Project No. 070408	Sale Date - 8/29/2007

Question Submitted: 8/20/2007 Question Number: 1

Deitering Landscaping Inc.6700 RD 5Leipsic, Ohio 45856To whom it may concern. In addition to our questions on the ODOT 070408 project and bid, we have compiled the following list of concerns, facts, and opinions for reference and to help aid in the understanding of why so many questions and concerns were submitted. The 070408 project's overall scope is complex to say the least, and the terms of acceptance rather stringent, a fact that I am sure all who are involved in this project are well aware.1. Watering. There is a profound watering requirement for the prairie areas, to mandate 1" per week from May to October in the first year, and a half-inch per week in the second growing season. This requirement, combined with the substantial amount of hose and the restriction of driving on the seeded areas, dictates that a large amount of logistics. management, and manpower be applied to the cost analysis equation. An additional concern here is how to water the narrow shelves along the sound walls. It can be done, of course, but it will take some very careful number crunching. 2. Decline during Maintenance. Any "Decline" during the maintenance period shall receive "immediate action" and "to undertake corrective measures." These terms are arbitrary to say the least and open to interpretation by the project engineer. Because the contract is performance based, and all burden of proof is on the contractor, it seems prudent that a more clear and concise definition of acceptance be written that would be a consensus of input from both parties. Perhaps also, an independent third party expert could be employed to help draft these new guidelines and to arbitrate any misunderstandings in expected results of this high risk endeavor. These "misunderstandings" will occur. For example, many of these seeds will not germinate in the first growing season. By the current specifications, this would indicate a failure on the contractor's part. This is but one example. The following paragraphs will bring out additional concerns on the issue of what constitutes compliance and acceptance. Hand-wiping of Herbicides. A mutual close examination of the entire length of the to-be seeded areas is also recommended to make certain that profuse, existing quack grass, Canada thistle, and other unacceptable and invasive weeds are not present. The big cloverleafs at Manhattan could be very problematic. 4. Warm Day Herbicide Restriction. The spec prohibits the application of herbicides at air temps higher than 75 degrees F, to prohibit "drift" or voliatization. This is a needless but complicating factor which has to be factored into project costs. 5. Mowing Concerns. The "mow back to 3-inches" and "mow back to 6-inches" specs are OK. But mowing to these heights on the steep, sloped shelf lengths along the noise walls could be problematic. One isn't going to merely drag a flail mower behind a tractor on these areas. (Seeding of these areas presents similar mechanical problems). 6. Seed Depth Specs. The seed depth specs are between 0.25 and 0.50 inches. Modern practice would indicate no seed depth, requiring the seeds to be deposited and incorporated into the soil surface. The fact that many of these seeds are extremely small and light and proper practice would put them on or about the surface, indicates that some form of mulching would be valuable in this situation. In addition, much of the proposed work area is sloped and erosion control of some type is indicated here, not only to control washouts, but to assist with the placement and retention of this very fragile seed. 7. Final Performance Specifications Concerns. There shall be "no weeds present" at the end. Again, our experts inform us that a prairie seeding project of this scope and magnitude will not be able to achieve this at the end of the second growing season. There will always be a few foxtails and other annual grasses and a few dandelions and other blown-in "weeds." If strictly enforced, this could be a project killer. The specification should have referred to long-lived and aggressive perennial weeds, such as Canada thistle, but it does not. In addition, the "no bare spots greater than 6-inches in diameter over 5% of the overall seeded area" is equally difficult. On the Castalia Prairie, Ohio's most pristine, virgin prairie, at least 25% of the ground is "bare." Prairies don't create a closed sod. The plants grow in a clump form, with open soil between the plants. Again, this will all depend upon how the enforcement officer measures and understands what the term "bare" is to mean. It should mean that unvegetated soil surfaces that are over-arched and covered above with stems and leaves of adjacent grasses and forbs count as being "covered." That's the way it is on mature prairies. The presumption here is that at the end of two growing seasons the prairie areas will be mature and closed in. It is our firm belief that in the two year acceptance period, this will not happen.

But even if this specification definition is implemented, it still might be a problem on the "short grass" where the three "short grasses," little bluestem, sideoats gramma, and prairie dropseed are the dominants. None of these grow to maturity in two growing seasons. Large interstitial openings may still be present at the end of the second season. This then, brings to light, additional acceptance terms. In areas found to be deficient, it is apparently required that re-seeding be accomplished by total site prep again as at the beginning, with herbicide sprays, shallow tillage, and mechanical seeding. This makes re-seeding of deficient areas a four year project instead of a two year project. Proper over seeding and mechanical seed incorporation into the soil surface should be allowed in such cases. 8. Many Specified Species Can't Grow or Persist. A close review of the specified species, based upon our own research and consultation with experts within the discipline of Ohio prairie plants, reveals that a significant number of plants that simply will not grow or establish themselves along I-280. Specifically, these include the following. In the Short Grass grass mix, inclusion of prairie dropseed is most unfortunate, for three reasons. It is 1) not native to northem Ohio, 2) does not grow or persist in clay soils, and 3) takes as long as seven years to reach maturity. It's not found in the region; it dies out in heavy soils, and grows very, very slowly. It would not be seen until the third or fourth year, and then only in short leafy clumps – before it dies out. In addition, our suppliers have indicated that this specific specie is not available in sufficient enough quantities for the 07-08 season. In the short grass forbs mix, a large number of species are problematic.

Canada milkvetch is not native to Ohio and almost surely will fail in the heavy soils of the site. Lance-leafed coreopsis has been attempted on Lake Plain soils repeatedly, and in every case the plant disappears in two or three years (if it even survives its first seedling year). Purple prairie clover is not native and will not grow or persist in the local soils. It will not be found in the second or third year. The inclusion of shooting star is enigmatic. Even if it could be established, it would never be seen by a single motorist passing on I-280, even at the slowest speeds. It is a very small flower, and cannot grow in the local soils which lack fertile humus. After seeding, this species will never be seen again. The gentian that is included will be never seen by passing motorists. It's too small and won't grow in the local soils. Same for the bedstraw species. The included St. John's Wort is an unknown species here. How it will fare is unknown. Pale beardtongue is not likely to do well in the local soils.

Royal catchfly is stunning in its beauty, and if it can be established, would be a noted member of the prairie, even at 65 mph. But it is not native to northern Ohio because it does not persist in heavy soils. It is very likely to quickly disappear. Aromatic aster is unknown in Ohio prairie restorations. It may or may not survive. Ohio spiderwort is a local native, and in May and June is very beautiful. But it absolutely requires sandy or silt soils, which aren't along I-280. The chances of this species survival are very low. Several tallgrass forbs mix inclusions are problematic. Canada milkvetch is non-native is unlikely to thrive in the local soils. White false indigo is not native to Ohio. It will fail. Purple coneflower is stunning in beauty, but it, too, is not native to northern Ohio. It dislikes heavy soils, but may persist on all but the heaviest local soils once planted. Questionable. Smooth phlox is unknown locally. How or if it might survive is unknown. Heart-leaved golden alexanders are extremely rare in Ohio. A virtual unknown in prairie creations in the state. Very likely not to thrive or persist. In the swale mix, the American bellflower is an unknown in Ohio. It may not grow or persist here. The indicated ironweed species, Vernonia fasciculata, is western ironweed, known from only a few dry prairie sites in Ohio. It surely will die out in the wet swales. The common local ironweed, V. gigantea, should have been specified. It would thrive. \*\*\*\*\*\*

Question Submitted: 8/20/2007

**Question Number: 2** 

Questions pertaining to the PLANTINGS - 18/59 - How many seasons are we required to spray the evergreens? Are the 5' Autumn Blaze Red Maple to be supplied as whips? Can the 1 1/2" Cal. & 18" Ht. material be supplied in container form?Can the Oak trees be planted in the spring as recommended by the suppliers?Can a substitution be made for Eastern Red Cedar? Will the watering be paid for on a per fill basis? Are all trees spec'd suitable for a Zone 5B Hardiness region?Questions pertaining to the SEEDING - Have any sensitivity tests been done between herbicide and exotic seed? I.E. are all the components of the prairie seed mix labeled for herbicide spraying? This would include the 2-4D, Roundup, and Plateau.Under maintenance, the terms, "decline", "immediate action", and "undertake corrective measures", are vague and are open to interpretation. A more specific definition of these terms is necessary, as is a plan of action geared toward the consensus of the owner, and the contractor. Can this issue(s) be more concise? Because the contract is performance based, and the maintenance of this project is one of the largest factors in the overall success of the planting and seeding; It is our view that a lot more specificity would be prudent into this matter. Can the herbicide application dates for the prairie seeded areas be moved ahead to increase planting window, thus providing a better chance of success for the project? If this project begins in SP08, will one application of Roundup be sufficient?If not, can the 30 day window be shortened?Does prairie grass go into the forbs area to exist congruent with the forbs. If so, is it sowed at 1/2 of the normal rate or 1/2 rate and seeded twice? Why is the prairie seed mix not receiving any mulch? Is has been suggested by the suppliers that at least either a light layer of straw or some kind of erosion control blanket be put down. This is to reduce the risk of wash outs and also to keep the seed in place. They have also stated that the seed has been spec'd to be sown at a depth that may not be the industry standard anymore and have it sown closer to the surface of the soil. Is prairie grass watering needed during season 2? If, yes, will it be paid for? Who will determine the decline in the seeded areas, if it would occur? Who will determine the corrective course of action?Is it required to apply Plateau? Many suppliers and experts feel this is a very risky method of controlling the non-native and invasive material. Is Plateau to be applied by the weed wiper method? Can a more comprehensive list of unacceptable, non-native and invasive plants that will need to be controlled in the seeded areas, be provided? Will we be directed by the Project Engineer when it is necessary to mow? Mowing will be difficult, if not impossible on many of the slopes. How can we address this issue?If class 1 seeding is delayed until SP08, will the 8 scheduled mowings still be necessary?Who pays for them?Can the seed depths be raised from the specified 0.25 - 0.50 inch range to 0.00 to 0.25 inches? Research and consultation with established and credentialed experts prompt this question. If class 1 seeding is delayed to SP08, is the second application of fertilizer needed? Who pays for the second fertilizer application? Questions pertaining to the GENERAL PROJECT - Is there any additional or more clear information available concerning the Clearing and Grubbing? Have all trees been marked for removal? Is it necessary to remove via grinding, all stumps, regardless of size?Will there be any vegetation on any chain or border fence that needs to be removed?Can the contractor stage equipment on ODOT's nearby lot? If not, are there any secure lots available nearby for equipment and material storage?When is the law enforcement vehicle and officer required? Is the LEOS needed during crossing from one side of the highway to the other? What is the 2-4D rate for off road? At what location will the rainfall to be measured? Is final acceptance technically Spring 2010? Has the state already obtained the soil testing of these areas to receive seeding and plant material?You have stated with Addendum #1 that this is a "Federal Oversight Project." What does this mean? Does it pertain to us in anyway, ie. Bid calculations, regulations etc? Will there be a bonus if we complete the work before the milestones placed within the project? Prior to construction, were there invasive and undesirable weeds established that could become an issue? Where is the haul route located for the Front Street and Summit Street trench fill?Which version of the CPM software is required, P3 or Suretrack?

Question Submitted: 8/22/2007

**Question Number:** 3

On Sheet 7 of 59 Item 201 Clearing and Grubbing shows (3) trees to be removed on Sheet 34. On Sheet 34 of 59 there are only (2) trees shown to be removed. Could you please clarify this?

Question Submitted: 8/22/2007

Question Number: 4

Shrubs are shown with the condition of "Balled and Burlaped". Can the contractor use shrubs with the condition of "Container" provided the height and width of the plant is equal or greater than what is given in the schedule?

Question Submitted: 8/23/2007 Question Number: 5

In the item description of the landscaping, on line 0035 the Autumn Blaze Maple. Are you meaning the tree be 5' and 1" in diameter. There is no way you will find a 1 gallon container that is 5'.

<u>Question Submitted:</u> 8/24/2007 <u>Question Number:</u> 6

On sheet 28 at the top of the sheet there are two trees that are not labeled. Can you tell me what they are? or just to not include them in our bid? The two trees are above the PC STA 5+450.5041. Between 1 NS & 4 CV.On sheet 23, the balck Tupelo only shows a total of 9 but you have a total of 15. Am I missing something? Are there supposed to be more somewhere?On sheet 24 Plant subsummary, it says there are 6 Shumard Oaks on sheet 43. I do not have a sheet 43. Is there one?

Answer-the two trees in question are Eastern Redcedar and are part of the 5 Jv that are on either side of the Black Tupelo at Station 5+28.53. Answer 2-bid the Black Tupelo quantity as listed in the Proposal for Reference 0042-Fifteen (15). Answer 3-bid the Shumard Oak quantity as listed in the Proposal for Reference 0042-Eight (8). Sheet 43 was "Not used" as shown in the Index of Sheets on Sheet 1/59

Project No. 060486 Sale Date - 12/13/2006

<u>Question Submitted:</u> 10/18/2006 <u>Question Number:</u> 1

Where is the closest water source?

Is there enough topsoil on site available to be used? If not, is there anywhere within the rest of the Maumee Crossing project that topsoil can be used from?

You have a Autumn Blaze Red Maple listed at 5' Ht. Cont. These trees are normally sold by caliper. And do you still want it in a container or B&B?

You have a Eastern Redbud at 1 1/2" Cal. B&B. This tree is normally sold by height. And do you still want this tree in B&B form or will container be ok?

You have a River Birch listed as a 1 1/2" Cal. B&B. This tree is normally sold by height because it is a multi-stem. Do you want a single stem or multi-stem plant. If multi-stem is wanted what is the height?

Are all the seed mixes spec'd to be PLS? If so, can ODOT check that the tables are per PLS?

The Class 5B-Shortgrass Drift Mix totals are off. The % of Mix you have at 100 but my calculations add up to 103.9 and the Oz./1000 SF you have at 5.178 and my calculations add up to 5.204. Please advise.

The Class 5B-Tallgrass Drift Mix totals are off also. The % of Mix is ok but the Oz./1000 SF is off, you have 5 and I added it up to be 6.32. Please advise.

The Class 5B-Swale Mix - the % of Mix is ok but the Oz./1000 SF you say adds up to 9.04 and I have it adding up to 6.32. Please advise.

I wanted to make sure the only mixes that will have a cover crop of oats are as follows: Class 4B - Shortgrass Mix Class 4A - Tallgrass Mix Class 5B - Swale Mix.

What happens to our schedule if the road improvements are not completed within a reasonable amount of time as stated on sheet 07/59?

On sheet 59/59 it talks about two gates by contractor. Are we to supply and install these?

#### Question Submitted: 11/1/2006

Question Number: 2

- 1. For the linear Grading, will the contractor be responsible for removal and disposal of all material?
- 2. What is the typical section for the linear grading Method B? Stone depth? Asphalt Depth?
- 3.Linear Grading Method A and Topsoil requires crossing the bike path to get material in and out. Near Buckeye Street there is currently access. Will this access be paved for the bike path before the landscape project begins? Could it be delayed until the linear grading is complete? Should the contractor consider damage to the bike path during construction? Can you provide a X-Section for the bike path?
- 4.Linear Grading, Method B calls for 231 stations (23,100ft). On sheet 26/59 it shows only 6,505ft. Which quantity will be used for payment? How will this be measured and paid?
- 5.Sheet 6/59 shows topsoil only going where the lawn grass area is required. It calls for 17,940cy on the quantity sheets. If you look at sheet 25/59 it calls for 82,199sy of Class 1 lawn mixture. 82,199sy X 6inches = 13,699cy. Is the topsoil over stated?

#### Question Submitted: 11/15/2006

**Question Number:** 3

These Question pertains to Line Item 002 & 003 Linear Grading Method A & B:

- 1. Since these line items are paid at a STA unit rate, are you going to make Electronic CAD Drawings (with existing and design elevations) available for the contractor to be able to determine a CY Volume to be moved?
- 2. Has this CY Volume already been determined? if so, what is the CY Volume?
- 3. Also, does the Typical Section shown on Sheet 6 of 59 apply to both of these Grading line items (Method A & B)?

Question Submitted: 11/16/2006 Question Number: 4

- 1. Is there a detail available for Method B Linear Grading?
- 2. In the event of a failed Perk Test, specifically on existing subgrade material prior to topsoil installation per Sheet 11 of 59 Preparation of Subgrade, the contractor is required to loosen the top 18" of subgrade. How will this be quantified and how will the reworking of the existing subgrade be paid?
- 3. Is it the intent of Linear Grading line item to remove the top 6" over the entire project area, dispose of the material off site, and reinstall 6" of topsoil ?
- 4. We would like to clarify if 6" of topsoil is required to be placed prior to each individual seed mixture shown by the various x-hatchings on sheets 27 of 59 thru 57 of 58 ?
- -Does the Short Grass Drift Mix require topsoil placement?
- -Does the Tall Grass Drift Mix require topsoil placement ?
- -Does the Short Grass Mix require topsoil placement ?
- -Does the Tall Grass Mix require topsoil placement ?
- -Does the Lawn Seeding require topsoil placement?
- -Does the Swale Mix require topsoil placement ?

<u>Question Submitted:</u> 11/22/2006 <u>Question Number:</u> 5

Part III - 11/21/06

Question PB Q1-10 pertained to oaks/Quercus not oats. Can this question be clarified based on oaks/Quercus? To restate the question. 'Another issue is there's some OAKS on here which tend not to take fall planting real well versus spring. I just

wondered if there'd be some latitude there as far as holding off on some plants that won't take fall planting as well and planting those in the spring'?

Are we obligated to get our seed mix from the seed suppliers that you listed in addendum #1? FYI we have contacted these suppliers as well as others and we

have been unable to find a seed supplier that provide a full quote as per your spec.

I believe there still needs to be a clarification to the bid documents on the Blue Rug Junipers. Based on the following Blue Rug Junipers

are not sold based on height but on spread. Per ONLA's website they base their sizes on a

"Size Designation chart - Sizes for each plant listed are designated based on the following - Shrubs and Evergreens-listed on the basis of spread OR height in inches and feet". I have also found reference to Blue Rug Junipers in Michael Dirr's book titled Dirr's Hardy Trees and Shrubs. On Page 210 he states that they grow to be 1/3 - 1/2 feet high and 6 - 8 feet wide. There isn't any

reference to a 12" Height in Dirr's book. And it is probable that there is no such thing in this size. This must be addressed and changed

in the bid documents.

We would like to revisit the question concerning the availability of the Eastern Redcedar/Juniperus virginiana. After receiving the addendum we visited the ONLA

website and found that they did not have any nurseries reporting that they have these in kind or size asked for in stock. We also checked Michigan In our

Landscape and Nursery Assoc. and we were unable to locate any there. They suggested calling KY, TN, NJ or Virginia. In our experience of just this

past year we have had to locate hundreds of these trees and have only been able to locate them in Tennessee/Zone 6. Again from the pre-bid meeting

Mr. Leary stated on page 10 line 5 & 6 that "we will work with you to find those."

You answered my question(Q1-3) about the height of the Autumn Blaze Maple in addendum #1 by stating you were wanting them in the form of a whip. It is my

understanding that whips are normally sold as bare root material and not rooted in containers. Will it be acceptable if we planted these as

dormant, bare root material or branched, potted material?

Per Q1-33 of addendum #1. The aerating of the steep slopes, that are not able to be aerated by machine are then to be done by hand. What is an acceptable

procedure for aerating the areas by hand?

The preparation of subgrade for topsoil per ODOT 659.10 - Will the removal of the existing grade and vegetation in the linear grading be paid under topsoil,

clearing and grubbing or linear grading?

Per addendum #1 you stated that we would have access to a trailer site and a 1/2 acre site for staging. Is there a charge for this and are we to supply two

field offices one for ourselves and one for the state and if so, is it a pay item?

According to addendum #1 you stated that the work on Sheets 42 and 45 was to be removed from this project and would be completed under another

contract. But when going through the plan sheets included in addendum #1 there was a new plan sheet for 45. So are we to remove both

sheets 42 and 45 or just 42 and include the new 45. Please advise, what are you wanting us to do.

Is Line Item 12 - Repair Seeding and Mulching, as per plan to be used for all seeding types?

In regards to the seeding schedule (sheet 14/59 - 1st column - 7th paragraph) are you considering Tall Grass Drift Mix, Short Grass Drift Mix, Short Grass Mix,

Tall Grass Mix and the Swale Mix to be prairie seeding?

What hardiness zone map are you using?

Please clarify the 9th paragraph - in the 1st column on sheet 12/59. Pertaining to the application of erosion control blanket in the event that the seeding is

not completed by Oct. 1st. I don't quite understand the timing since on sheet 14/59 - 1 st column - 7th paragraph - you have a seeding

schedule based on the dates of November 15 - December 31 and March 15 - June 1.

On sheet 14/59 - 2nd column - 4th paragraph - You spec straw to be put down in the areas that are to be pneumatic seeded. Is this necessary?

On sheet 14/59 - 1st column - 2nd paragraph- You have spec'd that herbicide spraying in the prairie grass areas are to be done between May 15 - October 1. Then in paragraph 9

1st column - sheet 12/59 you have the dates for seeding of the prairie grasses to be done March 15 - June 1 and November 15 - December 31. If you want

the herbicide sprarying done at a minimum of 30 days and a maximum of 45 days that would leave us to do all the seeding in the fall. It is my

experience that things start to green up in March, which then we could do our first application at the end of March and still be able to meet the June 1st

deadline for spraying.

What depth of compost is to be placed on the 2:1 slopes?

#### Question Submitted: 11/7/2006

**Question Number:** 6

The completion date in the specifications show October 15th. 2008 what will the actual start date be for the landscape construction and completion date.

#### Question Submitted: 12/5/2006

**Question Number:** 7

In both sections of erosion control and landscaping there are respectfully, per the addendums, 4,102 MGal or 4,102,000 gallons of watering, and 3,100 M Gal or 3,100,000 gallons of watering. This is an enormous amount of water costs and even though the specifications set out that there is a certain amount of rainfall per week that will allow for this watering to not occur, to have to put the cost of this watering into the bid is actually more than the seeding or landscape plants themselves. This is surely going to cause great differences in companies bidding and usually ODOT does not bid these kinds of quantities for that express reason. Particularly with the planting and seeding season being specified as being in the spring or fall months and these months are very rainy and have plenty of water to handle the seeding and plants.

So, can there be a reduction in the quantities of the amount of millions of gallons of water in an attempt to make the bids more equal?

#### Question Submitted: 12/5/2006

**Question Number:** 8

Per addendum #3 you supplied Tom Kistner at Neville Landscape & Tree Service as a supplier of the Eastern Redcedar. After reaching him today (12/5/06) he has informed me that he does not grow these and is only able to locate them through another supplier out of state. Do you have another supplier that grows the Eastern Redcedar in Zone 5B or colder?

#### Question Submitted: 12/5/2006

Question Number: 9

Per Sheet 12/59, paragraph 9, the plans state that blankets or netting is to be installed over the winter to prevent topsoil degradation and movement at no additional cost to the owner. This may be a significant amount of material. The April 25th 2006 version of the 832 supplemental specifications lists blankets or netting to be paid under item 832.08 "F" Slope Protection or 832.08 "G" Ditch Protection. There are also other options to pay for winterizing the topsoil such as 832.08 "D" Construction Mulch or "E" Winter Seeding and Mulching. Would ODOT consider compensating the contractor for this blanket? If so, under which item will this winter blanket be paid?

Can B&B plant material be substituted for the container grown plant material and vise versa (container grown plant material substituted for B&B) as long as it reaches the required size listed in the plans?