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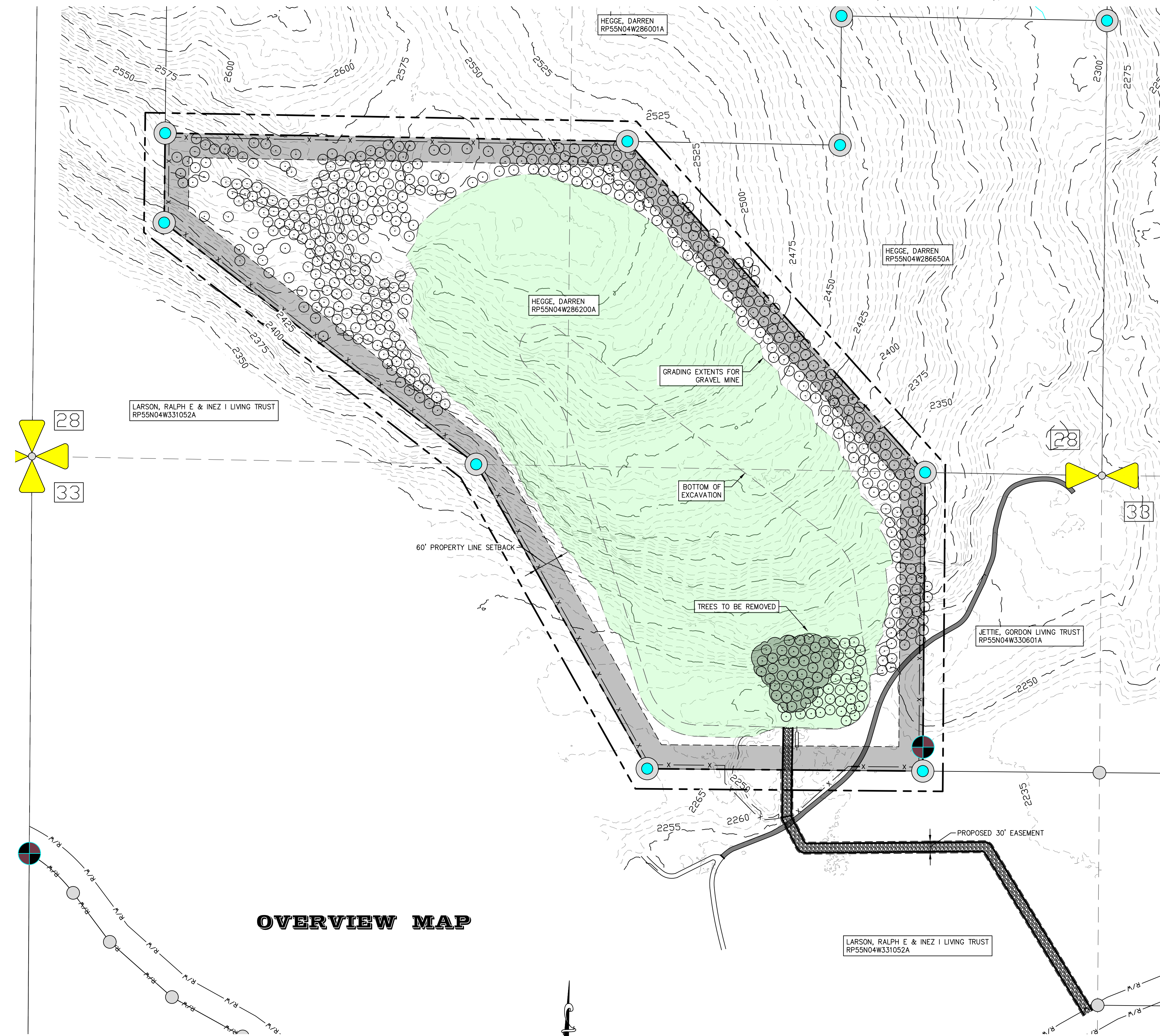
CURTIS CREEK SAND & GRAVEL CUP

CONDITIONAL USE PERMIT FOR  
DARREN HEGGE

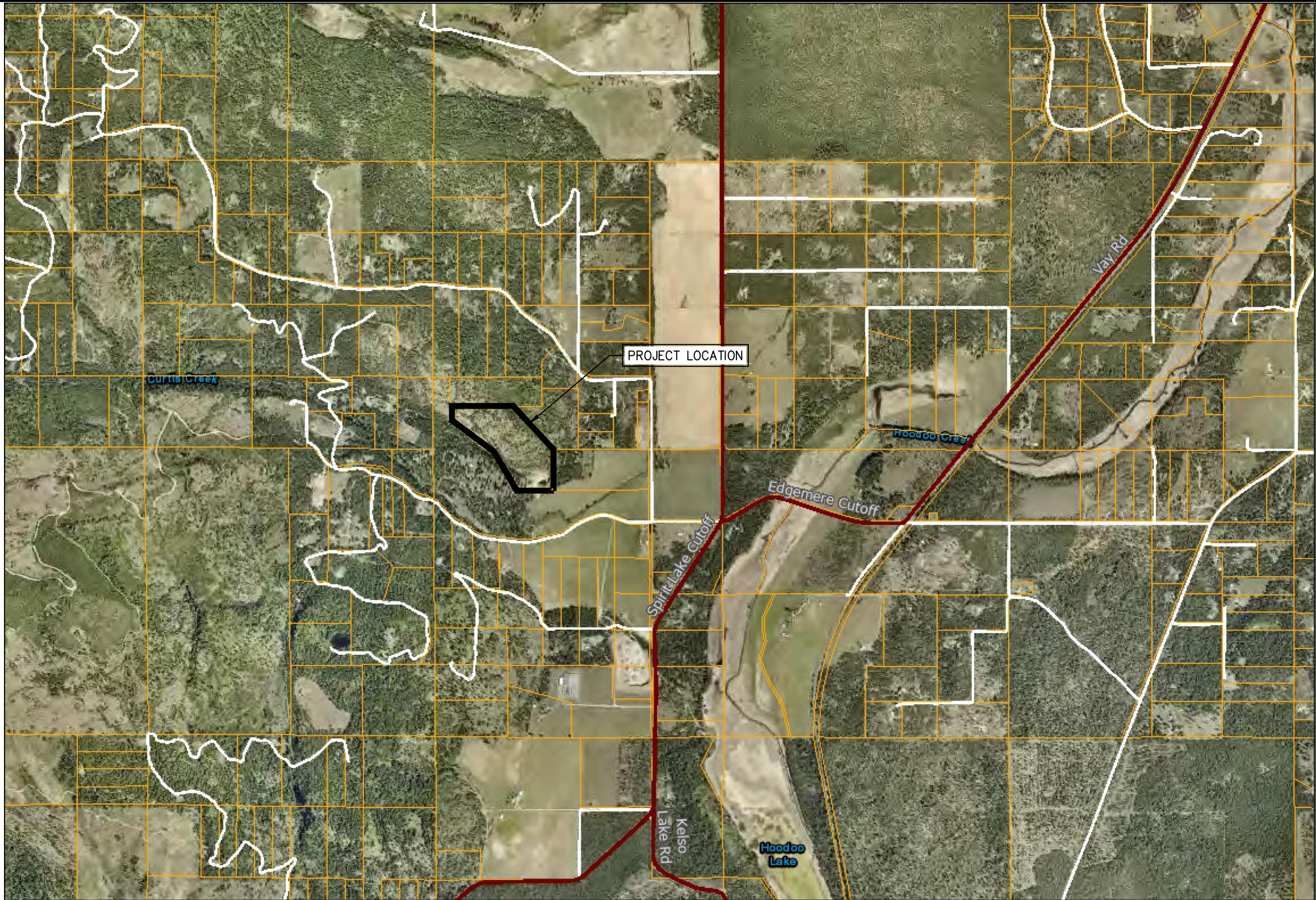
A CONDITIONAL USE PERMIT FOR A GRAVEL PIT ON

PARCEL 5A RP55N04W286200A

CURTIS CREEK ROAD, PRIEST RIVER (BONNER COUNTY), IDAHO 83856



OVERVIEW MAP



VICINITY MAP  
NTS

GENERAL NOTES

1. THESE PLANS ARE FOR A CONDITIONAL USE PERMIT FOR A GRAVEL MINE; AND ASSOCIATED GRADING, STORMWATER, AND EROSION CONTROL IN BONNER COUNTY, IDAHO.
2. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH THE REQUIREMENTS OF BONNER COUNTY AND ANY OTHER DEVELOPMENT STANDARDS.
3. SITE EARTHWORK SHALL CONFORM TO THE "IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION," 2020 OR MOST RECENT EDITION. IN CASE OF CONFLICT, THE STRICTER STANDARDS SHALL PREVAIL.
4. THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE UTILITY COMPANIES PRIOR TO STARTING WORK NEAR ANY FACILITIES AND SHALL COORDINATE WORK WITH UTILITY COMPANY REPRESENTATIVES. ALL UTILITY SERVICES SHALL BE INSTALLED UNDERGROUND. FOR EXISTING UTILITY LOCATIONS, CONTACT CALL BEFORE YOU DIG AT 1-800-626-4950 AT LEAST 48 HOURS PRIOR TO STARTING ANY EXCAVATIONS.
5. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER TO LOCATE ALL ON-SITE UTILITIES. INFORMATION PROVIDED BY SURVEYOR IS APPROXIMATE.
6. AN APPROVED PERMIT SHALL BE OBTAINED FROM THE BONNER COUNTY PLANNING DEPARTMENT AND WORK SHALL NOT BEGIN UNTIL A NOTICE TO PROCEED IS RECEIVED. THE CONTRACTOR SHALL NOTIFY THE BONNER COUNTY PLANNING DEPARTMENT 48 HOURS PRIOR TO STARTING WORK.
7. THE CONTRACTOR SHALL HAVE AN APPROVED SET OF IMPROVEMENT PLANS AND APPROVAL LETTER ON THE JOB SITE AT ALL TIMES.
8. WHERE TRENCHES ARE WITHIN PUBLIC EASEMENTS, COMPACTION TEST RESULTS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD BY A QUALIFIED LABORATORY AND PROPERLY CERTIFIED TECHNICIAN WHO WILL CERTIFY THAT TRENCH BACKFILL WAS COMPACTED AS REQUIRED IN ACCORDANCE WITH THE ISPCW OR BONNER COUNTY REQUIREMENTS.
9. ALL TESTING REQUIRED WILL BE AT THE EXPENSE OF THE CONTRACTOR.
10. EXISTING DRAINAGE FEATURES SHALL BE PRESERVED OR RESTORED SUCH THAT NO BLOCKAGE OF EXISTING RUNOFF WATER WILL PERMANENTLY OCCUR.
11. NO REVISIONS SHALL BE MADE TO THESE PLANS WITHOUT THE APPROVAL OF THE ENGINEER.

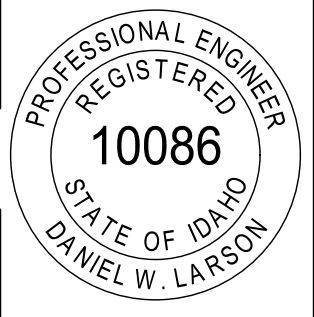
LEGEND

- PROPERTY LINE
- EASEMENT LINE
- SETBACK LINE
- x- FENCE
- EXISTING CONTOUR (5')
- EXISTING CONTOUR (1')
- FINISHED GRADE CONTOUR (5')
- FINISHED GRADE CONTOUR (1')
- FLOW LINE
- STRAW WATTLE
- SILT FENCE
- PROPOSED GRAVEL ROAD
- GRAVEL ROAD
- FLOW ARROWS
- EXISTING TREES TO BE RETAINED AND PROTECTED
- RECLAMATION / VEGETATED AREA

REVISION	DATE	DESCRIPTION



SHEET TITLE	SITE PLAN	ORIGINAL STORED AT: 7B ENGINEERING, 414 CHURCH ST STE 203, SANDPOINT, ID 83864	PROJECT #: 24027
OWNER	DARREN HEGGE	DRAWN BY: JMW	CHECKED BY: DWL
PROJECT	CURTIS CREEK SAND & GRAVEL CUP, BONNER COUNTY, IDAHO	DRAWING DATE: 12/11/2025	SCALE: 1"=100' (VALID FOR 24"x36" OR 22"x34")
			SHEET 1 OF 7





## PROJECT NOTES

1. THE STORM POND/SAND FILTER SHOWN HEREON IS THE PREFERRED LOCATION. INDIVIDUAL SHAPE AND LOCATION MAY VARY FROM THAT SHOWN IN ORDER TO INCORPORATE LANDSCAPING AS LONG AS THE TOTAL VOLUME FOR THE SITE IS MAINTAINED. THE STORMWATER GENERATED BY GRADING ACTIVITIES IS DIRECTED TO THE STORM POND, AND THE REVISED STORM POND IS WITHIN THE SETBACK LIMITS. ADDITIONALLY, IT SHALL BE THE RESPONSIBILITY OF THE GRADING CONTRACTOR TO NOTIFY 7B ENGINEERING OF DEVIATIONS FROM THE APPROVED PLANS.
2. THIS PLAN IS DESIGNED TO INTERCEPT EXISTING DRAINAGE CONDITIONS CHARACTERISTICS OF THE SITE AND CONVEY STORMWATER RUNOFF TO MAINTAIN PRE-CONSTRUCTION DRAINAGE PATTERNS.
3. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

## SURVEY NOTES

1. THIS PLAN WAS PREPARED FROM A BOUNDARY SURVEY PERFORMED BY GLAHE & ASSOCIATES, INC.
2. THE EXISTING GROUND CONTOURS HAVE BEEN PULLED FROM USGS LIDAR AND THE FINISHED GRADE CONTOURS HAVE BEEN BUILT OFF OF THE LIDAR SURFACE.
3. THESE PLANS DO NOT REPRESENT AN ACTUAL SURVEY BUT WERE ASSEMBLED FROM INFORMATION GATHERED AS NOTED.
4. ELEVATION CONTOUR DATA IS INTENDED TO BE USED IN ESTABLISHING SLOPES AND ELEVATIONS FOR THE GRADING, STORMWATER, AND EROSION CONTROL PLAN.
5. EXISTING PROPERTY CORNERS AND SURVEY MONUMENTS SHALL BE LOCATED, MARKED, AND PROTECTED DURING THE COURSE OF CONSTRUCTION. ANY DAMAGE OR OBLITERATED CORNERS, OR MONUMENTS, SHALL BE RE-ESTABLISHED AT THE CONTRACTORS EXPENSE BY A PROFESSIONAL LAND SURVEYOR, LICENSED IN THE STATE OF IDAHO, PRIOR TO FINAL ACCEPTANCE.

## SOILS

PRELIMINARY SOIL DATA WAS GATHERED FROM USDA'S NRCS WEB SOIL SURVEY. SITE SOIL'S LISTED AS BEING:

- 28 - LENZ ROCK OUTCROP ASSOCIATION, 20-65% SLOPES; Ksat: 1.98-5.95 IN/HR
- 35 - PEND ORELLE SILT LOAM, 5-45% SLOPES; Ksat: 0.57-1.98 IN/HR
- 15 - HOODOO SILT LOAM, 0-1% SLOPES; Ksat: 0.20-0.57 IN/HR
- 2 - BONNER GRAVELLY ASHY SILT LOAM, 0-4%; Ksat: 0.43-2.13 IN/HR

DESIGN INFILTRATION RATES FOR THE STORMWATER FACILITIES WERE ASSUMED TO BE 2 IN/HR.

THIS LOCATION RECEIVES AN AVERAGE ANNUAL RAINFALL AMOUNT OF 32.56 IN/YEAR.

## SLOPES

SLOPES ON SITE RANGE FROM 1% TO 65%.

## ZONING

ZONE: AGRICULTURAL/FORESTRY 10 (A/F-10)

## UTILITIES

THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE UTILITY COMPANIES PRIOR TO STARTING WORK NEAR ANY FACILITIES AND SHALL COORDINATE WORK WITH UTILITY COMPANY REPRESENTATIVES. ALL UTILITY SERVICES SHALL BE INSTALLED UNDERGROUND. FOR EXISTING UTILITY LOCATIONS, CONTACT CALL BEFORE YOU DIG AT 1-800-626-4950 AT LEAST 48 HOURS PRIOR TO STARTING ANY EXCAVATIONS.

## CUT/FILL

THE EXCAVATION FOR THE GRAVEL PIT WILL BE 4,059,758 CY OF CUT AND WILL OCCUR OVER 20+ YEARS. THE EXCAVATIONS WILL BE PERFORMED IN 20' BENCHES WITH A 20' VERTICAL CUT AT EACH BENCH. AFTER THE COMPLETION OF EXCAVATION, THE OWNER SHALL REVEGETATE THE DISTURBED AREA TO MATCH PREEXISTING CONDITIONS.

## PERMANENT EROSION CONTROL NOTES

1. INSTALL STORMWATER COLLECTION, CONVEYANCE, DETENTION, AND TREATMENT FACILITIES AS SHOWN ON THESE PLANS.
2. IF TREATMENT FACILITIES SHOW SIGNS OF EXCESSIVE SEDIMENTATION DETERMINE THE SOURCE OF EROSION.
3. ADDITIONAL BMPs FOR EROSION CONTROL AND APPLICATION RATES CAN BE FOUND IN THE 2020 VERSION OF IDAHO'S CATALOG OF STORM WATER BEST MANAGEMENT PRACTICES. THE DOCUMENT CAN BE FOUND ON THE IDAHO DEPARTMENT OF ENVIRONMENTAL QUALITY'S "STORM WATER" WEB PAGE.
4. TOP SOIL TO BE SPREAD OVER SURFACES FOR FINAL RESTORATION AND NATIVE TREES TO BE PLANTED AT 20 FT O.C.

## TEMPORARY EROSION CONTROL MEASURES O&M REQUIREMENTS

1. GENERAL REQUIREMENTS:
  - INSPECT CONSTRUCTED FACILITIES MONTHLY AND BETWEEN LARGE STORM EVENTS FOR THE FIRST YEAR. AFTER IT IS ESTABLISHED AND WORKING AS INTENDED, INSPECT ONCE IN THE SPRING AND FALL. INSPECT FOR FAILURES, EROSION, DISPLACED ROCK PROTECTION, DEAD VEGETATION, AND SEDIMENT BUILDUP. REPAIR AND/OR REPLACE AS NECESSARY.

BMP 41 - STABILIZED CONSTRUCTION ROADS & STAGING AREAS

- THESE WILL BE CLEARLY DESIGNATED AREAS WHERE CONSTRUCTION EQUIPMENT, VEHICULAR TRAVEL, STOCKPILES, WASTE BINS, MATERIAL STORAGE, AND OTHER CONSTRUCTION-RELATED EQUIPMENT WILL BE STORED.
- AS EXCAVATION EXPANDS, THE STAGING AREAS MAY NEED TO BE RELOCATED, BUT WILL NEED TO MAINTAIN CLEAR DESIGNATIONS.
- THE ENTRANCE TO THE PROPERTY WILL NEED TO CONTINUOUSLY BE MAINTAINED TO AVOID ANY SITE RUNOFF AND EROSION FROM OCCURRING.
- OVERSIZING THE STABILIZED STAGING AREA MIGHT RESULT IN DISTURBING MORE VEGETATION THAN IS REQUIRED FOR THE PROJECT.
- FOR LARGER AREAS, GEOTEXTILE FABRIC IS RECOMMENDED TO BE PLACED TO HELP PREVENT EROSION.
- IF RUNOFF OCCURS, UTILIZING SILT FENCE (BMP 65) OR FIBER ROLLS (BMP 64) IS RECOMMENDED TO BE PLACED TO REMEDY THE EROSION/RUNOFF.

- MAINTENANCE:
  - INSPECT ALL DEVICES REGULARLY, ESPECIALLY AFTER LARGE STORM EVENTS AND MAKE REPAIRS IMMEDIATELY TO AVOID DAMAGES TO THE SURROUNDING PROPERTIES.
  - AGGREGATE SHOULD BE ADDED AS NEEDED.
  - REMOVE ACCUMULATED SEDIMENTS AS NECESSARY
  - ONCE THE PROJECT HAS COMPLETED, TEMPORARY CONSTRUCTION ROADS AND STAGING AREAS SHOULD BE REMOVED AND RESTORED TO PREEXISTING CONDITIONS.

BMP 43 - DUST CONTROL

- THESE WILL BE UTILIZED TO PREVENT SOIL PARTICLES AND DUST FROM ENTERING THE AIR AS A RESULT FROM EXCAVATION AND VEHICULAR TRAFFIC RELATED TO THE CONSTRUCTION.
- SEEDING OR SODDING (BMP 32), MULCHING (BMP52), USING SOIL BINDERS (BMP 55), SPRINKLING, SURFACE ROUGHING (BMP 58), OR PRACTICES THAT PROVIDE PROMPT SURFACE COVER CAN BE USED. IT'S IMPORTANT TO APPLY DUST CONTROL TECHNIQUES BEFORE, DURING, AND AFTER EXCAVATION TO ENSURE NO CONTAMINANTS ESCAPE THE PROPERTY.
- WHEN PLANNING FOR THE EXCAVATIONS, THE OWNER AND/OR CONTRACTOR WILL NEED TO IDENTIFY ALL POTENTIAL FUGITIVE DUST EMISSION SOURCES AND MITIGATE THEM ACCORDINGLY BY SELECTING THE APPROPRIATE BMP EITHER LISTED ABOVE, OR FOUND IN THE IDAHO CATALOG OF STORM WATER BEST MANAGEMENT PRACTICES.

BMP 44 - STOCKPILE MANAGEMENT

- USE STOCKPILE HANDLING METHODS THAT LIMIT AIR EMISSIONS AND STORMWATER CONTAMINATION FROM EXPOSED, ERODIBLE MATERIALS SUCH AS SOIL, SAWDUST, BARK, COMPOST, SAND, FLY ASH, STUCCO, HYDRATED LIME, CONCRETE RUBBLE (PORTLAND AND ASPHALT), AGGREGATE BASE AND SUBBASE, PREMIXED AGGREGATE, COLD-MIX ASPHALT, AND PRESSURE-TREATED LUMBER.
- RECOGNIZE THAT UNCOVERED RAW MATERIAL, PILES ARE HIGHLY SUSCEPTIBLE TO EROSION DURING RAIN AND RUNOFF EVENTS.
- UNDERSTAND THAT ERODING STOCKPILES CAN RELEASE SUSPENDED SEDIMENT, NUTRIENTS, AND METALS, AND CAN ALTER THE PH OF STORMWATER LEAVING THE SITE.
- IN LOCATIONS WITH STRONG WINDS, TARPS AND PLASTIC COVERS OFTEN NEED EXTRA ANCHORING, WEIGHTING, OR FASTENING TO KEEP THEM SECURELY IN PLACE.
- DO NOT USE STANDARD POLYETHYLENE SHEETING FOR APPLICATIONS LONGER THAN 6 MONTHS.
- INSTALL TEMPORARY PERIMETER SEDIMENT CONTROLS AROUND STOCKPILES TO BLOCK STORMWATER RUN-ON AND CAPTURE RUNOFF FROM THE PILE.
- USE BERMS, DIKES, FIBER ROLLS, SILT FENCE, BARRIER BAGS, OR SIMILAR BMPs FOR PERIMETER CONTROL.
- APPLY DUST- AND WIND-CONTROL MEASURES TO ALL EXPOSED STOCKPILED MATERIAL.
- FOR SOIL STOCKPILES, PROVIDE COVER OR SOIL STABILIZATION AND A TEMPORARY PERIMETER SEDIMENT BARRIER AT ALL TIMES.
- COVER OR STABILIZE SOIL STOCKPILES WITHIN 14 DAYS OF PLACEMENT, OR SOONER IF SOILS ARE HIGHLY ERODIBLE OR RAINFALL IS EXPECTED; FOR DISCHARGES TO IMPAIRED WATERS, COMPLETE STABILIZATION WITHIN 7 DAYS.

## TEMPORARY STORMWATER EROSION CONTROL NOTES

1. PRIOR TO CONSTRUCTING THE STORMWATER COLLECTION, CONVEYANCE, DETENTION, AND TREATMENT FACILITIES; ALL TEMPORARY EROSION CONTROL FEATURES SHALL BE INSTALLED AND MAINTAINED, DURING CONSTRUCTION, TO PREVENT CONSTRUCTION RELATED RUNOFF AND SEDIMENT MIGRATION OFF-SITE.
2. BARRIERS SHALL BE PLACED PERPENDICULAR TO THE DIRECTION OF FLOW.
3. CONSTRUCT SILT FENCES, COMPOST BERMS, OR FIBER ROLLS WHERE OVERLAND RUNOFF MAY LEAVE THE CONSTRUCTION AREA OR ENTER NEIGHBORING PROPERTIES.
4. MULCHING OF DISTURBED AREAS CAN BE DONE WITH HAY, STRAW, WOOD CHIPS, GRASS CLIPPINGS, OR ROCK. SLOPES STEEPER THAN 2:1 MAY REQUIRE TACKING AGENTS TO HOLD MULCH IN PLACE.
5. LEAVE TEMPORARY STORMWATER AND EROSION CONTROL MEASURES IN PLACE UNTIL VEGETATION HAS BEEN RE-ESTABLISHED.
6. ALL EXPOSED SOILS SHALL BE MULCHED PRIOR TO OCTOBER 10TH, AREAS IN THE IMMEDIATE VICINITY OF ACTIVE CONSTRUCTION/STAGING ARE EXEMPT FROM THIS REQUIREMENT. SILT FENCES AND MULCH SHALL BE MAINTAINED THROUGHOUT THE WINTER.

## STORMWATER FACILITY O&M REQUIREMENTS

1. GENERAL REQUIREMENTS:
  - INSPECT CONSTRUCTED FACILITIES MONTHLY AND BETWEEN LARGE STORM EVENTS FOR THE FIRST YEAR. AFTER IT IS ESTABLISHED AND WORKING AS INTENDED, INSPECT ONCE IN THE SPRING AND FALL. INSPECT FOR FAILURES, EROSION, DISPLACED ROCK PROTECTION, DEAD VEGETATION, AND SEDIMENT BUILDUP. REPAIR AND/OR REPLACE AS NECESSARY.
2. SAND FILTER
  - INSPECT FOR SILTATION AND LOSS OF INFILTRATION. REMOVE SILT TO CLEAN SAND AND REFILL WITH CLEAN SAND AS NEEDED.
  - DRAINING TOO SLOW. CHECK FOR SEDIMENT PLUGGING-REPLACE SAND AND CONTROL SOURCE OF SEDIMENT.
  - CHECK THAT OUTLETS AND OUTLET PROTECTION ARE WORKING AND ARE NOT DAMAGED. REPLACE AS NECESSARY.

## GENERAL STORMWATER NOTES

1. EXISTING DRAINAGE FEATURES WILL BE PRESERVED OR RESTORED SUCH THAT NO BLOCKAGE OF EXISTING RUNOFF WATER WILL PERMANENTLY OCCUR.
2. THE STORMWATER TREATMENT FACILITY SHALL CONSIST OF A SAND FILTER / STORAGE POND AREA AS NOTED ON THE PLANS. THE TREATMENT FACILITY IS SIZED TO TREAT AND INFILTRATE THE FIRST  $\frac{1}{2}$ " OF THE 25-YEAR 24-HOUR EVENT.

## GRADING NOTES

1. LOCATIONS, TOPOGRAPHY AND ELEVATIONS SHOWN ARE APPROXIMATE AND SERVE TO ESTABLISH GRADES AND AN ESTIMATE OF GRADING QUANTITIES. IT IS THE CONTRACTORS RESPONSIBILITY TO LOCATE AND PROTECT ALL UTILITIES ONSITE PRIOR TO COMMENCING GRADING WORK.
2. PRIOR TO ROUGH GRADING, THE CONTRACTOR SHALL INSTALL TEMPORARY CONSTRUCTION STORMWATER CONTROL MEASURES (BMPs) TO PREVENT DAMAGE TO ADJACENT PROPERTIES.
3. AREAS TO RECEIVE FILL SHALL BE CLEARED, GRUBBED, AND SCARIFIED PRIOR TO PLACING FILL.
4. CONTRACTOR SHALL PROVIDE DUST CONTROL OR ABATEMENT MEASURES SUCH AS WATER SUPPRESSION, SCREENING & ENCLOSURE AND GENERAL SITE HOUSE KEEPING DURING CONSTRUCTION OF PROJECT.

## GRADING NOTES

ESTIMATED GRADING QUANTITIES		
TOTAL ESTIMATED DISTURBED VOLUME ONSITE		
VOLUME CUT (CY)	VOLUME FILL (CY)	NET VOLUME (CY)
4,059,770	12	4,059,758(CUT)

\* GRADING QUANTITIES ARE ESTIMATED BY AUTOCAD 3D 2023 SOFTWARE.

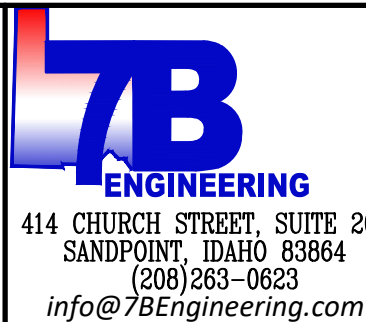
## EROSION CONTROL

- SILT FENCE (AS NEEDED)
  - STRAW WATTLE (AS NEEDED)
- CONTRACTOR TO VERIFY TEMPORARY EROSION CONTROL LOCATIONS WITH OWNER AND ENGINEER.
- PERMANENT EROSION CONTROL IS SHOWN ON THESE PLANS THROUGH RE-VEGETATION. IF NEEDED, REFERENCE THE 2020 VERSION OF IDAHO'S CATALOG OF STORM WATER BEST MANAGEMENT PRACTICES FOR ADDITIONAL TEMPORARY AND PERMANENT EROSION CONTROL METHODS.

EROSION CONSTRUCTION SCHEDULE		
STAKING, PRE-CONSTRUCTION MEETINGS	APR-2026	
PLACEMENT OF TEMPORARY EROSION CONTROLS	APR-2026	
PIT EXCAVATION	MAY 2026 - MAY 2051	
LANDSCAPING - PERMANENT EROSION CONTROLS	SEP-2051	
RESEED SLOPES & DISTURBED AREAS	OCT-2051	

REVISION DATE DESCRIPTION

REVISION	DATE	DESCRIPTION



SHEET TITLE

OWNER

PROJECT

NOTES / R.O.S.

DARREN HEGGE

CURTIS CREEK SAND & GRAVEL CUP

BONNER COUNTY, IDAHO

PROJECT # 24027

DRAWN BY: JMW

CHECKED BY: DWL

DRAWING DATE: 12/11/2025

SHEET 2 OF 7

SCALE: NTS

(VALID FOR 24"x36" OR 22"x34")

PROFESSIONAL LAND SURVEYOR

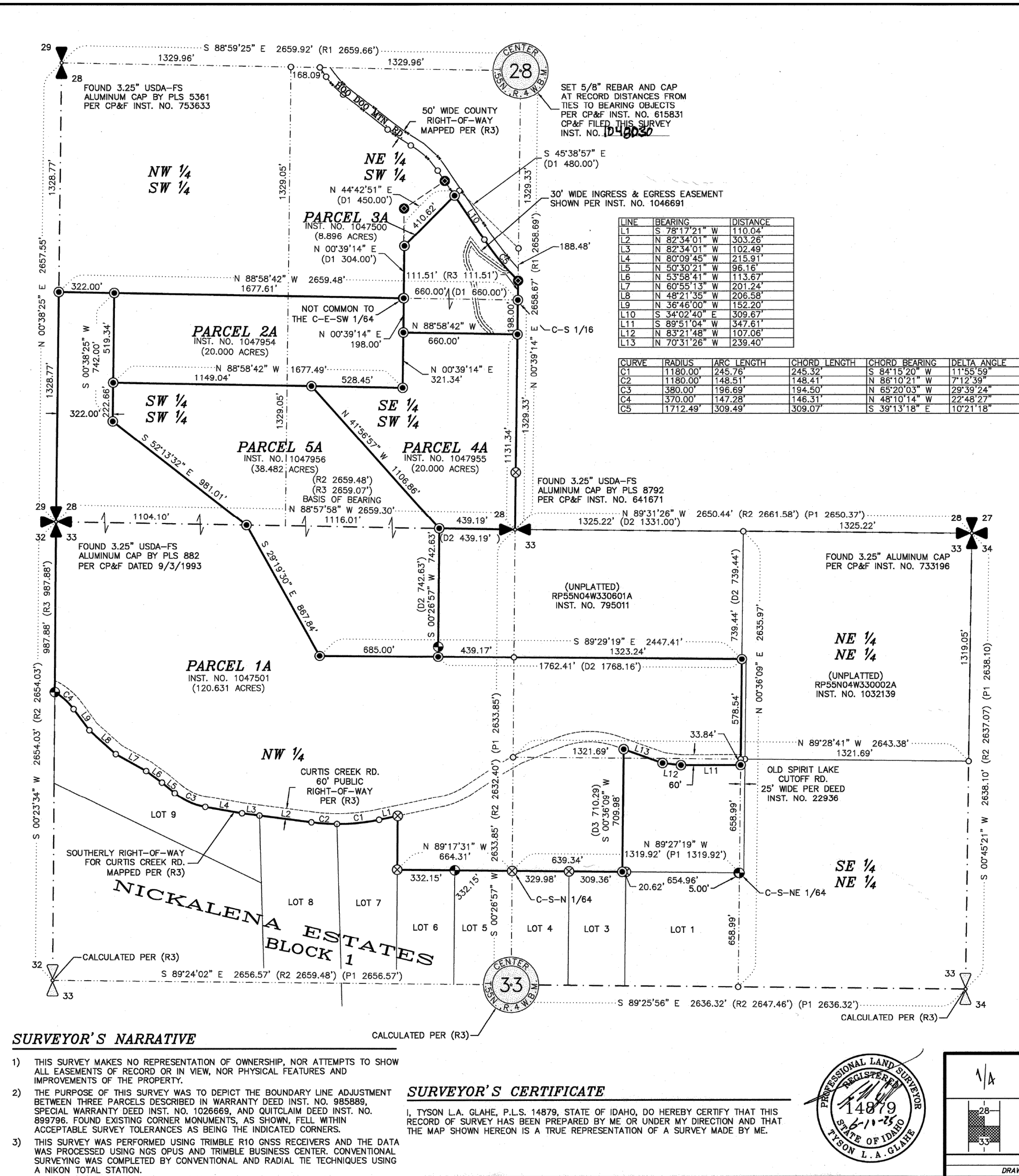
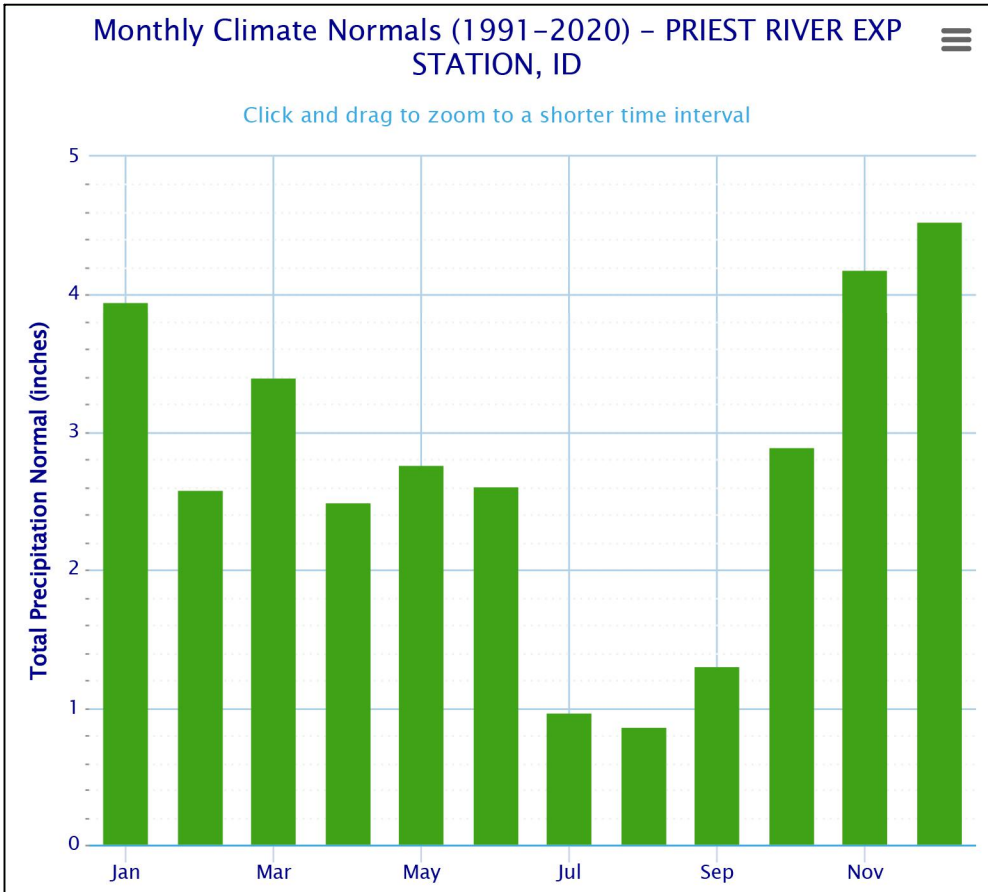
REGISTERED

10086

STATE OF IDAHO

DANIEL W. LARSON

Month	Total Precipitation Normal (inches)
January	3.95
February	2.59
March	3.40
April	2.50
May	2.76
June	2.61
July	0.97
August	0.87
September	1.30
October	2.89
November	4.19
December	4.53
Annual	32.56

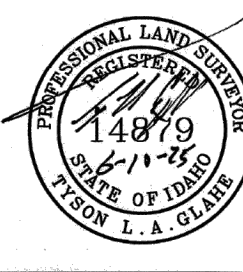


## SURVEYOR'S NARRATIVE

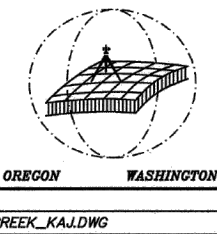
1. THIS SURVEY MAKES NO REPRESENTATION OF OWNERSHIP, NOR ATTEMPTS TO SHOW ALL EASEMENTS OF RECORD OR IN VIEW, NOR PHYSICAL FEATURES AND IMPROVEMENTS OF THE PROPERTY.
2. THE PURPOSE OF THIS SURVEY WAS TO DEPICT THE BOUNDARY LINE ADJUSTMENT BETWEEN THREE PARCELS DESCRIBED IN WARRANTY DEED INST. NO. 985888, SPECIAL WARRANTY DEED INST. NO. 1008669, AND QUITCLAIM DEED INST. NO. 899796. FOUND EXISTING CORNER MONUMENTS, AS SHOWN, FELL WITHIN ACCEPTABLE SURVEY TOLERANCES AS BEING THE INDICATED CORNERS.
3. THIS SURVEY WAS PERFORMED USING TRIMBLE R10 GNSS RECEIVERS AND THE DATA WAS PROCESSED USING NGS OPUS AND TRIMBLE BUSINESS CENTER. CONVENTIONAL SURVEYING WAS COMPLETED BY CONVENTIONAL AND RADIAL THE TECHNIQUES USING A NIKON TOTAL STATION.

## SURVEYOR'S CERTIFICATE

I, TYSON L.A. GLAHE, P.L.S. 14879, STATE OF IDAHO, DO HEREBY CERTIFY THAT THIS RECORD OF SURVEY HAS BEEN PREPARED BY ME OR UNDER MY DIRECTION AND THAT THE MAP SHOWN HEREON IS A TRUE REPRESENTATION OF A SURVEY MADE BY ME.



1/4	Section	Township	Range
28	28	55	4
33	33	4	N

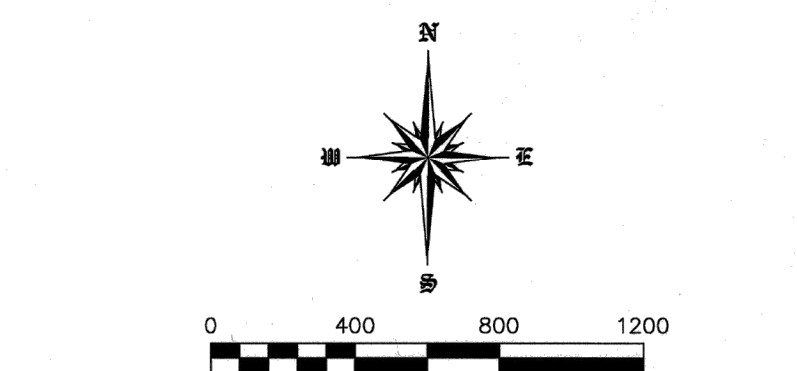


RECORD OF SURVEY	
FOR CURTIS CREEK	
GLAHE & ASSOCIATES	Scale: 1" = 400'
PROFESSIONAL LAND SURVEYORS	Checked By: TLG
300 Church Street	Drawn By: KAJ
Sandpoint, Idaho 83864	Checked By: DWL
208-265-4474	Plot Date: 6/10/2025
	Sheet: 1 of 1

## RECORD OF SURVEY

FOR  
CURTIS CREEK  
LYING IN A PORTION OF THE  
SW 1/4 OF SECTION 28 AND THE N 1/2 OF SECTION 33,  
TOWNSHIP 55 NORTH, RANGE 4 WEST,  
BOISE MERIDIAN, BONNER COUNTY, IDAHO

SECTIONAL CORNER, AS NOTED.



## LEGEND

- SECTIONAL CORNER, AS NOTED.
- SET 5/8" X 24" REBAR AND CAP, PLS 14879
- FOUND 5/8" REBAR AND CAP BY PLS 7879
- FOUND 5/8" REBAR ANC CAP BY PLS 8792
- FOUND 5/8" REBAR AND NO CAP OR ILLEGIBLE CAP
- CALCULATED POINT, NOTHING SET
- WARRANTY DEED, INST. NO. 985888
- QUIT CLAIM DEED, INST. NO. 795011
- QUIT CLAIM DEED, INST. NO. 969104
- RECORD OF SURVEY, PLS 8792, INST. NO. 572018
- RECORD OF SURVEY, PLS 8792, INST. NO. 547123
- RECORD OF SURVEY, PLS 8792, INST. NO. 615828
- PLAT OF NICKALENA ESTATES, PLS 7879, INST. NO. 740617

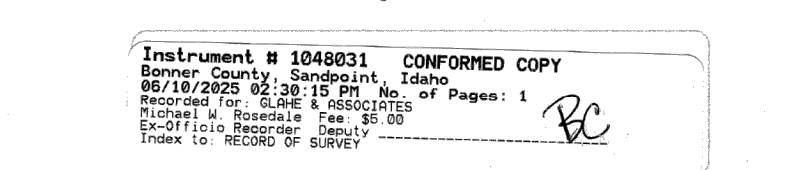
## BASIS OF BEARING

THE BASIS OF BEARINGS FOR THIS SURVEY WAS ESTABLISHED BY GPS CONTROL COORDINATES DERIVED FROM NGS OPUS SOLUTIONS USING A REFERENCE FRAME OF NAD83 (2011) (EPOCH: 2010.000). ALL BEARINGS REFER TO THE IDAHO COORDINATE SYSTEM OF 1983, WEST ZONE, (1103) - US SURVEY FT. REFER TO THE DRAWING FOR SPECIFIC LINE AND MONUMENTS USED.

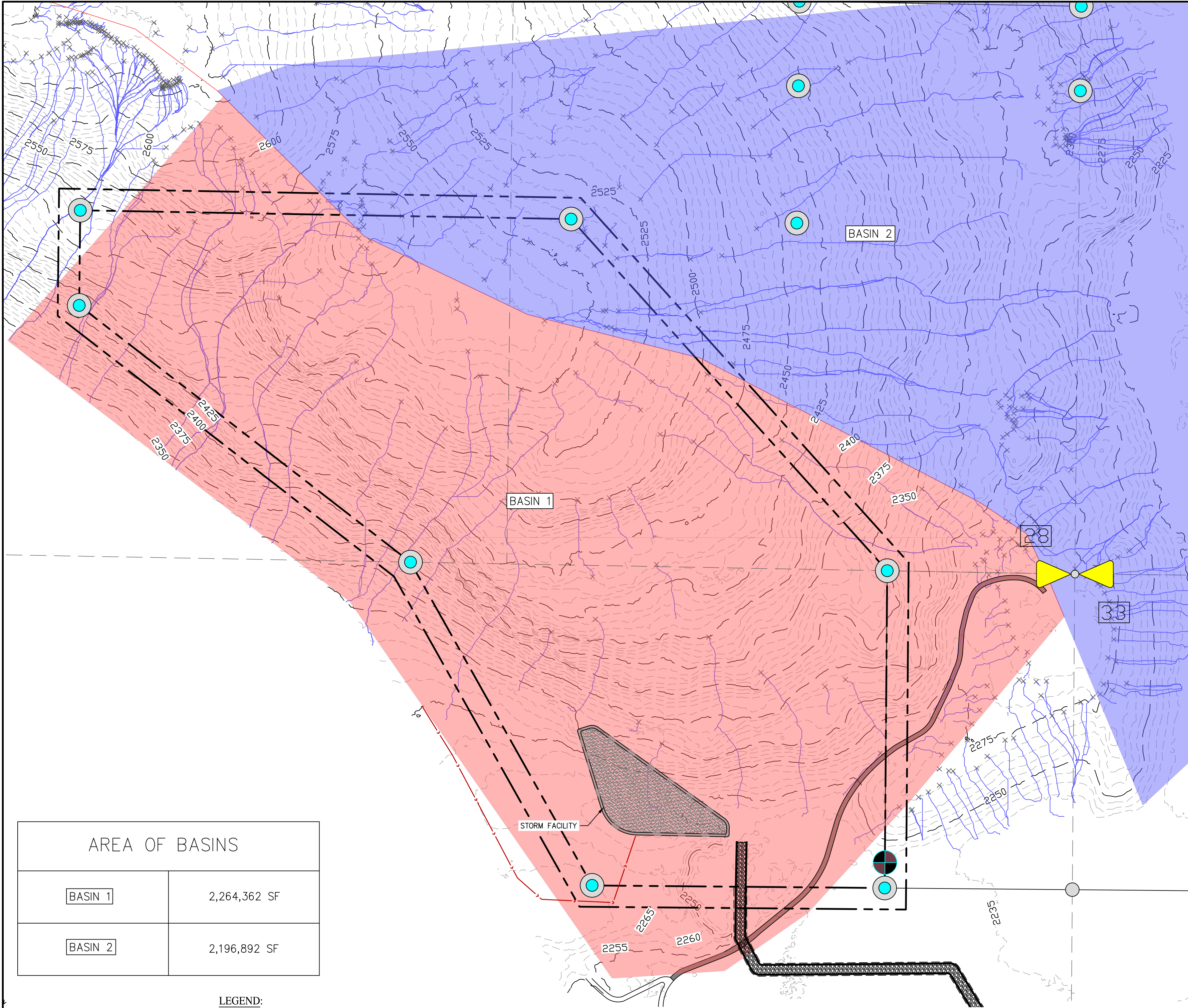
DISTANCES SHOWN HAVE BEEN CONVERTED FROM GRID TO GROUND USING A COMBINED ADJUSTMENT FACTOR (CAF) OF 1.0001017320. GEODETIC NORTH IS AN ANGULAR ROTATION OF -0°45'39" AT THE QUARTER CORNER COMMON TO SECTION 28 AND SECTION 33.

## RECORDER'S CERTIFICATE

FILED THIS 10th DAY OF June, 2025, AT 2:30 O'CLOCK P.M., AT THE REQUEST OF GLAHE & ASSOCIATES, INC., AS INSTRUMENT NO. 1048031.  
M. Rosales Bridge Center & S.00  
COUNTY RECORDER BY







AREA OF BASINS	
BASIN 1	2,264,362 SF
BASIN 2	2,196,892 SF

LEGEND:

CIVIL 3D GENERATED WATER DROPLET (TYP.)

EXISTING GROUND CONTOUR MAJOR - 25' INTERVALS

EXISTING GROUND CONTOUR MINOR - 5' INTERVALS

PROPERTY BOUNDARY

FLOW LINE

BASIN 1

BASIN 2

7B ENGINEERING

Stormwater Management Calculations

Rational Method

Pre-Developed

Pre-Developed

Runoff from Table 6-2 Kennedy report

	Area(ft²)	Area(acres)	Runoff	Area * C
Spars Woods	2196892	50.43	0.20	10.09
Totals	2196892.00	50.43	0.20	10.09

Developed "C" 0.20

Time increment 5 min

Time of concentration 5 min

Outflow 0 cfs

Design year 25

Area (sqft) 2196892

Area (acres) 50.434

Area x "C" 10.09

Developed "C" factor 0.20

1) input outflow (0.3 cfs 600 gal drywell, 1.0 cfs 1000 gal drywell)

2) input surface area for basin (in sqft)

3) input the basins "C" factor

Time Inc. (min)	Time Inc. (sec)	Intensity (in / hr)	Q (cfs)	Volume (cf)
5	300	2.80	28.24	11354
10	600	2.10	21.18	14870
11	660	2.00	20.17	15372
12	720	1.90	19.16	15753
13	780	1.85	18.66	16459
14	840	1.75	17.65	16628
15	900	1.70	17.15	17182
20	1200	1.60	16.14	21013
25	1500	1.40	14.12	22623
30	1800	1.20	12.10	23022
35	2100	1.10	11.10	24432
40	2400	0.95	9.58	23975
45	2700	0.90	9.08	25437
50	3000	0.87	8.78	27221
55	3300	0.85	8.57	29168
60	3600	0.78	7.87	29126
65	3900	0.75	7.57	30275
70	4200	0.70	7.06	30375
75	4500	0.69	6.96	32029
80	4800	0.67	6.76	33128
85	5100	0.65	6.56	34106
90	5400	0.63	6.35	34963
95	5700	0.60	6.05	35114
100	6000	0.59	5.95	36314
105	6300	0.58	5.85	37454
110	6600	0.55	5.55	37181
115	6900	0.52	5.25	36726
120	7200	0.5	5.04	36827
125	7500	0.49	4.89	37200
130	7800	0.48	4.80	37900
135	8100	0.48	4.80	39339
140	8400	0.46	4.60	39124
145	8700	0.45	4.50	39648
150	9000	0.44	4.41	40114
155	9300	0.43	4.31	40522
160	9600	0.42	4.21	40872
165	9900	0.41	4.12	41163
170	10200	0.40	4.02	41396
175	10500	0.39	3.92	41570
180	10800	0.38	3.82	41686
360	21600	0.25	2.52	54726
720	43200	0.17	1.72	74616
1440	86400	0.11	1.09	94523

24 Hr Storm

25 year design (store or discharge 25 year / 2-hour storm event)

24-Hour Volume (pre-developed) 94523 cu ft

Time of concentration calculation

Sheet Flow

n = manning roughness (woods)

p=2 year, 24 hour rainfall

Slope (S)

Length (L)

0.240

2 in

0.65 ft/ft

100 feet

USDA

Tt=[0.007(nL)^0.8] / (((P)^0.50)^S^0.4))^60

4.48 min

7B ENGINEERING

Stormwater Management Calculations

Rational Method

Post-Developed

Post-Developed

Runoff and Developed "C" Factor

	Area(ft²)	Area(acres)	Runoff	C*A
Roofs	0.00	0.00	0.00	0.00
Driveway	0.00	0.00	0.00	0.00
Landscaped	0.00	0.00	0.00	0.00
Spars Woods	2196892	50.43	0.20	10.09
Totals	2196892.00	50.4337	0.20	10.09

Developed "C" 0.200

Time increment 5 min

Time of concentration 5 min

Outflow (infiltration) 0.8954 cfs

Design year 25 YR

Area (sqft) 2196892

Area (acres) 50.434

Area x "C" 10.09

Developed "C" factor 0.20

Exfiltration through engineered soils

1) input outflow (0.3 cfs 600 gal drywell, 1.0 cfs 1000 gal drywell)

2) input surface area for basin (in sqft)

3) input the basins "C" factor

Weighted value

Time Inc. (min)	Time Inc. (sec)	Intensity (in / hr)	Q dev (cfs)	V in	Q pre (cfs)	V pre	Storage Required
5	300	2.80	28.24	11354	28.24	11354	0
10	600	2.10	21.18	14870	21.18	14870	0
11	660	2.00	20.17	15372	20.17	15372	0
12	720	1.90	19.16	15753	19.16	15753	0
13	780	1.85	18.66	16459	18.66	16459	0
14	840	1.75	17.65	16628	17.65	16628	0
15	900	1.70	17.15	17182	17.15	17182	0
20	1200	1.60	16.14	21013	16.14	21013	0
25	1500	1.40	14.12	22623	14.12	22623	0
30	1800	1.20	12.10	23022	12.10	23022	0
35	2100	1.10	11.10	24432	11.10	24432	0
40	2400	0.95	9.58	23975	9.58	23975	0
45	2700	0.90	9.08	25437	9.08	25437	0
50	3000	0.87	8.78	27221	8.78	27221	0
55	3300	0.85	8.57	29168	8.57	29168	0
60	3600	0.78	7.87	29126	7.87	29126	0
65	3900	0.75	7.57	30275	7.57	30275	0
70	4200	0.70	7.06	30375	7.06	30375	0
75	4500	0.69	6.96	32029	6.96	32029	0
80	4800	0.67	6.76	33128	6.76	33128	0
85	5100	0.65	6.56	34106	6.56	34106	0
90	5400	0.63	6.35	34963	6.35	34963	0
95	5700	0.60	6.05	35114	6.05	35114	0
100	6000	0.59	5.95	36314	5.95	36314	0
105	6300	0.58	5.85	37454	5.85	37454	0
110	6600	0.55	5.55	37181	5.55	37181	0
115	6900	0.52	5.25	36726	5.25	36726	0
120	7200	0.5	5.04	36827	5.04	36827	0
125	7500	0.49	4.89	37200	4.89	37200	0
130	7800	0.48	4.80	37900	4.80	37900	0
135	8100	0.48	4.796	39339	4.796	39339	0
140	8400	0.46	4.60	39124	4.60	39124	0
145	8700	0.45	4.50	39648	4.50	39648	0
150	9000	0.44	4.41	40114	4.41	40114	0
155	9300	0.43	4.31	40522	4.31	40522	0
160	9600	0.42	4.21	40872	4.21	40872	0
165	9900	0.41	4.12	41163	4.12	41163	0
170	10200	0.40	4.02	41396	4.02	41396	0
175	10500	0.39	3.92	41570	3.92	41570	0
180	10800	0.38	3.82	41686	3.82	41686	0
360	21600	0.25	2.52	54726	2.52	54726	0
720	43200	0.17	1.7232	74616	1.7232	74616	0
1440	86400	0.11	1.09	94523	1.09	94523	0

25 year design (store or infiltrate 25 year peak flow and volume)

Peak Storm required storage 0 CF

Overall Treatment Req and Soil Infiltration Rate

Total Impervious Area

Req Treatment

Req Treatment Area (8" depth)

Proposed Treatment Area

Treatment soil infiltration

Soil infiltration of Treatment Area

Depth of Treatment Area Req'd for Detention

0 SF

0.0 CF

0.0 SF

19340 SF

2 in/hr

0.8953704 CFS

0.16 FT

0%

Time of concentration calculation

Sheet Flow

n = manning roughness (woods)

p=2 year, 24 hour rainfall

Slope (S)

Length (L)

0.4

1.8 in

0.2 ft/ft

100 feet

USDA

Tt=[0.007(nL)^0.8] / (((P)^0.50)^S^0.4))^60

11.40 min

BASIN 2 CALCULATIONS

REVISION	DATE	DESCRIPTION

811

Know what's below. Call before you dig.

7B ENGINEERING

414 CHURCH STREET, SUITE 203  
SANDPOINT, IDAHO 83864  
(208)263-0623  
info@7BEngineering.com

SHEET TITLE

EXISTING DRAINAGE MAP

OWNER

DARREN HEGGE

PROJECT

CURTIS CREEK SAND & GRAVEL CUP  
BONNER COUNTY, IDAHO

ORIGINAL STORED AT:  
7B ENGINEERING  
414 CHURCH ST STE 203  
SANDPOINT, ID 83864

PROJECT # 24027

DRAWN BY: JMW

CHECKED BY: DWL

NOT VALID OR APPROVED  
WHEN ELECTRONIC  
SIGNATURE DOES NOT  
COVER THIS NOTE

DRAWING DATE: 12/11/2025

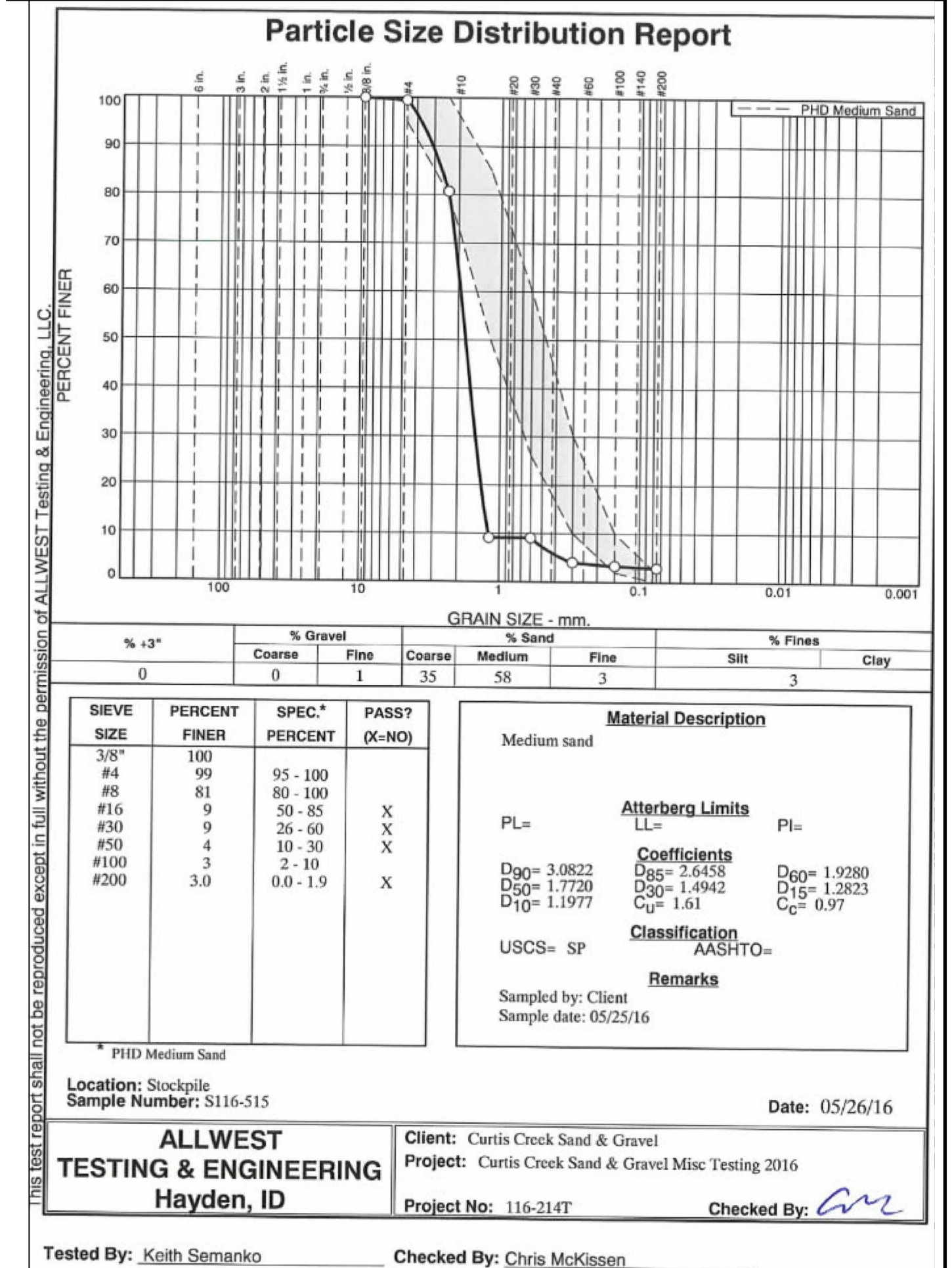
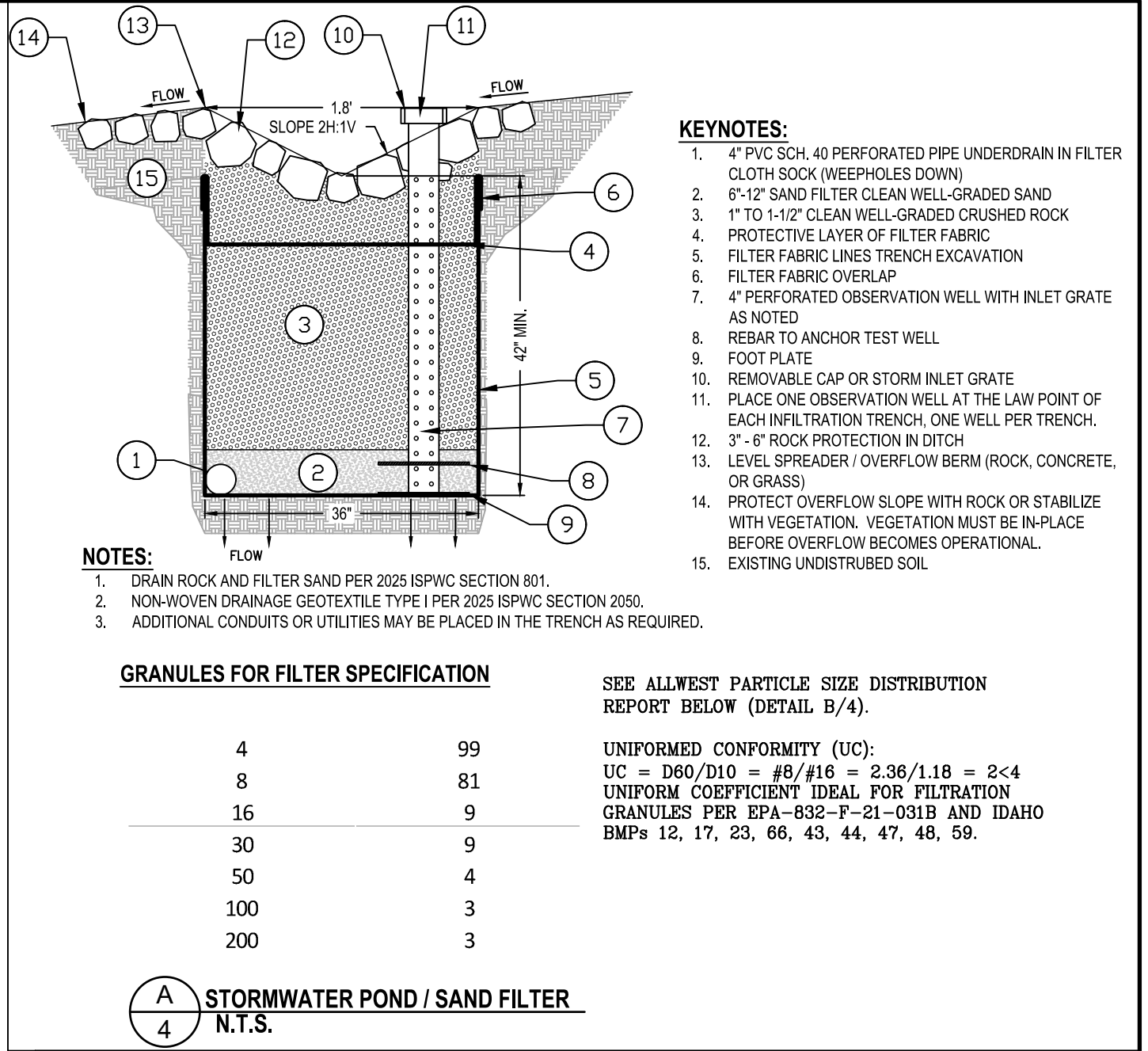
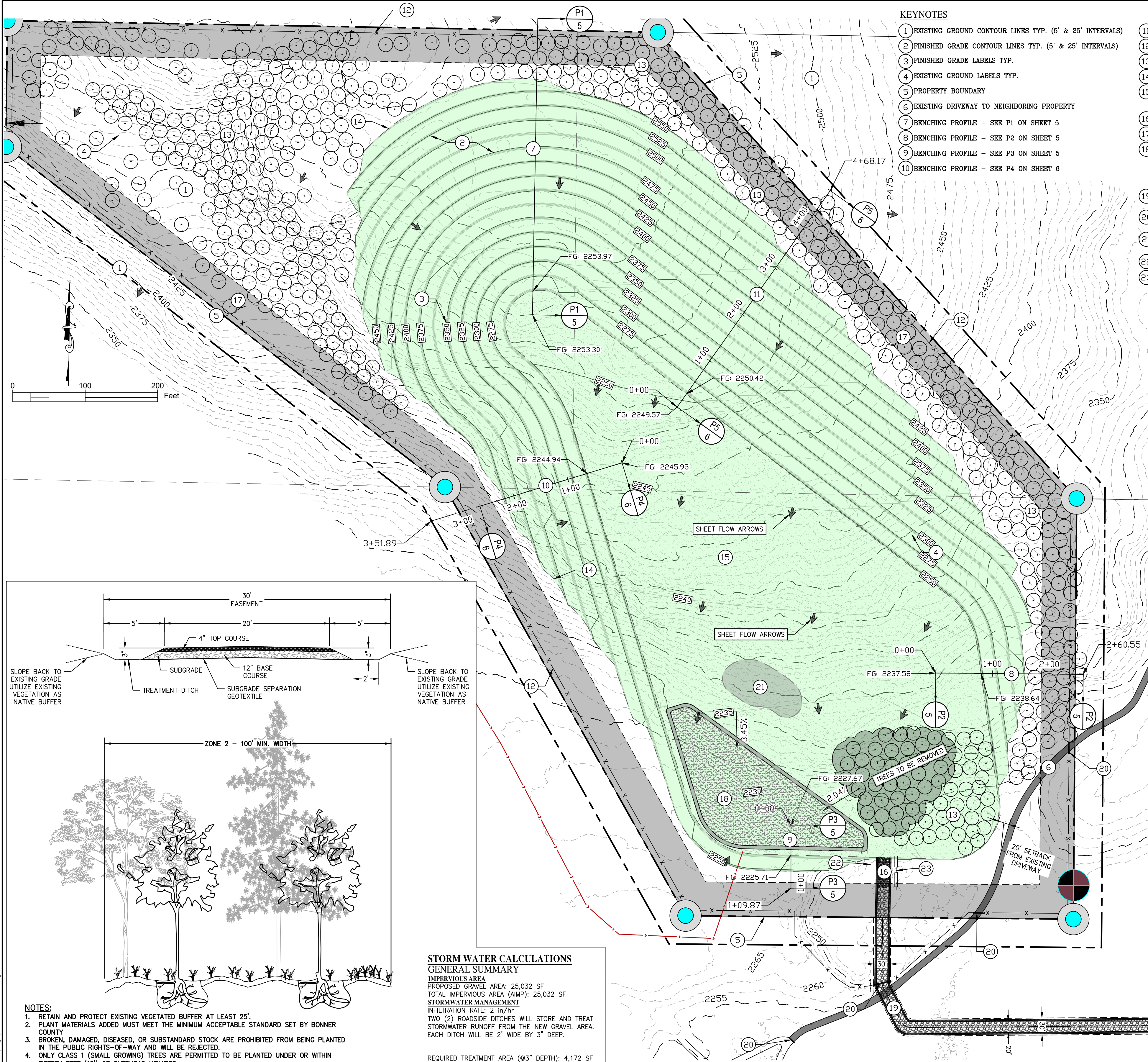
SCALE: 1" = 150'

(VALID FOR 24"x36" OR 22"x34")

SHEET 3 OF 7

PROFESSIONAL ENGINEER  
REGISTERED  
10086  
STATE OF IDAHO  
DANIEL W. LARSON



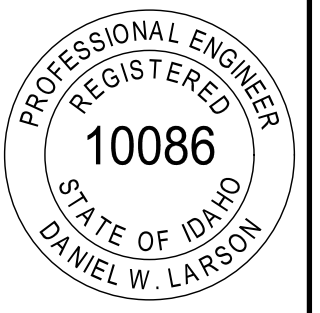


**B**  
4  
ALLWEST PARTICLE SIZE DISTRIBUTION REPORT  
N.T.S.

REVISION	DATE	DESCRIPTION



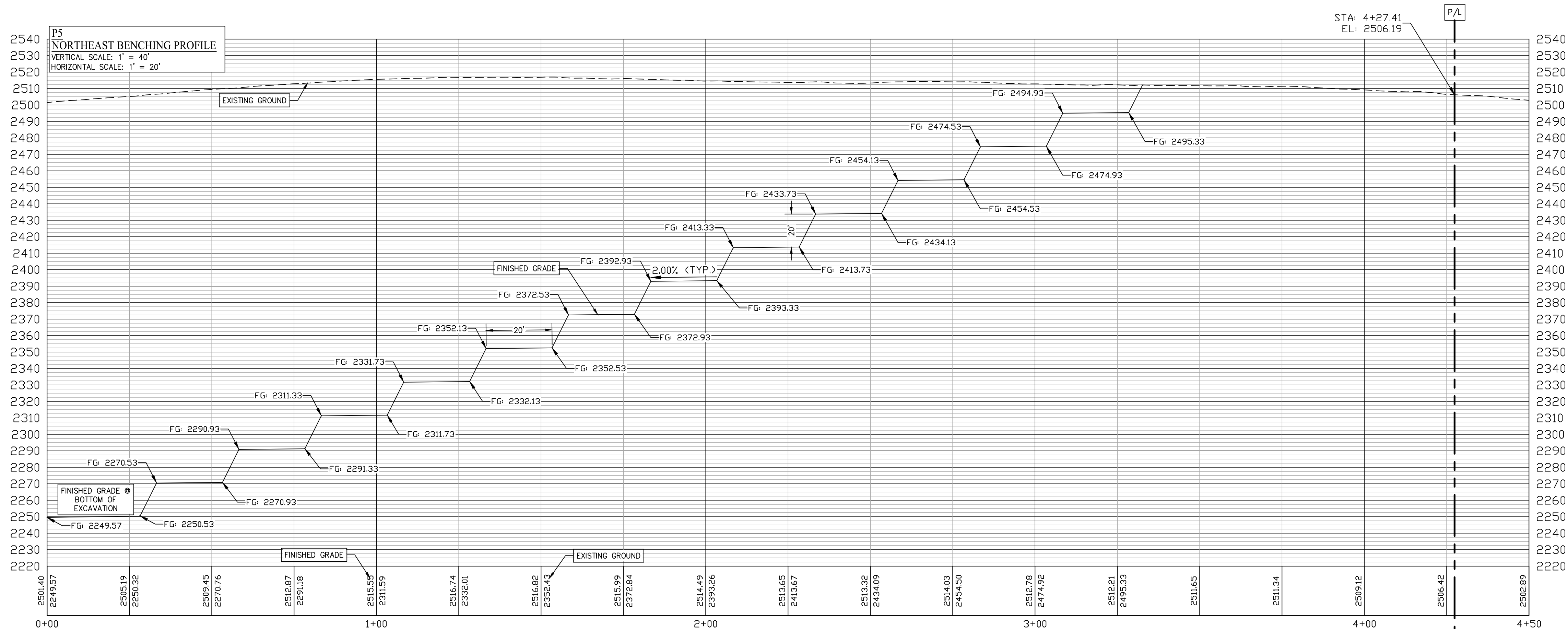
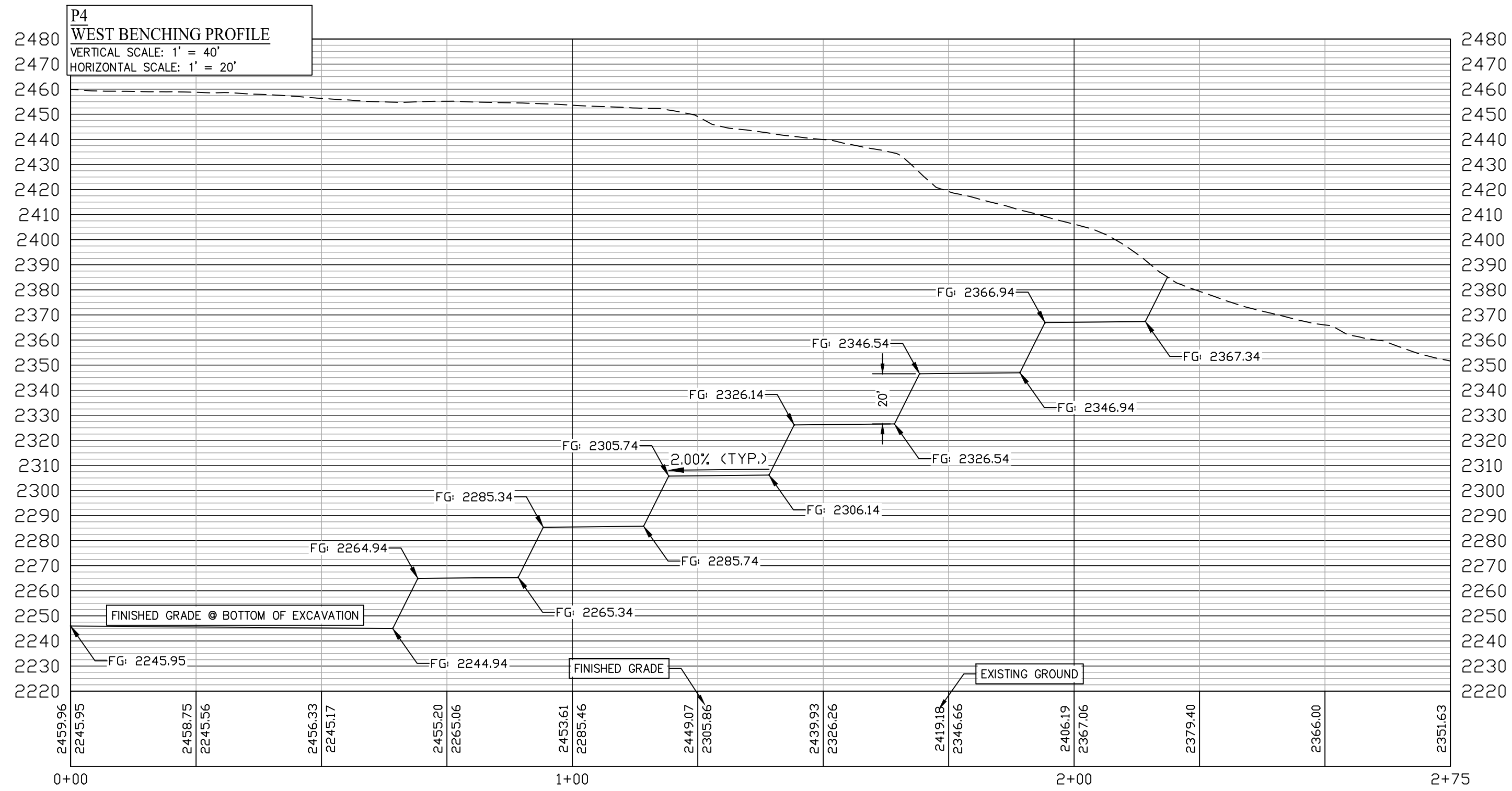
SHEET TITLE STORMWATER MANAGEMENT & GRADING AND EROSION CONTROL PLAN	ORIGINAL STORED AT: 7B ENGINEERING 414 CHURCH ST STE 203 SANDPOINT, ID 83864	PROJECT #: 24027
OWNER DARREN HEGGE	DRAWN BY: JMW	CHECKED BY: DWL
PROJECT CURTIS CREEK SAND & GRAVEL CUP BONNER COUNTY, IDAHO	DRAWING DATE: 12/11/2025	SCALE: 1" = 100' (VALID FOR 24"x36" OR 22"x34")
		SHEET 4 OF 7







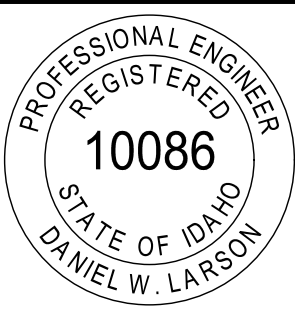




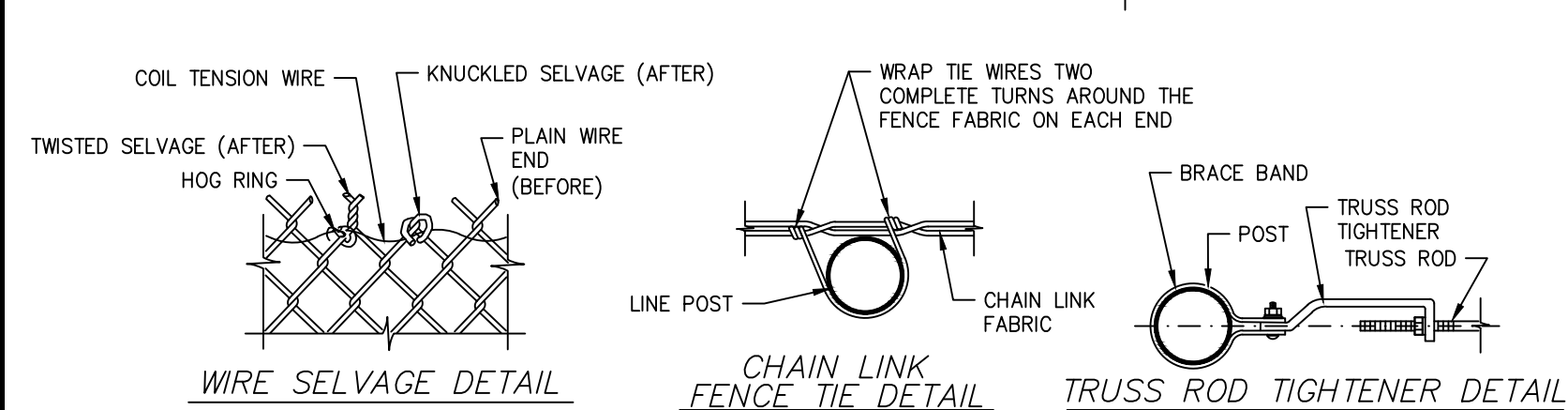
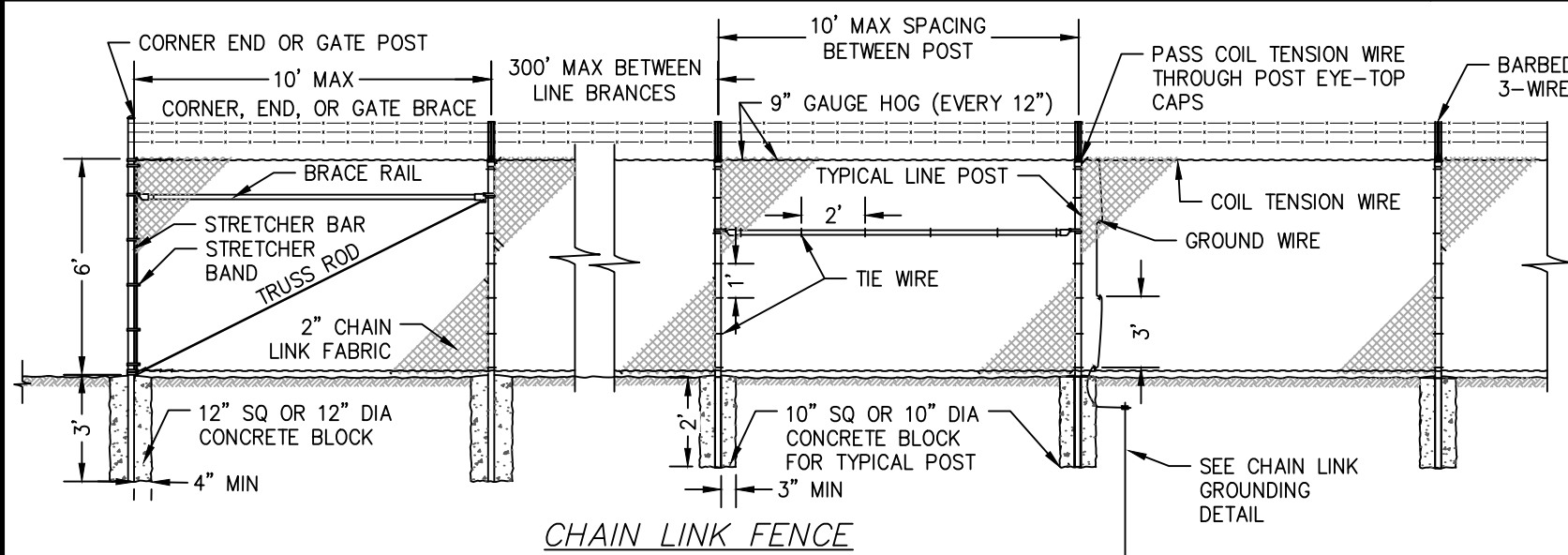
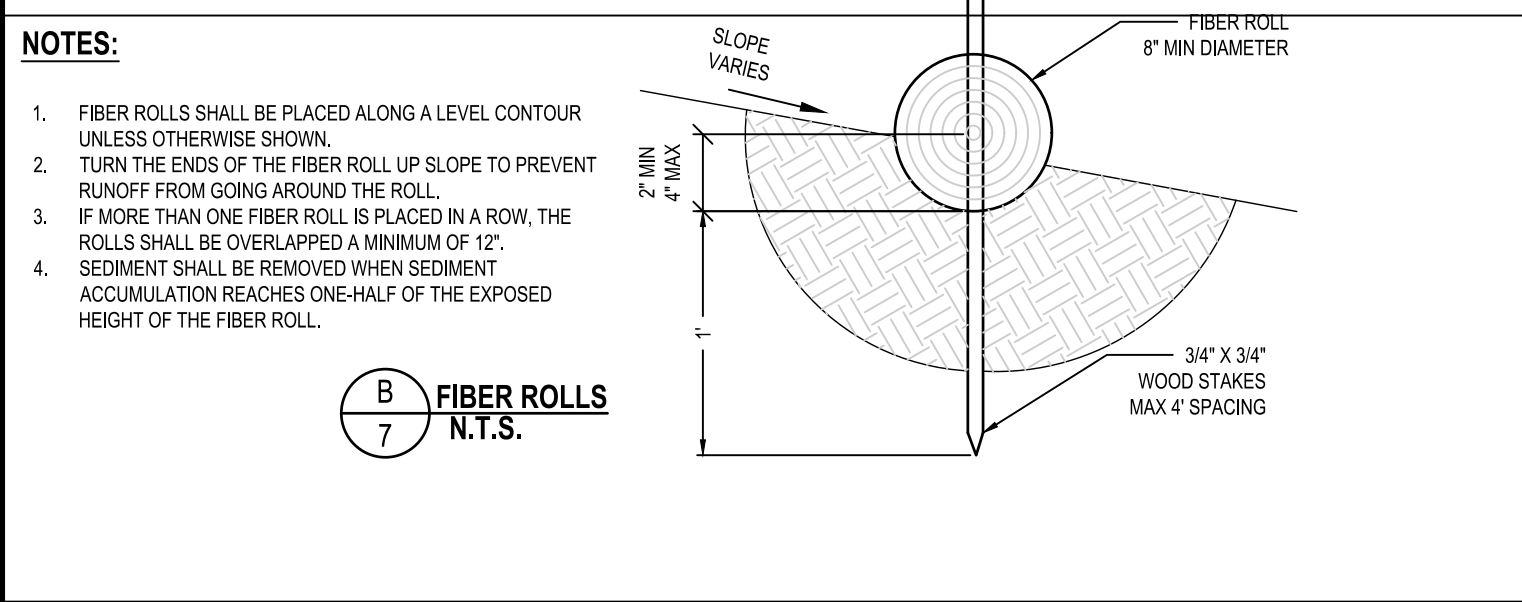
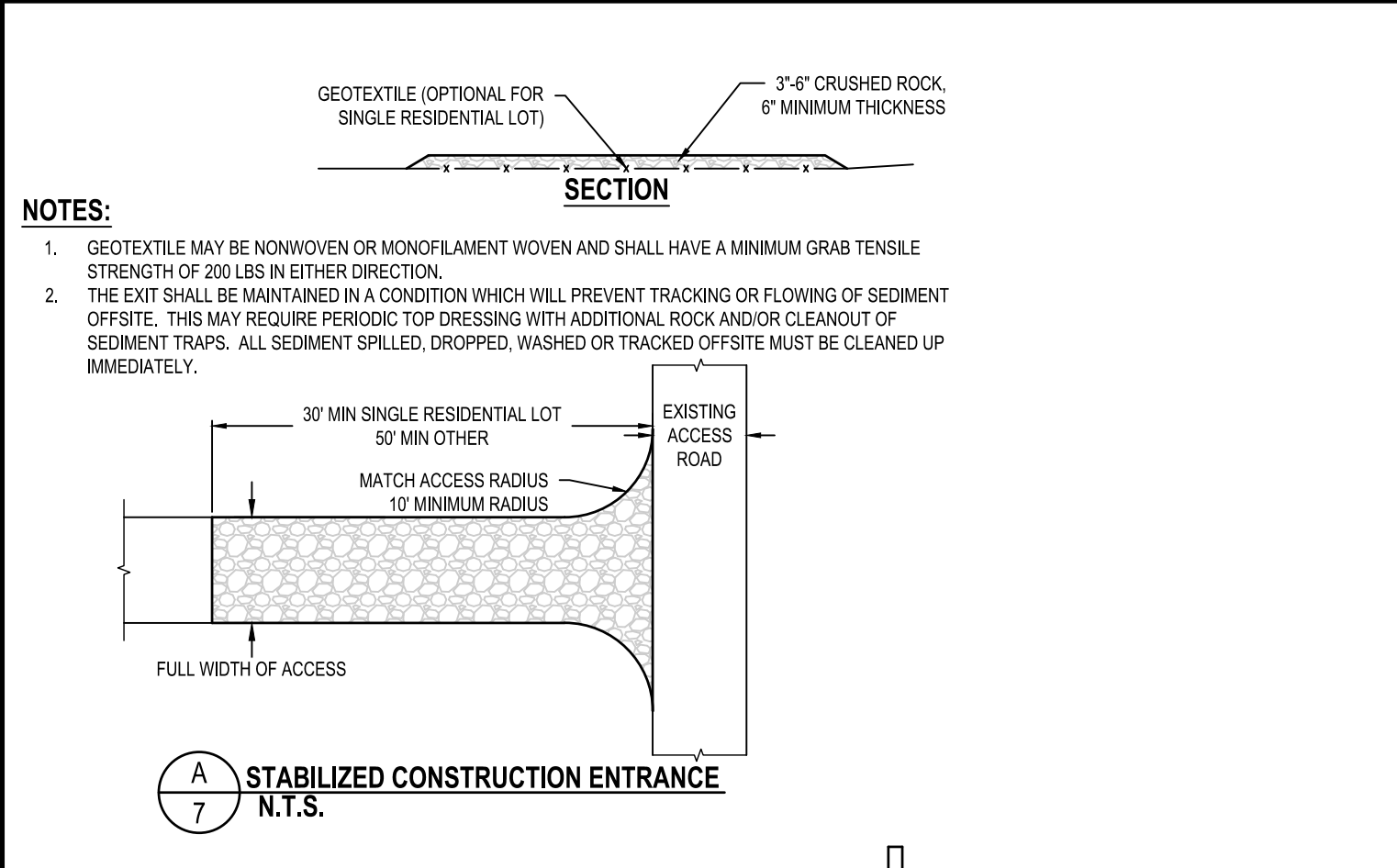
REVISION	DATE	DESCRIPTION



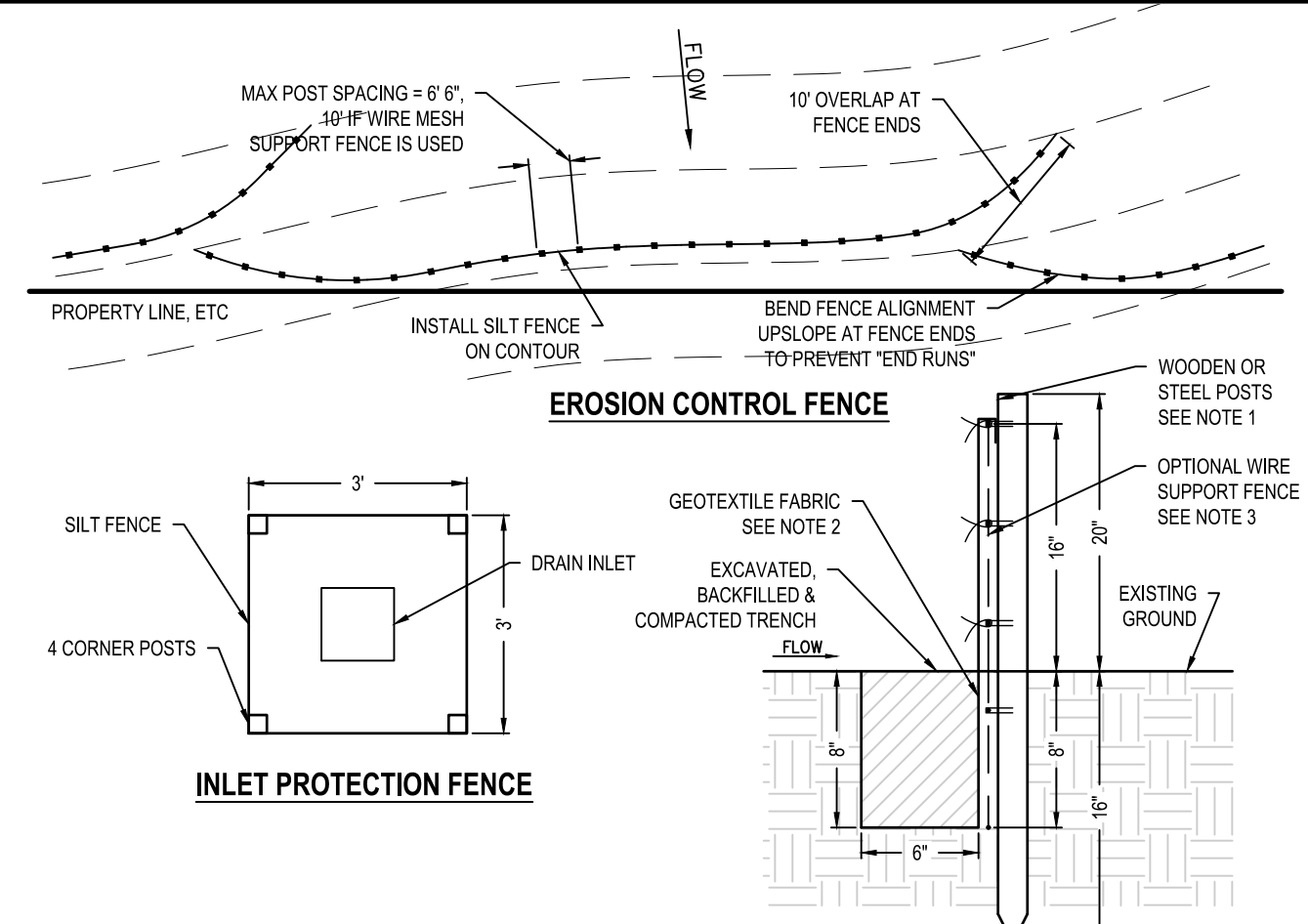
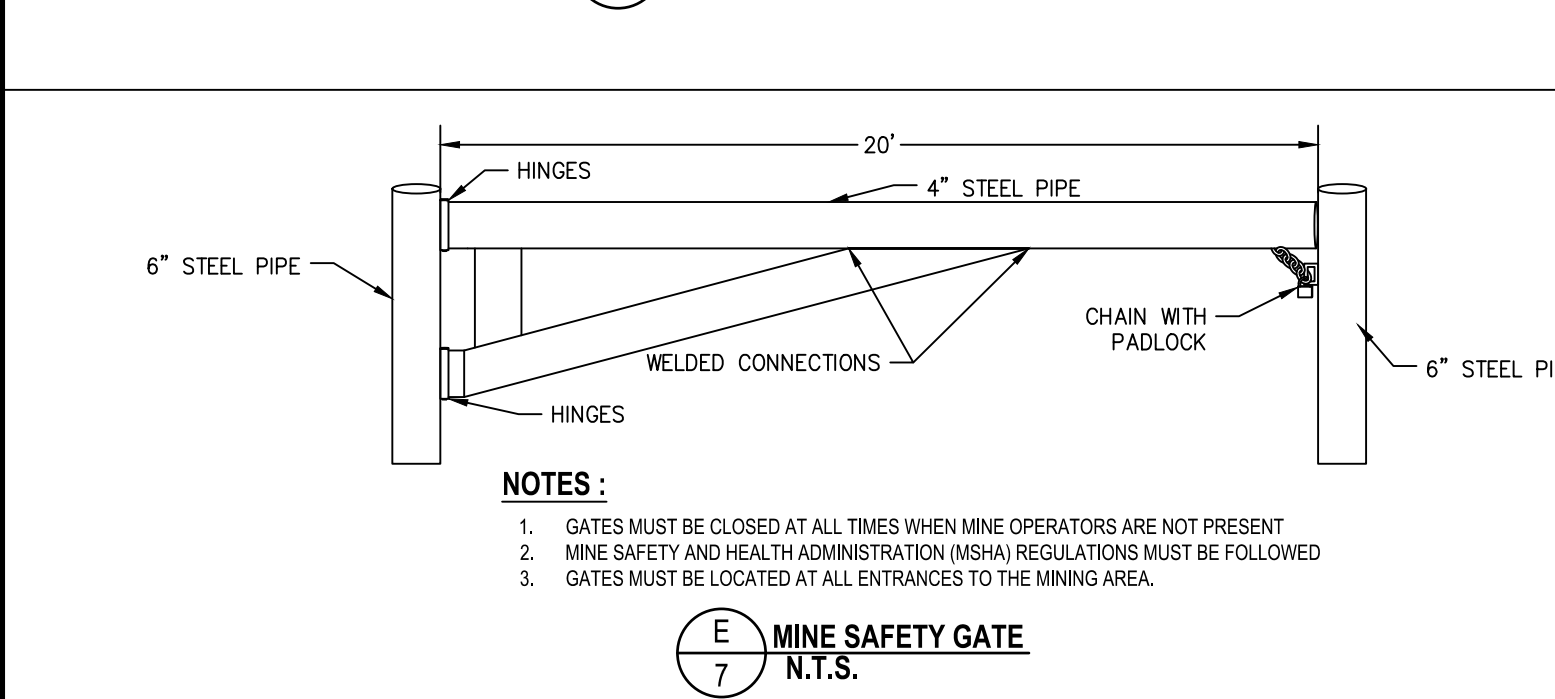
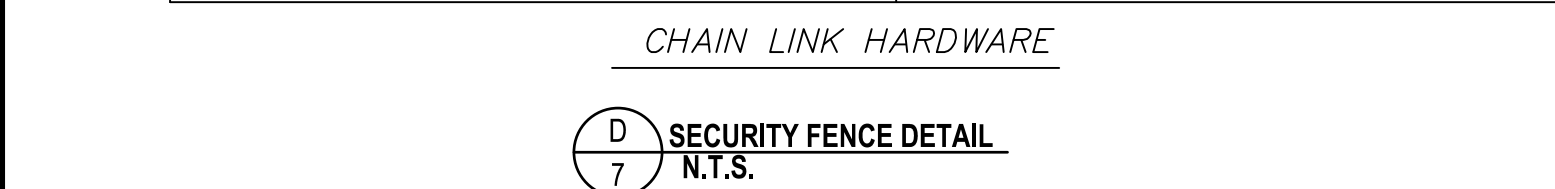
SHEET TITLE	EXCAVATION & RECLAMATION PLAN 2
OWNER	DARREN HEGGE
PROJECT	CURTIS CREEK SAND & GRAVEL CUP BONNER COUNTY, IDAHO
ORIGINAL STORED AT: 7B ENGINEERING 414 CHURCH ST STE 203 SANDPOINT, ID 83864	PROJECT # 24027 DRAWN BY: JMW CHECKED BY: DWL
NOT VALID OR APPROVED WHEN ELECTRONIC SIGNATURE DOES NOT COVER THIS NOTE	DRAWING DATE: 12/11/2025 SCALE: 1" = 20' (VALID FOR 24"x36" OR 22"x34") SHEET 6 OF 7







FENCE FABRIC	2" GALVANIZED DIAMOND MESH STEEL FABRIC
TIE WIRES	MIN. 9 GAUGE ALUMINUM WITH ONE HOOKED END
COIL TENSION WIRE	MIN. 7 GAUGE
BARBED WIRE:	14 GAUGE SPACED GALVANIZED MEDIUM CARBON STEEL WIRE WITH BARBS SPACED AT 5" C. TO C. GALVANIZING SHALL CONFORM TO APPLICABLE A.S.T.M. DES. A-121-66 FOR ZINC-COATED & AASHTO M 280 SPECIFICATIONS.
3-WIRE BARBARM:	BARBWIRE ARM (ONE PIECE "2" CUT) FITS 1 5/8" O.D. POST, 1 5/8" TOP RAIL" FITS 2" O.D. POST, 1 5/8" TOP RAIL" FITS 2 1/2" O.D. POST, 1 5/8" TOP RAIL" FITS 3" O.D. POST, 1 5/8" TOP RAIL"



NOTES:

- HARDWOOD POSTS SHALL HAVE A MINIMUM CROSS SECTIONAL AREA OF 3 SQUARE INCHES. STEEL POSTS SHALL BE STANDARD "T" OR "U" SECTION WEIGHING NOT LESS THAN 1 POUND PER LINEAR FOOT.
- GEOTEXTILES MEETING THE FOLLOWING ARE ACCEPTABLE:

PROPERTY	TEST METHOD	MINIMUM AVERAGE
GRAB TENSILE STRENGTH	ASTM D4632	90 LB
GRAB ELONGATION (@ 45 LB MIN)	ASTM D4632	50% MAX
PERMITTIVITY	ASTM D4491	0.05 SEC-1
APPARENT OPENING SIZE	ASTM D4751	#20 OR FINER
ULTRAVIOLET STABILITY RETAINED	ASTM D4353	70% STRENGTH @ 150 HRS

- OPTIONAL WIRE SUPPORT FENCE SHALL BE A MINIMUM OF 14.5 GAUGE WELDED WIRE W/ 6" MESH SPACING.
- IF OPTIONAL WIRE SUPPORT FENCE IS USED, ATTACH TO GEOTEXTILE W/ TIE WIRES OR RINGS AT MINIMUM 24" SPACINGS AND ATTACH WIRE FENCE TO POSTS W/ STAPLES. TIE WIRES OR RINGS IN 3 PLACES.
- IF OPTIONAL WIRE SUPPORT FENCE IS NOT USED, ATTACH GEOTEXTILE DIRECTLY TO POSTS W/ STAPLES. TIE WIRES OR RINGS IN 3 PLACES.
- WHERE JOINTS IN THE GEOTEXTILE FABRIC ARE REQUIRED, SPICE ONLY AT A SUPPORT POST, WITH A MINIMUM 6 INCH FOLDED OVERLAP.
- INSPECT SILT FENCE PERIODICALLY FOR DAMAGE AND REMOVE SEDIMENT WHEN IT REACHES ONE-HALF THE HEIGHT OF THE FENCE.

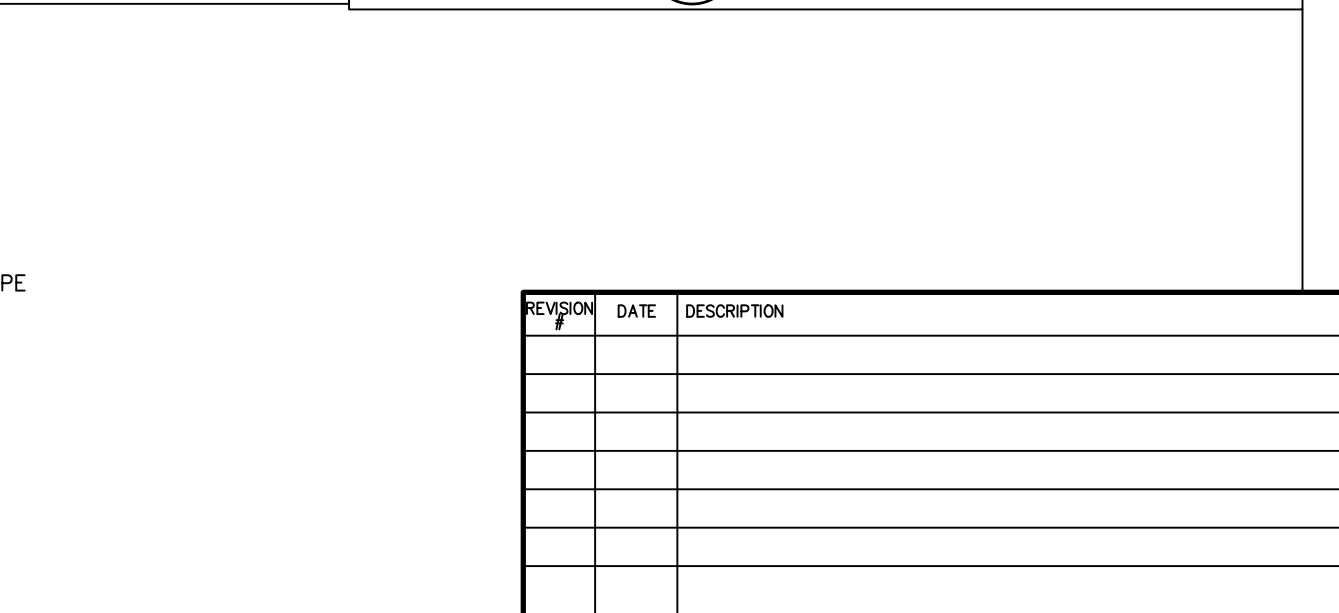
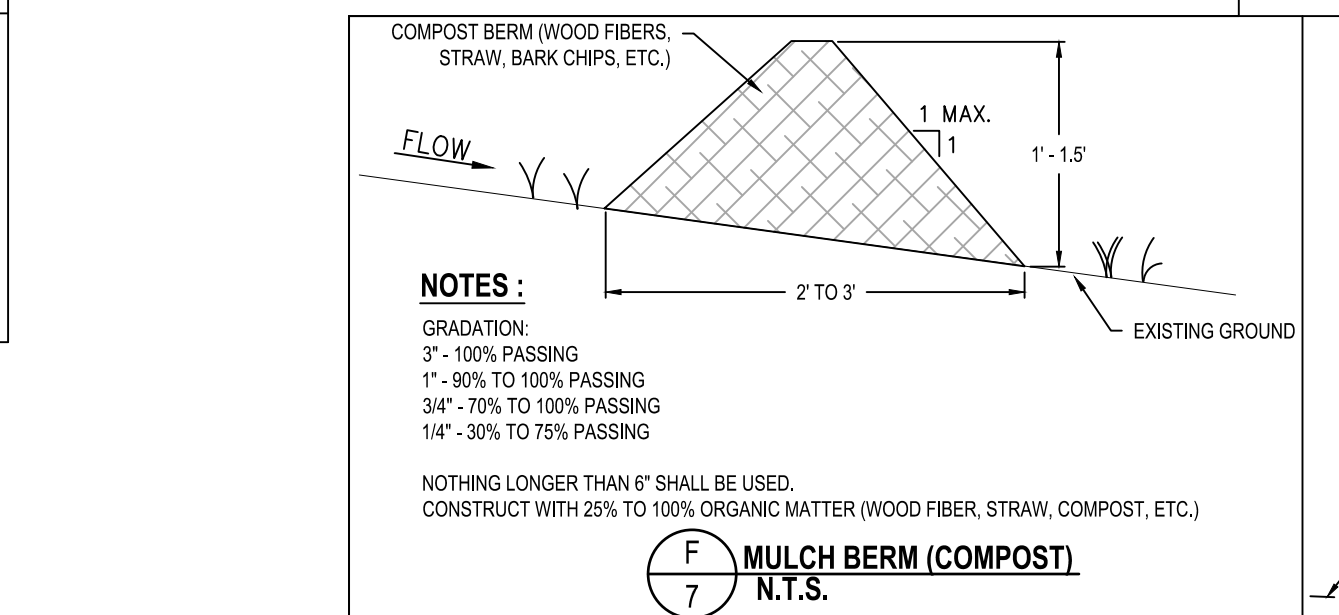
**C**  
7  
**SILT FENCE**  
N.T.S.

**CHAIN LINK FENCE GROUNDING TABLE**

FENCE DIST. FROM TRANSMISSION LINE	KV	GROUNDING INTERVAL
0' - 100'	500	200'
100' - 200'	500	500'
0' - 100'	345	400'
100' - 150'	345	1,000'
50' - 100'	230	500'

**CHAIN LINK FENCE GROUNDING DETAIL**

- CHAIN LINK FENCE NOTES**
- DETAIL MODIFIED FROM ITD STANDARD DRAWING NO. 610-1 CREATED DECEMBER 6, 2016.
  - PER BONNER COUNTY CODE 12-486C, FENCING MATERIAL SHALL COMPLIMENT EXTERIOR BUILDING MATERIALS EXCEPT WHEN OBSURED FROM PUBLIC VIEW WITH LANDSCAPING.
  - SPACE POST EQUAL DISTANCES APART, 10' MAXIMUM SPACING.
  - ADJUST THE POST TOP ELEVATIONS TO PROVIDE A SMOOTH VISUAL FENCE PROFILE. INSTALL CORNER POST AT HORIZONTAL BREAKS IN THE FENCE OF 15'.
  - STRETCH FENCE SMOOTH SO THAT IT HAS A UNIFORM APPEARANCE.
  - SELVAGE THE PLAIN WIRE ENDS ON TOP AND BOTTOM OF THE CHAIN LINK FABRIC BY TWISTED OR KNUCKLED METHOD. SEE WIRE SELVAGE DETAIL.
  - CHAIN LINK FENCE HARDWARE MAY VARY SOMEWHAT FROM THAT SHOWN IN THE CHAIN LINK FENCE HARDWARE TABLE. ENSURE THAT HARDWARE AND MATERIALS USED ARE UNIFORM AND COMPATIBLE.
  - INSTALL A TOP RAIL WHEN BARBED WIRE AND 3-WIRE BARBARM ARE USED.
  - PRIVACY FENCE SLATS ARE OPTIONAL UNLESS SHOWN ON PROJECT PLANS.
  - GROUND CHAIN LINK FENCES THAT ARE NEAR POWER TRANSMISSION LINES OR THAT INTERSECT TRANSMISSION LINES. SEE THE CHAIN LINK FENCE GROUNDING TABLE AND CHAIN LINK FENCE GROUNDING DETAILS. TO GROUND, CONNECT 6 GAUGE BRAIDED GROUND CABLE TO THE CHAIN LINK FABRIC EVERY 3' IN HEIGHT. GROUND THE FENCE ONCE IF THE FENCE SECTION IS SHORTER THAN THE GROUNDING INTERVAL.



Stormwater Management Calculations  
Rational Method  
**Pre-Developed**

Pre-Developed		Runoff from Table 6-2 Kennedy report	
Area(ft <sup>2</sup> )	Area(acres)	Runoff	Area * C
2264362	51.98	0.20	10.40
Totals	2264362.00	51.98	10.40

Developed "C" 0.20

Time increment	5 min
Time of concentration	5 min
Outflow	0 cfs
Design year	25
Area (sqft)	2264362 sqft
Area (acres)	51.983
Area x "C"	10.40
Developed "C" factor	0.20

1) input outflow (0.3 cfs 600 gal drywell, 1.0 cfs 1000 gal drywell)  
2) input surface area for basin (in sqft)  
3) input the basins "C" factor

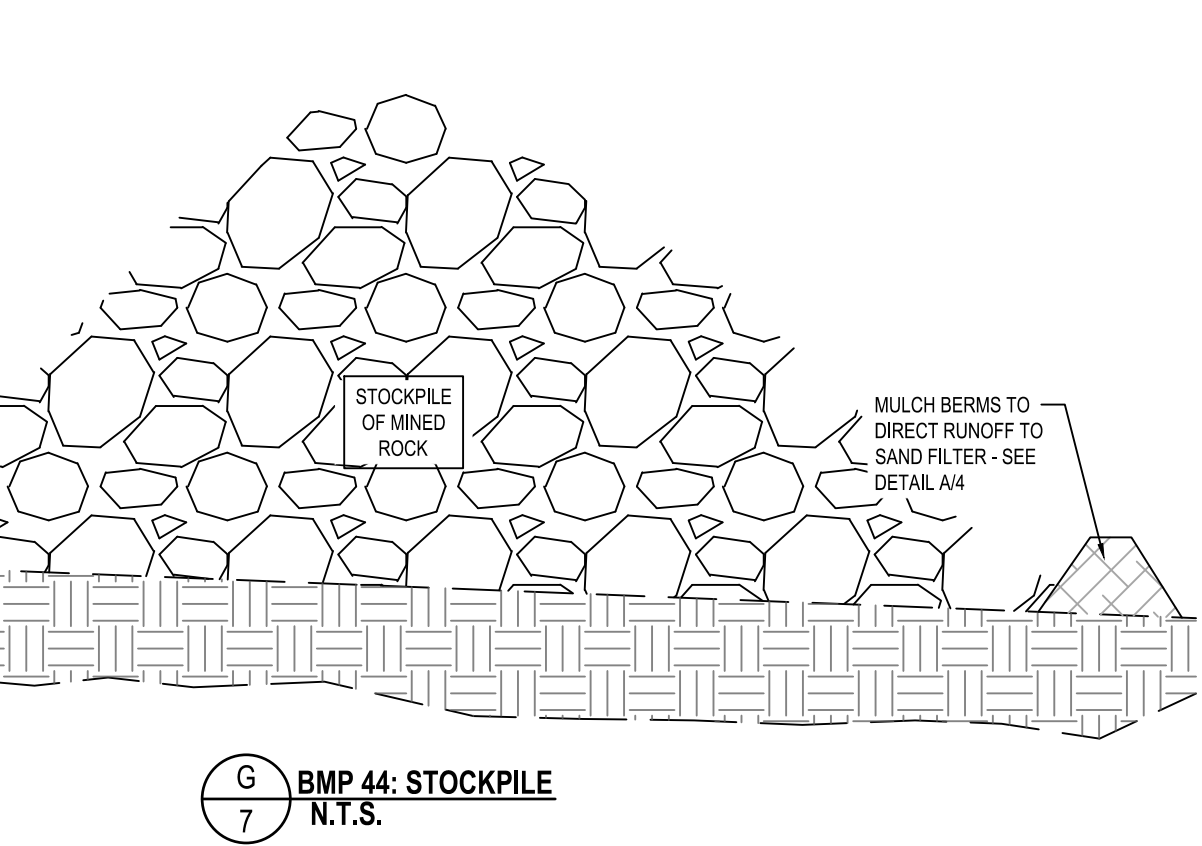
Time Inc. (min)	Time Inc. (sec)	Intensity (in / hr)	Q (cfs)	Volume (cf)
5	300	2.80	29.11	11702
10	600	2.10	21.83	15327
11	660	2.00	20.79	15844
12	720	1.90	19.75	16237
13	780	1.85	19.23	16964
14	840	1.75	18.19	17139
15	900	1.70	17.67	17709
20	1200	1.60	16.63	21658
25	1500	1.40	14.56	23317
30	1800	1.20	12.48	23729
35	2100	1.10	11.44	25182
40	2400	0.95	9.88	24711
45	2700	0.90	9.36	26218
50	3000	0.87	9.04	28058
55	3300	0.85	8.84	30064
60	3600	0.78	8.11	30021
65	3900	0.75	7.80	31205
70	4200	0.70	7.28	31308
75	4500	0.69	7.17	33013
80	4800	0.67	6.97	34146
85	5100	0.65	6.76	35154
90	5400	0.63	6.55	36037
95	5700	0.60	6.24	36192
100	6000	0.59	6.13	37429
105	6300	0.58	6.03	38604
110	6600	0.55	5.72	38323
115	6900	0.52	5.41	37854
120	7200	0.5	5.20	37958
125	7500	0.49	5.04	38343
130	7800	0.48	4.94	39064
135	8100	0.48	4.94	40547
140	8400	0.46	4.74	40325
145	8700	0.45	4.64	40866
150	9000	0.44	4.54	41346
155	9300	0.43	4.44	41767
160	9600	0.42	4.34	42127
165	9900	0.41	4.24	42427
170	10200	0.40	4.14	42667
175	10500	0.39	4.04	42847
180	10800	0.38	3.94	42966
360	21600	0.25	2.60	56406
720	43200	0.17	1.78	76907
1440	86400	0.11	1.13	97426

24 Hr Storm

25 year design (store or discharge 25 year / 2-hour storm event)  
24-Hour Volume (pre-developed) 97426 cu ft

Time of concentration calculation

Sheet Flow	n = manning roughness (woods)	0.240	USDA
p=2 year, 24 hour rainfall	2 in		
Slope (S)	0.65 ft/ft		
Length (L)	100 feet		
Tt=[0.007(nL) <sup>0.8</sup> ] / (((P) <sup>0.50</sup> *S <sup>0.4</sup> )) <sup>60</sup>		4.48 min	



Stormwater Management Calculations  
Rational Method  
**Post-Developed**

Post-Developed		Runoff from Table 6-2 Kennedy report	
Area(ft <sup>2</sup> )	Area(acres)	Runoff	Area * C
2264362	51.98	0.20	10.40
Totals	2264362.00	51.98	10.40

Stormwater Management Calculations  
Rational Method  
**Post-Developed**

Post-Developed		Runoff from Table 6-2 Kennedy report	
Area(ft <sup>2</sup> )	Area(acres)	Runoff	C*A
2264362	51.98	0.20	10.40
Totals	2264362.00	51.98	10.40

Developed "C" 0.600

Time increment	5 min
Time of concentration	5 min
Outflow (Infiltration)	1.8733 cfs
Design year	25 YR
Area (sqft)	2264362 sqft
Area (acres)	51.983 Ac
Area x "C"	31.19
Developed "C" factor	0.60

1) input outflow (0.3 cfs 600 gal drywell, 1.0 cfs 1000 gal drywell)  
2) input surface area for basin (in sqft)  
3) input the basins "C" factor

Time Inc. (min)	Time Inc. (sec)	Intensity (in / hr)	Q dev (cfs)	V in	Q pre (cfs)	V pre	Storage Required
5	300	2.80	87.33	35107	29.11	11702	☆ 22843
10	600	2.10	65.50	45980	21.83	15327	☆ 29529
11	660	2.00	62.38	47533	20.79	15844	☆ 30452
12	720	1.90	59.26	48712	19.75	16237	☆ 31126
13	780	1.85	57.70	50892	19.23	16964	☆ 32467
14	840	1.75	54.58	51416	18.19	17139	☆ 32704
15	900	1.70	53.02	53128	17.67	17709	☆ 33733
20	1200	1.60	49.90	64974	16.63	21658	☆ 41068
25	1500	1.40	43.67	69952	14.56	23317	☆ 43825
30	1800	1.20	37.43	71187	12.48	23729	☆ 44086
35	2100	1.10	34.31	75547	11.44	25182	☆ 46431
40	2400	0.95	29.63	74134	9.88	24711	☆ 44927
45	2700	0.90	28.07	78654	9.36	26218	☆ 47378
50	3000	0.87	27.13	84173	9.04	28058	☆ 50495
55	3300	0.85	26.51	90191	8.84	30064	☆ 53945
60	3600	0.78	24.33	90062	8.11	30021	☆ 53297
65	3900	0.75	23.39	93615	7.80	31205	☆ 55104
70	4200	0.70	21.83	93924	7.28	31308	☆ 54748
75	4500	0.69	21.52	98039	7.17	33013	☆ 57596
80	4800	0.67	20.90	102437	6.97	34146	☆ 59300
85	5100	0.65	20.27	105461	6.76	35154	☆ 60754
90	5400	0.63	19.65	108111	6.55	36037	☆ 61958
95	5700	0.60	18.71	108577	6.24	36192	☆ 61707
100	6000	0.59	18.40	112288	6.13	37429	☆ 63619
105	6300	0.58	18.09	115812	6.03	38604	☆ 65406
110	6600	0.55	17.15	114968	5.72	38323	☆ 64282
115	6900	0.52	16.22	113562	5.41	37854	☆ 62783
120	7200	0.5	15.59	113873	5.20	37958	☆ 62428
125	7500	0.49	15.13	115028	5.04	38343	☆ 62635
130	7800	0.48	14.83	117191	4.94	39064	☆ 63516
135	8100	0.48	14.83	121640	4.94	40547	☆ 65920
140	8400	0.46	14.23	120976	4.74	40325	☆ 64915
145	8700	0.45	13.93	122598	4.64	40866	☆ 65434
150	9000	0.44	13.63	124039	4.54	41346	☆ 65833
155	9300	0.43	13.33	125300	4.44	41767	☆ 66112
160	9600	0.42	13.03	126381	4.34	42127	☆ 66270
165	9900	0.41	12.73	127281	4.24	42427	☆ 66308
170	10200	0.40	12.42	128001	4.14	42667	☆ 66226
175	10500	0.39	12.12	128540	4.04	42847	☆ 66024
180	10800	0.38	11.82	128899	3.94	42966	☆ 65701
360	21600	0.25	7.80	169219	2.60	56406	☆ 72350
720	43200	0.17	5.3282	230722	1.7761	76907	☆ 72889
1440	86400	0.11	3.38	292279	1.13	97426	☆ 33001

25 year design (store or infiltrate 25 year peak flow and volume)  
Peak Storm required storage 72889 CF

Overall Treatment Req and Soil Infiltration Rate

Total Impervious Area	0 SF	0%
Req Treatment	0.0 CF	
Req Treatment Area (8" depth)	0.0 SF	
Proposed Treatment Area	40463 SF	
Treatment soil infiltration	2 in/hr	
Soil infiltration of Treatment Area	1.8732870 CFS	
Depth of Treatment Area Req'd for Detention	0.16 FT	

Time of concentration calculation

Sheet Flow	n = manning roughness (woods)	0.4	USDA
p=2 year, 24 hour rainfall	1.8 in		
Slope (S)	0.2 ft/ft		
Length (L)	100 feet		
Tt=[0.007(nL) <sup>0.8</sup> ] / (((P) <sup>0.50</sup> *S <sup>0.4</sup> )) <sup>60</sup>		11.40 min	

BASIN 1 CALCULATIONS

ORIGINAL STORED AT: 7B ENGINEERING 414 CHURCH ST STE 203 SANDPOINT, ID 83864	PROJECT #: 24027
DRAWN BY: JMW	CHECKED BY: DWL
NOT VALID OR APPROVED WHEN ELECTRONIC SIGNATURE DOES NOT COVER THIS NOTE	
DRAWING DATE: 12/11/2025	SCALE: NTS
(VALID FOR 24"x36" OR 22"x34")	
SHEET 7 OF 7	

