

When a pavement edge drop-off exists, install a SHOULDER DROP-OFF sign.

Pavement edge drop-offs greater than a nominal 10 inches will not be allowed during non-working hours.

Shoulder edge drop-offs shall be mitigated according to Article 1107.08.K2 of the Standard Specifications.

① When the length of a pavement edge drop-off is 1000 feet or less, the temporary fillet requirement of Article 1107.08 of the Standard Specifications does not apply.

Space devices at 40 feet.

② For work areas less than 200 feet long, use channelizers spaced at 20 foot centers or use a vehicle with an amber revolving light or amber strobe light.

Possible Contract Item:
Traffic Control

LEGEND	
	Traffic Sign
	42" Channelizer
	Work Area
	Direction of Traffic

SPEED LIMIT (mph)	A	B	C ②	T
35 or less	500'	250'	40'	100'
40 - 45	700'	350'	80' ①	200'
50 or greater	1000'	500'	100' ①	200'

 STANDARD ROAD PLAN	REVISION 4 04-17-12
	TC-202 SHEET 1 of 1
	<small>REVISIONS: Removed "or Vertical Panel" from 42" Channelizer In Legend.</small>
 <small>APPROVED BY DESIGN METHODS ENGINEER</small>	
SHOULDER CLOSURE (ONE LANE)	

Seeding.

1. On various portions of the right-of-way, except the traveled portion of the roadbed:
 - Prepare the seedbed,
 - Furnish, sow, and cover the seed, and
 - Compact the seedbed.
2. Seed other areas as may be indicated in the contract documents or directed by the Engineer. The limits of areas to be seeded will be clearly marked before the seedbed is prepared.
3. Do not disturb areas having a satisfactory growth of desirable grasses or legumes.
4. Sow seed only at times of the year when temperature, moisture, and climatic conditions will promote germination and plant growth. Normal permanent seed application dates are between March 1 and May 31, and between August 10 and September 30. If an area is disturbed, but not seeded by September 30th, scarify the area to a 3 inch (75mm) depth and mulch. Perform seeding

Application of Seed.

Use the seed mixture in Table 2601.03-1 for permanent seeding of rural areas, unless otherwise specified in the contract documents:

Fescue, Fawn	55 lbs. per acre (62 kg/ha)
Ryegrass, Perennial	45 lbs. per acre (51 kg/ha)
Birdsfoot Trefoil	5 lbs. per acre (6 kg/ha)

115.10(7) Repair and cleanup. Prior to the department's final inspection, the utility owner shall:

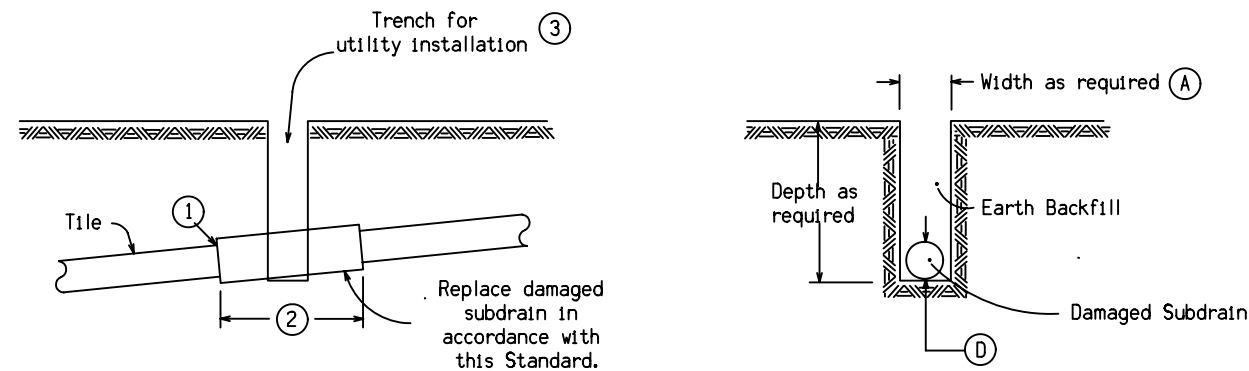
- a. Upon notification by the department, immediately make any repairs to the right-of-way that are necessary due to the construction work.
- b. Remove from the right-of-way all unused materials and rubbish resulting from the work and leave the right-of-way in a clean, presentable condition.

115.10(8) Final inspection.

- a. Upon notification by the owner of the utility facility or its authorized representative that the work is complete, the district representative may inspect each item of work included in the permit as it relates to the condition of the highway.
- b. If the district representative finds that the work is not in compliance with the permit, the district representative shall provide to the utility owner written notice of the particular defects found. The owner is responsible for remedying these defects in a timely manner.

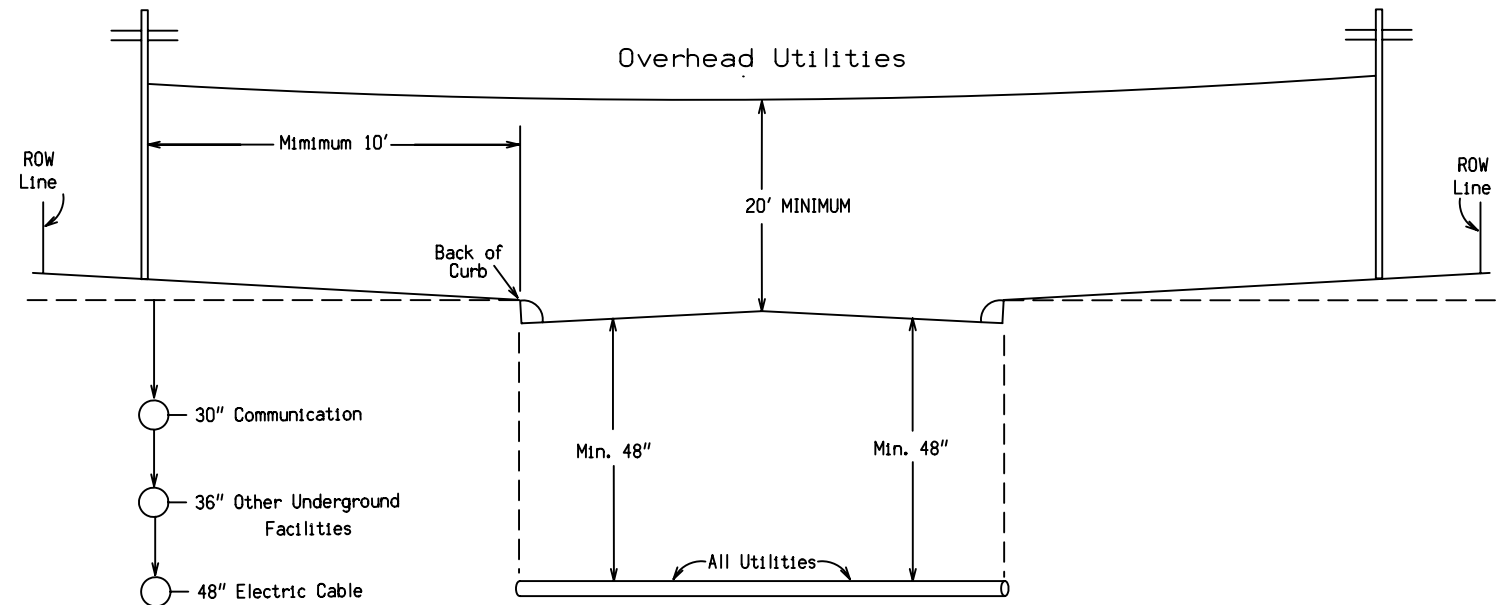
Tile Line Repair Guideline

Minimum Policy Requirements Urban Section Non - Freeway Highway



Note:
Replacement of drainage tile shall be accomplished so as to cause the minimum of disturbance to existing field tile. The repaired drainage tile shall be left in a functional condition with special emphasis placed on maintaining existing flow line elevations.

Ⓐ = A minimum of 24" shall be excavated outside the normal utility trench wall or such greater width as may be required to expose a minimum of 12" of undamaged drain tile.



Notes:
Utilities shall be located between back of curb and the highway row. Utilities should be located as near to the highway row line as practical. See Utility Policy, Section 115.13 for further details.

REPLACEMENT SCHEDULE - CASE 'A'										
Existing Tile ⓐ	4	6	8	10	12	15	18	21	24	>24
Proposed Subdrain Size										
Concrete Pipe	-	-	12	15	15	18	21	24	30	D+6"
Coated C.M.P.	10	12	15	18	21	24	30	36	36	*

* Replacement sizes provide equivalent capacity based on 6" settlement assuming a 0.20% slope with $n = 0.013$ for concrete pipe and $n = 0.025$ for corrugated pipe (Manning Formula)

NOTES:

Tile lines disturbed within the right-of-way (outside the Roadway Embankment Area *) limits shall be repaired as follows:

May be repaired with schedule 40 PVC pipe of compatible size or in accordance with the replacement schedule-case 'A' as listed above. Replacement with schedule 40 PVC pipe shall require using a connecting device of a Femco plain and plain flexible pipe coupling or equal.

Tile lines disturbed within the "Roadway Embankment Area" shall be replaced in accordance with the replacement schedule - case 'A' stated above and as follows:

① Concrete collar to be placed around joint where existing tile line and corrugated aluminized metal pipe connect.

② Minimum length of corrugated metal pipe shall be 4 feet. Minimum length of 2 feet on each side of the tile line break location.

③ Trench shall be backfilled with 8 inches loose material, compacted to 6 inches with a minimum of 95% compaction of natural density.

A. Backfill and compact area around drain tile to be completed by hand until new tile is completely covered. Remainder of the trench shall be backfilled by acceptable methods.

B. Area shall require inspection by the Iowa Department of Transportation inspectors or their designated personnel prior to backfilling of trench.

* "Roadway Embankment Area" is defined as the area lying between the foreslopes of a two-lane roadway and from near foreslope to far foreslope of a four lane roadway.

IOWA COMMUNICATIONS NETWORK		THIS DRAWING IS PROVIDED FOR GENERAL INFORMATION ONLY AND IS NOT TO BE USED TO DETERMINE PRECISE ICN PLACEMENT. CALL ONE CALL BEFORE EXCAVATION (1-800-292-8989)		
400 EAST 14TH STREET, GRIMES STATE OFFICE BUILDING, DES MOINES, IOWA 50319 ICN © 2012, COPY WITH PERMISSION				
1	IDOT	3-28-12	SCALE:	SIZE: 11 x 17
			TILE REPAIR & REQ'D HEIGHT/DEPTH URBAN	
			IDOT-URBAN	

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