



Permit Number _____

Address: _____

New Market Township

Driveway/Approach Permit

No person may construct or reconstruct any Driveway/Approach to a Township road without first obtaining a permit and the initial approval of the Township Engineer.

Driveway/Approach must be completed BEFORE CONSTRUCTION OF THE HOME

A \$750 Bond and \$250 non-refundable Inspection Fee is required before any installation begins.

1. The \$750 Bond is refundable if the driveway/approach passes a final inspection.
2. Permits resulting in special circumstances will require a Town Board Recommendation.
3. **Driveway Surfacing**
 - a. Minimum of 24' ft. and a maximum of 32' ft. wide
 - b. The driveway material must be equal or better to the road material within the right of way.
 - i. Gravel roads can have gravel, blacktop, concrete or brick paver driveways
 - ii. Blacktop roads can have blacktop, concrete or brick paver driveways
 - c. Gravel surfaced driveways shall be minimum 6" Class 5 Aggregate surfacing within Right of Way
 - d. Blacktop surfaced driveways shall be minimum 3" blacktop over 6" class 5 aggregate base within Right of Way.
 - e. Concrete and brick pavers are subject to approval.
4. **Culverts**
 - a. Materials
 - i. Allowable materials are corrugated metal (CMP), Dual Wall HDPE, Dual Wall Polypropylene, or Reinforced concrete (RCP)
 - ii. Aprons are required at each side.
 - b. Size
 - i. Minimum inside culvert diameter is 15 inch. Culverts to be evaluated individually for sizing requirements.
 - ii. The Township Engineer reserves the right to increase culvert size based on driveway location, at no cost to the Township.
 - c. Installation
 - i. All installation to be in accordance with MnDOT Standards
 - ii. <https://standardplates.dot.state.mn.us/>
5. **Restoration**
 - a. 6 to 1 Slopes or flatter are required.
 - b. Permanent Erosion Control shall be in compliance with attached standard plans.
 - c. Only natural netting blanket is allowed in the right of way.
 - d. Both temporary seed (oats, wheat, etc) and perennial ditch grass mix seed shall be used in accordance with supplier application rates.

Call for inspection BEFORE and AFTER Driveway/Approach is installed:

Township Engineer – Chris McKenzie: (763) 463.5036 or

Road Supervisor – Marko Popovich (612) 247.0967



Permit Number _____

Address: _____

Unless an extension of time has been granted by the Township Board; if the landowner does not begin construction of the Driveway/Approach or does not complete the Driveway /Approach or call for a final inspection, within six months of the date of permit issuance, the inspection fee will be forfeited to the township and the permit will be voided.

\$500 fine will be imposed upon any landowner who installs a Driveway/Approach without first obtaining a permit. The fine does not relieve the applicant from obtaining a permit.

APPLICATION DATE: _____

LOCATION/ADDRESS OF DRIVEWAY/APPROACH (include a sketch if necessary):

Owner Name _____ Phone _____

Applicant Name _____ Phone _____

I, We, the undersigned, hereby apply for a permit from New Market Township for the above.

Signature

Date

Checks Payable to: *New Market Township*

Send checks to: *New Market Township Clerk, 8950 230th St, Lakeville, MN 55044*

Township Use Only

Date Fee Received: _____

Check Number _____

Approved Culvert Size and Material: _____

Special Conditions of Permit Approval Notes: _____

Date Permit Granted: _____

Inspection Approved Date _____

Granted Permit Signature _____

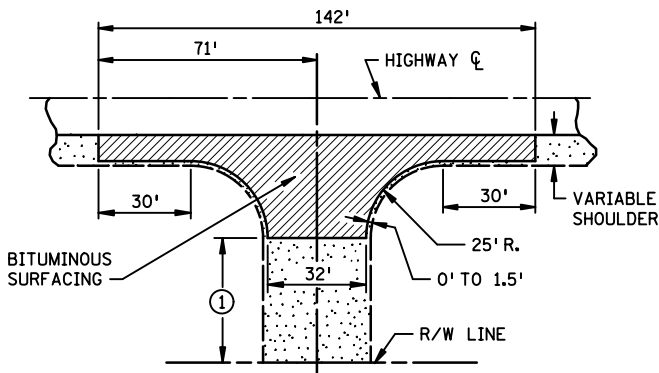
Approved by (Printed): _____

Inspection Date(s): _____

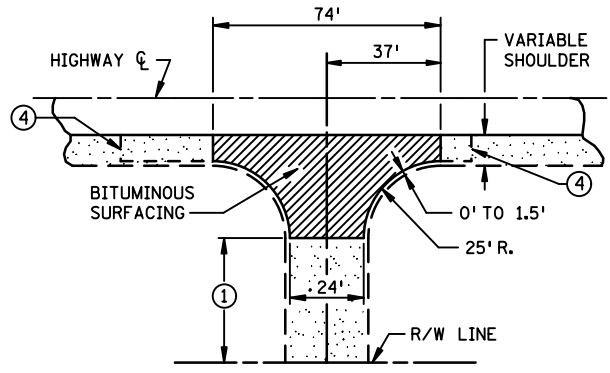
Approved by (Signed): _____

Inspection Date(s): _____

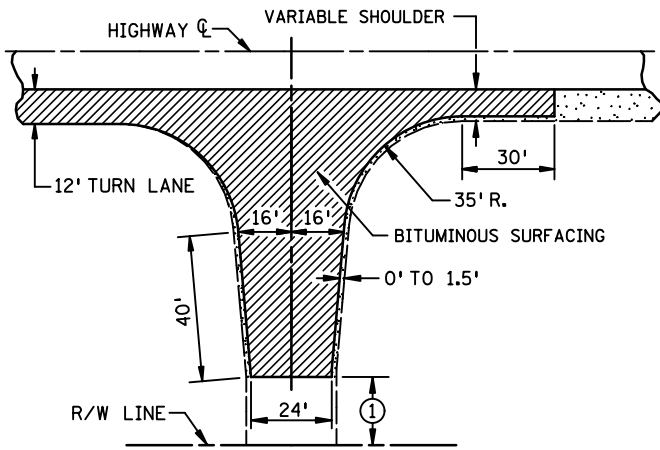
Date Bond Refunded: _____



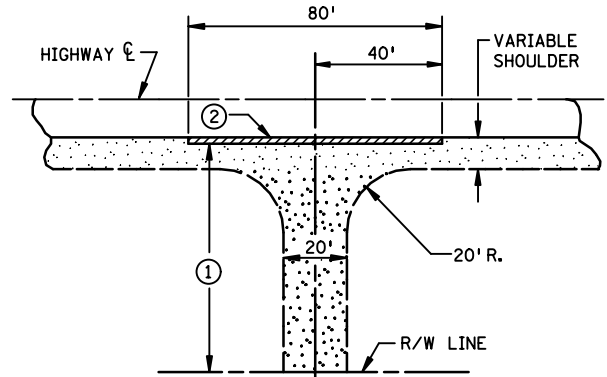
COMMERCIAL - INDUSTRIAL - FARM ENTRANCES



RURAL RESIDENTIAL ENTRANCE

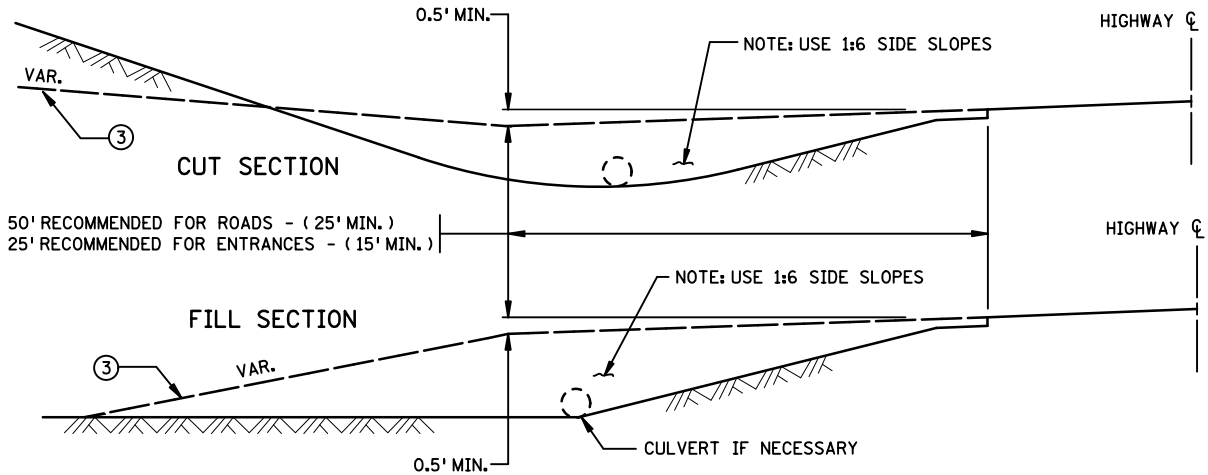


LOW VOLUME ROAD



FIELD ENTRANCES

- ① SURFACING TO MATCH EXISTING CONDITIONS. WHERE THERE IS NO SURFACING, PLACE GRAVEL BEYOND BITUMINOUS SURFACING TO R/W LINE.
- ② PLACE 2 FT. WIDE BITUMINOUS SURFACING AS DIRECTED BY ENGINEER.
- ③ 8% MAXIMUM COMMERCIAL; 15% MAXIMUM RESIDENTIAL.
- ④ THE USE OF PAVING SIMILAR TO COMMERCIAL ENTRANCES MAY BE APPROPRIATE FOR SOME RESIDENCES - AS SHOWN IN PLANS OR DIRECTED BY THE ENGINEER.



CROSS SECTIONS

APPROVED SEPT. 27, 2012

Michael J. Henneman
STATE DESIGN ENGINEER

STATE OF MINNESOTA
DEPARTMENT OF TRANSPORTATION

APPROACHES AND ENTRANCES
RECOMMENDED STANDARDS

SPECIFICATION
REFERENCE

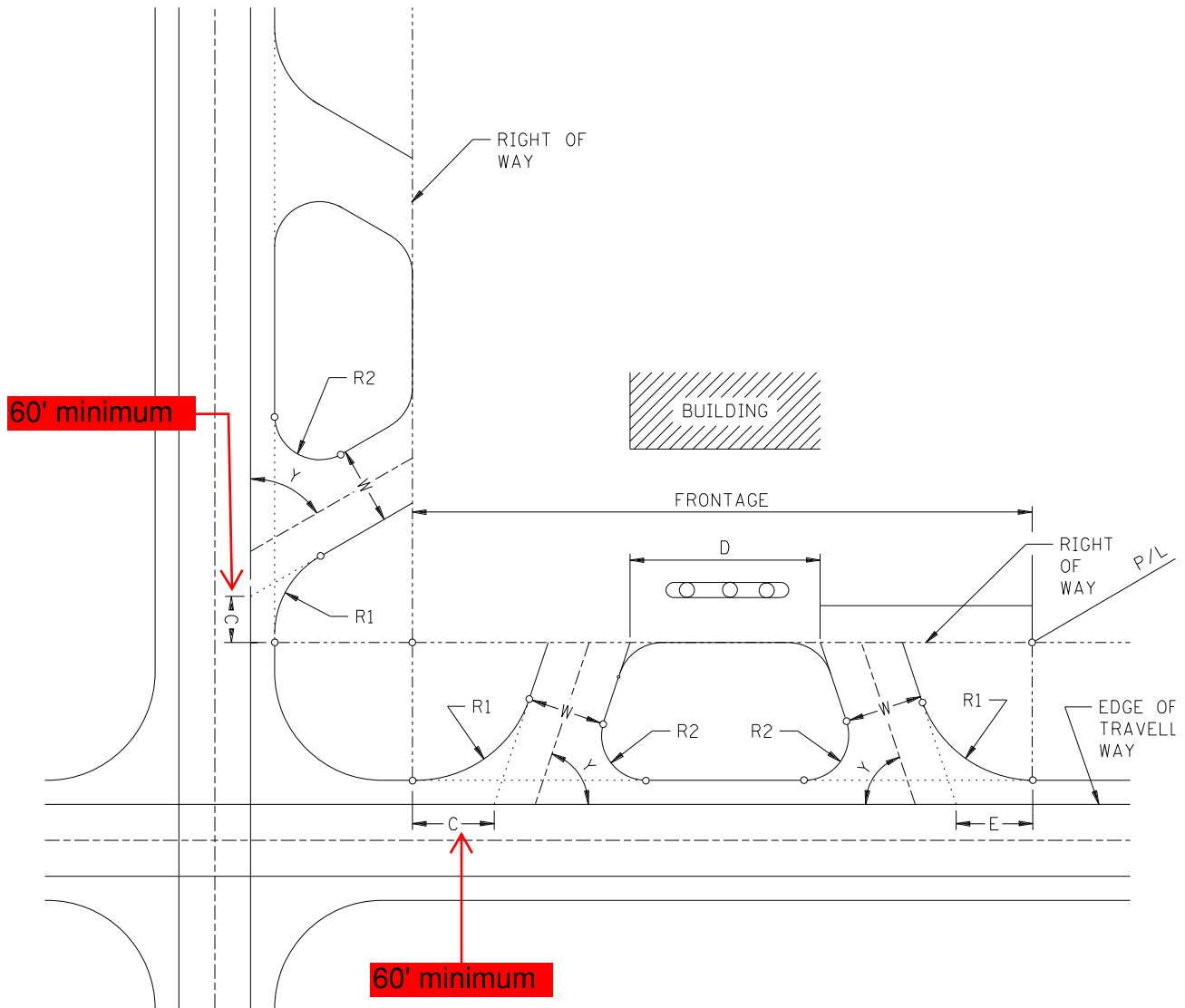
STANDARD
PLATE
NO.

9000E

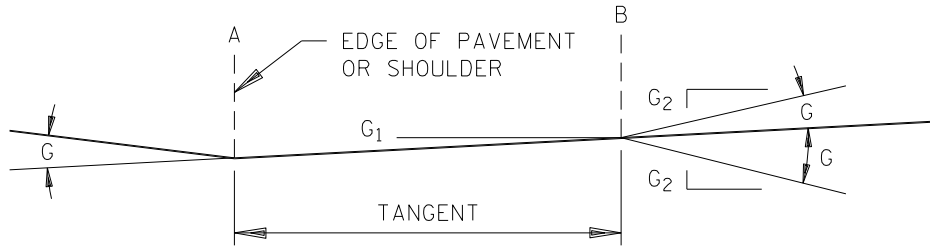
**Table 5-3.04A
Driveway Dimensions**

| | | RESIDENTIAL | | COMMERCIAL - INDUSTRIAL - FARM | | | |
|---|------|-------------|---------|--------------------------------|--------|-------|--------|
| | | URBAN | RURAL | URBAN | | RURAL | |
| Driveway Angle (degrees) (Y) (1) | | 70 - 90 | 70 - 90 | 70 | 90 | 70 | 90 |
| Recommended Driveway Width (W) (ft) (2) (3) | | 16 | 24 | 32 | 32 | 32 | 32 |
| Radius of Curvature (R1) (ft) | Min. | 5 | 5 | 5 | 5 | 10 | 10 |
| | Max. | 15 | 25 | 30 | 30 (4) | 40 | 40 (4) |
| Radius of Curvature (R2) (ft) | Min. | 5 | 5 | 5 | 5 | 5 | 5 |
| | Max. | 15 | 15 | 15 | 15 | 15 | 15 |
| Recommended Edge Clearance (E) (ft) | | N/A | N/A | 5 | 5 | 10 | 10 |
| Recommended Distance Between Double Driveways (D) (ft) | | 20 | 50 | 20 | 20 | 30 | 30 |
| Recommended Corner Clearance From Major Street (C) (ft) (5) | | 30 | 60 | 30 | 30 | 60 | 60 |
| Recommended Corner Clearance From Minor Street (C) (ft) (5) | | 20 | 60 | 20 | 20 | 60 | 60 |

- (1) A 90 degree driveway is desired. Driveway angle "Y" shall not be less than 70 degrees for two-way driveways.
- (2) Driveway widths may be greater than those recommended but should not exceed 50 feet. The larger driveway dimensions are intended for those used nearly exclusively by tractor trailer combinations. Required widths are determined with vehicle wheel path templates.
- (3) One-way driveway dimensions may be reduced.
- (4) The recommended radius of a 90 degree driveway is 25 ft.
- (5) Clearances other than those recommended may be needed due to varying circumstances.



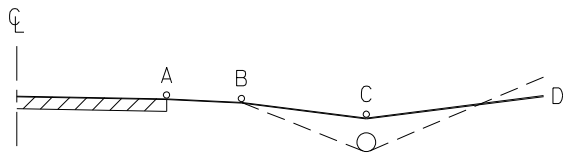
MINIMUM DRIVEWAY LOCATIONS AND DIMENSIONS
Figure 5-3.04A



SUGGESTED MAXIMUM GRADE CHANGE (G)

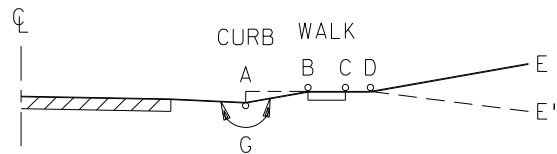
| | DESIRABLE | MAXIMUM |
|---|-----------|---------------------------------|
| HIGH VOLUME DRIVEWAY | 0% | ± 3% |
| LOW VOLUME DRIVEWAY ON MAJOR OR COLLECTOR STREETS | ± 3% | ± 6% |
| LOW VOLUME DRIVEWAY ON LOCAL STREETS | ± 6% | CONTROLLED BY VEHICLE CLEARANCE |

NOTE: THE CHANGE IN VERTICAL ALIGNMENT AT POINTS "A" AND "B" SHOULD NOT EXCEED THE VALUE OF "G" IN THE ABOVE TABLE. DESIRABLY, "G" SHOULD NOT EXCEED 7%.



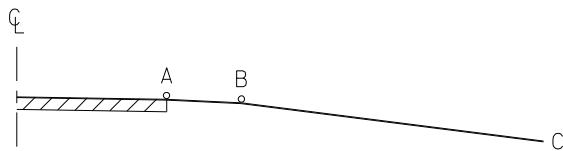
PROFILE IN CUT SECTION

- A TO B = SAME PITCH AS SHOULDER SLOPE
- B TO C = 8% MAX. (MIN. PITCH SAME AS SHOULDER SLOPE)
- C TO D = 8% MAX. FOR COMMERCIAL AND INDUSTRIAL DRIVEWAYS. 15% FOR RESIDENTIAL.



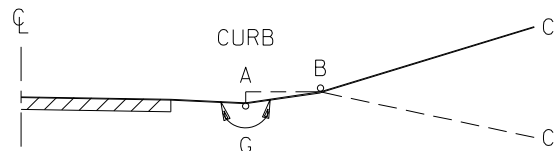
PROFILE WITH CURB AND SIDEWALK

- A TO B = SLOPE FROM GUTTER TO MEET SIDEWALK
- C TO D = VARIABLE DISTANCE
- D TO E = ± 8% MAX. FOR COMMERCIAL AND INDUSTRIAL DRIVEWAYS. 15% FOR RESIDENTIAL.



PROFILE IN FILL SECTION

- A TO B = SAME AS SHOULDER SLOPE
- B TO C = 8% MAX. FOR COMMERCIAL AND INDUSTRIAL DRIVEWAYS. 15% FOR RESIDENTIAL.

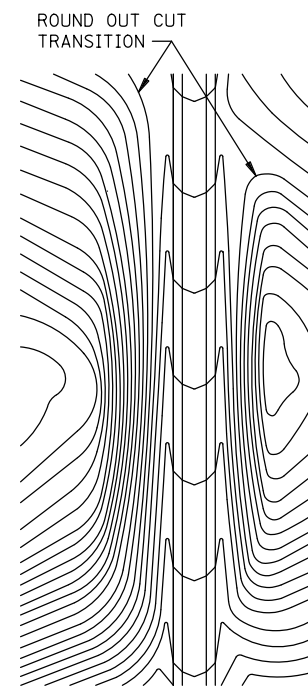


PROFILE WITH CURB

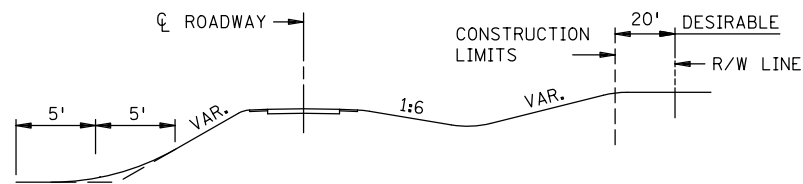
- A TO B = SLOPE UPWARD TO A MIN. HEIGHT EQUAL TO CURB HEIGHT
- B TO C = ± 8% MAX. FOR COMMERCIAL AND INDUSTRIAL DRIVEWAYS. 15% FOR RESIDENTIAL.

DRIVEWAY PROFILES

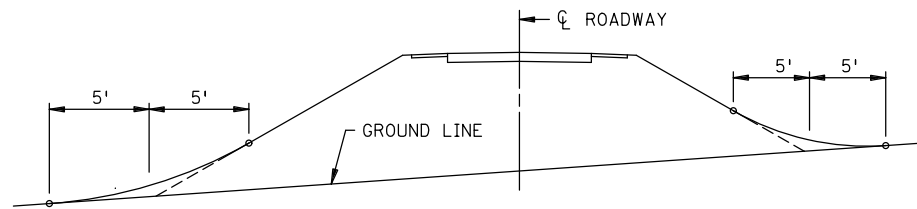
Figure 5-3.04B



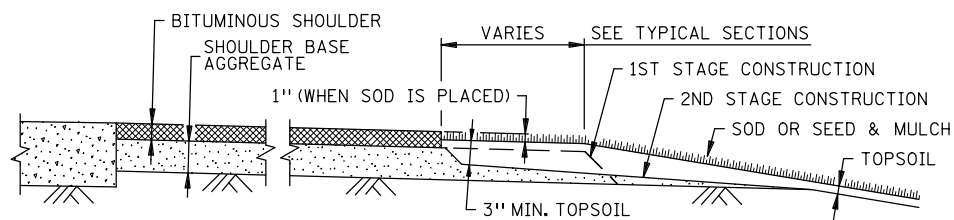
CONTOURING ROAD CUTS



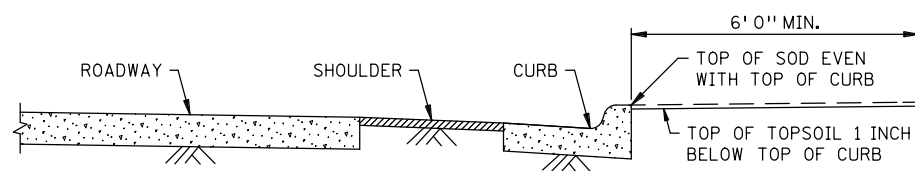
ROUNDING SHOULDERS AND BACKSLOPES



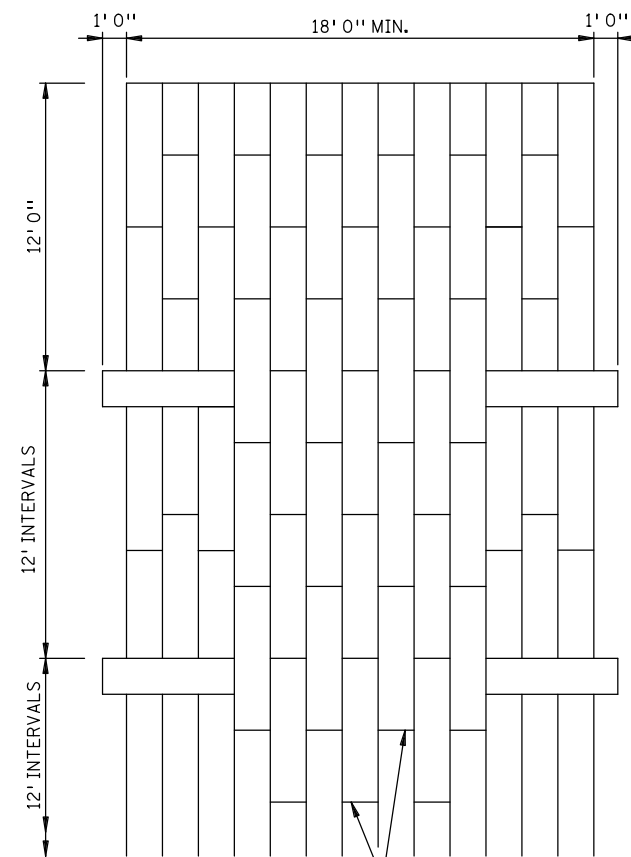
SHAPING FOR DRAINAGE ALONG THE TOE OF FILL SLOPES



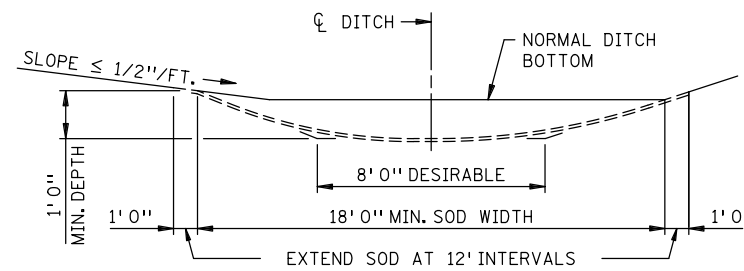
SHAPING AND TOPSOILING INSLOPES



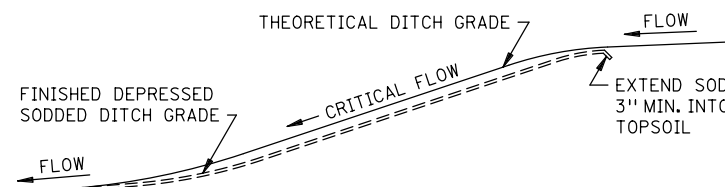
SHAPING ADJACENT TO CURBS WHEN SOD IS PLACED



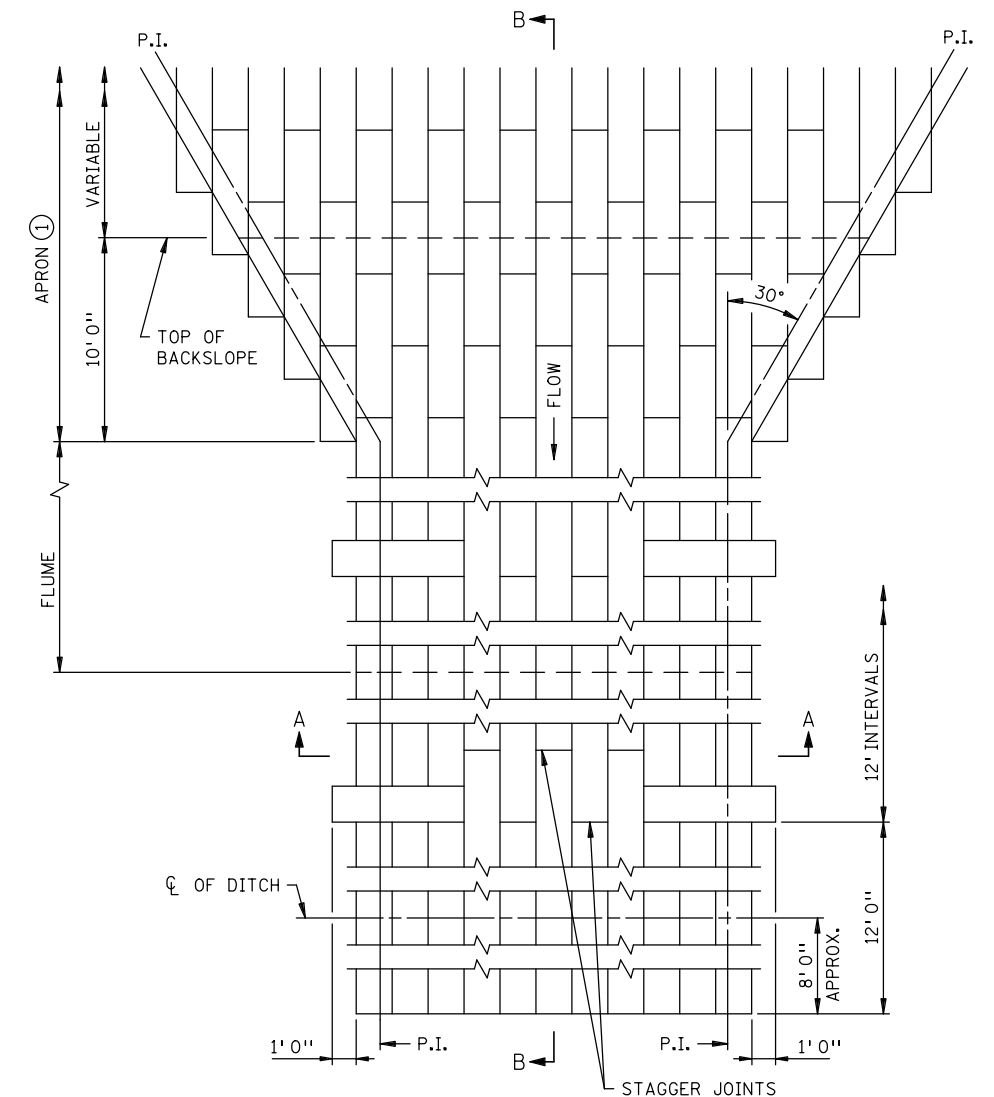
STAGGER JOINTS
PLAN VIEW



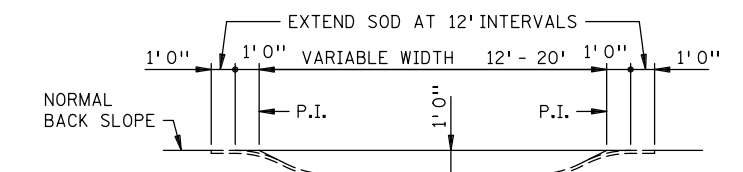
SODDED DITCH CROSS SECTION
WHERE FRONT OR BACK SLOPE IS FLAT (LESS THAN 1/2"/FT.),
FIRST NOTCH DITCH AND THEN PROVIDE ROUNDING.



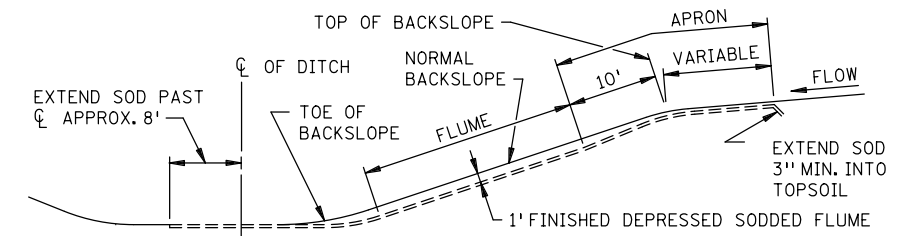
DITCH PROFILE
SODDED DITCH DETAILS



PLAN VIEW



SECTION A-A



SECTION B-B
SODDED FLUME DETAILS

NOTES:
SEE SPEC. 2575.3 FOR ADDITIONAL INFORMATION.
① CONSTRUCT TAPER AS DIRECTED BY THE ENGINEER.

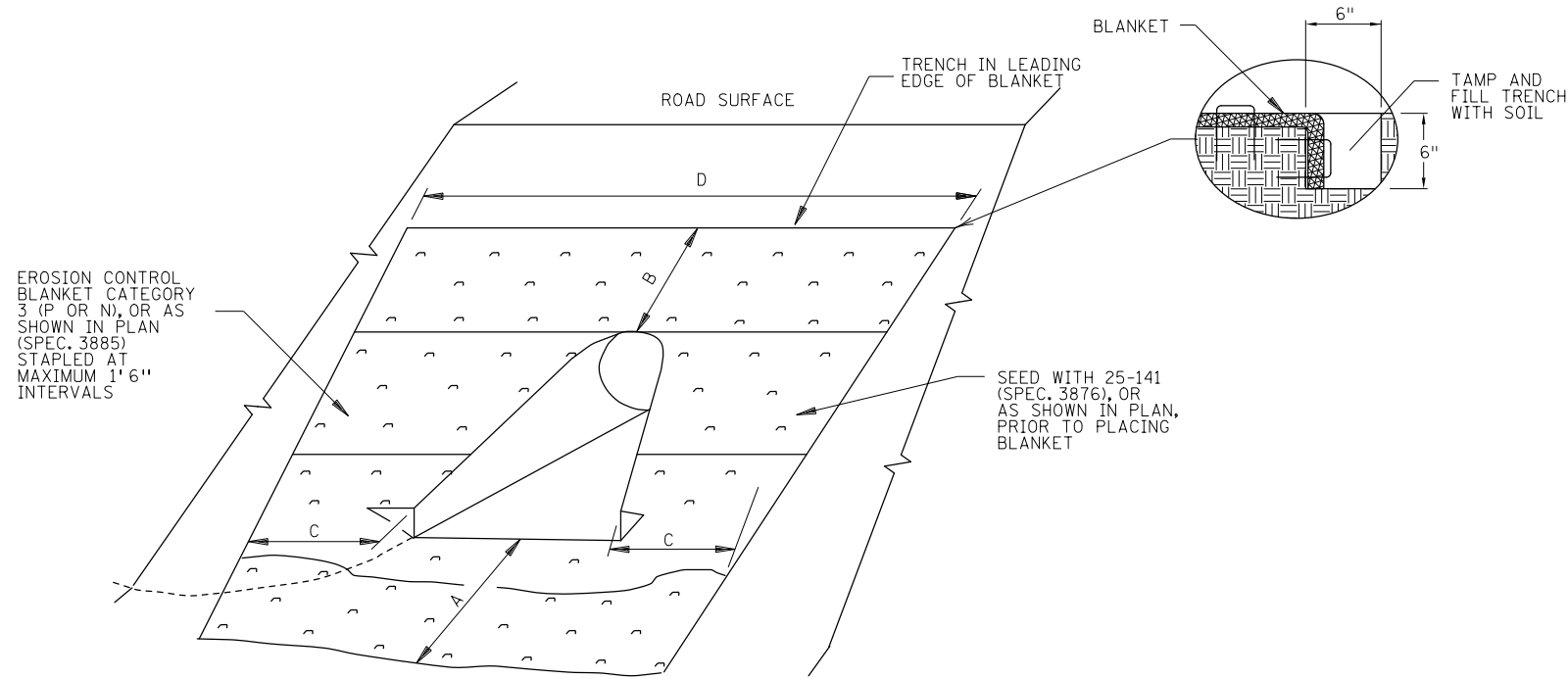
REVISION:
APPROVED: 2-28-2017
[Signature]
CHIEF ENVIRONMENTAL OFFICER

m
MINNESOTA
DEPARTMENT
OF
TRANSPORTATION

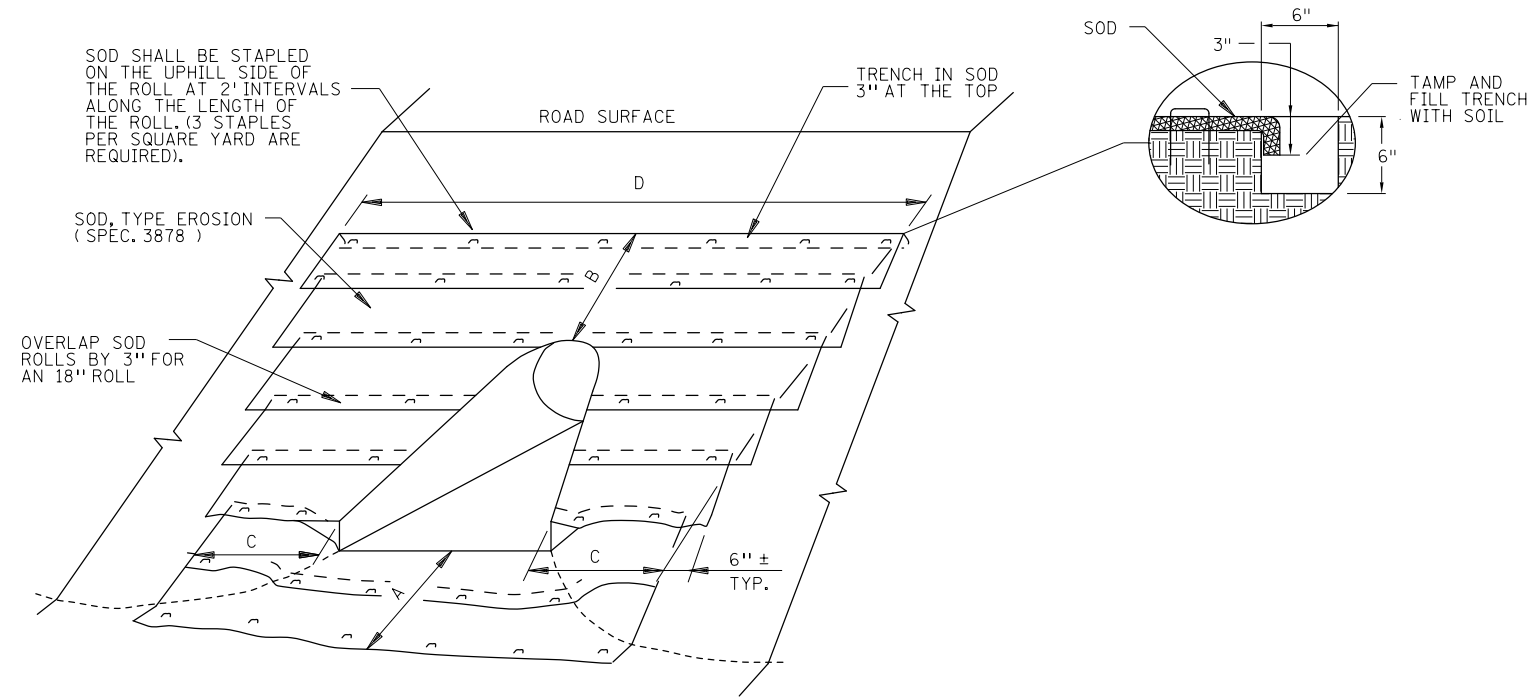
[Signature]
STATE DESIGN ENGINEER

REVISED:
APPROVED:
2-28-2017

PERMANENT EROSION CONTROL
ALONG ROADWAYS, DITCHES AND FLUMES
STANDARD PLAN 5-297.404 1 OF 3



EROSION CONTROL BLANKET & SEED DETAIL



SODDING DETAIL

| CULVERT DIAMETER ② | SOD OR EROSION CONTROL BLANKET (SQ. YDS.) | | | | | | "A" | "B" | "C" | "D" |
|-----------------------|---|--|--|--|--|--|------|-------|------|-----|
| | CIRCULAR AND ARCH PIPE METAL APRON (PLATE 3123, PLATE 3122) | CIRCULAR AND ARCH PIPE CONCRETE APRON (PLATE 3100, PLATE 3110) | CIRCULAR AND ARCH PIPE METAL SAFETY APRON 1:4 SLOPE (PLATE 3148) | CIRCULAR AND ARCH PIPE METAL SAFETY APRON 1:6 SLOPE (PLATE 3148) | CIRCULAR CORRUGATED METAL PIPE SAFETY APRON 1:6 SLOPE (PLATE 3128) | CIRCULAR CORRUGATED METAL PIPE SAFETY APRON 1:4 SLOPE (PLATE 3128) | | | | |
| 15" | 9 | 9 | 8 | 8 | N/A | N/A | 3' | 1.5' | 3' | 13' |
| 18" | 13 | 12 | 12 | 14 | 16 | N/A | 3' | 3' | 3' | 16' |
| 21" | 14 | 14 | 14 | 16 | 18 | 14 | 3' | 3' | 3' | 17' |
| 24" | 16 | 15 | 16 | 19 | 21 | 17 | 3' | 3' | 3' | 18' |
| 27" | N/A | 20 | N/A | N/A | N/A | N/A | 3' | 4.5' | 3' | 20' |
| 30" | 23 | 22 | 25 | 30 | 32 | N/A | 3' | 4.5' | 3' | 22' |
| 36" | 34 | 34 | 39 | 48 | 51 | 37 | 4.5' | 4.5' | 4.5' | 27' |
| 42" | 43 | 40 | 51 | 64 | N/A | N/A | 4.5' | 6' | 4.5' | 30' |
| 48" | 54 | 50 | 66 | 82 | N/A | N/A | 4.5' | 7.5' | 4.5' | 34' |
| 54" | 65 | 58 | 81 | 102 | N/A | N/A | 4.5' | 9' | 4.5' | 37' |
| 60" | 69 | 59 | 91 | 115 | N/A | N/A | 4.5' | 9' | 4.5' | 39' |
| 66" | 69 | 63 | N/A | N/A | N/A | N/A | 4.5' | 9' | 4.5' | 39' |
| 72" | 78 | 72 | 99 | 122 | N/A | N/A | 4.5' | 10.5' | 4.5' | 41' |

| CULVERT DIAMETER ② | SOD OR EROSION CONTROL BLANKET (SQ. YDS.) | | | | | | "A" | "B" | "C" | "D" |
|-----------------------|---|--|--|--|--|--|-------|------|------|-----|
| | CIRCULAR AND ARCH PIPE METAL APRON (PLATE 3123, PLATE 3122) | CIRCULAR AND ARCH PIPE CONCRETE APRON (PLATE 3100, PLATE 3110) | CIRCULAR AND ARCH PIPE METAL SAFETY APRON 1:4 SLOPE (PLATE 3148) | CIRCULAR AND ARCH PIPE METAL SAFETY APRON 1:6 SLOPE (PLATE 3148) | CIRCULAR CORRUGATED METAL PIPE SAFETY APRON 1:6 SLOPE (PLATE 3128) | CIRCULAR CORRUGATED METAL PIPE SAFETY APRON 1:4 SLOPE (PLATE 3128) | | | | |
| 15" | 10 | 10 | 9 | 10 | N/A | N/A | 4.5' | 1.5' | 3' | 13' |
| 18" | 13 | 13 | 12 | 14 | 15 | N/A | 6' | 1.5' | 3' | 14' |
| 21" | 16 | 14 | 16 | 18 | 19 | 15 | 6' | 1.5' | 3' | 15' |
| 24" | 18 | 18 | 18 | 21 | 22 | 18 | 7.5' | 1.5' | 3' | 16' |
| 27" | N/A | 19 | N/A | N/A | N/A | N/A | 7.5' | 1.5' | 3' | 17' |
| 30" | 23 | 23 | 24 | 28 | 29 | N/A | 9' | 1.5' | 3' | 18' |
| 36" | 36 | 35 | 38 | 47 | 48 | 37 | 10.5' | 1.5' | 4.5' | 23' |
| 42" | 43 | 40 | 47 | 58 | N/A | N/A | 12' | 1.5' | 4.5' | 25' |
| 48" | 50 | 46 | 57 | 70 | N/A | N/A | 13.5' | 1.5' | 4.5' | 27' |
| 54" | 57 | 50 | 67 | 84 | N/A | N/A | 15' | 1.5' | 4.5' | 29' |
| 60" | 74 | 63 | 90 | 113 | N/A | N/A | 16.5' | 1.5' | 6' | 33' |
| 66" | 75 | 67 | N/A | N/A | N/A | N/A | 16.5' | 1.5' | 6' | 33' |
| 72" | 77 | 70 | 92 | 114 | N/A | N/A | 16.5' | 1.5' | 6' | 34' |

NOTES:

- AREA SHOWN IN SQUARE YARDS IS FOR ONE CULVERT END.
- QUANTITIES ARE CALCULATED TO INCLUDE SOD REQUIRED TO PROVIDE A 3" OVERLAP ON ALL 18" WIDE ROLLS. THIS ALLOWS FOR SHRINKAGE OF THE SOD.
- FOR PIPE ARCHES USE EQUIVALENT PIPE DIAMETER TO APPROXIMATE AREA.
- FOR CORRUGATED POLYETHYLENE PIPE METAL APRON (PLATE 3129), USE THE METAL APRON COLUMN (PLATE 3123).
- AREAS AND DIMENSIONS ARE APPROXIMATE AND ARE BASED ON APRON SIDE SLOPES OF NO STEEPER THAN 1:2, UNLESS INDICATED AS FOR SAFETY APRONS.
- CARE SHOULD BE TAKEN IN SELECTING SOD TO STABILIZE THE APRON. RIP-RAP SHOULD BE USED FOR FLOW VELOCITIES GREATER THAN 6 FPS.

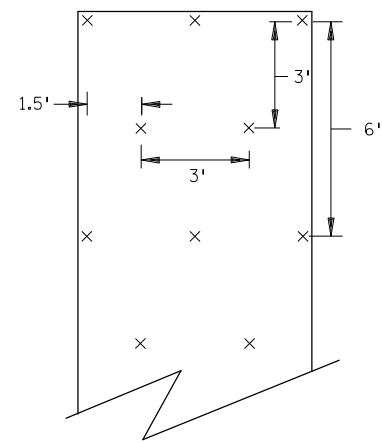
- ① ADDITIONAL QUANTITIES MAY BE SHOWN IN THE PLAN OR REQUIRED BY THE ENGINEER.
- ② FOR ARCH PIPE USE CLOSEST CIRCULAR PIPE DIAMETER AND APRON SLOPE. (DIAMETERS LARGER THAN 72" REQUIRE SPECIAL DESIGNS.)

REVISION:
APPROVED: 2-28-2017
[Signature]
CHIEF ENVIRONMENTAL OFFICER

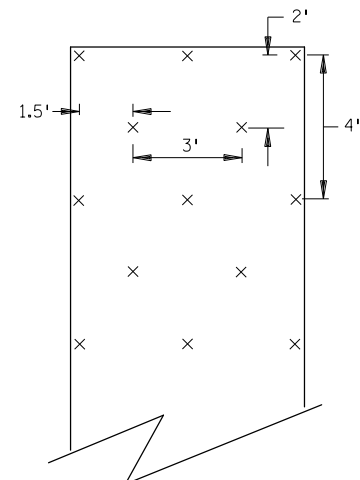
m
MINNESOTA
DEPARTMENT
OF
TRANSPORTATION

REVISED:
[Signature]
APPROVED:
2-28-2017
STATE DESIGN ENGINEER

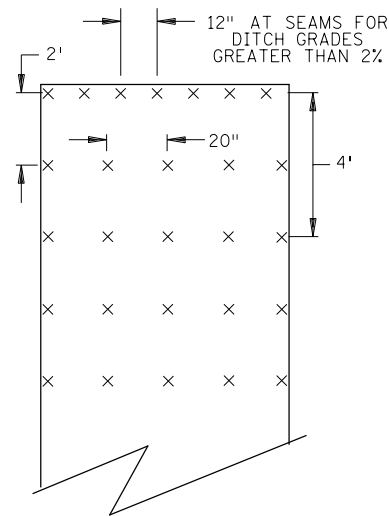
PERMANENT EROSION CONTROL
TURF ESTABLISHMENT DETAIL AT CULVERT ENDS
STANDARD PLAN 5-297.404
2 OF 3



SLOPES FLATTER THAN 1:2
(120 STAPLES PER 100 SQ YD)

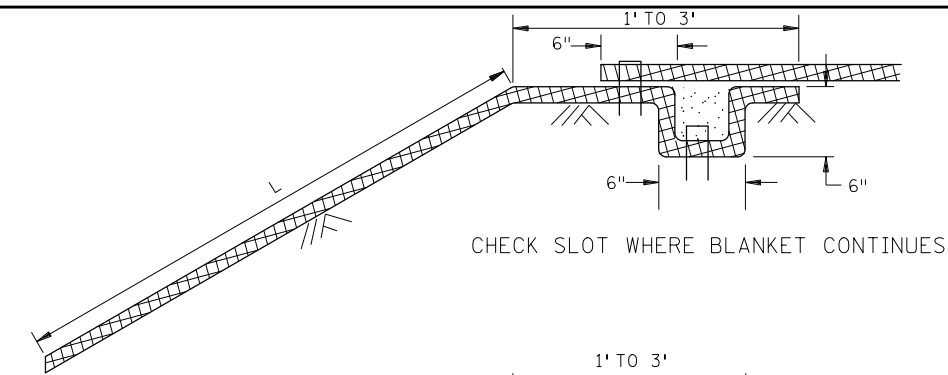


SLOPES 1:2 TO 1:1
(170 STAPLES PER 100 SQ YD)

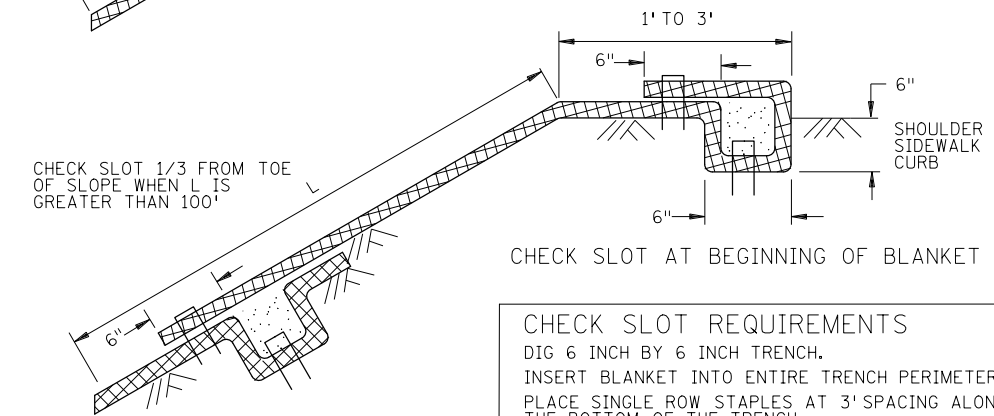


CHANNEL AND DITCH APPLICATIONS
(350 STAPLES PER 100 SQ YD)

BLANKET STAPLE PATTERN



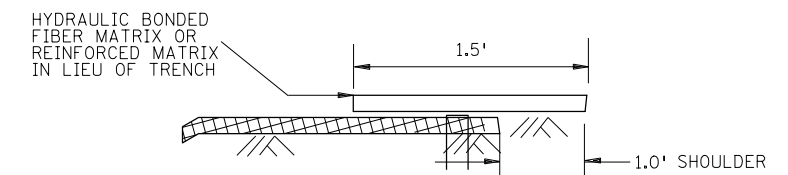
CHECK SLOT WHERE BLANKET CONTINUES



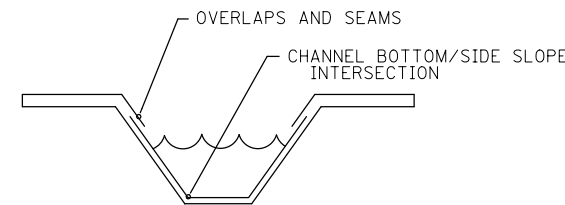
CHECK SLOT 1/3 FROM TOE OF SLOPE WHEN L IS GREATER THAN 100'

CHECK SLOT AT BEGINNING OF BLANKET

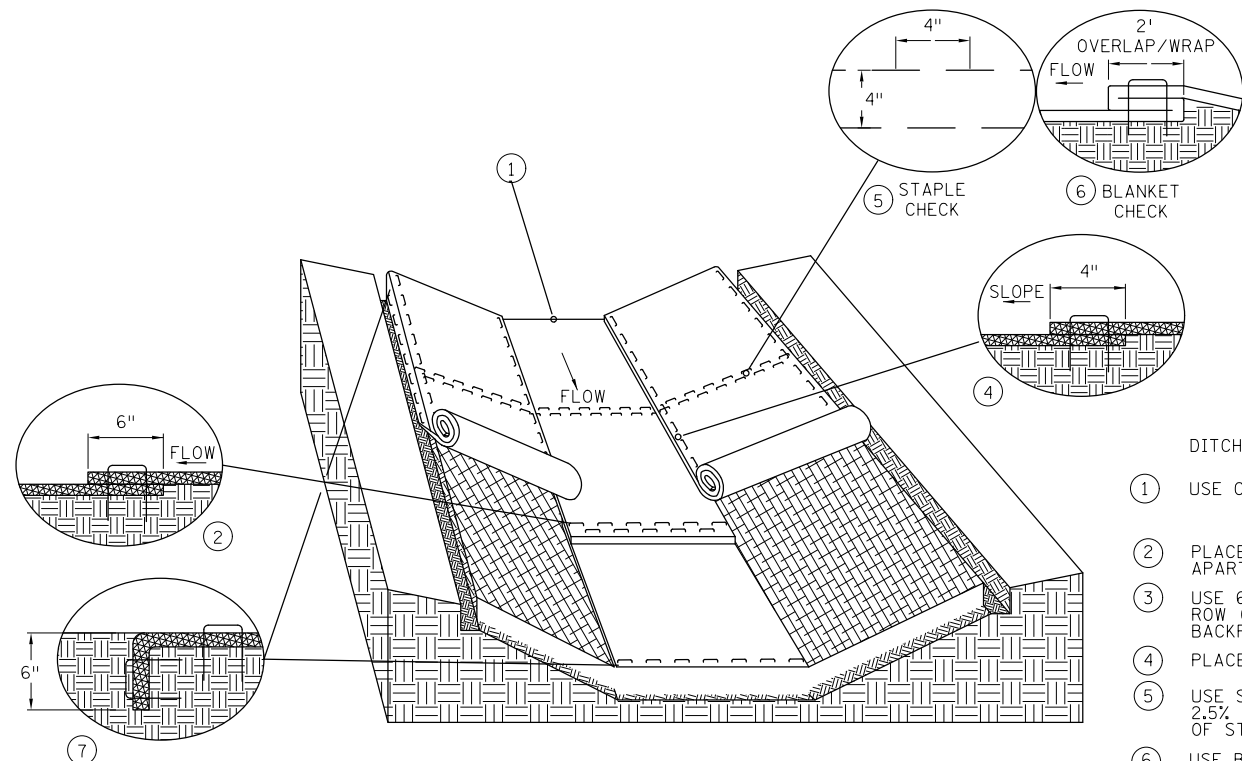
CHECK SLOT REQUIREMENTS
DIG 6 INCH BY 6 INCH TRENCH.
INSERT BLANKET INTO ENTIRE TRENCH PERIMETER.
PLACE SINGLE ROW STAPLES AT 3' SPACING ALONG THE BOTTOM OF THE TRENCH.
BACKFILL TRENCH WITH SOIL AND TAMP.
PLACE SINGLE ROW STAPLES AT 3' SPACING ON OVERLAP.



CHECK SLOT ALTERNATIVE
PLACE SINGLE ROW STAPLES AT 12" SPACING
CHECK SLOT DETAILS



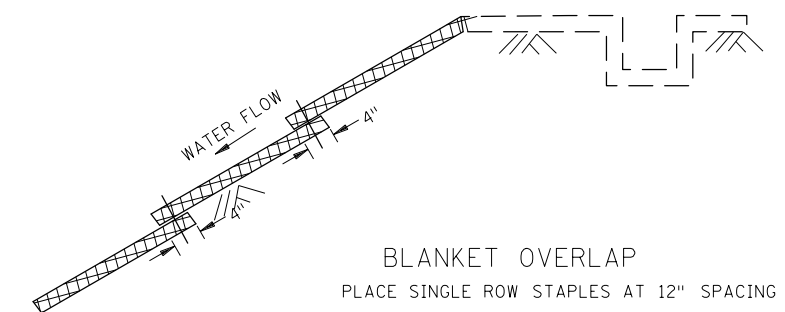
DITCH BLANKET CRITICAL POINTS ⑦



DITCH BLANKET STAPLE DETAIL

DITCH BLANKET STAPLE DETAIL NOTES

- ① USE CHECK SLOT DETAIL (NO ALTERNATES).
- ② PLACE DOUBLE ROW OF STAPLES STAGGERED 4" APART AND 4" ON CENTER.
- ③ USE 6" X 6" TRENCH TO PLACE BLANKET. PLACE SINGLE ROW OF STAPLES ON TOP AND TRENCH SIDES AT 12" SPACING. BACKFILL TRENCH WITH SOIL AND TAMP.
- ④ PLACE SINGLE ROW OF STAPLES AT 12" SPACING.
- ⑤ USE STAPLE CHECK FOR CHANNEL SLOPES LESS THAN 2.5% GRADE AT 100 FOOT INTERVALS. PLACE DOUBLE ROW OF STAPLES STAGGERED 4" APART AND AT 4" SPACING.
- ⑥ USE BLANKET CHECKS FOR THE FOLLOWING SLOPES:
2.5%-3% 100 FT INTERVALS
3%-5% 50 FT INTERVALS
5%-7% 25 FT INTERVALS
- ⑦ CRITICAL POINTS SHALL BE SECURED WITH PROPER STAPLE PATTERNS.



BLANKET OVERLAP
PLACE SINGLE ROW STAPLES AT 12" SPACING

GENERAL BLANKET INSTALLATION REQUIREMENTS
PREPARE SOIL AS PER SPECIFICATION 2574.
LAY PARALLEL OR PERPENDICULAR TO THE DIRECTION OF WATER FLOW.
OVERLAP ADJACENT STRIP EDGES A MINIMUM OF 4 INCHES.
OVERLAP BLANKET 6" (MIN.) AT EACH END. OVERLAP BOTTOM END OF UPPER BLANKET OVER TOP END OF LOWER BLANKET. STAPLE ALONG OVERLAP EVERY 1.5'.
THE UPPERMOST BLANKET OF ALL SLOPE APPLICATIONS MUST START IN A CHECK SLOT. IF SLOPE LENGTH (L) IS 100' OR GREATER, INSERT BLANKET INTO A CHECK SLOT 1/3 FROM THE BOTTOM OF THE SLOPE.

REVISION:
APPROVED: 2-28-2017
[Signature]
CHIEF ENVIRONMENTAL OFFICER

m
MINNESOTA
DEPARTMENT
OF
TRANSPORTATION

[Signature]
STATE DESIGN ENGINEER

REVISED:
APPROVED:
2-28-2017

PERMANENT EROSION CONTROL
BLANKET STAPLE PATTERN FOR SLOPES
STANDARD PLAN 5-297.404
3 OF 3