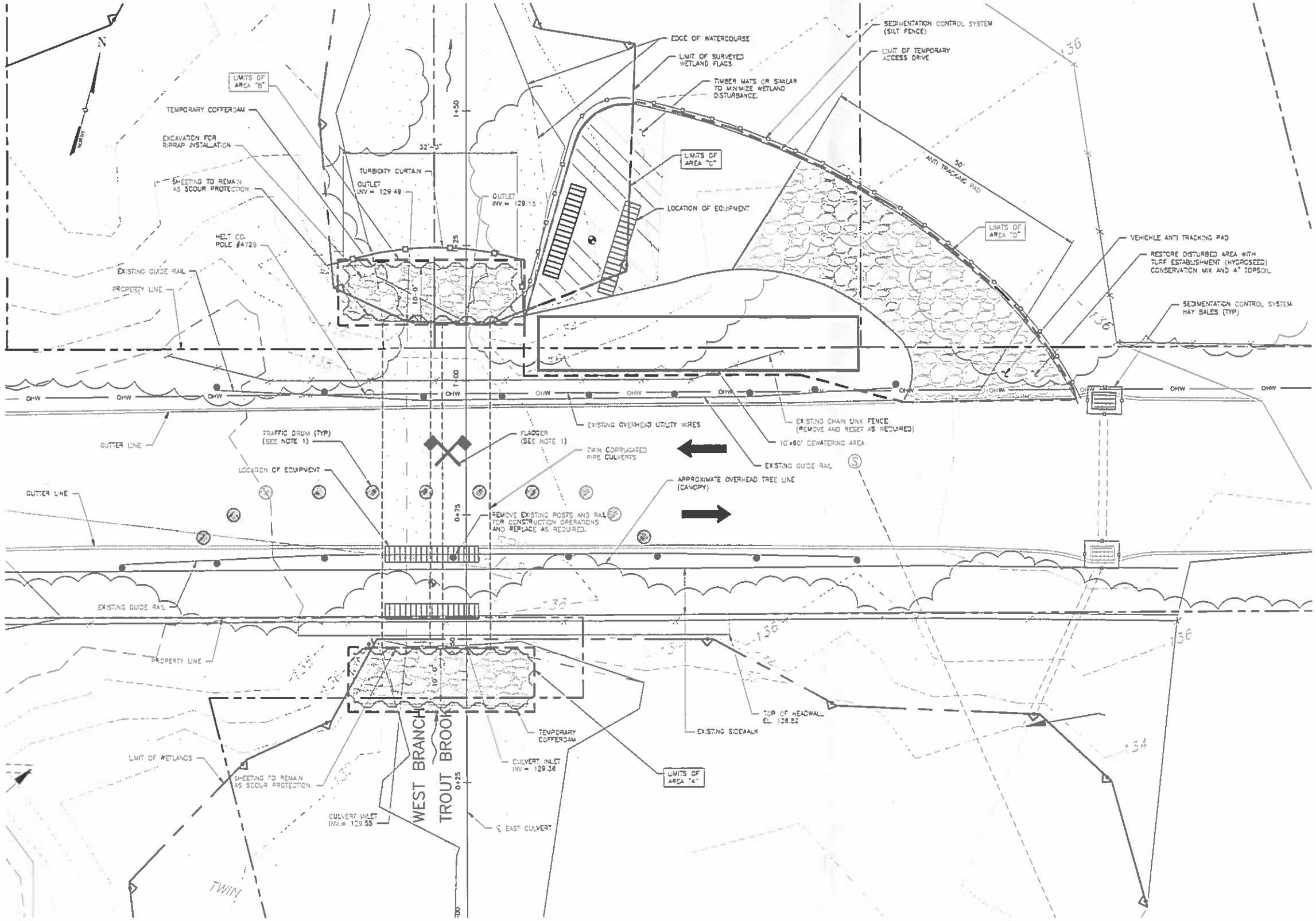

SEDIMENTATION CONTROL AND EQUPMENT PLAN

SCALE: 1:10

LOCATION	WETLANDS IMPACT	AREA (S.F.)
A	PERMANENT INLAND WETLANDS IMPACT	420
B	PERMANENT INLAND WETLANDS IMPACT	420
C	TEMPORARY INLAND WETLANDS IMPACT	440
D	TEMPORARY IMPACT TO REGULATED UPLAND AREA WITHIN 150' BUFFER	3200

NOTES:

1. SEE SPECIFICATION ITEM 0971001A "MAINTENANCE AND PROTECTION OF TRAFFIC" FOR CT CONSTRUCTION TRAFFIC CONTROL PLANS 13 AND 14 BY CTDOT.
2. CONTRACTOR SHALL SUBMIT HANDLING WATER PLANS AND METHODS FOR APPROVAL.
3. OVERHEAD UTILITIES ARE PRESENT ON THE NORTH SIDE OF THE ROAD. UNDERGROUND UTILITIES ARE SHOWN ON THE EXISTING CONDITIONS PLAN SHEET 2. CONTRACTOR SHALL "CALL BEFORE YOU DIG" PRIOR TO STARTING THE WORK.

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RESTORATION & SEDIMENTATION CONTROL PLAN

CULVERT REPAIRS OF BRIDGE NO. 06076
BRAEBURN ROAD TWIN CULVERT
OVER WEST BRANCH TROUT BROOK
WEST HARTFORD, CONNECTICUT

Date	Work Order	Drawing No.	Rev
5-11-16	7486.01	7	
Scale: AS SHOWN			

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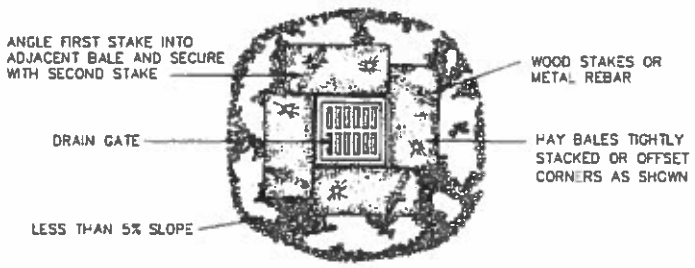
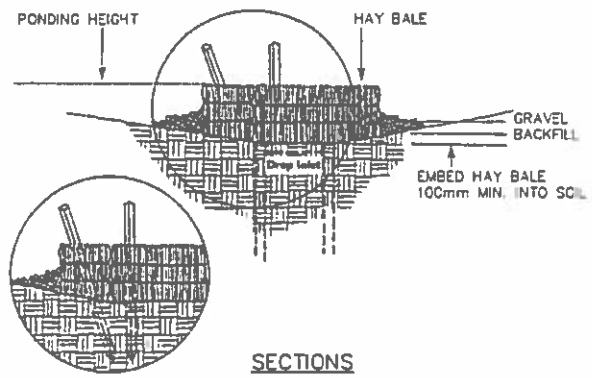
NOTE:
1. ALL WORK SHALL BE IN CONFORMANCE WITH THE 2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL.



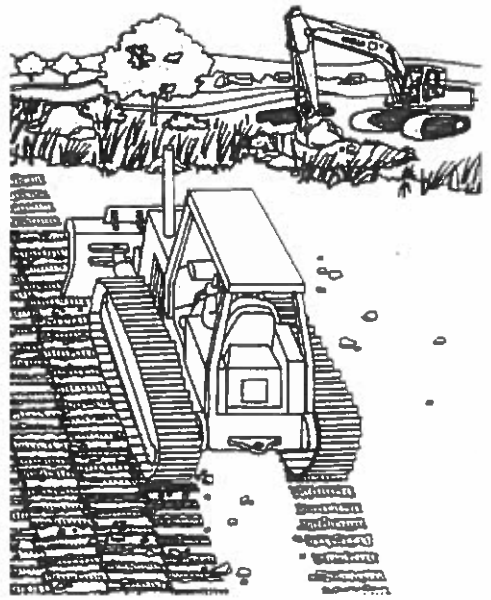
PLAN



SECTIONS

HAY BALE INSTALLATION AT CATCH BASIN

NOT TO SCALE

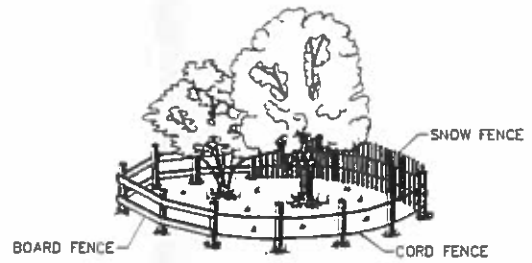


TRACKING SLOPES

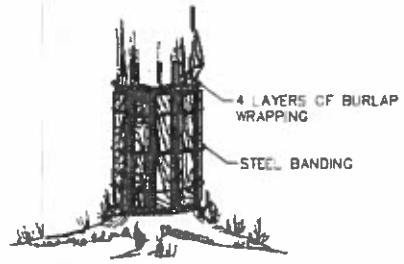
SURFACE ROUGHENING DETAILS

NOTES:

1. ALL CUT AND FILL SLOPES BETWEEN 2:1 AND 4:1 INCLUSIVE SHALL BE TRACKED.
2. ROUGHENING WITH TRACKED MACHINERY ON SOILS WITH A HIGH CLAY CONTENT IS NOT RECCOMENDED UNLESS NO ALTERNATIVES ARE AVAILABLE. UNDUE COMPACTION OF SOIL RESULTS FROM THIS PRACTICE. SANDY SOILS DO NOT COMPACT SEVERELY, AND MAY BE TRACKED. IN SANDY SOILS TRACKING MAY NOT BE AS EFFECTIVE AS OTHER ROUGHENING METHODS DESCRIBED. WHEN TRACKING IS THE CHOSEN SURFACE ROUGHENING TECHNIQUE, IT SHALL BE DONE BY OPERATING TRACKED MACHINERY UP AND DOWN THE SLOPE TO LEAVE HORIZONTAL DEPPRESSIONS IN THE SOIL, AS FEW PASSES AS POSSIBLE OF THE MACHINERY SHOULD BE MADE TO MINIMIZE COMPACTION.
3. IMMEDIATELY FOLLOWING SURFACE ROUGHENING, PROTECT THE SOIL FROM EROSION BY SEEDING AND / OR MULCHING.



TREE PROTECTION ZONING FENCING

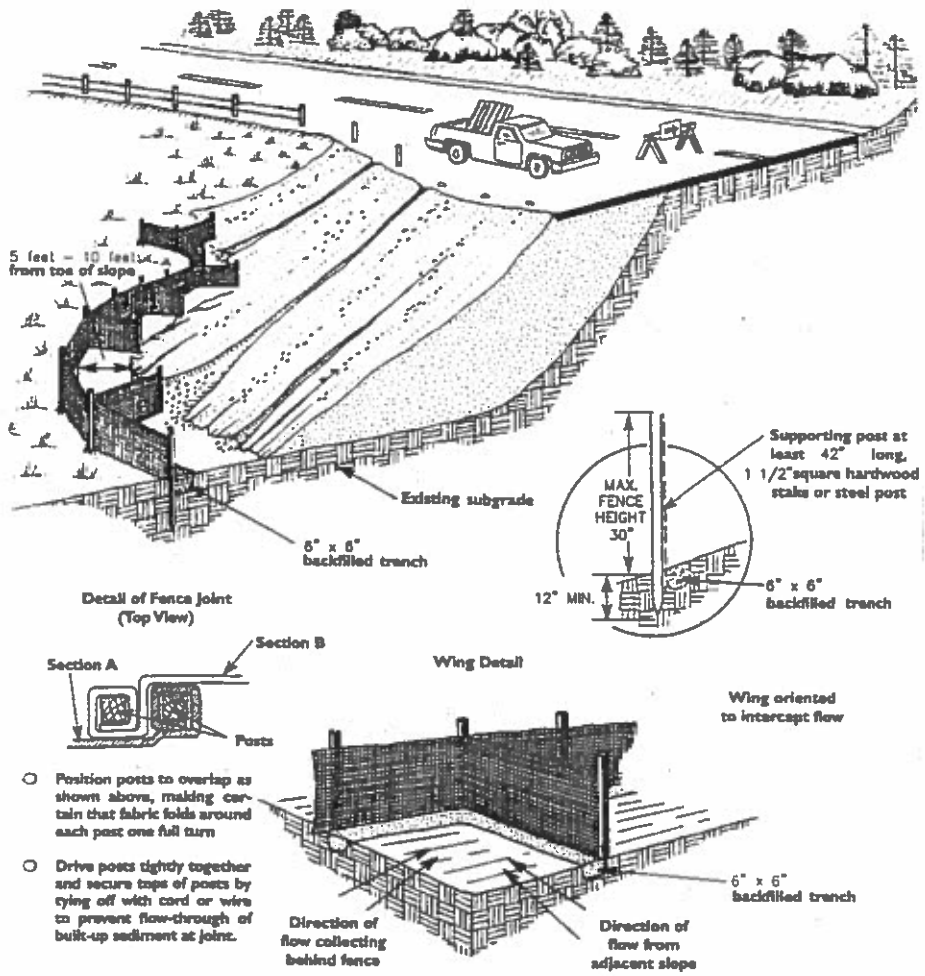


TRUNK ARMORING

NOTE: TRUNK ARMORING USED FOR PROTECTING STREET TREES ADJACENT TO CONSTRUCTION AREA WHERE PAVED SURFACES MAKE IT IMPRACTICAL TO ESTABLISH TREE PROTECTION ZONE.

TREE PROTECTION DETAILS

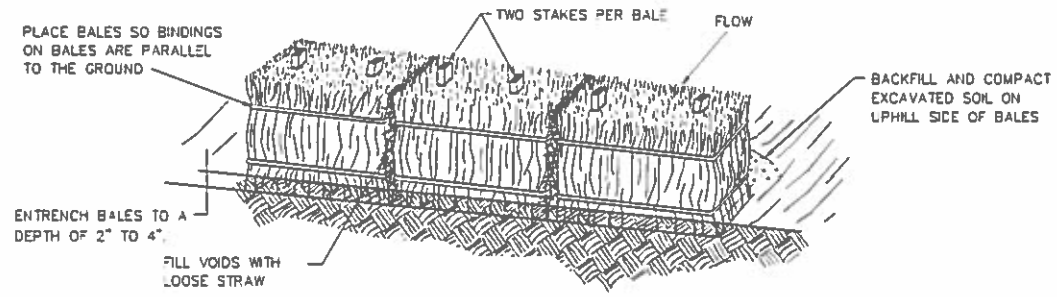
NOT TO SCALE



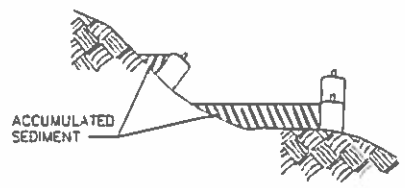
SILT FENCE INSTALLATION AT TOE OF SLOPE

NOTES:

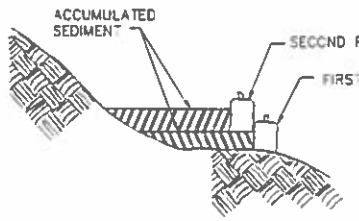
A) MINIMUM LENGTH OF SILT FENCE IS 15 FT.
B) MAXIMUM POST SPACING IS 10 FT.
C) JOINTS ONLY AT SUPPORT POST WITH MINIMUM 6" OVERLAP SECURELY SEALED.
D) SEDIMENTATION DEPOSIT SHALL BE REMOVED WHEN IT REACHES HALF THE HEIGHT OF THE SILT FENCE.
E) SILT FENCE SHALL NOT BE USED IN A WATER COURSE.
F) UPON ESTABLISHMENT OF GROUND COVER ON DISTURBED AREAS, AND WHEN DIRECTED BY THE ENGINEER, FENCE WILL BE REMOVED AND ANY SEDIMENTATION WILL BE THINLY SPREAD UPON EXISTING GROUND COVER.



HAY BALE BARRIER



WRONG PLACEMENT OF SUPPLEMENTAL HAY BALES



CORRECT PLACEMENT OF SUPPLEMENTAL HAY BALES

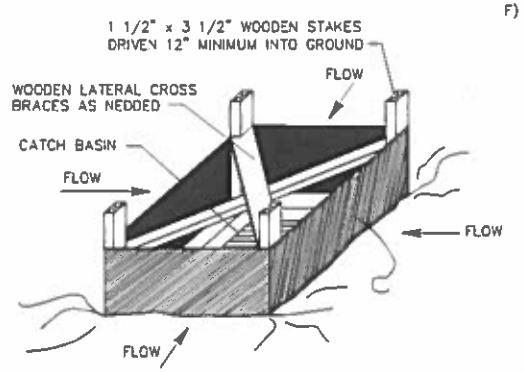
PREFERRED PLACEMENT:

BALES PLACED AWAY FROM TOE OF SLOPE HAVE A LARGER CONFINEMENT AREA. ADDITIONAL BALES SHOULD BE ADDED BEHIND THE ORIGINAL BALES WHEN SEDIMENTATION ACCUMULATION IS ABOUT ONE HALF THE HEIGHT OF THE FIRST ROW.

DIKES HAY / STRAW BALES

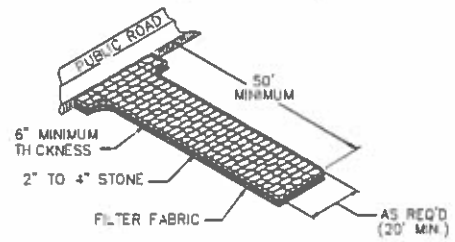
HAY BALE INSTALLATION

A) IDEALLY, BALES SHOULD BE ENTRENCHED 2" TO 4" AND TIGHTLY BUTTED TOGETHER. BALES CAN BE SUCCESFULLY PLACED WITHOUT A TRENCH IF GOOD GROUND CONTACT IS MADE. REMOVE HEAVY BRUSH AND FILL ALL VOIDS WITH LOOSE STRAW. PLACE HAY BALE AND STAKE FIRST AT ANGLE TOWARDS FIRST BALE. STAKES ARE 18" INTO GROUND
B) BALES SHOULD BE ONLY USED AS A TEMPORARY BARRIER AND FOR NO LONGER THAN 60 DAYS. THEY SHALL NOT BE USED ON A JOB ADJACENT TO A RESIDENTIAL NEIGHBORHOOD, RESIDENCES OR ADJACENT TO OR IN A WATERCOURSE.
C) WHEN SEDIMENTATION DEPOSITS REACH WITHIN 6" OF THE TOP OF BALES, REMOVE SEDIMENTATION OR ADD ADDITIONAL BALES ON SEDIMENTATION DIRECTLY BEHIND FIRST ROW OF BALES AS DIRECTED BY ENGINEER.
D) UPON ESTABLISHMENT OF GROUND COVER ON DISTUBED AREAS AND WHEN DIRECTED BY ENGINEER, HAY BALES WILL BE REMOVED AND USED AS MULCH. ANY SEDIMENTATION WILL BE THINLY SPREAD UPON ESTABLISHED GROUND COVER.



SILT FENCE INSTALLATION AT CATCH BASIN

NOT TO SCALE



ANTI-TRACKING PAD

NOT TO SCALE

THE COST OF THE ANTI-TRACKING PAD IS TO BE INCLUDED UNDER GENERAL COST OF THE WORK.

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Rev	Date	Revision	Approved

DRAWING CONTROL

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ORIGINAL SIZE IN INCHES

SEDIMENTATION & EROSION CONTROL DETAILS

CULVERT REPAIRS OF BRIDGE NO. 06076
BRAEBURN ROAD TWIN CULVERT
OVER WEST BRANCH TROUT BROOK
WEST HARTFORD, CONNECTICUT

Date	Work Order	Drawing No.	Rev
5-11-16	7486.01	8	
Scale N.T.S.			

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