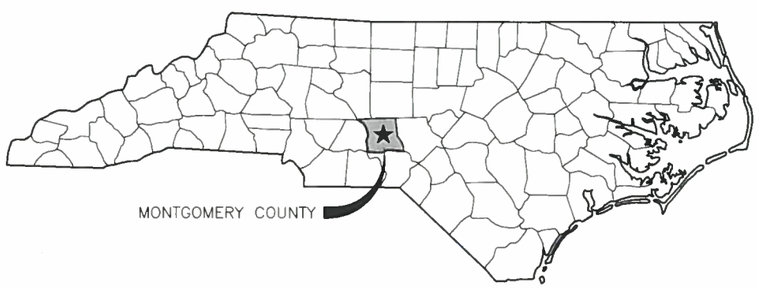
N.C. HIGHWAY 73
SIDEWALK IMPROVEMENTS
TO SERVE
TOWN OF MOUNT GILEAD
MONTGOMERY COUNTY, NORTH CAROLINA

INDEX OF SHEETS

SHEET NO.	TITLE
1	COVER SHEET
L-1	OVERALL SIDEWALK PLAN
L-2	SIDEWALK PLAN
L-3	SIDEWALK PLAN
L-4	DETAILS
L-5	DETAILS
L-6	DETAILS
L-7	DETAILS
L-8	DETAILS



COUNTY LOCATION MAP
NTS

Mayor	-	Earl Poplin
Commissioner	-	Tim McAuley
Commissioner	-	Paula Covington
Commissioner	-	Branson Webb
Commissioner	-	Vera Richardson
Town Manager	-	Katrina Tatum

NORTH CAROLINA PROFESSIONAL SEAL 17651 ENGINEER BILL LESTER, JR.

5·21·15

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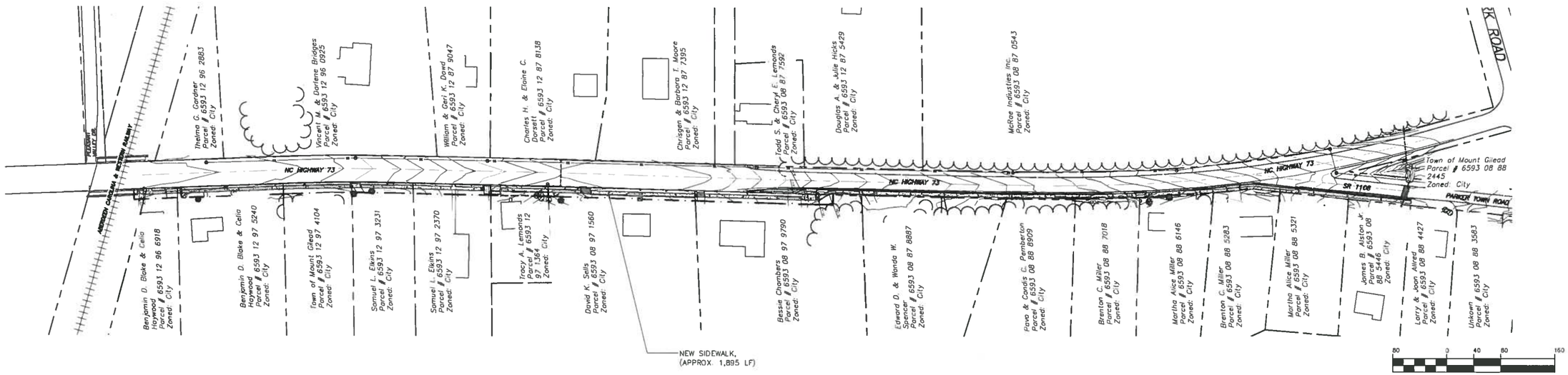
REVISIONS			
SYM.	DESCRIPTION	DATE	BY
	REVISED PER NCDOT COMMENTS	3-31-15	WLS



NORTH

1 / L-1 SIDEWALK OVERALL SITE PLAN

SCALE: 1" = 80'-0"

GENERAL CONSTRUCTION NOTES:

1. THE CONTRACTOR SHALL CONTACT ALL APPLICABLE UTILITY COMPANIES FOR THE EXACT LOCATION OF ALL UNDERGROUND MAINS, CABLES, OR LINES BEFORE CONSTRUCTION BEGINS.
2. ALL WORK PERFORMED WITHIN NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RIGHTS-OF-WAY SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE NCDOT CONSTRUCTION AND MAINTENANCE OPERATIONS SUPPLEMENT TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PERFORMING THE WORK AND ADHERING TO THE RIGHT-OF-WAY ENCROACHMENT CONTRACT SPECIAL PROVISIONS.
3. ALL SIDEWALKS AND HANDICAP RAMPS TO BE BUILT IN ACCORDANCE WITH THE CURRENT EDITION OF THE NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES AND THE ROADWAY STANDARD DRAWINGS MANUAL.
4. AS WELL AS THE NCDOT REQUIREMENTS, ALL SIDEWALKS AND HANDICAP RAMPS TO MEET THE REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT (ADA).
5. ALL CROSSWALK STRIPING, IF REQUIRED, TO BE IN ACCORDANCE WITH THE CURRENT EDITION OF THE NCDOT ROADWAY STANDARD DRAWING # 848.05 AND THE CURRENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). CROSSWALK MARKINGS TO BE 6 INCH SOLID WHITE LINES AND NOT LESS THAN 6 FEET WIDE.
6. ALL SIDEWALKS TO BE CLASS "B" CONCRETE WITH SIDEWALK FINISH.
7. ALL SIDEWALKS TO BE A MINIMUM OF 4 INCHES THICK AND 5 FEET WIDE, EXCEPT AT NOTED DRIVEWAYS WHERE THEY ARE TO BE A MINIMUM OF 6 INCHES THICK.
8. ALL SIDEWALKS ENDING AT A HANDICAP RAMP SHALL END A MINIMUM OF 3 FEET PAST HANDICAP RAMP TAPER.
9. ALL SIDEWALK SUBGRADE TO BE COMPACTED TO 95% PROCTOR AND TO BE FREE OF ANY ROOTS AND DEBRIS FOR AT LEAST 6 INCHES DEPTH.
10. ALL LANDSCAPING TO BE UNDISTURBED. IF LANDSCAPE MUST BE DISTURBED IT SHALL BE REPLACED AS SOON AS DISTURBANCE IS COMPLETED IN THAT AREA.
11. TRAFFIC BOXES, DROP INLET COVERS, SIGNALIZATION BOXES AND WATER VALVES IN SIDEWALK AREA TO REMAIN AND CONTRACTOR TO BRING THEM UP TO SIDEWALK GRADE.
12. ALL ROAD / STREET SIGNS IN SIDEWALK AREA TO BE RELOCATED BY THE NCDOT. CONTRACTOR TO COORDINATE RELOCATION SCHEDULE WITH THE NCDOT.
13. THE CONTRACTOR IS RESPONSIBLE FOR REPLACING ALL CURB AND GUTTER THAT IS BROKEN / DAMAGED IN THE PROJECT AREA. A MINIMUM OF 4 FEET IS TO BE CUT OUT AND REPLACED AT THESE LOCATIONS. (THESE ARE IN ADDITION TO AREAS NOTED FOR REPLACEMENT / ADJUSTMENT ON THE PLANS.)
14. ALL SIDEWALKS TO HAVE A MAXIMUM 2% CROSS SLOPE, UNLESS OTHERWISE NOTED.
15. CONTRACTOR TO TIE EXISTING GRADE TO SIDEWALK, NOT TO EXCEED 8% OVER 5 FEET UNLESS OTHERWISE SPECIFIED ON CROSS SECTIONS.
16. CONTRACTOR TO TIE TO EXISTING ASPHALT AND CONCRETE TO SIDEWALK, NOT TO EXCEED 8% OVER 5 FEET UNLESS SPECIFIED ON CROSS SECTIONS OR AS NOTED ON PLAN.
17. CONTRACTOR SHALL ADJUST ELEVATIONS OF ALL EXISTING VALVE BOXES AND TRAFFIC SIGNAL BOXES PROPOSED UNDER SIDEWALK. WHERE EXISTING ABOVE GRADE CONCRETE DRAINAGE STRUCTURES EXIST WITHIN PROPOSED SIDEWALK AREAS; CONTRACTOR SHALL CONSTRUCT NEW SIDEWALK TO MATCH EXISTING SLAB STRUCTURE ELEVATIONS AND INSTALL EXPANSION JOINTS IN ACCORDANCE WITH NCDOT STANDARD DETAIL 848.01 ON SHEET 8.
18. CONTRACTOR SHALL REMOVE ALL EXISTING NC DOT SIGNAGE WITHIN DISTURBED AREAS FOR CONSTRUCTION OF SIDEWALK. SIGNAGE SHALL BE SET ASIDE AND PROTECTED FOR NC DOT TO REINSTALL AT THE CONCLUSION OF THE PROJECT. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE CREATED TO SIGNAGE DURING REMOVAL AND CONSTRUCTION.
19. ALL LANE CLOSURE TIMES SHALL BE COORDINATED WITH NC DOT AND MAY BE PROHIBITED DURING HIGH VOLUME PERIODS AS ESTABLISHED BY NC DOT.
20. A CERTIFIED TESTING AGENCY SHALL BE PROVIDED BY OWNER FOR TESTING OF CONCRETE AS REQUIRED BY NC DOT SPECIFICATIONS. CONTRACTOR SHALL COORDINATE WITH TESTING AGENCY TO PROVIDE SAMPLES AS REQUIRED.

2 / L-1 GENERAL NOTES

LEGEND

EXISITNG
- EDGE OF PAVEMENT BACK OF CURB
- GIS PROPERTY LINE
- RIGHT-OF-WAY
- OVERHEAD ELECTRIC
- STORM DRAIN
- WOODS LINE
- DITCH
- HOUSE / STRUCTURE

PROPOSED
- PROPOSED SIDEWALK
- PROPOSED HEAVY DUTY CONCRETE
- PROPOSED ASPHALT PAVING
- PROPOSED 2'-6" CURB & GUTTER
- PROPOSED 1'-6" WEDGE CURB & GUTTER
- PROPOSED DRIVEWAY TURNOUT

EXISITNG
- VARIOUS TREES & SHRUBS
- POWER POLE W / GUY WIRE
- WATER VALVE
- TRAFFIC SIGNAL BOX
- WATER METER
- FIRE HYDRANT
- STORM DRAIN INLET
- RIGHT-OF-WAY MARKER
- TREE STUMP
- SANITARY SEWER MANHOLE
- SANITARY SEWER CLEANOUT
- SIGN
- STOP SIGN
- ELECTRICAL PANEL / TRAFFIC SIGNAL BOX
- CONCRETE SLAB W/ ELECTRICAL PANEL
- STORM DRAIN W / HEADWALL

NOTE: LOCATIONS OF EXISTING UTILITIES AS SHOWN ARE APPROXIMATE ONLY. EXACT LOCATIONS ARE TO BE VERIFIED IN THE FIELD BY THE CONTRACTOR.

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OVERALL SIDEWALK PLAN

NC HIGHWAY 73
SIDEWALK IMPROVEMENTS
TO SERVE
TOWN OF MOUNT GILEAD
MONTGOMERY COUNTY, NORTH CAROLINA

DATE:	MAY, 2015
DESIGNED:	WLS
DRAWN:	WLS
CHECKED:	-
NO.	L-1

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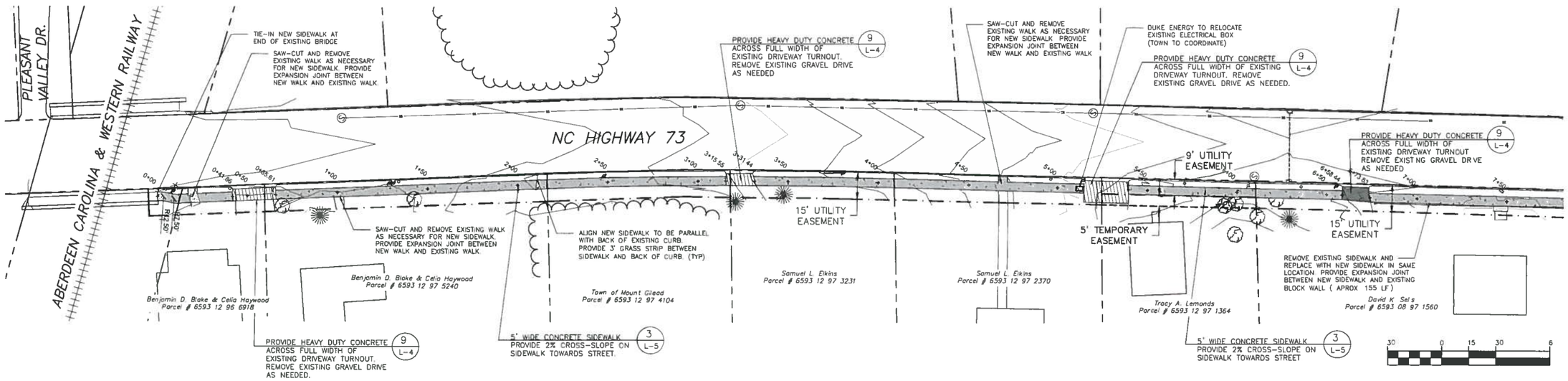
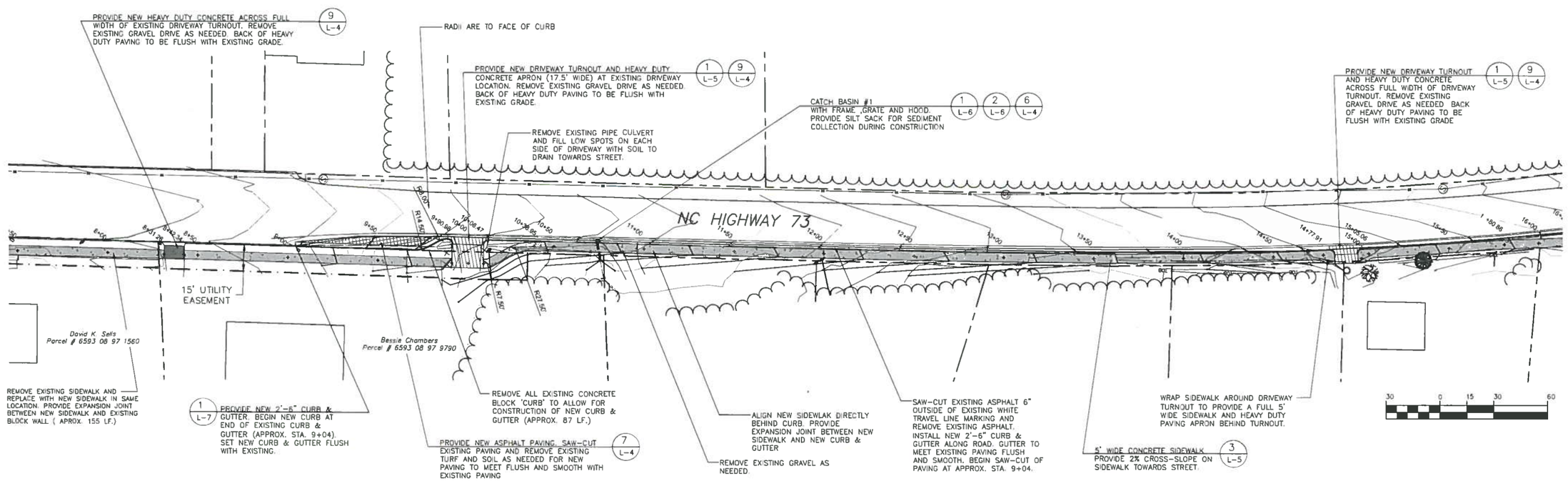


NORTH

1 L-2 SIDEWALK LAYOUT PLAN (STA. 0+00 TO STA. 7+50)

SCALE: 1" = 30'-0"



NORTH

2 L-2 SIDEWALK LAYOUT PLAN (STA. 7+50 TO STA. 16+00)

SCALE: 1" = 30'-0"

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SIDEWALK PLAN

NC HIGHWAY 73
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MONTGOMERY COUNTY, NORTH CAROLINA

DATE:	MAY, 2015
DESIGNED:	WLS
DRAWN:	WLS
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NO.	L-2

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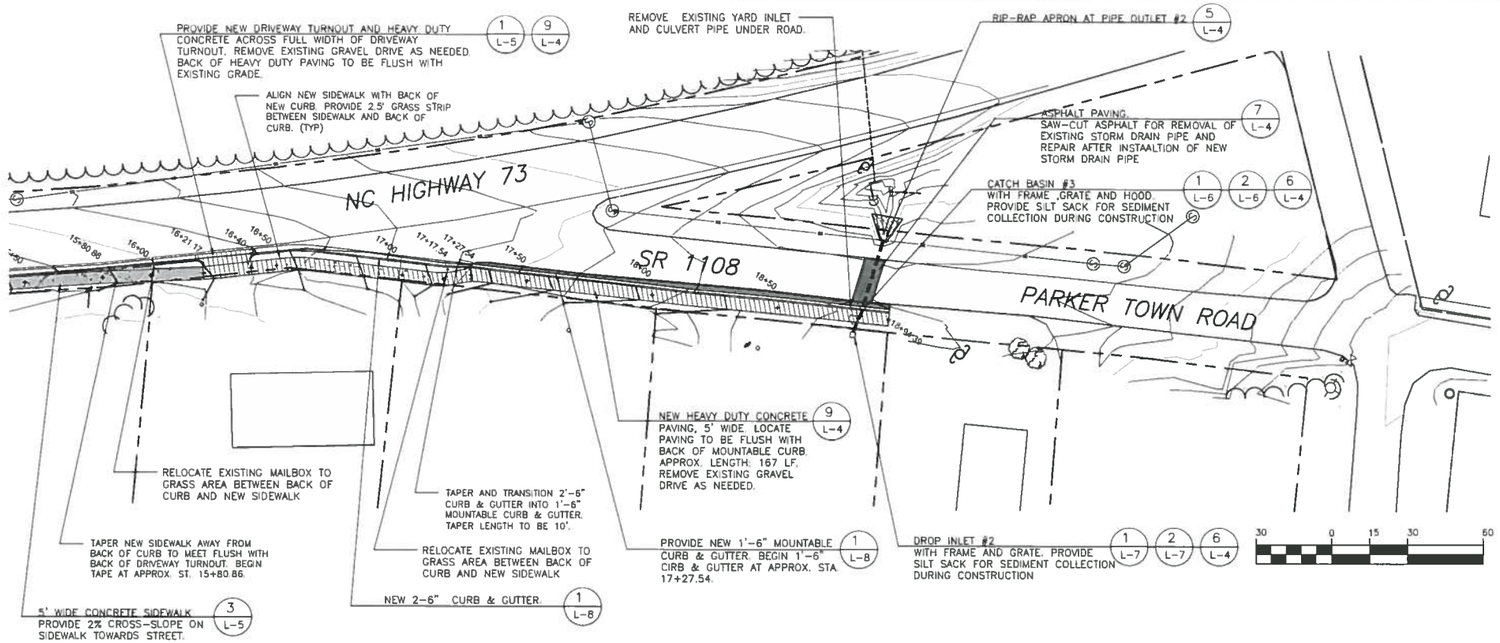

NORTH

1 / L-3 SIDEWALK LAYOUT PLAN (STA. 16+00 TO STA. 18+94.39)

SCALE: 1" = 30'-0"

REVISIONS			
SYM.	DESCRIPTION	DATE	BY
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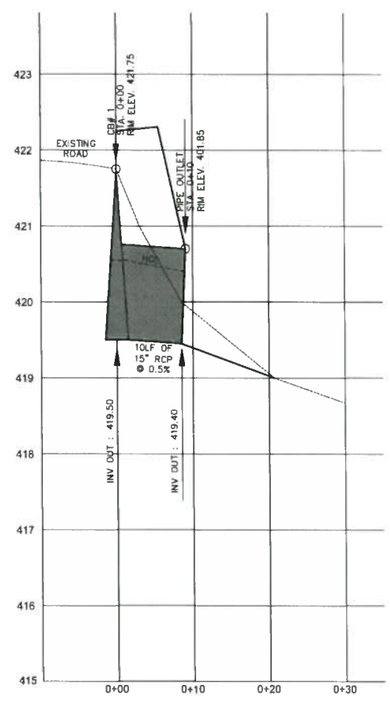
STORM FREQUENCY: 25 YEAR TIME OF CONCENTRATION: 5 MIN.

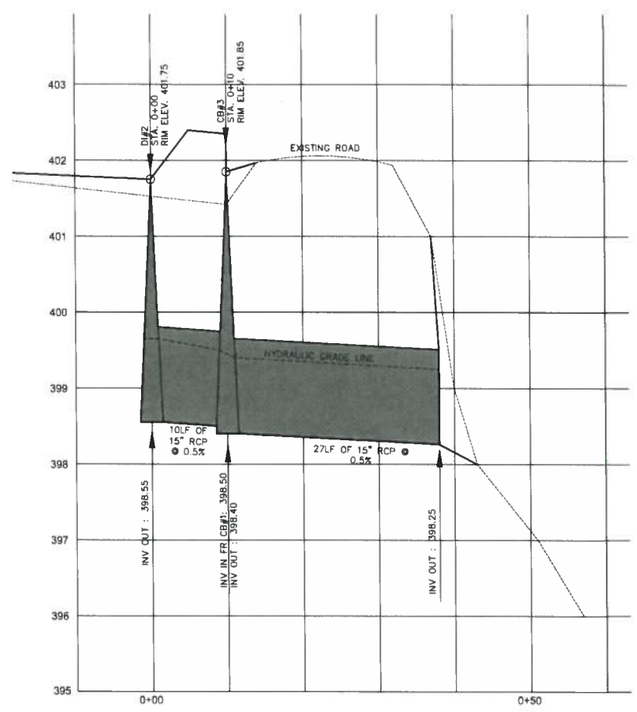
LOCATION		AREA(AC.)		C/I	Q=CIA(CFS)			SLOPE	LENGTH	SIZE	VEL.	RIM	INVERT	
FROM	TO	SUB	TOTAL		SUB	TOTAL	N	%	FEET	INCH	FPS	ELEV	OUT	SUB
CB #1	OUTLET	0.30	0.30	.95/8.44	2.41	2.41	.012	0.5	10	15	3.8	421.75	419.50	
														PIPE INV. OUT: 419.40
DI #2	CI #3	0.67	0.67	.37/8.44	2.09	2.09	.012	0.5	10	15	3.7	401.75	398.55	
CB #3	OUTLET	0.12	0.79	.95/8.44	0.96	3.05	.012	0.5	27	15	4.2	401.85	398.40	INV. IN FR.CB #2: 398.50
														PIPE INV. OUT: 398.25

4 / L-3 STORM PIPE SCHEDULE



2 / L-3 STORM DRAINAGE PROFILE CB#1

SCALE: 1" = 10'-0" HORIZONTAL, 1" =1'-0" VERTICLE



3 / L-3 STORM DRAINAGE PROFILE DI#2 TO CB#3

SCALE: 1" = 10'-0" HORIZONTAL, 1" =1'-0" VERTICLE

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SIDEWALK PLAN

NC HIGHWAY 73
SIDEWALK IMPROVEMENTS
TO SERVE
TOWN OF MOUNT GILEAD
MONTGOMERY COUNTY, NORTH CAROLINA

DATE: MAY, 2015
DESIGNED: WLS
DRAWN: WLS
CHECKED: -
NO. L-3

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TEMPORARY SEEDING

SEEDING MIXTURE:

SPECIES	RATE:
WINTER RYE (GRAIN)	200 LB/AC.
GERMAN MILLET	120 LB/AC.

SEEDING DATES:
WINTER RYE (GRAIN): SEPT. 1 – MAR 1
GERMAN MILLET: MAR 1 – SEPT. 1

SOIL AMENDMENTS:
FOLLOW RECOMMENDATIONS OF SOIL TEST OR APPLY 2000 LB/AC. GROUND AGRICULTURAL LIMESTONE AND 750 LB/AC. 10–10–10 FERTILIZER.

MULCH:
APPLY 4000 LB/AC. STRAW. ANCHOR STRAW BY TACKING WITH NON–ASPHALTIC TACKIFIER, NETTING, OR A MULCH ANCHORING TOOL. A DISK WITH BLADES TURNED NEARLY STRAIGHT CAN BE USED AS AN ANCHORING TOOL.

MAINTENANCE:
REFERTILIZE IF GROWTH IS NOT ADEQUATE. RESEED, REFERTILIZE, AND MULCH IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE.

NOTE: TEMPORARY SEED MIX SHALL BE USED FOR ALL AREAS EXPOSED GREATER THAN ONE WEEK AND SUBJECT TO FURTHER DISTURBANCE.

PERMANENT SEEDING

COMMON BERMUDA SEED 2 LB./1000 SF
SEEDING DATES:
COMMON BERMUDA : MAR. 1 – NOV. 1

SOIL AMENDMENTS: COMMON BERMUDA
FOLLOW RECOMMENDATIONS OF SOIL TEST OR APPLY 3000 LB/AC. GROUND AGRICULTURAL LIMESTONE AND 875 LB/AC. 10–10–10 FERTILIZER. ADD 25–50 LBS/ACRE NITROGEN AT 2–3 WEEK INTERVALS THROUGH MIDSUMMER.

MULCH:
STRAW MULCH

MAINTENANCE:
SUPPLEMENT RAINFALL WITH WATER AS NEEDED TO COMPLY WITH ONE INCH OF WATER PER WEEK MINIMUM AND MOW TO 3/4" TO 1" HEIGHT. TOPDRESS WITH 40 lbs/ ACRE NITROGEN IN APR., 50lbs IN JUNE, 30 lbs IN JULY, AND 25–50 lbs IN AUG.

NOTE: PERMANENT SEED MIX SHALL BE CHECKED FOR ADEQUACY ON JULY 15.

2 / L–4 SEEDING SCHEDULE

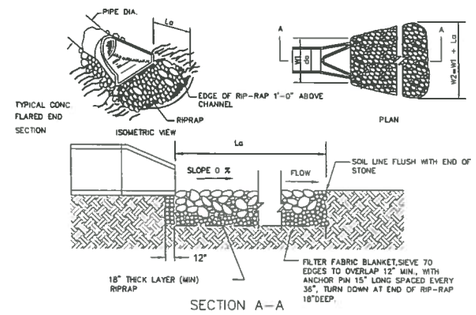
1. GROUND STABILIZATION REQUIREMENTS		
CONTRACTOR SHALL BE REQUIRED TO ESTABLISH GROUND STABILIZATION AS PER FOLLOWING CHART.		
SITE AREA DESCRIPTION	STABILIZATION TIME FRAME	STABILIZATION TIME FRAME EXCEPTIONS
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED
SLOPES 3:1 OR FLATTER	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50 FEET IN LENGTH
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE (EXCEPT FOR PERIMETERS AND HQW ZONES)
TYPICAL GROUND COVER STABILIZATION TYPES – GRASS AND OR SOD, WHEAT STRAW, MULCH, BIODEGRADABLE STRAW MATTING, SYNTHETIC MATTING, ETC.		

3 / L–4 DWQ GROUND STABILIZATION CHART

1. SEED BED PREPARATION
2. RIP THE ENTIRE AREA TO 6 INCH DEPTH.
3. REMOVE ALL LOOSE ROCK, ROOTS, AND OTHER OBSTRUCTIONS LEAVING SURFACE REASONABLY SMOOTH AND UNIFORM.
4. APPLY AGRICULTURAL LIME, FERTILIZER AND SUPERPHOSPHATE IN ACCORDANCE WITH "SEEDING SCHEDULE" AND MIX WITH SOIL.
5. CONTINUE TILLAGE UNTIL A WELL–PULVERIZED, FIRM, REASONABLY UNIFORM SEED BED IS PREPARED 4 TO 6 INCHES DEEP.
6. SEED ON A FRESHLY PREPARED SEED BED AND COVER SEED LIGHTLY WITH SEEDING EQUIPMENT OR CULTIPACK AFTER SEEDING. SEED ACCORDING TO "SEEDING SCHEDULE".
7. MULCH IN ACCORDANCE WITH "SEEDING SCHEDULE" IMMEDIATELY AFTER SEEDING.
8. INSPECT ALL SEEDING FOR COMPLIANCE WITH THE REQUIREMENTS OF THE "SEEDING SCHEDULE". MAKE NECESSARY REPAIRS AND RESEED WITHIN THE PLANTING SEASON. IF POSSIBLE, OR THE DAMAGED AREA SHALL BE REESTABLISHED FOLLOWING THE ORIGINAL LIME, FERTILIZER AND SEEDING REQUIREMENTS.

4 / L–4 SEEDBED PREPARATION

VELOCITY DISSIPATOR SCHEDULE							
FES #	DIA.	ZONE	L	W_1	W_2	CLASS	THICKNESS
outlet 1	18"	2	10	3.5	13.5	B	18"

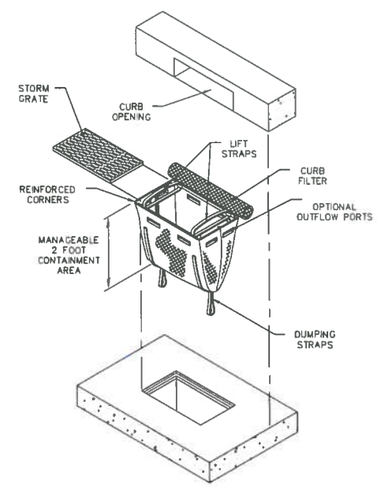


SECTION A–A

MAINTENANCE:
INSPECT RIPRAP OUTLET STRUCTURES WEEKLY AND AFTER SIGNIFICANT RAINFALL EVENTS (½" OR GREATER) TO SEE IF ANY EROSION AROUND OR BELOW THE RIPRAP HAS TAKEN PLACE, OR IF STONES HAVE BEEN DISLODGED. IMMEDIATELY MAKE ALL REPAIRS TO PREVENT FURTHER DAMAGE.

5 / L–4 RIPRAP APRON DETAIL

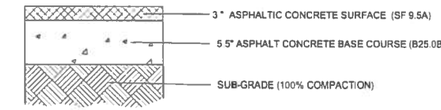
NOT TO SCALE



NOTES & MAINTENANCE:
1. INSPECT SEDIMENT BAG AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY.
2. SHOULD THE FABRIC OF A SEDIMENT BAG COLLAPSE, TEAR, DECOMPOSE OR BECOME INEFFECTIVE, REPLACE IT PROMPTLY.
3. REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND REDUCE PRESSURE ON THE BAG.
4. REMOVE SEDIMENT DEEPER THAN 12".
5. SEDIMENT BAG/INLET PROTECTION TO BE DANDY CURB SACK BY DANDY PRODUCTS, INC. PHONE #: 1–800–591–2284, OR EQUAL.

6 / L–4 STORM INLET PROTECTION

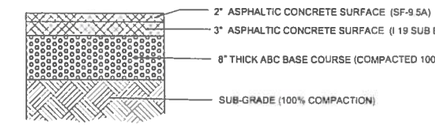
NOT TO SCALE



PAVEMENT PROFILE PER CIVIL DRAWINGS

7 / L–4 ASPHALT PAVING DETAIL

NOT TO SCALE



PAVEMENT PROFILE PER CIVIL DRAWINGS

8 / L–4 HEAVY DUTY ASPHALT DETAIL

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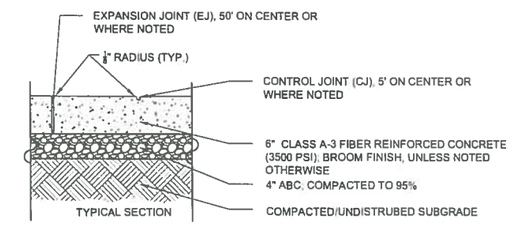

NOTES:
1. CONCRETE SIDEWALK TO BE 5' WIDE AND 4" THICK, UNLESS NOTED OTHERWISE ON PLANS.
2. PLACE A GROOVE JOINT 1" DEEP WITH ¼" RADII IN THE CONCRETE SIDEWALK AT 5' INTERVALS. ONE ¾" EXPANSION JOINT WILL BE REQUIRED AT 50' INTERVALS. A 1"2" EXPANSION JOINT WILL BE REQUIRED WHERE THE SIDEWALK JOINS ANY EXISTING RIGID SURFACE OR STRUCTURE.
3. EXPANSION JOINT TO BE FILLED WITH JOINT FILLER AND CAPPED WITH JOINT SEALER.

9 / L–4 HEAVY–DUTY CONCRETE DETAIL

NOT TO SCALE

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DETAILS

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SIDEWALK IMPROVEMENTS
TO SERVE
TOWN OF MOUNT GILEAD
MONTGOMERY COUNTY, NORTH CAROLINA

DATE: MAY, 2015
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NO.
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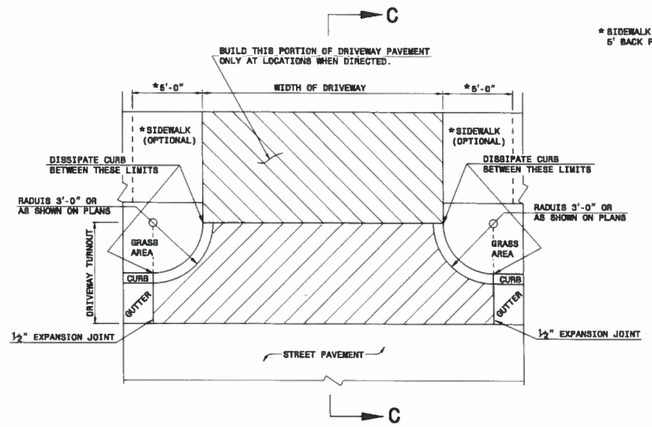
REVISIONS			
SYM.	DESCRIPTION	DATE	BY
	REVISED PER NCDOT COMMENTS	3-31-15	WLS

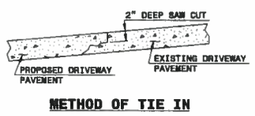
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

7-06

ENGLISH STANDARD DRAWING FOR
DRIVEWAY TURNOUT
RADIUS TYPE

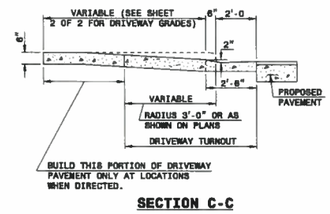


PLAN
DETAIL OF DRIVEWAY



METHOD OF TIE IN

WHEN EXISTING DRIVEWAY PAVEMENT IS CONCRETE, SAW CUT 2" DEEP JOINT AT THE POINT OF TIE-IN. SAW JOINT PERPENDICULAR TO EDGE OF EXISTING DRIVEWAY PAVEMENT.



SECTION C-C

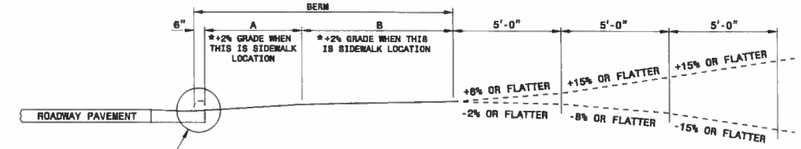
SHEET 1 OF 2
848.02

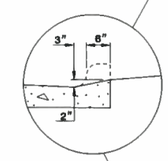
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

7-06

ENGLISH STANDARD DRAWING FOR
DRIVEWAY TURNOUT
DRIVEWAY GRADES

DESIRABLE DRIVEWAY GRADES



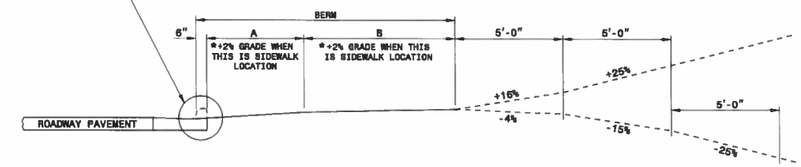


*SIDEWALK LOCATION (DO NOT PLACE SIDEWALK ON BERMS LESS THAN 8' WIDE.)

DESIRABLE OR MAXIMUM DRIVEWAY GRADES

BERM WIDTH	A DIST.	A GRADE	B DIST.	B GRADE
8' OR LESS	5'-0"	+2%*	2'-6"	+5%
8' OR LESS	2'-0"	+8%	5'-6"	+2%*
10'	4'-0"	+4%	5'-6"	+2%*
12' & OVER	4'-6"	+4%	7'-0"	+2%*

MAXIMUM DRIVEWAY GRADES



SHEET 2 OF 2
848.02

1 L-5 DRIVEWAY TURNOUT DETAIL

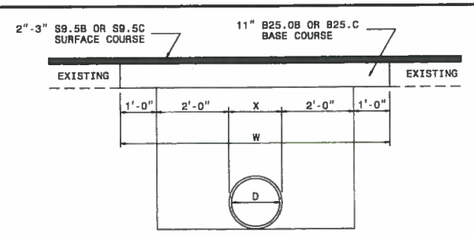
NOT TO SCALE

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

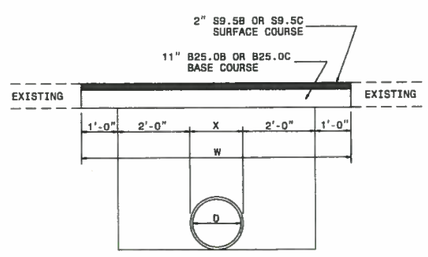
1-12

ENGLISH STANDARD DRAWING FOR
PAVEMENT REPAIRS
FOR SUPERPAVE MIX TYPES

D	X	W
12"	1'-4"	7'-4"
15"	1'-7"	7'-7"
18"	1'-10"	7'-10"
24"	2'-8"	8'-6"
30"	3'-1"	9'-1"
36"	3'-8"	9'-8"
42"	4'-5"	10'-5"
48"	5'-0"	11'-0"



PAVEMENT REPAIRS ON ROADS TO BE RESURFACED (PIPE IS PLACED UNDER EXISTING PAVEMENT)



PAVEMENT REPAIRS ON ROADS NOT TO BE RESURFACED (PIPE IS TO BE PLACED UNDER EXISTING PAVEMENT)

SHEET 1 OF 1
654.01

2 L-5 PAVEMENT REPAIR DETAIL

NOT TO SCALE

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

1-12

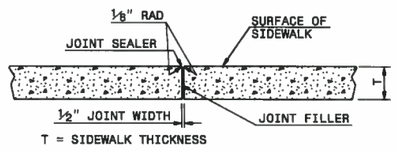
ENGLISH STANDARD DRAWING FOR
CONCRETE SIDEWALK

NOTES:

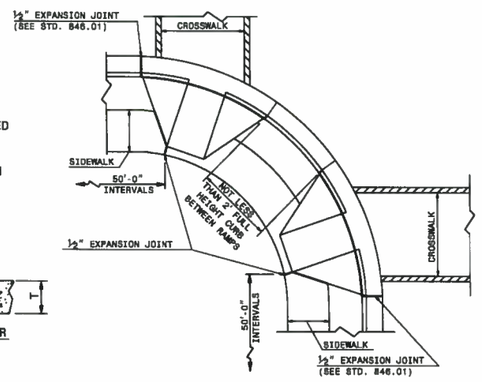
CONSTRUCT STANDARD SIDEWALK 5' WIDE AND 4" THICK UNLESS OTHERWISE DENOTED ON PLANS.

PLACE A GROOVE JOINT 1" DEEP WITH ⅛" RADII IN THE CONCRETE SIDEWALK AT 5' INTERVALS. ONE ½" EXPANSION JOINT WILL BE REQUIRED AT 50' INTERVALS. A ½" EXPANSION JOINT WILL BE REQUIRED WHERE THE SIDEWALK JOINS ANY RIGID STRUCTURE.

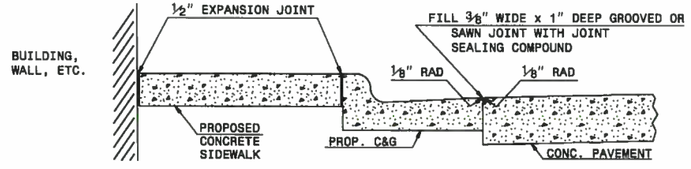
SEE STD. DWG. 848.05 FOR WHEELCHAIR RAMP LOCATION REQUIREMENTS AND CONSTRUCTION GUIDELINES.



TRANSVERSE EXPANSION JOINT IN SIDEWALK



PLAN VIEW



DETAILS SHOWING JOINTS IN CONCRETE SIDEWALK

SHEET 1 OF 1
848.01

3 L-5 CONCRETE SIDEWALK DETAIL

NOT TO SCALE

LKC Engineering, pllc
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F: 910.637.0096
lkcengineering.com
License No. P-1095

Engineering
Landscape Architecture
Planning

LKC

DETAILS

NC HIGHWAY 73
SIDEWALK IMPROVEMENTS
TO SERVE
TOWN OF MOUNT GILEAD
MONTGOMERY COUNTY, NORTH CAROLINA

DATE:	MAY, 2015
DESIGNED:	WLS
DRAWN:	WLS
CHECKED:	-
NO.	L-5

L:\WIG4-14.01 - NC 73 Sidewalk Project\800 Drawings\810 Design Drawings\100%CD.dwg, Last Saved By: ANDY PATTERSON, 5/22/2015 10:43:32 AM, L-5 Details, Plotted By: Andy Patterson, 05/22/15 10:51:39 AM
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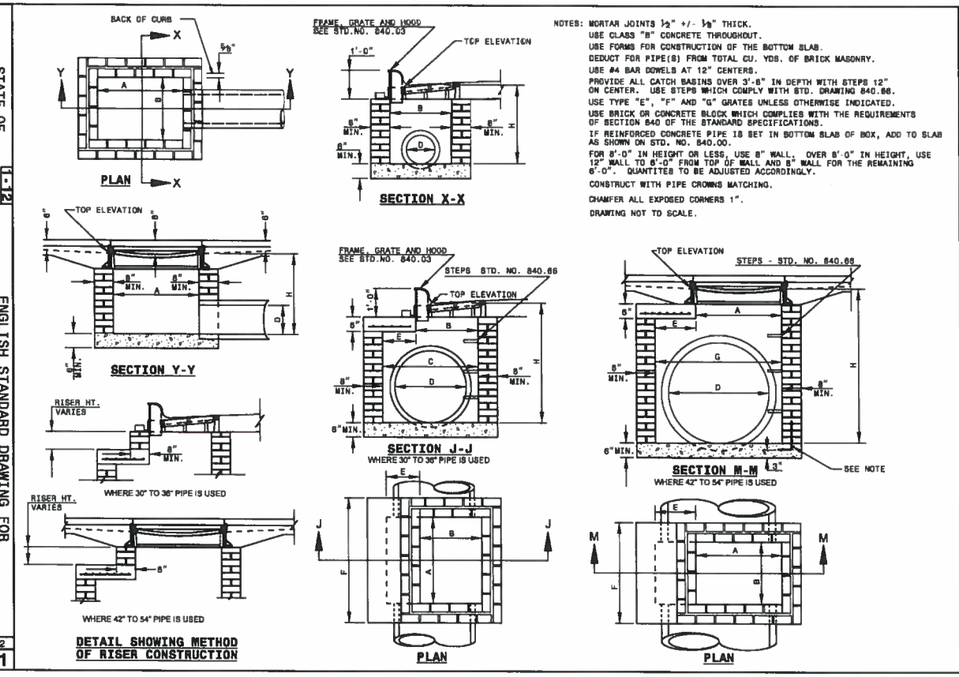
REVISIONS			
SYM.	DESCRIPTION	DATE	BY
	REVISED PER NCDOT COMMENTS	3-31-15	WLS

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

1-12



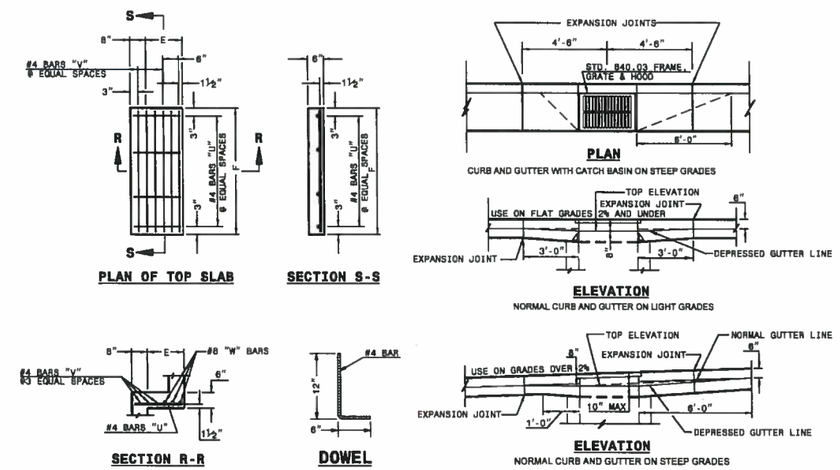
NOTES: MORTAR JOINTS ½" +/- ⅛" THICK.
USE CLASS "B" CONCRETE THROUGHOUT.
USE FORMS FOR CONSTRUCTION OF THE BOTTOM SLAB.
DEDUCT FOR PIPE(S) FROM TOTAL CU. YDS. OF BRICK MASONRY.
USE #4 BAR DOWELS AT 12" CENTERS.
PROVIDE ALL CATCH BASINS OVER 3'-6" IN DEPTH WITH STEPS 12" ON CENTER. USE STEPS WHICH COMPLY WITH STD. DRAWING 840.66.
USE TYPE "E", "F" AND "G" GRATES UNLESS OTHERWISE INDICATED.
USE BRICK OR CONCRETE BLOCK WHICH COMPLIES WITH THE REQUIREMENTS OF SECTION 840 OF THE STANDARD SPECIFICATIONS.
IF REINFORCED CONCRETE PIPE IS SET IN BOTTOM SLAB OF BOX, ADD TO SLAB AS SHOWN ON STD. NO. 840.00.
FOR 8'-0" IN HEIGHT OR LESS, USE 8" WALL. OVER 8'-0" IN HEIGHT, USE 12" WALL TO 8'-0" FROM TOP OF WALL AND 8" WALL FOR THE REMAINING 6'-0". QUANTITIES TO BE ADJUSTED ACCORDINGLY.
CONSTRUCT WITH PIPE CROWNS MATCHING.
CHAMFER ALL EXPOSED CORNERS 1".
DRAWING NOT TO SCALE.

ENGLISH STANDARD DRAWING FOR
BRICK CATCH BASIN
12" THRU 54" PIPE

SHEET 1 OF 2
840.01

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

1-12



MINIMUM DIMENSIONS AND QUANTITIES FOR BRICK CATCH BASIN(BASED ON MIN. HEIGHT, H, WITH NO RISER)*

DIMENSIONS OF BOX AND PIPE						TOP SLAB DIMENSIONS		BARS-U		BARS-V		BARS-W			CU.YDS. CONC. IN BOX			BRICK MASONRY		DEDUCTIONS ONE PIPE	
PIPE D	SPAN A	WIDTH B	WIDTH C	SPAN G	MIN. HEIGHT H	E	F	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	TOTAL LBS.	TOP SLAB	BOTTOM SLAB	TOTAL CONC.	BRICK REQD. IN WALLS	TOTAL BRICK AND CONCRETE	C.M.	R.C.
12"	3'-0"	2'-2"	--	--	2'-9"	--	--	--	--	--	--	--	--	--	--	0.281	0.281	0.883	1.164	0.020	0.042
15"	3'-0"	2'-2"			3'-0"											0.281	0.281	0.963	1.244	0.031	0.047
18"	3'-0"	2'-2"			3'-3"											0.281	0.281	1.043	1.324	0.044	0.065
24"	3'-0"	2'-2"			3'-9"											0.281	0.281	1.204	1.485	0.078	0.121
30"	3'-0"	2'-2"	3'-4"		4'-3"	1'-2"	4'-4"	4	1'-6"	3	4'-1"	3	4'-1"	45	0.147	0.374	0.521	1.606	2.217	0.122	0.184
36"	3'-0"	2'-2"	3'-10"		4'-9"	1'-8"	4'-4"	4	2'-0"	4	4'-1"	3	4'-1"	49	0.187	0.415	0.602	1.914	2.516	0.176	0.261
42"	3'-0"	2'-2"		4'-5"	5'-3"	1'-6"	3'-6"	4	1'-9"	3	3'-3"	3	3'-3"	38	0.135	0.373	0.508	2.162	2.660	0.240	0.371
48"	3'-0"	2'-2"		5'-0"	5'-9"	2'-0"	3'-6"	4	2'-8"	4	3'-3"	3	3'-3"	41	0.173	0.410	0.583	2.498	2.415	0.313	0.477
54"	3'-0"	2'-2"		5'-7"	6'-3"	2'-7"	3'-6"	4	3'-0"	6	3'-3"	3	3'-3"	47	0.211	0.448	0.659	2.806	3.465	0.398	0.595

* RISER HAS .321 CUBIC YARDS OF BRICK MASONRY PER FOOT HEIGHT

ENGLISH STANDARD DRAWING FOR
BRICK CATCH BASIN
12" THRU 54" PIPE

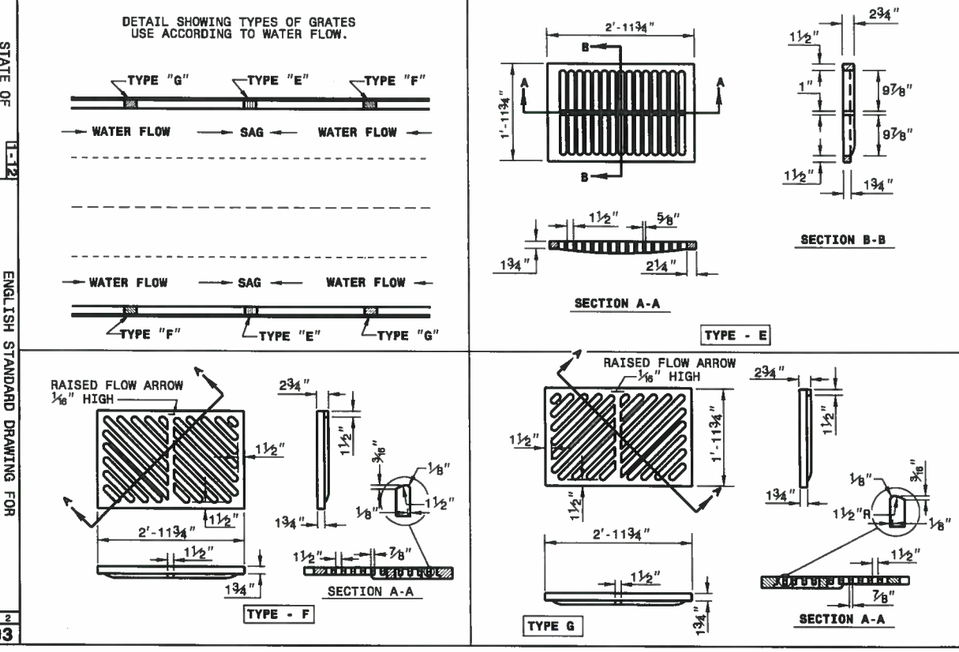
SHEET 2 OF 2
840.01

1 / L-6 BRICK CATCH BASIN DETAIL

NOT TO SCALE

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

1-12

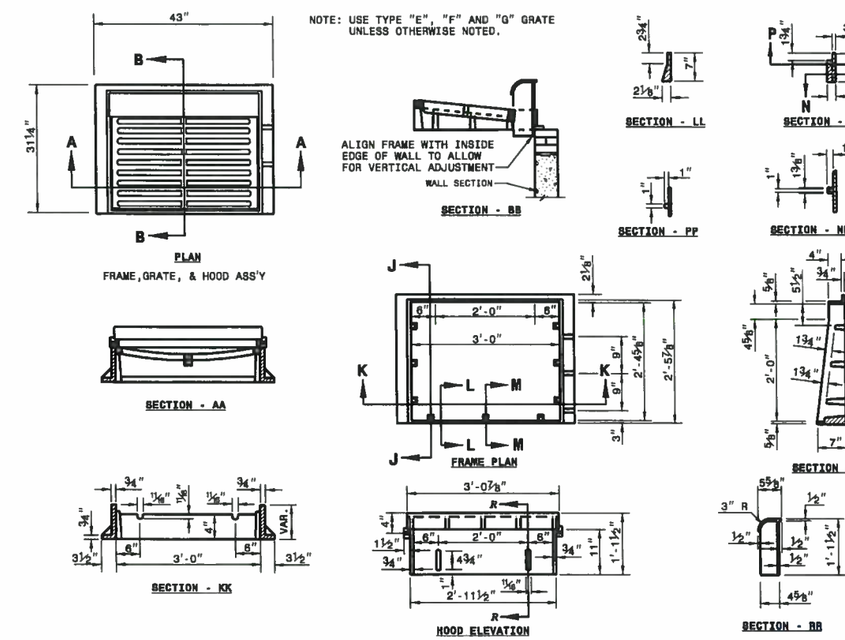


ENGLISH STANDARD DRAWING FOR
FRAME, GRATES, AND HOOD
FOR USE ON STANDARD CATCH BASIN

SHEET 2 OF 2
840.03

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

1-12



ENGLISH STANDARD DRAWING FOR
FRAME, GRATES, AND HOOD
FOR USE ON STANDARD CATCH BASIN

SHEET 1 OF 2
840.03

2 / L-6 CATCH BASIN FRAME, GRATE & HOOD DETAIL

NOT TO SCALE

LKC Engineering, pllc
140 Aqua Shed Court
Aberdeen, NC 28315
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F: 910.637.0096
lkcengineering.com
License No. P-1095

Engineering
Landscape Architecture
Planning

LKC

DETAILS

NC HIGHWAY 73
SIDEWALK IMPROVEMENTS
TO SERVE
TOWN OF MOUNT GILEAD
MONTGOMERY COUNTY, NORTH CAROLINA

DATE: MAY, 2015
DESIGNED: WLS
DRAWN: WLS
CHECKED: -
NO.
L-6

L:\MIGd-14.01 - NC 73 Sidewalk Project\900 Drawings\810 Design Drawings\100%CD.dwg; Last Saved By: ANDY PATTERSON, 5/22/2015 10:51:49 AM; L-6 Details; Plotted By: Andy Patterson, 05/22/15 10:52:01 AM
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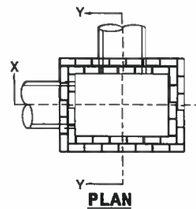
REVISIONS			
SYM.	DESCRIPTION	DATE	BY
	REVISED PER NCDOT COMMENTS	3-31-15	WLS

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

1-12

ENGLISH STANDARD DRAWING FOR
BRICK DROP INLET
12" THRU 30" PIPE

SHEET 1 OF 1
840.15



PLAN
WITH COPING REMOVED

GENERAL NOTES:

MORTAR JOINTS ½" +/- ⅛" THICK.

USE CLASS "B" CONCRETE THROUGHOUT.

USE FORMS FOR CONSTRUCTION OF THE BOTTOM SLAB.

USE #4 BAR DOWELS AT 12" CENTERS.

DEDUCT FOR PIPE(S) FROM TOTAL CU. YDS. OF BRICK MASONRY.

PROVIDE ALL CATCH BASINS OVER 3'-6" IN DEPTH WITH STEPS 12" ON CENTER. USE STEPS WHICH COMPLY WITH STD. DRAWING 840.66.

USE BRICK OR CONCRETE BLOCK WHICH COMPLIES WITH THE REQUIREMENTS OF SECTION 840 OF THE STANDARD SPECIFICATIONS.

IF REINFORCED CONCRETE PIPE IS SET IN BOTTOM SLAB OF BOX, ADD TO SLAB AS SHOWN ON STD. NO. 840.00.

FOR 8'-0" IN HEIGHT OR LESS, USE 8" WALL; OVER 8'-0" IN HEIGHT, USE 12" WALL TO 8'-0" FROM TOP OF WALL AND 8" WALL FOR THE REMAINING 8'-0". QUANTITES TO BE ADJUSTED ACCORDINGLY.

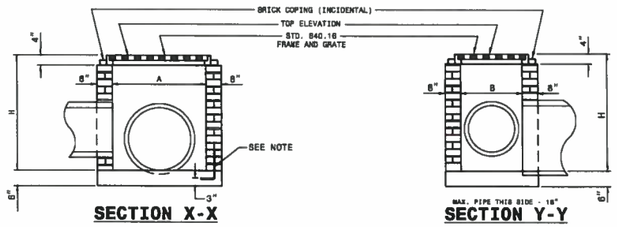
CONSTRUCT WITH PIPE CROWNS MATCHING.

SEE STANDARD DRAWING 840.25 FOR ATTACHMENT OF FRAMES AND GRATES.

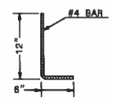
DO NOT USE BRICK MASONRY DROP INLET IN LOCATIONS SUBJECT TO TRAFFIC.

CHAMFER ALL EXPOSED CORNERS 1".

DRAWING NOT TO SCALE.



SECTION X-X **SECTION Y-Y**



DOWEL

DIMENSIONS AND QUANTITIES FOR DROP INLET(BASED ON MIN. HEIGHT, H)								
DIMENSIONS OF BOX & PIPE				CUBIC YARDS CONCRETE	CUBIC YARDS BRICK MASONRY		DEDUCTIONS FOR ONE PIPE	
PIPE	SPAN	WIDTH	MIN. HEIGHT					
D	A	B	H	BOTTOM SLAB	WALL PER FOOT HT.	TOTAL BRICK MASONRY FOR MIN. HEIGHT, H	C.S.	R.C.
12"	3'-0"	2'-0"	2'-0"	0.268	0.313	0.522	0.020	0.032
15"			2'-3"	0.268	0.313	0.600	0.031	0.047
18"			2'-6"	0.268	0.313	0.678	0.044	0.065
24"			3'-0"	0.268	0.313	0.835	0.078	0.113
30"	3'-0"	2'-0"	3'-8"	0.268	0.313	0.991	0.122	0.170

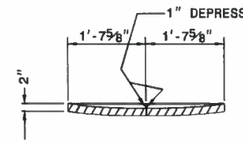
1 / L-7 BRICK DROP INLET DETAIL
NOT TO SCALE

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

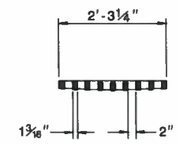
1-12

ENGLISH STANDARD DRAWING FOR
DROP INLET FRAME AND GRATES
FOR USE WITH STD. DWG.S 840.14 AND 840.15

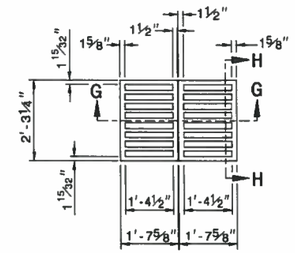
SHEET 1 OF 1
840.16



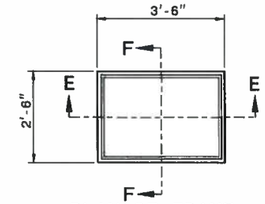
SECTION G-G



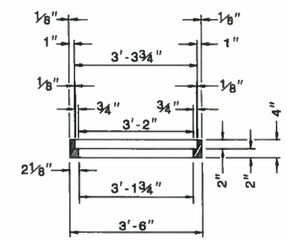
SECTION H-H



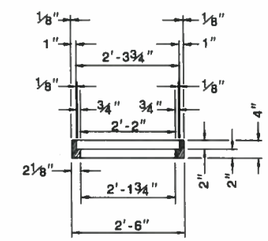
PLAN OF GRATING
CAST IRON



PLAN OF FRAME
CAST IRON



SECTION E-E



SECTION F-F

2 / L-7 BRICK DROP INLET FRAME AND GRATE DETAIL
NOT TO SCALE

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

1-12

ENGLISH STANDARD DRAWING FOR
DROP INLET FRAME AND GRATES
FOR USE WITH STD. DWG.S 840.14 AND 840.15

SHEET 1 OF 1
840.16

PROFESSIONAL SEAL 17851 ENGINEER BILL LESTER, JR. NORTH CAROLINA

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License No. P-1095

LKC Engineering Landscape Architecture Planning

DETAILS

NC HIGHWAY 73
SIDEWALK IMPROVEMENTS
TO SERVE
TOWN OF MOUNT GILEAD
MONTGOMERY COUNTY, NORTH CAROLINA

DATE: MAY, 2015
DESIGNED: WLS
DRAWN: WLS
CHECKED: -
NO.
L-7

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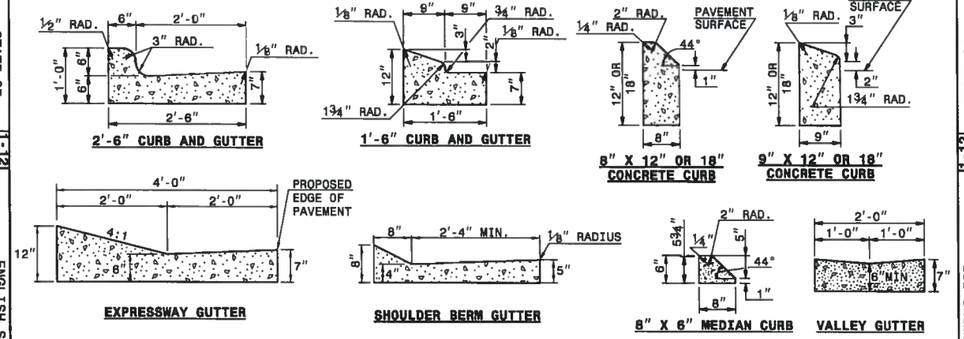
REVISIONS			
SYM.	DESCRIPTION	DATE	BY
	REVISED PER NCDOT COMMENTS	3-31-15	WLS

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

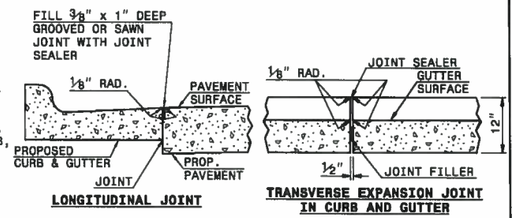
1-12

ENGLISH STANDARD DRAWING FOR
CONCRETE CURB, GUTTER AND CURB & GUTTER



SECTION VIEW OF CURBS OR CURBS AND GUTTERS

GENERAL NOTES:
- PLACE CONTRACTION JOINTS AT 10' INTERVALS, EXCEPT THAT A 15' SPACING MAY BE USED WHEN A MACHINE IS USED OR WHEN SATISFACTORY SUPPORT FOR THE FACE FORM CAN BE OBTAINED WITHOUT THE USE OF TEMPLATES AT 10' INTERVALS.
- JOINT SPACING MAY BE ALTERED IF REQUIRED BY THE ENGINEER.
- CONTRACTION JOINTS MAY BE INSTALLED WITH THE USE OF TEMPLATES OR FORMED BY OTHER APPROVED METHODS. CONSTRUCT NON-TEMPLATE FORMED JOINTS A MIN. OF 1½" DEEP.
- FILL ALL CONSTRUCTION JOINTS, EXCEPT IN 8"x8" MEDIAN CURB, WITH JOINT FILLER AND SEALER.
- SPACE EXPANSION JOINTS AT 90' INTERVALS AND ADJACENT TO ALL RIGID OBJECTS.



LONGITUDINAL JOINT

TRANSVERSE EXPANSION JOINT IN CURB AND GUTTER

SECTION VIEW OF JOINTS

SHEET 1 OF 3
846.01

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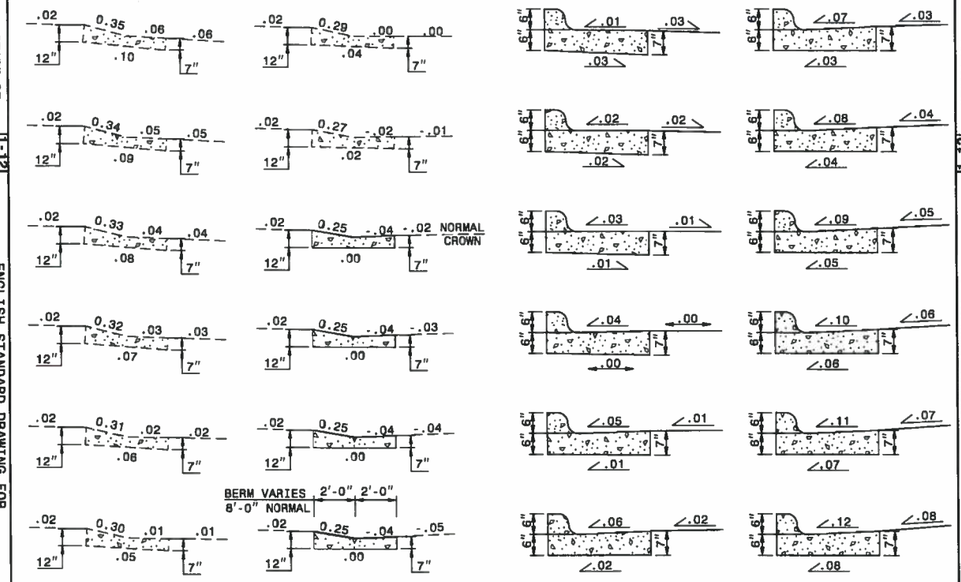
1-12

ENGLISH STANDARD DRAWING FOR
CONCRETE CURB, GUTTER AND CURB & GUTTER



SECTION VIEWS OF EXPRESSWAY GUTTER IN SUPER ELEVATION

SECTION VIEWS OF 2'-6" CURB AND GUTTER SUPERELEVATION RATES

SHEET 2 OF 3
846.01

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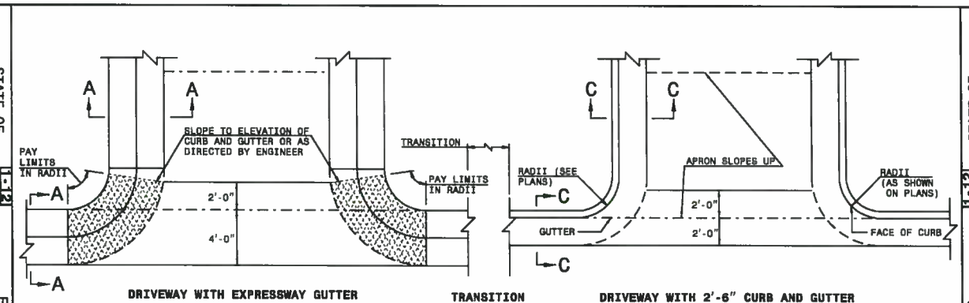
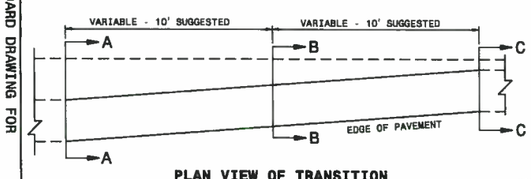
1-12

ENGLISH STANDARD DRAWING FOR
CONCRETE CURB, GUTTER AND CURB & GUTTER

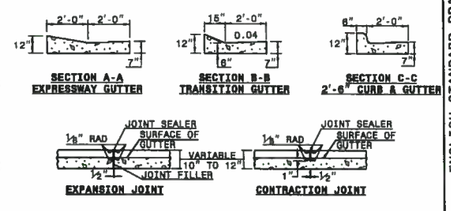


DRIVEWAY WITH EXPRESSWAY GUTTER — TRANSITION — DRIVEWAY WITH 2'-6" CURB AND GUTTER

PLAN VIEW OF TYPICAL CURB AND GUTTER OCCURENCES



PLAN VIEW OF TRANSITION
EXPRESSWAY GUTTER TO 2'-6" CURB AND GUTTER



NOTES:
- IN THE TRANSITION FROM 4'-0" CONCRETE EXPRESSWAY GUTTER TO 2'-6" CONCRETE CURB AND GUTTER, PLACE ½" EXPANSION JOINTS AT 25' INTERVALS.
- PLACE GROOVE JOINTS 1" DEEP AT 12'-6" INTERVALS BETWEEN EXPANSION JOINTS.
- FILL AND SEAL THE TOP ½" OF THE EXPANSION JOINTS AND 1" OF CONTRACTION JOINTS WITH APPROVED JOINT SEALING COMPOUND.

SHEET 3 OF 3
846.01

1 / L-8 CURB AND GUTTER DETAIL

NOT TO SCALE

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Engineering
Landscape Architecture
Planning

DETAILS

NC HIGHWAY 73
SIDEWALK IMPROVEMENTS
TO SERVE
TOWN OF MOUNT GILEAD
MONTGOMERY COUNTY, NORTH CAROLINA

DATE:	MAY, 2015
DESIGNED:	WLS
DRAWN:	WLS
CHECKED:	-
NO.	L-8

L:\MICd-14.01 - NC 73 Sidewalk Project\800 Drawings\810 Design Drawings\100%CD.dwg; Last Saved By: ANDY PATTERSON, 5/22/2015 10:51:49 AM; L-8 Details; Plotted By: Andy Patterson, 05/22/15 10:52:45 AM
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