IMPROVEMENT PLAN (SHOP)

MIKE FOLLETT
LEWISTON, IDAHO 83501

BB 392-157-031

MATERIAL LIST

INSTALL UNDERGROUND RETENTION =	2,560 CU. FT.
PAVED PARKING AREA, =	10,275 SQ. FT

LEGEND

	EXISTING SOIL
	CRUSHED AGGREGATE
	CONCRETE
----------	EXISTING LOT LINE
- - - - - -	HIDDEN LINE
—— - - —— - - ——	EXISTING RIGHT-OF-WAY
—— - —— - ——	CENTER LINE
- - - - - - - - - -	EXISTING BUILDING
—W—W—W—W—	WATER LINE
—OP—OP—OP—OP—	OVERHEAD POWER
—○———○——	FENCE

VICINITY MAP

SHEET INDEX

AGENCY TELEPHONE NUMBERS

CITY OF LEWISTON PUBLIC WORKS	(208) 746 1316
WARREN WATTS ENGINEERING	(509) 780 9725
CONTRACTOR (_____)	(___) ___ ____
PROPERTY OWNER (MIKE FOLLETT)	(208) 743 4200

CONSTRUCTION NOTES

COMPACTION;	SUBGRADE AND CRUSHED AGGREGATE BASE 90% ASTM 1557
CRUSHED AGGREGATE BASE;	¾" MINUS IDT SPECIFICATIONS
ASPHALT PAVEMENT;	FROM APPROVED COMMERCIAL SOURCE (½" MINUS)

BIS-00075 Retaining Wall

UB-00012

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* ROADS & SUBDIVISIONS
* RESIDENTIAL & COMMERCIAL
* STRUCTURES

PROFESSIONAL ENGINEER REGISTERED 1551 STATE OF IDAHO WARREN S. WATTS

SITE DEVELOPMENT
MIKE FOLLETT
1225 SNAKE RIVER AVENUE
LEWISTON, IDAHO 83501
COVER

DRAWN BY: WRW	CHECKED BY: WSW
DESIGNED BY:	WSW
DATE:	03/22/2015
LAST REV:	05/16/2016
PROJECT NO.:	15-023
SHEET	C1 OF C2

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ITEM	MATERIAL	TEST / STANDARD	ACCEPTANCE	TEST FREQUENCY	INSPECTOR/CO.	DATE	INITIAL
1. ALL UTILITY TRENCHES & STRUCTURES							
TRENCH SUBGRADE	Native (6" to 8" Lifts Max.)	Moisture Density Relationship of Soils (AASHTO T 180) In-Place Density and Moisture Content (AASHTO 310 Method B)	90% Max. Dry Density	One in-place density test every lift per 100 linear feet. If project is less than 100 linear feet, one in-place density test per day OR per lift [whichever test frequency is more restrictive].			
PIPE BEDDING	3/4" minus Crushed Aggregate (6" to 8" Max. Lift) (Current ITD Spec 703.04) OR 5/8" minus Crushed Aggregate (6" to 8" Max. Lift) (Current WDOT/M41-10 Spec 9-03.9)	Moisture Density Relationship of Soils (AASHTO T 180) In-Place Density and Moisture Content (AASHTO 310 Method B)	95% Max. Dry Density	One in-place density test every lift per 100 linear feet. If project is less than 100 linear feet, one in-place density test per day OR per lift [whichever test frequency is more restrictive]. Test top 6" of 12" cover.			
1st FOOT [12"] OF FILL OVER PIPE	3/4" minus Crushed Aggregate (6" to 8" Max. Lift) (Current ITD Spec 703.04) OR 5/8" minus Crushed Aggregate (6" to 8" Max. Lift) (Current WDOT/M41-10 Spec 9-03.9)	Moisture Density Relationship of Soils (AASHTO T 180) In-Place Density and Moisture Content (AASHTO 310 Method B)	95% Max. Dry Density	One in-place density test every lift per 100 linear feet. If project is less than 100 linear feet, one in-place density test per day OR per lift [whichever test frequency is more restrictive].			
TRENCH BACKFILL UNDER PROPOSED ROAD & SIDEWALK	3/4" minus Crushed Aggregate (6" to 8" Max. Lift) (Current ITD Spec 703.04) OR 5/8" minus Crushed Aggregate (6" to 8" Max. Lift) (Current WDOT/M41-10 Spec 9-03.9)	Moisture Density Relationship of Soils (AASHTO T 180) In-Place Density and Moisture Content (AASHTO 310 Method B)	95% Max. Dry Density	One in-place density test every lift per 100 linear feet. If project is less than 100 linear feet, one in-place density test per day OR per lift [whichever test frequency is more restrictive].			
TRENCH BACKFILL UNDER EASEMENT / NON-TRAFFICKED AREA	Native Soil Free of Unsuitable Material w/ 4" Max. Particle Size (8" Max. Lift)	Moisture Density Relationship of Soils (AASHTO T 180) In-Place Density and Moisture Content (AASHTO 310 Method B)	90% Max. Dry Density	One in-place density test every lift per 100 linear feet. If project is less than 100 linear feet, one in-place density test per day OR per lift [whichever test frequency is more restrictive].			
STRUCTURAL FILLS	As Spec'd by Engineer	As Spec'd by Engineer		As Spec'd by Engineer			
2. STORM DRAIN MAINS							
GASKETED PE Storm Sewer Pipe	Polyethylene, ADS N-12 or Equal		Certified & Visual by City		Certified & Visual by City		
ALIGNMENT AND GRADE	N/A	Per Manufacturer's Instructions		Per Plan			
JOINTS (Deflection/Proper Pipe Embedment)	N/A	Per Manufacturer's Instructions		Each Joint			
PRESSURE TEST	N/A	4 PSI for 15 Minutes, 1/2 PSI Drop	If required by City Engineer	Between Access Holes			
MANHOLES	Concrete	City Standard		N/A	Certified & Visual by City		
VIDEO INSPECTION	N/A		Public Works Policy No 2012-2				
3. WATER MAINS							
DUCTILE IRON or PVC WATER MAIN	AWWA C-151, C-900, C-905 (Class as Req'd)		Certified & Visual by City		Certified & Visual by City		
ALIGNMENT AND GRADE	N/A	AWWA C-600, AWWA C-605		Per Plan			
JOINTS (Deflection/Proper Pipe Embedment)	N/A	AWWA C-600, AWWA C-605		Each Joint			
THRUST BLOCKS	Concrete, 2500 PSI Mix	Per Approved Plans/or City Std Dwg # 4-4		Each Joint	Certified & Visual by City		
HYDROSTATIC PRESSURE	N/A	2 Hrs, NTE Allowable Leakage Per AWWA C-600, AWWA C-605		150% Working Pressure OR 1½ times the Working Pressure in the Water System			
CHLORINATION/BACTERIA	N/A	AWWA C-651		Bacterial Testing: two negative testing samples 24 hours apart	City of Lewiston		
4. WASTEWATER MAINS							
PVC WASTEWATER MAIN	PVC, SDR 35	ASTM 3034		N/A			
ALIGNMENT AND GRADE	N/A	N/A		Per Plan			
JOINTS (Deflection/Proper Pipe Embedment)	N/A	Per Manufacturer's Instructions		Each Joint			
MANHOLES	Concrete	Hydrostatic Test		Each Joint			
PRESSURE TEST	N/A	4 PSI for 15 Minutes, 1/2 PSI Drop		Between Access Holes			
VIDEO INSPECTION	N/A	No Perforations, Dents or Dimples, No Bellies > 0.02'	Public Works Policy No 2012-2	Between Access Holes			
5. CONCRETE CURB, GUTTER & SIDEWALK							
CONCRETE	CLASS 35B - Approved Mix Design Required with Min Cement Content of 560 Lb/CY, Max Water/ Cement Ratio of .44, a WRA, and an AEA	AASHTO T-22 Compressive Strength of Concrete AASHTO T-23 Making Test Specimens AASHTO T-119 Slump of Hydraulic Cement Concrete AASHTO T-152 Air Content of Freshly Mixed Concrete AASHTO T-309 Temperature of Freshly Mixed Concrete WAQTC TM-2 Sampling Freshly Mixed Concrete	Min. 28 day Compressive Strength = 3000 psi; Water/Cement Ratio shall be 0.5 lb/lb Max. Slump = 5 inches Air Content Percent = 6.0% ± 1.5 Temperature = 50°F - 80°F	1 of Each Test Minimum per Day, or 1 of Each Test per 50 CY			
CRUSHED AGGREGATE BASE COURSE	3/4" minus Crushed Aggregate (4" Max. Lift) (Current ITD Spec 703.04) OR 5/8" minus Crushed Aggregate (4" Max. Lift) (Current WDOT/M41-10 Spec 9-03.9)	Moisture Density Relationship of Soils (AASHTO T 180) In-Place Density and Moisture Content (AASHTO 310 Method B)	95% Max. Dry Density	1 Tests Per 500 LF-Min 2 Tests			
ALIGNMENT AND GRADE	N/A	Visual	± 0.02' from Design Grade/Alignment	Per 10' Section	City Approval		
JOINTS/FLATNESS/STRAIGHTNESS	N/A	Visual	± 0.02'/10' Segment	Per 10' Section			
FINISH	N/A	Visual	Floated, Uniform, Light Broom Finish	Entire Surface Area			
6. ASPHALTIC CONCRETE PAVING							
HOT MIX ASPHALT	ITD Class II 1/2" - Appv'd Mix Design Required (2004 ITD Spec 405, 702, and 703.05)	AASHTO T 166, Method C, Specific Gravity of HMA AASHTO T 209, Test for Maximum Specific Gravity WAQTC TM-8, In-Place Density of Bituminous Mixes	92%-95% Max. Theoretical Density	1Test Per 750 Ton-Min 1 Test			
CRUSHED AGGREGATE BASE COURSE*	Same test requirement as under **5. Concrete Curb, Gutter & Sidewalk**						
7. EROSION & SEDIMENT CONTROLS	Per Approved Plan	Per Plan and Manufacturers' Instructions		1/Wk or After Every Rainfall			
8. TRAFFIC CONTROL	Per Approved Plan	Current Adopted MUTCD/ATSSA		Continuous			
9. RECORD DRAWINGS	AutoCAD Elect File, Bond Paper, 22" x 34" Min Size	City Checklist		Before Public Improvements Accepted			
10. ENGINEER'S CERTIFICATION							
Date Last: Revised September 2015							

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* ENVIRONMENTAL SERVICES

PROFESSIONAL ENGINEER REGISTERED 1551 STATE OF IDAHO WARREN S. WILTS

SITE DEVELOPMENT
MIKE FOLLETT
1225 SNAKE RIVER AVENUE
LEWISTON, IDAHO 83501
INSPECTION CHECK LIST

DRAWN BY: WRW	CHECKED BY: WSW
DESIGNED BY:	WSW
DATE:	03/22/2015
LAST REV:	05/16/2016
PROJECT NO.:	15-023
SHEET	C2 OF C2

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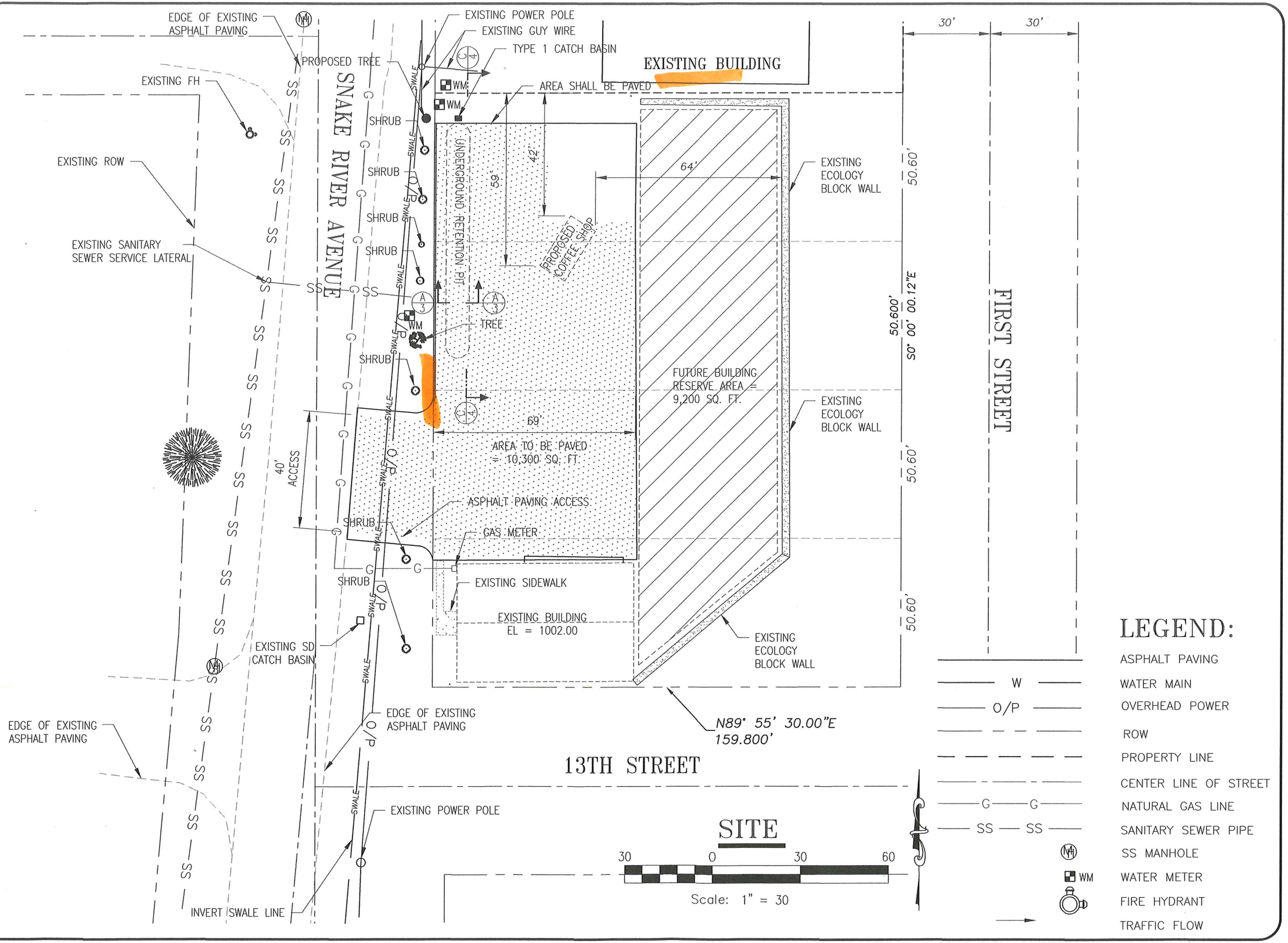

LEGEND:

- ASPHALT PAVING
- WATER MAIN
- OVERHEAD POWER
- ROW
- PROPERTY LINE
- CENTER LINE OF STREET
- NATURAL GAS LINE
- SANITARY SEWER PIPE
- SS MANHOLE
- WATER METER
- FIRE HYDRANT
- TRAFFIC FLOW

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PROFESSIONAL ENGINEER REGISTERED 1551 STATE OF IDAHO WARREN S. WILTS

SITE DEVELOPMENT

MIKE FOLLETT
1225 SNAKE RIVER AVENUE
LEWISTON, IDAHO 83501
SITE

DRAWN BY: WRW	CHECKED BY: WSW
DESIGNED BY: WSW	
DATE: 03/22/2015	
LAST REV: 05/16/2016	
PROJECT NO.: 15-023	
SHEET 1 OF 5	

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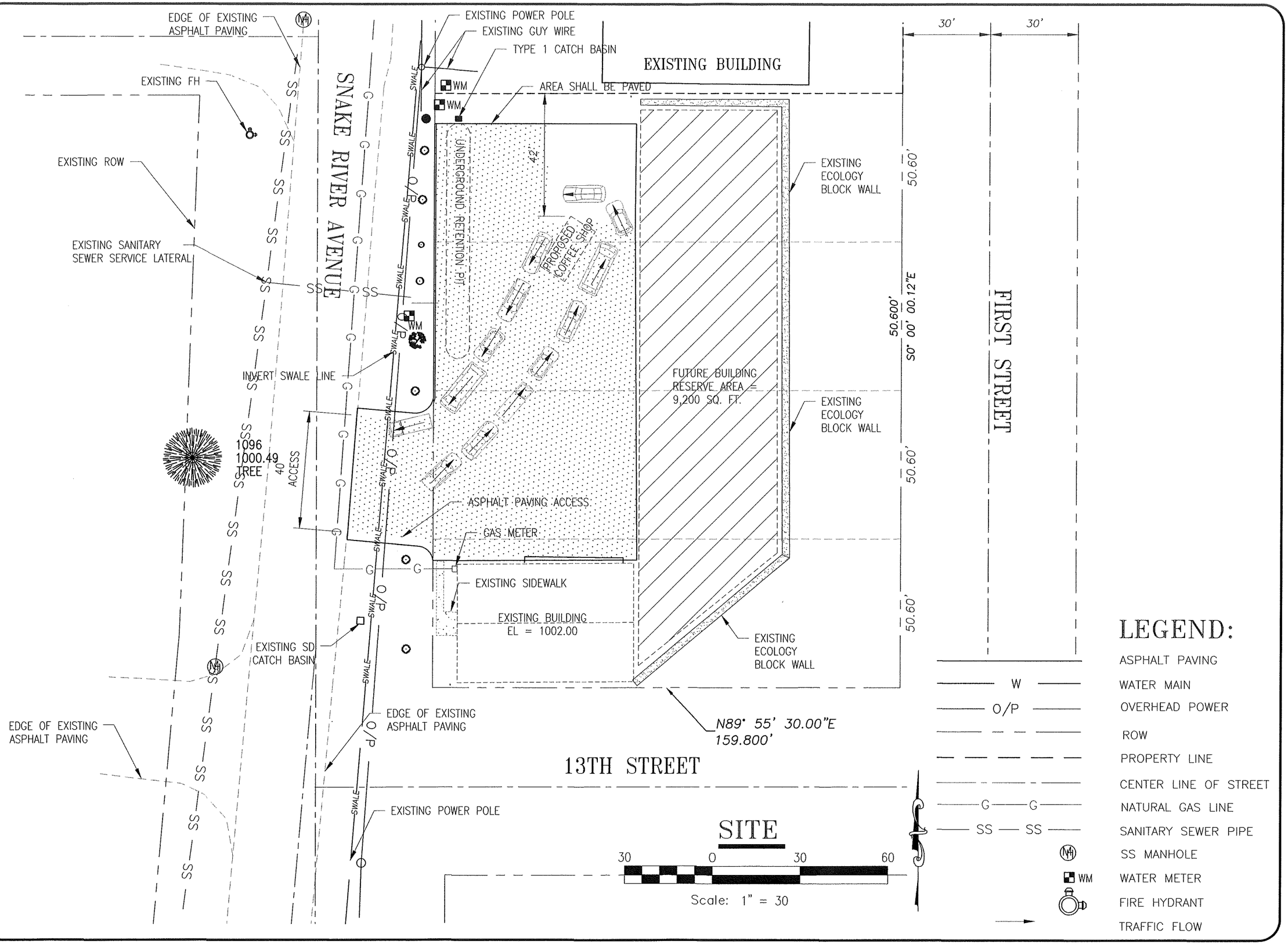

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PROFESSIONAL ENGINEER REGISTERED 1551 STATE OF IDAHO WARREN S. WILTIS

SITE DEVELOPMENT
MIKE FOLLETT
1225 SNAKE RIVER AVENUE
LEWISTON, IDAHO 83501
TRAFFIC PATTERN

DRAWN BY: WRW	CHECKED BY: WSW
DESIGNED BY:	WSW
DATE:	03/22/2015
LAST REV:	05/16/2016
PROJECT NO.:	15-023
SHEET	2 OF 5

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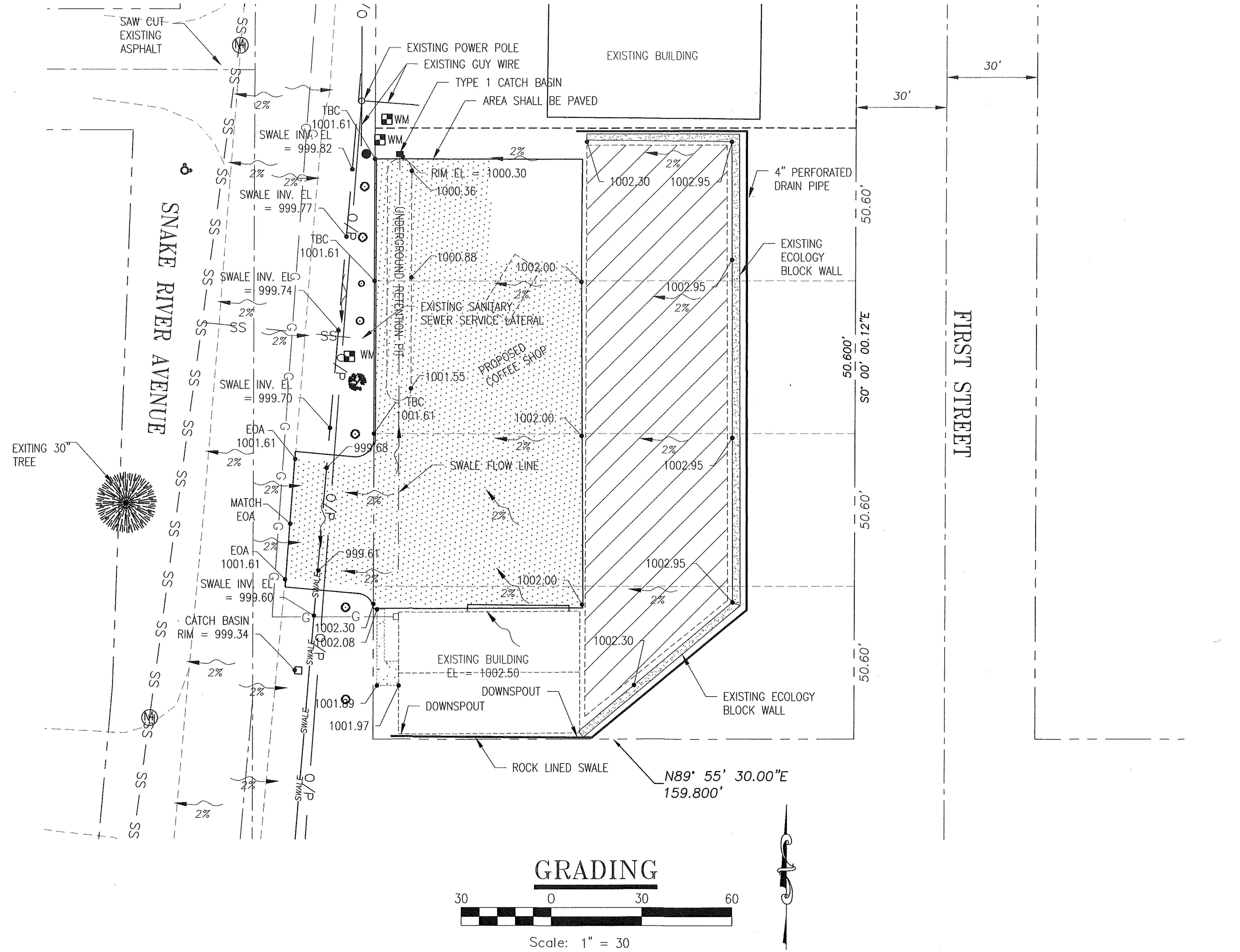
SAW CUT EXISTING ASPHALT
EXISTING POWER POLE
EXISTING GUY WIRE
TYPE 1 CATCH BASIN
AREA SHALL BE PAVED
EXISTING BUILDING
30'
30'
TBC 1001.61
SWALE INV. EL = 999.82
RIM EL. = 1000.30
1000.36
1002.30
1002.95
4" PERFORATED DRAIN PIPE
50.60'
SWALE INV. EL = 999.77
UNDERGROUND RETENTION PIT
TBC 1001.61
1000.88
1002.00
EXISTING ECOLOGY BLOCK WALL
1002.95
SNAKE RIVER AVENUE
SWALE INV. EL = 999.74
EXISTING SANITARY SEWER SERVICE LATERAL
50.600'
S0° 00' 00.12"E
FIRST STREET
PROPOSED COFFEE SHOP
1001.55
SWALE INV. EL = 999.70
TBC 1001.61
1002.00
EDA 1001.61
EXITING 30" TREE
999.68
SWALE FLOW LINE
1002.95
MATCH EOA
50.60'
EOA 1001.61
999.61
1002.95
SWALE INV. EL = 999.60
1002.00
CATCH BASIN RIM = 999.34
1002.30
1002.08
1002.30
EXISTING BUILDING EL = 1002.50
50.60'
DOWNSPOUT
DOWNSPOUT
1001.89
1001.97
EXISTING ECOLOGY BLOCK WALL
ROCK LINED SWALE
N89° 55' 30.00"E 159.800'
2%
SWALE
WM
SS
G
O/P

GRADING

30 0 30 60

Scale: 1" = 30

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- * RESIDENTIAL & COMMERCIAL
- * STRUCTURES

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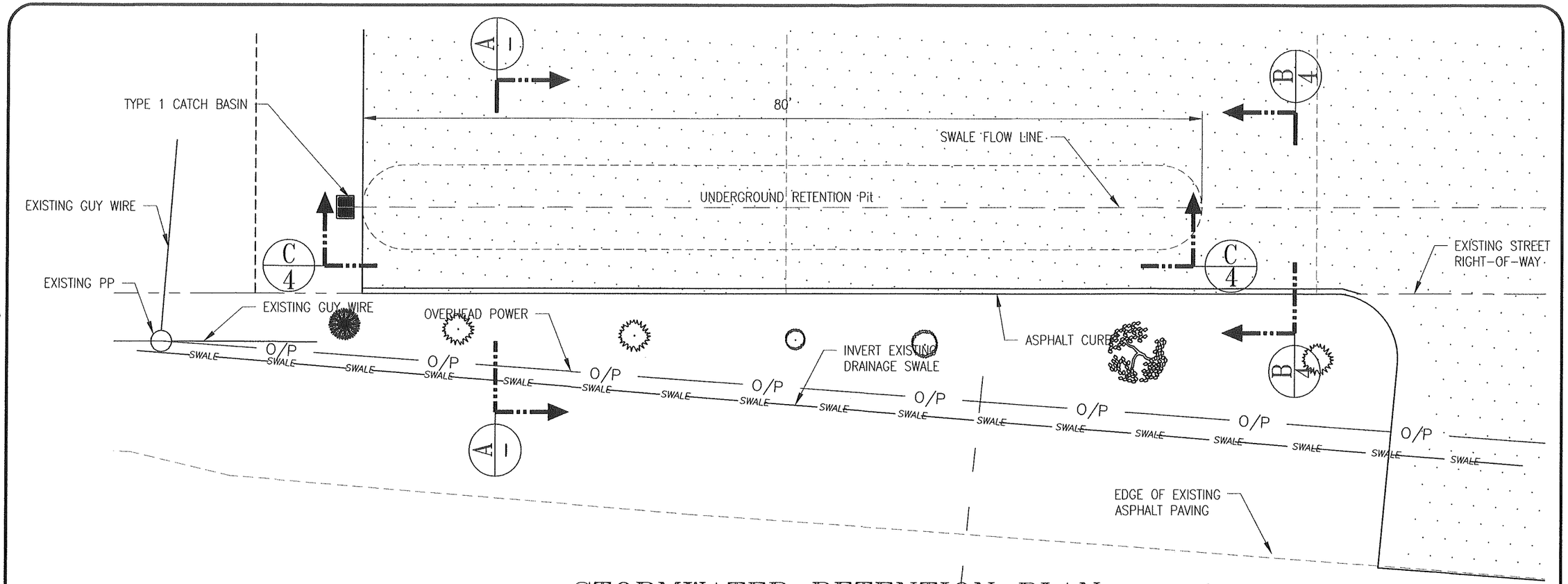
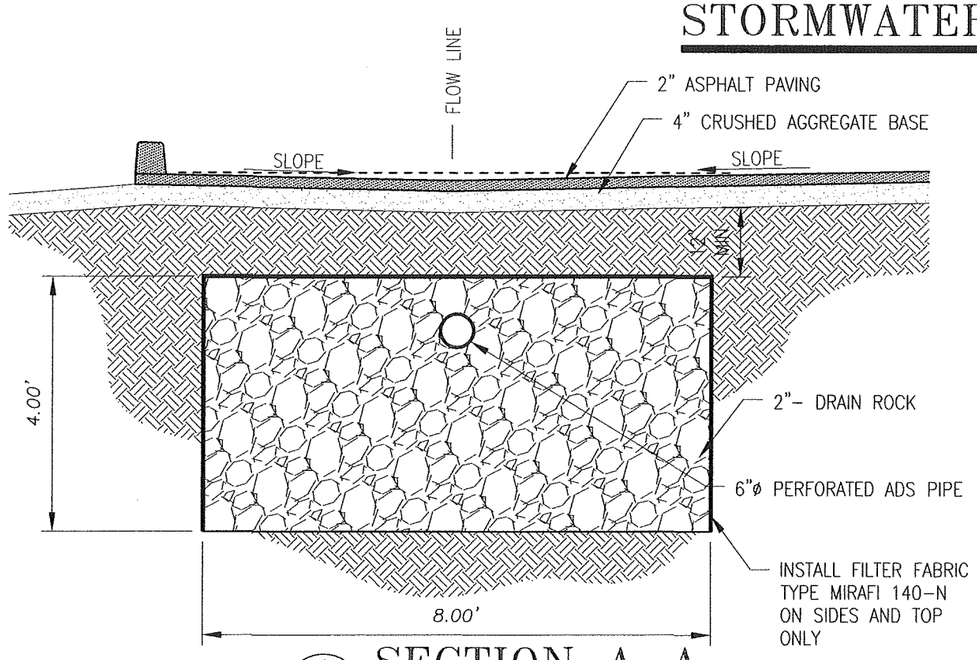
SITE DEVELOPMENT
MIKE FOLLETT
1225 SNAKE RIVER AVENUE
LEWISTON, IDAHO 83501
GRADING

DRAWN BY: WRW	CHECKED BY: WSW
DESIGNED BY: WSW	
DATE: 03/22/2015	
LAST REV: 05/16/2016	
PROJECT NO.: 15-023	
SHEET 3 OF 5	



STORMWATER RETENTION PLAN

SCALE: 1" = 10'



A — SECTION A-A

SCALE: N.T.S.

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* STRUCTURES

PROFESSIONAL ENGINEER REGISTERED 15551 STATE OF IDAHO WARREN S. WILT

SITE DEVELOPMENT
MIKE FOLLETT
1225 SNAKE RIVER AVENUE
LEWISTON, IDAHO 83501
STORMWATER PLAN & DETAILS

DRAWN BY: WRW	CHECKED BY: WSW
DESIGNED BY: WSW	
DATE: 03/22/2015	
LAST REV: 05/16/2016	
PROJECT NO.: 15-023	
SHEET 4 OF 5	

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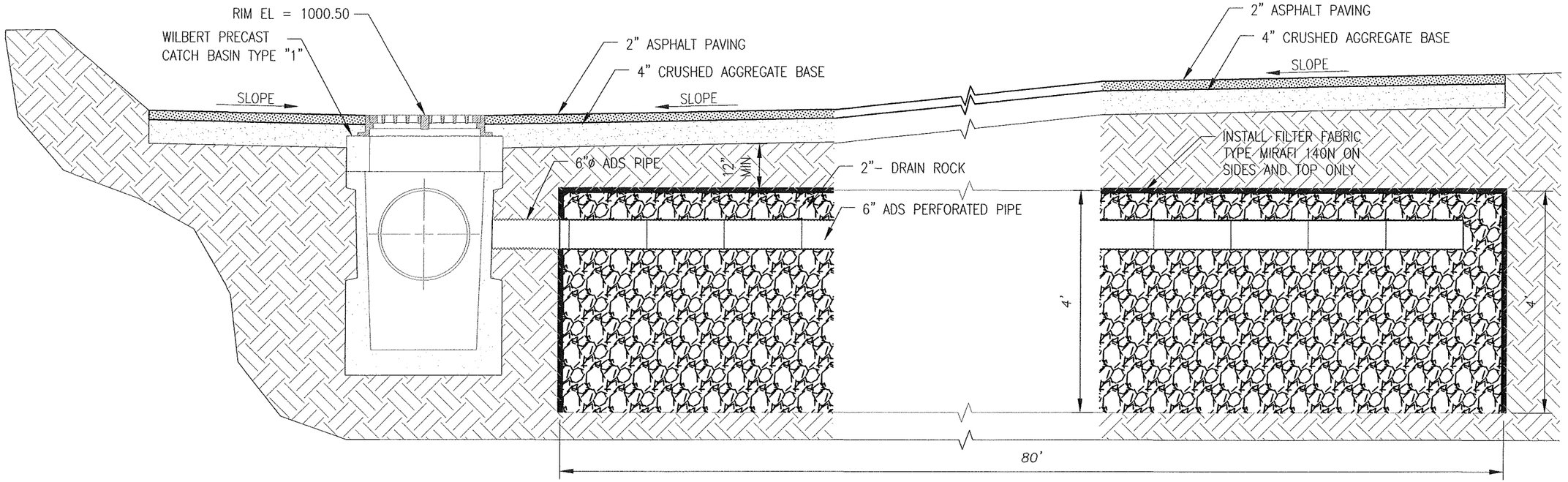
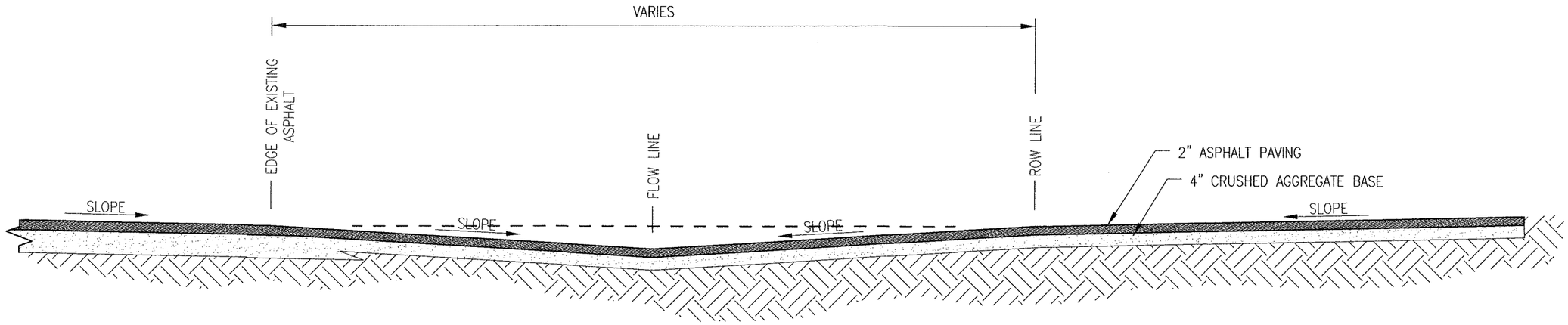


C/3 SECTION C–C

SCALE: ½" = 1'-0"



B/3 SECTION B–B

SCALE: N.T.S.

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PROFESSIONAL ENGINEER REGISTERED 11551 STATE OF IDAHO WARREN S. WILLIS

SITE DEVELOPMENT
MIKE FOLLETT
1225 SNAKE RIVER AVENUE
LEWISTON, IDAHO 83501
STORMDRAIN DETAILS

DRAWN BY: WRW	CHECKED BY: WSW
DESIGNED BY: WSW	
DATE: 03/22/2015	
LAST REV: 05/16/2016	
PROJECT NO.: 15-023	
SHEET 5 OF 5	

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