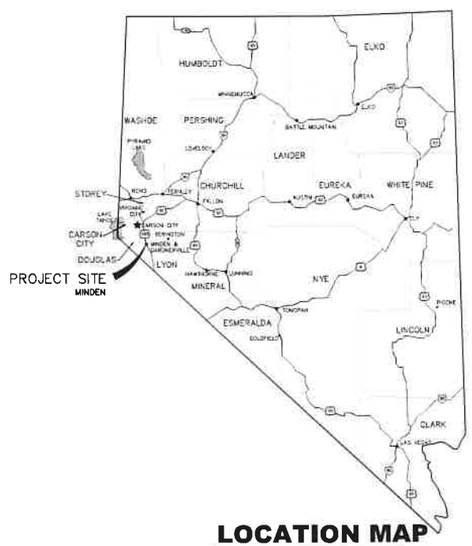
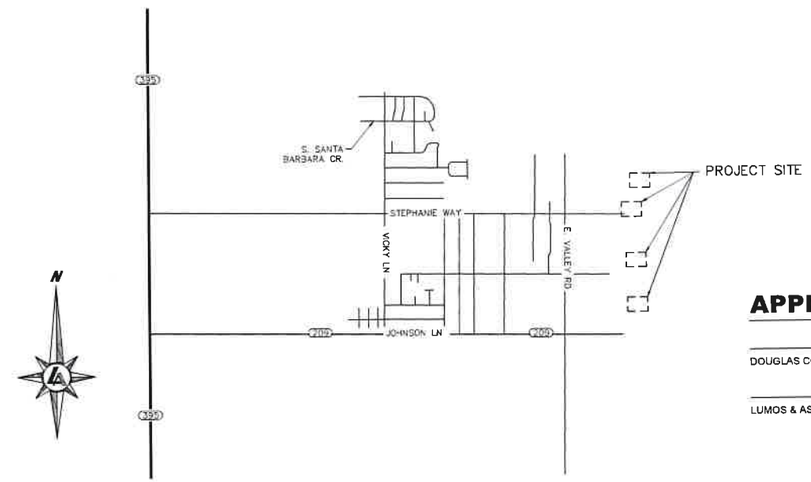
DOUGLAS COUNTY

JOHNSON LANE DRAINAGE BASINS
PWP-DO-2022-390



LOCATION MAP



VICINITY MAP

APPROVED BY:

DOUGLAS COUNTY _____ DATE

LUMOS & ASSOCIATES, INC. _____ DATE

OWNER/DEVELOPER

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BASIS OF BEARING

THE BASIS OF BEARING FOR THIS SURVEY IS BASED ON NEVADA STATE PLANE GRID COORDINATE SYSTEM WEST ZONE AND NAD 83 (2011). ALL HORIZONTAL DATA FOR THIS PROJECT IS TIED TO THE NGS STATION 15E220X. PID AI5106

BASIS OF ELEVATION

DATUM: NAVD 88
PROJECT BENCHMARK = NGS MONUMENT NO. 158220X. PID AI5106, HAVING AN ELEVATION OF 4923.57'

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06/21/2022

DOUGLAS COUNTY
JOHNSON LANE DRAINAGE BASINS
TITLE SHEET
MINDEN NEVADA DOUGLAS

REV	DATE	DESCRIPTION	BY

BID/PERMIT SET
CONSTRUCTION DOCUMENTS
JUNE 2022

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C1.0

DRAWN BY: IKM
DESIGNED BY: IKM
CHECKED BY: TLR
JOB NO.: 9953.001

I:\LAProj\9953.001 - Douglas County Johnson Lane Rescue\DWG\Civil\9953.000 TITLE INDEX DETAILS.dwg,C1.0 TITLE SHEET,
06/21/2022 03:26 pm, mstuart

LEGEND

EXISTING		PROPOSED
	MAJOR CONTOUR LINE	4174
	MINOR CONTOUR LINE	4174
	TREE	
	ROCK	
	EDGE OF AGG BASE ACCESS ROAD	
	AC PAVING TO BE REMOVED	
	CURB & GUTTER	
	CONCRETE	
	UTILITY POLE	
	LIGHT	
	GUY WIRE	
ET	ELECTRIC TRANSFORMER	ET
EV	ELECTRIC VAULT	EV
EP	ELECTRIC PANEL	EP
EC	ELECTRIC CABINET	EC
EB	ELECTRIC BOX	EB
EM	ELECTRIC METER	EM
EG	ELECTRIC GENERATOR	EG
E	ELECTRIC MANHOLE	E
AC	AIR CONDITIONER	AC
	ELECTRIC OUTLET	
	BOLLARD	
	STORM DRAIN MANHOLE / DROP INLET	
	CATCH BASIN	
WV	WATER VALVE	WV
IRV	IRRIGATION CONTROL VALVE WATER	IRV
WM	METER	WM
WS	WATER SPIGOT / HOSE BIB WATER	WS
W	MANHOLE	W
WV	WATER VAULT	WV
	FIRE HYDRANT	
GV	GAS VALVE	GV
GM	GAS METER	GM
T	TELEPHONE MANHOLE	T
TB	TELEPHONE BOX	TB
TV	TELEPHONE VAULT	TV
S	SEWER MANHOLE	S
SSCO	SEWER CLEANOUT	SSCO
	SURVEY MONUMENT	
	CONTROL POINT	
	BARRICADE	
	SIGN	
	RETAINING WALL	
C C	FENCE	
	GRADE BREAK	
	FLOW LINE	
	SOIL TEST PIT	
	DETAIL CALLOUT	X / C.X.X
	COMM LINE	COMM
	GAS LINE	8"G
	ELECTRIC LINE	ELEC
	SEWER LINE	SS 12" PVC SS
	WATER LINE	12" C900 W
AIR	AIR LINE	AIR
	STORM DRAIN	SD 12" RCP SD
RECL WL	RECLAIMED WATER LINE	RECL WL

ABBREVIATIONS

AC	ASPHALT CONCRETE	N	NORTH
ACP	ASBESTOS CEMENT PIPE	NAP	NOT A PART
AGG	AGGREGATE	NIP	NOT IN PROJECT
BC	BEGIN CURVE (HORIZONTAL)	NTS	NOT TO SCALE
BOW	BOTTOM OF WALL	OC	ON CENTER
BF, BOF	BOTTOM OF FOOTING	OD	OUTSIDE DIAMETER
BV	BUTTERFLY VALVE	OH	OVERHEAD
BVC	BEGIN VERTICAL CURVE	(P)	PROPOSED
BW	BACK OF WALK	PCC	PORTLAND CEMENT CONCRETE
CB	CATCH BASIN	PG	PAD GRADE
cfs	CUBIC FEET PER SECOND	PI	POINT OF INTERSECTION
CF	CUBIC FEET	PIVC	POINT OF INTERSECTION VERTICAL CURVE
C&G	CURB AND GUTTER	PL	PROPERTY LINE
℄	CENTER LINE	POCC	POINT OF COMPOUND CURVATURE
CL	CLASS / CENTER LINE	POT	POINT OF TANGENCY
CMP	CORRUGATED METAL PIPE	PP	POWER POLE
COMP	COMPACTION	PRC	POINT OF REVERSE CURVE
CONC	CONCRETE	PRVC	POINT OF REVERSE VERTICAL CURVE
CONTR	CONTRACTOR	PVC	POLYVINYL CHLORIDE
CP	CONCRETE PAD	PVMT	PAVEMENT
CTV	CABLE TELEVISION	Q 5	5 YEAR PEAK FLOW
DI	DROP INLET	Q 100	100 YEAR PEAK FLOW
DIA	DIAMETER	R	RADIUS
DWY	DRIVEWAY	RCP	REINFORCED CONCRETE PIPE
E	EAST	REF	REFERENCE
EA	EACH	RET	CURB RETURN
EC	END CURVE (HORIZONTAL)	RP	RADIUS POINT
ELL	ELBOW	RT	RIGHT
ELEC	ELECTRICAL	R/W, ROW	RIGHT-OF-WAY
ELEV	ELEVATION	S=	SLOPE
EVC	END VERTICAL CURVE	S	SOUTH
EX, (E)	EXISTING	SD	STORM DRAIN
EXT	EXTERIOR	SDMH	STORM DRAIN MANHOLE
FCA	FLANGE COUPLING ADAPTER	SL	STREET LIGHT
FE	FINISH ELEVATION	SS	SANITARY SEWER
FES	FLARED END SECTION	SSCO	SANITARY SEWER CLEAN OUT
FF	FINISH FLOOR	SSMH	SANITARY SEWER MANHOLE
FFC	FRONT FACE OF CURB	SSPWC	STANDARD SPEC. FOR PUBLIC WORKS CONSTRUCTION
FG	FINISH GRADE		
FH	FIRE HYDRANT	STA	STATION
FL	FLOW LINE	SW	SIDEWALK
FLG	FLANGE	TELE	TELEPHONE
fps	FEET PER SECOND	TBO	TEMPORARY BLOW OFF VALVE
FTG	FOOTING	TC	TOP OF CURB, TOP OF CONC
G	GAS	TG	TO GRADE
GALV	GALVANIZED	TOB	TOP OF BERM
GB	GRADE BREAK	TF, TOF	TOP OF FOOTING
GDW	GRAVEL DRIVEWAY	TOW	TOP OF WALL
GD	GROUND	TS	TRAFFIC SIGNAL
GV	GATE VALVE	TSCB	TRAFFIC CONTROL SIGNAL BOX
H	HANDICAPPED	TR	TOP OF RAIL
HGL	HYDRAULIC GRADE LINE	TRANS	TRANSITION
HORIZ	HORIZONTAL	TYP	TYPICAL
HP	HIGH POINT	UG/P	UNDER GROUND POWER
ID	INSIDE DIAMETER	UNO	UNLESS NOTED OTHERWISE
IE	INVERT ELEVATION	Vs	VELOCITY AT 5 YEAR PEAK
INT	INTERSECTION	VC	VERTICAL CURVE
IRR	IRRIGATION	VEL	VELOCITY
LAT	LATERAL	VERT	VERTICAL
LF	LINEAR FEET	VG	VALLEY GUTTER
LP	LOW POINT	W	WEST
LT	LEFT	W/G	WATER AND GAS
MAX	MAXIMUM	WL	WATER LINE
MDD	MAXIMUM DRY DENSITY	WM	WATER METER
MH	MANHOLE	WS	WATER SURFACE
MIN	MINIMUM	WV	WATER VALVE
MJ	MECHANICAL JOINT	WWF	WELDED WIRE FABRIC
MMD	MAXIMUM MARSHALL DENSITY	YR	YEAR
MUTCD	MANUAL FOR TRAFFIC CONTROL DEVICES		

811

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NOTES:

GENERAL

1. ALL WORK SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, LATEST EDITION.
2. THE CONTRACTOR SHALL REFER TO THE STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION, AS ADOPTED BY THE PERMITTING ENTITY, FOR ALL DETAILING NOT SHOWN ON THESE PLANS.
3. CONSTRUCTION SHALL COMPLY WITH THESE PLANS AND CURRENT NDOT STANDARD PLANS/SPECIFICATIONS (STANDARD SPECIFICATIONS) AND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ARRANGING A PRE-CONSTRUCTION JOB SITE CONFERENCE WITH GOVERNING AGENCIES, ALL UTILITY COMPANIES, OWNER'S REPRESENTATIVES, AND THE PROJECT ENGINEER PRIOR TO COMMENCING WORK. THIS MEETING SHALL BE HELD AT LEAST FORTY-EIGHT (48) HOURS, OR TWO (2) BUSINESS DAYS, PRIOR TO THE START OF CONSTRUCTION AND SHALL COMMUNICATE SCHEDULES, CONTRACTORS MEAN AND METHODS, MATERIALS TO BE USED, AND OTHER RELEVANT MATTERS ASSOCIATED WITH THE CONSTRUCTION OF THE PROJECT.
5. ALL WORK EITHER DIRECTLY OR INDIRECTLY RELATED TO THE PROJECT SHALL BE COORDINATED WITH THE APPROPRIATE UTILITY SYSTEM MANAGER.
6. THE CONTRACTOR SHALL MAINTAIN AN ONSITE RECORD COPY OF ALL DRAWINGS, SPECIFICATIONS, ADDENDA, CHANGE ORDERS, WORK CHANGE DIRECTIVES, FIELD ORDERS, FIELD CHANGES, AND WRITTEN INTERPRETATIONS AND CLARIFICATIONS. RECORDS SHALL BE IN GOOD ORDER AND ANNOTATED TO SHOW CHANGES MADE DURING CONSTRUCTION.
7. CONTRACTOR SHALL PROVIDE MATERIALS AND EQUIPMENT SUBMITTALS AND/OR SHOP DRAWINGS TO THE PROJECT ENGINEER FOR REVIEW PRIOR TO ORDERING OR INSTALLATION. A SIGNED SET OF REVIEWED SUBMITTALS MUST ALWAYS BE AVAILABLE ONSITE DURING CONSTRUCTION.
8. THE CONTRACTOR SHALL CALL UNDERGROUND SERVICE ALERT AT 1-800-642-2444 TO PROVIDE FIELD LOCATIONS OF UNDERGROUND UTILITIES PRIOR TO THE START OF CONSTRUCTION.
9. THE LOCATION OF EXISTING UTILITIES SHOWN ON THESE PLANS ARE BASED ON THE BEST INFORMATION AVAILABLE TO THE ENGINEER. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY PROPOSED POINTS OF CONNECTION AND IN AREAS OF POSSIBLE CONFLICT WITH NEW UTILITY INSTALLATION PRIOR TO BEGINNING CONSTRUCTION. SHOULD THE CONTRACTOR FIND ANY DISCREPANCIES BETWEEN THE CONDITIONS EXISTING IN THE FIELD AND THE INFORMATION SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER BEFORE PROCEEDING WITH CONSTRUCTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROTECT AND MAINTAIN ALL EXISTING UTILITIES WHETHER OR NOT SHOWN ON THE PLAN.
10. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROCURE ALL NECESSARY PERMITS, LICENSES, INSURANCE POLICIES, ETC. AS MAY BE NECESSARY TO COMPLY WITH LOCAL, COUNTY, STATE, AND FEDERAL LAWS ASSOCIATED WITH THE PERFORMANCE OF THE WORK; UNLESS OTHERWISE OBTAINED BY THE OWNER.
11. THE CONTRACTOR SHALL PREPARE A TRAFFIC CONTROL PLAN AND PROVIDE, PLACE, AND MAINTAIN ALL LIGHTS, SIGNS, BARRICADES, FLAG PERSONS, PILOT CAR, OR OTHER DEVICES NECESSARY TO CONTROL TRAFFIC THROUGH THE CONSTRUCTION AREA AND FOR PUBLIC SAFETY. ALL TRAFFIC CONTROL OPERATIONS SHALL COMPLY WITH THE LATEST MUTCD. AT NO TIME WILL OBSTRUCTIONS BE LEFT IN THE ROADWAY DURING NIGHT HOURS. ALL TRAFFIC CONTROL PLANS SHALL BE PREPARED BY A REGISTERED CIVIL ENGINEER OR ATTSA CERTIFIED PERSONNEL.
12. THE CONTRACTOR AGREES TO ASSUME SOLE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, AND FURTHER AGREES THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS IN ACCORDANCE WITH THE PROVISIONS OUTLINED BY THE PROJECT CONTROL AND THE STANDARD SPECIFICATIONS.
13. THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR COMPLIANCE WITH ALL APPLICABLE PROVISIONS OF OSHA AND NRS CHAPTER 618.
14. THE CONTRACTOR SHALL PURSUE THE WORK IN A CONTINUOUS AND DILIGENT MANNER, CONFORMING TO ALL THE PERTINENT SAFETY REGULATIONS TO ENSURE A TIMELY COMPLETION OF THE PROJECT.
15. THE CONTRACTOR SHALL MAINTAIN A CLEAN PROJECT SITE, REMOVING CONSTRUCTION DEBRIS AT THE END OF EACH ACTIVITY DAY. THE CONTRACTOR SHALL MAINTAIN DEBRIS FREE CONSTRUCTION ROUTES, ADJACENT STREETS AND STORM DRAIN SYSTEMS.
16. TEMPORARY CONSTRUCTION FENCING SHALL BE PROVIDED AND MAINTAINED BY THE CONTRACTOR THROUGHOUT THE DURATION OF THE PROJECT IN AREAS AS DELINEATED ON THE PLANS OR AS DIRECTED BY THE PROJECT ENGINEER. THE TEMPORARY FENCING SHALL PREVENT CHILDREN AND PETS FROM ENTERING THE CONSTRUCTION AREA, CREATE A VISUAL BARRIER OF THE CONSTRUCTION ACTIVITIES FROM THE ADJACENT RESIDENCE AND YARDS, AND PROTECT VEGETATION FROM CONSTRUCTION EQUIPMENT.
17. THE CONTRACTOR SHALL USE ONLY AUTHORIZED SITES FOR STORAGE OF EQUIPMENT AND MATERIALS AND OBTAIN PROPER APPROVALS FROM THE LAND OWNER AND LOCAL GOVERNING AUTHORITY TO DO SO. CONTRACTOR SHALL BE RESPONSIBLE FOR THE SECURITY OF ALL EQUIPMENT AND MATERIALS.
18. CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING SURVEY MONUMENTS AND OTHER SURVEY MARKERS DURING CONSTRUCTION. IN THE EVENT A MONUMENT IS DISTURBED, THE CONTRACTOR SHALL HAVE THE MONUMENT REPLACED, AT HIS OWN EXPENSE, BY A LICENSED SURVEYOR IN THE STATE OF THE PROJECT SITE.
19. CONSTRUCTION HOURS SHALL BE WEEKDAYS BETWEEN 7:00 AM AND 6:00 PM UNLESS OTHERWISE DICTATED BY LOCAL ORDINANCE. CONTRACTOR SHALL OBTAIN APPROVAL FROM THE PROJECT ENGINEER TO MODIFY WORK HOURS.
20. ALL FIELD CHANGES MUST BE PRE-APPROVED BY THE PROJECT ENGINEER.
21. SHOULD IT APPEAR THAT THE WORK TO BE DONE, OR ANY MATTER RELATIVE THERETO, IS NOT SUFFICIENTLY DETAILED OR EXPLAINED ON THESE PLANS, THE CONTRACTOR SHALL CONTACT THE PROJECT ENGINEER FOR SUCH FURTHER EXPLANATIONS AS MAY BE NECESSARY.
22. ALL SALVAGED MATERIALS ARE THE PROPERTY OF THE OWNER AND SHALL BE PALLETIZED ONSITE UNLESS OTHERWISE ARRANGED WITH THE OWNER AND/OR PROJECT ENGINEER.
23. THE OWNER IS RESPONSIBLE FOR FURNISHING QUALIFIED SITE INSPECTIONS AS REQUIRED TO COMPLY WITH LOCAL ORDINANCES.
24. A GEOTECHNICAL INVESTIGATION WAS PERFORMED ON THIS PROJECT. ALL RECOMMENDATIONS INCLUDED IN THE REPORT ARE HEREBY MADE A PART OF THE CONSTRUCTION DOCUMENTS UNLESS MODIFIED WITHIN THESE PLANS. INSPECTION AND TESTING DURING CONSTRUCTION SHALL BE REQUIRED IN ACCORDANCE WITH THE RECOMMENDATIONS CONTAINED WITHIN THE REPORT.
    TITLE: JOHNSON LANE BASINS
    DATE: FEBRUARY, 2022

UNDERGROUND UTILITIES

25. THE CONTRACTOR SHALL FIELD VERIFY UTILITY LOCATIONS NEAR OR WITHIN THE CONSTRUCTION LIMITS WITH THE RESPECTIVE UTILITY COMPANIES PRIOR TO BEGINNING CONSTRUCTION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ARRANGE FOR THE NECESSARY RELOCATION OF ANY UTILITY. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES INVOLVED AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO BEGINNING WORK.
26. NO OTHER UTILITIES MAY BE PLACED IN A WATER OR SEWER TRENCH.
27. ALL VALVE BOXES, MANHOLE STRUCTURES, AND CLEAN OUTS SHALL BE MARKED AND ACCESSIBLE AT ALL TIMES.
28. CONTRACTOR SHALL SUPPORT TRENCH SIDEWALLS IN ACCORDANCE WITH ALL APPLICABLE LAWS AND GOVERNING SAFETY REGULATIONS. SHEETING OR SHORING SHALL CONFORM TO LOCAL REGULATIONS AND OSHA STANDARDS.
29. ENDS OF UNFINISHED PIPE SHALL BE SEALED AT THE END OF EACH DAY.
30. PIPE SHALL BE LAID IN THE UPHILL DIRECTION, WITH BELL ENDS UPHILL.
31. THE CONTRACTOR SHALL COORDINATE ALL WATER MAIN SHUT DOWNS AND TIE-INS WITH THE WATER UTILITY A MINIMUM OF FORTY-EIGHT (48) HOURS OR TWO (2) BUSINESS DAYS IN ADVANCE.
32. ALL UNDERGROUND VALVES, TEES, FITTINGS, ETC. LARGER THAN 2" SHALL BE COATED TO PROTECT AGAINST CORROSION.
33. ALL WATER PROJECT MATERIAL (PIPES, VALVES, LATERALS AND APPURTENANCES) SHALL BE LEAD FREE AND MEET THE MINIMUM REQUIREMENTS OF THE NEVADA ADMINISTRATIVE CODE AND NSF/ANSI 61.
34. ALL THRUST BLOCKS SHALL BE INSPECTED PRIOR TO BACK-FILL.
35. ALL BOLTS AT THRUST BLOCKS AND VALVE SADDLES SHALL BE COVERED WITH VISQUEEN AND TAPED PRIOR TO CONCRETE PLACEMENT.
36. THE WATER MAINS SHALL NOT BE PLACED INTO SERVICE UNTIL:
    a. THE WATER MAIN HAS BEEN DISINFECTED IN ACCORDANCE WITH AWWA, NEVADA DEPARTMENT OF ENVIRONMENTAL PROTECTION (NDEP), THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTIONS STANDARDS.
    b. THE DISPOSAL OF ANY SPENT CHLORINE SOLUTIONS MUST BE COORDINATED WITH NDEP'S BUREAU OF WATER POLLUTION CONTROL.
    c. ANALYSIS OF THE WATER MAIN WHICH INDICATE THAT THE WATER MEETS PRIMARY DRINKING WATER STANDARDS FOR COLIFORM BACTERIA (ABSENT FOR COLIFORM BACTERIA) HAVE BEEN OBTAINED AND REPORTED TO NDEP'S BUREAU OF SAFE DRINKING WATER. SAMPLING SHALL BE IN ACCORDANCE WITH NDEP REGULATIONS.
37. PVC PIPE SHALL BE TESTED PER AWWA C605 AND DUCTILE IRON PIPE SHALL BE TESTED FOR AWWA C600. OTHER MATERIALS SHALL BE TESTED PER REQUIREMENTS IN THE STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION SECTION 336.
38. CONTRACTOR SHALL CONDUCT PIPING TESTS BEFORE JOINTS ARE COVERED AND AFTER THRUST BLOCKS HAVE HARDENED SUFFICIENTLY. FILL PIPELINE 24 HOURS BEFORE TESTING AND APPLY TEST PRESSURE TO STABILIZE SYSTEM. USE ONLY POTABLE WATER.
39. CONTRACTOR SHALL PERFORM PLASTIC PIPE BALL AND MANDREL TEST ON NEWLY INSTALLED SEWER PIPE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
40. CONTRACTOR SHALL PERFORM AIR PRESSURE TESTING ON NEWLY INSTALLED SEWER PIPE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTIONS.

GRADING, EXCAVATION & SURFACE IMPROVEMENTS

41. THE CONTRACTOR IS RESPONSIBLE FOR PERFORMING THEIR OWN QUANTITY TAKE-OFF AND SHALL BUDGET THE PROJECT ACCORDINGLY. ALL EXCESS GRADING MATERIALS SHALL BE DISPOSED OF OFFSITE.
42. ALL EARTHWORK ACTIVITIES SHALL BE IN ACCORDANCE WITH THE PROJECT'S GEOTECHNICAL REPORT.
43. THE SOILS ENGINEER SHALL APPROVE ALL EARTHWORK AND GRADING TO CONFIRM COMPACTION REQUIREMENTS ARE MET.
44. CONTRACTOR SHALL PROTECT EXISTING PAVING, CONCRETE, LANDSCAPING, FENCING, MAILBOXES, SIGNS AND ANY OTHER IMPROVEMENTS NOT SPECIFICALLY CALLED OUT FOR REPLACEMENT. CONTRACTOR SHALL REPAIR/REPLACE ANYTHING DAMAGED BY FORCES UNDER THEIR EMPLOY OR CONTRACT.
45. ALL ASPHALT CONCRETE SURFACES SHALL BE SAWCUT THREE FEET MINIMUM INSIDE THE EDGE OF PAVEMENT TO A NEAT, STRAIGHT LINE AND REMOVED. THE EXPOSED PAVEMENT TIE-IN EDGES SHALL BE METICULOUSLY CLEANED OF ALL LOOSE MATERIAL AND THEN TREATED WITH BITUMINOUS EMULSION PRIOR TO PAVING. THE EXPOSED BASE MATERIALS SHALL BE GRADED AND RECOMPACTED PRIOR TO PAVING.

ENVIRONMENTAL

46. ALL CONSTRUCTION SHALL BE PERFORMED IN COMPLIANCE WITH THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES). CONTRACTOR IS RESPONSIBLE FOR ACQUIRING AND MAINTAINING A SWPPP.
47. INSTALLATION AND MAINTENANCE OF EROSION CONTROL MEASURES ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PREVENTION OF EROSION AND SILTATION FROM ENTERING THE STORM DRAIN SYSTEM, NATURAL DRAINAGE COURSES, AND/OR INTRUDING UPON ADJACENT ROADWAYS AND PROPERTIES. EROSION CONTROL MEASURES SHOWN ON THESE PLANS ARE INTENDED AS A GUIDE. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED AS DETERMINED IN THE FIELD. THIS RESPONSIBILITY SHALL APPLY THROUGHOUT THE COURSE OF CONSTRUCTION AND UNTIL ALL DISTURBED AREAS HAVE BECOME STABILIZED AND SHALL NOT BE LIMITED TO WET WEATHER PERIODS. THE CONTRACTOR IS RESPONSIBLE FOR SWPPP UPDATES.
48. THE CONTRACTOR SHALL MAINTAIN AN ON-GOING DUST CONTROL PROGRAM INCLUDING WATERING OF OPEN AREAS, TO CONFORM WITH THE LATEST FEDERAL, STATE, AND COUNTY AIR POLLUTION REGULATIONS. CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND UPDATING DUST CONTROL PERMITS FOR THE PROJECT.
49. ALL AREAS DISTURBED AND LEFT UNDEVELOPED FOR A PERIOD OF MORE THAN 30 DAYS SHALL BE STABILIZED BY THE APPLICATION OF AN APPROVED DUST PALLIATIVE OR HYDROMULCH.
50. THE CONTRACTOR SHALL IDENTIFY A STANDBY CREW FOR EMERGENCY WORK AND THEY SHALL BE AVAILABLE AT ALL TIMES. MATERIAL NECESSARY TO FACILITATE RAPID CONSTRUCTION OF TEMPORARY DEVICES OR TO REPAIR DAMAGED EROSION CONTROL MEASURES SHALL BE AVAILABLE ON-SITE AND STOCKPILED AT APPROVED LOCATIONS.
51. PROTECTIVE MEASURES AND TEMPORARY DRAINAGE PROVISIONS SHALL BE USED TO PROTECT ADJOINING PROPERTIES DURING CONSTRUCTION OF IMPROVEMENTS.
52. AFTER A RAINSTORM, ALL SILT AND DEBRIS SHALL BE REMOVED FROM CHECK BERMS AND DESILTING FACILITIES, GRADED SLOPE SURFACE PROTECTION MEASURES DAMAGED DURING THE RAINSTORM SHALL ALSO BE REPAIRED.
53. FILL SLOPES AT THE PROJECT PERIMETER MUST DRAIN AWAY FROM THE TOP OF THE SLOPE AT THE END OF EACH WORKING DAY.
54. ALL DISTURBED AREAS ARE REQUIRED TO HAVE A PALLIATIVE APPLIED FOR DUST CONTROL. ALL GRADING SHALL COMPLY WITH STATE AND COUNTY REGULATIONS.
55. A SIX-FOOT HIGH PERIMETER FENCE OR A 24-HOUR GUARD SHALL BE POSTED ON THE SITE WHENEVER THE DEPTH OF WATER IN A FACILITY EXCEEDS 18".
56. ALL AREAS DISTURBED BECAUSE OF THE WORK SHALL BE REVEGETATED IN ACCORDANCE WITH INDUSTRY BEST MANAGEMENT PRACTICES.
57. IF GROUNDWATER IS ENCOUNTERED, THE CONTRACTOR SHALL STOP WORK IMMEDIATELY, PREPARE A DEWATERING PLAN, AND OBTAIN APPROVAL FROM THE PROJECT ENGINEER BEFORE PROCEEDING WITH WORK. DEWATERING ACTIVITIES MAY REQUIRE THE CONTRACTOR TO OBTAIN A DISCHARGE/PUMPING PERMIT FROM THE STATE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN SUCH PERMITS.
58. ALL STREETS SHALL BE MAINTAINED FREE OF DUST AND MUD CAUSED BY GRADING OPERATIONS.

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NEVADA LICENSED PROFESSIONAL ENGINEER
IAN K. HARFEY
EXP: 12/31/23
CIVIL
06/21/2022

DOUGLAS COUNTY
JOHNSON LANE DRAINAGE BASINS
NOTES SHEET
MINDEN DOUGLAS NEVADA

REV	DATE	DESCRIPTION	BY

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CONSTRUCTION DOCUMENTS
JUNE 2022

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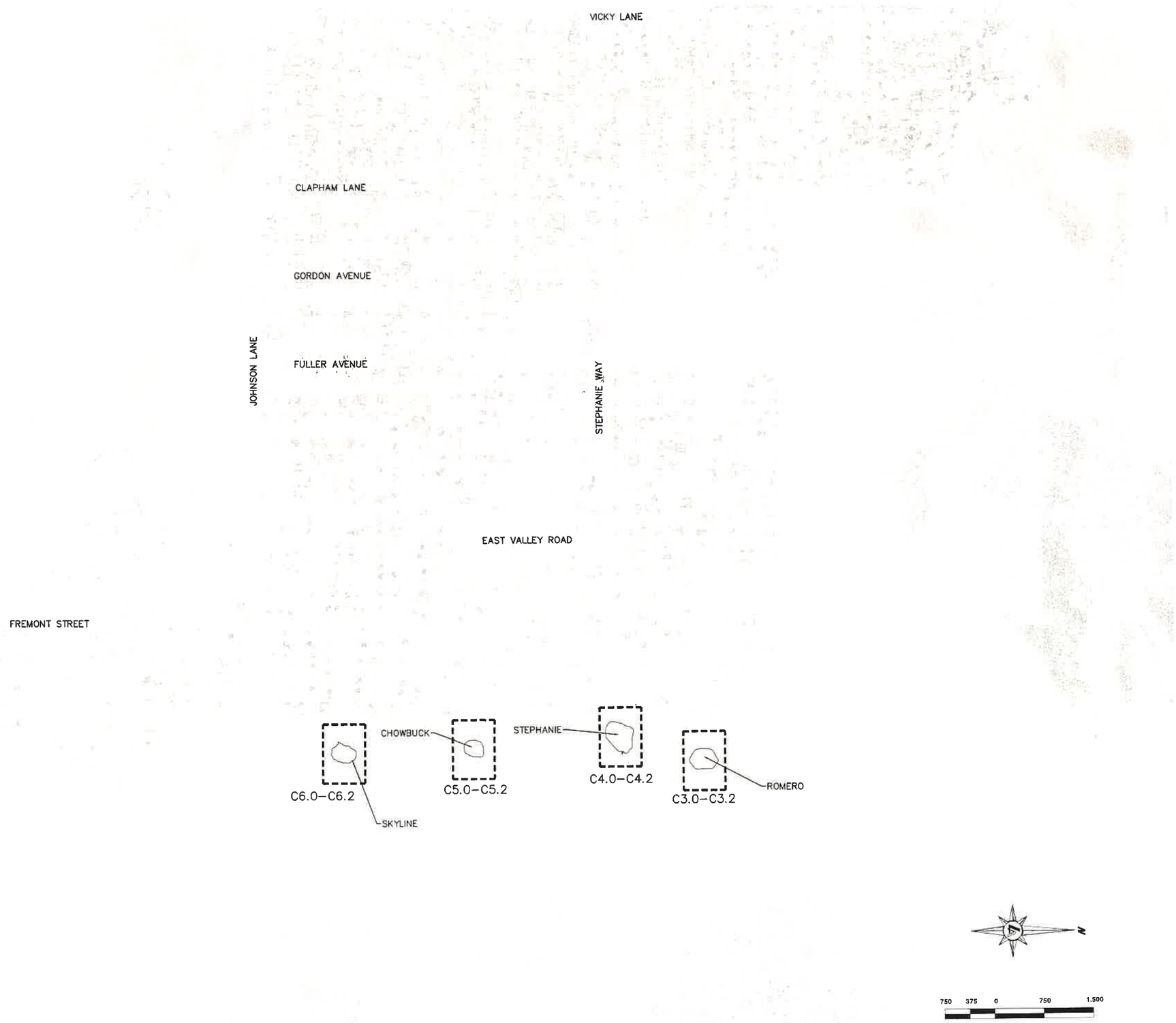
06/21/2022 03:25 am mshults



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DOUGLAS COUNTY

JOHNSON LANE DRAINAGE BASINS

BASIN INDEX SHEET

MINDEN DOUGLAS NEVADA

REV	DATE	DESCRIPTION	BY

BID/PERMIT SET
CONSTRUCTION DOCUMENTS
JUNE 2022

BAR IS 1 INCH ON ORIGINAL DRAWING
0 1/2
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C2.0

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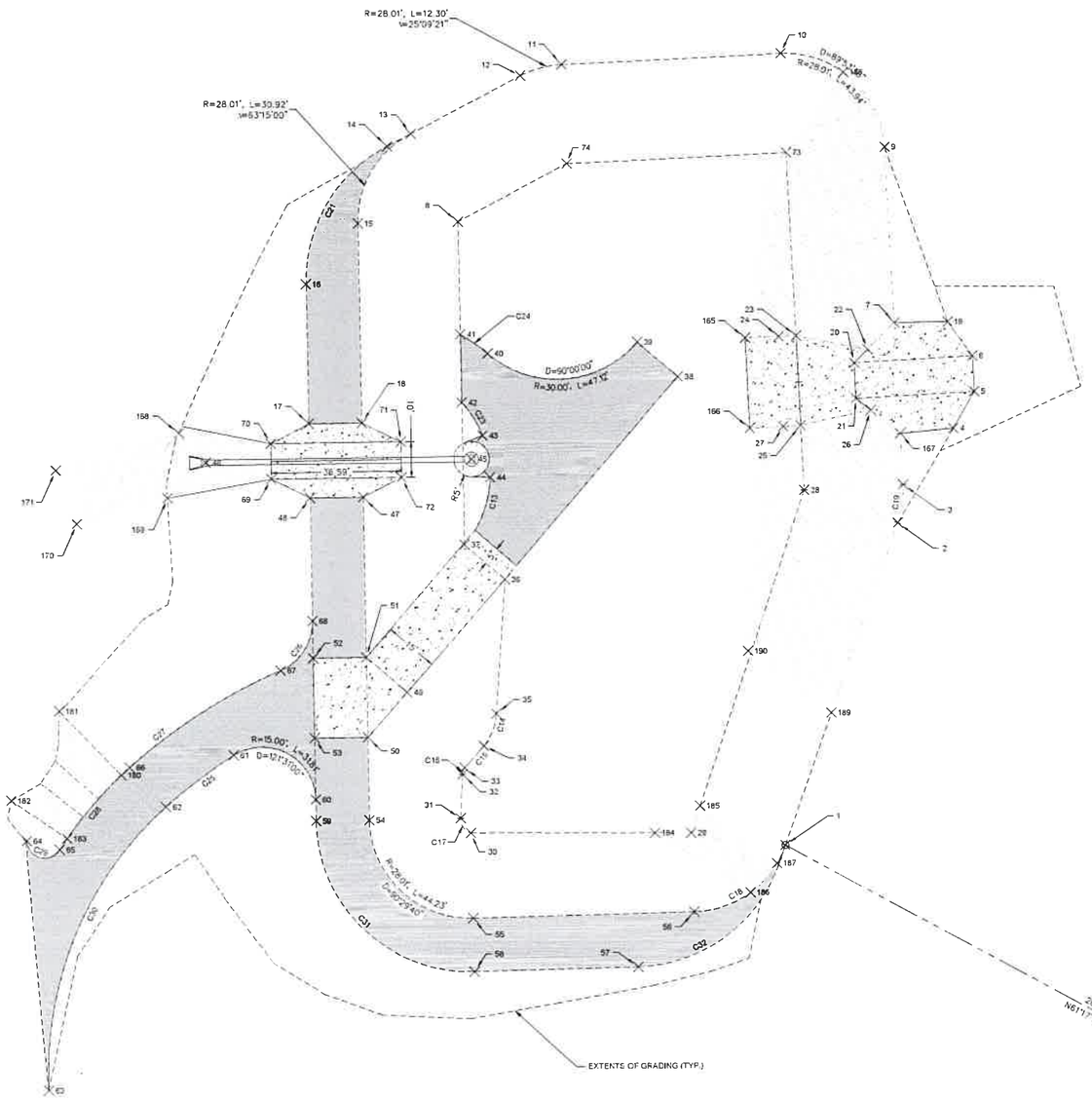
DESIGNED BY	IKM
CHECKED BY	TLR
JOB NO.	9950.001



GRADING NOTES

1. ADD 4,900 TO ALL SPOT ELEVATIONS.
2. ANY DISCREPANCIES IN THESE PLANS SHALL BE IMMEDIATELY BROUGHT TO THE ENGINEER'S ATTENTION PRIOR TO CONSTRUCTION.

CONTROL POINT REFERENCE TABLE			
Point #	NORTHING	EASTING	Description
1	14691742.67	2306730.80	Top of Slope
2	14691833.10	2306763.24	Top of Slope
3	14691843.87	2306764.85	Top of Slope
4	14691859.56	2306779.14	Top of Slope
5	14691869.84	2306785.09	Edge of Concrete
6	14691879.83	2306784.59	Edge of Concrete
7	14691889.33	2306762.72	Top of Slope
8	14691918.22	2306639.63	Bottom of Slope
9	14691938.61	2306760.42	Top of Slope
10	14691965.27	2306731.18	Top of Slope
11	14691962.49	2306669.36	Top of Slope
12	14691959.30	2306657.59	Top of Slope
13	14691943.01	2306626.60	Top of Slope
14	14691939.47	2306619.89	Top of Slope
15	14691917.74	2306611.63	Top of Slope
16	14691900.68	2306596.92	Top of Slope
17	14691861.54	2306597.59	Top of Slope
18	14691861.50	2306612.59	Top of Slope
19	14691889.47	2306777.74	Top of Slope
20	14691878.19	2306751.28	Top of Slope
21	14691858.20	2306751.77	Edge of Concrete
22	14691881.90	2306755.10	Edge of Concrete
23	14691885.87	2306734.85	Bottom of Slope
24	14691885.71	2306729.85	Bottom of Slope
25	14691860.72	2306736.03	Bottom of Slope
26	14691864.87	2306755.91	Bottom of Slope
27	14691860.49	2306731.03	Bottom of Slope
28	14691842.56	2306736.88	Bottom of Slope
29	14691746.24	2306704.41	Bottom of Slope
30	14691746.46	2306642.72	Bottom of Slope
31	14691750.57	2306639.83	Bottom of Slope
32	14691762.91	2306640.31	Bottom of Slope
33	14691764.81	2306640.99	Bottom of Slope
34	14691770.95	2306646.41	Bottom of Slope
35	14691780.01	2306649.95	Bottom of Slope
36	14691817.85	2306652.52	Bottom of Slope
37	14691827.66	2306641.17	Bottom of Slope
38	14691874.63	2306701.53	Edge of Pavement
39	14691884.43	2306690.17	Edge of Pavement
40	14691881.32	2306647.86	Edge of Pavement
41	14691885.67	2306640.17	Bottom of Slope
42	14691867.62	2306640.49	Bottom of Slope
43	14691858.33	2306646.34	Bottom of Slope
44	14691846.59	2306648.45	Bottom of Slope
45	14691851.71	2306643.21	Utility Location
46	14691850.57	2306568.57	Utility Location
47	14691841.00	2306612.95	Top of Slope
48	14691840.75	2306597.95	Top of Slope
49	14691786.06	2306625.08	Edge of Concrete
50	14691773.35	2306614.11	Top of Slope

CONTROL POINT REFERENCE TABLE			
Point #	NORTHING	EASTING	Description
51	14691795.86	2306613.72	Top of Slope
52	14691795.61	2306598.72	Top of Slope
53	14691773.10	2306599.11	Top of Slope
54	14691750.05	2306614.51	Top of Slope
55	14691722.53	2306643.23	Top of Slope
56	14691724.13	2306705.16	Top of Slope
57	14691708.71	2306689.47	Top of Slope
58	14691707.53	2306643.62	Top of Slope
59	14691749.79	2306599.51	Top of Slope
60	14691755.76	2306599.40	Top of Slope
61	14691768.15	2306576.35	Edge of Pavement
62	14691753.60	2306557.35	Edge of Pavement
63	14691674.18	2306524.68	Edge of Pavement
64	14691743.93	2306518.49	Edge of Pavement
65	14691741.46	2306527.70	Edge of Pavement
66	14691764.98	2306547.23	Edge of Pavement
67	14691792.10	2306589.53	Edge of Pavement
68	14691806.11	2306598.54	Edge of Pavement
69	14691845.96	2306587.05	Edge of Pavement
70	14691855.96	2306586.89	Edge of Concrete
71	14691856.58	2306623.47	Edge of Concrete
72	14691846.58	2306623.64	Edge of Concrete
73	14691937.30	2306732.44	Edge of Concrete
74	14691934.51	2306670.82	Edge of Concrete
165	14691885.41	2306720.38	Edge of Concrete
166	14691860.05	2306721.57	Edge of Concrete
167	14691858.22	2306764.18	Edge of Concrete
168	14691858.78	2306561.04	Edge of Rip Rap
169	14691840.56	2306557.90	Edge of Rip Rap
170	14691833.24	2306532.68	Edge of Rip Rap
171	14591848.26	2306526.78	Edge of Rip Rap
180	14691762.53	2306544.95	Edge of Rip Rap
181	14691780.49	2306527.63	Edge of Rip Rap
182	14691755.30	2306514.27	Edge of Rip Rap
183	14591744.65	2306529.81	Edge of Rip Rap
184	14691746.27	2306694.40	Edge of Rip Rap
185	14691753.84	2306706.97	Edge of Rip Rap
186	14691729.43	2306720.85	Edge of Rip Rap
187	14691737.57	2306728.37	Edge of Rip Rap
188	14691958.90	2306748.98	Edge of Rip Rap
189	14691779.79	2306744.12	Edge of Rip Rap
190	14691787.34	2306720.66	Edge of Rip Rap

CURVE TABLE				
CURVE NO.	LENGTH	RADIUS	DELTA	CHORD LENGTH
C13	15.67	30.00	29.93	15.49
C14	9.88	15.91	35.59	9.72
C15	8.19	104.07	4.51	8.19
C16	2.08	2.49	47.80	2.02
C17	5.39	4.14	74.68	5.02
C18	33.62	28.01	68.79	31.64
C19	10.96	28.01	22.42	10.89
C21	47.46	43.00	63.23	45.08
C22	11.04	30.00	21.08	10.98
C24	9.39	45.00	11.95	9.37
C25	23.96	138.66	9.90	23.93
C26	17.66	15.00	67.46	16.66
C27	50.64	153.66	18.88	50.41
C28	30.43	115.70	15.07	30.34
C29	12.66	5.00	145.07	9.54
C30	86.72	100.70	50.46	85.88
C31	67.53	43.01	90.45	61.00
C32	51.63	43.00	68.79	48.58

PROJECT CONTROL

POINT	NORTH	EAST	ELEVATION	DESCRIPTION
613	14675802.53	2291434.88	4704.09'	3.5" BRASS CAP USGS BM D 323
701	14691613.97	2306965.75	5000.07	REBAR & CAP
705	14688174.06	2306446.49	5015.20	REBAR & CAP
754	14690329.52	2306472.44	4976.04	REBAR & CAP
760	14686275.79	2306579.15	5000.54	60D NAIL

CONTROL (POINT 701)
14691613.97 N
2306965.75 E
5000.07' ELEV
REBAR & CAP

N

0 20' 40'
22x34 SHEETS: 1" = 20'
11x17 SHEETS: 1" = 40'

LUMOS & ASSOCIATES
9222 PROTOTYPE DRIVE
RENO, NV 89521
TEL 775.827.6111
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NOV 21 2022

DOUGLAS COUNTY
JOHNSON LANE DRAINAGE BASINS
ROMERO HORIZONTAL CONTROL PLAN
MINDEN NEVADA DOUGLAS

REV.	DATE	DESCRIPTION	BY

BID/PERMIT SET
CONSTRUCTION DOCUMENTS
JUNE 2022

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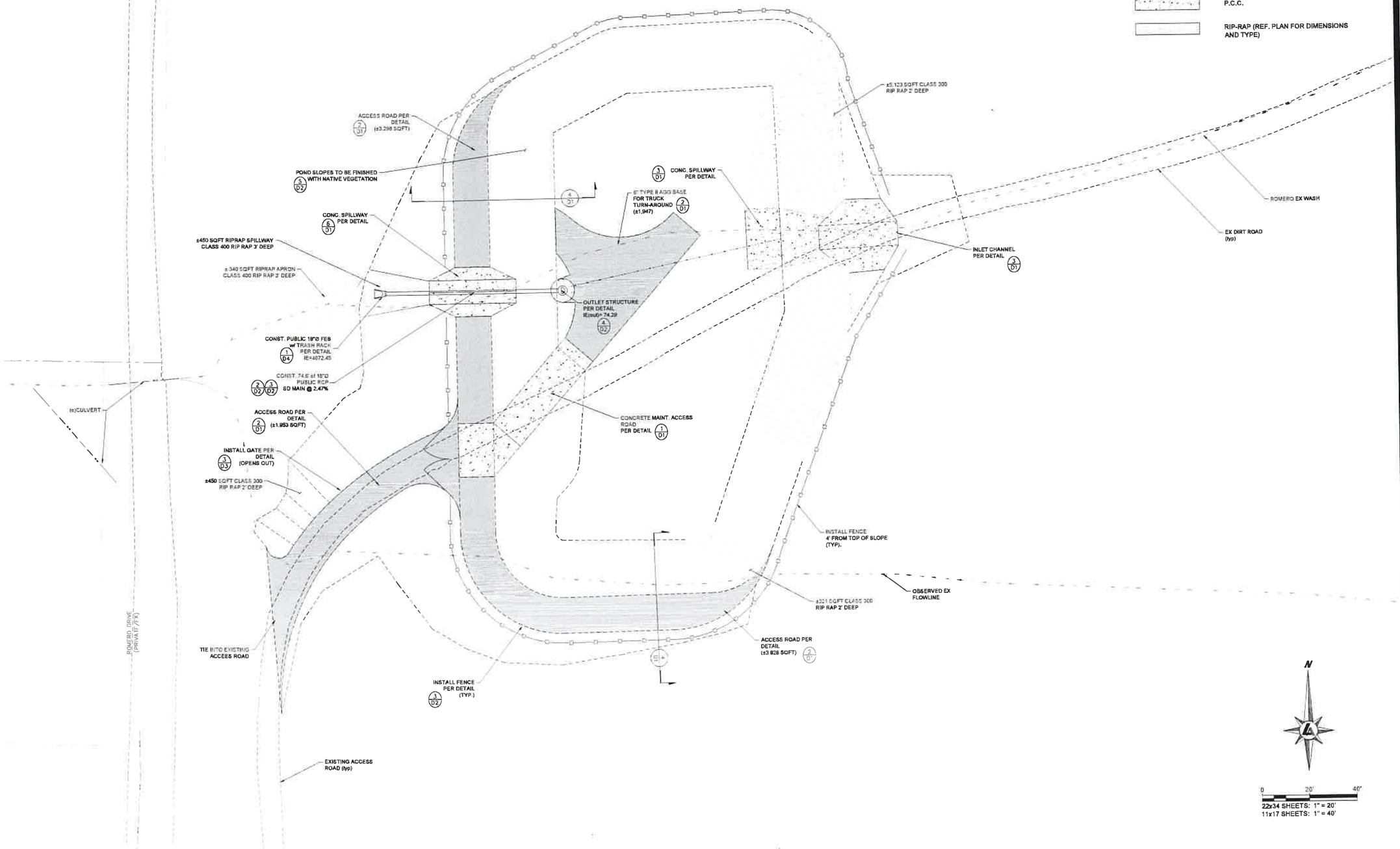
DRAWN BY: IKM
DESIGNED BY: IKM
CHECKED BY: TLR
JOB NO.: 9953.001

GRADING NOTES

1. ADD 4,900 TO ALL SPOT ELEVATIONS.
2. ANY DISCREPANCIES IN THESE PLANS SHALL BE IMMEDIATELY BROUGHT TO THE ENGINEER'S ATTENTION PRIOR TO CONSTRUCTION.

LEGEND

- TYPE 2 AGG. BASE ACCESS ROAD
- P.C.C.
- RIP-RAP (REF. PLAN FOR DIMENSIONS AND TYPE)



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PROFESSIONAL ENGINEER STAMP
IAN V. HAFFEY
Exp: 12/31/23
CIVIL
06/21/2022

DOUGLAS COUNTY
JOHNSON LANE DRAINAGE BASINS
ROMERO SITE PLAN
MINDEN NEVADA DOUGLAS

REV	DATE	DESCRIPTION	BY

BID/PERMIT SET
CONSTRUCTION DOCUMENTS
JUNE 2022

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CHECKED BY:	TLR
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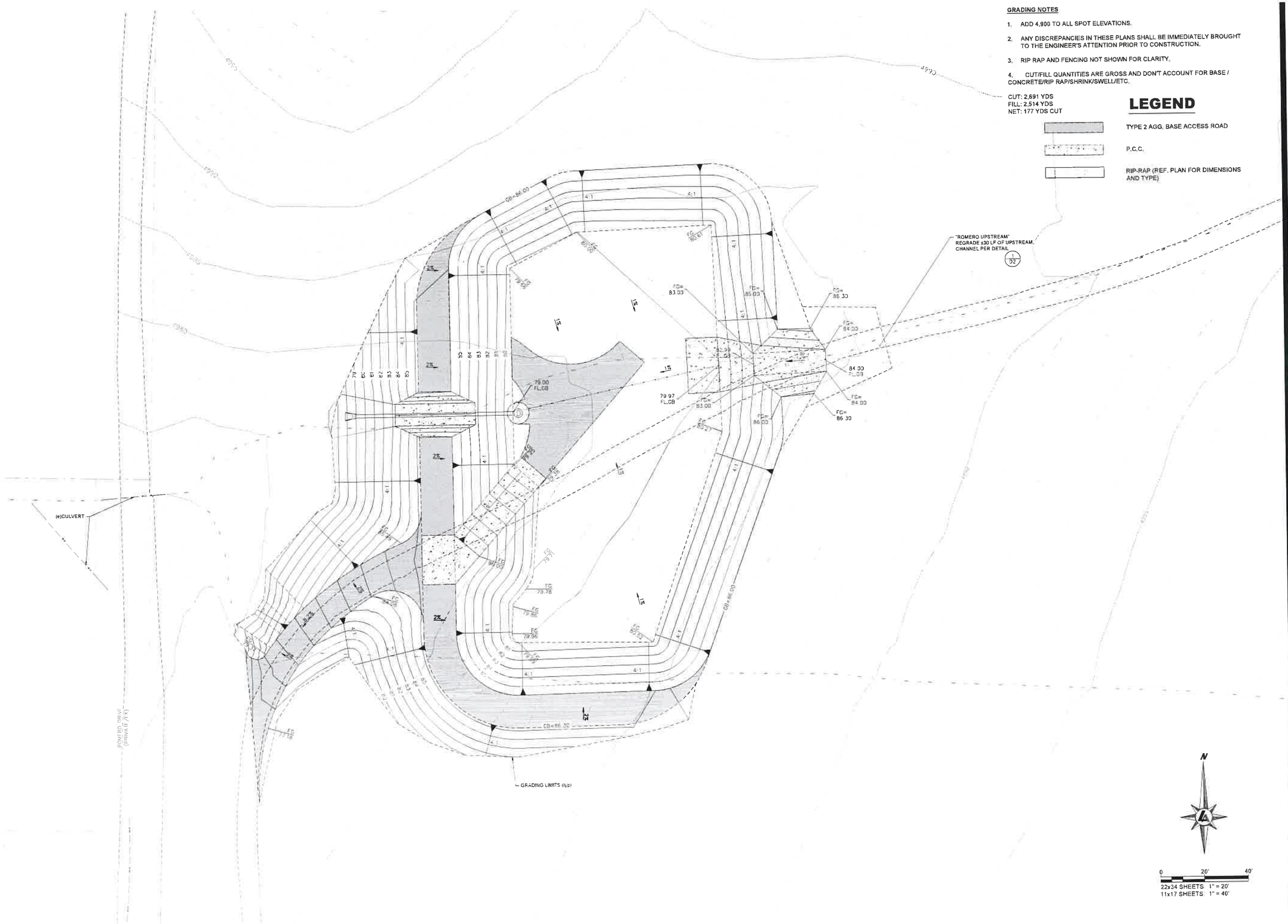

GRADING NOTES

1. ADD 4,900 TO ALL SPOT ELEVATIONS.
2. ANY DISCREPANCIES IN THESE PLANS SHALL BE IMMEDIATELY BROUGHT TO THE ENGINEER'S ATTENTION PRIOR TO CONSTRUCTION.
3. RIP RAP AND FENCING NOT SHOWN FOR CLARITY.
4. CUT/FILL QUANTITIES ARE GROSS AND DON'T ACCOUNT FOR BASE / CONCRETE/RIP RAP/SHRINK/SWELL/ETC.

CUT: 2,691 YDS
FILL: 2,514 YDS
NET: 177 YDS CUT

LEGEND

TYPE 2 AGG. BASE ACCESS ROAD

P.C.C.

RIP-RAP (REF. PLAN FOR DIMENSIONS AND TYPE)

LUMOS & ASSOCIATES

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PROFESSIONAL ENGINEER STATE OF NEVADA
IAN K. HAFFEY
EXP. 12/31/23
CIVIL
06-21-2022

DOUGLAS COUNTY
JOHNSON LANE DRAINAGE BASINS
ROMERO GRADING PLAN
MINDEN
DOUGLAS
NEVADA

REV	DATE	DESCRIPTION	BY

BID/PERMIT SET
CONSTRUCTION DOCUMENTS
JUNE 2022

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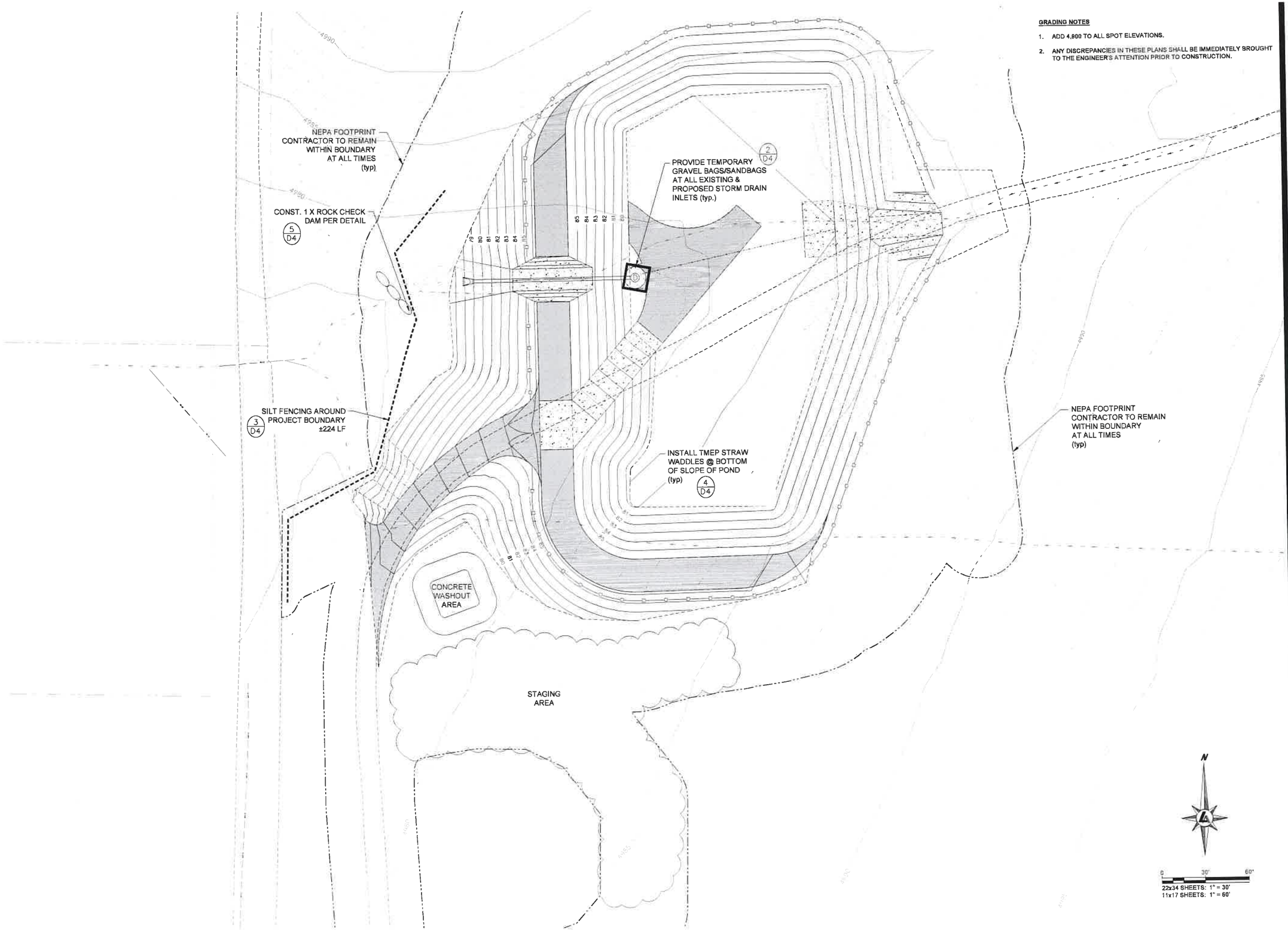
DESIGNED BY:	IKM
CHECKED BY:	TLR
JOB NO.:	9953.001

GRADING NOTES

1. ADD 4,800 TO ALL SPOT ELEVATIONS.
2. ANY DISCREPANCIES IN THESE PLANS SHALL BE IMMEDIATELY BROUGHT TO THE ENGINEER'S ATTENTION PRIOR TO CONSTRUCTION.



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CIVIL

06-21-2022

DOUGLAS COUNTY

JOHNSON LANE DRAINAGE BASINS

ROMERO EROSION CONTROL PLAN

MINDEN NEVADA DOUGLAS

REV	DATE	DESCRIPTION	BY

BID/PERMIT SET
CONSTRUCTION DOCUMENTS
JUNE 2022

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C3.3

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DESIGNED BY: IKM
CHECKED BY: TLR
JOB NO.: 9953.001

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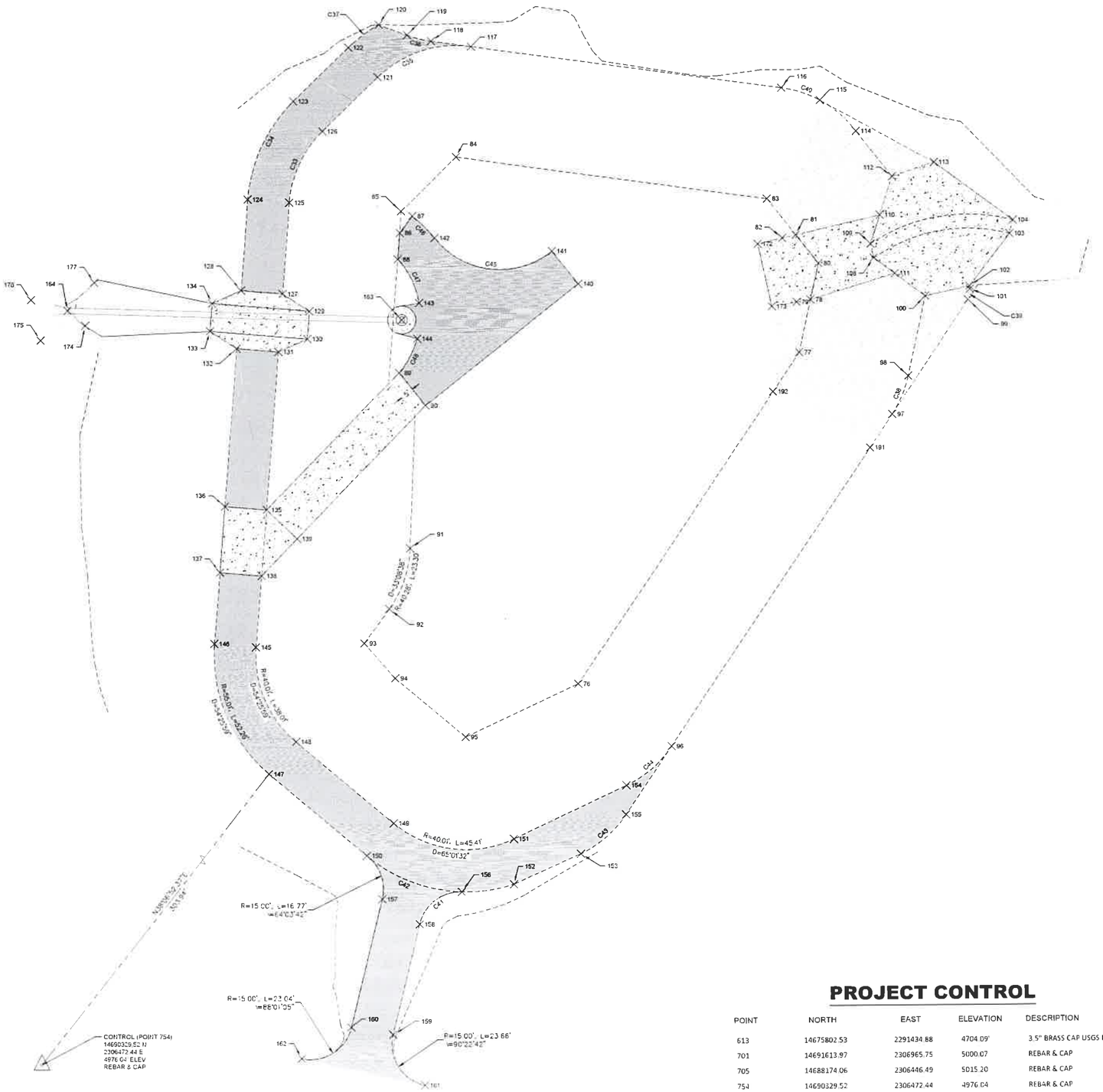

GRADING NOTES

1. ADD 4,900 TO ALL SPOT ELEVATIONS.
2. ANY DISCREPANCIES IN THESE PLANS SHALL BE IMMEDIATELY BROUGHT TO THE ENGINEER'S ATTENTION PRIOR TO CONSTRUCTION.

CONTROL POINT REFERENCE TABLE			
Point #	NORTHING	EASTING	Description
UNUSED			
UNUSED			
76	14690600.64	2306770.12	Bottom of Slope
77	14690718.93	2306850.03	Bottom of Slope
78	14690737.81	2306854.21	Bottom of Slope
79	14690736.98	2306849.28	Edge of Concrete
80	14690750.80	2306857.10	Bottom of Slope
81	14690760.97	2306849.10	Bottom of Slope
82	14690759.86	2306844.22	Edge of Concrete
83	14690773.91	2306838.93	Bottom of Slope
84	14690789.41	2306727.41	Bottom of Slope
85	14690769.99	2306707.53	Bottom of Slope
86	14690762.35	2306706.95	Bottom of Slope
87	14690768.32	2306711.50	Edge of Pavement
88	14690752.91	2306706.23	Bottom of Slope
89	14690712.33	2306706.66	Bottom of Slope
90	14690700.59	2306715.99	Bottom of Slope
91	14690649.38	2306710.26	Bottom of Slope
92	14690627.84	2306702.85	Bottom of Slope
93	14690615.32	2306694.08	Bottom of Slope
94	14690602.78	2306704.98	Bottom of Slope
95	14690581.85	2306729.98	Bottom of Slope
96	14690578.23	2306803.26	Top of Slope
97	14690596.53	2306883.18	Top of Slope
98	14690710.27	2306889.09	Top of Slope
99	14690737.41	2306910.79	Top of Slope
100	14690738.87	2306895.43	Top of Slope
101	14690741.24	2306911.54	Top of Slope
102	14690742.22	2306911.33	Top of Slope
103	14690760.88	2306925.85	Top of Slope
104	14690765.71	2306927.13	Top of Slope
108	14690752.61	2306876.93	Top of Slope
109	14690757.55	2306875.82	Top of Slope
110	14690767.84	2306879.28	Top of Slope
111	14690746.97	2306884.52	Top of Slope
112	14690781.54	2306883.83	Top of Slope
113	14690788.51	2306899.00	Top of Slope
114	14690797.82	2306871.02	Top of Slope
115	14690808.95	2306856.24	Top of Slope
116	14690813.54	2306844.44	Top of Slope
117	14690829.04	2306732.92	Top of Slope
118	14690831.04	2306718.52	Top of Slope
119	14690833.21	2306709.96	Top of Slope
120	14690837.01	2306699.84	Top of Slope
121	14690818.03	2306699.45	Top of Slope
122	14690828.76	2306688.97	Top of Slope
123	14690809.34	2306669.09	Top of Slope
124	14690774.19	2306652.68	Top of Slope
125	14690773.04	2306667.64	Top of Slope
126	14690798.61	2306679.57	Top of Slope

CONTROL POINT REFERENCE TABLE			
Point #	NORTHING	EASTING	Description
127	14690740.56	2306665.16	Top of Slope
128	14690741.71	2306650.20	Top of Slope
129	14690734.42	2306674.72	Edge of Concrete
130	14690724.44	2306673.96	Edge of Concrete
131	14690719.82	2306663.57	Top of Slope
132	14690720.97	2306648.61	Top of Slope
133	14690727.12	2306639.05	Edge of Concrete
134	14690737.09	2306639.81	Edge of Concrete
135	14690663.17	2306659.24	Top of Slope
136	14690664.31	2306644.28	Top of Slope
137	14690640.64	2306642.47	Top of Slope
138	14690639.49	2306657.43	Top of Slope
139	14690652.83	2306670.11	Top of Slope
140	14690743.99	2306770.92	Edge of Pavement
141	14690755.73	2306781.58	Edge of Pavement
142	14690760.55	2306719.43	Edge of Pavement
143	14690737.30	2306713.82	Bottom of Slope
144	14690724.54	2306713.12	Bottom of Slope
145	14690613.88	2306655.47	Top of Slope
146	14690615.03	2306640.51	Top of Slope
147	14690568.65	2306660.04	Top of Slope
148	14690580.16	2306669.67	Top of Slope
149	14690551.17	2306704.29	Top of Slope
150	14690539.67	2306694.66	Top of Slope
151	14690545.61	2306746.94	Top of Slope
152	14690529.49	2306746.87	Top of Slope
153	14690540.17	2306770.70	Top of Slope
154	14690564.39	2306787.07	Top of Curve
155	14690554.01	2306786.89	Top of Curve
156	14690526.86	2306728.34	Top of Curve
157	14690524.30	2306700.04	Edge of Pavement
158	14690515.38	2306713.32	Edge of Pavement
159	14690476.04	2306703.84	Edge of Pavement
160	14690478.66	2306689.04	Edge of Pavement
161	14690457.92	2306715.00	Edge of Pavement
162	14690467.48	2306671.45	Edge of Pavement
163	14690731.24	2306707.64	Utility Location
164	14690734.47	2306588.37	Utility Location
172	14690757.85	2306835.39	Edge of Concrete
173	14690735.47	2306840.34	Edge of Concrete
174	14690729.05	2306594.68	Edge of Rip Rap
175	14690723.70	2306578.82	Edge of Rip Rap
176	14690738.17	2306575.37	Edge of Rip Rap
177	14690744.48	2306597.87	Edge of Rip Rap
191	14690684.62	2306875.13	Edge of Rip Rap
192	14690704.94	2306840.58	Edge of Rip Rap

CURVE TABLE				
CURVE NO.	LENGTH	RADIUS	DELTA	CHORD LENGTH
C33	28.83	40.01	41.29	28.21
C34	28.64	55.01	41.29	28.75
C35	26.48	40.01	52.25	25.53
C36	8.84	40.00	12.67	8.82
C37	13.69	55.01	14.25	13.65
C38	15.64	40.01	21.54	14.95
C39	4.01	5.00	45.95	3.90
C40	31.71	40.05	45.36	30.89
C41	20.46	15.00	78.15	18.91
C42	55.52	55.01	57.83	53.19
C43	21.55	40.00	30.87	21.29
C44	21.56	40.01	30.87	21.30
C45	47.12	30.00	90.00	42.43
C46	11.13	45.00	14.17	11.10
C47	17.61	30.00	33.63	17.36
C48	12.51	34.43	20.15	12.61

PROJECT CONTROL

POINT	NORTH	EAST	ELEVATION	DESCRIPTION
613	14675802.53	2291434.88	4704.09'	3.5" BRASS CAP USGS BM D 323
701	14691613.97	2306965.75	5000.07	REBAR & CAP
705	14688174.06	2306446.49	5015.20	REBAR & CAP
754	14690329.52	2306472.44	4976.04	REBAR & CAP
760	14686275.79	2306579.15	5000.54	60D NAIL

N

0 20' 40'
22x34 SHEETS: 1" = 20'
11x17 SHEETS: 1" = 40'

LUMOS & ASSOCIATES
9222 PROTOTYPE DRIVE
RENO, NV 89521
TEL: 775.827.6111
WWW.LUMOSINC.COM
INFO@LUMOSINC.COM

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06/21/2022

DOUGLAS COUNTY
JOHNSON LANE DRAINAGE BASINS
STEPHANIE HORIZONTAL CONTROL PLAN
MINDEN
DOUGLAS
NEVADA

REV	DATE	DESCRIPTION	BY

BID/PERMIT SET
CONSTRUCTION DOCUMENTS
JUNE 2022

BAR IS 1 INCH ON ORIGINAL DRAWING
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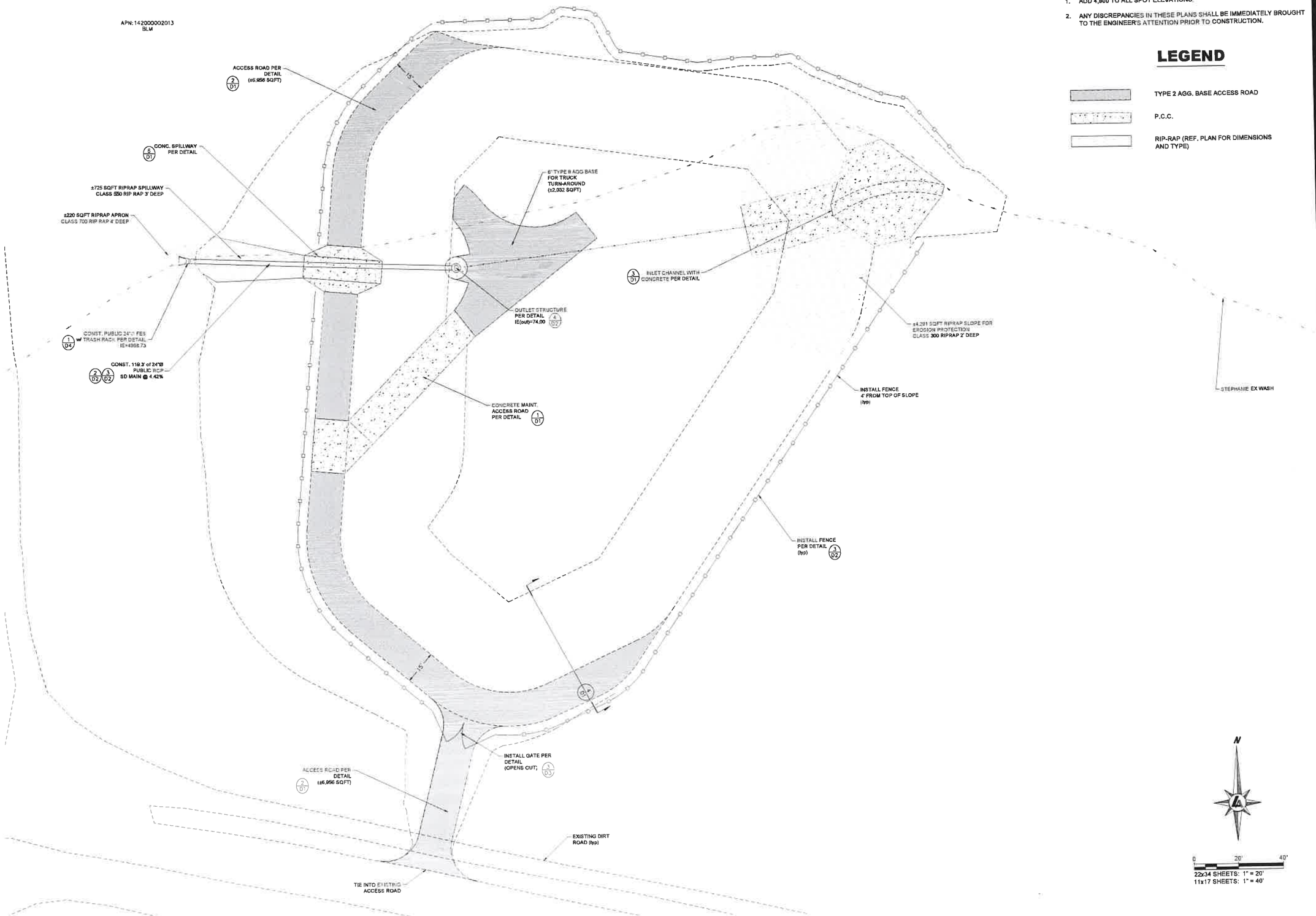
C4.0

DRAWN BY: IKM
DESIGNED BY: IKM
CHECKED BY: TLP
JOB NO.: 9953.001



GRADING NOTES

1. ADD 4,900 TO ALL SPOT ELEVATIONS.
2. ANY DISCREPANCIES IN THESE PLANS SHALL BE IMMEDIATELY BROUGHT TO THE ENGINEER'S ATTENTION PRIOR TO CONSTRUCTION.

LEGEND

- TYPE 2 AGG. BASE ACCESS ROAD
- P.C.C.
- RIP-RAP (REF. PLAN FOR DIMENSIONS AND TYPE)

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PROFESSIONAL ENGINEER
IAN K. HAFFEY
Exp: 12/31/23
CIVIL
06-21-2022

DOUGLAS COUNTY
JOHNSON LANE DRAINAGE BASINS
STEPHANIE SITE PLAN
MINDEN
DOUGLAS
NEVADA

REV	DATE	DESCRIPTION	BY

BID/PERMIT SET
CONSTRUCTION DOCUMENTS
JUNE 2022

BAR IS 1 INCH ON ORIGINAL DRAWING
0 N/A
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

C4.1

DRAWN BY:	IKM
DESIGNED BY:	IKM
CHECKED BY:	TLR
JOB NO.:	9953.001

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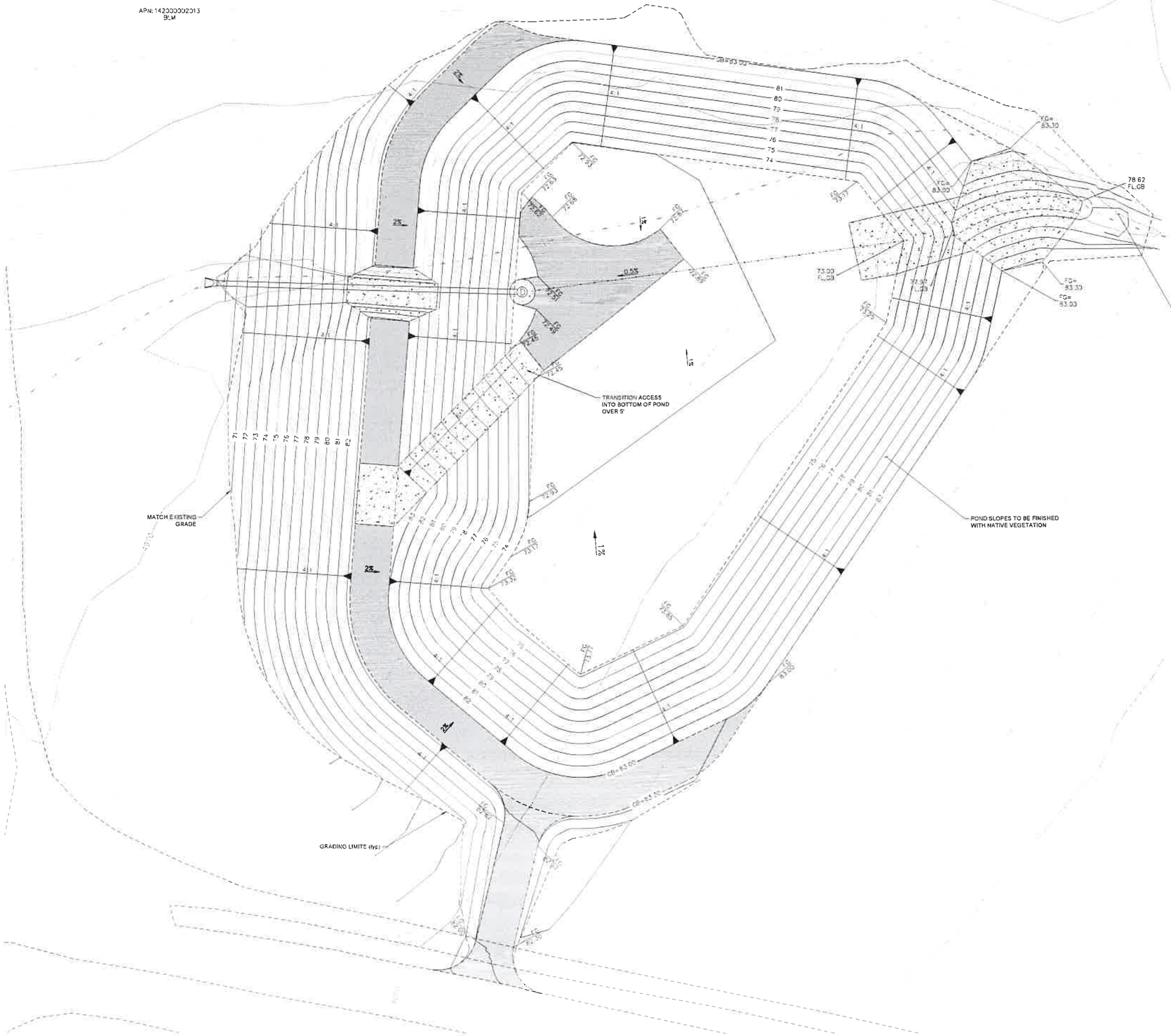

GRADING NOTES

1. ADD 4,900 TO ALL SPOT ELEVATIONS.
2. ANY DISCREPANCIES IN THESE PLANS SHALL BE IMMEDIATELY BROUGHT TO THE ENGINEER'S ATTENTION PRIOR TO CONSTRUCTION.
3. RIP RAP AND FENCING NOT SHOWN FOR CLARITY.
4. CUT/FILL QUANTITIES ARE GROSS AND DON'T ACCOUNT FOR BASE / CONCRETE/RIP RAP/SHRINK/SWELL/ETC.

CUT: 5,628 YDS
FILL: 5,125 YDS
NET: 503 YDS CUT

LEGEND

- TYPE 2 AGG. BASE ACCESS ROAD
- P.C.C.
- RIP-RAP (REF. PLAN FOR DIMENSIONS AND TYPE)

N

0 20' 40'
22x34 SHEETS: 1" = 20'
11x17 SHEETS: 1" = 40'

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PROFESSIONAL ENGINEER STATE OF NEVADA
ALAN M. HAFFEY
EXP: 12/31/23
CIVIL
CERTIFICATE NO. 07823
06/21/2022

DOUGLAS COUNTY
JOHNSON LANE DRAINAGE BASINS
STEPHANIE GRADING PLAN
MINDEN NEVADA DOUGLAS

REV	DATE	DESCRIPTION	BY

BID/PERMIT SET
CONSTRUCTION DOCUMENTS
JUNE 2022

BAR IS 1 INCH ON ORIGINAL DRAWING
0 N/A
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C4.2

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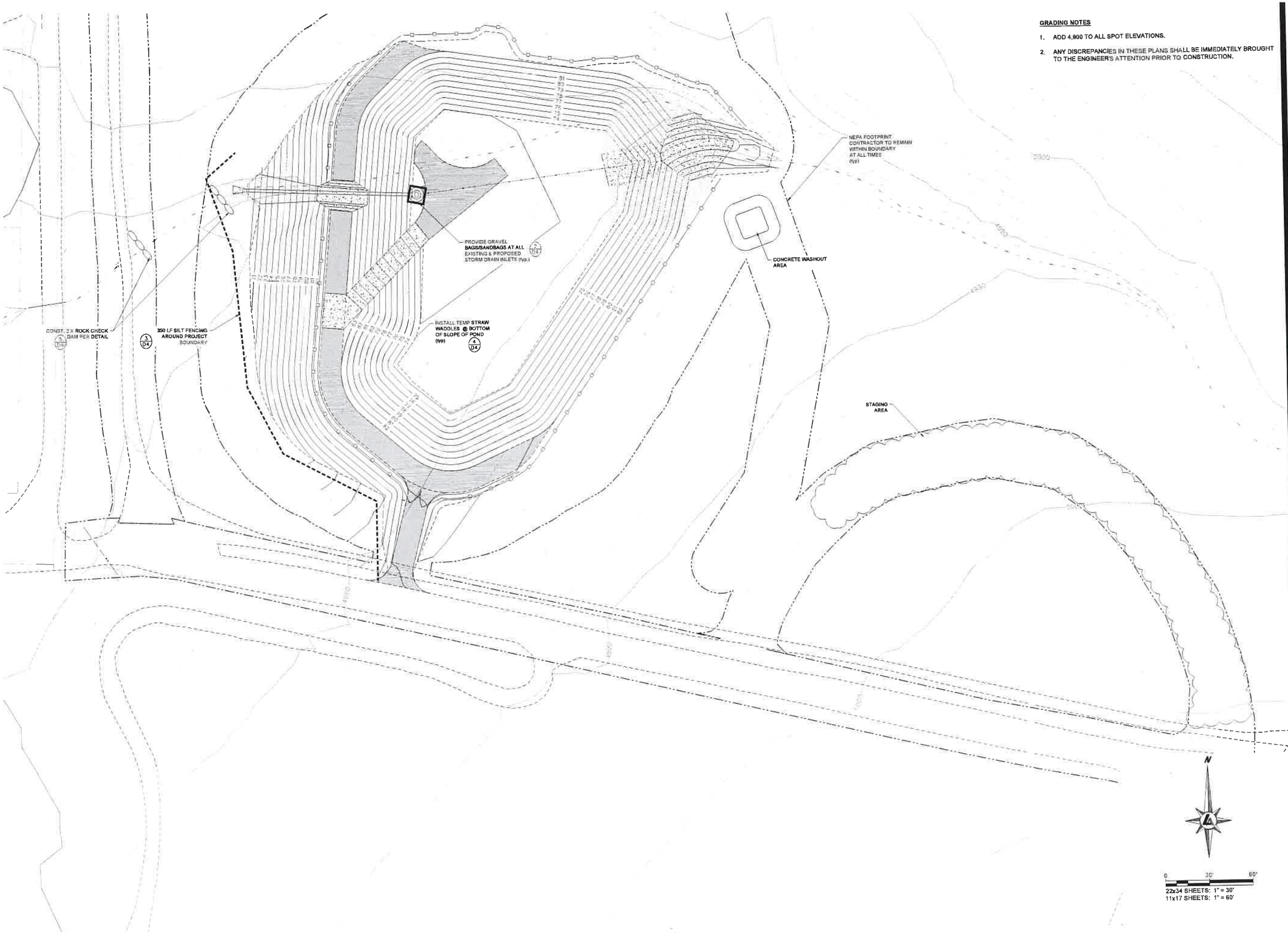
CHECKED BY	TLR
JOB NO.	9953.001



GRADING NOTES

1. ADD 4,900 TO ALL SPOT ELEVATIONS.
2. ANY DISCREPANCIES IN THESE PLANS SHALL BE IMMEDIATELY BROUGHT TO THE ENGINEER'S ATTENTION PRIOR TO CONSTRUCTION.

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NEVADA PROFESSIONAL ENGINEER STAMP
M. HAFFEY
EXP 12/31/23
CIVIL

06/21/2022

DOUGLAS COUNTY

JOHNSON LANE DRAINAGE BASINS

STEPHANIE EROSION CONTROL PLAN

MINDEN — DOUGLAS — NEVADA

REV	DATE	DESCRIPTION	BY

BID/PERMIT SET
CONSTRUCTION DOCUMENTS
JUNE 2022

BAR IS 1 INCH ON ORIGINAL DRAWING
0 N/A

IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

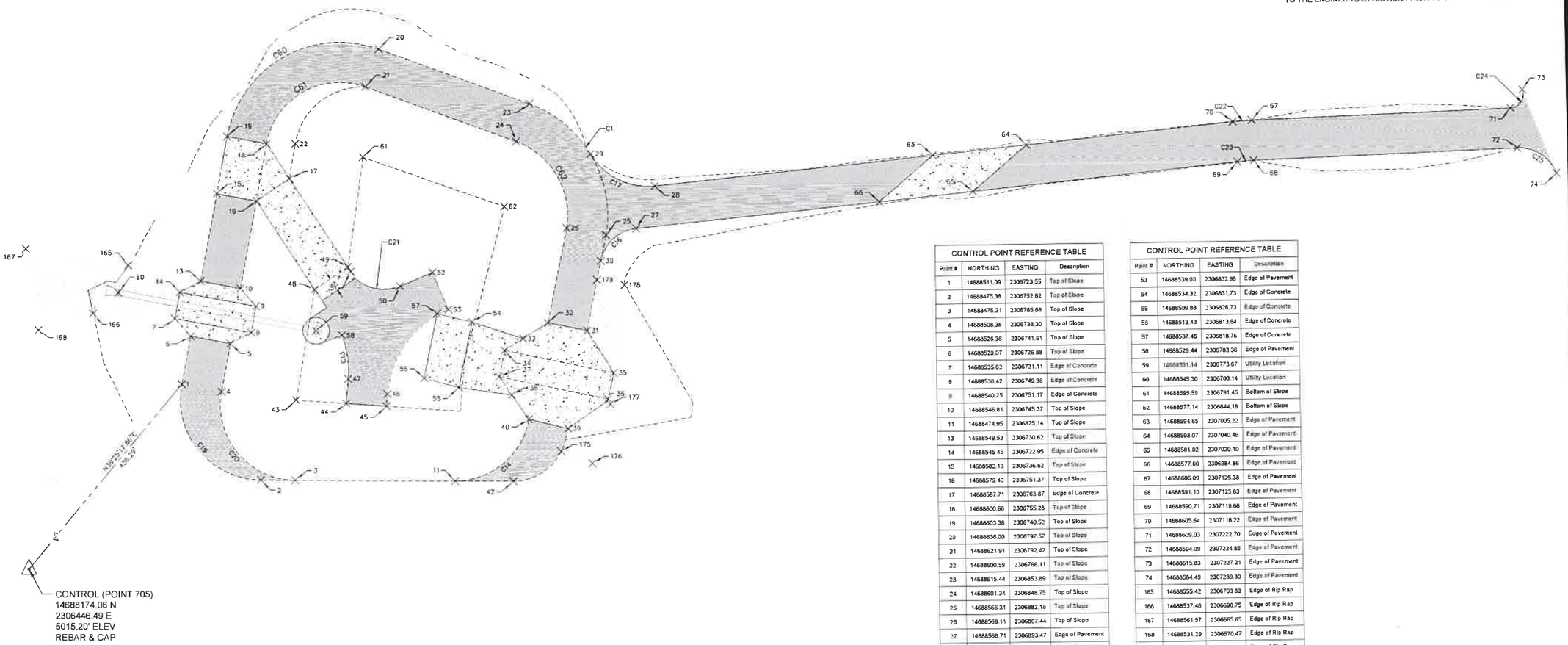
C4.3

DRAWN BY:	IKM
DESIGNED BY:	IKM
CHECKED BY:	TLR
JOB NO.:	9953.001

I:\APrj\9953.001 - Douglas County Johnson Lane Basins\PWC\Civil3D\9953.000BASE_NORTH.dwg,C4.3,
06/21/2022 09:28 am mpulls

GRADING NOTES

1. ADD 4,900 TO ALL SPOT ELEVATIONS.
2. ANY DISCREPANCIES IN THESE PLANS SHALL BE IMMEDIATELY BROUGHT TO THE ENGINEER'S ATTENTION PRIOR TO CONSTRUCTION.



CONTROL POINT REFERENCE TABLE			
Point #	NORTHING	EASTING	Description
1	14688511.09	2306723.55	Top of Slope
2	14688475.38	2306752.82	Top of Slope
3	14688475.31	2306765.68	Top of Slope
4	14688508.38	2306738.30	Top of Slope
5	14688526.36	2306741.61	Top of Slope
6	14688529.07	2306726.88	Top of Slope
7	14688535.62	2306721.11	Edge of Concrete
8	14688530.42	2306749.36	Edge of Concrete
9	14688540.25	2306751.17	Edge of Concrete
10	14688546.81	2306745.37	Top of Slope
11	14688474.95	2306825.14	Top of Slope
13	14688549.53	2306730.62	Top of Slope
14	14688545.45	2306722.95	Edge of Concrete
15	14688582.13	2306736.62	Top of Slope
16	14688579.42	2306751.37	Top of Slope
17	14688587.71	2306763.87	Edge of Concrete
18	14688600.66	2306755.28	Top of Slope
19	14688603.38	2306740.52	Top of Slope
20	14688636.00	2306797.57	Top of Slope
21	14688621.91	2306792.42	Top of Slope
22	14688600.59	2306766.11	Top of Slope
23	14688615.44	2306853.89	Top of Slope
24	14688601.34	2306848.75	Top of Slope
25	14688566.31	2306882.18	Top of Slope
26	14688569.11	2306867.44	Top of Slope
27	14688568.71	2306893.47	Edge of Pavement
28	14688584.47	2306900.56	Edge of Pavement
29	14688596.57	2306876.66	Top of Slope
30	14688556.79	2306880.23	Top of Slope
31	14688530.84	2306874.92	Top of Slope
32	14688533.85	2306860.22	Top of Slope
33	14688528.04	2306850.86	Edge of Concrete
34	14688523.68	2306843.90	Edge of Concrete
35	14688515.03	2306884.72	Edge of Concrete
36	14688505.27	2306882.51	Edge of Concrete
37	14688513.89	2306841.82	Edge of Concrete
38	14688507.05	2306846.56	Edge of Concrete
39	14688464.39	2306867.51	Top of Slope
40	14688497.83	2306852.87	Top of Slope
42	14688474.82	2306846.92	Top of Slope
43	14688505.29	2306766.15	Bottom of Slope
44	14688503.98	2306784.67	Bottom of Slope
45	14688502.94	2306799.83	Bottom of Slope
46	14688507.54	2306800.21	Edge of Pavement
47	14688513.18	2306785.63	Edge of Pavement
48	14688546.56	2306773.16	Bottom of Slope
49	14688554.85	2306785.66	Bottom of Slope
50	14688547.71	2306805.07	Edge of Pavement
51	14688553.24	2306786.73	Edge of Pavement
52	14688552.82	2306817.13	Edge of Pavement

CONTROL POINT REFERENCE TABLE			
Point #	NORTHING	EASTING	Description
53	14688539.00	2306832.98	Edge of Pavement
54	14688534.32	2306831.73	Edge of Concrete
55	14688509.88	2306826.73	Edge of Concrete
56	14688513.43	2306813.84	Edge of Concrete
57	14688537.46	2306818.76	Edge of Concrete
58	14688529.44	2306783.36	Edge of Pavement
59	14688531.14	2306773.67	Utility Location
60	14688545.30	2306700.14	Utility Location
61	14688595.59	2306791.45	Bottom of Slope
62	14688577.14	2306844.18	Bottom of Slope
63	14688594.85	2307005.22	Edge of Pavement
64	14688598.07	2307040.46	Edge of Pavement
65	14688581.02	2307020.10	Edge of Pavement
66	14688577.60	2306984.86	Edge of Pavement
67	14688606.09	2307125.38	Edge of Pavement
68	14688591.10	2307125.83	Edge of Pavement
69	14688590.71	2307119.68	Edge of Pavement
70	14688605.64	2307118.22	Edge of Pavement
71	14688609.03	2307222.70	Edge of Pavement
72	14688594.09	2307224.85	Edge of Pavement
73	14688615.83	2307227.21	Edge of Pavement
74	14688584.49	2307239.30	Edge of Pavement
165	14688555.42	2306703.83	Edge of Rip Rap
166	14688537.48	2306690.75	Edge of Rip Rap
167	14688561.57	2306665.65	Edge of Rip Rap
168	14688531.29	2306670.47	Edge of Rip Rap
175	14688485.83	2306864.90	Edge of Rip Rap
176	14688481.26	2306876.55	Edge of Rip Rap
177	14688503.25	2306883.36	Edge of Rip Rap
178	14688547.64	2306888.99	Edge of Rip Rap
179	14688549.73	2306878.79	Edge of Rip Rap

CURVE TABLE				
CURVE NO.	LENGTH	RADIUS	DELTA	CHORD LENGTH
C1	61.57	44.08	80.04	56.69
C13	16.55	37.50	25.28	16.41
C14	39.01	28.37	78.77	36.01
C16	19.08	15.00	72.88	17.82
C17	28.27	25.00	64.80	26.78
C19	52.69	30.00	100.62	46.18
C20	48.92	28.01	100.06	42.92
C21	17.83	15.96	64.01	16.91
C22	7.17	107.50	3.82	7.17
C23	6.17	92.50	3.82	6.17
C24	9.54	5.00	109.37	8.16
C25	18.48	15.00	70.63	17.34
C60	74.78	43.01	99.63	65.71
C61	48.70	28.01	99.63	42.78
C62	40.44	29.08	79.69	37.26

PROJECT CONTROL

POINT	NORTH	EAST	ELEVATION	DESCRIPTION
613	14675802.53	2291434.88	4704.09'	3.5" BRASS CAP USGS BM D 323
701	14691613.97	2306965.75	5000.07	REBAR & CAP
705	14688174.06	2306446.49	5015.20	REBAR & CAP
754	14690329.52	2306472.44	4976.04	REBAR & CAP
760	14686275.79	2306579.15	5000.54	60D NAIL

N

0 20' 40'

22x34 SHEETS 1" = 20'
11x17 SHEETS: 1" = 40'

LUMOS & ASSOCIATES

9222 PROTOTYPE DRIVE
RENO, NV 89521
TEL: 775.827.6111

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PROFESSIONAL ENGINEER STAMP
IAN K. HAFFEY
Exp: 12/31/23
CIVIL
06-21-2022

DOUGLAS COUNTY
JOHNSON LANE DRAINAGE BASINS
CHOWBUCK HORIZONTAL CONTROL PLAN
MINDEN NEVADA DOUGLAS

REV	DATE	DESCRIPTION	BY

BID/PERMIT SET
CONSTRUCTION DOCUMENTS
JUNE 2022

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C5.0

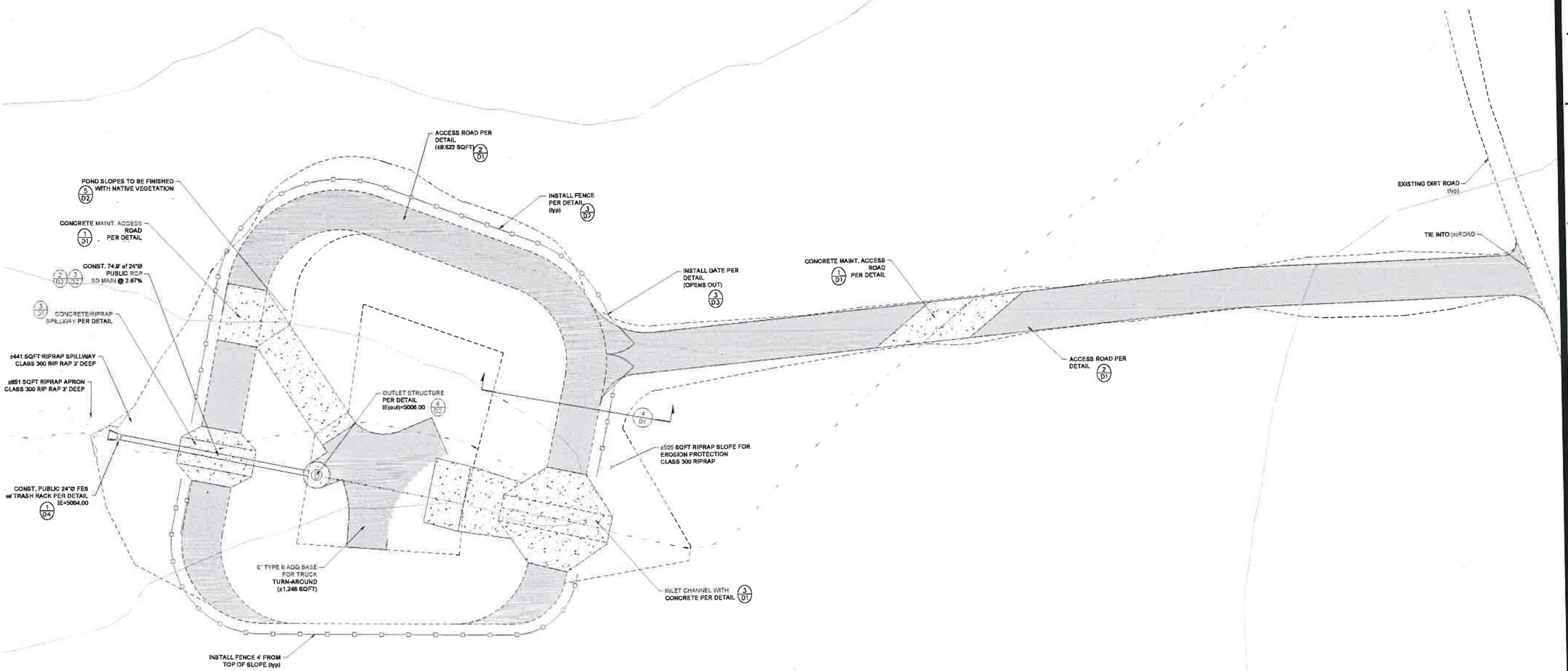
DRAWN BY: IKM
DESIGNED BY IKM
CHECKED BY TLR
JOB NO.: 9953.001

APN: 1420000002013
BLM

GRADING NOTES

1. ADD 4,800 TO ALL SPOT ELEVATIONS.
2. ANY DISCREPANCIES IN THESE PLANS SHALL BE IMMEDIATELY BROUGHT TO THE ENGINEER'S ATTENTION PRIOR TO CONSTRUCTION.

CUT: 1,545 YDS
FILL: 1,205 YDS
NET: 340 YDS CUT



LEGEND

TYPE 2 AGG. BASE ACCESS ROAD

P.C.C.

RIP-RAP (REF. PLAN FOR DIMENSIONS AND TYPE)

N

0 20' 40'
22x34 SHEETS: 1" = 20'
11x17 SHEETS: 1" = 40'

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IAN HAFFEY
CIVIL
06/21/2022

DOUGLAS COUNTY
JOHNSON LANE DRAINAGE BASINS
CHOWBUCK SITE PLAN
MINDEN NEVADA DOUGLAS

REV	DATE	DESCRIPTION	BY

BID/PERMIT SET
CONSTRUCTION DOCUMENTS
JUNE 2022

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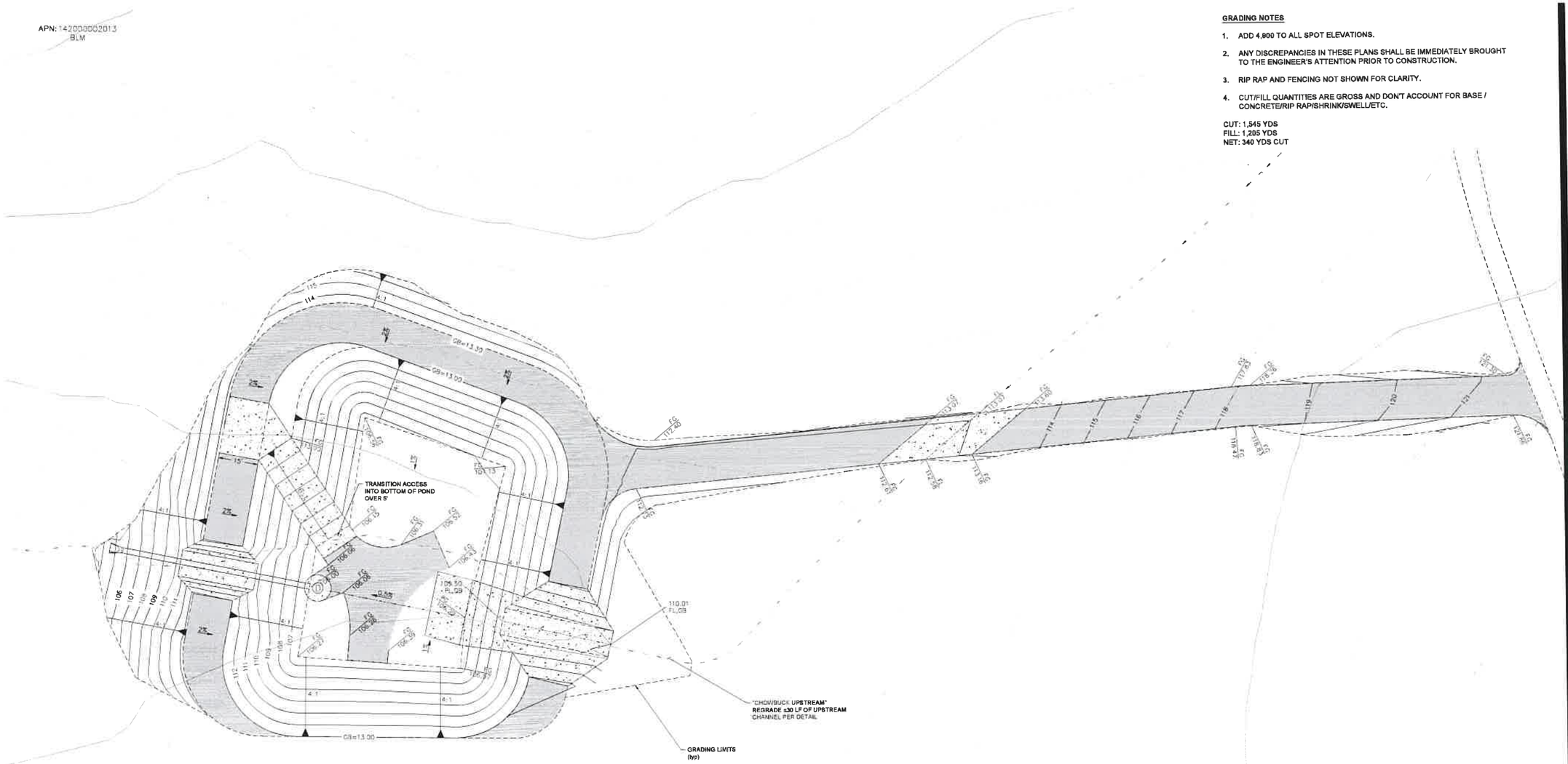
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

C5.1

DRAWN BY: IKM
DESIGNED BY: IKM
CHECKED BY: TLR
JOB NO.: 9953.001

I:\Proj\9953.001 - Douglas County Johnson Lane Basins\DWG\C5a30\9953.0009ASE_SOUTH.dwg,C5.1, 06/21/2022 04:28 am mpulls

APN: 1420000002013
BLM



GRADING NOTES

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3. RIP RAP AND FENCING NOT SHOWN FOR CLARITY.
4. CUT/FILL QUANTITIES ARE GROSS AND DON'T ACCOUNT FOR BASE / CONCRETE/RIP RAP/SHRINK/SWELL/ETC.

CUT: 1,545 YDS
FILL: 1,205 YDS
NET: 340 YDS CUT

LEGEND

TYPE 2 AGG. BASE ACCESS ROAD

P.C.C.

RIP-RAP (REF. PLAN FOR DIMENSIONS AND TYPE)

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PROFESSIONAL ENGINEER STATE OF NEVADA
JAIME HAFFEY
Exp 12/31/23
CIVIL
06-21-2022

DOUGLAS COUNTY

JOHNSON LANE DRAINAGE BASINS

CHOWBUCK GRADING PLAN

MINDEN DOUGLAS NEVADA

REV	DATE	DESCRIPTION	BY

BID/PERMIT SET
CONSTRUCTION DOCUMENTS
JUNE 2022

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0 N/A
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

C5.2

DRAWN BY:	IKM
DESIGNED BY:	IKM
CHECKED BY:	TLR
JOB NO.:	9953.001

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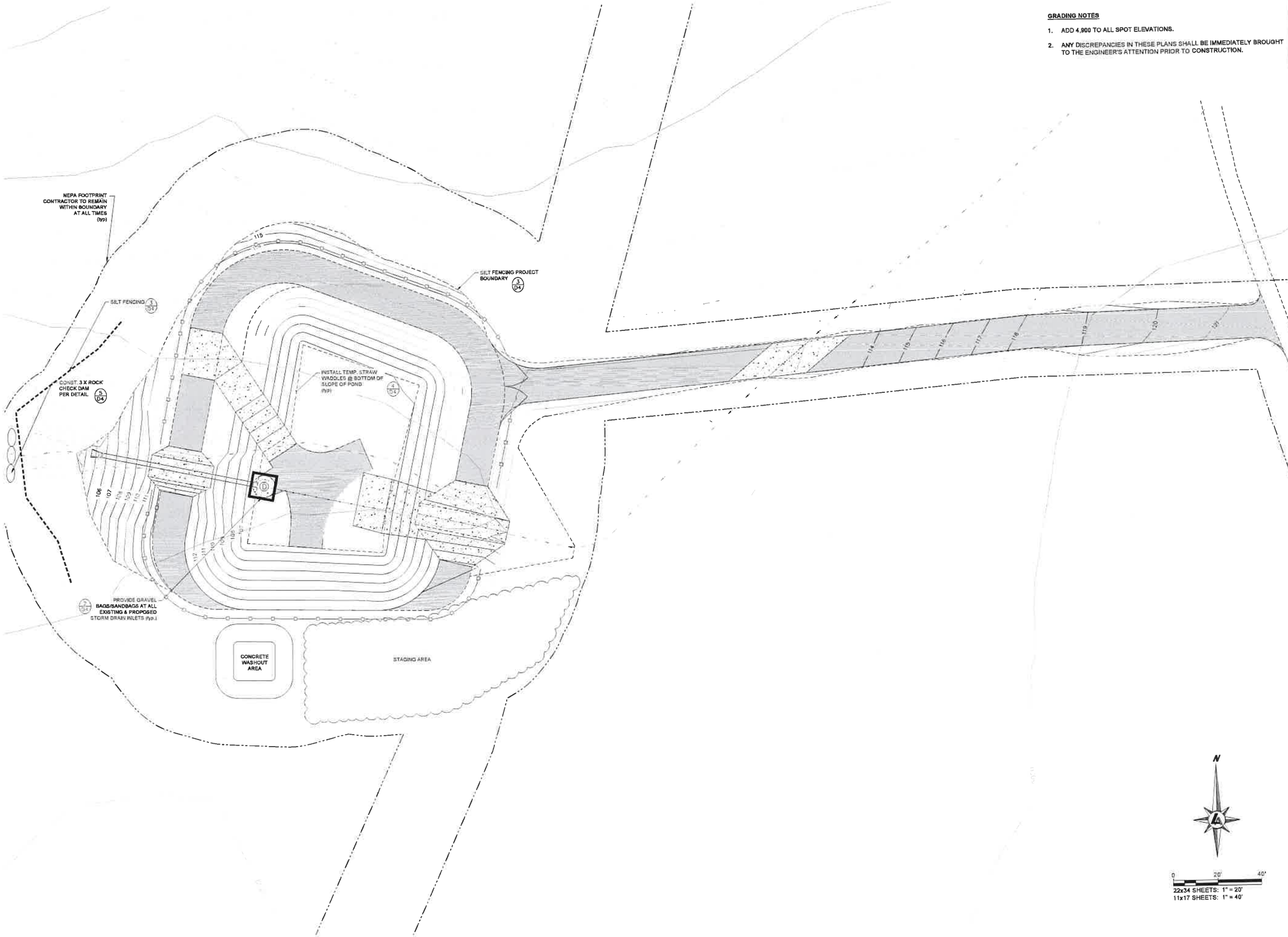
GRADING NOTES

1. ADD 4,900 TO ALL SPOT ELEVATIONS.
2. ANY DISCREPANCIES IN THESE PLANS SHALL BE IMMEDIATELY BROUGHT TO THE ENGINEER'S ATTENTION PRIOR TO CONSTRUCTION.



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PROFESSIONAL ENGINEER STATE OF NEVADA
IAN M. HAFFEY
Exp: 12/31/23
CIVIL
No. 21202

06/21/2022

DOUGLAS COUNTY

JOHNSON LANE DRAINAGE BASINS

CHOWBUCK EROSION CONTROL PLAN

MINDEN DOUGLAS NEVADA

REV	DATE	DESCRIPTION	BY

BID/PERMIT SET
CONSTRUCTION DOCUMENTS
JUNE 2022

BAR IS 1 INCH ON ORIGINAL DRAWING
0 1 N/A

IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

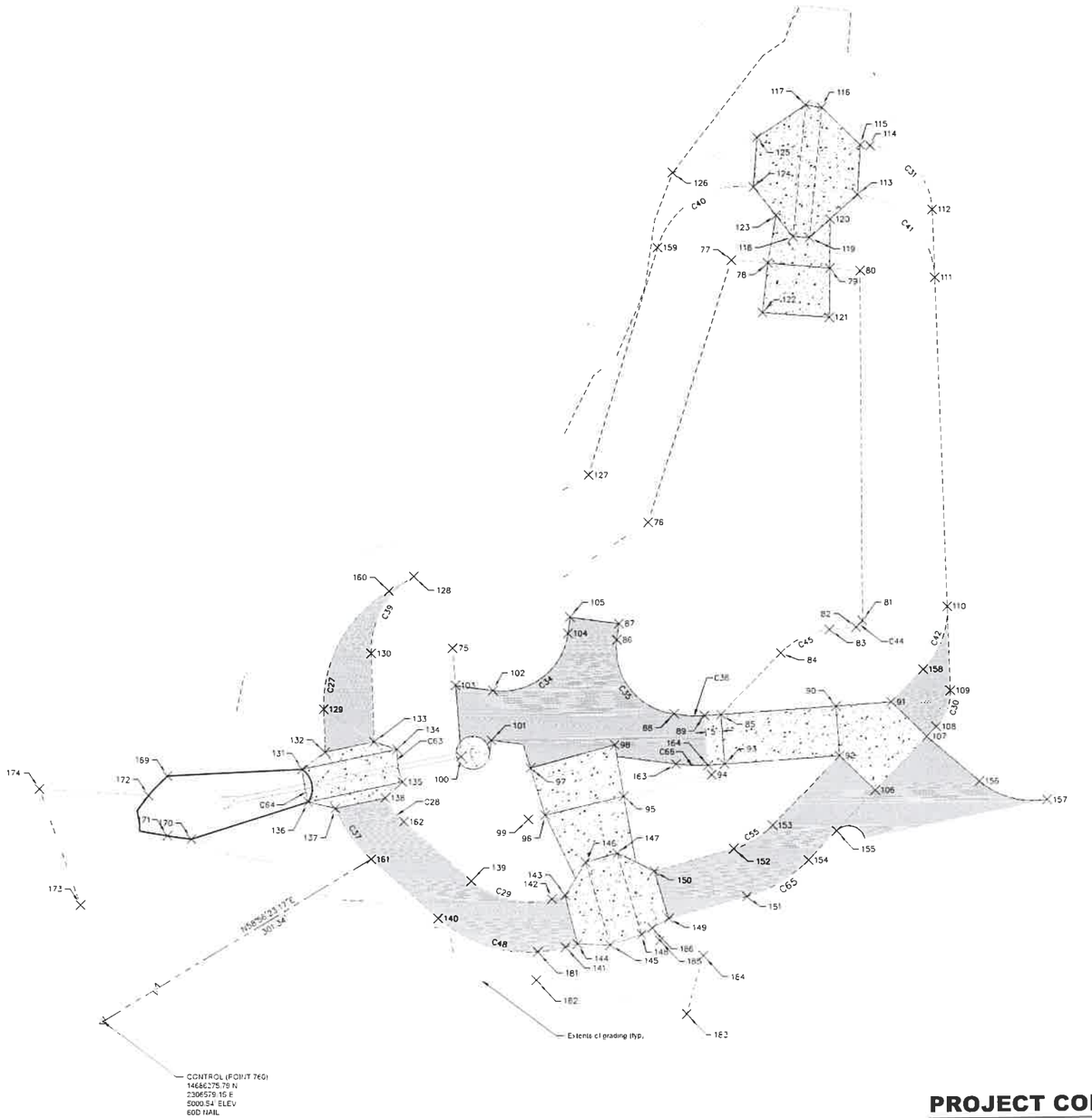
C5.3

DRAWN BY:	IKM
DESIGNED BY:	IKM
CHECKED BY:	TLR
JOB NO.:	9953.001

\\LAPro\9953.001 - Douglas County Johnson Lane Basins\DWG\Civil3D\9953.001BASE_SOUTH.dwg,C5.3,
06/21/2022 06:28 pm mmuth

BMP NOTES

1. ALL SILT FENCING TO REMAIN IN PLACE DURING THE ENTIRE CONSTRUCTION PERIOD.



CONTROL POINT REFERENCE TABLE			
Point #	NORTHING	EASTING	Description
75	14686494.86	2306861.97	Bottom of Slope
76	14686532.73	2306921.08	Bottom of Slope
77	14686611.70	2306946.76	Bottom of Slope
78	14686610.71	2306957.81	Bottom of Slope
79	14686609.01	2306976.61	Bottom of Slope
80	14686608.19	2306985.76	Bottom of Slope
81	14686502.32	2306985.50	Bottom of Slope
82	14686500.33	2306983.65	Bottom of Slope
83	14686499.73	2306975.53	Bottom of Slope
84	14686492.85	2306960.75	Bottom of Slope
85	14686474.32	2306942.67	Bottom of Slope
86	14686497.13	2306911.37	Edge of Pavement
87	14686502.09	2306912.04	Edge of Pavement
88	14686474.64	2306928.52	Edge of Pavement
89	14686474.00	2306937.58	Edge of Pavement
90	14686476.53	2306977.31	Edge of Concrete
91	14686477.60	2306994.04	Edge of Concrete
92	14686461.56	2306978.26	Edge of Concrete
93	14686459.35	2306943.63	Bottom of Slope
94	14686456.15	2306939.70	Bottom of Slope
95	14686449.93	2306913.21	Bottom of Slope
96	14686444.34	2306889.45	Bottom of Slope
97	14686458.51	2306885.09	Edge of Concrete
98	14686465.39	2306910.50	Edge of Concrete
99	14686443.16	2306884.39	Bottom of Slope
100	14686462.00	2306864.44	Bottom of Slope
101	14686466.93	2306873.52	Edge of Pavement
102	14686481.99	2306874.01	Edge of Pavement
103	14686483.50	2306862.83	Bottom of Slope
104	14686499.14	2306896.50	Edge of Pavement
105	14686504.10	2306897.17	Edge of Pavement
106	14686451.04	2306988.96	Top of Slope
107	14686467.08	2307004.73	Top of Slope
108	14686470.00	2307007.61	Top of Slope
109	14686480.93	2307011.91	Top of Slope
110	14686506.43	2307011.21	Top of Slope
111	14686605.87	2307008.48	Top of Slope
112	14686626.38	2307007.91	Top of Slope
113	14686631.01	2306985.28	Top of Slope
114	14686645.79	2306989.27	Top of Slope
115	14686645.99	2306986.29	Top of Slope
116	14686657.42	2306974.73	Edge of Concrete
117	14686658.26	2306969.79	Edge of Concrete
118	14686618.58	2306965.56	Edge of Concrete
119	14686618.26	2306970.56	Edge of Concrete
120	14686623.73	2306976.86	Edge of Concrete
121	14686594.16	2306976.36	Edge of Concrete
122	14686595.82	2306956.14	Edge of Concrete
123	14686625.64	2306960.46	Edge of Concrete
124	14686632.62	2306953.77	Top of Slope

CONTROL POINT REFERENCE TABLE			
Point #	NORTHING	EASTING	Description
125	14686648.58	2306954.91	Top of Slope
126	14686638.19	2306929.21	Top of Slope
127	14686547.13	2306903.04	Top of Slope
128	14686516.55	2306850.40	Top of Slope
129	14686476.36	2306822.97	Top of Slope
130	14686493.27	2306837.47	Top of Slope
131	14686458.19	2306816.45	Edge of Concrete
132	14686463.32	2306823.37	Top of Slope
133	14686466.46	2306836.29	Top of Slope
134	14686464.24	2306845.19	Edge of Concrete
135	14686454.36	2306846.82	Edge of Concrete
136	14686448.35	2306818.27	Edge of Concrete
137	14686446.41	2306826.51	Top of Slope
138	14686449.58	2306841.59	Top of Slope
139	14686424.73	2306887.33	Top of Slope
140	14686413.49	2306857.40	Top of Slope
141	14686404.64	2306895.27	Top of Slope
142	14686419.12	2306891.34	Top of Slope
143	14686420.20	2306895.34	Top of Slope
144	14686405.61	2306898.86	Top of Slope
145	14686405.25	2306938.72	Edge of Concrete
146	14686430.08	2306901.50	Edge of Concrete
147	14686432.73	2306911.15	Edge of Concrete
148	14686408.36	2306918.23	Edge of Concrete
149	14686413.09	2306926.48	Top of Slope
150	14686427.33	2306922.27	Top of Slope
151	14686419.47	2306950.07	Top of Slope
152	14686433.95	2306946.14	Top of Slope
153	14686440.82	2306957.89	Top of Slope
154	14686430.30	2306968.58	Top of Slope
155	14686439.00	2306977.14	Top of Slope
156	14686453.41	2307020.59	Top of Slope
157	14686447.67	2307040.85	Top of Slope
158	14686487.46	2307003.76	Top of Slope
159	14686615.64	2306924.49	Top of Slope
160	14686512.15	2306842.87	Top of Slope
161	14686431.25	2306837.29	Top of Slope
162	14686442.49	2306847.23	Top of Slope
163	14686459.42	2306928.98	Edge of Pavement
164	14686459.03	2306938.64	Edge of Pavement
169	14686456.14	2306776.14	Edge of Rip Rap
170	14686437.13	2306783.27	Edge of Rip Rap
171	14686438.13	2306776.14	Edge of Rip Rap
172	14686450.25	2306770.39	Edge of Rip Rap
173	14686417.46	2306749.83	Edge of Rip Rap
174	14686452.29	2306737.36	Edge of Rip Rap
181	14686403.26	2306886.99	Edge of Rip Rap
182	14686394.54	2306866.47	Edge of Rip Rap
183	14686264.63	2306931.63	Edge of Rip Rap
184	14686401.87	2306936.81	Edge of Rip Rap

CONTROL POINT REFERENCE TABLE			
Point #	NORTHING	EASTING	Description
185	14686406.51	2306923.74	Edge of Rip Rap
186	14686410.23	2306921.50	Edge of Rip Rap

CURVE TABLE				
CURVE NO.	LENGTH	RADIUS	DELTA	CHORD LENGTH
C27	43.00	40.00	61.59	40.96
C28	9.09	26.01	20.02	9.04
C29	25.69	26.01	56.61	24.66
C30	12.07	15.00	46.10	11.75
C31	29.52	20.00	84.57	26.91
C34	31.42	20.00	90.00	28.28
C35	31.42	20.00	90.00	28.28
C36	7.42	37.50	11.34	7.41
C37	18.75	41.01	26.20	18.59
C39	27.95	26.01	61.59	26.63
C40	35.10	26.01	77.34	32.50
C41	37.33	26.01	82.25	34.21
C42	20.92	26.01	46.10	20.36
C44	2.99	2.00	85.65	2.72
C45	16.66	23.00	41.50	16.30
C48	40.52	41.01	56.61	38.89
C55	13.76	26.63	29.60	13.60
C63	7.43	19.20	22.18	7.39
C64	10.02	48.14	11.93	10.00
C65	21.70	41.01	30.32	21.45
C66	10.39	52.50	11.34	10.37

PROJECT CONTROL

POINT	NORTH	EAST	ELEVATION	DESCRIPTION
613	14675802.53	2291434.88	4704.09'	3.5" BRASS CAP USGS BM D 323
701	14691613.97	2306965.75	5000.07	REBAR & CAP
705	14688174.06	2306446.49	5015.20	REBAR & CAP
754	14690329.52	2306472.44	4976.04	REBAR & CAP
760	14686275.79	2306579.15	5000.54	60D NAIL

N

0 20' 40'

22x34 SHEETS: 1" = 20'
11x17 SHEETS: 1" = 40'

LUMOS & ASSOCIATES

9222 PROTOTYPE DRIVE
RENO, NV 89521
TEL: 775.827.6111

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06/21/2022

DOUGLAS COUNTY

JOHNSON LANE DRAINAGE BASINS

SKYLINE HORIZONTAL CONTROL PLAN

MINDEN DOUGLAS NEVADA

REV	DATE	DESCRIPTION	BY

BID/PERMIT SET
CONSTRUCTION DOCUMENTS
JUNE 2022

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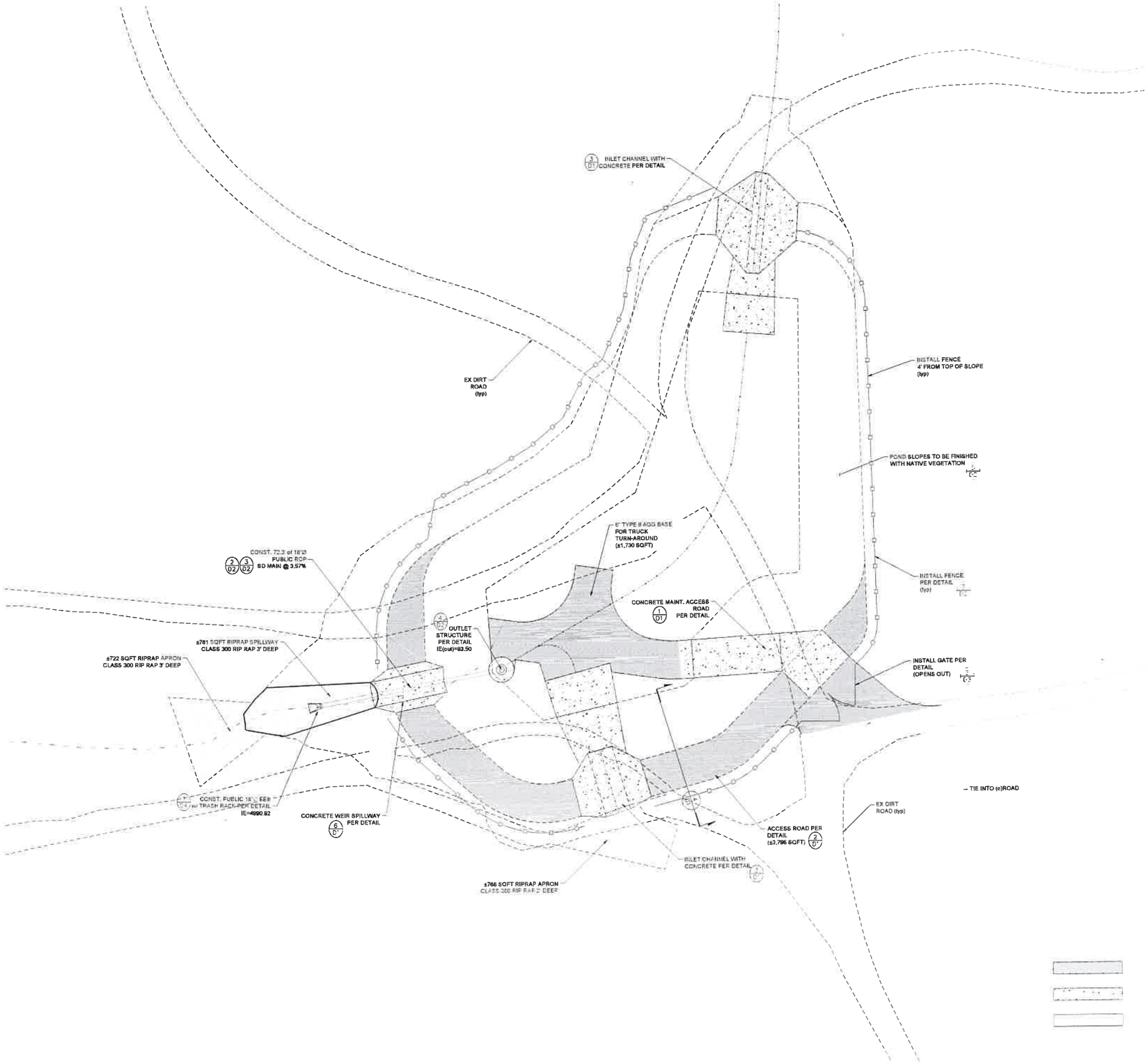

GRADING NOTES

1. ADD 4,900 TO ALL SPOT ELEVATIONS.
2. ANY DISCREPANCIES IN THESE PLANS SHALL BE IMMEDIATELY BROUGHT TO THE ENGINEER'S ATTENTION PRIOR TO CONSTRUCTION.

CUT: 1,944 YDS
FILL: 1,789 YDS
NET: 155 YDS CUT

LEGEND

- TYPE 2 AGG. BASE ACCESS ROAD
- P.C.C.
- RIP-RAP (REF. PLAN FOR DIMENSIONS AND TYPE)

N

0 20' 40'
22x34 SHEETS: 1" = 20'
11x17 SHEETS: 1" = 40'

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PROFESSIONAL ENGINEER STATE OF NEVADA
IAN K. MAHFFEY
Exp: 12/31/23
CIVIL
06/21/2022

DOUGLAS COUNTY
JOHNSON LANE DRAINAGE BASINS
SKYLINE SITE PLAN
MINDEN NEVADA DOUGLAS

REV	DATE	DESCRIPTION	BY

BID/PERMIT SET
CONSTRUCTION DOCUMENTS
JUNE 2022

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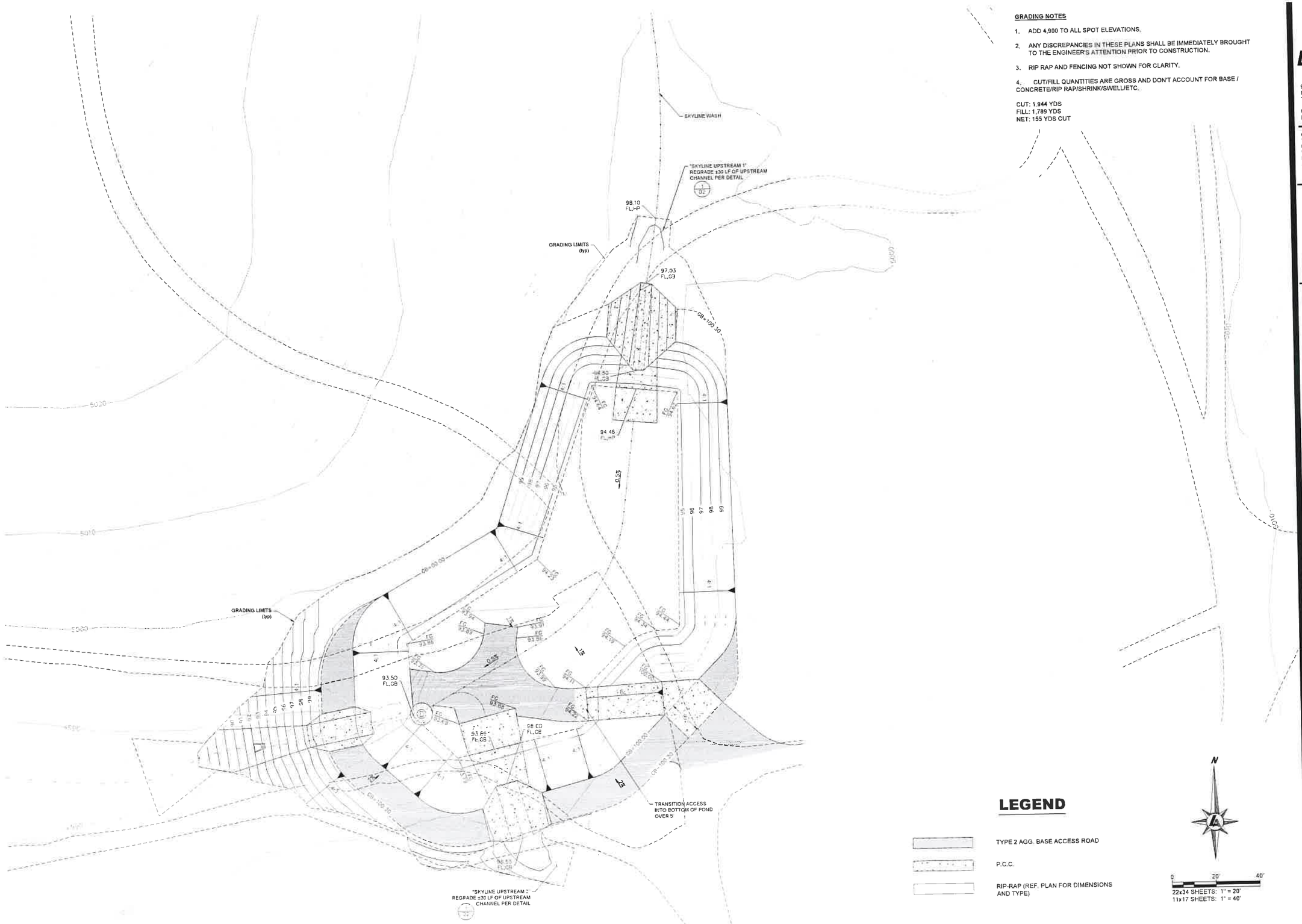

GRADING NOTES

1. ADD 4,900 TO ALL SPOT ELEVATIONS.
2. ANY DISCREPANCIES IN THESE PLANS SHALL BE IMMEDIATELY BROUGHT TO THE ENGINEER'S ATTENTION PRIOR TO CONSTRUCTION.
3. RIP RAP AND FENCING NOT SHOWN FOR CLARITY.
4. CUT/FILL QUANTITIES ARE GROSS AND DON'T ACCOUNT FOR BASE / CONCRETE/RIP RAP/SHRINK/SWELL/ETC.

CUT: 1,944 YDS
FILL: 1,789 YDS
NET: 155 YDS CUT

LEGEND

TYPE 2 AGG. BASE ACCESS ROAD

P.C.C.

RIP-RAP (REF. PLAN FOR DIMENSIONS AND TYPE)

N

0 20' 40'
22x34 SHEETS: 1" = 20'
11x17 SHEETS: 1" = 40'

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PROFESSIONAL ENGINEER STATE OF NEVADA
IAN V. HARPER
EXP. 12/31/23
CIVIL
No. 21,022

DOUGLAS COUNTY
JOHNSON LANE DRAINAGE BASINS
SKYLINE GRADING PLAN
MINDEN
DOUGLAS
NEVADA

REV	DATE	DESCRIPTION	BY

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CONSTRUCTION DOCUMENTS
JUNE 2022

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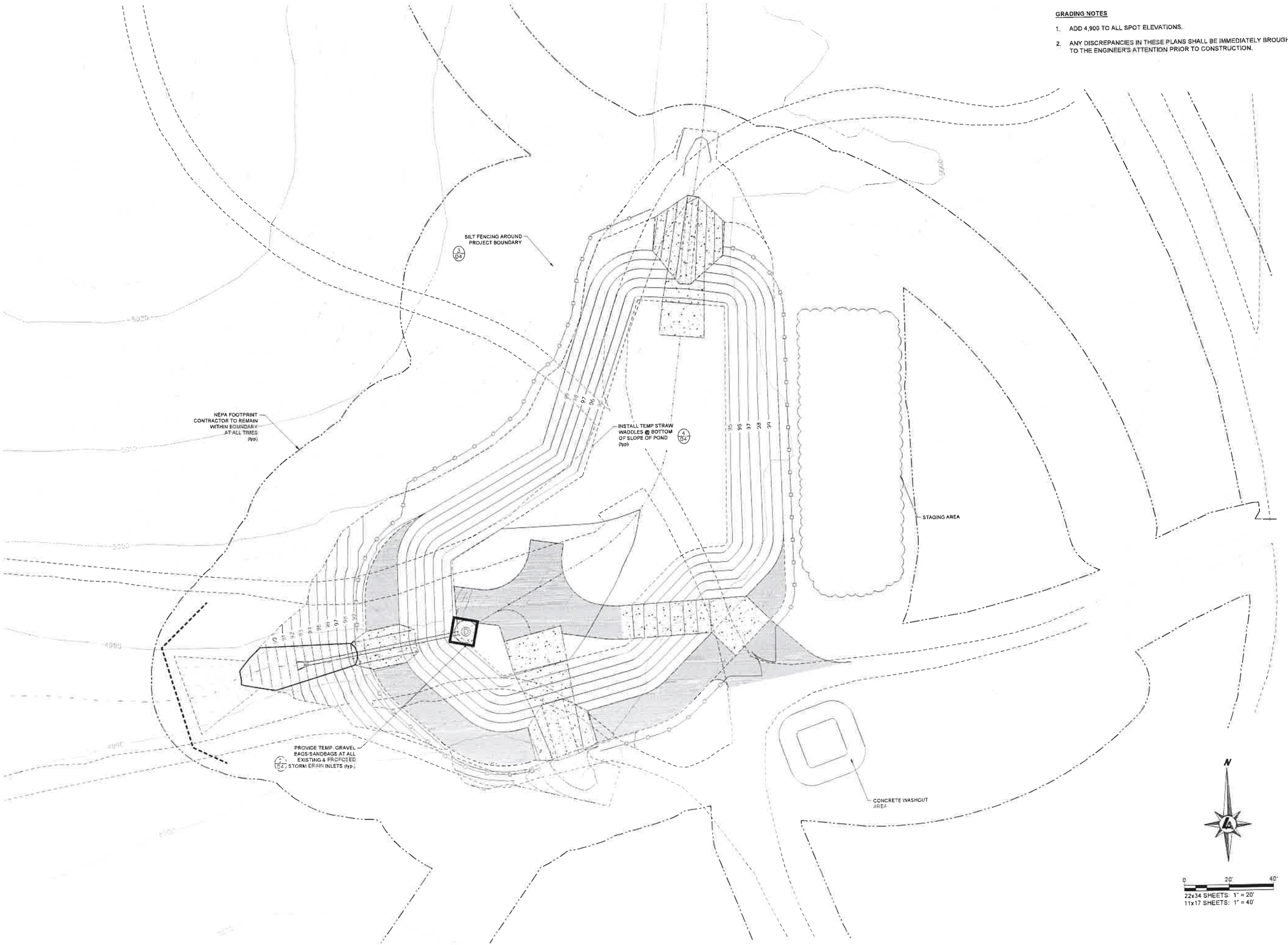
GRADING NOTES

1. ADD 4,900 TO ALL SPOT ELEVATIONS.
2. ANY DISCREPANCIES IN THESE PLANS SHALL BE IMMEDIATELY BROUGHT TO THE ENGINEER'S ATTENTION PRIOR TO CONSTRUCTION.



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PROFESSIONAL ENGINEER STATE OF NEVADA
IAN M. HAFFEY
Exp 12/31/23
CIVIL
06/21/2022

DOUGLAS COUNTY

JOHNSON LANE DRAINAGE BASINS

SKYLINE EROSION CONTROL PLAN

MINDEN NEVADA DOUGLAS

REV	DATE	DESCRIPTION	BY

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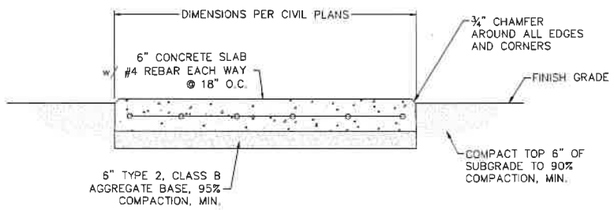
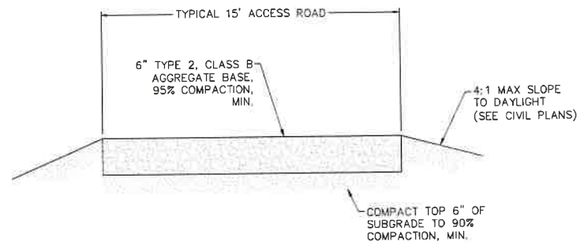
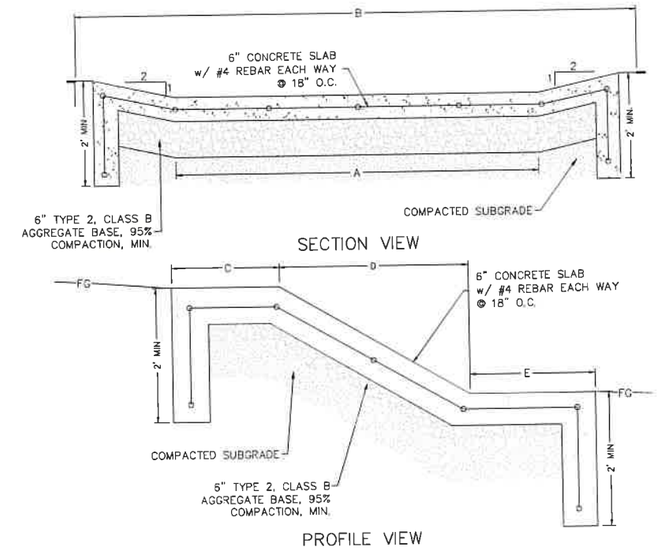


ACCESS ROAD CONCRETE APPROACH (1)
N.T.S.

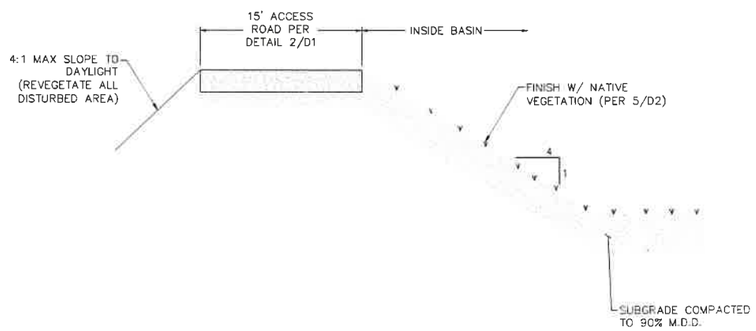


TYPICAL ACCESS ROAD SECTION (2)
N.T.S.

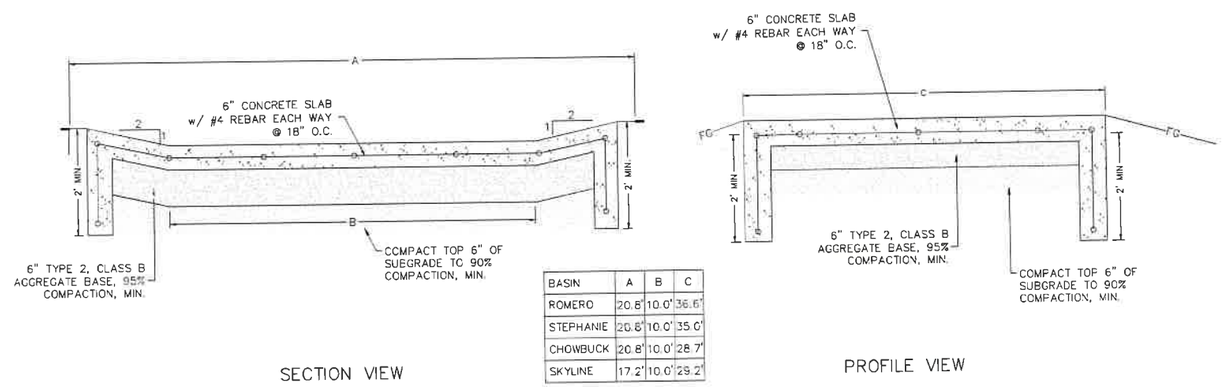


BASIN	A	B	C	D	E
ROMERO	10.0'	30.0'	33.4'	16.1'	14.5'
STEPHANIE	5.0'	44.0'	51.3'	19.8'	19.7'
CHOWBUCK	10.0'	37.2'	41.6'	14.0'	13.4'
SKYLINE 1	5.0'	31.5'	39.4'	8.7'	14.8'
SKYLINE 2	10.0'	28.6'	25.9'	16.6'	14.8'

CONCRETE INLET (3)
N.T.S.



BASIN SIDE SLOPE SECTION VIEW (4)
N.T.S.



BASIN	A	B	C
ROMERO	20.8'	10.0'	36.6'
STEPHANIE	20.8'	10.0'	35.0'
CHOWBUCK	20.8'	10.0'	28.7'
SKYLINE	17.2'	10.0'	29.2'

SPILLWAY W/ RIPRAP LINING (6)
N.T.S.

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PROFESSIONAL ENGINEER STATE OF NEVADA
IAN K. HAFFEY
Exp: 12/31/23
CIVIL
06/21/2022

DOUGLAS COUNTY
JOHNSON LANE DRAINAGE BASINS
DETAILS
MINDEN
NEVADA
DOUGLAS

REV	DATE	DESCRIPTION	BY

BID/PERMIT SET
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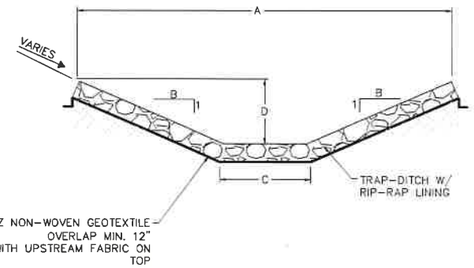
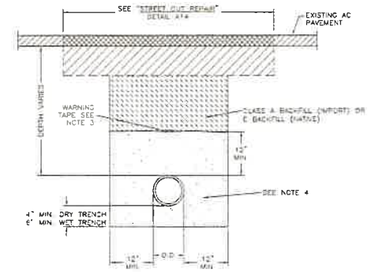


CHANNEL	A (FT)	B	C (FT)	D (FT)	RIP RAP CLASS	RIP RAP DEPTH (FT)
ROMERO UPSTREAM	9.00	2.00	5.00	1	300	2
STEPHANIE UPSTREAM	22.00	2.00	10.00	3	300	2
CHOWBUCK UPSTREAM	14.00	2.00	10.00	1	300	2
SKYLINE UPSTREAM 1	18.00	2.00	10.00	2	300	2
SKYLINE UPSTREAM 2	18.00	2.00	10.00	2	300	2

MINOR CHANNEL W/ RIPRAP LINING SECTION VIEW (1)

N.T.S.



THE FOLLOWING GRADED BEDDING MATERIAL MAY BE USED IN WET TRENCHES:

U.S. STANDARD SIEVE SIZE	PERCENT BY WEIGHT PASSING
1.5"	100%
1"	50-90%
3/4"	30-70%
3/8"	10-40%
#4	5-25%
#200	0-10%

CLASS A BACKFILL PER ORANGE BOOK 300.03.02 USED AS BEDDING MATERIAL MUST BE USED IN DRY TRENCHES ONLY. SEE NOTE 4

SEE NOTES ON PAGE 2

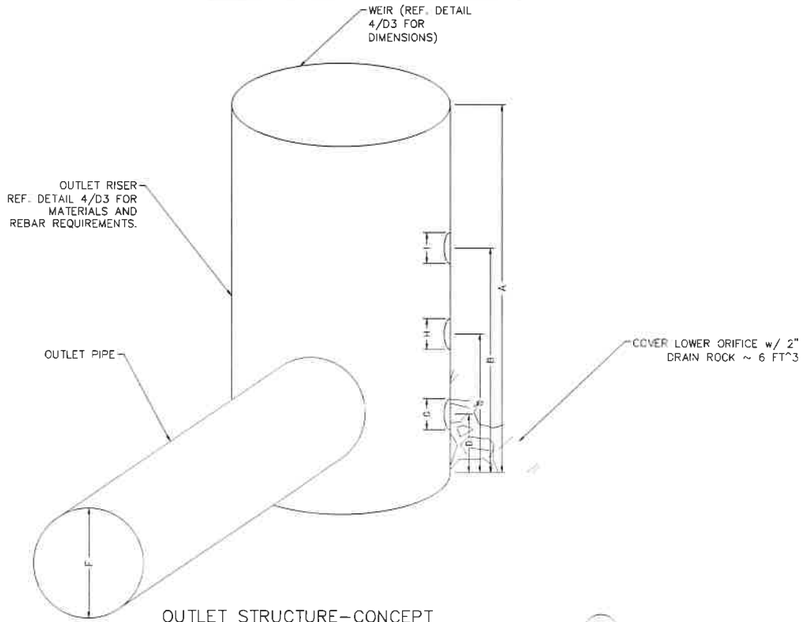
PAGE 1 OF 2

NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION: DOUGLAS COUNTY
			TYPICAL STORM DRAIN TRENCH	DATE: JULY 2017
				DWG: D01

TYPICAL STORM DRAIN TRENCH (1/2) (2)

N.T.S.

BASIN	A	B	C	D	F	G	H	I
ROMERO	3.8'	3'	2'	1'	18"	2"	2"	2"
STEPHANIE	7'	3'	2'	1'	24"	2"	2"	2"
CHOWBUCK	4.8'	3'	2'	1'	18"	2"	2"	2"
SKYLINE	4'	3'	2'	1'	18"	2"	2"	2"



OUTLET STRUCTURE-CONCEPT (4)

N.T.S.

NOTES:

1. ALL REQUIREMENTS OF THE STORM DRAIN UTILITY ORDINANCE MUST BE MET.
2. CLASS A AND CLASS E BACKFILL AND BEDDING MATERIAL SHALL CONFORM TO SECTION 200 OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION. BEDDING AND BACKFILL SHALL BE MECHANICALLY COMPACTED IN CONFORMANCE WITH SECTION 305.10 OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
3. PLACE WARNING TAPE 1-FOOT ABOVE STORM DRAIN PIPE. WARNING TAPE SHALL READ "CAUTION STORM DRAIN MAIN"
4. CLASS A BACKFILL AS BEDDING MATERIAL PER ORANGE BOOK 200.03.02. COMPACT OR CONSOLIDATE TO PROVIDE PROPER SUPPORT OF PIPE.
5. UTILIZE WATER STOP DETAIL D02 FOR WET TRENCHES.

PAGE 2 OF 2

NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION: DOUGLAS COUNTY
			TYPICAL STORM DRAIN TRENCH	DATE: JULY 2017
				DWG: D01

TYPICAL STORM DRAIN TRENCH (2/2) (3)

N.T.S.

REVEGETATION SEED MIXTURE		
BOTANICAL NAME	COMMON NAME/VARIETY	PLS lbs./acre
AHILLEA MILLEFOLIUM	YARROW	0.25
ACHNATHERUM OCCIDENTALIS	WESTERN NEEDLEGRASS	1.00
ARTEMISIA TRIDENTATA SSP. VASEYANA	MTN. SAGEBRUSH	0.50
BROMUS CARINTUS	CALIFORNIA BROME	4.00
ELYMUS ELYMOIDES	BLUE WILDRYE 'STANISLAUS'	4.00
ELYMUS TRACHYCAULUS	SLENDER WHEATGRASS, 'PRYOR'	6.00
ERICAMERIA NAUSEOSA	RUBBER RABBITBRUSH	1.00
POA SECUNDA	SANDBERG BLUEGRASS 'SHERMAN'	2.00
PURSHIA TRIDENTATA	BITTERBRUSH	3.00
	TOTAL	21.75

REVEGETATION SPECIFICATIONS:

1. GENERAL

CONTRACTORS SHALL LOCATE AND STAKE TREATMENT BOUNDARIES. THE LANDSCAPE ARCHITECT AND ALL OTHERS OR THEIR REPRESENTATIVE SHALL APPROVE CONTRACTORS STAKING PRIOR TO PROGRESSING WITH THE WORK. FENCE THE ENTIRE AREA TO BE DISTURBED WITH SAFETY FENCING. STORE ALL MATERIAL AND EQUIPMENT ON HARD SURFACE AREAS OUTSIDE OF THE EXISTING SHOWN ON THE PLANS. THERE SHALL BE NO PAY ITEM OR CLAIM FROM THE CONTRACTOR FOR THEIR RESTORATION OF DISTURBED AREAS BEYOND THOSE DESIGNATED ON THE PLANS AND IN THE FIELD.

THE REVEGETATION WORK SHALL CONSIST OF APPLICATION OF SOIL STRIPPING AND GRINDINGS, SOIL, SEEDING AND APPLICATION OF WOOD FIBER MULCH WITH TACKIFIERS.

LANDSCAPE ARCHITECT OR OWNERS REPRESENTATIVE WILL INSPECT MATERIALS AND WORKMANSHIP THROUGHOUT THE PROJECT.

2. TREATMENTS

APPLY SEED, WOOD FIBER AND TACKIFIER AS SPECIFIED BELOW. ALL SEEDING TO TAKE PLACE AFTER NOVEMBER 15T

3. SUBMITTALS

SUBMIT THE FOLLOWING MATERIAL SAMPLES OR LABELS AND RATES OR QUANTITIES OF APPLICATION FOR ACCEPTANCE BY THE LANDSCAPE ARCHITECT OR THEIR REPRESENTATIVE:

- SEED (SAMPLES, TAGS, LOT TEST RESULTS)
- WOOD FIBER MULCH
- TACKIFIER
- HYDRO GEL CRYSTALS-FINN HYDRO GEL B, OR EQUIVILANT

4. MATERIALS

A. SEED

ALL SEED SHALL CONFORM WITH THE LAWS AND REGULATIONS PERTAINING TO THE SALE AND SHIPMENT OF SEED REQUIRED BY THE NEVADA STATE DEPARTMENT OF AGRICULTURE AND THE FEDERAL SEED ACT. DELIVER SEED TO THE SITE TAGGED AND LABELED IN ACCORDANCE WITH THE STATE AGRICULTURE CODE AND ACCEPTABLE TO THE COUNTY AGRICULTURE COMMISSION.

WEED SEED SHALL NOT EXCEED 0.25 PERCENT OF THE PURE LIVE SEED AND INERT MATERIAL AND SHALL NOT INCLUDE ANY SEED OF CHEATGRASS,(BROMES TECTORUM) OR SWEET CLOVER (MELLITUS OFFICINALIS, M. ALBA). CROP SEED SHALL NOT EXCEED .50 PERCENT UNLESS OTHERWISE APPROVED. INDIVIDUAL SEED TEST RESULTS, BY SPECIES, AND LOT NUMBER SHALL BE PROVIDED 30 DAYS PRIOR TO COMMENCING THE WORK PRIOR TO ACCEPTANCE AND BEFORE SEED IS BLENDED. ALL SEED IS SUBJECT TO INSPECTION AND TAGS SHALL BE SUBMITTED TO THE LANDSCAPE ARCHITECT OR THEIR REPRESENTATIVE FOR APPROVAL AND ACCEPTANCE. SPECIES AND/OR VARIETIES MAY ONLY BE SUBSTITUTED UPON THE WRITTEN APPROVAL OF THE LANDSCAPE ARCHITECT OR THEIR REPRESENTATIVE.

IMMEDIATE EROSION CONTROL SHALL BE ACCOMPLISHED BY THE USE OF A NURSE GRASS CROP WHICH WILL PROVIDE 50% COVERAGE IN THE FIRST YEAR OF GROWTH. NURSE GRASS CROP MUST BE A MINIMUM OF 15% ON THE OVERALL SEED BLEND.

B. WOOD FIBER MULCH

WOOD FIBER MULCH SHALL CONSIST OF DEGRADABLE GREEN DYED WOOD CELLULOSE FIBER, 100% RECYCLED LONG FIBER PULP, AND SHALL BE FREE FROM WEEDS OR OTHER FOREIGN MATTER.

MATERIAL SHALL BE OF AN ORGANIC, PLANT DERIVED SUBSTANCE CONTAINING PSYLLIUM, GUAR GUM, OR CORNSTARCH SUCH AS PT-TAC, SUPERTAK RECLAMARE2400,M-BINDER, ECO-TAK, FISCH-STICK, OR APPROVED EQUAL. MATERIAL SHALL FORM A TRANSPARENT 3-DIMENSIONAL FILM LIKE CRUST PERMEABLE TO WATER AND AIR AND CONTAINING NO AGENTS TOXIC TO SEED GERMINATION.

5. IMPLEMENTATION

A. BROADCAST SEEDING

AFTER STAKING THE CLEARING LIMITS CONTRACTOR TO CLEAR AND GRINDING THE EXISTING VEGETATION WITH A BRUSH HOG, STOCKPILE THE MATERIAL IN A PAVED OR CLEARED AREA. CONTRACTOR TO THEN STRIP THE TOP 4" OF ROOTS AND TOPSOIL AND STOCKPILE THE MATERIAL WITH CLEARED VEGETATION PILE. MIX BOTH MATERIALS COMPLETELY. CONTRACTOR TO THEN RE-APPLY STRIPPINGS TO THE AREAS SHOWN ON THE LANDSCAPE PLANS. SEEDED AREAS TO BE COMPACTED TO NO GREATER THAN 90% AND LEFT IN A ROUGHENED CONDITION, WITH ANY SITE BOULDERS LEFT IN THE BERM AREA. RE-APPLY THE STRIPPING AND TOPSOIL, AND THEN SPREAD EVENLY. FOLLOW WITH AN APPLICATION OF SPECIFIED SEED AND ½ OF THE HYDRO MULCH MATERIAL (250 LBS PER ACRE). FOLLOW WITH THE SECOND PASS OF THE REMAINING HYDRO MULCH MATERIAL. APPLY A TACKIFYER AS SPECIFIED TO HOLD THE SEED BED IN PLACE, AT THE SPECIFIED RATE. SEED MUST NOT BE LEFT UNCOVERED MORE THAN 24 HOURS UNLESS OTHERWISE APPROVED. SEEDING SHALL NOT OCCUR UNDER CONDITIONS THAT WOULD ALLOW THE SEED TO BECOME WIND BORNE. THE SECOND PASS TO APPLY WOOD FIBER MULCH USING 3,000 LBS./ACRE HYDRO STRAW AND 150 LBS./ACRE PSYLLIUM TACKIFIER.

B. GUAR TACKIFIER

MIX TACKIFIER IN A TANK EQUIPPED WITH AN AGITATOR SO A UNIFORM SUSPENSION IS ACHIEVED. APPLY THE SLURRY WITHIN 30 MINUTES OF MIXING. SEVERAL PASSES MAY BE REQUIRED TO ACHIEVE THE SPECIFIED RATES. CONTRACTOR TO PROVIDE TRAFFIC CONTROL WITH TEMPORARY FENCING TO KEEP. ALL VEHICULAR AND PEDESTRIAN TRAFFIC OFF THE SITE AFTER APPLYING TACKIFIER.

MAINTENANCE- CONTRACTOR SHALL MAINTAIN THE TREES AND SEEDED AREA ON THE BERM FOR A PERIOD OF 1 YEAR. MAINTENANCE SHALL CONSIST OF WEEDING THE SEEDED BERM AREA. TRASH AND DEBRIS REMOVAL, WATERING TREES, REPAIRING RABBIT FENCING, WEEDING AND RE-MULCHING TREE PITS, REMAKING BERMS AND REPLACING ANY DEAD TREES DURING THE MAINTENANCE PERIOD. CONTRACTOR SHALL MAINTAIN THE PROTECTIVE FENCE FOR THE 1 YEAR PERIOD. WATER TRESS A MINIMUM OF 3 TIMES DURING THE FIRST GROWING SEASON.

6. GAURANTEE

FOR REVEGETATED AREAS COVERED BY TEMPORARY IRRIGATION (IF PROVIDED), CONTRACTOR SHALL GUARANTEE SEED GERMINATION OF NO LESS THAN 50% AND ADEQUATE COVERAGE ACHIEVED IN THE FIRST YEAR. FOR AREAS NOT TEMPORARILY IRRIGATED, CONTRACTOR SHALL GUARANTEE 20% COVERAGE IN THREE YEARS. CONTRACTOR SHALL RE-APPLY SEEDING TREATMENT IN AREAS OF COVERAGE-FAILURE AS NEEDED.

SEED MIX DETAIL AND SPECIFICATIONS (5)

N.T.S.

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PROFESSIONAL ENGINEER STATE OF NEVADA
IAN V. HAFFEY
EXP: 12/31/23
CIVIL
06/21/2022

DOUGLAS COUNTY
JOHNSON LANE DRAINAGE BASINS
DETAILS
DOUGLAS
MINDEN
NEVADA

REV	DATE	DESCRIPTION	BY

BID/PERMIT SET
CONSTRUCTION DOCUMENTS
JUNE 2022

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DESIGNED BY:	IKM
CHECKED BY:	TLR
JOB NO.:	9953.001

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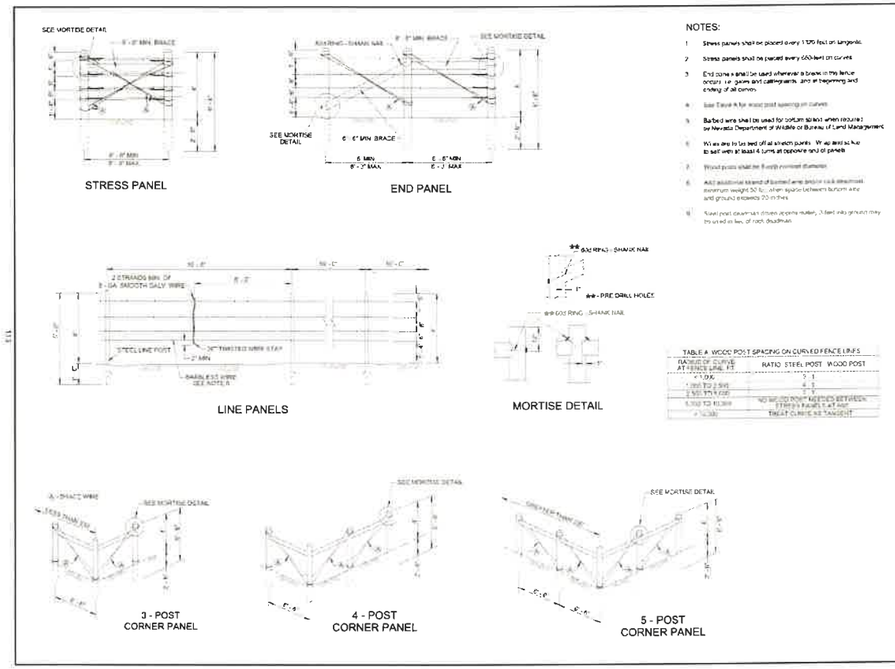

WIRE FENCING–PANEL DETAILS (1)

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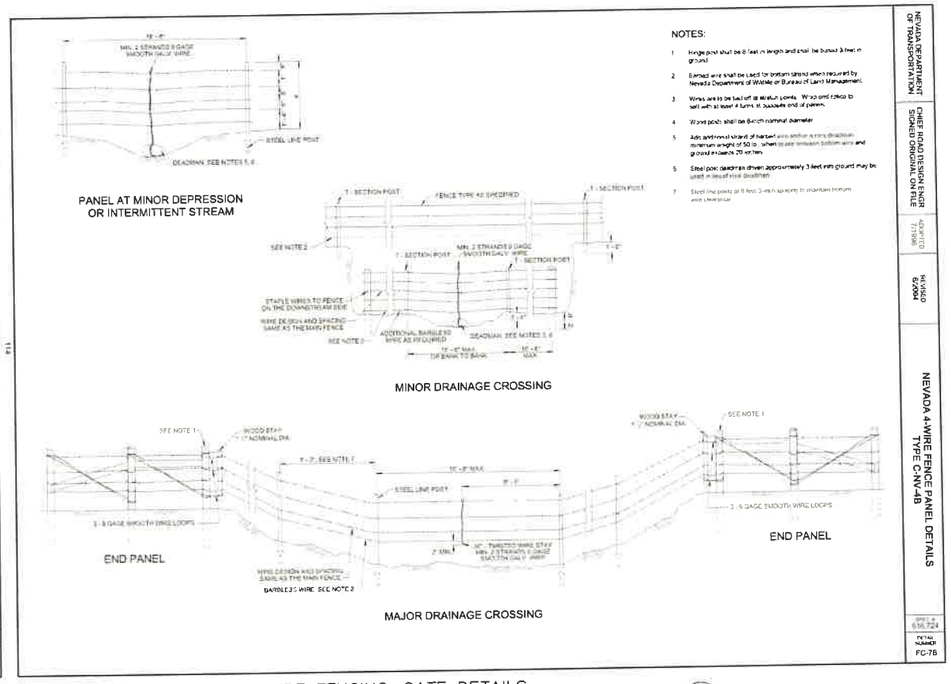

WIRE FENCING–GATE DETAILS (2)

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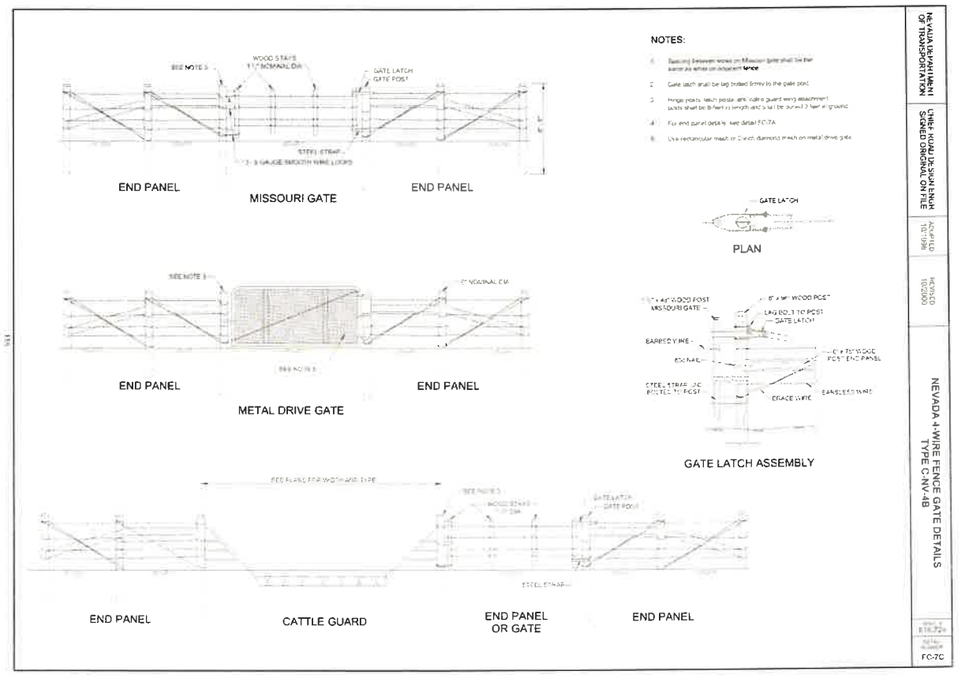

GATE AND FENCE DETAILS (3)

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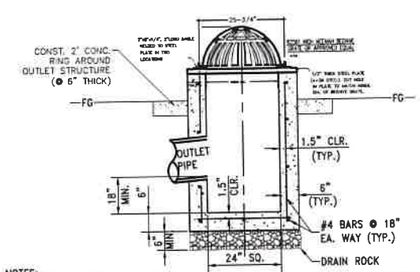

NOTES:

1. FIBER-REINFORCED PORTLAND CEMENT CONCRETE (F.C.C.) SHALL HAVE THE FOLLOWING CHARACTERISTICS: 4000 PSI MIN. COMPRESSIVE STRENGTH AT 28 DAYS, MIN. 6 SACKS OF CEMENT PER CUBIC YARD WITH MAX. WATER-CEMENT RATIO OF 0.45, AIR ENTRAINMENT 6% ±1.5%, SLUMP AT 1 TO 4 INCHES. MIX DESIGN SHALL CONFORM TO THE REQUIREMENTS OF SECTION 337 OF STANDARD SPECIFICATIONS OF PUBLIC WORKS CONSTRUCTION (SSPWC). CEMENT SHALL BE TYPE II. ALL CEMENT CONCRETE SHALL HAVE A COARSE AGGREGATE GRADATION CONFORMING TO SIZE No. 67. POLYPROPYLENE OR CELLULOSE FIBERS SHALL BE ADDED TO THE P.C.C. AT 1.5 LBS. PER CUBIC YARD. ALL MATERIALS SHALL CONFORM TO SSPWC.
2. REINFORCING STEEL SHALL BE GRADE 40 AND HAVE 1.5" CLEAR COVER.
3. CONCRETE STRUCTURE MAY BE A PRE-CAST CONCRETE UNIT. BASE OF PRE-CAST CONCRETE UNIT SHALL BE PLACED ON 6" COMPACTED DRAIN ROCK.
4. FRAME & GRATE SHALL BE D&L I-9226 OR APPROVED EQUAL.
5. ALL CATCH BASINS, PUBLIC OR PRIVATE, SHALL BE PROVIDED WITH A "SUR-TRAP" OIL/WATER SEPARATOR OR APPROVED EQUAL.
6. REFERENCE DETAIL 4 ON D2 FOR EACH BASIN'S OUTLET DIMENSIONS AND ADDITIONAL REQUIREMENTS

CATCH BASIN TYPE 3-R (4)

N.T.S

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06/21/2022

DOUGLAS COUNTY
JOHNSON LANE DRAINAGE BASINS
DETAILS
MINDEN NEVADA DOUGLAS

REV	DATE	DESCRIPTION	BY

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JUNE 2022

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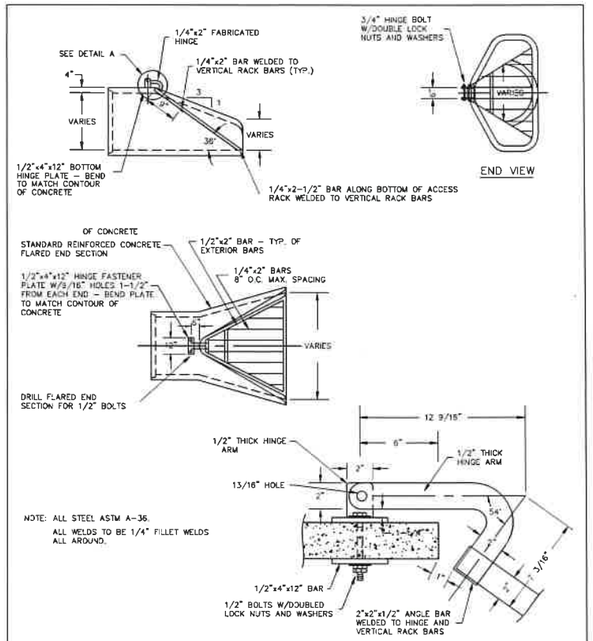
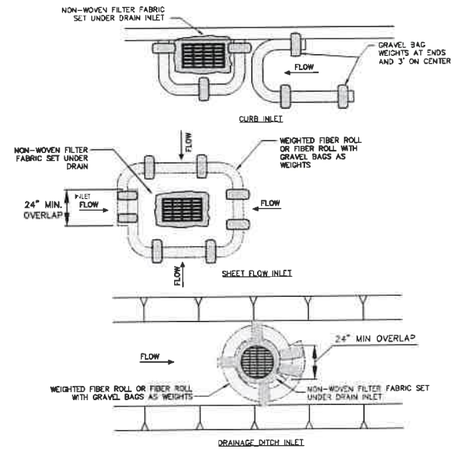


PAGE 1 OF 1

NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION: DOUGLAS COUNTY
			TRASH RACK	DATE: JULY 2017
				DWG: D08

TRASH RACK (1)

N.T.S.



NOTES

1. FIBER ROLL DRAIN INLET PROTECTION SHALL USE A MIN 12" DIAMETER ROLL AND BE INSTALLED BEFORE CONSTRUCTION BEGINS.
2. GRAVEL BAGS SHALL BE WOVEN FILTER FABRIC. SAND BAGS ARE NOT AN ACCEPTABLE SUBSTITUTE.
3. ON PAVED SURFACES, SUBSTITUTE STAKES WITH GRAVEL BAGS (USE PROPER STAKING METHODS).
4. CONSTRUCT ON GENTLY SLOPING STREETS WHERE WATER CAN POND AND ALLOW SEDIMENT TO SEPARATE OUT OF SUSPENSION.
5. INSPECT AND REPAIR FIBER ROLLS EACH DAY AND AFTER EACH STORM EVENT. REMOVE SEDIMENT WHEN ONE THIRD OF THE FILTER DEPTH HAS BEEN FILLED. REMOVED SEDIMENT SHALL BE DISPOSED OF PROPERLY.
6. SEDIMENT AND GRAVEL DEPOSITED ON ROADWAYS SHALL BE IMMEDIATELY REMOVED.
7. IN HIGH TRAFFIC AREAS, MARK DRAIN INLET PROTECTION WITH VISIBLE BARRIERS SUCH AS SAFETY CONES.
8. REMOVE DRAIN INLET PROTECTION AFTER THE SURROUNDING AREA IS STABILIZED.

DETAIL COURTESY OF TRPA EROSION CONTROL TEAM

INLET PROTECTION (2)

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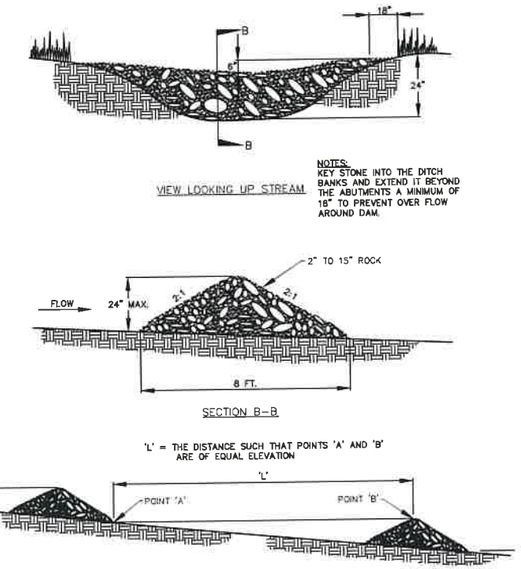

CHECK DAM DETAIL (5)

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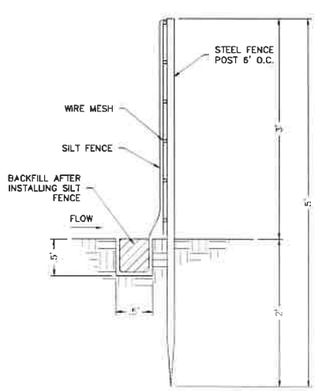
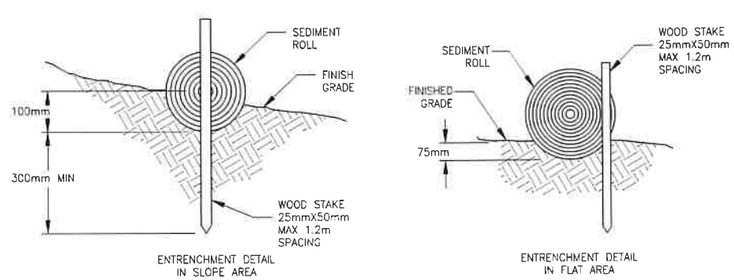


NOTE: THE CONTRACTOR MAY USE MANUFACTURED SILT FENCING IN LIEU OF THE ABOVE, SUBJECT TO SUBMITTAL OF THE MANUFACTURE'S DATA SHEETS TO THE ENGINEER FOR APPROVAL.

SILT FENCE (3)

N.T.S.



NOTES:

1. SEDIMENT ROLLS MAY BE FIBER ROLL LOGS OR RICE STRAW WATTLES. THEY SHALL BE A MINIMUM OF 400mm IN DIAMETER WHEN PLACED ON SOIL. SEDIMENT ROLLS PLACED ON AC PAVING SHALL BE WEIGHTED AND SHALL BE A MINIMUM OF 200mm IN DIAMETER.
2. ROLLS SHALL BE INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS, THESE DETAILS AND THE SPECIAL PROVISIONS.
3. WHEN MORE THAN ONE FIBER ROLL IS PLACED IN A ROW, THE ROLLS SHALL BE TIGHTLY ABUTTED AND STAKED, NOT OVERLAPPED.

SEDIMENT ROLL DETAIL

SEDIMENT ROLL DETAIL (4)

N.T.S.

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