

EXHIBIT A

STORMWATER ANALYSIS
INLAND AUTO GLASS

ANALYSIS PERFORMED BY:
HEDCO, INC
2014-06-25

Maximum Runoff Volume (NRCS Curve Number Method)

$$V = R(\text{Contributing Area})$$

$$R = \frac{(P - 0.2S)^2}{P + 0.8S} \Rightarrow \frac{[1.2in - 0.2(0.204in)]^2}{1.2in + 0.8(0.204in)} \Rightarrow \left(\frac{1.34in^2}{1.36in} \right) \left(\frac{1ft}{12in} \right) \Rightarrow 0.082ft$$

$$P = 1.2in \text{ (2year, 24hr storm)} \quad CN = 98 \quad S = \frac{1000}{98} - 10$$

Contributing Area (all impervious areas, including: asphaltic concrete parking lot & building roof area) = 94,700 ft²

$$V = (0.082ft)(94,700ft^2) \Rightarrow 7765.4ft^3$$

User Name: HEDCO
Project: 1413 Inland Glass
Scenario: SAWLE

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RESERVOIR REPORT

Reservoir Number: 1
Name: 1

[RESERVOIR STAGE STORAGE/DISCHARGE]

Elevation (ft)	Stage (ft)	Area (sq ft)	Storage (cu ft)	Discharge (cfs)
741.00	0.00	0.00	0.00	0.00
741.10	0.10	2544.64	127.23	0.00
741.20	0.20	2793.12	394.12	0.00
741.30	0.30	3041.61	685.86	0.00
741.40	0.40	3290.09	1002.44	0.00
741.50	0.50	3538.58	1343.87	0.00
741.60	0.60	3787.06	1710.16	0.00
741.70	0.70	4035.55	2101.29	0.00
741.80	0.80	4284.03	2517.27	0.00
741.90	0.90	4532.52	2958.09	0.00
742.00	1.00	4781.00	3423.77	0.00
742.10	1.10	5144.30	3920.03	0.00
742.20	1.20	5507.60	4452.63	0.00
742.30	1.30	5870.90	5021.55	0.00
742.40	1.40	6234.20	5626.81	0.00
742.50	1.50	6597.50	6268.39	0.00
742.60	1.60	6960.80	6946.31	0.00
742.70	1.70	7324.10	7660.55	0.00
742.80	1.80	7687.40	8411.13	0.00
742.90	1.90	8050.70	9198.03	0.00
743.00	2.00	8414.00	10021.27	0.00

Maximum Storage = 10021.27 (cu ft)
Maximum Discharge = 0.00 (cfs)



Construction Materials Testing
Geotechnical Engineering
Environmental Consulting

March 10, 2014

Mr. Jack Hammond, P.E.
HEDCO
528 Bryden Avenue
Lewiston, Idaho 83501

**RE: Subsurface Exploration and Infiltration Testing Services
Proposed Inland Auto Glass Facility
7th Avenue North & 24th Street
Lewiston, Idaho 83501
ALLWEST Project No. 314-038G**

Dear Mr. Hammond:

ALLWEST Testing and Engineering, LLC (ALLWEST) has completed the authorized subsurface exploration and infiltration testing for the proposed Inland Auto Glass Facility stormwater disposal system to be located at the southeast corner of 7th Avenue North and 24th Street in Lewiston, Idaho. The general location of the project is shown on the Site Vicinity Map, Figure 1 (attached). The purpose of the evaluation was to assess the subsurface soil conditions at the proposed stormwater drainage location. This letter details the results of the field evaluation and infiltration testing and presents our recommendations to assist the design of the proposed drainage improvements.

PROPOSED CONSTRUCTION

We understand it is proposed to construct a gravel drainage gallery or other subsurface stormwater infiltration system within the existing grass drainage swale located on the south edge of the project site. The proposed infiltration system will retain and infiltrate stormwater runoff.

SCOPE OF SERVICES

Our Scope of Services included the following:

- 1) Review soil and geologic mapping of the site.
- 2) Excavate two (2) test pits in the vicinity of the suspected drywell with a rubber tire backhoe.
- 3) Prepare logs of the subsurface conditions observed in the test pits.
- 4) Perform an in-situ infiltration test within stratum representative of the soil anticipated to receive stormwater.
- 5) Prepare this report.

Our services were performed in general accordance with our proposal dated February 13, 2014.

GENERAL GEOLOGIC CONDITIONS

The project site is mapped on the "Surficial Geologic Map of the Lewiston Orchards North Quadrangle and Part of the Clarkston Quadrangle, Nez Perce County, Idaho", prepared Othberg, et al (2003), as alluvial fan and debris flow deposits (Qad) to older alluvium of mainstreams (Qaom). The alluvial fan and debris flow deposits are reported to consist of poorly sorted muddy gravel shed from canyon slopes of basalt colluvium. The alluvium of mainstreams deposits are reported to consist of sand and silty sand overlying river channel gravel.

GENERAL SOIL CONDITIONS

The USDA Soil Conservation Service (SCS) (currently the USDA Natural Resources Conservation Service) has mapped the soil on the property as Wistona very fine sandy loam. The Wistona very fine sandy loam unit consists of mixed alluvium.

SUBSURFACE CONDITIONS

The subsurface conditions observed in the test pits excavated consisted of approximately ½ foot of topsoil underlain by silt with sand to a depth of approximately five (5) feet. The silt with sand is underlain by poorly graded gravel with sand. Silty sand was observed between the silt with sand and poorly graded gravel with sand in test pit TP-2.

Descriptions of the soils observed follow:

Topsoil – The topsoil consists of silt with sand and roots and organics. It appeared to be stiff, moist, and dark brown in color.

Silt with sand – The silt with sand appeared to be stiff/medium dense, moist, low plastic to non-plastic and dark brown in color.

Silty sand – The silty sand appeared to be medium dense, moist, fine-grained and brown in color.

Poorly graded gravel with sand – The poorly graded gravel with sand contains cobbles. It appeared to be dense, moist, fine to coarse-grained and light brown in color.

Subsurface water was not observed in the test pits at the time of excavation.

INFILTRATION TESTING

A single-ring infiltration test was performed near the location of test pit TP-2. The ring used for the test was 12 inches in diameter and was pushed into the silt a depth of approximately eight (8) inches. A constant head of approximately six (6) inches was maintained throughout the test. A stabilized infiltration rate of approximately 1.5 inches per hour was measured.

The saturated hydraulic conductivity value for the natural soil in the project area is reported by the USDA Natural Resources Conservation Service to be approximately 1.3 inches per hour.

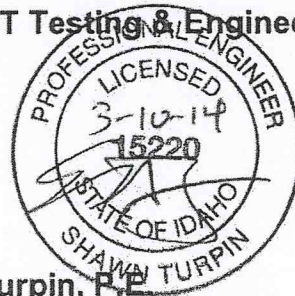
CONCLUSIONS

The site appears to be suitable for stormwater infiltration.

If you have any questions or need additional information, please give us a call.

Sincerely,

ALLWEST Testing & Engineering, LLC



Shawn Turpin, P.E.
Senior Geotechnical Engineer

ATTACHED: Figure 1: Site Vicinity Map
Figure 2: Test Pit Location Plan
Test Pit Logs

A handwritten signature in black ink, appearing to read "Colin Meehan".

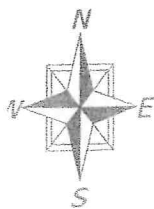
Colin Meehan, P.E.
Senior Geotechnical Engineer



⊠ Approximate test pit location

Google Earth, 2013

DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS
NOT INTENDED FOR CONSTRUCTION PURPOSES



ALLWEST
Testing & Engineering

2705 E. Main Street
Lewiston, Idaho
www.allwesttesting.com

FIGURE 2 - TEST PIT LOCATION PLAN

Inland Auto Glass

7th Avenue North & 24th Street

Lewiston, Idaho

Client Name: HEDCO

Project No.: 314-038G

Date: March 8, 2014

EXPLORATORY TEST PIT LOG



PROJECT: 314-038G Inland Auto Glass Facility 7th Avenue N & 24th Street Lewiston, Idaho HEDCO			TEST PIT: TP-1	
			LOCATION: See Figure A-2	
			DATE: 3/3/2014	SCALE: 1" = 2'
Depth 0.0	ASTM D2487 Symbol	Description of Materials	WL	Tests or Notes
0	TS	SILT with sand; stiff, moist, roots, organics and dark brown to black.		
2	ML	SILT with sand; loose to medium dense, wet, slightly plastic and dark brown.		
4				
6	GP	Poorly graded GRAVEL with sand; cobbles, medium dense to dense, moist, fine to coarse-grained and light brown.		
8		End of test pit at an approximate depth of 7 1/2 feet.		
10				
12				
14				

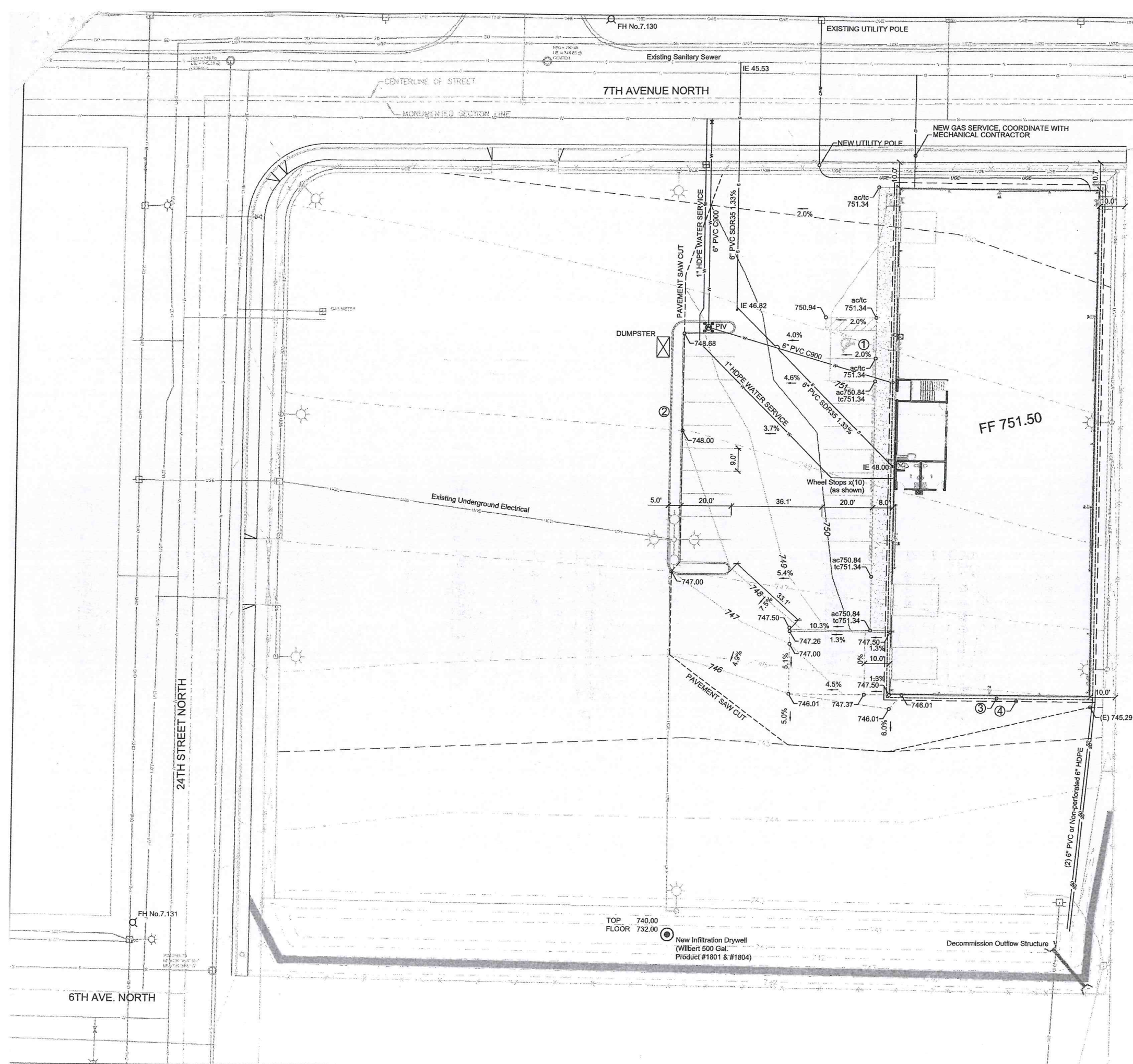
(See Report and Standard Plates for elevation and descriptive terminology.)

EXPLORATORY TEST PIT LOG



PROJECT: 314-038G Inland Auto Glass Facility 7th Avenue N & 24th Street Lewiston, Idaho HEDCO			TEST PIT: TP-2 LOCATION: See Figure A-2	
			DATE: 3/3/2014	SCALE: 1" = 2'
Depth 0.0	ASTM D2487 Symbol	Description of Materials	WL	Tests or Notes
0	TS	SILT with sand; stiff, moist, roots, organics and dark brown to black.		
2	ML	SILT with sand; medium dense, moist to wet, non-plastic and brown.		
4				
6	SM	Silty SAND; medium dense, moist to wet, fine to medium-grained, non-plastic and light brown.		
8	GP	Poorly graded GRAVEL with sand; cobbles, medium dense to dense, moist, fine to coarse-grained and light brown.		
10		End of test pit at an approximate depth of 9 1/2 feet.		
12				
14				

(See Report and Standard Plates for elevation and descriptive terminology.)



LEGEND

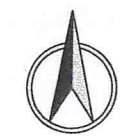
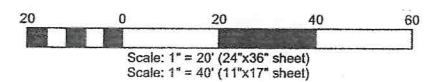
- CENTERLINE MONUMENT
- SANITARY SEWER MANHOLE
- STORM SEWER MANHOLE
- CATCH BASIN
- FIRE HYDRANT
- GATE VALVE
- WATER METER
- POWER POLE
- GUY WIRE
- LIGHT POLE
- SIGN
- TELEPHONE RISER
- CENTERLINE
- PROPERTY LINE
- DEED LINES
- EDGE OF ASPHALT
- SANITARY SEWER LINE
- STORM DRAIN LINE
- WATER LINE
- OVERHEAD POWER LINE
- UNDERGROUND POWER LINE
- UNDERGROUND FIBER OPTIC LINE
- UNDERGROUND COMMUNICATION LINE
- SECTION LINE

NOTES

- See Architect's drawing Sheet T1, Detail 2 for Accessible Parking Stall requirements.
- See Architect's drawing sheet T1, Detail 1 for landscape planting requirements.
- Foundation Drains: Install 4" dia. perforated drintile wrapped in fabric, to be set in gravel at toe of footing. Run foundation drains to southeast corner of building, as shown.
- Roof Drains: Install 4" dia. drintile on east and west elevations for roof drains. Run roof drains below grade to southeast corner of building, as shown.
- Traffic Control Plan: See attached document, "Maintenance & Protection of Traffic."

STORMWATER MANAGEMENT PLAN

The existing stormwater swale along the entire south edge of the paved site will be converted to an Infiltration Swale with the installation of the new Wilbert Precast 500 gallon Infiltration Drywell as shown below. Additionally, the March 10, 2014 Subsurface Exploration & Infiltration Testing Report by ALLWEST concludes that "the site appears to be suitable for stormwater infiltration" utilizing the Infiltration Drywell. Referenced report is attached.



REVISION		DESCRIPTION	APPRO.
DATE	BY	REVISION	
5-23-14	A	Revised Water Service Connection to Water Main in Street	
		Revised Water Meter and New Power Pole to Area Behind Sidewalk	

SCALE: 1"=20'

DRAWN BY: MEE

CHECKED BY: JSH

DATE: 4-24-14

SHEET: 1413

DRAWING #: 1413-C1

HEDCO
HAMMOND ENGINEERING & DEVELOPMENT CO.
328 BRYDEN AVENUE LEWISTON, IDAHO 83501
(208) 786-5422

SHEET

C1