# VILLAGE OF MINOOKA

## Construction Standards and Specifications
## For Soil Erosion and Sediment Control

### General Provisions

The underground utilities general provisions shall be constructed in accordance with the requirements of the Federal or State Statutes and Regulations; Illinois Urban Manual, latest version; and Building Regulations for the Village of Minooka (enclosed here in); in addition, the following specifications shall apply:

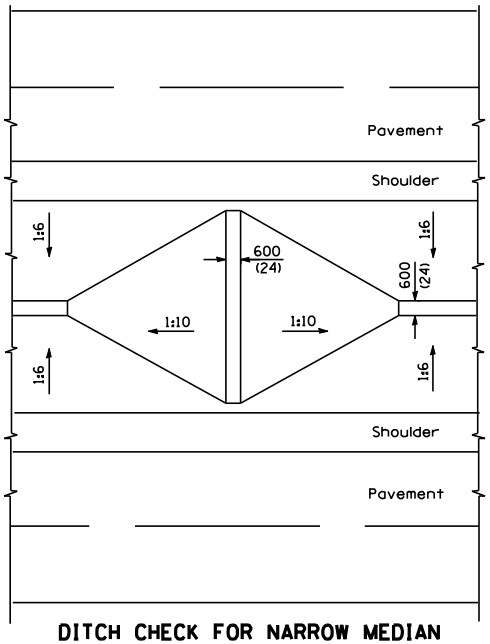
**General**

- All materials shall be manufactured in the United States of America. A letter of origin will be provided if requested by the Village.

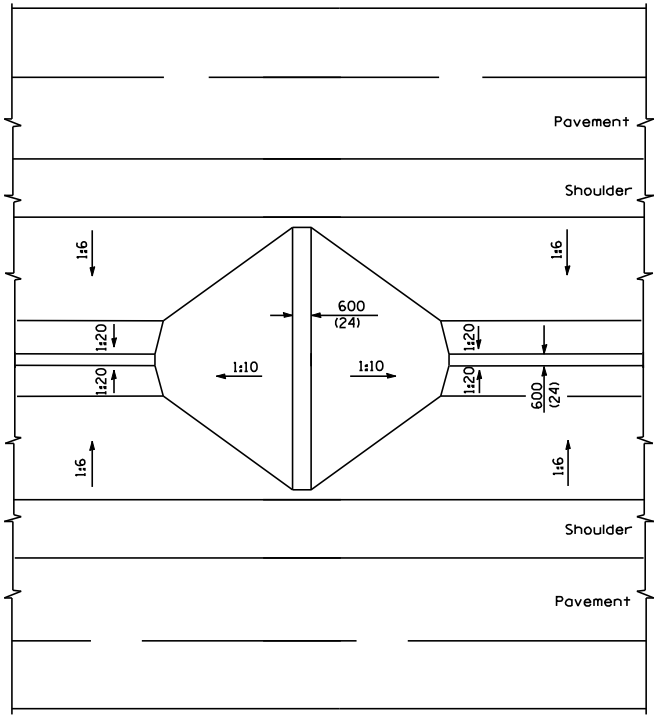
- The Contractor is solely responsible for jobsite safety.

# EARTH MEDIAN DITCH CHECK

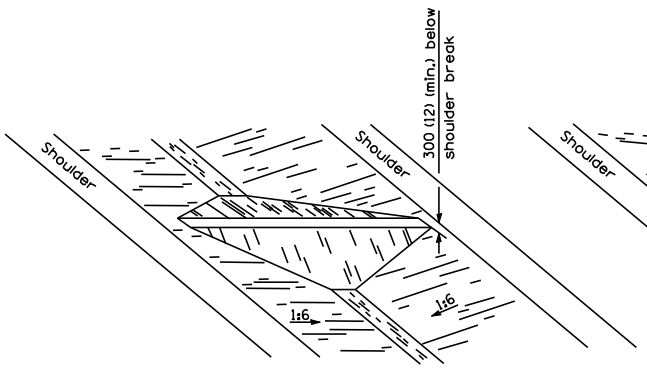
**IDOT STANDARD 202001**



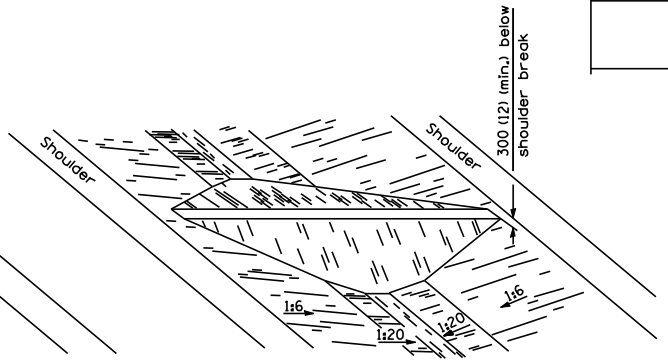

DITCH CHECK FOR NARROW MEDIAN




DITCH CHECK FOR WIDE MEDIAN




VIEW OF NARROW MEDIAN




VIEW OF WIDE MEDIAN

GENERAL NOTES

All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (V:H).

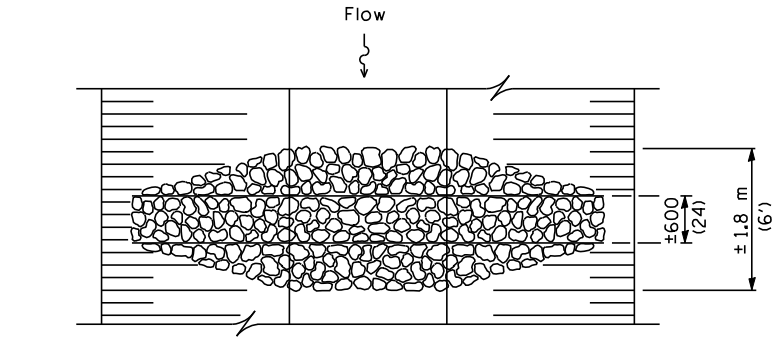
All dimensions are in millimeters (inches) unless otherwise shown.

**MINOOKA STANDARD 2005**

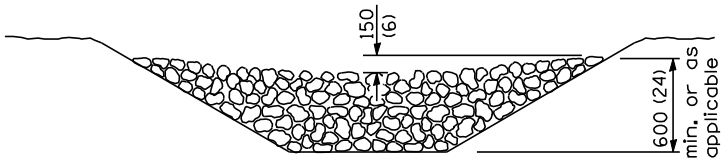
VERSION 1.0

# TEMPORARY EROSION CONTROL SYSTEMS

**IDOT STANDARD 280001-02**




PLAN



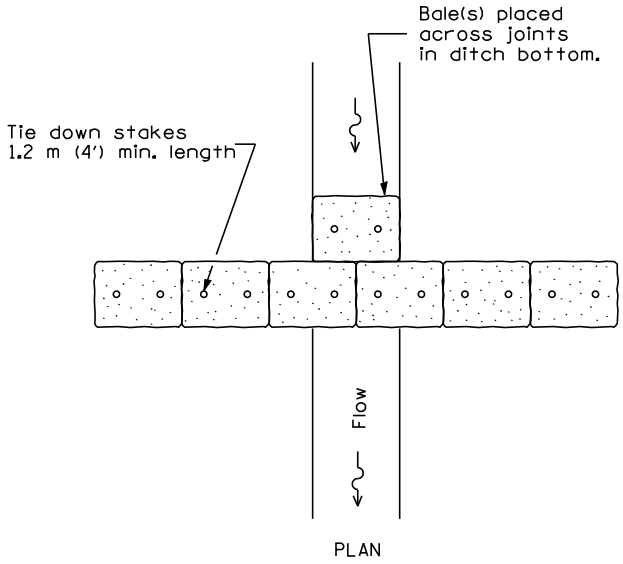

ELEVATION

## AGGREGATE DITCH CHECK

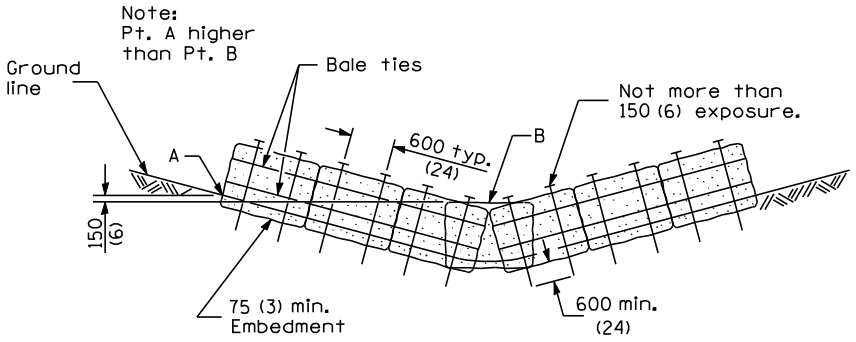
### GENERAL NOTES

The dimensions and installation methods for ditch checks shall be the same for perimeter erosion barriers and inlet and outlet protection unless otherwise specified.

All dimensions are in millimeters (inches) unless otherwise shown.




PLAN

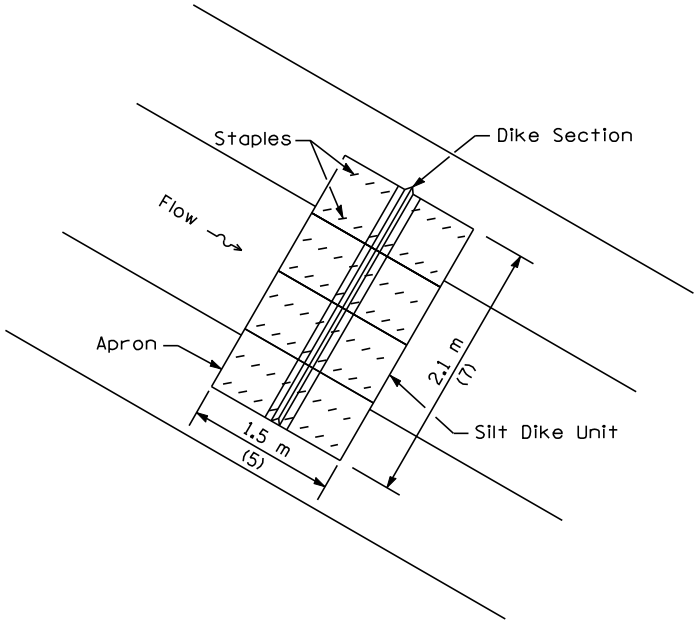



ELEVATION

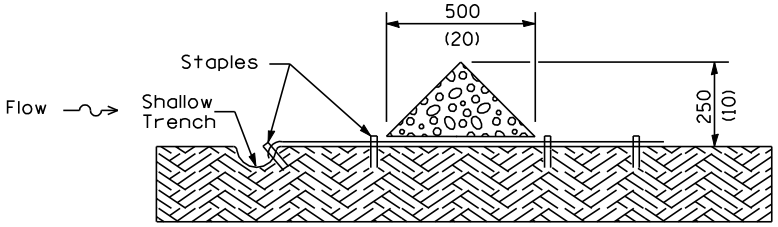
## ROLLED EXCELSIOR OR STRAW BALES FOR DITCH CHECK

# TEMPORARY EROSION CONTROL SYSTEMS

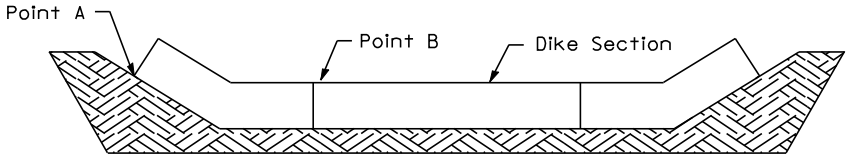
**IDOT STANDARD 280001-02**




PLAN



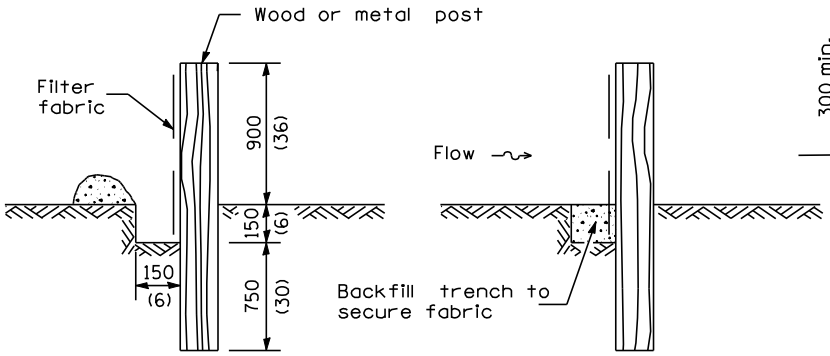

SIDE ELEVATION



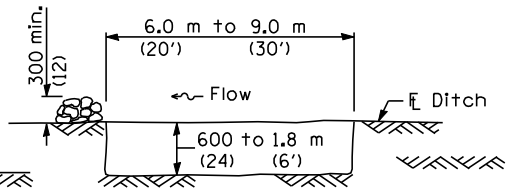

Point A must be higher than Point B to ensure that water flows over the dike and not around the ends.

FRONT ELEVATION

## URETHANE FOAM/GEOTEXTILE DITCH CHECK

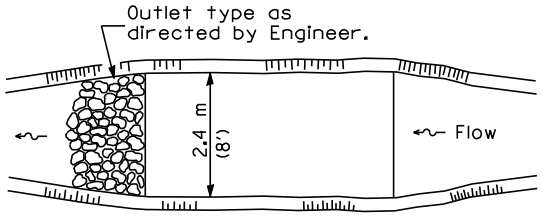



## SILT FILTER FENCE AS A PERIMETER EROSION BARRIER




The performance of the basin will improve if put into a series.

ELEVATION



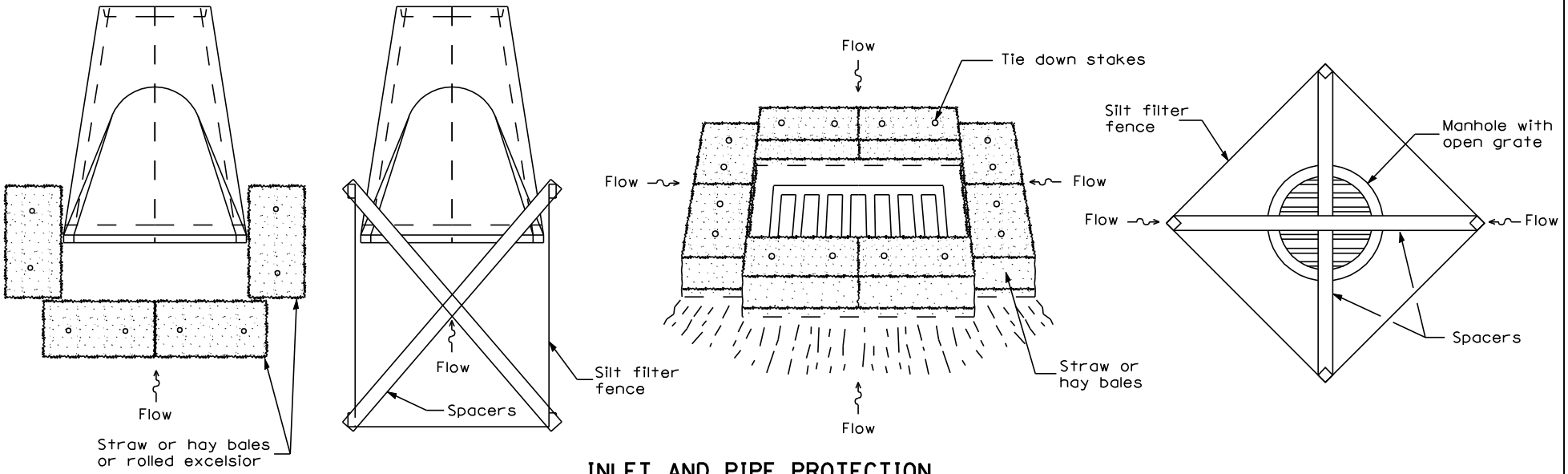

The long dimension should be parallel with the direction of the flow. Accumulated silt shall be removed anytime the basins become 75% filled.

PLAN

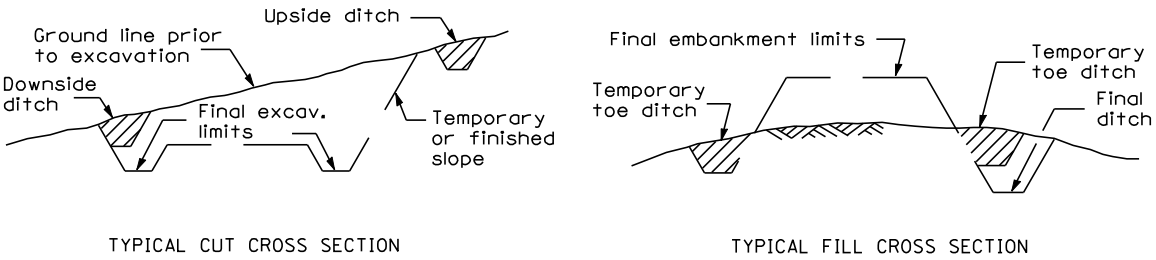
## SEDIMENT BASIN

# TEMPORARY EROSION CONTROL SYSTEMS

**IDOT STANDARD 280001-02**




## INLET AND PIPE PROTECTION




TYPICAL CUT CROSS SECTION

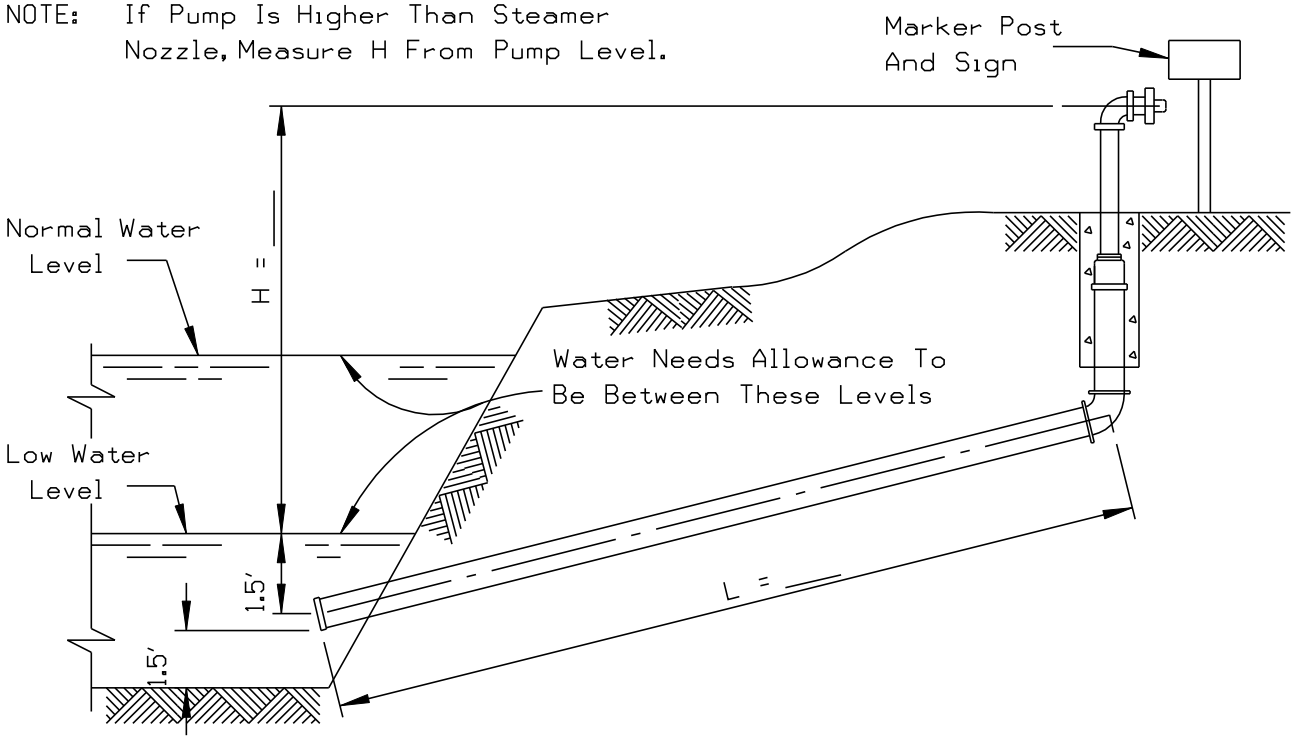
TYPICAL FILL CROSS SECTION

## TEMPORARY DITCHES FOR CUT & FILL SECTIONS

# DRY FIRE HYDRANT DETAILS

**NRCS STANDARD IL-120**

NOTE: If Pump Is Higher Than Steamer Nozzle, Measure H From Pump Level.




PROFILE OF INSTALLATION

## CALCULATING REQUIRED LIFT

TOTAL REQUIRED LIFT = HEAD LOSS IN HYDRANT, FITTINGS AND GUARD + HEAD LOSS IN INTAKE PIPE (HL) + STATIC LIFT (H)

USING 500 GALLONS/MIN.

TOTAL REQUIRED LIFT = $7.6' + L \times \frac{HL + H}{100} = 7.6' +$ ____ + ____ = ____ ____

USING 250 GALLONS/MIN.

TOTAL REQUIRED LIFT = $1.9' + L \times \frac{HL + H}{100} = 1.9' +$ ____ + ____ = ____ ____

| ILLINOIS | |
|---|---|
| Altitude (Feet) | Allowable Lift (Feet) |
| 300 | 22.7 |
| 1,000 | 22.0 |
| 1,300 | 21.8 |

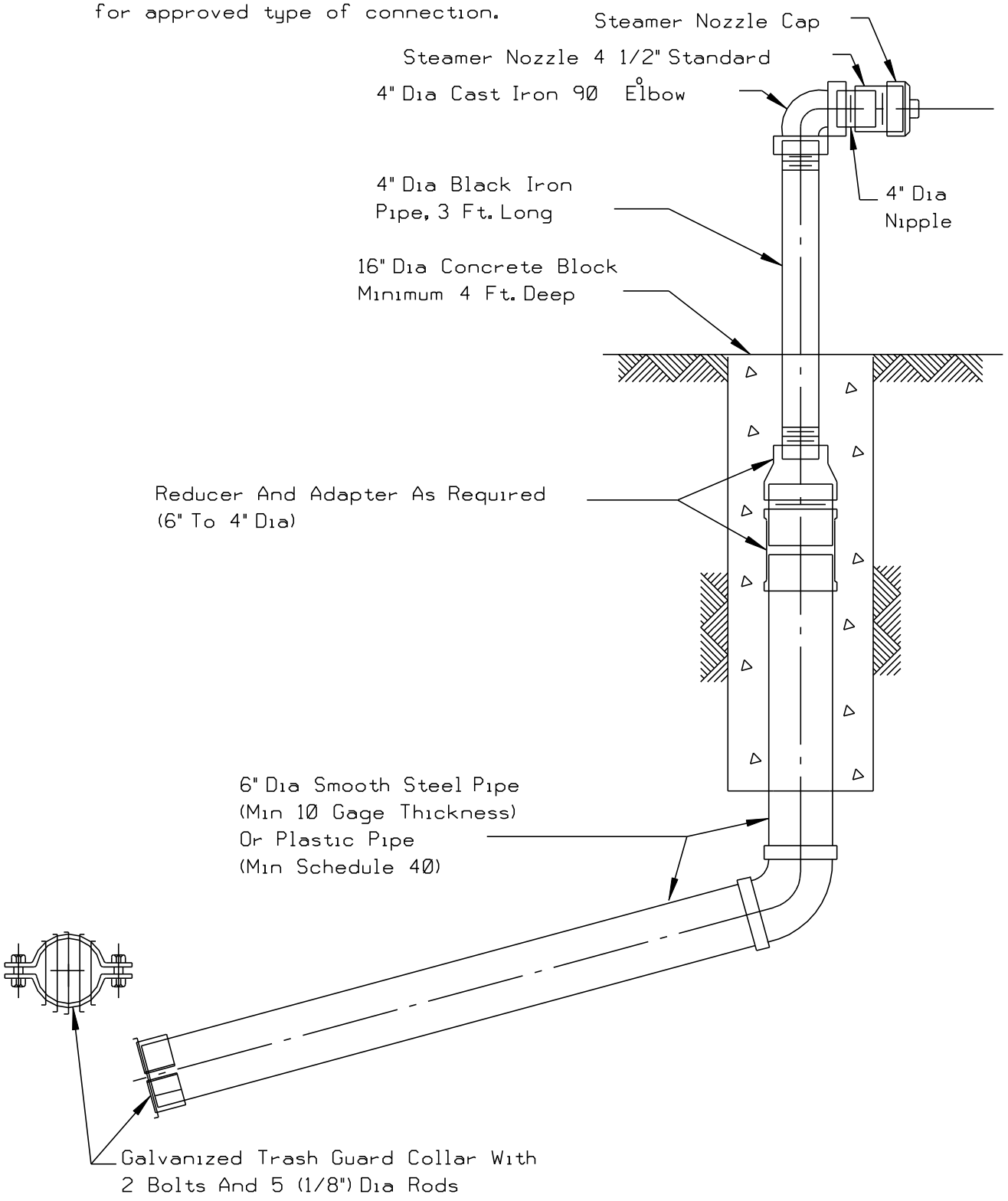
| HEAD LOSS IN FEET (HL) | | |
|---|---|---|
| Gallons Per Minute | Plastic Pipe | Smooth Steel Pipe |
| 500 | 2.3 | 5.3 |
| 250 | 0.6 | 1.3 |

NOTE: Total required lift value not to exceed value obtained from table of allowable lifts (above).

# DRY FIRE HYDRANT DETAILS

**NRCS STANDARD IL-120**

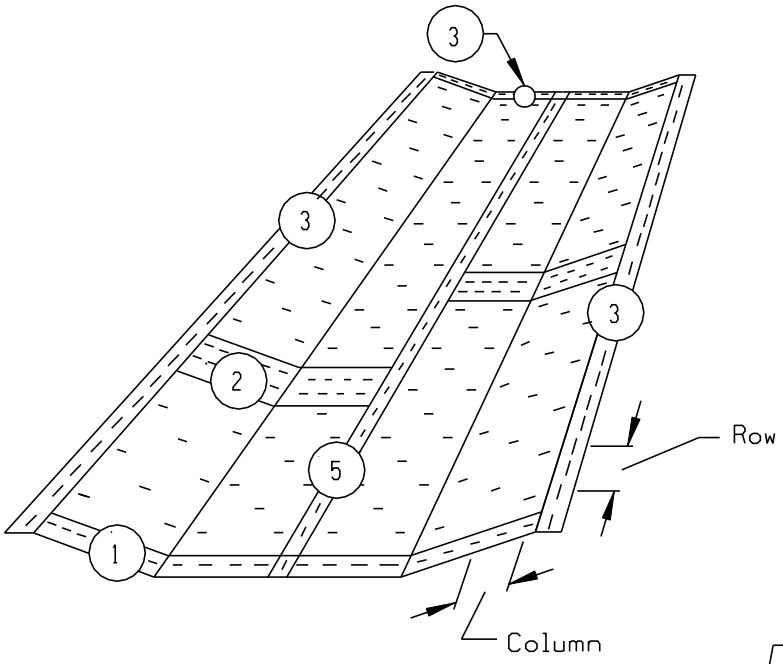
NOTE: Check with local Fire Department for approved type of connection.

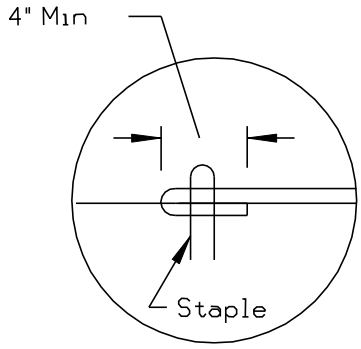



DETAIL OF HYDRANT

# EROSION BLANKET PLAN

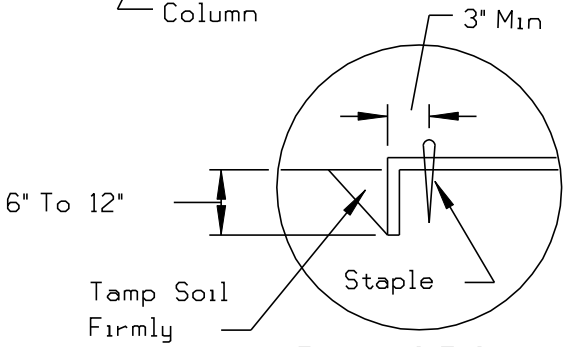
**NRCS STANDARD IL–530**




Terminal Fold

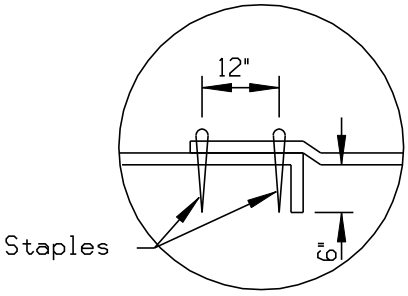
Jute Mesh Only




Terminal Fold

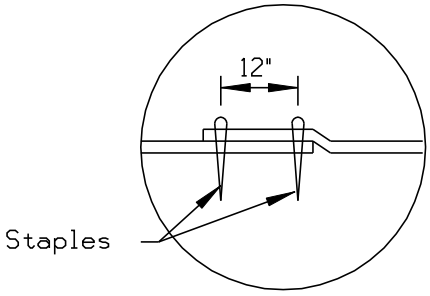
Excelsior Blanket
Erosion Control Paper

DETAIL 1




Junction Slot

Jute Mesh
Erosion Control Paper



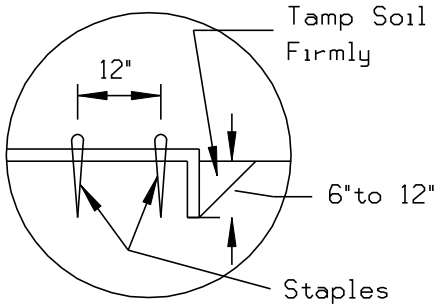

Junction Slot

Excelsior Blanket

DETAIL 2

# EROSION BLANKET PLAN

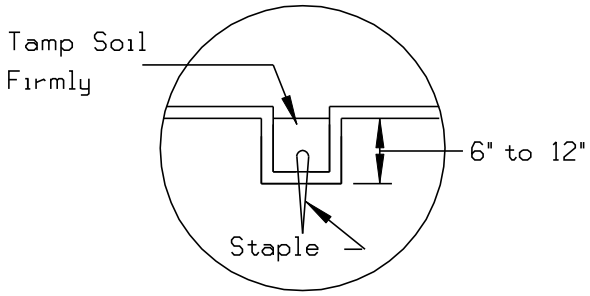
**NRCS STANDARD IL-530**




Anchor Slot

Jute Mesh
Excelsior Blanket
Erosion Control Paper

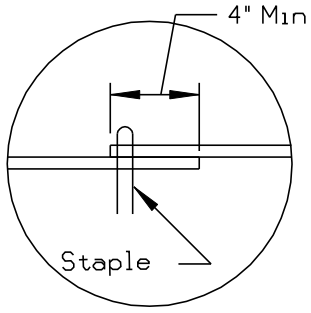
DETAIL 3




Check Slot

Erosion Control Paper

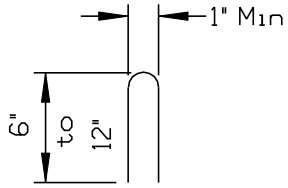
DETAIL 4




Lap Joint

Jute Mesh
Erosion Control Paper
Excelsior Blanket Shall
Be Butted Together.

DETAIL 5



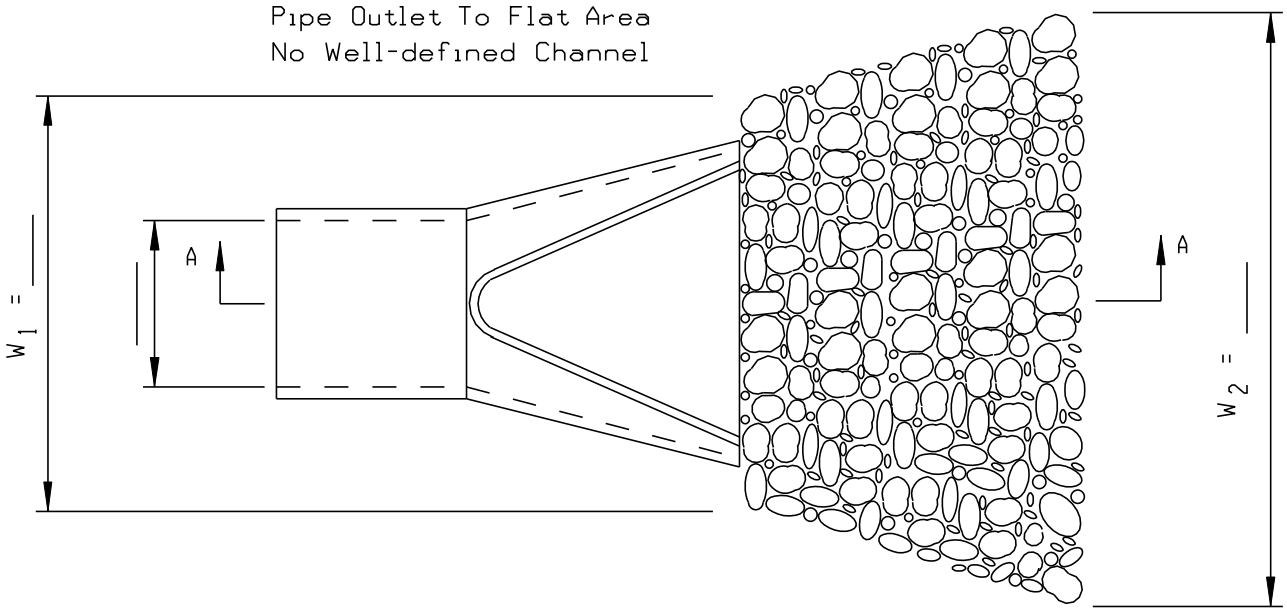

STAPLE DETAIL

NOTES:

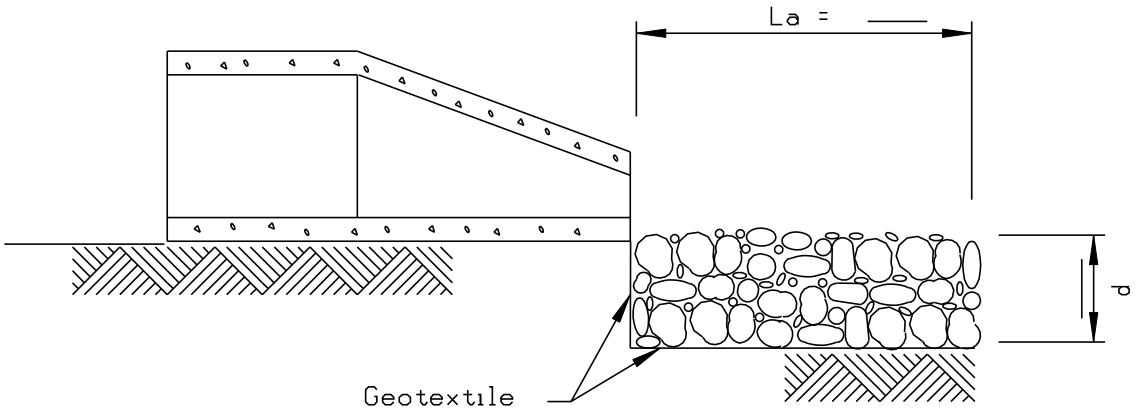
1. On erosion control paper, check slots, in ditch channel shall be spaced so that one occurs within each 50' on slopes of more than 4% and less than 6%. On slopes of 6% or more, they shall be spaced so that one occurs within each 25'.
2. Staples are to be placed alternately, in columns approximately 2' apart and in rows approximately 3' apart. Approximately 175 staples are required per 4'x 225' roll of material and 125 staples are required per 4'x 150' roll of material.
3. Erosion control material shall be placed loosely over ground surface. Do not stretch.
4. All terminal ends and transverse laps shall be stapled at approximately 12" intervals.

# PIPE OUTLET TO FLAT AREA

**NRCS STANDARD IL-610**




PLAN




SECTION A-A

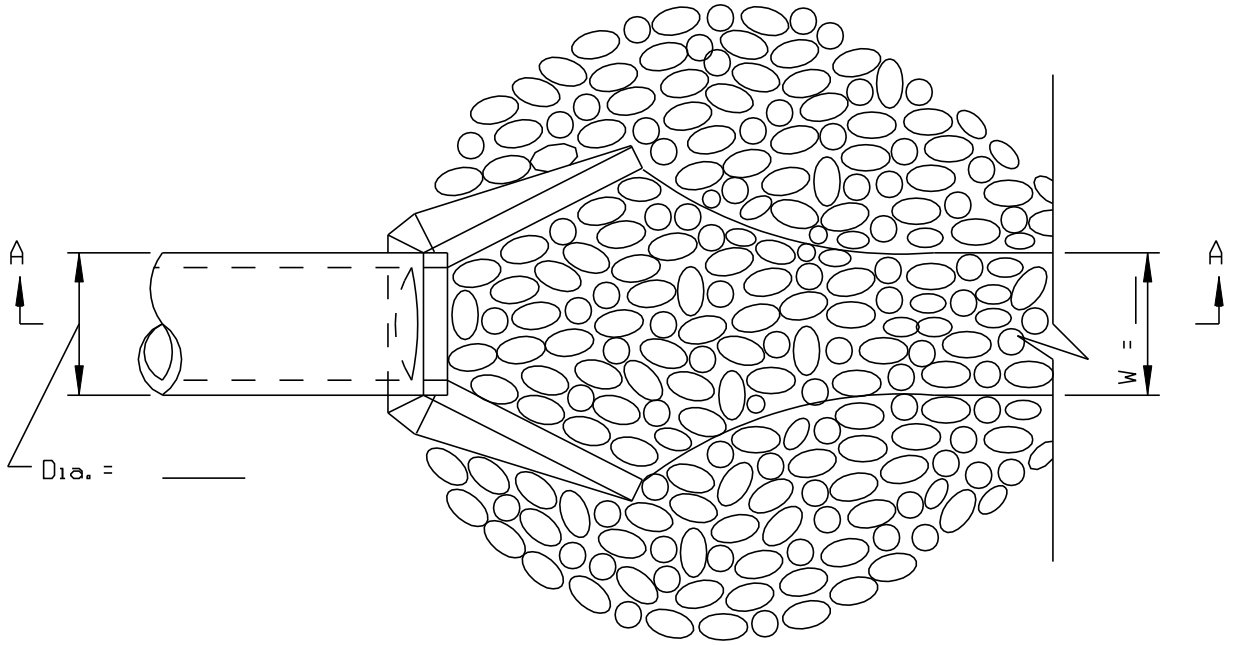
NOTES:

1. The filter fabric shall meet the requirements in material specifications 592 GEOTEXTILE Table 1 or 2, class I, II or III .
2. The rock riprap shall shall meet the IDOT requirements for the following gradation: RR _____ , Quality _____.
3. The riprap shall be placed according to construction specification 61 LOOSE ROCK RIPRAP. The rock may be equipment placed.

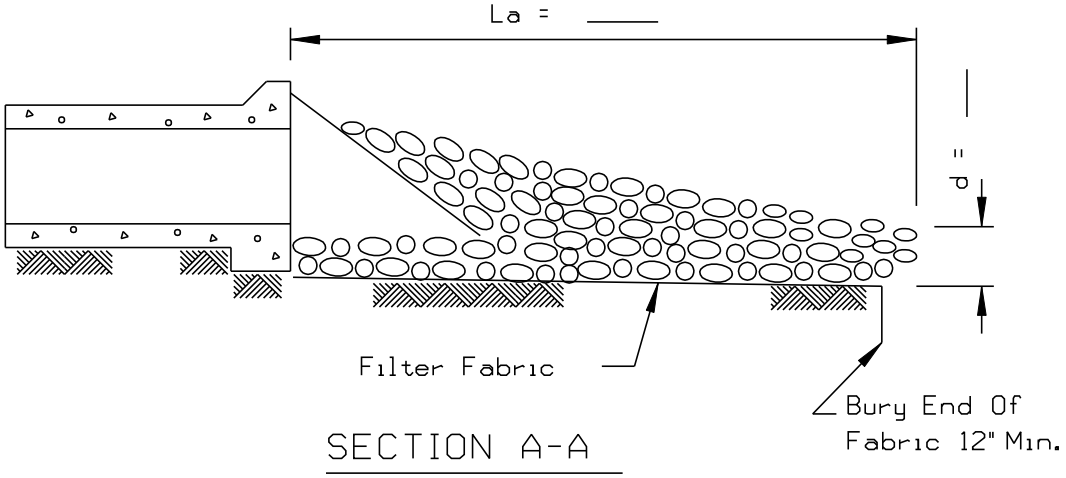
# PIPE OUTLET TO CHANNEL

**NRCS STANDARD IL-611**

Pipe Outlet To Well-Defined Channel




PLAN



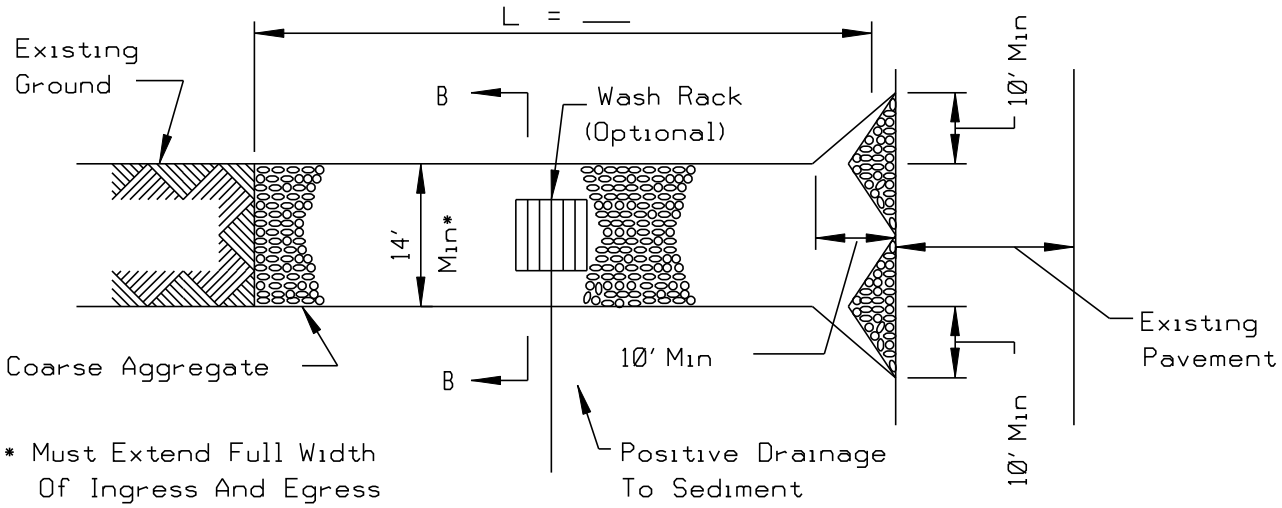

SECTION A-A

NOTES:

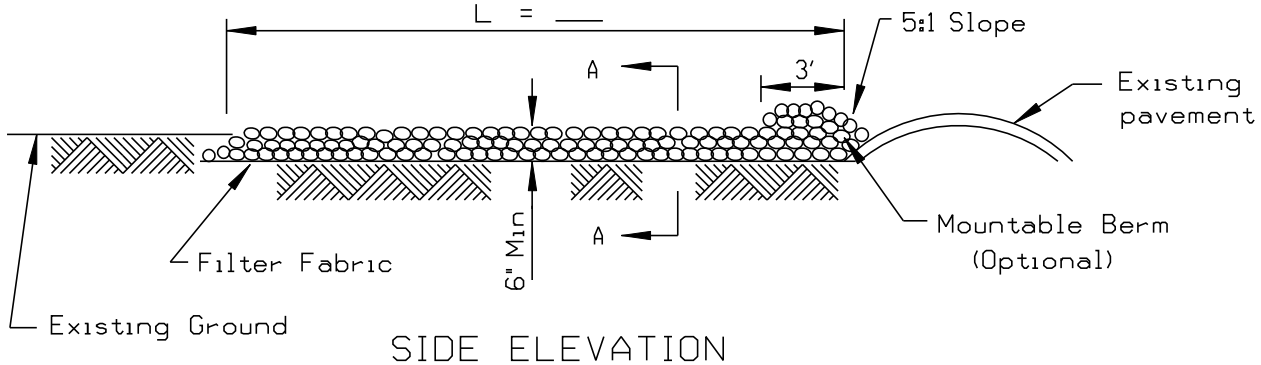
1. The filter fabric shall meet the requirements in material specification 592 GEOTEXTILE Table 1 or 2, Class I ,II or III .
2. The rock riprap shall meet the IDOT requirements for the following gradation _____.
3. The riprap shall be placed according to construction specification 61 LOOSE ROCK RIPRAP. The rock may be equipment placed.

# STABILIZED CONSTRUCTION ENTRANCE PLAN

**NRCS STANDARD IL-630**




PLAN VIEW



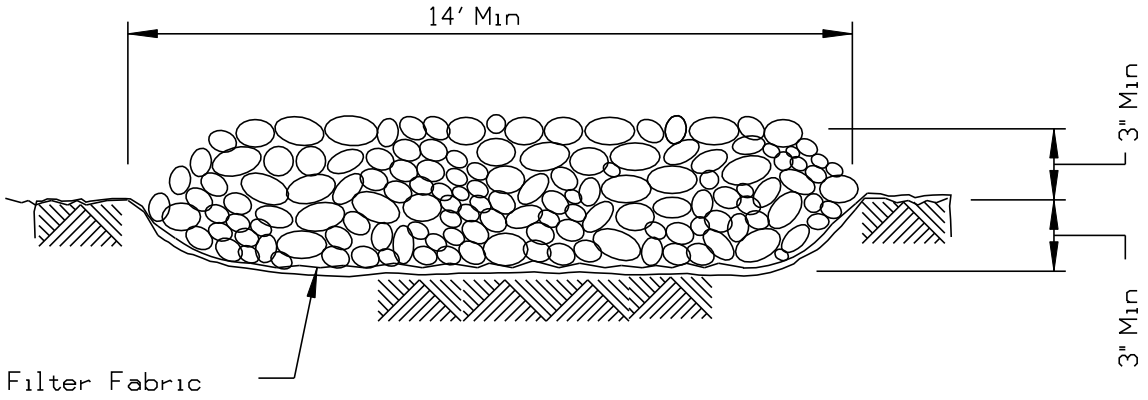

SIDE ELEVATION

NOTES:

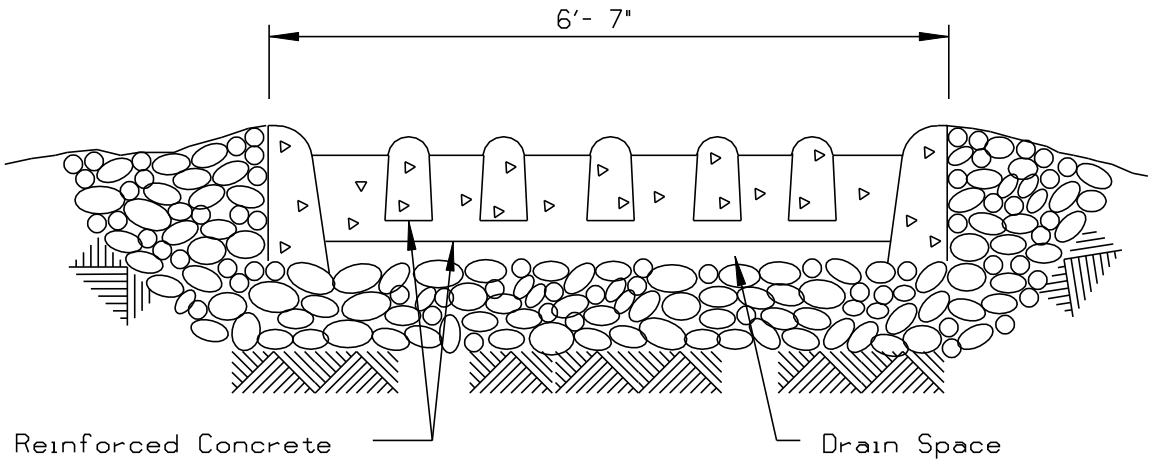
1. Filter fabric shall meet the requirements of material specification 592 GEOTEXTILE, Table I or 2, Class I, II or IV and shall be placed over the cleared area prior to the placing of rock.
2. Rock or reclaimed concrete shall meet one of the following IDOT coarse aggregate gradation, CA-1, CA-2, CA-3 or CA-4 and be placed according to construction specification 25 ROCKFILL using placement Method 1 and Class III compaction.
3. Any drainage facilities required because of washing shall be constructed according to manufacturers specifications.
4. If wash racks are used they shall be installed according to the manufacturer's specifications.

# STABILIZED CONSTRUCTION ENTRANCE PLAN

**NRCS STANDARD IL-630**



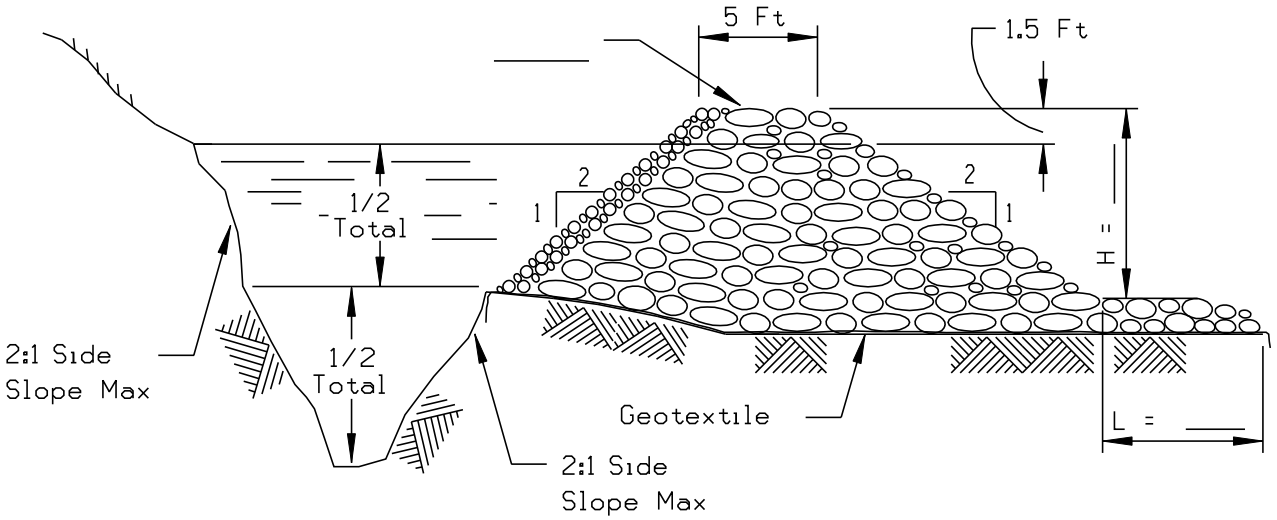

SECTION A-A



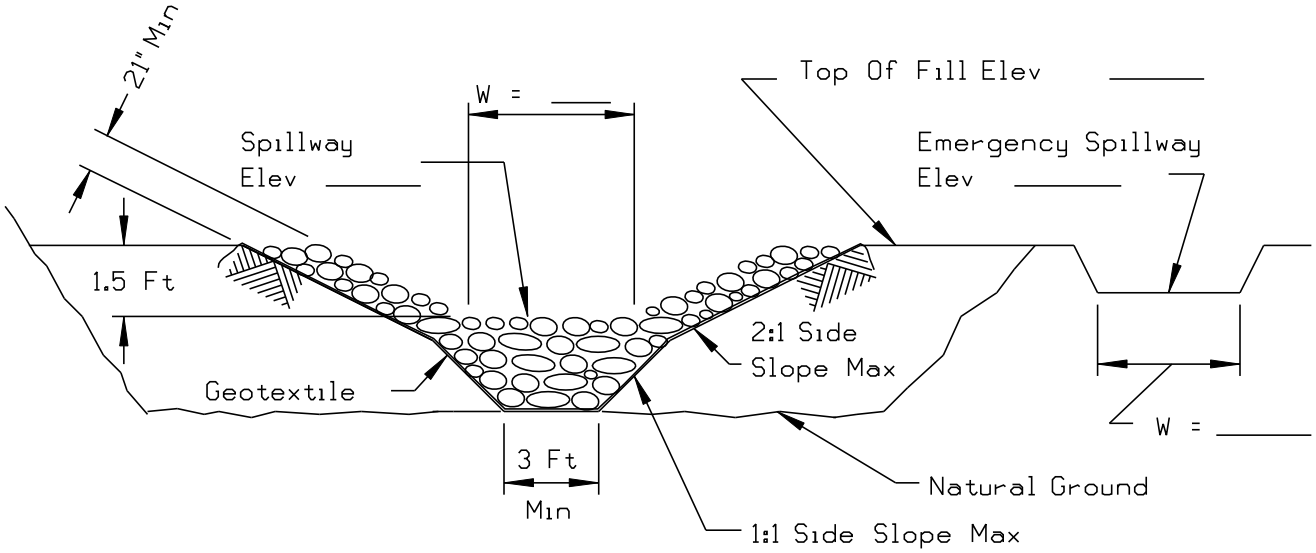

SECTION B-B

# TEMPORARY SEDIMENT TRAP

**NRCS STANDARD IL-660**




CROSS SECTION




STONE SECTION

NOTES:

1. If the sediment pool is formed or enlarged the side slope will be 2:1 or flatter.
2. The fill shall be constructed using IDOT RR-4 stone size. A 1'layer of IDOT CA-2 should be placed on the inside face to reduce the flow rate.
3. The rock will be placed according to construction specification 25 ROCKFILL. Placement will be by Method 1 and compaction will be class III.
4. The geotextile shall meet the requirements in material specification 592 GEOTEXTILE table 1 or 2, class I, II or IV .