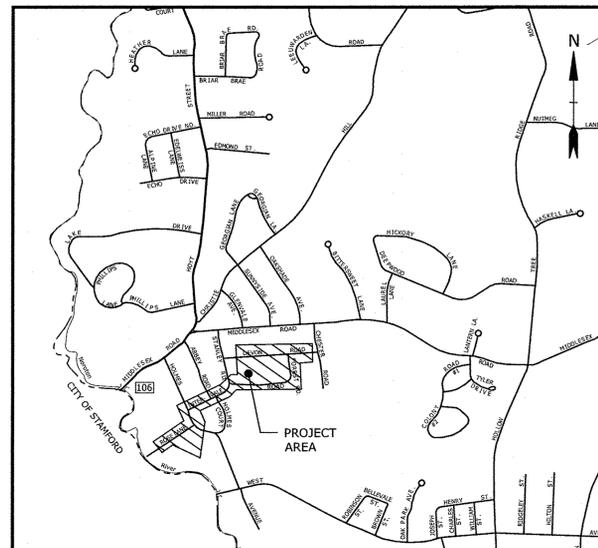


TOWN OF DARIEN, CONNECTICUT

ABBHEY ROAD DRAINAGE IMPROVEMENTS

JUNE 10, 2013

LIST OF DRAWINGS	
SHEET NO.	TITLE
	COVER SHEET
C1.00	GENERAL NOTES, LEGEND AND ABBREVIATIONS
C2.00	INDEX PLAN
C2.10	DRAINAGE AND UTILITY PLAN ENLARGEMENT
C2.11	DRAINAGE AND UTILITY PLAN
C2.20	DRAINAGE AND UTILITY PLAN
C2.30	DRAINAGE AND UTILITY PLAN
C2.40	DRAINAGE AND UTILITY PLAN
C2.50	DRAINAGE AND UTILITY PLAN
C3.00	SEDIMENTATION AND EROSION CONTROL NOTES, NARRATIVE, AND DETAILS
C4.00	STORM DRAINAGE DETAILS - 1
C4.10	STORM DRAINAGE DETAILS - 2
C4.20	STORM DRAINAGE DETAILS - 3
C4.30	STORM DRAINAGE DETAILS - 4
C4.40	STORM DRAINAGE DETAILS - 5
C4.50	STORM DRAINAGE DETAILS - 6
C4.60	STORM DRAINAGE DETAILS - 7
C4.70	ROADWAY DETAILS

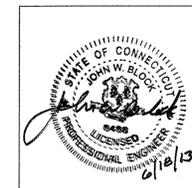


LOCATION MAP
SCALE: 1"=1000'

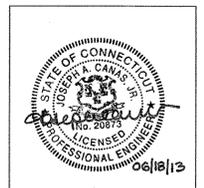
PREPARED BY:



1000 Bridgeport Avenue
Suite 320
Shelton, CT 06484
(203) 712-1100



JOHN W. BLOCK P.E.



JOSEPH A. CANAS P.E.

PREPARED FOR:
TOWN OF DARIEN

FIRST SELECTMAN: JAYME STEVENSON

DATE:

DEPARTMENT OF PUBLIC WORKS

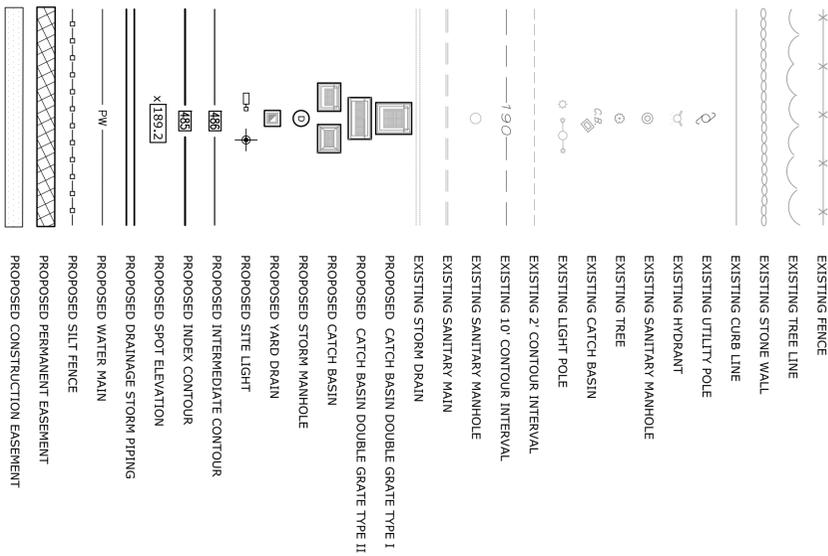
DIRECTOR: ROBERT S. STEEGER, Jr., P.E.

DATE:

GENERAL NOTES

1. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FOR THE WORK.
2. CONTRACTOR SHALL NOT COMMENCE WORK ON PRIVATE PROPERTY UNTIL THE TOWN HAS SECURED PERMANENT EASEMENTS AND ANY CONSTRUCTION RIGHTS AS MAY BE REQUIRED FROM ADJOINING PROPERTY OWNERS.
3. INFORMATION ON EXISTING CONDITIONS WAS TAKEN FROM SURVEY PREPARED BY WILLIAM W. SPYRNOUR, INC., NORWOTON, CT. ENTITLED "THE INFORMATION ON EXISTING UTILITIES HAS BEEN COMPILED FROM AVAILABLE INFORMATION INCLUDING UTILITY COMPANY AND CITY RECORD MAPS AND FIELD SURVEY AND IS NOT GUARANTEED CORRECT OR COMPLETE. UTILITIES ARE SHOWN TO ALERT THE CONTRACTOR TO THEIR PRESENCE. THE CONTRACTOR AND/OR RESPONSIBLE PARTY IS SOLELY RESPONSIBLE FOR DETERMINING ACTUAL LOCATIONS AND ELEVATIONS OF ALL UTILITIES INCLUDING SERVICES. PRIOR TO ANY CONSTRUCTION, CALL "CALL BEFORE YOU DIG" AT 1-800-922-4455 AND VERIFY ALL UNDERGROUND AND OVERHEAD UTILITY LOCATIONS.
4. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH TOWN OF DARLEN AND CONNECTICUT DEPARTMENT OF TRANSPORTATION STANDARDS.
5. LOCATION OF UTILITY COMPANY FACILITIES SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE FACILITY OWNERS.
6. THE CONTRACTOR IS TO USE CAUTION WHEN WORKING NEAR OVERHEAD AND UNDERGROUND UTILITIES.
7. HIGH DENSITY POLYETHYLENE PIPE (HDPE) SHALL BE HANCOR HI-Q OR ADS-N-12, SMOOTH INTERIOR POLYETHYLENE PIPE.
8. REINFORCED CONCRETE PIPE (RCP) SHALL BE CLASS IV UNLESS OTHERWISE NOTED.
9. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ASSURE THAT ALL PIPING IS PROPERLY BEDED AND STABILIZED IN AREAS OF HIGH GROUND WATER AND/OR UNSTABLE SOIL CONDITIONS.
10. IT IS THE RESPONSIBILITY OF EACH BIDDER IN EVALUATING THESE PLANS TO MAKE EXAMINATIONS IN THE FIELD BY VARIOUS METHODS AND OBTAIN NECESSARY INFORMATION FROM AVAILABLE RECORDS, UTILITY CORPORATIONS, AND INDIVIDUALS AS TO THE LOCATION OF ALL SUBSURFACE STRUCTURES.
11. ANY DRAINAGE STRUCTURES, DITCHES, ASPHALT, CURBS, OTHER EXISTING CONSTRUCTION OR GRASSED AREAS DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO THE ORIGINAL CONDITION.
12. AREAS OF DISTURBED EARTH SHALL BE STABILIZED BY MULCHING OR OTHER MEANS. SEEDING OF GRASSED AREAS SHALL BE INITIATED AS SOON AS PRACTICAL AS AN EROSION AND SILTATION CONTROL MEASURE. ALL DISTURBED EARTH AREAS SHALL BE TREATED WITH 4" TOPSOIL & SEED.
13. SEWER AND WATER LINE CROSSING ALL OTHER UTILITIES SHALL MAINTAIN A 12 INCH VERTICAL SEPARATION DISTANCE, OTHERWISE ENCASE 10' EACH SIDE OF CROSSING IN CONCRETE.
14. AFTER CONSTRUCTION, THE CONTRACTOR IS TO PROVIDE AN AS-BUILT OF THE STORM DRAINAGE SYSTEM, PREPARED BY A LICENSED SURVEYOR IN THE STATE OF CONNECTICUT.
15. A ROAD OPENING PERMIT FOR WORK WITHIN A TOWN ROAD RIGHT-OF-WAY, INCLUDING TEST PITS, IS TO BE ACQUIRED FROM THE TOWN.
16. RELOCATION OF HOUSE SEWER, WATER, AND GAS SERVICES MAY BE NECESSARY. CONTRACTOR TO RELOCATE THESE SERVICES AS NECESSARY IN COORDINATION WITH RESPECTIVE UTILITY COMPANIES. COSTS OF SUCH RELOCATION SHALL BE INCORPORATED INTO THE BID, WHETHER OR NOT SPECIFICALLY CALLED OUT ON THE PLANS.
17. CONTRACTOR IS RESPONSIBLE FOR THE RESTORATION OF PAVEMENT AND CURB LINES DISTURBED BY CONSTRUCTION ACTIVITY.
18. INSTALL CATCH BASIN TRAPS ONLY ON CATCH BASINS THAT HAVE NO UPSTREAM CATCH BASINS ATTACHED.
19. ALL ROADS DISTURBED SHALL BE FILLED & OVERLAD (2" BIT. CONC. CLASS 2) CURB-TO-CURB.
20. CONTRACTOR SHALL MAINTAIN AND SUPPORT ALL UTILITIES DURING CONSTRUCTION.

LEGEND



STANDARD ABBREVIATIONS

- AASHTO - AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS
 ACB - ASPHALT COATED CORRUGATED PIPE
 AC - ACERS
 ACT - AMERICAN CONCRETE INSTITUTE
 ADA - AMERICANS WITH DISABILITIES ACT
 ALUM. - ALUMINUM
 BC - BOTTOM OF CURB
 BIT. - BITUMINOUS
 BW - BOTTOM OF WALL
 CB - CATCH BASIN
 CCB - CORRUGATED METAL PIPE
 CIP - CONCRETE
 CPP - CORRUGATED PLASTIC PIPE
 DEC - DANBURY ENVIRONMENTAL IMPACT COMMISSION
 DIA - DIAMETER
 DIP - DUCTILE IRON PIPE
 DMH - DRAINAGE MANHOLE
 EA - EACH
 EL - ELEVATION
 EXIST. - EXISTING
 F.A.R. - FLOOR AREA RATIO
 FD - FOOTING DRAIN
 FE - FLARED END OUTLET
 FF - FIRST FLOOR
 FT - FEET
 GALV. - GALVANIZED
 GR - GRATE
 HDPE - HIGH DENSITY POLYETHYLENE PIPE
 HW - HEADWALL
 HW - HEADWALL
 ID - INSIDE DIAMETER
 INV - INVERT
 JT - JOINT
 MAX. - MAXIMUM
 MEG - MEET EXISTING GRADE
 MIN. - MINIMUM
 MH - MANHOLE
 MPH - MILES PER HOUR
 O.C. - ON CENTER
 O.D. - OUTSIDE DIAMETER
 PCB - PROPOSED CATCH BASIN
 PROP - PROPOSED
 P.S.I. - POUNDS PER SQUARE INCH
 PSMH - PROPOSED SANITARY MANHOLE
 PVC - PLASTIC PIPE
 PAVT. - PAVEMENT
 RCP - REINFORCED CONCRETE PIPE
 RL - ROD LEADER
 ROW - RIGHT OF WAY
 ROW - RIGHT OF WAY
 SF - SQUARE FEET
 SQ. - SQUARE
 SMH - SANITARY MANHOLE
 STD - STANDARD
 TC - TOP OF CURB
 TD - TRENCH DRAIN
 TW - TOP OF WALL
 TYP. - TYPICAL
 V.P. - VERTICAL
 V.P. - VERTICAL
 WT - WEIGHT
 YD - YARD DRAIN

Town of Darien
 Abbey Road
 Drainage
 Improvements

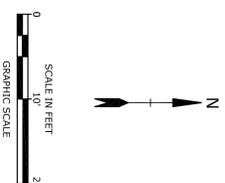
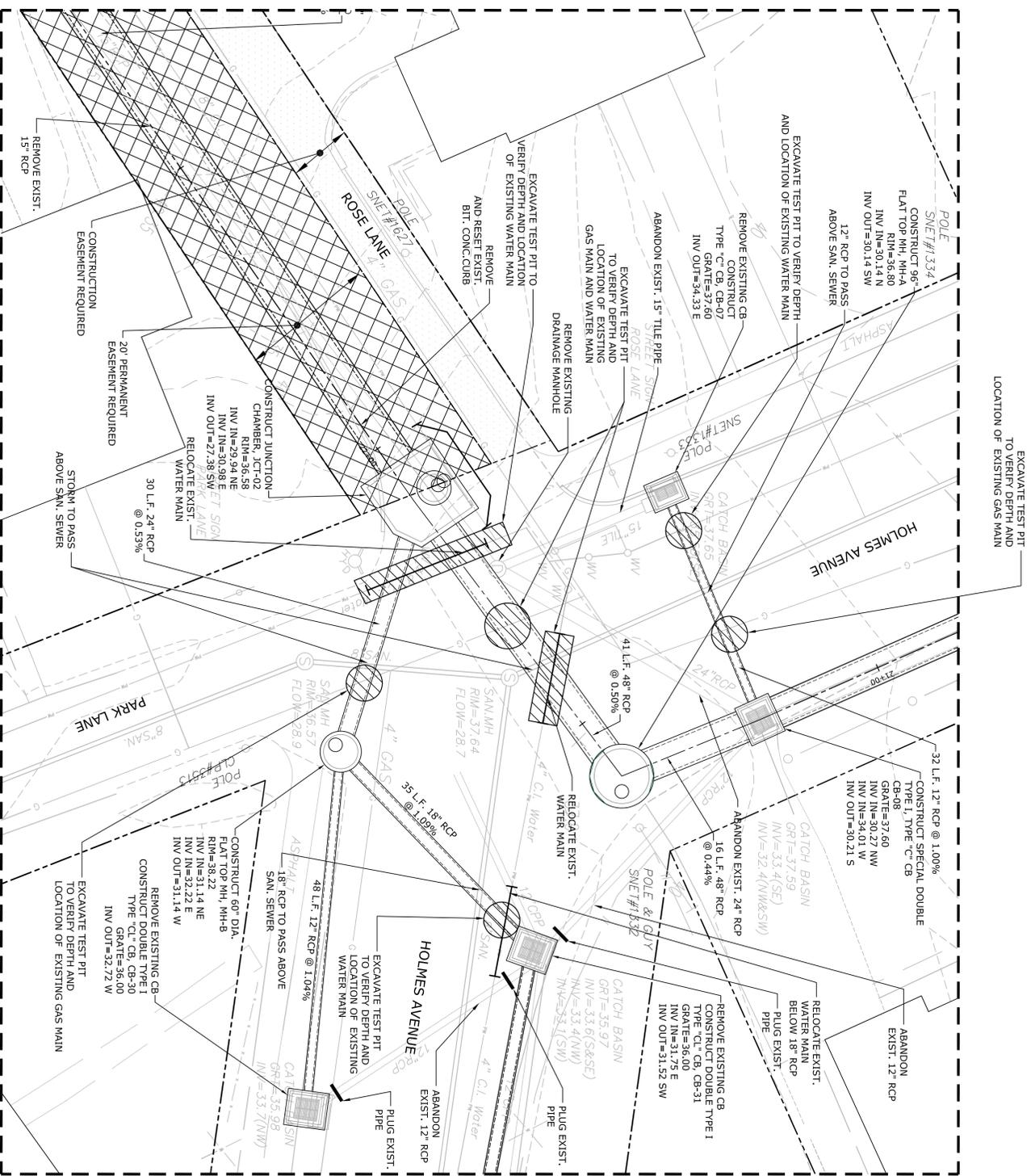
Darien, Connecticut
 June 10, 2013

MARK	DATE	DESCRIPTION
PROJECT NO.	D0213	
FILES	GN-D0213-01.dwg	
DRAWN BY	MOS	
CHECKED	JAC	
APPROVED	JWB	

GENERAL NOTES, LEGEND
 AND
 ABBREVIATIONS

SCALE: **C1.00**
 NONE

Tighe & Bond
 www.tighebond.com
 1000 Bridgeport Avenue
 Suite 320
 Shelton, CT 06484
 (203) 712-1100



Town of Darlen

**Abbey Road
 Drainage
 Improvements**

Darlen, Connecticut
 June 10, 2013

MARK	DATE	DESCRIPTION
PROJECT NO.	D0213	
FILES	DR-D0213-01.dwg	
DRAWN BY	MOS	
CHECKED	JAC	
APPROVED	JWB	

**DRAINAGE AND
 UTILITY PLAN
 ENLARGEMENT**

SCALE: 1" = 10'
C2.11

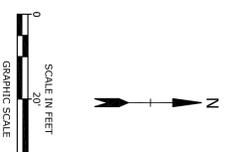
NOTE:
 1. REFER TO DRAWING C1.00 FOR
 GENERAL NOTES AND LEGEND.



MATCH LINE SHEET C2.10

MATCH LINE SHEET C2.30

NOTE:
 1. REFER TO DRAWING C1.00 FOR GENERAL NOTES AND LEGEND.



Town of Darien

**Abbey Road
 Drainage
 Improvements**

Darien, Connecticut
 June 10, 2013

MARK	DATE	DESCRIPTION
PROJECT NO.	02013	
FILES	DR-D0213-01.dwg	
DRAWN BY	JAC	
CHECKED	JAC	
APPROVED	JWB	

**DRAINAGE AND
 UTILITY PLAN**

C2.20

1" = 20'

Tighe & Bond
 www.tighebond.com
 1000 Bridgeport Avenue
 Suite 320
 Shelton, CT 06484
 (203) 712-1100



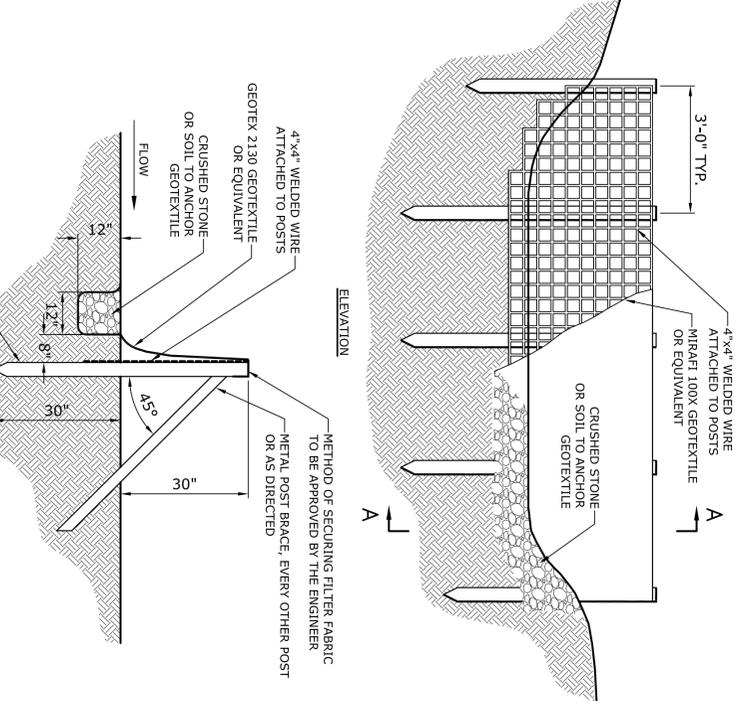
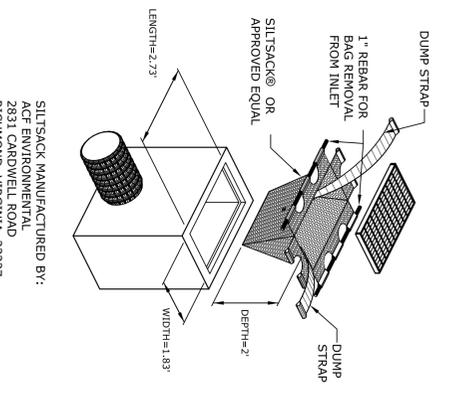
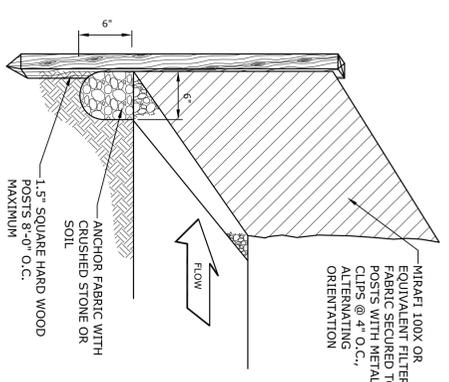
MATCH LINE SHEET C2.50

NOTE:
 1. REFER TO DRAWING C1.00 FOR GENERAL NOTES AND LEGEND.

<p>Tighe & Bond www.tighebond.com 1000 Bridgeport Avenue Shelton, CT 06484 (203) 712-1100</p>	<p>Town of Darien Abbey Road Drainage Improvements</p>	<p>Darien, Connecticut June 10, 2013</p>	<p>SCALE: 1" = 20'</p> <p>C2.40</p>	<p>MARK DATE DESCRIPTION PROJECT NO. D0213 FILES: DR-D0213-01.dwg DRAWN BY: JMC CHECKED: JMC APPROVED: JWB</p>
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SEDIMENTATION AND EROSION CONTROL LEGEND:

- 70--- EXISTING INDEX CONTOUR
- X 72.50 EXISTING SPOT ELEVATION
- 485 PROPOSED INDEX CONTOUR
- x 70.3 PROPOSED SPOT ELEVATION
- o---o---o--- PROPOSED GEOTEXTILE SILT FENCE
- S.S. X PROPOSED SILT SACK
- PROPOSED HAYBALE CATCH BASIN RING
- PROPOSED HAYBALE CHECKDAM
- o---o---o--- PROPOSED HAYBALE BARRIER
- o---o---o--- PROPOSED CONSTRUCTION FENCE
- o---o---o--- PROPOSED CONSTRUCTION FENCE GATE
- o---o---o--- PROPOSED CONSTRUCTION ENTRANCE



SEDIMENTATION AND EROSION CONTROL NARRATIVE

SEDIMENTATION AND EROSION CONTROL MEASURES WILL BE INSTALLED DURING CONSTRUCTION WHICH WILL MINIMIZE ADVERSE IMPACTS FROM CONSTRUCTION ACTIVITIES.

ALL SEDIMENTATION AND EROSION CONTROL MEASURES PROPOSED FOR THIS DEVELOPMENT HAVE BEEN DESIGNED IN ACCORDANCE WITH THE "2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENTATION CONTROL," AS PUBLISHED BY THE CONNECTICUT COUNCIL ON SOIL EROSION AND WATER CONSERVATION. ADDITIONAL GUIDELINES HAVE ALSO BEEN FOLLOWED THAT ARE AVAILABLE FROM THE CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION AS RECOMMENDED FOR SEDIMENTATION CONTROL DURING CONSTRUCTION ACTIVITIES.

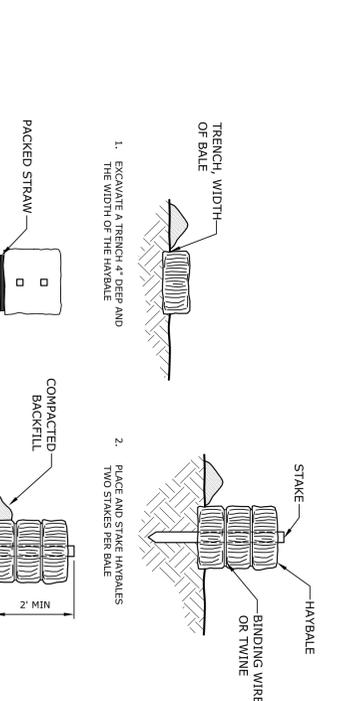
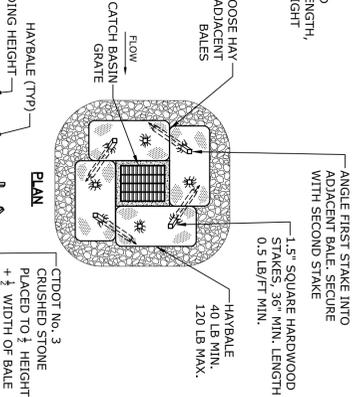
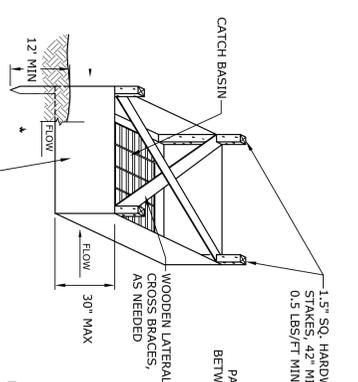
CONSTRUCTION SEQUENCE

GENERAL

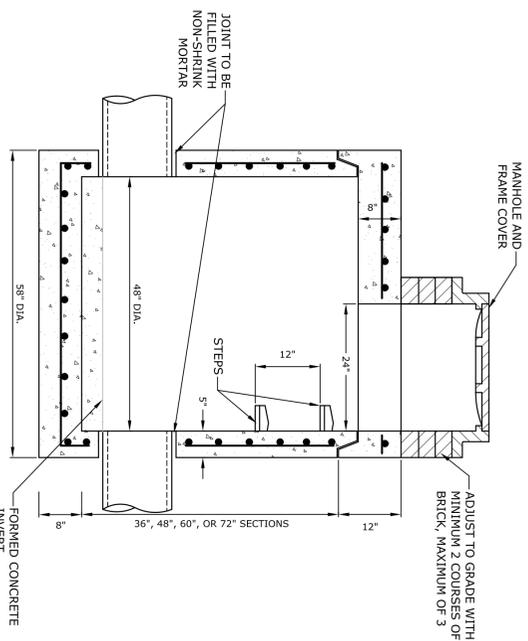
1. THE PROPOSED DEVELOPMENT IS ENTITLED "ABBEY ROAD DRAINAGE IMPROVEMENTS" DARLEN, CONNECTICUT.
2. ESTIMATED:
PROJECT START: APRIL 2013
PROJECT COMPLETION: SEPTEMBER 2013

CONSTRUCTION SEQUENCE

1. CONDUCT A PRECONSTRUCTION MEETING WITH THE OWNER OR OWNER'S REPRESENTATIVE, TOWN ENGINEER, DESIGN ENGINEER, SITE ENGINEER, CONTRACTOR AND SITE SUPERINTENDENT TO ESTABLISH THE LIMITS OF CONSTRUCTION, CONSTRUCTION PROCEDURES AND MATERIAL STOCKPILE AREAS.
2. COORDINATE SEDIMENTATION AND EROSION CONTROL WITH ON-GOING SITE PROJECT.
3. INSTALL NEW AND MAINTAIN EXISTING SILT SACKS AND HAYBALE BARRIERS AROUND EXISTING CATCH BASINS TO REMAIN AS INDICATED ON THE PLANS AND IN NEW DRAINAGE SYSTEM.
4. MAINTAIN INSTALLED WATER QUALITY SYSTEMS AND ASSOCIATED DRAINAGE NETWORK. FINE GRADE THE AREA AROUND THE STORM DRAINAGE SYSTEM AS NECESSARY. MAINTAIN EXISTING UNDERGROUND STORMWATER DETENTION.
5. COMPLETE SITE PUNCHLIST ITEMS.
6. REMOVE ALL TEMPORARY SEDIMENTATION AND EROSION CONTROL STRUCTURES AND CLEAN ALL NEW AND EXISTING CATCH BASINS AND PIPING ON THE SITE. REMOVE ANY SEDIMENT AND DISPOSE OF OFF-SITE.



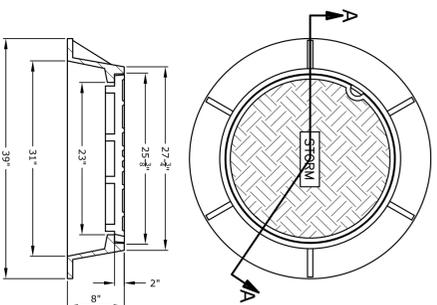
MARK	DATE	DESCRIPTION
PROJECT NO.:	D0213	
FILE:	SE-D0213-02.dwg	
DRAWN BY:	JAC	
CHECKED:	JAC	
APPROVED:	JWB	



- NOTES:
1. JOINT SEALANT SHALL BE PREFORMED BUTYL RUBBER MASTIC TYPE SEAL COMPLYING WITH AASHTO SPECIFICATION M198.
 2. REINFORCING 0.12 IN./VERTICAL FOOT PER ASTM A185.
 3. CONCRETE COMPRESSION STRENGTH: 5,000 PSI, 28 DAYS.
 4. MANHOLE STEP TO BE USED MEETS OSHA REGULATION 20 CFR 1910.27 AND SECTION 11 ASTM SPECIFICATION C-473.
 5. METHOD OF MANUFACTURE: WET CAST.
 6. BASE SECTION MONOLITHIC.
 7. KNOCKOUTS FOR PIPES 4" MIN. FROM TOP AND BOTTOM OF SECTION.

48" DIA. SHALLOW MANHOLE

NO SCALE

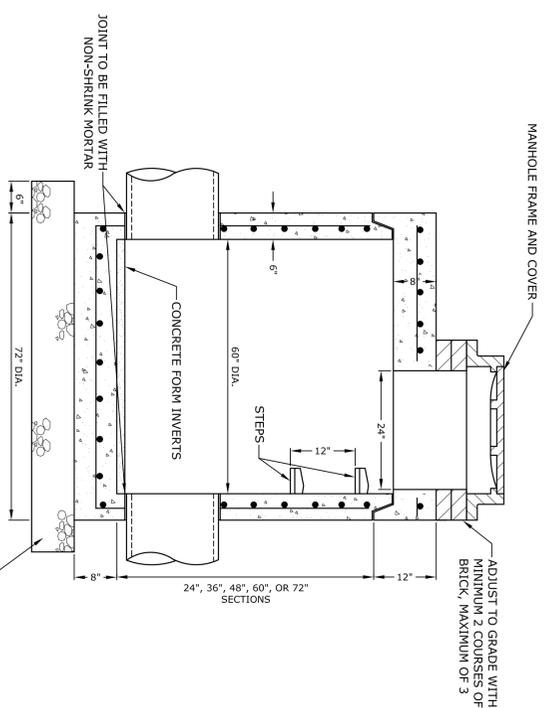


SECTION A-A

NOTE:
MANHOLE FRAMES & COVERS SHALL BE PATTERN #1202
AS MANUFACTURED BY THE CAMPBELL FOUNDRY
COMPANY, NORTH HAVEN, CONNECTICUT, OR
APPROVED EQUIVALENT.

**TOWN OF DARLEN
MANHOLE FRAME AND COVER**

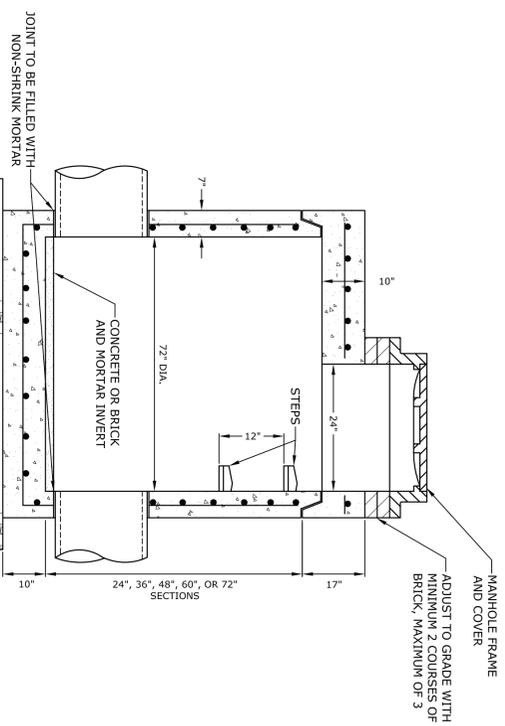
NO SCALE



- NOTES:
1. JOINT SEALANT SHALL BE PREFORMED BUTYL RUBBER MASTIC TYPE SEAL COMPLYING WITH AASHTO M198.
 2. REINFORCING ASTM A185, 0.17 IN./VERT. FT.
 3. 5,000 PSI CONCRETE @ 28 DAYS.
 4. MANHOLE STEP TO BE USED MEETS OSHA REGULATION 20 CFR 1910.27 AND SECTION 11 ASTM SPECIFICATION C-473.
 5. METHOD OF MANUFACTURE: WET CAST.
 6. BASE SECTION MONOLITHIC.
 7. KNOCKOUTS FOR PIPES 4" MIN. FROM TOP AND BOTTOM OF SECTION.

60" DIA. FLAT TOP MANHOLE

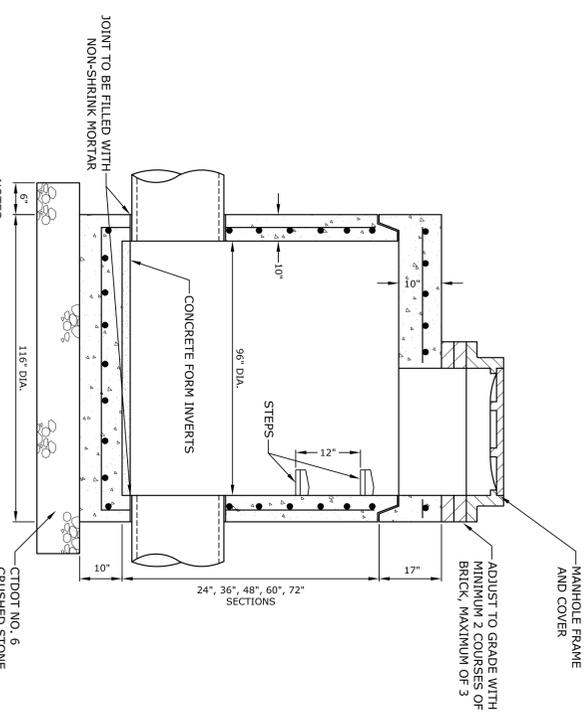
NO SCALE



- NOTES:
1. JOINT SEALANT SHALL BE PREFORMED BUTYL RUBBER MASTIC TYPE SEAL THAT COMPLES WITH AASHTO SPECIFICATION M-198. MEETS FEDERAL SPECIFICATION SS-S-00210(210-A).
 2. REINFORCING ASTM A-185 AREA 72" DIA. 0.19 IN./VERT. FT. REINFORCE IN BOTH BELL & SPIGOT.
 3. CONCRETE COMPRESSION STRENGTH 5000 PSI - 28 DAYS.
 4. MANHOLE STEP TO BE USED MEETS OSHA REGULATION 20 CFR 1910.27 AND SECTION 11 ASTM SPECIFICATION C-473.
 5. METHOD OF MANUFACTURE: WET CAST.
 6. BASE SECTION MONOLITHIC.
 7. KNOCKOUTS FOR PIPES 4" MIN. FROM TOP AND BOTTOM OF SECTION.

72" DIAMETER FLAT TOP MANHOLE

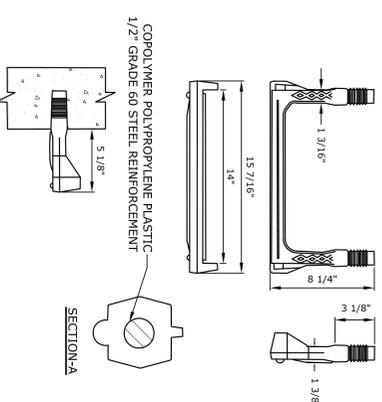
NO SCALE



- NOTES:
1. JOINT SEALANT SHALL BE PREFORMED BUTYL RUBBER MASTIC TYPE SEAL THAT COMPLES WITH AASHTO SPECIFICATION M-198. MEETS FEDERAL SPECIFICATION SS-S-00210(210-A).
 2. REINFORCING ASTM A-185 AREA 96" DIA. 0.24 IN./VERT. FT. REINFORCE IN BOTH BELL & SPIGOT.
 3. CONCRETE COMPRESSION STRENGTH 5000 PSI - 28 DAYS.
 4. MANHOLE STEP TO BE USED MEETS OSHA REGULATION 20 CFR 1910.27 AND SECTION 11 ASTM SPECIFICATION C-473.
 5. METHOD OF MANUFACTURE: WET CAST.
 6. BASE SECTION MONOLITHIC.
 7. KNOCKOUTS FOR PIPES 4" MIN. FROM TOP AND BOTTOM OF SECTION.

96" DIAMETER FLAT TOP MANHOLE

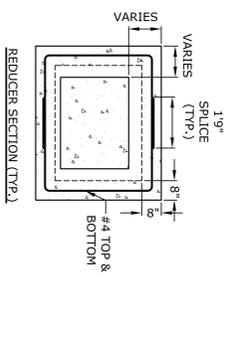
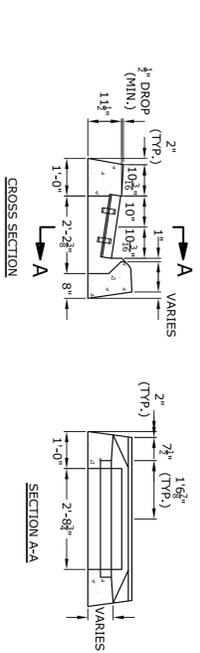
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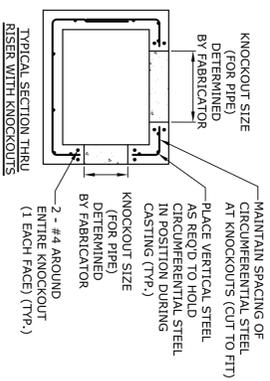
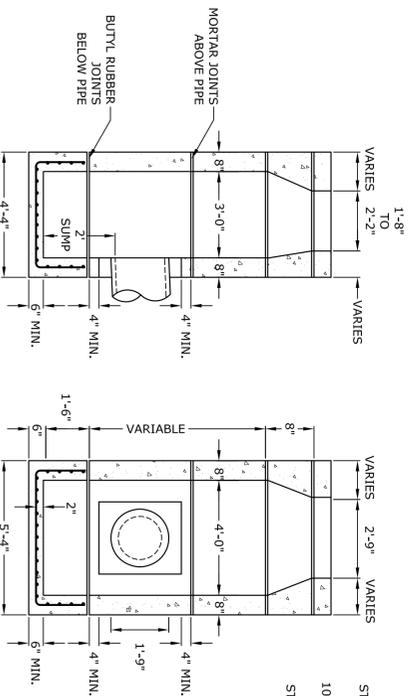
NOTE:
MANHOLE RINGS ARE TO BE "SAFETY GREEN" PHOSPHORESCENT COPOLYMER POLYPROPYLENE PLASTIC COATED 1/2" GRADE STEEL REINFORCEMENT STEP MODEL NO. P53-PRS1 AS MANUFACTURED BY M.A. INDUSTRIES, INC. OR PRESS-SEAL GASKET STEEL REINFORCED (GRADE 60 STEEL). COPOLYMER POLYPROPYLENE 1/4" MANHOLE SAFETY STEP PART # P-14850 WITH BUILT-IN REFLECTORS. STEPS ARE TO BE FACTORY INSTALLED BY THE MANUFACTURER OF THE MANHOLES

MANHOLE RING

NO SCALE

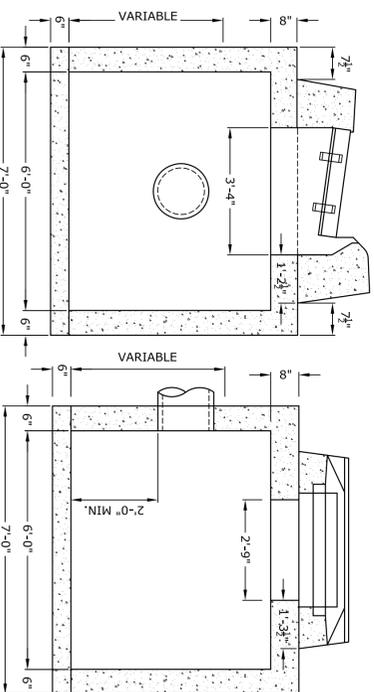
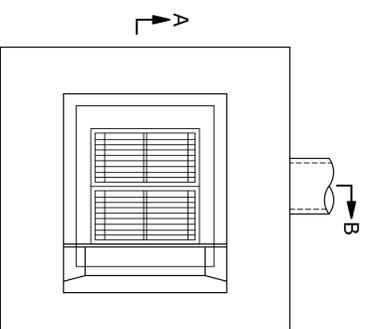


CATCH BASINS 10' DEEP OR LESS
MINIMUM CIRCUMFERENTIAL STEEL AREA SHALL BE 0.20 IN²/FT
CATCH BASINS GREATER THAN 10' DEEP AND LESS THAN 20' DEEP
MINIMUM CIRCUMFERENTIAL STEEL AREA SHALL BE 0.20 IN²/FT

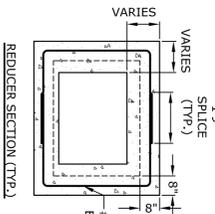
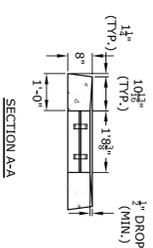
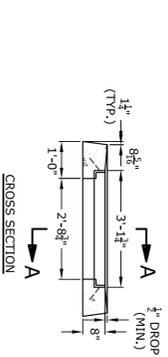


TYPE "C" CATCH BASIN
NO SCALE

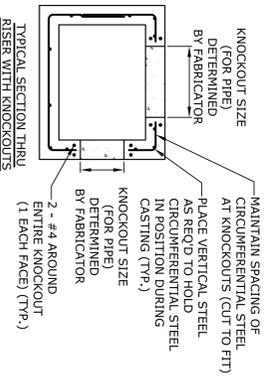
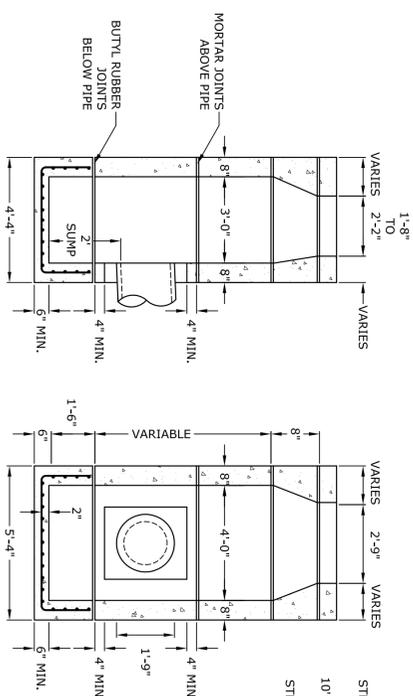
PRECAST CONCRETE SPECIAL TYPE "C" DOUBLE GRATE
TYPE I CATCH BASIN
NO SCALE



- NOTES:
1. REINFORCEMENT SHALL CONFORM TO ASTM A615, GRADE 60.
 2. DETAILS ON THIS SHEET SHOW STANDARD REINFORCEMENT. WELDED WIRE FABRIC WITH AN AREA EQUAL TO OR GREATER THAN THE REINFORCING SHOWN MAY BE SUBSTITUTED.
 3. ALL LAP SPLICES, DEVELOPMENT LENGTHS, BENDS FOR REINFORCEMENT, AND WELDED WIRE FABRIC SHALL CONFORM TO ASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES.
 4. ALL REINFORCEMENT SHALL HAVE A MINIMUM CLEAR COVER OF 2", EXCEPT FOR BENEATH BOTTOM REINFORCEMENT IN TOP SLABS, WHERE THE MINIMUM MAY BE 1".
 5. MINIMUM CONCRETE COMPRESSIVE STRENGTH FC=4,000PSI SHALL BE OBTAINED BEFORE SHIPPING.
 6. BASES AND RISERS AT A DEPTH OF 20' AND GREATER SHALL BE DESIGNED BY THE CONTRACTOR AND WORKING DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW.
 7. SEE STANDARD DRAWING 507-K FOR CATCH BASIN FRAMES AND GRATES.
 8. RISERS SHALL NEVER HAVE CORNER PIPE ENTRIES, WHERE THE ALIGNMENT OF THE PIPE WITH RESPECT TO THE CORNER OF THE CATCH BASIN CANNOT BE CHANGED. A ROUND STRUCTURE CONFORMING TO ASTM C478 SHALL BE USED. REINFORCING FOR THE ROUND TOP SLAB WITH A RECTANGULAR OPENING SHALL CONFORM TO DETAILS SHOWN HERE.
 9. ALL PIPE OPENINGS SHALL BE CLOSED USING MATERIALS WHICH CONFORM TO STATE OF CONNECTICUT STANDARD SPECIFICATIONS FOR BRIDGE STRUCTURES. THE CONTRACTOR SHALL PROVIDE A PROPER CLOSURE OF ANY PIPE OPENING. THE CONTRACTOR SHALL RECLOSE SAID OPENING AT NO ADDITIONAL COST TO THE STATE. KNOCKOUTS FOR PIPE OPENINGS SHALL NOT RESULT IN A REDUCED WALL THICKNESS.
 10. THE LATEST STATE OF CONNECTICUT STANDARD SPECIFICATIONS AND SUPPLEMENTALS SHALL GOVERN.
 11. FOR ADDITIONAL DETAILS, SEE OTHER CATCH BASIN SHEETS.
 12. WALL THICKNESS OF ALL CAS OVER 10' DEEP SHALL BE INCREASED TO 12" THICK. INSIDE DIMENSION SHALL REMAIN THE SAME. (THE 12" THICKNESS SHALL START AFTER THE FIRST 10')
 13. BUTYL RUBBER JOINT SEAL SHALL CONFORM TO AASHTO M-198 AND MORTAR SHALL CONFORM TO THE LATEST STATE OF CONNECTICUT STANDARD SPECIFICATIONS MATERIAL SECTION M11.04.
 14. SHRINKAGE AND TEMPERATURE REINFORCEMENT SHALL BE PROVIDED AT THE TOP OF ALL TOP SLABS. ENDO REINFORCEMENT PROVIDED SHALL BE AT LEAST 0.125 IN²/FT IN EACH DIRECTION. THE MAXIMUM SPACING OF THIS REINFORCEMENT SHALL NOT EXCEED 18 INCHES.
 15. THE DETAILS SHOWN IN THE PLAN VIEW FOR THE PRECAST CONCRETE ROUND STRUCTURES SHALL ALSO BE USED FOR CONVERTING MANHOLES TO CATCH BASINS.

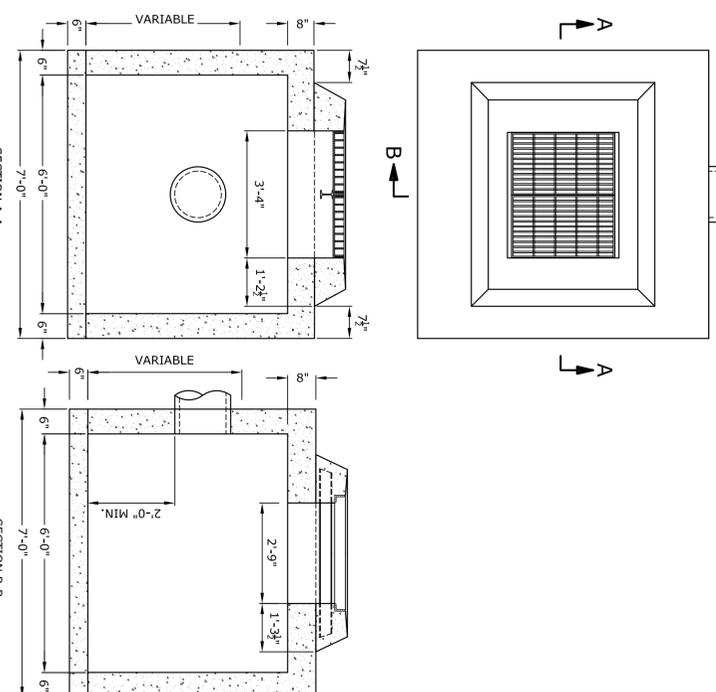


CATCH BASINS 10' DEEP OR LESS
MINIMUM CIRCUMFERENTIAL STEEL AREA SHALL BE 0.20 IN²/FT
CATCH BASINS GREATER THAN 10' DEEP AND LESS THAN 20' DEEP
MINIMUM CIRCUMFERENTIAL STEEL AREA SHALL BE 0.20 IN²/FT



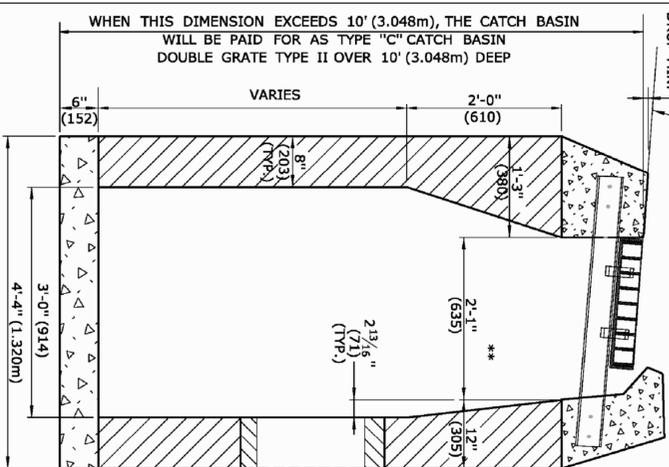
TYPE "C-1" CATCH BASIN
NO SCALE

PRECAST CONCRETE TYPE "C-1" DOUBLE GRATE TYPE I CATCH BASIN
NO SCALE



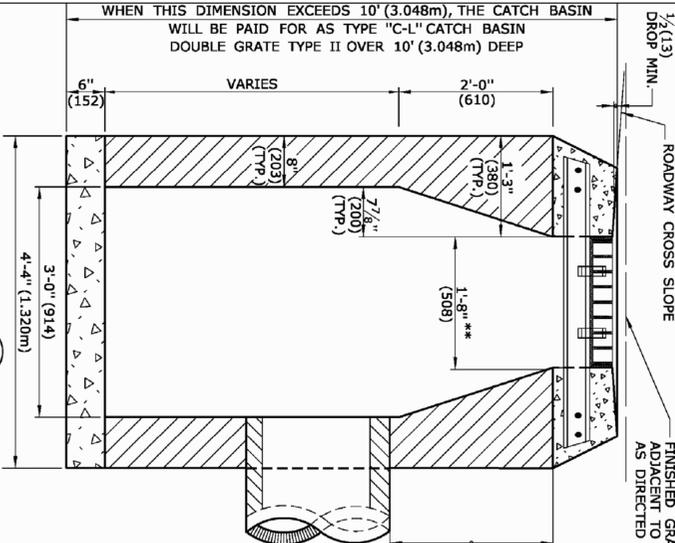
- NOTES:
1. REINFORCEMENT SHALL CONFORM TO ASTM A615, GRADE 60.
 2. DETAILS ON THIS SHEET SHOW STANDARD REINFORCEMENT. WELDED WIRE FABRIC WITH AN AREA EQUAL TO OR GREATER THAN THE REINFORCING SHOWN MAY BE SUBSTITUTED.
 3. ALL LAP SPLICES, DEVELOPMENT LENGTHS, BENDS FOR REINFORCEMENT, AND WELDED WIRE FABRIC SHALL CONFORM TO ASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES.
 4. ALL REINFORCEMENT SHALL HAVE A MINIMUM CLEAR COVER OF 2", EXCEPT FOR BENEATH BOTTOM REINFORCEMENT IN TOP SLABS, WHERE THE MINIMUM MAY BE 1".
 5. MINIMUM CONCRETE COMPRESSIVE STRENGTH FC=4,000PSI SHALL BE OBTAINED BEFORE SHIPPING.
 6. BASES AND RISERS AT A DEPTH OF 20' AND GREATER SHALL BE DESIGNED BY THE CONTRACTOR AND WORKING DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW.
 7. SEE STANDARD DRAWING 507-K FOR CATCH BASIN FRAMES AND GRATES.
 8. RISERS SHALL NEVER HAVE CORNER PIPE ENTRIES, WHERE THE ALIGNMENT OF THE PIPE WITH RESPECT TO THE CORNER OF THE CATCH BASIN CANNOT BE CHANGED. A ROUND STRUCTURE CONFORMING TO ASTM C478 SHALL BE USED. REINFORCING FOR THE ROUND TOP SLAB WITH A RECTANGULAR OPENING SHALL CONFORM TO DETAILS SHOWN HERE.
 9. ALL PIPE OPENINGS SHALL BE CLOSED USING MATERIALS WHICH CONFORM TO STATE OF CONNECTICUT STANDARD SPECIFICATIONS FOR BRIDGE STRUCTURES. THE CONTRACTOR SHALL PROVIDE A PROPER CLOSURE OF ANY PIPE OPENING. THE CONTRACTOR SHALL RECLOSE SAID OPENING AT NO ADDITIONAL COST TO THE STATE. KNOCKOUTS FOR PIPE OPENINGS SHALL NOT RESULT IN A REDUCED WALL THICKNESS.
 10. THE LATEST STATE OF CONNECTICUT STANDARD SPECIFICATIONS AND SUPPLEMENTALS SHALL GOVERN.
 11. FOR ADDITIONAL DETAILS, SEE OTHER CATCH BASIN SHEETS.
 12. WALL THICKNESS OF ALL CAS OVER 10' DEEP SHALL BE INCREASED TO 12" THICK. INSIDE DIMENSION SHALL REMAIN THE SAME. (THE 12" THICKNESS SHALL START AFTER THE FIRST 10')
 13. BUTYL RUBBER JOINT SEAL SHALL CONFORM TO AASHTO M-198 AND MORTAR SHALL CONFORM TO THE LATEST STATE OF CONNECTICUT STANDARD SPECIFICATIONS MATERIAL SECTION M11.04.
 14. SHRINKAGE AND TEMPERATURE REINFORCEMENT SHALL BE PROVIDED AT THE TOP OF ALL TOP SLABS. ENDO REINFORCEMENT PROVIDED SHALL BE AT LEAST 0.125 IN²/FT IN EACH DIRECTION. THE MAXIMUM SPACING OF THIS REINFORCEMENT SHALL NOT EXCEED 18 INCHES.
 15. THE DETAILS SHOWN IN THE PLAN VIEW FOR THE PRECAST CONCRETE ROUND STRUCTURES SHALL ALSO BE USED FOR CONVERTING MANHOLES TO CATCH BASINS.

1/4" (13)
DROP MIN.



SECTION B

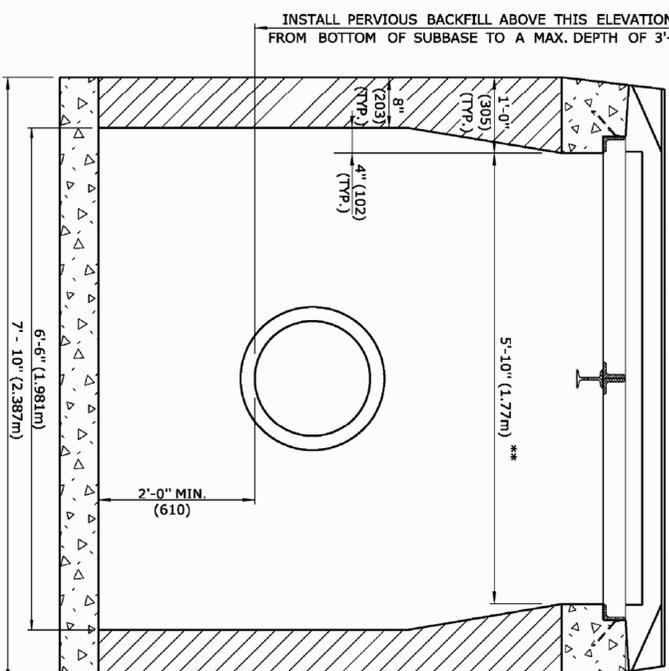
TYPE "C" CATCH BASIN DOUBLE GRATE - TYPE II



SECTION B

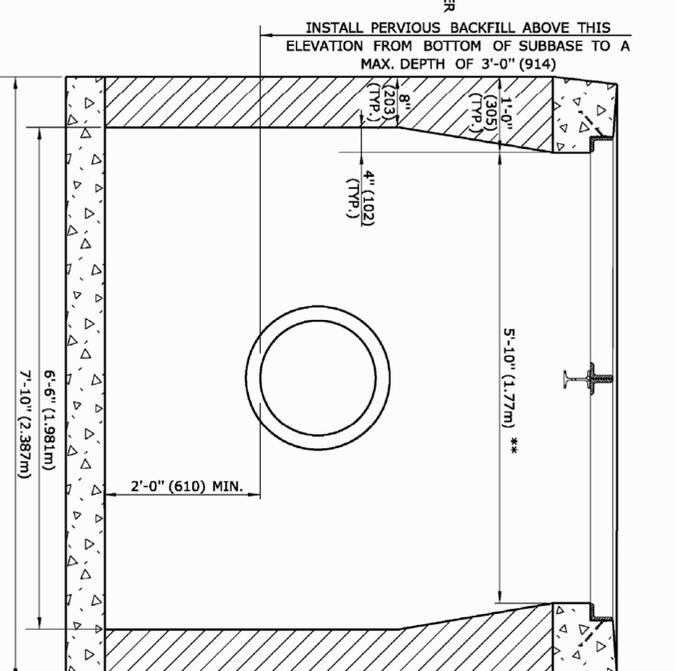
TYPE "C-L" CATCH BASIN DOUBLE GRATE - TYPE II

1/4" (13)
DROP MIN.



SECTION A

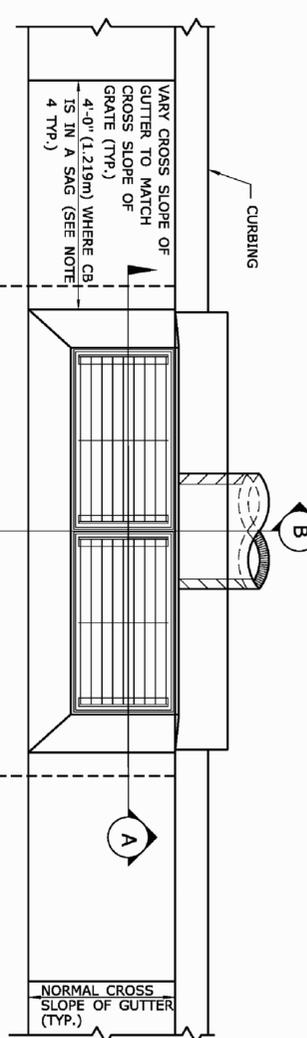
TYPE "C" CATCH BASIN DOUBLE GRATE - TYPE II



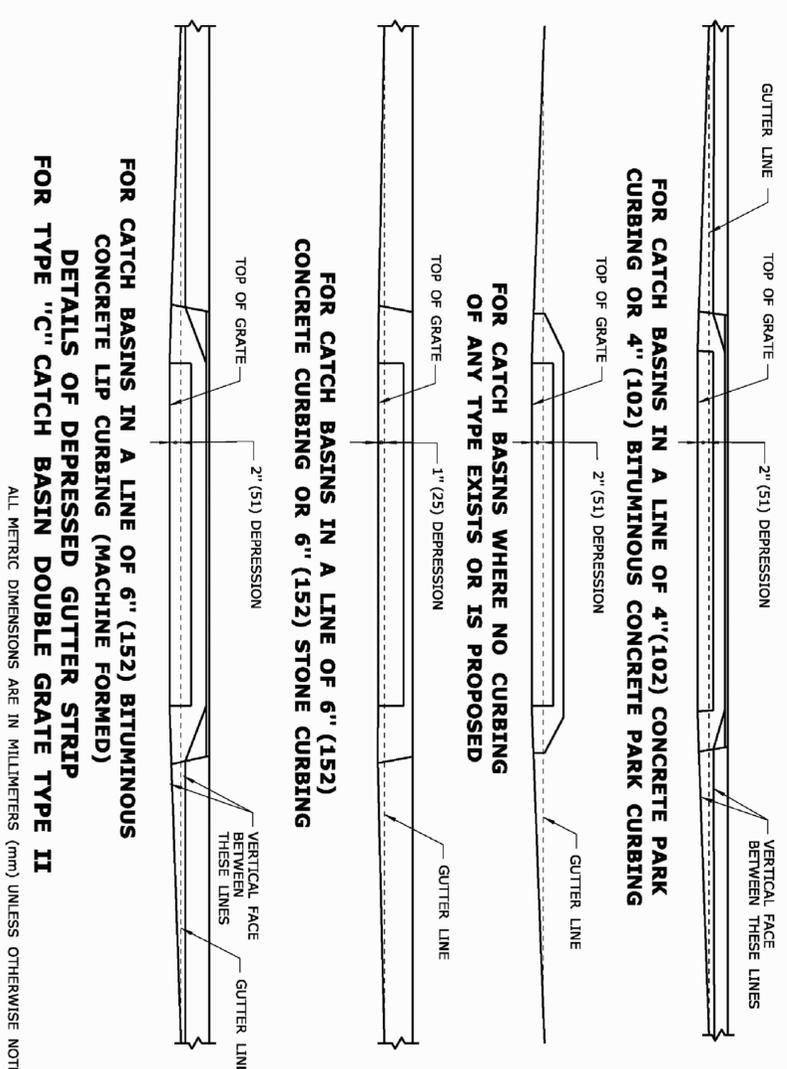
SECTION A

TYPE "C-L" CATCH BASIN DOUBLE GRATE - TYPE II

- GENERAL NOTES:**
1. FOR DETAILS OF FRAME AND GRATE SEE STANDARD SHEET HW-507-08.
 2. USE APPROPRIATE CONCRETE TOP FOR CURBING SHOWN ON PLANS. IF CURBING IS NOT SPECIFIED ON THE PLANS, IT SHALL BE CONSTRUCTED AS DIRECTED BY THE ENGINEER.
 3. ALL FACES OF STRUCTURES IN CONTACT WITH CONCRETE PAVEMENT SHALL BE COVERED WITH A LAYER OF TAR PAPER OR APPROVED EQUAL. THE COST FOR THE PAPER SHALL BE INCLUDED IN THE BID PRICE FOR THE TYPE OF CATCH BASIN INSTALLED.
 4. USE 6'-0" (1.830m) ON UPGRADE SIDE OF CONTINUOUS GRADE AND 1'-0" (305) ON DOWNGRADE SIDE OF CONTINUOUS GRADE OR AS DIRECTED.
 5. IF MASONRY UNITS ARE REQUIRED, THE BASIN SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE OVER ALL DIMENSIONS SHOWN HERE AND SECTION 5.07 OF THE STATE OF CONNECTICUT'S STANDARD SPECIFICATIONS. CORRELLING SHALL BE PERMITTED TO A MAXIMUM OF 3" (75). NO PROJECTION SHALL EXTEND INSIDE THE LIMITS NOTED BY **.
 6. WALL THICKNESS OF ALL CPIS OVER 10' (3.048m) DEEP SHALL BE INCREASED TO 12" (305) THICK. INSIDE DIMENSION SHALL REMAIN THE SAME (12" (305) THICKNESS WILL START AFTER THE FIRST 10' (3.048m)).
 7. TO CONVEY SUBSURFACE DRAINAGE, OPENINGS SHALL BE FORMED IN THE FOUR WALLS AT OR IMMEDIATELY ABOVE THE BOTTOM OF THE PERVIOUS BACKFILL.
 8. MINIMUM CONCRETE COMPRESSIVE STRENGTH OF Fc = 4000 PSI (27,580 kPa) SHALL BE OBTAINED PRIOR TO SHIPPING.
 9. LATEST STATE OF CONNECTICUT'S STANDARD SPECIFICATIONS AND SUPPLEMENTALS SHALL GOVERN.



PLAN



FOR CATCH BASINS IN A LINE OF 4" (102) CONCRETE PARK CURBING OR 4" (102) BITUMINOUS CONCRETE PARK CURBING

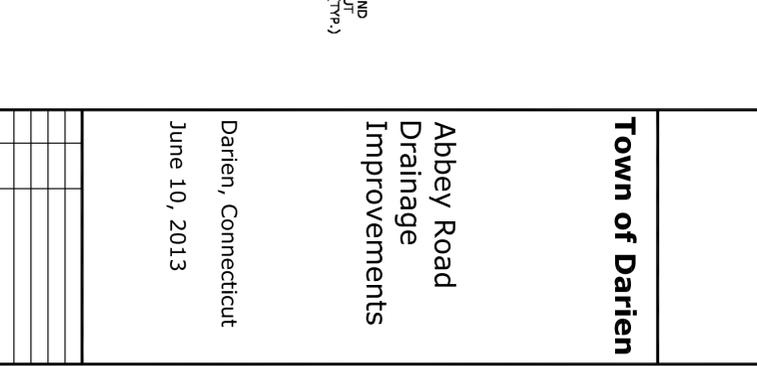
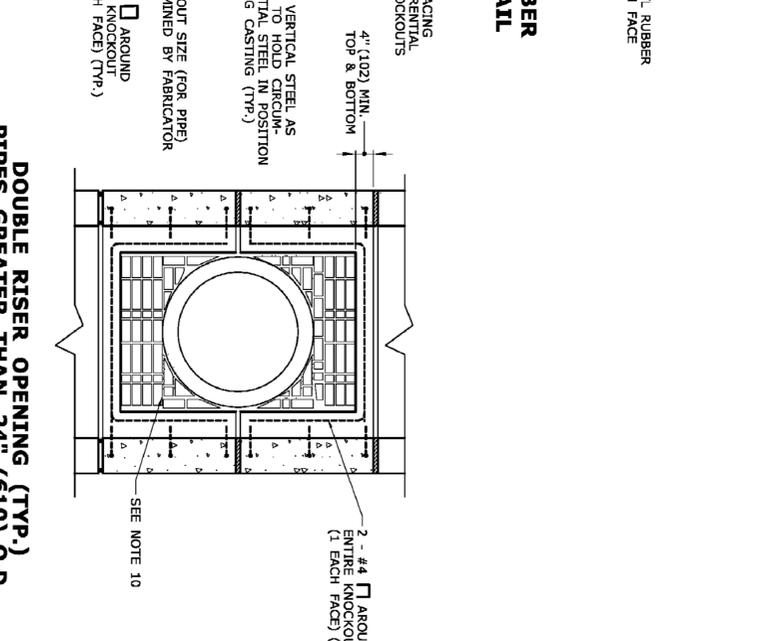
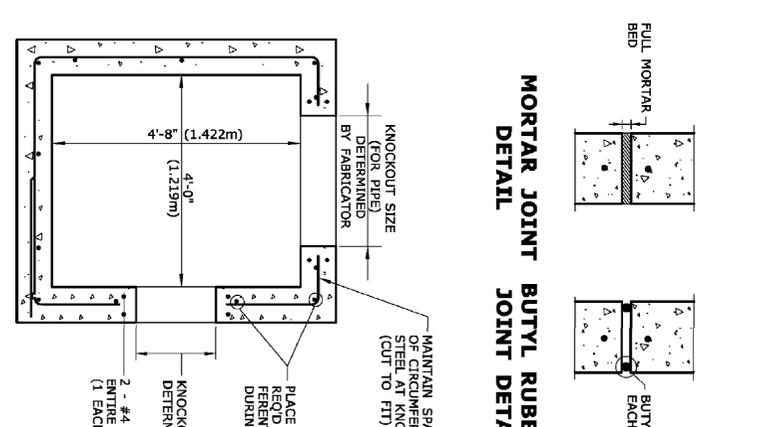
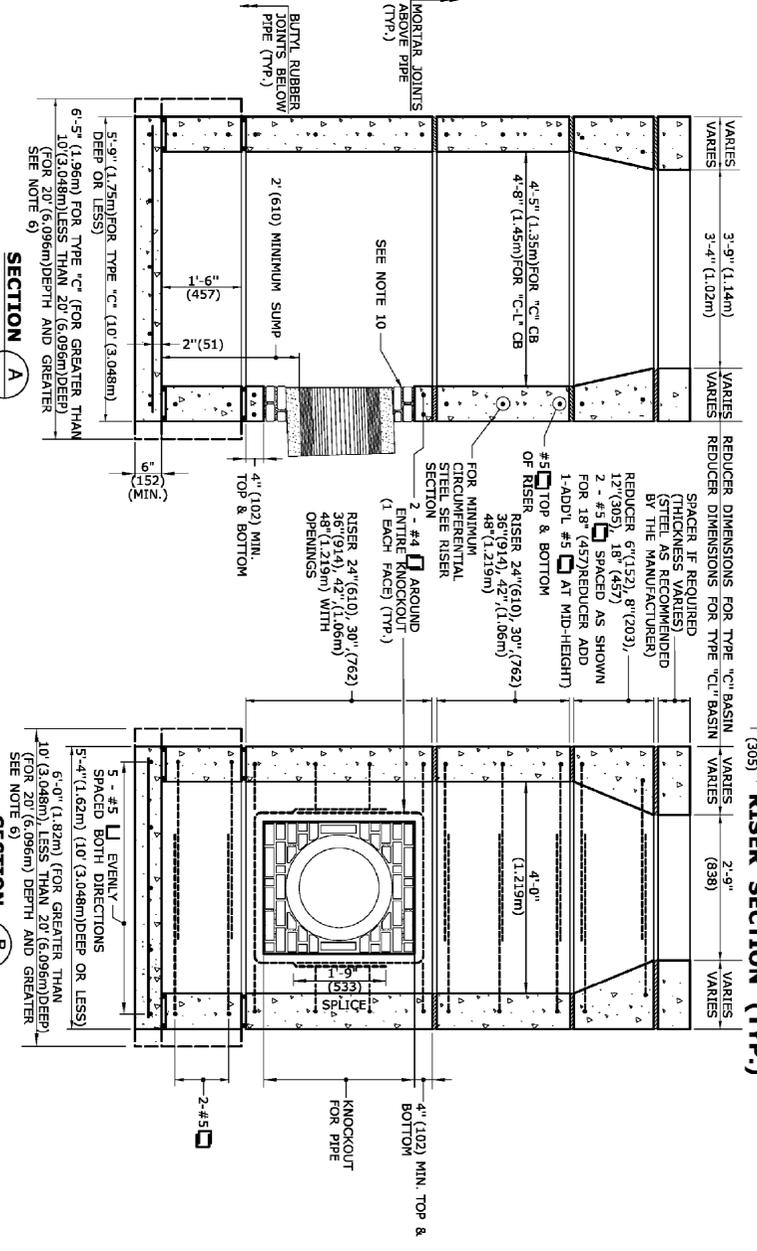
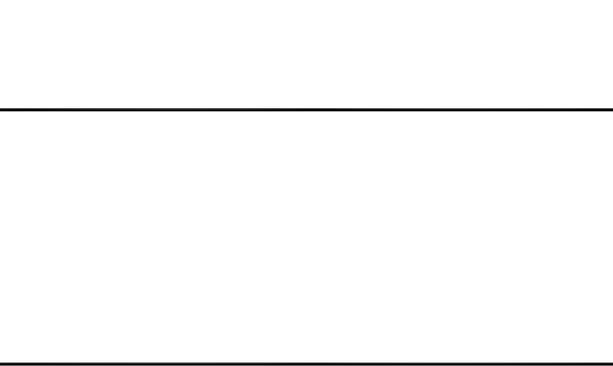
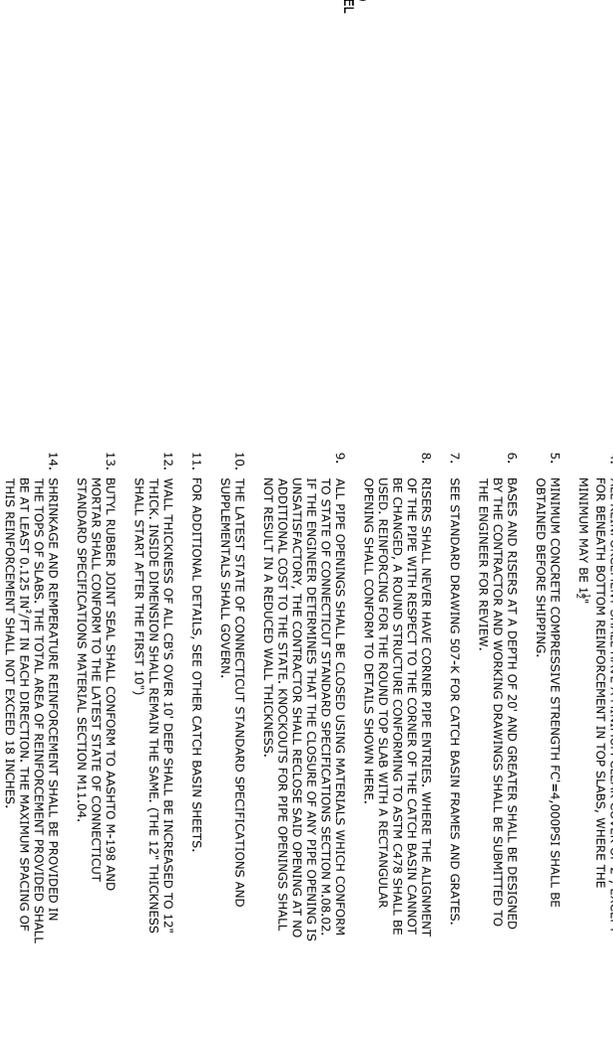
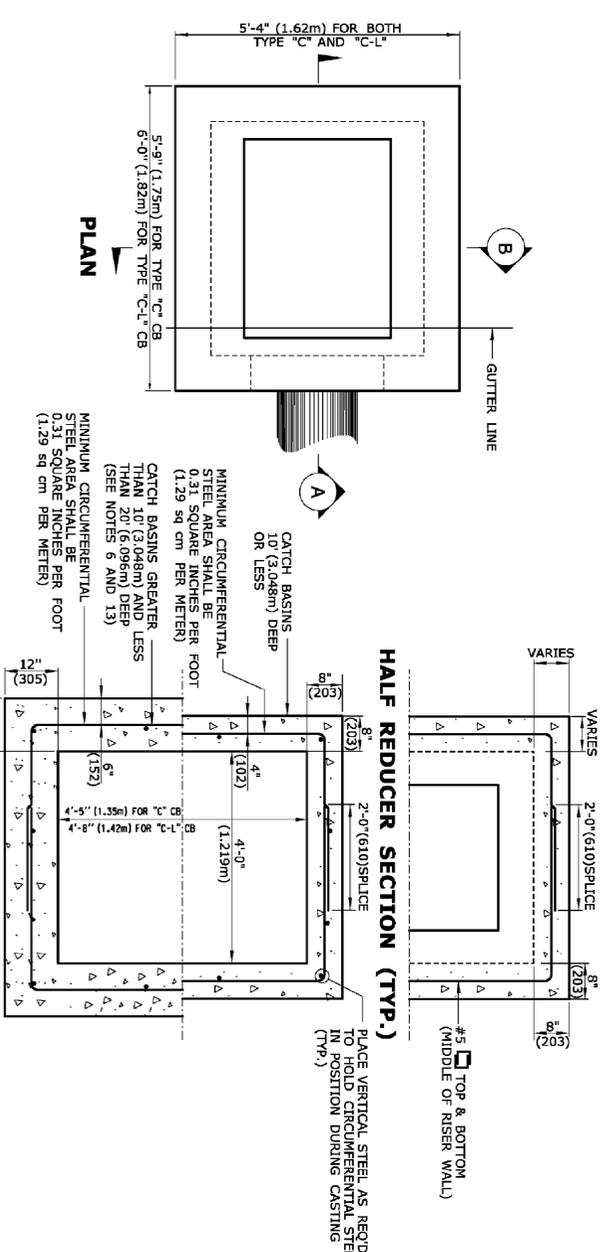
FOR CATCH BASINS WHERE NO CURBING OF ANY TYPE EXISTS OR IS PROPOSED

FOR CATCH BASINS IN A LINE OF 6" (152) BITUMINOUS CONCRETE LIP CURBING (MACHINE FORMED) OR APPROVED EQUAL

DETAILS OF DEPRESSED GUTTER STRIP FOR TYPE "C" CATCH BASIN DOUBLE GRATE TYPE II

ALL METRIC DIMENSIONS ARE IN MILLIMETERS (MM) UNLESS OTHERWISE NOTED

MARK	DATE	DESCRIPTION
PROJECT NO.		0213
FILE: DS-0213-01.dwg		
DRAWN BY:		MOS
CHECKED:		JMC
APPROVED:		JWB



NOTE: REINFORCEMENT IN FAR FACE WALL NOT SHOWN FOR CLARITY
PRECAST CONCRETE TYPE "C" & "C-L" DOUBLE GRATE TYPE I CATCH BASIN
(UNDER 10" (3.048m) DEEP SHOWN)

ALL METRIC DIMENSIONS ARE IN MILLIMETERS (mm) UNLESS OTHERWISE NOTED

- NOTES:
1. REINFORCEMENT SHALL CONFORM TO ASTM A615, GRADE 60.
 2. DETAILS ON THIS SHEET SHOW STANDARD REINFORCEMENT. WELDED WIRE FABRIC WITH AN AREA EQUAL TO OR GREATER THAN THE REINFORCING SHOWN MAY BE SUBSTITUTED.
 3. ALL LAP SPLICES, DEVELOPMENT LENGTHS, BENDS FOR REINFORCEMENT, AND WELDED WIRE FABRIC SHALL CONFORM TO AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES.
 4. ALL REINFORCEMENT SHALL HAVE A MINIMUM CLEAR COVER OF 2" EXCEPT FOR BENEATH BOTTOM REINFORCEMENT IN TOP SLABS, WHERE THE MINIMUM MAY BE 1 1/2"
 5. MINIMUM CONCRETE COMPRESSIVE STRENGTH FC=4,000PSI SHALL BE OBTAINED BEFORE SHIPPING.
 6. BASES AND RISERS AT A DEPTH OF 20" AND GREATER SHALL BE DESIGNED BY THE CONTRACTOR AND WORKING DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW.
 7. SEE STANDARD DRAWING 507-K FOR CATCH BASIN FRAMES AND GRATES.
 8. RISERS SHALL NEVER HAVE CORNER PIPE ENTRIES. WHERE THE ALIGNMENT OF THE PIPE WITH RESPECT TO THE CORNER OF THE CATCH BASIN CANNOT BE CHANGED, A ROUND STRUCTURE CONFORMING TO AASHTO C478 SHALL BE USED. REINFORCING FOR THE ROUND TOP SLAB WITH A RECTANGULAR OPENING SHALL CONFORM TO DETAILS SHOWN HERE.
 9. ALL PIPE OPENINGS SHALL BE CLOSED USING MATERIALS WHICH CONFORM TO STATE OF CONNECTICUT STANDARD SPECIFICATIONS SECTION 11.04. IF THE ENGINEER DETERMINES THAT THE CLOSEURE OF ANY PIPE OPENING IS UNSATISFACTORY, THE CONTRACTOR SHALL RECLOSE SAID OPENING AT NO ADDITIONAL COST TO THE STATE. KNOCKOUTS FOR PIPE OPENINGS SHALL NOT RESULT IN A REDUCED WALL THICKNESS.
 10. THE LATEST STATE OF CONNECTICUT STANDARD SPECIFICATIONS AND SUPPLEMENTALS SHALL GOVERN.
 11. FOR ADDITIONAL DETAILS, SEE OTHER CATCH BASIN SHEETS.
 12. WALL THICKNESS OF ALL CR'S OVER 10' DEEP SHALL BE INCREASED TO 12" THICK. INSIDE DIMENSION SHALL REMAIN THE SAME. (THE 12" THICKNESS SHALL START AFTER THE FIRST 10')
 13. BUTYL RUBBER JOINT SEAL SHALL CONFORM TO AASHTO M-198 AND MORTAR SHALL CONFORM TO THE LATEST STATE OF CONNECTICUT STANDARD SPECIFICATIONS MATERIAL SECTION 11.104.
 14. SHRINKAGE AND REPERATURE REINFORCEMENT SHALL BE PROVIDED IN THE TOPS OF SLABS. THE TOTAL AREA OF REINFORCEMENT PROVIDED SHALL BE AT LEAST 0.125 IN²/FT IN EACH DIRECTION. THE MAXIMUM SPACING OF THIS REINFORCEMENT SHALL NOT EXCEED 18 INCHES.

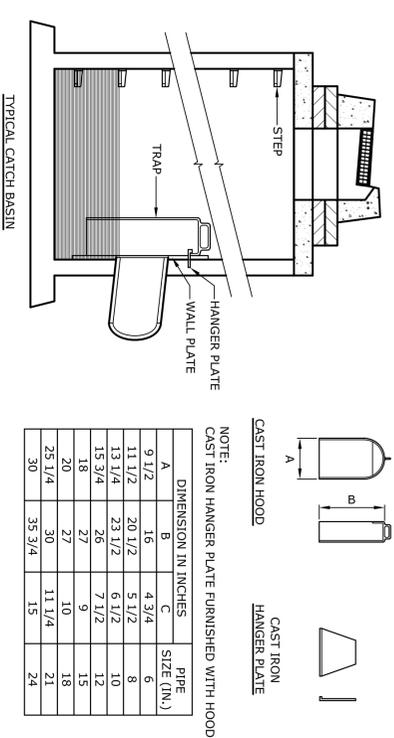
Tighe & Bond
www.tighebond.com
1000 Bridgeport Avenue
Suite 320
Shelton, CT 06484
(203) 712-1100

Town of Darien
Abbey Road
Drainage
Improvements
Darien, Connecticut
June 10, 2013

**STORM DRAINAGE
DETAILS - 4**

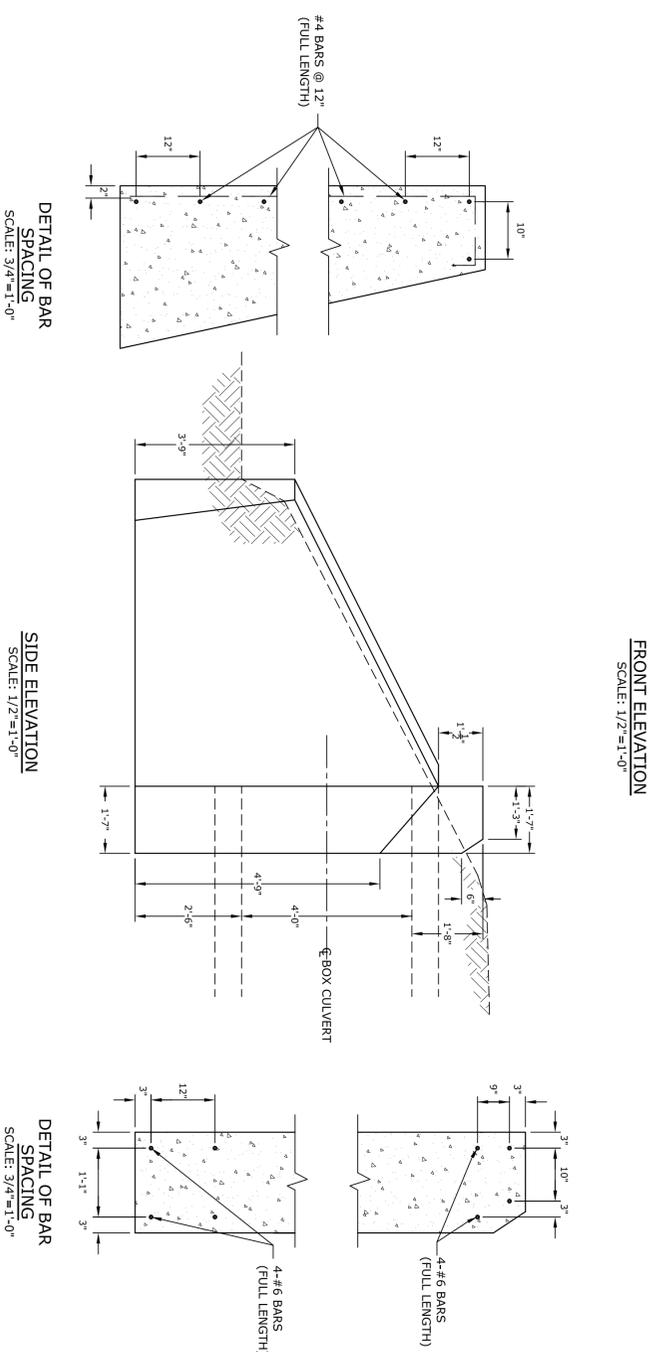
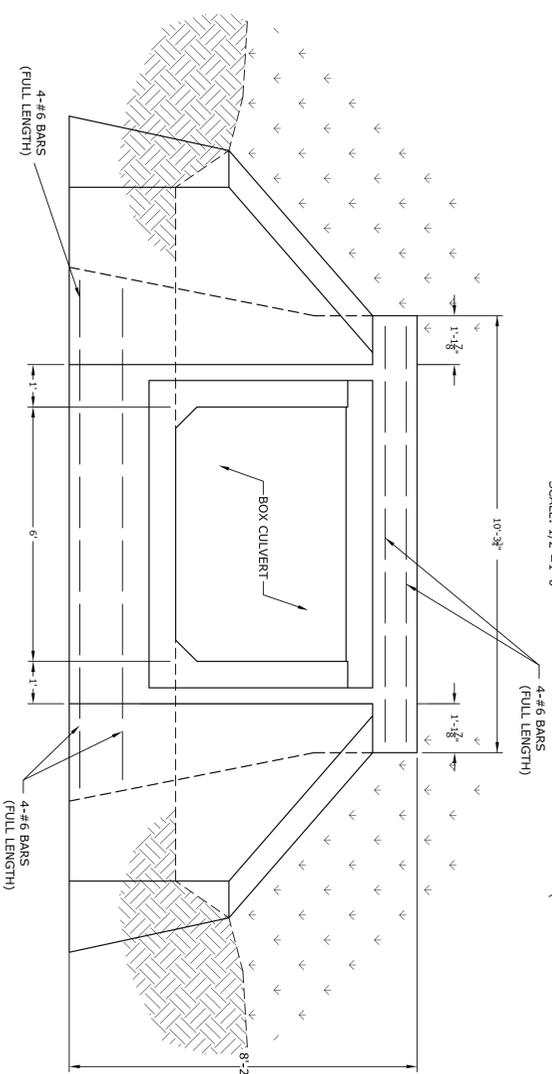
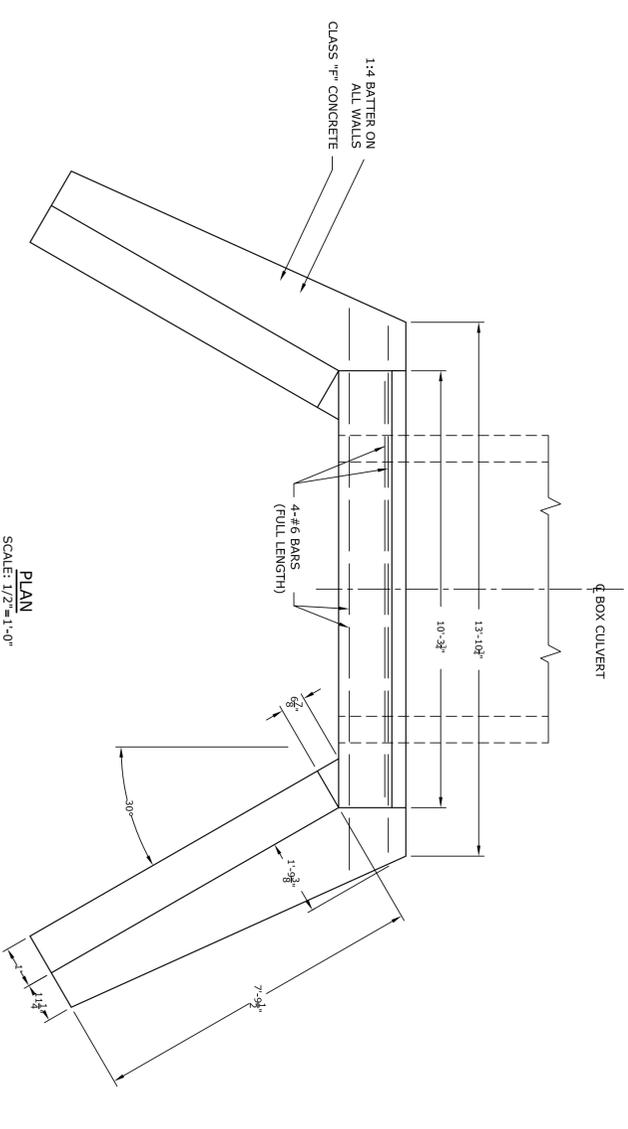
MARK	DATE	DESCRIPTION
PROJECT NO.:		D0213
FILE:		DS-D0213-01.dwg
DRAWN BY:		MOS
CHECKED:		JAC
APPROVED:		JWB

SCALE: AS NOTED
C4.30



- NOTES:
1. TO BE USED ONLY WHERE THERE ARE NO UPSTREAM CATCH BASINS CONTRIBUTING TO THE STRUCTURE.

CATCH BASIN TRAP DETAIL
NO SCALE

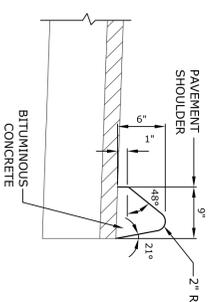


Town of Darien
Abbey Road
Drainage
Improvements

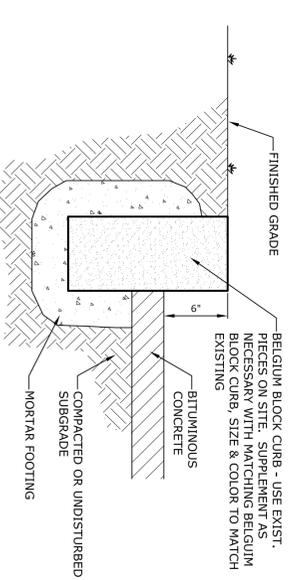
Darien, Connecticut
June 10, 2013

MARK	DATE	DESCRIPTION
PROJECT NO.:	D0213	
FILE:	DS-D0213-01.dwg	
DRAWN BY:	MOS	
CHECKED:	JMC	
APPROVED:	JWB	

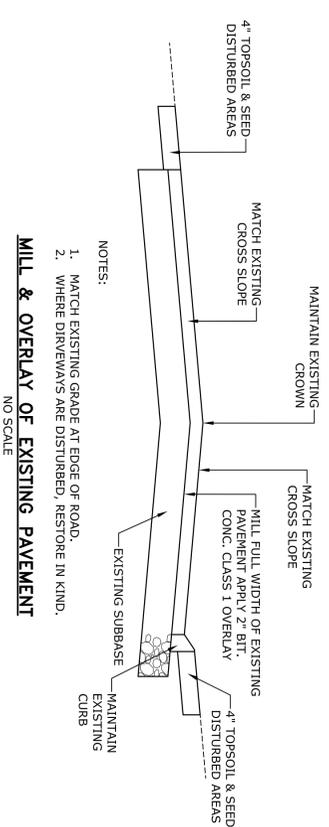
STORM DRAINAGE
DETAILS - 7
SCALE: AS NOTED
C4.60



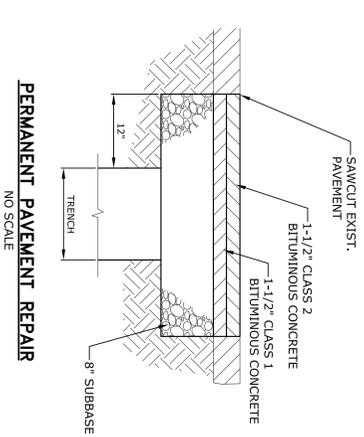
BITUMINOUS CONCRETE LIP CURBING
NO SCALE



BELGIUM BLOCK CURBING
NO SCALE



MILL & OVERLAY OF EXISTING PAVEMENT
NO SCALE



PERMANENT PAVEMENT REPAIR
NO SCALE

Town of Darien

**Abbey Road
 Drainage
 Improvements**

Darien, Connecticut
 June 10, 2013

MARK	DATE	DESCRIPTION
PROJECT NO.:	02013	
FILE:	DS-02013-01.dwg	
DRAWN BY:	MOS	
CHECKED:	JAC	
APPROVED:	JWB	

ROADWAY
 DETAILS

SCALE: AS NOTED
C4.70