

NAME OF CONTRACTOR \_\_\_\_\_

PROPOSAL AND SPECIFICATIONS

FOR

HIGHWAY CONSTRUCTION

COUNTY PRIMARY ROAD SYSTEM

PROJECT NO. PH 3304 – Removal of existing culvert, installation of 14' x 6' concrete box culvert, stream relocation, and restoration on 136<sup>th</sup> Avenue 540' west of 48<sup>th</sup> Street in Fillmore and Manlius Townships, Allegan County.

FILLMORE/MANLIUS TOWNSHIPS

July 7, 2010

BOARD OF COUNTY ROAD COMMISSIONERS  
OF ALLEGAN COUNTY, MICHIGAN

1308 Lincoln Road, Allegan, MI 49010

ALLEGAN COUNTY ROAD COMMISSION  
ADVERTISEMENT FOR BIDS  
COUNTY PRIMARY ROAD CONSTRUCTION

Sealed bids will be received by the Allegan County Road Commission at their office at 1308 Lincoln Road (M-89), Allegan, Michigan until 11:00 a.m., Local Time, July 7, 2010, and, at such time, be publicly opened and read aloud for the following:

PROJECT NO. PH 3304 – Removal of existing culvert, installation of 14' x 6' concrete box culvert, stream relocation, and restoration on 136<sup>th</sup> Avenue 540' west of 48<sup>th</sup> Street in Fillmore and Manlius Townships, Allegan County.

Complete specifications and bid forms are available at the Road Commission office and on the Road Commission website at [www.alleganroads.org](http://www.alleganroads.org) under Construction Information. Project plans will only be available at the Road Commission office.

All bids must be submitted on forms furnished by the Road Commission with all pages of the proposal included and sealed in envelopes with the name and address of the bidder, and the item bid upon clearly marked thereon.

A bid deposit of at least 5% of the bid amount will be required for this item. The bid deposit may be in the form of certified check, cashier's check or bid bond.

The Commission reserves the right to reject any or all bids, to waive minor technicalities, and to accept the bid that is deemed to be in the best interest of the County of Allegan.

BOARD OF COUNTY ROAD COMMISSIONERS  
OF ALLEGAN COUNTY, MICHIGAN

Bruce D. Culver, Chairman  
Robert Kaarlie, Vice-Chairman  
John Kleinheksel, Member

PROJECT NO. PH 3304 – Removal of existing culvert, installation of 14' x 6' concrete box culvert, stream relocation, and restoration on 136<sup>th</sup> Avenue 540' west of 48<sup>th</sup> Street in Fillmore and Manlius Townships, Allegan County.

BID and AWARD

Date \_\_\_\_\_

Board of County Road Commissioners  
Of Allegan County  
1308 Lincoln Road  
Allegan, MI 49010

Gentlemen:

The undersigned has examined the plans, specifications, and location of the work described herein and is fully informed as to the nature of the work and the conditions relating to its performance and understands that the quantities shown in the estimate are approximate only and are subject to either increase or decrease; and hereby proposed to furnish all necessary machinery, tools, apparatus and other means of doing the work, do all the work, furnish all the materials except as otherwise specified herein, and, for the unit prices named in the accompanying unit price schedule, to complete work in strict accordance with the plans and specifications therefore.

The undersigned further proposes to such extra work as may be ordered by you, prices for that are not included in the itemized bid, compensation therefore to be made on the basis agreed upon before such extra work is begun.

The undersigned agrees to complete all items of work on or before **August 27, 2010**. The schedule for liquidated damages is located in the general specifications.

The contractor shall submit a progress schedule subject to approval of the project engineer prior to the award of the contract.

The undersigned encloses a certified check, cashier's check, or Bid Bond, representing 5% of the bid, in the amount of \$ \_\_\_\_\_, payable to the Allegan County Road Commission as a guarantee of good faith. If the contract is awarded to the undersigned, and the undersigned fails to furnish satisfactory bonds to the Road Commission within fifteen (15) days after being given notice of award said check will be forfeited to the Allegan County Road Commission as liquidated damage.

**THE CONTRACT**

The Contract Documents consist of the bid documents, this Agreement, Conditions of the Contract (General Supplementary, Special and other Conditions), Drawings, Specifications, Addenda issued prior to execution of this Agreement, other documents listed in this Agreement and Modifications issued after execution of this Agreement; these form the Contract, and are as fully a part of the Contract as if attached to this Agreement or repeated herein. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiation, representations or agreements, either written or oral. If anything in the other Contract Documents is inconsistent with this Agreement, this Agreement will govern.

**PROJECT NO. PH 3304** – Removal of existing culvert, installation of 14’ x 6’ concrete box culvert, stream relocation, and restoration on 136<sup>th</sup> Avenue 540’ west of 48<sup>th</sup> Street in Fillmore and Manlius Townships, Allegan County.

**ALLEGAN COUNTY ROAD COMMISSION  
ALLEGAN, MICHIGAN  
ITEMIZED UNIT PRICE BID SCHEDULE**

ITEM OF WORK	QUANTITY	UNIT PRICE	TOTAL
Station Grading	1 LS		
Clearing	1 LS		
Topsoil Surface	80 Cyd		
Aggregate Base, 6 inch	450 Syd		
Subbase, CIP	170 Cyd		
Precast Concrete Box Culvert	80 Ft		
Culv, CI F, 24 inch	80 Ft		
Sidewalk, Conc, 4 inch	400 Sft		
HMA, 3C	110 Ton		
HMA, 4C	50 Ton		
Riprap, Heavy	80 Syd		
Riprap, Plain	40 Syd		
Turbidity Curtain, Shallow	14 Ft		
Erosion Control, Silt Fence	400 Ft		
Restoration	1 LS		
Mulch Blanket, High Velocity	600 Syd		
Extended Restoration	1 LS		
Sign, Type B, Temp, Modified	360 Sft		
Plastic Drum, High Intensity, Modified	10 Ea		
Barricade, Type III, High Intensity, Double Sided, Lighted, Mod.	4 Ea		

TOTAL OF BID \$ \_\_\_\_\_

The undersigned bidder agrees that the following is a complete and accurate list of all sub-contractors to be utilized is awarded this contract and any change from this list will be permitted only with the consent of the Board of County Road Commissioners of Allegan County. **LIST NAME OF EACH SUB-CONTRACTOR AND BRIEF DESCRIPTION OF WORK TO BE DONE.**

---

---

---

---

---

---

I hereby state that all of the information I have provided is true, accurate and complete. I hereby state that I have the authority to submit this bid, which will become a binding contract if accepted by the Board of County Road Commissioners of Allegan County. I hereby state that I have not communicated with nor otherwise colluded with any other bidder, nor have I made any agreement with nor offered or accepted anything of value from an official or employee of the Board of County Road Commissioners of Allegan County that would tend to destroy or hinder free competition.

In case the bidder is a co-partnership, each member must sign this proposal.

In case the bidder is a Corporation, this proposal must be executed by its duly authorized officials in accordance with its articles of incorporation and a certified copy of such articles must be attached hereto.

I hereby state that I have read, understand and agree to be bound by all the terms of this bid document.

SIGNATURE: \_\_\_\_\_ NAME: \_\_\_\_\_  
(Type or Print)

TITLE: \_\_\_\_\_ DATE: \_\_\_\_\_

FIRM NAME: \_\_\_\_\_ PHONE: \_\_\_\_\_

ADDRESS: \_\_\_\_\_  
(Street Address) (City) (State) (Zip)

**FOR COUNTY USE ONLY – DO NOT WRITE BELOW**

ACCEPTED BY: BOARD OF COUNTY ROAD COMMISSIONERS  
OF THE COUNTY OF ALLEGAN, MICHIGAN

\_\_\_\_\_  
Chairman

\_\_\_\_\_  
Vice-Chairman

\_\_\_\_\_  
Member

\_\_\_\_\_  
Date

STANDARD SPECIFICATIONS

The Standard Specifications for Construction of the Michigan Department of Transportation, 2003 Edition shall apply. Nothing herein will be construed to create any obligation or duty on the part of the Board of County Road Commissioners of Allegan County, including obligations or duties which may be expressed or implied in the Standard Specifications for Construction of the Michigan Department of Transportation, unless specifically set forth in the contract documents.

STATION GRADING: The item of "Station Grading" will include all tree removal, culvert removal, guardrail removal, sidewalk removal, fence removal, fence relocation regardless of fence type, obliterating roadway, rock excavation, HMA surface removal, concrete removal, ditching, earth excavation, embankment and saw cuts required. The contractor will place ditches and slopes as shown on the plans and project cross section sheets. The earth excavation quantity does include the topsoil and pavement that must be stripped. The embankment quantity does include material to replace stripped topsoil and pavement in fill sections. The embankment quantity does not reflect shrinkage. Some excavation and embankment will be required to make a smooth transition into driveways; this is included in the earthwork figures. Additional driveway changes in slopes or ditch depths will not result in extra payment on this item.

Some material excavated from ditches will not be suitable for embankment and will be disposed of at the contractor's expense.

All slopes in yard areas will be finished to Class A tolerance. Slopes not in yards will be trimmed to Class B tolerance.

The Controlled Density Method (Section 205.03 page 138) of the Standard Specifications for Construction will apply. The engineer will run density tests at his discretion.

Any salvaged gravel required to maintain local traffic will be included in the item of Station Grading.

METHOD OF PAYMENT FOR STATION GRADING: The item of "Station Grading" will be paid for as a lump sum. The quantities listed above are approximate; any changes in quantity will not alter the lump sum pay quantity for Station Grading.

<u>PAY ITEM</u>	<u>PAY UNIT</u>
Station Grading	Lump Sum

CLEARING: The contractor will remove all trees and brush that are marked or are entirely or partially within the right-of-way or within the slope stake line as shown on the plans and all stumps within five (5) feet of the right-of-way or within the slope stake line unless instructed otherwise by the project engineer. Trees will remain the property of the adjacent landowner, if they want them. If not, the contractor will dispose of them. The contractor will dispose of all stumps. Where called for on the plans or when directed by the engineer in the field, the contractor shall grind stumps to avoid disturbing underground facilities. The tree and stump removal will be done in accordance with Section 201 & 202 of the 2003 Standard Specifications for Construction.

The Contractor will not receive any additional compensation due to delays caused by utility companies.

METHOD OF PAYMENT FOR CLEARING: The item of "Clearing" will be paid for as a lump sum. No tree count is provided; it is the contractor's responsibility to inspect the site and verify accuracy of trees, stumps, and brush shown on the plans. No change in payment will be made for variances. Clearing stakes have been set; direct any questions to the Allegan County Road Commission.

<u>PAY ITEM</u>	<u>PAY UNIT</u>
Clearing	Lump Sum

TOPSOIL SURFACE: The existing topsoil will be stripped from the areas within the right-of-way or grading limits shown or as directed in the field, adjacent to roadway as detailed in the project description. The salvaged topsoil will be stockpiled for measurement. The item includes picking up, stockpiling, replacing and shaping the topsoil.

Prior to seeding, the Contractor will be required to drag all front and back slopes that are 1 on 3 or flatter. Slopes that are steeper than 1 on 3 must be left in a relatively smooth condition. Slope preparation will be included in the item of Topsoil Surface.

METHOD OF PAYMENT FOR TOPSOIL SURFACE: The item of “Topsoil Surface” will be paid for by the cubic yard as measured in the stockpile. A maximum of 2,000 Cubic Yards will be paid for.

<u>PAY ITEM</u>	<u>PAY UNIT</u>
Topsoil Surface	Cubic Yard

AGGREGATE BASE, 6 INCH: The item of “Aggregate Base, 6 inch” will include all labor, material and equipment to place, and compact the base course.

The contractor may use 21AA gravel, 21AA slag, 21AA limestone, 21AA recycled concrete, or cold-milled bituminous material, which approximates the gradation for 21AA material. When milled bituminous material is used as aggregate base, the density provisions of Standard Specifications are not waived. Milled bituminous material may be used full depth or on top of 21AA gravel to obtain the specified thickness. 21AA gravel shall not be placed on top of bituminous millings.

Section 302 of the Standard Specifications for Construction will apply.

METHOD OF PAYMENT FOR AGGREGATE BASE, 6 INCH: The item of “Aggregate Base, 6 inch” will be paid for by the square yard, compacted in place.

<u>PAY ITEM</u>	<u>PAY UNIT</u>
Aggregate Base, 6 inch	Square Yard

SUBBASE, CIP: Section 301 of the Standard Specifications will apply. The contractor will furnish, place, compact and shape the material to obtain a minimum depth of 12 inch of Subbase for the length of the project. All Subbase will be Class II material.

The Subbase material will be compacted to not less than 95% of the maximum unit weight. Density tests will be done at the discretion of the engineer.

METHOD OF PAYMENT FOR SUBBASE, CIP: The item of “Subbase, CIP” will be paid by the cubic yard, compacted-in-place. The pay quantity for this item shall not exceed more than 5% of the plan quantity unless the contractor has received a written work order from the Allegan County Road Commission. Amounts in excess of the plan quantity will not be considered for payment unless an error in calculations is proven.

<u>PAY ITEM</u>	<u>PAY UNIT</u>
Subbase, CIP	Cubic Yard

**PRECAST CONCRETE BOX CULVERT:** The item of “Precast Concrete Box Culvert” will include all labor, material, and equipment necessary to install the concrete box culvert as shown on the plans. The Allegan County Road Commission will furnish the culvert and precast footings. This work shall be done in accordance with the requirements of Sections 401, 701 and 909 of the 2003 Michigan Department of Transportation Standard Specifications for Construction and as specified herein. The work of “Precast Concrete Box Culvert” shall consist of the following:

- Installing the precast concrete box culvert and footings as shown on the plans
- Installing all grout, joint sealers, shims, gaskets, geotextile wrap, inserts and underdrain required
- Dewatering the area to allow construction of the footings and culvert.
- Maintaining stream flow during construction
- Performing the channel excavation as shown on the plans and as directed by the engineer including required stream relocation and backfill of abandoned stream channel.
- Performing any excavation or backfill that is required due to the type of culvert provided
- Furnishing, excavating for, placing and grading 6A bedding stone up to 2’ deep and 2’ wider than the culvert as required.
- Furnishing, placing and compacting structure backfill.

**METHOD OF PAYMENT FOR PRECAST CONCRETE BOX CULVERT:** The item of “Precast Concrete Box Culvert” will be paid for by the linear foot.

<u>PAY ITEM</u>	<u>PAY UNIT</u>
Precast Concrete Box Culvert 14’x6’	Foot

**CULVERT AND END SECTIONS:** The items of culvert and end section will include all labor and material for placing the new culverts and end sections as specified. Excavating and backfilling will be included in the item of Culverts. If any material more than 0.5 feet below the culvert is ordered to be removed by the project engineer, it will be paid for as “Subgrade Undercutting, Type II”.

Granular bedding and backfill will be included in the item of Culverts.

All culverts and end sections will be laid true to the lines and grades given, bells or grooves upgrade, ends fully and closely jointed, and each section will have a full, firm bearing throughout its length. All pipe sections/joint assemblies for use in culvert will be selected from the Qualified Products List for Watertight Sewer and Culvert Joint Systems. Pipes with diameters greater than 24 inch will have the pipe joints wrapped with a non-woven Geotextile fabric. The fabric will have a minimum width of 36 inch and will be centered on the joint.

It is the contractor’s responsibility to protect all new culverts and existing culverts to be left in place from damage by heavy equipment by ramping or other means necessary. All cross culverts will be placed prior to the machine grading.

Culverts will be placed at the following locations:

<u>STATION</u>	<u>TYPE</u>	<u>END SECTIONS</u>	<u>LENGTH</u>
46+50	Culv, CI F, 24 inch	0	80

**METHOD OF PAYMENT FOR CULVERT AND END SECTION:** The item of “Culvert” will be paid by the linear foot and the item of “End Section” will be paid for by the individual unit.

<u>PAY ITEM</u>	<u>PAY UNIT</u>
Culv, CI F, ___ inch	Foot

SIDEWALK, CONC, 4 INCH: The item of “Sidewalk, Conc, 4 inch” will include all labor, equipment and material to install the sidewalk as instructed by the engineer.

Sections 803 of the Standard Specifications for Construction will apply to this item.

METHOD OF PAYMENT FOR SIDEWALK, CONC, 4 INCH: The item of “Sidewalk, Conc, 4 inch” will be paid for by the square foot. The pay quantity for this item shall not exceed more than 5% of the plan quantity unless the contractor has received a written work order from the Allegan County Road Commission. Amounts in excess of the plan quantity will not be considered for payment unless an error in calculations is proven.

<u>PAY ITEM</u>	<u>PAY UNIT</u>
Sidewalk, Conc, 4 inch	Square Foot

HOT MIX ASPHALT (HMA): This item includes furnishing, hauling, and placing the required HMA mixture as indicated below. This work will also include furnishing and applying bond coat, cleaning and sweeping as required, and placing mixes around catch basins, spillways, and downspouts. No additional payment will be made for HMA valley curb. HMA material used on driveways, intersections, and downspouts will also be included in this item and paid for as the HMA mixture used, no additional payment will be made.

#### MIX DESIGNS

##### HMA – 3C/4C

1. The Contractor shall submit a mix design with a range of 5.0 to 8.0 percent (effective bitumen) of bitumen content.
2. The Limits for the bitumen content of Range 1 shall be  $\pm 0.30\%$  from the optimum mix design.
3. PG 64-22 Penetration Grade Asphaltic Cement Bituminous Material shall be combined with the mineral aggregate.
4. The Contractor shall submit a mix design and test results of the aggregates to be used at least two weeks before commencing paving. The mix design shall be submitted to an approved testing laboratory for design compliance tests. The Road Commission shall require a 1 point Marshall Test Mix Design.
5. The HMA – 3C and 4C shall conform to the SPECIAL PROVISION FOR PLANT MIXED BITUMINOUS MIXTURES of the Michigan Department of Transportation Bureau of Highways (1-30-96) and this Special Provision shall be a part of this contract.

#### COST PENALTY FOR DEFICIENT HMA MIXTURE

Where laboratory tests indicate that the bitumen content is outside of Range 1, a cost reduction penalty will be imposed in the amount of \$2.00 per ton per each 0.1% over or below the tolerance allowed. The sampling will be done by Road Commission personnel at the plant, from the trucks prior to unloading, from a pile unloaded from the truck prior to unloading, or off the road immediately behind the paver. The testing (field extractions) of the field samples will be

#### HOT MIX ASPHALT:

done by an independent testing consultant at the expense of the Road Commission. Two (2) consecutive tests of mixture showing the bitumen content to be outside the above ranges will be cause to invoke the above penalties. If it is determined that the mixture is deficient in bitumen content, any additional testing such as coring the pavement to determine the extent of the deficient material, will be the responsibility of the Contractor. The Contractor will be responsible for the cost of any additional coring and testing. The coring and testing will be done by an independent testing consultant selected by the Road Commission.

POWER BROOM

The Contractor shall furnish a power broom on this project and shall broom all edges, intersections, and roadway as necessary before paving of the project. This shall be incidental to the item of "Hot Mix Asphalt".

ROLLING OF THE HMA MIXTURE

Nuclear gauge testing requirements will be waived, the rolling operation will be controlled by the "Number of Roller Method" as follows:

Number of Rollers Required Based on Placement Rate

Average Laydown Rate, Square Yards per Hour	Number of Rollers Required	
	Compaction	Finish
Less than 800	1	*1
800 – 1800	1	1
1800 – 4000	2	1
4000 – 7200	3	1

\* The compaction roller may be used as the finish roller also.

METHOD OF PAYMENT FOR HMA MIXTURES

The item of "HMA Mixtures" will be paid for by the Ton. Paving of all existing HMA drives and approaches will be paid for as HMA, 4C.

PAY ITEMPAY UNIT

HMA, 3C  
HMA, 4C

Ton  
Ton

RIPRAP, HEAVY: The item of "Riprap, Heavy" will include all labor, equipment and material to place the Riprap as instructed by the engineer.

Sections 813 and 916 of the Standard Specifications for Construction will apply to this item except that the riprap must be natural stone. Broken concrete will be allowed for filling the scour hole. Prior to placing the riprap, the contractor shall shape the outlet area to a smooth contour. Multiple layers of riprap may be required as directed by the engineer.

The Riprap will be placed over Geotextile Fabric, included in this item.

METHOD OF PAYMENT FOR RIPRAP, HEAVY: The item of "Riprap, Heavy" will be paid for by the square yard. The pay quantity for this item shall not exceed more than 5% of the plan quantity unless the contractor has received a written work order from the Allegan County Road Commission. Amounts in excess of the plan quantity will not be considered for payment unless an error in calculations is proven.

PAY ITEMPAY UNIT

Riprap, Heavy

Cubic Yard

RIPRAP, PLAIN: The item of “Riprap, Plain” will include all labor, equipment and material to place the Riprap as instructed by the engineer.

Sections 813 and 916 of the Standard Specifications for Construction will apply to this item except that the riprap must be natural stone. Prior to placing the riprap, the contractor shall shape the outlet area to a smooth contour. Multiple layers of riprap may be required as directed by the engineer.

The Riprap will be placed over Geotextile Fabric, included in this item.

METHOD OF PAYMENT FOR RIPRAP, PLAIN: The item of “Riprap, Plain” will be paid for by the cubic yard. The pay quantity for this item shall not exceed more than 5% of the plan quantity unless the contractor has received a written work order from the Allegan County Road Commission. Amounts in excess of the plan quantity will not be considered for payment unless an error in calculations is proven.

<u>PAY ITEM</u>	<u>PAY UNIT</u>
Riprap, Plain	Cubic Yard

TURBIDITY CURTAIN (SHALLOW): The item of “Turbidity Curtain (Shallow)” will include all labor, material and equipment necessary to place the turbidity curtain for channel excavation and riprap placement according to the following MDOT Special Provision for Turbidity Curtain.

MICHIGAN  
DEPARTMENT OF TRANSPORTATION  
  
SPECIAL PROVISION  
FOR  
**TURBIDITY CURTAIN**

C&amp;T:LDT

1 of 4

C&amp;T:APPR:DMG:TWK:06-12-06

**a. Description.** This work shall consist of furnishing and placing a geosynthetic barrier totally enclosing construction activities within watercourses to confine sedimentation within the construction area. Provide a floating or staked turbidity curtain, not silt fence, for water depths as shown on the details attached. The turbidity curtain shall be a pre-assembled system, including the geotextile/geomembrane, connection and securing mechanisms, flotation devices, stakes, and ballast chain. The Contractor shall provide a system which meets this specification, appropriate for the site conditions such as depth (shown on plans), current, and wind or waves. Construct a turbidity curtain according to the Standard Specifications for Construction, this special provision, and the details as shown on the plans.

**b. Materials.**

**Geosynthetic.** The geosynthetic shall meet the minimum physical requirements for *Stabilization Geotextile*, except the permittivity (ASTM D 4491) requirement shall be 0.2 sec<sup>1</sup> maximum and the trapezoidal tear strength requirement shall be 50 pounds minimum. Geosynthetics may be polymer impregnated to negate permittivity and opening size requirements. Hemmed pockets shall be sewn or heat bonded to accommodate flotation devices and bottom weights. Panel ends shall have metal grommets placed through a reinforced hem. Connections between panels shall be tightly tied with synthetic or wire rope to prevent flow through the joint.

**Flotation.** Flotation devices shall be closed-cell polystyrene. The buoyancy (volume) required will depend upon site conditions; however, sufficient freeboard shall be provided to prevent overtopping.

**Stakes.** Stakes, when used to assist in maintaining alignment of the curtain, shall be hardwood or steel with sufficient length and cross-section to support the curtain. External supports may be used; however, embedment depth shall not be less than 1.5 feet. Stake spacing shall not exceed 6.5 feet.

**Hardware.** All hardware such as stakes, ballast chain, connection bolts, reinforcement plates, and tension cables shall be galvanized, stainless steel, aluminum, or otherwise corrosion resistant. The ballast chain shall have sufficient mass to maintain the geosynthetic in a vertical position, but shall not be less than 0.7 pounds/foot.

**c. Construction.** The turbidity curtain shall be placed according to locations shown on the plans, details, and according to the manufacturer's published installation guidelines or as directed by the Engineer. In streams, the turbidity curtain shall be placed parallel to flow. The turbidity curtain system shall be selected to handle site-specific drainage or flow patterns. The Contractor shall be responsible to provide and maintain sufficient anchors, tie-downs, or other mechanisms to insure proper position and performance of the turbidity curtain.

In situations with extreme flow, the turbidity curtain may require a redirectional barrier on the upstream end such as concrete barrier wall to enhance performance. Any visible plume of cloudy water outside the protected construction area shall constitute inadequate performance of the turbidity curtain.

C&T:LDT

2 of 4

06-12-06

The Contractor shall immediately modify, adjust or repair any portion of turbidity curtain to correct inadequate performance and eliminate any sediment plume.

Turbidity curtains shall maintain continuous contact with the bottom throughout the entire construction area. Excess curtain shall lay without wrinkles on the bottom, turned towards the construction activity. The turbidity curtain shall be situated at the appropriate distance from the construction activity to avoid interference resulting in sediment discharge to the unprotected area.

The Contractor shall maintain the turbidity curtain until the construction activity within the watercourse is complete and the turbidity is reduced to acceptable levels as approved by the Engineer. Maintaining shall include keeping a tight alignment around the work area or shoreline and sediment removal as necessary.

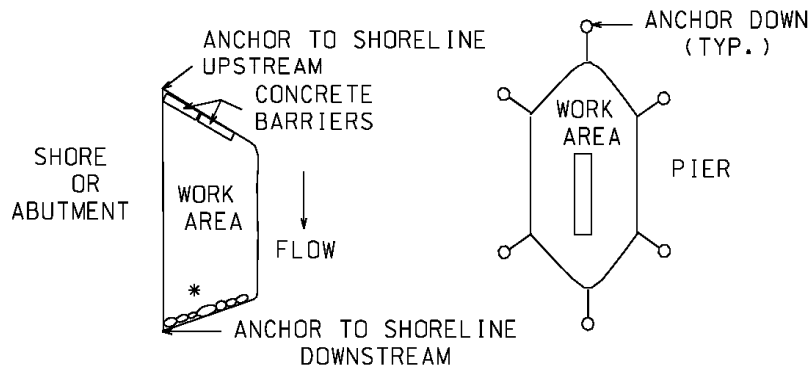
**d. Measurement and Payment.** The completed work as described shall be paid for at the contract unit price for the following contract items (pay items):

<b>Contract Item (Pay Item)</b>	<b>Pay Unit</b>
Turbidity Curtain (Shallow) .....	Foot
Turbidity Curtain (Deep) .....	Foot

The item **Turbidity Curtain (Shallow)** or **(Deep)** will be measured from the plan quantities and will be paid for by length in feet, measured linearly across the top of the curtain. Payment for **Turbidity Curtain (Shallow)** or **(Deep)** includes furnishing all material, labor, and equipment necessary to furnish, place and stake the Turbidity curtain (Shallow) or (Deep), maintain proper alignment, remove and dispose of sediment, remove the **Turbidity Curtain (Shallow)** or **(Deep)** and all appurtenances upon completion of the project.

Install **Turbidity Curtain (Shallow)** when water depths are 2 feet or less, and install **Turbidity Curtain (Deep)** when water depths are greater than 2 feet.

3 of 4

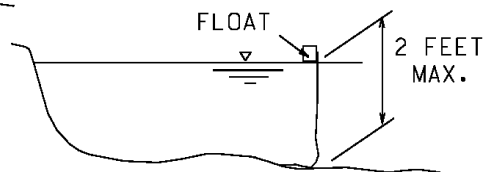
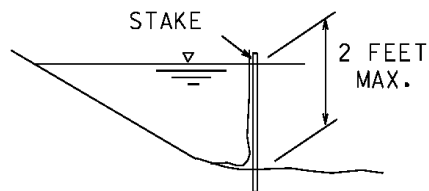


SHORELINE CONSTRUCTION

IN-STREAM CONSTRUCTION

\* PLACE ADDITIONAL WEIGHTS (AS NEEDED) ON DOWNSTREAM SIDE OF INSIDE BOTTOM FACE OF CURTAIN.

ANCHOR CURTAIN TO MAINTAIN STATIONARY LOCATION.



TURBIDITY CURTAIN (SHALLOW) SECTIONS

IN WATERCOURSE AREAS WHERE WATER IS 2 FEET DEEP OR LESS, TURBIDITY CURTAIN (SHALLOW) WILL BE USED. ANCHOR THE CURTAIN UPSTREAM AND DOWNSTREAM AS NEEDED TO SECURE IN PLACE.

FILE NAME: turbcurt.dgn

DATE 6/9/06

TURBIDITY CURTAIN (SHALLOW)

TURBIDITY CURTAIN (SHALLOW) (CON'T):

METHOD OF PAYMENT FOR TURBIDITY CURTAIN (SHALLOW): The item of “Turbidity Curtain (Shallow)” will be paid for by the linear foot of curtain placed.

<u>PAY ITEM</u>	<u>PAY UNIT</u>
Turbidity Curtain (Shallow)	Foot

EROSION CONTROL, SILT FENCE: The item of “Erosion Control, Silt Fence” will include all labor, material and equipment to place silt fence as instructed by the engineer.

Section 208 of the Standard Specifications for Construction will apply to this item.

METHOD OF PAYMENT FOR EROSION CONTROL, SILT FENCE: The item of “Erosion Control, Silt Fence” will be paid for by the linear foot. The pay quantity for this item shall not exceed more than 5% of the plan quantity unless the contractor has received a written work order from the Allegan County Road Commission.

<u>PAY ITEM</u>	<u>PAY UNIT</u>
Erosion Control, Silt Fence	Foot

RESTORATION: The item of “Restoration” will include all labor, material and equipment required to do the restoration on all disturbed areas outside the roadway. Restoration will consist of placing 3” of topsoil, Cereal Rye (70#/acre), Seeding, Mixture TUF (220#/acre), and Fertilizer, Chemical Nutrient, CI A (228#/acre). If the required topsoil is not available from salvaged material the contractor shall be responsible for supplying the necessary material at his cost.

Section 816 of the Standard Specifications for Construction will apply.

METHOD OF PAYMENT FOR RESTORATION: The item of “Restoration” will be paid for as a lump sum.

<u>PAY ITEM</u>	<u>PAY UNIT</u>
Restoration	Lump Sum

MULCH BLANKET, HIGH VELOCITY: The item of “Mulch Blanket, High Velocity” will include all labor, material and equipment to place the blanket as instructed by the engineer. Mulch Blanket, High Velocity shall meet the specifications set on page 808 (Section 917.15) of the 2003 MDOT Standard Specifications for Construction.

The contractor will also seed following placement of Mulch Blanket, High Velocity with Seeding, Mixture TUF at the rate of 400 pounds per acre (included in this item).

METHOD OF PAYMENT FOR MULCH BLANKET, HIGH VELOCITY: The item of “Mulch Blanket, High Velocity” will be paid for by the square yard.

<u>PAY ITEM</u>	<u>PAY UNIT</u>
Mulch Blanket, High Velocity	Square Yard

PERMANENT TURF REINFORCEMENT MAT: The item of “Permanent Turf Reinforcement Mat” will include all labor, material and equipment to place the mat as specified by the manufacturer and instructed by the engineer. The Permanent Turf Reinforcement Mat shall be North American Green VMAX3 C350 or approved equal.

The contractor will also seed prior to placement of Permanent Turf Reinforcement Mat with Seeding, Mixture TUF at the rate of 400 pounds per acre (included in this item).

METHOD OF PAYMENT FOR PERMANENT TURF REINFORCEMENT MAT: The item of “Permanent Turf Reinforcement Mat” will be paid for by the square yard.

<u>PAY ITEM</u>	<u>PAY UNIT</u>
Permanent Turf Reinforcement Mat	Square Yard

EXTENDED RESTORATION: The item of “Extended Restoration” will include all labor, material and equipment required to maintain the restoration of the construction site. The contractor shall be responsible for the permanent establishment of turf and maintaining the temporary and permanent soil erosion control measures for a period of one year from the date of final approval or when the site is stabilized and approved by the engineer. This may include reseeding, maintaining check dams and spillways, and fixing erosion on site.

METHOD OF PAYMENT FOR EXTENDED RESTORATION: The item of “Extended Restoration” will be paid for as a lump sum.

<u>PAY ITEM</u>	<u>PAY UNIT</u>
Extended Restoration	Lump Sum

SIGN, TYPE B, TEMP, MODIFIED: The item of “Sign, Type B, Temp, Modified” will include supplying all materials, equipment and labor required to erect and maintain construction signs as designated by the project engineer. Materials and placement will conform to the MDOT Standard Specifications for Construction and the Michigan Manual of Uniform Traffic Control Devices. Signs will be placed as instructed by the project engineer. A detour route along 50<sup>th</sup> Street, 138<sup>th</sup> Avenue and M-40 will require signage. All “CONSTRUCTION AHEAD”, “ROAD CLOSED AHEAD”, and “DETOUR AHEAD” signs will be 48” x 48” mounted on two posts with one steady burn light. (Steady burn light and posts are included in the Sign, Type B, Temp, Modified item).

METHOD OF PAYMENT FOR SIGN, TYPE B, TEMP, MODIFIED: The item of “Sign, Type B, Temp, Modified” will be paid for by the square foot of Sign Face.

<u>PAY ITEM</u>	<u>PAY UNIT</u>
Sign, Type B, Temp, Modified	Square Foot

PLASTIC DRUM, HIGH INTENSITY, MODIFIED: The item of “Plastic Drum, High Intensity, Modified” will include all labor, equipment and material to furnish, set up, move and maintain the drums as required by the engineer. Drums will be equipped with one light.

Section 812 of the Standard Specifications for Construction will apply.

METHOD OF PAYMENT FOR PLASTIC DRUM, HIGH INTENSITY, MODIFIED: The item of “Plastic Drum, High Intensity, Modified” will be paid for by the individual unit.

<u>PAY ITEM</u>	<u>PAY UNIT</u>
Plastic Drum, High Intensity, Modified	Each

BARRICADE, TYPE III, HIGH INTENSITY, DOUBLE SIDED, LIGHTED, MODIFIED: The item of “Barricade, Type III, High Intensity, Dbl Sided, Ltd, Modified” will include all labor, equipment and material to furnish, set up, move and maintain the barricades.

The Contractor will furnish and maintain Barricades, Type III with three lights and an R-11-4 Sign (ROAD CLOSED TO THRU TRAFFIC) mounted above the barricade.

Section 812 of the Standard Specifications for Construction will apply.

METHOD OF PAYMENT FOR BARRICADE, TYPE III, HIGH INTENSITY, DBL SIDED, LTD, MODIFIED: The item of “Barricade, Type III, Dbl Sided, Ltd” will be paid for as individual units.

<u>PAY ITEM</u>	<u>PAY UNIT</u>
Barricade, Type III, High Intensity, Dbl Sided, Ltd, Modified	Each

ALLEGAN COUNTY ROAD COMMISSION  
ALLEGAN, MICHIGAN

GENERAL SPECIFICATIONS

MICHIGAN DEPARTMENT OF TRANSPORTATION-STANDARD SPECIFICATIONS

The work covered by the plans and specifications will be done in accordance with the 2003 Michigan Department of Transportation Standard Specifications for Construction, except as qualified in supplemental specifications and special conditions of the Allegan County Road Commission or as agreed to in writing at the time of the award of the contract.

DEFINITION OF TERMS

See Section 101 of Michigan Department of Transportation Standard Specifications for Construction.

SPECIAL CONDITIONS

Special requirements, regulations or directions applying to a particular project may be made a part of these specifications.

THE WORK

The work consists of the completed services, construction and/or paving by the Contract Documents and includes all materials and labor incorporated or to be incorporated therein.

RESPONSIBILITIES OF CONTRACTOR

- A. Responsibility for and Supervision of Construction. Unless otherwise stated herein, Contractor will be solely responsible for all construction under this Contract, including the methods, techniques, sequences, procedures, and means, and for coordination of all work. Contractor will supervise and direct the work to the best of Contractor's ability, and give it all attention necessary for such proper supervision and direction.
- B. Discipline and Employment. Contractor will maintain at all times strict discipline among Contractor's employees, and contractor agrees not to employ for work on the project any person unfit for without sufficient skill to perform the job for which he or she was employed.
- C. Furnishing of Labor, Materials, etc. Unless otherwise stated herein, Contractor will provide and pay for all labor, materials, and equipment, including tools, construction equipment, and machinery, utilities, including water, transportation, and all other facilities and services necessary for the proper completion of work on the project in accordance with the Contract Documents.
- D. Payment of Taxes; Procurement of Licenses and Permits. Contractor will pay all taxes required by law in connection with work on the project in accordance with this agreement including sales, use, and similar taxes, and will secure all licenses and permits necessary for proper completion of the work, paying the fees for such licenses and permits.
- E. Compliance with Laws and Regulations. Contractor will comply with all laws and ordinances, and the rules, regulations or orders of all public authorities relating to the performance of the work under and pursuant to this Agreement including, but not limited to, the Occupational Safety and Health Act of 1970, the Michigan Occupational Safety and Health Act, and the rules and regulations of the Michigan Construction Safety Commission.

RESPONSIBILITIES OF CONTRACTOR (CON'T):

F. Responsibility for Negligence of Employees and Subcontractors. Contractor assumes full responsibility for acts, negligence or omissions of all of Contractor's employees on the project, for those of Contractor's subcontractors and their employees, and for those of all other persons doing work under a contract with Contractor.

G. Responsibility for Safety. Unless otherwise stated herein, at Contractor's expense, Contractor will take all necessary precautions (including, without limitation, the furnishing of traffic control, barricades, traffic control devices, flaggers, warning lights, signs, warning signs, safety channels, channelization devices, guards, fences, walks, flags, cables and lights) for the safety of, and the prevention of injury, loss and damage to, persons and property (including, without limitation, in the term persons, members of the public, employees, Contractor's subcontractors and their respective employees, other contractors, their subcontractors and respective employees) on, about or adjacent to the location where the work is being performed, and will comply with all applicable provisions of safety rules, ordinances, codes, regulations, and orders of duly-constituted public authorities including, but not limited to, the Michigan Manual of Uniform Traffic Control Devices.

H. Responsibility of Subcontractors. The Contractor will require any subcontractor hired by the Contractor for the purpose of performing any of the work described by the Contract documents to be bound by all of the terms and conditions of the Contract documents and to perform the work in accordance with the Contract documents. Each and every condition of the Contract documents, including without limitation, the RESPONSIBILITIES OF THE CONTRACTOR, will be made a condition of each subcontract entered into by the Contractor in conjunction with the performance of the work.

INDEMNIFICATION

To the fullest extent permitted by law, the Contractor will indemnify, defend, and hold harmless The Board of County Road Commissioners of Allegan County, its officers, employees, representatives and agents from and against any and all claims, damages, demands, payments, suits, actions, recoveries, judgements, losses and expenses, including attorney fees, interest, and court costs, which are made, brought or recovered against the Board of County Road Commissioners of Allegan County, arising out of or resulting from performance of the Contractor's work under this Contract, provided that such claims, damages, losses, demands, payments, suits, actions, recoveries, judgements and/or expenses are attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the work itself) including loss of use resulting therefrom, but only if caused in whole or in part, by the act, omissions, fault, negligence or breach of the conditions of this Contract by negligent acts or omissions of the Contractor, the Contractor's sub-subcontractors, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss or expense is caused in part by a party indemnified hereunder. The Contractor will not, however, be obligated to indemnify the Board of County Road Commissioners of Allegan County, for any damage or injuries caused by or resulting from the sole negligence of the Board of County Road Commissioners of Allegan County. Such obligation will not be construed to negate, abridge or otherwise reduce other rights or obligations of indemnity which would otherwise exist as a party or person described in this paragraph.

In claims against any person or entity indemnified under this Agreement by an employee of the Contractor, the Contractor's sub-subcontractors, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, the indemnification obligation under this paragraph will not be limited by a limitation on amount or type of damages, compensation or benefits payable by or for the Contractor or the Contractor's subcontractors under workers' or workmen's compensation acts, disability benefit acts or other employee benefit acts.

## INSURANCE

A. Contractor's Insurance. Prior to start of the Contractor's work, the Contractor will procure for the Contractor's work and maintain in force until the completion of the work, workers' compensation insurance, employer's liability insurance, comprehensive general liability insurance and all insurance required of the contract under the contract documents.

The Board of County Road Commissioners of Allegan County will be named as an additional insured on each of these policies except for worker's compensation.

The insurance will include contractual liability insurance covering the Contractor's obligations under its agreement of indemnification as set forth herein.

B. Minimum Limits of Liability. The Contractor's comprehensive general and automobile liability insurance as required herein, will be written with limits of liability not less than the following:

a. Comprehensive general liability including completed operations

(1) \$ 500,000 each occurrence

b. Property damage

(1) \$ 500,000 each occurrence

C. Number of Policies. Comprehensive general liability insurance and other liability insurance may be arranged under a single policy for the full limit required or by combination of underlying policies with the balance provided by an excess or umbrella liability policy.

D. Cancellation, Renewal or Modification. The Contractor will maintain in effect all insurance coverage required under this Agreement at the Contractor's sole expense and with insurance companies acceptable to the Board of County Road Commissioners of Allegan County.

All insurance policies will contain a provision that the coverage afforded thereunder will not be cancelled or not renewed nor restrictive modifications added at any time after a certificate of insurance required under agreement has been issued and before the work; as defined herein, has been completed, until at least thirty (30) days prior thereto written notice has been given to the Board of County Road Commissioners of Allegan County unless otherwise specifically required in the Contract Documents.

Certificates of insurance or certified copies of policies acceptable to the Board of County Road Commissioners of Allegan County will be filed with the Board of County Road Commissioners of Allegan County prior to the commencement of the Contractor's work.

In the event that the Contractor fails to obtain or maintain any insurance coverage required under this Agreement, the Board of County Road Commissioners of Allegan County may:

1. Purchase such coverage and charge the expense thereof to the Contractor, and
2. Withhold from any payment due or to become due to the Contractor an amount sufficient to protect the Board of County Road Commissioners of Allegan County from such claims, damages, demands, payments, suits, actions, recoveries, judgements, losses and expenses, including attorney fees, interest and court costs, and
3. Terminate this agreement.

Nothing contained in this Agreement, nor the Board of County Road Commissioners of Allegan County's compliance therewith, will relieve the Contractor from its obligations under the Contract to purchase and maintain required insurance or to indemnify the Board of County Road Commissioners of Allegan County.

PROGRESS CLAUSE

The successful bidder will be required to submit a Progress Schedule, giving an outline of his proposed order of work and to indicate the dates for completion of the work. This outline, when approved by the Road Commission, will become a part of the contract.

PROSECUTION OF THE WORK

The Contractor will begin the work within five (5) days after being notified by the Road Commission of the award of the contract, unless this is inconsistent with the Progress Schedule, in which case the Progress Schedule will govern. He will prosecute the work in the order given in the Progress Schedule, with force and equipment adequate to complete the sections within the time limit therein fixed for completion. In case of failure to proceed with the work as rapidly as is provided in the Progress Schedule, or if it appears at any time that such work is not being prosecuted in such a manner as to insure its completion within time specified, the Road Commission will have the right to require the contractor to furnish and place in operation such additional force and equipment as the Road Commission will deem necessary to bring the work up to the Progress Schedule; and in case of the Contractor's neglect to do so, the Road Commission may place such working force and equipment on the work and charge the Contractor the cost of the labor and such rental and depreciation rates for the plant and equipment as in its judgement is reasonable, and for such time as the plant and equipment are in service.

ESTIMATED QUANTITIES

The quantities listed in the proposal are the estimated quantities. Increases or decreases in quantities will not be considered as a basis for adjustment in unit prices and Articles 104.02 of M.D.O.T. Standard Specifications for Construction will not apply in this regard.

FINAL PAYMENT

Final payment will not be made until the contractor will have filed with the Board of County Road Commissioners the consent of the Surety of the payment of the final estimate and satisfactory evidence by affidavit or otherwise that all his indebtedness by reason of the contract has been fully paid or satisfactorily secured. In case such evidence is not furnished, the Road Commission may retain out of any amount due said contractor sums sufficient to cover all lienable claims unpaid.

AFFIRMATIVE ACTION POLICY (EQUAL EMPLOYMENT OPPORTUNITY EMPLOYER)

The Allegan County Road Commission will require the Contractor to submit an Affirmative Action Policy stating that they are an equal employment opportunity employer and will recruit, hire and promote in all job classifications without regard to race, color, religion, sex or national origin, except where sex is a bona fide occupational qualification. The Affirmative Action Policy will be signed by the Contractor or one of the Company's Authorized Officers.

CONTRACT BONDS

The Successful Bidder will furnish satisfactory performance and lien bonds, each in the amount of not less than one hundred (100) per cent of the total contract price. Such bonds will be on forms provided and will meet the regulations of the Allegan County Road Commission and the requirements specified in the laws of Michigan.

Bonds will be required for contracts of less than \$5,000.00.

M.D.O.T. – PREQUALIFICATION

Contractors bidding on this work must be pre-qualified by the Michigan Department of Transportation to do similar work on State or Federal-aid Secondary projects.

LIQUIDATED DAMAGES

Failure to complete the project on or before the completion date specified will be assessed according to the following schedule:

Original Contract Amount	Liquid Damages Per Calendar Day
\$ 0 to 49,999	75
50,000 to 99,999	150
100,000 to 499,999	450
500,000 to 999,999	900
1,000,000 to 1,999,999	1,300
2,000,000 to 4,999,999	1,550
5,000,000 to 9,999,999	2,650
10,000,000 and above	3,000

The liquidated damages may be delayed if the contractor meets the requirements set forth in Section 108.12 of the 2003 Standard Specifications for Construction. Approval of the project engineer is required.