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**“If Contractors were in control, how would we do it differently?”**

- **Moderator:**  
*Vince Ricciuti, Con Drain Group*
- **Panelists:**  
*Julia Risi, SCS Consulting Group*  
*Robert Pocrnic, TACC Construction*  
*John Currey, Earth Boring*

# COMPARING CURRENT SYSTEM TO PROPOSED



**Incandescent Light Bulb**



**LED Light Bulb**

Cost of Lights	\$1.00	\$4.50
Light bulb projected lifespan:	1,200 hours	50,000 hours
Watts per bulb (equiv. 60 watts)	60	10
KWh electricity used over 50k hrs	3,000	500
Bulbs needed: 50k hours of use	42	1
Cost of electricity (0.10per KWh)	\$300	\$50

# EXAMPLE OF CURRENT ENVIRONMENTAL SPECIFICATIONS

## **SC 6. PENDING PERMITS OR APPROVALS**

The Region is in the process of obtaining the following permits or approvals for the Works described below:

- (a) Environmental Activity and Sector Registry (EASR)
- (b) Drinking Water Works Permit (DWWP)- Form 1- Record of Watermains
- (c) O. Re. 166/06 TRCA Work Permit for Robinson Creek Crossing
- (d) Letter of Advice from the Ministry of Natural Resources and Forestry

Copies of these permits and/or approvals will be provided to the Contractor once they have been obtained. The permits and/or approvals will form part of the Contract Documents and the Contractor shall be required to comply with the requirements of all permits and approvals at no additional cost.

Copies of the permit and approval applications have been provided with the tender documents for the bidder's reference, however, the final permits and approvals may contain requirements which are different from, or additional to, those included in the applications.

The Contractor shall not be permitted to commence any Works for which a permit or approval is required until such time as the permit or approval has been obtained by the Region and provided to the Contractor.

The Contractor is advised that, in the event that the Region encounters delays in obtaining the permits or approvals, any Works for which a permit or approval is required may be deleted from the scope of Work under the Contract, or the Contract may be terminated in its entirety. The Contractor shall not have any claims for delays, on the part of the Region, in obtaining the permits or approvals, or any claims in the event that any Work is deleted from the Contract or the Contract is terminated because a required permit or approval has not been obtained by the Region.

# SO WHAT IS WRONG WITH THIS LANGUAGE?

- The permits have **not been provided** to the Contractor up front, at the time of tender
- While copies of the applications have been made, these **may not** contain the final permit conditions
- **Contractor must comply with these permits, at no additional cost**
- How is the Contractor expected to anticipate potential conditions or requirements within a final issued permit?
- By not having the conditions up front, this poses **risk** to the Contractor
- If final permits have not been provided, provide a cash allowance or contingency for any additional monitoring as a result of permits to be obtained post-tender

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- How is the Contractor expected to anticipate potential conditions or requirements within a final issued permit?
- By not having the conditions up front, this poses **risk** to the Contractor
- If final permits have not been provided, provide a cash allowance or contingency for any additional monitoring as a result of permits to be obtained post-tender

## FURTHER EXAMPLE OF CURRENT ENVIRONMENTAL SPECIFICATIONS

- a) Obtain all necessary approvals and permits prior to undertaking the Work for compliance with all codes and standards, including, but not limited to, any applicable requirements of the Toronto Regional Conservation Authority (TRCA), Ministry of Environment and Climate Change (MOECC), Ministry of Natural Resources and Forestry (MNRF), Fisheries and Oceans Canada (DFO), the Ontario Water Resources Act (OWRA), and Transport Canada (TC).



# WHAT SHOULD THE LANGUAGE LOOK LIKE?

- **No permits have been obtained** for the project, pre-tender
- By putting the responsibility to secure all permits on the Contractor, the Owner is **downloading responsibility and risk**
- Securing various permits may result in significant **delays** to the start of the project
- It will also result in significant added **risk** and potential **cost** to the bid item
- It also leaves open to interpretation – how much will securing these permits cost?  
How long?
- Are any of these permits even applicable?



# WHAT SHOULD THE LANGUAGE LOOK LIKE?

- SECTION C - EROSION AND SEDIMENT CONTROLS To provide all labour, materials and plant required to construct complete, the following erosion and sediment controls according to the drawings, specifications and as described herein
- Sediment Control Fence
  - Supply and install sediment control fence as per OPSD 219.130
- Double Silt Fence - Straw Bales
  - Supply and install double silt fence spaced 1.0m apart. As per OPSD 219.130 with straw bales staked in between
  - Supply and install double silt fence spaced 1.0m apart. As per OPSD 219.130 with straw bales staked in between. Fence to be installed once permit is received from MNRF and timing window is open
- Berms
  - Construct Berms as per detail on DWG 610 (with topsoil) Supply and install Single Straw erosion mat staked in place on berm side slopes.
- Swales
- Construct Cut-Off Swales as per detail on DWG 610 Protect Side slopes with Erosion Mats [Terrafix Single Straw Blanket (S100B) or approved equivalent] as per spec on DWG 611
- Hydroseed with Mixture of Nurse Crop Oats or Annual Rye

# WHAT SHOULD THE LANGUAGE LOOK LIKE?

- CONSTRUCTION FENCE - 300M HERONRY BUFFER
  - SUPPLY AND INSTALL CONSTRUCTION FENCE AS PER DETAIL ON DWG 610
- CONSTRUCTION FENCE - 400M HERONRY BUFFER
  - SUPPLY AND INSTALL CONSTRUCTION FENCE AS PER DETAIL ON DWG 610
- CONSTRUCTION FENCE - 500M HERONRY BUFFER
  - SUPPLY AND INSTALL CONSTRUCTION FENCE AS PER DETAIL ON DWG 610
- CULVERTS
  - SUPPLY AND INSTALL 500MM DIAMETER CSP CULVERT
- ROCK CHECK DAMS
  - SUPPLY AND INSTALL ROCK CHECK DAM AS PER OPSD 219.211. PRICE TO INCLUDE REMOVAL AFTER THE COMPLETION OF THE EARTHWORKS PROGRAM.
- SCARIFY AREA
  - SCARIFY STRIPPED SURFACE BY RUNNING TRACKED EQUIPMENT UP AND DOWN SLOPES AS REQUIRED. SCARIFICATION IS TO BE DONE AS PER INSTRUCTIONS ON DWG 611

# WHAT SHOULD THE LANGUAGE LOOK LIKE?

- HYDROSEED WITH MIXTURE OF NURSE CROP OATS OR ANNUAL RYE.
- FILTREXX CHECK DAM (200MM)
- SUPPLY AND INSTALL 200MM FILTREXX SILT SOXX TO BE PLACED EVERY 6M ON SLOPES. PRICE TO INCLUDE PERIODIC INSPECTION, DURING THE DURATION OF THE EARTHWORKS PROGRAM. REFER TO DWG 611 FOR INSTALLATION INSTRUCTIONS.
- BERMS
  - CONSTRUCT BERMS AS SHOWN ON DETAIL ON DWG 610 (WITH TOPSOIL)
  - SUPPLY AND INSTALL [TERRAFIX SINGLE STRAW BLANKET (S100B) OR APPROVED EQUIVALENT] AS PER SPEC ON DWG 611 STAKED IN PLACE ON BERM SIDE SLOPES
- SWALES
  - CONSTRUCT CUT-OFF SWALES AS SHOWN ON DETAIL ON DWG 610
  - PROTECT SIDE SLOPES WITH EROSION MATS (TERRAFIX SINGLE STRAW BLANKETS OR APPROVED EQUIVALENT)
  - HYDROSEED WITH MIXTURE OF NURSE CROP OATS OR ANNUAL RYE
- ROCK CHECK DAMS
  - SUPPLY AND INSTALL ROCK CHECK DAM AS PER OPSD 219 .211. PRICE TO INCLUDE REMOVAL AFTER THE COMPLETION OF THE EARTHWORKS PROGRAM.

# WHAT SHOULD THE LANGUAGE LOOK LIKE?

- SEDIMENT TRAPS
  - CONSTRUCT SEDIMENT TRAP AS PER OPSD 219.220. PRICE TO INCLUDE SIDE SLOPE GRADING AND ROCK CHECK DAM.
  - FILTREXX CHECK DAM (300MM) - SEDIMENT TRAPS
  - SUPPLY AND INSTALL 300MM FILTREXX SILT SOXX. PRICE TO INCLUDE PERIODIC INSPECTION, DURING THE DURATION OF THE EARTHWORKS PROGRAM. REFER TO DWG 611 FOR INSTALLATION INSTRUCTIONS.
- STAGE II - PREGRADE
- CULVERTS
  - EXTEND EXISTING 500MM CSP CULVERT BY 3M UNDER MUD MAT
  - SUPPLY AND INSTALL 500MM DIAMETER CSP CULVERT
  - REMOVE AND DISPOSE OFF-SITE OF CSP CULVERTS NEEDED BETWEEN STAGE 1 AND STAGE 2
- SEDIMENT TRAPS
  - CONSTRUCT SEDIMENT TRAP AS PER OPSD 219.220 . PRICE TO INCLUDE SIDE SLOPE GRADING AND ROCK CHECK DAM.
  - FILTREXX CHECK DAM (300MM) - SEDIMENT TRAPS
  - SUPPLY AND INSTALL 300MM FILTREXX SILT SOXX. PRICE TO INCLUDE PERIODIC INSPECTION, DURING THE DURATION OF THE EARTHWORKS PROGRAM. REFER TO DWG 611 FOR INSTALLATION INSTRUCTIONS.
- SCARIFY AREA
  - SCARIFY STRIPPED SURFACE BY RUNNING TRACKED EQUIPMENT UP AND DOWN SLOPES AS REQUIRED. SCARIFICATION IS TO BE DONE AS PER INSTRUCTIONS ON DWG 611 .
  - HYDROSEED WITH MIXTURE OF NURSE CROP OATS OR ANNUAL RYE.

# WHAT SHOULD THE LANGUAGE LOOK LIKE?

- Growth Media Erosion Control Blanket
  - Protect disturbed area using 75mm Filtrexx growth media erosion control blanket, price to include Lockdown netting to be used on slopes greater than 3:1
  - Filtrexx Check Dam (300mm)
  - Supply and install 300mm Filtrexx Check Dam. Price to include periodic inspection, during the duration of the earthworks program. Refer to DWG 611 for installation instructions.
- Temporary Culvert Crossing
  - Double Silt Fence - Coir Logs
  - Supply and install double silt fence spaced 0.3m apart. As per OPSD 219 .130 with Coir Logs staked in between, refer to detail on DWG 610.
- Mud Mat
  - Supply and place 50mm diameter crusher run limestone, 300mm thick on top of existing driveway.
  - Supply and install Terrafix 270R Filter Cloth placed along the existing ground and wrapping around Jersey Barrier and plywood. Refer to DWG 615 for details and area.

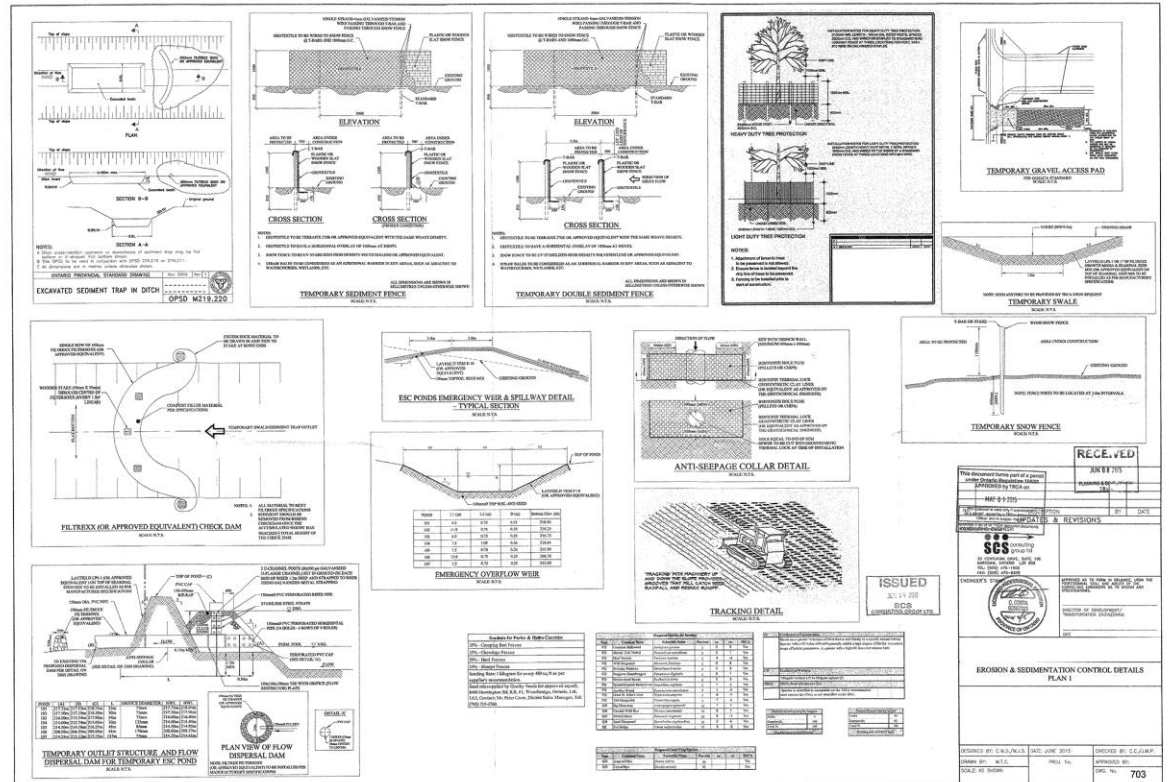
# LEVEL OF DETAIL



ITEM NO.	DESCRIPTION	ESTIMATED QUANTITY	UNIT	UNIT PRICE	AMOUNT
<b>Stage 1 Works</b>					
6	Snowfence as specified and/or where directed as per details on Drawing 703.				
a)	Installation.	250.0	m		
b)	Removal and disposal off-site to Contractor's Approved Disposal Site.	250.0	m		
7	Double row sedimentation control fence with filter cloth as per details on Drawing 703.				
a)	Installation.	3200.0	m		
b)	Removal to Contractor's Approved Disposal Site, including all necessary surface restoration.	3200.0	m		
8	Sedimentation Control Fence with filter cloth as per details on Drawing 703.				
a)	Installation.	3490.0	m		
b)	Removal and disposal off site to Contractor's Approved Disposal Site, including all necessary surface restoration.	3490.0	m		
9	Temporary sedimentation trap with Filtrexx Soxx (or approved equivalent), as per details on Drawing 703 and per OPSD standard M-219.220.				
a)	Installation.	2.0	each		
b)	Removal of trap and accumulated silts off-site to Contractor's Approved Disposal Site, including all necessary surface restoration.	2.0	each		
10	Temporary Sedimentation Control Pond #104 as per Drawing 701-1 and 703.				
a)	Excavate sedimentation pond, place and grade material where directed.	42700.0	m <sup>3</sup>		
b)	Install piping, outlet, flow dispersal, riser, emergency overflow weir, anti seepage collar, etc.	1.0	lump sum		
c)	Install inlet spillways consisting of 150-300mm dia. rip-rap placed 450mm deep.	340.0	m <sup>2</sup>		
d)	2" Filtrexx growth media.	200.0	m <sup>2</sup>		
e)	Maintenance during construction and completion of earthworks.	1.0	allow		
f)	Removal of items in part b).	1.0	lump sum		
g)	Subexcavate saturated material, load, haul and place on site where directed by the Engineer. <b>(PROVISIONAL)</b>	450.0	m <sup>3</sup>		
h)	Place engineered fill to pre-grade elevation as directed by the Engineer.	10000.0	m <sup>3</sup>		
16	Construct temporary swale as specified on Drawing 703 and per municipal/OPSD standard.	540.0	m		



# LEVEL OF DETAIL





# Committee: **L**eaders of **E**nvironmental **D**evelopment



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