

# HALO CAR WASH 3555 BORRISOKANE RD BARRHAVEN, ON

## REVISION 11



KEY PLAN (N.T.S.)

### DRAWING INDEX

DRAWING INDEX	
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# LRL

ENGINEERING | INGÉNIERIE

5430 Canotek Road | Ottawa, ON, K1J 9G2  
www.lrl.ca | (613) 842-3434

HALO CAR WASH  
3555 BORRISOKANE RD, BARRHAVEN, ON  
REV.11 - RE-ISSUED FOR APPROVAL - JULY 07, 2023  
LRL PROJECT no: 210691



NOT AUTHENTIC UNLESS SIGNED AND DATED

GENERAL NOTES

- 1. ALL WORKS MATERIALS SHALL CONFIRM TO THE LAST REVISION OF THE STANDARDS AND SPECIFICATIONS FOR THE CITY OF OTTAWA, ONTARIO PROVINCIAL STANDARD DRAWINGS (OPSD) AND SPECIFICATIONS (OPSS), WHERE APPLICABLE. LOCAL UTILITY STANDARDS AND MINISTRY OF TRANSPORTATION STANDARDS WILL APPLY WHERE REQUIRED.

EROSION AND SEDIMENT CONTROL NOTES

GENERAL

THE CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES, TO PROVIDE FOR PROTECTION OF THE AREA DRAINAGE SYSTEM AND THE RECEIVING WATERCOURSE, DURING CONSTRUCTION ACTIVITIES. THE CONTRACTOR ACKNOWLEDGES THAT FAILURE TO IMPLEMENT APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES MAY BE SUBJECT TO PENALTIES IMPOSED BY ANY APPLICABLE REGULATORY AGENCY.

THE CONTRACTOR ACKNOWLEDGES THAT SURFACE EROSION AND SEDIMENT RUNOFF RESULTING FROM THEIR CONSTRUCTION OPERATIONS HAS POTENTIAL TO CAUSE A DETRIMENTAL IMPACT TO ANY DOWNSTREAM WATERCOURSE OR SEWER, AND THAT ALL CONSTRUCTION OPERATIONS THAT MAY IMPACT UPON WATER QUALITY SHALL BE CARRIED OUT IN MANNER THAT STRICTLY MEETS THE REQUIREMENT OF ALL APPLICABLE LEGISLATION AND REGULATIONS.

AS SUCH, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CARRYING OUT THEIR OPERATIONS, AND SUPPLYING AND INSTALLING ANY APPROPRIATE CONTROL MEASURES, SO AS TO PREVENT SEDIMENT LADEN RUNOFF ENTERING ANY SEWER OR WATERCOURSE WITHIN OR DOWNSTREAM OF THE WORKING AREA.

THE CONTRACTOR ACKNOWLEDGES THAT NO ONE MEASURE IS LIKELY TO BE 100% EFFECTIVELY FOR EROSION PROTECTION AND CONTROLLING SEDIMENT RUNOFF AND DISCHARGES FROM THE SITE. THEREFORE, WHERE NECESSARY THE CONTRACTOR SHALL IMPLEMENT ADDITIONAL MEASURES ARRANGED IN SUCH MANNER AS TO MITIGATE SEDIMENT RELEASE FROM THE CONSTRUCTION OPERATIONS AND ACHIEVE SPECIFIC MAXIMUM PERMITTED CRITERIA WHERE APPLICABLE. SUGGESTED ON-SITE MEASURES MAY INCLUDE, BUT SHALL NOT BE LIMITED TO, THE FOLLOWING METHODS: SEDIMENT PONDS, FILTER BAGS, PUMP FILTERS, SETTLING TANKS, SILT FENCE, STRAW BALES, FILTER CLOTHS, CATCH BASIN FILTERS, CHECK DAMS AND/OR OTHER RECOGNIZED TECHNOLOGIES AND METHOD AVAILABLE AT THE TIME OF CONSTRUCTION. SPECIFIC MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH REQUIREMENTS OF OPSS 577 WHERE APPROPRIATE, OR IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

WHERE, IN THE OPINION OF THE CONTRACT ADMINISTRATOR OR REGULATORY AGENCY, THE INSTALLED CONTROL MEASURES FAIL TO PERFORM ADEQUATELY, THE CONTRACTOR SHALL SUPPLY AND INSTALL ADDITIONAL OR ALTERNATIVE MEASURES AS DIRECTED BY THE CONTRACT ADMINISTRATOR OR REGULATORY AGENCY. AS SUCH, THE CONTRACTOR SHALL HAVE ADDITIONAL CONTROL MATERIALS ON SITE AT ALL TIME WHICH ARE EASILY ACCESSIBLE AND MAY BE IMPLEMENTED BY HIM AT THE MOMENT'S NOTICE.

PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL SUBMIT TO THE CONTRACT ADMINISTRATOR SIX COPIES OF A DETAILED EROSION AND SEDIMENT CONTROL PLAN (ESCP). THE ESCP WILL CONSIST OF WRITTEN DESCRIPTION AND DETAILED DRAWINGS INDICATING THE ON-SITE ACTIVITIES AND MEASURES TO BE USED TO CONTROL EROSION AND SEDIMENT MOVEMENT FOR EACH STEP OF THE WORK.

CONTRACTOR'S RESPONSIBILITIES

THE CONTRACTOR SHALL ENSURE THAT ALL WORKERS, INCLUDING SUB-CONTRACTOR, IN THE WORKING AREA ARE AWARE OF THE IMPORTANCE OF THE EROSION AND SEDIMENT CONTROL MEASURES AND INFORMED OF THE CONSEQUENCES OF THE FAILURE TO COMPLY WITH THE REQUIREMENTS OF ALL REGULATORY AGENCIES.

THE CONTRACTOR SHALL PERIODICALLY, AND WHEN REQUESTED BY THE CONTRACT ADMINISTRATOR, CLEAN OUT ACCUMULATED SEDIMENT DEPOSITS AS REQUIRED AT THE SEDIMENT CONTROL DEVICES, INCLUDING THOSE DEPOSITS THAT MAY ORIGINATE FROM OUTSIDE THE CONSTRUCTION AREA. ACCUMULATED SEDIMENT SHALL BE REMOVED IN SUCH A MANNER THAT PREVENTS THE DEPOSITION OF THIS MATERIAL INTO THE SEWER WATERCOURSE AND AVOIDS DAMAGE TO CONTROL MEASURES. THE SEDIMENT SHALL BE REMOVED FROM THE SITE AT THE CONTRACTOR'S EXPENSE AND MANAGED IN COMPLIANCE WITH REQUIREMENTS FRO EXCESS EARTH MATERIAL, AS SPECIFIED ELSEWHERE IN THE CONTRACT.

THE CONTRACTOR SHALL IMMEDIATELY REPORT TO THE CONTRACT ADMINISTRATOR ANY ACCIDENTAL DISCHARGES OF SEDIMENT MATERIAL INTO EITHER THE WATERCOURSE OR THE STORM SEWER SYSTEM. FAILURE TO REPORT WILL BE CONSTITUTE A BREACH OF THIS SPECIFICATION AND THE CONTRACTOR MAY ALSO BE SUBJECT TO THE PENALTIES IMPOSED BY THE APPLICABLE REGULATORY AGENCY. APPROPRIATE RESPONSE MEASURES, INCLUDING ANY REPAIRS TO EXISTING CONTROL MEASURES OR THE IMPLEMENTATION OF ADDITIONAL CONTROL MEASURES, SHALL BE CARRIED OUT BY THE CONTRACTOR WITHOUT DELAY.

THE SEDIMENT CONTROL MEASURES SHALL ONLY BE REMOVED WHEN, IN THE OPINION OF THE CONTRACT ADMINISTRATOR, THE MEASURE OR MEASURES, IS NO LONGER REQUIRED. NO CONTROL MEASURE MAY BE PERMANENTLY REMOVED WITHOUT PRIOR AUTHORIZATION FROM THE CONTRACT ADMINISTRATOR. ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE REMOVED IN A MANNER THAT AVOIDS THE ENTRY OF ANY EQUIPMENT, OTHER THAN HAND-HHELD EQUIPMENT, INTO ANY WATERCOURSE, AND PREVENTS THE RELEASE OF ANY SEDIMENT OR DEBRIS INTO ANY SEWER OR WATERCOURSE WITHIN OR DOWNSTREAM OF THE WORKING AREA. ALL ACCUMULATED SEDIMENT SHALL BE REMOVED FROM THE WORKING AREA AT THE CONTRACTOR'S EXPENSE AND MANAGED IN COMPLIANCE WITH THE REQUIREMENTS FOR EXCESS EARTH MATERIAL.

WHERE, IN THE OPINION OF EITHER THE CONTRACT ADMINISTRATOR OR A REGULATORY AGENCY, ANY OF THE TERMS SPECIFIED HEREIN HAVE NOT BEEN COMPLIED WITH OR PERFORMED IN A SUITABLE MANNER, OR YAT ALL, THE CONTRACTOR ADMINISTRATOR OR A REGULATORY AGENCY HAS THE RIGHT TO IMMEDIATELY WITHDRAW ITS PERMISSION TO CONTINUE THE WORK BUT MAY REVEW ITS PERMISSION UPON BEING SATISFIED THAT THE DEFAULTS OR DEFICIENCIES IN THE PERFORMANCE OF THIS SPECIFICATION BY THE CONTRACTOR HAVE BEEN REMEDIED.

SPILL CONTROL NOTES

- 1. ALL CONSTRUCTION EQUIPMENT SHALL BE RE-FUELED, MAINTAINED, AND STORED NO LESS THAN 30 METRES FROM WATERCOURSE, STREAMS, CREEKS, WOODLOTS, AND ANY ENVIRONMENTALLY SENSITIVE AREAS, OR AS OTHERWISE SPECIFIED.

MUD MAT NOTES

- 1. THE GRANULAR MATERIAL WILL REQUIRE PERIODIC REPLACEMENT AS IT BECOMES CONTAMINATED BY VEHICLE TRAFFIC.

SITE GRADING NOTES

- 1. PRIOR TO THE COMMENCEMENT OF THE SITE GRADING WORKS, ALL SILTATION CONTROL DEVICES SHALL BE INSTALLED AND OPERATIONAL PER EROSION CONTROL PLAN.

ROADWORK SPECIFICATIONS

- 1. ROADWORK TO BE COMPLETED IN ACCORDANCE WITH GEOTECHNICAL REPORT, PREPARED BY LRL ASSOCIATES, DATED NOVEMBER 2020.

SANITARY, FOUNDATION DRAIN, STORM SEWER AND WATERMAIN NOTES

GENERAL

- 1. LASER ALIGNMENT CONTROL TO BE UTILIZED ON ALL SEWER INSTALLATIONS.

SANITARY

- 1. ALL SANITARY SEWER INSTALLATION SHALL CONFORM TO THE LATEST REVISIONS OF THE CITY OF OTTAWA AND THE ONTARIO PROVINCIAL STANDARD DRAWINGS (OPSD) AND SPECIFICATIONS (OPSS).

STORM

- 17. ALL REINFORCED CONCRETE STORM SEWER PIPE SHALL BE IN ACCORDANCE WITH CSA A257.2, OR LATEST AMENDMENT. ALL NON-REINFORCED CONCRETE STORM SEWER PIPE SHALL BE IN ACCORDANCE WITH CSA A257.1, OR LATEST AMENDMENT. PIPE SHALL BE JOINED WITH STD. RUBBER GASKETS AS PER CSA A257.2, OR LATEST AMENDMENT.

WATERMAIN

- 30. ALL WATERMAIN INSTALLATION SHALL CONFORM TO THE LATEST REVISIONS OF THE CITY OF OTTAWA AND THE ONTARIO PROVINCIAL STANDARD DRAWINGS (OPSD) AND SPECIFICATIONS (OPSS).

USE AND INTERPRETATION OF DRAWINGS

GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION ARE PART OF THE CONTRACT DOCUMENTS AND DESCRIBE USE AND INTENT OF THE DRAWING. THE CONTRACT DOCUMENTS INCLUDE NOT ONLY THE DRAWINGS, BUT ALSO THE OWNER-CONTRACTOR AGREEMENTS, CONDITIONS OF THE CONTRACT, THE SPECIFICATIONS, ADDENDA, AND MODIFICATIONS ISSUED AFTER EXECUTION OF THE CONTRACT. THESE CONTRACT DOCUMENTS ARE COMPLEMENTARY, AND WHAT IS REQUIRED BY ANY ONE SHALL BE BINDING AS IF REQUIRED BY ALL. WORK NOT COMPLETELY DELINEATED HEREON SHALL BE CONSTRUCTED OF THE SAME MATERIALS AND DETAILED SIMILARLY AS WORK SHOWN MORE COMPLETELY ELSEWHERE IN THE CONTRACT DOCUMENTS.

BY USE OF THE DRAWINGS FOR CONSTRUCTION OF THE PROJECT, THE OWNER CONFIRMS THAT HE HAS REVIEWED AND APPROVED THE DRAWINGS. THE CONTRACTOR CONFIRMS THAT HE HAS VISITED THE SITE, FAMILIARIZED HIMSELF WITH THE LOCAL CONDITIONS, VERIFIED FIELD DIMENSIONS AND CORRELATED HIS OBSERVATIONS WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.

AS INSTRUMENTS OF SERVICE, ALL DRAWINGS, SPECIFICATIONS, CAD FILES OR OTHER ELECTRONIC MEDIA AND COPIES THEREOF FURNISHED BY THE ENGINEER ARE HIS PROPERTY. THEY ARE TO BE USED ONLY FOR THIS PROJECT AND ARE NOT TO BE USED ON ANY OTHER PROJECT, INCLUDING REPEATS OF THE PROJECT. CHANGES TO THE DRAWINGS MAY ONLY BE MADE BY THE ENGINEER.

UNLESS THE REVISION TITLE IS ISSUED FOR CONSTRUCTION, THESE DRAWINGS SHALL BE CONSIDERED PRELIMINARY AND SHALL NOT BE USED AS A CONSTRUCTION DOCUMENT.

THESE DRAWINGS ILLUSTRATES THE WORK TO BE DONE. THE ENGINEER IS NOT RESPONSIBLE FOR THE MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES USED TO DO THE WORK, OR THE SAFETY ASPECTS OF CONSTRUCTION, AND NOTHING ON THESE DRAWINGS EXPRESSED OR IMPLIED CHANGES THIS CONDITION. CONTRACTOR SHALL DETERMINE ALL CONDITIONS AT THE SITE AND SHALL BE RESPONSIBLE FOR KNOWING HOW THEY AFFECT THE WORK. SUBMITTAL OF A BID TO PERFORM THIS WORK IS ACKNOWLEDGEMENT OF THE RESPONSIBILITIES, AND THAT THEY HAVE BEEN FULLY CONSIDERED IN PLANNING OF THE WORK. THE ENGINEER HAS NO CLAIMS FOR EXTRA CHARGES DUE TO THESE CONDITIONS WILL BE FORTHCOMING.

UNAUTHORIZED CHANGES

IN THE EVENT THE CLIENT, THE CLIENT'S CONTRACTORS OR SUBCONTRACTORS, OR ANYONE FOR WHOM THE CLIENT IS LEGALLY LIABLE MAKES OR PERMITS TO BE MADE ANY CHANGES TO ANY REPORTS, PLANS, SPECIFICATIONS OR OTHER CONSTRUCTION DOCUMENTS PREPARED BY LRL ASSOCIATES LTD. (LRL) WITHOUT OBTAINING LRL'S PRIOR WRITTEN CONSENT, THE CLIENT SHALL ASSUME FULL RESPONSIBILITY FOR THE RESULTS OF SUCH CHANGES. THEREFORE THE CLIENT AGREES TO WAIVE ANY CLAIM AGAINST LRL AND TO RELEASE LRL FROM ANY LIABILITY ARISING DIRECTLY OR INDIRECTLY FROM SUCH UNAUTHORIZED CHANGES.

IN ADDITION, THE CLIENT AGREES, TO THE FULLEST EXTENT PERMITTED BY LAW, TO INDEMNIFY AND HOLD HARMLESS LRL FROM ANY DAMAGES, LIABILITIES OR COST, INCLUDING REASONABLE ATTORNEY'S FEES AND COST OF DEFENSE, ARISING FROM SUCH CHANGES.

THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF PIPES AND CHECK WITH THE UTILITY COMPANIES BEFORE DIGGING OR PERFORMING WORK.

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CONTRACTOR IS ADVISED TO COLLECT INFORMATION ON SOIL CONDITIONS BEFORE START OF CONSTRUCTION.

THE ENGINEER WAIVES ANY AND ALL RESPONSIBILITY AND LIABILITY FOR PROBLEMS WHICH ARISE FROM FAILURE TO FOLLOW THESE PLANS, SPECIFICATIONS AND THE DESIGN INTENT THEY CONVEY, OR FOR PROBLEMS WHICH ARISE FROM OTHERS' FAILURE TO OBTAIN AND/OR FOLLOW THE ENGINEERS GUIDELINES PRIOR WRITTEN CONSENT, THE CLIENT SHALL ASSUME FULL RESPONSIBILITY FOR THE RESULTS OF SUCH CHANGES, INCLUDING OMISSIONS, INCONSISTENCIES AMBIGUITIES OR CONFLICTS WHICH ARE ALLEGED.

CONTRACTOR TO VERIFY ALL DIMENSIONS AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES BEFORE WORK COMMENCES. DO NOT SCALE DRAWINGS.

SUBJECT FOR APPROVAL

Table with columns: No., REVISIONS, BY, DATE. Contains revision history from 01 to 11.



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5430 Canotek Road | Ottawa, ON, K1J 9G2

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CLIENT: HALO CAR WASH INC.

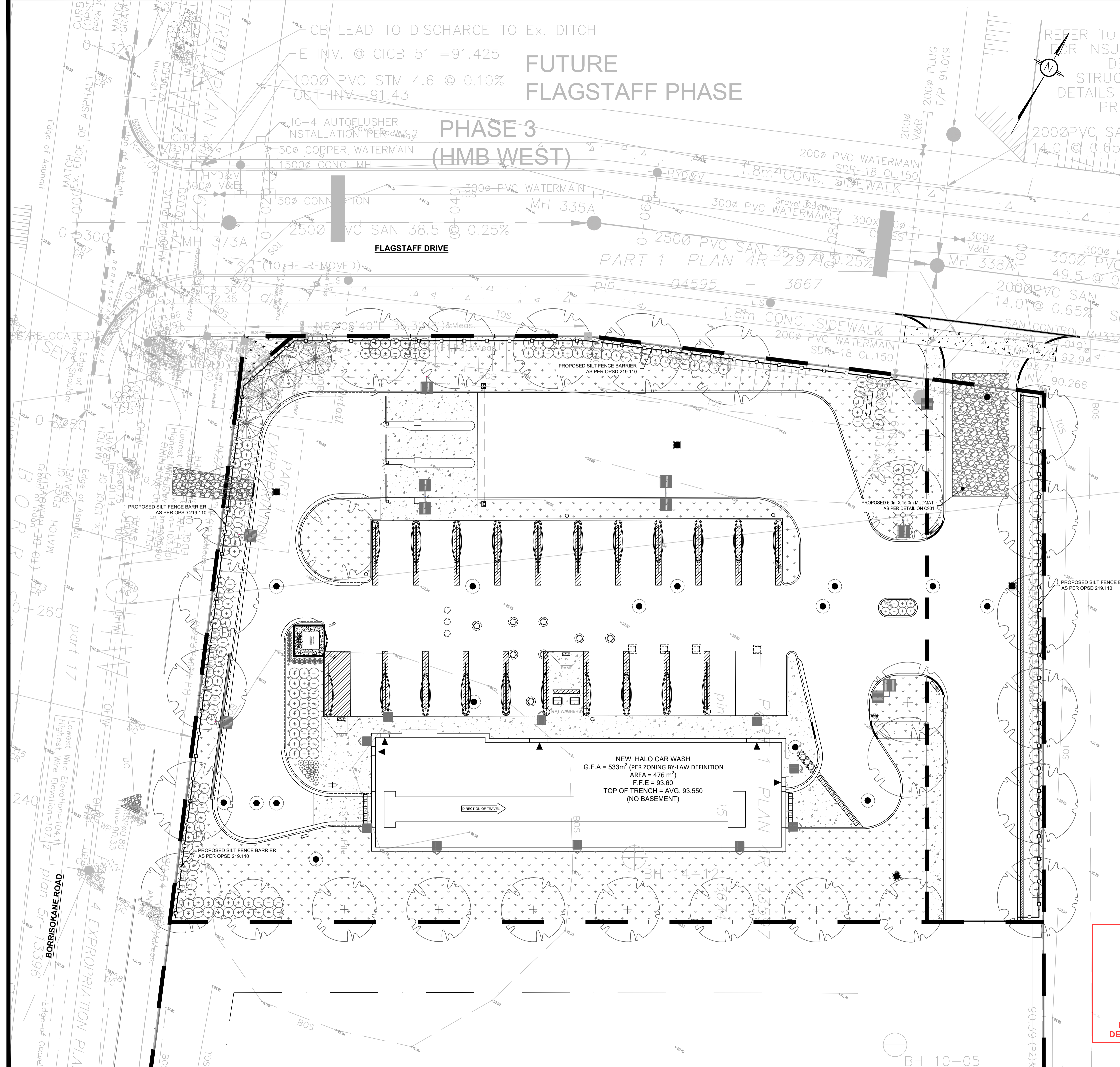
DESIGNED BY: M.L. / P.P. DRAWN BY: M.L. APPROVED BY: M.B.

PROJECT: HALO CAR WASH 3555 BORRISOKANE RD BARRHAVEN, ON

DRAWING TITLE: GENERAL NOTES

PROJECT NO: 210691 DATE: JANUARY 2022

C001



**LEGEND:**

- EXISTING PROPERTY LINE TO REMAIN
- PROPOSED CURB
- PROPOSED DEPRESSED CURB
- ▤ PROPOSED TERRACING (3:1 MIN.)
- PROPOSED SILT FENCE AS PER OPSD 219.110
- ▴ PROPOSED DOOR ENTRANCE/EXIT
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- ▬ PROPOSED 1.5m WIDE LINE PAINTING PER CITY OF OTTAWA LATEST REGULATIONS
- STM — PROPOSED STORM SEWER
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- WTR — PROPOSED WATERMAIN
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- ▨ STORM WATERSHED EXTENT
- WS-XX CONTROLLED AREA
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CONTRACTOR IS ADVISED TO COLLECT INFORMATION ON SOIL CONDITIONS BEFORE START OF CONSTRUCTION.

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CONTRACTOR TO VERIFY ALL DIMENSIONS AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES BEFORE WORK COMMENCES. DO NOT SCALE DRAWINGS.

SCALE: 1:200

**SUBJECT FOR APPROVAL**

11	RE-ISSUED FOR APPROVAL	M.L.	07 JULY 2023
10	RE-ISSUED FOR APPROVAL	M.L.	23 MAY 2023
09	RE-ISSUED FOR APPROVAL	M.L.	09 MAY 2023
08	ISSUED FOR COMMITTEE OF ADJUSTMENT	M.L.	08 MAY 2023
07	RE-ISSUED FOR APPROVAL	P.P.	31 MAR 2023
06	RE-ISSUED FOR APPROVAL	P.P.	31 MAR 2023
05	RE-ISSUED FOR APPROVAL	P.P.	22 FEB 2023
04	RE-ISSUED FOR APPROVAL	P.P.	17 NOV 2022
03	REVISED FLOOR AREA FOR MV APPLICATION	P.P.	13 JULY 2022
02	REVISED FLOOR AREA FOR MV APPLICATION	P.P.	23 JUNE 2022
01	ISSUED FOR APPROVAL	M.L.	22 APR 2022

No.	REVISIONS	BY	DATE
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**LRL**  
 ENGINEERING | INGÉNIÉRIE  
 5430 Canotek Road | Ottawa, ON, K1J 9G2  
 www.lrl.ca | (613) 842-3434

**APPROVED**  
 By Lily Xu at 12:21 pm, Aug 22, 2023

**LILY XU, MCIP, RPP**  
 MANAGER, DEVELOPMENT REVIEW SOUTH  
 PLANNING, INFRASTRUCTURE & ECONOMIC  
 DEVELOPMENT DEPARTMENT, CITY OF OTTAWA

CLIENT: HALO CAR WASH INC.

DESIGNED BY:	M.L. / P.P.	DRAWN BY:	M.L.	APPROVED BY:	M.B.
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PROJECT: HALO CAR WASH  
 3555 BORRISOKANE RD  
 BARRHAVEN, ON

DRAWING TITLE: EROSION AND SEDIMENT CONTROL PLAN

PROJECT NO: 210691

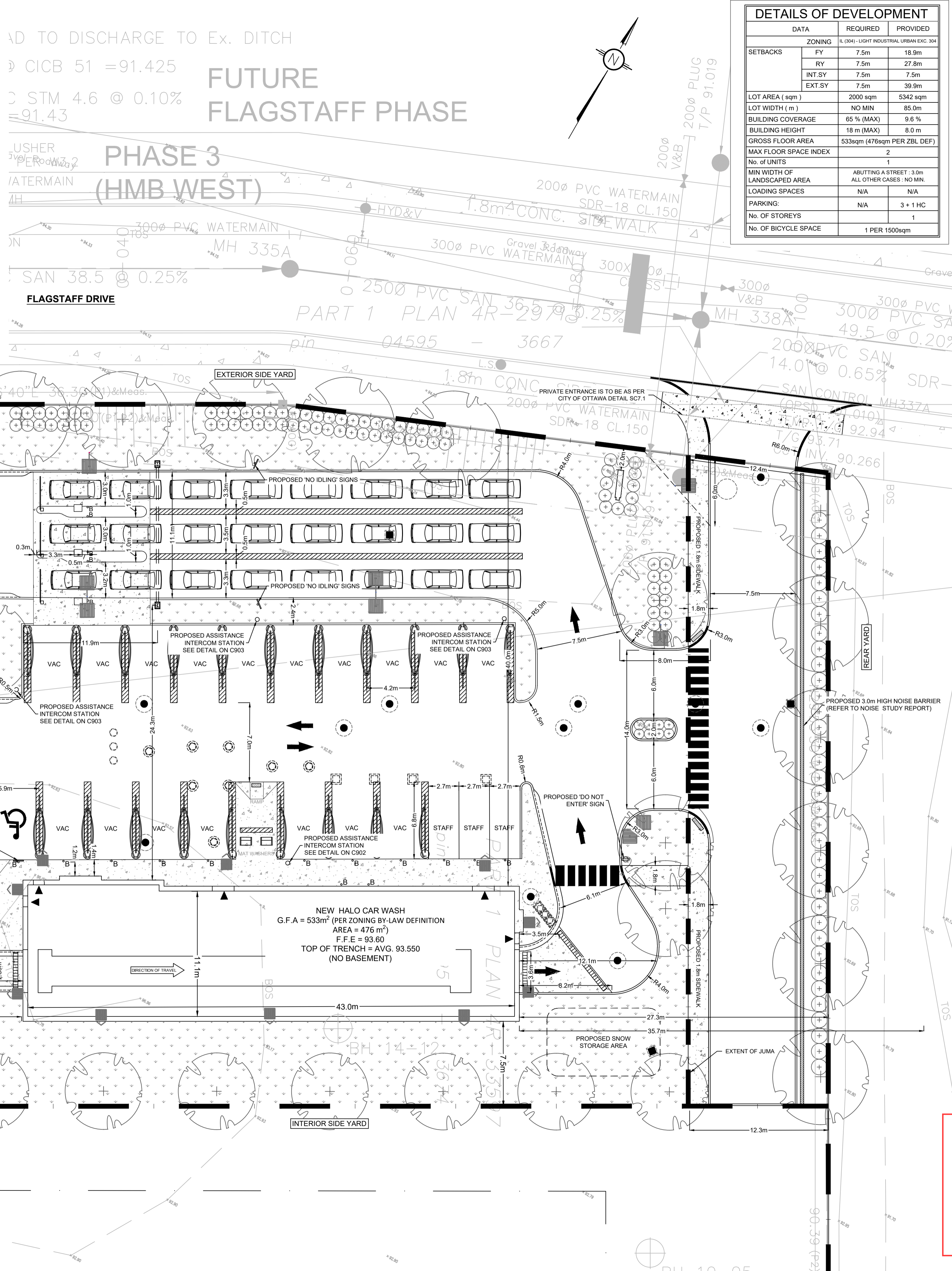
DATE: JANUARY 2022

**C101**

#18788



KEY PLAN  
N.T.S.



DETAILS OF DEVELOPMENT		
DATA	REQUIRED	PROVIDED
ZONING	18.000 - LIGHT INDUSTRIAL URBAN EXC. 304	
SETBACKS		
FY	7.5m	18.9m
RY	7.5m	27.8m
INT.SY	7.5m	7.5m
EXT.SY	7.5m	39.9m
LOT AREA (sqm)	2000 sqm	5342 sqm
LOT WIDTH (m)	NO MIN	85.0m
BUILDING COVERAGE	65% (MAX)	9.6%
BUILDING HEIGHT	18 m (MAX)	8.0 m
GROSS FLOOR AREA	533sqm (476sqm PER ZBL DEF)	
MAX FLOOR SPACE INDEX		2
No. of UNITS		1
MIN WIDTH OF LANDSCAPED AREA	ABUTTING A STREET: 3.0m ALL OTHER CASES: NO MIN.	
LOADING SPACES	N/A	N/A
PARKING		
No. of STOREYS	N/A	3 + 1 HC
No. of BICYCLE SPACE		1 PER 1500sqm

**LEGEND:**

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- PROPOSED DEPRESSED CURB
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- PROPOSED PIPE INSULATION
- PROPOSED 100 YEAR HIGH WATER LEVEL
- PROPOSED 5 YEAR HIGH WATER LEVEL
- STORM WATERSHED EXTENT
- WATERSHED NAME
- RUNOFF COEFFICIENT
- AREA IN HECTARES

**TOPOGRAPHIC INFORMATION**  
 TOPOGRAPHIC INFORMATION PROVIDED BY ANNIS, O'SULLIVAN, VOLLEBEKK LTD. PART OF LOT 11, CONCESSION 3 (RIDEAU FRONT), GEOGRAPHIC TOWNSHIP OF NEPEAN, CITY OF OTTAWA. DATED JANUARY 21st 2022.

**ELEVATION NOTES**  
 1. Elevations shown are geodetic and are referred to the CGVD28 geodetic datum.  
 2. It is the responsibility of the user of this information to verify that the job benchmark has not been altered or disturbed and that its relative elevation and description agrees with the information shown on this drawing.

**UTILITY NOTES**  
 1. This drawing cannot be accepted as acknowledging all of the utilities and it will be the responsibility of the user to contact the respective utility authorities for confirmation.  
 2. Only visible surface utilities were located.  
 3. A field location of underground plant by the pertinent utility authority is mandatory before any work involving breaking ground, probing, excavating etc.

Bearings are grid, derived from Can-Nat 2016 Real Time Network GPS observations referenced to Specified Control Points 01919761338 and 01919871649, MTM Zone 9 (76°30' West Longitude) NAD-83 (original).

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**SUBJECT FOR APPROVAL**

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01	ISSUED FOR APPROVAL	M.L.	22 APR 2022

**APPROVED**  
 By Lily Xu at 12:11 pm, Aug 22, 2023

*Lily Xu*

LILY XU, MCIP, RPP  
 MANAGER, DEVELOPMENT REVIEW SOUTH  
 PLANNING, INFRASTRUCTURE & ECONOMIC  
 DEVELOPMENT DEPARTMENT, CITY OF OTTAWA

NOT AUTHENTIC UNLESS SIGNED AND DATED

**LRL**  
 ENGINEERING | INGENIERIE  
 5430 Canotek Road | Ottawa, ON, K1J 9G2  
 www.lrl.ca | (613) 842-3434

CLIENT: HALO CAR WASH INC.

DESIGNED BY: M.L. / P.P.    DRAWN BY: M.L.    APPROVED BY: M.B.

PROJECT: HALO CAR WASH  
 3555 BORRISOKANE RD  
 BARRHAVEN, ON

DRAWING TITLE: SITE DEVELOPMENT PLAN

PROJECT NO: 210691  
 DATE: JANUARY 2022

**C201**

**PAVEMENT STRUCTURE**

COURSE	MATERIAL	THICKNESS (mm)	
		AUTOMOBILE PARKING	TRUCK ROUTE (HEAVY TRAFFIC)
SURFACE	HL 3 A/C (PG 58-28)	50	40
BINDER	HL 8 A/C (PG 58-28)	-	50
BASECOURSE	OPSS GRANULAR "A"	150	150
SUBBASE	OPSS GRANULAR "B" TYPE II	350	450

NOTE: IN PREPARATION FOR PAVEMENT CONSTRUCTION AT THIS SITE, ANY SURFICIAL OR NEAR SURFACE/SUBGRADE LEVEL TOPSOIL AND ANY SOFT, WET OR DELETERIOUS MATERIALS SHOULD BE REMOVED FROM THE PROPOSED PAVED AREAS. THE EXPOSED SUBGRADE SHOULD BE INSPECTED AND APPROVED BY GEOTECHNICAL PERSONNEL. ANY SOFT AREAS EVIDENT SHOULD BE SUBCAVATED AND REPLACED WITH SUITABLE EARTH BORROW APPROVED BY THE GEOTECHNICAL ENGINEER. THE SUBGRADE SHOULD BE SHAPED AND CROWNED TO PROMOTE DRAINAGE OF THE SITE DRAINAGE STRUCTURES. FOLLOWING APPROVAL OF THE PREPARATION OF THE SUBGRADE, THE PAVEMENT GRANULARS MAY BE PLACED. REFER TO LATEST GEOTECHNICAL REPORT PREPARED BY LRL ENGINEERING LTD.

**LEGEND:**

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- PROPOSED SILT FENCE AS PER OPSD 219.110
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DESIGNED BY: M.L. / P.P. DRAWN BY: M.L. APPROVED BY: M.B.

PROJECT: HALO CAR WASH  
3555 BORRISOKANE RD  
BARRHAVEN, ON

DRAWING TITLE: GRADING AND DRAINAGE PLAN

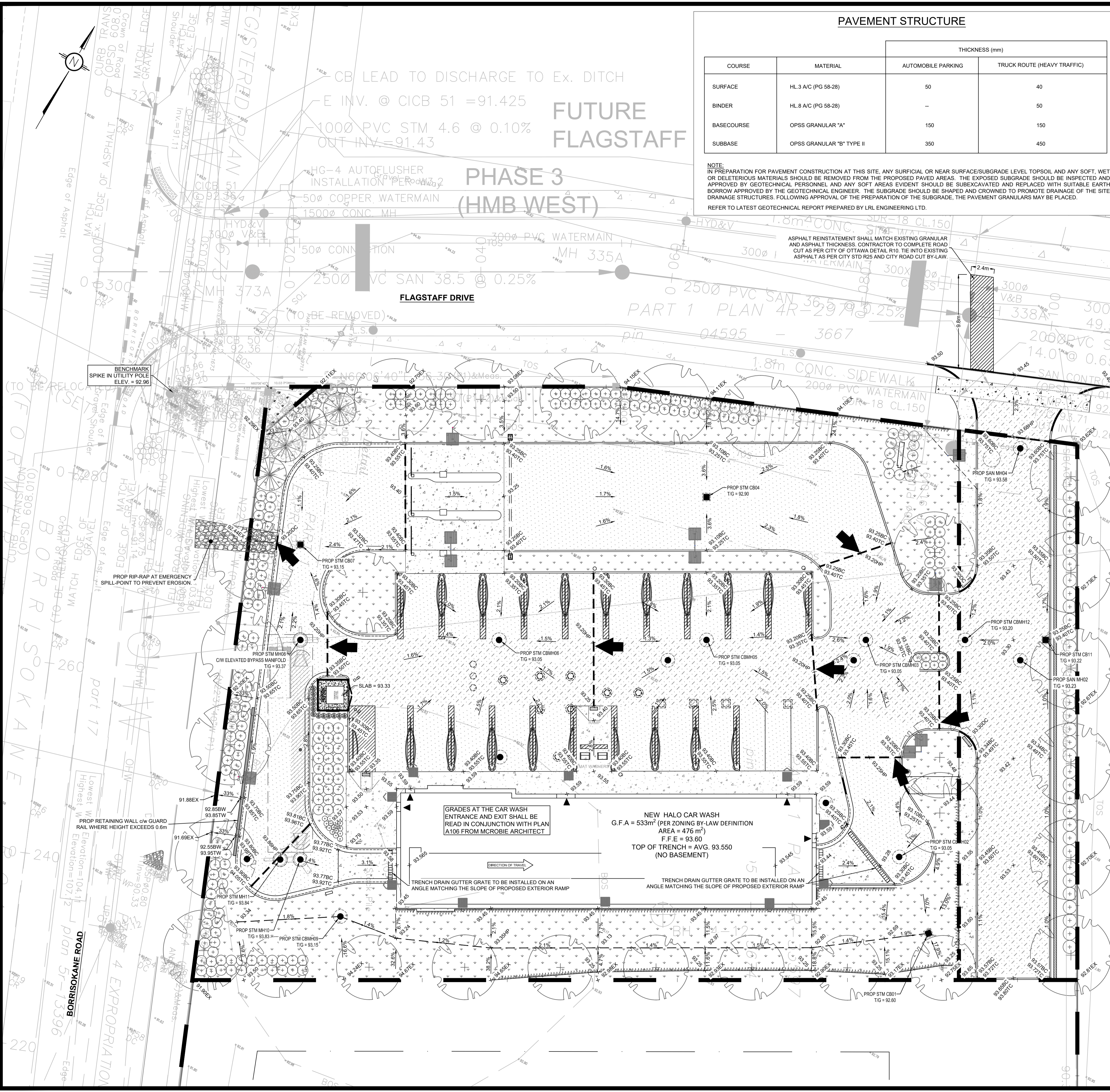
PROJECT NO: 210691  
DATE: JANUARY 2022

C301

**APPROVED**  
By Lily Xu at 12:22 pm, Aug 22, 2023

*Lily Xu*

LILY XU, MCIP, RPP  
MANAGER, DEVELOPMENT REVIEW SOUTH  
PLANNING, INFRASTRUCTURE & ECONOMIC  
DEVELOPMENT DEPARTMENT, CITY OF OTTAWA



D07-12-22-0085

**APPROVED**  
By Lily Xu at 12:23 pm, Aug 22, 2023

*Lily Xu*  
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**MANAGER, DEVELOPMENT REVIEW SOUTH**  
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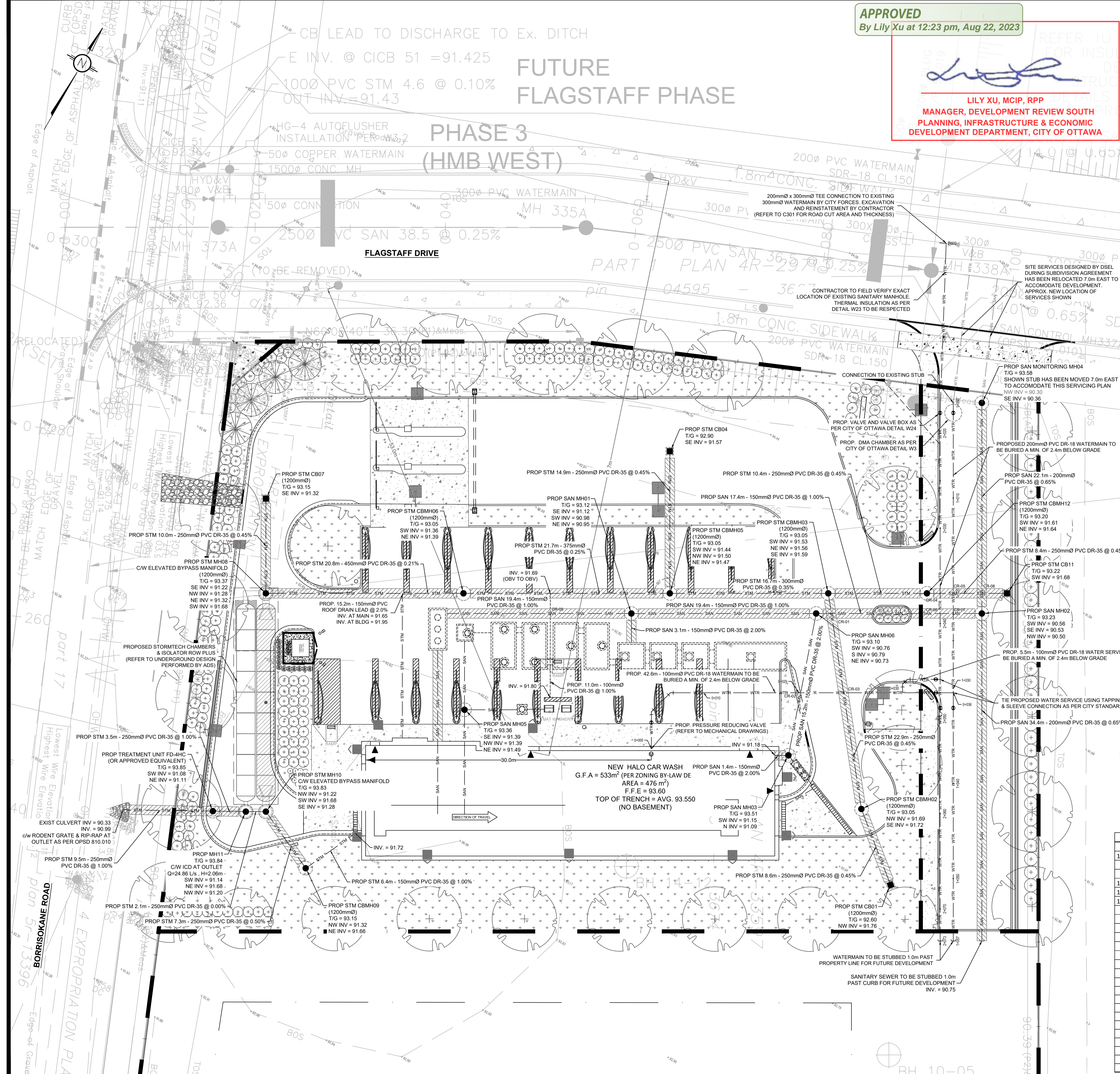
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**Crossing Table**

Crossing #	WM	STM	SAN	Depth Separation (m)
CR-01	N/A	91.74 (inv.)	90.87 (obv.)	0.87
CR-02	91.63 (inv.)	N/A	91.11 (obv.)	0.52
CR-03	90.92 (obv.)	91.77 (inv.)	N/A	0.85
CR-04	91.04 (obv.)	91.79 (inv.)	N/A	0.75
CR-05	91.03 (obv.)	91.79 (inv.)	N/A	0.76
CR-06	91.27 (inv.)	N/A	90.75 (obv.)	0.52
CR-07	91.28 (inv.)	N/A	90.74 (obv.)	0.54
CR-08	N/A	91.81 (inv.)	90.64 (obv.)	1.17
CR-09	N/A	91.87 (inv.)	91.22 (obv.)	0.65

WM crossing above sewer per City STD W25.2  
WM crossing below sewer per City STD W25

**Watermain Table**

Description	Chainage	Finish Grade	Obvert of Watermain	Cover (m)
100mm Water Service	0+000	93.41	91.01	2.40
45° Bend	0+004	93.34	90.94	2.40
45° Bend	0+007	93.27	90.87	2.40
100mm Water Service	0+010	93.32	90.92	2.40
100mm Water Service	0+020	93.25	91.63	1.62
100mm Water Service	0+030	93.37	90.97	2.40
Tee	0+036	93.05	90.65	2.40
200mm Watermain	1+000	93.56	91.16	2.40
200mm Watermain	1+010	93.35	90.95	2.40
200mm Watermain	1+020	93.17	90.77	2.40
200mm Watermain	1+030	93.05	90.65	2.40
Tee	1+031	93.04	90.64	2.40
200mm Watermain	1+040	93.02	90.62	2.40
200mm Watermain	1+050	93.15	90.75	2.40
200mm Watermain	1+057	92.75	90.35	2.40
200mm Watermain	2+000	94.02	91.62	2.40
200mm Watermain	2+010	93.60	91.20	2.40
200mm Watermain	2+020	93.50	91.10	2.40
200mm Watermain	2+030	93.30	90.90	2.40
200mm Watermain	2+040	93.15	90.75	1.68
200mm Watermain	2+046	93.10	90.70	2.40
200mm Watermain	2+050	93.05	90.65	2.40
200mm Watermain	2+060	93.10	90.70	2.40
200mm Watermain	2+070	93.25	90.85	2.40
200mm Watermain	2+073	92.75	90.35	2.40

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**CLIENT**  
HALO CAR WASH INC.

**DESIGNED BY:** M.L. / P.P. **DRAWN BY:** M.L. **APPROVED BY:** M.B.

**PROJECT**  
HALO CAR WASH  
3555 BORRISOKANE RD  
BARRHAVEN, ON

**DRAWING TITLE**  
SERVICING PLAN

**PROJECT NO.**  
210691

**DATE**  
JANUARY 2022

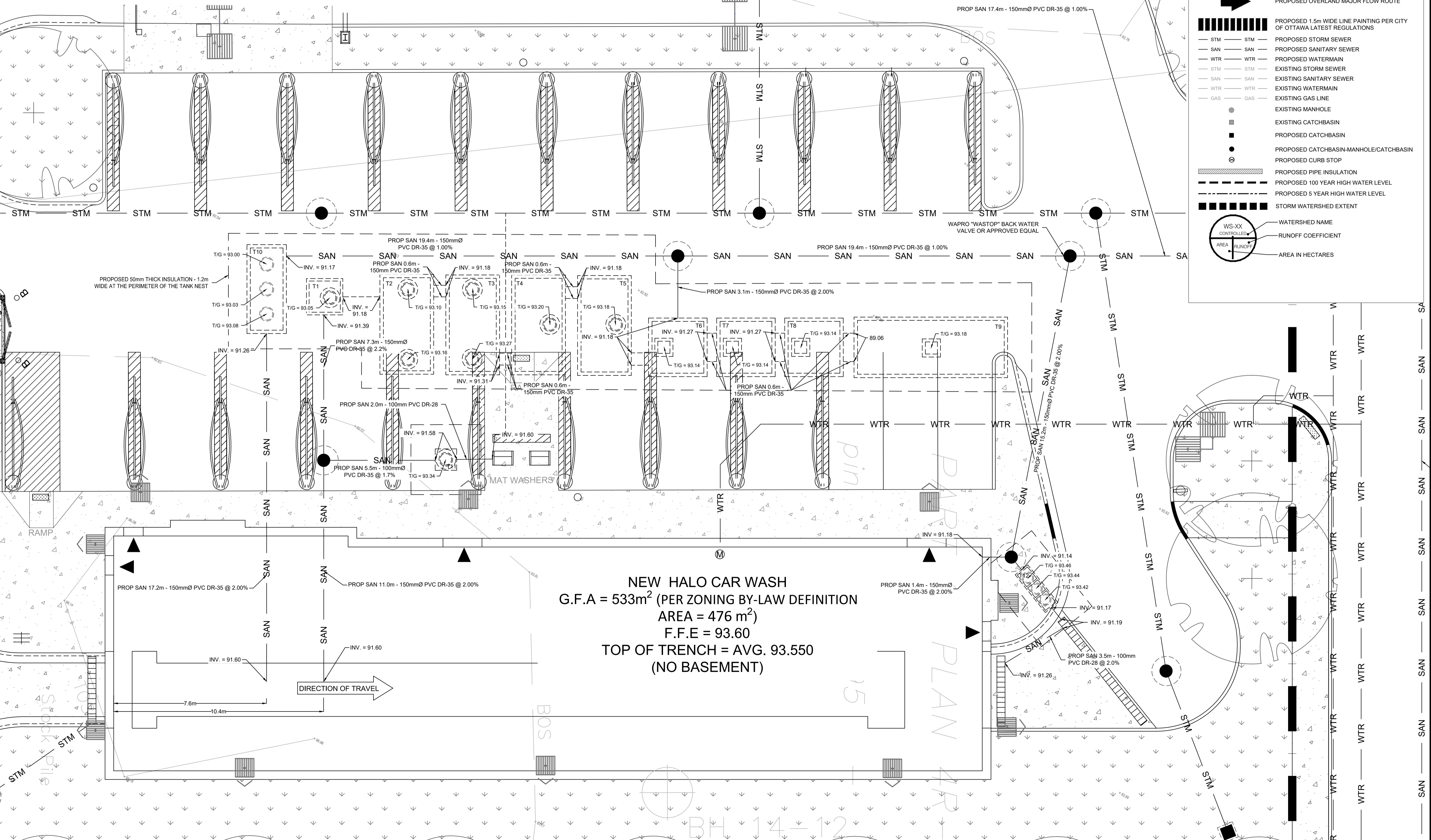
**C401**

**#18788**

**List of Underground Tanks**

Water Reclamation Tanks			
For Validation	Tank ID	Tank Name	Capacity
	T1	Wilkinson Sand Tank	Wilkinson Model H4H 1056 USG
	T2	Wilkinson Settling Tank	Wilkinson Model H22.2H 5811 USG
	T3	Wilkinson Settling Tank	Wilkinson Model H22.2H 5811 USG
	T4	Wilkinson Settling Tank	Wilkinson Model H22.2H 5811 USG
	T5	Wilkinson Settling Tank	Wilkinson Model H22.2H 5811 USG
	T6	Wilkinson Aeration Tank	Wilkinson Model 2.5M
	T7	Wilkinson Clean Water Tank	Wilkinson Model 2.5M
	T8	Wilkinson Clarifier Tank	Wilkinson Model 2.5M
	T9	Wilkinson Biological Tank	Wilkinson Model H50.1S 5811 USG
Sediment Trap and other tanks on site			
	T10	Wilkinson Oil Grit Separator	Wilkinson Model 1075 1600USG
	T11	Wilkinson Mat Washer Grit Tank	Wilkinson Model H1.35S
	T12	Wilkinson Oil Interceptor	Wilkinson Model 230 277 USG

NOTE: FOR ADDITIONAL INFORMATION, REFER TO WATER RECLAMATION SYSTEM DESIGN BY AQUA BIO. ALL THE PROPOSED UNDERGROUND WILKINSON TANKS TO BE TRAFFIC RATED AND TO BE PROPERLY INSTALLED AS PER WILKINSON INSTALLATIONS GUIDELINES.



**APPROVED**  
 By Lily Xu at 12:23 pm, Aug 22, 2023

*Lily Xu*

**LILY XU, MCIP, RPP**  
 MANAGER, DEVELOPMENT REVIEW SOUTH  
 PLANNING, INFRASTRUCTURE & ECONOMIC  
 DEVELOPMENT DEPARTMENT, CITY OF OTTAWA

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SCALE: 1:200

**SUBJECT FOR APPROVAL**

No.	REVISIONS	BY	DATE
11	RE-ISSUED FOR APPROVAL	M.L.	07 JULY 2023
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NOT AUTHENTIC UNLESS SIGNED AND DATED

**LRL**  
 ENGINEERING | INGENIERIE  
 5430 Canotek Road | Ottawa, ON, K1J 9G2  
 www.lrl.ca | (613) 842-3434

CLIENT: **HALO CAR WASH INC.**

DESIGNED BY: M.L. / P.P. DRAWN BY: M.L. APPROVED BY: M.B.

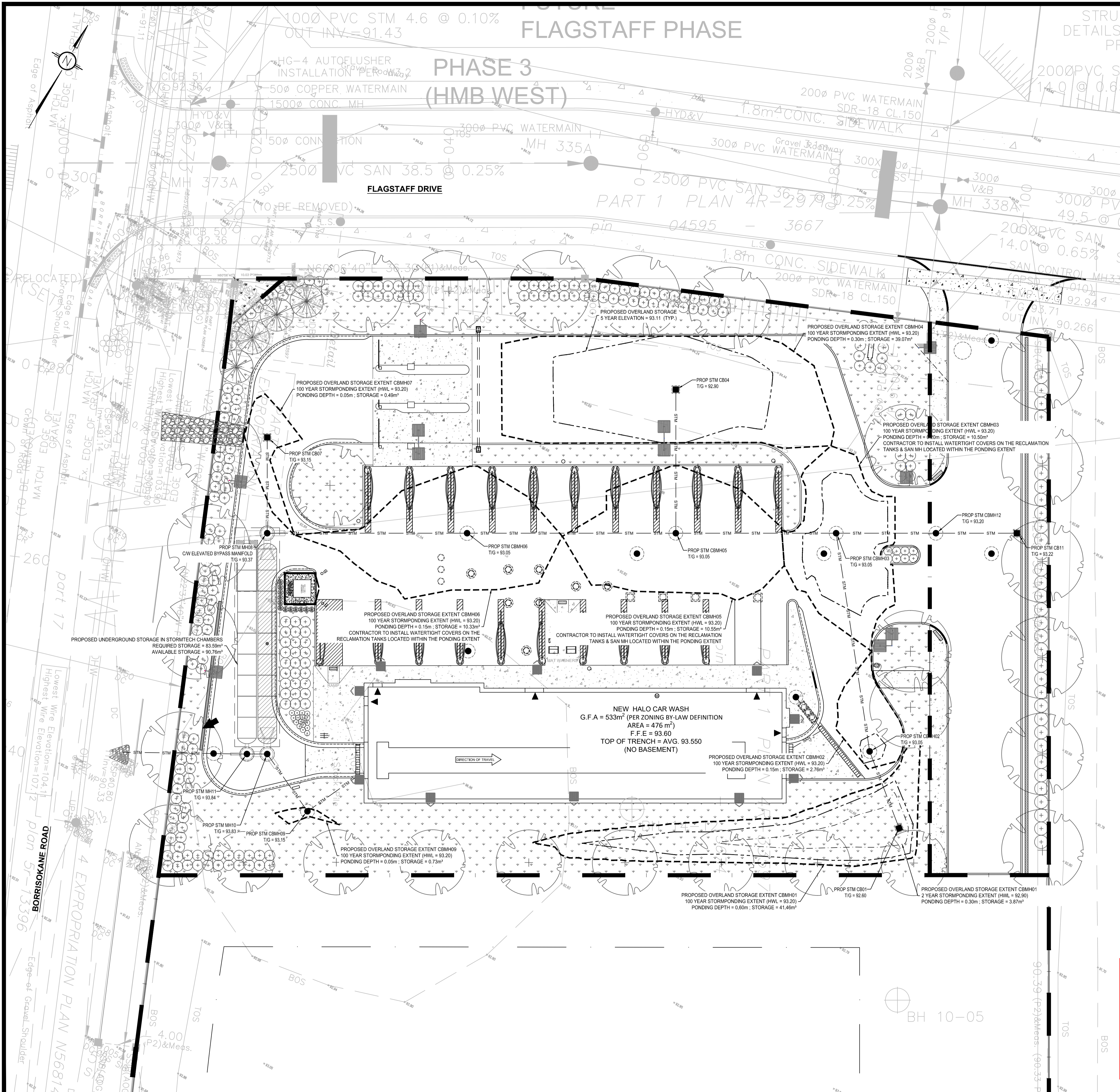
PROJECT: **HALO CAR WASH**  
 3555 BORRISOKANE RD  
 BARRHAVEN, ON

DRAWING TITLE: **CAR WASH WASTEWATER TREATMENT & RECLAMATION SYSTEM**

PROJECT NO: 210691 DATE: JANUARY 2022

**C402**

#18788



**LEGEND:**

- EXISTING PROPERTY LINE TO REMAIN
- PROPOSED CURB
- PROPOSED DEPRESSED CURB
- PROPOSED TERRACING (3:1 MIN.)
- PROPOSED SILT FENCE AS PER OPSD 219.110
- PROPOSED DOOR ENTRANCE/EXIST
- PROPOSED GRASS AREA (100mm TOP SOIL & SOD)
- PROPOSED CONCRETE FEATURES/SLAB
- PROPOSED HEAVY DUTY ASPHALT
- PROPOSED LIGHT DUTY ASPHALT
- PROPOSED RIP RAP
- \*50.00 PROPOSED ELEVATION
- \*50.00HP PROPOSED HIGH POINT ELEVATION
- \*50.00BC PROPOSED BOTTOM OF CURB / ASPHALT ELEVATION
- \*50.00TC PROPOSED TOP OF CURB ELEVATION
- \*50.00EX MATCH INTO EXISTING ELEVATION
- x70.19 EXISTING ELEVATION
- PROPOSED OVERLAND MAJOR FLOW ROUTE
- PROPOSED 1.5m WIDE LINE PAINTING PER CITY OF OTTAWA LATEST REGULATIONS
- STM - STM PROPOSED STORM SEWER
- SAN - SAN PROPOSED SANITARY SEWER
- WTR - WTR PROPOSED WATERMAIN
- STM - STM EXISTING STORM SEWER
- SAN - SAN EXISTING SANITARY SEWER
- WTR - WTR EXISTING WATERMAIN
- GAS - GAS EXISTING GAS LINE
- EXISTING MANHOLE
- EXISTING CATCHBASIN
- PROPOSED CATCHBASIN
- PROPOSED CATCHBASIN-MANHOLE/CATCHBASIN
- PROPOSED CURB STOP
- PROPOSED PIPE INSULATION
- PROPOSED 100 YEAR HIGH WATER LEVEL
- PROPOSED 5 YEAR HIGH WATER LEVEL
- STORM WATERSHED EXTENT
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CLIENT: **HALO CAR WASH INC.**

DESIGNED BY: M.L. / P.P.    DRAWN BY: M.L.    APPROVED BY: M.B.

PROJECT: **HALO CAR WASH  
3555 BORRISOKANE RD  
BARRHAVEN, ON**

DRAWING TITLE: **STORMWATER MANAGEMENT PLAN**

PROJECT NO: 210691    DATE: JANUARY 2022

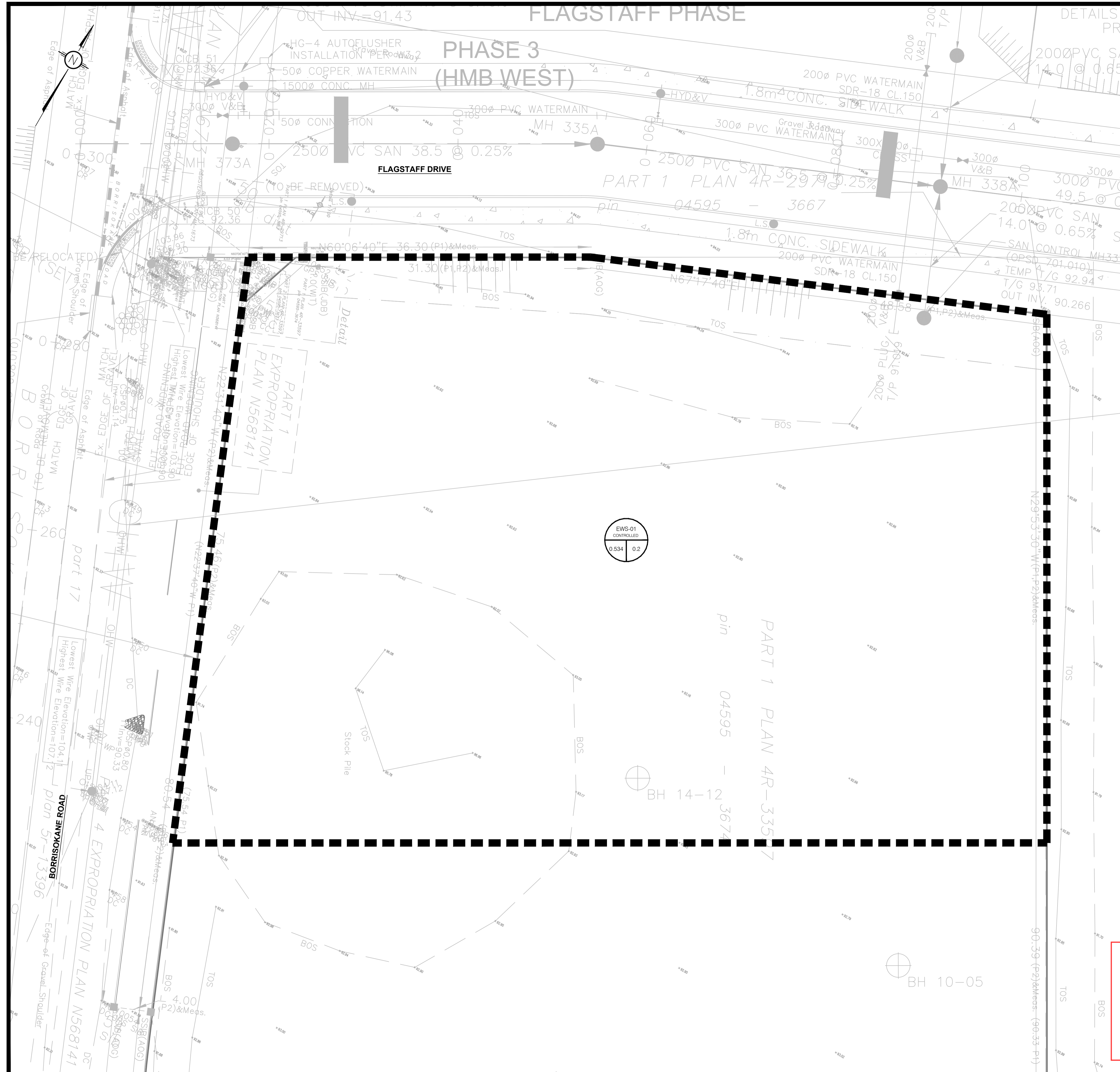
**C601**

**APPROVED**  
By Lily Xu at 12:23 pm, Aug 22, 2023

**LILY XU, MCIP, RPP**  
MANAGER, DEVELOPMENT REVIEW SOUTH  
PLANNING, INFRASTRUCTURE & ECONOMIC  
DEVELOPMENT DEPARTMENT, CITY OF OTTAWA

#18788





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By Lily Xu at 12:23 pm, Aug 22, 2023

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MANAGER, DEVELOPMENT REVIEW SOUTH  
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CLIENT: **HALO CAR WASH INC.**

DESIGNED BY: M.L. / P.P.    DRAWN BY: M.L.    APPROVED BY: M.B.

PROJECT: **HALO CAR WASH  
3555 BORRISOKANE RD  
BARRHAVEN, ON**

DRAWING TITLE: **PRE-DEVELOPMENT  
WATERSHED PLAN**

PROJECT NO: 210691    DATE: JANUARY 2022

**C701**

#1878

# FLAGSTAFF PHASE

## PHASE 3 (HMB WEST)

FLAGSTAFF DRIVE

NEW HALO CAR WASH  
G.F.A = 533m<sup>2</sup> (PER ZONING BY-LAW DEFINITION)  
AREA = 476 m<sup>2</sup>  
F.F.E = 93.60  
TOP OF TRENCH = AVG. 93.550  
(NO BASEMENT)

**LEGEND:**

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UNAUTHORIZED CHANGES:

IN THE EVENT THE CLIENT, THE CLIENT'S CONTRACTORS OR SUBCONTRACTORS, OR ANYONE FOR WHOM THE CLIENT IS LEGALLY LIABLE MAKES OR PERMITS TO BE MADE ANY CHANGES TO ANY REPORTS, PLANS, SPECIFICATIONS OR OTHER CONSTRUCTION DOCUMENTS PREPARED BY LRL ASSOCIATES LTD. (LRL) WITHOUT OBTAINING LRL'S PRIOR WRITTEN CONSENT, THE CLIENT SHALL ASSUME FULL RESPONSIBILITY FOR THE RESULTS OF SUCH CHANGES. THEREFORE THE CLIENT AGREES TO WAIVE ANY CLAIM AGAINST LRL AND TO RELEASE LRL FROM ANY LIABILITY ARISING DIRECTLY OR INDIRECTLY FROM SUCH UNAUTHORIZED CHANGES.

IN ADDITION, THE CLIENT AGREES TO THE FULLEST EXTENT PERMITTED BY LAW, TO INDEMNIFY AND HOLD HARMLESS LRL FROM ANY DAMAGES, LIABILITIES OR COSTS, INCLUDING REASONABLE ATTORNEY'S FEES AND COST OF DEFENSE, ARISING FROM SUCH CHANGES.

IN ADDITION, THE CLIENT AGREES TO INCLUDE IN ANY CONTRACTS FOR CONSTRUCTION APPROVED BY LRL THAT PROHIBITS THE CONTRACTOR OR ANY SUBCONTRACTORS OF ANY TIER FROM MAKING ANY CHANGES OR MODIFICATIONS TO LRL'S CONSTRUCTION DOCUMENTS WITHOUT THE PRIOR WRITTEN APPROVAL OF LRL AND THAT FURTHER REQUIRES THE CONTRACTOR TO INDEMNIFY BOTH LRL AND THE CLIENT FROM ANY LIABILITY OR COST ARISING FROM SUCH CHANGES MADE WITHOUT SUCH PROPER AUTHORIZATION.

GENERAL NOTES:

EXISTING SERVICES AND UTILITIES SHOWN ON THESE DRAWINGS ARE TAKEN FROM THE BEST AVAILABLE RECORDS, BUT MAY NOT BE COMPLETE OR TO DATE. CONTRACTOR SHALL VERIFY IN FIELD FOR LOCATION AND ELEVATION OF PIPES AND CHECK WITH THE UTILITY COMPANIES BEFORE DIGGING OR PERFORMING WORK.

CONTRACTOR IS ADVISED TO COLLECT INFORMATION ON SOIL CONDITIONS BEFORE START OF CONSTRUCTION.

THE ENGINEER WAIVES ANY AND ALL RESPONSIBILITY AND LIABILITY FOR PROBLEMS WHICH ARISE FROM FAILURE TO FOLLOW THESE PLANS, SPECIFICATIONS AND THE DESIGN INTENT THEY CONVEY, OR FOR PROBLEMS WHICH ARISE FROM OTHERS' FAILURE TO OBTAIN AND/OR FOLLOW THE ENGINEER'S GUIDANCE WITH RESPECT TO ANY ERRORS, OMISSIONS, INCONSISTENCIES AMBIGUITIES OR CONFLICTS WHICH ARE ALLEGED.

CONTRACTOR TO VERIFY ALL DIMENSIONS AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES BEFORE WORK COMMENCES. DO NOT SCALE DRAWINGS.

**SUBJECT FOR APPROVAL**

No.	REVISIONS	BY	DATE
11	RE-ISSUED FOR APPROVAL	M.L.	07 JULY 2023
10	RE-ISSUED FOR APPROVAL	M.L.	23 MAY 2023
09	RE-ISSUED FOR APPROVAL	M.L.	09 MAY 2023
08	ISSUED FOR COMMITTEE OF ADJUSTMENT	M.L.	08 MAY 2023
07	RE-ISSUED FOR APPROVAL	P.P.	31 MAR 2023
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03	REVISED FLOOR AREA FOR MV. APPLICATION	P.P.	13 JULY 2022
02	REVISED FLOOR AREA FOR MV. APPLICATION	P.P.	23 JUNE 2022
01	ISSUED FOR APPROVAL	M.L.	22 APR 2022



**LRL**  
ENGINEERING | INGENIERIE  
5430 Canotek Road | Ottawa, ON, K1J 9G2  
www.lrl.ca | (613) 842-3434

CLIENT: HALO CAR WASH INC.

DESIGNED BY: M.L. / P.P. DRAWN BY: M.L. APPROVED BY: M.B.

PROJECT: HALO CAR WASH  
3555 BORRISOKANE RD  
BARRHAVEN, ON

DRAWING TITLE: POST-DEVELOPMENT WATERSHED PLAN

PROJECT NO: 210691  
DATE: JANUARY 2022

**APPROVED**  
By Lily Xu at 12:32 pm, Aug 22, 2023

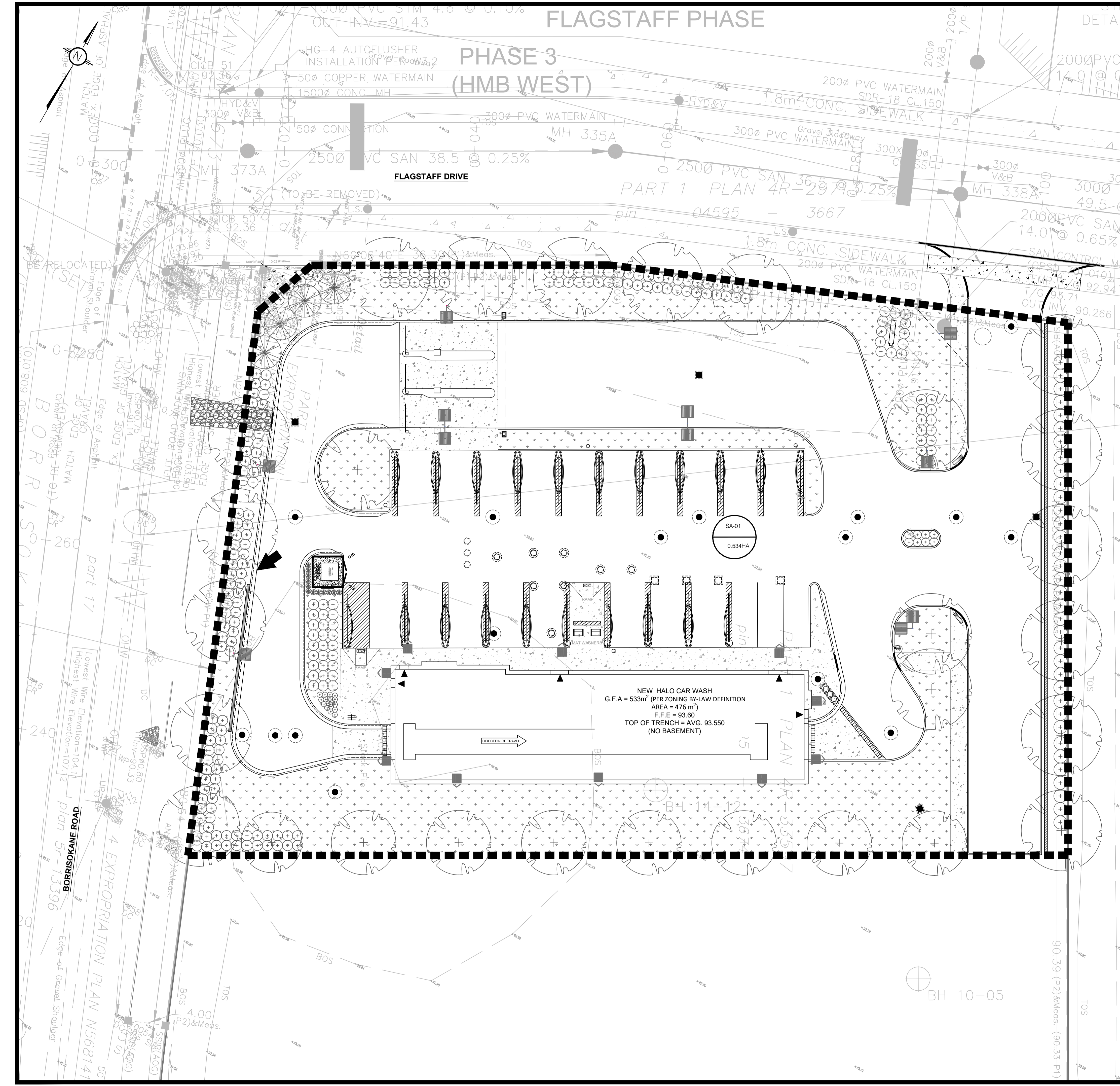
LILY XU, MCIP, RPP  
MANAGER, DEVELOPMENT REVIEW SOUTH  
PLANNING, INFRASTRUCTURE & ECONOMIC  
DEVELOPMENT DEPARTMENT, CITY OF OTTAWA

C702

# FLAGSTAFF PHASE

## PHASE 3 (HMB WEST)

FLAGSTAFF DRIVE



### LEGEND:

- EXISTING PROPERTY LINE TO REMAIN
- PROPOSED CURB
- PROPOSED DEPRESSED CURB
- PROPOSED TERRACING (3:1 MIN.)
- PROPOSED SILT FENCE AS PER OPSD 219.110
- PROPOSED DOOR ENTRANCE/EXIST
- PROPOSED GRASS AREA (100mm TOP SOIL & SOD)
- PROPOSED CONCRETE FEATURES/SLAB
- PROPOSED HEAVY DUTY ASPHALT
- PROPOSED LIGHT DUTY ASPHALT
- PROPOSED RIP RAP
- PROPOSED ELEVATION
- PROPOSED HIGH POINT ELEVATION
- PROPOSED BOTTOM OF CURB / ASPHALT ELEVATION
- PROPOSED TOP OF CURB ELEVATION
- MATCH INTO EXISTING ELEVATION
- EXISTING ELEVATION
- PROPOSED OVERLAND MAJOR FLOW ROUTE
- PROPOSED 1.5m WIDE LINE PAINTING PER CITY OF OTTAWA LATEST REGULATIONS
- PROPOSED STORM SEWER
- PROPOSED SANITARY SEWER
- PROPOSED WATERMAIN
- EXISTING STORM SEWER
- EXISTING SANITARY SEWER
- EXISTING WATERMAIN
- EXISTING GAS LINE
- EXISTING MANHOLE
- EXISTING CATCHBASIN
- PROPOSED CATCHBASIN
- PROPOSED CATCHBASIN-MANHOLE/CATCHBASIN
- PROPOSED CURB STOP
- PROPOSED PIPE INSULATION
- PROPOSED 100 YEAR HIGH WATER LEVEL
- PROPOSED 5 YEAR HIGH WATER LEVEL
- STORM WATERSHED EXTENT
- WATERSHED NAME
- RUNOFF COEFFICIENT
- AREA IN HECTARES

**GENERAL CONDITIONS OF DRAWINGS**

GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION ARE PART OF THE CONTRACT DOCUMENTS AND DESCRIBE THE SCOPE AND INTENT OF THE DRAWING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF OTTAWA AND ANY OTHER AGENCIES INVOLVED IN THE PROJECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL DIMENSIONS AND CONDITIONS AT THE SITE AND SHALL BE RESPONSIBLE FOR KNOWING HOW THEY AFFECT THE WORK. SUBMITTALS OF A BID TO PERFORM THIS WORK IS ACKNOWLEDGEMENT OF THE RESPONSIBILITIES AND THAT THEY HAVE BEEN FULLY CONSIDERED IN PLANNING OF THE WORK AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY CHANGES DUE TO THESE CONDITIONS THAT ARE FORTHCOMING.

**UNAUTHORIZED CHANGES:**

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01	ISSUED FOR APPROVAL	M.L.	22 APR 2022



NOT AUTHENTIC UNLESS SIGNED AND DATED



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ENGINEERING | INGENIERIE  
5430 Canotek Road | Ottawa, ON, K1J 9G2  
www.lrl.ca | (613) 842-3434

CLIENT  
**HALO CAR WASH INC.**

DESIGNED BY: M.L. / P.P. DRAWN BY: M.L. APPROVED BY: M.B.

PROJECT  
**HALO CAR WASH  
3555 BORRISOKANE RD  
BARRHAVEN, ON**

DRAWING TITLE  
**SANITARY DRAINAGE AREA**

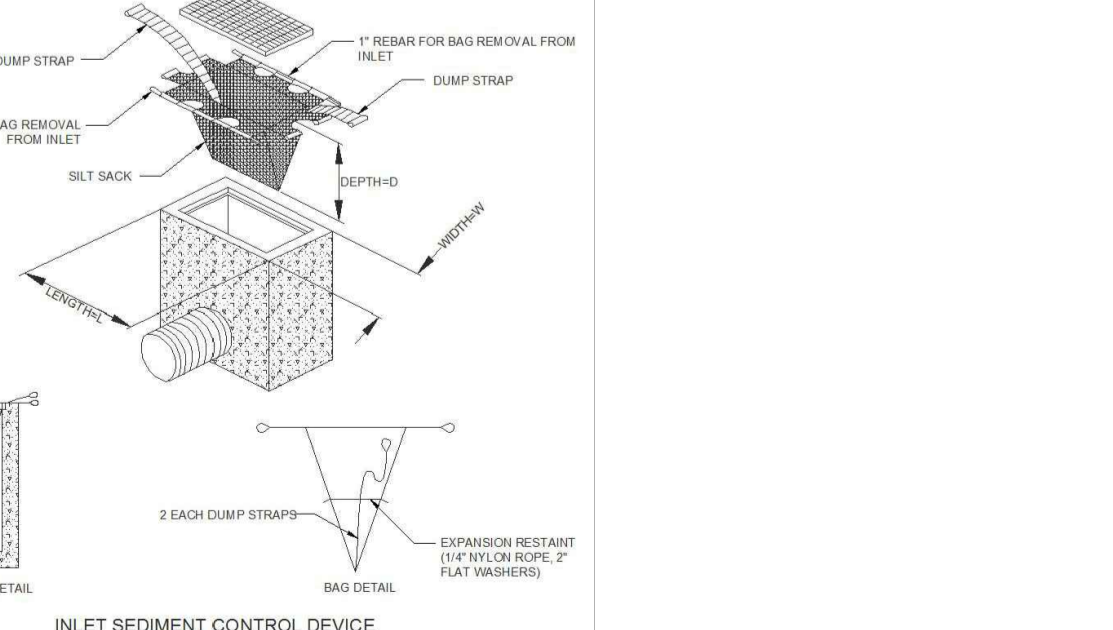
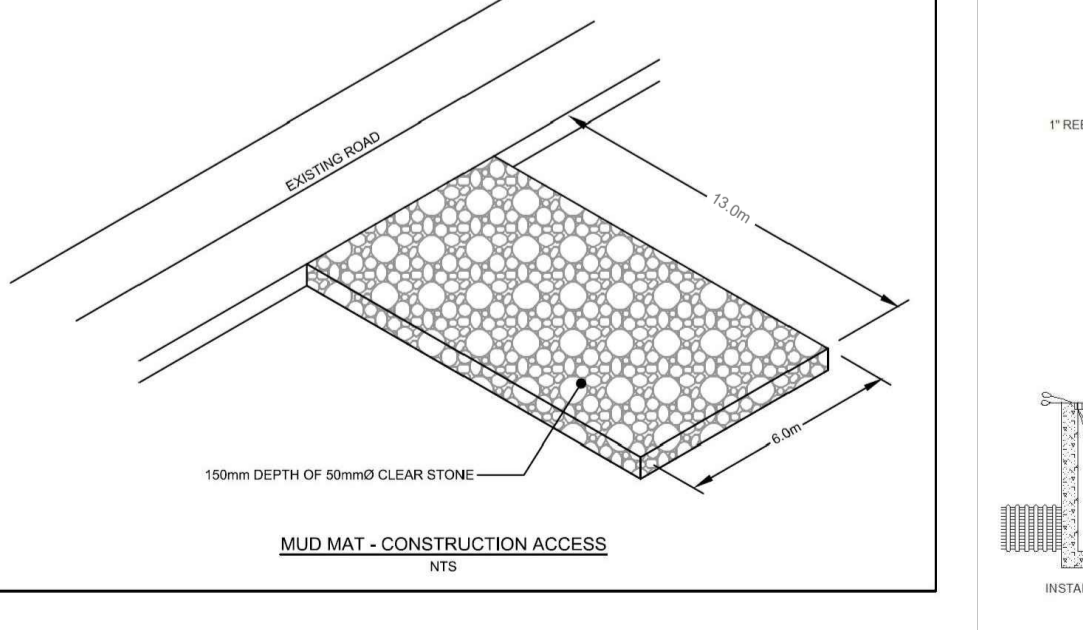
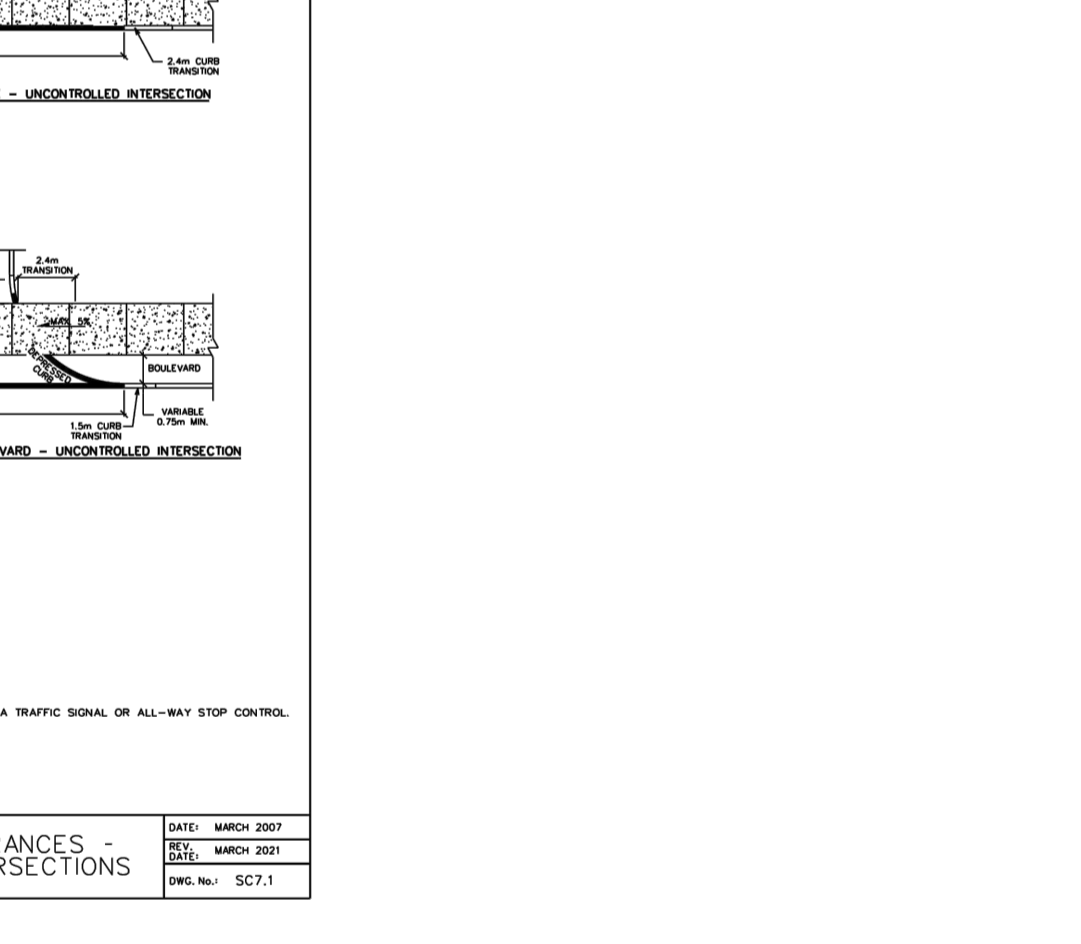
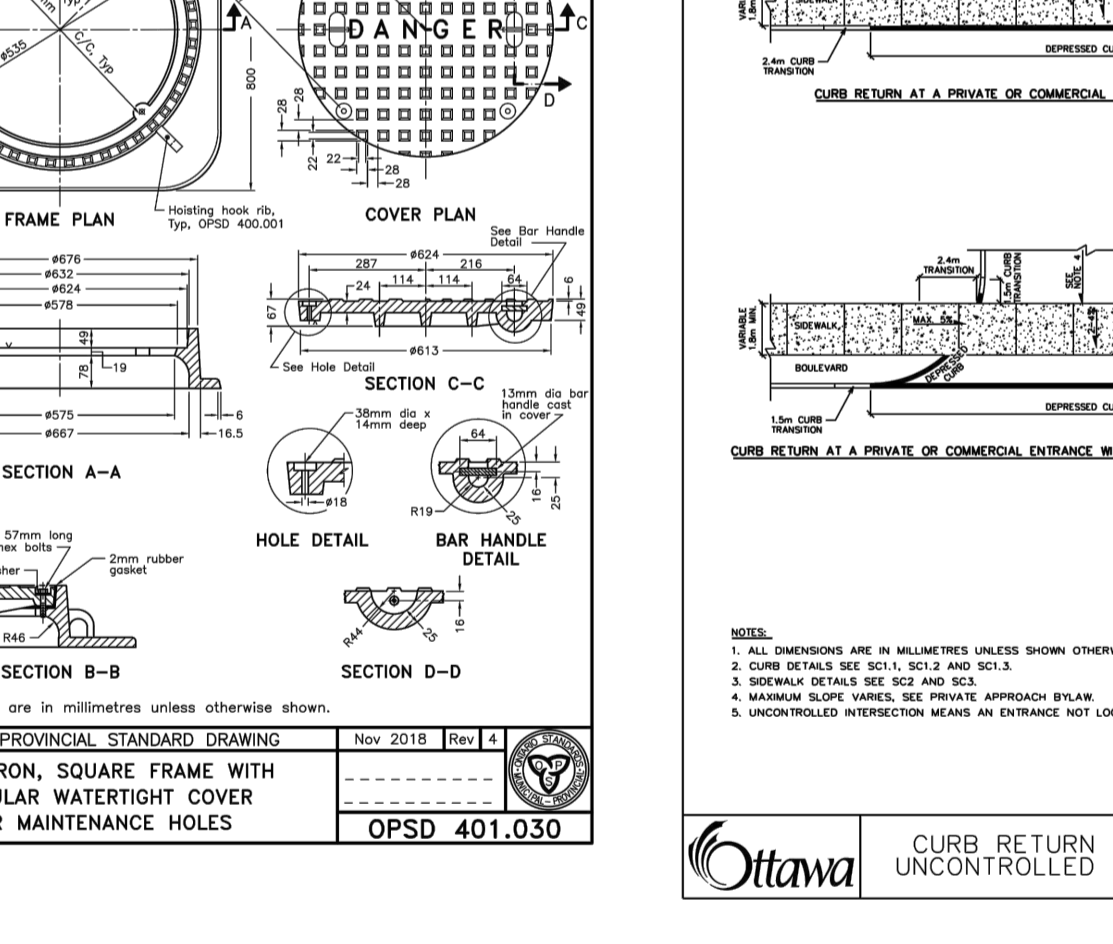
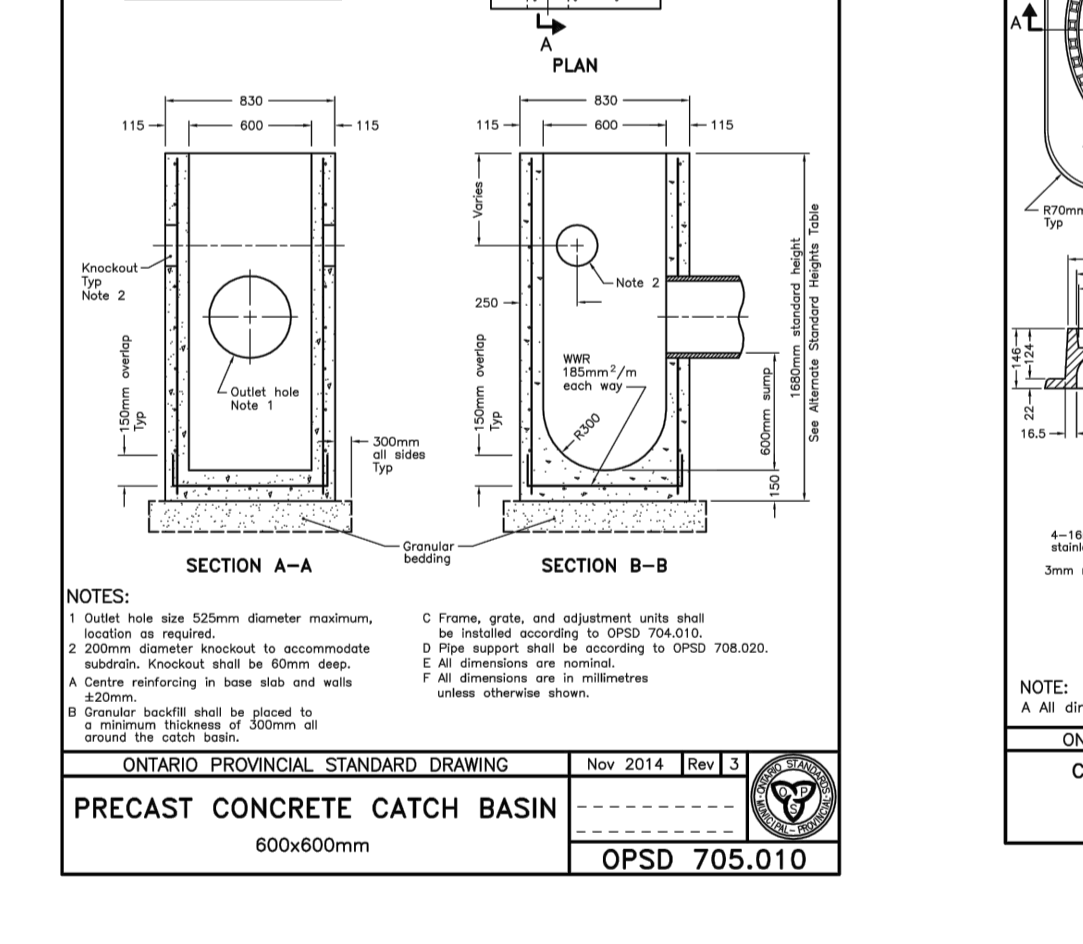
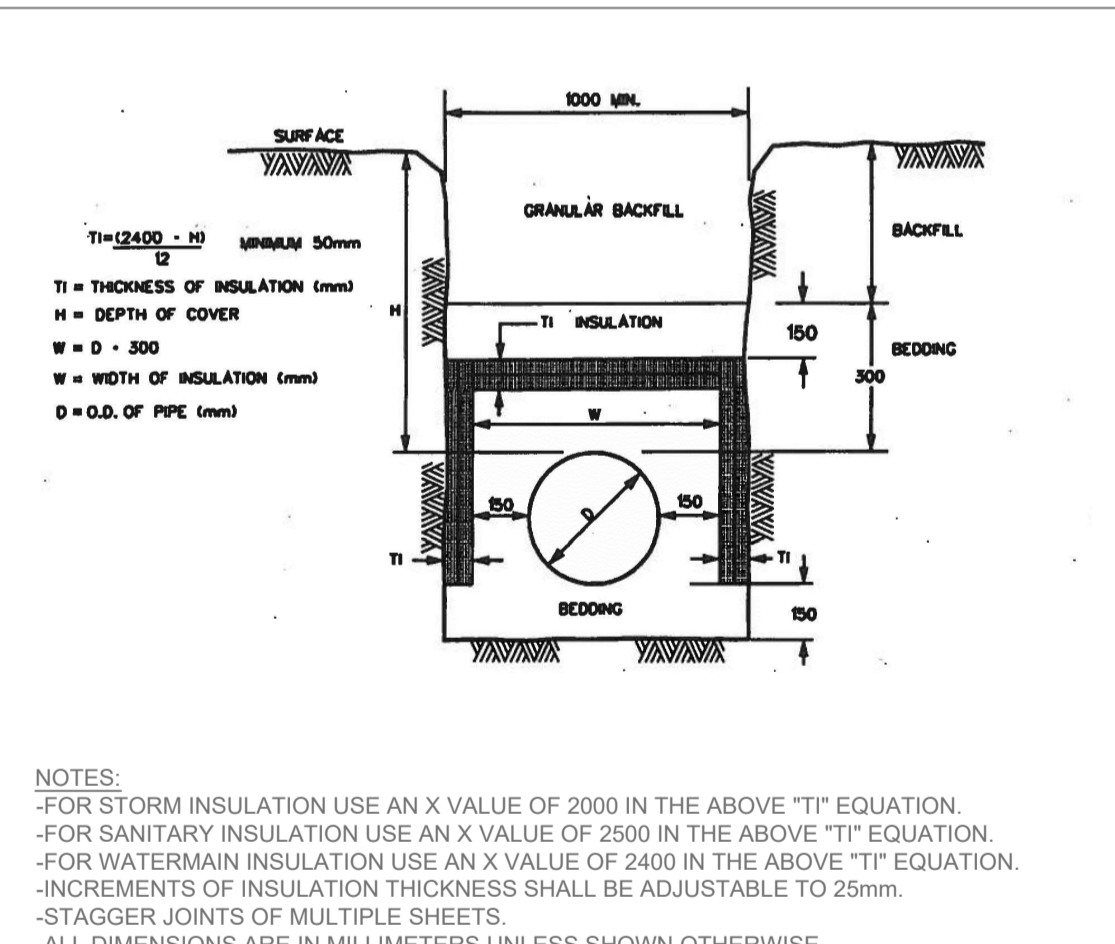
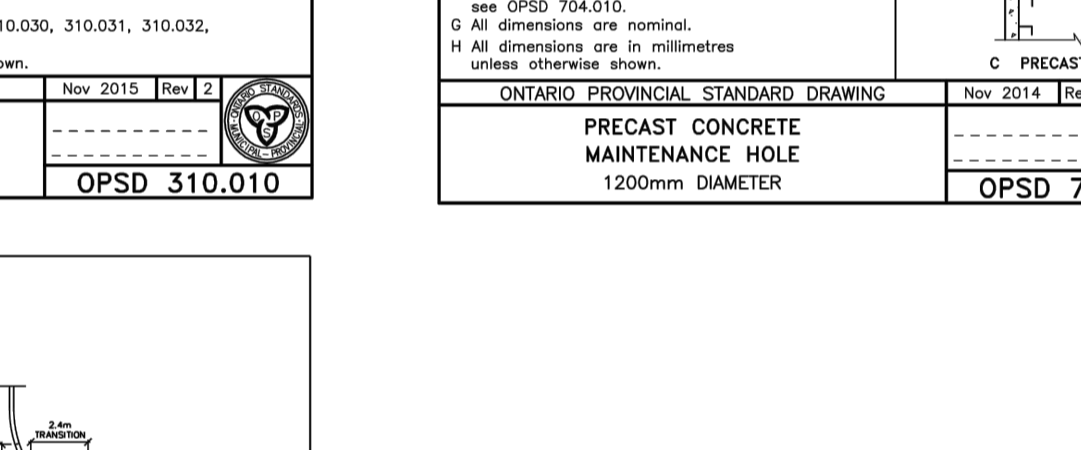
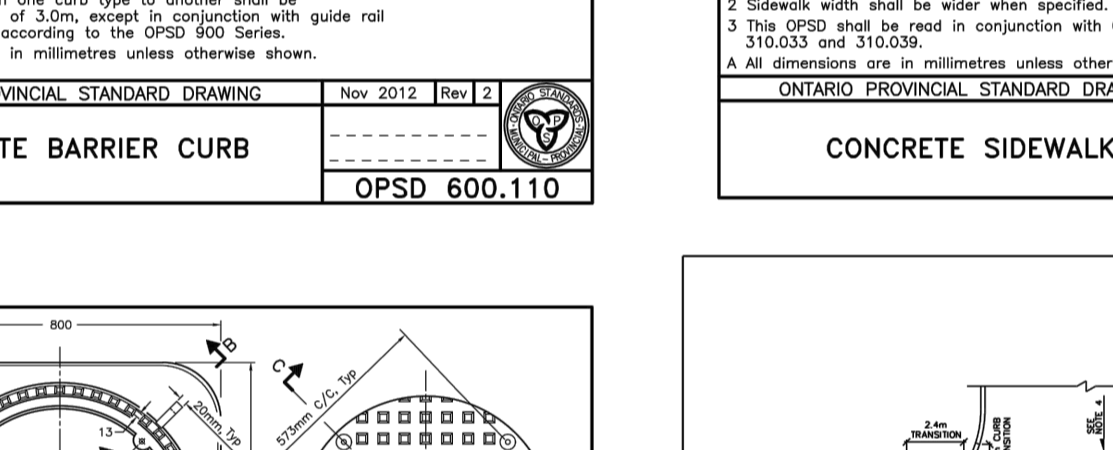
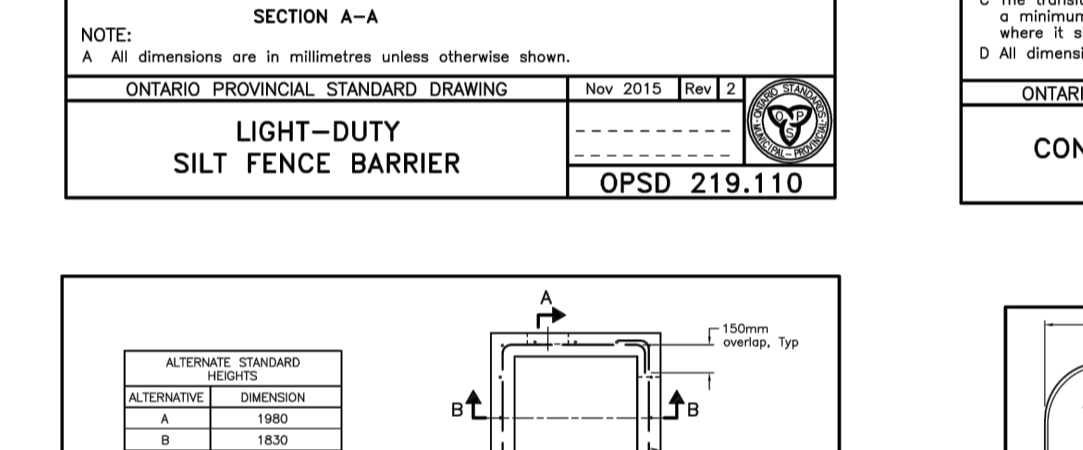
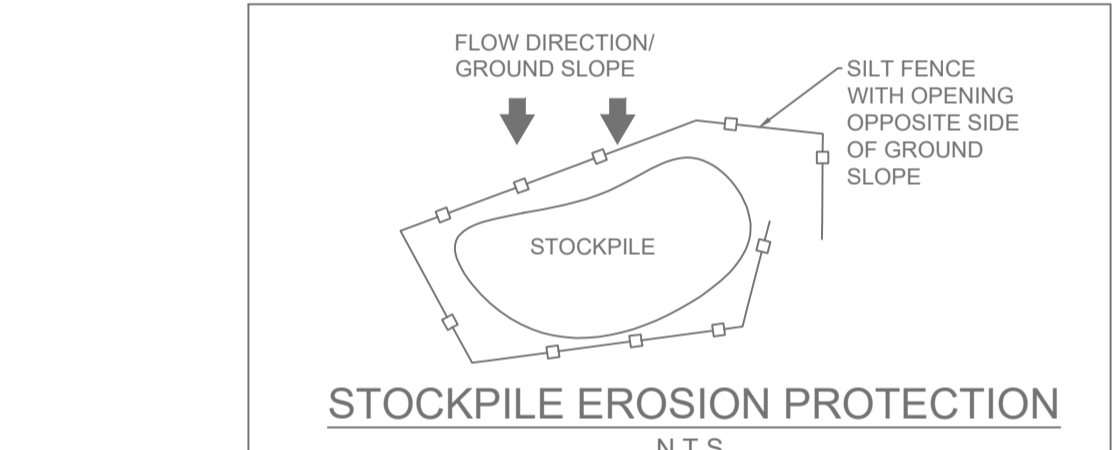
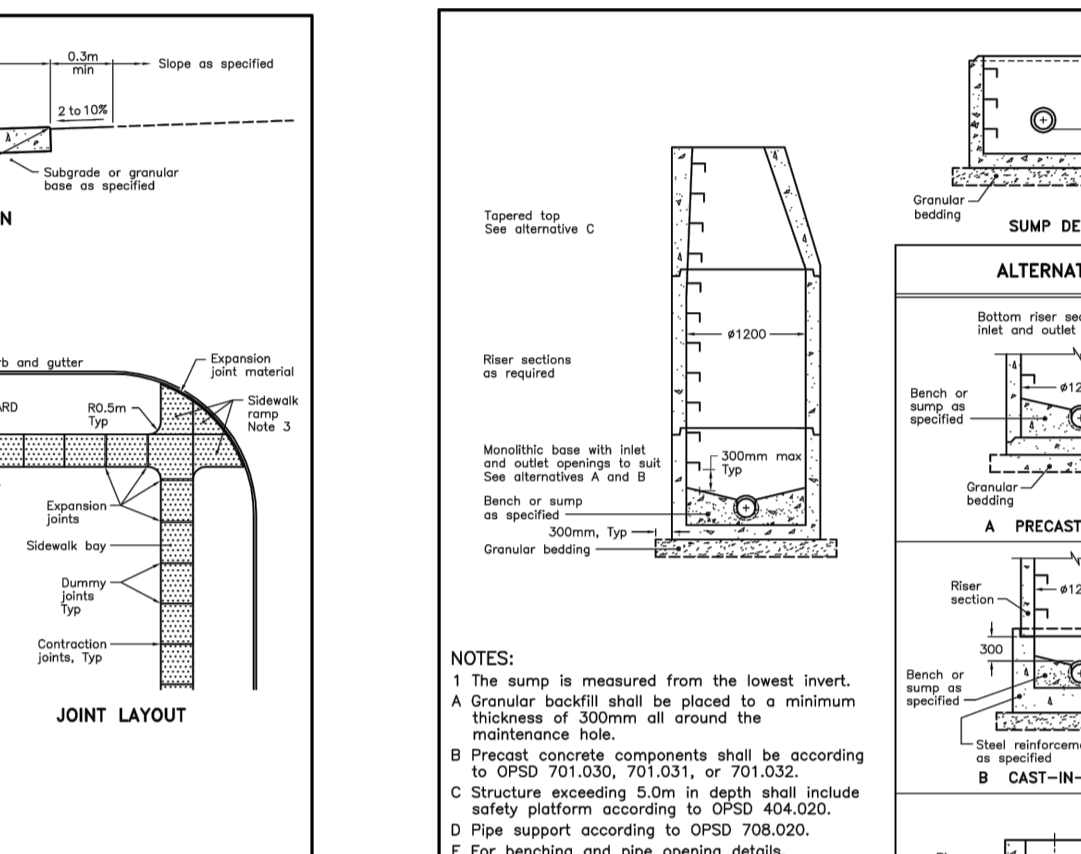
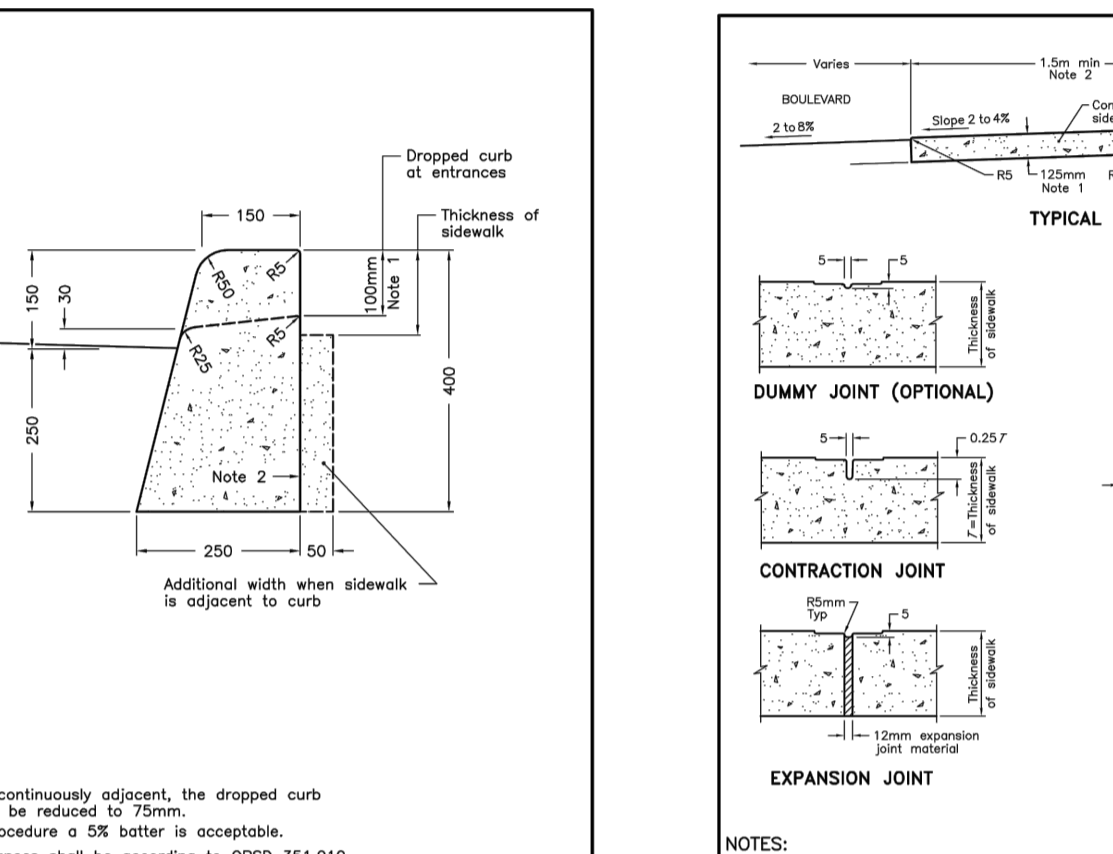
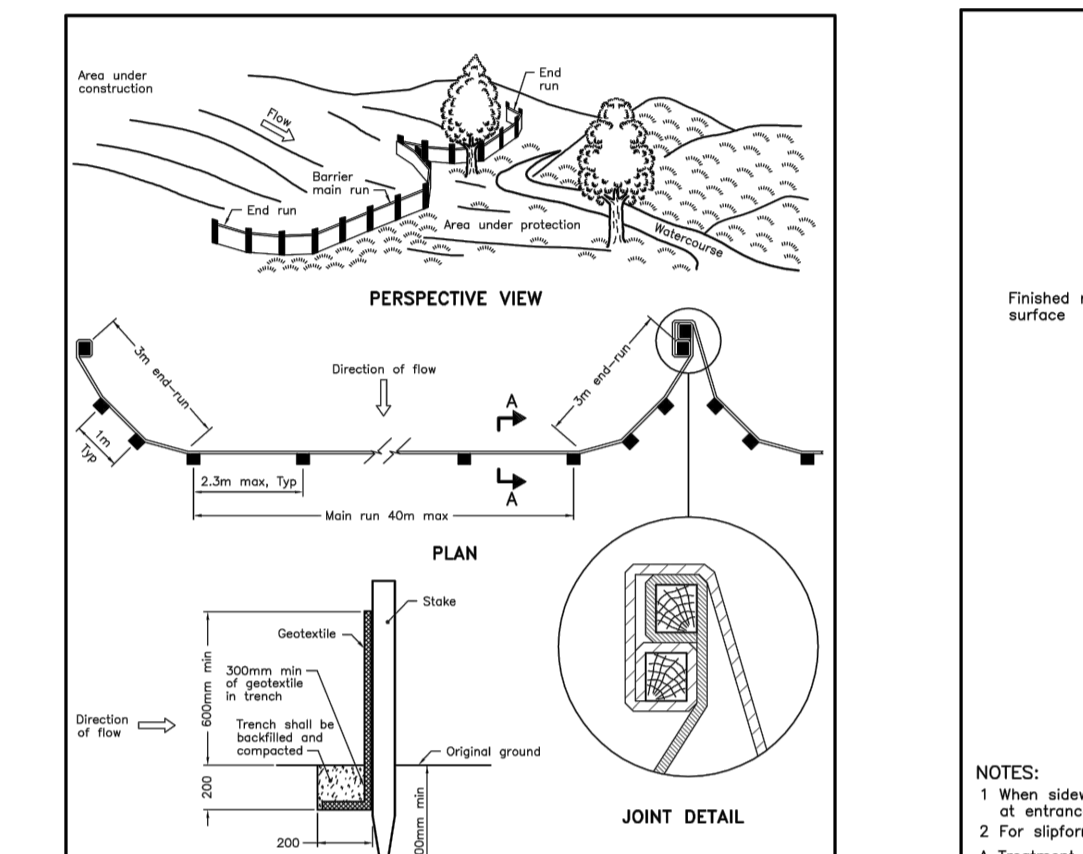
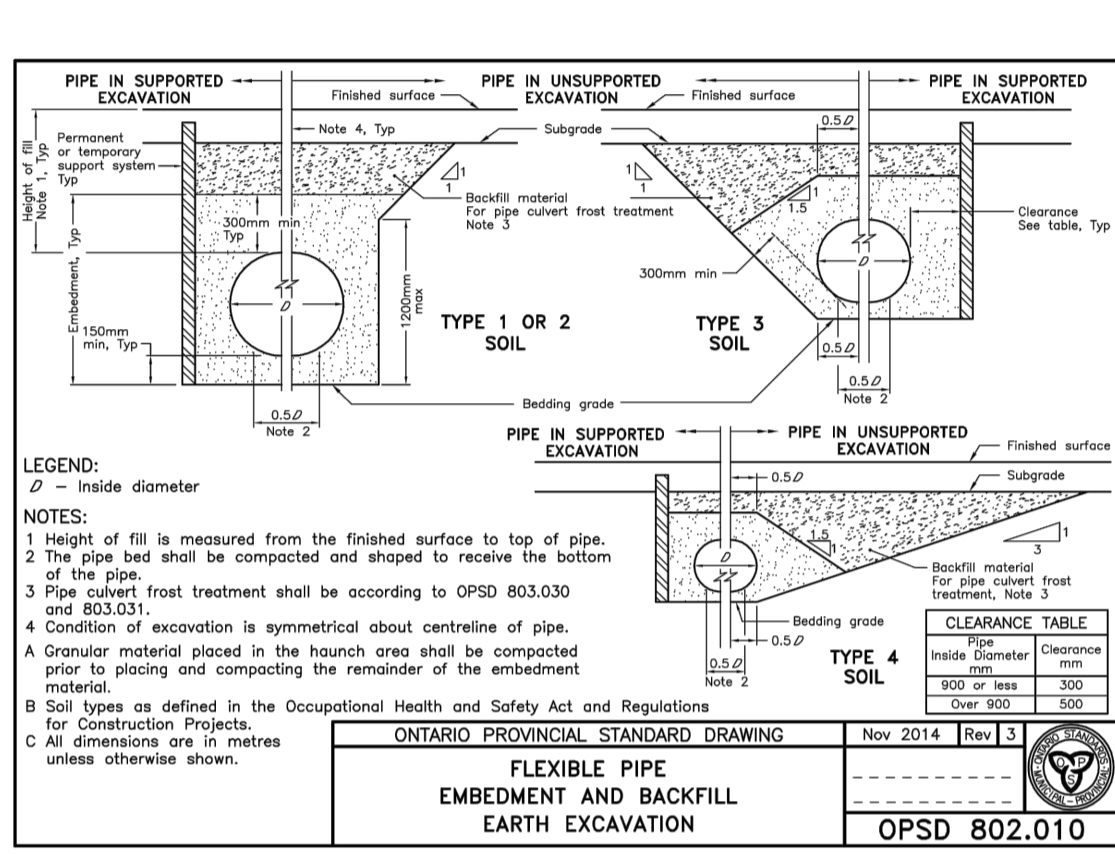
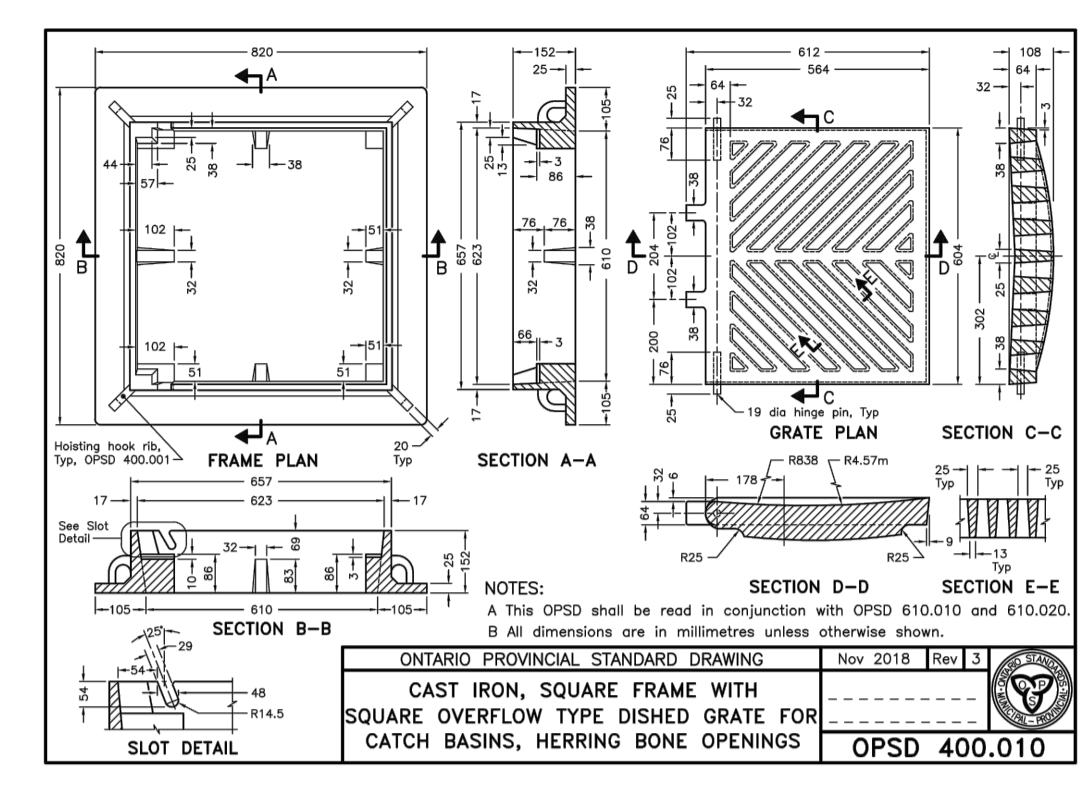
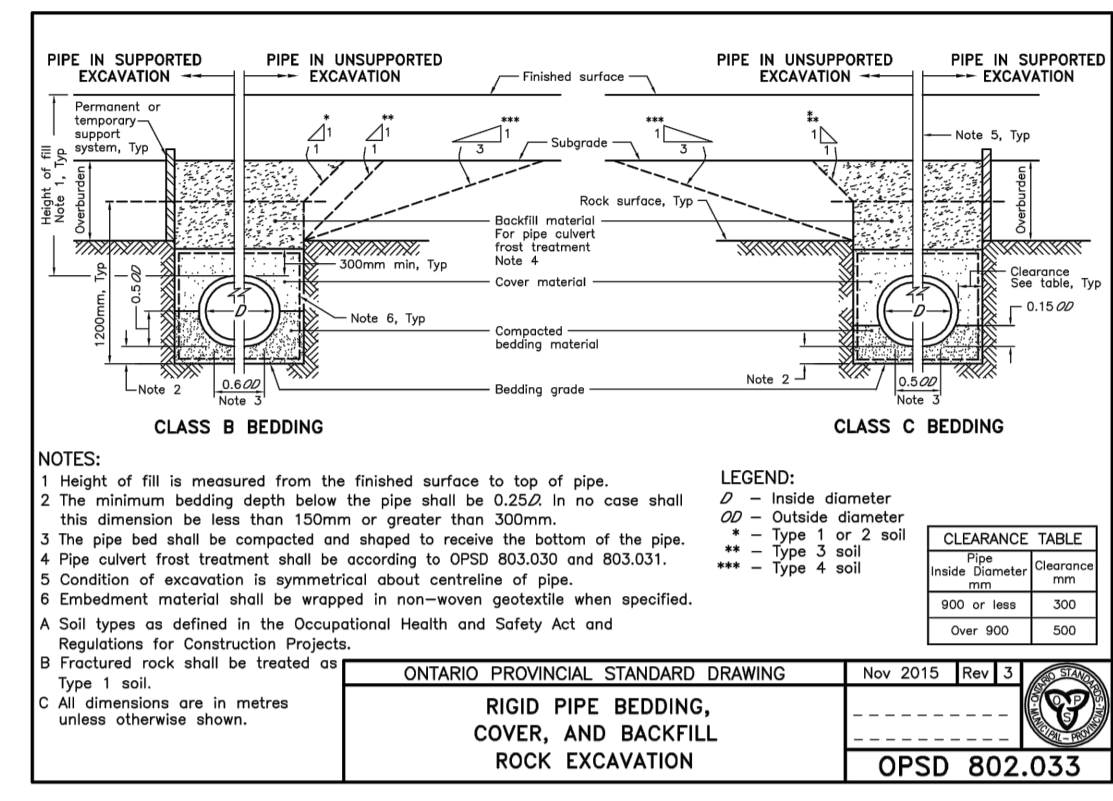
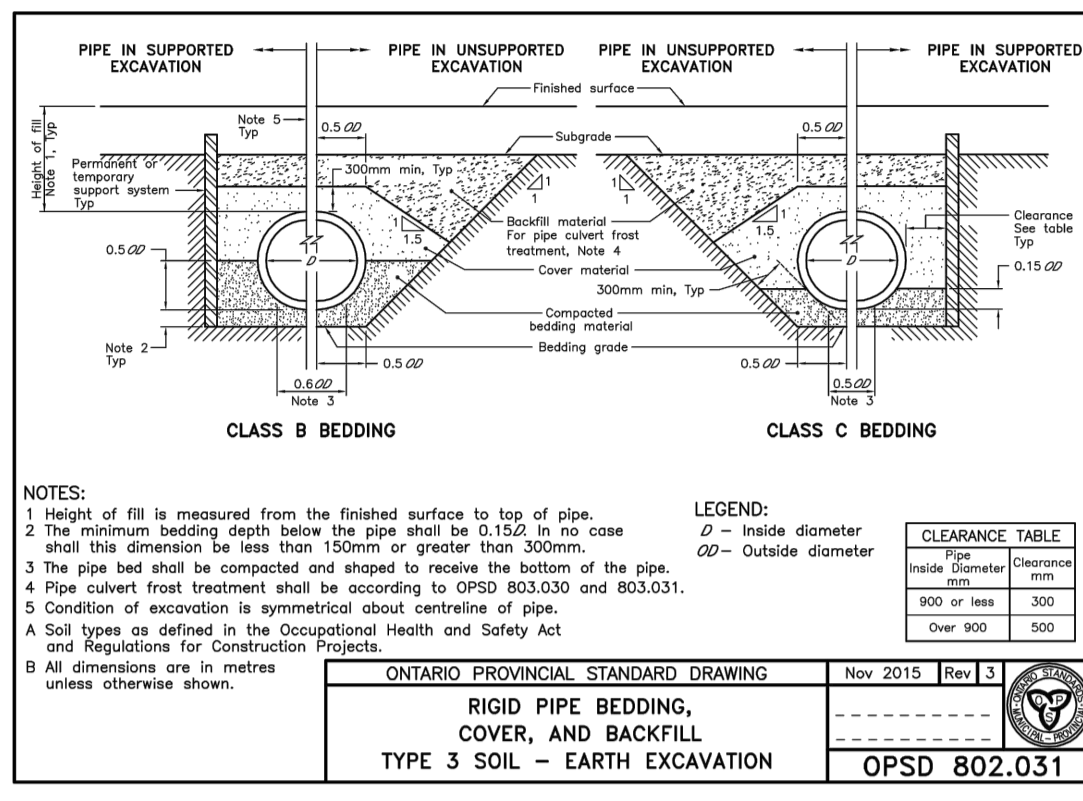
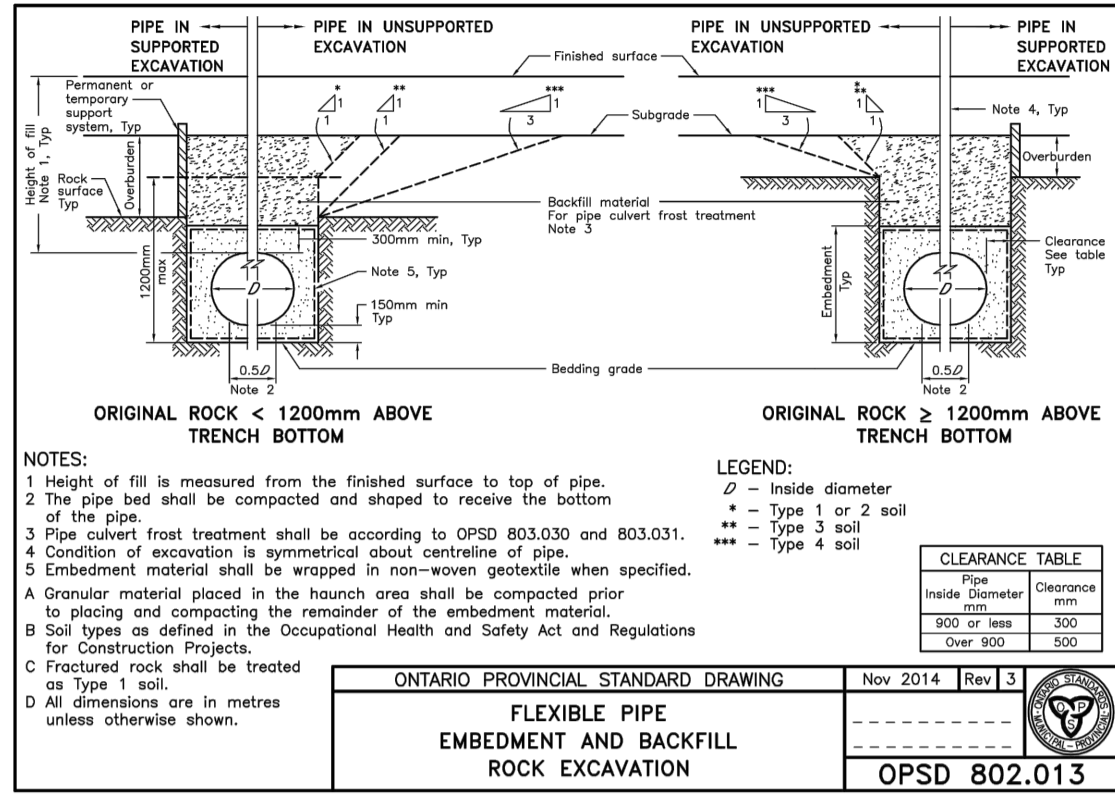
PROJECT NO.  
**210691**

DATE  
**JANUARY 2022**

**APPROVED**  
By Lily Xu at 12:32 pm, Aug 22, 2023

**LILY XU, MCIP, RPP**  
MANAGER, DEVELOPMENT REVIEW SOUTH  
PLANNING, INFRASTRUCTURE & ECONOMIC  
DEVELOPMENT DEPARTMENT, CITY OF OTTAWA

#1878



**USE AND INTERPRETATION OF DRAWINGS**

GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION ARE PART OF THE CONTRACT DOCUMENTS AND DESCRIBE THE USE AND INTENT OF THE DRAWING. THE CONTRACT DOCUMENTS INCLUDE NOT ONLY THE DRAWINGS, BUT ALSO THE OWNER-CONTRACTOR AGREEMENTS, CONDITIONS OF THE CONTRACT, THE SPECIFICATIONS, AGREEMENTS AND MODIFICATIONS ISSUED AFTER EXECUTION OF THE CONTRACT. THESE CONTRACT DOCUMENTS ARE COMPLEMENTARY, AND WHAT IS REQUIRED BY ANY ONE SHALL BE BINDING AS REQUIRED BY ALL WORK NOT COMPLETELY DELINEATED HEREON SHALL BE CONSTRUCTED OF THE SAME MATERIALS AND INSTALLED UNLESS OTHERWISE SHOWN MORE COMPLETELY ELSEWHERE IN THE CONTRACT DOCUMENTS.

BY USE OF THE DRAWINGS FOR CONSTRUCTION OF THE PROJECT, THE OWNER CONFIRMS THAT HE HAS REVIEWED AND APPROVED THE DRAWINGS. THE CONTRACTOR CONFIRMS THAT HE HAS VISITED THE SITE, FAMILIARIZED HIMSELF WITH THE LOCAL CONDITIONS, VERIFIED FIELD DIMENSIONS AND CORRELATED HIS OBSERVATIONS WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.

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**UNAUTHORIZED CHANGES:**

IN THE EVENT THE CLIENT, THE CLIENT'S CONTRACTORS OR SUBCONTRACTORS, OR ANYONE FOR WHOM THE CLIENT IS LEGALLY LIABLE MAKES OR PERMITS TO BE MADE ANY CHANGES TO REPORTS, PLANS, SPECIFICATIONS OR OTHER CONSTRUCTION DOCUMENTS PREPARED BY LRL ASSOCIATES LTD. (LRL) WITHOUT OBTAINING LRL'S PRIOR WRITTEN CONSENT, THE CLIENT SHALL ASSUME FULL RESPONSIBILITY FOR THE RESULTS OF SUCH CHANGES. THEREFORE THE CLIENT AGREES TO WAIVE ANY CLAIM AGAINST LRL AND TO RELEASE LRL FROM ANY LIABILITY ARISING DIRECTLY OR INDIRECTLY FROM SUCH UNAUTHORIZED CHANGES.

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**SUBJECT FOR APPROVAL**

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 www.lrl.ca | (613) 842-3434

**CLIENT**  
**HALO CAR WASH INC.**

**DESIGNED BY:** M.L. / **P.P.** **DRAWN BY:** M.L. **APPROVED BY:** M.B.

**PROJECT**  
**HALO CAR WASH**  
**3555 BORRISOKANE RD**  
**BARRHAVEN, ON**

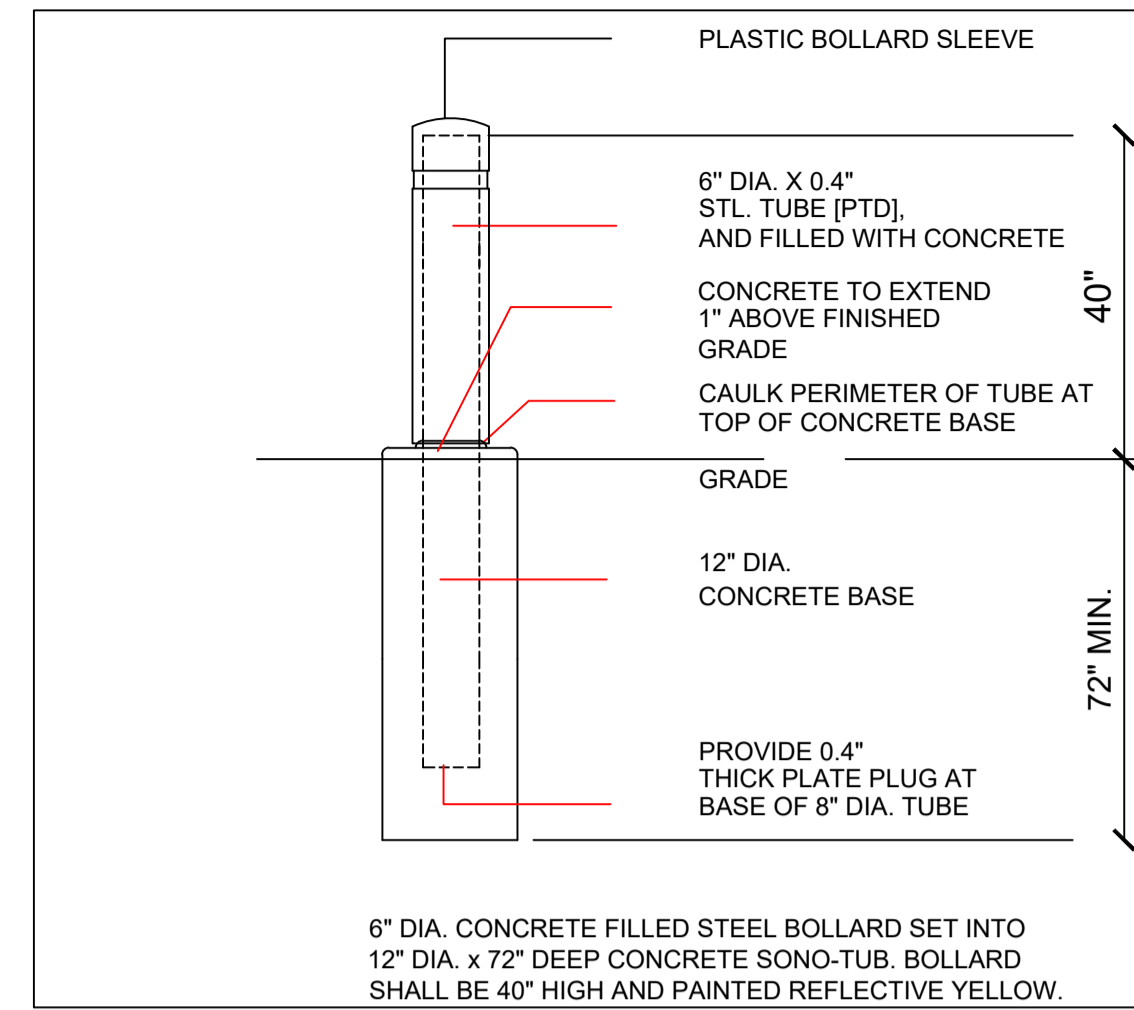
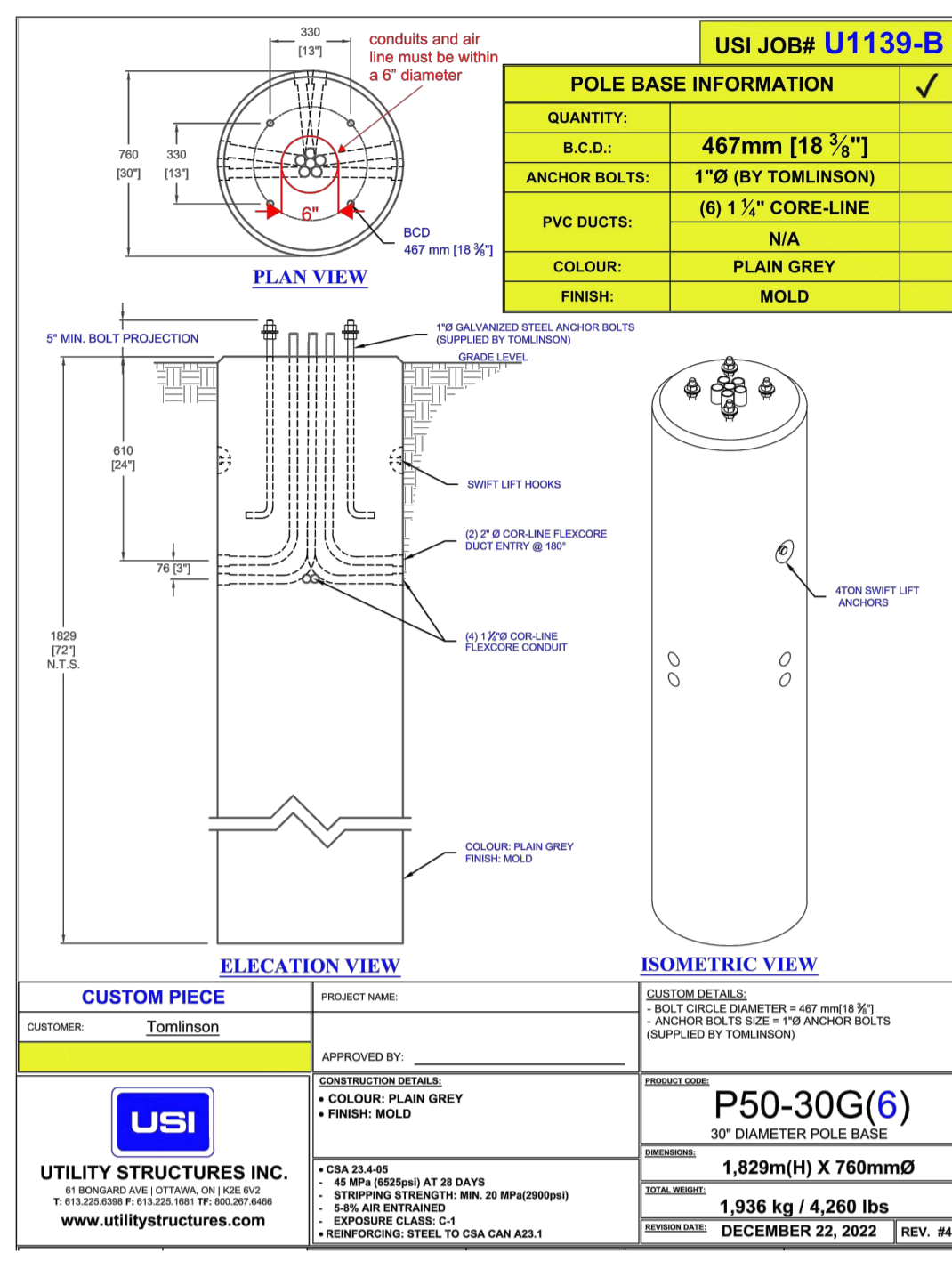
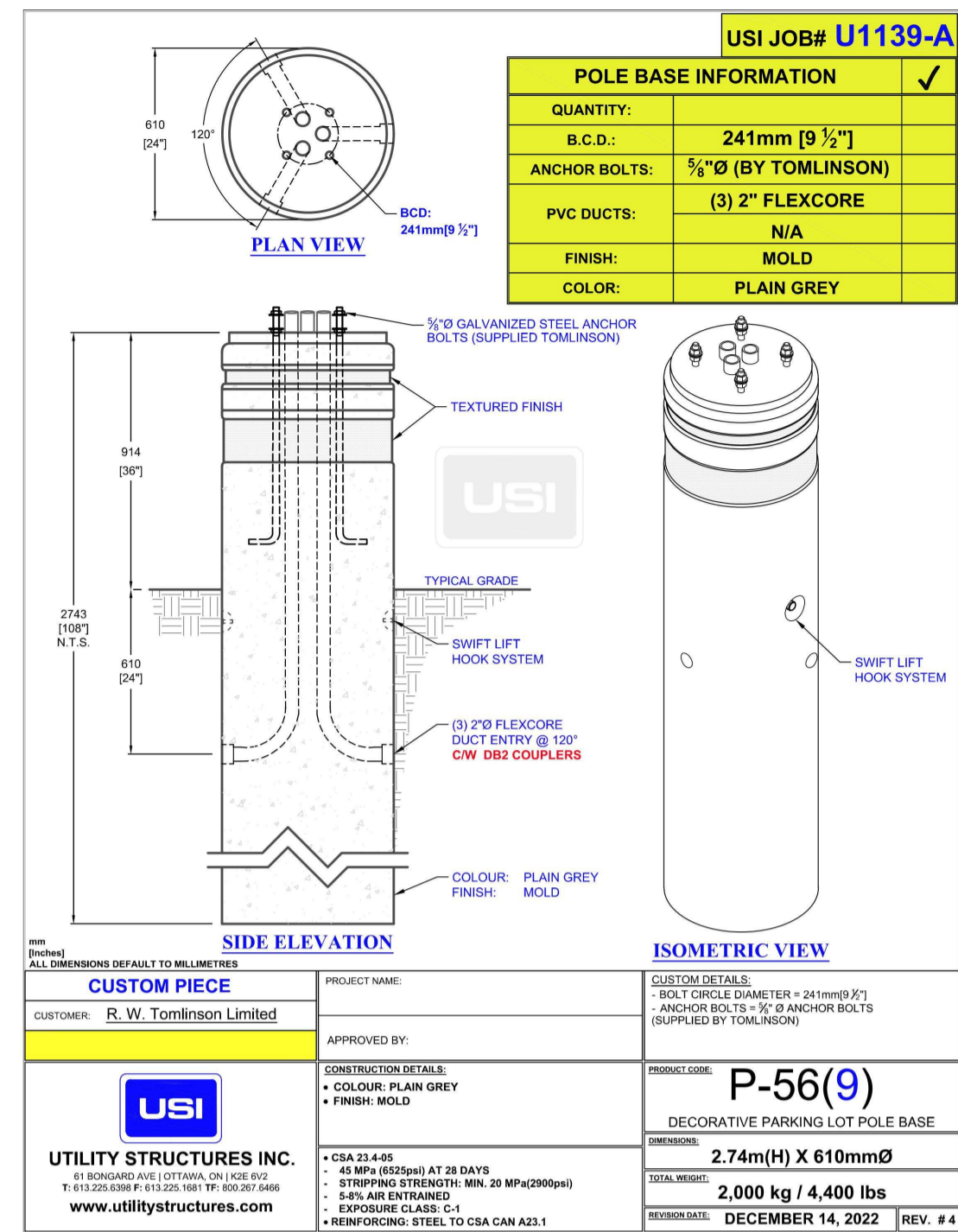
**DRAWING TITLE**  
**CONSTRUCTION DETAIL PLAN**

**PROJECT NO.** 210691 **DATE** JANUARY 2022

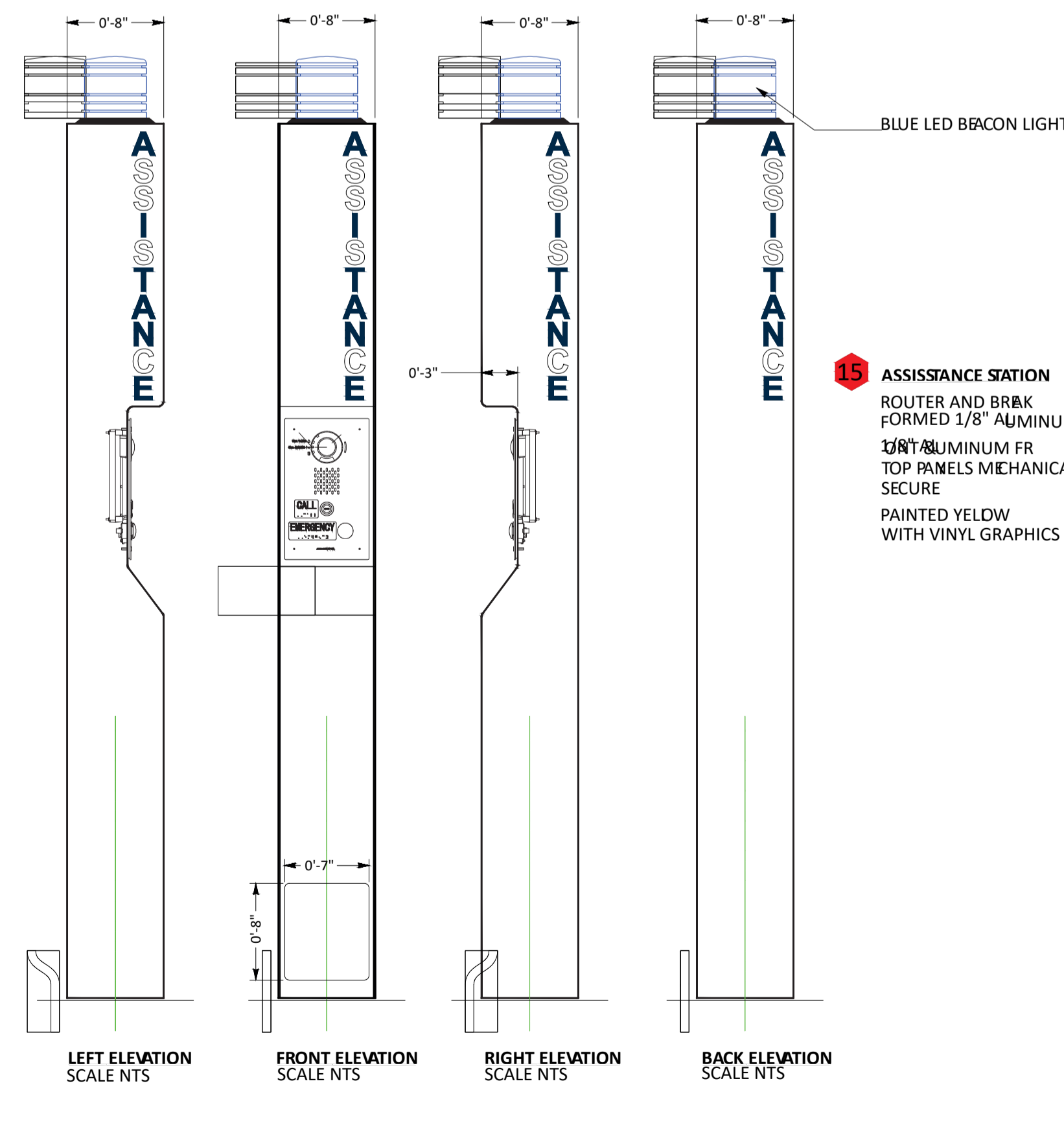
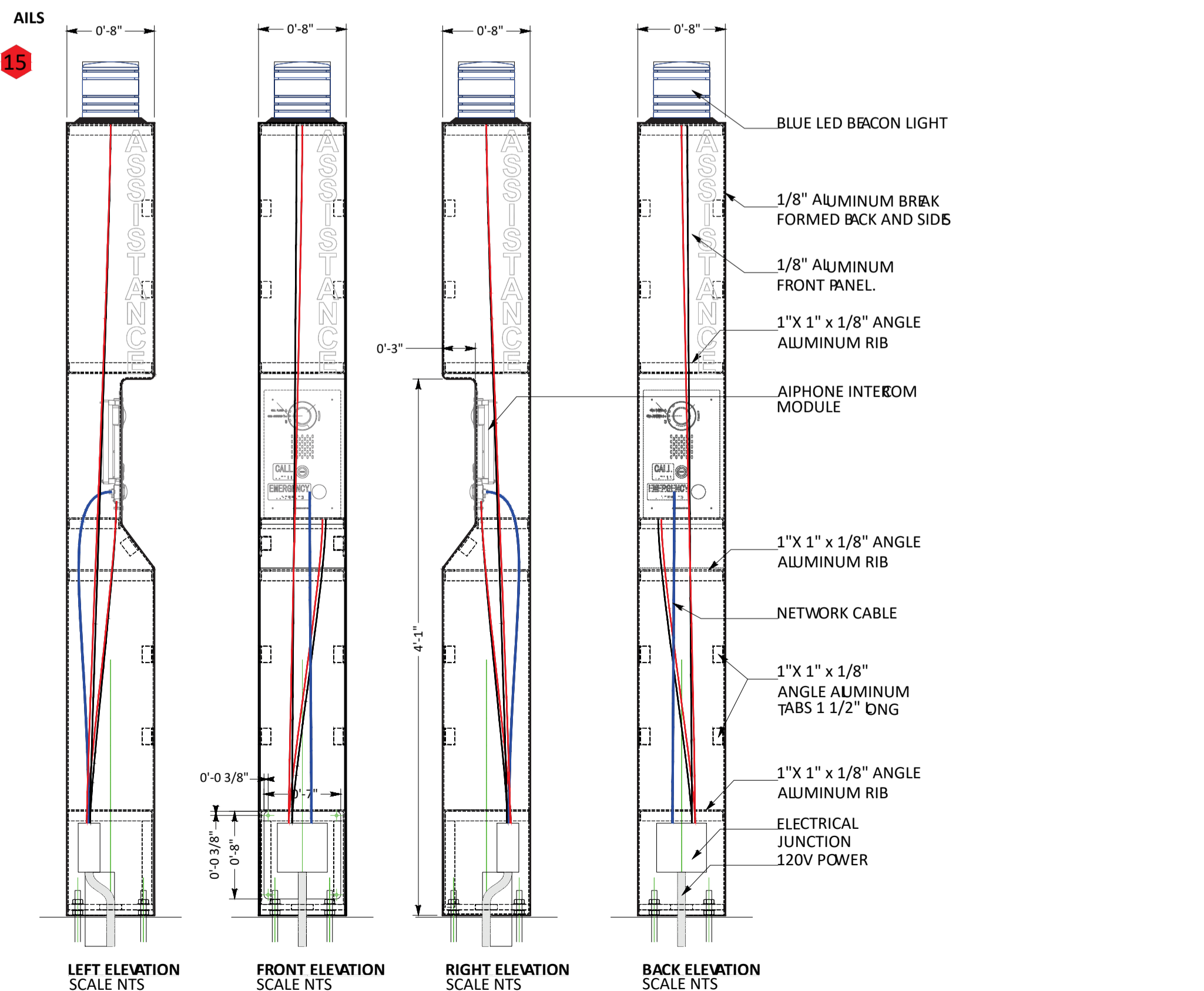
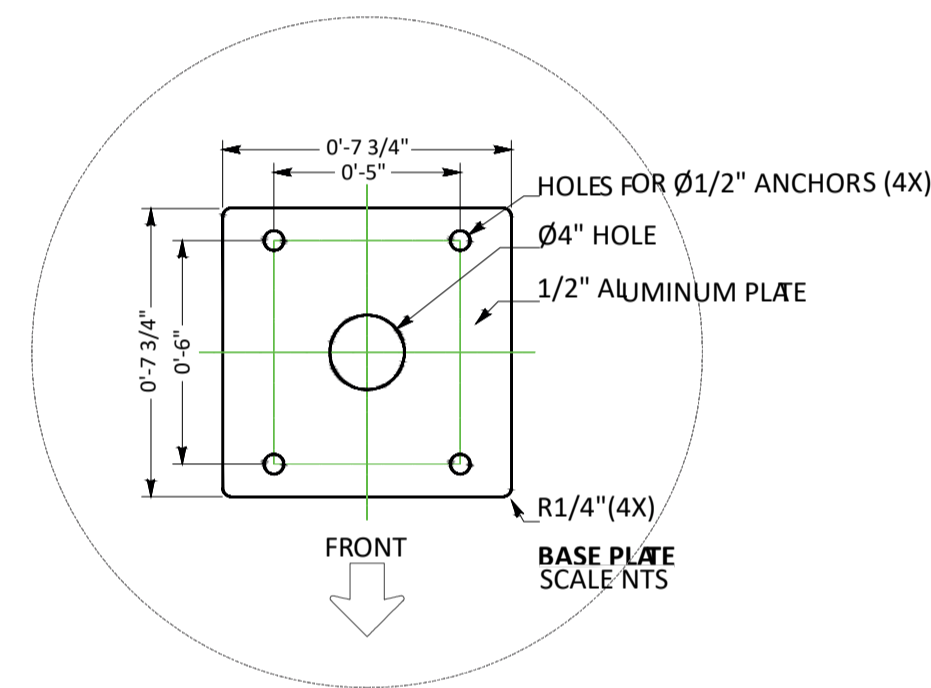
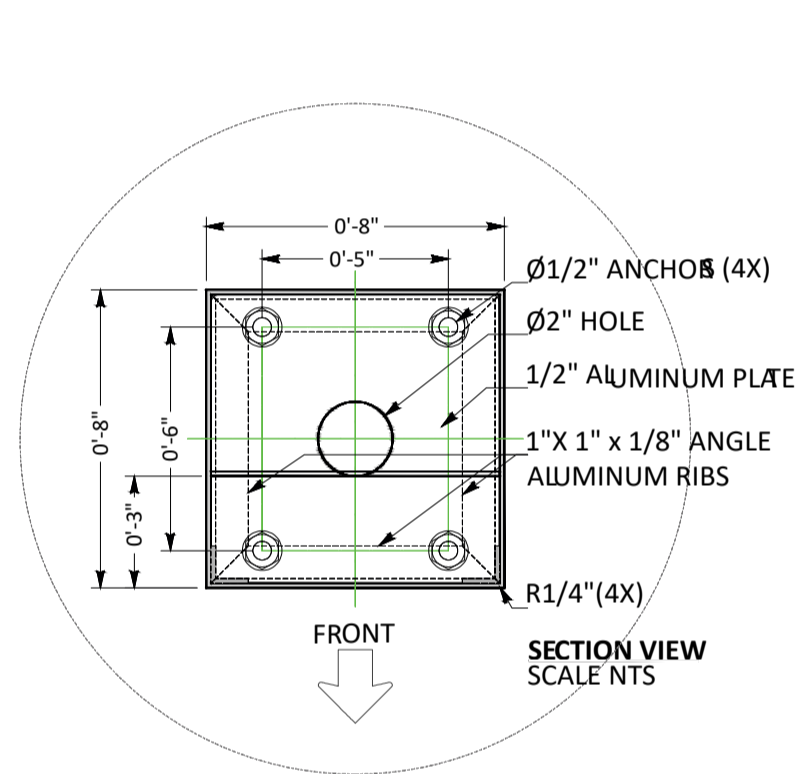
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**APPROVED**  
 By Lily Xu at 12:33 pm, Aug 22, 2023

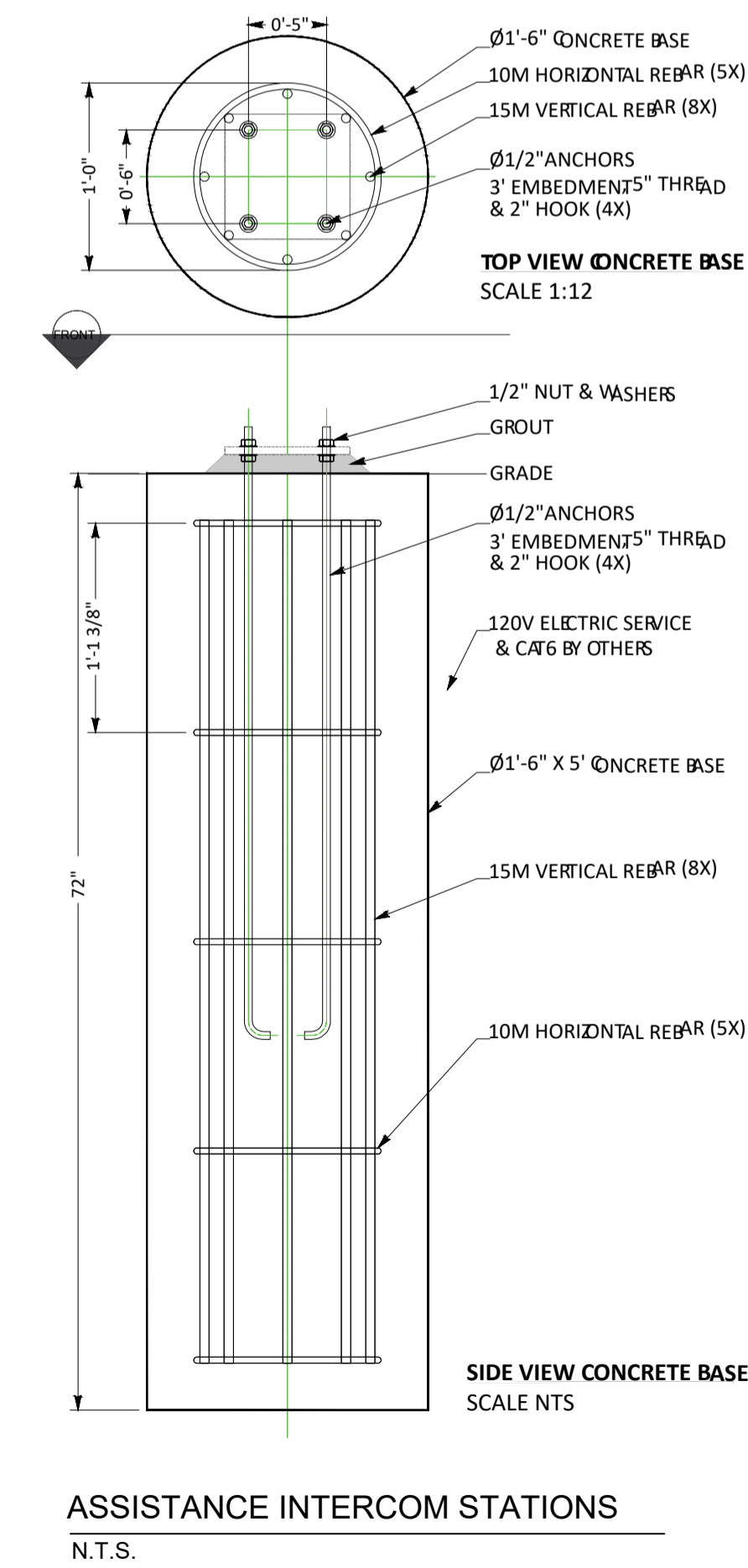
**LILY XU, MCIP, RPP**  
**MANAGER, DEVELOPMENT REVIEW SOUTH**  
**PLANNING, INFRASTRUCTURE & ECONOMIC**  
**DEVELOPMENT DEPARTMENT, CITY OF OTTAWA**



BOLLARD DETAIL  
N.T.S.



**15 ASSISTANCE STATION**  
ROUTER AND BRK FORMED 1/8" ALUMINUM FRONT PANELS MECHANICAL SECURE  
PAINTED YELLOW WITH VINYL GRAPHICS



ASSISTANCE INTERCOM STATIONS  
N.T.S.

ASSISTANCE INTERCOM STATIONS  
N.T.S.

NOTE:  
DETAIL TO BE VERIFIED AND STAMPED BY A STRUCTURAL ENGINEER PRIOR TO CONSTRUCTION

**APPROVED**  
By Lily Xu at 12:33 pm, Aug 22, 2023

**LILY XU, MCIP, RPP**  
MANAGER, DEVELOPMENT REVIEW SOUTH  
PLANNING, INFRASTRUCTURE & ECONOMIC  
DEVELOPMENT DEPARTMENT, CITY OF OTTAWA

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CONTRACTOR TO VERIFY ALL DIMENSIONS AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES BEFORE WORK COMMENCES. DO NOT SCALE DRAWINGS.

**SUBJECT FOR APPROVAL**

No.	REVISIONS	BY	DATE
11	RE-ISSUED FOR APPROVAL	M.L.	07 JULY 2023
10	RE-ISSUED FOR APPROVAL	M.L.	23 MAY 2023
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02	REVISED FLOOR AREA FOR MV APPLICATION	P.P.	23 JUNE 2022
01	ISSUED FOR APPROVAL	M.L.	22 APR 2022



NOT AUTHENTIC UNLESS SIGNED AND DATED



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5430 Canotek Road | Ottawa, ON, K1J 9G2  
www.lrl.ca | (613) 842-3434

CLIENT: HALO CAR WASH INC.

DESIGNED BY: M.L. / P.P. DRAWN BY: M.L. APPROVED BY: M.B.

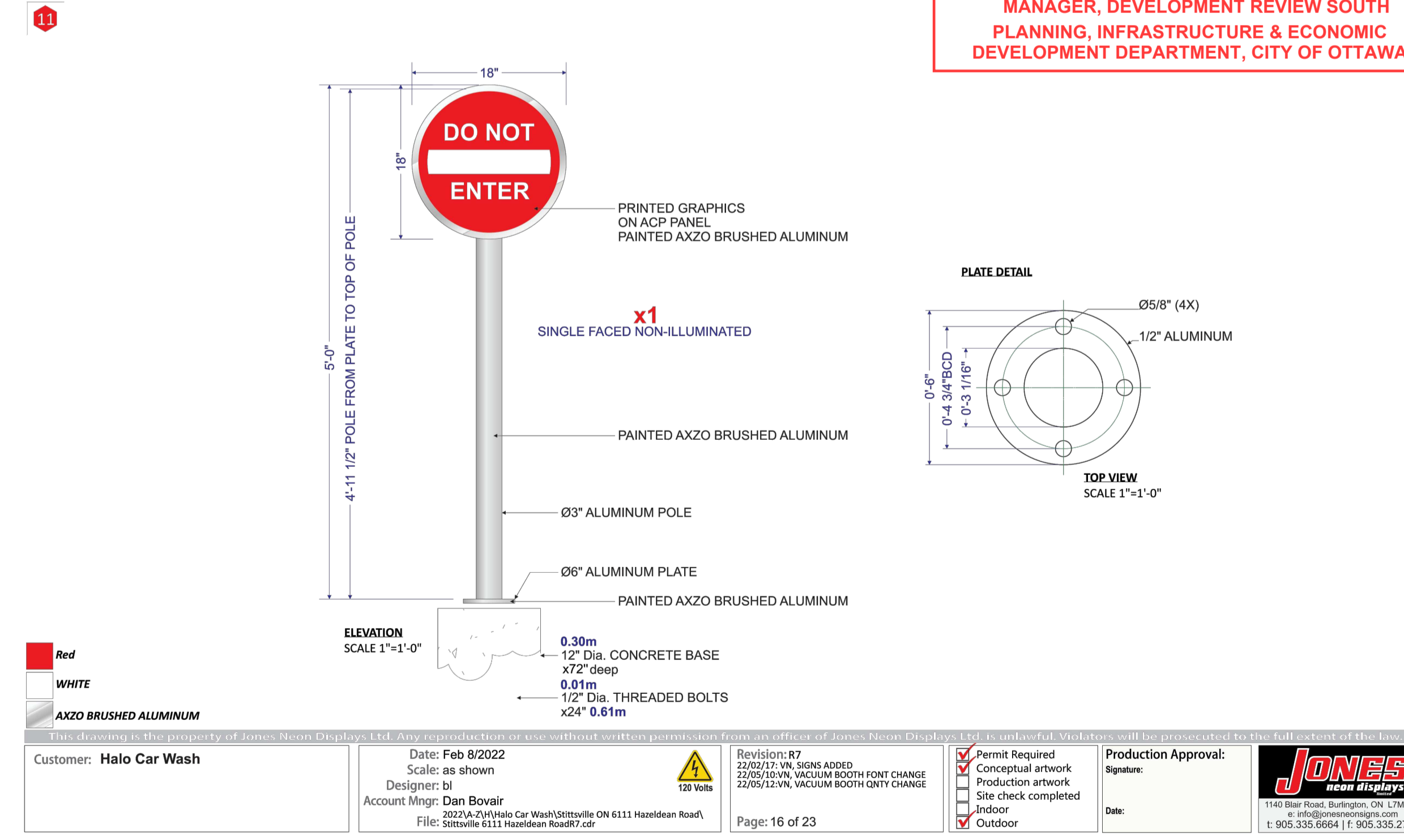
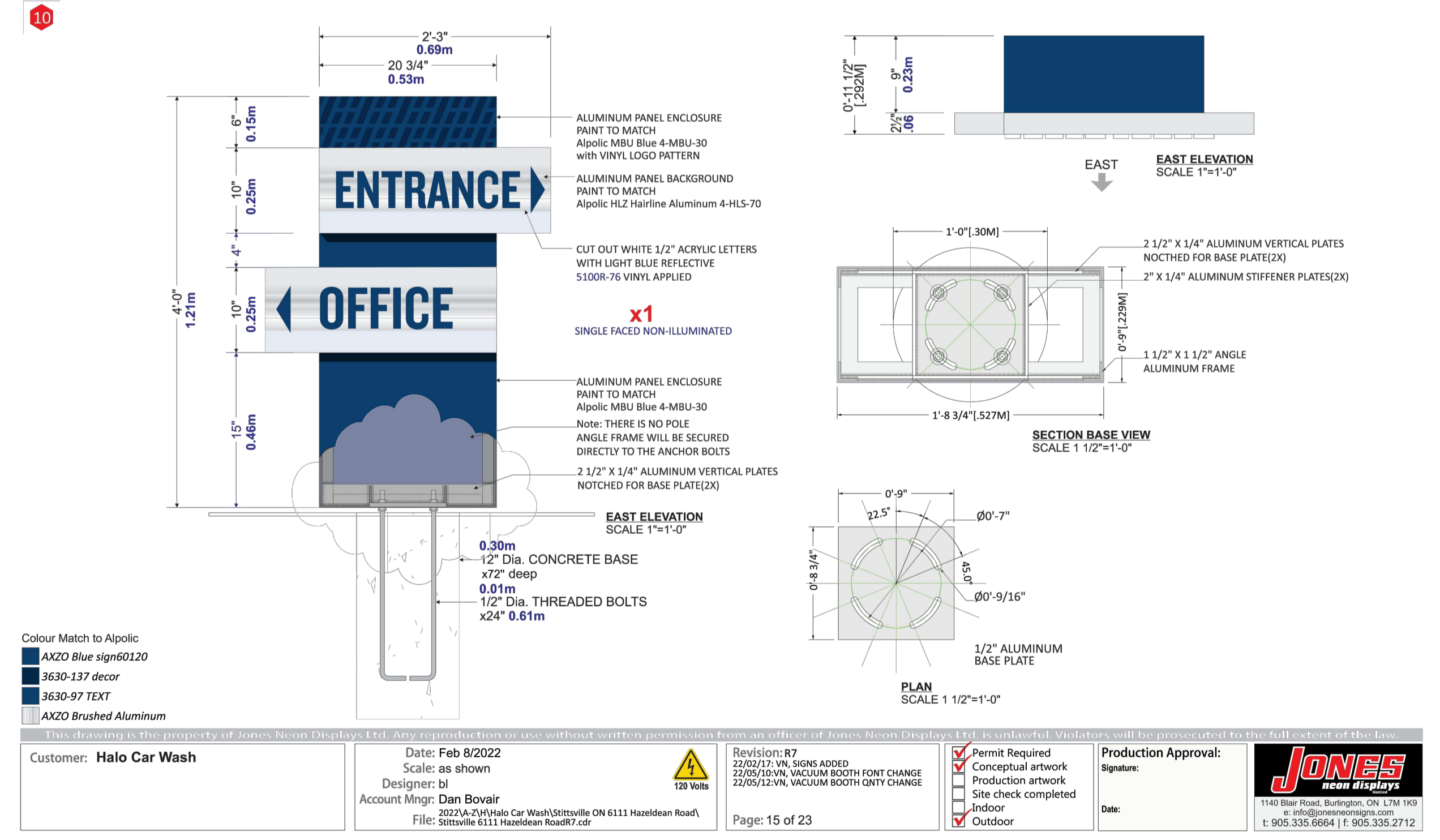
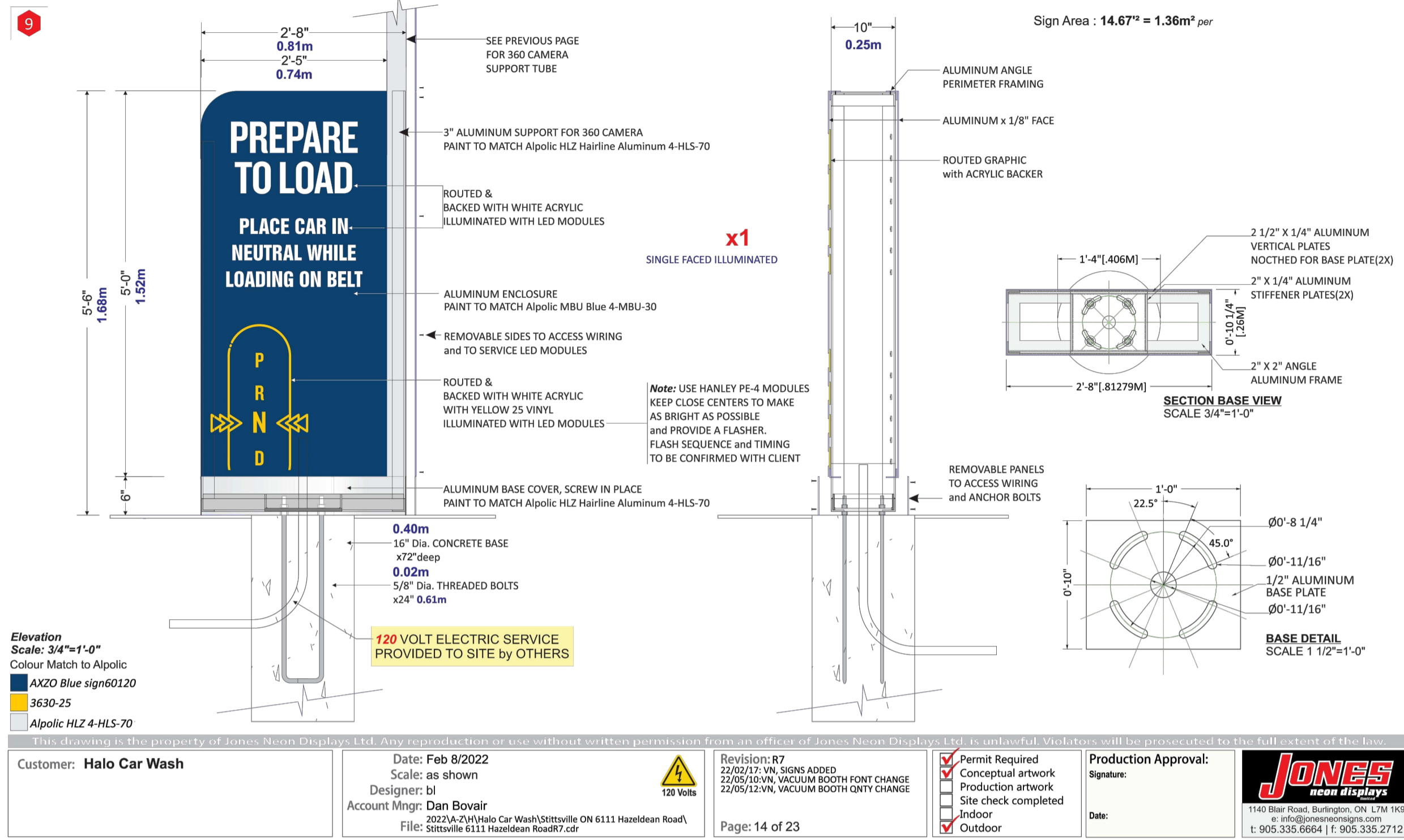
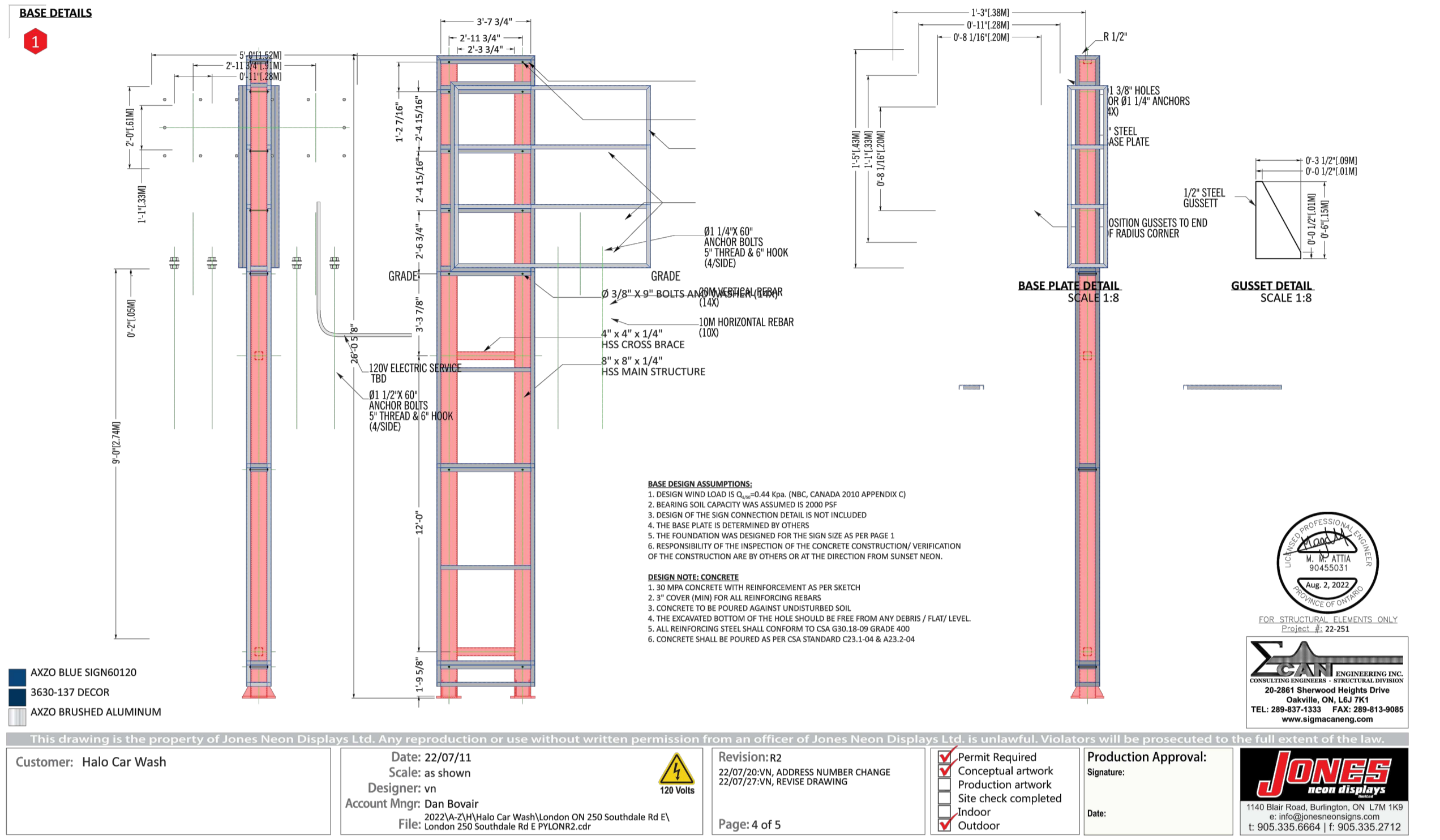
PROJECT: HALO CAR WASH  
3555 BORRISOKANE RD  
BARRHAVEN, ON

DRAWING TITLE: CONSTRUCTION DETAIL PLAN

PROJECT NO. 210691

DATE: JANUARY 2022

**C902**



**USE AND INTERPRETATION OF DRAWINGS**

GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION ARE PART OF THE CONTRACT DOCUMENTS AND DESCRIBE USE AND INTENT OF THE DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL AUTHORITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL AUTHORITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL AUTHORITIES.

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GENERAL NOTES:

EXISTING SERVICES AND UTILITIES SHOWN ON THESE DRAWINGS ARE TAKEN FROM THE BEST AVAILABLE RECORDS, BUT MAY NOT BE COMPLETE OR TO DATE. CONTRACTOR SHALL VERIFY IN FIELD FOR LOCATION AND ELEVATION OF PIPES AND CHECK WITH THE UTILITY COMPANIES BEFORE DIGGING OR PERFORMING WORK.

CONTRACTOR IS ADVISED TO COLLECT INFORMATION ON SOIL CONDITIONS BEFORE START OF CONSTRUCTION.

THE ENGINEER WAIVES ANY AND ALL RESPONSIBILITY AND LIABILITY FOR PROBLEMS WHICH ARISE FROM FAILURE TO FOLLOW THESE PLANS, SPECIFICATIONS AND THE DESIGN INTENT THEY CONVEY, OR FOR PROBLEMS WHICH ARISE FROM OTHERS' FAILURE TO OBTAIN AND/OR FOLLOW THE ENGINEER'S GUIDANCE WITH RESPECT TO ANY ERRORS, OMISSIONS, INCONSISTENCIES AMBIGUITIES OR CONFLICTS WHICH ARE ALLEGED.

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01	ISSUED FOR APPROVAL	M.L.	22 APR 2022

**APPROVED**  
By Lily Xu at 12:33 pm, Aug 22, 2023

*Lily Xu*

**LILY XU, MCIP, RPP**  
MANAGER, DEVELOPMENT REVIEW SOUTH PLANNING, INFRASTRUCTURE & ECONOMIC DEVELOPMENT DEPARTMENT, CITY OF OTTAWA

**LRL**  
ENGINEERING | INGENIERIE  
5430 Canotek Road | Ottawa, ON, K1J 9G2  
www.lrl.ca | (613) 842-3434

CLIENT: **HALO CAR WASH INC.**

DESIGNED BY: M.L. / P.P. DRAWN BY: M.L. APPROVED BY: M.B.

PROJECT: **HALO CAR WASH**  
3555 BORRISOKANE RD  
BARRHAVEN, ON

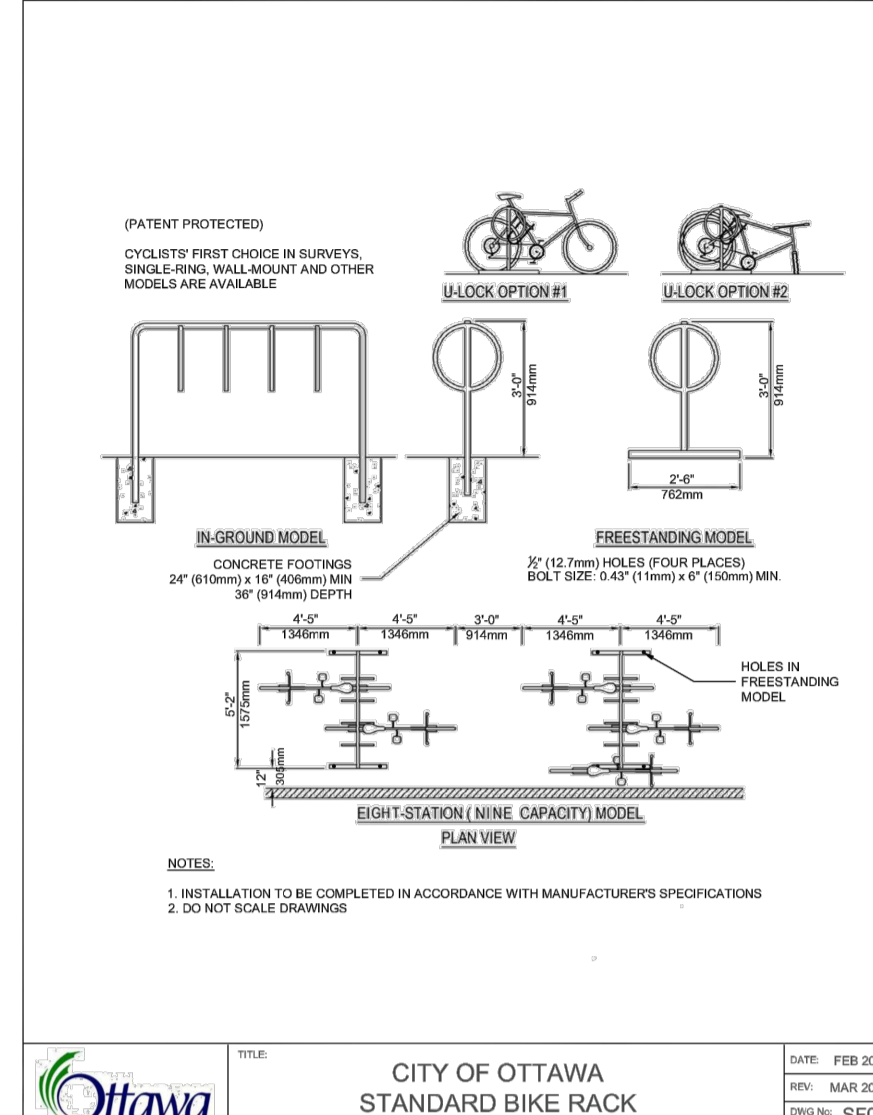
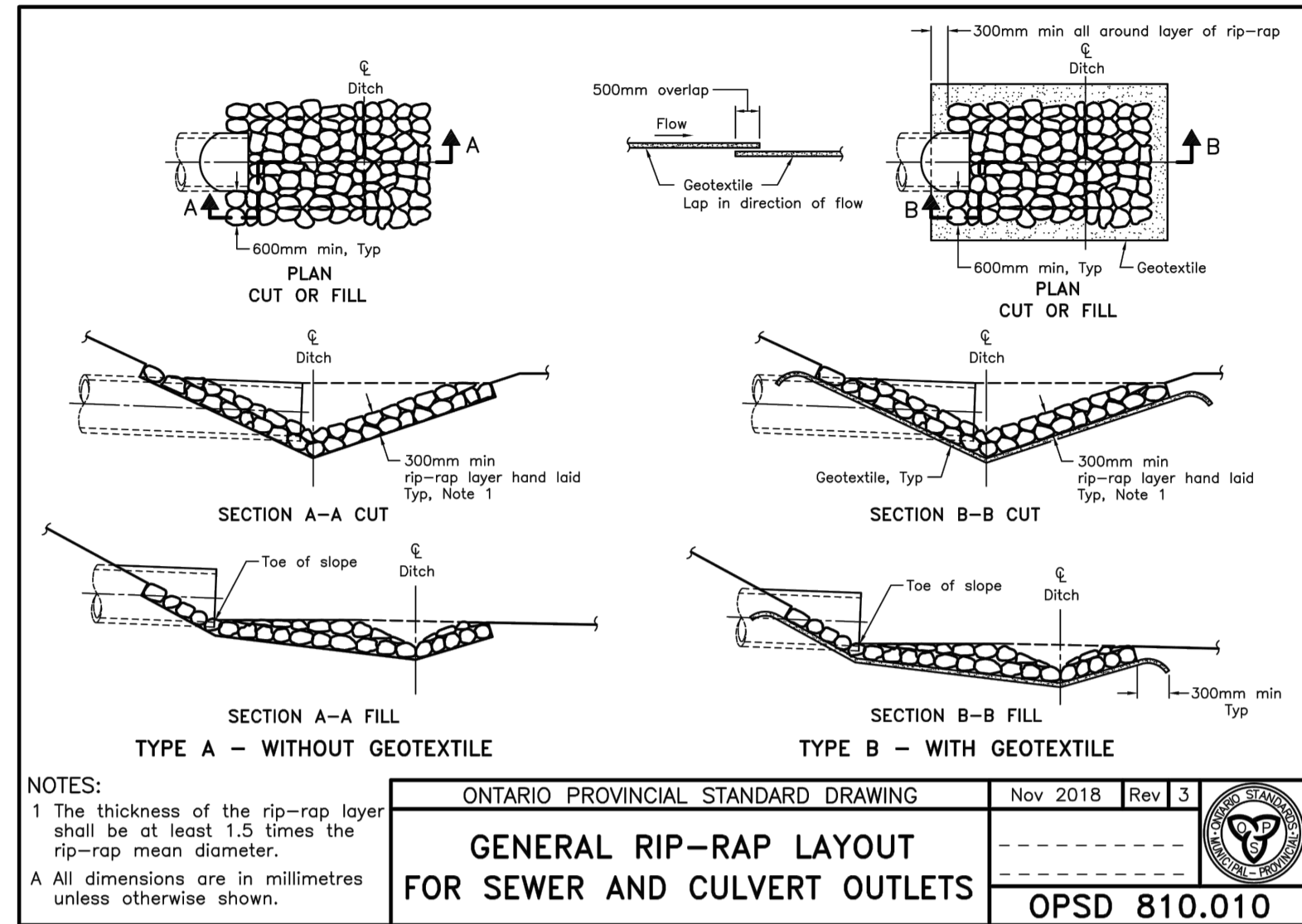
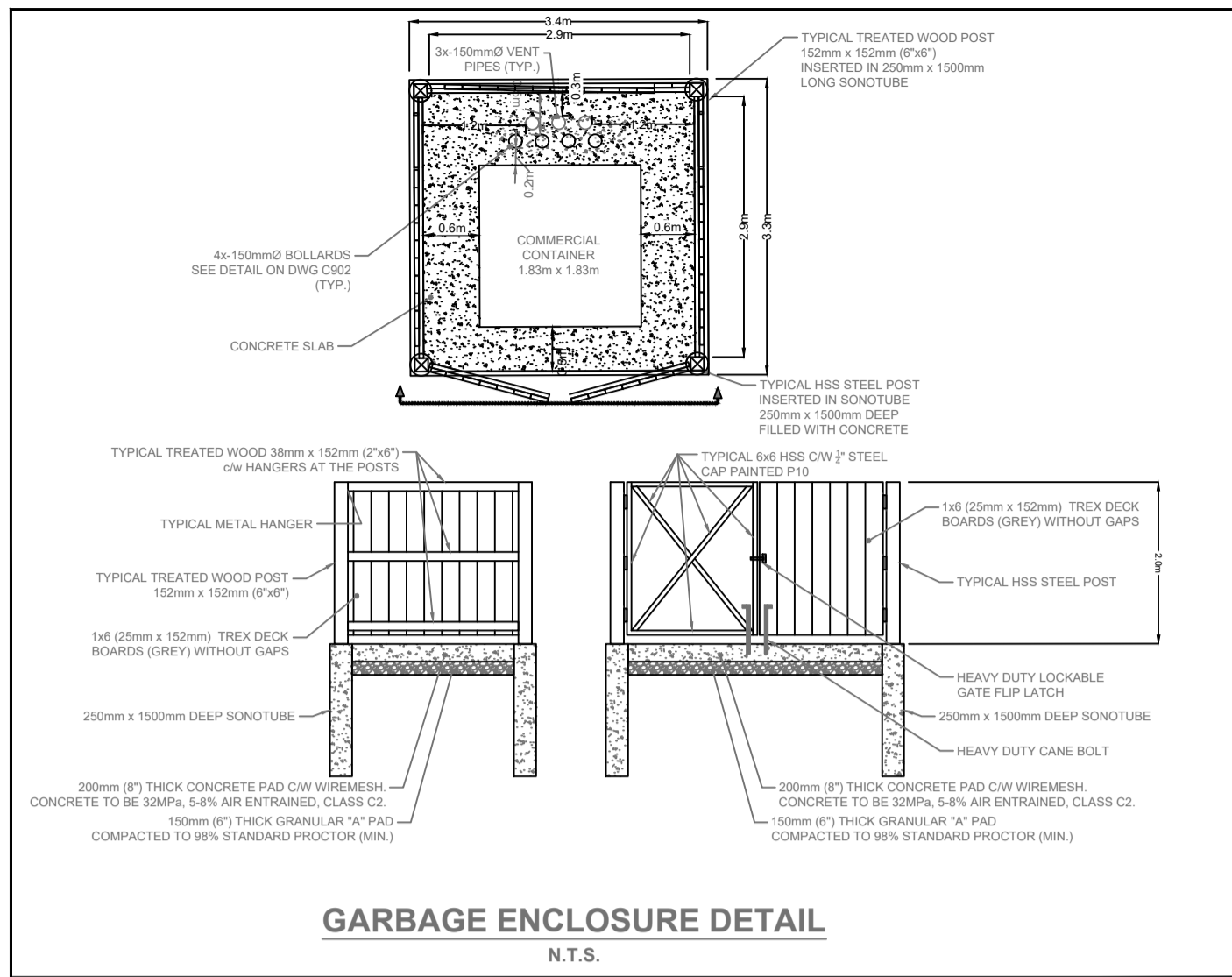
DRAWING TITLE: **CONSTRUCTION DETAIL PLAN**

PROJECT NO: 210691

DATE: JANUARY 2022

**C903**

D07-12-22-0085



**APPROVED**  
By Lily Xu at 12:33 pm, Aug 22, 2023

**LILY XU, MCIP, RPP**  
MANAGER, DEVELOPMENT REVIEW SOUTH  
PLANNING, INFRASTRUCTURE & ECONOMIC  
DEVELOPMENT DEPARTMENT, CITY OF OTTAWA

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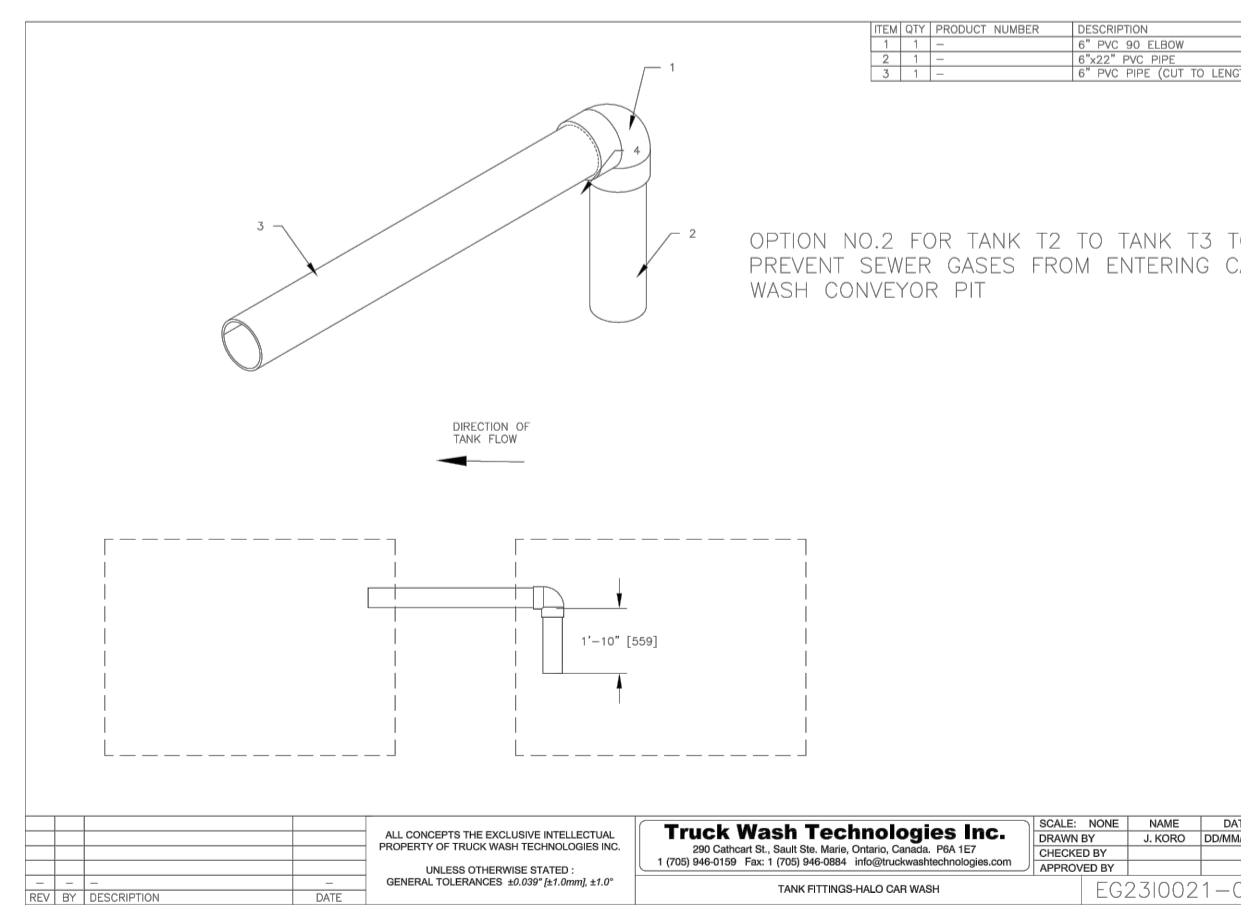
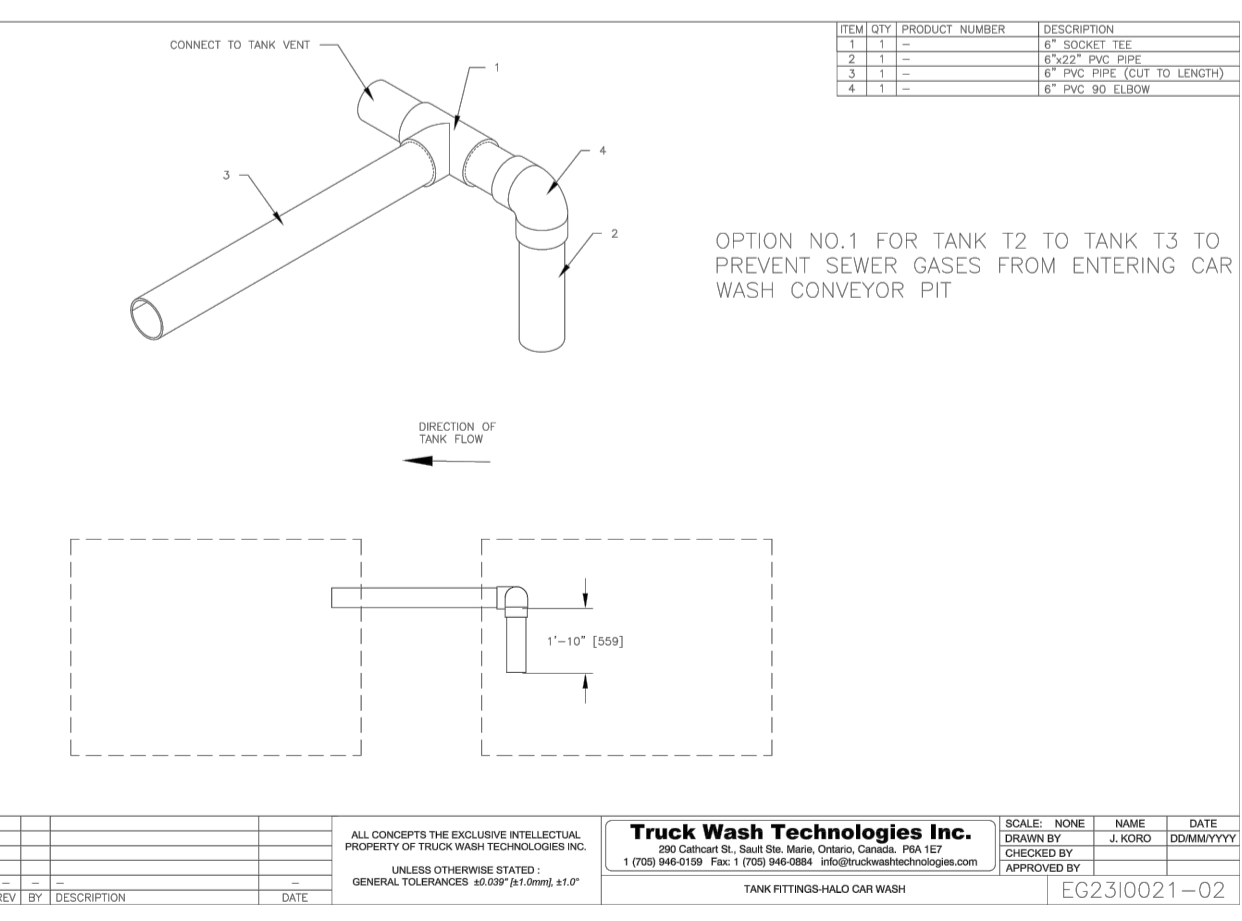
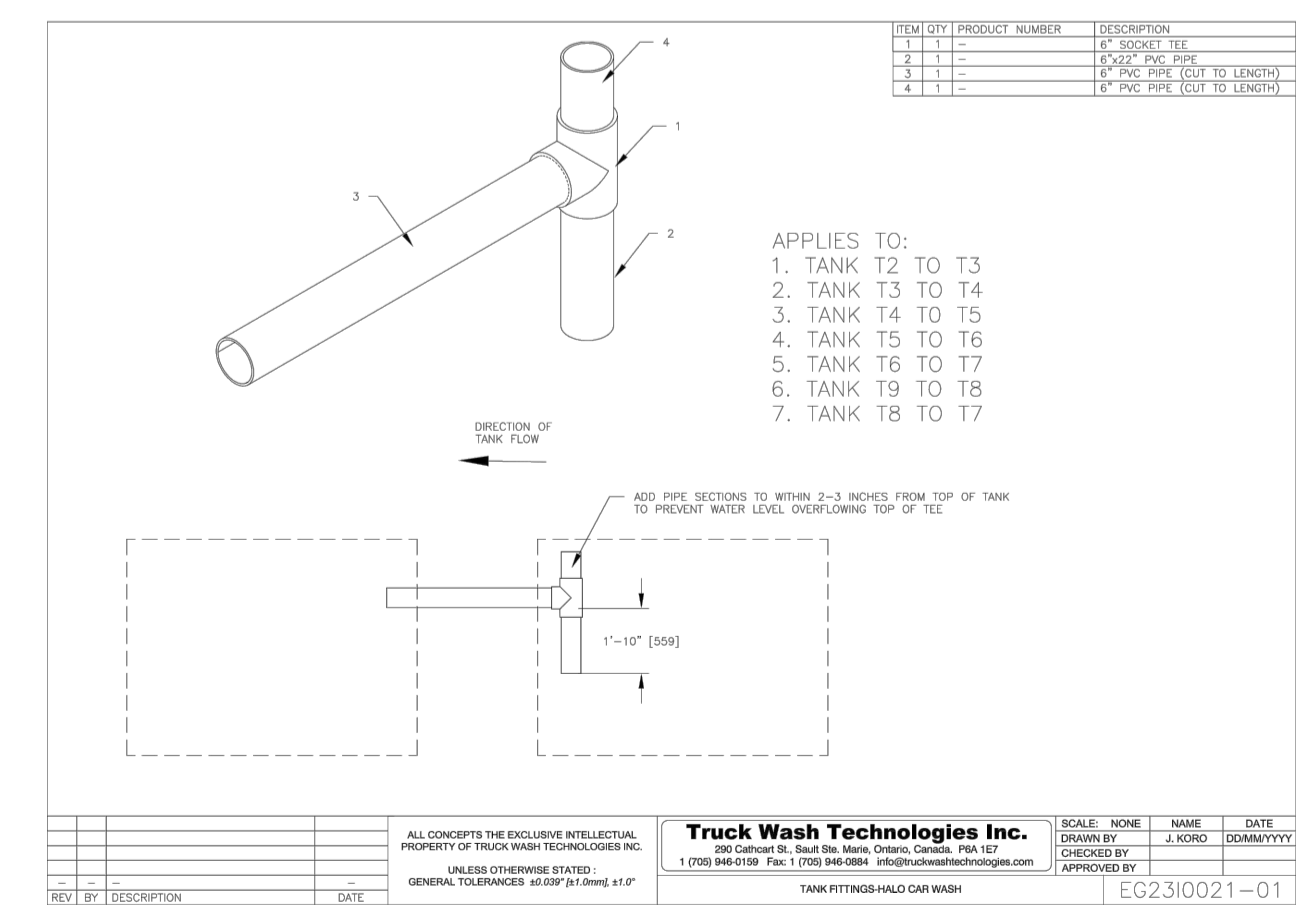
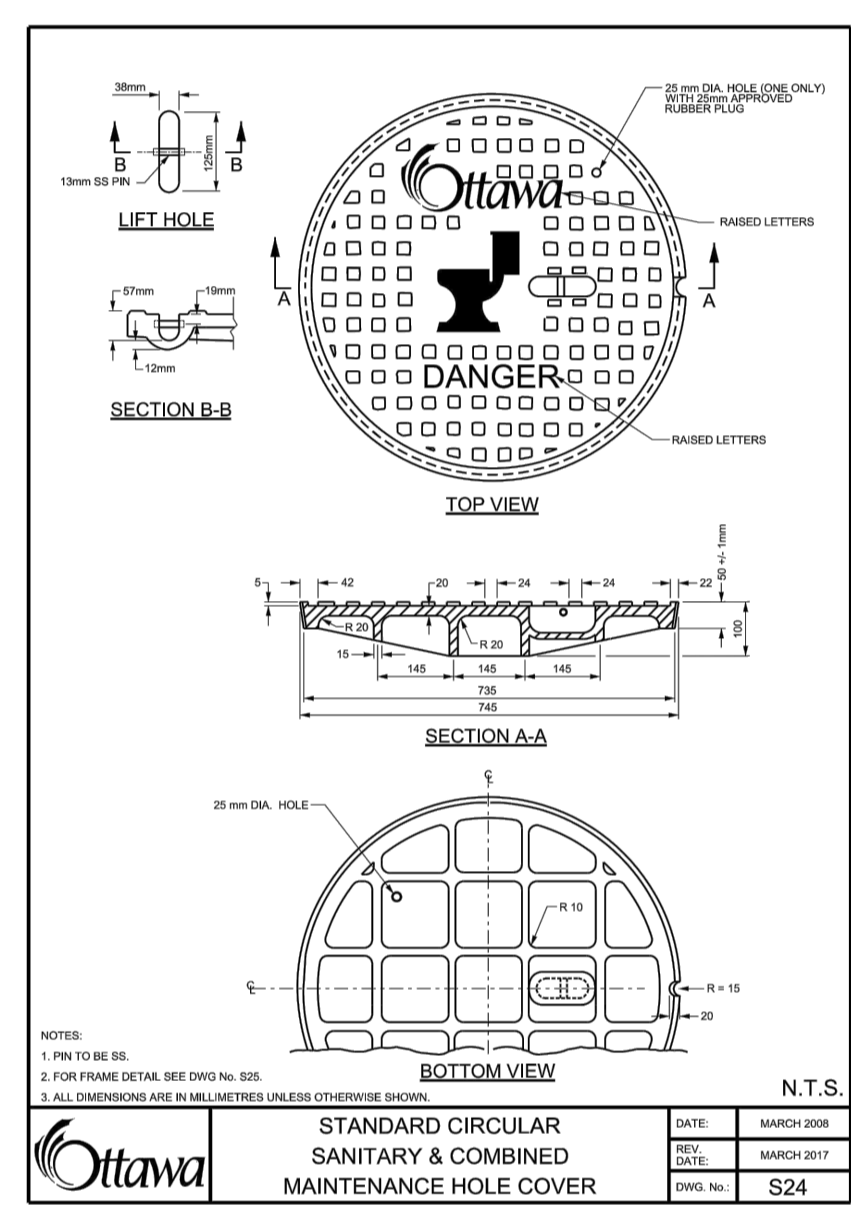
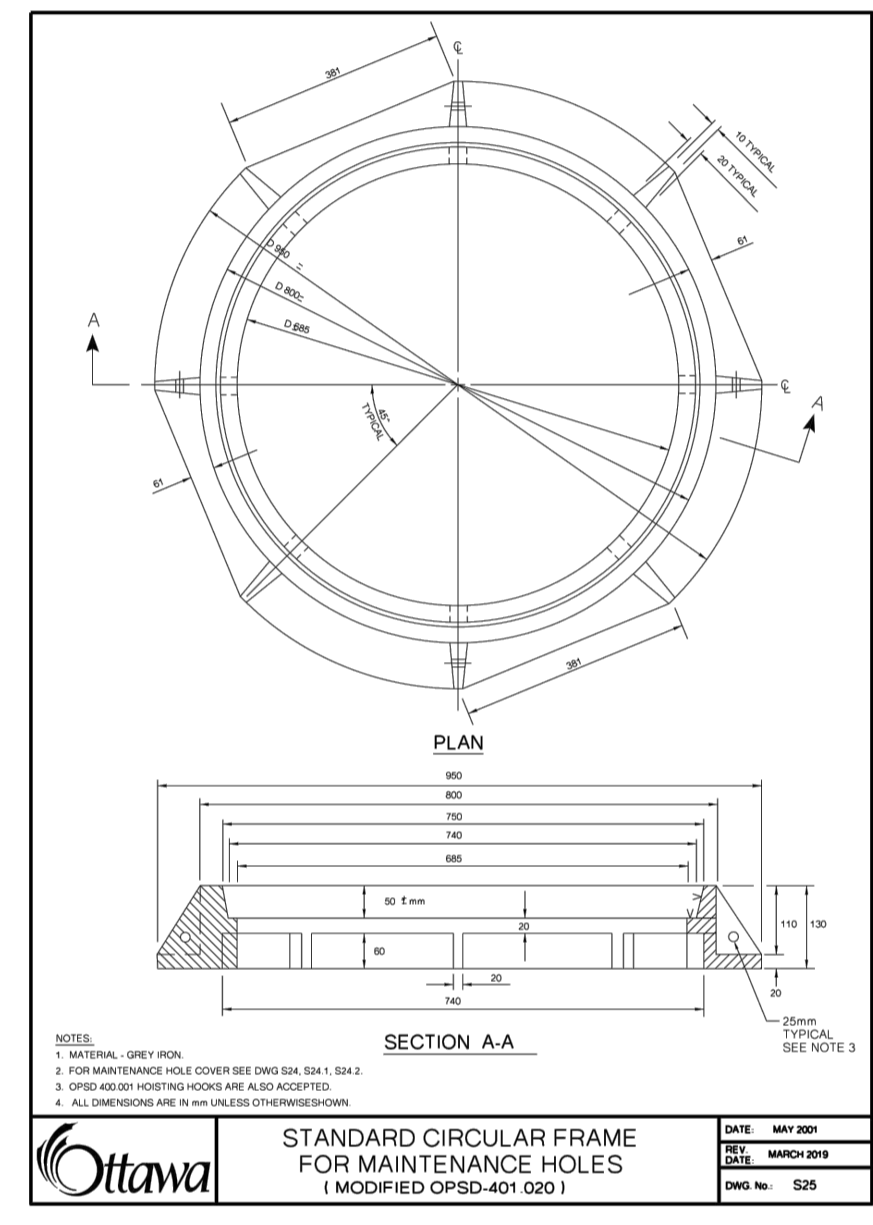
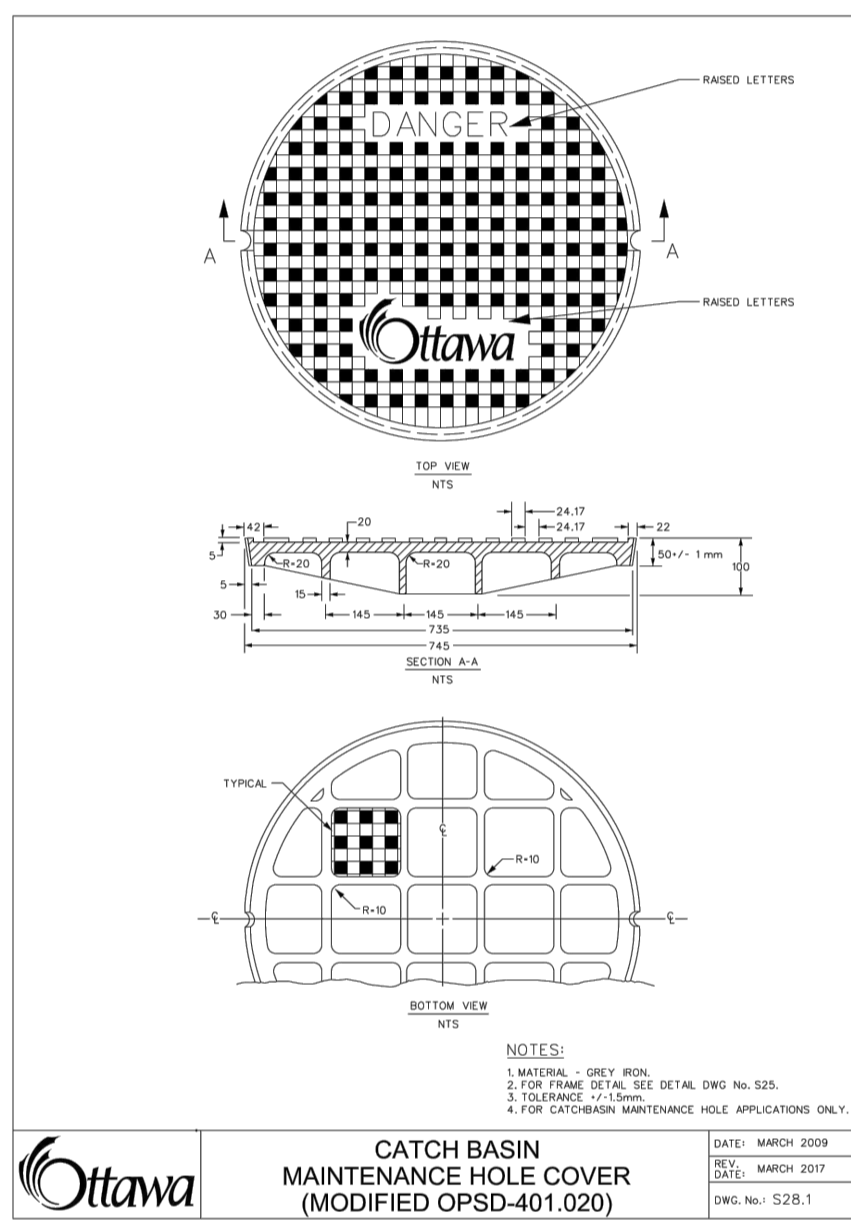
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www.lrl.ca | (613) 842-3434

**HALO CAR WASH INC.**

DESIGNED BY: M.L. / P.P. DRAWN BY: M.L. APPROVED BY: M.B.

PROJECT: HALO CAR WASH 3555 BORRISOKANE RD BARRHAVEN, ON

DRAWING TITLE: CONSTRUCTION DETAIL PLAN

PROJECT NO: 210691

DATE: JANUARY 2022

**C904**

NOT AUTHENTIC UNLESS SIGNED AND DATED

PROFESSIONAL ENGINEER  
M. BASNET  
109301996  
PROVINCE OF ONTARIO

D07-12-22-0085