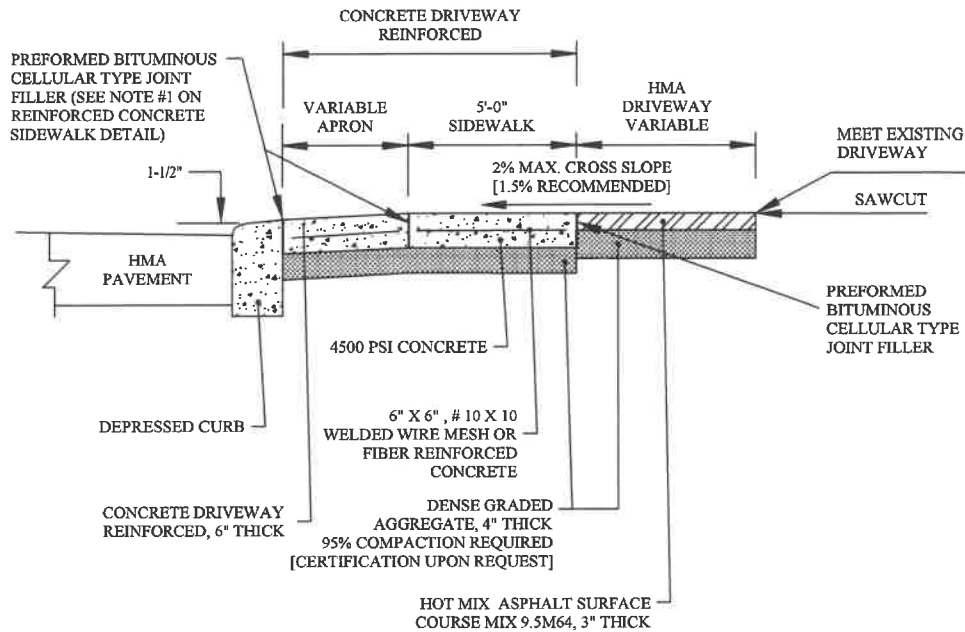
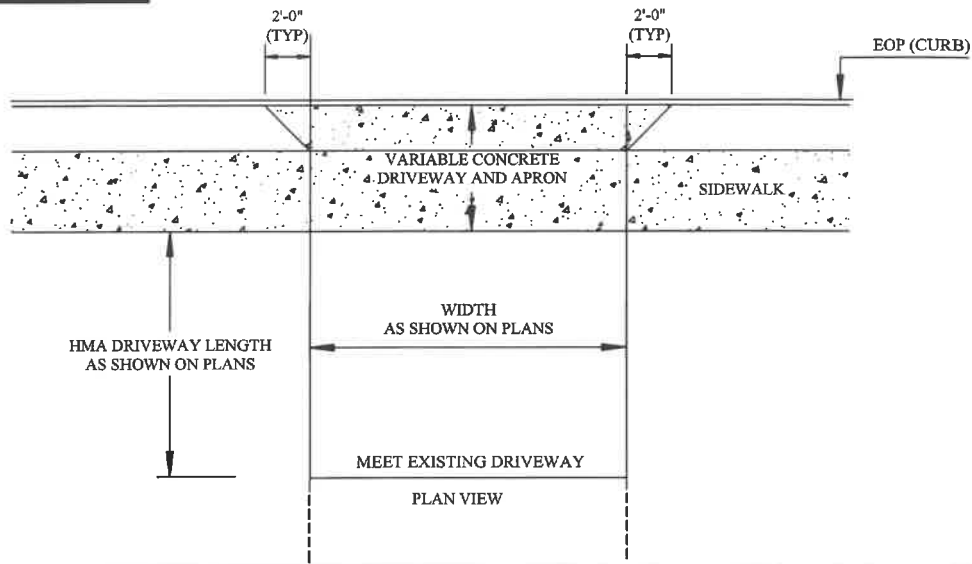


DETAIL #5



NOTE:

1. LENGTH AND WIDTH OF DRIVEWAY SHALL BE SHOWN ON THE PLANS OR AS DIRECTED.
2. MAINTAIN EXISTING DIRECTION OF STORM WATER FLOW ON THE DRIVEWAY.
3. PROVIDE TEMPORARY ACCESS DURING DRIVEWAY CONSTRUCTION.
4. DEPRESSED CURB SHALL BE CONSTRUCTED AS PER DEPRESSED CURB DETAIL.
5. IN LIEU OF DENSE GRADED (DGA), RECYCLED CONCRETE AGGREGATE (RCA) IS ACCEPTABLE. ALL RCA MUST MEET NJDOT SPECIFICATIONS AND BE CERTIFIED BY AN NJDOT APPROVED PLANT OF ORIGIN. ALL RCA SHIPMENTS MUST BE FREE OF FOREIGN MATERIALS AND CONTAMINENTS.

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NO.	DATE	BY
1	1/16/19	KP

County of Middlesex
 Department of Infrastructure Management
 Office of Engineering/Planning/Public Works
 75 Bayard St., New Brunswick, NJ 08901

**HOT MIX ASPHALT TYPICAL
 DRIVEWAY SECTION ADJACENT TO
 REINFORCED CONCRETE
 SIDEWALK AND APRON**

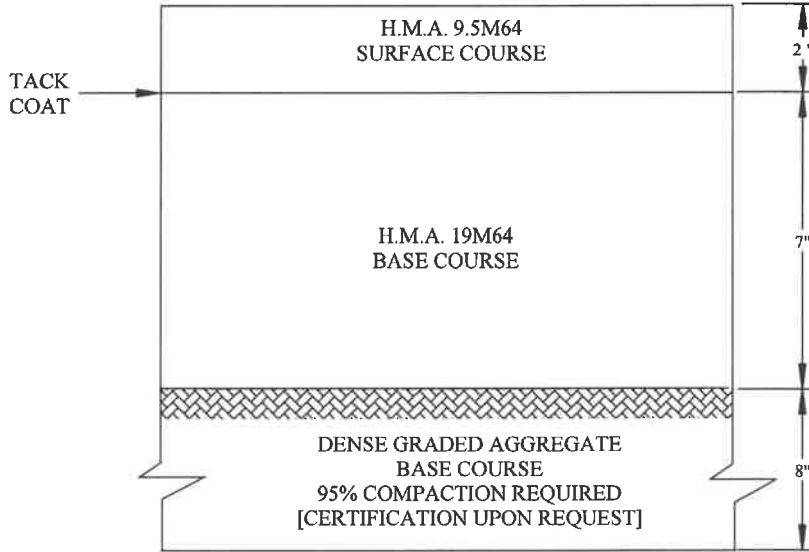
Ronald Sender Date
 Licensed Professional Engineer
 License No. 24GE03162200

Designed By: *RS*
 Drawn By: *ESR*
 Checked By: *RS*
 Approved By: *RS*

Scale: NOT TO SCALE
 Sheet No. 1 of 1
 Date: 4/25/17

Ronald Sender
 Acting County Engineer
 N.J. P.E. No. 24GE03162200

DETAIL #6



NOTES:

1. MIX NUMBERS ARE IN ACCORDANCE WITH THE CURRENT NEW JERSEY DEPARTMENT OF TRANSPORTATION, STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
2. IN LIEU OF DENSE GRADED (DGA), RECYCLED CONCRETE AGGREGATE (RCA) IS ACCEPTABLE. ALL RCA MUST MEET NJDOT SPECIFICATIONS AND BE CERTIFIED BY AN NJDOT APPROVED PLANT OF ORIGIN. ALL RCA SHIPMENTS MUST BE FREE OF FOREIGN MATERIALS AND CONTAMINENTS.
3. PAVEMENT CORES (UPON REQUEST)

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 75 Bayard St., New Brunswick, NJ 08901

**HOT MIX ASPHALT PAVEMENT
 DETAIL**

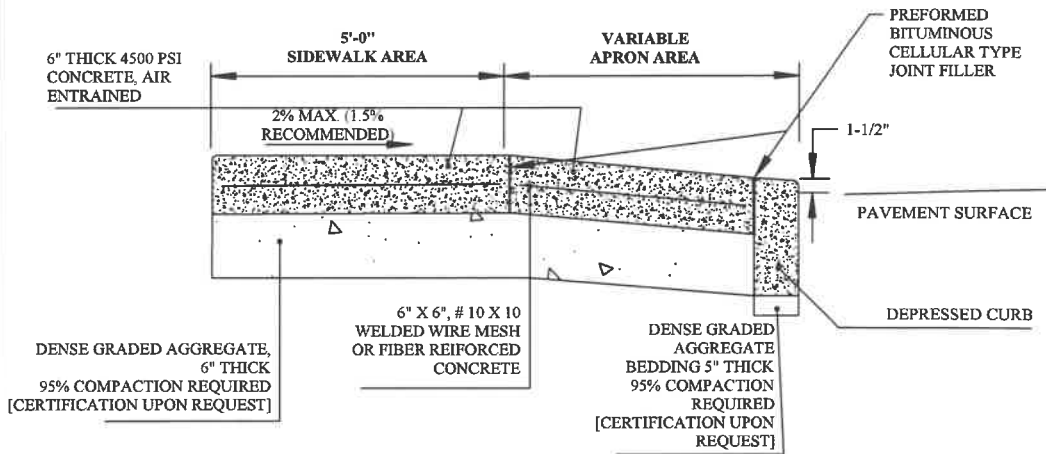
Ronald Sendner Date
 Licensed Professional Engineer
 License No. 24GE03162200

Scale: *NOT to SCALE*
 Sheet No. 1 of 1
 Date: 4/25/17

Ronald Sendner
 Acting County Engineer
 N.J. P.E. No. 24GE03162200

DETAIL #7

CONCRETE DRIVEWAY REINFORCED, 6" THICK



NOTES:

1. TRANSVERSE EXPANSION JOINTS, 1/2" WIDE SHALL BE PROVIDED AT INTERVALS OF NOT MORE THAN 8' AND FILLED WITH PREFORMED BITUMINOUS CELLULAR TYPE JOINT FILLER (AASHTO M33). LONGITUDINAL JOINTS 1/2" WIDE SHALL BE PROVIDED BETWEEN CURBS AND ABUTTING SIDEWALKS, AND SHALL BE FILLED WITH PREFORMED BITUMINOUS CELLULAR TYPE JOINT FILLER (AASHTO M33). THE TOP OF ALL JOINT FILLER SHALL BE TRIMMED 1/2" BELOW THE TOP OF THE SIDEWALK AND FILLED WITH JOINT SEALER (SIKAFLEX-1A OR APPROVED EQUAL).

2. IN LIEU OF DENSE GRADED (DGA), RECYCLED CONCRETE AGGREGATE (RCA) IS ACCEPTABLE. ALL RCA MUST MEET NJDOT SPECIFICATIONS AND BE CERTIFIED BY AN NJDOT APPROVED PLANT OF ORIGIN. ALL RCA SHIPMENTS MUST BE FREE OF FOREIGN MATERIALS AND CONTAMINENTS.

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County of Middlesex
 Department of Infrastructure Management
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 75 Bayard St., New Brunswick, NJ 08901

REINFORCED CONCRETE DRIVEWAY DETAIL

Ronald Sendner Date
 Licensed Professional Engineer
 License No. 24GE03162200

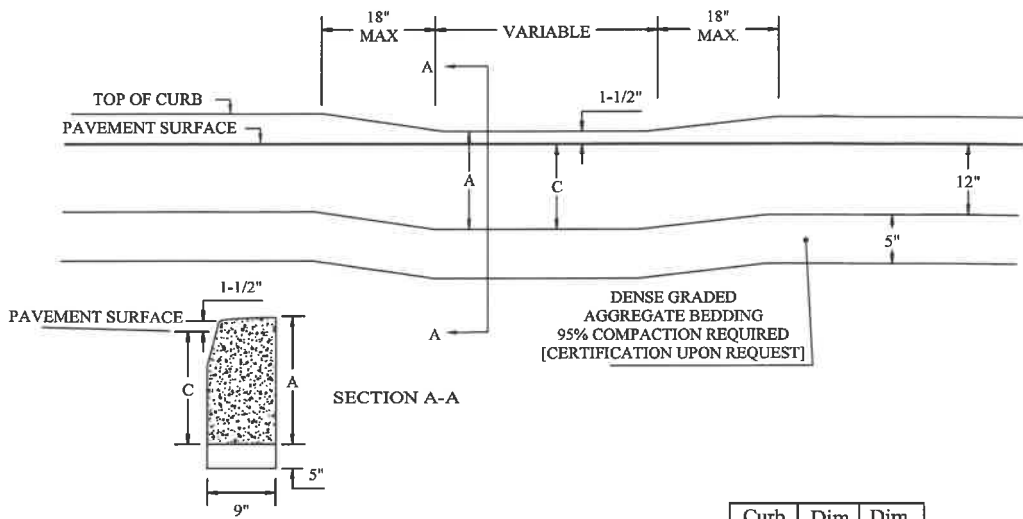
Designed By	Drawn By
RS	RS
Checked By	Approved By
RS	RS

Scale: NOT TO SCALE
 Sheet No. 1 of 1
 Date: 4/25/17

Ronald Sendner
 Acting County Engineer
 N.J. P.E. No. 24GE03162200

DETAIL #8

METHOD OF DEPRESSING CURBS



Curb Size	Dim. "A"	Dim. "C"
9"x16"	17 1/2"	16"

NOTE:

1. PREFORMED BITUMINOUS CELLULAR TYPE EXPANSION JOINT FILLER (AASHTO M33) 1/2" WIDE IN THE CURB SHALL BE PROVIDED AT APPROXIMATELY EQUAL DISTANCES OF NOT MORE THAN 20' BETWEEN JOINTS, AND SHALL BE FLUSH WITH THE TOP AND FACE OF CURB.
2. IN LIEU OF DENSE GRADED (DGA), RECYCLED CONCRETE AGGREGATE (RCA) IS ACCEPTABLE. ALL RCA MUST MEET NJDOT SPECIFICATIONS AND BE CERTIFIED BY AN NJDOT APPROVED PLANT OF ORIGIN. ALL RCA SHIPMENTS MUST BE FREE OF FOREIGN MATERIALS AND CONTAMINENTS.

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75 Bayard St., New Brunswick, NJ 08901

DEPRESSED CURB DETAIL

Ronald Sendner Date
Licensed Professional Engineer
License No. 24GE03162200

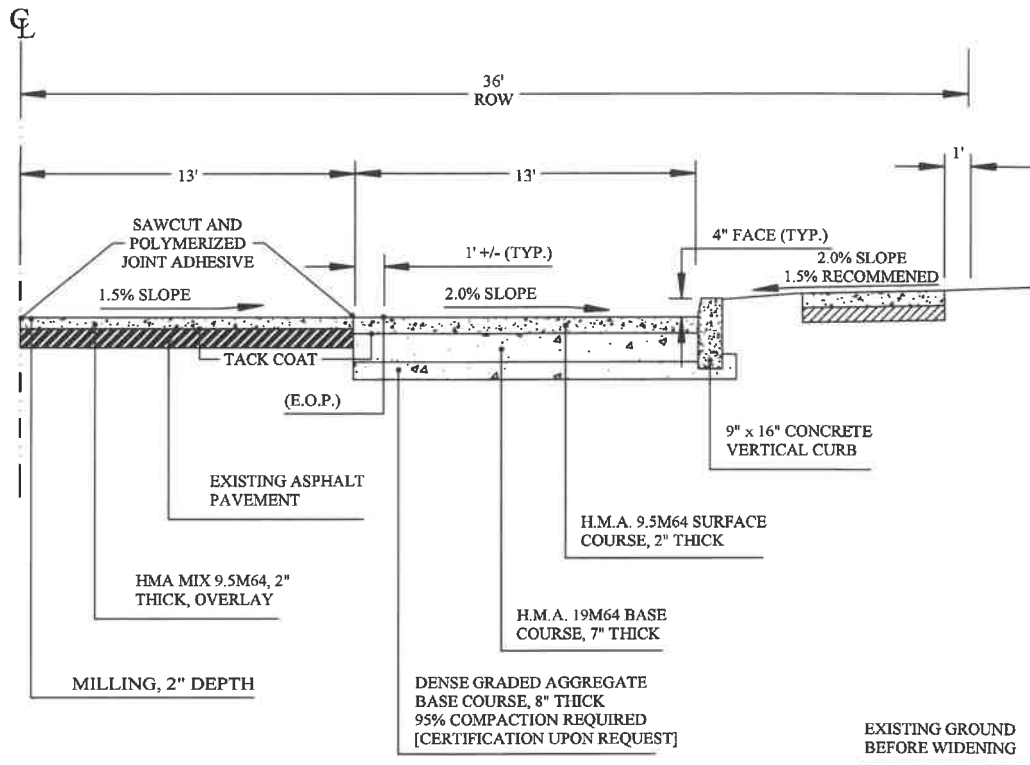
Designed By	Drawn By
Checked By	Approved By

Scale: NOT TO SCALE
Sheet No. 1 of 1
Date: 4/25/17

Ronald Sendner
Acting County Engineer
N.J. P.E. No. 24GE03162200

DETAIL #9

TYPICAL COUNTY ROAD WIDENING DETAIL



NOTES:

1. PROVIDE SLOPE TOWARDS GUTTER LINE TO ENSURE POSITIVE DRAINAGE.
2. IN LIEU OF DENSE GRADED (DGA), RECYCLED CONCRETE AGGREGATE (RCA) IS ACCEPTABLE. ALL RCA MUST MEET NJDOT SPECIFICATIONS AND BE CERTIFIED BY AN NJDOT APPROVED PLANT OF ORIGIN. ALL RCA SHIPMENTS MUST BE FREE OF FOREIGN MATERIALS AND CONTAMINENTS.

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 75 Bayard St., New Brunswick, NJ 08901

TYPICAL COUNTY ROAD WIDENING DETAIL

Ronald Sendner Date
 Licensed Professional Engineer
 License No. 24GE03162200

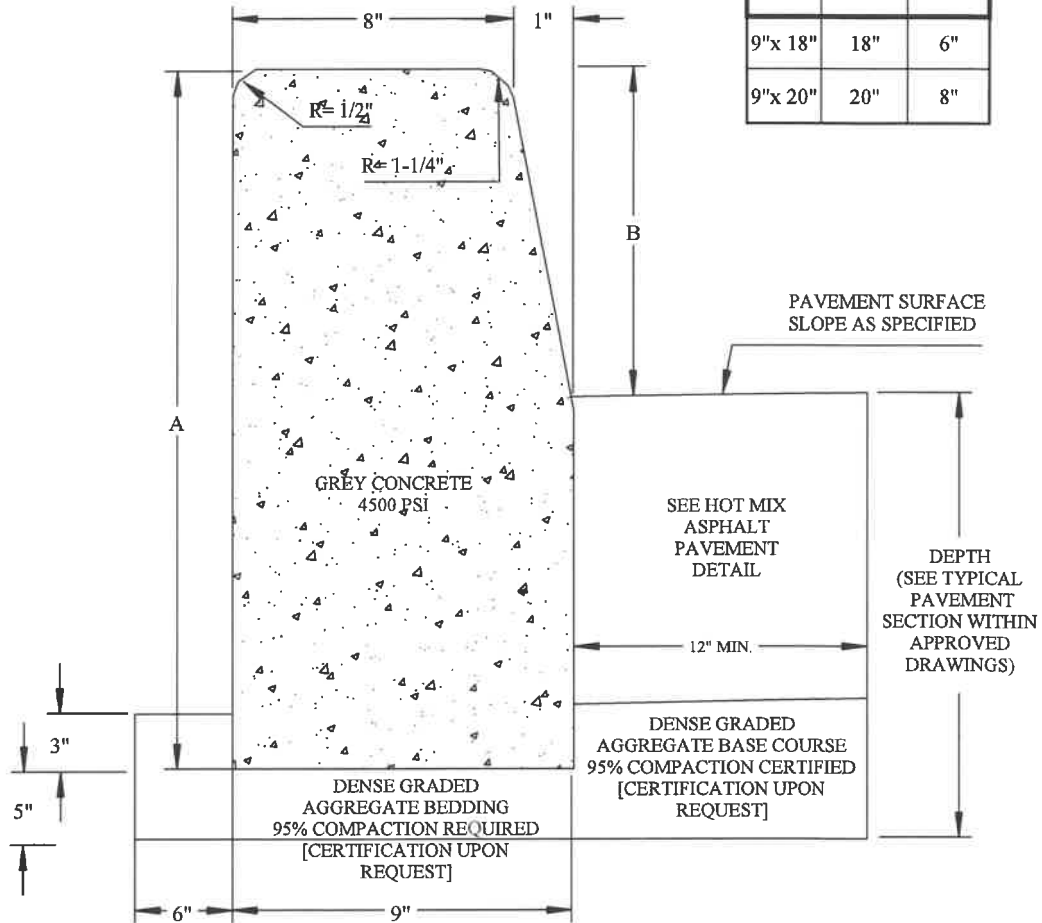
Designed By: RS
 Drawn By: EEB
 Checked By: RS
 Approved By: RS

Scale: NOT TO SCALE
 Sheet No. 1 of 1
 Date: 4/25/17

Ronald Sendner
 Acting County Engineer
 N.J. P.E. No. 24GE03162200

DETAIL #10

CURB SIZE	DIM. "A"	DIM. "B"
9"x 16"	16"	4"
9"x 18"	18"	6"
9"x 20"	20"	8"



NOTES:

1. PREFORMED BITUMINOUS CELLULAR TYPE EXPANSION JOINT FILLER (AASHTO M33) 1/2" WIDE IN THE CURB SHALL BE PROVIDED AT APPROXIMATELY EQUAL DISTANCES OF NOT MORE THAN 20' BETWEEN JOINTS, AND SHALL BE FLUSH WITH THE TOP AND FACE OF CURB.
2. CURB SHALL BE INSTALLED ON TOP OF 5" THICK DENSE GRADED AGGREGATE BEDDING.
3. THE COST OF EXPANSION JOINTS IN THE CURB AND DENSE GRADED AGGREGATE BEDDING SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE CURB.
4. 4" CURB FACE IS PREFERRED.
5. IN LIEU OF DENSE GRADED (DGA), RECYCLED CONCRETE AGGREGATE (RCA) IS ACCEPTABLE. ALL RCA MUST MEET NJDOT SPECIFICATIONS AND BE CERTIFIED BY AN NJDOT APPROVED PLANT OF ORIGIN. ALL RCA SHIPMENTS MUST BE FREE OF FOREIGN MATERIALS AND CONTAMINANTS.

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STANDARD GRAY CONCRETE VERTICAL CURB DETAIL

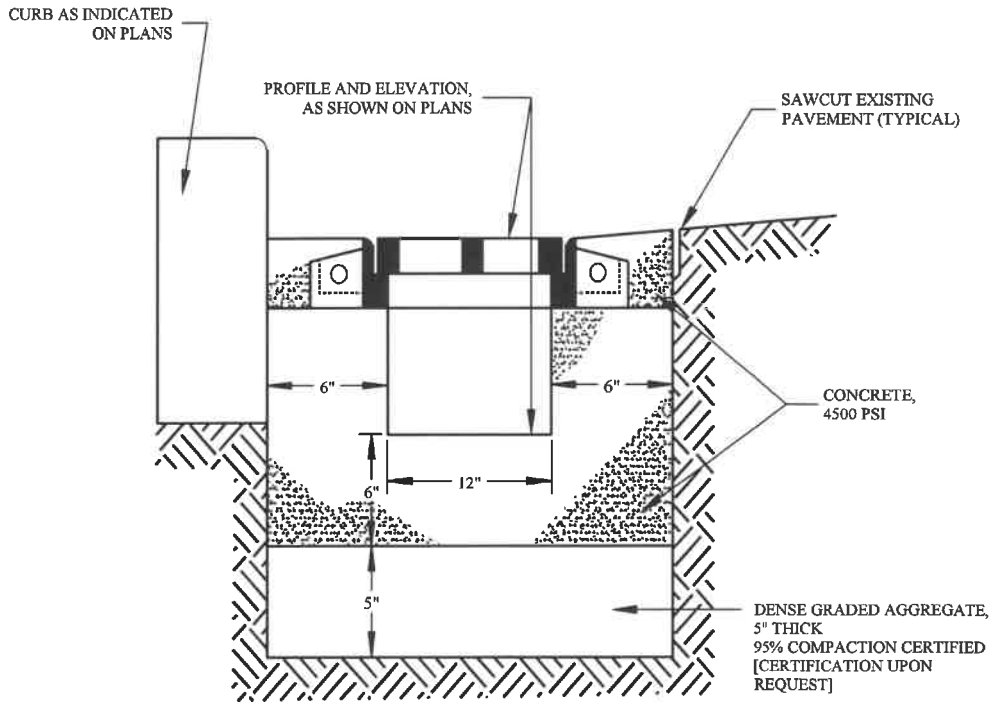
Ronald Sender Date
 Licensed Professional Engineer
 License No. 24GE03162200

Designed By	Drawn By
Checked By	Approved By

Scale: NOT TO SCALE
 Sheet No. 1 of 1
 Date: 4/25/17

Ronald Sender
 Acting County Engineer
 N.J. P.E. No. 24GE03162200

DETAIL #11



NOTES:

1. UNLESS SPECIFIED ON THE PLANS, USE HEAVY DUTY TRENCH FRAMES WITH GRATE PATTERN NO. 4526A, CAMPBELL FOUNDARY, HARRISON, N.J., OR AN APPROVED EQUAL.
2. IN LIEU OF DENSE GRADED (DGA), RECYCLED CONCRETE AGGREGATE (RCA) IS ACCEPTABLE. ALL RCA MUST MEET NJDOT SPECIFICATIONS AND BE CERTIFIED BY AN NJDOT APPROVED PLANT OF ORIGIN. ALL RCA SHIPMENTS MUST BE FREE OF FOREIGN MATERIALS AND CONTAMINENTS.

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**TRENCH FRAME WITH GRATE
 DETAIL**

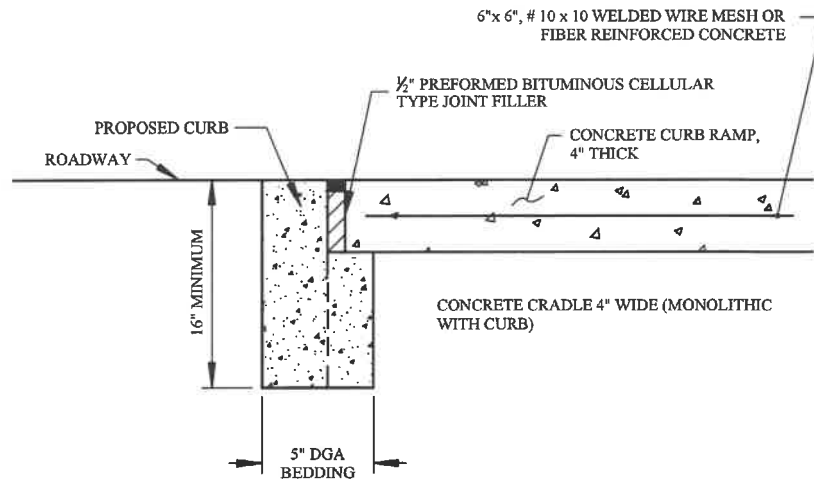
Ronald Sender Date
 Licensed Professional Engineer
 License No. 24GE03162200

Designed By	Drawn By
RS	RS
Checked By	Approved By
RS	RS

Scale: NOT TO SCALE
 Sheet No. 1 of 1
 Date: 4/25/17

Ronald Sender
 Acting County Engineer
 N.J. P.E. No. 24GE03162200

DETAIL #12



NOTES:

1. TRANSVERSE EXPANSION JOINTS, 1/2" WIDE, SHALL BE PROVIDED AT INTERVALS OF NOT MORE THAN 15' AND FILLED WITH PREFORMED BITUMINOUS CELLULAR TYPE JOINT FILLER (AASHTO M33). LONGITUDINAL JOINTS, 1/2" WIDE, SHALL BE PROVIDED BETWEEN CURBS AND ABUTTING SIDEWALKS, AND SHALL BE FILLED WITH PREFORMED BITUMINOUS CELLULAR TYPE JOINT FILLER (AASHTO M33). THE TOP OF ALL JOINT FILLER SHALL BE TRIMMED 1/2" BELOW THE TOP OF THE SIDEWALK AND FILLED WITH JOINT SEALER (SIKAFLEX-1A), OR AN APPROVED EQUAL.
2. IN LIEU OF DENSE GRADED (DGA), RECYCLED CONCRETE AGGREGATE (RCA) IS ACCEPTABLE. ALL RCA MUST MEET NJDOT SPECIFICATIONS AND BE CERTIFIED BY AN NJDOT APPROVED PLANT OF ORIGIN. ALL RCA SHIPMENTS MUST BE FREE OF FOREIGN MATERIALS AND CONTAMINENTS.

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**CONCRETE CRADLE CURB DETAIL
 for ADA RAMPS**

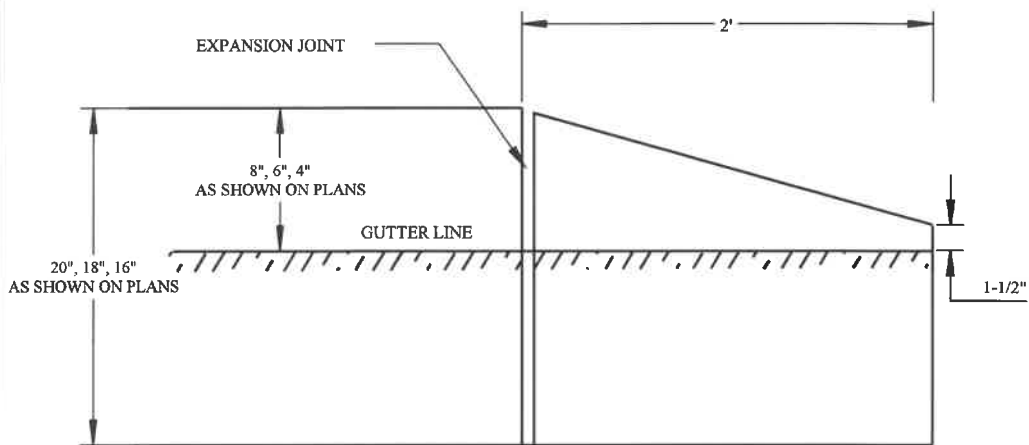
Ronald Sender Date
 Licensed Professional Engineer
 License No. 24GE03162200

Designed By	Drawn By
RS	SPS
Checked By	Approved By
RS	RS

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Ronald Sender
 Acting County Engineer
 N.J. P.E. No. 24GE03162200

DETAIL #13



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**CONCRETE VERTICAL CURB
 2' KNOCKOUT DETAIL**

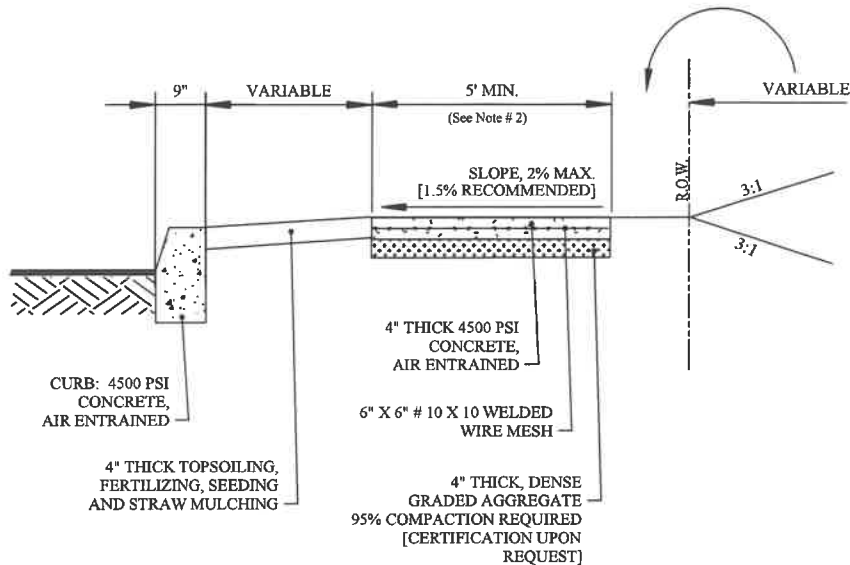
Ronald Sendner Date
 Licensed Professional Engineer
 License No. 24GE03162200

Designed By	Drawn By
<i>RS</i>	<i>RS</i>
Checked By	Approved By
<i>RS</i>	<i>RS</i>

Scale: NOT to SCALE
 Sheet No. 1 of 1
 Date: 4/25/17

Ronald Sendner
 Acting County Engineer
 N.J. P.E. No. 24GE03162200

DETAIL #14



NOTE:

1. TRANSVERSE EXPANSION JOINTS, 1/2" WIDE, SHALL BE PROVIDED AT INTERVALS OF NOT MORE THAN 15' AND FILLED WITH PREFORMED BITUMINOUS CELLULAR TYPE JOINT FILLER (AASHTO M33). LONGITUDINAL JOINTS, 1/2" WIDE, SHALL BE PROVIDED BETWEEN CURBS AND ABUTTING SIDEWALKS, AND SHALL BE FILLED WITH PREFORMED BITUMINOUS TYPE JOINT FILLER (AASHTO M33). THE TOP OF ALL JOINT FILLER SHALL BE 1/2" BELOW THE TOP OF THE SIDEWALK AND FILLED WITH JOINT SEALER (SIKAFLEX-1A), OR AN APPROVED EQUAL.
2. SIDEWALK WIDTH SHALL BE 5'-0" MINIMUM UNLESS OTHERWISE NOTED ON THE APPROVED PLANS.
3. TYPE OF SEEDING SHALL MEET FREEHOLD SOIL CONSERVATION DISTRICT REQUIREMENTS.
4. THE COST OF THE EXPANSION JOINT, JOINT FILLER, WELDED WIRE MESH AND DENSE GRADED AGGREGATE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE CONCRETE SIDEWALK.
5. IN LIEU OF WELDED WIRE MESH FIBER REINFORCED CONCRETE IS ACCEPTABLE.
6. IN LIEU OF DENSE GRADED (DGA), RECYCLED CONCRETE AGGREGATE (RCA) IS ACCEPTABLE. ALL RCA MUST MEET NJDOT SPECIFICATIONS AND BE CERTIFIED BY AN NJDOT APPROVED PLANT OF ORIGIN. ALL RCA SHIPMENTS MUST BE FREE OF FOREIGN MATERIALS AND CONTAMINENTS.

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 Department of Infrastructure Management
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 75 Bayard St., New Brunswick, NJ 08901

**REINFORCED CONCRETE
 SIDEWALK DETAIL**

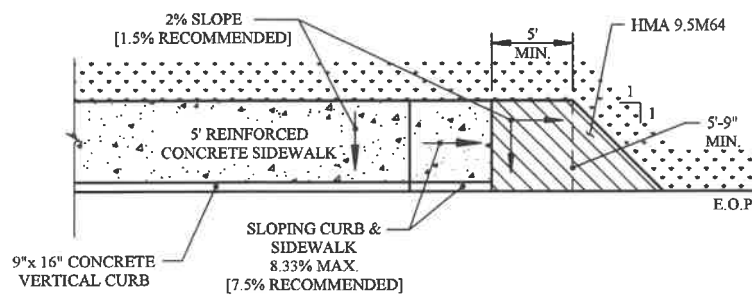
Ronald Sendner Date
 Licensed Professional Engineer
 License No. 24GE03162200

Designed By	Drawn By
RS	SPB
Checked By	Approved By
RS	RS

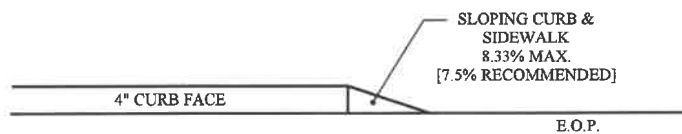
Scale: NOT TO SCALE
 Sheet No. 1 of 1
 Date: 4/25/17

Ronald Sendner
 Acting County Engineer
 N.J. P.E. No. 24GE03162200

DETAIL #15



PLAN



ELEVATION

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NO.	DATE	BY
1	1/16/19	KP

Designed By	Drawn By
<i>RS</i>	<i>SPB</i>
Checked By	Approved By
<i>RS</i>	<i>RS</i>

*County of Middlesex
Department of Infrastructure Management
Office of Engineering/Planning/Public Works
75 Bayard St., New Brunswick, NJ 08901*

**HALF PARALLEL REINFORCED
CONCRETE RAMP TO HMA
SHOULDER**

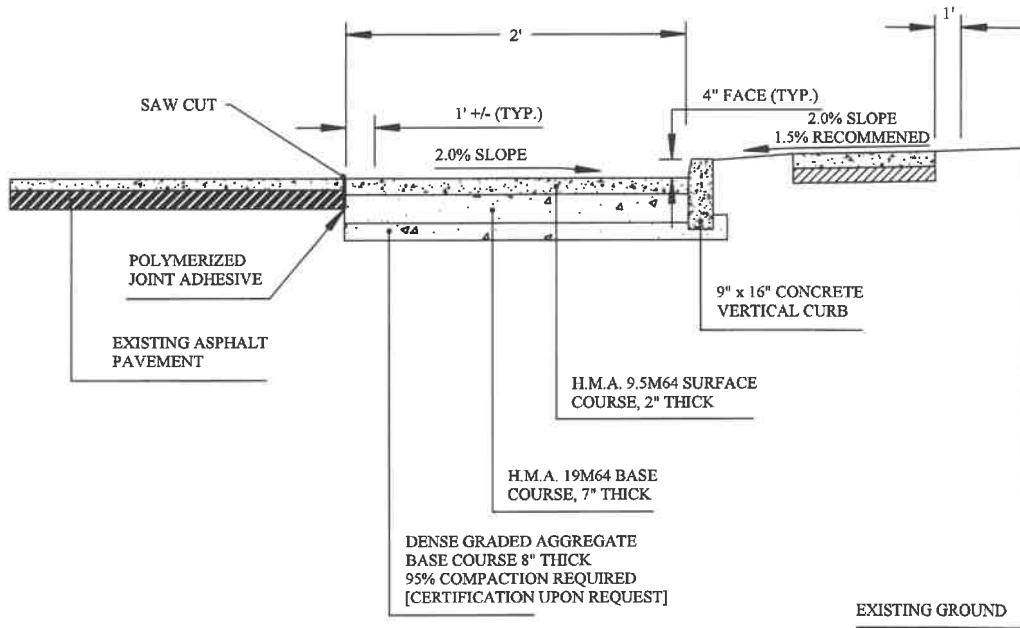
Ronald Sendner *Date*
Licensed Professional Engineer
License No. 24GE03162200

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Sheet No. 1 of 1
Date: 4/25/17*

Ronald Sendner
Aching County Engineer
N.J. P.E. No. 24GE03162200

DETAIL #16

TYPICAL COUNTY CURB INSTALLATION DETAIL



NOTE:

1. PROVIDE SLOPE TOWARDS GUTTER LINE TO ENSURE POSITIVE DRAINAGE.

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 Office of Engineering/Planning/Public Works
 75 Bayard St., New Brunswick, NJ 08901

**TYPICAL COUNTY CURB
 INSTALLATION DETAIL**

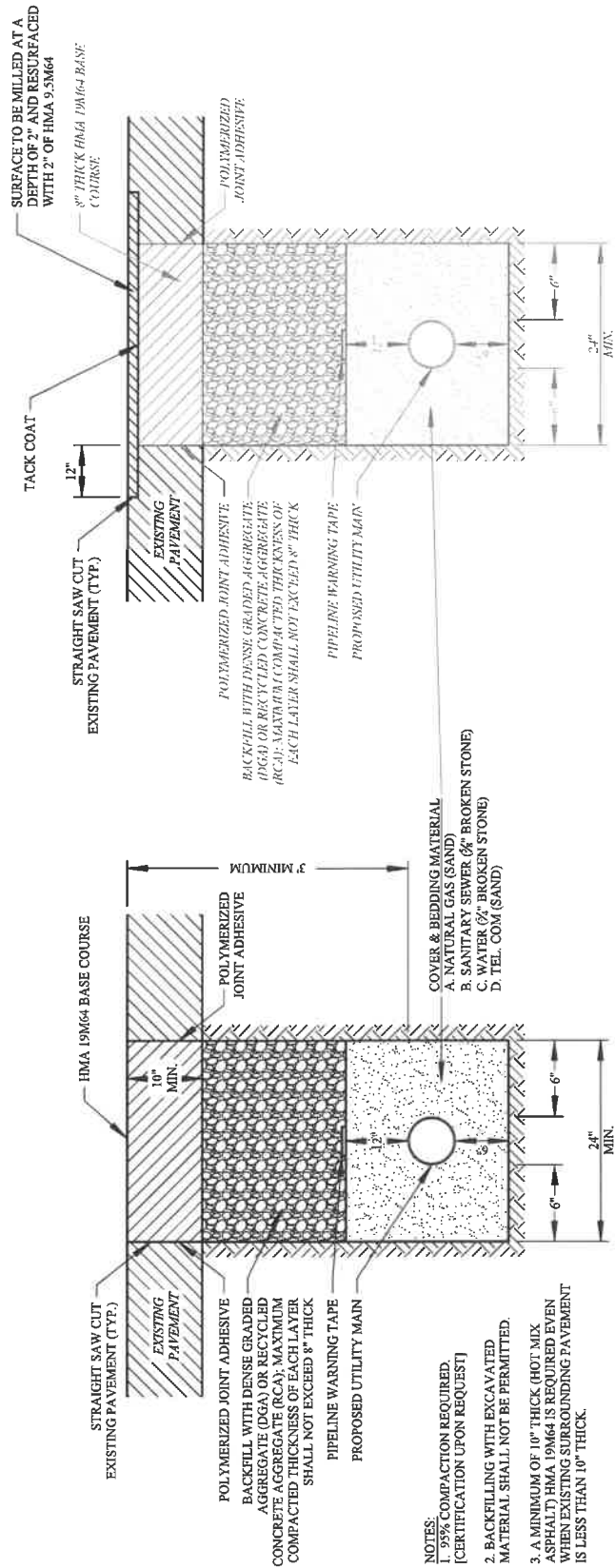
Ronald Sender Date
 Licensed Professional Engineer
 License No. 24GE03162200

Designed By	Drawn By
ICP	RPB
Checked By	Approved By
RP	RP

Scale: NOT TO SCALE
 Sheet No. 1 of 1
 Date: 5/22/17

Ronald Sender
 Acting County Engineer
 N.J. P.E. No. 24GE03162200

DETAIL #17



- NOTES:**
1. 95% COMPACTION REQUIRED. (CERTIFICATION UPON REQUEST)
 2. BACKFILLING WITH EXCAVATED MATERIAL SHALL NOT BE PERMITTED.
 3. A MINIMUM OF 10" THICK (HOT MIX ASPHALT) HMA 19M64 IS REQUIRED EVEN WHEN EXISTING SURROUNDING PAVEMENT IS LESS THAN 10" THICK.

TEMPORARY TRENCH RESTORATION DETAIL (PAVED AREA)

FINAL TRENCH RESTORATION DETAIL (PAVED AREA)

NOTE:

1. THE STORM SEWER TRENCH AND BEDDING DETAIL MAY BE UTILIZED AS AN ALTERNATE.
2. THE TEMPORARY TRENCH DETAIL MUST BE CONVERTED TO THE FINAL TRENCH DETAIL (NO SOONER THEN 30 DAYS AND NO LATER THAN 90 DAYS FROM COMPLETION OF TRENCH CONSTRUCTION.

Revisions	NO.	DATE	BY
	1	11/16/19	KP

Designed By	Drawn By
Checked By	Agreed By

Ronald Sandner
 Licensed Professional Engineer
 License No. 246E03182200
 Date 4/25/17

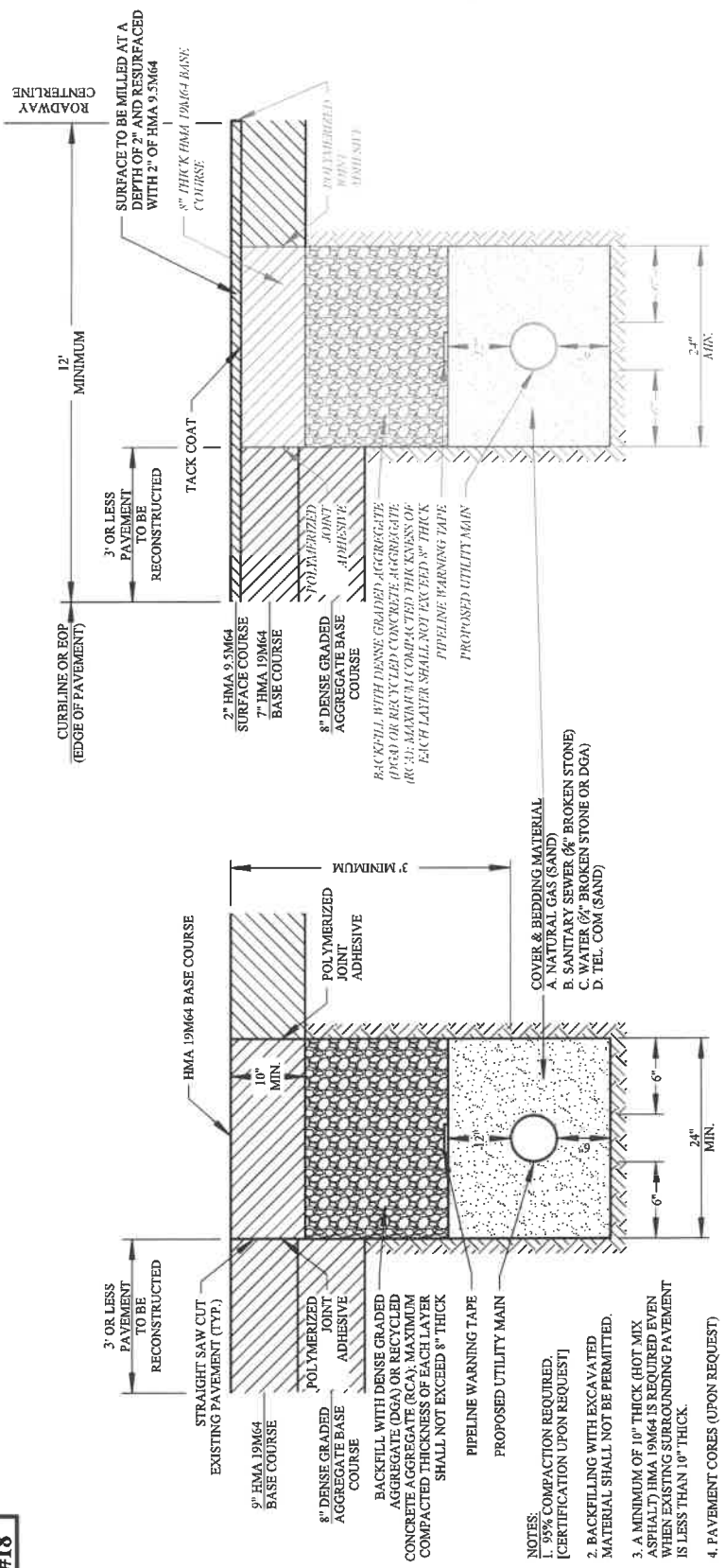
County of Middlesex
 Department of Infrastructure Management
 Office of Engineering/Planning/Public Works
 75 Bayard St., New Brunswick, NJ 08901

**UTILITY TRENCH AND BEDDING
 DETAIL (PAVED AREA)
 TRANSVERSE JOINT**

Scale: NOT TO SCALE
 Sheet No. 1 of 1
 Date: 4/25/17

Ronald Sandner
 Acting County Engineer
 N.J. P.E. No. 246E03182200

DETAIL #18



- NOTES:**
1. 95% COMPACTION REQUIRED. (CERTIFICATION UPON REQUEST)
 2. BACKFILLING WITH EXCAVATED MATERIAL SHALL NOT BE PERMITTED.
 3. A MINIMUM OF 10" THICK (HOT MIX ASPHALT) HMA 19M64 IS REQUIRED EVEN WHEN EXISTING SURROUNDING PAVEMENT IS LESS THAN 10" THICK.
 4. PAVEMENT CORES (UPON REQUEST)

TEMPORARY TRENCH RESTORATION DETAIL (PAVED AREA)

NOTE:

1. THE STORM SEWER TRENCH AND BEDDING DETAIL MAY BE UTILIZED AS AN ALTERNATE.
2. THE TEMPORARY TRENCH DETAIL MUST BE CONVERTED TO THE FINAL TRENCH DETAIL (NO SOONER THEN 30 DAYS AND NO LATER THAN 90 DAYS FROM COMPLETION OF TRENCH CONSTRUCTION.

**FINAL TRENCH RESTORATION DETAIL (PAVED AREA)
WHEN TRENCH IS WITHIN 3' OF EDGE OF PAVEMENT/CURLBLINE**

NO.	DATE	BY

Ronald Spangler
 Licensed Professional Engineer
 License No. 246E03162200

Orch
 Date: 1/16/2019

County of Middlesex
 Department of Infrastructure Management
 Office of Engineering/Planning/Public Works
 75 Bayard St., New Brunswick, NJ 08901

**UTILITY TRENCH AND BEDDING
 DETAIL (PAVED AREA)
 LONGITUDINAL JOINT**

Scale: NOT TO SCALE
 Sheet No. 1 of 1
 Date: 1/16/2019

Ronald Spangler
 Acting County Engineer
 P.E. No. 246E03162200