Use the proper identification cap for the party installing the monument, as shown on the exhibit.

Make all stampings, forgings, and impressions legible. The stampings, forgings, and impressions will properly identify the location of the monument within the Public Land Survey System (PLSS).

A "System of Marking" is available in the current "Manual of SURVEYING INSTRUCTION", which is published by the United States Department of the Interior, Bureau of Land Management.

Reset all PLSS corners in accordance with KDOT's Standard Specifications.

In addition to monumentation of the PLSS corner, the Engineer may direct or select specific locations for offset monumentation, as shown.

Use Type A-1 or Type A-2 monuments as directed by the Engineer.

Type A monuments may be used on a project as specified in the plans or as directed by the Engineer. Typically, Type A monuments are used on high traffic volume roadways, in urban areas, or as required by local governmental codes. Otherwise, use Type B-D monumentation. Avoid installing monument boxes in vehicle wheelpaths where practicable.

All work and materials required to install the Type A-1 and Type A-2 monument boxes will be paid under the bid item "Monument Box (Each)" and will be included in the plan quantities.

All work and materials required to install Types B-D monumentation will be "subject to the B-D item "Contractor Construction Staking (Lump Sum)" See KDOT's Standard Specifications for details.

GENERAL NOTES:

Monumentation, as shown.

Engineer may direct or select specific locations for offset monumentation, as shown.

Use Type A-1 or Type A-2 monuments as directed by the Surveyor or Engineer.

Type A monuments are used on high traffic volume roadways, in urban areas, or as required by local governmental codes. Otherwise, use Type B-D monumentation. Avoid installing monument boxes in vehicle wheelpaths where practicable.

All work and materials required to install the Type A-1 and Type A-2 monument boxes will be paid under the bid item "Monument Box (Each)" and will be included in the plan quantities.

All work and materials required to install Types B-D monumentation will be "subject to the B-D item "Contractor Construction Staking (Lump Sum)" See KDOT's Standard Specifications for details.

GENERAL NOTES:

Use the proper identification cap for the party installing the monument, as shown on the exhibit.

Make all stampings, forgings, and impressions legible. The stampings, forgings, and impressions will properly identify the location of the monument within the Public Land Survey System (PLSS).

A "System of Marking" is available in the current "Manual of SURVEYING INSTRUCTION", which is published by the United States Department of the Interior, Bureau of Land Management.

Reset all PLSS corners in accordance with KDOT's Standard Specifications.

In addition to monumentation of the PLSS corner, the Engineer may direct or select specific locations for offset monumentation, as shown.

Use Type A-1 or Type A-2 monuments as directed by the Surveyor or Engineer.

Type A monuments may be used on a project as specified in the plans or as directed by the Engineer. Typically, Type A monuments are used on high traffic volume roadways, in urban areas, or as required by local governmental codes. Otherwise, use Type B-D monumentation. Avoid installing monument boxes in vehicle wheelpaths where practicable.

All work and materials required to install the Type A-1 and Type A-2 monument boxes will be paid under the bid item "Monument Box (Each)" and will be included in the plan quantities.

All work and materials required to install Types B-D monumentation will be "subject to the B-D item "Contractor Construction Staking (Lump Sum)" See KDOT's Standard Specifications for details.
Aggregate Ditch Lining (DxW)

GENERAL NOTE

Concrete Grade 3.0 shall be used in Concrete Ditch Lining. Welded wire reinforcement shall be of the electrically welded square mesh type with No. W1.4 wires spaced at 6" cts. each way.

The exact location and dimensions may be adjusted, if required, by the Engineer at the time of construction. Longitudinal construction joints may be constructed at the Contractor's option.

Concrete Ditch Lining (Backslope)

Ditch elevation as shown on plans.

Concrete Grade 3.0 shall be used in Concrete Ditch Lining (Backslope).

Welded wire reinforcement shall be of the electrically welded square mesh type with No. W1.4 wires spaced at 6" cts. each way.

The exact location and dimensions may be adjusted, if required, by the Engineer at the time of construction. Longitudinal construction joints may be constructed at the Contractor's option.

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Ditch elevation as shown on plans.

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The exact location and dimensions may be adjusted, if required, by the Engineer at the time of construction. Longitudinal construction joints may be constructed at the Contractor's option.

Concrete Ditch Lining (Backslope)

Ditch elevation as shown on plans.

Concrete Grade 3.0 shall be used in Concrete Ditch Lining (Backslope).

Welded wire reinforcement shall be of the electrically welded square mesh type with No. W1.4 wires spaced at 6" cts. each way.

The exact location and dimensions may be adjusted, if required, by the Engineer at the time of construction. Longitudinal construction joints may be constructed at the Contractor's option.
**Note to Designers:** KDOT Pipe Policy provides guidance in identifying the prohibited and/or restricted uses of CSP, ACSP, PEP, PVP, CAP & RCP. Provide end sections of the same type and coating as the pipe. Exceptions to this are noted in the Standard Specifications. Refer to the KDOT Design Manual, Volume II Part C, KDOT Sections: Guidelines of Drainage & Culvert Design for structural pipe design information which includes corrugations, sizes, gauges, maximum/minimum fill heights and obstacles of pipe.

Provide End Sections of the same type and coating as the pipe. Exceptions to this are noted in the Standard Specifications. Refer to the KDOT Design Manual, Volume II Part C, KDOT Sections: Guidelines of Drainage & Culvert Design for structural pipe design information which includes corrugations, sizes, gauges, maximum/minimum fill heights and obstacles of pipe.

### Summary of Pipe Culverts

<table>
<thead>
<tr>
<th>Type</th>
<th>Comment</th>
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</thead>
<tbody>
<tr>
<td>CSP</td>
<td>-</td>
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<tr>
<td>PVCP</td>
<td>-</td>
</tr>
<tr>
<td>CAP</td>
<td>-</td>
</tr>
<tr>
<td>RCP</td>
<td>-</td>
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</tbody>
</table>

### PLAN

- **Type**
  - CSP
  - PVCP
  - CAP
  - RCP

### SECTION

- **Type**
  - CSP
  - PVCP
  - CAP
  - RCP

### Length of Pipe

- **Rt.**
  - CSP: 100 ft.
  - PVCP: 105 ft.
  - CAP: 108 ft.
  - RCP: 110 ft.

- **Lt.**
  - CSP: 100 ft.
  - PVCP: 105 ft.
  - CAP: 108 ft.
  - RCP: 110 ft.

### Crown Grade

- **Lt.**
  - CSP: 100 ft.
  - PVCP: 105 ft.
  - CAP: 108 ft.
  - RCP: 110 ft.

- **Rt.**
  - CSP: 100 ft.
  - PVCP: 105 ft.
  - CAP: 108 ft.
  - RCP: 110 ft.

### End Sections

- **Type**
  - CSP
  - PVCP
  - CAP
  - RCP

- **Rt.**
  - CSP: 100 ft.
  - PVCP: 105 ft.
  - CAP: 108 ft.
  - RCP: 110 ft.

- **Lt.**
  - CSP: 100 ft.
  - PVCP: 105 ft.
  - CAP: 108 ft.
  - RCP: 110 ft.

### Height of Fill (max.)

- **Ft.**
  - CSP: 10 ft.
  - PVCP: 15 ft.
  - CAP: 20 ft.
  - RCP: 25 ft.

### Concrete Pipe

- **AASHTO Class No.**
  - CSP
  - PVCP
  - CAP
  - RCP

### Remarks

- **Steel**
  - CSP
  - PVCP
  - CAP
  - RCP

- **Alum.**
  - CSP
  - PVCP
  - CAP
  - RCP

### Pipe Corrugations

- **Showing Rotation about (i) and (ii)**
  - Left angle shown
  - Direction of Rotation

### Allowable Location

- **Type**
  - CSP
  - PVCP
  - CAP
  - RCP

### Allowable End Sections

- **Type**
  - CSP
  - PVCP
  - CAP
  - RCP

### Storm Sewer

- **Under ML**
  - Not Under ML

### Note to Designer:

- KDOT Pipe Policy provides guidance in identifying the prohibited and/or restricted uses of CSP, ACSP, PEP, PVP, CAP & RCP. Provide end sections of the same type and coating as the pipe. Exceptions to this are noted in the Standard Specifications. Refer to the KDOT Design Manual, Volume II Part C, KDOT Sections: Guidelines of Drainage & Culvert Design for structural pipe design information which includes corrugations, sizes, gauges, maximum/minimum fill heights and obstacles of pipe.

- **Provide End Sections of the same type and coating as the pipe.**

- **Exceptions to this are noted in the Standard Specifications.**

- **Refer to the KDOT Design Manual, Volume II Part C, KDOT Sections: Guidelines of Drainage & Culvert Design for structural pipe design information which includes corrugations, sizes, gauges, maximum/minimum fill heights and obstacles of pipe.**

### Design side slope to intersect inside diameter of pipe outside of Clear Zone.

### Summary of Pipe Culverts

- **CSP**
  - **CAP**
  - **PEP**
  - **PVCP**
  - **RCP**

### Remarks

- **Steel**
  - CSP
  - PVCP
  - CAP
  - RCP

- **Alum.**
  - CSP
  - PVCP
  - CAP
  - RCP

### Pipe Corrugations

- **Showing Rotation about (i) and (ii)**
  - Left angle shown
  - Direction of Rotation

### Allowable Location

- **Type**
  - CSP
  - PVCP
  - CAP
  - RCP

### Allowable End Sections

- **Type**
  - CSP
  - PVCP
  - CAP
  - RCP

### Storm Sewer

- **Under ML**
  - Not Under ML

### Note to Designer:

- KDOT Pipe Policy provides guidance in identifying the prohibited and/or restricted uses of CSP, ACSP, PEP, PVP, CAP & RCP. Provide end sections of the same type and coating as the pipe. Exceptions to this are noted in the Standard Specifications. Refer to the KDOT Design Manual, Volume II Part C, KDOT Sections: Guidelines of Drainage & Culvert Design for structural pipe design information which includes corrugations, sizes, gauges, maximum/minimum fill heights and obstacles of pipe.

- **Provide End Sections of the same type and coating as the pipe.**

- **Exceptions to this are noted in the Standard Specifications.**

- **Refer to the KDOT Design Manual, Volume II Part C, KDOT Sections: Guidelines of Drainage & Culvert Design for structural pipe design information which includes corrugations, sizes, gauges, maximum/minimum fill heights and obstacles of pipe.**

### Design side slope to intersect inside diameter of pipe outside of Clear Zone.

### Summary of Pipe Culverts

- **CSP**
  - **CAP**
  - **PEP**
  - **PVCP**
  - **RCP**

### Remarks

- **Steel**
  - CSP
  - PVCP
  - CAP
  - RCP

- **Alum.**
  - CSP
  - PVCP
  - CAP
  - RCP

### Pipe Corrugations

- **Showing Rotation about (i) and (ii)**
  - Left angle shown
  - Direction of Rotation

### Allowable Location

- **Type**
  - CSP
  - PVCP
  - CAP
  - RCP

### Allowable End Sections

- **Type**
  - CSP
  - PVCP
  - CAP
  - RCP

### Storm Sewer

- **Under ML**
  - Not Under ML

### Note to Designer:

- KDOT Pipe Policy provides guidance in identifying the prohibited and/or restricted uses of CSP, ACSP, PEP, PVP, CAP & RCP. Provide end sections of the same type and coating as the pipe. Exceptions to this are noted in the Standard Specifications. Refer to the KDOT Design Manual, Volume II Part C, KDOT Sections: Guidelines of Drainage & Culvert Design for structural pipe design information which includes corrugations, sizes, gauges, maximum/minimum fill heights and obstacles of pipe.

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### Design side slope to intersect inside diameter of pipe outside of Clear Zone.
**Note to Designer:** KDOT Pipe Policy provides guidance in identifying the prohibited and/or restricted uses of CSP, ACS, Culvert Design "for structural pipe design information which includes: corrugations, sizes, gauges, maximum/minimum fill heights and classes of pipe.

---

### END SECTION (TYPE I) NOMINAL DIMENSIONS

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<th>Overall Length</th>
<th>Barrier Length</th>
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<th>Slab</th>
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<td>3.0</td>
<td>3.0</td>
<td>3.0</td>
<td>27.5</td>
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</tbody>
</table>

---

**Note:** Reinforced concrete pipe extensions are based on the surveyed end of pipe. Replacement of any additional pipe length required due to the removal of the existing and section will be paid for directly, but will be **subtracted** from the bid item "Removal of Existing Structures".

---

**Design of end section shall conform to standard reinforced concrete horizontal elliptical pipe. Slight variations in the dimensions specified will be allowed.**

---

**KDOT Pipe Policy** provides guidance in identifying the prohibited and/or restricted uses of CSP, ACS, Culvert Design "for structural pipe design information which includes: corrugations, sizes, gauges, maximum/minimum fill heights and classes of pipe.
Section A-A - Thrush Minerals

Granular Backfill and Foundation Stabilization

OPTIONAL BAR DETAIL

The Contractor shall have the option of using Dowel Bars to match vertical joints across the filter fabric. No allowance will be made for additional steel required for bar laps.

Granular Cold Joint

The Contractor shall have the option of placing the Lower Horizontal Construction Joint at the top of the slab. See Filter Fabric Modification.

VERTICAL CONSTRUCTION JOINTS

NOTE: Vertical construction joints shall be perpendicular to the longitudinal axes of the RCB and shall be placed at the location as needed for construction lines and abutments. The Engineer shall be consulted before placing such joints in the exterior walls and top slab. See the exterior walls and top slab. See the design criteria for additional information.

VERTICAL STRIP DRAIN

Material

Granular

It is required that the Contractor use a "non-coal tar" material from KDOT approved list. Use only hand or walk behind equipment for Compaction.

Requirements for bentonite in the KDOT Specifications for "Bridge Backwall Protection System". Material and installation of bentonite on exterior walls and top slab shall be protected by a bentonite based material. See the exterior walls and top slab. See the design criteria for additional information.

SECTION B-B - Thrush Minerals

Granular Backfill Limits

Added Weep Hole Note

SECTION C-C

Strip Drain (Extend to Top)

VERTICAL STRIP DRAIN

Granular Backfill Limits

In-Situ Backfill (Wingwalls)

Limits of Bridge Protection System

General Notes

New Construction

Foundation Stabilization

The depth of Foundation Stabilization may be increased by the Engineer. The Contractor shall have the option of using Dowel Bars to match vertical joints across the filter fabric. No allowance will be made for additional steel required for bar laps.

Granular Cold Joint

The Contractor shall have the option of placing the Lower Horizontal Construction Joint at the top of the slab. See Filter Fabric Modification.

VERTICAL CONSTRUCTION JOINTS

NOTE: Vertical construction joints shall be perpendicular to the longitudinal axes of the RCB and shall be placed at the location as needed for construction lines and abutments. The Engineer shall be consulted before placing such joints in the exterior walls and top slab. See the exterior walls and top slab. See the design criteria for additional information.

VERTICAL STRIP DRAIN

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Granular

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SECTION B-B - Thrush Minerals

Granular Backfill Limits

Added Weep Hole Note

SECTION C-C

Strip Drain (Extend to Top)

VERTICAL STRIP DRAIN

Granular Backfill Limits

In-Situ Backfill (Wingwalls)

LIMITS OF BRIDGE PROTECTION SYSTEM

Section C-C - Thrush Minerals

Granular Backfill Limits

Added Weep Hole Note

SECTION B-B - Thrush Minerals

Granular Backfill Limits

Added Weep Hole Note

SECTION C-C

Strip Drain (Extend to Top)

VERTICAL STRIP DRAIN

Granular Backfill Limits

In-Situ Backfill (Wingwalls)
EXCAVATION DETAILS FOR REINFORCED CONCRETE BOX CULVERT

Note: Excavation for culverts less than bridge length and the additional excavation for "Embedded Structures" shall not be paid for as Class III Excavation, but shall be subsidiary to Grade 4.0 Concrete.

EXCAVATION DETAILS FOR TYPICAL PIERs

Note: Class II Excavation includes the entire volume of whatever material found below the "Excavation Boundary Plane" within the limits specified for measurement. This may include water or air.

EXCAVATION DETAILS FOR ABUTMENTS WITH FLARED WINGWALLS

Note: Any sheathing required shall be subsidiary to the bid item for Excavation.

EXCAVATION DETAILS FOR PERIMETERS

Note: All bridge excavation shall be computed on the basis of the cross-hatch area and boundary lines indicated on this sheet and the Excavation Boundary Plane on the Construction Layout.

Sides of trenches in hard or compacted soil including embankments shall be shored, sheeted, braced or otherwise supported when the trench is more than 5 feet in depth and 8 feet or more in length. Limits of Class I, II or III Excavation respectively shall be subsidiary to the bids for Excavation.

EXCAVATION DETAILS FOR FOOTINGS IN ROCK

Note: Excavation below top of rock or shale (rock) is encountered.

See detail when rock or shale (rock) is encountered.

EXCAVATION DETAILS FOR DRILLED SHAFTS

Note: Refer to the limits of the drilled shaft construction as greater than the Column Diameter + 2X, otherwise on the general plans.

Dimension "X" shall be 2'-0" unless indicated otherwise on the general plans.

CLASS II EXCAVATION QUANTITIES

Note: All bridge excavation shall be computed on the basis of the cross-hatch area and boundary lines indicated on this sheet and the Excavation Boundary Plane on the Construction Layout.

Sides of trenches in hard or compacted soil including embankments shall be shored, sheeted, braced or otherwise supported when the trench is more than 5 feet in depth and 8 feet or more in length. Limits of Class I, II or III Excavation respectively shall be subsidiary to the bids for Excavation.

EXCAVATION DETAILS FOR ABUTMENTS

Note: Any sheathing required shall be subsidiary to the bid item for Excavation.

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EXCAVATION DETAILS FOR DRILLED SHAFTS

Note: Refer to the limits of the drilled shaft construction as greater than the Column Diameter + 2X, otherwise on the general plans.

Dimension "X" shall be 2'-0" unless indicated otherwise on the general plans.
**SUMMARY OF QUANTITIES**

<table>
<thead>
<tr>
<th>ITEM</th>
<th>DESCRIPTION</th>
<th>UNIT</th>
<th>QTY</th>
<th>TOTAL UNIT</th>
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<tbody>
<tr>
<td>Milling</td>
<td>28' Width 15' Total</td>
<td>Yards</td>
<td>153</td>
<td>11,283</td>
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<td>Yards</td>
<td>153</td>
<td>11,283</td>
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**RATES OF APPLICATION**

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**RECAPITULATION OF QUANTITIES**

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<td>11,283</td>
</tr>
</tbody>
</table>

**TYPICAL PROFILE AT GRADE CONTROL POINTS**

- **Normal Slope (but not steeper than 6:1)**
  - Shoulder Line
  - Surfaced Roadbed
  - R/W line or to the end of construction, as directed by the Engineer.

- **Variable slope approx. 6'' deep shall be constructed to variable slope approx. 6'' deep shall be constructed to**
  - Shoulder Line
  - Surfaced Roadbed

- **3'' or Shoulder Width, whichever is greater.**
  - Shoulder Line
  - Surfaced Roadbed

**DETAIL FOR SURFACING OF MAIL BOX TURNOUTS**

- **Normal Slope**
  - Shoulder Line
  - Surfaced Roadbed

- **Mound Entrance on Side Road**
  - Shoulder Line
  - Surfaced Roadbed

**SUMMARY OF QUANTITIES**

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<td>11,283</td>
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**TYPICAL PROFILE AT GRADE CONTROL POINTS**

- **Normal Slope (but not steeper than 6:1)**
  - Shoulder Line
  - Surfaced Roadbed

- **Variable slope approx. 6'' deep shall be constructed to variable slope approx. 6'' deep shall be constructed to**
  - Shoulder Line
  - Surfaced Roadbed

- **3'' or Shoulder Width, whichever is greater.**
  - Shoulder Line
  - Surfaced Roadbed

**DETAIL FOR SURFACING OF MAIL BOX TURNOUTS**

- **Normal Slope**
  - Shoulder Line
  - Surfaced Roadbed

- **Mound Entrance on Side Road**
  - Shoulder Line
  - Surfaced Roadbed

**SUMMARY OF QUANTITIES**

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<tr>
<th>ITEM</th>
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**RATES OF APPLICATION**

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**RECAPITULATION OF QUANTITIES**

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**TYPICAL PROFILE AT GRADE CONTROL POINTS**

- **Normal Slope (but not steeper than 6:1)**
  - Shoulder Line
  - Surfaced Roadbed

- **Variable slope approx. 6'' deep shall be constructed to variable slope approx. 6'' deep shall be constructed to**
  - Shoulder Line
  - Surfaced Roadbed

- **3'' or Shoulder Width, whichever is greater.**
  - Shoulder Line
  - Surfaced Roadbed

**DETAIL FOR SURFACING OF MAIL BOX TURNOUTS**

- **Normal Slope**
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  - Surfaced Roadbed

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**SUMMARY OF QUANTITIES**

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</table>
Fertilize, Seed & Mulch

- FERTILIZER: A ratio and application rate that equals or exceeds the required minimum rate per acre of N, P, K. Exceeding the N, P, K rate in Summary of Quantities will be acceptable.
  - N = Nitrogen Rate of Application
  - P = Phosphorus Rate of Application
  - K = Potassium Rate of Application

Temporary Berm (Set Price)
Temporary Ditch Check (Rock)
Temporary Inlet Sediment Barrier
Temporary Sediment Basin
Biodegradable Log (12")
Biodegradable Log (9")
Synthetic Sediment Barrier
Sediment Removal (Set Price)
Silt Fence
SWPPP Design
SWPPP Inspection

GENERAL NOTES:
The entire disturbed areas, excluding the paved or surfaced areas, road cuts, slopes, and areas of unfractured native soil or other desirable vegetation must be fertilized, seeded, and mulched.

Temporary seeding shall conform to the Standard Specifications.
Temporary seeding shall be done during any time of the year that the soil can be cultivated. After the temporary seeding has been completed on the entire project, permanent seeding shall be done during the interim seeding season.

The above rates are general guidelines. It will be at the discretion of the Engineer to determine what rate is sufficient for adequate protection of newly seeded areas.

Soil Erosion Mix

The Soil Erosion Mix is to be placed under the Class 1 and/or Class II erosion control materials.

The Soil Erosion Mix consists of the Shoulder Area of the Permanent Seed Mix used on the project.

SUMMARY OF SEEDING / EROSION CONTROL QUANTITIES

- CLT = Construction Limit Tract. This area is defined by the entire disturbed area of the project that requires seeding and erosion control. Resources required to be placed. Any riparian, stream, floodplain, groundwater, riparian, etc. shall not be included in this measurement.
- SHS = Shared Resources Area. The area that results from installation or construction of temporary water preservation structures shall be included in the disturbed area. Acreage shall be calculated in accordance with the specifications. Areas that result from installation or construction of temporary water preservation structures shall be included in the disturbed area.

SL/CH = Slope Length/Change. The rate of application per acre, thickness in place, for the mulching materials is generally as follows:

- ** - N = Nitrogen Rate of Application
- ** - P = Phosphorus Rate of Application
- ** - K = Potassium Rate of Application

NOTE: Projects less than 1 acre shall be bid as "Seeding" by the lump sum. See Permanent Seeding Summary of Seeding Quantities sheet LABGE for further details.

Geotextile (Erosion Control) shall be removed prior to placement of permanent slope protection.

Regger and Quick Guard are the approved sheet/wheatgrass products.

If the entire disturbed area of the project, not just the seeding area, is 1 acre or more, then these bid items must be included.

**** List size of material.

The amount of mulch and mulch tacking slurry in the bid quantities is estimated. (Acres of Seeding X 1.5 X 2 Tons/Acre). The estimated quantity includes mulching associated with both temporary and permanent seeding operations. The total mulch and mulch tacking slurry in the bid quantities is estimated. (Acres of Seeding X 1.5 X 2 Tons/Acre). The estimated quantity includes mulching associated with both temporary and permanent seeding operations. The total mulch and mulch tacking slurry is estimated to be placed. This area shall be seeded using the Soil Erosion Mix prior to placement of the material. The Soil Erosion Mix shall be applied using the Soil Erosion Mix prior to placement of the material.
### Erosion Control - Class 1, Type C

<table>
<thead>
<tr>
<th>Station</th>
<th>Left Elevation</th>
<th>Right Elevation</th>
<th>Length</th>
<th>Perimeter</th>
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<tr>
<td>90+40</td>
<td>5.5</td>
<td>5.5</td>
<td>0.0</td>
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<tr>
<td>100+00</td>
<td>5.5</td>
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Total Erosion Control (Class 1, Type C) = 11,999
NOTES:
1) Temporary Slope Drain and Temporary Berm may be used on either project forelopes or projected backslopes.
2) Discharge of Slope Drains shall be pipe stabilized drift or area or into Sediment Basins.
3) Pipe shall be secured in place as approved by Engineer.
4) Temporary Berms under 2,000 feet shall be bid by Set Price.

**TYPICAL PROFILE OF TEMPORARY SLOPE DRAIN**

Pipe size may vary.

Place 1 pipe buried 6" into stream bottom, in the lowest point of the channel to allow the passage of aquatic organisms, with additional pipes placed along the remainder of the stream channel below such that ordinary high water (OHW) flows designated in the Contract Documents shall flow through the pipes without overlapping the crossing.

See KDOT Specifications for more information.

**TYPICAL PROFILE OF TEMPORARY BERM**

Pipe size may vary.

Place 1 pipe buried 6" into stream bottom, in the lowest point of the channel to allow the passage of aquatic organisms, with additional sizes placed along the remainder of the stream channel below such that ordinary high water (OHW) flows designated in the Contract Documents shall flow through the pipes without overlapping the crossing.

See KDOT Specifications for more information.

**TEMPORARY SLOPE DRAIN**

- **Temporary Berm**
- **Temporary Drain Pipe**
- **Surface of Compacted Fill**
- **Temporary Berm**
- **Temporary Drain Pipe**

**TEMPORARY BERM**

**TEMPORARY STREAM CROSSING (ARTICULATED CONCRETE BLOCKS)**

- **Artificial Concrete Block w/ Filter Fabric**
- **Clean Aggregate Fill**
- **Steel Pipe**

**TEMPORARY STREAM CROSSING (AGGREGATE)**

- **Clean Aggregate Fill**
- **Clean Aggregate Fill**
- **Steel Pipe**
1. Stake inlet protection will be measured and paid for approved by the Engineer.
2. Height of bags (8" minimum diameter) must not be above top of curb.
3. Alternative products may be used other than gravel bags such as the "Gutter Buddy". Products must be approved by the Engineer.
4. Attachment of bags shall be such a way that no gaps are evident.
5. If multiple gravel bags are required, place them in anchor trench. Bags shall be tied together and filled with gravel. The bags shall be placed in such a way that no gaps are evident.
6. All bags shall be laid horizontally with no gaps evident.
7. Mesh of bags shall be laid horizontally with no gaps evident.
8. Silt fence shall be placed horizontally with no gaps evident.
9. Netting shall be placed horizontally with no gaps evident.
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SILT FENCE:
1. Stakes shall be 4' (min.) long and of one of the following materials:
   a. Hardwood - 1 3/4" x 3/4".
   b. Southern Pine No. 2 - 2" x 2" x 2'广播.
2. Steel U, T, L, or C Section - 36 lbs. per ft or longer.
3. Synthetic - same strength as wood stakes.
4. Attach fabric with 3 zip ties within the top 8' of the fence.
   Additional attachment methods may be approved by the Engineer on a performance basis.
5. Use of high flow material is acceptable.
   Refer to plan sheets to estimate the length of silt fence required.

BIODEGRADABLE LOG OR FILTER Sock:
1. Place biodegradable logs or filter sock tightly together minimum overlap of 18".
2. Wood stakes shall be 2" x 2" (nom).
3. Refer to plan sheets to estimate length of biodegradable log and filter sock required.
4. Each log or sock (except compost filter socks) should be keyed into the ground at a minimum of 200 feet of its length, Composite filter socks should be placed on an unprepared ground with no gaps between the sock and soil.
5. Length of stakes should be 2 times the height of the log at a minimum with minimum ground embedment equal to the height of the log / sock.

SLOPE INTERRUPTIONS:
1) Slope interruptions shall be placed along contour lines, with a short section turned upgrade at each end of the barrier.
2) The maximum length of the slope interruptions shall not exceed 250 feet, and the barrier ends need to be staggered.
3) Interruptions damaged by Contractor’s negligence, including improper maintenance or lack of maintenance, shall be repaired immediately by Contractor at no additional cost to KDOT.
4) Agricultural products, such as native prairie hay, used for mulching and erosion control practices, excluding wood based mulch, shall meet the North American Weed Free Forage Standards.

### INSTALLATION NOTES

- **GENERAL NOTES**
  1. Slope interruptions shall be placed along contour lines, with a short section turned upgrade at each end of the barrier.
  2. The maximum length of the slope interruptions shall not exceed 250 feet, and the barrier ends need to be staggered.
  3. Interruptions damaged by Contractor's negligence, including improper maintenance or lack of maintenance, shall be repaired immediately by Contractor at no additional cost to KDOT.
  4. Agricultural products, such as native prairie hay, used for mulching and erosion control practices, excluding wood based mulch, shall meet the North American Weed Free Forage Standards.

- **PRODUCT**
  - Straw/Compost
  - Excelsior / Wood Chips / Coconut Fiber

- **SILT FENCE RAILING**
  - No Scale

- **SILT FENCE BARRIER INSTALLATION**
  - No Scale

- **SILT FENCE**
  - Plastic 50 ft no or other material approved by the field engineer, 150 lb tensile strength located in top 8'.
  - Plastic 50 ft no or other material approved by the field engineer, 150 lb tensile strength located in top 8'.

- **BIO DEGRADABLE LOG MATERIAL**
  - Low Flow:
    - Straw/Compost
    - Excelsior / Wood Chips / Coconut Fiber
  - High Flow:
    - Straw/Compost
    - Excelsior / Wood Chips / Coconut Fiber

- **BIO DEGRADABLE LOG SLOPE INTERRUPTIONS**
  - Optional
  - Minimal slope:
    - 6" x 12" depth
  - Temporary erosion and pollution control.

- **GENERAL NOTES**
  1. Slope interruptions shall be placed along contour lines, with a short section turned upgrade at each end of the barrier.
  2. The maximum length of the slope interruptions shall not exceed 250 feet, and the barrier ends need to be staggered.
  3. Interruptions damaged by Contractor's negligence, including improper maintenance or lack of maintenance, shall be repaired immediately by Contractor at no additional cost to KDOT.
  4. Agricultural products, such as native prairie hay, used for mulching and erosion control practices, excluding wood based mulch, shall meet the North American Weed Free Forage Standards.
TYPICAL DITCH CHECK LAYOUT PLAN

GENERAL NOTES

1) The choice of ditch check methods is at the option of the Contractor.

2) Use only rock checks in situations where the ditch slope is 6 percent or greater.

3) Ditch checks damaged by Contractor's negligence, including improper maintenance or lack of maintenance, shall be repaired by Contractor at no extra cost to KDOT.
ROCK DITCH CHECK NOTES

1. Rock shall be clean aggregate, D50 = 6".
2. Place rock in such manner that water will flow over, not around ditch check.
3. Do not use rock ditch checks in clear zone.
4. Exception: The ditch area shall be reshaped to fill any eroded areas. Prior to placement of the rock, the ditch shall be excavated to the dimensions of the Rock Ditch Check and to a minimum depth of 6' (150mm). After placement of the rock, backfill and compact any over excavated soil to ditch grade. This work shall be subsidiary to the Old Temporary Ditch Check (Rock).
5. Aggregates excavated on site may be used as an alternate to the 6" rock, if approved by the Engineer.
6. The Engineer may approve the use of larger aggregates for the downstream portion of the check when conditions warrant their use.
7. When the use of larger rock is approved, the upstream portion of the check should be constructed of D50 = 6" or smaller.

BIODEGRADABLE LOG DITCH CHECK NOTES

1. Use as many biodegradable log sections as necessary to ensure water does not flow around end of ditch check.
2. Overlap sections a minimum of 18".
3. Stakes shall be wood or steel according to Section 2114 of the Standard Specifications. Length of stakes shall be a minimum of 2 x the diameter of the log.
4. Use Erosion Control (Class 1)(Type C) as the downstream apron when required.
5. A downstream apron is required when directed by the Engineer. Apron material will be paid at contract unit price.
6. Each log or sock (except compost filter socks) should be keyed into the ground at a minimum of 25% of its height. Compost filter socks should be placed on smooth prepared ground with no gaps between the sock and soil.

Temporary Ditch Check (Rock).

Temporary Ditch Check (Rock):
This work shall be subsidiary to the bid item and compact any over excavated soil to ditch grade.

Excavation:
The ditch area shall be reshaped to fill any eroded areas. Prior to placement of the rock, the ditch shall be excavated to the dimensions of the Rock Ditch Check and to a minimum depth of 6' (150mm). After placement of the rock, backfill and compact any over excavated soil to ditch grade. This work shall be subsidiary to the Old Temporary Ditch Check (Rock).

Aggregates excavated on site may be used as an alternate to the 6" rock, if approved by the Engineer.

The Engineer may approve the use of larger aggregates for the downstream portion of the check when conditions warrant their use.

When the use of larger rock is approved, the upstream portion of the check should be constructed of D50 = 6" or smaller.
NOTES:
1) Temporary Sediment Basins shall be constructed at locations as directed by the Engineer or as approved in the SWPPP Schedule. All work and materials necessary, including fill, aggregates and all other incidentals necessary to construct the basin, shall be paid as "Temporary Sediment Basin".
2) Lengths and top dimensions shall be determined in the field by the Engineer.
3) Skimmer dewatering device required and must be used regardless the size of the drainage area.
4) Other skimmer designs maybe used that dewateres from the surface at a controlled rate. The design must be approved by the engineer.

SEDIMENT STORAGE BASIN LOCATIONS

<table>
<thead>
<tr>
<th>STATION TO STATION</th>
<th>SIDE</th>
<th>REQUIRED STORAGE CAPACITY</th>
</tr>
</thead>
</table>

Sediment Storage Basin Plan

Cross Section (Emergency Spillway)

Concrete Anti-Deep Collar

Section A-A

Notes:
1. All P.V.C. pipes are to be schedule 40.
2. HDPE flexible drain pipe is to be attached to the pond outlet structure with water-tight connections.
3. The orifice shall be sized of to provide drawdown time to 2 to 5 days and approved by the engineer.
4. Other skimmer designs maybe used that dewateres from the surface at a controlled rate. The design must be approved by the engineer.

Principal spillway

Sediment Storage

Emergency Spillway (Shot rock)

Anti-seep collar (6" conc.)

3:1

4'-6" min.

18" pipe (min.)

Concrete Anti-Deep Block

Anti-flotation (to top or side slope)

Principal spillway

Emergency Spillway (Shot rock)

Anti-seep collar (6" conc.)

18" pipe (min.)

Concrete Anti-Deep Block

Anti-flotation (to top or side slope)
Erosion Control Blankets shall be laid loosely in the direction of the slope, beginning at the bottom of the slope, in order for blanket to be in contact with the soil, and anchored in place with anchors 6 inches apart. The slots should be 6 inches wide x 6 inches deep with the blanket positioned in the bottom of the slot, then backfilled, tamped and seeded.

1. ANCHOR SLOT(s). The top of the blanked should be "slotted" at the top of the slope and anchored in place with anchors 6 inches apart. The slots should be 6 inches wide ± 6 inches deep with the blanket positioned in the bottom of the slot, then backfilled, tamped and seeded.

2. LONGITUDINAL SEAM(s). The edges of the blanket should overlap each other a minimum of 6 inches, with anchors catching the edges of both blankets.

3. SPLICE SEAM(s). When splices are necessary, overlap end of Stagger splice seams.

4. TERMINAL FOLD(s). The bottom edge of the blanket shall be turned under a minimum of 4 inches, then anchored in place with anchors 9 inches apart.

5. TYPICAL ANCHORS. Anchor design shall be as recommended by the manufacturer.

6. STAPLE CHECK(s). Establish Staples in 2 rows 4" on center apart. Staple Checks - shall be 30' apart.

NOTE: Single post ring and shank staple is acceptable.

Agricultural products, such as native prairie hay, used for mulching and erosion control practices, excluding wood based mulch, shall meet the North American Weed Free Forage Standards.
Fertilize, Seed & Mulch

SHLDR = Seeded with the Shoulder Mix. Typically 15 feet for 2-lane roads and 30 feet for 4-lane roads. Includes outside roadsides, turfed portions of shoulders, and turfed portion of the median.

OTHER = Seeded with the "Other" Mix. Designated as all other turf areas, except the Shoulder. Usually includes a Wildflower Mix.

Wildflower Mixes

- Native Wildflower Mix 1
- Native Wildflower Mix 2

Other vegetative mulches are acceptable only with the Engineer's concurrence.

Agricultural products, such as native prairie hay, used for mulching and erosion control practices, excluding wood mulch, are acceptable.

The entire disturbed area, excepting the paved or surfaced areas, steep rocky slopes and areas of undisturbed native sod or other desirable vegetation shall be fertilized (limed when required), seeded and mulched. Soil preparation shall conform to the Standard Specifications except as noted below.

Soil preparation shall be adequate for the entire disturbed area. The above rate is a guide. It will be at the discretion of the Engineer to determine what rate is sufficient for adequate protection of newly seeded areas.

Wildflower Mixes are acceptable only with the Engineer's concurrence.

The entire disturbed area, excepting the paved or surfaced areas, steep rocky slopes and areas of undisturbed native sod or other desirable vegetation shall be fertilized (limed when required), seeded and mulched. Soil preparation shall conform to the Standard Specifications except as noted below.

The above rate is a guide. It will be at the discretion of the Engineer to determine what rate is sufficient for adequate protection of newly seeded areas.

Wildflower Mixes are acceptable only with the Engineer's concurrence.

The entire disturbed area, excepting the paved or surfaced areas, steep rocky slopes and areas of undisturbed native sod or other desirable vegetation shall be fertilized (limed when required), seeded and mulched. Soil preparation shall conform to the Standard Specifications except as noted below.

The above rate is a guide. It will be at the discretion of the Engineer to determine what rate is sufficient for adequate protection of newly seeded areas.

Wildflower Mixes are acceptable only with the Engineer's concurrence.

The entire disturbed area, excepting the paved or surfaced areas, steep rocky slopes and areas of undisturbed native sod or other desirable vegetation shall be fertilized (limed when required), seeded and mulched. Soil preparation shall conform to the Standard Specifications except as noted below.

The above rate is a guide. It will be at the discretion of the Engineer to determine what rate is sufficient for adequate protection of newly seeded areas.

Wildflower Mixes are acceptable only with the Engineer's concurrence.
TYPICAL SIGNING AND MARKING
FOR RIGHT LANE MUST TURN RIGHT

RAILROAD CROSSING MARKING

A THREE-LANE ROADWAY SHOULD BE MARKED WITH A CENTERLINE FOR TWO-LANE APPROACH OPERATION ON THE APPROACH TO A CROSSING.
ON MULTI-LANE ROADS THE TRANSVERSE BANDS SHOULD EXTEND ACROSS ALL APPROACH LANES, AND INDIVIDUAL R X R SYMBOLS SHOULD BE USED IN EACH APPROACH LANE. REFER TO STANDARD ALPHABET FOR HIGHWAY SIGNS AND MARKINGS FOR R X R SYMBOLS DETAILS.

*STOP LINE 8' FROM NEAR EDGE OF GATE OR CANTILEVER, IF PRESENT.
NOTES:
- ON NON I, US, AND K ROUTES, 4" EDGE LINES MAY BE INSTALLED.
- 6" EDGE LINES ARE NOT REQUIRED ON NON I, US, AND K ROUTES.
- THEY SHALL BE SPACED A MINIMUM OF 6' APART FROM INSIDE EDGE TO INSIDE EDGE.

TYPICAL CROSSWALKS

TYPE I: CROSSWALK LINES SHALL BE 12" SOLID WHITE LINES. THEY SHALL BE SPACED A MINIMUM OF 6' APART FROM INSIDE EDGE TO INSIDE EDGE.

TYPE II: THESE LINES SHOULD BE SOLID WHITE 24" WIDE PLACED PARALLEL TO THE DIRECTION OF TRAFFIC FLOW. THE LINE PLACEMENT IS DETERMINED BY LANE LINES, CENTER LINE, AND WHITE PATH IN SUCH A MANNER AS TO MINIMIZE TRAFFIC WEAR. THE CROSSWALK WIDTH SHOULD BE NOT LESS THAN 8'. THE TRANSVERSE CROSSWALK LINES MAY BE ADDED.

TYPICAL APPROACH TAPER DETAIL

THE APPROACH TAPER LENGTH FROM POINT A TO POINT B IS TO BE DETERMINED USING CHART C. VALUES FOR L WERE CALCULATED USING THE EQUATIONS BELOW AND INCREASED TO THE NEXT HIGHER 5 MPH INCREMENT.

- SPEEDS < 45 MPH: \( L = W \times 60 \)
- SPEEDS ≥ 45 MPH: \( L = W \times 45 \)

IF ARROWS ARE USED AND UNLESS OTHERWISE SPECIFIED THE SPACE BETWEEN LINES SHOULD BE AT LEAST FOUR TIMES THE HEIGHT OF THE CHARACTERS FOR LOW SPEED ROADS BUT NOT MORE THAN TEN TIMES THE HEIGHT OF THE CHARACTERS, UNDER ANY CONDITIONS.

FOR SPEEDS LESS THAN OR EQUAL TO 40 MPH: \( R = 150 \times \frac{W}{L} \)
FOR SPEEDS GREATER THAN OR EQUAL TO 45 MPH: \( R = 200 \times \frac{W}{L} \).
DETAILED SPECIFICATIONS FOR FLAT SHEET SIGNS

All new flat sheet sign blanks shall be of the aluminum alloy and thickness shown on the flat sheet blank detail sheets. Flat sheet blanks shall be used for signs that are less than or equal to 7'-0" in length and/or less than or equal to 4'-0" in height. Flat sheet blanks shall also be used for signs that are 4'-0" in length and less than or equal to 8'-0" in height.

The design details for signs (color, letter height, and letter series) shall be as shown in the Standard Highway Signs Manual (2004 Edition), unless other details are shown in the plans.

All sign faces with blue, green, red, yellow, fluorescent yellow green, brown, or white background shall be covered with Type IV high intensity retroreflective sheeting.

The type of adhesive used for retroreflective sheeting or lettering film shall be heat activated or pressure sensitive.

The sign faces shall be direct screen process, reverse screen process, or direct applied legend.

DETAILED SPECIFICATIONS FOR STRUCTURAL EXTRUDED PANEL SIGNS

All new reinforced sign panels shall be of the fabrication, aluminum alloy, and thickness shown on the reinforced panel detail sheets. If extrusheet fabricated sign panels are used, they shall be of the length, width and in the position shown. If extrusheet fabricated panel dimensions are not shown, a line of legend should be placed entirely on one panel. If extrusheet fabricated sign panels are used, either 1'-0" or 6" panels shall be used. The 1'-0" panels shall be used only at the top or bottom of signs.

Reinforced panels shall be used for signs that are greater than 7'-0" in length or greater than 4'-0" in height.

All sign faces shall be covered with Type IV high intensity retroreflective sheeting.

The retroreflective sheeting used for the direct applied legend, and direct applied borders shall be Type IV high intensity retroreflective sheeting.

The type of adhesive used for retroreflective sheeting or lettering film shall be heat activated or pressure sensitive.

Letters and numbers on reinforced panel signs are modified series "E" unless otherwise shown. Spacing table dimensions are in inches.
### SUMMARY OF PAVEMENT MARKINGS

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>4&quot; White Edge Line</th>
<th>6&quot; White Edge Line</th>
<th>8&quot; White Edge Line</th>
<th>12&quot; White Base Line</th>
<th>6&quot; Yellow Broken Line</th>
<th>8&quot; Yellow Solid Line</th>
<th>10&quot; Yellow Broken Line</th>
<th>12&quot; Yellow Solid Line</th>
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<tbody>
<tr>
<td>AYRE ST. E/W</td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<td>224'</td>
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<tr>
<td>AYRE ST. R/W</td>
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<td></td>
<td></td>
<td>224'</td>
</tr>
<tr>
<td>AYRE ST. N/R</td>
<td></td>
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<td>224'</td>
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<tr>
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<tr>
<td>AYRE ST. S/N</td>
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<td></td>
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<tr>
<td>AYRE ST. S/E</td>
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<td></td>
<td></td>
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<td></td>
<td>224'</td>
</tr>
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</table>

**NOTE:** FOR SPECIFIC PAVEMENT MARKING DETAILS AND DIMENSIONS SEE PLAN SHEETS.

**NOTE:** ALL TOTALS REFLECT ACTUAL QUANTITY OF PAVEMENT MARKING MATERIALS REQUIRED.

### SUMMARY OF WORD & SYMBOL MARKINGS

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<thead>
<tr>
<th>LOCATION</th>
<th>STOP</th>
<th>SCHOOL</th>
<th>SCHOOL</th>
<th>STOP</th>
<th>SCHOOL</th>
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<tbody>
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<td>AYRE ST.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**NOTE:** WORKS & SYMBOLS SHALL CONFORM TO THE LATEST EDITION OF "STANDARDS ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKINGS" PRINTED BY THE U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION.

PRIOR TO COMMENCEMENT OF PAVEMENT MARKING WORK THE ENGINEER WILL ESTABLISH THE LIMITS FOR "NO PASSING" ZONES. THESE LIMITS SHALL BE USED FOR THE LOCATION OF "NO PASSING" ZONES AND FOR THE COMPUTATION OF ACTUAL MARKING QUANTITIES FOR THIS LINE TYPE.

### RECAPITULATION OF QUANTITIES

<table>
<thead>
<tr>
<th>ITEMS</th>
<th>TOTAL</th>
<th>UNITS</th>
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<tbody>
<tr>
<td>Line Types</td>
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<tr>
<td>Symbols</td>
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<tr>
<td>Sh. No.</td>
<td></td>
<td></td>
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<tr>
<td>SHEETS</td>
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<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**NOTE:** FOR SPECIFIC PAVEMENT MARKING DETAILS AND DIMENSIONS SEE PLAN SHEETS.

**NOTE:** ALL TOTALS REFLECT ACTUAL QUANTITY OF PAVEMENT MARKING MATERIALS REQUIRED.
1) Design Speed: Those items delegated to temporary traffic control should be designed and installed using the posted/legal speed of the roadway prior to work starting.

2) Minimum Lane Width: Lane widths shall be a minimum of 11' (measured between centers of pavement markings) or as shown on the plans, or as directed by the engineer. A lane width less than 11' may require restricted roadway width signing.

3) Consideration should be made to separate pedestrian and, if needed, bicycle movements from both work site activity and vehicular traffic. Unless a reasonable safe route that does not involve crossing the roadway can be provided, pedestrian should be appropriately directed with advance signing that encourages them to cross to the opposite side of the roadway. In urban and suburban areas with high vehicular traffic volumes, these signs should be placed at intersections (rather than midblock locations) so that pedestrians are not confronted with midblock work sites that will induce them to attempt skirting the work site or making a midblock crossing.

4) When existing pedestrian facilities are disrupted, closed, or relocated, the temporary traffic control unit for more information at 785-296-1179 or 6) Alternative temporary rumble strip options may be available. Please contact.

5) When the driving surface open to traffic is milled or is a temporary surface made of loose material, or when directed by the engineer a WB-15 (Gravel Pavement) or WB-7 (Loose Gravel) sign shall be used on mainline approaches. This sign should be placed a "C" distance after the W20-1 (Road Work Ahead) Pavement) or W8-7 (Loose Gravel) sign shall be used on mainline approaches.

Pavement or W20-1 (Road Work Ahead)

4) When existing pedestrian facilities are disrupted, closed, or relocated, the temporary traffic control unit for more information at 785-296-1179 or 6) Alternative temporary rumble strip options may be available. Please contact.

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Pavement or W20-1 (Road Work Ahead)

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Pavement or W20-1 (Road Work Ahead)

4) When existing pedestrian facilities are disrupted, closed, or relocated, the temporary traffic control unit for more information at 785-296-1179 or 6) Alternative temporary rumble strip options may be available. Please contact.
1. Support device shall not project beyond the detection plate into the pathway.
2. Hand trailing edges and detection plates are optional for continuous walls.
3. Interconnect pedestrian channelizers to prevent displacement and to provide continuous guidance through or around work.
4. Alternate pathways shall be firm, stable, and slip resistant.
5. Treat height differentials > 1/2" in the surfaces of alternate paths with a firm, stable, and slip resistant temporary ramp having a slope of 12:1 or flatter and having a width equal to the alternate path.
6. Use alternating orange/white on interconnected devices.
Note: Signs shown for one approach to work zone.

FIGURE 1: TYPICAL SIGNING FOR ROAD CLOSURE (MAINLINE OR SIDE ROAD)

Note: Signs shown for one approach to intersection (work zone).

FIGURE 2: TYPICAL SIGNING FOR SIDE ROAD OPEN

Note: Signs shown for one approach to work zone.

FIGURE 3: TYPICAL SIGNING FOR ROAD CLOSURE - LOCAL TRAFFIC ACCESS

ROAD CLOSED GENERAL NOTES

As shown in Figure 1, at the point where thru traffic must detour and local traffic can proceed to the location where the roadway is completely closed, the R11-3a (ROAD CLOSED # MILES AHEAD LOCAL TRAFFIC ONLY) or R11-4 (ROAD CLOSED LOCAL TRAFFIC ONLY or ROAD CLOSED TO THRU TRAFFIC) sign shall be used with Type 3 barricades (winged position), placed on the shoulders of roadway.

As shown in Figure 3, when local traffic must be allowed access into the work zone, Type 3 barricades shall be longitudinally staggered to maintain the appearance of a closed roadway. A second line of end-to-end Type 3 barricades shall be placed just beyond the last access point in the work zone, to completely close the roadway.

The R11-4 (ROAD CLOSED TO THRU TRAFFIC or ROAD CLOSED LOCAL TRAFFIC ONLY) or R11-3a (ROAD CLOSED # MILES AHEAD LOCAL TRAFFIC ONLY) sign shall be used when the distance to the point of complete closure of the roadway is less than 1 mile.

The R11-3a (ROAD CLOSED # MILES AHEAD LOCAL TRAFFIC ONLY) sign shall be used when the distance to the point of complete closure of the roadway is 1 mile or greater.

The words "BRIDGE OUT" (or BRIDGE CLOSED) may be substituted for the words "ROAD CLOSED" on the signs shown for one approach to work zone.

The R11-4 (ROAD CLOSED TO THRU TRAFFIC or ROAD CLOSED LOCAL TRAFFIC ONLY) sign shall be used when the distance to the point of complete closure of the roadway is less than 1 mile.

The R11-3a (ROAD CLOSED # MILES AHEAD LOCAL TRAFFIC ONLY) sign shall be used when the distance to the point of complete closure of the roadway is 1 mile or greater.

The words "BRIDGE OUT" (or BRIDGE CLOSED) may be substituted for the words "ROAD CLOSED" on the R11-3a or R11-4 sign where applicable.
SIGN LAYOUT INFORMATION

1. Shift the sign location. Do not violate minimum sign spacing.
2. When the sign width is equal to or greater than 9', three or more wood posts may be used with a minimum of 4' between the centerline of each post. All signs less than 9' in width shall use a maximum of two wood posts.
3. The height from the top of the primary sign to the bottom of the pavement. Signs shall not overlap each other.
4. Large signs having an area exceeding 50 square feet installed on multiple breakaway posts shall be mounted a minimum of 7' above the ground.
5. Pedestrian detour signing shall be a minimum of 2' measured from the top of the pedestrian pathway to the bottom of the sign and shall not intrude into the walkway nor shall it project beyond the back of curb.
6. Details and instructions for putting up signs are given in the Manual of Uniform Traffic Control Devices for Streets and Highways, Chapter 2.
Perforated square steel tube (P.S.S.T.) post setup

Wood post setup

3 lb/f U-Channel setup

Notes:
- Place two bolts at both ends of the splice through the holes nearest the ends of the splice.
- Use manufacturer recommended spacers over the bolts between the spliced pieces of U-Channel.

Details for 2", 2 1/4", or 2 1/2" sign posts
- Place bolts in the same corner along each sign post.

See TE710 for additional details and requirements.
### SUMMARY OF TRAFFIC CONTROL DEVICES

#### EACH PER DAY

- **Quantity most used on the project at any one time**

#### Work Zone Sign (Special)

<table>
<thead>
<tr>
<th>Sign No.</th>
<th>WORK ZONE SIGN (16.25 SQ.FT. &amp; LESS)</th>
<th>WORK ZONE SIGN (16.26 SQ.FT. &amp; OVER)</th>
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<tbody>
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#### Work Zone Signs

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<thead>
<tr>
<th>Sign No.</th>
<th>WORK ZONE SIGNS (0 TO 9.25 SQ.FT.)</th>
<th>WORK ZONE SIGNS (9.26 TO 16.25 SQ.FT.)</th>
<th>WORK ZONE SIGNS (16.26 &amp; OVER)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

### LIGHTED DEVICES

- **EACH**

#### Work Zone Barricades (Type 3 - 4' to 12')

<table>
<thead>
<tr>
<th>Type</th>
<th>Pedestrian</th>
<th>Fixed</th>
<th>Portable</th>
<th>Pedestrian</th>
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</tbody>
</table>

### SUMMARY OF TRAFFIC CONTROL DEVICES

#### EACH PER DAY

- **16.25 Sq.Ft. & Less**
- **16.26 Sq.Ft. & Over**

#### Recapitulation of Quantities

<table>
<thead>
<tr>
<th>Device Type</th>
<th>Quantity</th>
<th>Unit</th>
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<tbody>
<tr>
<td>Work Zone Signs</td>
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</tr>
<tr>
<td>Work Zone Barricades</td>
<td>each</td>
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<tr>
<td>Lighted Devices</td>
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</tr>
<tr>
<td>Portable Changeable Message Sign</td>
<td>each per day</td>
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**TRAFFIC CONTROL SUMMARY OF DEVICES RECAPITULATION OF QUANTITIES**

**63-4898-01**

**Year: 2019**

**Sheets:** 34

**Sh. No.:** XXX

**KANSAS DEPARTMENT OF TRANSPORTATION**

**Designed:** Kristina Ericksen

**Drawn By:**

**File:**

**Plotted:**

**DGN SPEC:**

**SYTIME:**

**KDOT GROUP:**

**TRACED:**

**TRACE CK.:**

**DETAILED:**

**DETAIL CK.:**

**FHWA APPROVAL:**

**DESIGNED:**

**DESIGN CK.:**

**APP'D DATE:**

**REVISIONS BY APP'D:**

**KDOT Graphics Certified:**

**03-29-2018**

**CADconform Certified This File**

**TOTAL SHEETS:** 50

**TOTAL SHEET NO.:** 63 C-4898-01

**STATE:**

**PROJECT NO.:**

**YEAR:**

**TOTAL:**

**SHEETS:**