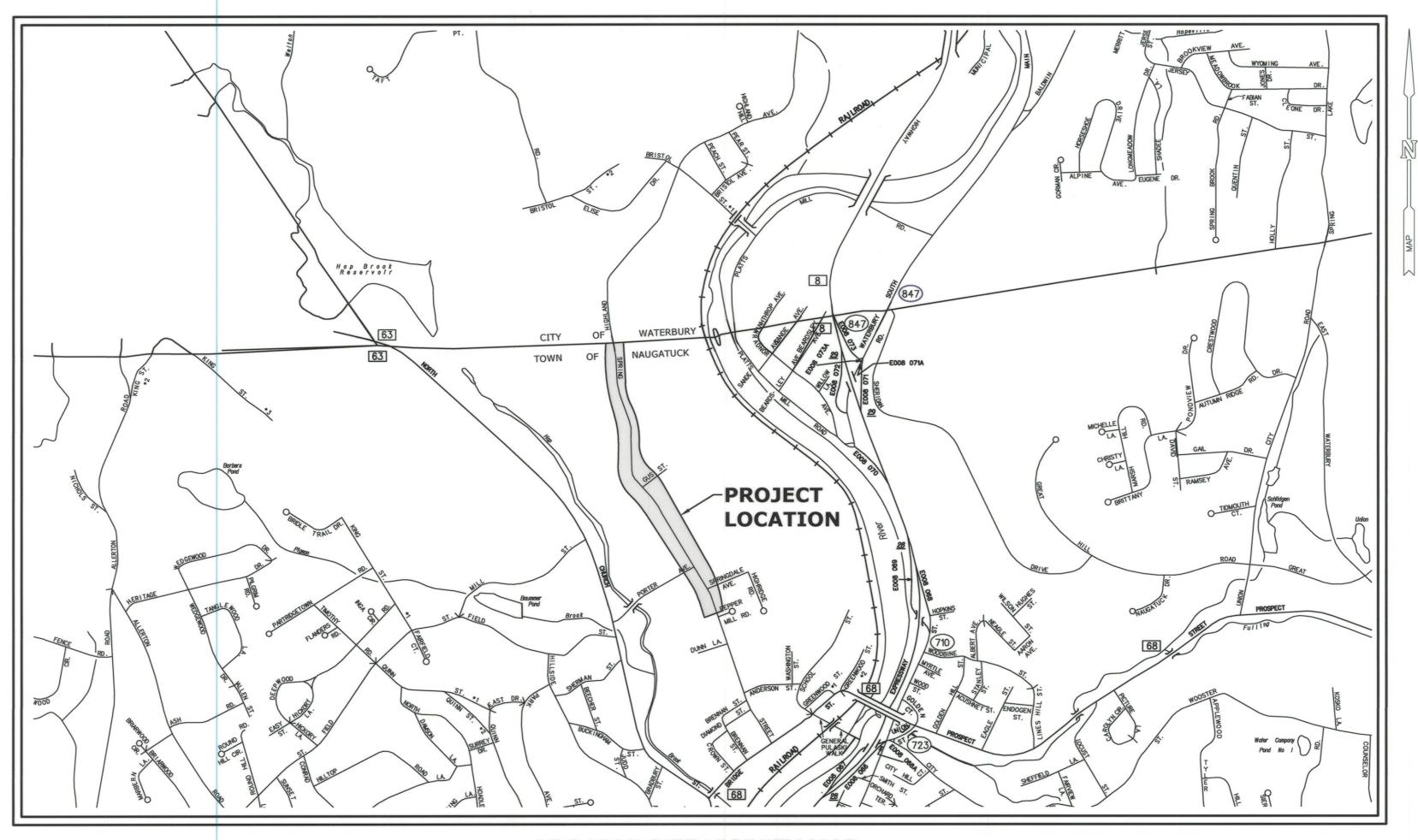
# SPRING STREET PAVEMENT REHABILITATION

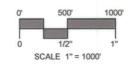
# NAUGATUCK, CONNECTICUT

LOTCIP PROJECT NO. L087-0001 TO BE MAINTAINED BY THE BOROUGH OF NAUGATUCK MMI PROJECT NO. 2129-32

> CONSTRUCTION DOCUMENTS APRIL 18, 2017



### PROJECT SITE VICINITY MAP:

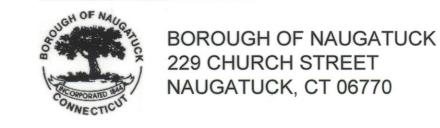


### PREPARED BY:



99 Realty Drive Cheshire, Connecticut 06410 (203) 271-1773 Fax (203) 272-9733 www.miloneandmacbroom.com

#### PREPARED FOR:



## SPRING STREET

ROADWAY CLASSIFICATION: URBAN MINOR ARTERIAL

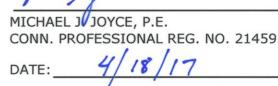
PROJECT LENGTH: 3660± LF **BEGIN STATION:** 13+65± **ENDING STATION:**  $50 + 25 \pm$ 

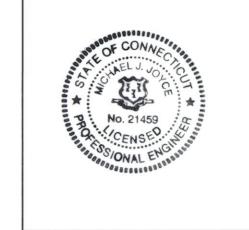
**DESIGNED BY:** 



99 Realty Drive Cheshire, Connecticut 06410 (203) 271-1773 Fax (203) 272-9733

MICHAEL JUJOYCE, P.E. CONN. PROFESSIONAL REG. NO. 21459





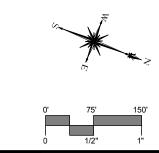
#### LIST OF DRAWINGS

LIO	I OI DIA	47711100
NO.	NAME	TITLE
01		TITLESHEET
02	IN	GENERAL NOTES AND INDEX PLAN
03	MDS-1	MISCELLANEOUS DETAILS
04	TYP	TYPICAL SECTIONS
05-08	PLN-01 TO PLN-04	ROADWAY PLANS
		CTDOT HIGHWAY STANDARD DRAWINGS
		CTDOT TRAFFIC STANDARD DRAWINGS



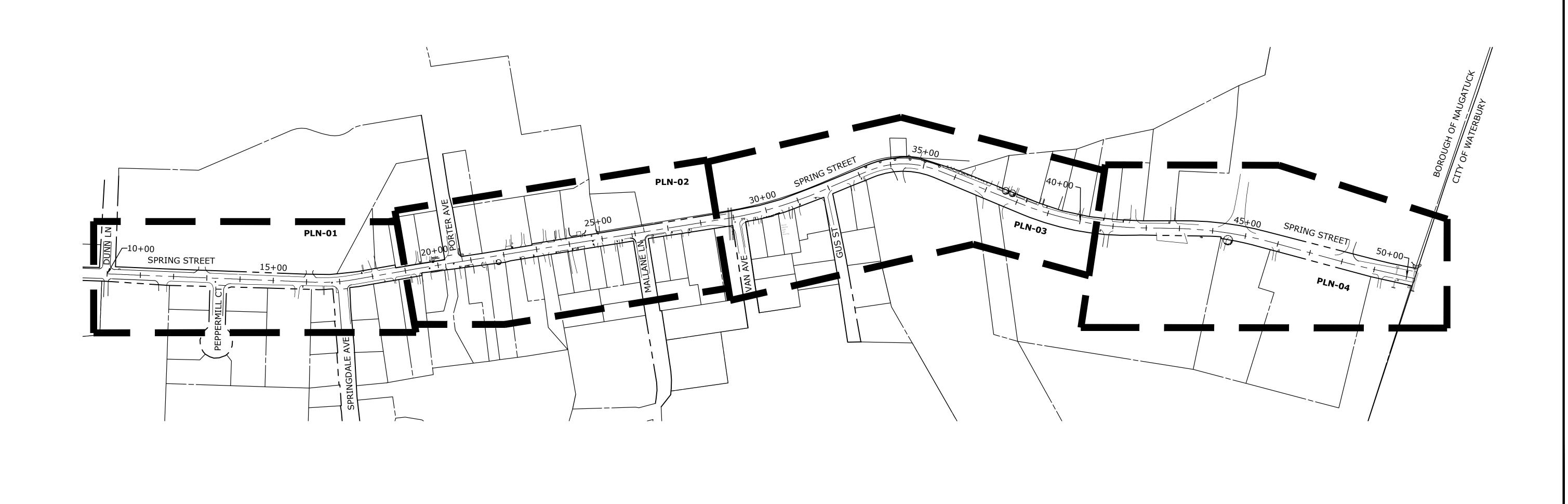
- 2. FEATURES AND ELEVATIONS ARE BASED UPON TOWN PROVIDED GIS DATA AND FIELD OBSERVATIONS WITH MEASUREMENTS COMPILED BY: MILONE & MACBROOM, INC.
- 3. MILONE & MACBROOM, INC. ACCEPTS NO RESPONSIBILITY FOR THE ACCURACY OF MAPS AND DATA WHICH HAVE BEEN SUPPLIED BY OTHERS.
- 4. ALL DIMENSIONS AND ELEVATIONS SHALL BE VERIFIED BY THE CONTRACTOR IN THE FIELD PRIOR TO CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
- 5. INFORMATION REGARDING THE LOCATION OF EXISTING UTILITIES HAS BEEN BASED UPON AVAILABLE INFORMATION AND MAY BE INCOMPLETE, AND WHERE SHOWN SHOULD BE CONSIDERED APPROXIMATE. THE LOCATION OF ALL EXISTING UTILITIES SHOULD BE CONFIRMED PRIOR TO BEGINNING CONSTRUCTION. THE CONTRACTOR MUST CALL "CALL BEFORE YOU DIG", 811 OR VISIT CBYD.COM. ALL UTILITIES THAT DO NOT MATCH HORIZONTAL AND VERTICAL LOCATIONS SHOWN ON THE PLANS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY.
- 6. THE CONTRACTOR SHALL COORDINATE WITH THE APPROPRIATE UTILITY COMPANY FOR THE ADJUSTMENT OF UTILITY GATE BOXES AND VALVES.
- 7. THE CONTRACTOR SHALL TAKE PRECAUTION TO PREVENT DAMAGE TO EXISTING UNDERGROUND UTILITIES WHEN OPERATING HEAVY MACHINERY SUCH AS VIBRATORY ROLLERS. UTILITY LINES DAMAGED BY THE CONTRACTOR SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER AND THE UTILITY COMPANY AND THE COST OF REPAIR WORK SHALL BE BORNE BY THE CONTRACTOR.
- 8. THE BOROUGH OF NAUGATUCK OR ITS DESIGNATED AGENT SHALL INSPECT ALL WORK PERFORMED BY THE CONTRACTOR. THE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS PRIOR TO CONSTRUCTION. PERMITS MAY BE OBTAINED AT THE BOROUGH OF NAUGATUCK ENGINEERING DEPARTMENT. REQUESTS FOR INSPECTION REQUIRES 24 HOUR NOTICE.
- 9. SEDIMENT AND EROSION CONTROL MEASURES AS DEPICTED ON THESE PLANS AND DESCRIBED WITHIN THE SEDIMENT AND EROSION CONTROL NARRATIVE SHALL BE IMPLEMENTED AND MAINTAINED UNTIL PERMANENT COVER AND STABILIZATION IS ESTABLISHED. ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL CONFORM TO THE "GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL", CONNECTICUT - 2002, THE BOROUGH OF NAUGATUCK AND IN ALL CASES BEST MANAGEMENT PRACTICES SHALL PREVAIL.
- 10. THE CONTRACTOR MUST MAINTAIN (REPAIR/REPLACE WHEN NECESSARY) THE SILTATION CONTROL UNTIL ALL CONSTRUCTION ACTIVITY IS COMPLETED AND ALL DISTURBED AREAS ARE PERMANENTLY STABILIZED. COSTS TO CLEAN, MAINTAIN AND REPLACE SILT SACKS SHALL BE INCLUDED IN THE COST OF "SEDIMENT CONTROL SYSTEM AT CATCH BASIN".
- 11. ALL CONSTRUCTION MATERIALS AND METHODS SHALL CONFORM TO THE BOROUGH OF NAUGATUCK REQUIREMENTS AND TO THE APPLICABLE SECTIONS OF THE STATE OF CONNECTICUT DEPARTMENT OF

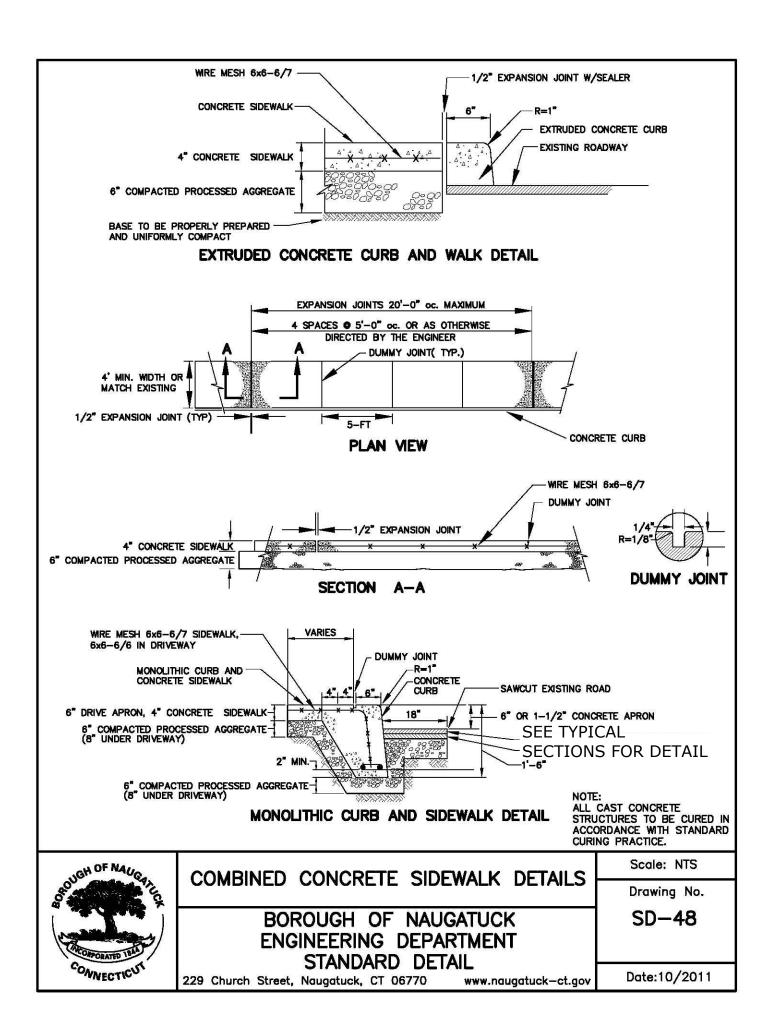
- TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADS, BRIDGES, AND INCIDENTAL CONSTRUCTION, FORM 817.
- 12. THE PLANS REQUIRE A CONTRACTOR'S WORKING KNOWLEDGE OF LOCAL, MUNICIPAL, WATER AUTHORITY, AND STATE CODES FOR UTILITY SYSTEMS. ANY CONFLICTS BETWEEN MATERIALS AND LOCATIONS SHOWN, AND LOCAL REQUIREMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO THE EXECUTION OF WORK. THE ENGINEER WILL NOT BE HELD LIABLE FOR COSTS INCURRED TO IMPLEMENT OR CORRECT WORK WHICH DOES NOT CONFORM TO LOCAL CODE.
- 13. ANY MAINTENANCE OR REFUELING OF EQUIPMENT AND VEHICLES SHALL BE PERFORMED AT LEAST 50 FEET FROM WETLANDS OR WATERCOURSES. OIL, GASOLINE, AND CHEMICALS NEEDED AT THE SITE SHALL BE STORED IN A SECONDARY CONTAINER AT LEAST 50 FEET FROM WETLANDS OR WATERCOURSES AND OUTSIDE OF FLOODPLAIN AND FLOODWAY LIMITS TO PREVENT CONTAMINATION FROM POSSIBLE LEAKS.
- 14. ALL EXISTING SIGNS SHALL REMAIN. CONTRACTOR TO STORE, PROTECT AND REINSTALL ALL STREET SIGNS AS NEEDED. THE COST FOR RESETTING OF STREET SIGNS SHALL BE INCLUDED IN "CLEARING AND GRUBBING"
- 15. ALL EXISTING MANHOLES SHALL BE RESET WITH NEW FRAMES AND COVERS IN ACCORDANCE WITH THE BOROUGH OF NAUGATUCK STANDARDS, UNLESS NOTED OTHERWISE.
- 16. ALL BITUMINOUS CONCRETE DRIVEWAYS, BITUMINOUS CONCRETE SIDEWALKS, AND CONCRETE SIDEWALKS SHALL BE RECONSTRUCTED TO THE STREET LINE, OR CLOSEST JOINT AS DETERMINED BY THE ENGINEER UNLESS NOTED OTHERWISE.
- 17. FINAL CURB LINE LAYOUT AND LIMITS TO BE CONFIRMED BY THE ENGINEER IN THE FIELD PRIOR TO INSTALLATION.
- 18. CONTRACTOR TO COORDINATE THE SCHEDULE FOR THE START OF CONSTRUCTION WITH THE BOROUGH FOR THEIR USE IN THE INSTALLATION OF THE VARIABLE MESSAGE SIGNAGE ALONG SPRING STREET. THE VARIABLE MESSAGE SIGNAGE SHALL BE VISIBLE AND OPERATING AT LEAST TWO WEEKS PRIOR TO THE START OF CONSTRUCTION. THE BOROUGH WILL BE RESPONSIBLE FOR PROVIDING THE CONTRACTOR WITH THE VARIABLE MESSAGE SIGNAGE.
- 19. THE LOCATION OF THE VARIABLE MESSAGE SIGNAGE THAT IS SHOWN ON THE PLANS IS APPROXIMATE. THE EXACT LOCATION SHALL BE COORDINATED IN THE FIELD WITH THE TOWN AND THE ENGINEER.

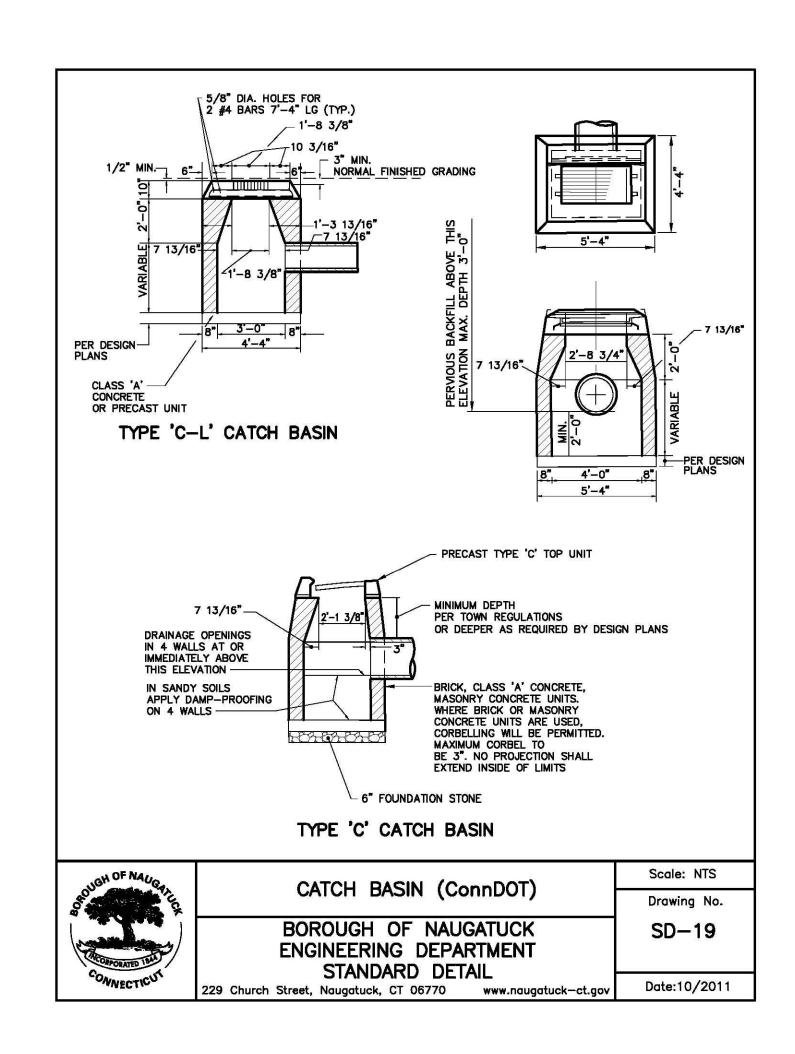


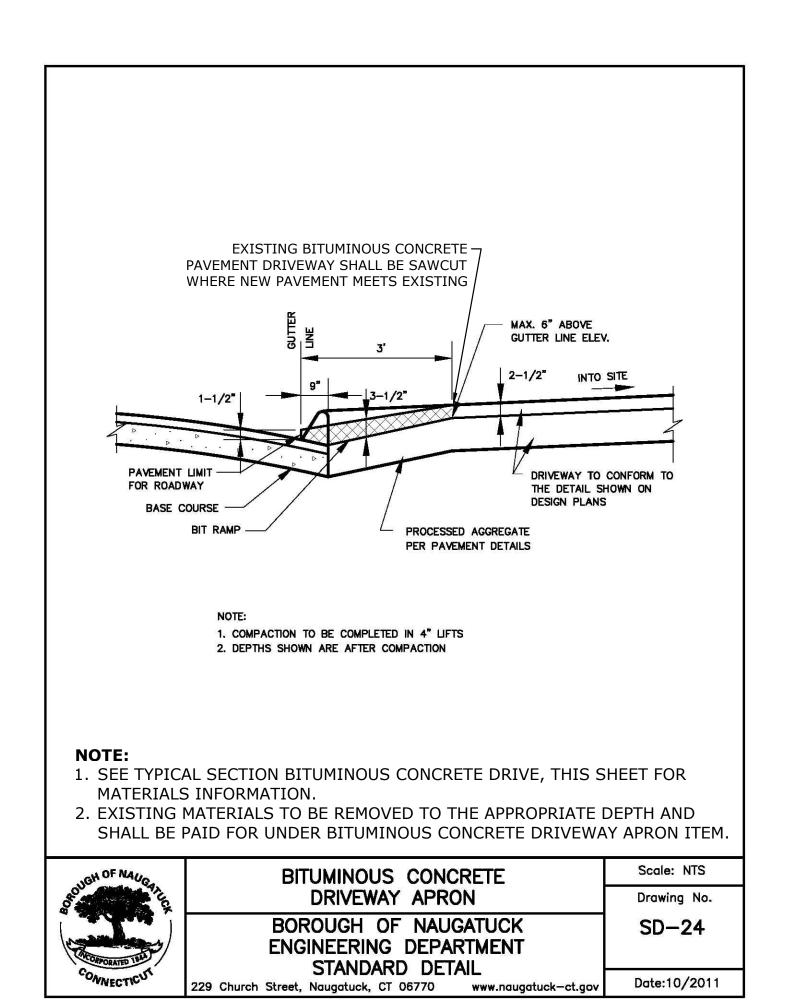
め MILONE
99 Realty Drive
Cheshire, Comed
(203) 271-1773

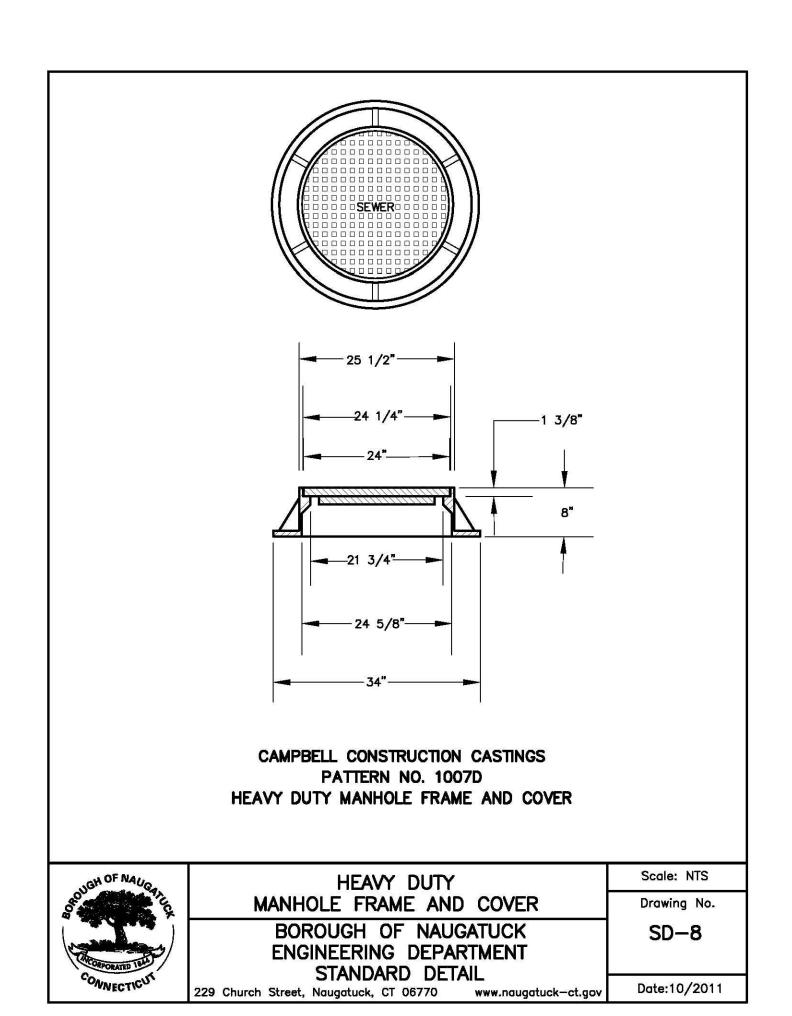
CJR **MARCH 2017** 2129-32

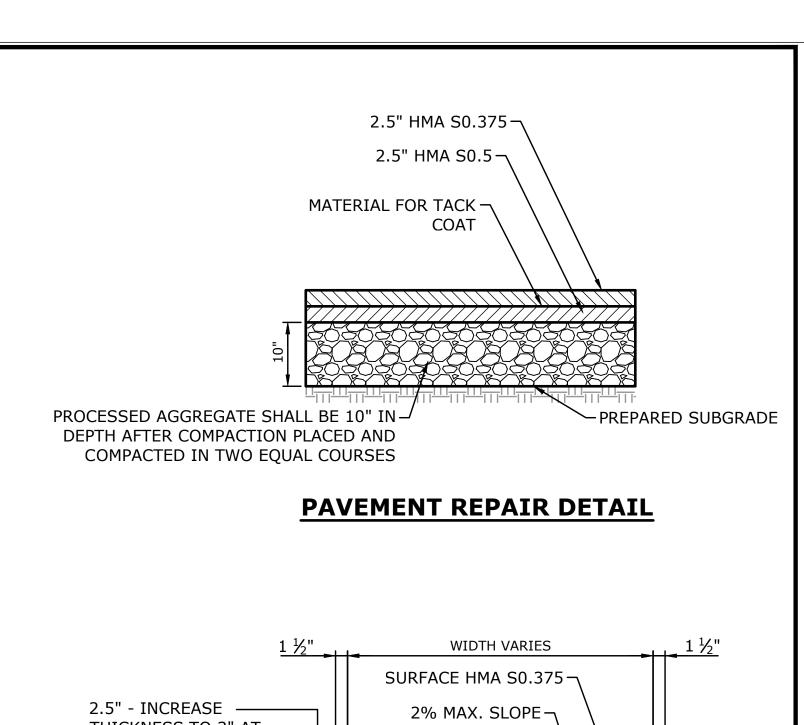


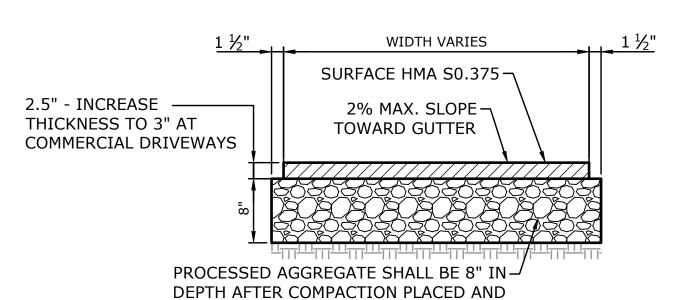






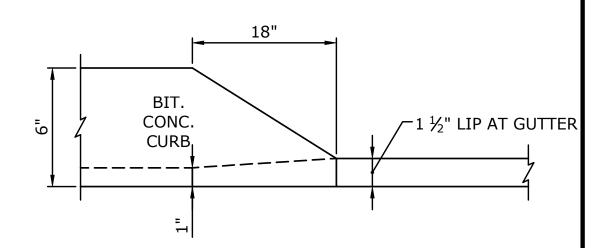




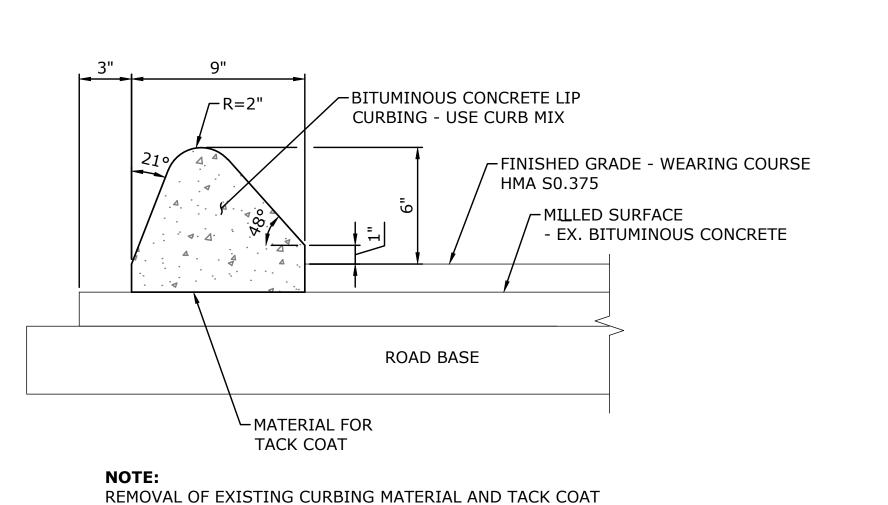


COMPACTED IN TWO EQUAL COURSES

#### **BITUMINOUS CONCRETE** SIDEWALK AND DRIVEWAY

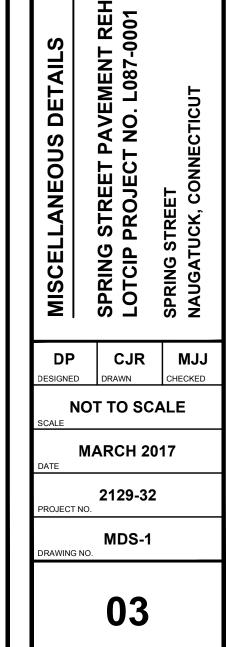


### **BITUMINOUS CONCRETE LIP CURBING AT DRIVEWAY**



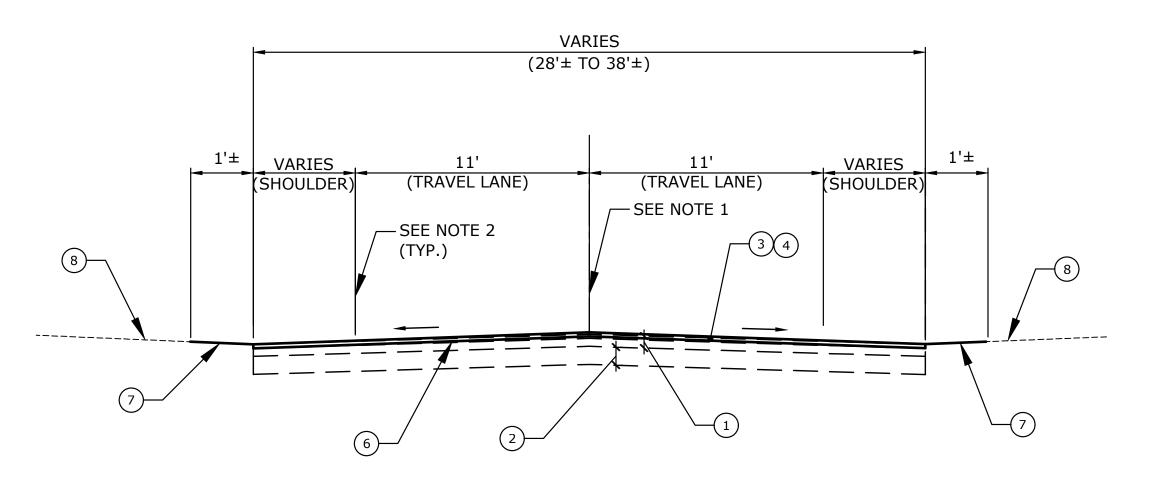
# **BITUMINOUS CONCRETE LIP CURBING**

SHALL BE PAID FOR UNDER BITUMINOUS CONCRETE LIP

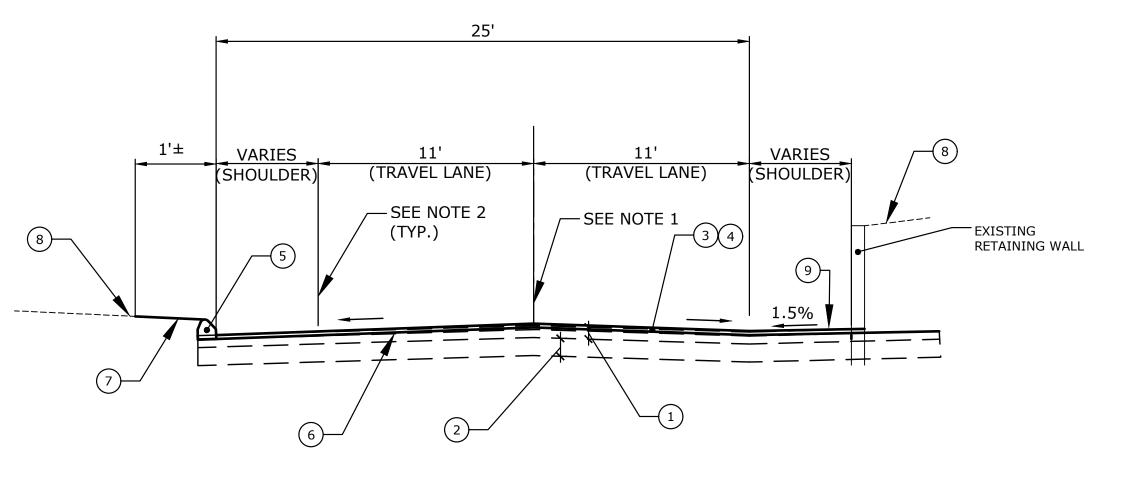


MILONE

# TYPICAL SECTION WITH CURBING



TYPICAL SECTION WITHOUT CURBING



TYPICAL SECTION
STA. 22+74 TO STA. 24+70

### **LEGEND**

- (1) EXISTING BITUMINOUS CONCRETE (DEPTH VARIES 4-1/2"± TO 9-1/2"±)
- 2 EXISTING BASE MATERIAL (DEPTH VARIES, 16"± MIN. TO OVER 20"±)
- FINE MILLING OF BITUMINOUS CONCRETE (DEPTH VARIES FROM 2" AT EDGE OF ROADWAY TO 1" AT THE CENTER OF THE ROADWAY)
- (4) 2" HMA S0.375
- (5) REMOVE EXISTING CURBING AND REPLACE WITH B.C.L.C.
- (6) MATERIAL FOR TACK COAT
- 7) 4" TOPSOIL & TURF ESTABLISHMENT
- 8 EXISTING GRADE
- 9 HMA S0.375 THICKNESS VARIES
- \* SEE TABLE ON THIS SHEET FOR CURBING LOCATION ON RIGHT SIDE (SEE NOTE 3)
  \*\* SEE TABLE ON THIS SHEET FOR CURBING LOCATION ON LEFT SIDE (SEE NOTE 3)

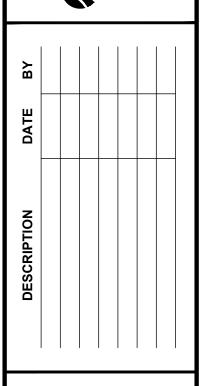
** CURBING LOCATION - RIGHT SIDE						
START STA.	END STA.					
13+65	16+94					
17+19	28+26					
29+25	31+48					
32+07	40+66					
48+97	50+25					

*** CURBING LOCATION - LEFT SIDE								
START STA.	END STA.							
13+65	20+38							
20+65	23+92							
34+90	44+16							
48+27	50+25							

#### **NOTES**

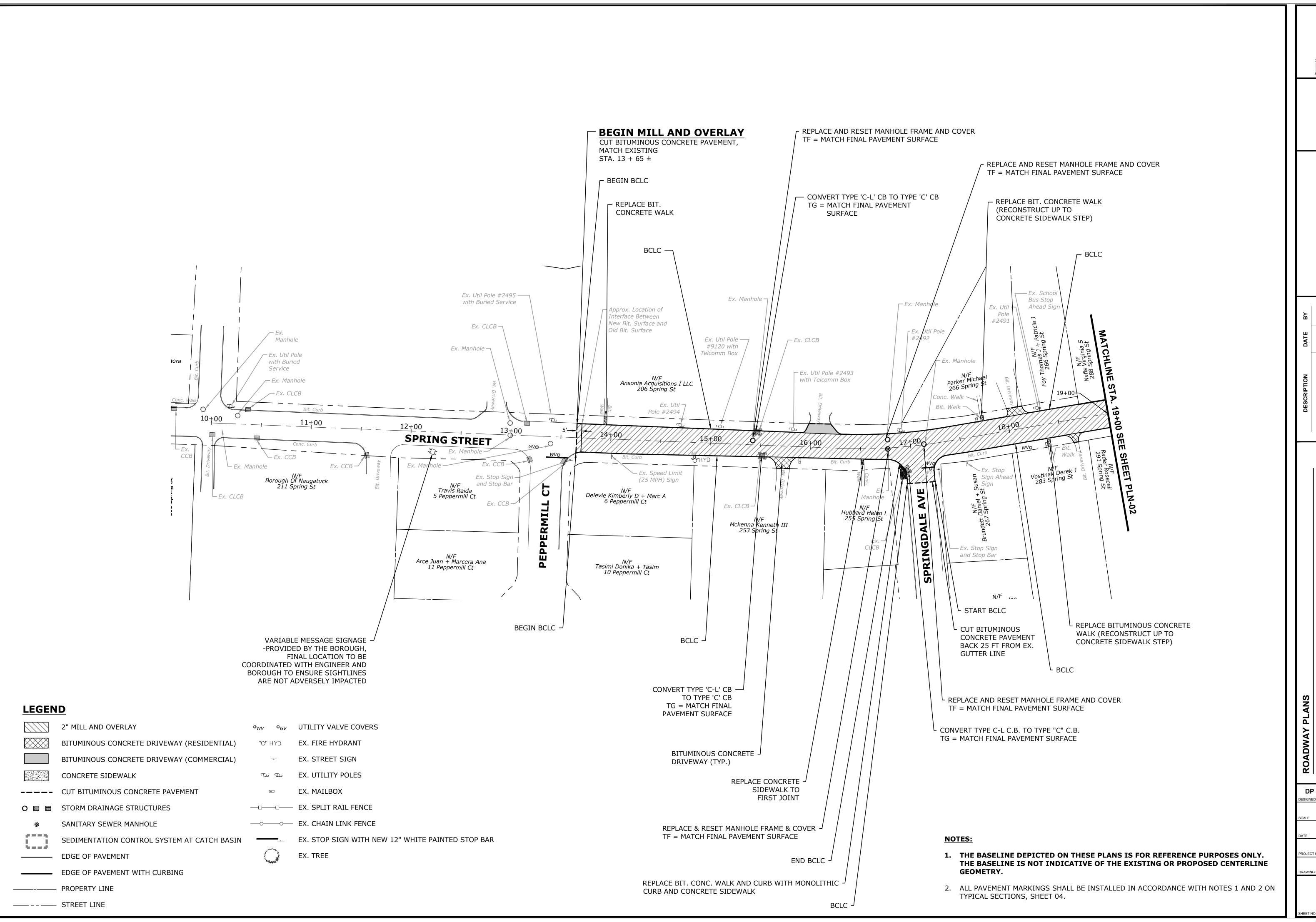
- 1. NEW STOP BARS AND DOUBLE YELLOW CENTERLINE TO BE INSTALLED IN SAME LOCATION AS EXISTING. CONTRACTOR SHALL BE RESPONSIBLE FOR RECORDING AND DOCUMENTING EXISTING LOCATION AND OFFSETS PRIOR TO MILLING.
- 2. CONTRACTOR TO INSTALL NEW 4" WHITE SHOULDER LINE MEASURED 11' FROM THE NEW DOUBLE YELLOW CENTERLINE. SHOULDER WIDTH VARIES.
- 3. FINAL LOCATION AND LIMITS OF BITUMINOUS CONCRETE LIP CURBING TO BE CONFIRMED BY THE ENGINEER IN THE FIELD PRIOR TO INSTALLATION.

MILONE & MACBROOM
99 Realty Drive
Cheshire, Connecticut 06410
(203) 271-1773 Fax (203) 272-9733



PROJECT NO. L087-0001

	S	Z				
<b>DP</b> DESIGNED	CJR DRAWN	MJJ CHECKED				
NO'	T TO SCA	LE				
MARCH 2017						
PROJECT NO.	2129-32					
DRAWING NO.	TYP					
	04					

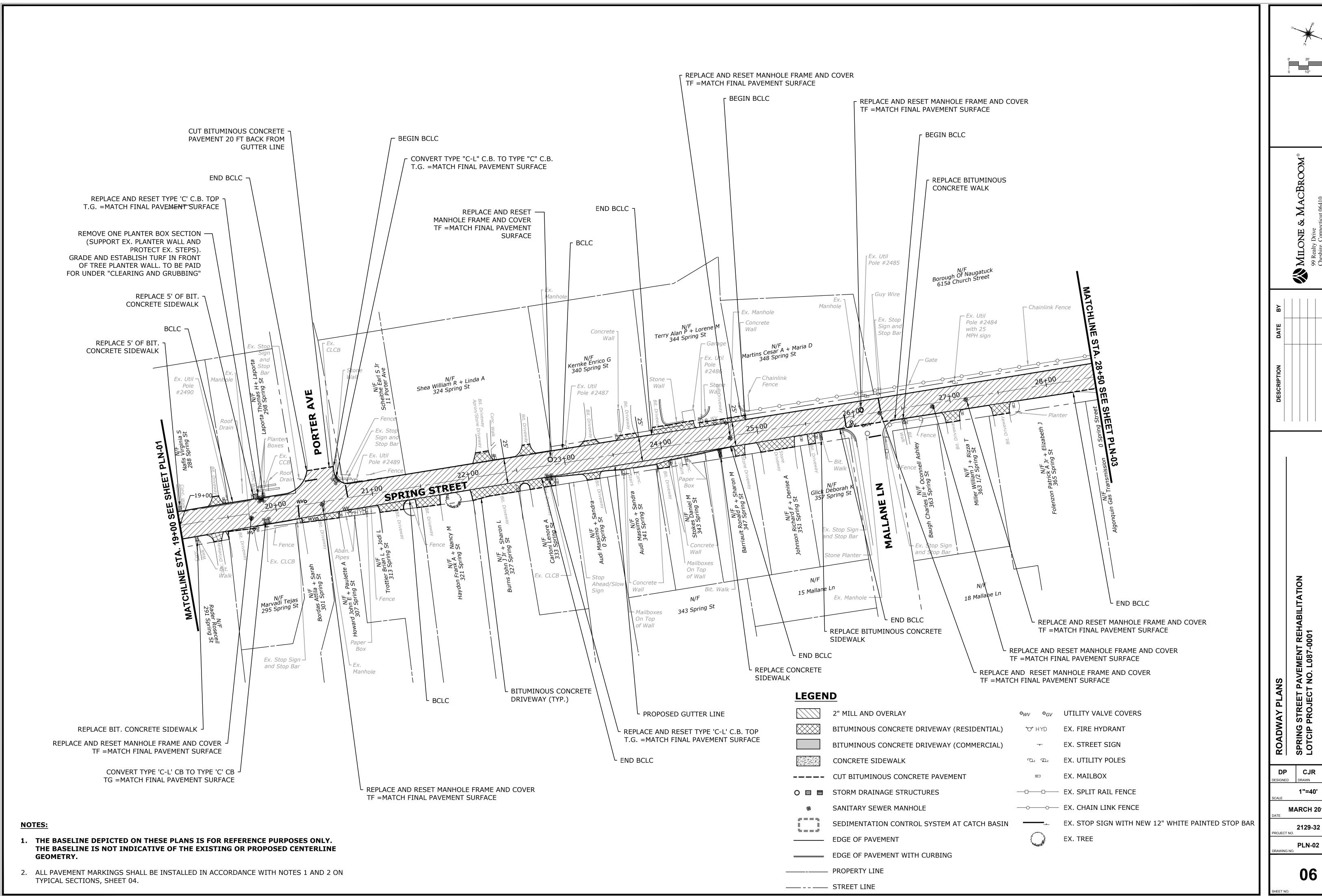


MILONE 99 Realty Drive Cheshire, Conne

SPRING LOTCIP

CJR MJJ 1"=40' **MARCH 2017** 2129-32

PLN-01

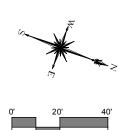


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**MARCH 2017** 

2129-32

PLN-02

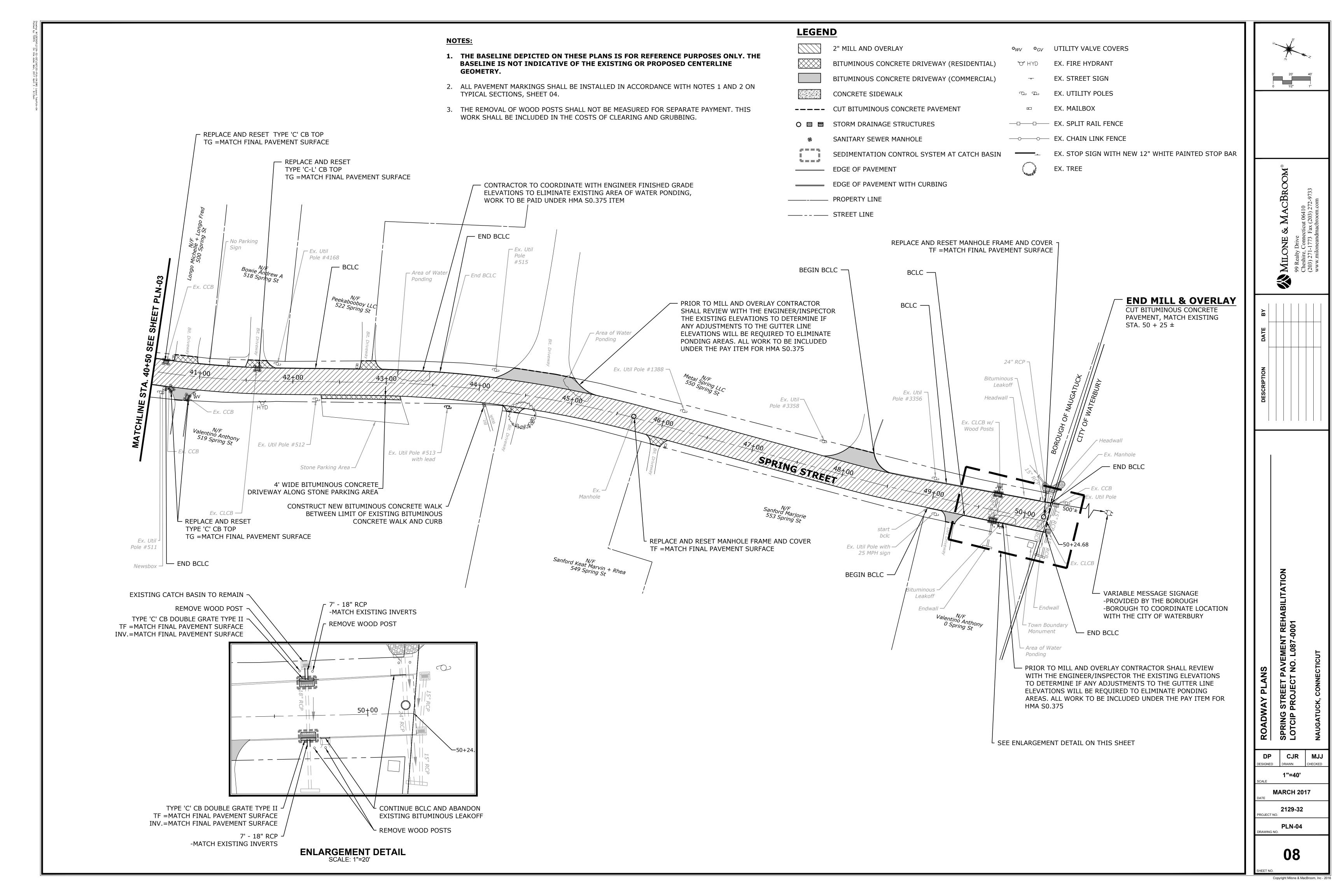


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CJR 1"=40'

**MARCH 2017** 

2129-32 PLN-03



# \*ONLY STANDARD SHEETS MARKED WITH AN "\( \sqrt{"} ARE IN THIS PROJECT #

### \*\*REVISED OR ADDED

SHEET NO.	TITLE	APPROVAL DATE**
HW-506_01	ENDWALLS, SLOPE PAVED INLETS AND OUTLETS	1-26-12
HW-506_02	TYPE "D-G" & "L" ENDWALLS	7-13-12
HW-506_03	TENDWALS FOR PIPE ARCH	9-18-09
HW-507_01	TYPE "C", "C-L" & DROP INLET CATCH BASIN	7-24-13
HW-507_02	TYPE "C", "C-L" & DOUBLE GRATE TYPE - I	7-24-13
HW-507_03	TYPE "C", "C-L" & DOUBLE GRATE TYPE - II	7-24-13
HW-507_04	TYPE "C", "C-L" & ROUND PRECAST CONCRETE CB	11-10-11
HW-507_05	TYPE "C" & "C-L" PRECAST CONCRETE CB DOUBLE GRATE TYPE - I	11-10-11
HW-507_06	TYPE "C" & "C-L" PRECAST CONCRETE CB DOUBLE GRATE TYPE - II	11-10-11
HW-507_07	TYPE "C" & "C-L" CATCH BASIN TOPS AND CURBS	11-10-11
HW-507_08	CATCH BASIN FRAMES AND GRATES	9-18-09
HW-507_09	HEAVY DUTY LOCK DOWN TOPS	7-12-12
HW-507_10	MANHOLE - FRAME & COVER	7-24-13
HW-651_01	C.C.M. PIPE INSTALLATIONS IN FILL & ROCK SLOPES & PIPE TRENCH DETAIL	7-24-13
HW-651_02	SLOTTED DRAIN PIPE 12"- 15"-18"-24"-30" (305-381-457-610-762)	7-12-12
HW-652_01	PIPE ENDS	7-24-13
HW-751_01	UNDERDRAINS AND UNDERDRAIN OUTLETS	7-12-12
HW-803_01a	PAVED APRONS	6-07-17
HW-803_01b	PAVED DITCHES AND PAVED CHANNELS	6-07-17
HW-811_01	CONCRETE CURBING	6-07-17
HW-813_01	GRANITE STONE TRANSITION CURBING	7-24-13
HW-813_02	STONE CURBING	6-07-17
HW-815_01	BITUMINOUS CONCRETE CURBING	6-07-17
HW-821_01a	TRANSITION - 45" (1145) F-SHAPE TO 45" (1145) VERTICAL SHAPE SHEET 1	1-26-12
HW-821_01b	TRANSITION - 45" (1145) F-SHAPE TO 45" (1145) VERTICAL SHAPE SHEET 2	10-18-10
HW-821_01c	TRANSITION - 45" (1145) F-SHAPE TO 45" (1145) VERTICAL SHAPE SHEET 3	1-26-12
HW-821_02a	45" (1145) F-SHAPE PRECAST CONCRETE BARRIER CURB SHEET 1	7-24-13
HW-821_02b	45" (1145) F-SHAPE PRECAST CONCRETE BARRIER CURB SHEET 2	7-24-13
HW-821_03a	TRANSITION - 32" (813) JERSEY SHAPE TO 45" (1145) VERTICAL SHAPE SHEET 1	1-26-12
HW-821_03b	TRANSITION - 32" (813) JERSEY SHAPE TO 45" (1145) VERTICAL SHAPE SHEET 2	10-18-10
HW-821_03c	TRANSITION - 32" (813) JERSEY SHAPE TO 45" (1145) VERTICAL SHAPE SHEET 3	10-18-10
HW-821_03d	TRANSITION - 32" (813) JERSEY SHAPE TO 45" (1145) VERTICAL SHAPE SHEET 4	10-18-10
HW-821_03e	TRANSITION - 32" (813) JERSEY SHAPE TO 45" (1145) F-SHAPE	7-24-13

<b>√</b> *	SHEET NO.	TITLE	APPROVAI DATE**
	HW-821_04a	MERRITT PARKWAY NARROW MEDIAN BARRIER	6-09-11
	HW-821_04b	MERRITT PARKWAY - 2'(610) WIDE MEDIAN BARRIER AND ROADSIDE BARRIER	7-24-13
	HW-821_05a	TRANSITION - 45" (1145) F-SHAPE TO 54" (1372) VERTICAL SHAPE SHEET 1	1-26-12
	HW-821_05b	TRANSITION - 45" (1145) F-SHAPE TO 54" (1372) VERTICAL SHAPE SHEET 2	1-26-12
	HW-821_06	54" (1372) VERTICAL SHAPE BARRIER	2-06-12
	HW-821_07	MISCELLANOUS DETAILS FOR BARRIER TRANSITIONS	7-12-12
	HW-822_01	TEMPORARY PRECAST CONCRETE BARRIER CURB	7-24-13
	HW-905_01	STONE WALL, FARM WALL AND WIRE FENCES	6-07-17
	HW-910_01	W-BEAM METAL BEAM RAIL HARDWARE	6-09-11
	HW-910_02	METAL BEAM RAIL (TYPE R-B 350) GUIDERAIL	6-09-11
	HW-910_03	METAL BEAM RAIL (TYPE MD-B 350)	6-09-11
	HW-910_04	METAL BEAM RAIL (TYPE R-B 350) SYSTEMS 5, 5A, & 6	6-09-11
	HW-910_05	METAL BEAM RAIL R-B 350 SPAN TYPE I, II, III SECTIONS	7-24-13
	HW-910_06	R-B 350 BRIDGE ATTACHMENT SAFETY SHAPE PARAPET	6-09-11
	HW-910_07	R-B 350 BRIDGE ATTACHMENT VERTICAL SHAPE PARAPET	6-09-11
	HW-910_08	R-B 350 BRIDGE ATTACHMENT TRAILING END	6-09-11
	HW-910_09a	MISCELLANEOUS GUIDERAIL TRANSITIONS SHEET 1	1-26-12
	HW-910_09b	MISCELLANEOUS GUIDERAIL TRANSITIONS SHEET 2	7-25-12
	HW-910_10	METAL BEAM RAIL 8" (203) X 6" (152) BOX BEAM	7-24-13
	HW-910_11	CURVED GUIDERAIL TREATMENT DETAIL	7-25-12
	HW-910_12a	MERRITT PARKWAY GUIDERAIL ATTACHMENT - SYSTEM 2 & 3	7-24-13
	HW-910_12b	MERRITT PARKWAY GUIDERAIL	7-24-13
	HW-910_12c	MERRITT PARKWAY GUIDERAIL TRAILING END ATTACHMENTS	7-24-13
	HW-910_12d	MERRITT PARKWAY MEDIAN GUIDERAIL AND END ANCHOR	6-09-11
	HW-910_13a	THRIE-BEAM METAL BEAM RAIL HARDWARE	7-24-13
	HW-910_13b	THRIE-BEAM TRANSITIONS	7-24-13
	HW-910_14a	THRIE-BEAM 350 BRIDGE ATTACHMENT	6-09-11
	HW-910_14b	THRIE-BEAM 350 GUIDERAIL TRANSITION TO R-B 350 GUIDERAIL	6-09-11
	HW-910_15	MD-B 350 MEDIAN BARRIER SAFETY SHAPE ATTACHMENT TYPE I	6-09-11
	HW-910_16	MD-B 350 MEDIAN BARRIER SAFETY SHAPE ATTACHMENT TYPE II	6-09-11
	HW-910_17	R-B TERMINAL SECTION	7-24-13
	HW-910_18	METAL BEAM RAIL (TYPE MD-I)	10-18-10
	HW-910_19a	METAL BEAM RAIL (MODIFIED TYPE R-I) AND END ANCHORAGE TYPE I	7-24-13

-	-	-	
-			THE INFORMATION, INCLUDING ESTIMATED
-	-	-	QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED
-	-	-	INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE
-	-		THE CONDITIONS OF ACTUAL QUANTITIES
-	-		OF WORK WHICH WILL BE REQUIRED.
-	-	-	
REV.	DATE	REVISION DESCRIPTION	Plotted Date: 6/8/2017

STATE OF CONNECTICUT

DEPARTMENT OF TRANSPORTATION

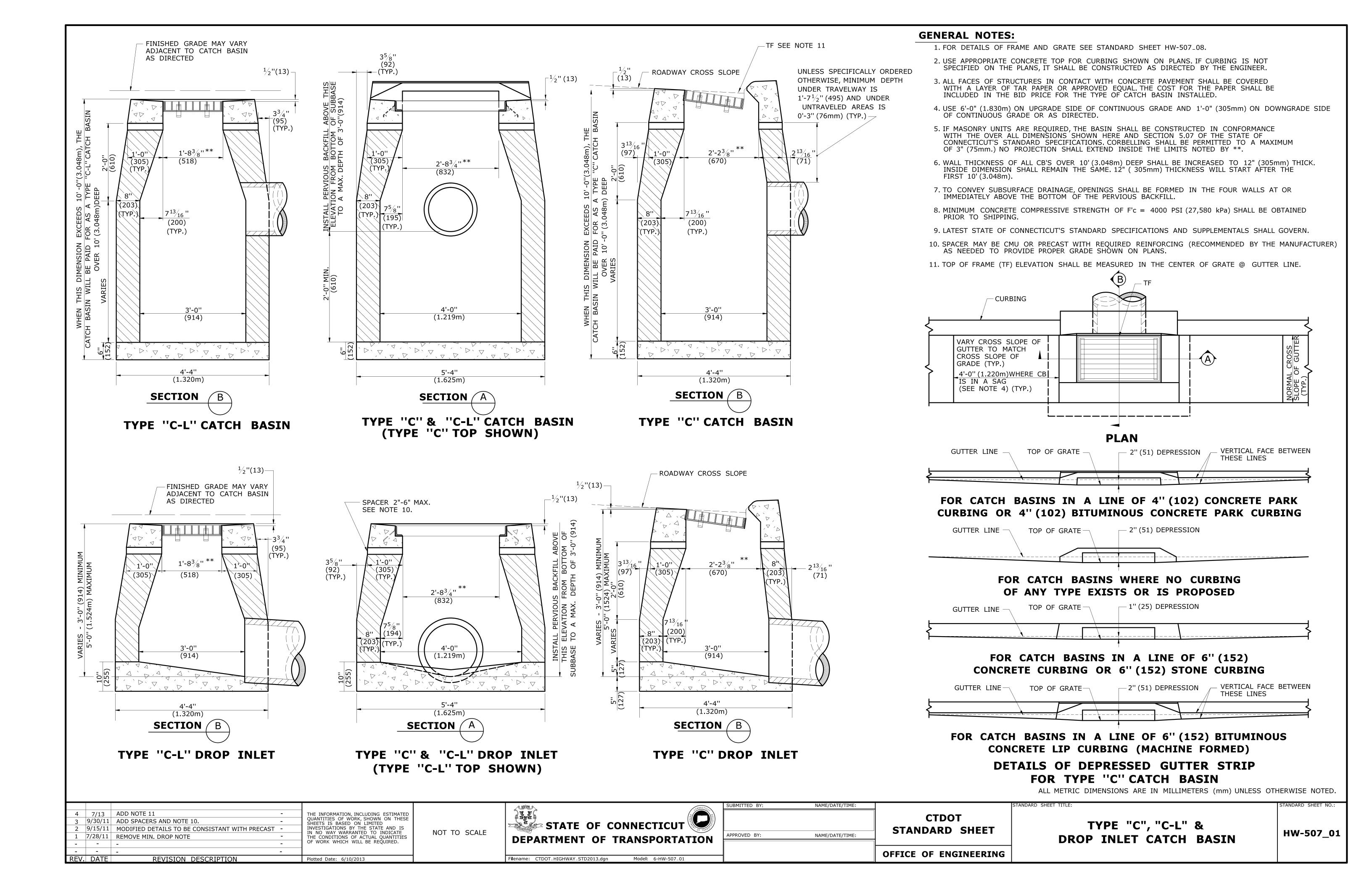
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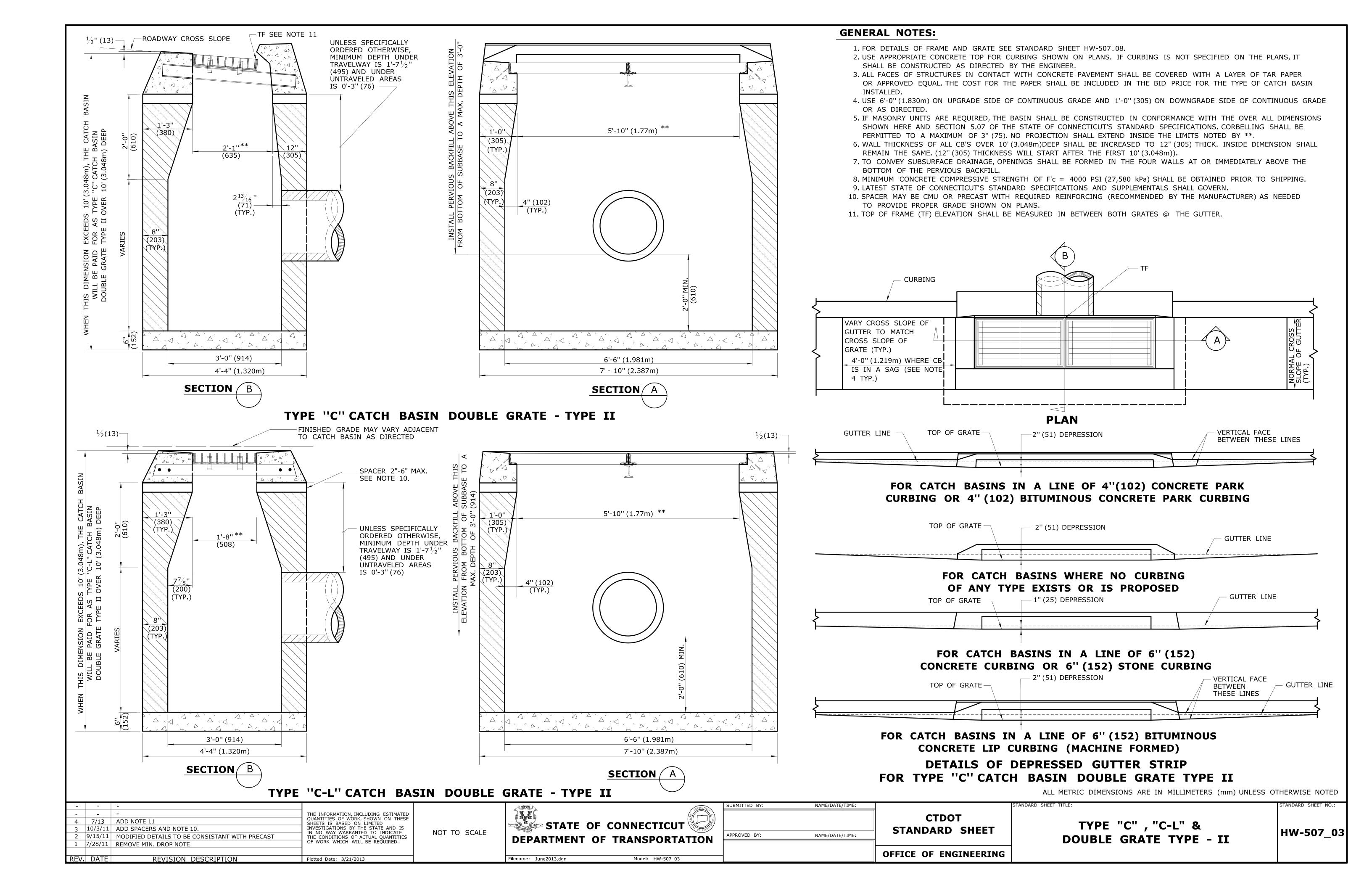
NOT TO SCALE

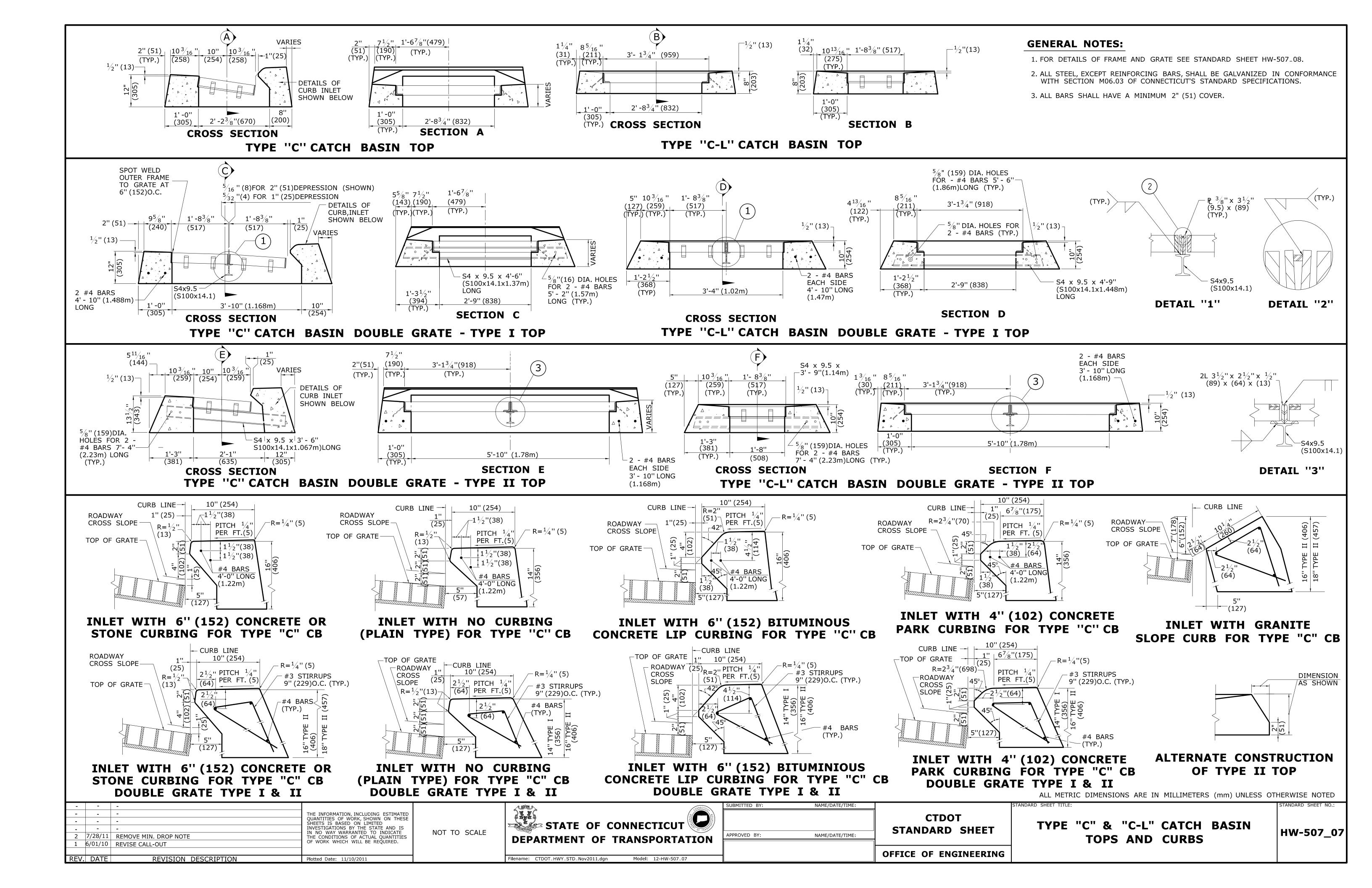
CTDOT
STANDARD SHEET
OFFICE OF ENGINEERING

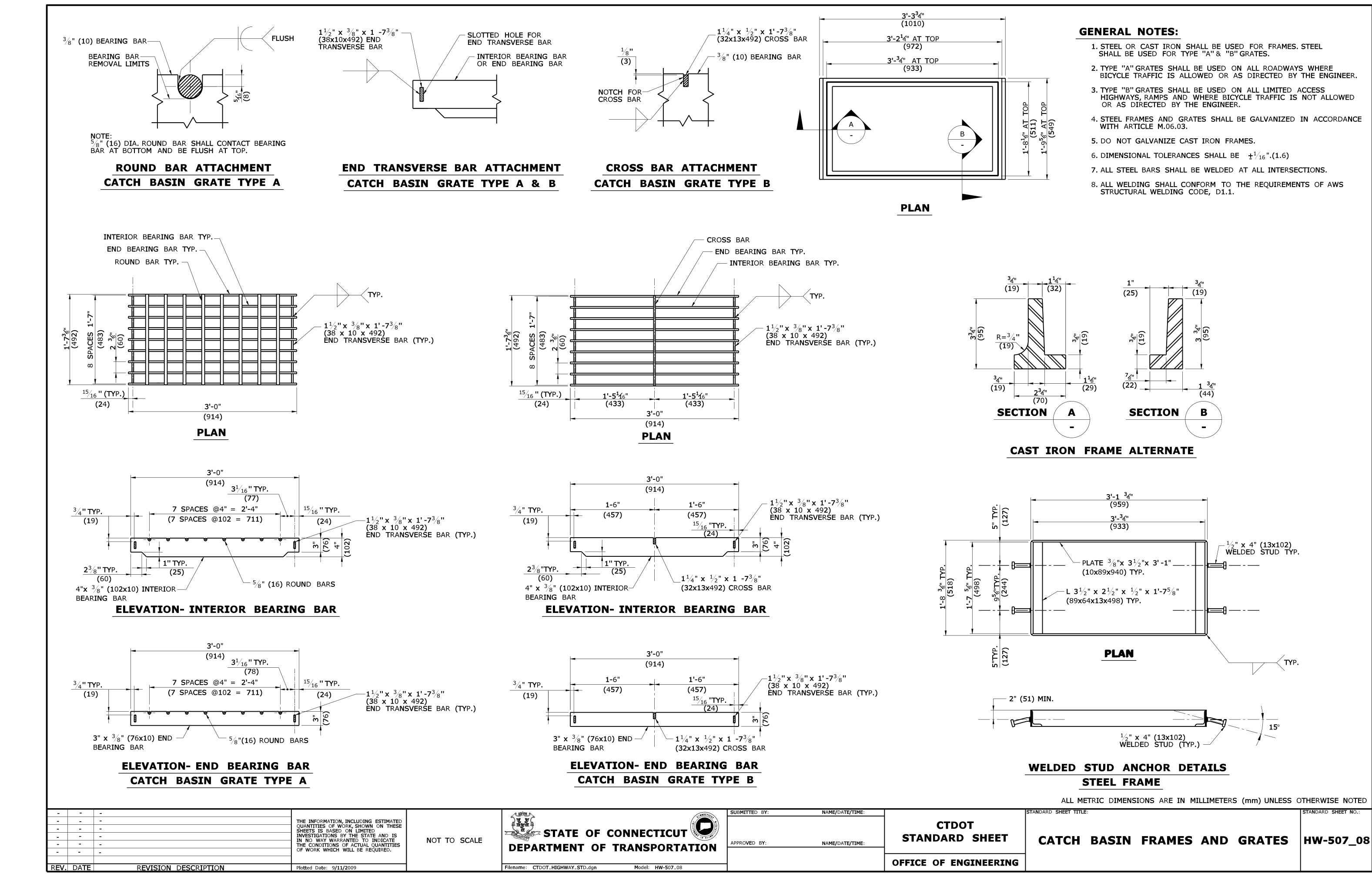
HIGHWAY STANDARD SHEET INDEX

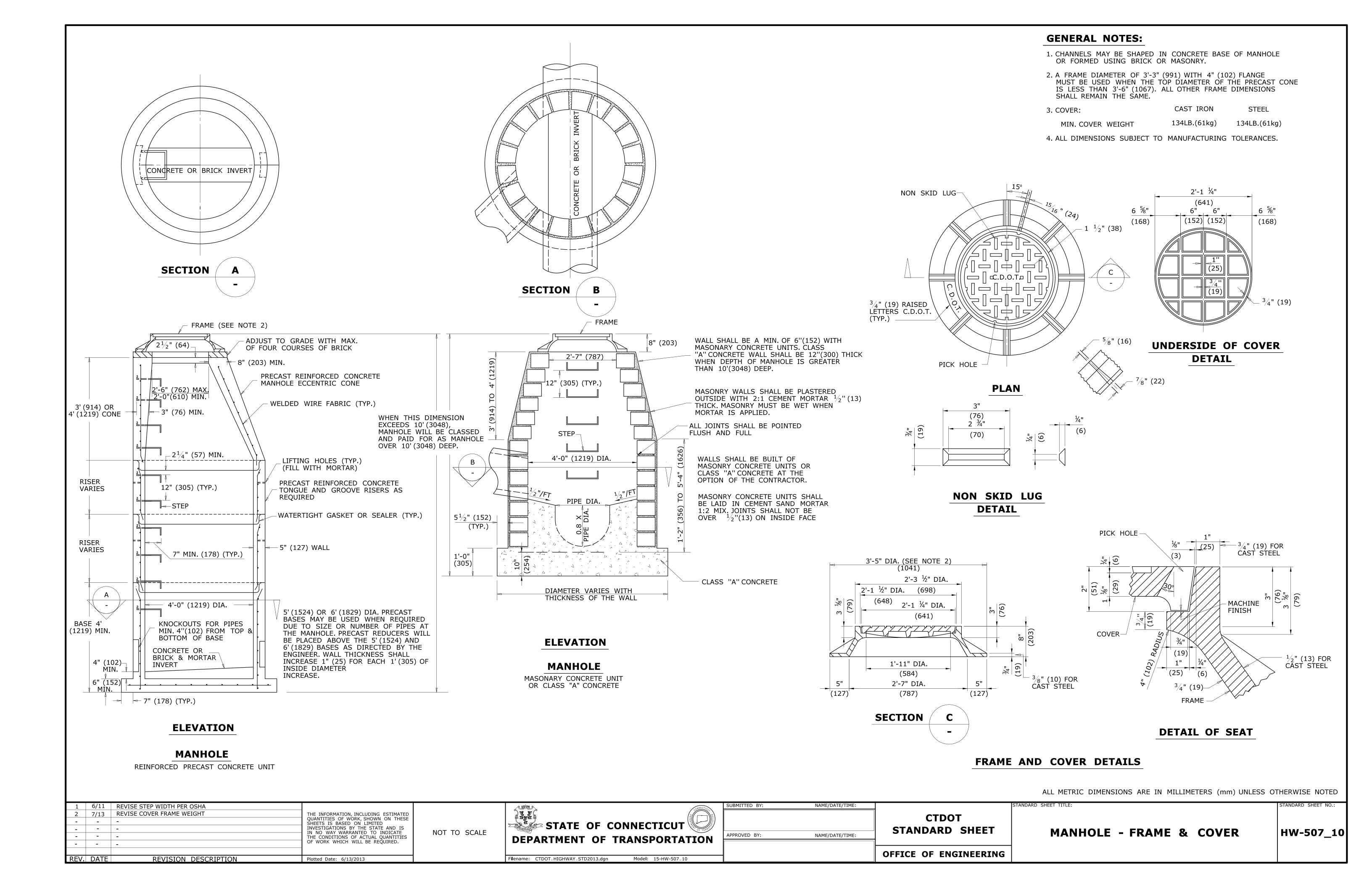
HW\_INX 1 of 2

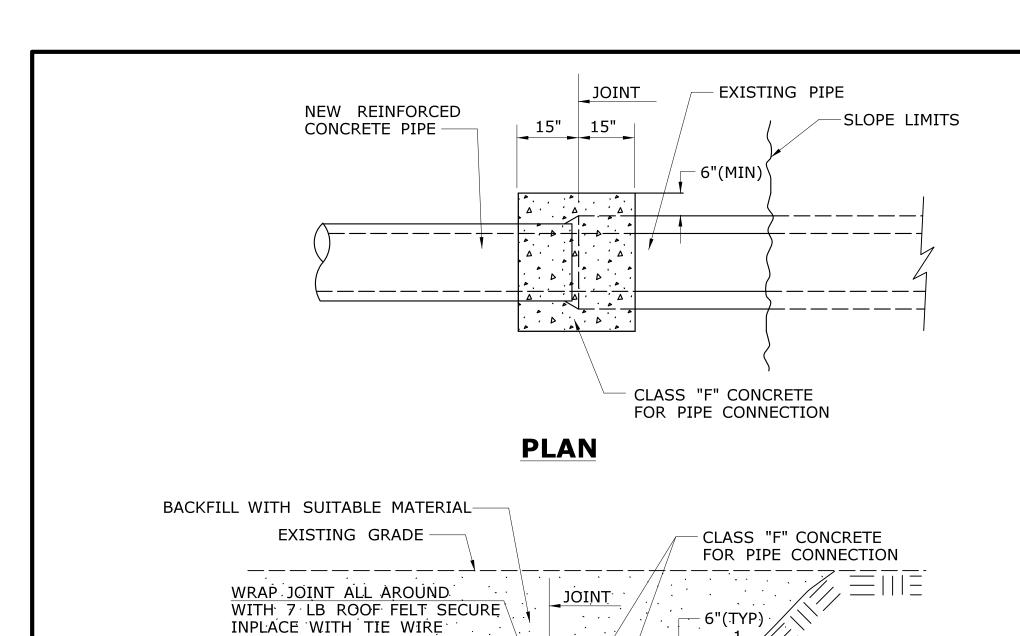












77777777777777777

**BEDDING** 

**MATERIAL** 

PAY LIMIT FOR TRENCH

EXCAVATION AND BEDDING MATERIAL

4 . . 4 . . 4 . . 4 . . 4 . . 4 .

/D= DIA. CIRCULAR PIPE \

EQUIVALENT HORIZONTAL

PIPE TRENCH DETAIL

WHERE GRANULAR FILL IS NOT USED

\_& PIPE ARCH OF

\ SPAN

LOWER VERTICAL PAYMENT

AND BEDDING MATERIAL

LIMIT FOR TRENCH EXCAVATION

3/8" MAX. GAP →

**SECTION** 

**CONCRETE PIPE CONNECTION** 

-CUT PIPE WHEN REQUIRED

TYPE II BACKFILL

WITH BEDDING

0.25H

TYPE I BACKFILL WITH BEDDING

PRESHAPE BEDDING

MATERIAL TO 0.10H

PRIOR TO INSTALLING

4"(100) BEDDING/

DEPTH VARIES AS

NOT TO SCALE

DETERMINED BY

THE ENGINEER

MATERIAL-

MATERIAL

MATERIAL

BEDDING MATERIAL - 4"(100)

IN EARTH AND 12"(300)

MINIMUM IN ROCK

#### NOTES:

- 1. "CONCRETE PIPE CONNECTION" IS INTENDED FOR USE WHERE A REINFORCED CONCRETE PIPE REPAIR OR MODIFICATION IS NEEDED SOMEWHERE WITHIN A PIPE RUN WHERE A BELL/SPIGOT JOINT CANNOT BE ACHIEVED.
- 2. MAINTAIN INTERIOR ALIGNMENT OF PIPE AT JOINTS UNTIL CONCRETE IS PROPERLY CURED.
- 3. BACKFILL OF PIPE REPAIR WITH SUITABLE MATERIAL MAY NOT TAKE PLACE UNTIL CONCRETE IS PROPERLY CURED.
- 4. CONTRACTOR SHALL MAINTAIN LINE AND GRADE OF PIPE REPAIR OR MODIFICATION BY METHODS APPROVED BY THE ENGINEER.
- 5. HOLES OR GAPS AT JOINT LARGER THAN 3/8" SHALL BE FILLED OR WRAPED TO PREVENT CONCRETE FROM ENTERING PIPE.
- 6. TRENCH EXCAVATION SHALL BE TO THE MAXIMUM EXTENT NEEDED TO PERFORM WORK.

PAY LIMIT FOR TRENCH

EXCAVATION AND BEDDING MATERIAL

/D= DIA. CIRCULAR PIPE

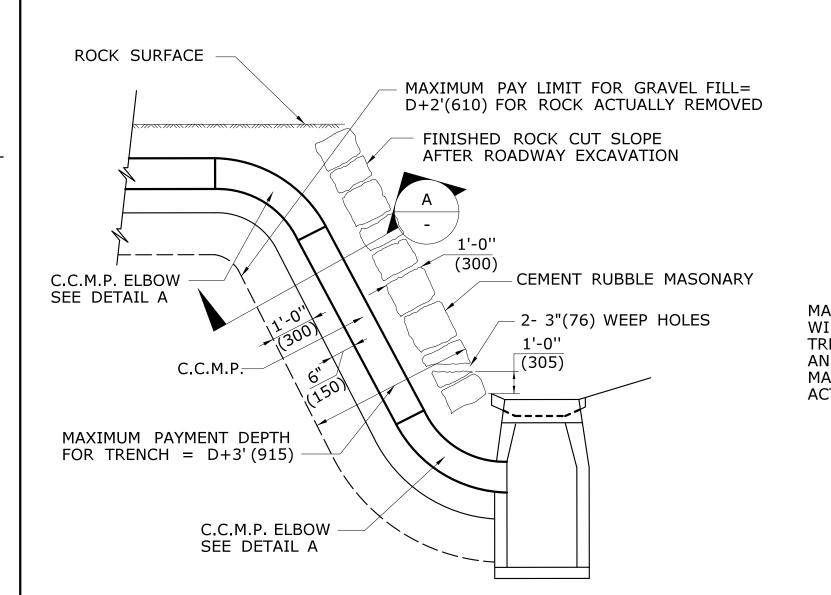
& PIPE ARCH OF EQUIVALENT HORIZONTAL

LOWER VERTICAL

PAYMENT LIMIT

FOR TRENCH

**EXCAVATION** 

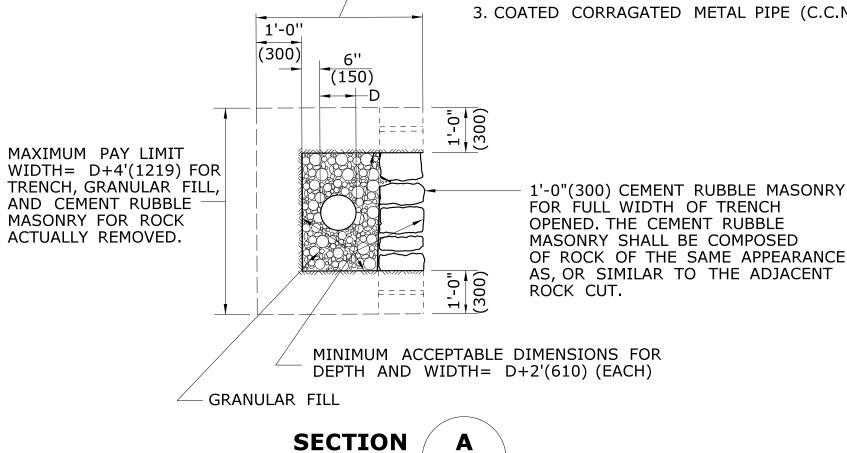


1. ROCK REMOVED BEYOND THE MAXIMUM PAY LIMIT SHOWN SHALL BE REPLACED WITH CEMENT RUBBLE MASONRY AND GRANULAR FILL.

**GENERAL NOTES:** 

2. FILL, AS REQUIRED TO CLOSE THE OPENING AS SHOWN ON THE PLANS, WILL BE AT THE CONTRACTORS EXPENSE. HOWEVER, THE PAY LIMIT LINES MAY BE MODIFIED TO COINCIDE WITH NATURAL FAULTS OR FISSURES OF ROCK AS THE ENGINEER MAY DETERMINE.

3. COATED CORRAGATED METAL PIPE (C.C.M.P.)



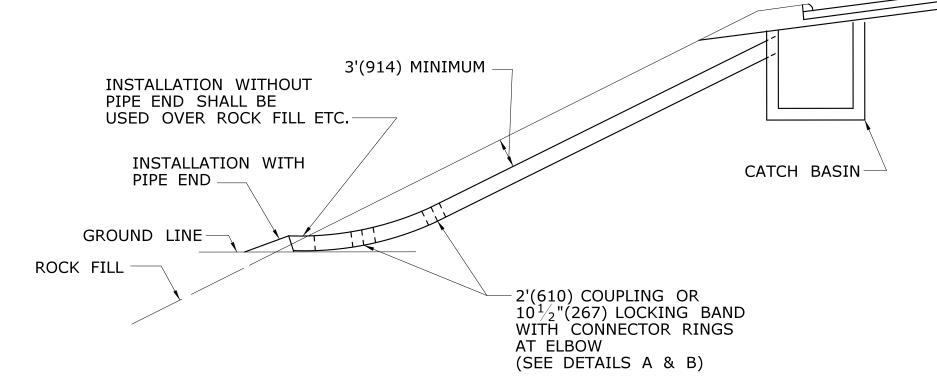
MAXIMUM PAY LIMIT DEPTH FOR

FOR ROCK ACTUALLY REMOVED -

TRENCH = D+3'(915). MAXIMUM PAY

LIMIT FOR GRAVEL FILL = D+2'(610)

#### TYPICAL INSTALLATION OF C.C.M.P. IN ROCK SLOPE



#### TABLE C CONNECTOD DINGS

CONNECT	OK KINGS
PIPE DIAMETER 12" (300) 15" (381) 18" (457) 21" (533) 24" (610) 30" (762) 36" (915) 42" (1066) 48" (1219)	LENGTH OF RING 52" (1321) 61" (1549) 71" (1803) 80" (2032) 90" (2286) 108" (2743) 128" (3251) 147" (3734) 166" (4216)

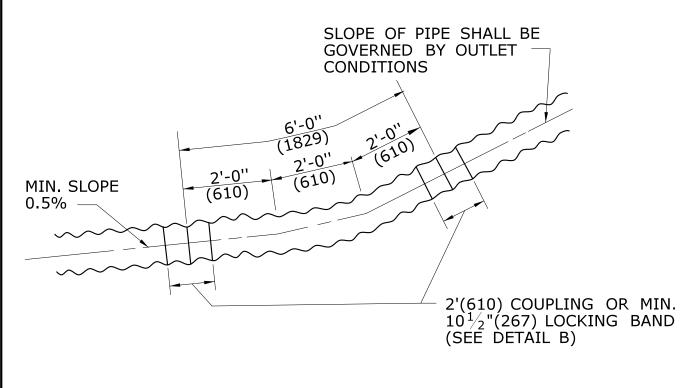
 $10\frac{1}{2}$ "

(267)

1/// 1111/14 | 111/14/1/

ALTERNATE

#### TYPICAL INSTALLATION OF C.C.M.P ELBOW IN FILL SLOPE



RING RODS:  $\frac{7}{16}$  "(11) DIAMETER ELECTRO-GALVANIZED WITH 6"(152) LENGTH OF ½"(13) ROLLED THREADS EACH END, FURNISHED CURVED, TO FIT PIPE. SEE TABLE C

CONNECTOR

CONNECTOR RINGS

LUGS: DOUBLE TAKE UP, CAST IRON, ELECTRO-GALVINIZED.

(267)

CIRCUMFERENTIALLY

CORRUGATED ENDS

NOTE: THE COUPLER FASTENING DEVICE SHALL NOT INTERFERE WITH INSTALLATION OF CONNECTOR RINGS.

> **DETAIL B ELBOW DIMENSIONS**

PIPE TRENCH DETAIL WHERE GRANULAR FILL IS USED AS BEDDING

Filename: CTDOT\_HIGHWAY\_STD2013.dgn

**DETAIL A** C.C.M.P. ELBOW AND COUPLING

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

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED - | - | -INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE 7/13 ADD CONCRETE PIPE CONNECTION DETAIL 2 | 6/01/10 | REVISE TITLE TO SAY TRENCH DETAIL THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED. 6/01/10 | REMOVE GRAVEL, REPLACE W/ GRANULAR REV. DATE REVISION DESCRIPTION Plotted Date: 6/13/2013

2 4 . 4 . 4 . 4

STATE OF CONNECTICUT **DEPARTMENT OF TRANSPORTATION** 

-TYPE II BACKFILL

TYPE I BACKFILL

WITH BEDDING

MATERIAL

PRESHAPE BEDDING

MATERIAL TO 0.10H

PRIOR TO INSTALLING

WITH BEDDING

0.25H

LOWER VERTICAL

PAYMENT LIMIT

FOR BEDDING

MATERIAL

Model: 17-HW-651\_01

GRANULAR FILL

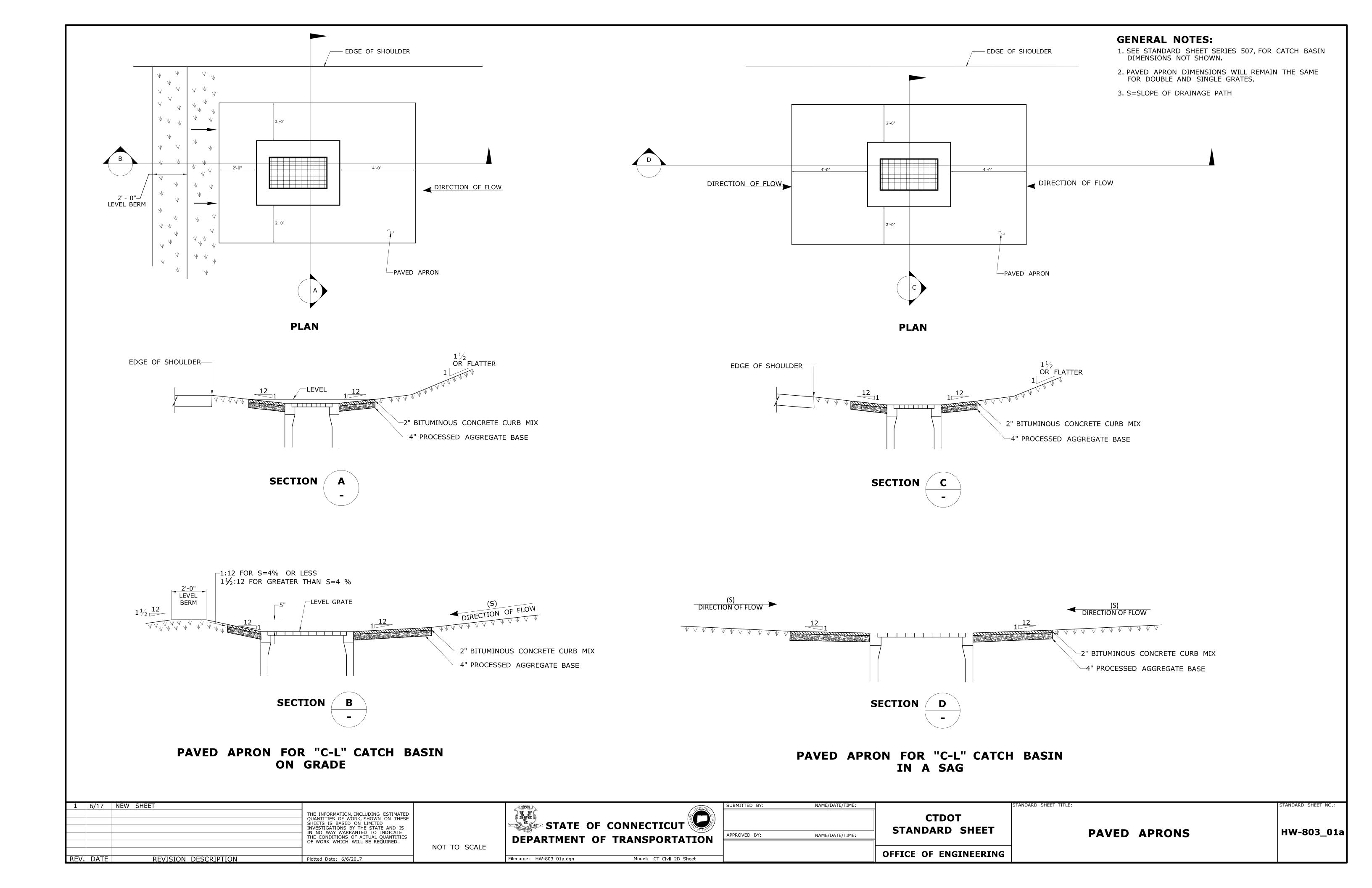
MATERIAL

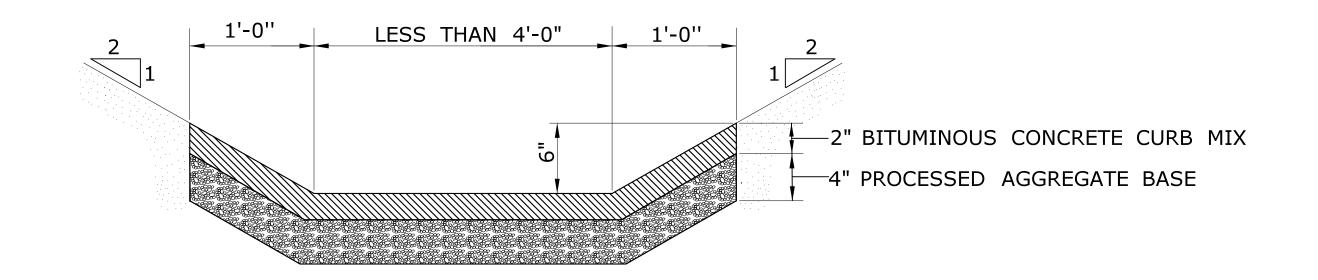
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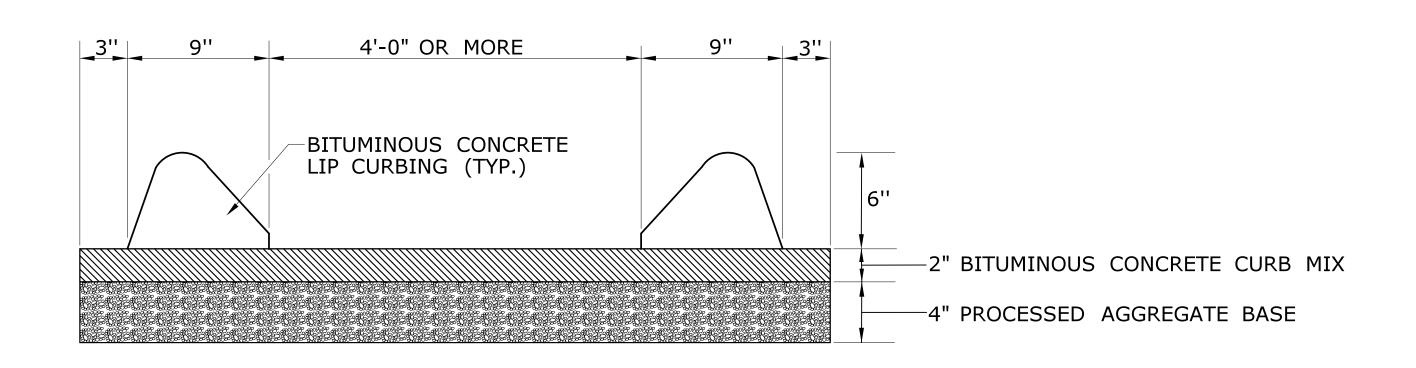
**CTDOT** STANDARD SHEET

C.C.M.PIPE INSTALLATIONS IN FILL & **ROCK SLOPES & PIPE TRENCH DETAIL** 

HW-651\_01







## PAVED DITCHES

# PAVED CHANNELS

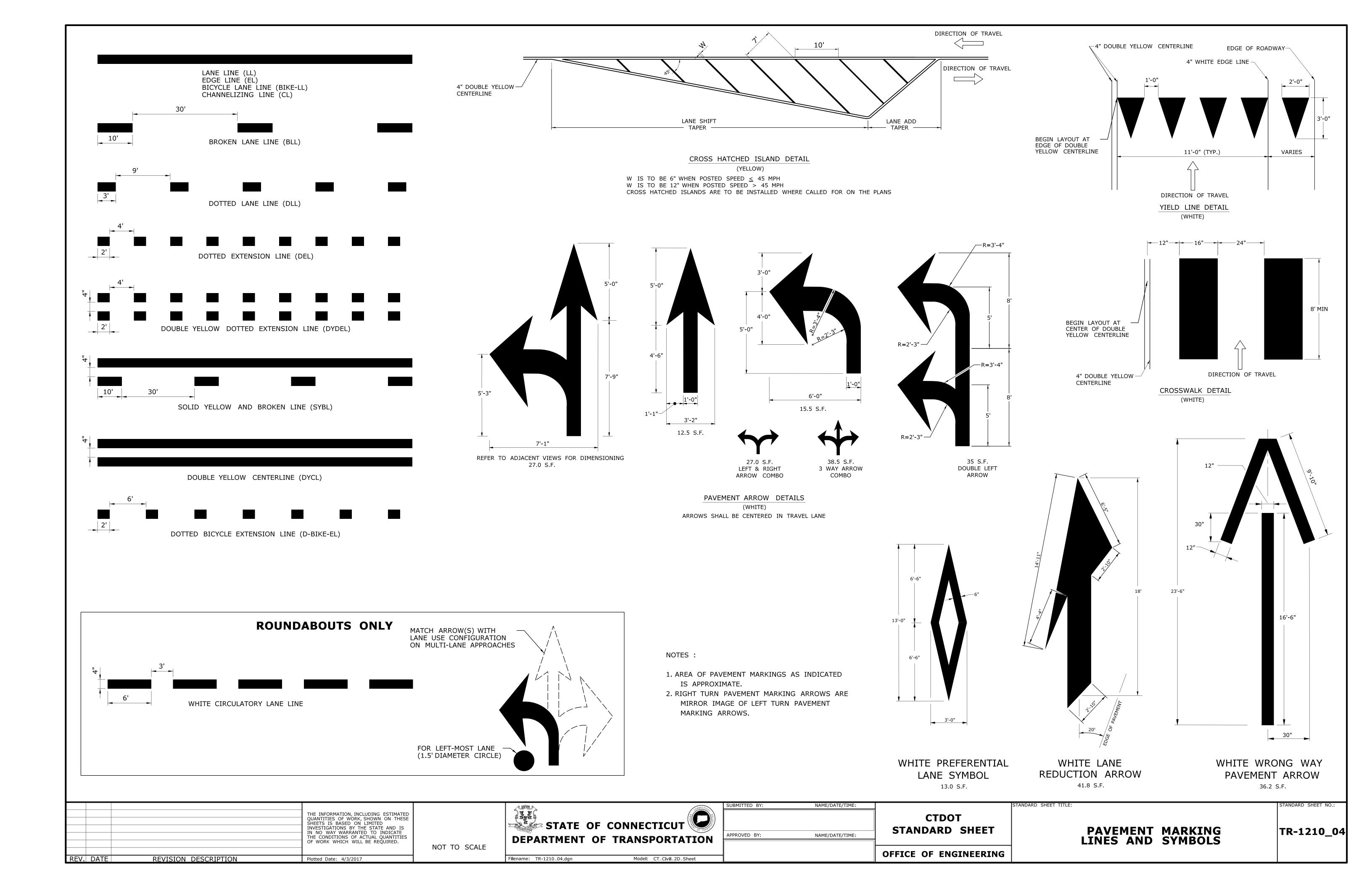
1   6/17   NEW SHEET	1		A 3903 A	unec7;	SUBMITTED BY:	NAME/DATE/TIME:		STANDARD SHEET TITLE:	STANDARD SHEET NO.:
	THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.		- Constitution of the cons	CONNECTICUT F TRANSPORTATION	APPROVED BY:	NAME/DATE/TIME:	CTDOT STANDARD SHEET	PAVED DITCHES AND PAVED CHANNELS	HW-803_01b
DEVIDATE DEVISION DESCRIPTION	Plotted Date: 6/6/2017	NOT TO SCALE	Filename: HW-803 01h dan	Model: CT Civil 2D Sheet	1		OFFICE OF ENGINEERING		

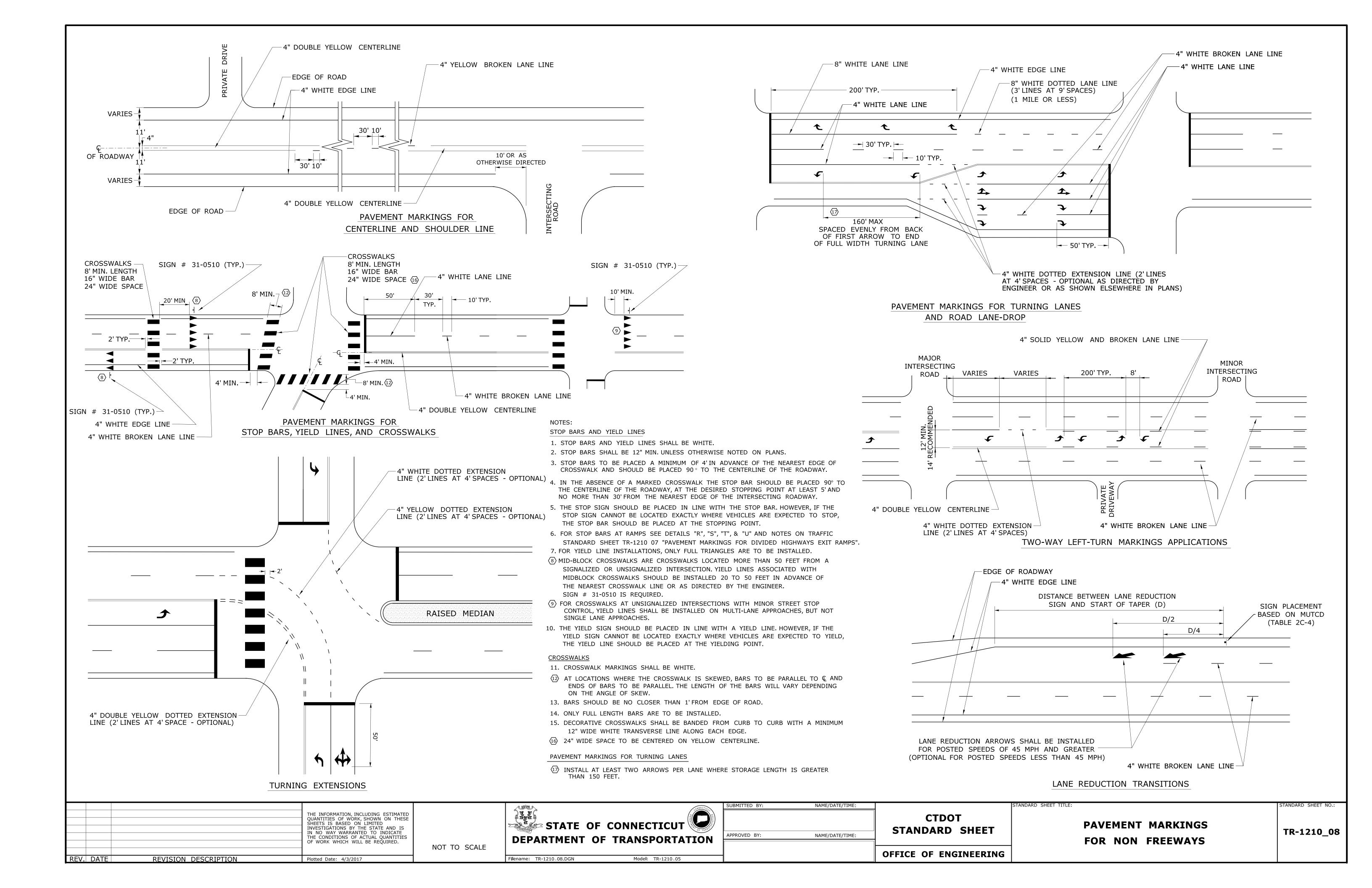
SHEET NO.	TITLE	APPROVAL DATE		SHEET NO.	TITLE	APPROVA DATE
R-1000_01	GENERAL CLAUSES (TEST PROCEDURES)	1/2014		TR-1205_01	DELINEATION, DELINEATOR AND OBJECT MARKER DETAILS	4/2017
R-1001_01	TRENCHING & BACKFILLING, ELECTRICAL CONDUIT	4/2012		TR-1208_01	SIGN SUPPORT AND SIGN PLACEMENT DETAILS, GORE EXIT SIGN	4/2017
R-1002_01	TRAFFIC CONTROL FOUNDATIONS	1/2014		TR-1208_02	METAL SIGN POSTS AND SIGN MOUNTING DETAILS	6/2017
R-1010_01	CONCRETE HANDHOLE	4/2014		TR-1210_01	PAVEMENT MARKINGS (DURABLE MARKINGS) FOR DIVIDED HIGHWAYS	OBSOLET
R-1102_01	PEDESTALS, PEDESTRIAN SIGNALS	4/2012		TR-1210_02	PAVEMENT MARKINGS (DURABLE MARKINGS) FOR DIVIDED HIGHWAYS	OBSOLET
R-1105_01	TRAFFIC SIGNALS AND CABLE ASSIGNMENTS	5/2015		TR-1210_03	SPECIAL DETAILS & TYPICAL PAVEMENT MARKINGS FOR TWO-WAY HIGHWAYS	OBSOLET
R-1107_01	PEDESTRIAN PUSH BUTTON	4/2014	<b>√</b>	TR-1210_04	PAVEMENT MARKING LINES AND SYMBOLS	4/2017
R-1108_01	CONTROLLERS	5/2013		TR-1210_05	PAVEMENT MARKINGS FOR DIVIDED HIGHWAYS	4/2017
R-1111_01	LOOP VEHICLE DETECTOR AND SAWCUT	4/2014		TR-1210_06	PAVEMENT MARKINGS FOR DIVIDED HIGHWAYS	6/2017
R-1113_01	CONTROL CABLE	4/2014		TR-1210_07	PAVEMENT MARKINGS FOR EXIT RAMPS	4/2017
R-1114_01	BONDING & UTILITY POLE ATTACHMENT DETAILS, SIGN HANGER, "Y" CLAMP DETAILS	4/2012 TR-1208_01 SIGN SUPPORT AND SIGN PLACEMENT DETAILS, GORE EXIT SIGN 4/2017  1/2014 TR-1208_02 METAL SIGN POSTS AND SIGN MOUNTING DETAILS 6/2017  4/2014 TR-1210_01 PAVEMENT MARKINGS (DURABLE MARKINGS) FOR DIVIDED HIGHWAYS OBSOLE  4/2012 TR-1210_02 PAVEMENT MARKINGS (DURABLE MARKINGS) FOR DIVIDED HIGHWAYS OBSOLE  5/2015 TR-1210_03 SPECIAL DETAILS & TYPICAL PAVEMENT MARKINGS FOR TWO-WAY HIGHWAYS OBSOLE  4/2014 TR-1210_04 PAVEMENT MARKING LINES AND SYMBOLS 4/2017  5/2013 TR-1210_05 PAVEMENT MARKINGS FOR DIVIDED HIGHWAYS 4/2017  4/2014 TR-1210_06 PAVEMENT MARKINGS FOR DIVIDED HIGHWAYS 6/2017				
				TR-1210_09	PAVEMENT MARKINGS FOR BICYCLE LANES, PARKING STALLS, AND RR CROSSINGS	4/2017
			<b>√</b>	TR-1220_01	SIGNS FOR CONSTRUCTION AND PERMIT OPERATIONS	8/2015
			<b>√</b>	TR-1220_02	CONSTRUCTION SIGN SUPPORTS AND CHANNELIZING DEVICES	8/2015

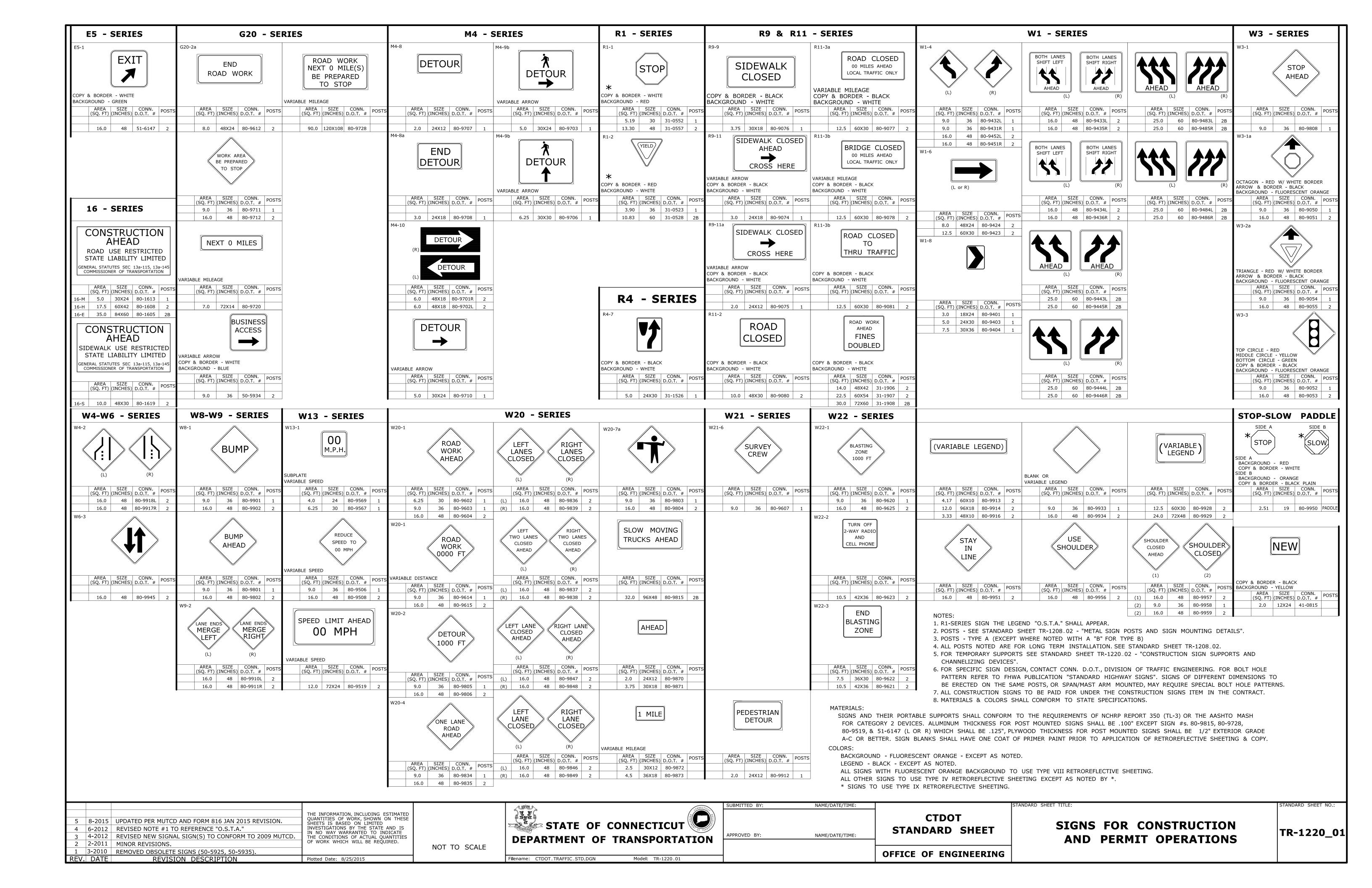
		COMMECTICAL	SUBMITTED BY: NAME/DATE/TIME:	STANI	DARD SHEET TITLE:
QUANTITIE  4 4-2017 REMOVED TR-1210_01 TO TR-1210_03. ADDED TR-1210_04 TO TR-1210_09  3 4-2014 REMOVED TR-1111 02.	IFORMATION, INCLUDING ESTIMATED ITIES OF WORK, SHOWN ON THESE S IS BASED ON LIMITED IGATIONS BY THE STATE AND IS WAY WARRANTED TO INDICATE DINDITIONS OF ACTUAL QUANTITIES OF INCLUDING THE STATE OF ITEM OF I	STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION		CTDOT STANDARD SHEET	TRAFFIC STANDARD SHEET INDEX
1 4-2012 RENUMBERED TR-1107_02 TO TR-1114_01. REMOVED TR-1116_01.  REV. DATE REVISION DESCRIPTION Plotted Da	NOT TO SCALE  Date: 7/18/2017	Filename: CTDOT_TRAFFIC_STD_DGN.DGN Model: TR-01-STD_INDEX		OFFICE OF ENGINEERING	

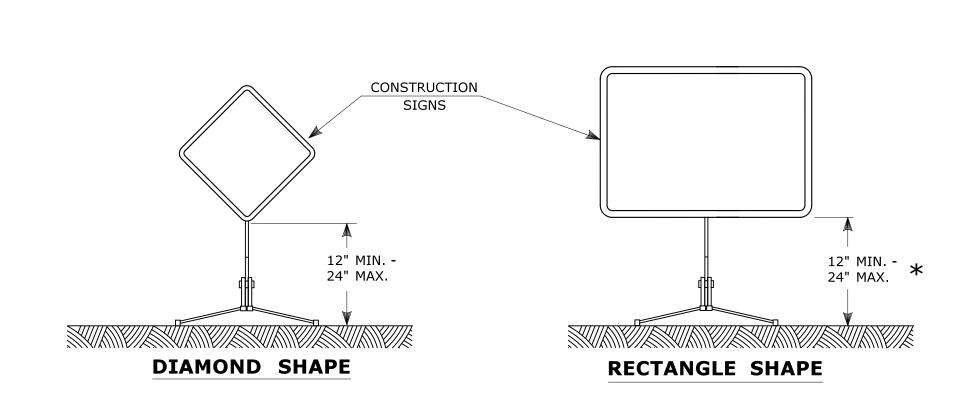
STANDARD SHEET NO.:

TR-STD\_INDEX







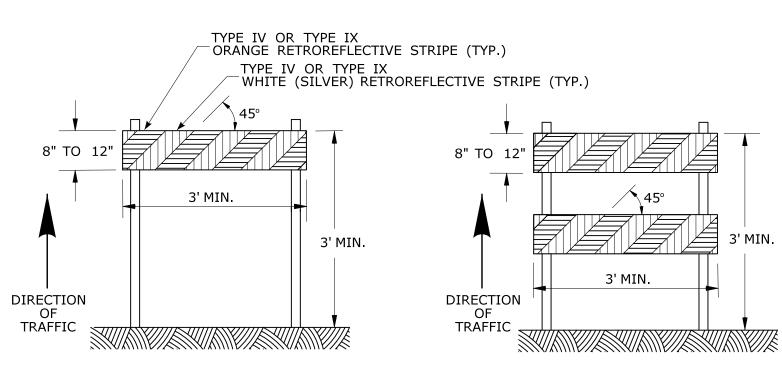


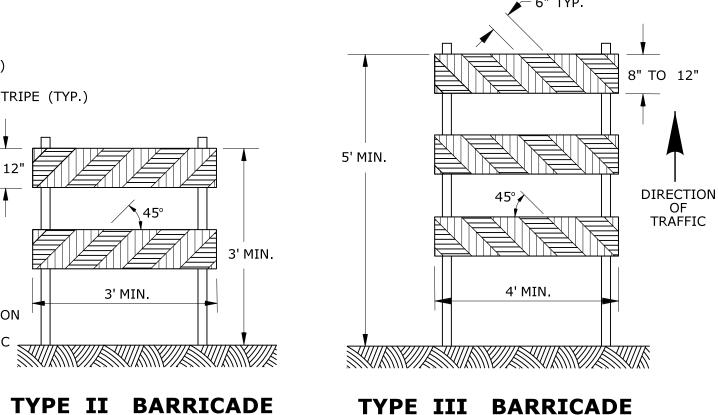
#### PORTABLE CONSTRUCTION SIGNS

NOTES FOR PORTABLE SIGN SUPPORTS:

- 1. SIGNS AND THEIR PORTABLE SUPPORTS SHALL CONFORM TO THE REQUIREMENTS OF NCHRP REPORT 350 (TL-3) OR THE AASHTO MASH FOR CATEGORY 2 DEVICES AND THE LATEST EDITION OF THE MUTCD.
- 2. MOUNTING HEIGHT OF SIGNS SHALL BE A MINIMUM OF 12" AND A MAXIMUM OF 24". SIGNS SHALL BE MOUNTED HIGHER AS NEEDED TO MEET FIELD CONDITIONS OR AS DIRECTED BY THE ENGINEER.
- 3. THE ENGINEER RESERVES THE RIGHT TO REJECT ANY SUPPORT DEEMED UNSUITABLE FOR THE PURPOSE INTENDED.
- 4. PORTABLE SIGN SUPPORTS SHALL BE STABILIZED IN A MANNER THAT WILL NOT AFFECT THEIR COMPLIANCE WITH NCHRP REPORT 350 (TL-3) OR THE AASHTO MASH FOR CATEGORY 2 DEVICES.
- 5. PORTABLE CONSTRUCTION SIGN SUPPORTS SHOULD NOT BE USED FOR DURATION OF MORE THAN 3 DAYS EXCEPT FOR R9-8 THROUGH R9-11a SERIES, R11 SERIES, W1-6 THROUGH W1-8 SERIES, M4-10, AND E5-1. SEE STANDARD SHEET TR-1220\_01 - "SIGNS FOR CONSTRUCTION AND PERMIT OPERATIONS" FOR SIGN DETAILS.
- \* FOR E5-1 (EXIT SIGNS) USE MIN 48".

TYPE I BARRICADE





### CONSTRUCTION BARRICADES

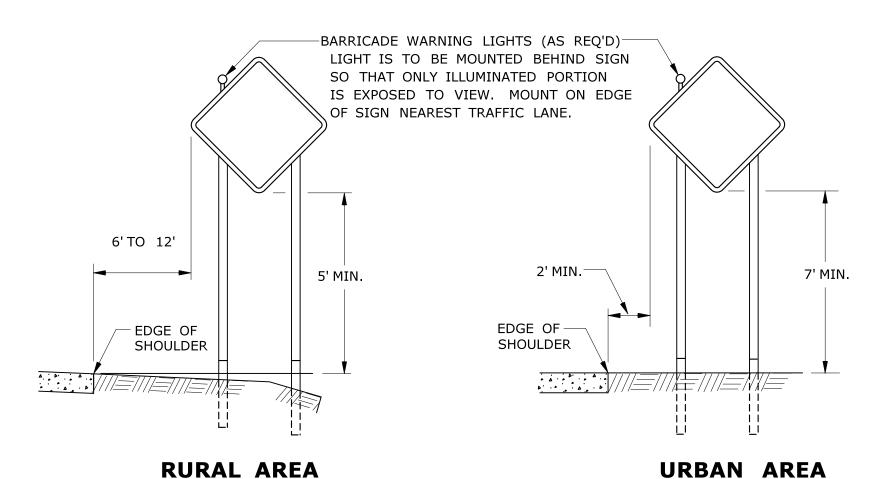
- 1. CONSTRUCTION BARRICADES SHALL CONFORM TO THE REQUIREMENTS OF NCHRP REPORT 350 (TL-3) OR THE AASHTO MASH AND THE LATEST EDITION OF THE MUTCD.
- 2. MARKINGS FOR BARRICADE RAILS SHALL BE ALTERNATE ORANGE AND WHITE STRIPES SLOPING DOWNWARD IN THE DIRECTION TRAFFIC IS TO PASS. 6" WIDE STRIPES SHALL BE USED.
- 3. THE ENTIRE AREA OF ORANGE AND WHITE STRIPES SHALL BE RETROREFLECTIVE SHEETING AS REQUIRED IN THE SPECIFICATIONS. THE SIDES OF BARRICADES FACING TRAFFIC SHALL HAVE RETROREFLECTIVE RAIL FACES.
- 4. THE ENGINEER RESERVES THE RIGHT TO REJECT ANY BARRICADE DEEMED UNSUITABLE FOR THE PURPOSE INTENDED.
- 5. CORNERS OF BARRICADE RAILS SHALL BE ROUNDED.
- 6. SIGNS MAY ONLY BE INSTALLED ON TYPE III BARRICADES AND SHALL BE PLACED SO AS TO COVER NO MORE THAN ONE BARRICADE RAIL.

# TYPE IX ORANGE RETROREFLECTIVE STRIPE -TYPE IX WHITE (SILVER) RETROREFLECTIVE STRIPE — -CENTERED ON SECTION (TYP.) TYPE IX ORANGE RETROREFLECTIVE STRIPE -TYPE IX WHITE (SILVER) RETROREFLECTIVE STRIPE -

#### **42" TRAFFIC CONE**

#### NOTES:

- 1. TRAFFIC CONES SHALL CONFORM TO THE REQUIREMENTS OF NCHRP REPORT 350 (TL-3) OR THE AASHTO MASH FOR CATEGORY 1 DEVICES AND THE LATEST EDITION OF THE MUTCD.
- 2. IF RUBBER CONES ARE USED, THEY SHALL HAVE INTERIOR RIBS FOR RIGIDITY.
- 3. IF PLASTIC CONES ARE USED, THEY SHALL BE COLOR IMPREGNATED.
- 4. THE ENGINEER RESERVES THE RIGHT TO REJECT ANY CONE DEEMED UNSUITABLE FOR THE PURPOSE INTENDED.
- 5. THE ENTIRE AREA OF ORANGE AND WHITE STRIPES SHALL BE RETROREFLECTIVE SHEETING AS REQUIRED IN THE SPECIFICATIONS.
- 6. THE SECTIONS OF CONES NOT COVERED WITH RETROREFLECTIVE STRIPES SHALL BE ORANGE.



### PLACEMENT OF CONSTRUCTION SIGNS TYPICAL LONG TERM INSTALLATION

#### NOTES:

SUPPORTS SHALL BE METAL SIGN POSTS AND HAVE BREAK-AWAY FEATURES. SEE TYPICAL SHEETS:

"TYPICAL SIGN SUPPORT AND SIGN PLACEMENT DETAILS-GORE EXIT SIGN" "TYPICAL METAL SIGN POSTS AND SIGN MOUNTING DETAILS"

#### 1. TRAFFIC CONES SHALL CONFORM TO THE REQUIREMENTS OF NCHRP REPORT 350 (TL-3) OR THE AASHTO MASH FOR CATEGORY 1 DEVICES AND THE LATEST EDITION OF THE MUTCD.

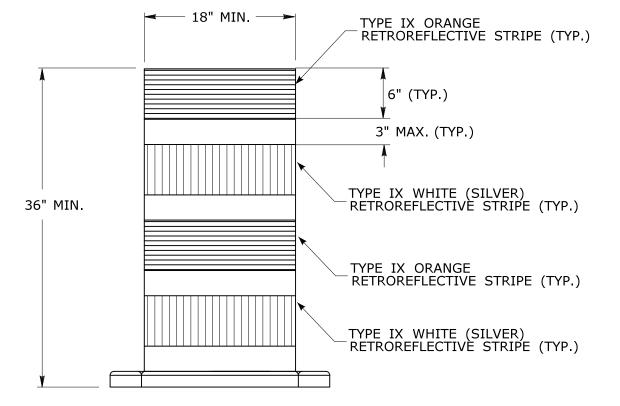
2. IF RUBBER CONES ARE USED, THEY SHALL HAVE INTERIOR RIBS FOR RIGIDITY.

TRAFFIC CONE

3" TO 4

28" MIN.

- 3. IF PLASTIC CONES ARE USED, THEY SHALL BE COLOR IMPREGNATED.
- 4. THE ENGINEER RESERVES THE RIGHT TO REJECT ANY CONE DEEMED UNSUITABLE FOR THE PURPOSE INTENDED.
- 5. TRAFFIC CONES NOT USED AT NIGHT MAY UTILIZE TYPE III SHEETING.
- 6. THE SECTIONS OF CONES NOT COVERED WITH RETROREFLECTIVE STRIPES SHALL BE ORANGE.



#### TRAFFIC DRUM **FRONT VIEW**

#### NOTES:

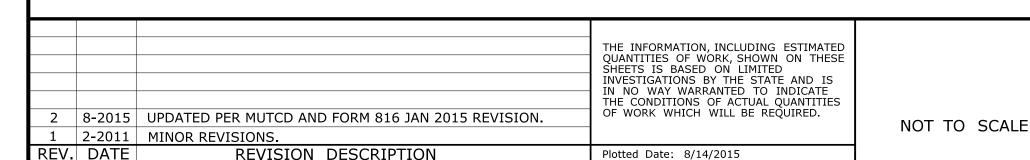
TYPE VI OR TYPE IX

WHITE (SILVER) RETROREFLECTIVE STRIPE

NOTES:

TYPE VI OR TYPE IX WHITE (SILVER) RETROREFLECTIVE STRIPE

- 1. TRAFFIC DRUM SHALL CONFORM TO THE REQUIREMENTS OF NCHRP REPORT 350 (TL-3) OR THE AASHTO MASH FOR CATEGORY 1 DEVICES AND THE LATEST EDITION OF THE MUTCD.
- 2. THE ENGINEER RESERVES THE RIGHT TO REJECT ANY DRUM DEEMED UNSUITABLE FOR THE PURPOSE INTENDED.
- 3. THE ENTIRE AREA OF ORANGE AND WHITE STRIPES SHALL BE RETROREFLECTIVE SHEETING AS REQUIRED IN THE SPECIFICATIONS.
- 4. THE SECTIONS OF DRUMS NOT COVERED WITH RETROREFLECTIVE STRIPES SHALL BE ORANGE.



Filename: CTDOT\_TRAFFIC\_STD.DGN

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OFFICE OF ENGINEERING

**CONSTRUCTION SIGN SUPPORTS** AND CHANNELIZING DEVICES

TR-1220\_02