

Project No. A195-16008

ADDENDUM NUMBER 3

GMIA Taxiway F Reconstruction - 2016
Milwaukee, WI

Project Number: A195-16008

Date of Addendum: 8/22/16

This Addendum to the Contract Documents is issued to modify, explain or correct the original documents, dated 8/01/2016, and is hereby made part of the Contract Documents. Acknowledge receipt of this Addendum in the space provided on the Bid Form, or bid may be rejected.

1. BID FORM

- i. Replace bid form with attached bid form (V2.0 8/22/2016).
 1. Note changes to Econocrete bid items.
 - a. P306 Econocrete shall be measured in Square Yards. Modify all references to other units of measure within the plans and specifications accordingly.
 2. Salvage note from addendum 2 incorporated into bid form.

2. PLAN SHEETS

- a. Sheet C101 Replace entire sheet Revision Date 8/11/2016 with attached C101 Revision Date 8/22/16 to reflect changes in bid form.
- b. Detail 7/C340: Change dowel bar size from $\frac{3}{4}$ inch by 18 inch, 12 inch spacing to 1 $\frac{1}{2}$ inch by 20 inch, 15 inch spacing, epoxy coated.
- c. Detail 7/C340: Change 0.362" dia. Bottom spacer bars to 0.306" dia. bottom spacer bars.
- d. Detail 8/C340: Add note: 6" x 12" W 6.5 x 4.0 Deformed Wire.
- e. Detail 9/C340: Remove note: 07x07 – 4"x4" (English standard)
- f. Detail 1/E350: Add Note: Guidance sign is size 2, style 2.
- g. Detail 5/E350: Add Note: Isolation transformer requirement is 100 watts.
- h. Detail 6/P350: Add Note: Clean out pipe martial to be 6" Schedule-40 PVC.

3. SPECIFICATIONS

- a. Add specification: P-635 Geotextile Fabrics. See attached for spec.
 - i. Geotextile Type DF shall be schedule B.

4. General Questions:

- a. The contractor may use the Van Beck Farm area of GMIA (off of College Ave.) to dispose of excavated soil. Only excavated soil is allowed. No asphalt, concrete or other debris.
 - i. If the contractor intends to use this area for disposal of excavated fill they must surround fill area with silt fence, grade the fill to match into existing slopes, and seed with standard local turf mix. The contractor shall remove the silt fence once turf is established.
- b. The geotechnical report, which includes data on existing pavement thicknesses is located on the project bidding website here:
<http://county.milwaukee.gov/ConstructionBidsandR23075/GMIA-Taxiway-F-Reconstruction---2016.htm>
- c. Removed existing asphalt cannot be reused onsite.
- d. No crushing operation is allowed onsite.
- e. No batch plant is available or allowed onsite.
- f. The low profile barricades shall be tightly linked together unless otherwise directed in the field by the engineer.
- g. A GMIA consultant will perform concrete testing coring.
- h. GMIA / Milwaukee County will provide surveying to layout line and grade.
- i. Can Nuvo Ready Mix bid as a DBE prime or subcontractor?

Project No.

- i. Contractors retain their certification(s) until such time as information is presented that would indicate they are no longer in compliance with Federal regulations. As the current investigation has not resulted in any charges or conviction at this time, Nuvo will continue to be certified as a DBE firm and able to be counted for meeting a participation goal.

The Prime will be held to the participation goal they present at time of bid regardless of whether a firm remains certified through the life of the contract. Should a DBE firm be decertified prior to contract award but post bid, the Prime will be required to submit a new participation plan that does not include the decertified firm.

It is unlikely that a firm would be decertified within the time between bid opening and contract award, unless start of the project would be delayed. The DBE firm has the option to challenge the notice to decertify, so typically the decertification process takes a minimum of 6 months, unless the firm agrees to the findings, then it may be immediate.

End of Addendum No. 3

BID FORM

PROPOSAL

Project No. A195-16008

Milwaukee, Wisconsin

August 10, 2016

Mr. Teig Whaley-Smith
Director of Department of Administrative Services
Milwaukee, Wisconsin 53208

Official Notice No. 7128

Bids Close: August 24, 2016 at 2:00 P.M.

Dear Mr. Whaley-Smith:

In conformance with the Advertisement for Bids, Plans, Specifications, General Provisions, Special Provisions, Contract and Bond, the undersigned agrees to furnish all labor, materials, tools, and equipment and to perform the work necessary for **GMIA – Taxiway F Reconstruction – 2016** at General Mitchell International Airport, City of Milwaukee, Wisconsin.

The undersigned bidder submitting this proposal hereby declares and agrees to be bound and to perform the work in accordance with all terms, conditions and requirements of and within the proposal, the contract, the applicable specifications, the general provisions, the special provisions, and the plans, such applicable specifications and all plans being made a part thereof.

The undersigned bidder further agrees to perform the said work for and in consideration of the amount becoming due on account of work performed, according to the unit prices bid in the attached schedule, and to accept such amounts in full payment for said work.

The bidder declares that all of the said work will be performed at his own proper cost and expense, that he will furnish all necessary materials, labor, tools, machinery, apparatus and other means of construction in the manner provided in the specifications, and at the time stated in the contract of which this proposal will become a part if and when accepted. The bidder further declares that only the persons, firm or corporation herein named have an interest in these proposals, and that the same is submitted without collusion with any person, firm or corporation.

The undersigned bidder declares that he has read, understands and agrees to conform to the Proposal Requirements and Conditions (Section 20 of the General Provisions).

The undersigned declares that if he is awarded the contract, he will execute the contract agreement, begin the work within ten (10) days after the required project start date identified on the written notice to proceed, complete the work scheduled within the specified durations and other time conditions as defined in the Special Provisions in these documents, will file a good and sufficient surety company bond in the full amount of the contract price to guarantee the successful execution of the work and will furnish satisfactory evidence showing that he has complied with Chapter 102 of the Wisconsin Statutes.

PROPOSAL

Enclosed herewith is a certified check/bid bond in the sum of _____

(\$ _____) to be retained by and become the property of the County in case the undersigned shall, in the acceptance of this proposal, refuse to sign the contract agreement or fail to file the bond hereinbefore described within ten (10) days after the contract is mailed to the undersigned, otherwise to be returned.

NOTE: Bidder must state price bid in figures and in writing and sign proposal.

No bids containing "escalator" provisions will be accepted.

Government Contracts Subject to Equal Opportunity Clause

The bidder shall complete the Certification following this proposal and submit it with his bid.

Proposal Submitted By:

(Insert above corporate, partnership, or individual's name)

In Presence Of:

(Witness)

By _____
Title _____

(Witness)

By _____
Title _____

BIDDER

IF A CORPORATION, STATE THE FOLLOWING:

(a) Legal Firm Title _____

(b) State in which Incorporated _____

(c) Names and Titles of Officers Authorized to Sign Contract:

(d) Business Address _____

Please state Employer's File Number under the Unemployment Insurance Laws of the State of Wisconsin _____

Employer's Federal Identification Number _____

Employer's Taxpayer Identification Number _____

CERTIFICATE OF BIDDER REGARDING

EQUAL EMPLOYMENT OPPORTUNITY

GENERAL

In accordance with Executive Order 11246 (30 F.R. 12319-25), the implementing rules and regulations thereof, and orders of the Secretary of Labor, a Certification regarding Equal Opportunity is required of bidders of prospective contractors and their proposed subcontractors prior to the award of contracts or subcontracts.

CERTIFICATION OF BIDDER

Airport Name General Mitchell International Airport

Project Number A195-16008

Bidder's Name _____

Address _____

1. Participation in a previous federally assisted contract or subcontract.
 - a. The Bidder (Proposer) shall complete the following statement by checking the appropriate boxes.
 - (1) The Bidder (Proposer) has has not participated in a previous contract subject to the equal opportunity clause prescribed by Executive Order 10925 or Executive Order 11114, or Executive Order 11246.
 - (2) The Bidder (Proposer) has has not submitted all compliance reports in connection with any such contract due under the applicable filing requirements; and that representations indicating submission of required compliance reports signed by proposed subcontractors will be obtained prior to award of subcontracts.
 - b. If the Bidder (Proposer) has participated in a previous contract subject to the equal opportunity clause and has not submitted compliance reports due under applicable filing requirements, the Bidder (Proposer) shall submit a compliance report on Standard Form 100, "Employee Information Report EEO-1" prior to the award of contract.
 - c. When a determination has been made to award the contract to a specific contractor, such contractor may be required prior to award, or after the award or both, to furnish such other pertinent information regarding its own employment practices and policies as well as of its proposed subcontractors as the FAA, the sponsor, or the Director of OFCC may require. (41 CFR Chapter 60;)

CERTIFICATE OF BIDDER REGARDING

EQUAL EMPLOYMENT OPPORTUNITY

2. Contractor certifies that he is not currently in receipt of any outstanding letters of deficiency, show cause, probable cause or other such notification of non-compliance with EEO regulations.

REMARKS:

Certification - The information above is true and complete to the best of my knowledge and belief.

Name and title of signer (Please Type)

Contractor

Subcontractor

Signature

Date

NOTE: The penalty for making false statements in offers is prescribed in 18 U.S.C. 1001.

Revised 10/16/84

PROJECT NUMBER:
 A195-16008
SCHEDULE OF PRICES FOR:
 GMIA TAXIWAY F RECONSTRUCTION
AT:
 General Mitchell International Airport
 Milwaukee, WI
 V2.0 (8/22/16)

Note: Bidder must state prices in words and figures and sign proposal.

Item No.	Approx. Quantities	Items With Unit Bid Price Written in Words	Unit Price in Figures	Total Amount of Bid
BASE BID				
1	1 Lump Sum Item M-1	Mobilization including temporary signage, low profile barriers, security preparations, etc. _____ Per Lump Sum		
2	11,734 Square Yard Item P-101	Pavement Removal _____ Per Square Yard		
3	1,249 Linear Foot Item P-101	Pavement Saw Cutting, Full Depth _____ Per Linear Foot		
4	12,208 Cubic Yard Item P-152	Unclassified Excavation _____ Per Cubic Yard		
5	6,290 Ton Item P-154	Breaker Run Subbase _____ Per Ton		
6	4,230 Ton Item P-209	Crushed Aggregate Base Course _____ Per Ton		
7	13,361 Square Yard Item P-306	Econcrete Base Course, 6 inch _____ Per Square Yard		
8	574 Square Yard Item P-306	Econcrete Base Course, 10 inch _____ Per Square Yard		

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Item No.	Approx. Quantities	Items With Unit Bid Price Written in Words	Unit Price in Figures	Total Amount of Bid
9	9,793 Square Yard Item P-501	Portland Cement Concrete Pavement, 18 inch _____ Per Square Yard		
10	131 Ton Item P-401	Hot Mix Asphalt - P401 _____ Per Ton		
11	1,013 Ton Item P-403	Hot Mix Asphalt - P403 _____ Per Ton		
12	505 Gallon Item P-603	Asphalt Tack Coat _____ Per Gallon		
13	10,376 Linear Foot Item P-605	Concrete Joint Filler _____ Per Linear Foot		
14	1,120 Square Foot Item P-620	Remove Taxiway Painting _____ Per Square Foot		
15	3,824 Square Foot Item P-620	Taxiway Marking, Yellow & White, with type III glass beads _____ Per Square Foot		
16	5,994 Square Foot Item P-620	Taxiway Marking, Black _____ Per Square Foot		

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Item No.	Approx. Quantities	Items With Unit Bid Price Written in Words	Unit Price in Figures	Total Amount of Bid
17	198 Square Foot Item P-620	Preformed Thermoplastic Marking Sign (Includes Reflective Beads) _____ Per Square Foot		
18	10,771 Square Yard	BX 1200 Type Geogrid _____ Per Square Yard		
19	11,282 Square Yard	Geotextile Type SR _____ Per Square Yard		
20	2,089 Square Yard	Geotextile Type DF _____ Per Square Yard		
21	3 Each Item P-156	Inlet Protection Type A _____ Per Each		
22	1,265 Linear Foot Item P-156	Silt Fence _____ Per Linear Foot		
23	428 Linear Foot Item P-	Storm Sewer Removal _____ Per Linear Foot		
24	428 Linear Foot Item P-701	Storm Sewer, 18 Inch, Class V RCP _____ Per Linear Foot		
25	180 Linear Foot Item P-701	Storm Sewer, 12 Inch, Class IV RCP _____ Per Linear Foot		

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Note: Bidder must state prices in words and figures and sign proposal.

Item No.	Approx. Quantities	Items With Unit Bid Price Written in Words	Unit Price in Figures	Total Amount of Bid
26	2,329 Linear Foot Item D-705	Underdrain, 6 Inch Corrugated, Perforated. Including porous backfill, filter fabric & cleanouts. _____ Per Linear Foot		
27	1 Each Item D751	Storm Sewer Catch Basin (CB1) _____ Per Each		
28	1 Lump Sum Item D751	Stormwater Structure Modification at Parking Structure Pond (Pond 13A) _____ Per Lump Sum		
29	1 Lump Sum Item D751	Stormwater Structure Modification at Structure 400A _____ Per Lump Sum		
30	2,400 Linear Foot Item L-108	Lighting Cable, 5KVA, No. 8 In Conduit or Duct _____ Per Linear Foot		
31	1,596 Linear Foot Item L-108	Temporary Cable, 5KVA, No. 8 in Conduit or Duct _____ Per Linear Foot		
32	2,400 Linear Foot Item L-108	No. 6 Bare Copper Counterpoise Wire _____ Per Linear Foot		
33	54 Each Item L-108	Ground Rods _____ Per Each		
34	2,400 Linear Foot Item L-108	Lighting Cable removed in conduit or duct _____ Per Linear Foot		
35	2,400 Linear Foot Item L-110	PVC Electrical Conduit, 2 Inch, Sch. 40 _____ Per Linear Foot		

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Note: Bidder must state prices in words and figures and sign proposal.

Item No.	Approx. Quantities	Items With Unit Bid Price Written in Words	Unit Price in Figures	Total Amount of Bid
36	5 Each Item L-110	Coring into manhole _____ Per Each		
37	2 Each	Runway Guard Light Salvage and Reinstall _____ Per Each		
38	21 Each Item L-125A	Elevated Taxiway Light Removal. Salvage light and transformer for reuse. Remove, base, stainless cover with neoprene gasket, plastic transformer stand, grounding, etc. _____ Per Each		
39	21 Each Item L-125A	L-861T Elevated (LED) Taxiway Lights, Salvage Reuse Assembly. Salvage light assembly, light stem, transformer, transformer stand, cover, cover bolts. Replace base (can), seals, grounding rods, and reinstall with salvaged equipment in locations shown, per specifications. Connect to new conduit and wiring. _____ Per Each		
40	6 Each Item L-125A	L-861T Elevated (LED) Taxiway Lights, Standard Assembly (Entire taxiway lighting assembly including new light, transformer, base, stainless cover with neoprene gasket, plastic transformer stand, grounding, joint sealant, etc.). _____ Per Each		
41	1 Each Item L-125A	New Taxi Guidance Sign per details 1/E350 & 6/E350. Includes entire sign assembly (sign, concrete base, grounding, wiring, transformer, etc.) _____ Per Each		
42	1 Each Item P-610	New Taxi Guidance Sign concrete base, per each sign _____ Per Each		
43	833 Cubic Yard Item T-905	2" Topsoil _____ Per Cubic Yard		
44	15,000 Square Yard Item T-901	Seeding (Endophyte Enhanced) and fertilizer. _____ Per Square Yard		
45	15,000 Square Yard T-908	Hydro Mulch _____ Per Square Yard		

BASE BID

Total amount for items one (1) through forty five (45) inclusive.

Dollars \$

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Note: Bidder must state prices in words and figures and sign proposal.

Item No.	Approx. Quantities	Items With Unit Bid Price Written in Words	Unit Price in Figures	Total Amount of Bid
ALTERNATIVE BID ITEMS - MILL AND OVERLAY				
46	653 Ton Item P-401	Hot Mix Asphalt - P401 <hr style="width: 80%; margin: 0 auto;"/> Per Ton		
47	288 Gallon Item P-603	Asphalt Tack Coat <hr style="width: 80%; margin: 0 auto;"/> Per Gallon		
48	2,880 Square Yard Item P-101	Cold Milling <hr style="width: 80%; margin: 0 auto;"/> Per Square Yard		

Alternative Bids: All bidders shall fill in all the Alternative Bids as listed. Failure of a bidder to fill in an alternative bid will be cause for the owner to disqualify bid. Where no change in price occurs or the Alternative Bid does not affect the particular Bid, mark "No Change". If any Alternative Bid is left blank, it shall mean the Contractor has no addition or deduction in the contract.

Note: Milwaukee County will award the Contract on the basis of the Base Bid alone or a combination of the Base Bid and any combination of the alternative bid item(s), whichever would be most advantageous to Milwaukee County.

ALTERNATIVE BID ITEMS

Total amount for items forty six (46) through forty eight (48).

Dollars \$

Note: The Contract will be awarded on the basis of the Base Bid alone or a combination of the Base Bid and the alternative bid, whichever would be most advantageous to Milwaukee County.

**AFFIDAVIT & CERTIFICATE
PURSUANT TO MILWAUKEE COUNTY CODE 44.07(b)**

STATE OF WISCONSIN)
) SS
COUNTY OF MILWAUKEE)

Pursuant to Section 66.29 (7), Wisconsin Statutes, _____

being duly sworn, deposes and says:

That he is the duly authorized representative of _____

(Name of person, firm or corporation submitting bid)

bidder for doing the work or labor or the furnishing of material under the proposal of which this affidavit is a part, and

That the said bidder has examined and carefully prepared his bid form, the plans and specifications, and has checked the same detail before submitting said proposal or bid to Milwaukee County.

(Signed by Bidder or his authorized Representative)

Subscribed and sworn to before me

this _____ day of _____, 20____.

Notary Public, Milwaukee County, Wisconsin

My commission expires _____, 20_____.



COMMUNITY BUSINESS DEVELOPMENT PARTNERS MILWAUKEE COUNTY

COMMITMENT TO CONTRACT WITH DBE

PROJECT No. A195-16008 PROJECT TITLE GMIA Taxiway F Reconstruction - 2016

TOTAL CONTRACT AMOUNT (less allowances) \$ _____ DBE Goal: 25%

Name & Address of DBE(*)	Scope of Work Detailed Description	DBE Contract Amount	% of Total Contract

(* Separate commitment form must be completed for each DBE firm)

Bidder/Proposer Commitment (To be completed by firm committing work to DBE)

I certify that the DBE firm quoted the identified service(s) and cost(s). I further acknowledge our firm having negotiated with, and having received confirmation, on partnering, pricing and delivery from DBE firm listed herein.
 Our firm _____ Phone No. _____, or one of our subcontractors, will enter into contract with the DBE firm listed, for the service(s) and amount(s) specified when awarded this contract. A copy of the contract between our firm and that of the named DBE will be submitted directly to CBDP within seven (7) days from receipt of Notice-to-Proceed on this contract. The information on this form is true and accurate to the best of my knowledge. I further understand that falsification, fraudulent statement, or misrepresentation will result in appropriate sanctions under applicable law.

 Signature of Authorized Representative Name & Title of Authorized Representative Date

Subscribed and sworn to before me this _____ day of _____, 20 _____

 Signature of Notary Public [SEAL]

State of _____ My Commission expires _____

* Only firms certified as DBEs (within qualifying NAICS codes) by the Wisconsin UCP **prior to bid/proposal opening** will be credited on this contract

DBE Affirmation (To be completed by DBE Owner/Authorized Representative)

- I affirm that the Wisconsin UCP has certified our company as a DBE, and that our company is currently listed in the Wisconsin UCP Directory.
- I acknowledge and accept this commitment to contract with my firm for the service(s) and dollar amount(s) specified herein, as put forth by _____.
- I understand and accept that this commitment is for service(s) to be rendered in completion of the Milwaukee County project specified herein to be completed with my own forces, unless otherwise approved by CBDP.
- I affirm that approval from CBDP will be obtained prior to subletting any portion of this work awarded to my firm on this project.

 Signature of Authorized DBE Representative Name & Title of Authorized DBE Representative Phone Number Date

FOR CBDP USE ONLY

Commitment number ____ **of** ____ **Project Total:** (A) _____ (V) _____ **Total %** _____

Verified with: _____
Authorized Signature Date



COMMUNITY BUSINESS DEVELOPMENT PARTNERS MILWAUKEE COUNTY

COMMITMENT TO CONTRACT WITH DBE

ADDITIONAL INFORMATION & REQUIREMENTS:

1. The Directory of Certified DBE firms eligible for credit toward the satisfaction of this project's DBE goal will be found at the following link, and can be searched by Name and/or NAICS code.

<http://wisconsindot.gov/Pages/doing-bus/civil-rights/dbe/certified-firms.aspx>

2. **CONTRACT ADJUSTMENTS:** The successful Bidder/Proposer will maintain the approved DBE participation level during the term of the contract with the County, including any additional work on the contract, e.g., change orders, addendums, scope changes, etc. Contract adjustments shall include proportional DBE participation.

3. **WRITTEN CONTRACTS WITH DBEs:** The County requires that the successful Bidder/Proposer enter into contract, directly or through subcontractors, as stated in this form. Agreements must be submitted to the County within 7 days of receipt of the Notice-To-Proceed. By executing this commitment, you are certifying that you have had contact with the named DBE firm and that they will be hired if you are awarded the contract by the County.

VIOLATION OF THE TERMS OF THIS COMMITMENT MAY RESULT IN TERMINATION OF YOUR CONTRACT.

4. **SUBSTITUTIONS, DBE SUBCONTRACTING WORK, TRUCKING FIRMS:** The successful Bidder/Proposer must submit written notification of desire for substitution to the DBE affected, and send a copy to the County, stating the reason(s) for the request. The DBE will have five (5) business days to provide written objection/acceptance of the substitution. The "right to correct" must be afforded any DBE objecting to substitution/termination for less than good cause as determined by the County. Approval must be obtained from the County prior to making any substitutions. DBEs are also required to notify and obtain approval from the County prior to seeking to subcontract out work on this project. In the case of DBE trucking firms, credit will be given for trucks leased from other DBE firms; however, if the DBE leases trucks from non-DBE firms, the commission or fee will be counted for DBE crediting.

5. **REQUESTS FOR PAYMENT:** The successful Bidder/Proposer must indicate on the Continuation Sheet (AIA form G703, or equivalent) the work being performed by DBE by either a) placing the word "DBE" behind the work item or b) breaking out the work done by DBEs at the end of the report. The successful Bidder/Proposer shall notify DBE firms of the date on which they must submit their invoices for payment.

6. **DBE UTILIZATION REPORTS:** The successful Bidder/Proposer will enter payments to subs and suppliers directly into the County's online reporting system on a monthly basis. These entries will cover payments made during the preceding month and will include zero dollar (\$0) entries where no payment has occurred.

If you have any questions related to Milwaukee County's DBE Program, please contact:

414.278.4747 or cbdpcompliance@milwaukeecountywi.gov

DISCLOSURE OF OWNERSHIP

Subject to State Statute 66.293 (3)(n)4, any person submitting a bid shall be required to identify any construction business in which the person (or a shareholder, officer or partner of the person, if the person is a business) owns or has owned at least a 25 percent interest on the date the person submits the bid or at any time within 3 years preceding the date the person submits the bid, if the business has been found to have failed to pay the prevailing wage rate or to have paid less than 1.5 times the hourly basic rate of pay for hours worked on a project in excess of the prevailing hours of labor as defined in Chapter 30 of the County Ordinances.

It is intended that award of contract will be made to the lowest bidder who is responsible, responsive, and qualified to perform the work. Debarred contractors listed in the "List of Debarred Contractors" shall be deemed not responsible and shall not be utilized on any project. Bids received from "Debarred Contractors" shall be rejected.

A copy of the "List of Debarred Contractors" is available for review in the Milwaukee County Department of Administrative Services located at 633 W. Wisconsin Ave, Suite 1000; Milwaukee, WI 53203.

Name and address of construction businesses which failed to pay prevailing wage. If none, so state.

Name	Address
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Modified C101

BASE BID		
1	1 Lump Sum Item M-1	Mobilization including temporary signage, low profile barriers, security preparations, etc. Per Lump Sum
2	11,734 Square Yard Item P-101	Pavement Removal Per Square Yard
3	1,249 Linear Foot Item P-101	Pavement Saw Cutting, Full Depth Per Linear Foot
4	12,208 Cubic Yard Item P-152	Unclassified Excavation Per Cubic Yard
5	6,290 Ton Item P-154	Breaker Run Subbase Per Ton
6	4,230 Ton Item P-209	Crushed Aggregate Base Course Per Ton
7	13,361 Square Yard Item P-306	Econocrete Base Course, 6 inch Per Square Yard
8	574 Square Yard Item P-306	Econocrete Base Course, 10 inch Per Square Yard
9	9,793 Square Yard Item P-501	Portland Cement Concrete Pavement, 18 inch Per Square Yard
10	131 Ton Item P-401	Hot Mix Asphalt - P401 Per Ton
11	1,013 Ton Item P-403	Hot Mix Asphalt - P403 Per Ton
12	505 Gallon Item P-603	Asphalt Tack Coat Per Gallon
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14	1,120 Square Foot Item P-620	Remove Taxiway Painting Per Square Foot
15	3,824 Square Foot Item P-620	Taxiway Marking, Yellow & White, with type III glass beads Per Square Foot

16	5,994 Square Foot Item P-620	Taxiway Marking, Black Per Square Foot
17	198 Square Foot Item P-620	Preformed Thermoplastic Marking Sign (Includes Reflective Beads) Per Square Foot
18	10,771 Square Yard	BX 1200 Type Geogrid Per Square Yard
19	11,282 Square Yard	Geotextile Type SR Per Square Yard
20	2,089 Square Yard	Geotextile Type DF Per Square Yard
21	3 Each Item P-156	Inlet Protection Type A Per Each
22	1,265 Linear Foot Item P-156	Silt Fence Per Linear Foot
23	428 Linear Foot Item P-	Storm Sewer Removal Per Linear Foot
24	428 Linear Foot Item P-701	Storm Sewer, 18 Inch, Class V RCP Per Linear Foot
25	180 Linear Foot Item P-701	Storm Sewer, 12 Inch, Class IV RCP Per Linear Foot
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31	1,596 Linear Foot Item L-108	Temporary Cable, 5KVA, No. 8 in Conduit or Duct Per Linear Foot
32	2,400 Linear Foot Item L-108	No. 6 Bare Copper Counterpoise Wire Per Linear Foot
33	54 Each Item L-108	Ground Rods Per Each
34	2,400 Linear Foot Item L-108	Lighting Cable removed in conduit or duct Per Linear Foot
35	2,400 Linear Foot Item L-110	PVC Electrical Conduit, 2 Inch, Sch. 40 Per Linear Foot
36	5 Each Item L-110	Coring into manhole Per Each
37	2 Each	Runway Guard Light Salvage and Reinstall Per Each
38	21 Each Item L-125A	Elevated Taxiway Light Removal. Salvage light and transformer for reuse. Remove, base, stainless cover with neoprene gasket, plastic transformer stand, grounding, etc. Per Each
39	21 Each Item L-125A	L-861T Elevated (LED) Taxiway Lights, Salvage Reuse Assembly. Salvage light assembly, light stem, transformer, transformer stand, cover, cover bolts. Replace base (can), seals, grounding rods, and reinstall with salvaged equipment in locations shown, per specifications. Connect to new conduit and wiring. Per Each
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41	1 Each Item L-125A	New Taxi Guidance Sign per details 1/E350 & 6/E350. Includes entire sign assembly (sign, concrete base, grounding, wiring, transformer, etc.) Per Each
42	1 Each Item P-610	New Taxi Guidance Sign concrete base, per each sign Per Each
43	833 Cubic Yard Item T-905	2" Topsoil Per Cubic Yard
44	15,000 Square Yard Item T-901	Seeding (Endophyte Enhanced) and fertilizer. Per Square Yard
45	15,000 Square Yard T-908	Hydro Mulch Per Square Yard

ALTERNATIVE BID ITEMS - MILL AND OVERLAY		
46	653 Ton Item P-401	Hot Mix Asphalt - P401 Per Ton
47	288 Gallon Item P-603	Asphalt Tack Coat Per Gallon
48	2,880 Square Yard Item P-101	Cold Milling Per Square Yard

1 QUANTITIES
C101 SCALE: N/A

GENERAL MITCHELL INTERNATIONAL AIRPORT
GMIA TAXIWAY F PAVEMENT RECONSTRUCTION
5300 S. HOWELL AVE., MILWAUKEE, WI 53207



Milwaukee County Dept. of Administrative Services
FACILITIES MANAGEMENT DIVISION
Architectural, Engineering & Environmental Services
633 W. WISCONSIN AVE. SUITE 1000, MILWAUKEE, WI 53203
AIRPORT ENGINEERING, 5300 S. HOWELL AVE., MILWAUKEE, WI 53207

REVISIONS:
08/11/2016
08/22/2016

DATE: 8/01/2016
PROJECT: A195-16008
SITE NO: 290
BUILDING NO: N/A

PROJECT QUANTITIES

C101

GEOTEXTILE SPEC

STANDARD SPECIFICATIONS
ITEM P-635 GEOTEXTILE FABRICS

DESCRIPTION

635-1.1 DESCRIPTION. This Work consists of furnishing and installing geotextile fabrics for subgrade separation and stabilization, drainage filtration, subgrade reinforcement, and under culverts and riprap in accordance with the Contract Documents.

MATERIALS

635-2.1 GENERAL. The geotextile fabric shall consist of either woven or nonwoven polyester, polypropylene, stabilized nylon, polyethylene or polyvinylidene chloride. All fabric shall have the minimum strength values in the weakest principle direction. Nonwoven fabric may be needle punched, heat bonded, resin bonded, or combinations thereof.

The geotextile fabric shall be insect, rodent, mildew, and rot resistant.

Furnish the geotextile fabric in a wrapping that will protect the fabric from ultraviolet radiation and from abrasion due to shipping and hauling. The geotextile is to be kept dry until installed.

Clearly mark the geotextile fabric rolls showing the type of fabric.

Samples of fabric for testing may be obtained from the job site as specified herein or as determined by the Engineer.

If sewn seams are used, furnish a field sewn seam sample produced from the geotextile fabric and thread and with the equipment to be used on the project, prior to its incorporation into the Work.

Minimum values when not specified herein shall be as specified in the Special Provisions.

In the following tables, numerical values (1) represent minimum/maximum average roll values (i.e., the average of minimum test results on rolls in a lot should meet or exceed the minimum specified values).

635-2.2 GEOTEXTILE FABRIC, TYPE SAS (Subgrade Aggregate Separation). The fabric shall comply with the following physical properties

TABLE 1. GEOTEXTILE FABRIC, TYPE SAS

<i>Test</i>	<i>Method</i>	<i>Value₍₁₎</i>
Grab Tensile Strength, N	ASTM D-4632	750 minimum
Puncture Strength, N	ASTM D 4833	300 minimum
Apparent Opening Size, μm (U.S. Standard Sieve)	ASTM D 4751	212 maximum
Permittivity, S-1	ASTM D 4491	0.35 minimum

For quantities over 20,000 square yards (17,000 m²), furnish to the Engineer at least 10 days prior to use in the Work a manufacturer's Certified Report of Test or Analysis that the geotextile fabric delivered for use in the Work meets the above requirements. The delivered geotextile fabric shall

STANDARD SPECIFICATIONS

ITEM P-635 GEOTEXTILE FABRICS

bear markings to clearly identify it with the applicable test report furnished to the Engineer. Samples of fabric for testing will be obtained from the job site for each 20,000 square yards (17,000 m²) or portion thereof used in the Work.

635-2.3 GEOTEXTILE FABRIC, TYPE MS (Marsh Stabilization). The following test methods will be used to confirm the values shown in the Special Provisions or shown on the Plans.

TABLE 2. GEOTEXTILE FABRIC, TYPE MS

<i>Test</i>	<i>Method</i>	<i>Value₍₁₎</i>
Tensile Strength (N/m) machine direction	ASTM D 4595	___ minimum
Tensile Strength (N/m) cross direction	ASTM D 4595	___ minimum
Elongation at Required Strength (%)	ASTM D 4595	___ maximum
Puncture, (N)	ASTM D 4833	___ minimum
Apparent Opening Size, μm	ASTM D 4751	___ maximum
Permittivity, S-1	ASTM D 4491	___ minimum

Deliver to the Engineer a sample of the geotextile material at least 15 days prior to its incorporation into the Work. At the same time, also furnish a sewn seam sample using the same geotextile fabric, thread, seam spacing and number, and overlap distance as are intended or required for use in the Work.

Furnish to the Engineer at least 15 days prior to use in the Work a Manufacturer's Certified Report of Test or Analysis that the geotextile fabric delivered for use in the Work meets the above requirements. The delivered geotextile fabric shall bear markings to clearly identify it with the applicable test report furnished to the Engineer. Samples of fabric for testing will be obtained from the job site for each 10,000 square yards (8500 m²) or portion thereof used on the Contract.

635-2.4 GEOTEXTILE FABRIC, TYPE DF (Drainage Filtration). The fabric shall comply with the physical requirements of Table 3A unless Table 3B (Schedule B) is indicated on the Plans or in the Special Provisions.

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ITEM P-635 GEOTEXTILE FABRICS

TABLE 3A. GEOTEXTILE FABRIC, TYPE DF, SCHEDULE A

<i>Test</i>	<i>Method</i>	<i>Value₍₁₎</i>
Grab Tensile Strength, N	ASTM D 4632	500 minimum
Puncture Strength, N	ASTM D 4833	200 minimum
Apparent Breaking Elongation (%)	ASTM D 4632	30 minimum
Apparent Opening Size, μm	ASTM D 4751	300 maximum
Permittivity, S-1	ASTM D 4491	0.72 minimum

TABLE 3B. GEOTEXTILE FABRIC, TYPE DF, SCHEDULE B

<i>Test</i>	<i>Method</i>	<i>Value₍₁₎</i>
Grab Tensile Strength, N	ASTM D 4632	800 minimum
Puncture Strength, N	ASTM D 4833	300 minimum
Apparent Breaking Elongation (%)	ASTM D 4632	30 minimum
Apparent Opening Size, μm	ASTM D 4751	300 maximum
Permittivity, S-1	ASTM D 4491	1.35 minimum

Slit film woven fabric shall not be used for this Work.

For quantities over 2,000 square yards (1700 m²), furnish to the Engineer at least 10 days prior to use in the Work a manufacturer's Certified Report of Test or Analysis that the geotextile fabric delivered for use in the Work meets the above requirements. The delivered geotextile fabric shall bear markings to clearly identify it with the applicable test report furnished to the Engineer. Samples of fabric for testing will be obtained from the job site for each 2,000 square yards (1700 m²) or portion thereof used in the Work.

635-2.5 GEOTEXTILE FABRIC, TYPE SR (Subgrade Reinforcement). The following test methods will be used to confirm the values shown in the Special Provisions or shown on the Plans.

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ITEM P-635 GEOTEXTILE FABRICS

TABLE 4. GEOTEXTILE FABRIC, TYPE SR

<i>Test</i>	<i>Method</i>	<i>Value₍₁₎</i>
Tensile Strength, N/m	ASTM D 4595	minimum
Puncture Strength, N	ASTM D 4833	minimum
Elongation at Required Strength (%)	ASTM D 4595	maximum
Apparent Opening Size, μm	ASTM D 4751	maximum
Permittivity, S-1	ASTM D 4491	minimum

For quantities over 10,000 square yards (8500 m²), furnish to the Engineer at least 10 days prior to use in the Work a Manufacturer's Certified Report of Test or Analysis that the geotextile fabric delivered for use in the Work meets the above requirements. The delivered geotextile fabric shall bear markings to clearly identify it with the applicable test report furnished to the Engineer. Samples of fabric for testing will be obtained from the job site for each 10,000 square yards (8500 m²) or portion thereof used on this Contract.

635-2.6 GEOTEXTILE FABRIC, TYPE R (Riprap). The fabric shall comply with the following physical properties:

TABLE 5. GEOTEXTILE FABRIC, TYPE R

<i>Test</i>	<i>Method</i>	<i>Value₍₁₎</i>
Grab Tensile Strength, N	ASTM D 4632	900 minimum
Puncture Strength, N	ASTM D 4833	350 minimum
Apparent Breaking Elongation (%)	ASTM D 4632	20 minimum
Apparent Opening Size, μm	ASTM D 4751	600 maximum
Permittivity, S-1	ASTM D 4491	0.12 minimum

635-2.7 GEOTEXTILE FABRIC, TYPE HR (Heavy Riprap). The fabric shall comply with the following physical properties:

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ITEM P-635 GEOTEXTILE FABRICS

TABLE 6. GEOTEXTILE FABRIC, TYPE HR

<i>Test</i>	<i>Method</i>	<i>Value₍₁₎</i>
Grab Tensile Strength, N	ASTM D 4632	1350 minimum
Puncture Strength, N	ASTM D 4833	450 minimum
Apparent Breaking Elongation (%)	ASTM D 4632	20 minimum
Apparent Opening Size, μm	ASTM D 4751	600 maximum
Permittivity, S-1	ASTM D 4491	0.40 minimum

635-2.8 GEOTEXTILE FABRIC, TYPE C (Modified SAS). The fabric shall comply with the following physical properties:

TABLE 7. GEOTEXTILE FABRIC, TYPE C

<i>Test</i>	<i>Method</i>	<i>Value₍₁₎</i>
Grab Tensile Strength, N	ASTM D 4632	900 minimum
Puncture Strength, N	ASTM D 4833	300 minimum
Apparent Opening Size, μm	ASTM D 4751	300 maximum
Permittivity, S-1	ASTM D 4491	0.12 minimum

635-2.9 GEOTEXTILE FABRIC, TYPE ES (Embankment Stabilization). The following test methods shall be used to confirm the values required in the Contract Document..

TABLE 8. GEOTEXTILE FABRIC, TYPE ES

<i>Test</i>	<i>Method</i>	<i>Value₍₁₎</i>
Tensile Strength, N/m Machine Direction	ASTM D 4595	___ minimum
Tensile Strength, N/m Cross Direction	ASTM D 4595	___ minimum
Elongation at Required Strength, Percent	ASTM D 4595	___ maximum
Apparent Opening Size, μm	ASTM D 4751	___ maximum
Permittivity, S-1	ASTM D 4491	___ minimum

Deliver to the Engineer a sample of the geotextile material at least 15 days prior to its incorporation into the Work. At the same time, also furnish a sewn seam sample using the same geotextile fabric, thread, seam spacing and number, and overlap distance as are intended or required for use in the Work.

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ITEM P-635 GEOTEXTILE FABRICS

Furnish to the Engineer at least 15 days prior to use in the Work a manufacturer's Certified Report of Test or Analysis that the geotextile fabric delivered for use in the Work meets the above requirements. The delivered geotextile fabric shall bear markings to clearly identify it with the applicable test report furnished to the Engineer. Samples of fabric for testing will be obtained from the job site for each 10,000 m² or portion thereof used on the Contract.

CONSTRUCTION METHODS

635-3.1 SEWING. Sew all factory and field seams with a thread having the same or greater durability as the material in the fabric. Use a 401 stitch conforming to Federal Standard No. 751a for all seams. All seams should develop a tensile strength equal to or greater than 60 percent of the specified grab tensile strength of the fabric, unless otherwise specified.

635-3.2 GEOTEXTILE FABRIC, TYPE SAS. Smooth, shape, and compact the subgrade to the required grade, section, and density prior to the placement of the geotextile fabric. After the fabric has been placed on the subgrade area, no traffic or construction equipment will be permitted to travel directly on the fabric.

Roll out the fabric on the subgrade and pull taut manually to remove wrinkles. Join separate pieces of fabric by overlapping or sewing. Place the fabric in the overlapped joints with a minimum overlap of 18 inches (460 mm).

Weight or pins may be required to prevent lifting of the fabric by wind.

After placement, expose the fabric no longer than 48 hours prior to covering.

Place the base course material over the fabric by back dumping with trucks and leveling with a crawler dozer. Construction equipment shall be such that ruts do not exceed 3 inches in depth. Fill all ruts with additional material. The smoothing of ruts without adding additional material will not be permitted. Cover damaged areas with a patch of fabric using a 3 foot (0.9 m) overlap in all directions.

635-3.3 GEOTEXTILE FABRIC, TYPE MS. Complete clearing operations prior to placement of the fabric. Within the area to be covered by fabric, cut off level with the ground surface all stumps and sharp objects. Do not remove sod, grass, and roots that extend beneath the ground surface. Carefully place the geotextile fabric on the existing ground using hand methods to avoid disturbing the existing root mat and vegetation. Roll out the fabric as smoothly as possible and pull taut manually to remove wrinkles. Weight or pins may be required to prevent lifting of the fabric by wind. After placement, expose the fabric no longer than 48 hours prior to covering. If defects are observed, replace the section of the fabric containing the defect with a new section of fabric containing no defects.

Place the geotextile fabric with the machine direction of fabric perpendicular to the centerline alignment. Sew all seams with a minimum lap of 3 inches (75 mm) using two parallel stitch lines. The parallel stitching should be spaced no more than 1 inch apart. Orient all seams perpendicular to the centerline alignment and shall be placed facing upward. The seams shall develop at least 80 percent of the specified cross direction tensile strength of the fabric, as determined by the same testing methods. No butt splices between individual roll ends will be allowed. Do not cross stitch lines. Repair all breaks or faults in any seam as directed by the Engineer.

Carefully bend, dump, and push on to the fabric, the initial fill layer to a nominal 2-foot depth (610 mm) depth. Construction equipment will be such that ruts do not exceed 3 inches (75 mm) in depth and excessive deformation of the marsh surface does not occur. Do not allow vehicles to drive on the fabric. Complete the initial 2 foot (610 mm) lift and install all instrumentation before any

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ITEM P-635 GEOTEXTILE FABRICS

additional material is placed. After the initial 2 foot (610 mm) lift, all subsequent lifts shall be of a nominal 1 foot (305 mm) depth. Do not start a lift until the preceding lift is completed and approval of the Engineer is obtained. Conduct spreading operations so that damage to the fabric does not occur. Unless otherwise directed by the Engineer, place and spread lifts by expanding outward from the center line of the fill. If the fabric is damaged during fill placement, remove the fill material around the damaged area and cover that area with a patch of fabric having a 3 foot (0.9 m) overlap in all directions.

635-3.4 GEOTEXTILE FABRIC, TYPE DF. Before placement of the geotextile fabric in trench drains, bring the trench to the grades and dimensions shown on the Plans. Remove protruding stones and other items that may damage the geotextile fabric from the trench walls and base prior to placement of the fabric. Place the geotextile fabric in the trench in such a manner as to conform to the trench walls and remain in proper position during drain construction and backfilling. Separate pieces of fabric may be joined by overlapping or sewing. Place the fabric in overlap joints with a minimum overlap of 1.5 feet (450 mm) in the direction of drain flow. Correct misaligned fabric. Damaged fabric areas shall be treated as directed by the Engineer, by either:

- a. Placing an additional section of fabric extending at least 2.0 feet (600 mm) beyond any point of the damaged area and positioned between the trench walls and the damaged fabric; or
- b. Removing the section of fabric containing the damaged area and replacing it with a new section of fabric. After placement, the fabric shall remain exposed no longer than 48 hours prior to covering.

For applications other than trench drains, bring to the grades and dimension shown on the Plan the surface upon which the fabric is to be located. Prepare the application surface by removing or covering all objects that may damage the fabric. Carefully place the fabric to prevent damage and secure it in position. Conduct backfilling or covering operations in such a manner so as to prevent damage or misalignment of the fabric. Treat damage or misalignment of the fabric as described previously in this Subsection. After placement, expose the fabric no longer than 48 hours prior to covering or backfilling.

635-3.5 GEOTEXTILE FABRIC, TYPE SR. Prior to placement of the fabric, smooth and shape the earth grade to the required grade and section, and when required, compact it to the specified density. After the fabric has been placed on the earth grade, no traffic or construction equipment will be permitted to travel directly on the fabric.

Roll the fabric out on the earth and pull it taut manually to remove wrinkles. Join parallel strips of fabric by overlapping or sewing. Sewn seams shall comply with the requirements of Subsection 635-3.1, but shall develop a tensile strength equal to or greater than 60 percent of the specified directional tensile strength of the fabric. Place the fabric in the overlapped joints with a minimum overlap of 24 inches (610 mm). Lapp butt splices between fabric rolls a minimum of 36 inches (0.9 m). After the fabric has been placed on the prepared surface, make provisions to prevent the fabric from being lifted or moved by the wind.

Cover tears, holes, or rips in the fabric with a patch of fabric overlapping the defect 3 feet (0.9 m) in all directions.

Cover all fabric within 72 hours of the time of placement.

Place the backfill material with an initial lift of 12 inches (305 mm). Do not exceed 12 inches (305 mm) in thickness for subsequent lifts. Spread each lift with a crawler type tractor and compact it with suitable compaction equipment. Do not exceed 4 inches for the maximum wheel or tread rut depth caused by the operation of construction equipment on backfill lifts. No turning movements for

STANDARD SPECIFICATIONS

ITEM P-635 GEOTEXTILE FABRICS

hauling or spreading equipment will be allowed over the fabric until at least two lifts of backfill with a minimum total depth of 18 inches (460 mm) have been placed and compacted. Subsequent lifts may not be started until at least 1,000 feet (305 m) of the previous lift has been spread and compacted. A 1,000 foot (305 m) interval shall be maintained between subsequent lifts until each lift is completed. If ruts greater than 4 inches (100 mm) develop during construction operations, the Engineer reserves the right to require the Contractor to use lighter equipment, equipment with lower contact pressure, or smaller loads on existing equipment.

Fill all ruts in the surface of each lift of backfill with additional material. Smoothing of ruts without adding additional backfill will not be permitted.

635-3.6 GEOTEXTILE FABRIC, TYPE R. Grade the area smooth and remove all stones, roots, sticks, or other foreign material that would interfere with the fabric being completely in contact with the soil prior to placing the fabric.

Place the fabric loosely and lay it parallel to the direction of water movement. Pinning or stapling may be required to hold the geotextile in place. Join separate pieces of fabric by overlapping or sewing. Place the fabric in the overlapped joints with a minimum overlap of 24 inches (610 mm) in the direction of flow. After placement, do not expose the fabric longer than 48 hours prior to covering.

Cover damaged areas with a patch of fabric using a 3 foot (0.9 m) overlap in all directions.

Placement of riprap shall be from the base of the slope upward. Height of freefall of riprap shall be determined by the Engineer but in no case shall this height exceed 1 foot (305 mm).

635-3.7 GEOTEXTILE FABRIC, TYPE HR. The construction methods for Type HR fabric shall conform to the requirements of Subsection 635-3.6, except that the height of freefall of riprap shall not exceed 6 inches (150 mm).

635-3.8 GEOTEXTILE FABRIC, TYPE C. Prior to the placement of geotextile fabric, grade the earth smooth and shape it to the required grade and section. After the fabric has been placed, no traffic or construction equipment will be permitted to travel directly on the fabric.

Roll out the fabric on the excavation and manually pull it taut to remove wrinkles. Join separate pieces of fabric by overlapping or sewing. Place the fabric in the overlapped joints with a minimum overlap of 18 inches (460 mm). Weights or pins may be required to prevent lifting of the fabric by wind.

After placement, do not expose the fabric longer than 48 hours prior to covering.

Place the granular material over the fabric. Construction equipment shall be such that ruts do not exceed 3 inches (75 mm) in depth. Fill all ruts with additional material. The smoothing of ruts without adding additional material will not be permitted.

Cover damaged areas with a patch of fabric using a 3 foot (0.9 m) overlap in all directions.

635-3.9 GEOTEXTILE FABRIC, TYPE ES. Prior to placing the geotextile fabric, bring the embankment to the required elevation and make the surface nominally smooth and level. Place the fabric on the prepared surface to the limits shown on the Plan with the machine direction of the fabric oriented in the direction or directions shown on the Plan. Roll out the fabric as smoothly as possible and manually pull it taut to remove wrinkles. Restrain the fabric as needed to prevent lifting and displacement due to wind. After placement, expose the fabric no longer than 48 hours prior to covering. If defects or damage to the fabric are observed, remove the section of fabric

STANDARD SPECIFICATIONS

ITEM P-635 GEOTEXTILE FABRICS

containing the defect or damage and replace it with a new section of fabric without defects or damage.

Sew all seams between fabric strips with two parallel stitch lines spaced no more than 25 mm apart in accordance with the details shown on the Plan. Orient all seams parallel to the roadway alignment and face upward. Sew all seams with a thread having the same or greater durability as the material in the fabric. Use a 401 stitch conforming to Federal Standard No 751a for all seams. All seams shall develop a tensile strength equal to or greater than 50 percent of the specified cross direction tensile strength of the fabric. Repair all sewing defects in any seam as directed by the Engineer. Butt splices between individual roll ends will not be allowed.

The initial fill layer over fabric layers shall not be less than 8 inches (200 mm) or more than 12 inches (300 mm). Carefully end dump and push this lift on to the fabric. Spreading operations and equipment shall not cause displacement and damage to the fabric. Sharp turning movements are not permitted while placing the initial lift over individual fabric layers. Vehicles are not allowed to drive on the fabric. No lift may be started until the preceding lift is completed. Place and compact additional lifts in accordance with Section P-152 of the Standard Specifications.

Unless otherwise specified, all fill material placed in the zone from at least 8 inches (200 mm) below to at least 8 inches (200 mm) above any single or multiple layer geotextile installation shall be a granular material meeting the requirements as presented in the Plans and Special Provisions of the project.

METHOD OF MEASUREMENT

635-4.1 METHOD OF MEASUREMENT. Geotextile Fabric, Type SAS; Geotextile Fabric, Type MS; Geotextile Fabric, Type DF; Geotextile Fabric, Type SR; Geotextile Fabric, Type R; Geotextile Fabric, Type HR; and Geotextile Fabric, Type C; will each be measured by the square yard of surface area upon which the fabric has been placed and accepted in accordance with the Contract.

BASIS OF PAYMENT

635-5.1 BASIS OF PAYMENT. Geotextile Fabric, Type SAS; Geotextile Fabric, Type DF; and Geotextile Fabric, Type SR; and Geotextile Fabric, Type C; measured as provided above, will each be paid for at the Contract unit price per square yard, which price will be full compensation for furnishing, transporting, and installing the fabric; and for furnishing all labor, tools and equipment necessary to complete the Work.

Geotextile Fabric, Type MS; Geotextile Fabric, Type ES; Geotextile Fabric, Type R; and Geotextile Fabric, Type HR, measured as provided above, will each be paid for at the Contract unit price per square yard, which price will be full compensation for preparing the marsh area or foundation; for furnishing, transporting, and placing the fabric; and for furnishing all labor, tools and equipment necessary to complete the Work.

Standard Pay Items for Work covered by this Specification are as follows:

Pay Item P635-5.4	Geotextile Fabric, Type SR, per square yard
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Measurement and Payment will only be made for Pay Items included in the Schedule of Prices. The cost of all Work required by the Contract Documents will be included in the Pay Items contained in the Schedule of Prices.

STANDARD SPECIFICATIONS
ITEM P-635 GEOTEXTILE FABRICS

TESTING REQUIREMENTS

ASTM D 4595	Standard Test Method for Tensile Properties of Geotextiles by the Wide-Width Strip Method
ASTM D 4632	Standard Test Method for Grab Breaking Load and Elongation of Geotextiles
ASTM D 4491	Standard Test Methods for Water Permeability of Geotextiles by Permittivity
ASTM D 4751	Standard Test Method for Determining Apparent Opening Size of a Geotextile
ASTM D 4833	

END OF SECTION