

**STATE OF NEW HAMPSHIRE
SITE EVALUATION COMMITTEE**

Docket No. 2015-06

**Joint Application of Northern Pass Transmission, LLC
and Public Service Company of New Hampshire
d/b/a Eversource Energy for a Certificate of Site and Facility**

**PREFILED DIRECT TESTIMONY OF
EDWARD L. ROBERGE, P.E., CITY ENGINEER**

November 15, 2016

Background and Qualifications

Q. Please state your name and work address.

A. My name is Edward L. Roberge. My work address is 41 Green Street, Concord, New Hampshire 03301.

Q. Please describe your employment at the City of Concord?

A. I am the City Engineer. I have held this position for 11 years. My responsibilities are to manage the Engineering Services Division of the Community Development Department, including private development projects, capital projects, and traffic and transportation programs.

Q. What is your professional background and experience?

A. I received a Bachelor of Science Degree in Civil Engineering from Northeastern University in 1995. I was licensed as a Professional Engineer in the State of New Hampshire in 1999. I have over thirty (30) years of professional experience primary focused within municipal public works and engineering.

Purpose of Testimony

Q. What is the purpose of this prefiled direct testimony?

A. The purpose of this prefiled testimony is to address the City's concerns with the proposed access roads along public highways.

Authority for Regulating Highway Use by Abutting Property Owners

Q. What is the City's authority for regulating highway use by abutting property owners, specifically with regard to access roads?

A. The City may control how private roads and driveways are connected to local, public highways. RSA 236:13. The planning board may enact regulations that address a number of subjects, such as: width, angles, slopes and grades of connections, curbs, ditching, and culvert standards to prevent erosion and preserve highway drainage, adequate lines of sight to prevent safety hazards, and limiting the number of accesses per parcel. The statute provides that a planning board may delegate the day-to-day administration of driveway regulations, including driveway applications, to a highway agent or other qualified official or body.

Q. What are the requirements for driveways and other permanent accesses to the public highways in the City of Concord?

A. For permanent driveways and other accesses, there are requirements set forth in the City of Concord Construction Standards, the City of Concord Rural or Urban Driveway Details, the City of Concord Zoning Ordinance, and the City of Concord Code of Ordinances.

Q. What are the requirements for new driveways and other permanent driveways set forth in the Zoning Ordinance?

A. The City of Concord Zoning Ordinance, Section 28-7-8 states as follows:

28-7-8 - Access and Driveway Standards.

(a) *Restrictions on Backing Into a Street.* Except in connection with single-family detached dwellings and two-family dwellings, parking areas shall be designed so that,

1 without resorting to extraordinary movements, vehicles may enter and exit the parking
2 area without backing within or into a street, and without inhibiting pedestrian safety.

3 Parking spaces for each dwelling unit in a duplex or two-family dwelling shall be
4 independently accessible from a street.

5 (b) *Separation of Driveways in Residential Districts.* For all streets in residential
6 districts, driveways entering such streets shall be located at least thirty (30) feet from
7 street intersections, and at least forty (40) feet from other existing driveways on the same
8 lot or an adjacent lot. One driveway is permitted for lots with up to one hundred (100)
9 feet of lot frontage. One additional driveway is permitted for each additional one
10 hundred fifty (150) feet of lot frontage. Where compliance cannot be achieved with these
11 standards, the Planning Board may grant a conditional use permit pursuant to Section 28-
12 7-11, Alternative Parking Arrangements, of this ordinance.

13 (c) *Separation of Driveways in Nonresidential Districts.* Except as may be otherwise
14 provided in Performance Districts, and except where a conditional use permit has been
15 granted by the Planning Board pursuant to Section 28-7-11, Alternative Parking
16 Arrangements, of this ordinance, the following standards are established in nonresidential
17 districts:

18 (1) For all local streets, driveways entering such streets shall be located at least one
19 hundred twenty-five (125) feet from street intersections, and at least one hundred (100)
20 feet from other existing driveways on the same lot or an adjacent lot. One driveway is
21 permitted per lot for lots with up to one hundred fifty (150) feet of lot frontage. One

1 additional driveway is permitted for each additional one hundred fifty (150) feet of lot
2 frontage.

3 (2) For all collector and arterial streets, driveways entering such streets shall be located
4 at least two hundred (200) feet from street intersections, and at least two hundred (200)
5 feet from other existing driveways on the same lot or an adjacent lot. One driveway is
6 permitted per lot for lots with up to three hundred fifty (350) feet of lot frontage. One
7 additional driveway is permitted for each additional three hundred fifty (350) feet of lot
8 frontage.

9 (d) *Separation of Median Openings.* Except as may be otherwise provided in
10 Performance Districts, there shall be a minimum distance of five hundred (500) feet
11 between openings in a median, where medians exist or are established on collector or
12 arterial streets.

13 (e) *Measurement of Separations.* The separation between public street intersections and
14 driveways is measured from the point of intersection of the nearest edge of each of the
15 street rights-of-way to the nearest edge of the driveway where it intersects with the right-
16 of-way line. The separation between driveways is measured from the nearest edge of
17 each driveway where it intersects with the street right-of-way. The separation between
18 median openings is measured from centerline to centerline of each opening.

1 **Q. Is a property owner or contractor required to obtain a driveway on**
2 **residential or commercial property?**

3 A. Yes. The City of Concord Ordinance, Section 5-1-8 requires an application for a
4 permit “to repair, widen, reconstruct, or construct a driveway on residential or commercial
5 property, to ensure conformance with the City of Concord's zoning laws pertaining to driveway
6 locations.” The Ordinance also states that “residential driveways shall be a minimum of five
7 (5) feet from abutting property line, forty (40) feet from nearest adjacent driveway, and thirty
8 (30) feet from street intersections according to the present Zoning Ordinance. Commercial
9 driveways shall be in conformance with approved plans by the Engineering Services and
10 Community Planning Divisions of the Community Development Department.”

11 A copy of the driveway permit is attached as Exhibit A. The details for construction of
12 new permanent driveways are attached as Exhibit B. These details include requirements for
13 driveways in both urban and rural settings.

14 **Q. Do the access roads in the plans submitted for the proposed Northern Pass**
15 **Project comply with the City of Concord’s driveway and access requirements?**

16 A. No. To the extent that Northern Pass intends for the access roads to be
17 permanent, they do not comply with the City of Concord’s requirements due to (1) the width of
18 the access roads (exceeds 28 feet); (2) the separation from driveways and/or intersections that do
19 not meet the Zoning Ordinance because the distance is insufficient; and (3) the insufficient
20 frontage of the parcels being accessed by many of the proposed access roads.

1 **Q. What are the requirements for temporary access roads to the public**
2 **highways in the City of Concord?**

3 A. The City of Concord reviews temporary access roads to the public highways on a
4 case by case basis. While we generally apply the requirements of a permanent driveway, we
5 consider factors such as requirements for access, work area, type of equipment using the public
6 roads, construction schedules, construction area warning signs, and traffic control. Temporary
7 access roads may require the removal and replacement of curbing or other structures which
8 would then require a street excavation or encumbrance permit.

9 **Q. Are there other requirements that the City of Concord's Engineering**
10 **Services Division oversees for which the Northern Pass Project must comply or address?**

11 A. Other factors that are considered by the Engineering Services Division include
12 review of construction standards and details to prevent tracking of debris onto public roads, the
13 placement of a financial surety or guarantee to ensure that the condition of the public road from
14 which access is granted will be repaired if any damage occurs during the project, adherence to
15 the springtime road posting requirements, reducing the number of access points to minimize road
16 cuts, ensuring existing drainage runoff paths are maintained and not changed, trucks entering
17 from and exiting onto major arterial and collector roads, potential for access by the public for
18 unauthorized use of the space or illegal dumping, and review of any commitments for protecting
19 environmentally sensitive or archeologically sensitive areas.

1 **Q. To the extent that the access roads are temporary, what concerns do you**
2 **have about use of the access roads after construction is completed?**

3 A. There is a concern that in the event the access roads are not property restored
4 through revegetation, regrading, or placement of fencing or barrier, there will be unauthorized
5 and unanticipated use of the access roads by the public.

6 **Q. Does this end your testimony?**

7 A. Yes.

EXHIBIT A



City of Concord, NH

Engineering Services Division
City Hall, 41 Green Street
Concord, NH 03301
Tel: (603) 225-8520
Fax: (603) 230-3630

engineering@concordnh.gov

Driveway Permit Application

Minimum of **Three (3)** Working Days Required for Approval

Applicant: Fill out sections 1 – 4 only

1. Applicant's Name: _____
Address: _____
City/State/Zip: _____
Phone: _____
Contractor: _____ Phone: _____
Address: _____
City/State/Zip: _____
Email: _____

2. Scheduled Start Date: _____ Complete : _____
☐ New Driveway
☐ Existing Driveway: Overlay Only
☐ Existing Driveway: Remove and Replace
☐ Existing Driveway with alterations to City right-of-way
☐ Existing Driveway with alterations on private property
☐ Driveway culvert : Size _____ Type _____

3. Location of Driveway _____
(Street Address)

Give a brief description of any alterations on private property.

Give a brief description of any alterations to city right-of-way.

4. By undersigning this application, the Applicant acknowledges that he/she has read and hereby agrees to abide by the City of Concord's of Code of Ordinances, Title 1, General Code, Chapter 5, Public Works, Article 5-1, Highway and Sidewalks – Ordinance No. 2577 Section 5-1-8 and to any other ordinances, special conditions, restrictions, and regulations that may be imposed by the Engineering Services Division.

Applicant's Signature: _____ Date: _____

City Use

Permit #: _____

Approved By: _____

Approval Date: _____

Expiration Date: 1 YEAR FROM APPROVAL

Yes No

☐ ☐ Traffic Control Plan required

☐ ☐ Insurance and Bond required

Other Conditions: _____

Fees:

☐ New Permit ☐ Renewal

Administration and Application Fee: \$ 75.00
(Non-Refundable)

Sub-total \$ _____

Previous Payments \$ _____

Total Due: \$ _____

Date Paid: _____

Form of Payment _____

Receipt # : _____

Final Approval: _____

Date: _____

Revised 4/2012

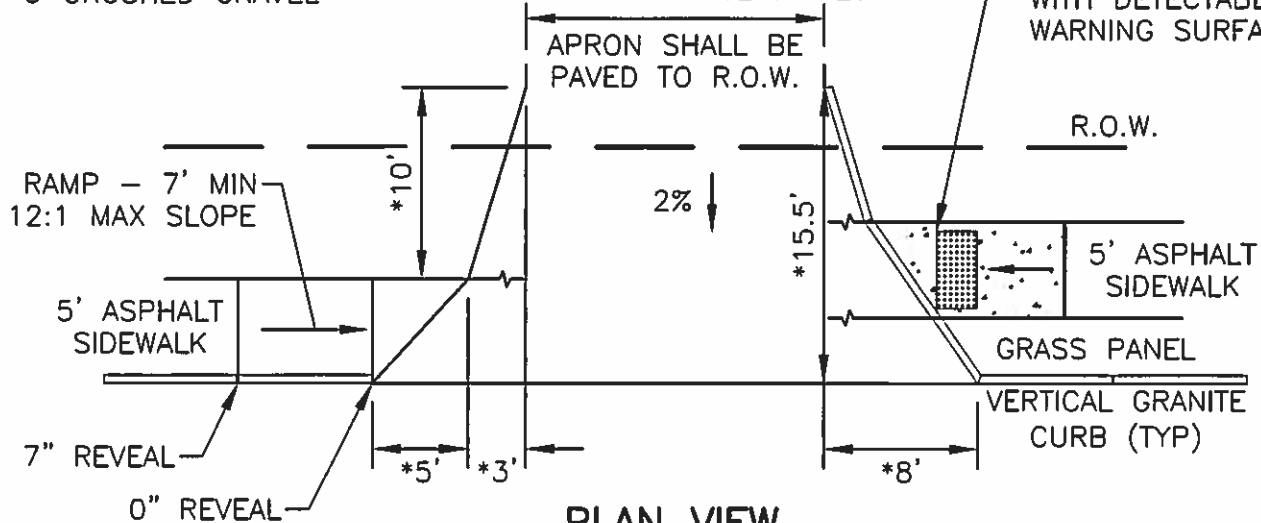
EXHIBIT B

MINIMUM MATERIAL VALUES

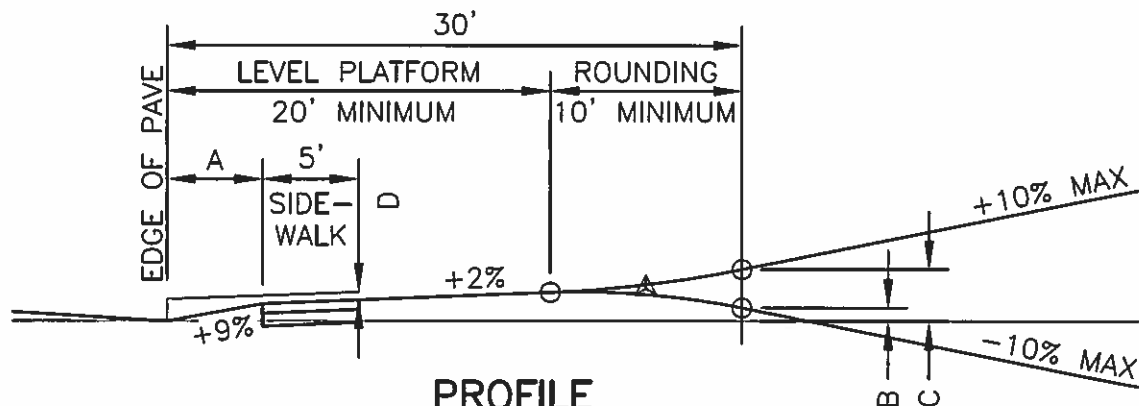
1½" WEAR COURSE PAVEMENT
1½" BASE COURSE PAVEMENT
6" CRUSHED GRAVEL

MEASURED AT R.O.W.
12' MIN/28' MAX
18' MIN FOR RESIDENTIAL
COMMON PRIVATE DRIVES

COMMERCIAL DRIVES IF
REQUIRED: CONSTRUCT
CONCRETE CURB RAMP
WITH DETECTABLE
WARNING SURFACE



PLAN VIEW



PROFILE

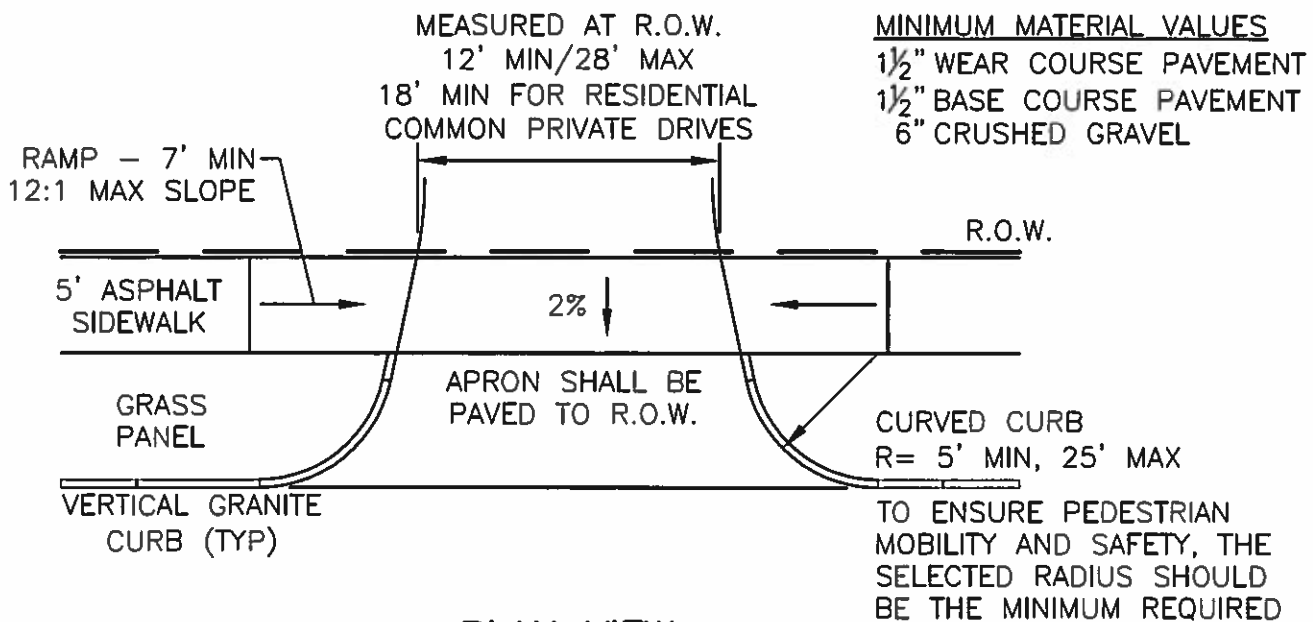
- A -WIDTH OF GRASS PANEL
- B -VERTICAL OFFSET AT 30' FOR DRIVES IN FILL
- C -VERTICAL OFFSET AT 30' FOR DRIVES IN CUT
- D -VERTICAL DROP OF SIDEWALK

VERTICAL CURB			
A	B	C	D
0	0	1'-0"	7"
1'	¾"	1'-¾"	6"
2'	1¾"	1'-1¾"	5¼"
3'	2½"	1'-2½"	4¼"
4'	3¼"	1'-3¼"	3½"

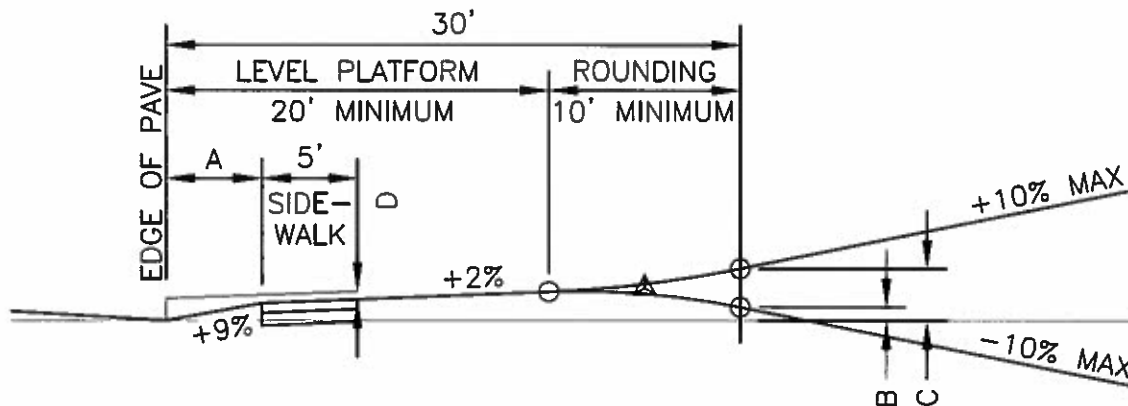
NOTE:

1. THE DRIVE WIDTHS AND PROFILE PERTAIN TO ALL URBAN DRIVES, REGARDLESS OF R.O.W. WIDTH OR SIDEWALK LOCATION
 2. IF REQUIRED FOR COMMERCIAL DRIVES, DETECTABLE WARNING PANELS SHALL BE PLACED PERPENDICULAR TO THE SIDEWALK WITH THE NEAREST EDGE 6" TO 8" FROM THE DRIVE.
- * DIMENSIONS ARE MAXIMUMS AND ARE TO BE USED IF NECESSARY TO ACCOMMODATE TURNING VEHICLES.

NO.	REVISION	DATE	City of Concord Engineering Services Division	SECTION: SITE/STREET
1	DRAFTING	11-11	DRIVE WITH VERTICAL GRANITE CURB, GRASS PANEL WIDTH <5'	DRAWING NO. D-1
1	MIN WIDTH	11-11		DATE: 12/08
-	-	-		PAGE: 1
APPROVED BY:				



PLAN VIEW



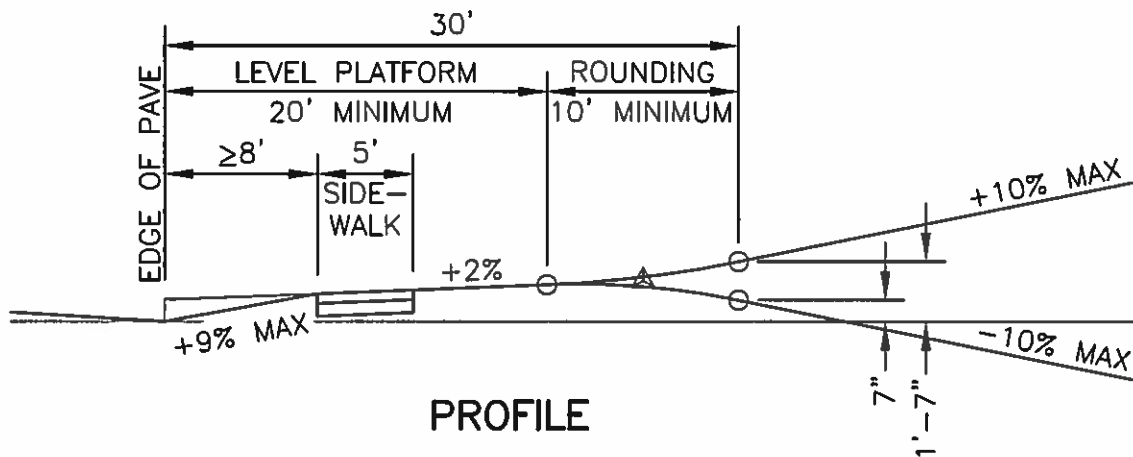
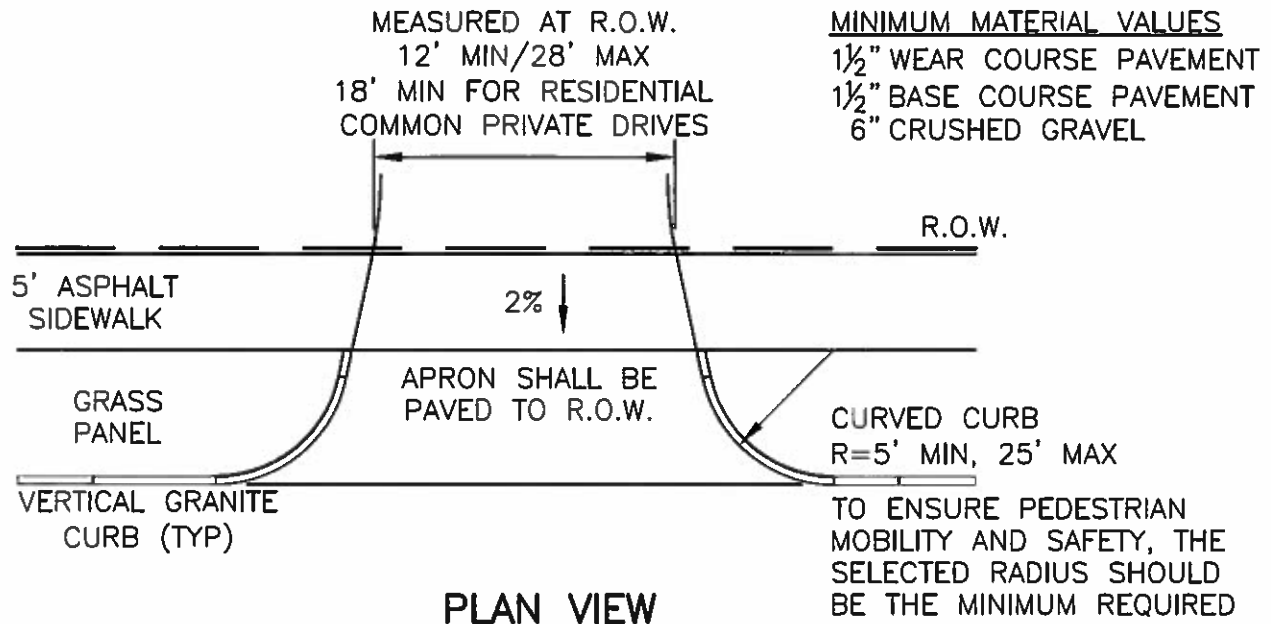
PROFILE

- A -WIDTH OF
GRASS PANEL
- B -VERTICAL OFFSET
AT 30' FOR
DRIVES IN FILL
- C -VERTICAL OFFSET
AT 30' FOR
DRIVES IN CUT
- D -VERTICAL DROP
OF SIDEWALK

VERTICAL CURB			
A	B	C	D
5'	4¼"	1'-4¼"	2¾"
6'	5"	1'-5"	1¾"
7'	6"	1'-6"	1"

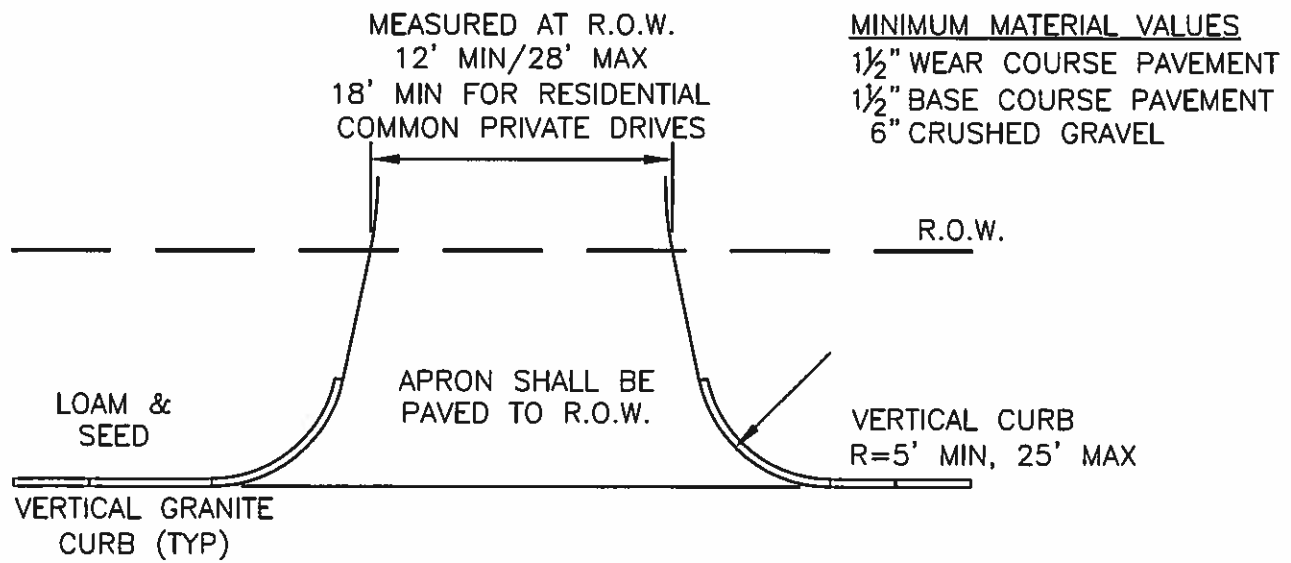
NOTE: THE DRIVE WIDTHS AND PROFILE PERTAIN TO ALL URBAN DRIVES,
REGARDLESS OF R.O.W. WIDTH OR SIDEWALK LOCATION

NO.	REVISION	DATE	City of Concord Engineering Services Division	SECTION: SITE/STREET
1	MIN WIDTH	11-11	DRIVE WITH VERTICAL GRANITE CURB, AND GRASS PANEL BETWEEN 5' AND 8' WIDE	DRAWING NO. D-2
-	-	-		DATE: 12/08
-	-	-		PAGE: 1
APPROVED BY:				

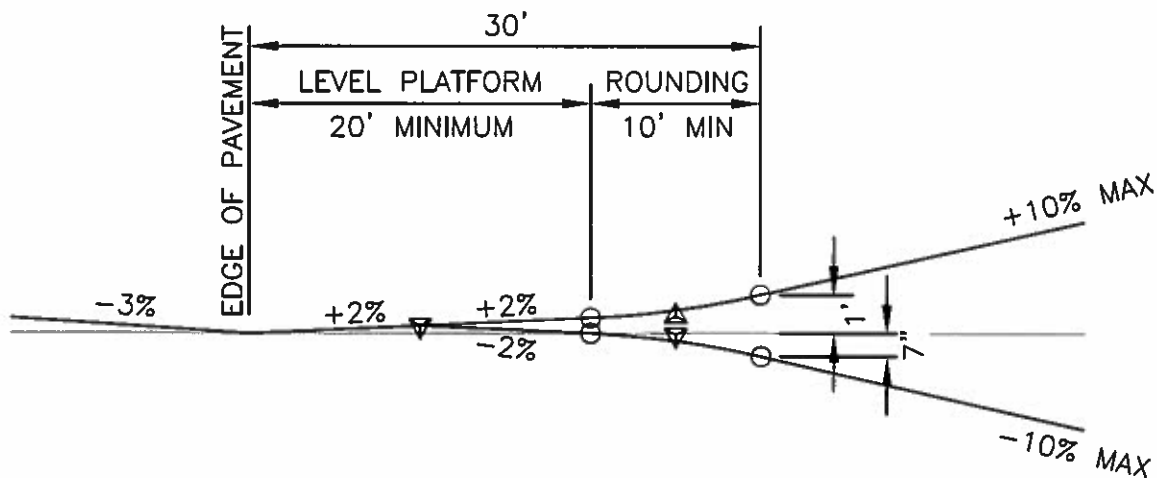


NOTE: THE DRIVE WIDTHS AND PROFILE PERTAIN TO ALL URBAN DRIVES,
REGARDLESS OF R.O.W. WIDTH OR SIDEWALK LOCATION

NO.	REVISION	DATE	City of Concord Engineering Services Division	SECTION: SITE/STREET
1	MIN WIDTH	11-11	DRIVE WITH VERTICAL GRANITE CURB, GRASS PANEL WIDTH ≥8'	DRAWING NO. D-3
-	-	-		DATE: 12/08
-	-	-		PAGE: 1
APPROVED BY:				



PLAN VIEW



PROFILE

NOTE: THE DRIVE WIDTHS AND PROFILE PERTAIN TO ALL URBAN DRIVES, REGARDLESS OF R.O.W. WIDTH

NO.	REVISION	DATE	City of Concord Engineering Services Division		SECTION: SITE/STREET	
1	MIN WIDTH	11-11	DRIVE WITH VERTICAL GRANITE CURB, W/O SIDEWALK		DRAWING NO.	D-4
-	-	-			DATE:	12/08
-	-	-			PAGE:	1
APPROVED BY:						

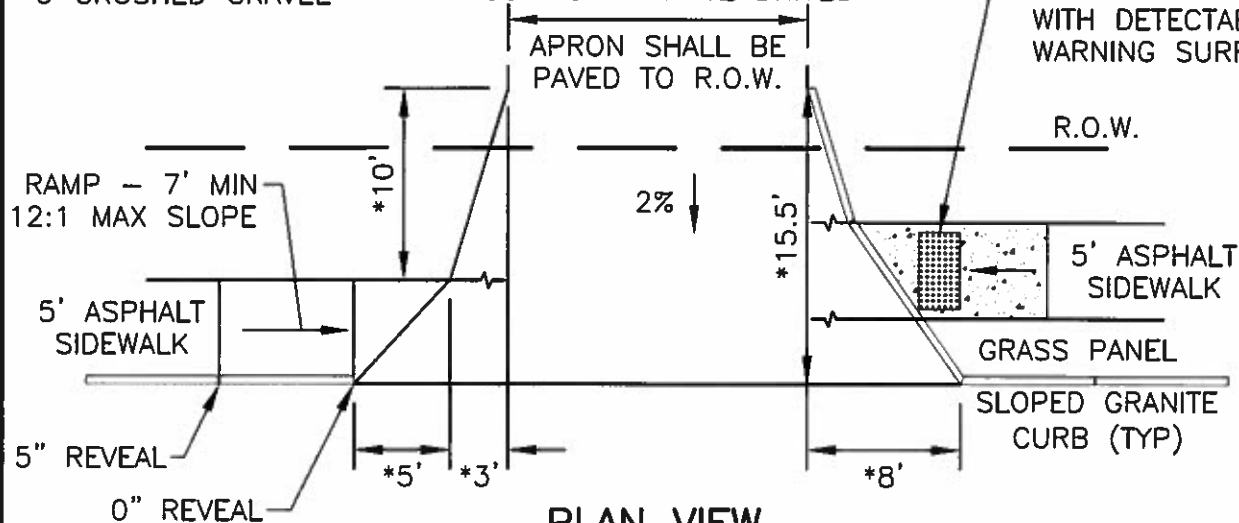
MINIMUM MATERIAL VALUES

1½" WEAR COURSE PAVEMENT
1½" BASE COURSE PAVEMENT
6" CRUSHED GRAVEL

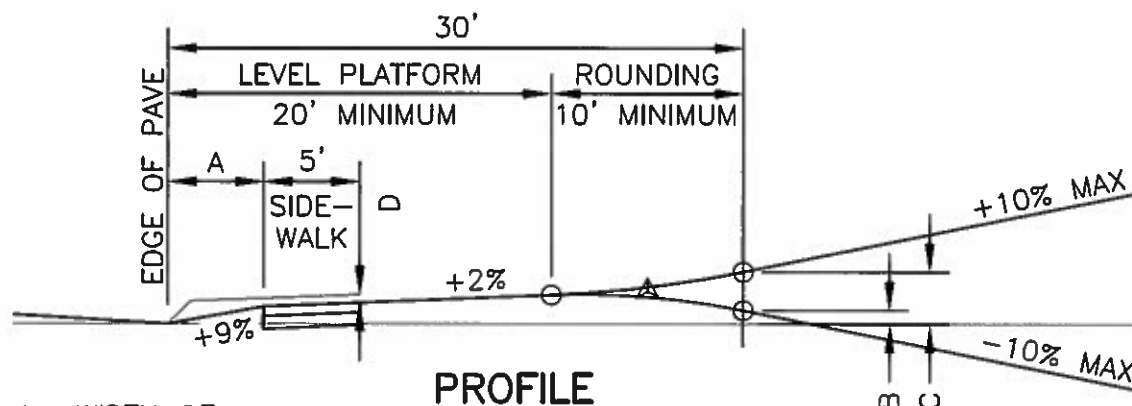
MEASURED AT R.O.W.

12' MIN/28' MAX
18' MIN FOR RESIDENTIAL
COMMON PRIVATE DRIVES

COMMERCIAL DRIVES IF
REQUIRED: WHERE "A" IS
<5', CONSTRUCT
CONCRETE CURB RAMP
WITH DETECTABLE
WARNING SURFACE



PLAN VIEW



PROFILE

- A -WIDTH OF GRASS PANEL
- B -VERTICAL OFFSET AT 30' FOR DRIVES IN FILL
- C -VERTICAL OFFSET AT 30' FOR DRIVES IN CUT
- D -VERTICAL DROP OF SIDEWALK

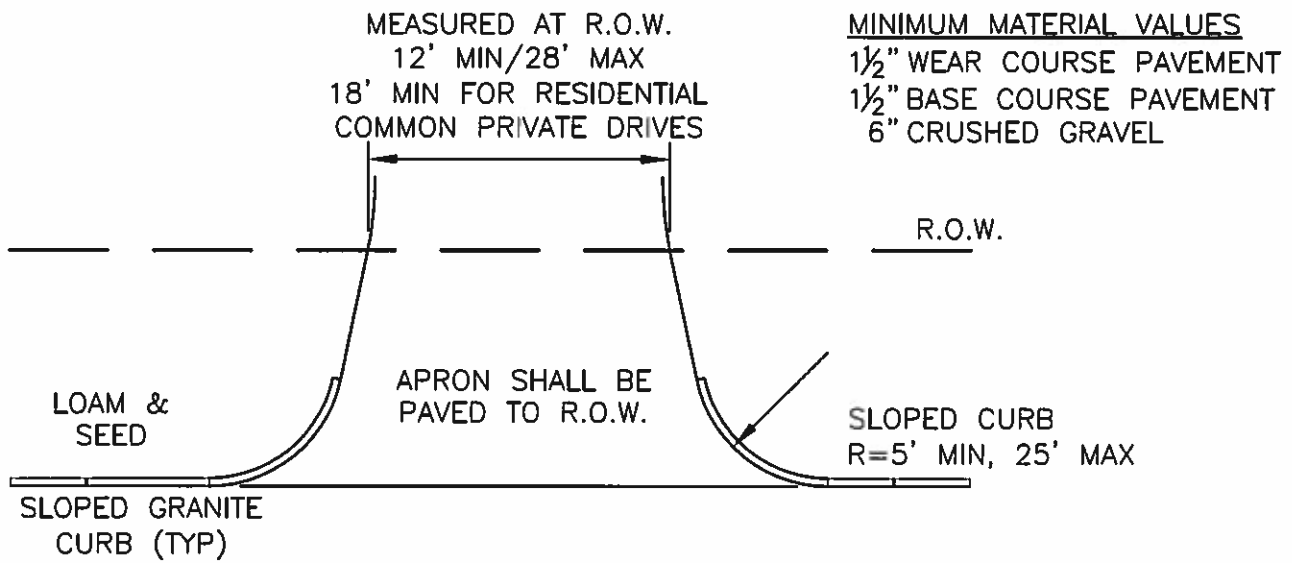
SLOPED CURB			
A	B	C	D
0	0	1'-0"	5"
1'	¾"	1'-¾"	4"
2'	1¾"	1'-1¾"	3¾"
3'	2½"	1'-2½"	2¾"
4'	3¾"	1'-3¾"	1½"
5'	5"	1'-4¾"	¾"

NOTE:

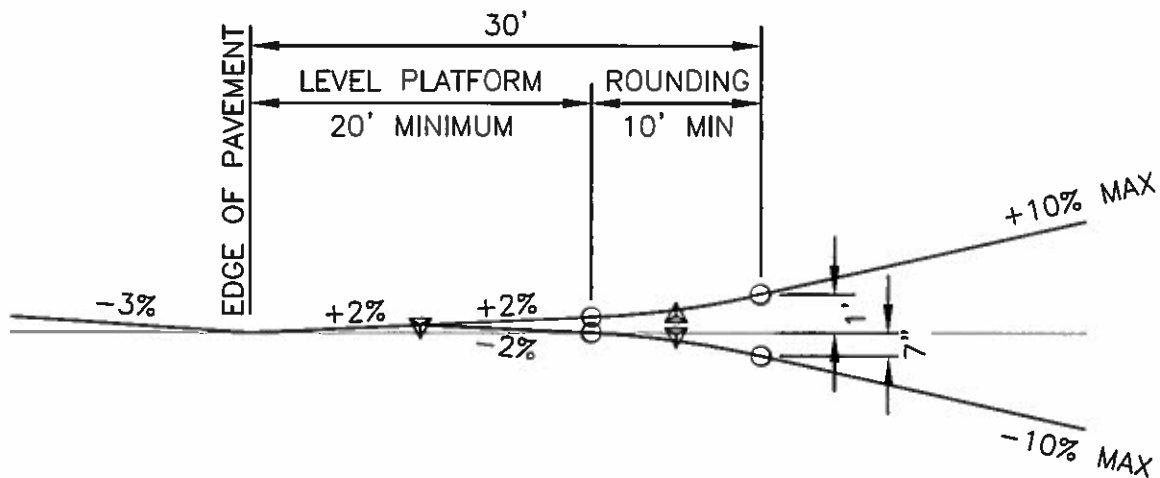
- THE DRIVE WIDTHS AND PROFILE PERTAIN TO ALL URBAN DRIVES, REGARDLESS OF R.O.W. WIDTH OR SIDEWALK LOCATION
- IF REQUIRED FOR COMMERCIAL DRIVES, DETECTABLE WARNING PANELS SHALL BE PLACED PERPENDICULAR TO THE SIDEWALK WITH THE NEAREST EDGE 6" TO 8" FROM THE DRIVE.

* DIMENSIONS ARE MAXIMUMS AND ARE TO BE USED IF NECESSARY TO ACCOMMODATE TURNING VEHICLES.

NO.	REVISION	DATE	City of Concord Engineering Services Division	SECTION: SITE/STREET
1	DRAFTING	11-11	DRIVE WITH SLOPED GRANITE CURB GRASS PANEL WIDTH <6'	DRAWING NO. D-5
1	MIN WIDTH	11-11		DATE: 12/08
-	-	-		PAGE: 1
APPROVED BY:				



PLAN VIEW



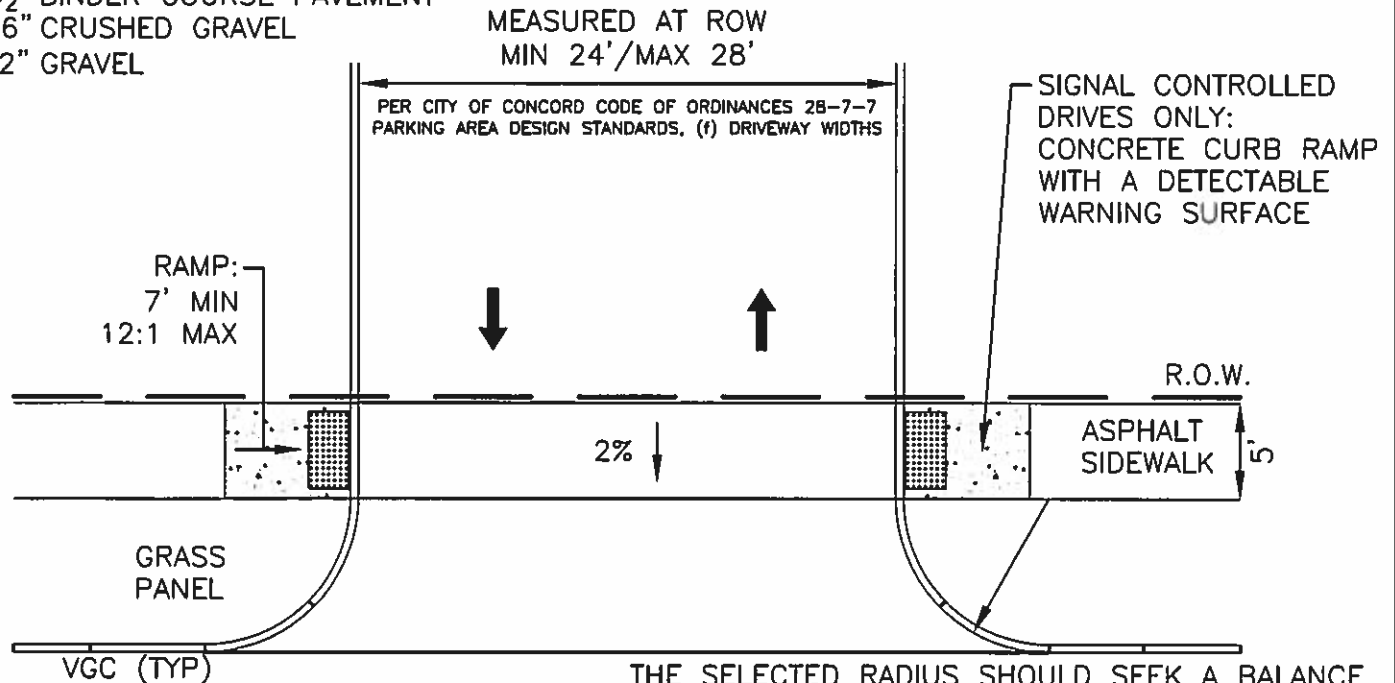
PROFILE

NOTE: THE DRIVE WIDTHS AND PROFILE PERTAIN TO ALL URBAN DRIVES,
REGARDLESS OF R.O.W. WIDTH

NO.	REVISION	DATE	City of Concord Engineering Services Division		SECTION: SITE/STREET	
1	DRAFTING	11-11	DRIVE WITH SLOPED GRANITE CURB, W/O SIDEWALK		DRAWING NO.	D-7
1	MIN WIDTH	11-11			DATE:	12/08
-	-	-			PAGE:	1
APPROVED BY:						

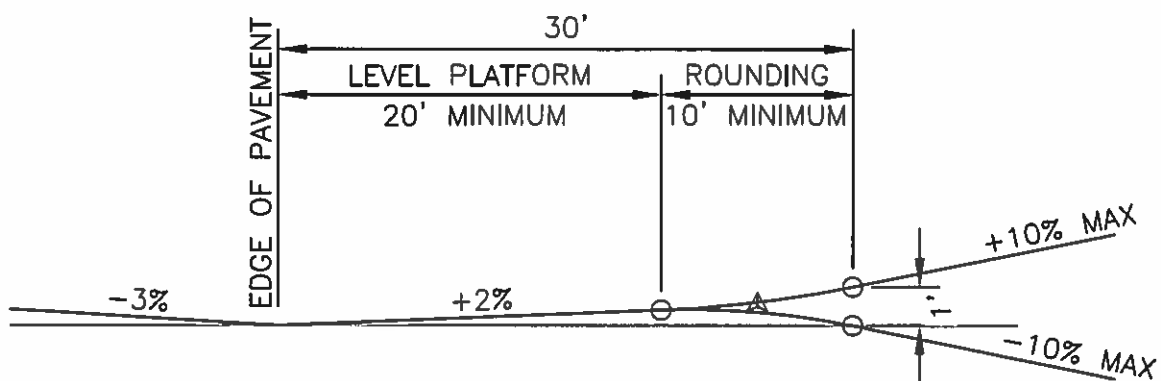
MINIMUM MATERIAL VALUES

1½" WEAR COURSE PAVEMENT
 1½" BINDER COURSE PAVEMENT
 6" CRUSHED GRAVEL
 12" GRAVEL



THE SELECTED RADIUS SHOULD SEEK A BALANCE BETWEEN ACCOMMODATING TURNING VEHICLES AND ENSURING PEDESTRIAN MOBILITY AND SAFETY. A WIDER DRIVEWAY WIDTH WITH A SMALLER RADIUS MAY BE A BETTER CHOICE TO ACCOMPLISH THIS GOAL.

PLAN VIEW



PROFILE

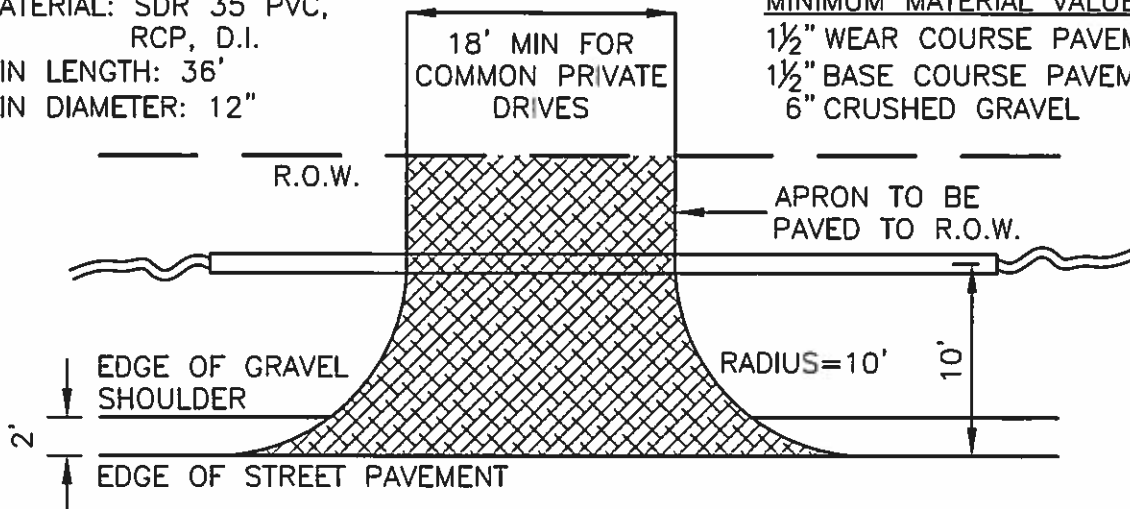
NOTE: THIS DETAIL IS TO BE USED FOR SITES WHERE THE DRIVEWAY REQUIRES TRAFFIC SIGNALS AND/OR ACTS AS A STREET.

NO.	REVISION	DATE	City of Concord Engineering Services Division	SECTION:	SITE/STREET
1	SET SF AREA	11-11	MAJOR COMMERCIAL DRIVE >20,000 SF FLOOR AREA	DRAWING NO.	D-8
-	-	-		DATE:	12/08
-	-	-		PAGE:	1
APPROVED BY:					

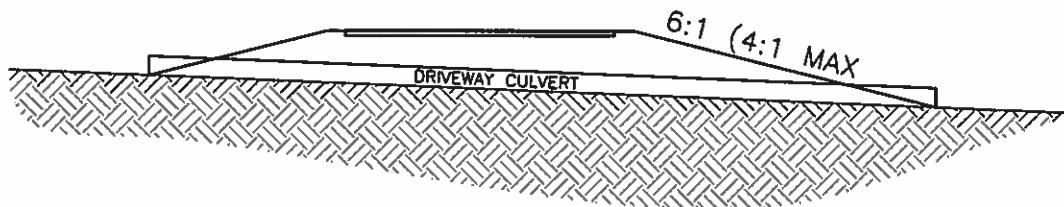
DRIVEWAY CULVERT
 MATERIAL: SDR 35 PVC,
 RCP, D.I.
 MIN LENGTH: 36'
 MIN DIAMETER: 12"

MEASURED AT ROW
 12' MIN/18' MAX

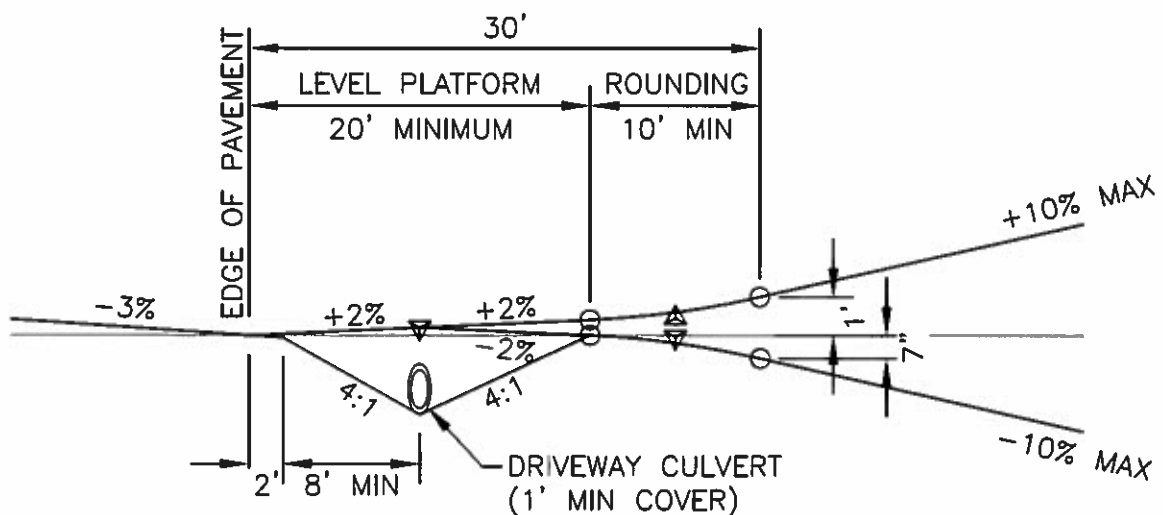
MINIMUM MATERIAL VALUES
 1½" WEAR COURSE PAVEMENT
 1½" BASE COURSE PAVEMENT
 6" CRUSHED GRAVEL



PLAN VIEW



SECTION VIEW



PROFILE

NO.	REVISION	DATE	City of Concord Engineering Services Division		SECTION: SITE/STREET	
1	MIN WIDTH	11-11	RURAL RESIDENTIAL DRIVE		DRAWING NO.	D-9
-	-	-			DATE:	12/08
-	-	-			PAGE:	1
APPROVED BY:						