

HAMILTON - PORT HOPE 4 SOLAR FARM

FARM

BALTIMORE, ONTARIO



SHEET 01	REHABILITATION AREA 1
SHEET 02	POND 5 DETAILS
SHEET 03	REHABILITATION AREA 2
SHEET 04	REHABILITATION AREA 3
SHEET 05	POND 1&3 DETAILS
SHEET 06	REHABILITATION AREA 4
SHEET 07	POND 10 DETAILS
SHEET 08	POND 10 REHABILITATION AREA
SHEET 09	EROSION AND SEDIMENT CONTROL PLAN
SHEET 10	CONSTRUCTION NOTES AND DETAILS
SHEET 11	PRE-DEVELOPMENT DRAINAGE PLAN
SHEET 12	POST-DEVELOPMENT DRAINAGE PLAN

MASTER REVISION LIST		
REV. #	REVISION	DATE
0	ISSUED FOR REVIEW	APRIL 20, 2015
1	ISSUED FOR TENDER	JUNE 09, 2015
2	REISSUED FOR TENDER	JUNE 23, 2015
3	REVISED AS PER COMMENTS	JULY 16, 2015
4	REVISED AS PER COMMENTS	JULY 28, 2015
5	PRE-MOECC SUBMISSION	SEPTEMBER 21, 2015
6	REVISED AS PER COMMENTS	NOVEMBER 06, 2015
7	REVISED AS PER COMMENTS	NOVEMBER 16, 2015
8	PRE-MOECC SUBMISSION	JANUARY 08, 2016
9	REVISED AS PER COMMENTS	MARCH 04, 2016
10	REVISED AS PER COMMENTS	MARCH 24, 2016
11	REVISED AS PER COMMENTS	APRIL 08, 2016
12	REVISED AS PER COMMENTS	APRIL 13, 2016
13	REVISED AS PER COMMENTS	APRIL 22, 2016
14	REVISED AS PER COMMENTS	MAY 10, 2016
15	REVISED AS PER COMMENTS	JUNE 10, 2016
16	REVISED AS PER COMMENTS	JUNE 24, 2016
17	REVISED AS PER COMMENTS	JUNE 29, 2016
18	REVISED AS PER COMMENTS	JULY 06, 2016
19	REVISED AS PER COMMENTS	SEPTEMBER 21, 2016
20	REVISED AS PER SITE COMMENTS	OCTOBER 14, 2016
21	REVISED AS PER SITE COMMENTS	OCTOBER 21, 2016

BENCHMARK:		
No.	DESCRIPTION	ELEVATION
1	X ON N.E. CORNER OF CONCRETE PAD	238.68
2	X ON N.E. CORNER OF CONCRETE PAD	251.43
3	X ON S.W. CORNER OF CONCRETE PAD	243.64
4	X ON S.W. CORNER OF CONCRETE PAD	240.70
5	X ON S.W. CORNER OF CONCRETE PAD	246.20
6	X ON N.E. CORNER OF CONCRETE PAD	234.90

BENCHMARKS PROVIDED BY MCINTOSH PERRY SURVEYING INC.

21	REVISED AS PER SITE COMMENTS	OCT/21/16
20	REVISED AS PER SITE COMMENTS	OCT/14/16
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15	REVISED AS PER COMMENTS	JUN/10/16

SEE MASTER REVISION LIST

No.	Revision/Issue	Date
Check and verify all dimensions before proceeding with the work. Do not scale drawings.		



1-1329 Gardiners Road, Kingston, ON K7P 0L8
Tel: 613-542-3788 Fax: 613-542-7583

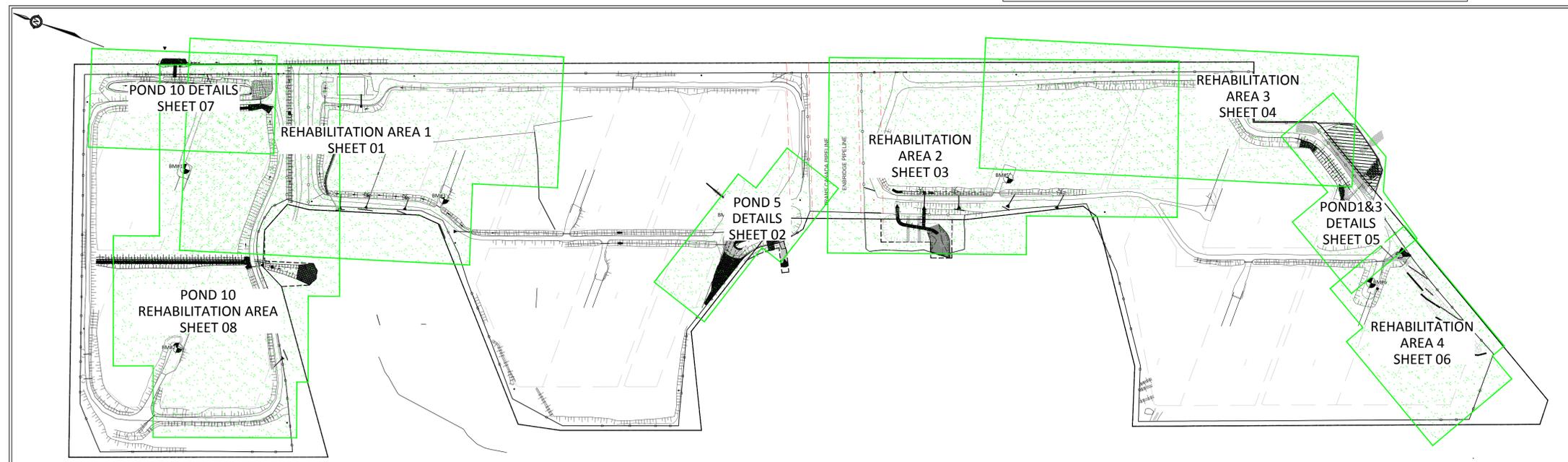
Stamp:	Stamp:

Client:
CANADIAN SOLAR SOLUTIONS INC.
545 SPEEDVALE AVE. WEST GUELPH, ON N1K1E6

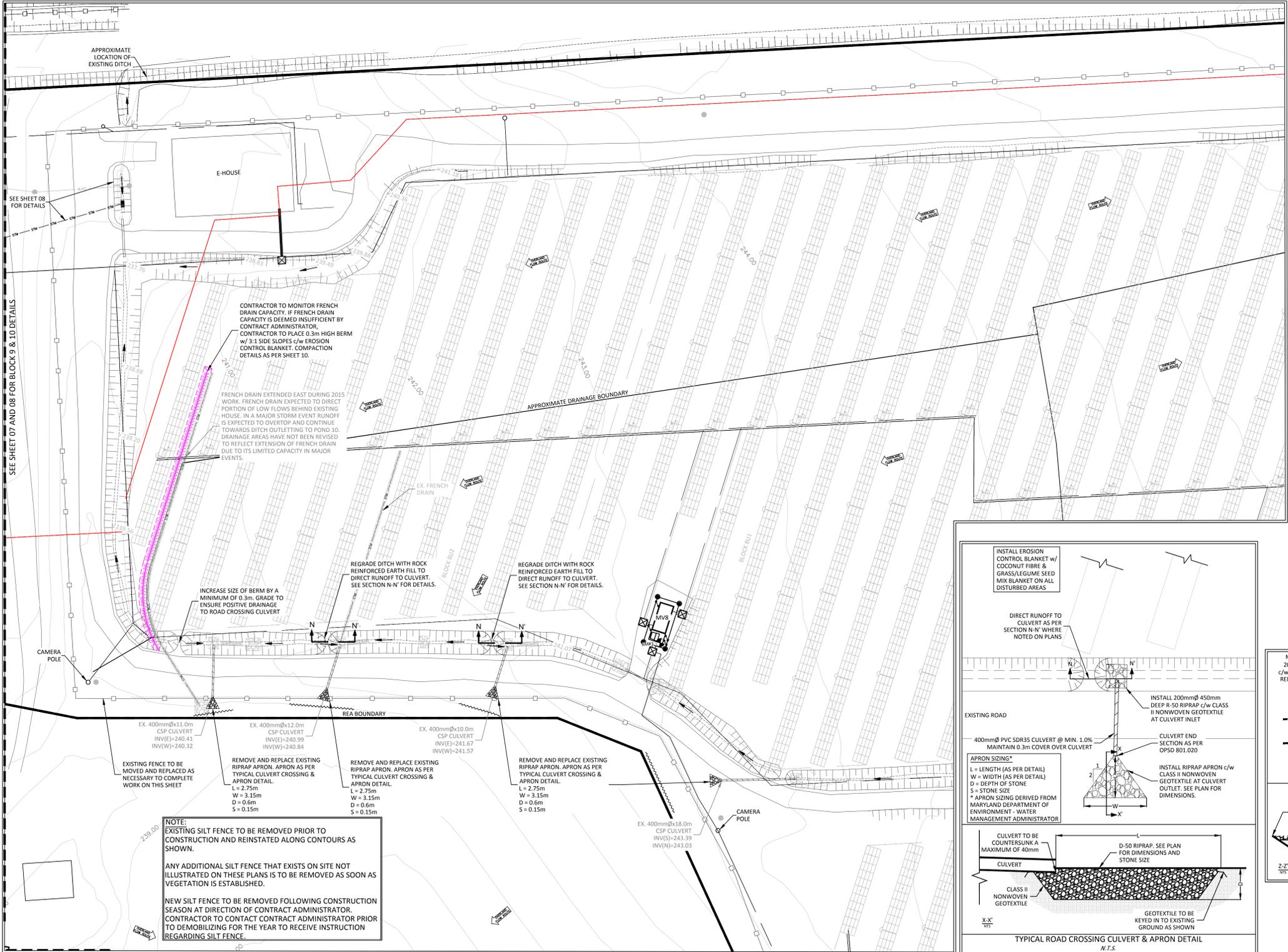
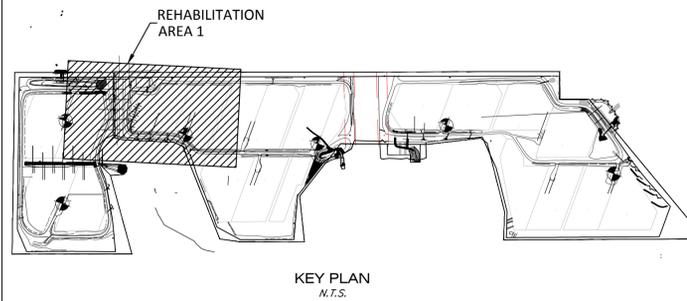
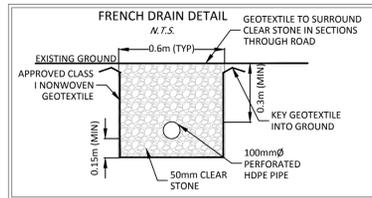
Project:
HAMILTON - PORT HOPE 4 SOLAR FARM

BALTIMORE ONTARIO
Drawing Title:
COVER SHEET

Scale: NTS	Project Number: PP-14-9580
Drawn by: D. LONGMUIR	
Checked By: A. O'CONNOR	Drawing Number:
Designed By: J. SHARP	SHEET of
Date: JUN/03/2015	



DRAWINGS TO BE READ IN CONJUNCTION WITH POST-CONSTRUCTION STORMWATER MANAGEMENT REPORT
BY MCINTOSH PERRY DATED JUNE 2015 REVISED SEPTEMBER 2016



NOTES:
 1. CONTRACTOR TO REINSTATE EROSION CONTROLS AS REQUIRED
 2. CONTRACTOR TO FIELD FIT EROSION CONTROLS AS REQUIRED TO MINIMIZE EROSION

LEGEND

PROPOSED TOP OF SLOPE	
PROPOSED TOE OF SLOPE	
PROPOSED ROAD	
EXISTING ROAD	
EXISTING ROAD (TO BE REMOVED)	
EXISTING UNDERGROUND CABLE	
ORIGINAL REA BOUNDARY	
PROPOSED REA BOUNDARY	
EXISTING ELEVATION	
PROPOSED 150mm Ø 450mm DEEP R-50 RIPRAP c/w CLASS II NONWOVEN GEOTEXTILE (EXCEPT WHERE NOTED)	
EXISTING FENCE	
PROPOSED FENCE	
PROPOSED SILT FENCE (AS PER HEAVY DUTY SILT FENCE DETAIL ON SHEET 09)	
BENCHMARK	

NOTE: THE LOCATION AND CONFIGURATION OF PROPOSED AND EXISTING UNDERGROUND SERVICES AND UTILITIES HAVE BEEN SHOWN FOR INFORMATION PURPOSES ONLY AND CANNOT BE GUARANTEED TO BE COMPLETE OR ACCURATE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE CONFIGURATION AND LOCATION OF UNDERGROUND SERVICES AT THE SITE PRIOR TO CONSTRUCTION.

CONTOUR DATA FROM MAY 2015, PROVIDED BY PENN ENERGY

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McINTOSH PERRY

1-1329 Gardiners Road, Kingston, ON K7P 0L8
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Stamp:

Client: **CANADIAN SOLAR SOLUTIONS INC.**
 545 SPEEDVALE AVE. WEST GUELPH, ON N1K1E6

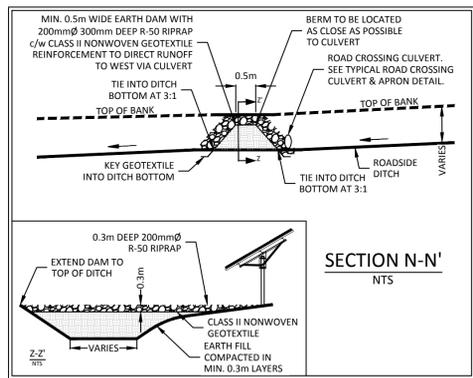
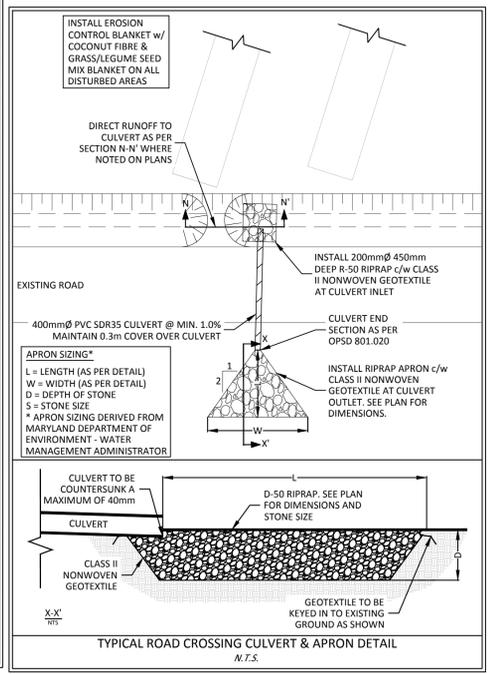
Project: **HAMILTON - PORT HOPE 4 SOLAR FARM**

BALTIMORE ONTARIO

Drawing Title: **REHABILITATION AREA 1**

Scale: 1:250 Project Number: PP-14-9580

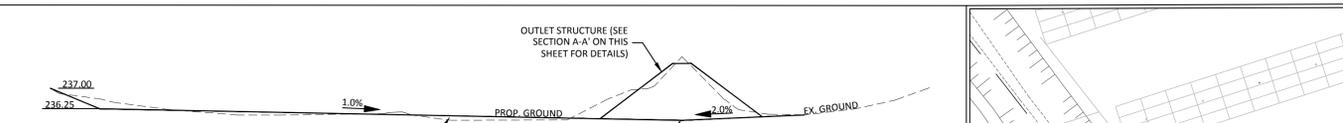
Drawn by: D. LONGMUIR
 Checked by: A. O'CONNOR
 Designed by: J. SHARP
 Date: JUN/03/2015 SHEET 1 of 12 **REHAB (A)**



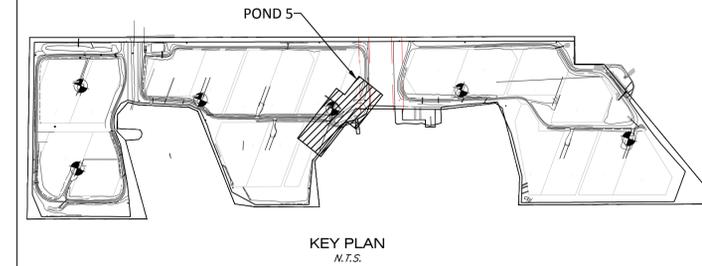
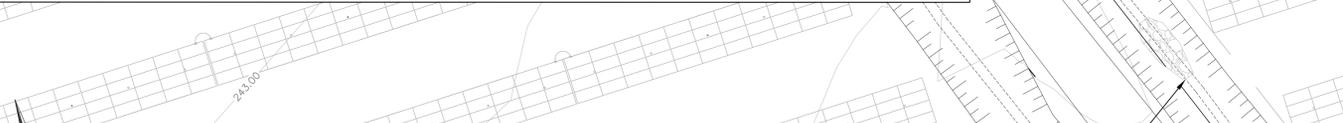
DRAWINGS TO BE READ IN CONJUNCTION WITH POST-CONSTRUCTION STORMWATER MANAGEMENT REPORT BY MCINTOSH PERRY DATED JUNE 2015 REVISED SEPTEMBER 2016

FILENAME: M:\02-Documents\2014\OPP-14-9580 - Canadian Solar Baltimore Solar\Drawings\PP-14-9580 Baltimore Solar October 21 - 16.dwg
 LAST SAVED: Friday, October 21, 2016 LAST SAVED BY: d.longmuir
 LAST PLOTTED: Friday, October 28, 2016 PLOT FILE USED: MP-CV-STANDARD.ctb

SECTION L-L'
1:250 H 1:125 V



SECTION M-M'
1:250 H 1:125 V



LEGEND

- PROPOSED TOP OF SLOPE
- PROPOSED TOE OF SLOPE
- PROPOSED ROAD
- EXISTING ROAD (TO BE REMOVED)
- EXISTING UNDERGROUND CABLE
- ORIGINAL REA BOUNDARY
- PROPOSED REA BOUNDARY
- EXISTING ELEVATION
- PROPOSED 150mmØ 450mm DEEP R-50 RIPRAP c/w CLASS II NONWOVEN GEOTEXTILE (EXCEPT WHERE NOTED)
- EXISTING FENCE
- PROPOSED FENCE
- PROPOSED SILT FENCE (AS PER HEAVY DUTY SILT FENCE DETAIL ON SHEET 09)
- BENCHMARK

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SEE MASTER REVISION LIST ON COVER SHEET

Check and verify all dimensions before proceeding with the work. Do not scale drawings.

McINTOSH PERRY **MP**

1-1329 Gardiners Road, Kingston, ON K7P 0L8
Tel: 613-542-3788 Fax: 613-542-7583

Stamp:

Client: **CANADIAN SOLAR SOLUTIONS INC.**
545 SPEEDVALE AVE. WEST GUELPH, ON N1K1E6

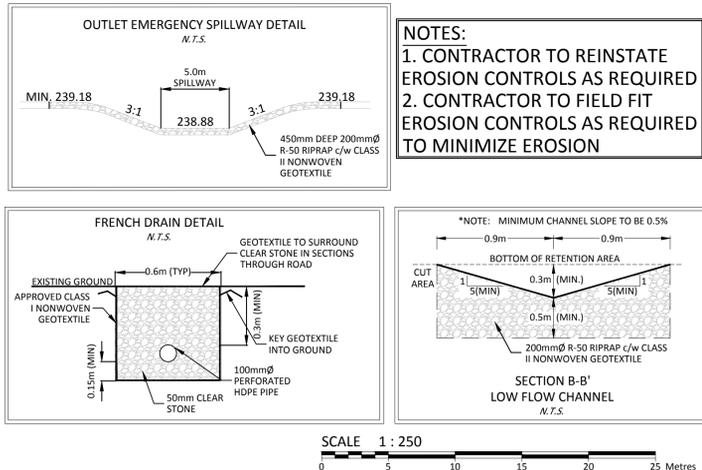
Project: **HAMILTON - PORT HOPE 4 SOLAR FARM**

BALTIMORE ONTARIO

Drawing Title: **POND 5 DETAILS**

Scale: 1:250	Project Number: PP-14-9580
Drawn by: D. LONGMUIR	Checked by: A. O'CONNOR
Designed by: J. SHARP	Drawing Number:
Date: JUN/03/2015	SHEET 2 of 12

POND (A)



NOTES:

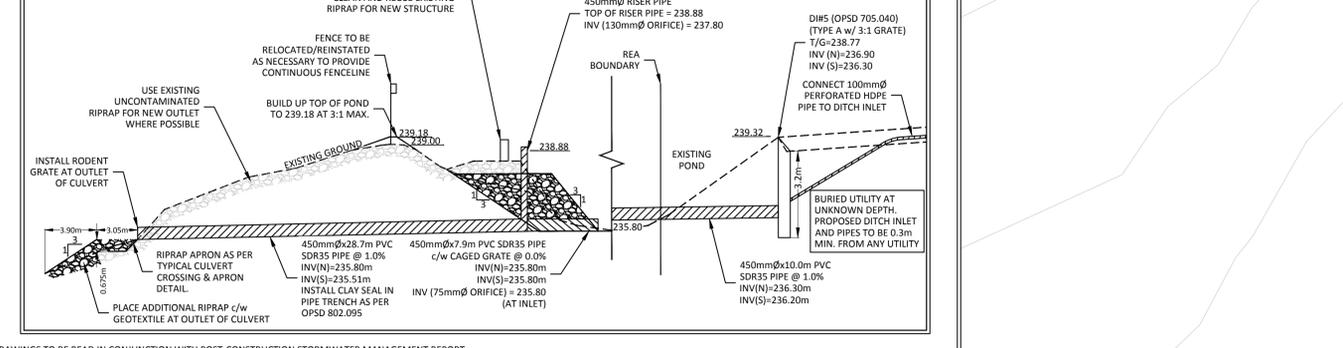
- CONTRACTOR TO REINSTATE EROSION CONTROLS AS REQUIRED
- CONTRACTOR TO FIELD FIT EROSION CONTROLS AS REQUIRED TO MINIMIZE EROSION

SCALE 1:250

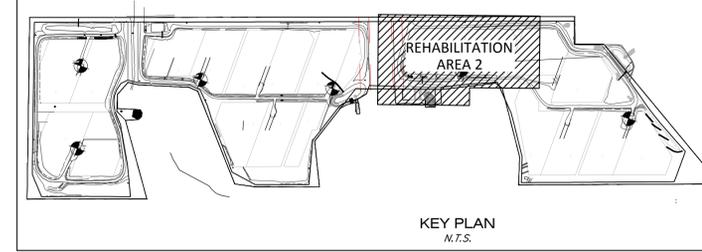
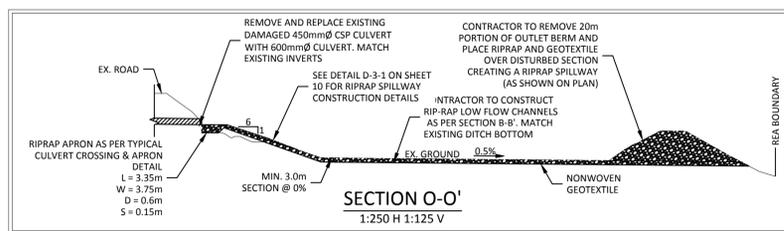
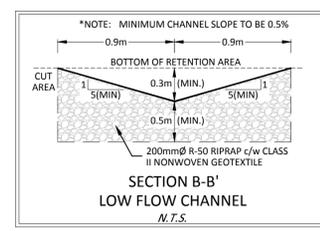
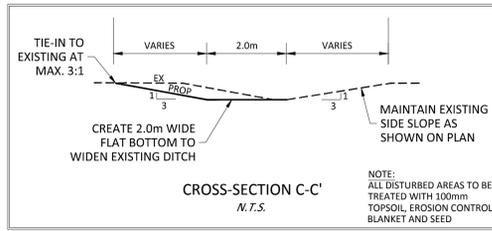
NOTE:

- CONTRACTOR TO PLACE 100mm TOPSOIL OVER NON-RIPRAP AREAS AT BOTTOM OF POND AND UP SIDE SLOPES.
- CONTRACTOR TO INSTALL EROSION CONTROL BLANKET AND SEED

SECTION A-A'
1:250 H 1:125 V



DRAWINGS TO BE READ IN CONJUNCTION WITH POST-CONSTRUCTION STORMWATER MANAGEMENT REPORT
BY MCINTOSH PERRY DATED JUNE 2015 REVISED SEPTEMBER 2016



LEGEND

- PROPOSED TOP OF SLOPE
- PROPOSED TOE OF SLOPE
- PROPOSED ROAD
- EXISTING ROAD
- EXISTING ROAD (TO BE REMOVED)
- EXISTING UNDERGROUND CABLE
- PIPELINE NO-BUILD ZONE
- ORIGINAL REA BOUNDARY
- PROPOSED REA BOUNDARY
- PROPOSED SILT FENCE (AS PER HEAVY DUTY SILT FENCE DETAIL ON SHEET 09)
- PROPOSED POND ELEVATION
- PROPOSED 150mm R-50 RIPRAP c/w CLASS II NONWOVEN GEOTEXTILE (EXCEPT WHERE NOTED)
- PROPOSED ROAD GRADE
- BENCHMARK

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15	REVISED AS PER COMMENTS	JUN/10/16

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McINTOSH PERRY

1-1329 Gardiners Road, Kingston, ON K7P 0L8
Tel: 613-542-3788 Fax: 613-542-7583

Stamp: **PROFESSIONAL ENGINEER**
R. J. A. SHARP
100748910
PROVINCE OF ONTARIO

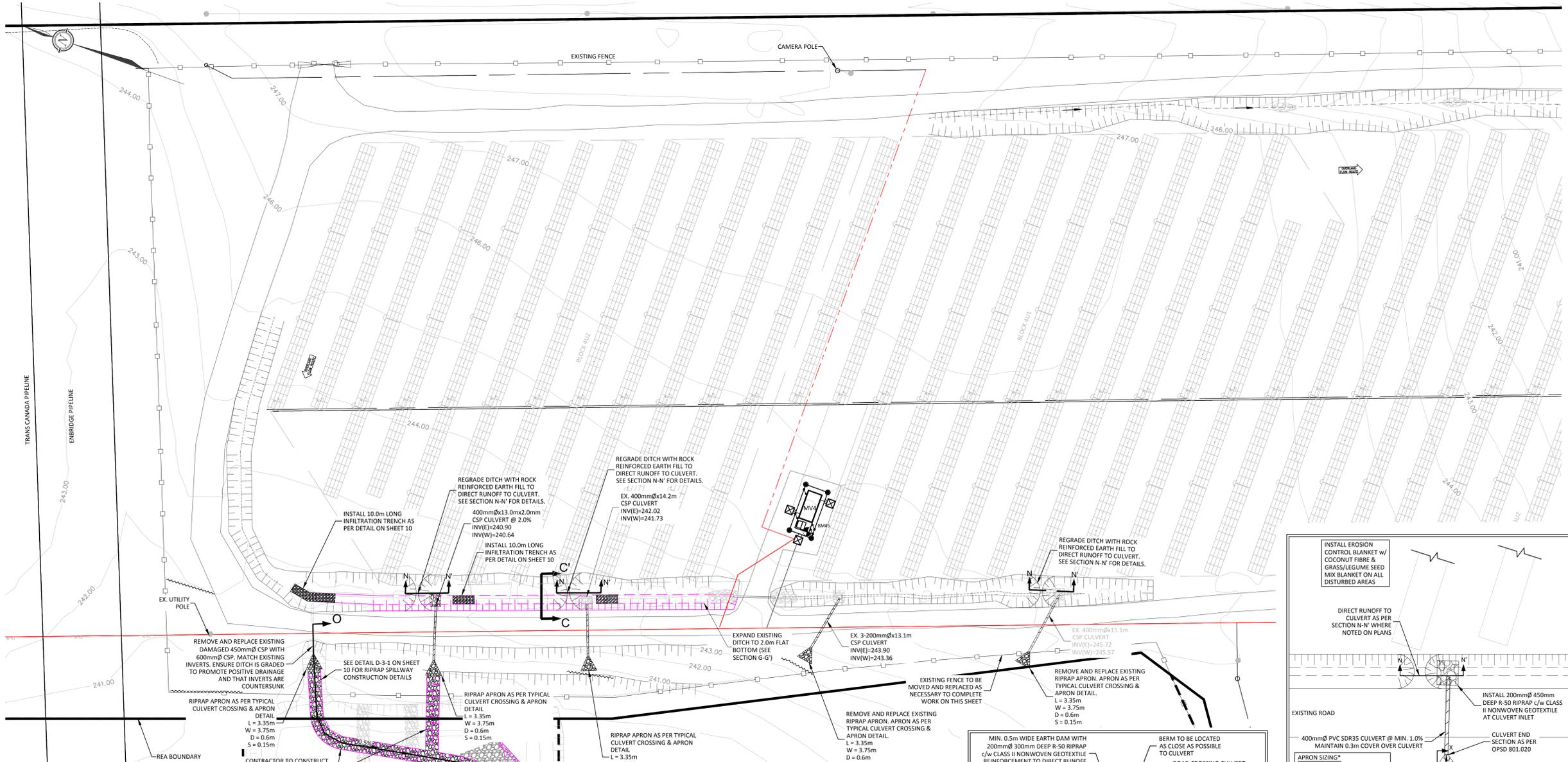
Client: **CANADIAN SOLAR SOLUTIONS INC.**
545 SPEEDVALE AVE. WEST GUELPH, ON N1K1E6

Project: **HAMILTON - PORT HOPE 4 SOLAR FARM**

BALTIMORE ONTARIO

Drawing Title: **REHABILITATION AREA 2**

Scale: 1:500	Project Number: PP-14-9580
Drawn by: D. LONGMUIR	Checked by: A. O'CONNOR
Designed by: J. SHARP	Drawing Number: SHEET 3 of 12
Date: JUN/03/2015	REHAB (B)



NOTE:

- CONTRACTOR TO PLACE 100mm TOPSOIL OVER NON-RIPRAP AREAS AT BOTTOM OF POND AND UP SIDE SLOPES.
- CONTRACTOR TO INSTALL EROSION CONTROL BLANKET AND SEED

- CONTRACTOR TO REMOVE OUTLET CULVERT AND STRUCTURE
- CONTRACTOR TO REMOVE 20m PORTION OF OUTLET BERM AS SHOWN
- CONTRACTOR TO PLACE RIPRAP AND GEOTEXTILE OVER DISTURBED SECTION CREATING A RIPRAP SPILLWAY
- CONTRACTOR TO TIE INTO SIDE SLOPES AT 3:1 MAX.
- CONTRACTOR TO PLACE EROSION CONTROL BLANKET AND SEED ON ALL DISTURBED NON-RIPRAP SURFACES
- SILT FENCE SHALL BE FIELD FIT AROUND DISTURBED AREA
- CONTRACTOR TO MONITOR AREA THROUGHOUT RE-ESTABLISHMENT OF VEGETATION AND ADD ADDITIONAL EROSION CONTROLS (BIOLGOS ETC.) IF EROSION OCCURS.

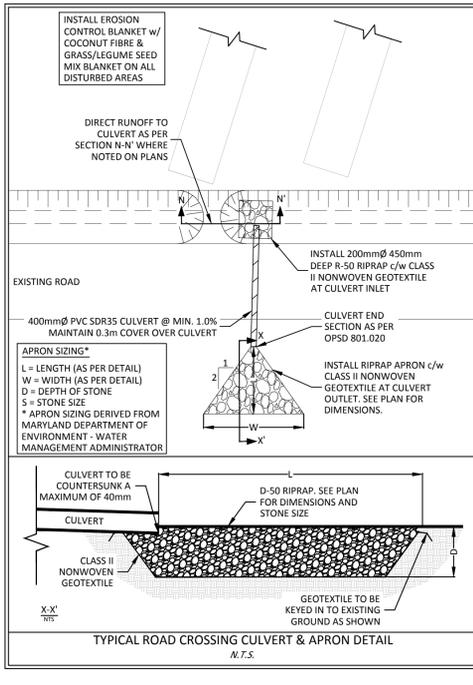
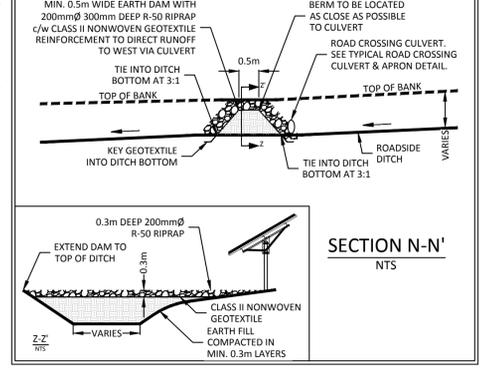
NOTES:

- CONTRACTOR TO REINSTATE EROSION CONTROLS AS REQUIRED
- CONTRACTOR TO FIELD FIT EROSION CONTROLS AS REQUIRED TO MINIMIZE EROSION

NOTE: EXISTING SILT FENCE TO BE REMOVED PRIOR TO CONSTRUCTION AND REINSTATED ALONG CONTOURS AS SHOWN.

ANY ADDITIONAL SILT FENCE THAT EXISTS ON SITE NOT ILLUSTRATED ON THESE PLANS IS TO BE REMOVED AS SOON AS VEGETATION IS ESTABLISHED.

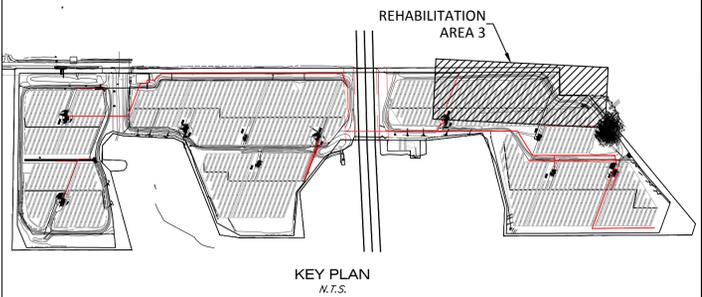
NEW SILT FENCE TO BE REMOVED FOLLOWING CONSTRUCTION SEASON AT DIRECTION OF CONTRACT ADMINISTRATOR. CONTRACTOR TO CONTACT CONTRACT ADMINISTRATOR PRIOR TO DEMOBILIZING FOR THE YEAR TO RECEIVE INSTRUCTION REGARDING SILT FENCE.



NOTE:
EXISTING SILT FENCE TO BE REMOVED
PRIOR TO CONSTRUCTION AND REINSTATED
ALONG CONTOURS AS SHOWN.

ANY ADDITIONAL SILT FENCE THAT EXISTS
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DIRECTION OF CONTRACT ADMINISTRATOR.
CONTRACTOR TO CONTACT CONTRACT
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FOR THE YEAR TO RECEIVE INSTRUCTION
REGARDING SILT FENCE.



LEGEND

- PROPOSED TOP OF SLOPE
- PROPOSED TOE OF SLOPE
- PROPOSED ROAD
- EXISTING ROAD
- EXISTING ROAD (TO BE REMOVED)
- EXISTING UNDERGROUND CABLE
- PIPELINE NO-BUILD ZONE
- ORIGINAL REA BOUNDARY
- PROPOSED REA BOUNDARY
- PROPOSED SILT FENCE (AS PER HEAVY DUTY SILT FENCE DETAIL ON SHEET 09)
- PROPOSED POND ELEVATION
- PROPOSED 150mmØ R-50 RIPRAP c/w CLASS II NONWOVEN GEOTEXTILE (EXCEPT WHERE NOTED)
- PROPOSED ROAD GRADE BENCHMARK

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Project:
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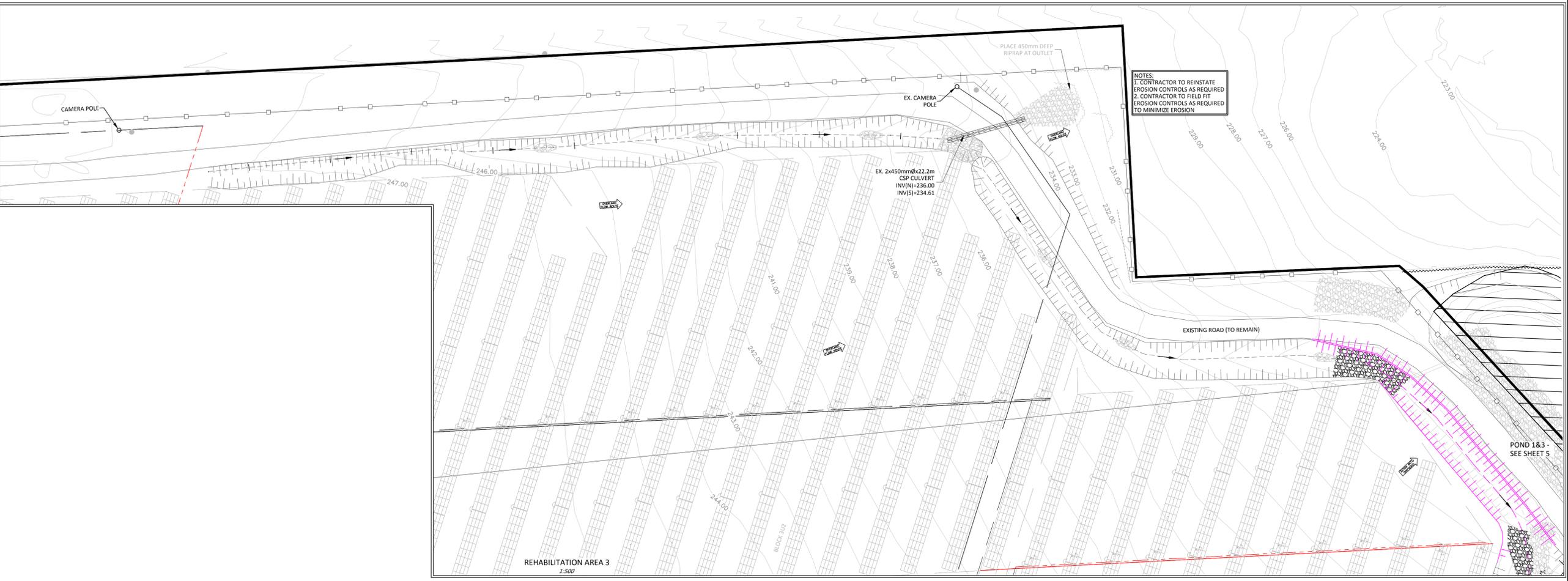
BALTIMORE ONTARIO

Drawing Title:
REHABILITATION AREA 3 COMPLETED 2015

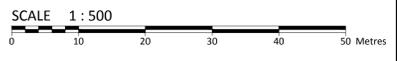
Scale: 1:500 Project Number: PP-14-9580

Drawn by: D. LONGMUIR
Checked by: A. O'CONNOR
Designed by: J. SHARP
Date: JUN/03/2015

Drawing Number: SHEET 4 of 12 **REHAB (C)**

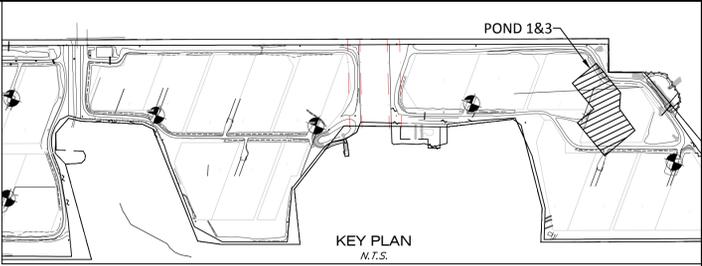


NOTES:
1. CONTRACTOR TO REINSTATE
EROSION CONTROLS AS REQUIRED
2. CONTRACTOR TO FIELD FIT
EROSION CONTROLS AS REQUIRED
TO MINIMIZE EROSION



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FILENAME: M:\02-Documents\2014\OPP-14-9580 - Canadian Solar Baltimore Solar\Drawings\PP-14-9580 Baltimore Solar October 21 - 16.dwg
LAST SAVED: Friday, October 21, 2016 LAST SAVED BY: d.longmuir
LAST PLOTTED: Friday, October 28, 2016 PLOT FILE USED: MP-CV-STANDARD.ctb



NOTE:
 1. CONTRACTOR TO PLACE 100mm TOPSOIL OVER NON-RIPRAP AREAS AT BOTTOM OF POND AND UP SIDE SLOPES.
 2. CONTRACTOR TO INSTALL EROSION CONTROL BLANKET AND SEED

PROVISIONAL
 CONTRACTOR TO INSTALL TERRAFIX FLEXAMAT® OR IECS CABLE CONCRETE DOWN THE SPILLWAY. INSTALL AS PER MANUFACTURER'S SPECIFICATIONS TO THE LIMITS SHOWN

LEGEND

PROPOSED TOP OF SLOPE	
PROPOSED TOE OF SLOPE	
PROPOSED ROAD	
EXISTING ROAD	
EXISTING ROAD (TO BE REMOVED)	
EXISTING UNDERGROUND CABLE	
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2	X ON N.E. CORNER OF CONCRETE PAD	251.43
3	X ON S.W. CORNER OF CONCRETE PAD	243.64
4	X ON S.W. CORNER OF CONCRETE PAD	240.70
5	X ON S.W. CORNER OF CONCRETE PAD	246.20
6	X ON N.E. CORNER OF CONCRETE PAD	234.90

No.	REVISION	DATE
21	REVISED AS PER SITE COMMENTS	OCT/21/16
20	REVISED AS PER SITE COMMENTS	OCT/14/16
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17	REVISED AS PER COMMENTS	JUN/29/16
16	REVISED AS PER COMMENTS	JUN/24/16
15	REVISED AS PER COMMENTS	JUN/10/16

SEE MASTER REVISION LIST ON COVER SHEET

No.	Revision/Issue	Date

Check and verify all dimensions before proceeding with the work. Do not scale drawings.



1-1329 Gardiners Road, Kingston, ON K7P 0L8
 Tel: 613-542-3788 Fax: 613-542-7583

Stamp:

Client: CANADIAN SOLAR SOLUTIONS INC.
 545 SPEEDVALE AVE. WEST GUELPH, ON N1K1E6

Project: HAMILTON - PORT HOPE 4 SOLAR FARM

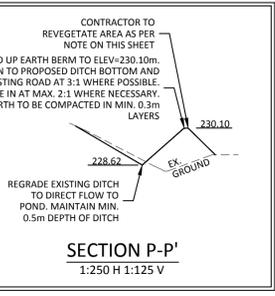
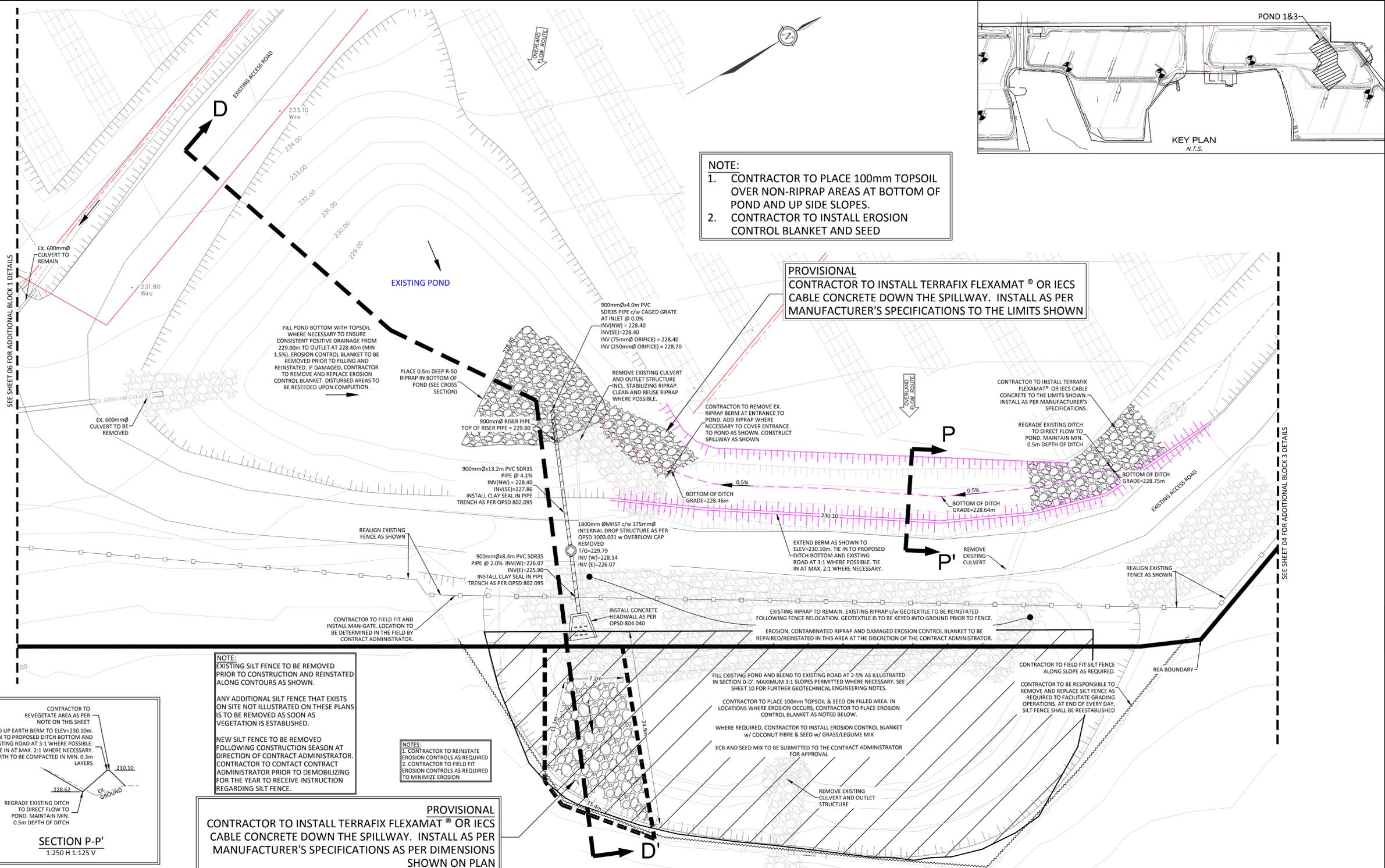
BALTIMORE ONTARIO

Drawing Title: POND 1&3 DETAILS

Scale: 1:250 Project Number: PP-14-9580

Drawn by: D. LONGMUIR Checked by: A. O'CONNOR

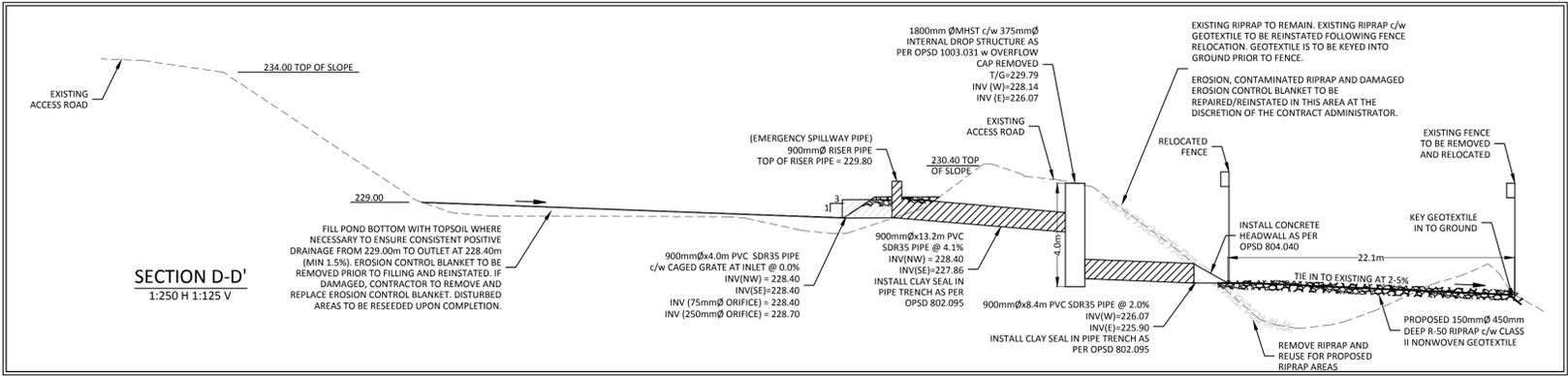
Designed by: J. SHARP Date: JUN/03/2015 SHEET 5 of 12 POND (B)



NOTE:
 EXISTING SILT FENCE TO BE REMOVED PRIOR TO CONSTRUCTION AND REINSTATED ALONG CONTOURS AS SHOWN.
 ANY ADDITIONAL SILT FENCE THAT EXISTS ON SITE NOT ILLUSTRATED ON THESE PLANS IS TO BE REMOVED AS SOON AS VEGETATION IS ESTABLISHED.
 NEW SILT FENCE TO BE REMOVED FOLLOWING CONSTRUCTION SEASON AT DIRECTION OF CONTRACT ADMINISTRATOR. CONTRACTOR TO CONTACT CONTRACT ADMINISTRATOR PRIOR TO DEMOBILIZING FOR THE YEAR TO RECEIVE INSTRUCTION REGARDING SILT FENCE.

PROVISIONAL
 CONTRACTOR TO INSTALL TERRAFIX FLEXAMAT® OR IECS CABLE CONCRETE DOWN THE SPILLWAY. INSTALL AS PER MANUFACTURER'S SPECIFICATIONS AS PER DIMENSIONS SHOWN ON PLAN

NOTES:
 1. CONTRACTOR TO REINSTATE EROSION CONTROLS AS REQUIRED
 2. CONTRACTOR TO FIELD FIT EROSION CONTROLS AS REQUIRED TO MINIMIZE EROSION

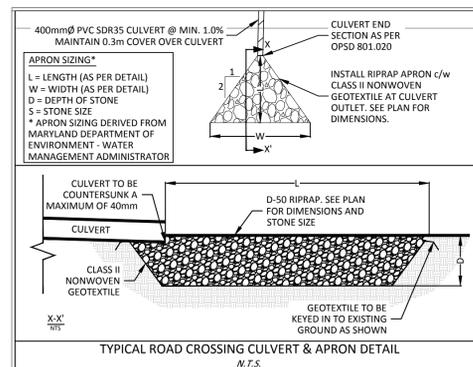
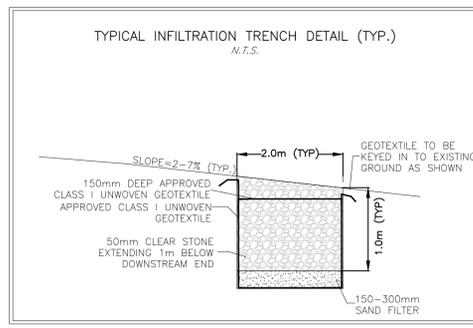


PREFERRED ORDER OF OPERATIONS
 (ALTERNATIVES TO BE APPROVED BY THE CONTRACT ADMINISTRATOR)

- DEWATER EXISTING POND IF REQUIRED
- EXCAVATE PROPOSED POND AND STOCKPILE MATERIAL IN APPROVED LOCATION (STOCKPILE LOCATION TO BE CONFIRMED WITH CSSI AND APPROPRIATE SEDIMENT CONTROLS MUST BE INSTALLED PRIOR TO PLACEMENT OF MATERIAL)
- WIDEN ROADSIDE DITCH (IF APPLICABLE)
- INSTALL EROSION CONTROLS AS PER PLANS
- INSTALL OUTLET FROM POND
- FILL EXISTING POND AT OUTLET AREA ONLY INCLUDING RIPRAP
- DEWATER (IF NECESSARY) AND FILL REMAINDER OF POND
- INSTALL EROSION CONTROLS ON EXISTING POND AREA. SEE PLAN FOR DETAILS.

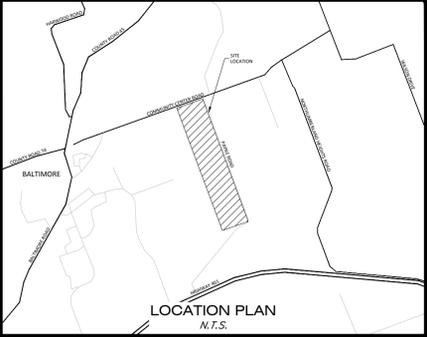
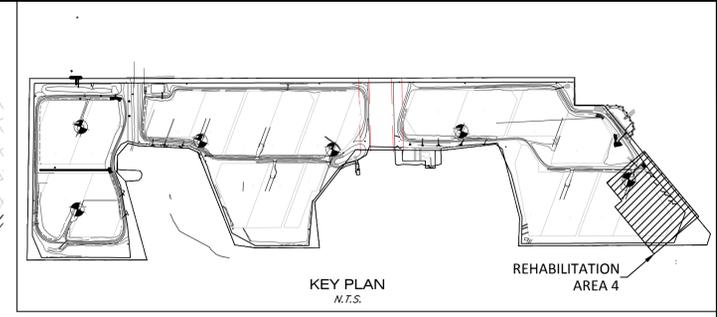
NOTE:
 A PERMIT TO TAKE WATER HAS NOT BEEN APPLIED FOR. THE CONTRACTOR MAY OPT TO OBTAIN A PERMIT; THIS SHALL NOT BE THE CAUSE FOR DELAYS/CLAIMS AGAINST CSSI





NOTE:
 EXISTING SILT FENCE TO BE REMOVED PRIOR TO CONSTRUCTION AND REINSTATED ALONG CONTOURS AS SHOWN.
 ANY ADDITIONAL SILT FENCE THAT EXISTS ON SITE NOT ILLUSTRATED ON THESE PLANS IS TO BE REMOVED AS SOON AS VEGETATION IS ESTABLISHED.
 NEW SILT FENCE TO BE REMOVED FOLLOWING CONSTRUCTION SEASON AT DIRECTION OF CONTRACT ADMINISTRATOR. CONTRACTOR TO CONTACT CONTRACT ADMINISTRATOR PRIOR TO DEMOBILIZING FOR THE YEAR TO RECEIVE INSTRUCTION REGARDING SILT FENCE.

NOTE:
 1. CONTRACTOR TO PLACE 100mm TOPSOIL OVER NON-RIPRAP AREAS.
 2. CONTRACTOR TO INSTALL EROSION CONTROL BLANKET AND SEED.
 3. SEE SHEET 10 FOR FURTHER GEOTECHNICAL ENGINEERING NOTES.



LEGEND

PROPOSED TOP OF SLOPE	
PROPOSED TOE OF SLOPE	
PROPOSED ROAD	
EXISTING ROAD	
EXISTING ROAD (TO BE REMOVED)	
EXISTING UNDERGROUND CABLE	
ORIGINAL REA BOUNDARY	
PROPOSED REA BOUNDARY	
EXISTING ELEVATION	
PROPOSED 150mmØ 450mm DEEP R-50 RIPRAP c/w CLASS II NONWOVEN GEOTEXTILE (EXCEPT WHERE NOTED)	
EXISTING FENCE	
PROPOSED FENCE	
PROPOSED SILT FENCE (AS PER HEAVY DUTY SILT FENCE DETAIL ON SHEET 09)	
BENCHMARK	

NOTE: THE LOCATION AND CONFIGURATION OF PROPOSED AND EXISTING UNDERGROUND SERVICES AND UTILITIES HAVE BEEN SHOWN FOR INFORMATION PURPOSES ONLY AND CANNOT BE GUARANTEED TO BE COMPLETE OR ACCURATE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE CONFIGURATION AND LOCATION OF UNDERGROUND SERVICES AT THE SITE PRIOR TO CONSTRUCTION.

CONTOUR DATA FROM MAY 2015, PROVIDED BY PENN ENERGY

BENCHMARKS (PROVIDED BY MCINTOSH PERRY SURVEYING INC.):

No.	DESCRIPTION	ELEVATION
1	X ON N.E. CORNER OF CONCRETE PAD	238.68
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15	REVISED AS PER COMMENTS	JUN/10/16

SEE MASTER REVISION LIST ON COVER SHEET

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1-1329 Gardiners Road, Kingston, ON K7P 0L8
 Tel: 613-542-3788 Fax: 613-542-7583



Client:
CANADIAN SOLAR SOLUTIONS INC.
 545 SPEEDVALE AVE. WEST GUELPH, ON N1K1E6

Project:
HAMILTON - PORT HOPE 4 SOLAR FARM

BALTIMORE ONTARIO

Drawing Title:
REHABILITATION AREA 4

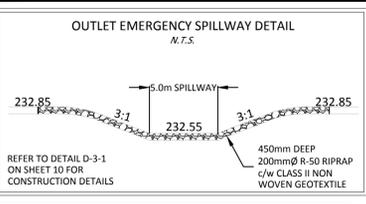
Scale: 1:250 Project Number: PP-14-9580

Drawn by: D. LONGMUIR

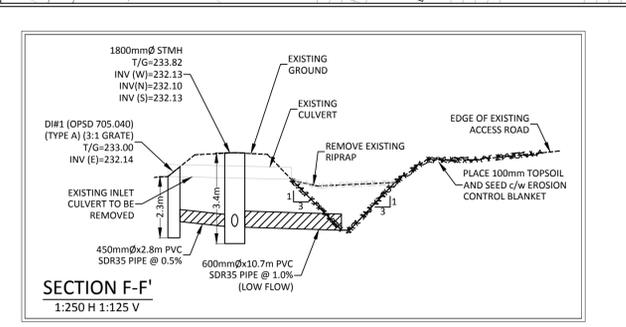
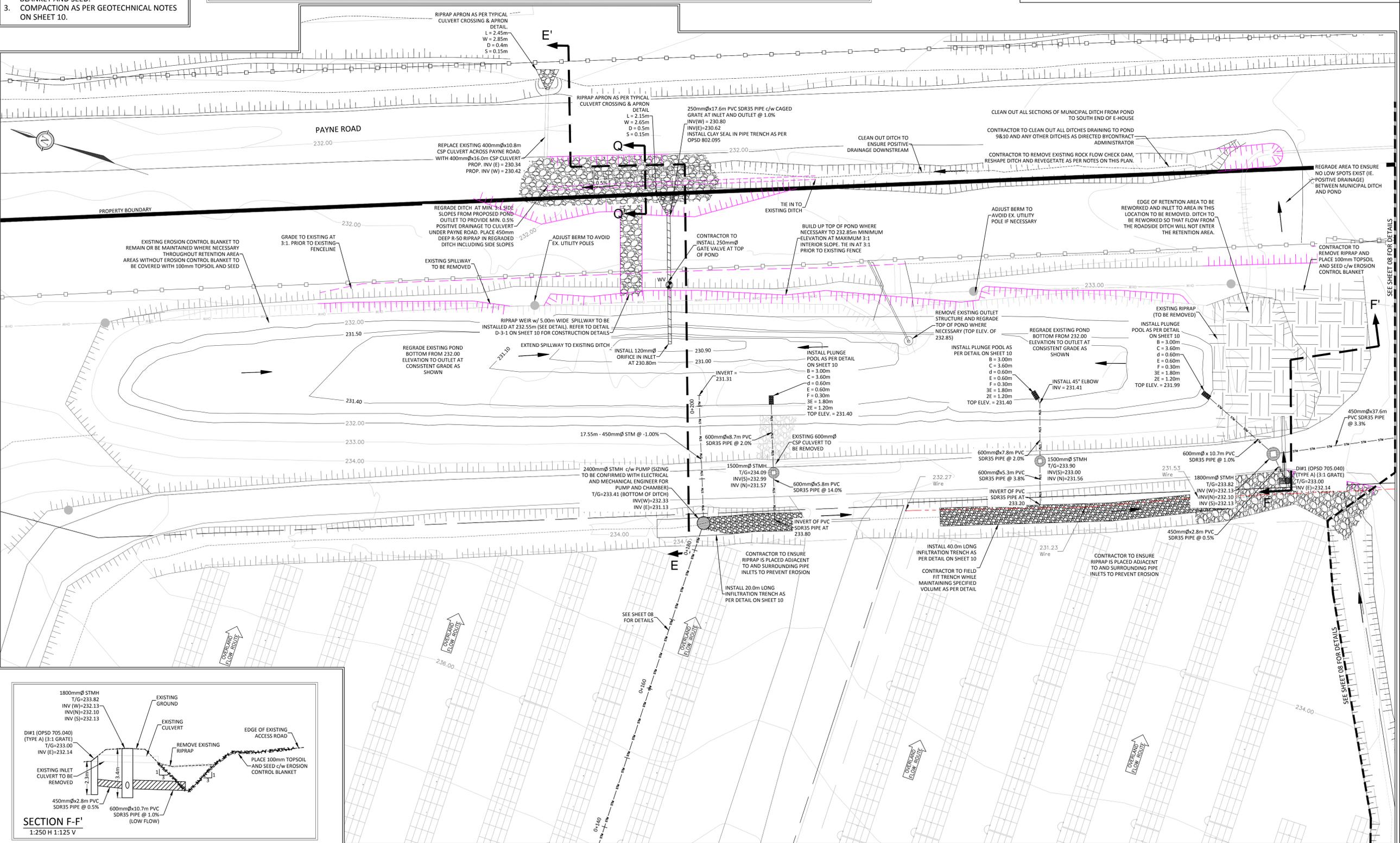
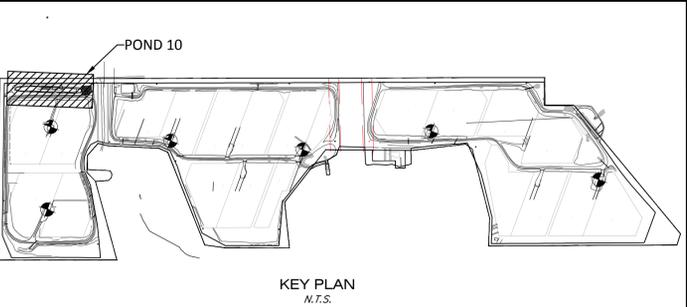
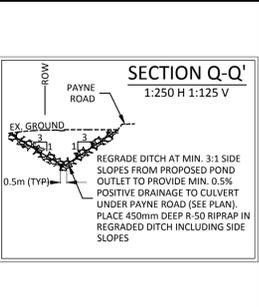
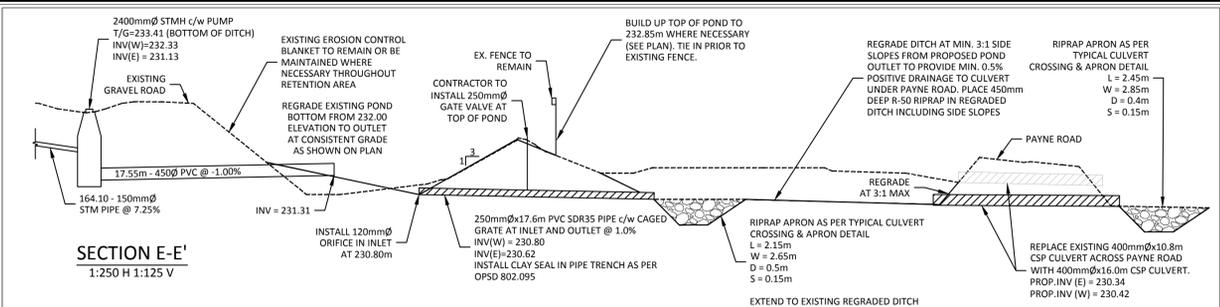
Checked by: A. O'CONNOR Drawing Number:

Designed by: J. SHARP SHEET 6 of 12 **REHAB (D)**

Date: JUN/03/2015



- NOTE:**
- CONTRACTOR TO PLACE 100mm TOPSOIL OVER NON-RIPRAP AREAS AT BOTTOM OF POND AND UP SIDE SLOPES.
 - CONTRACTOR TO INSTALL EROSION CONTROL BLANKET AND SEED.
 - COMPACTION AS PER GEOTECHNICAL NOTES ON SHEET 10.



LEGEND

- PROPOSED TOP OF SLOPE
- PROPOSED TOE OF SLOPE
- PROPOSED ROAD
- EXISTING ROAD
- EXISTING ROAD (TO BE REMOVED)
- EXISTING UNDERGROUND CABLE
- ORIGINAL REA BOUNDARY
- PROPOSED REA BOUNDARY
- EXISTING ELEVATION
- PROPOSED 150mm x 450mm DEEP R-50 RIPRAP c/w CLASS II NONWOVEN GEOTEXTILE (EXCEPT WHERE NOTED)
- EXISTING FENCE
- PROPOSED FENCE
- PROPOSED SILT FENCE (AS PER HEAVY DUTY SILT FENCE DETAIL ON SHEET 09)
- PROPOSED POND RIBBON DAM

NOTE: THE LOCATION AND CONFIGURATION OF PROPOSED AND EXISTING UNDERGROUND SERVICES AND UTILITIES HAVE BEEN SHOWN FOR INFORMATION PURPOSES ONLY AND CANNOT BE GUARANTEED TO BE COMPLETE OR ACCURATE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE CONFIGURATION AND LOCATION OF UNDERGROUND SERVICES AT THE SITE PRIOR TO CONSTRUCTION.

BENCHMARKS (PROVIDED BY MCINTOSH PERRY SURVEYING INC.):

No.	DESCRIPTION	ELEVATION
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4	X ON S.W. CORNER OF CONCRETE PAD	240.70
5	X ON S.W. CORNER OF CONCRETE PAD	246.20
6	X ON N.E. CORNER OF CONCRETE PAD	234.90

CONTOUR DATA FROM MAY 2015, PROVIDED BY PENN ENERGY

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15	REVISED AS PER COMMENTS	JUN/10/16

SEE MASTER REVISION LIST ON COVER SHEET

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McINTOSH PERRY

1-1329 Gardiners Road, Kingston, ON K7P 0L8
Tel: 613-542-3788 Fax: 613-542-7583

Stamp: **PROFESSIONAL ENGINEER**
R. J. A. SHARP
100748910
PROVINCE OF ONTARIO

Client: **CANADIAN SOLAR SOLUTIONS INC.**
545 SPEEDVALE AVE. WEST GUELPH, ON N1K1E6

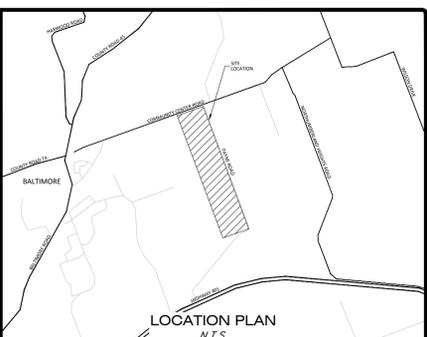
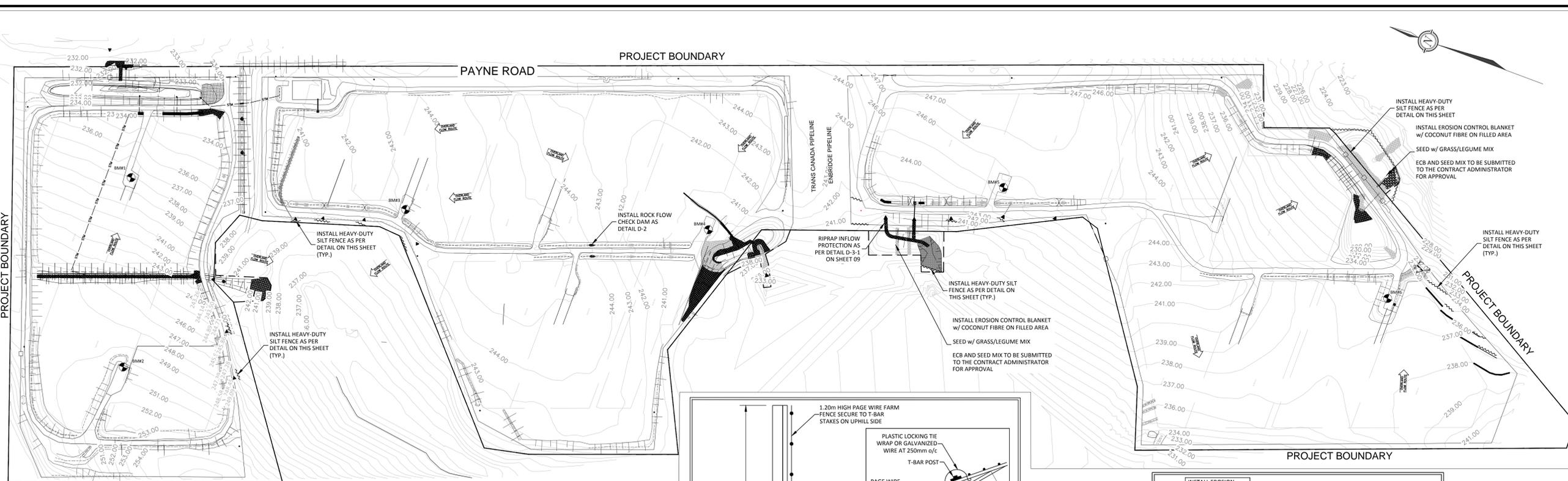
Project: **HAMILTON - PORT HOPE 4 SOLAR FARM**

BALTIMORE ONTARIO

Drawing Title: **POND 10 DETAILS**

Scale: 1:250	Project Number: PP-14-9580
Drawn by: D. LONGMUIR	Checked by: A. O'CONNOR
Designed by: J. SHARP	Drawing Number:
Date: JUL/28/2015	SHEET 7 of 12

RET



LEGEND

- PROPOSED SILT FENCE (AS PER DETAIL ON THIS SHEET)
- ORIGINAL REA BOUNDARY
- PROPOSED REA BOUNDARY
- PROPOSED POND
- OVERLAND FLOW DIRECTION
- PROPOSED SWALE
- UNDERGROUND CABLES
- PROPOSED ROAD
- EXISTING ROAD
- PROPOSED CULVERT
- PROPOSED ROCK FLOW CHECK DAM (AS PER DETAIL D-2)
- PROPOSED RIPRAP (SEE PLANS FOR DETAILS)
- BENCHMARK

NOTE: THE LOCATION AND CONFIGURATION OF PROPOSED AND EXISTING UNDERGROUND SERVICES AND UTILITIES HAVE BEEN SHOWN FOR INFORMATION PURPOSES ONLY AND CANNOT BE GUARANTEED TO BE COMPLETE OR ACCURATE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE CONFIGURATION AND LOCATION OF UNDERGROUND SERVICES AT THE SITE PRIOR TO CONSTRUCTION.

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Stamp:

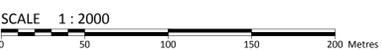
Client: CANADIAN SOLAR SOLUTIONS INC.
545 SPEEDVALE AVE. WEST GUELPH, ON N1K1E6

Project: HAMILTON - PORT HOPE 4 SOLAR FARM

BALTIMORE ONTARIO

Drawing Title: EROSION & SEDIMENT CONTROL PLAN

Scale: 1:2000	Project Number: PP-14-9580
Drawn by: D. LONGMUIR	Checked by: A. O'CONNOR
Designed by: J. SHARP	Drawing Number:
Date: JUN/03/2015	SHEET 9 of 12



EMERGENCY RESPONSE PLAN
THE EMERGENCY RESPONSE PLAN IDENTIFIES SITE REQUIREMENTS AND ACTIONS TO BE TAKEN IN THE EVENT OF AN ENVIRONMENTAL EMERGENCY (SUCH AS A SPILL OF HAZARDOUS MATERIALS, DISCHARGE OF A DELETERIOUS SUBSTANCE (E.G. SEDIMENT) TO A WATERCOURSE OR OTHER ACCIDENT, ETC.). THIS PLAN IS TO BE IMPLEMENTED ON A CONTINUOUS BASIS AND UPDATED AS SITE CONDITIONS CHANGE.

- SITE ENVIRONMENTAL INSPECTOR**
A DESIGNATED SITE ENVIRONMENTAL INSPECTOR WILL BE APPOINTED BY THE CONTRACTOR. THIS PERSON WILL BE RESPONSIBLE FOR ENSURING THAT THE CONTRACTOR(S) HAS PREPARED A SPILL CLEAN-UP PROCEDURE/EMERGENCY RESPONSE PLAN AND APPROPRIATE EQUIPMENT, WITH ALL STAFF TRAINED IN THE RECOGNITION OF A SPILL AND PROPER IMPLEMENTATION IN THE EVENT OF A SPILL OR ACCIDENT ON-SITE. ALL SPILLS ARE TO BE RESPONDED TO, DOCUMENTED AND REPORTED TO THE OWNER AND MOECC AS REQUIRED BY LAW. THE INSPECTOR WILL ALSO BE RESPONSIBLE TO ENSURE THROUGH DOCUMENTED INSPECTIONS THAT, AMONGST OTHERS:
- EROSION AND SEDIMENT CONTROL WORKS ARE FUNCTIONAL AND EFFECTIVE (MINIMUM WEEKLY INSPECTION AND FOLLOWING PRECIPITATION EVENTS);
 - PUMPED EXCESS STORMWATER IS DIRECTED PROPERLY TO VEGETATED AREAS AND EXCESSIVE WATER (>50,000 L) IS NOT TRANSFERRED WITHIN A 24 HOUR PERIOD UNLESS A PTTW IS AVAILABLE;
 - WATER SETBACKS, OR OTHER SETBACKS, ARE MAINTAINED AT ALL TIMES DURING CONSTRUCTION;
 - CEMENT/CONCRETE TRUCKS REMAIN 120 M AWAY FROM WATER;
 - CONCRETE MIX (AND OTHER POTENTIALLY HAZARDOUS MATERIALS) ARE STORED PROPERLY;
 - ALL PUBLIC COMPLAINTS, AS A RESULT OF CONSTRUCTION, ARE DOCUMENTED AND THE OWNER NOTIFIED;
 - COMPLAINTS MADE TO THIRD PARTIES (E.G. MOECC, MNRF) ARE ALSO DOCUMENTED AND THE OWNER NOTIFIED.

SITE REQUIREMENTS

EMERGENCY CONTACTS SHALL BE POSTED IN A CONSPICUOUS SPACE ON SITE, INCLUDING 911, POLICE, FIRE DEPARTMENT, MOECC SPILLS ACTION CENTRE, AND THESE ORGANIZATIONS SHOULD BE CONTACTED AS REQUIRED. THE FOLLOWING IS A NON-EXHAUSTIVE LIST OF PHONE NUMBERS:

EMERGENCY - POLICE, FIRE, AMBULANCE	911
ONTARIO PROVINCIAL POLICE	1.888.310-1122
OFFICE OF THE FIRE MARSHAL	1.800.565-1842
MINISTRY OF ENVIRONMENT AND CLIMATE CHANGE	1.800.268-6060
(MOECC) SPILLS ACTION CENTRE	
MOECC EMERGENCY MANAGEMENT COORDINATOR	1.416.325-1995
ENVIRONMENT CANADA*	1.416.739-4826

*SHOULD BE CONTACTED WHEN ON FEDERAL LANDS OR IN THE CONTAMINATION COULD AFFECT A FEDERAL LAND OR NAVIGABLE WATER AND FISH HABITAT.

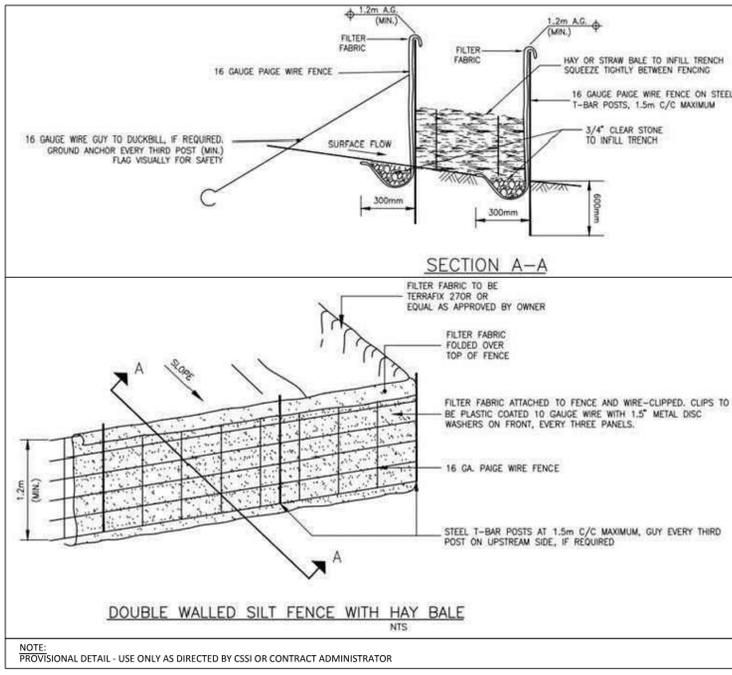
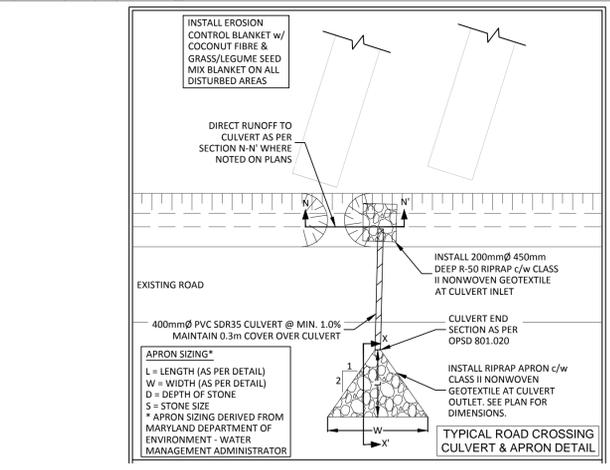
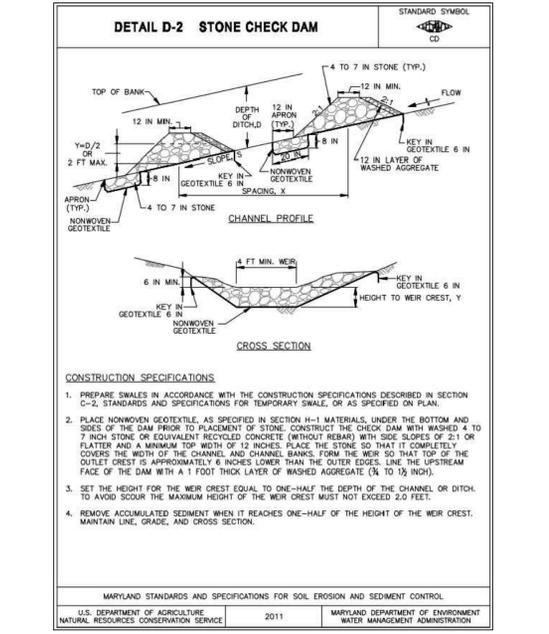
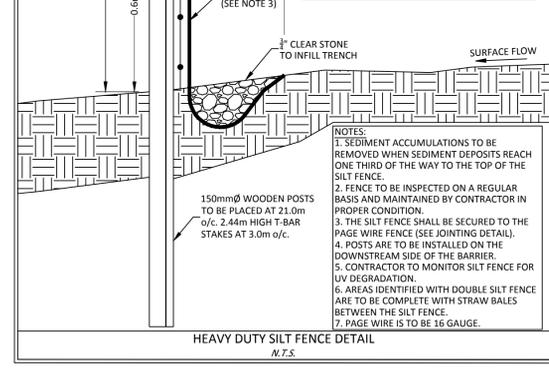
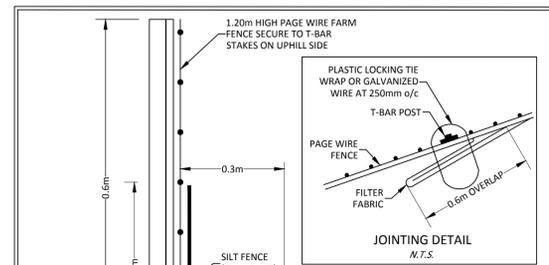
- SPILL CONTAINMENT AND CLEAN-UP SUPPLIES ARE TO BE MAINTAINED ON SITE AT ALL TIMES. THESE "SPILL KITS" GENERALLY COME IN TRANSPORTABLE BAGS OR PLASTIC CONTAINERS DEPENDING ON SIZE. A TYPICAL SPILL KIT SHOULD INCLUDE:**
- VARIOUS SIZES AND LENGTHS OF ABSORBENT SOCKS;
 - VARIOUS SIZES OF ABSORBENT PADS OR CUSHIONS (10-18"x18" PADS MINIMUM);
 - GRANULAR ABSORBENT MATERIAL (S.I.D. MINIMUM);
 - DRAIN MATS;
 - WASTE BAGS AND TIES, AND;
 - GLOVES AND PROTECTIVE EYEWEAR.

A SHOVEL OR OTHER HAND DEVICE SHOULD ALSO BE INCLUDED OR EASILY AVAILABLE ON THE WORK SITE TO ASSIST WITH THE CLEAN UP OR CONTROL OF A SMALL SPILL/RELEASE. THESE MATERIALS SHOULD BE USED DURING INTERVENTIONS/CLEANUPS FOLLOWING SMALL SPILLS OR LEAKS, HOWEVER IF A MAJOR INCIDENT OCCURS, A SPECIALIZED COMPANY WITH APPROPRIATE EQUIPMENT SHOULD BE CONTACTED (SEE LIST ABOVE).

ACTIONS
SPILLS MUST BE CLEANED UP IMMEDIATELY AND REPORTED ACCORDINGLY. IN THE EVENT OF A REPORTABLE SPILL, THE MOECC SPILLS ACTION CENTRE IS TO BE CONTACTED IMMEDIATELY, AS REQUIRED BY PROVINCIAL REGULATIONS. ALL SPILLS MUST BE DOCUMENTED AND REPORTED TO THE OWNER, FORTHWITH. THESE INCLUDE DISCHARGES OF ANY TURBID WATER FROM THE SITE AND/OR TO WATERCOURSES.

EROSION AND SEDIMENT CONTROL NOTES:

- THE CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES, TO PROVIDE FOR PROTECTION OF THE AREA DRAINAGE SYSTEM AND THE RECEIVING WATERCOURSE, DURING CONSTRUCTION ACTIVITIES. THIS INCLUDES LIMITING THE AMOUNT OF EXPOSED SOIL AND INSTALLING SILT FENCES AND OTHER SEDIMENT TRAPS.
- AT THE DISCRETION OF THE CONTRACT ADMINISTRATOR, CONSERVATION AUTHORITY OR MUNICIPALITY, ADDITIONAL SILT CONTROL DEVICES INCLUDING SILT FENCE, RIP RAP AND ROCK FLOW CHECK DAMS SHALL BE INSTALLED AT DESIGNATED LOCATIONS.
- FOR SILT FENCE BARRIER, SEE DETAIL ON THIS SHEET.
- ALL RIPRAP SHALL BE PLACED ON CLASS II NONWOVEN GEOTEXTILE AS PER OPSS 805 AND OPSS 1860.
- ALL PROPOSED RIPRAP SHALL BE R-50 (NOMINAL SIZE OF 200mm) AT CULVERT APRONS AND IN PONDS, 150mm IN DITCHES AS PER OPSS 1004 TABLE B, UNLESS OTHERWISE NOTED.
- EXCEPT AS PROVIDED IN PARAGRAPHS C.(a), and (b) BELOW, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS FEASIBLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN 7 DAYS AFTER THE CONSTRUCTION ACTIVITY HAS TEMPORARILY OR PERMANENTLY CEASED.
 - WHERE THE INITIATION OF STABILIZATION MEASURES BY THE 7TH DAY AFTER CONSTRUCTION ACTIVITY TEMPORARILY OR PERMANENTLY CEASES IS PRECLUDED BY SNOW COVER, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS FEASIBLE.
 - WHERE CONSTRUCTION ACTIVITY WILL RESUME ON A PORTION OF THE SITE WITHIN 14 DAYS FROM WHEN ACTIVITIES CEASED, (E.G. THE TOTAL TIME PERIOD THAT CONSTRUCTION ACTIVITY IS TEMPORARILY CEASED IS LESS THAN 14 DAYS) THEN STABILIZATION MEASURES DO NOT HAVE TO BE INITIATED ON THAT PORTION OF SITE BY THE 7TH DAY AFTER CONSTRUCTION ACTIVITY TEMPORARILY CEASED.
 - SEDIMENT THAT IS ACCUMULATED BY THE TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED IN A MANNER THAT AVOIDS ESCAPE OF THE SEDIMENT TO THE DOWNSTREAM SIDE OF THE CONTROL MEASURE AND AVOIDS DAMAGE TO THE CONTROL MEASURE. SEDIMENT SHALL BE REMOVED TO THE LEVEL OF THE GRADE EXISTING AT THE TIME THE CONTROL MEASURE WAS CONSTRUCTED AND BE ACCORDING TO THE FOLLOWING:
 - FOR ALL SEDIMENT BARRIERS, ACCUMULATED SEDIMENT SHALL BE REMOVED ONCE IT REACHES THE LESSER OF THE FOLLOWING:
 - A DEPTH OF ONE-HALF THE EFFECTIVE HEIGHT OF THE CONTROL MEASURE.
 - A DEPTH OF 300 MM IMMEDIATELY UPSTREAM OF THE CONTROL MEASURE.
 - FOR ALL CONTROL MEASURES, ACCUMULATED SEDIMENT SHALL BE REMOVED AS NECESSARY TO PERFORM MAINTENANCE REPAIRS.
 - ACCUMULATED SEDIMENT SHALL BE REMOVED IMMEDIATELY PRIOR TO THE REMOVAL OF THE CONTROL MEASURE.
 - ACCUMULATED SEDIMENT IS TO BE REMOVED AND DISPOSED OF AS PER OPSS 180.
- ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MONITORED TO ENSURE THEY ARE IN EFFECTIVE WORKING ORDER. THE CONDITION OF THE CONTROL MEASURES SHALL BE MONITORED PRIOR TO ANY FORECAST STORM EVENT AND FOLLOWING A STORM EVENT.
- DUST CONTROL MEASURES SHOULD BE CONSIDERED PRIOR TO CLEARING AND GRADING. THE USE OF WATER, CALCIUM CHLORIDE FLAKES/SOLUTION OR MAGNESIUM CHLORIDE FLAKES/SOLUTION SHALL BE USED AS DUST SUPPRESSANTS AS PER OPSS 506. THIS IS TO LIMIT WIND EROSION OF SOILS WHICH MAY TRANSPORT SEDIMENTS OFFSITE, WHERE THEY MAY BE WASHED INTO THE RECEIVING WATER BY THE NEXT RAINSTORM.
- STOCKPILED MATERIAL IS TO BE STORED AWAY FROM POTENTIAL RECEIVERS (E.G. WATERCOURSES), AND BE SURROUNDED BY EROSION CONTROL MEASURES.
- IF REQUIRED, DEWATERING/SETTLING BASINS SHALL BE CONSTRUCTED AS PER OPSS 219-240 AND LOCATED ON FLAT GRADE UPSTREAM OF OTHER EXISTING MITIGATION MEASURES. WATERCOURSES SHALL NOT BE DIVERTED, OR BLOCKED, AND TEMPORARY WATERCOURSES CROSSINGS SHALL NOT BE CONSTRUCTED OR UTILIZED, UNLESS OTHERWISE SPECIFIED IN THE CONTRACT. IF CLOSURE OF ANY PERMANENT WATER PASSAGE IS NECESSARY, THE CONTRACTOR SHALL RELEASE ANY STRANDED FISH TO THE OPEN PORTION OF THE WATERCOURSE WITHOUT HARM.
- ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL CONFORM TO OPSS 805.
- WHERE DEWATERING IS REQUIRED, THE DISCHARGED WATER SHALL BE CONTROLLED IN ACCORDANCE WITH OPSS 518.
- ALL SETTLING/FILTRATION BASINS SHALL BE EQUIPPED WITH TERRAFIX 270R GEOTEXTILE (OR APPROVED EQUIVALENT) AND SHALL BE CLEANED AND REPLACED AS REQUIRED.
- ALL DISTURBED AREAS SHALL BE TREATED WITH 100mm OF TOPSOIL AND SEEDS IMMEDIATELY UPON COMPLETION OF THE WORK.
- CONTRACTOR TO REINSTATE EROSION CONTROLS AS REQUIRED.
- ALL SILT AND OTHER DELETERIOUS MATERIAL EXCAVATED FROM PONDS, DITCHES AND ESC MEASURES NOT ACCEPTABLE FOR USE AS FILL TO SHALL BE DISPOSED OFF SITE AS PER OPSS 180. ANY MATERIAL STOCKPILED BY THE CONTRACTOR FOR LATER USE SHALL BE APPROVED BY THE CONTRACT ADMINISTRATOR AND GEOTECHNICAL REPRESENTATIVE.



GENERAL NOTES:

1. THE ORIGINAL TOPOGRAPHY, GROUND ELEVATION AND SURVEY DATA SHOWN ARE SUPPLIED FOR INFORMATION PURPOSES ONLY, AND IMPLY NO GUARANTEE OF ACCURACY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL INFORMATION OBTAINED.
2. THE CONTRACTOR IS TO OBTAIN AND PAY FOR ALL NECESSARY PERMITS AND APPROVALS FROM THE TOWNSHIP OR MUNICIPALITY BEFORE COMMENCING CONSTRUCTION.
3. THE CONTRACTOR IS RESPONSIBLE FOR ALL LAYOUT.
4. THE CONTRACTOR IS TO DETERMINE THE EXACT LOCATION, SIZE, MATERIAL AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCING CONSTRUCTION. PROTECT AND ASSUME ALL RESPONSIBILITY FOR EXISTING UTILITIES WHETHER OR NOT SHOWN ON THESE DRAWINGS. IF THERE IS ANY DISCREPANCY THE CONTRACTOR IS TO NOTIFY THE ENGINEER PROMPTLY.
5. ALL DISTURBED 'GREEN AREAS' TO BE TREATED WITH 100mm TOPSOIL, SEED & EROSION CONTROL BLANKET AS SOON AS FEASIBLE UNLESS OTHERWISE NOTED. NO UNCOVERED TOPSOIL SHALL REMAIN.
6. RESTORE ALL TRENCHES AND SURFACES OF PUBLIC ROAD ALLOWANCES TO CONDITION EQUAL OR BETTER THAN ORIGINAL CONDITION AND TO THE SATISFACTION OF THE MUNICIPALITY.
7. EXCAVATE AND DISPOSE OF ALL EXCESS EXCAVATED MATERIAL, SUCH AS ASPHALT, CURBING AND DEBRIS, OFF SITE AS DIRECTED BY THE ENGINEER, OR THE MUNICIPALITY.
8. TOPSOIL TO BE STRIPPED AND STOCKPILED FOR REHABILITATION. CLEAN FILL TO BE PLACED IN FILL AREAS AND COMPACTED TO 95% STANDARD PROCTOR DENSITY AND TO 98% UNDER ALL STRUCTURES.
9. ALL DISTURBED AREAS TO BE RESTORED TO ORIGINAL CONDITION OR BETTER UNLESS OTHERWISE SPECIFIED.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRAFFIC CONTROL AND SAFETY MEASURES DURING THE CONSTRUCTION PERIOD, INCLUDING THE SUPPLY, INSTALLATION, AND REMOVAL OF ALL NECESSARY SIGNAGE, DELINEATORS, MARKERS AND BARRIERS.
11. DO NOT ALTER GRADING OF THE SITE WITHOUT PRIOR APPROVAL OF THE TOWNSHIP.
12. PROVIDE POSITIVE DRAINAGE AWAY FROM ALL BUILDINGS.
13. ALL DIMENSIONS AND INVERTS MUST BE VERIFIED PRIOR TO CONSTRUCTION, IF THERE IS ANY DISCREPANCY THE CONTRACTOR IS TO NOTIFY THE ENGINEER PROMPTLY.
14. PIPE MATERIAL FOR STORM SEWERS MAY BE PVC SDR35 OR CSA CERTIFIED HDPE, CONFORMING TO OPSS.

FOR ADDITIONAL DETAILED DESIGN INFORMATION REFER TO THE STORMWATER MANAGEMENT REPORT PREPARED BY MCINTOSH PERRY CONSULTING ENGINEERS DATED JUNE 2015, REVISED SEPTEMBER 2016.

BACKFILL MATERIAL:

NATIVE SOIL:

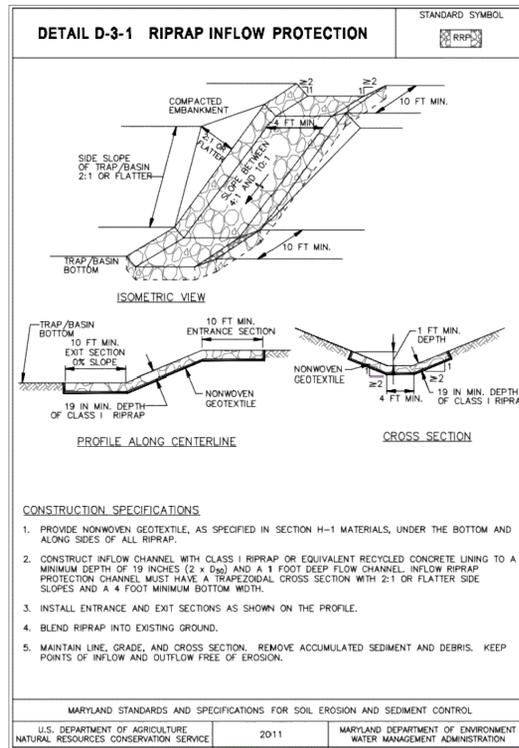
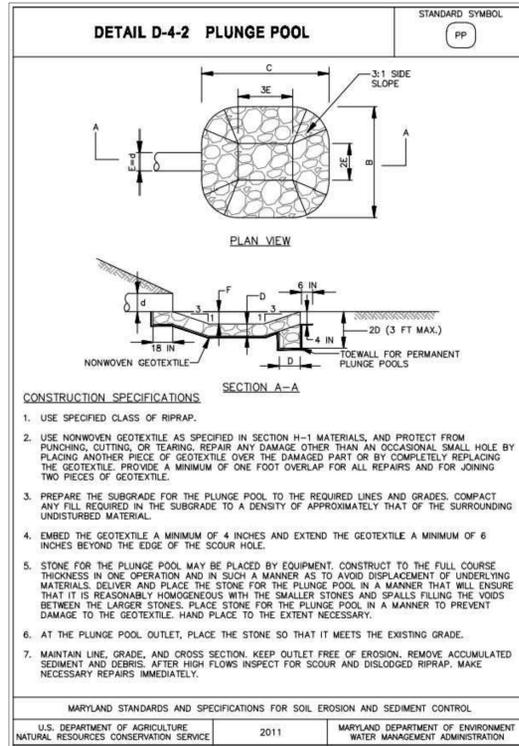
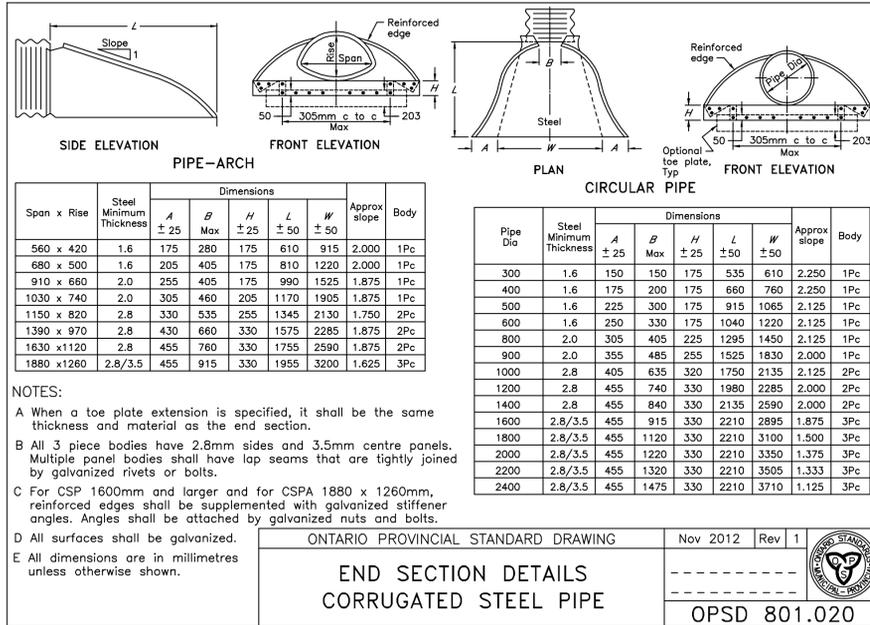
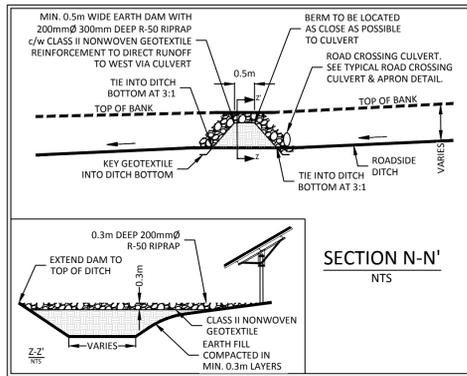
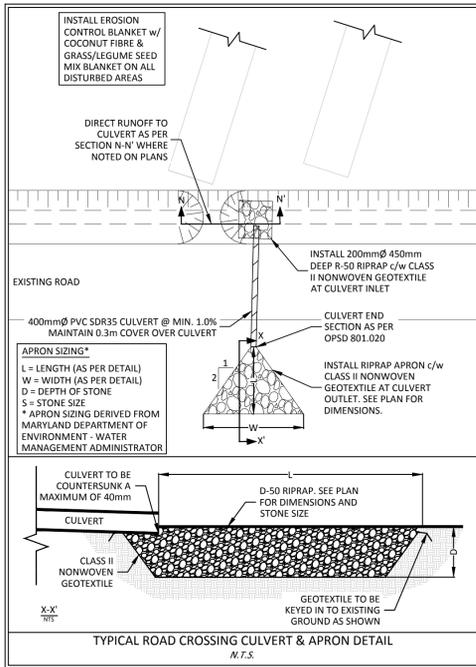
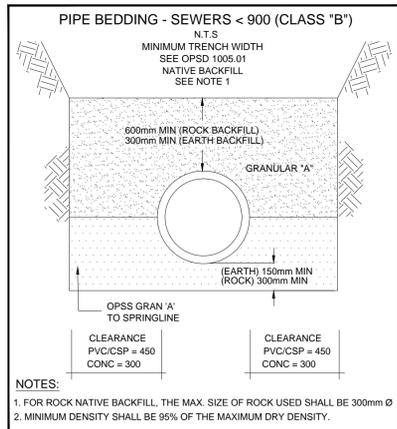
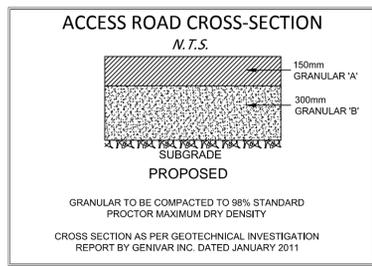
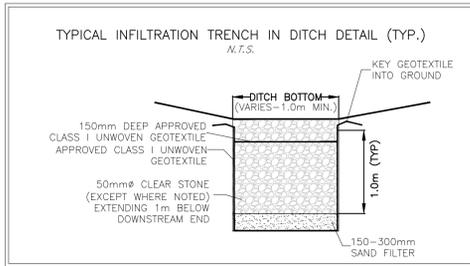
BACK FILL MATERIAL SHALL BE FREE OF ANY UNSUITABLE MATERIAL SUCH AS ROOTS, VEGETATION, ORGANICS, OR CLAY OF MEDIUM TO HIGH PLASTICITY (CI OR CH) AND BE ACCEPTABLE AS BACKFILL. MATERIAL EXCAVATED FROM THE PROPOSED PONDS MAY BE USED IF ACCEPTABLE.

GRANULAR B:

GRANULAR B MATERIAL USED AS BACKFILL IS TO BE COVERED WITH A LAYER OF TOPSOIL TO FACILITATE VEGETATION GROWTH (SEE ESC PLAN FOR DETAILS). GRANULAR MATERIAL IS TO BE SEPARATED FROM THE TOPSOIL WITH A LAYER OF GEOTEXTILE.

GEOTECHNICAL CONSTRUCTION NOTES:

1. CONTRACTOR SHALL ESTABLISH THE MAXIMUM DRY DENSITY AND OPTIMUM MOISTURE CONTENT (OMC) OF THE BACK FILL MATERIAL TO BE USED IN ACCORDANCE WITH LS-706/ASTM D 698 AND THE RESULTS SHALL BE USED FOR FIELD CONTROL OF COMPACTION. COMPACTION TEST TO ESTABLISH THE MAXIMUM DRY DENSITY AND OMC SHALL BE PERFORMED BY A LABORATORY ACCEPTABLE TO THE OWNER.
2. EACH LIFT OF THE BACK FILL SHALL BE FREE OF UNSUITABLE MATERIAL AND CONSIST OF A SINGLE UNIFORM LAYER. THE MAXIMUM LIFT THICKNESS OF THE FILL MATERIAL SHALL BE LIMITED TO A MAXIMUM OF 300mm BEFORE COMPACTION.
3. THE MOISTURE CONTENT OF THE FILL MATERIAL SHALL BE ADJUSTED AS NEEDED TO ALLOW FOR ITS SATISFACTORY PLACEMENT AND TO ACHIEVE THE DEGREE OF COMPACTION REQUIRED.
4. THE AVERAGE FIELD MOISTURE CONTENT SHALL BE MAINTAINED WITHIN THE RANGE OF NO LESS THAN 2% LOWER THAN AND NO MORE THAN 1% GREATER THAN OMC OF THE BACK FILL MATERIAL DETERMINED IN ACCORDANCE WITH ASTM D 698 OR MTO 15-706.
5. EACH LAYER OF THE BACKFILL SHALL BE COMPACTED TO A FIELD DENSITY OF AT LEAST 95% OF MAXIMUM DRY DENSITY (RELATIVE COMPACTION) DETERMINED IN THE LABORATORY IN ACCORDANCE WITH D 698/LS-706.
6. THE CONTRACTOR SHALL CONDUCT TWO OR MORE FIELD DENSITY AND MOISTURE CONTENT TESTS AT RANDOM LOCATIONS FOR QUALITY CONTROL PURPOSES AND THE RESULTS SHALL BE PROVIDED TO THE OWNER.
7. EXPOSED SLOPES ARE TO BE COVERED WITH RIPRAP PLACED ON A LAYER OF GEOTEXTILE OR ALTERNATIVE EROSION CONTROL AS SHOWN ON THE ESC PLAN.
8. EXPOSED SLOPES NOT COVERED WITH RIPRAP ARE TO BE COVERED WITH A LAYER OF GEOSYNTHETIC VEGETATION MAT (NON-DEGRADING POLYMER MAT IS PREFERRED) OR ALTERNATIVE EROSION CONTROL AS SHOWN ON THE ESC PLAN.



NOTE: THE LOCATION AND CONFIGURATION OF PROPOSED AND EXISTING UNDERGROUND SERVICES AND UTILITIES HAVE BEEN SHOWN FOR INFORMATION PURPOSES ONLY AND CANNOT BE GUARANTEED TO BE COMPLETE OR ACCURATE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE CONFIGURATION AND LOCATION OF UNDERGROUND SERVICES AT THE SITE PRIOR TO CONSTRUCTION.

BENCHMARKS (PROVIDED BY MCINTOSH PERRY SURVEYING INC.):	DESCRIPTION	ELEVATION
1	X ON N.E. CORNER OF CONCRETE PAD	238.68
2	X ON N.E. CORNER OF CONCRETE PAD	251.43
3	X ON S.W. CORNER OF CONCRETE PAD	243.64
4	X ON S.W. CORNER OF CONCRETE PAD	240.70
5	X ON S.W. CORNER OF CONCRETE PAD	246.20
6	X ON N.E. CORNER OF CONCRETE PAD	234.90

No.	Revision/Issue	Date
21	REVISED AS PER SITE COMMENTS	OCT/21/16
20	REVISED AS PER SITE COMMENTS	OCT/14/16
19	REVISED AS PER COMMENTS	SEP/21/16
18	REVISED AS PER COMMENTS	JUL/06/16
17	REVISED AS PER COMMENTS	JUN/29/16
16	REVISED AS PER COMMENTS	JUN/24/16
15	REVISED AS PER COMMENTS	JUN/10/16

SEE MASTER REVISION LIST ON COVER SHEET

Check and verify all dimensions before proceeding with the work. Do not scale drawings.

McINTOSH PERRY

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Tel: 613-542-3788 Fax: 613-542-7583

Stamp: **R. J. A. SHARP**
LICENSED PROFESSIONAL ENGINEER
109148910
PROVINCE OF ONTARIO

Client: **CANADIAN SOLAR SOLUTIONS INC.**
545 SPEEDVALE AVE. WEST GUELPH, ON N1K1E6

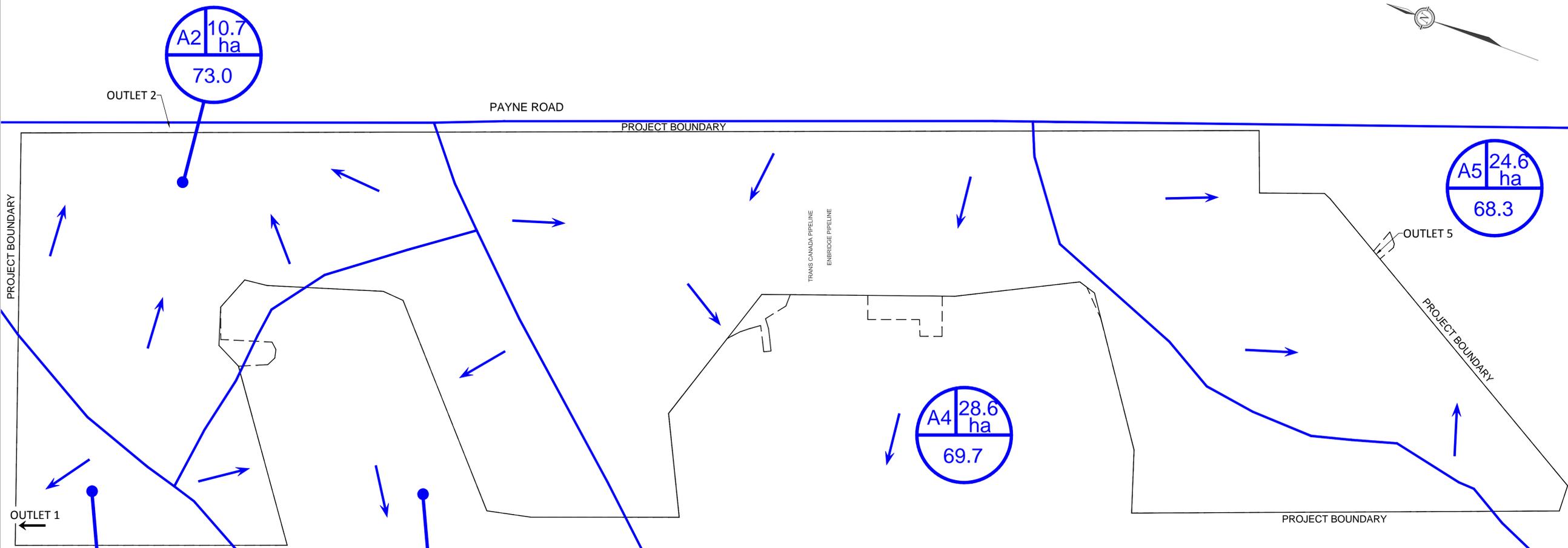
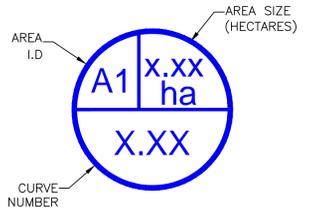
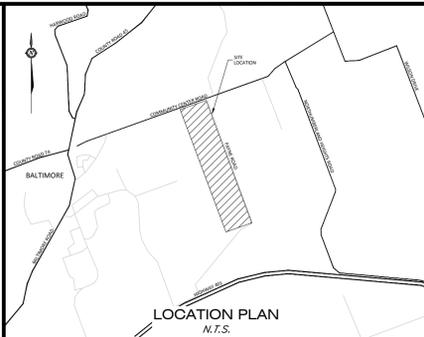
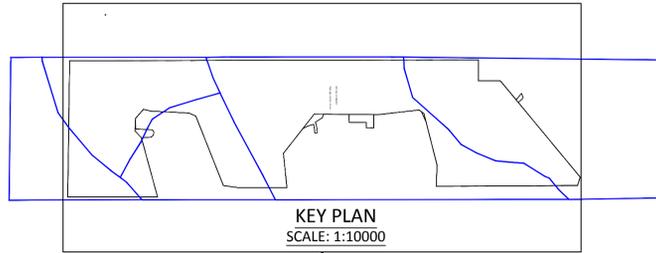
Project: **HAMILTON - PORT HOPE 4 SOLAR FARM**

BALTIMORE ONTARIO

Drawing Title: **CONSTRUCTION NOTES & DETAILS**

Scale: NTS	Project Number: PP-14-9580
Drawn by: D. LONGMUIR	Checked by: A. O'CONNOR
Designed by: J. SHARP	Drawing Number:
Date: JUN/03/2015	SHEET 10 of 12

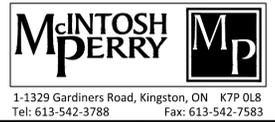
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BENCHMARK No.	DESCRIPTION	ELEVATION
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17	REVISED AS PER COMMENTS	JUN/29/16
16	REVISED AS PER COMMENTS	JUN/24/16
15	REVISED AS PER COMMENTS	JUN/10/16

SEE MASTER REVISION LIST ON COVER SHEET

No.	Revision/Issue	Date
Check and verify all dimensions before proceeding with the work. Do not scale drawings.		



Stamp: _____ Stamp: _____

Client: CANADIAN SOLAR SOLUTIONS INC.
545 SPEEDVALE AVE. WEST GUELPH, ON N1K1E6

Project: HAMILTON - PORT HOPE 4 SOLAR FARM

BALTIMORE ONTARIO

Drawing Title: PRE-DEVELOPMENT DRAINAGE PLAN

Scale: 1:2000	Project Number: PP-14-9580
Drawn by: D. LONGMUIR	Checked By: A. O'CONNOR
Designed By: J. SHARP	Date: JAN/19/2015
SHEET 11 of 12	

PRE

PRE-DEVELOPMENT DRAINAGE CONDITIONS BASED ON STORMWATER MANAGEMENT REPORT BY AECOM, DATED JULY 2013
CONTOURS FROM ONTARIO BASE MAPPING BY ESRI CANADA BASED ON ONTARIO MINISTRY OF NATURAL RESOURCES DATA

SCALE: 1:2000

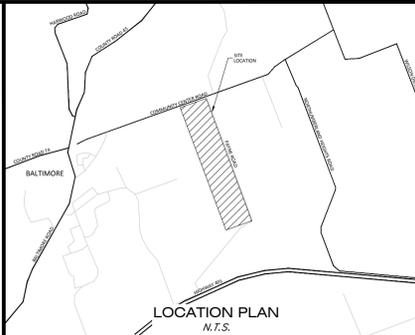


DRAWINGS TO BE READ IN CONJUNCTION WITH POST-CONSTRUCTION STORMWATER MANAGEMENT REPORT BY MCINTOSH PERRY DATED JUNE 2015 REVISED SEPTEMBER 2016

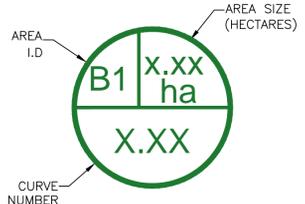
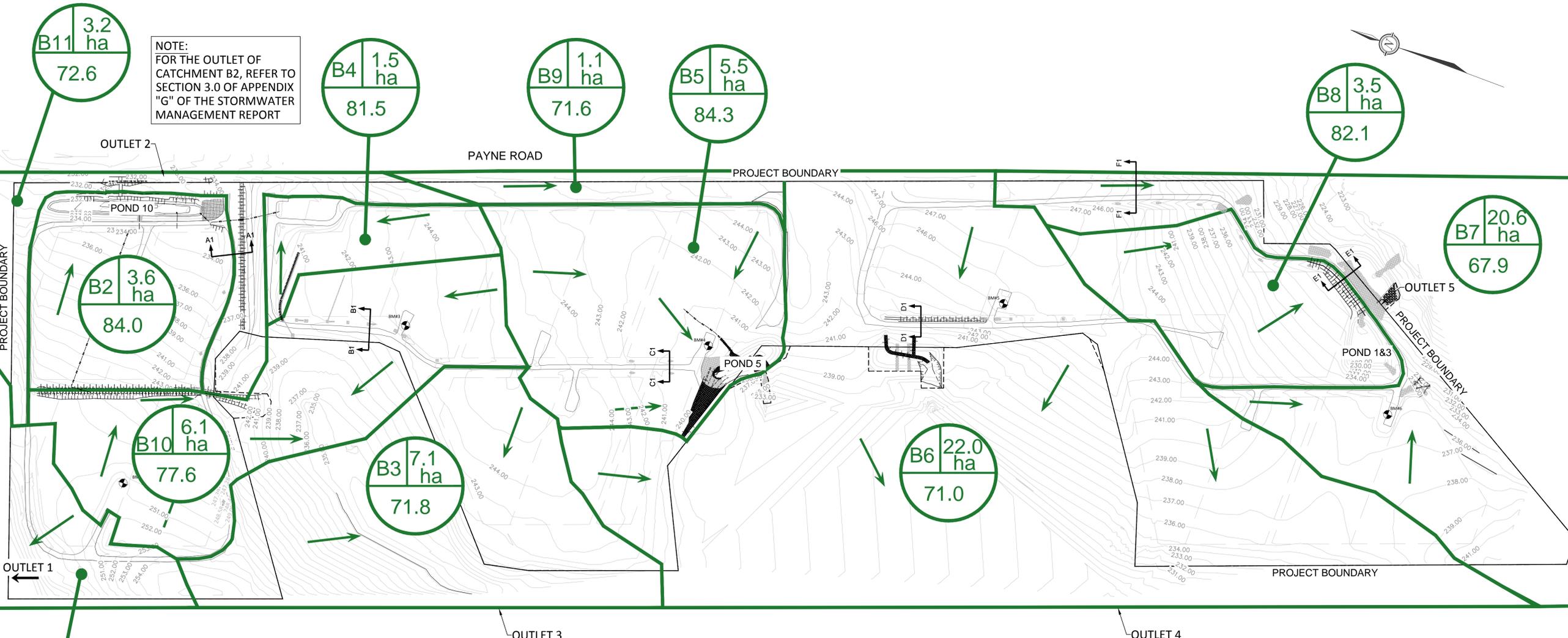


KEY PLAN
SCALE: 1:10000

NOTE: THE SECTIONS BELOW WERE USED TO ANALYZE THE DITCHES AND ROCK CHECK DAMS FOR THE 100YR STORM. REFER TO APPENDIX E



LOCATION PLAN
N.T.S.



CONTOUR DATA FROM MAY 2015, PROVIDED BY PENN ENERGY

BENCHMARK No.	DESCRIPTION	ELEVATION
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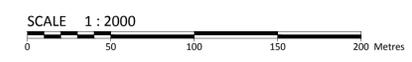


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Client:	CANADIAN SOLAR SOLUTIONS INC. 545 SPEEDVALE AVE. WEST GUELPH, ON N1K1E6
Project:	HAMILTON - PORT HOPE 4 SOLAR FARM
Location:	BALTIMORE ONTARIO
Drawing Title:	POST-DEVELOPMENT DRAINAGE PLAN

Scale:	1:2000	Project Number:	PP-14-9580
Drawn by:	D. LONGMUIR	Checked By:	A. O'CONNOR
Designed By:	J. SHARP	Drawing Number:	SHEET 12 of 12
Date:	JAN/19/2015		POST

SCALE: 1:2000



DRAWINGS TO BE READ IN CONJUNCTION WITH POST-CONSTRUCTION STORMWATER MANAGEMENT REPORT BY MCINTOSH PERRY DATED JUNE 2015 REVISED SEPTEMBER 2016
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LAST PLOTTED: Friday, October 28, 2016 9:18:00 AM PLOT FILE USED: MP-CV-STANDARD.ctb