Note: Contractor shall stay within existing R/W or temporary easement of all times. Do not disturb existing fences without Engineer’s approval.

The Contractor shall construct the guardrail widening as shown on Sheet No. 5. The existing structure is a steel beam bridge with W-beam railing on the bridge and R-beam guardrail on end terminals. The Contractor shall remove the existing approach and end guardrail to the first steel post on the bridge and install steel guardrails and end terminals at each quadrant of the existing bridge. No rubber shall be maintained.

The W-beam shall be bolted to the existing steel bridge posts with laps in the direction of traffic. The existing posts and guardrail shall be salvaged and stockpiled on the existing R/W for Meade County.

Borrow areas provided by the Contractor shall be approved by the Engineer as to the suitability of the borrow and location. Special care shall be taken in this approval to prevent the increase of siltation and turbidity of streams, lakes and reservoirs and to avoid interference with the movement of migratory fish. Areas which, in the opinion of the Engineer, may leave an unsightly appearance will not be approved.

It shall be the responsibility of the Contractor to restore, test and/or complete other operations noted in the agreement with the landowner, approved by the Engineer, on all disturbed areas used to provide borrow areas for Common Excavation (Contractor Furnished).
The Contractor shall construct the guardrail welding as shown on Sheet No. 5. The existing structure is a steel beam bridge with W-beam railing on the bridge and W-beam guardrail on end terraces. The Contractor shall retain the existing approach and exit guardrail to the first steel post on the bridge and install posts and guardrail end terminal at each quadrant of the existing bridge. No rail shall be constructed. The W-beam shall be bolted to the existing steel bridge posts with laps in the direction of traffic. The existing posts and railing shall be salvaged and stockpiled on the existing R/W for Meade County.

Borrow areas provided by the Contractor shall be approved by the Engineer as to the suitability of the borrow area location. Specification charts shall be taken to this approved to minimize the increase of siltation and turbidity of streams, lakes and reservoirs and to avoid interference with the movement of migratory fish. Areas which, in the opinion of the Engineer, may leave an unsightly appearance will not be approved.

All borrow area locations shall be submitted for clearance from the Kansas Motorist Safety and the Kansas Department of Wildlife and Parks, prior to any excavation.

It shall be the responsibility of the Contractor to remove, and from complete other operations related to the agreement with the landowner, restore, seed and/or complete other operations prior to any excavation.

The Kansas Department of Wildlife and Parks, clearance from the Kansas Historical Society and any approval of the Architectural History Preservation Board shall be obtained prior to any excavation.

The Contractor shall construct the guardrail and end terminals. The Contractor shall remove the existing approach and exit guardrail and end terminals. The Contractor shall install W-beam railing on the bridge and W-beam guardrail end terminal (FLET or SRT) Remove Existing Guardrail

EARTHWORK BALANCE

The Contractor shall remove existing guardrail and install new guardrail (W-beam) and end terminals.

Note: Contractor shall stay within existing R/W at all times. Do not disturb existing fences.

GPS Site Control
The GPS Site Control (horizontal and vertical) was derived using Kansas Regional Coordinate System Zone 13, NAD 92 (2D) and Geoidal 92 (US). Vertical Control
BM #2 = 2120.02 NAVD 88 Elevation

Keep such items showing relation to the work.
The Contractor shall construct the guardrail system as shown on Sheet No. 5. The existing structure is a reinforced concrete haunched abutment bridge with concrete parapet rail on the bridge and W-beam guardrail with rubber end and side terminal. The Contractor shall remove the existing approach and exit guardrail and install posts, 25’ W-beam transition, rubber end and side terminal at each quadrant of the existing bridge. The W-beam and rubber end shall be bolted to the existing concrete bridge posts.

Borrow areas provided by the Contractor shall be approved by the Engineer as to the suitability of the material and location. Special care shall be taken in this approval to minimize the increase of siltation and turbidity of streams, lakes and reservoirs and to avoid interference with the movement of migratory fish. Areas which, in the opinion of the Engineer, may leave an unsightly appearance will not be approved.

All borrow area locations shall be submitted for clearance from the Kansas Department of Wildlife and Parks, prior to any excavation. It shall be the responsibility of the Contractor to restore and/or complete all operations noted in the agreement with the landowner, approved by the Engineer, on all disturbed areas used to provide borrow areas for Common Excavation (Contractor Furnished).

Note: Contractor shall stay within existing R/W at all times. Do not disturb existing features.

EARTHWORK BALANCE

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Cu. Yds. Common Excavation (VMF 0.74)</td>
<td>7 Cu. Yds. Common Excavation (Contractor Furnished)</td>
</tr>
</tbody>
</table>

KANSAS DEPARTMENT OF TRANSPORTATION

STATE OF KANSAS

YEAR 2019

PROJ. NO. 60 C-4927-01

SHEET NO. 3

Plan 3: Design

File: Drawn By: J. B. Eckenmann

Plot: 10-Jan-2020 01:02

PLAN & ELEV. SCALE: 10' = 1'-0"

KDOT Proj. 60 C-4927-01 Sta. 146+00 TO STA. 152+00

10:1 10:1 10:1 3:1

For Reference:

The GPS Site Control (horizontal and vertical) was derived using Kansas Regional Coordinate System Zone 13, NAD 83 (2011) and Geoid 12B US.

CP #5 - N = 125,855.82 E = 13,580,097.32
CP #6 - N = 125,808.35 E = 13,580,653.53

BM #3 = 2154.25 NAVD 88 Elevation

BM @ 3 = 2154.25 NAVD 88 Elevation

Note: Contractor shall stay within existing R/W at all times. Do not disturb existing features.

BM #3 = Chiseled "ç" Top SW Corner S. Conc. Rail

BM #6 = 2154.25 NAVD 88 Elevation

BM #7 = 2154.25 NAVD 88 Elevation
GENERAL NOTES

Install the guardrail end terminals according to the Manufacturer's Installation Manual. The Contractor will furnish a copy of the Manufacturer's Installation Manual to the Engineer prior to the start of the installation.

The guardrail end terminal post type may be independent of the post type used in the remainder of the installation. However, no mixing of post types is permitted in the remaining w-beam and thrie-beam installation.

Use approved polymer (preferred) or wood blockouts provided by the Manufacturer. The guardrail end terminal splice post type and orientation are independent of the blockout size and type used in the remainder of the installation. For blockout size and type, refer to the Manufacturer’s Installation Manual.

The minimum length of w-beam guardrail required between the thrie-beam transition and the guardrail end terminal is 12'-6" for all installations; unless otherwise stated in the Manufacturer's Installation Manual.

Where pavement with a thickness less than or equal to 8" is encountered during installation, use the details shown on KDOT's 'Guardrail Post Details' Standard Drawings to provide openings in the pavement for the guardrail posts. Where pavement with a thickness greater than 8" or geologic rock is encountered during installation, follow the Manufacturer's Installation Manual for guidance. Where the Manufacturer’s Installation Manual does not address pavement with a thickness greater than 8" or geologic rock, contact the manufacturer for instructions or install the guardrail end terminal in accordance with the Manufacturer's Installation Manual.

At work and materials required for w-beam and thrie-beam guardrail installations are paid for under the appropriate bid item for either CGS or MGS guardrail depending on the type of guardrail posts as directed by the Engineer.

Apply retroreflective sheeting to the end terminal impact head before installation. See Guardrail Layout Sheets for Details.

The Engineer must include the following information on the Construction and Material Plans:
- CGS Omitted Post and Transition Details
- Thrie-Beam Transition Details
- Transition Details
- GUARDRAIL CLEAR AREA

Asphalt and guardrail surfacing materials are class otherwise shown in the plans.

Where the Manufacturer's Installation Manual does not address pavement with a thickness greater than 8" or geologic rock, contact the manufacturer for instructions or install the guardrail end terminal in accordance with the Manufacturer's Installation Manual.

Contractor will furnish a copy of the Manufacturer's Installation Manual to the Engineer prior to the start of the installation for guidance. Where the Manufacturer’s Installation Manual does not address pavement with a thickness greater than 8" or geologic rock, contact the manufacturer for instructions or install the guardrail end terminal in accordance with the Manufacturer's Installation Manual.

At work and materials required for w-beam and thrie-beam guardrail installations are paid for under the appropriate bid item for either CGS or MGS guardrail depending on the type of installation.

At work and materials required for guardrail end terminal installations are paid for under the proper bid item for the selected guardrail end terminal. See the table on this sheet for the appropriate end terminal bid item information.

Use approved polymer (preferred) or wood blockouts provided by the Manufacturer. The guardrail end terminal splice post type and orientation are independent of the blockout size and type used in the remainder of the installation. For blockout size and type, refer to the Manufacturer’s Installation Manual.

where pavement with a thickness less than or equal to 8" is encountered during installation, use the details shown on KDOT's 'Guardrail Post Details' Standard Drawings to provide openings in the pavement for the guardrail posts. Where pavement with a thickness greater than 8" or geologic rock is encountered during installation, follow the Manufacturer's Installation Manual for guidance.

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At work and materials required for w-beam and thrie-beam guardrail installations are paid for under the appropriate bid item for either CGS or MGS guardrail depending on the type of installation.

At work and materials required for guardrail end terminal installations are paid for under the proper bid item for the selected guardrail end terminal. See the table on this sheet for the appropriate end terminal bid item information.

Thrie-Beam Transition Details

Guardrail End Terminal (DFT)

Guarded End Terminal (DFT)

Guarded End Terminal (DFT)

Guarded End Terminal (DFT)

Guarded End Terminal (DFT)

Guarded End Terminal (DFT)

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Guarded End Terminal (DFT)
WOOD POSTS

GENERAL NOTES (Wood Posts)

- All wood posts and wood blocks are preservative treated, see standard specifications. Thoroughly saturate all eyes, stiles and bolt holes on wood posts and blocks with preservative.
- Use only one type of preservative treatment on a project. Use S4S rectangular posts and wood blocks, see standard specifications. Use only one post/blockout type within guardrail run, this excludes the guardrail end terminals.
- For wood/polymer blockout requirements see standard specifications. Approved polymer blockouts may be substituted for wood blockouts. Only one type of blockout is permitted on each post.
- Bolt and nut details are for Grade 50 Steel only. Steel post & wood blocks are slip resistant.
- Use only one type of preservative treatment on a project. Use S4S rectangular posts and wood blocks, see standard specifications. Use only one post/blockout type within guardrail run, this excludes the guardrail end terminals. Set guardrail posts by digging or by driving. Use post caps to protect the post from crushing during driving operations. Contractor must notify Engineer at the earliest time when a non-removable manmade object (footing, pipe, etc.) is encountered and prevents installation of a full length post. Contractor must obtain Engineer approval prior to cutting post shorter than 6'-6" except as noted. Transition Section Details. See Standard Drawing RD613 for Thrie-Beam Guardrail Splice Details. Contractor must obtain Engineer approval prior to cutting post shorter than 6'-6" except as noted. Variable截面

STEEL POSTS

GENERAL NOTES (Steel Posts)

- Use grade of steel for steel posts that meets the requirements of the standard specifications. See bolt sizes for bolt information, see standard specifications. Use only one bolt/blockout type within guardrail run. Tie bolts to guardrail posts when using a bolt/blockout type different than that specified in standard specifications. Use only one type of preservative treatment on a project. Use S4S rectangular posts and wood blocks, see standard specifications. Use only one post/blockout type within guardrail run, this excludes the guardrail end terminals. For wood/polymer blockout requirements see standard specifications. Approved polymer blockouts may be substituted for wood blockouts. Only one type of blockout is permitted on each post.
- Bolt and nut details are for Grade 50 Steel only. Steel post & wood blocks are slip resistant.
- Use only one type of preservative treatment on a project. Use S4S rectangular posts and wood blocks, see standard specifications. Use only one post/blockout type within guardrail run, this excludes the guardrail end terminals. Set guardrail posts by digging or by driving. Use post caps to protect the post from crushing during driving operations. Contractor must notify Engineer at the earliest time when a non-removable manmade object (footing, pipe, etc.) is encountered and prevents installation of a full length post. Contractor must obtain Engineer approval prior to cutting post shorter than 6'-6" except as noted. Variable截面

** GUARDDRAIL POST DETAILS**

- Galvanize all bolts, nuts, and washers in accordance with the KDOT's Standard Specifications.
Note: Flare rate of a:b and curve length of 50'-0" shall be used when guardrail is located inside the shy line. Flare rate of a:b and curve length of 50'-0" shall be used when guardrail is beyond shy line, flare rate of 2a:b and curve length of 50'-0" shall be used when guardrail is located inside the shy line.

Flare Rate = 2a:b

**ALTERNATE TREATMENT - TWO LANCES**

W-Beam Guardrail Lengths of 62.5 and 75

**DETAILS OF GUARDRAIL PROTECTION AT ROADSIDE OBSTACLE**

GUARDRAIL PROTECTION AT ROADSIDE OBSTACLE

**GENERAL NOTE**

For guardrail and rubrail sections, details, and general notes see KDOT's W-Beam Bridge Approach Transition Details Standard Drawings. For post details see KDOT's Guardrail Post Oeters Standard Drawings. The ratio of a:b may be specified as zero for long runs of guardrail in high fill areas.

Waveedges, slopes & transition for Four Lane will be similar to that shown on two lane detail.
GENERAL NOTE
Include all material and work for this area installation in the pay item "Steel Plate Guardrail" paid by the lineal foot.

Use 10 or 12 gauge steel guardrail elements unless otherwise called out, see standard specifications.

B-10 Rail Transition consists of one 12'-6" W-beam section nested in back of one 25'-0" section. Furred remaining rail elements in either 12'-6" or 25'-0" sections. Guardrail parts furnished under this specification shall be interchangeable with similar parts furnished by vendors and shall comply with the following:

Include all material and work for this installation in the pay item "Steel Plate Guardrail" paid by the lineal foot.

Blocks used with steel posts shall be grooved to fit over the flange of the post and may be Wood or Polymer.

The Special End Shoe has the same section as guardrail and is identical to guardrail splice elements, including Special End Shoe, in the plan drawing (RD616). Where inch parts are specified, the inch parts shall be designed to accommodate the direction of final configuration, or cut to size in the direction of permanent traffic.

See Std. Drawing RD616 for additional details of posts not shown on this sheet.

Bridge Rail Transition consists of one 12'-6" W-beam section nested in back of one 25'-0" section. Furred remaining rail elements in either 12'-6" or 25'-0" sections. Guardrail parts furnished under this specification shall be interchangeable with similar parts furnished by vendors and shall comply with the following:

See Std. Drawing RD616 for additional details of posts not shown on this sheet.
**Recapitulation of Bridge Quantities**

<table>
<thead>
<tr>
<th>Location</th>
<th>See</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
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</tbody>
</table>

**Recapitulation of Road Quantities**

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
<th>Unit</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

**Earthwork**

<table>
<thead>
<tr>
<th>Location</th>
<th>See</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
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</tbody>
</table>

**Removal of Existing Structures**

<table>
<thead>
<tr>
<th>Location</th>
<th>See</th>
<th>Description</th>
</tr>
</thead>
<tbody>
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</tbody>
</table>

**Summary of Quantities**

For Summary of Guardrail, See Sheet No. 5
For Temporary, Driveway, & Pollution Control Quantities, See Sheet No. 11
For Seeding Quantities, See Sheet No. 22
For Traffic Control Quantities, See Sheet No. 27
Temporary seeding to be combined with permanent seeding and seeded at the same time.

**SUMMARY OF SEEDING / EROSION CONTROL QUANTITIES**

<table>
<thead>
<tr>
<th>BID ITEM</th>
<th>QUANTITY</th>
<th>UNIT</th>
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</thead>
<tbody>
<tr>
<td>Temporary Seed Mix</td>
<td>1</td>
<td>EACH</td>
</tr>
<tr>
<td>Temporary Fertilizer (*** - ** - *)</td>
<td>1.5</td>
<td>TONS / ACRE</td>
</tr>
<tr>
<td>Mulch Tacking Slurry</td>
<td>2</td>
<td>TONS / ACRE</td>
</tr>
<tr>
<td>Mulch</td>
<td>2</td>
<td>TONS / ACRE</td>
</tr>
<tr>
<td>Geotextile (Erosion Control)</td>
<td>240</td>
<td>LF</td>
</tr>
<tr>
<td>Biodegradable Log (9&quot;)</td>
<td>36</td>
<td>LF</td>
</tr>
<tr>
<td>Sediment Removal (Set Price)</td>
<td>240</td>
<td>LF</td>
</tr>
<tr>
<td>Erosion Control (Class 1, Type D)</td>
<td>100</td>
<td>LF</td>
</tr>
<tr>
<td>Erosion Control (Class 2, Type Y)</td>
<td>200</td>
<td>LF</td>
</tr>
</tbody>
</table>

*Note: Projects less than 1 acre shall be bid as "Seeding" by the lump sum. See Permanent Seeding Summary of Seeding Quantities sheet LA050 for further details.

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

Regrown and Quick Guard are the approved native wheatgrass products.

- If the seed disturbed area of the project is not the seeding area(s) is/are more, then these bid items must be included.

---

**GENERAL NOTES**

The entire disturbed areas, excepting the paved or surfaced areas, steep rocky slopes and areas of unpotted native sod or other desirable vegetation areas be fertilized filled in when required, seeded, and mulched. Soil preparation 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 normal seeding season.

Mulching mix shall be spread uniformly over all disturbed areas and punched in the soil, unless otherwise noted on the plans. The rate of application per acre, thickness in place, for the mulching materials is generally as follows:

<table>
<thead>
<tr>
<th>Material</th>
<th>Rate of Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2&quot; - 2&quot;</td>
<td>Tons per Acre</td>
</tr>
</tbody>
</table>

Agricultural products, such as native prairie hay, used for mulching and erosion control practices, excluding wood based mulch, shall be in accordance with the Soil Erosion Mix prior to placement of the material.

Drilling is preferred, however, broadcasting is acceptable if drilling is not possible.

- 1/2" - 2" Total Mulch | Tons per Acre |
- 1/4" - 1" Total Mulch | Tons per Acre |
- 1/8" - 1/4" Total Mulch | Tons per Acre |
- 1/16" - 1/8" Total Mulch | Tons per Acre |

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

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

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).

---

**SOIL EROSION MIX**

The Soil Erosion Mix is to be placed under the Class 1 and/or Class 2 erosion control material.

The Soil Erosion Mix consists of the shoulder Areas of the Permanent Seed Mix used on the project.
<table>
<thead>
<tr>
<th>STATE</th>
<th>CITY</th>
<th>COUNTY</th>
<th>MISC</th>
<th>SHEET NO.</th>
<th>TOTAL SHEETS</th>
<th>DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>KANSAS</td>
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<td></td>
<td>1/04/2006</td>
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</table>

**EROSION CONTROL - CLASS I, TYPE D**

<table>
<thead>
<tr>
<th>UNIT</th>
<th>DESCRIPTION</th>
<th>SEQ</th>
<th>LENGTH</th>
<th>AREA</th>
<th>%</th>
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</tr>
</thead>
<tbody>
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</tbody>
</table>

*TOTAL EROSION CONTROL (CLASS I, TYPE D) = 80*
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 bottom, such that ordinary high water (OHW) flows designated in the Contract Documents shall flow through the pipes without overtopping the crossings.

See KDOT Specifications for more information.
TEMPORARY INLET SEDIMENT BARRIER
TRIANGULAR SILT FENCE METHOD

PLATE

1. Stakes shall be 4' (min.) long and of one of the following materials:
   a. Hardwood - 1" x 1"; or
   b. Southern Pine (No. 2) - 2" x 2".
   c. Steel U, T, L, or C Section - .95 lbs. per ft. (max.)
   d. Synthetic - same strength as wood stakes.
   e. Polyethylene - same strength as wood stakes.

2. Cross pieces shall be of same material as stakes.
3. Attach fence fabric securely on 6" centers (max).
4. Use of high flow material is acceptable.
5. Refer to plan sheets to estimate the length of silt fence required.

SILT FENCE:
1. Stake every 4' on 6'' centers (max).
2. Cross pieces shall be of same material as stakes.
3. Attach fence fabric securely on 6'' centers (max).
4. Use of high flow material is acceptable.
5. Refer to plan sheets to estimate the length of silt fence required.

SILT FENCE:
- Material Requirements:
  - BIODEGRADABLE LOG/FILTER Sock
  - SOFT FIBER DRAINAGE PIPE
  - DRAINAGE GRAVEL
  - SOIL OR GRANULAR MATERIAL
  - ROCK = approximately 1" to 2" diameter

CURB INLET PROTECTION
- Chicken Wire Backing
- Silt Fence Fabric over Cross Pieces

DROP INLET PROTECTION
- BAGS = synthetic net 3mm mesh or burlap bags
- Rock - approximately 1' to 2' diameter

Material Requirements:
- Log Mesh:
  - Mesh must allow water infiltration but also hold fill material in place.
  - Use mesh with 3/4" openings or larger.
  - Log Mesh:
  - Mesh must allow water infiltration but also hold fill material in place.

No compost or fines.
No hay or straw.
Do not use material which prohibits water infiltration.

Drop inlet use:
- 1'-6" TO 1'-8" diameter log
- BIODEGRADABLE LOG/FILTER Sock
- SOFT FIBER DRAINAGE PIPE

Soft Fiber Drainage Pipe
- Use 100% shredded mulch or other non-compost biodegradable material as filter sock.

Bags:
- Height of bags (8" minimum diameter) must not be above top of curb.
- 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. Curb inlet protection will be measured and paid for as Filter sock.
- 5. Refer to plan sheets to estimate the length of silt fence required.

Note:
- 25% of log shall be also hold fill material in place.

* Silt fence required.

Material Requirements:
- BIODEGRADABLE LOG/FILTER Sock
- SOFT FIBER DRAINAGE PIPE
- DRAINAGE GRAVEL
- SOIL OR GRANULAR MATERIAL
- ROCK = approximately 1" to 2" diameter

Material Requirements:
- Log Mesh:
  - Mesh must allow water infiltration but also hold fill material in place.
  - Use mesh with 3/4" openings or larger.
- Log Mesh:
  - Mesh must allow water infiltration but also hold fill material in place.

No compost or fines.
No hay or straw.
Do not use material which prohibits water infiltration.

Drop inlet use:
- 1'-6" TO 1'-8" diameter log
- BIODEGRADABLE LOG/FILTER Sock
- SOFT FIBER DRAINAGE PIPE

Soft Fiber Drainage Pipe
- Use 100% shredded mulch or other non-compost biodegradable material as filter sock.

Bags:
- Height of bags (8" minimum diameter) must not be above top of curb.
- 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. Curb inlet protection will be measured and paid for as Filter sock.
- 5. Refer to plan sheets to estimate the length of silt fence required.

Note:
- 25% of log shall be also hold fill material in place.
**Silt Fence**

1. Stakes shall be 4' (min.) long and of one of the following materials:
   - Hardwood - 1 1/2" x 6" x 35' or
   - Southern Pine No. 2 - 2" x 2" x 35'.
2. Steel U, L, or C Section - 36 lbs. per (4-4") or
3. Synthetic - same strength as wood stakes.
4. Attach fence fabric with 3 zip ties within the top 8" of the fence.

**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 25% of its height. Compost 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 or a minimum with minimum ground embedment equal to the height of the log / sock.

**Biodegradable Log or Filter Sock Slope Interruptions**

1. Attach 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 25% of its height. Compost 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 or a minimum with minimum ground embedment equal to the height of the log / sock.

**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. Slope 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 erosion control must meet the North American Wind Permeage Standards.

**Installation Notes**

- 4. Refer to plan sheets to estimate the length of silt fence required.
- 3. Use of high flow material is acceptable.
- 2. Attach fence fabric with 3 zip ties within the top 8" of the fence.
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.

NOTE: Use this spacing for all except Rock Ditch Checks.
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 zones.

4. 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 excavated soil to ditch grade. This work shall be subject to the Old Time Rock Ditch Check (Rock).

5. Aggregate excavated on site may be used as an alternative 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 614 of the Standard Specifications. Length of stakes shall be a minimum of 2 x the diameter of the log.

4. Use Erosion Control (Class I) (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 the contract unit price.

6. Each log or sock (except compost filter socks) should be keyed into the ground at a minimum of 21% of its height. Compost filter socks should be placed on smooth prepared ground with no gaps between the sock and soil.

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

8. When the use of larger rock is approved, the upstream portion of the check should be constructed of D50 = 6'' or smaller.

Temporary Rock Ditch Check Spacing

<table>
<thead>
<tr>
<th>Ditch Q</th>
<th>Slope Width</th>
<th>Borehole Spat</th>
<th>Depth</th>
<th>Spacing</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>4</td>
<td></td>
<td>36</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>5</td>
<td></td>
<td>33</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>7</td>
<td></td>
<td>29</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>9</td>
<td></td>
<td>29</td>
<td></td>
</tr>
</tbody>
</table>

Note: Use this spacing only for rock ditch checks.
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 skimmer shall be sized to provide drawdown time to 2 to 5 days and approved by the engineer.
4. Other skimmer designs maybe used that dewaters from the surface of a controlled rate. The design must be approved by the engineer.
ANCHOR SLOTS:
The top of the blanket 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 x 6 inches deep with the blanket positioned in the bottom of the slot, then backfilled, tamped and seeded.

LONGITUDINAL SEAMS:
The edges of the blanket should overlap each other a minimum of 6 inches, with anchors capturing the edges of both blankets.

SPLICE SEAM:
When splices are necessary, overlap end 6" min. and erosion control practices, excluding wood based mulch, shall meet the North American Weed Free Forage Standards.

NOTE:
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.

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

ANCHOR SLOTS:
Anchor design shall be as recommended by the manufacturer.

SPLICE SEAM:
When splices are necessary, overlap a minimum of 8 inches in direction of water flow. Slasher space seams.

LONGITUDINAL SEAM:
The edges of the blanket should overlap each other a minimum of 6 inches, with anchors capturing the edges of both blankets.

ANCHOR SLOTS:
The top of the blanket 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 x 6 inches deep with the blanket positioned in the bottom of the slot, then backfilled, tamped and seeded.

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

STAPLE CHECK:
Establish Staples in 2 rows 4" on center apart.

Each Side
8' min.
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### Summary of Seeding Quantities

<table>
<thead>
<tr>
<th>Product</th>
<th>Seeded Area</th>
<th>QTY (lb)</th>
<th>Revisions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NATIVE WILDFLOWER MIX 1</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Butter Fly Milkweed</td>
<td>0.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>White Prairie Clover</td>
<td>0.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Showy Partridge Pea</td>
<td>0.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Roundhead Lespedeza</td>
<td>0.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>NATIVE WILDFLOWER MIX 2</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blanket Flower</td>
<td>1.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Butterfly Milkweed</td>
<td>0.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Common Evening Primrose</td>
<td>0.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Illinois Bundleflower</td>
<td>0.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wild Bergamot</td>
<td>0.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lemon Mint</td>
<td>0.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dames Rocket</td>
<td>0.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>New England Aster</td>
<td>0.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td></td>
<td>10.3</td>
</tr>
</tbody>
</table>

### General Notes

- All areas shown on the plans are to be fertilized, seeded and mulched. However, operation in borrow areas where grass is growing may be delayed until requested by the owner.

- In areas of bare or worn turf, Cool Season grasses are mixed with Warm Season grasses. Seed the area during the Warm Season seeding period.

- When the area to be seeded is less than 1 acre, seed the area any time of the year.

- The entire disturbed area, excepting the paved or surfaced areas, steep rocky slopes and areas of undisturbed natural surface, shall be seeded.

- If temporary cover has provided stable slopes with no erosion, seed the permanent grasses into the existing cover. If there has been erosion that requires repair prior to seeding, then it is necessary to prepare the area.

- Mulching shall be spread uniformly over an undisturbed area and sown on the seed, unless otherwise noted on the plans. The rate of application per acre, thickness in place, for the mulching material is generally as follows:

- All borrow areas shown on the plans are to be fertilized, seeded, and mulched. However, operation in borrow areas where grass is growing may be delayed until requested by the owner.

- Projects less than 1 acre shall be bid as "Seeding" by the lump sum. All disturbed areas shall be seeded, including rock outcrops. Designated as all other turf areas, except Shoulder. Usually includes a Native Wildflower Mix.

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

- All temporary covers, such as native prairie, have been used for seeding and mulching in the past, including wildflower mixes and native prairie blends. Other temporary covers are acceptable only with the Engineer's approval.

- The above notes are for guide only. The type of the grass is the discretion of the Engineer to determine what rate is sufficient for adequate protection of newly seeded areas.

### Seeding Process

1. Package and deliver the wildflower seed separately from the grass seed mix. Package and deliver the Tall Drop Seed separately from the grass seed and the wildflower seed mix. The mulching material shall be delivered separately.

2. Place the wildflower seed in a separate seed box and place the seed (using the seed drill) on the soil surface.

3. OPTION: Broadcast Tall Drop Seed on the soil surface.

### Permanent Seeding

- Refer to the Kansas Specification, Division 900, Section 904 "Seeding" for the permanent seeding and mulching placement.

- Refer to the Standard Specifications, Division 900, Section 904 "Seeding" for the permanent seeding and mulching placement.

- See KADTA for contract quantity. See the quantity of each product in the "Stabilized Shoulders" section. The total contract quantity shall be determined in the field. The bid amount shall not be considered in the bid for the Standards Specifications.

### Sensoric Section - Dual Pavement

- Refer to the Kansas Specification, Division 900, Section 904 "Seeding" for the sensoric section - dual pavement.
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 centerlines 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 does not involve crossing the roadway can be provided, pedestrians 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, those signs should be placed at intersections (other than midblock locations) so that pedestrians are not confronted with midblock work sites that will induce them to attempt skirting the work site or crossing a midblock crossing.

4) When existing pedestrian facilities are disrupted, closed, or relocated, the temporary facilities shall be detectable and include accessibility features consistent with the features present in the existing pedestrian facility.

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 W8-15 (Grooved Pavement) or W8-7 (Loose Gravel) sign shall be used on mainline approaches. A W8-15 sign shall be used to supplement the W8-1 or W8-7 sign. All signs shall be displayed as long as the condition is present.

6) Alternative temporary rumble strip options may be available. Please contact the Temporary Traffic Control Unit for more information at 785-296-1179 or 785-296-1183.

### Minimum Advance Warning Sign Spacing (in feet):

<table>
<thead>
<tr>
<th>SPEED (MPH)</th>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>URBAN (40 MPH OR LOWER)</td>
<td>100</td>
<td>90</td>
<td>80</td>
</tr>
<tr>
<td>URBAN (45 MPH OR HIGHER)</td>
<td>90</td>
<td>80</td>
<td>70</td>
</tr>
<tr>
<td>RURAL (55 MPH OR HIGHER)</td>
<td>75</td>
<td>65</td>
<td>55</td>
</tr>
<tr>
<td>RURAL (60 MPH OR HIGHER)</td>
<td>70</td>
<td>60</td>
<td>50</td>
</tr>
<tr>
<td>EXPRESSWAY/FREeway</td>
<td>100</td>
<td>90</td>
<td>80</td>
</tr>
</tbody>
</table>

**Taper Formulas:**

- **Shifting Taper** = \( \frac{1}{2} L \)
- **Shoulder Taper** = \( \frac{1}{2} L \)


### Typical Work Zone Components

- When concrete barrier system is used, portable channelizing devices are not needed along the tangent barrier section.

#### Channelizer Placement:

1. The spacing between devices in transition area (taper) should not exceed a distance in feet equal to \( \frac{1}{2} \) the posted speed limit in mph prior to work starting.
2. The spacing between devices in the advanced warning area and the activity area should not exceed a distance in feet equal to two times the posted speed limit in mph prior to work starting.
3. Channelizing devices shall be placed for optimum visibility, normally at right angles to the traffic flow.
4. Place directional indicator baricades in series to direct traffic onto the new path. The arrow sign should not be visible to opposing traffic.
5. Alternating diagonal orange and white striping must slope downward in the direction traffic is expected to pass.

#### Buffer Space

<table>
<thead>
<tr>
<th>SPEED (MPH)</th>
<th>20</th>
<th>25</th>
<th>30</th>
<th>35</th>
<th>40</th>
<th>45</th>
<th>50</th>
<th>55</th>
<th>60</th>
<th>65</th>
<th>70</th>
<th>75</th>
</tr>
</thead>
<tbody>
<tr>
<td>LENGTH (ft)</td>
<td>115</td>
<td>125</td>
<td>135</td>
<td>150</td>
<td>165</td>
<td>180</td>
<td>200</td>
<td>225</td>
<td>250</td>
<td>275</td>
<td>300</td>
<td>330</td>
</tr>
</tbody>
</table>
For rails less than 36" long, 4" wide stripes may be used.
All stripes shall slope downward to the traffic side for channelization.

The stripes shall slope downward in the direction traffic is to pass.

The direction indicator barricade shall be used in series to direct the motorist into the intended lane of travel.

The direction indicator barricade shall be used in series to direct the motorist into the intended lane of travel.

6. Use alternating orange/white on interconnected devices.
7. Hand trailing edges and detection plates are optional for hand trailing edges and detection plates are optional for continuous walls.
8. Interconnect pedestrian channelizers to prevent displacement and to provide continuous guidance through or around work.
9. Alternate pathways shall be firm, stable, and slip resistant.
10. Treat height differentials > 1/2" in the surfaces of alternate pathways with a firm, stable, and slip resistant temporary ramp having a slope of 1:1 or flatter and having a width equal to the alternate path.
11. Use alternating orange/white on interconnected devices.

<table>
<thead>
<tr>
<th>Device</th>
<th>Support</th>
<th>Edge</th>
<th>Hand Trailing</th>
<th>Detection</th>
<th>Height</th>
<th>Min.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vertical Panel</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>6&quot;</td>
<td>2&quot;</td>
<td>Max.</td>
</tr>
<tr>
<td>Type 2 Barricade</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>6&quot;</td>
<td>2&quot;</td>
<td>Max.</td>
</tr>
<tr>
<td>Traffic Cones</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>6&quot;</td>
<td>2&quot;</td>
<td>Max.</td>
</tr>
<tr>
<td>Traffic Cones</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>6&quot;</td>
<td>2&quot;</td>
<td>Max.</td>
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<tr>
<td>Traffic Cones</td>
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<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>6&quot;</td>
<td>2&quot;</td>
<td>Max.</td>
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<tr>
<td>Traffic Cones</td>
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<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>6&quot;</td>
<td>2&quot;</td>
<td>Max.</td>
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<tr>
<td>Traffic Cones</td>
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<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>6&quot;</td>
<td>2&quot;</td>
<td>Max.</td>
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<tr>
<td>Traffic Cones</td>
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<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>6&quot;</td>
<td>2&quot;</td>
<td>Max.</td>
</tr>
<tr>
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<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>6&quot;</td>
<td>2&quot;</td>
<td>Max.</td>
</tr>
<tr>
<td>Traffic Cones</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>6&quot;</td>
<td>2&quot;</td>
<td>Max.</td>
</tr>
<tr>
<td>Traffic Cones</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>6&quot;</td>
<td>2&quot;</td>
<td>Max.</td>
</tr>
</tbody>
</table>

(1) Not allowed on centerline delineation along freeways or expressways.
(2) The stripes shall slope downward to the traffic side for channelization.
(3) May be used upon the approval of the engineer.
(4) Daytime operations only.
FIGURE 1: TYPICAL SIGNING FOR ROAD CLOSURE (MAINLINE OR SIDE ROAD)

Note: Signs shown for one approach to work zone.

FIGURE 2: TYPICAL SIGNING FOR SIDE ROAD OPEN

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

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

Note: Signs shown for one approach to work zone.

ROAD CLOSED GENERAL NOTES

As shown in Figure 1, at the point where local 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-a (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 "THROUGH OUT" (or "THROUGH OEF") may be substituted for the words "ROAD CLOSED" on the R11-3a or R11-4 sign where applicable.
**PERFORATED SQUARE STEEL TUBE (P.S.S.T.) POST SETUP**

**WOOD POST SETUP**

- **Post Anchor**
- **Sign Post**
- **Post Anchor Sleeve**
- **Corner Bolt**

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

**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.

**See TE710 for Additional Details and Requirements**

**KANSAS DEPARTMENT OF TRANSPORTATION**

**DRAWN BY:**

**FIED:**

**PLOTTED:**

**REVISIONS**

**TRACED**

**TRACE CK.**

**APP'D**

**DATE**

**NO.**

**FHWA APPROVAL**

**DESIGNED**

**DESIGN CK.**

**QUANTITIES**

**QUAN. CK.**

**DETAILED**

**DETAIL CK.**

**TOTAL SHEETS**

**SHEET NO.**
Notes:

No traffic control is required if the Work Space is located outside of the clear zone.

For operations of 60 minutes or less, all signs and channelizing devices may be eliminated if a vehicle with high-intensity rotating, flashing, oscillating, or strobe lights is used.

4. Omit taper if paved shoulder is less than 8' wide.
### Recapitulation of Quantities

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work Zone Sign (0 to 9.25 Sq.Ft.)</td>
<td></td>
<td>Each</td>
</tr>
<tr>
<td>Work Zone Signs (9.26 to 16.25 Sq.Ft.)</td>
<td></td>
<td>Each</td>
</tr>
<tr>
<td>Work Zone Signs (16.26 Sq.Ft. &amp; Over)</td>
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<td>Each</td>
</tr>
<tr>
<td>Work Zone Barricades (Type 3 -4 to 12')</td>
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<td>Each</td>
</tr>
<tr>
<td>Channelizer (Fixed)</td>
<td></td>
<td>Each</td>
</tr>
<tr>
<td>Channelizer (Portable)</td>
<td></td>
<td>Each</td>
</tr>
<tr>
<td>Work Zone Warning Light (Type &quot;A&quot; Low Intensity)</td>
<td></td>
<td>Each</td>
</tr>
<tr>
<td>Work Zone Warning Light (Red Type &quot;B&quot; High Intensity)</td>
<td></td>
<td>Each</td>
</tr>
<tr>
<td>Arrow Display</td>
<td></td>
<td>Each</td>
</tr>
<tr>
<td>Portable Changeable Message Sign</td>
<td></td>
<td>Each</td>
</tr>
<tr>
<td>Pavement Marking (Temporary)</td>
<td></td>
<td>Sta./Line</td>
</tr>
<tr>
<td>4&quot; Solid (Type I)</td>
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<td>Sta./Line</td>
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<tr>
<td>4&quot; Solid (Type II)</td>
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<td>Sta./Line</td>
</tr>
<tr>
<td>4&quot; Broken (8.0') (Type I)</td>
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<td>Sta./Line</td>
</tr>
<tr>
<td>4&quot; Broken (8.0') (Type II)</td>
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<td>Sta./Line</td>
</tr>
<tr>
<td>4&quot; Broken (3.0') (Type I)</td>
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<td>Sta./Line</td>
</tr>
<tr>
<td>4&quot; Broken (3.0') (Type II)</td>
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<td>Sta./Line</td>
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<tr>
<td>4&quot; Dotted Extension (Type I)</td>
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<td>Sta./Line</td>
</tr>
<tr>
<td>Solid Line Marking Tape</td>
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<td>Sta./Line</td>
</tr>
<tr>
<td>Break Line Marking Tape</td>
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<tr>
<td>Symbol (Type I)</td>
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<td>Each</td>
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<tr>
<td>Symbol (Type II)</td>
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<td>Each</td>
</tr>
<tr>
<td>Flexible Raised Pavement Marking (4&quot; Broken (8.0'))</td>
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<td>Sta./Line</td>
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<td>Flexible Raised Pavement Marker (4&quot; Broken (3.0'))</td>
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<td>Work Zone Sign (Special) (16.25 Sq. Ft. &amp; Less)</td>
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<td>Rigid Raised Pavement Marker (Type II)</td>
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<tr>
<td>Traffic Signal Installation (Temporary)</td>
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<td>Lump Sum</td>
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<td>Traffic Control Initial Set Up</td>
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<tr>
<td>Hugger (Set Price)</td>
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<td>1 Hour</td>
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### Summary of Traffic Control Devices (Each)

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<td>Work Zone Sign (Special)</td>
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<tr>
<td>Barricades</td>
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</tr>
<tr>
<td>Type 3 (4 to 12)</td>
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<tr>
<td>Pedestrian</td>
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</tr>
<tr>
<td>Portable</td>
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<tr>
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Bridge 31-CC

STA. 20 + 75.00 TO STA. 21 + 83.00